PATHFINDER

A Cogema Resources Company

December 21, 2000

Mr. Philip Ting, Chief
Fuel Cycle Licensing Branch, FCSS
c/o Document Control Desk
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20850

Re: Docket No. 40-2259
License No. SUA-672

Dear Mr. Ting:

Enclosed please find five copies of an application for ground water Alternate Concentration Limits (ACLs) for the Lucky Mc mill and tailings site. Pathfinder requests that the NRC amend the above referenced license to incorporate the proposed ACLs.

Pathfinder has been endeavoring for twenty years to accomplish ground water restoration at the site involving the extraction of contaminated water from the excursion area east of the tailings (referred to as the Wind River Channel), and for a lesser time span (eleven years), the dewatering of the tailings through pumped wells, and the injection of clean fresh water in the Wind River Channel to sweep contaminants to recovery wells. To date we have pumped 187 million gallons of water from the excursion area. extracted 199 million gallons of water from the tailings, and injected 172 million gallons of fresh water. Consequently, the concentrations of hazardous and non-hazardous constituents in the Wind River Channel ground water have been reduced dramatically. Despite this progress, there remain hazardous constituents that exceed the current site standards at the point of compliance as follows: beryllium, cadmium, nickel, radium, selenium, and uranium.

The enclosed application considers the cleanup efforts to date, the prospects for further reduction of constituent concentrations, and the attendant costs to accomplish these further reductions, concluding that we have reached the point of ALARA relative to ground water restoration at the Lucky Mc site. We have concluded that a continuation of the ground water corrective action program (CAP) beyond September, 2001 will produce marginal additional benefits for the significant expenditure of additional funds involved. The enclosed application discusses the attainment of ALARA, presents sound technical justification for the proposed ACLs, and ably demonstrates the minimal public health risk associated with the proposed ACLs.

We would like to encourage the NRC to accomplish a timely review of this application. The

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NMSSO1 Public

modeling completed as part of the application indicates that there is no significant additional public health advantage or environmental improvement to be gained from continued operation of the CAP beyond September, 2001. Pathfinder would like to terminate the CAP at that point with concurrence from the NRC. Upon termination of the CAP, a significant source of additional pumped water that must be managed as part of the tailings system water balance will be eliminated. This in turn will facilitate the more timely conclusion of the tailings reclamation. We anticipate that by late 2001 the portions of the tailings system devoted to residual water management will be the only obstacle to the completion of site closure. Considerable progress on the tailings reclamation has been accomplished over the past three years, and Pathfinder is earnestly pursuing the completion of the project. Approval of ACLs for ground water will be an integral part of the Lucky Mc site closure.

Once the NRC has completed an initial reading of the application we are willing to meet with your staff to discuss the application and provide any needed clarification or additional information that will expedite your staff's review. We look forward to hearing from you on this matter.

Sincerely,

Tom Hardgrove

T. W. Hardgrove
Operations Manager

Enclosure

cc: B. Spitzberg, USNRC Region IV
Gary Beach, Wyoming DEQ/WQD
D. L. Wichers
J. R. Blaise
Hydro-Engineering w/o encl.

APPLICATION FOR ALTERNATE CONCENTRATION LIMITS

PATHFINDER MINES CORPORATION LUCKY Mc MINE

APPLICATION FOR:

ALTERNATE CONCENTRATION LIMITS
PATHFINDER MINES CORPORATION
LUCKY Mc TAILINGS

PREPARED FOR:

PATHFINDER MINES CORPORATION
LUCKY Mc MINE

LICENSE NO. SUA-672

DOCKET NO. 40-2259

Prepared by:

HYDRO-ENGINEERING, LLC
DECEMBER 2000

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12/26/2000

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PREFACE

This report presents a summary of the hydrologic conditions at the Lucky Mc site in support of Alternate Concentration Limits (ACLs) for uranium, selenium, nickel, radium-226 plus radium-228, beryllium and cadmium. The 2000 Annual Report (Hydro-Engineering L.L.C., 2000) presents an updated analysis of the ground-water monitoring results. Appendix C in this report presents the recent and historical ground-water quality data for the Lucky Mc site through early 2000. The 2000 Annual Report presents the most recent water-quality data and trend plots of water-quality data in Section 3 of Hydro-Engineering, LLC (2000). Ground-water conditions have also been defined in previous documents[1]. Monitoring results for this site have also been presented in these documents. This report is written to summarize hydrologic conditions at the Lucky Mc site, and these previous reports should be referred to for details.

Appendices A and B in this ACL report present details of the exposure assessment for this site. Section 2.3 of this report presents a summary of the results from these appendices. Appendices A and B and Section 2.3 were prepared by Kenneth R. Baker, Ph.D., of Environmental Restoration Group, Inc. Appendices D and E present the water-flow modeling and transport modeling, respectively. Page, figure, and table numbers are sequenced by the subsection number. Tables are located after their initial reference while all figures follow all text in their respective subsection.

1 Hydro-Engineering, 1979, 1983, 1991, 1992, 1993, 1994, 1995, 1996a, 1996b, 1997a, 1998, 1999 and 2000 and Pathfinder Mines 1985, 1986, 1987, 1988, 1990a and 1990b.

EXECUTIVE SUMMARY

This document is an application for alternate concentration limits (ACLs) for Pathfinder Mines Corporation (PMC), Lucky Mc site and follows the Nuclear Regulatory Commission (NRC) guidelines (NRC, 1996). The NRC has set the following site standards for the ground water for point of compliance (POC) well T1-12 at the site:

TABLE E-1. PMC LUCKY Mc NRC SITE STANDARDS.

CONSTITUENTS	NRC
ARSENIC	0.05
BERYLLIUM	0.05
CADMIUM	0.01
CHROMIUM	0.05
NICKEL	0.09
RA-226 + RA-228	5.0
SELENIUM@	0.01
THORIUM-230	13.2
URANIUM	0.11

NOTE: All concentrations are in mg/l except:
Radium-226 + Radium-228 and Thorium-230, which are in pCi/l.
@ = Selenium site standard is replaced with EPA standard of 0.05 mg/l.

The NRC site standards for uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium will be exceeded at the point of compliance (POC) after the completion of restoration efforts. The ground-water concentrations for arsenic, chromium and thorium-230 are presently low, and alternate concentration limits (ACLs) will not be required for these site standards. The site standard for selenium of 0.01 mg/l is lower than the current EPA drinking water standard of 0.05 mg/l, and the NRC site standard can be superseded by the EPA drinking water standard but an ACL will still be needed for this constituent. This document provides support for and proposes ACLs for uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium at the POC location that will prevent the exceedence of the concentrations stated in Table E-2 at the proposed point of exposure (POE). The POE location is Fraser Draw alluvial well AL-6 (see Figure 1.2-

2 for locations of the POC and POE wells). The following POE and POC concentrations are proposed:

TABLE E-2. PROPOSED POE AND POC CONCENTRATIONS.

CONSTITUENTS	POE Concentrations	POC Concentrations
URANIUM	0.98	1.70
SELENIUM	0.26	1.10
NICKEL	0.15	0.85
RA-226 + RA-228	5.60	7.50
CADMIUM	0.01	0.02
BERYLLIUM	0.05	0.07

NOTE: Concentrations are in mg/l, except Ra-226 + Ra-228, which is in pCi/l.

Detailed hydrologic conditions have been defined for the quantity of water and drainage from the tailings area. A dewatering program has been designed to remove a substantial portion of the drainable water from the tailings. The long-term movement rate of the water from the No. 2 Tailings that is not removed by dewatering has been estimated and presented in Section 2.1. The mixture of seepage from the tailings with the Wind River Channel ground water will require ACLs for this site.

Parameters developed from observed site ground-water conditions were used to predict the ion migration of these six constituents during post restoration conditions. These simulations, which represent as low as reasonably achievable (ALARA) conditions, were used to establish the ACL concentrations.

Exposure and human health assessments were conducted to assure that the projected concentrations at the POE do not pose a substantial human health hazard. This analysis shows that the exposure pathway to man is most likely limited to eating beef from cattle that have obtained their drinking water from a well located at the POE. Assuming that a person eats beef solely from this source for a period of 30 years, the intakes of the chemical constituents, uranium, selenium, and nickel present an

insignificant risk using all available toxicological benchmarks for comparison. Radium-226 plus radium-228, beryllium and cadmium risk assessments were not developed because modeling shows that the site standards will not be exceeded at the POE location. The carcinogenic risk from intake of the radionuclide uranium is less than one percent of the NRC risk criterion of 1E-4.

The corrective action program (CAP) consists of aggressive dewatering of the tailings through September of 2001 in conjunction with continued operation of the Wind River aquifer collection and injection system also through September of 2001. The simulation of the CAP through September of 2003 does not predict a measurable change in the concentrations at the POC or POE wells. Therefore, no additional benefit will be obtained by the extension of the CAP from September of 2001 to September of 2003. The analysis of the extensive corrective action that has been used at this site demonstrates that ALARA conditions can be met with this restoration program.

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

This Alternate Concentration Limit (ACL) application is being submitted in accordance with 10 CFR, Part 40, Appendix A, Criterion 5B(6). The United States Nuclear Regulatory Commission (NRC) may establish site-specific ACLs if it can be shown that the constituents will not pose a substantial present or potential hazard to human health or the environment as long as the ACLs are not exceeded. It must also be demonstrated that the proposed ACLs are as low as reasonably achievable (ALARA). This application and the attachments provide sufficient evidence that these requirements have been met.

The groundwater restoration program at the Lucky Mc Tailings facility has been operating since 1980, in compliance with a corrective action plan (CAP) approved by the NRC in 1989. The site is regulated by the NRC under radioactive materials license SUA-672.

A collection and injection system was designed to intercept the seepage from the solid tailings storage area and restore the Wind River Channel ground-water quality. The CAP consists of collecting contaminated water in the Wind River aquifer near the tailings impoundments and injecting non-contaminated fresh water into the aquifer to aid the restoration in this area. A series of injection wells and recharge lines are used to inject the fresh water. In addition, dewatering of the tailings impoundments is continuing. The contaminated water collected from the wells (collection water) is evaporated.

In 1989, the NRC established site standards for arsenic, barium, beryllium, cadmium, chromium, nickel, Ra-226 + Ra-228, selenium, thorium-230, and uranium based on the average of a small number of samples taken from an upgradient background well or based on EPA drinking water concentration levels at the time. The operation of the CAP for over 20 years has resulted in significant restoration of ground-water quality in the Wind River Channel area. The current tailings dewatering program will drop the

water level in the No. 1 Tailings to below the base of the outlet to the Wind River Channel by the end of the CAP. Dewatering the No. 2 Tailings is not feasible based on the very low yields from the all of the No. 2 dewatering wells. Therefore, after the tailings have been dewatered to the extent practicable, the concentrations of uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium at the point of compliance (POC) well will remain above the site standards. The background concentrations of uranium, selenium and nickel at well T1-6 also routinely exceed the site standards. For uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium, small quantities of seepage from the No. 2 Tailings and remnant concentrations in the Wind River Channel are predicted to produce measurable elevations above background at the POC wells for a few decades. The seepage from the No. 2 Tailings after the planned dewatering through September of 2001 will be at a small rate that limits the concentrations at the POC wells, but also extends the duration of the elevated concentrations for a relatively long period of time. However, continued restoration efforts beyond the planned dewatering and restoration through September 2001 will be shown to make very little difference in the long-term concentrations. While ACLs will be required for these constituents, the calculations show that the concentrations at the point of exposure (POE) will be within acceptable limits.

1.2 FACILITY DESCRIPTION

PMC's Lucky Mc Tailings site is located in west central Wyoming, approximately 45 miles east of Riverton. Figure 1.2-1 shows the location of the Lucky Mc Tailings with respect to the location of the former uranium mill site and the Central Gas Hills mine sites, which presently contain the Area 4 and Area 5 reclamation reservoirs. The nearest residence is a ranch located approximately four miles northwest of the tailings area.

The uranium mining in this area occurred in the Gas Hills Mining District and was initiated in 1957 at Lucky Mc. PMC's Tailings site is between the American Nuclear site to the west and the UMETCO site to the east. Final reclamation, which has created two reclamation reservoirs, is nearing completion for PMC's mine pits to the southeast of the tailings.

1.2.1 URANIUM MILL FACILITIES

Uranium milling began at this site in 1958 and continued through 1988, except for shutdowns to expand the mill. The mill has now been decommissioned according to the decommissioning plan submitted to the NRC. Figure 1.2-1 shows the location of the former mill. A total of 12 million tons of ore were milled at this site. The mill utilized a conventional acid leach process. The mill was demolished and placed in the outslope of the No. 2 Tailings Dam, with a clay-radon barrier placed over the material.

Figures 1.2-1 and 1.2-2 show the location of the three solid tailings impoundments (No. 1, No. 2 and No. 2A) and the location of the three solution ponds (No. 3, No. 3A and No. 4). The thickness of the tailings and cover material can be obtained from the difference between the base of the tailings in Figure 1.3-2 and the present land surface in Figure 1.2-2.

1.2.2 OFF-SITE POPULATIONS

There are currently no downstream or down-gradient residences within eleven miles of the tailings area. The nearest ranch residence is approximately four miles northwest of

the tailings area and is located in the Muskrat drainage to the west of Fraser Draw. This residence is upgradient of the confluence of Fraser Draw with Muskrat Creek. This precludes any potential hydraulic communication in surface water or alluvial ground water between the tailings and the ranch home site.

1.2.3 GROUND-WATER RESTORATION FACILITIES

Two points of detection were set by the NRC to determine whether seepage is occurring from the Lucky Mc tailings. Well T1-12 in the Wind River Channel and well R-2 in the Reid Draw alluvium were established as the two points of detection. Arsenic and selenium concentrations were monitored to determine whether the concentrations in these wells exceeded the detection levels. Well T1-12 has exceeded the selenium detection level and, therefore, was selected as a point of compliance (POC). The sampling of constituents in background well T1-6 set the nine parameters listed in Table E-1 with their corresponding site standards. The detection monitoring at well R-2 has not exceeded the detection levels and, therefore, site standards were never set for Reid Draw alluvial well R-2. Selenium concentrations changed with the addition of the digestive step to the analytical process in September of 1997. Prior to this, a portion of selenium (selenate) was not being measured due to the lack of the digestion step. Therefore, reported selenium concentrations prior to September of 1997 were significantly lower than the total selenium concentrations. Concentrations in well R-2 also significantly increased with the modified analysis. A comparison between the background data in well T1-6 (see Table 1.3-1) and those concentrations monitored in well R-2 (see Table C-5 of Appendix C) shows that the background concentrations are significantly higher than those levels in well R-2 with the analysis that measures both selenate and selenite. This ACL application, therefore, is only necessary to address POC concentrations at well T1-12.

The ground-water restoration program at the Lucky Mc site started in late 1980 with initiation of pumping wells P-1, P-2, P-3 and T1-1. Restoration continued through 1988 and was augmented with the addition of several more collection wells, P-4 through P-9, P-19 and two horizontal drains, PS-1 and PS-2. In 1989, fresh-water injection was

initiated, along with the collection, to enhance the restoration of the Wind River Channel. Injection was initiated into wells P-1 and P-2 and adjacent recharge lines. Additional collection and recharge has occurred since 1989. Figure 1.2-3 shows the present configuration of the collection and injection system in the Wind River Channel area with 15 wells being used for collection and 15 wells used for fresh-water injection. Numerous recharge lines are also used to inject fresh-water into the Lucky Mc aquifer. Figure 1.2-4 presents the yearly collection and injection rates for the Lucky Mc ground-water restoration program. This figure shows that collection rates of between 20 and 30 gpm have occurred in the majority of the years in the 1990's. Injection rates have varied from a low of 13 gpm in 1998 to a high of 48 gpm in 1994 and 1995. A total of 187 million gallons of water has been pumped from the Wind River Channel area and 172 million gallons of fresh water has been injected into the Lucky Mc aquifer through 2000.

Tailings dewatering has also been a significant portion of the ground-water restoration program since the tailings are a source to the Wind River Channel. Ten dewatering wells were initially installed in the No. 1 Tailings in 1989 with dewatering initiated in late 1989. Ten wells were installed in the No. 2 and No. 2A Tailings during 1992. Figure 1.2-3 shows the location of the 15 currently utilized tailings dewatering wells. Figure 1.2-5 shows the yearly tailings dewatering rates at the Lucky Mc site. The tailings dewatering rates increased to a yearly average dewatering rate of 57 gpm in 1993. These rates subsequently declined as the progressive dewatering of the tailings was realized. Approximately 199 million gallons of water have been pumped from the tailings through 2000.

1.2.4 SURFACE WATER

The main surface water body in the vicinity of the PMC Lucky Mc Tailings is the Area 5 mine reclamation reservoir, which is approximately 1 mile to the southeast of the tailings. The Area 4 reclamation reservoir is an additional 1.5 miles further to the south. These reclamation reservoirs are fed by both surface runoff and ground water and, therefore, always contain water. The depth to ground water in both Reid and Fraser

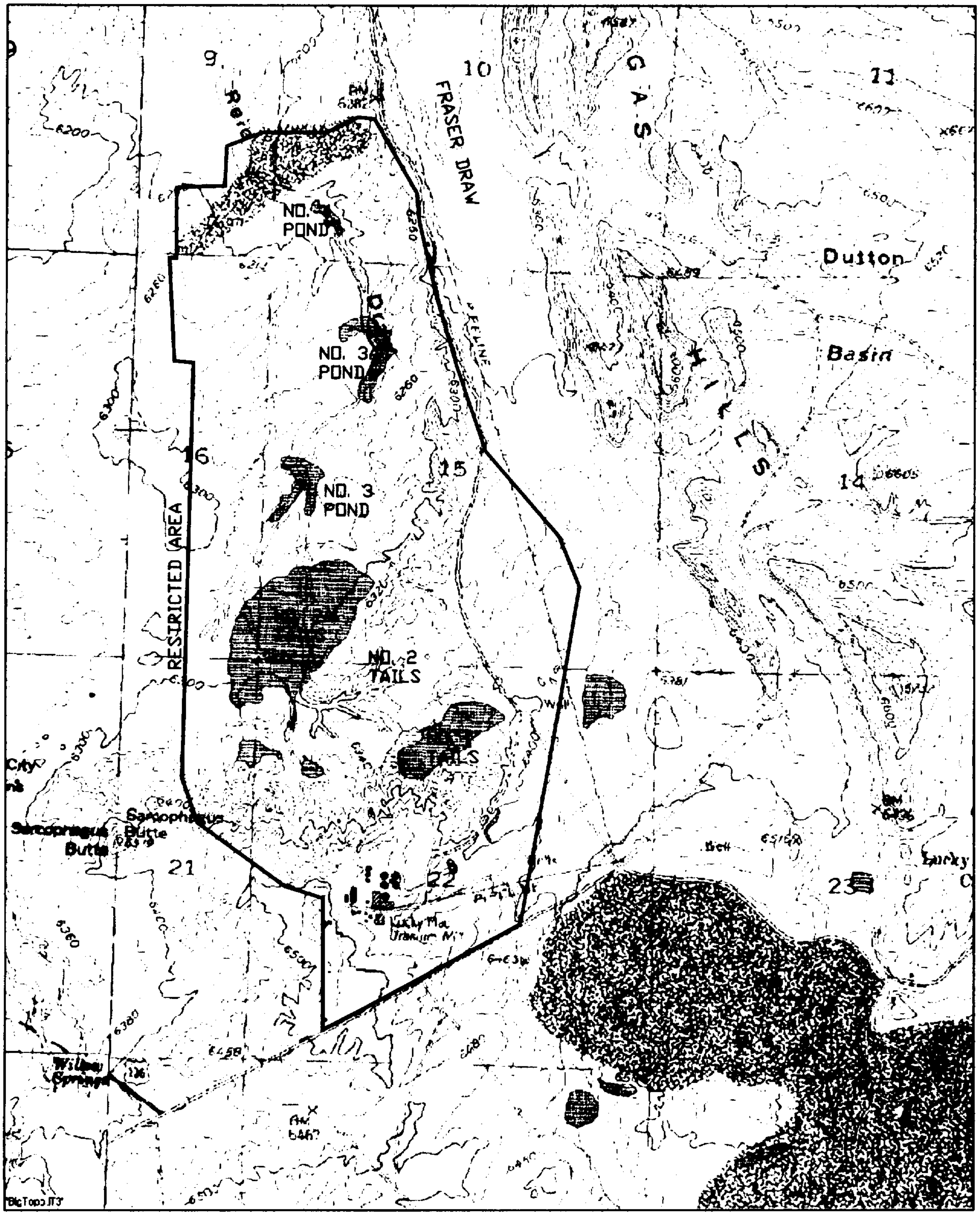
Draws is large enough that ground water does not discharge to the surface in these two ephemeral streams. A stock reservoir is located approximately two miles downstream of the No. 4 solution pond dam in Reid Draw. The first stock pond in Fraser Draw is approximately seven miles downstream of the tailings area. The ground-water level in the Fraser Draw alluvial system at the stock reservoir is estimated to be significantly below the land surface, based on the piezometric surfaces presented in Whitcomb and Lowrey (1968).

1.2.4.1 IMPACTS ON SURFACE WATER

The Area 4 and Area 5 reclamation reservoirs are upgradient of the Wind River Channel area in the Wind River aquifer and, therefore, are not potentially affected by the tailings seepage. Surface water in Reid and Fraser Draws recharge the alluvium for the short duration of the infrequent surface flows in these areas. Ground water from these alluvial systems does not have adequate head to discharge to the surface and, therefore, the surface water in Fraser Draw will not be affected by the tailings seepage.

1.2.4.2 SURFACE WATER FLOW

Surface-water flow in Fraser or Reid Draw occurs only during higher precipitation events or due to snowmelt. Fraser Draw drainage flows through the Area 5 reclamation reservoir and, therefore, large flows in Fraser Draw will occur only when runoff is large enough to spill from this reservoir. Approximately two square miles of additional Fraser Draw drainage area exists between the reservoir and the confluence of the Wind River Channel and Fraser Draw.



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SCALE: 1' = 2000'

FIGURE 1.2-1. LOCATION OF THE LUCKY Mc TAILINGS

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THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 1.2-2: LAND SURFACE ELEVATIONS (FT-MSL) AND TAILINGS LOCATIONS

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE 1.2-2

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

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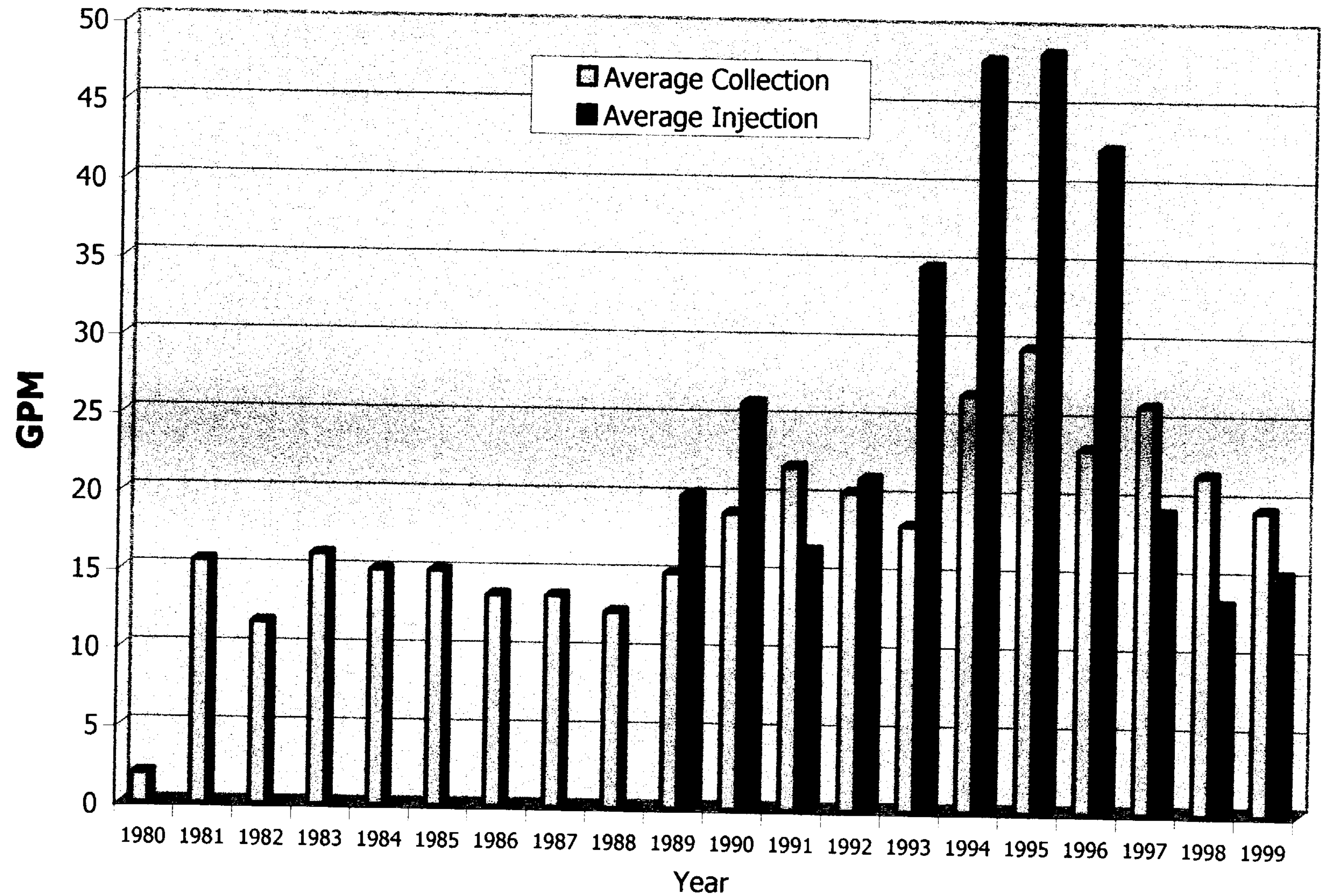

FIGURE 1.2-4. YEARLY AVERAGE COLLECTION AND INJECTION RATES AT LUCKY MC.

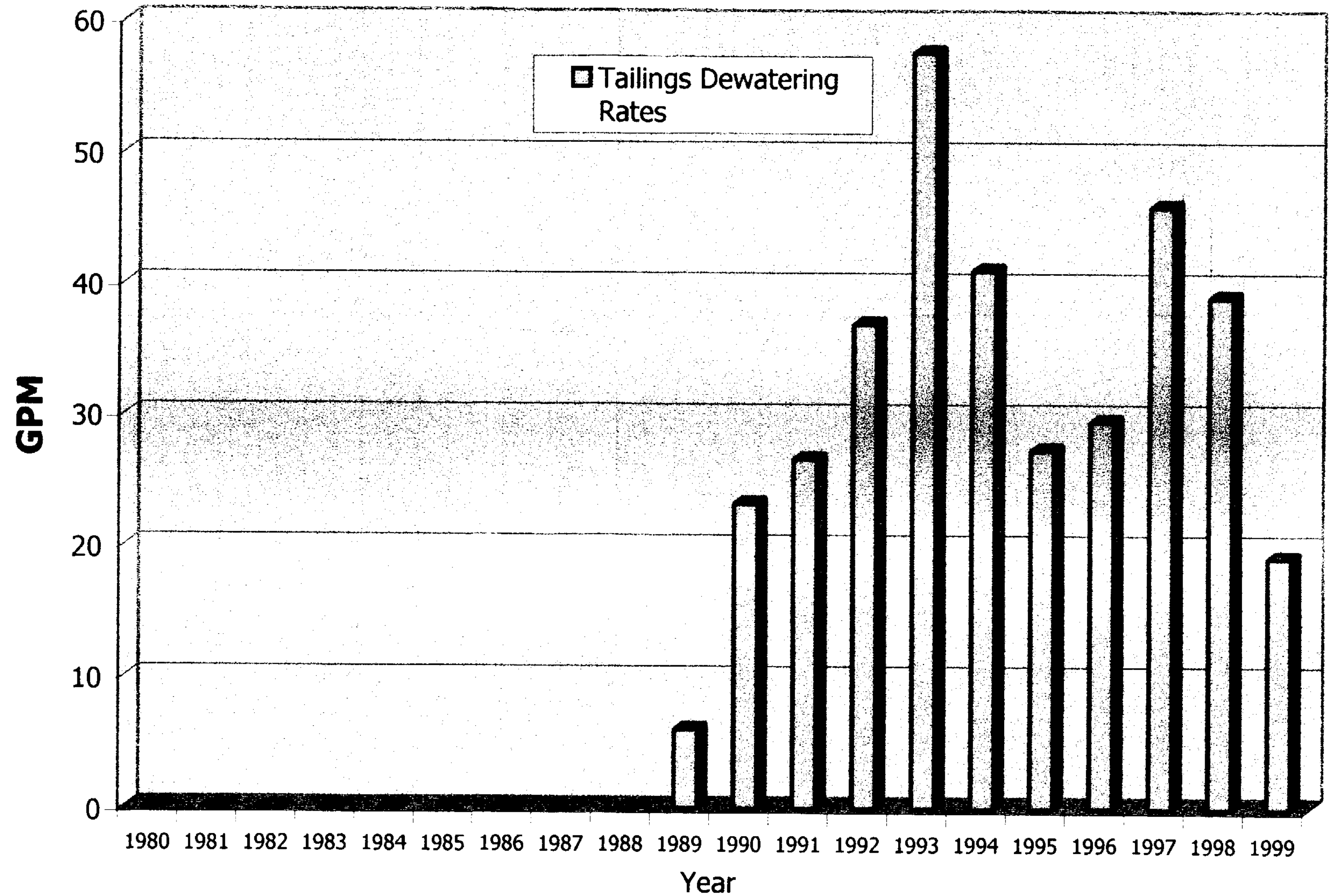

FIGURE 1.2-5. YEARLY TAILINGS DEWATERING RATES AT LUCKY MC.

1.3 EXTENT OF GROUND WATER AND GROUND-WATER CONTAMINATION

This section describes the climatic conditions, ground-water systems, background water quality and current extent of ground-water contamination at PMC's Lucky Mc site. The ground-water conditions and background water quality are presented because it is necessary to understand the ground-water systems and background concentrations before defining the degree and extent of contamination.

1.3.1 CLIMATIC CONDITIONS

The Lucky Mc site is at an elevation of 6200 to 6400 feet above mean sea level (MSL). The climate is typical of high desert with average precipitation of 9 inches according to Martner (1986). Precipitation is typically greatest in the months of May and June with infrequent high intensity thunderstorms. Figure 1.3-1 presents the total yearly precipitation for the Lucky Mc site from 1980 through 1999. This twenty-year record on site gives an average of 6.0 inches/year. Annual lake evaporation was estimated by Martner (1986) at 46 inches. Evaporation is typically greatest in the months of July and August.

1.3.2 GEOLOGIC AND HYDROLOGIC SETTING

The Wind River Formation, which exists mainly south of the Lucky Mc Tailings Site, is the ground-water aquifer that feeds the ground-water system adjacent to the Lucky Mc Tailings. The uranium was mined from the Wind River formation. The Wind River Formation dips to the south, while the ground-water flow is from the south. Mine areas 4 and 5 are located south of the tailings site and both contain a reclamation reservoir, which is fed by the Wind River aquifer. The Wind River Formation consists mainly of sand and clay lens sequences. A lower member exists in the tailings area that is mainly clay. The top of the lower member is considered the base of the Wind River aquifer. The Wind River aquifer flows into the tailings area through a narrow Wind River channel just east of the No. 1 and No. 2 Tailings and into the Fraser Draw alluvial system, which continues to convey the Wind River aquifer water to the north beyond the tailings area. The Wind River formation exists further to the north but the Fraser Draw alluvial system

has to convey water from the Wind River formation south of the site to the north due to the Cody Shale becoming the main surface geologic unit in the area from the tailings to the north. The Cody Shale acts as an aquitard and restricts ground-water movement. Water stored in the No. 1 and No. 2 Tailings has fed the Wind River Channel and is hydrologically connected to the Wind River aquifer. The tailings, Wind River Channel and Fraser Draw alluvial systems all act as one ground-water system in this area, and they are collectively referred to as the Lucky Mc aquifer for reference in this report.

Figure 1.3-2 presents the base of the Lucky Mc aquifer, which consists of the base of the tailings in the tailings area, base of the sands in the Wind River Channel area and the base of the alluvial material in Fraser Draw. The red line shown on Figure 1.3-2 shows the limits of saturation in the Lucky Mc aquifer and, therefore, the limits of this ground-water system. This figure also shows the location of three cross sections. Cross sections A-A' and B-B' are in the Wind River Channel area and are presented as Figures 1.3-3 and 1.3-4. These two cross sections were originally presented in Hydro-Engineering (1983). Figure 1.3-3 shows the Wind River Channel area downgradient of both the No. 1 and No. 2 Tailings and shows a significant ridge of Cody Shale on the right side of this cross section. East of this ridge, the Wind River formation fans into the Fraser Draw alluvium. Figure 1.3-3 shows the water-level elevations in 1988 and the year 2000. Water levels in the Wind River Channel are fairly similar, except for a depression near a collection well on the west side of the Wind River Channel in 1988. Water levels prior to pumping in 1980 were significantly higher than these water-level elevations and have also been higher between 1988 and 2000 due to the fresh-water injection system. The water-level elevation east of the Wind River Channel in Fraser Draw is currently less than 6,320 ft-msl. Figure 1.3-4 shows cross section B-B' (see Figure 1.3-2 for location), which is further to the south and shows the Wind River Channel near the No. 2 Tailings on the left and the main Wind River Channel in the middle of the cross section. This figure also shows the 1988 and 2000 water-level elevations in the Wind River Channel. Water-level elevations in the main portion of the Wind River Channel have also been higher than the present levels due to fresh-water injection.

A third cross section, which begins on the No. 1 Tailings Dam and goes through the No. 1 Tailings and into the Wind River Channel area at well P-6 is presented in Figure 1.3-5. The location of cross section C-C' is shown on Figure 1.3-2. This cross section shows that the lower Wind River clays exist in this area at an elevation of slightly greater than 6,370 ft-msl. Figure 1.3-2 shows a narrow ridge where the base of the Lucky Mc aquifer is lower than 6,380 in the CT-1 and OBS-2 areas. This low area has served as the main outlet from the No. 1 Tailings to the Wind River Channel. Figure 1.3-5 shows the water-level elevations in 1989 when they were initially defined in the No. 1 Tailings and the 2000 water-level elevations. This figure shows that a significant portion the tailings have been dewatered by the No. 1 Tailings dewatering program, which began in late 1989. This figure shows that the water levels in the low area east of the No. 1 Tailings have dropped below the base of the Lucky Mc aquifer. The No. 1 Tailings will not have a potential for future movement to the Wind River Channel with a small amount of additional drop of the water levels in the tailings area.

1.3.3 LUCKY Mc AQUIFER

The limits of the Lucky Mc aquifer are shown on Figure 1.3-2, which is the limits of saturation in the tailings, Wind River Channel and Fraser Draw. The limits of the Lucky Mc aquifer are continued slightly beyond the No. 2A Tailings due to the movement of water through this dam into the low permeability Cody Shale or the limited amount of Wind River material on the southwest side of the tailings. The Lucky Mc aquifer exists in the Wind River Channel area, east of the No. 1 and No. 2 Tailings, and continues to the north until it reaches Fraser Draw. The northern portion of the Wind River Channel consists mainly of weathered Cody Shale material. Therefore, the hydraulic conductivities in this area are significantly less than they are to the south. The Wind River Channel discharges to the Fraser Draw alluvium. The Fraser Draw alluvium also receives significant amounts of water from the Wind River aquifer to the southeast of the tailings area.

1.3.3.1 LUCKY Mc AQUIFER PROPERTIES

The Lucky Mc aquifer properties vary due to the variation in types of materials in this aquifer. Figure 1.3-6 presents the hydraulic conductivity (permeability) for the Lucky Mc aquifer in ft/day. The contours on Figure 1.3-6 are the hydraulic conductivities used to estimate the model values. The observed hydraulic conductivities from pump tests are presented by wells.

Figure 1.3-6 shows a high permeability zone through the Wind River Channel area, which exists on the east side of the No. 1 Tailings and extends to the northeast of the No. 2 Tailings and into the T1-9 area. Permeabilities gradually decline to the north of this area due to the Lucky Mc aquifer's transition to mainly weathered Cody Shale. Hydraulic conductivities are also high in the Fraser Draw alluvium with values greater than 30 ft/day at well AL-4.

Hydraulic conductivities in the tailings typically are near one ft/day in the tailings sand and significantly less where the tailings consists mainly of slimes. Hydraulic conductivities west of the No. 2A Tailings decrease significantly as the Wind River material pinches out and the ground water has to move to the Cody Shale.

Figure 1.3-7 presents the specific yields used in the modeling of the Wind River aquifer. Specific yields extend up to 0.2 and decline to less than 0.08. Multi-well pump tests near CT-4 in the No. 1 Tailings produced a specific yield of 0.15 for the tailings sand. The specific yield in the tailings slimes would be expected to be lower.

1.3.3.2 LUCKY Mc AQUIFER GROUND-WATER FLOW

The ground-water flow in the Lucky Mc aquifer is from the south into the Wind River Channel area and Fraser Draw alluvial system. Figure 1.3-8 presents the water-level elevation for the Lucky Mc aquifer for 2000. This figure shows that the head in the upgradient side of the aquifer at well T1-6 is greater than 6400 ft-msl and gradually decreases to less than 6220 ft-msl at the north end of Fraser Draw at well AL-6. Ground water from the Wind River aquifer enters the Lucky Mc Tailings area and can

flow through the narrow Wind River Channel or move to the northeast into the Fraser Draw alluvium. The Wind River Channel receives very little water presently from the No. 1 Tailings due to the dewatering. The piezometric surface is very flat in the northeastern area where the base of the Lucky Mc aquifer is the lowest. The gradient out of the No. 2 Tailings into the Wind River Channel is greater due to more head above the base of the Lucky Mc aquifer on the northeast side of the No. 2 Tailings. There is also limited seepage from the 2A dam to the northwest into the relatively impermeable Cody Shale. This seepage will remain very limited in quantity and in the extent of its migration (see Section 2.1 for further discussion).

The ground-water velocity equation is presented on pages 70 and 71 of Freeze and Cherry (1979). Hydraulic gradient multiplied by the horizontal permeability divided by the effective porosity yields the ground-water velocity. Ground-water velocities of less than one up to five ft/day are estimated for the Wind River Channel area. The ground-water velocity in 2000 near well T1-9 is estimated at 1.7 ft/day from an average permeability of 25 ft/day, a gradient of 0.01 ft/ft and an effective porosity of 0.15. Water-quality changes after the startup of the fresh-water injection system indicate a ground-water velocity of approximately 5 ft/day for this area. Ground-water velocities in the main portion of the Wind River Channel are expected to be within the range of 1 to 5 feet per day. Ground-water velocity in the main portion of the Fraser Draw alluvium is estimated to be 2 ft/day based on a gradient of 0.01 ft/ft, a permeability of 30 ft/day and an effective porosity of 0.15. Some of the ground water in Fraser Draw likely is moving significantly slower than this value and some may be moving a few times greater.

The rate of water movement in the Lucky Mc aquifer is derived from Darcy's Law where the rate is equal to the product of the transmissivity multiplied by the gradient and the width of the aquifer. The rate of water moving in the Wind River Channel prior to initiation of any collection was estimated to be 4.2 gpm, based on an average permeability of 3 ft/day, hydraulic gradient of 0.02 ft/ft and a cross-sectional area of 13,660 ft^2. An estimate of 34 gpm was obtained for the flow in Fraser Draw downgradient of the site based on an average hydraulic conductivity of 30 ft/day, a

saturated thickness of 20 feet, a cross section width of 1100 feet and a gradient of 0.01 ft/ft.

1.3.4 BACKGROUND WATER QUALITY

The background water-quality conditions at this site have been monitored since 1979 using well T1-6, which is located south of the tailings. Based on the piezometric surface, the general ground-water flow in the Lucky Mc aquifer is generally to the north with flow having to converge to Fraser Draw alluvium. The water quality in well T1-6 is influenced by the mineralization in the Wind River Formation. Naturally higher levels of uranium, selenium and radium are expected in this ground water due to the mineralization.

Table 1.3-1 presents the average background water quality for Lucky Mc aquifer well T1-6 over the period of record.

TABLE 1.3-1. PMC LUCKY Mc SUMMARY OF BACKGROUND WATER-QUALITY CONCENTRATIONS.

Constituents	No. of Samples	Concentrations in Well T1-6				95th Percentile Background Concentration
		Minimum	Maximum	Median	Mean	
Uranium	42	0.012	1.75	0.25	0.30	0.91
Selenium#	11	0.120	0.25	0.16	0.17	0.26
Nickel*	25	0.025	0.39	0.08	0.11	0.15
Ra-226+228*	24	0.800	11.0	2.30	3.39	5.61
Arsenic*	51	0.0005	0.012	0.001	0.0028	0.004
Beryllium*	24	0.0025	0.050	0.005	0.017	0.03
Cadmium*	25	0.0025	0.016	0.005	0.0068	0.01
Chromium*	25	0.010	0.050	0.025	0.033	0.04
Thorium-230*	37	0.10	12.1	0.200	1.69	2.60

Note: All concentrations are in mg/l, except:
Ra-226+228 and Thorium-230, which are in pCi/l
* - More than 15% non-detects.
# - Only data since 09/97 was used.

This table lists the minimum, maximum, mean and median for each of the hazardous constituents at this site. Arsenic, beryllium, cadmium, chromium, nickel, thorium-230

and Ra-226 + Ra-228 had significantly greater than 15% non-detects and, therefore, the distribution was considered non-parametric for statistical analysis. Table 1.3-1 also presents the 95th percentile of the background data. These are the levels that are required to be 95% confident that natural background concentrations are not the cause of downgradient concentrations.

Background water quality, as measured at well T1-6, has remained relatively consistent over the period of record. Appendix C presents the tabulated water quality for the period of record for well T1-6 (see pages C-25, C-26, C-27, C-59, C-60, C-82, C-83 and C-84).

1.3.5 EXTENT OF CONCENTRATIONS

For each constituent, the extent of concentrations at the Lucky Mc Tailings site are presented on the same figure for the Wind River Channel, tailings and Fraser Draw alluvial systems. These ground waters are presented on one map in each case because these three systems are hydraulically connected to each other and act as one aquifer system called the Lucky Mc aquifer. Concentration figures are presented for uranium, selenium, nickel, Ra-226 + Ra-228, arsenic, beryllium, cadmium, chromium and thorium-230 for first quarter 2000 data.

1.3.5.1 URANIUM

Uranium concentrations for the year 2000 are presented on Figure 1.3-9. Uranium concentrations in the tailings slightly exceeded 20 mg/l in 2000 in well CT-6 in southern No. 1 Tailings, while the typical value is less than 5 mg/l. Only the uranium concentration in well P-20 in the Wind River Channel exceeds 10 mg/l. Concentrations on the west side of Fraser Draw slightly exceed 1.0 mg/l at well AL-6. The blue pattern shows where the uranium concentrations exceed 0.98 mg/l, the proposed maximum average projected POE concentration. Uranium concentrations have been slow to restore in the Wind River Channel. Uranium concentrations in the Wind River Channel will continue to be elevated after the conclusion of the CAP. Some additional input to the Wind River Channel area from the No. 2 Tailings will also occur, but the CAP will

preclude input from the No. 1 Tailings into the Wind River Channel. An ACL will be needed for uranium.

1.3.5.2 SELENIUM

Figure 1.3-10 presents the selenium concentrations for the Lucky Mc ground-water systems. This figure shows that selenium concentrations exceed 2 mg/l in a small area of the Wind River Channel area near wells P-15 and P-17. Present concentrations in the tailings are less than 0.5 mg/l, except near wells 2A-21 and CT-6. Selenium concentrations are declining with time in the tailings, which decreases the importance of this parameter relative to future seepage. Concentrations in Fraser Draw monitoring wells extend up to 0.33 mg/l in well AL-1. The maximum projected average POE concentration of 0.26 mg/l is based on the 95% confident level of the background data. The pattern on Figure 1.3-10 shows where the concentrations of selenium exceed 0.26 mg/l, which is mainly the western portion of the Wind River Channel and western portion of Fraser Draw. Additional restoration of the western portion of the Wind River Channel is anticipated prior to the termination of the CAP. Regardless, an ACL for selenium will be needed for the Lucky Mc site.

1.3.5.3 NICKEL

The nickel concentrations for 2000 are shown on Figure 1.3-11 for the Lucky Mc site. Nickel concentrations exceed 1.0 mg/l in most of the tailings and a portion of the Wind River Channel. Concentrations have remained low in Fraser Draw due to geochemical retardation of this constituent. The blue pattern shows where nickel concentrations exceed 0.15 mg/l. This constituent's maximum projected average POE concentration of 0.15 mg/l is also based on the 95% confident level of background. An ACL is needed for nickel concentrations.

1.3.5.4 RADIUM-226 PLUS RADIUM-228

Figure 1.3-12 presents the radium-226 plus radium-228 concentrations. This figure shows that the radium concentrations are high in the tailings with a few exceeding 10 pCi/l in the Wind River Channel. Radium concentrations have remained below 5.0 pCi/l

in Fraser Draw due to the attenuation of this constituent. The blue pattern is shown where concentrations exceed the site standard of 5 pCi/l, which is close to the proposed maximum projected average POE concentration of 5.6 pCi/l. An ACL is needed for radium for the Lucky Mc ground-water system.

1.3.5.5 ARSENIC

Arsenic concentrations are presented on Figure 1.3-13 for the Lucky Mc aquifer. Arsenic concentrations are elevated in the tailings but do not exceed 0.05 mg/l (site standard) at any site in the Wind River Channel or Fraser Draw alluvium. An ACL for arsenic is not necessary due to the attenuation of this constituent in the Wind River Channel. The area where arsenic concentrations exceed 0.05 mg/l is shaded. Arsenic concentrations have never been mobile from the No. 2 Tailings to the Wind River Channel due to attenuation of arsenic by the Cody Shale in this area.

1.3.5.6 BERYLLIUM

Figure 1.3-14 presents the beryllium concentrations for the Lucky Mc area. Beryllium concentrations exceed 0.1 mg/l in some of the tailings. Beryllium concentrations are also elevated (greater than 0.05 mg/l), as shown by the blue pattern, in three areas of the Wind River Channel. Concentrations of beryllium exceed 0.05 mg/l in the southern portion of the Wind River Channel and in the P-3 and T1-26 areas. Beryllium is also elevated in the well closest to the No. 2A Dam (T2-5) shown on the west side of the figure. Attenuation of beryllium has limited the distance it migrates with no observed movement to the POC well. Beryllium concentrations have been completely attenuated from the No. 2 Tailings, but simulations indicate that the concentrations east of the No. 1 Tailings in the Wind River Channel will cause a slight exceedance of the site standard in the future at the POC, but not at the POE. Therefore, an ACL is considered necessary for beryllium.

1.3.5.7 CADMIUM

Figure 1.3-15 presents the cadmium concentrations for the Lucky Mc ground water and shows that cadmium concentrations exceed 0.1 mg/l in only two locations in the tailings.

The blue pattern shows where cadmium concentrations are greater than the site standard of 0.01 mg/l. Concentrations exceed the site standard at several locations in the Wind River Channel, but over the years cadmium has not been mobile from the No. 2 Tailings into the Wind River Channel. Simulations of the cadmium concentrations east of the No. 1 Tailings in the Wind River Channel predict a gradual exceedance of the site standard of 0.01 mg/l at the POC but not at the POE. Therefore, an ACL is considered necessary for cadmium.

1.3.5.8 CHROMIUM

Chromium concentrations in the Wind River Channel have been restored (see Figure 1.3-16). The chromium concentrations exceed 0.1 mg/l in the southern half of the No. 1 Tailings. Chromium concentrations have remained low in Fraser Draw due to attenuation by the Wind River materials. An ACL for chromium is not needed for the Lucky Mc site.

1.3.5.9 THORIUM-230

Thorium-230 concentrations are presented on Figure 1.3-17. Thorium concentrations in the Wind River Channel slightly exceed the site standard of 13.2 pCi/l in two small areas. Thorium has not been very mobile in the Wind River Channel. Thorium-230 in water moving from the No. 2 Tailings to the Wind River Channel has been attenuated by the Cody Shale. Therefore, an ACL is not needed for this constituent.

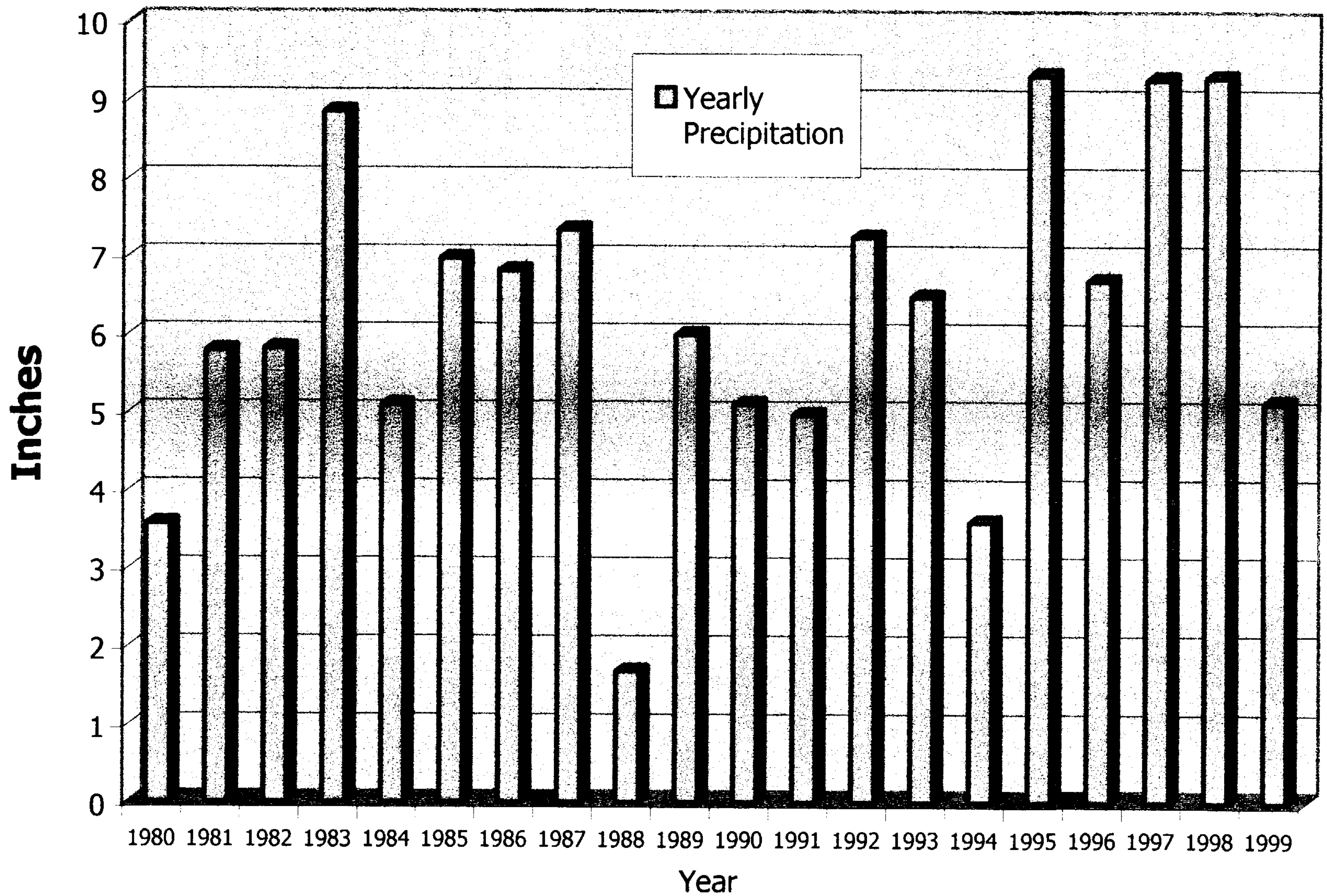

FIGURE 1.3-1. YEARLY TOTAL PRECIPITATION AT THE LUCKY MC SITE.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 1.3-2: ELEVATION OF THE BASE OF THE LUCKY MC AQUIFIER, IN FT-MSL

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE 1.3-2

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

D-1A

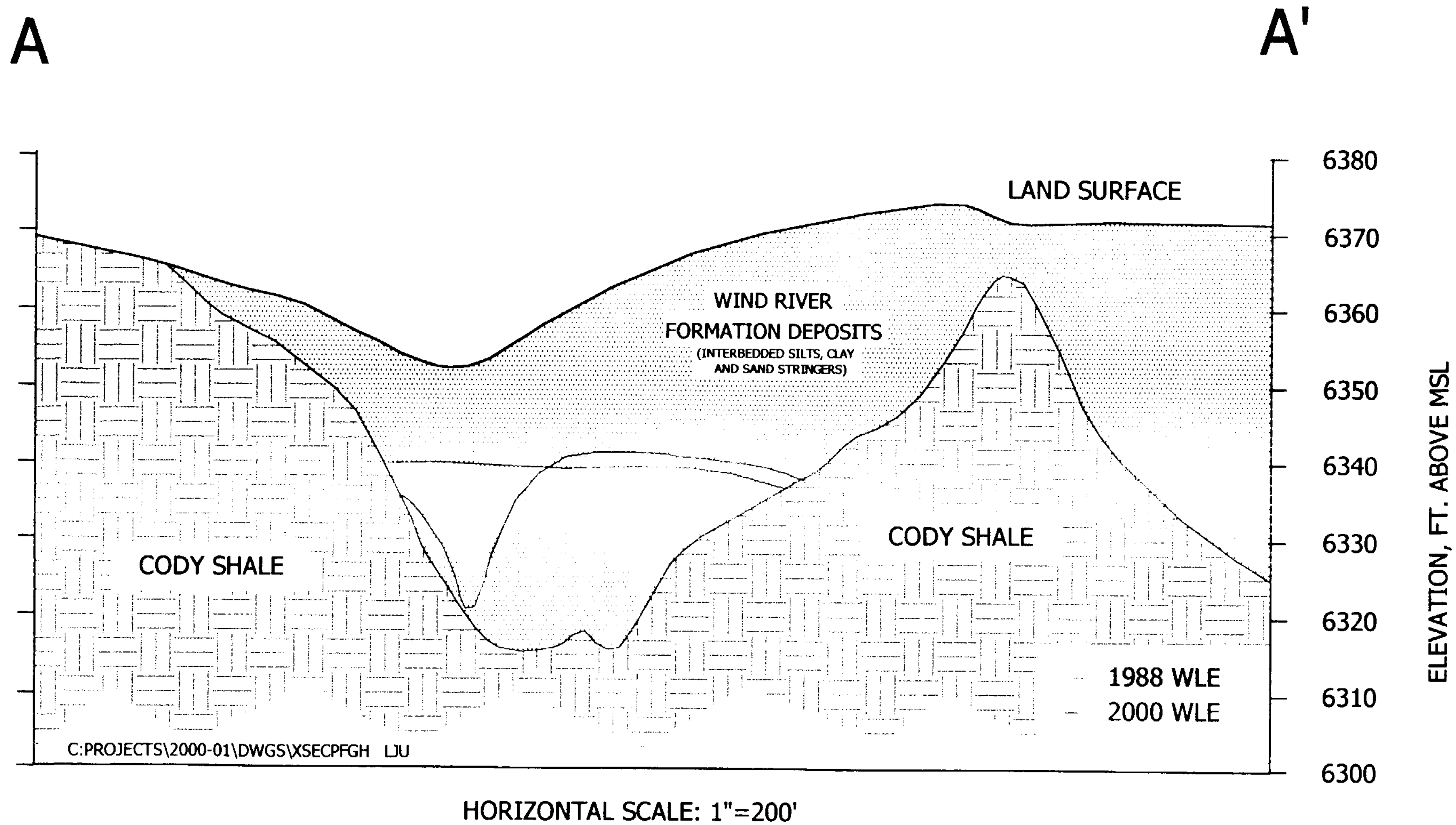

FIGURE 1.3-3. GEOLOGIC CROSS SECTION THROUGH THE WIND RIVER CHANNEL, A-A'

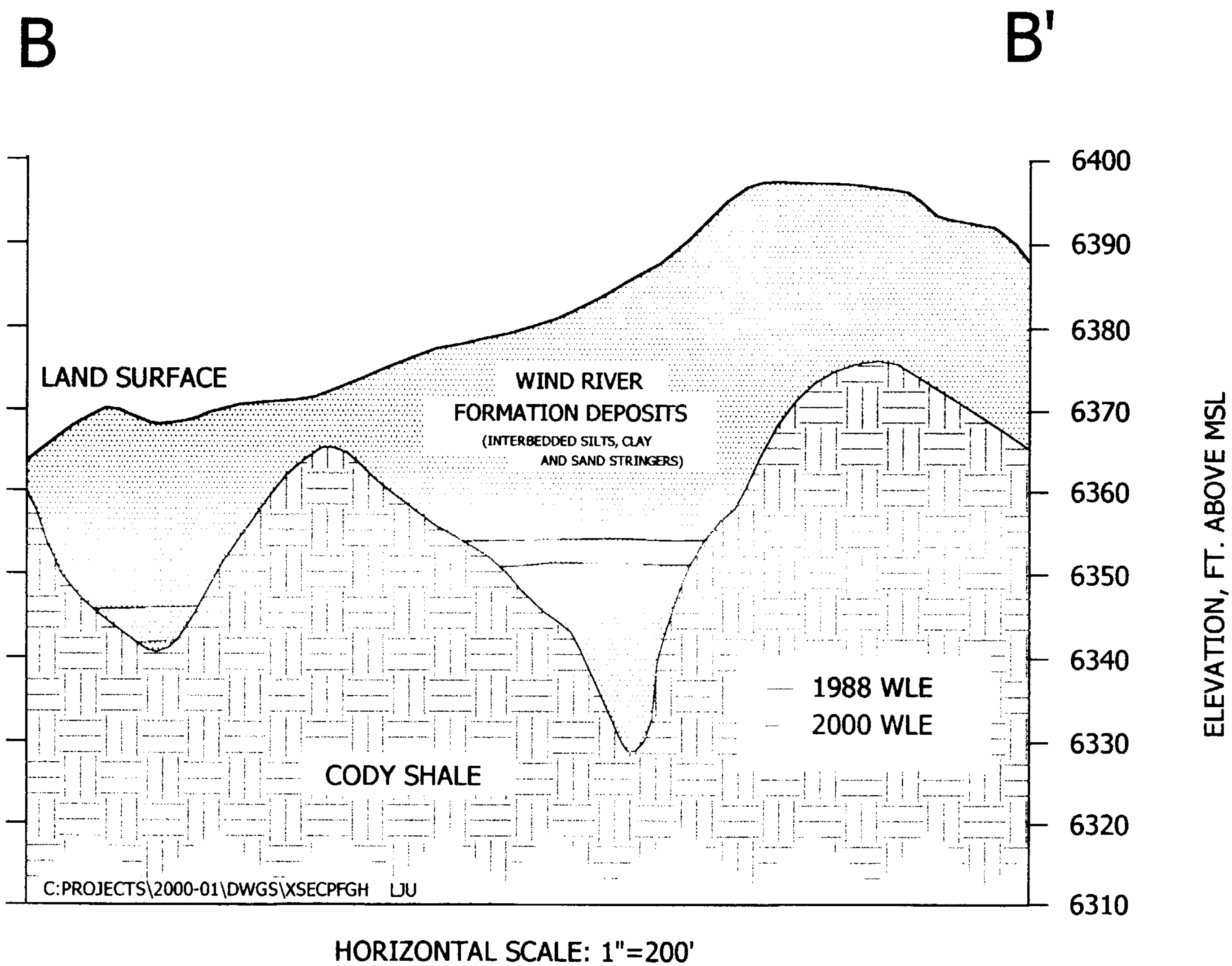

FIGURE 1.3-4. GEOLOGIC CROSS SECTION THROUGH THE WIND RIVER CHANNEL, B-B'

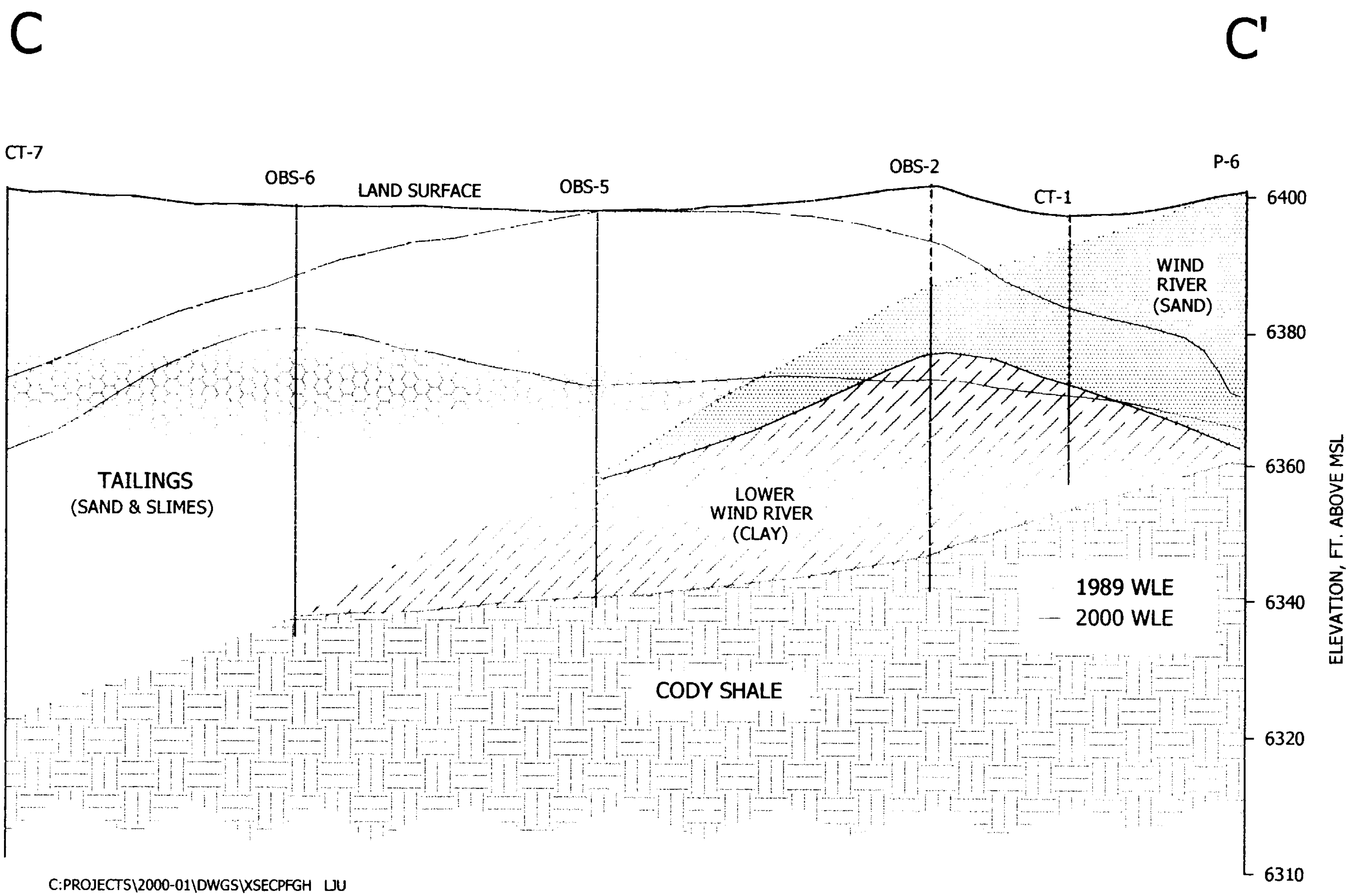

FIGURE 1.3-5. GEOLOGIC CROSS SECTION THROUGH THE No.1 TAILINGS, C-C'

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THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 1.3-8: WATER -LEVEL ELEVATION IN THE LUCKY MC AQUIFER, 2000, IN FT-MSL

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1.4 CURRENT GROUND-WATER PROTECTION STANDARDS

The PMC Lucky Mc site presently has ground-water protection standards established by the NRC to govern the point of compliance at this site, well T1-12. Section 1.5 presents the proposed alternate concentration limits. The following tabulation presents the nine site standards set by the NRC:

TABLE 1.4-1. PMC LUCKY Mc NRC SITE STANDARDS.

CONSTITUENTS	NRC STANDARD
ARSENIC	0.05
BERYLLIUM	0.05
CADMIUM	0.01
CHROMIUM	0.05
NICKEL	0.09
RA-226 + RA-228	5.0
SELENIUM	0.01#
THORIUM-230	13.2
URANIUM	0.11

NOTE: All concentrations are in mg/l except:
RA-226 + RA-228 and Thorium-230, which are in pCi/l
 # = Effective standard is the new EPA standard of 0.05 mg/l

The EPA selenium drinking water standard is 0.05 mg/l, and this standard should supersede the current site standard.

1.5 PROPOSED ALTERNATE CONCENTRATION LIMITS

Alternate concentration limits are needed for the Lucky Mc site because modeling predicts that concentrations at the POC will exceed the present site standards for uranium, selenium, nickel, radium, beryllium and cadmium. The long-term drainage of water from the tailings after the cessation of dewatering will result in Wind River aquifer concentrations greater than the present site standards at the Point of Compliance (POC). These concentrations will be As Low As Reasonably Achievable (ALARA). Twenty years of operation of the CAP can be used to demonstrate the extensive effort toward restoration of the Wind River aquifer. A total of sixty-four wells have been installed to define this ground-water system with twenty-eight different wells being used through the life of the operation for collection and seventeen wells used for injection. A large effort has been expended for twenty years in producing the restoration that has occurred in the Wind River Channel area. A total of 187 million gallons of contaminated water has been produced from the Wind River Channel. In addition to the collection, a total of 172 million gallons of fresh water has been used to aid in the restoration of the Wind River Channel. Dewatering of the tailings has also been a very important component to the CAP for the last 11 years. The tailings dewatering program has been used to minimize the future seepage of water to the Wind River Channel. Seventy-one wells were installed in the tailings to define the ground-water conditions in this area with fifty-five of these wells being installed so they could be used as dewatering wells if adequate production was obtained. A total of 185 million gallons of water have been removed from the tailings. Despite these efforts, ACLs are needed for uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium at this site. Figure 1.5-1 presents the POC well location (well T1-12), the proposed POE location (well AL-6), and the proposed transfer property boundary. No ground-water usage would be allowed within this boundary.

A three-dimensional ground-water flow model, MODFLOW, (McDonald and Harbaugh, 1988) was used to simulate ground-water flow in the Lucky Mc aquifer and seepage from the tailings. The model used a grid covering the entire tailings and extending down Fraser Draw to the POE location. The flow modeling was used to simulate the

rates of ground-water movement into Fraser Draw from the Wind River Channel and the rates of movement in Fraser Draw upgradient of the site. Results from the flow modeling were then used to predict the maximum concentration of the ACL constituents at POC well T1-12. A three-dimensional numerical solute transport model, MT3D, (S.S. Papadopulos & Associates, 1992) was used to predict the concentrations with time at the POC well, and the POE location. This model uses the cell-by-cell flows produced by the MODFLOW model to predict the movement of the constituents from the tailings to the Wind River aquifer and eventually to the POC well and beyond. The results from these simulations were used to determine the POC value for uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium. Table 1.5-1 presents the resulting ACL values for the POC well.

TABLE 1.5-1. PROPOSED ALTERNATE CONCENTRATION LIMITS.

CONSTITUENT	ALARA POC T1-12
Uranium	1.70
Selenium	1.10
Nickel	0.85
Ra-226 + Ra-228	7.50
Cadmium	0.02
Beryllium	0.07

NOTE: Concentrations are in mg/l, except Ra-226 + Ra-228, which is in pCi/l.

Pathfinder Mines Corporation has operated an extensive containment and restoration system for over 20 years that has been very successful in restoring water quality in much of the Wind River Channel area. Restoration efforts beyond those currently in place are prohibitively expensive and result in incrementally smaller benefit. Discussions concerning transport modeling and the ALARA values are presented in Sections 2.2 and 3.5, respectively.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

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2.0 HAZARD ASSESSMENT

The proposed Alternate Concentration Limits for uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium are supported by the risk assessment described in this section. The source of the contamination is characterized and the transport of contaminants in ground water is described in the first two sub-sections. The potential pathways and rates of exposure are summarized in sub-section 2.3 and details are provided in Appendix A. The potential risk to human health is described in Section 2.3.2 and details are provided in Appendix B.

The source of ground-water contamination at the Lucky Mc site is the tailings piles and the former mill site. The last mill tailings were hydraulically deposited in the tailings area in 1988. Tailings solution has not been contained on Tailings Piles No. 1 and No. 2 since the early 1980's. Interim cover was placed on the No. 2A Tailings by 1993. Spray evaporation on the No. 2A Pile was last performed in 1999.

2.1 SOURCE AND CONTAMINATION CHARACTERIZATION

The tailings impoundments have been the primary source of ground-water contamination at the Lucky Mc site. The hydraulic delivery of the tailings to the impoundments results in a segregation of material according to gradation at the point of discharge. Generally, the tailings were spigoted on the south and west sides of the No. 1 Tailings and off the No. 1 Dam into the No. 2 Pile, resulting in a beach area made up of the coarser materials. Spigoting off the No. 2 and No. 2A Dams into the No. 2A basin resulted in mainly sands on the south and north sides of the No. 2A Tailings. The finer grained materials were typically carried to the pool area in the center of the ponds where they were deposited as slimes. The transition from coarse to fine grained materials is gradual and the process of varying the spigot point resulted in stratification of the tailings by gradation. There are distinct sandy beach areas and slime pool areas, but much of the tailings area is made up of mixed gradation materials or layered sequences of sands and fine-grained materials.

2.1.1 CONTAMINANT SOURCE TERM CHARACTERIZATION

Water-quality data for the tailings is tabulated on pages C-1 through C-6 in Table C-1 in Appendix C where field pH and conductivity are presented with major constituents, sulfate and chloride, along with nitrate plus nitrite and uranium in the first group, radionuclides in the second group and minor constituents in the third group.

Six tailings wells were sampled during 2000 to update the water quality over the tailings area. Wells CT-3 and CT-6 were sampled in the No. 1 Tailings, 2-14 and 2-15 in the No. 2 Tailings and 2A-21 and 2A-22 in the No. 2A Tailings. The analysis of water quality for these tailings samples shows that the concentrations in the tailings vary significantly over the area. In general, the highest concentrations are in the southern portion of the No. 1 Tailings, while the lowest concentrations are in the southern portion of the No. 2 Tailings.

Uranium concentrations for the tailings wells averaged 6.3 mg/l from the six samples collected in March of 2000. A slightly higher uranium concentration was obtained from the composite of the water from tailings dewatering wells (TAILS) in the year 2000. No trend in the tailings uranium concentrations has been observed but the concentrations initially defined in the Wind River Channel exceeded 50 mg/l over a large area in 1981. The uranium concentration in the tailings solution discharged to the tailings likely declined over the life of the mill as the average ore grade declined. After water levels have been lowered so the No. 1 tails outlet does not flow, the average tails uranium concentration to the Wind River Channel should be less than 5 mg/l from the No. 2 Tailings. Some long-term biological reduction in the uranium concentration in the tailings may occur.

The selenium concentrations in the tailings varied substantially for the six 2000 samples. These concentrations varied from a low of 0.04 to a high of 15.3 mg/l. Two of the six samples were above 0.5 mg/l, one from a well in the southern portion of the No. 1 Tailings and the other from a well in the central portion of No. 2A. Selenium analyses prior to the third quarter of 1997 did not measure total selenium (all valence states) and,

therefore, earlier concentrations were likely to have been several times greater than the reported values. Selenium concentrations, as initially defined in the Wind River Channel, were above 0.5 mg/l, but initial total selenium concentrations likely were 3 to 5 mg/l in the Wind River Channel. The average total selenium concentration in seepage from the No. 2 Tailings into the Wind River Channel in the future is expected to be significantly less than 0.5 mg/l.

Nickel concentrations for the six tailings wells sampled in March of 2000 varied from 0.44 to 8.0 mg/l with the highest value in No. 1 Tailings well CT-6. Well CT-6 also contained the largest uranium and selenium values. Nickel concentrations in five of the six wells declined from the previous samples. A nickel concentration slightly above 1 mg/l is expected from the No. 2 Tailings into the Wind River Channel area in the future. Nickel concentrations in 1980 in the Wind River Channel were similar to the highest 2000 value from the tailings.

The radium-226 plus radium-228 concentration in the tailings is greater than 1000 pCi/l only in well CT-6. Radium is significantly attenuated as it migrates from the tailings into the Wind River Channel area. The radium-226 concentrations in the Wind River Channel in 1980 were low (near 5 pCi/l), showing the large amount of attenuation of this constituent.

Arsenic concentrations in the March 2000 tailings well samples varied from 0.41 (well 2-14) to 140 mg/l (well CT-6) with the next largest value being 10 mg/l in well CT-3. This shows that the arsenic concentrations presently vary substantially over the tailings as they have historically. Arsenic concentrations have been highly attenuated as seepage water moves into the Wind River Channel. Arsenic had migrated from the tailings to a level slightly greater than 1 mg/l in the Wind River Channel in 1981. Future seepage from the No. 2 Tailings into the Wind River Channel is expected to contain an arsenic concentration of less than 0.5 mg/l.

The March 2000 tailings well beryllium concentrations were less than 0.2 mg/l. Beryllium concentrations in the tailings wells have been fairly similar over time with concentrations only slightly above the site standard. Beryllium concentrations from the No. 2 Tailings into the Wind River Channel should not exceed the site standard of 0.05 mg/l in the future due to the attenuation of the already low levels by the Cody Shale material.

Cadmium concentrations for the March 2000 samples from the six tailings wells varied from 0.023 to 0.13 mg/l with the highest value from well CT-3. This shows that the present cadmium concentrations in the tailings are relatively low and potential migration of cadmium is low due to attenuation as seepage moves into the Wind River Channel. The 1980 cadmium concentrations in the Wind River Channel were approximately twice the highest 2000 value in the tailings, showing a significant decrease of this constituent with time.

The majority of the chromium concentrations for the March 2000 samples from the tailings were less than the detection level with the two No. 1 Tailings values above detection at 0.19 mg/l (CT-3) and 1.1 mg/l (CT-6). Measurable chromium concentrations exist only in the southern half of the No. 1 Tailings. Future seepage from the No. 2 Tailings into the Wind River Channel should contain a very small concentration of chromium, which is likely to be less than the site standard of 0.05 mg/l. The 1980 chromium concentrations in the Wind River Channel varied up to 0.58 mg/l.

Thorium-230 concentrations in the tailings have been high over time and are expected to remain high for a long time. However, thorium-230 has been highly attenuated in the Wind River Channel flows. Thorium-230 concentrations in the Wind River Channel exceeded 10,000 pCi/l in 1981 but have been returned to the site standard by the CAP. Future thorium concentrations in seepage from the No. 2 Tailings are expected to be small due to attenuation by the Cody Shale.

2.1.2 HYDROLOGIC SOURCE TERM CHARACTERIZATION

Seventy-one wells were drilled in the tailings (see Figure 1.2-3). The majority of the tailings wells were drilled into the sand tailings to develop dewatering in those areas. Some slime tailings wells were installed to define water conditions in the slime tailings. Wells CT-16, OBS-1, OBS-6A and OBS-6B were completed in the No. 1 slime tailings. Wells 2-4A and 2-4B were completed in the No. 2 slime tailings. Wells 2A-15 and 2A-16 exist in the slime tailings in the No. 2A Tailings. The remainder of the tailings wells were completed mainly in tailings sand. The tailings dewatering wells on Figure 1.2-3 are shown with a green symbol.

2.1.2.1 TAILINGS DRAINABLE VOLUME

The drainable portion of the water in the tailings is a function of the saturated thickness and the specific yield of the tailings. The base elevations of the tailings are shown in Figure 1.3-2 and water-level elevations of the tailings in 2000 are shown in Figure 1.3-8. The saturated thickness of the tailings is derived from the elevation differences.

A multi-well pump test was conducted at tailings well CT-4 in 1989 (see Hydro-Engineering, 1990). A specific yield of 0.15 was obtained from the analysis of the close observation well in this pump test. Figure 1.3-7 presents the specific yield values used in the tailings area during the numerical modeling. The specific yields are typically 0.15 in the sand areas and decline to 0.08 in the slime areas. A larger specific yield of 0.3 was required in the No. 1 Tailings dewatering area to fit water-level changes in that area.

A drainable volume of 160 million gallons of water was estimated for early 2000 in the three tailings piles by subtracting the 2000 water-level elevations from the base of the tailings. An average specific yield of 0.12 was used in this estimate.

2.1.2.2 TAILINGS DEWATERING

Tailings dewatering started on the No. 1 Tailings in late 1989. Figure 1.2-5 shows the average yearly dewatering rates for the Lucky Mc tailings. The dewatering in 1989

averaged 6 gpm over the entire year. The average yearly dewatering rates ranged from 19 gpm in 1999 to a high of 57 gpm in 1993. Dewatering in the No. 2 and No. 2A Tailings started in late 1992. A total volume of 199 million gallons of water has been extracted from the tailings and evaporated at the Lucky Mc site.

Tailings dewatering at the Lucky Mc site is a diminishing return process. As the saturated thickness of the tailings declines, the yield from the individual wells declines and the average dewatering rate declines. Tailings dewatering in the No. 1 Tailings is scheduled to continue until the water-level elevation is below the base of the outlet to the Wind River Channel. The dewatering rate from the No. 2 Tailings wells has been very small, despite a significant effort, and little progress in lowering water levels in the No. 2 Tailings has been achieved.

2.1.2.3 TAILINGS SEEPAGE

Tailings seepage from the No. 1 Tailings area has been through a subterranean outlet on the east side of the pile. The water-level elevation in this area of the tailings has been dropped below the base of the Wind River Sands. The maintenance of the water level in the tailings in this area below the base of the Wind River Sands will prevent future seepage out of the No. 1 Tailings into the Wind River Channel. Some additional dewatering is needed in the No. 1 Tailings to create a large enough depression in the tailings sands to prevent the heads in the outlet area from reaching the base of the Wind River Sand when the heads in the slimes in the No. 1 Tailings decay and cause the water levels in the Wind River Sands to recover. Water-level elevations in the sand portion of the No. 1 Tailings were typically near 6373 ft-msl in early 2000. Water-level elevations slightly exceed 6375 ft-msl in some of the slime portion of the tailings. Dewatering through September 2001 or until ACL approval will depress the water levels in the sands low enough that recovery due to slimes drainage will not exceed 6373 ft-msl. The No. 2 Tailings drainage is flowing through the No. 2 Dam into the No. 2A Tailings. A connection with the No. 2 Tailings is also allowing seepage to the northeast into the Wind River Channel area. Numerical modeling of the flow out of the No. 2 Tailings estimates that an average of 0.2 gpm will move out of the No. 2 Tailings into

the Wind River Channel over the next 10 years. Flow from the No. 2A Tailings is through the No. 2A Dam to the west into the Cody Shale. The Cody Shale is not a useable aquifer due to its extremely low permeabilities (typically less than 0.01 ft/day) and high TDS water. The Cody Shale has very good attenuation properties, which will greatly restrict any hazardous constituent movement through seepage. The total dissolved solids (TDS) of un-impacted water in the Cody Shale is typically greater than 10,000 mg/l, which makes it unsuitable for any purpose. Therefore, seepage from the No. 2A Tailings is inconsequential.

2.1.2.4 POC ALARA CONCENTRATION

The active dewatering effort will be continued through September of 2001 or until the ACL approval, which meets the ALARA conditions with respect to reducing seepage impacts on the Fraser Draw alluvial water quality.

The dewatering of the No. 1 Tailings to lower the water-level elevation in the tailings below the base of the Wind River Sand in the outlet of the No. 1 Tailings to the Wind River Channel meets ALARA conditions. This dewatering through September of 2001 will drop the water-level elevation based on the predictions of the numerical model of the Lucky Mc aquifer. The reduction of ground-water concentrations in the Wind River Channel for uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium also meets ALARA conditions. Additional operation of the CAP will not cause a measurable improvement in these concentrations.

A numerical model was used to account for the existing concentrations in the tailings and the Wind River Channel in predicting the POC concentrations at well T1-12. The results of the transport model were used to define the POC concentrations.

At present, little or no tailings seepage is escaping the collection/recharge system. Seepage from the No. 1 Tailings should not occur after the cessation of the CAP due to heads in the No. 1 Tailings being lower than the elevation of the base of the No. 1 subterranean outlet to the Wind River Channel. Dewatering of the No. 1 Tailings has

significantly decreased the heads in the No. 1 Tailings from greater than 6398 in 1989 to an average of 6373 ft-msl in the sand area in 2000. Some seepage from the No. 2 Tailings to the Wind River Channel will occur after termination of the CAP. The modeling of the Lucky Mc aquifer accounts for the future seepage from the No. 2 Tailings as heads in the No. 2 Tailings gradually decline. With this decay, the seepage rate from the No. 2 Tailings will gradually decrease with time. The concentrations of constituents at the POC well will be a result of the combination of the seepage from the No. 2 Tailings, concentrations already existing in the Wind River Channel, and the Wind River ground water moving into the Wind River Channel from the south.

For the transport modeling, the up-gradient ground-water concentrations were assumed to be equal to the average background concentrations measured at well T1-6. The mean background uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium concentrations for ground water were 0.30 mg/l, 0.17 mg/l, 0.11 mg/l, 3.4 pCi/l, 0.02 mg/l and 0.007 mg/l, respectively. The average uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium concentrations in the surface recharge water in the modeling were estimated to be 0.10 mg/l, 0.01 mg/l, 0.02 mg/l, 3.0 pCi/l, 0.002 mg/l and 0.002 mg/l, respectively. These estimates were based on the background and restoration concentrations in the Wind River Channel.

The uranium concentration in the tailings used in the transport modeling was based on the concentration contours in Figure 1.3-9. The concentration in the eastern portion of the No. 2 Tailings was slightly less than 5 mg/l. The uranium contours in Figure 1.3-9 were also used to develop initial concentrations for the model in the Fraser Draw alluvium and the remainder of the Lucky Mc aquifer.

The selenium concentrations for the model were developed from Figure 1.3-10. The selenium concentrations in the eastern portion of the No. 2 Tailings were slightly greater than 0.1 mg/l. Concentrations for the existing selenium values in the Wind River Channel and Fraser Draw were also developed from this figure. Initial concentrations in the Wind River Channel extended up to 2 mg/l of selenium.

Initial concentrations for the model for nickel and radium-226 plus radium-228 were developed from Figures 1.3-11 and 1.3-12, respectively. These 2000 concentrations were used as the initial concentrations for the model simulations. Nickel concentrations in excess of 1 mg/l were simulated in the eastern portion of the No. 2 Tailings, while radium concentrations of less than 100 pCi/l were simulated for radium-226 plus radium-228.

The beryllium and cadmium concentrations for the modeling were developed from Figures 1.3-14 and 1.3-15, respectively. These 2000 concentrations were used as initial concentrations in each of the model predictions. Beryllium concentrations slightly greater than 0.1 mg/l were simulated in the eastern portion of the No. 2 Tailings. The most important concentrations for this constituent are those that exist in the Wind River Channel east of the No. 1 Tailings. The cadmium concentrations in the No. 2 Tailings were simulated at slightly greater than 0.05 mg/l. The cadmium concentrations east of the No. 1 Tailings are also important in the cadmium simulations.

2.2 TRANSPORT ASSESSMENT

The quantity of water moving in the Lucky Mc aquifer in the tailings area is the sum of the upgradient inflow to the area from the Wind River and Fraser alluvial aquifer, the recharge from precipitation, seepage from tailings, operation of the CAP system, outflow to the Fraser Draw alluvium and flux through the No. 2A Dam. When the collection/injection system operation is terminated, the ground-water mound that has developed will decay and the long-term ground-water flow through the Wind River Channel from the south to the north will develop. In the area of concern, this water is moving to the Fraser Draw alluvium and is combining with the Fraser Draw alluvial water. The transport of constituents from the tailings is from the No. 2 Tailings to the Wind River Channel. The movement rates of the constituents are governed by the seepage velocity and retarding processes such as adsorption/desorption. The seepage velocity is a function of hydraulic conductivity, ground-water gradient, and specific yield (effective porosity) of the aquifer.

The modeling of ground-water flow was done with MODFLOW (McDonald and Harbaugh, 1988), a three-dimensional finite-difference model. A single-layer model was used due to the direct connection between the tailings, Wind River aquifer and the Fraser Draw alluvial aquifer. The details of the flow model construction are presented in Appendix C. The tailings were modeled as a bounded aquifer with connections to the remainder of the Lucky Mc aquifer on the east side of the No. 1 and No. 2 Tailings. The Lucky Mc aquifer was modeled as an unconfined aquifer with potential discharge/recharge by drains and wells, precipitation recharge or movement into or beyond the boundaries of the model. The water levels in the Fraser Draw alluvium are significantly below the land surface and, therefore, no river cells were used. The precipitation recharge over the aquifer was estimated as 0.88 inches per year, while recharge to the tailings barrier area after installation of the infiltration barrier was estimated at 0.044 inches per year.

Current versions of the MODFLOW model can create a file of cell-by-cell flow terms for use by a transport model. The MT3D model (S.S. Papadopulos & Associates, 1992),

can use the flow terms from the MODFLOW model in simulation of reactive solute transport, and was used to model the transport of uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium for the tailings area. The version of MT3D used in this modeling has been updated from an explicit finite difference solution to an implicit solution.

2.2.1 CONSTITUENT TRANSPORT

The transport of uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium in the Lucky Mc aquifer is through the Wind River channel with input from the No. 2 Tailings. The rate of transport is slow due to the hydraulic conductivities in this area. The transport modeling included input of uranium, selenium, nickel, Ra-226 + Ra-228, beryllium and cadmium from the tailings to the Wind River Channel and eventual transport to the Fraser Draw alluvium. Matrices of existing concentrations were established for the Lucky Mc aquifer.

2.2.1.1 DISPERSION

The dispersivity of the formation was estimated by fitting the conservative chloride concentration changes. The dispersivity used in the model was 65 feet, with a ratio of 0.1 for transverse/longitudinal dispersivity. Section E.2 of Appendix E presents the fit of the dispersivity to the observed chloride changes. Diffusion was not used in the model.

2.2.1.2 RETARDATION

The retardation factors were selected for each constituent by varying the distribution coefficient and comparing model results to observed data. Distribution coefficients used in the model and resulting retardation factors for a specific yield of 0.2 are tabulated in Table 2.2-1. These distribution coefficients were developed by fitting the observed concentration changes with time for observed simulated periods. The individual constituent sections in Appendix E present the details of the fits of observation wells for these distribution coefficients. The actual retardation factor varies some throughout the model due to the use of the specific yield array and the calculation of the retardation

factor. The typical values presented in Table 2.2-1 are based on a specific yield of 0.2. A bulk density of 120 lbs/ft^3 was used for calculating the retardation factor.

TABLE 2.2-1. RETARDATION INPUTS AND PREDICTED MAXIMUM POC CONCENTRATION AFTER OPERATION OF THE CAP.

Parameter	Constituent					
	U	Se	Ni	Ra-226 + Ra-228	Be	Cd
Distribution Coefficient (ft^3/lb)	0.0167	0.0033	0.02	0.02	0.0083	0.0133
Retardation Factor for Sy = 0.2	11	3	13	13	6	9
POC Concentration@	1.7	1.1	0.85	7.5	0.07	0.02

NOTE: @ = Units are in mg/l, except Ra-226 + Ra-228, which is in pCi/l.
A bulk density of 120 lb/ft3 was used with the specific yield array for effective porosity and the distribution coefficients to compute the retardation factor.

2.2.1.3 URANIUM

The predicted peak uranium concentration at POC well T1-12 was 1.7 mg/l (see Figure 2.2-1). This figure presents the predicted uranium concentrations for selected wells P-20, P-9, P-3, T1-12, T1-22, AL-1 and AL-6. Predictions for Scenario #1 (CAP to 9/2001) and Scenario #2 (CAP to 9/2003) are presented on the same graph. The results for POC well T1-12 and POE location at well AL-6 are the main results that will be used from the model. The modeling used a distribution coefficient of 0.0167 ft^3/lb, which yields a retardation factor of 11 for a specific yield of 0.2.

The model simulations were also used to predict the concentrations at the proposed POE location in the Fraser Draw alluvium at well AL-6. The predicted concentrations are also shown in Figure 2.2-1 and yield a predicted maximum concentration of 0.98 mg/l for uranium in Fraser Draw at the POE location. The distribution coefficient for uranium in Fraser Draw was the same as used for the remainder of the Lucky Mc aquifer.

2.2.1.4 SELENIUM

The predicted selenium concentration at POC well T1-12 is 1.1 mg/l. This concentration is shown in Figure 2.2-2 for well T1-12. The selenium concentration gradually decreases in the POC well with time. A distribution coefficient of 0.0033 ft^3/lb was used for selenium because the limited data obtained since the full analysis was made in September of 1997 does not indicate a large amount of retardation of this constituent.

The predicted selenium concentration at the point of exposure is also presented in Figure 2.2-2. The transport model indicates that a maximum selenium concentration of 0.12 mg/l should be observed at this location in the Fraser Draw alluvium. The upper limit of background (95% confident level) is 0.26 mg/l for selenium. Therefore, the point of exposure concentration for selenium of 0.26 mg/l was used to prevent average natural background levels from exceeding the POE concentrations. Naturally, a few samples over a period of time are expected to exceed this level solely from the variation in natural background concentrations.

2.2.1.5 NICKEL

The predicted peak concentration of nickel is presented in Figure 2.2-3 for POC well T1-12. The modeling indicates that a maximum concentration of 0.85 mg/l will be observed at POC well T1-12. This modeling used a distribution coefficient of 0.02 ft^3/lb, which yields a retardation factor of 13 when the specific yield is 0.2. Appendix E presents the fit of the observed data for this distribution coefficient.

The transport model indicates that the nickel concentrations at the point of exposure will be low at less than 0.05 mg/l. The large amount of retardation of this constituent prevents the movement of significant levels of nickel beyond this distance. The upper limit of background of 0.15 mg/l will be used as the POE concentration to prevent average natural background levels from exceeding the POE concentrations.

2.2.1.6 RADIUM-226 PLUS RADIUM-228

The fit of the observed radium concentration indicates a distribution coefficient of 0.02 ft^3/lb, or a retardation factor of 13 should be used when the specific yield is 0.2 (see Appendix E for the fit of the observed data). The predicted peak radium concentration at well T1-12 from the transport modeling is 7.5 pCi/l (see Figure 2.2-4). A POC concentration of 7.5 pCi/l is needed for this site.

The predicted radium-226 plus radium-228 concentration at the POE is also presented in Figure 2.2-4. The transport modeling indicates that a maximum Ra-226 + Ra-228 concentration at the POE location will be less than 5 pCi/l. The upper limit of background of 5.6 pCi/l will be used as the POE concentration.

2.2.1.7 BERYLLIUM

The beryllium concentrations were simulated with a distribution coefficient of 0.0083 ft^3/lb. This is equivalent to a retardation factor of 6 where the specific yield value is 0.2 (see Appendix E for the fit of this distribution coefficient). Figure 2.2-5 presents the simulated results for beryllium. The maximum concentration predicted for well T1-12 is slightly greater than the present site standard of 0.05 mg/l. This prediction indicates a POC concentration of 0.07 mg/l is needed for beryllium. The prediction at the POE location at well AL-6 is significantly below the 0.05 mg/l site standard and, therefore, the site standard is used as the POE concentration.

2.2.1.8 CADMIUM

The cadmium concentrations were simulated and the predictions are presented in Figure 2.2-6 for the selected well sites. These figures give the concentrations versus time for both Scenario #1 and Scenario #2. The maximum concentration at POC well T1-12 is predicted to be slightly less than 0.02 mg/l and, therefore, a POC standard of 0.02 mg/l is used for cadmium. This slight exceedance of the present site standard of 0.01 mg/l requires an ACL for cadmium. The long-term prediction at the POE location near alluvial well AL-6 is less than 0.01 mg/l. The present site standard of 0.01 mg/l is used for the cadmium POE concentration.

2.2.2 TRANSPORT TO SURFACE WATER

The seepage-affected ground water in the Wind River Channel will flow to the Fraser Draw alluvial aquifer. The water levels in the Fraser Draw alluvial system are significantly below the land surface and, therefore, the Fraser alluvial ground water will not discharge to the surface. No transport to the surface water has to be analyzed at this site.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 2.2-1: PREDICTED URANIUM CONCENTRATIONS IN THE LUCKY MC AQUIFER, IN mg/l

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE 2.2-1

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

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WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE 2.2-4

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THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 2.2-5: PREDICTED BERYLLIUM CONCENTRATIONS IN THE LUCKY MC AQUIFER, IN mg/l

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE 2.2-5

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THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 2.2-6: PREDICTED CADMIUM CONCENTRATIONS IN THE LUCKY MC AQUIFER, IN mg/l

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE 2.2-6

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

2.3 HUMAN HEALTH ASSESSMENT

As indicated in the Section 2.2.1, the projected concentrations at the POE location for cadmium, beryllium and Ra-226 plus Ra-228 are not expected to exceed the NRC-approved site standards but are expected to exceed the standards at the POC location. Since the simulations show that the concentrations are as low as reasonably achievable, the only NRC requirement for an ACL is to demonstrate that these constituents do not pose a significant health risk to the off-site population. Since the NRC approved these levels as Site Standards, no additional justifications for these near-background levels are considered necessary. The exposure assessment in Appendix A therefore does not address human exposure to cadmium, beryllium and Ra-226 plus Ra-228. Exposure assessments and human health risks are assessed in detail for the other ACL constituents.

2.3.1 EXPOSURE PATHWAYS

The exposure pathways have been evaluated for contaminated groundwater at this remote site. The result of the evaluation was that the only viable pathway to man is the indirect pathway of eating meat from wildlife or beef that drink water from a well placed at the POE location. Details of this exposure assessment are presented in Appendix A.

2.3.1.1 GROUND-WATER USES

Currently, the first ground-water use downgradient of the tailings site in Fraser Draw is more than eleven miles downgradient of the tailings area where a windmill and well provide water for livestock. The natural ground-water quality in this area of the Gas Hills is such that livestock and wildlife watering is the only viable use of the ground water. The water level in the Fraser Draw alluvium is below the land surface for the entire length of the Lucky Mc site and is not known to surface within a reasonable distance from the site.

2.3.1.2 LOCAL SURFACE-WATER SOURCES

The first surface-water use in Fraser Draw is approximately seven miles downgradient of the tailings in a stock reservoir. Three additional stock water reservoirs exist further

downstream on Fraser Draw prior to Fraser Draw joining Muskrat Creek. Fraser Draw ground water does not contribute to these surface water reservoirs. The main surface-water use in the area is from the upgradient Area 4 and Area 5 reclamation reservoirs. West Canyon Creek east of Fraser Draw contains some areas where the Wind River aquifer discharges to the surface, resulting in water available year around for wildlife and livestock use. This surface water is in a separate ground-water drainage area and, therefore, does not have the potential to be affected by the tailings. Therefore surface water use is not considered as a viable exposure pathway.

2.3.2 HUMAN HEALTH RISKS

The potential for anything other than livestock or wildlife watering from the Lucky Mc aquifer is highly unlikely. The naturally poor water quality and the remoteness of this site make other uses unfeasible. Hence, the only potential use analyzed is livestock and wildlife watering. The most direct of the plausible exposure pathways is extraction from a Fraser Draw well. It was assumed that there is a hypothetical herd of beef cattle that consumes the POE water from the Fraser Draw alluvium. It is assumed that a family will derive all of its beef from this livestock throughout much of their lifetime. Since ACL constituent uptake in wildlife is expected to be less than in beef, it was considered adequate to not include eating wildlife (deer and antelope) as an exposure pathway since the dietary intake of beef would be reduced by the quantity of wildlife eaten. Details of the human health assessment are presented in Appendix B.

The traditional approach of the EPA derives acceptable water-use limits by very conservative methods and the use of reference oral doses (RfD_o) that can be applied anywhere in the United States. RfD_o's are a function of uncertainty factors and toxicity values for which no toxic effects have been observed (NOAEL), or the lowest dose at which toxic effects have been observed (LOAEL) in humans or laboratory animals. The EPA's objective is to develop drinking water quality criteria that will protect the entire U.S. population. Therefore, it must be more protective and conservative than the objective of an Alternate Concentration Limit. One significant difference between the two approaches is the weight of consideration given by the Nuclear Regulatory

Commission to the probability, in this case, that the ground water will ever be used as a potable water source in the future. Currently, the ground water at the boundary of the site (simulated POE locations) is not being used for drinking water, and it is unlikely that it ever will be. Consequently, the criteria for predicting the risk of toxic effects occurring at the proposed POE values are not the same. Concentrations of the constituents may be higher than those listed by the EPA, or other agencies, as long as the risks of adverse impacts on human health and the environment are shown to be acceptable.

2.3.2.1 URANIUM

Excessive exposure to uranium was linked to two possible end-points: chronic kidney disease due to chemical toxicity and cancer due to radioactivity. This risk assessment addressed the toxicology and the probable risks of adverse health effects for both end-points assuming the use of water containing the maximum projected POE uranium concentration of 0.98 mg/l. An estimated daily intake value was developed from a uranium concentration of 0.98 mg/l in the uranium exposure assessment in Table A.4-2 in Appendix A.

The biokinetic model for estimating the kidney burden of uranium was validated by comparing the reported values, from studies of residents in New York City and Japan, with the predicted model value (Fisenne and Welford, 1987; Igarishi, 1985). The reported and predicted values compared favorably, thus validating the model.

The uranium burden in the kidneys was estimated for people eating beef from this site. Kidney concentration values were calculated to be approximately 0.0001 μg U/g kidney. This concentration is a very small fraction of the threshold value considered adequate for preventing the occurrence of irreparable kidney damage, 1 μg U/g kidney. The assessment, therefore, concludes that the use of well water for watering beef is not expected to result in uranium burdens in the kidney that are associated with kidney damage.

The potential risk of a fatal cancer from ingestion of uranium in beef from this site over a 30-year lifetime was estimated using the exposure pathways described in Section 2.3.1 and risk factors from the EPA. Details are provided in Appendix B. The conservative calculation resulted in a lifetime risk of cancer mortality of 1.2E-07. This value is a small fraction of the cancer risk criterion of the NRC of 1.0E-04 (NRC, 1996) and the EPA at 3.0E-04 (FR(57), 1992).

In conclusion, the chemical- and radio-toxicity to people eating beef from cattle that drink water which contains uranium at the maximum projected POE concentration will not result in unacceptable adverse effects.

2.3.2.2 SELENIUM

The selenium intake to humans from eating locally raised beef was calculated in Appendix A to be 1.24E-4 mg/kg-day (Table A.4-2), or 0.0087 mg/day for a 70 kg person. This is approximately 12 percent of the recommended daily allowance for selenium. This intake is also only 2.5 percent of EPA's reference oral dose of 0.005 mg/day-kg. Therefore, the additional selenium intake from this pathway is not considered a significant health risk.

2.3.2.3 NICKEL

The nickel intake to humans from eating locally raised beef was calculated to be 2.86E-05 mg/kg-day, or 0.002 mg/day for a 70 kg person. It has been estimated that the general population in the U. S. takes in from 150-168 μg/day of nickel through food and 2 μg/day through water. Therefore the intake of an additional 2 μg/day clearly is a small incremental dose compared to normal oral intakes. In 1996, the EPA (EPA, 1996) developed an oral reference dose (RfD) of 0.02 mg/kg-day. Again, the dose from eating locally raised beef is less than one percent of this RfD. Therefore the additional nickel intake from this pathway is not considered a significant health risk.

2.3.2.4 UNCERTAINTY

The numerous sources of uncertainty in this risk assessment have been discussed in each section of the analysis. In most cases, conservative assumptions have been made to increase the exposure estimate. The most conservative assumption is that a hypothetical person(s) would consume all of their beef from this source for a 30-year period throughout their lifetime. While the doses for all of the ACL constituents are considered insignificant, it is worth noting that these doses were derived using conservative assumptions. Table 2.3-1 lists some of the sources of uncertainty and associated consequences in predicting risk estimates for this human health assessment.

TABLE 2.3-1. UNCERTAINTIES IN HAZARDS ANALYSES.

PROBABLE DIRECTION OF ERROR	SOURCE OF UNCERTAINTY
Underestimation of risk	Lack of measured concentration data for chemicals in environmental media
Overestimation of risk	POE concentrations are the maximum value that should occur at any of the POE locations. Average 30 year concentrations at all POE locations will be significantly less than the POE concentrations.
	Use of conservative parameters in the ion migration simulations
	Conservative assumptions for human and exposure animal parameter values
	Lack of adequate toxicity data relevant to exposure to these chemicals by ingesting meat
	Application of conservative uncertainty factors that may not represent the current knowledge base
Unknown direction	Variations in analytical measurements
	Uncertainties in hydrological modeling
	Toxicological interactions between chemical constituents or between the constituents and other biochemicals in the body
	Use of reference doses RfD_o
	Use of generic agricultural biotransfer factors

3.0 CORRECTIVE ACTION ASSESSMENT

This section presents the results of the Corrective Action Program (CAP). Major topics in this subsection are the corrective actions relative to the tailings dewatering and the Wind River Channel restoration. The planned future corrective actions conclude the discussions in this subsection.

The feasibility of alternative corrective actions is presented as a second subsection. The final three subsections are the corrective action cost, corrective action benefits and ALARA conditions.

3.1 RESULTS OF CORRECTIVE ACTION PROGRAM

The corrective action program (CAP) for PMC's Lucky Mc site has included three basic components to restore ground-water quality. The first component was a series of Wind River aquifer collection wells that were pumped beginning in 1980. Additional collection wells have been installed with time and added to the CAP. The second component of the CAP, a fresh-water recharge system was installed in 1989. Subsequent additions to the CAP have included additional recharge lines and wells to increase the drive of water toward the collection wells. The third component of the CAP has been the tailings dewatering program, which was begun in 1989 and has been expanded with time.

The purpose of the combination of Wind River collection and fresh-water injection/recharge is to create a hydraulic depression with the collection and the injection to effect a "sweeping" of the area between recharge and collection. The combination of the injection with collection allows the collection rates to be maintained at reasonable rates. The original collection only system resulted in small collection rates with time. The fresh-water injection has allowed the collection rate to increase allowing more contaminated water to be removed.

3.1.1 TAILINGS

Tailings dewatering started on the No. 1 Tailings in late 1989. Figure 2.1-1 presents the yearly average rate of pumping from the tailings wells. Tailings dewatering started on

the No. 2 and No. 2A Tailings during 1992. A total of 199 million gallons of water has been removed from the tailings and pumped to evaporation ponds. Fifteen wells are presently being used to dewater the tailings. Water levels in the No. 1 Tailings significantly decreased from near 6400 to an average of 6373 ft-msl in late 1999. The pumping in the No. 1 Tailings has decreased the water-level elevation in the outlet area below the base of the Wind River Sand on the east side of the No. 1 Tailings.

3.1.2 WIND RIVER CHANNEL

Collection from wells in the Wind River Channel has been used since 1980. Figure 1.2-4 shows the yearly collection rate with time. Fresh-water injection was added to the restoration program in 1989. Figure 1.2-4 also shows the average yearly injection rates for the fresh-water injection system. A total of 14 Wind River Channel collection wells are presently being used to restore the ground water in this area. Fourteen injection wells are also being used to inject fresh water into the Wind River Channel. Numerous recharge lines are also used to inject fresh water to aid in the restoration of the Lucky Mc aquifer.

3.1.2.1 COLLECTION AND INJECTION

Figure 1.2-3 presents the location of the injection and collection systems. The collection wells have produced a total of 187 million gallons of water from the Wind River Channel area. This water has been pumped to evaporation ponds. A total of 172 million gallons of water has been injected into the Wind River Channel. Figure 1.2-4 shows the yearly average injection rates.

3.1.2.2 WIND RIVER WATER-QUALITY RESTORATION

The water-quality restoration due to the CAP at Lucky Mc can best be seen by comparing water-quality concentrations in 1981 to the 2000 map. Uranium concentrations exceeded 50 mg/l over a significant area in 1981, while Figure 1.3-9 shows that the uranium concentrations exceed 10 mg/l in only one area in the Wind River Channel in 2000. The 2000 Annual Report also presents a comparison of the 1988 and 2000 uranium concentrations (see Figure 3.3-1 in Hydro-Engineering, LLC,

2000). This figure shows the comparison between the changes in uranium concentrations prior to the use of fresh-water injection to the 2000 levels. Uranium concentrations in 1988 exceeded 20 mg/l for a significant portion of the Wind River Channel. The comparison of these uranium concentrations shows that the collection significantly reduced the uranium concentrations from greater than 52 mg/l to slightly greater than 10 mg/l, while the use of fresh-water injection, along with collection, has significantly reduced the concentrations in the majority of the Wind River Channel to less than 5 mg/l.

Selenium concentration comparisons cannot be adequately made due to the change in the third quarter of 1997 in the analytical techniques for selenium. Prior to the third quarter of 1997, selenium results were not for total selenium. Therefore, it is difficult to define the changes, but selenium concentrations likely were 5 to 10 times higher than those presented prior to the third quarter of 1997. The 1981 total selenium concentrations were likely above 5 mg/l, while the maximum 2000 concentration is slightly above 2 mg/l in one small area. The selenium concentrations have been reduced over a significant area of the Wind River Channel but are still elevated in the northwest portion of the Wind River Channel. The pattern on Figure 1.3-10 shows where the concentrations still exceed 0.26 mg/l in the northwest portion of the Wind River Channel and extending out into the western side of the Fraser Draw alluvium. Concentrations to the south in the Wind River Channel east of the No. 1 Tailings likely exceeded 5 mg/l prior to the initiation of the CAP.

Nickel concentrations were initially measured on the wells in the Wind River Channel area in 1980 at greater than 9 mg/l to the northeast of the No. 1 Tailings. Nickel concentrations were measured in 1988 and the nickel concentration comparison between 1988 and 2000 (Hydro-Engineering, LLC, 2000) shows that the nickel concentrations exceeded 5 mg/l in some of the Wind River Channel in 1988. Figure 1.3-11 shows the nickel concentrations for 2000 with concentrations exceeding 1 mg/l in a significant area of the Wind River Channel. The area where greater than 9 mg/l existed in 1980 had decreased by 1988 to 5 mg/l by use of collection and has been

further decreased to slightly above 1 mg/l from 1988 to 2000 with the CAP of collection and injection.

Radium-228 concentrations were not measured until late 1988. Radium-226 concentrations were measured in 1981 and exceeded 5 pCi/l in only one of the few wells that existed in the Wind River Channel in 1981. The 2000 Annual Report presents a comparison between the 1988 and 2000 radium-226 plus radium-228 concentrations. Radium concentrations exceeded 10 pCi/l in 1988 over a larger area than existed in 2000. The maximum concentrations in 1988 and 2000 were fairly similar. Combined radium concentrations in 1981 were likely significantly higher and the fresh-water injection has effectively stripped radium from the area.

The arsenic concentrations in 1981 exceeded 1 mg/l in the Wind River Channel in the northeast corner of the No. 1 Tailings (see Exhibit 11, Hydro-Engineering, 1981). These arsenic concentrations extended to the north in the Wind River Channel to nearly 0.5 mg/l at well P-3. Figure 1.3-13 shows that no significant arsenic concentrations exist in the Wind River Channel in 2000. This shows that the CAP has been very effective in restoring the arsenic concentrations in the Wind River Channel. Arsenic has not been mobile through the connection between the No. 2 Tailings and the Wind River Channel. The Cody material in this area has attenuated movement of arsenic from the No. 2 Tailings. The dewatering of the No. 1 Tailings to the point where no connection exists between the Wind River Channel and the No. 1 Tailings should eliminate the potential for future movement of arsenic into the Wind River Channel.

Beryllium concentrations were not analyzed in 1981. Beryllium concentrations exceeded 0.5 mg/l in the area of wells P-3 through P-11 in 1988 prior to the use of fresh-water injection. The 2000 concentrations (see Figure 1.3-14) show only two small areas near wells P-3 and P-11 that exceed 0.05 mg/l. The majority of the beryllium contamination has been eliminated by the CAP in this area. Beryllium concentrations do significantly exceed the site standard of 0.05 mg/l to the east of the No. 1 Tailings in the low permeability zone near well P-3. however, water levels in the No. 1 Tailings

should not allow any future seepage to move from the tailings to the Wind River Channel. The Cody material in the connection area between the No. 2 Tailings and the Wind River Channel has not shown any movement of beryllium through this area due to attenuation.

Cadmium concentrations were not contoured in 1981. Concentrations that were measured in the P wells in 1980 in the heart of the Wind River Channel showed concentrations slightly above 0.2 mg/l. The 1988 contour map (see Figure 3.9-1 of the 2000 Annual Report) shows concentrations above 0.1 mg/l in the area of P-3 through P-11. The 2000 contours in Figure 1.3-15 show that the cadmium concentrations exceed 0.01 mg/l in the main portion of the Wind River Channel in only three areas. Additional operation of the CAP is expected to restore the cadmium concentrations in these areas of the Wind River Channel. Some elevated cadmium concentrations also exist east of the No. 1 Tailings in the Wind River Channel in the low permeability zones. Restoration of these areas will be much slower due to the very slow movement of ground water. Cadmium concentrations have not been mobile in the Cody wells between the No. 2 Tailings and the Wind River Channel. Therefore, future seepage from the tailings should not allow cadmium concentrations to move into the Wind River Channel.

A chromium concentration map was not developed for the 1981 report, but initial values measured in 1980 were slightly less than 0.5 mg/l. The 2000 contours shown on Figure 1.3-16 show only one chromium concentration above 0.05 mg/l in well T1-18. This concentration is thought to be an outlier due to previous chromium concentrations in well T1-18. Chromium concentrations are low in the No. 2 Tailings and, therefore, are not expected to be a problem in future seepage into the Wind River Channel.

Exhibit 15 in Hydro-Engineering (1981) presents thorium concentrations for the Wind River Channel. Thorium concentrations exceeded 10,000 pCi/l near the No. 1 Tailings and extended to above 100 pCi/l near well T1-9 in the Wind River Channel. Thorium concentrations had been reduced to just above 100 pCi/l by 1988 due to the CAP. The 2000 thorium concentrations show only two areas in the Wind River Channel above 10

pCi/l. These two areas should be easily restored by the CAP. The thorium concentrations in the Cody wells in between the No. 2 Tailings and the Wind River Channel have shown complete retardation of thorium in this area. Therefore, future migration of thorium in the Wind River Channel is not expected.

3.1.3 PLANNED CORRECTIVE ACTION

The planned corrective action has been broken into subsections of collection and injection, and tailings dewatering.

3.1.3.1 COLLECTION AND INJECTION

As projected by the modeling, the existing collection and injection system will continue operation through September of 2001. This includes Wind River collection wells and the fresh-water injection wells and recharge lines. Fourteen collection and fourteen injection wells are planned for use during operation of this CAP.

3.1.3.2 TAILINGS DEWATERING

As projected by the modeling, the present tailings dewatering program will be continued through September of 2001. There is an expected decline in well yields, and projections of extraction rates were adjusted accordingly. Once the infiltration barrier is in place, the infiltration rates will be dramatically reduced. The continuation of the dewatering is projected to extract approximately 25 Mgal of water from the tailings. With an additional volume draining out of the tailings, an estimated 125 Mgal will be left in the tailings.

3.1.3.3 INFILTRATION BARRIER

The schedule for the construction of the radon/infiltration barrier varies for the different tailings areas. The barrier was constructed over the majority of the No. 1 Tailings in 1999, and most of it was completed on the No. 2 Tailings in 2000. The barrier will not be completed on the No. 2A Tailings until 2001. The barrier will reduce the infiltration rate to an estimated 0.044 inches per year.

3.2 FEASIBILITY OF ALTERNATE CORRECTIVE ACTIONS

The two corrective action programs presented herein (Sections 3.2.1 and 3.2.2) allow comparison of the planned corrective action plan with the alternative of extended CAP operation for purposes of demonstrating that the planned action meets ALARA conditions. Both options utilize a time frame for corrective action that starts in January of 2000. The planned corrective action includes continued operation of both the dewatering and collection/injection systems for 21 months (through September 2001). The alternative is an extension of the CAP through September of 2003.

3.2.1 CESSATION OF COLLECTION/INJECTION AND DEWATERING

The correction program consists of cessation of collection/injection system and dewatering efforts after September of 2001. This program is a feasible option that uses the existing corrective action facilities to complete the CAP.

3.2.2 EXTENDED COLLECTION/INJECTION AND DEWATERING

The alternative is based on an extended dewatering program with additional operational time for the collection/injection system. The tailings dewatering would be extended through September of 2003, resulting in a total of 48 Mgal removed from the tailings. The net annual extraction rate is decreased with subsequent years to reflect the anticipated decline in well yields. Operation of the injection wells is also discontinued after September 2003, and operation of the Wind River Channel collection wells and recharge lines is discontinued after September of 2003. This option is also feasible but requires additional wells to maintain the dewatering, collection and injection systems.

3.3 CORRECTIVE ACTION COSTS

This section summarizes the capital and yearly operational and maintenance (O & M) costs of both the planned corrective action plan (Section 3.1), as well as the alternative corrective action plans discussed above. Capital and yearly O & M costs are presented in 2000 dollars for the tailings dewatering and Wind River Channel injection/collection systems. These costs are presented in Table 3.3-1. Costs common to all alternatives are not included in the table. Common costs include decommissioning of the dewatering, injection, collection and recharge systems; construction of the infiltration/radon barrier; and disposal of the collected water.

The exclusion of common costs provides a fairer comparison of the merits of various options, but also gives a distorted picture of the effort expended in restoration of the Wind River aquifer. This is particularly true in the case where restoration systems and dewatering systems are in place and the large capital expenditures have already been made. The cost of the decommissioning of these systems will only be a small fraction of the original installation cost, and there is virtually no salvage value in system components.

The cost of continued operation of the dewatering system and the collection/injection system is estimated at $400,000 per year. This includes labor, equipment replacement, and energy costs.

TABLE 3.3-1. CORRECTIVE ACTION COST SUMMARY.

PROGRAM	TOTAL OPERATIONAL AND MAINTENANCE COST (Thousands)	CAPITAL COST (Thousands)
PLANNED CORRECTIVE ACTION		
Tailings Dewatering & Wind River Channel Restoration for 21 months	700	---
ALTERNATIVE CORRECTIVE ACTIONS		
Extended Dewatering & Wind River Channel Restoration	1500	300*

*Estimated cost of well replacement or rehabilitation

3.4 CORRECTIVE ACTION BENEFITS

This section presents the benefits of the proposed CAP. A comparison of benefits with the alternative corrective action is also presented.

3.4.1 BENEFITS OF CORRECTIVE ACTION

The primary benefit of the proposed corrective action plan is to lower water levels in the No. 1 Tailings to below the base of the outlet on the east side of the No. 1 Tailings. This will cease any seepage into the Wind River Channel from the No. 1 Tailings.

A secondary benefit of the proposed corrective action plan is the continued reduction of elevated constituents in the Wind River Channel. When the operation of the dewatering and collection/injection system is discontinued after 21 months (September of 2001), the seepage rate from the tailings into the Wind River Channel will have declined significantly due to reduced head. The average seepage rate for the first ten years after ceasing the CAP is less than 0.2 gpm from the No. 2 Tailings to the Wind River Channel. The removal of 25 Mgal of the remaining tailings water over 21 months takes advantage of the period when the extraction is most efficient.

3.4.2 COMPARISON WITH ALTERNATE CORRECTIVE ACTION

The alternative corrective action of continuing the CAP for two additional years to September of 2003 does not reduce the uranium concentration at the POE location. The predicted POE concentrations for selenium, nickel, radium, beryllium and cadmium are the same as the proposed CAP. Therefore, the alternate extension of the corrective actions does not decrease the concentrations at the POE location. The alternate corrective action also produces very similar concentrations at POC well T1-12 as the proposed CAP.

The extended operation of the CAP for two more years will more than double the future cost of the CAP with no benefit to the POC or POE concentrations. A small amount of additional tailings would be dewatered during the additional two years with predicted seepage rates from the No. 2 Tailings to the Wind River Channel essentially equal to those from the proposed CAP.

3.5 AS LOW AS REASONABLY ACHIEVABLE DEMONSTRATION

Pathfinder Mines Corporation has operated a corrective action program over the last 20 years that has resulted in significant restoration of the Wind River aquifer water quality in the seepage plume area in the Wind River Channel. The corrective action plan has undergone substantial modification to enhance performance and has been expanded to enhance the reduction of concentrations in the Wind River Channel. Tailings dewatering was initiated in 1989 and has been progressively expanded to remain aggressive in the extraction effort. Coverage of accessible areas of exposed tailings has reduced the recharge to the tailings.

The present corrective action program includes collection and injection for the restoration of water quality in the Wind River Channel. The CAP has consisted of installing 64 wells in the Wind River Channel area. Fifty-five of these wells were constructed for use as collection or injection wells. Twenty-eight of these wells have actually been used for collection purposes to intercept the contaminated water. Seventeen of these wells have been used for fresh-water injection and nearly 5,000 feet of perforated recharge line has been installed for restoration of the Wind River Channel system. A larger footage of fresh-water supply pipeline was required to transmit the fresh water to the injection and recharge lines. Greater than 7000 feet of pipeline has been required for the collection and transmission of contaminated ground water in the Wind River Channel. The operation of the collection system since 1980 and the injection system since 1989 has required a considerable outlay of manpower and money.

Significant restoration in the Wind River Channel has occurred over the last 20 years of operation of the CAP. Additional restoration is occurring at a very gradual rate, especially for uranium concentrations where a significant quantity of absorbed uranium will be leached off of the formation at a gradual rate for a very long period of time. Additional operation of the present CAP beyond September of 2001 will not significantly reduce the total volume of uranium that will gradually be released from the Wind River Channel area. The additional operation of the collection/injection system in the Wind

River Channel will not decrease the maximum concentration observed at POE location AL-6. Therefore, this present operation of the CAP meets the ALARA condition for aquifer restoration.

The tailings dewatering effort has been ongoing since 1989, with several drilling programs to expand the dewatering system. A total of 71 wells have been drilled in the tailings to define ground-water conditions in the tailings and for dewatering purposes. Thirty-two of these wells were placed in the No. 1 Tailings with twenty of the wells constructed so they could be used for dewatering purposes. Dewatering in the No. 1 Tailings has occurred since 1989. Sixteen wells have been installed in the No. 2 tailings. Eleven of these wells were constructed so they could be used for dewatering purposes but only a very few of the No. 2 wells have been used due to the very limited yield from the No. 2 Tailings. A total of twenty-three wells have been installed in the No. 2A Tailings to define the ground-water conditions in these tailings. Twenty of these wells were constructed so that they could be used for dewatering purposes. Dewatering from the No. 2 and No. 2A Tailings has occurred since 1992.

As the water level in the tailings drops, well yields decline and precipitation problems and maintenance costs increase. The water levels in more permeable areas of the tailings have dropped and well yields from the strongest wells have declined dramatically. An aggressive well development and maintenance program has been successful in continuing the dewatering program at reduced yields. However, as more permeable portions of the tailings are dewatered, the practical dewatering rate is expected to decline to approach a long-term drainage rate from the low permeability slimes. The yield from slime wells is very poor (typically a fraction of a gpm), and the practice of inducing drainage from slimes by pumping on the periphery of slime areas has been an effective dewatering technique.

The modeling of extended dewatering included an aggressive (and possibly optimistic), estimate of dewatering rates over a 3.7-year period. The projected net tailings dewatering rate at the end of this period was 22 gpm. It is difficult to predict what the

dewatering rate will be several years in the future, but there is little question that the practicably achievable rate will decrease. With the drawdown in more permeable tailings, the prospect for well replacement to bolster yield also diminishes dramatically. At an assumed yield of 0.3 gpm per slime well, it would take 73 slime wells to replace the projected yield of 22 gpm.

In addition to the probable limits on dewatering rates, the cost per unit volume of water extracted increases dramatically with time. For the projected extraction of 25 Mgal over 21 months at a cost of $700,000, the cost per 1000 gallons extracted is $28.00. With an extension of the dewatering for 2 more years, an estimated additional 23 Mgal will be removed at an additional cost of $1,100,000. This gives a cost of $47.83 per 1000 gallons extracted with an assumed cost of $300,000 for pumping well replacement and well rehabilitation. These costs represent only projected extraction costs and do not include disposal costs for the water.

The ultimate potential benefit of extending the dewatering and collection/injection system operation is a projected reduction in the maximum POE uranium concentration. The POE concentrations of the other ACL constituents are low and will not be affected very much by the variations in the CAP. The maximum uranium concentration will be a function of the concentrations that already exist at the POE location. Therefore, the maximum uranium concentration at the POE will be the same. The comparison for ALARA conditions will be based on uranium concentrations.

The implication to human health and safety of the reduction in uranium concentration with extension of the dewatering and Wind River Channel collection/injection programs is minimal. The maximum POE uranium concentration is the same for each of the restoration scenarios. Even with a very conservative analysis of the human or animal exposure to the increased uranium concentration, the analyses presented in Appendices A and B indicate that there will no measurable effects on public health or safety under the alternative. Thus, the proposed corrective action plan with respect to tailings dewatering meets ALARA conditions.

4.0 PROPOSED ALTERNATE CONCENTRATION LIMITS

4.1 PROPOSED ACLs

The following alternate concentration limits are proposed for the point of compliance well T1-12.

TABLE 4.1-1. PROPOSED ALTERNATE CONCENTRATION LIMITS.

CONSTITUENT	ALARA POC T1-12
Uranium	1.70
Selenium	1.10
Nickel	0.85
Ra-226 + Ra-228	7.50
Beryllium	0.07
Cadmium	0.02

NOTE: Concentrations are in mg/l, except for Ra-226 + Ra-228, which is in pCi/l.

These alternate concentration limits have been developed by simulating the migration of these constituents from the tailings to the Wind River aquifer and then to the Fraser Draw alluvium. The Fraser Draw POE concentrations are developed by combining the ground-water flow in Fraser Draw with the Wind River aquifer flow. The resulting POE concentrations have been shown to provide adequate health protection for the public from livestock use of this water.

4.2 PROPOSED IMPLEMENTATION MEASURES

4.2.1 CORRECTIVE ACTION

The alternate concentrations will be met by completing the corrective action plan for the ground-water systems at the Lucky Mc site, which includes the continuation of Wind River collection/injection system operation and aggressive tailings dewatering through September of 2001. Wind River collection/injection programs will continue to contain seepage and will restore water quality in the immediate area of the Wind River Channel. The tailings dewatering will reduce the quantity of water remaining in the tailings, and consequently, the long-term seepage rate to the Wind River aquifer. The construction of the radon/infiltration barrier and surface drainage system coincident with the termination of dewatering efforts will reduce recharge to the tailings.

4.2.2 COMPLIANCE MONITORING

A semi-annual monitoring program through 2005 for the POC well is proposed to define compliance after restoration. The samples will be analyzed for TDS, sulfate, chloride, selenium, nickel, uranium, Ra-226 + Ra-228, beryllium and cadmium concentrations.

The final step in the implementation of the ACL process will be turning over the site to the DOE. A three-sample average will be used to evaluate the concentration/activity of the ACL constituents. This average for the monitoring data will be analyzed to show that the alternate concentration at the POC well has not been exceeded at the point of compliance. This analysis will be submitted prior to the transfer of the property to the DOE.

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APPENDIX A

EXPOSURE ASSESSMENT

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APPENDIX A

TABLES

A.1 INTRODUCTION

Risk assessments of environmental toxins are conducted for making health-based risk decisions. A risk assessment of potentially hazardous constituents in the environment is a process that integrates the results of four investigations to determine the probability, or the risk, of adverse effects on human health and the environment. These investigations include selection of the hazardous constituents, analysis of environmental pathways and exposure estimations, toxicity evaluations, and characterizations of current and future risks. This appendix describes the environmental exposure pathway and the exposure assessment. The human health risk assessment is presented in Appendix B.

The methods for conducting an exposure assessment vary according to the degree of confidence that is required to support risk management decisions. The Environmental Protection Agency (EPA) drinking water quality standards, or Maximum Concentration Limits (MCL's), are based on exposure assessments that build-in large margins of safety to ensure protection of the U.S. population with a high degree of confidence. The MCL is the maximum permissible level of a contaminant in water that is delivered to any user of a public water system. The EPA accomplishes this by using the most conservative or protective assumptions, methods, and toxicity values for evaluating contaminants in drinking water.

The Nuclear Regulatory Commission (NRC) makes risk decisions about the appropriateness of Alternate Concentration Limit values (ACLs) for site-related hazardous constituents in ground water based on the results of an exposure assessment. The concept of an Alternate Concentration Limit is different than that of a Maximum Concentration Limit. An ACL value may be site-specific and higher than the MCL, or other applicable environmental standards, if the local conditions and the habits of nearby residents warrant this type of risk assessment consideration. NRC approval requires an exposure assessment to demonstrate two things: 1) that the proposed ACL values pose no substantial present or future hazard to human health and the environment, and 2) that the ACL values are as low as reasonably achievable (ALARA)

after considering practical corrective actions. The proposed ACL values are justified for use as site-specific and health-based groundwater criteria.

The method used to calculate the constituent doses to be received by hypothetical groundwater and surface water users are consistent with recommendations in NUREG/CR-5512 (NRC, 1992). Where appropriate, generic parameter values provided in this document or other government guidance have been used in the calculations. These default values are suitable for screening purposes and are "intended to produce generic dose estimates that are unlikely to be exceeded at real sites" (p.1.2 NRC, 1992). Where data are available, site-specific parameter values have been used to calculate the doses to livestock and humans. As discussed in the body of the report, natural uranium, selenium, nickel, beryllium, cadmium and Ra-226 plus Ra-228 in groundwater are the site constituents under consideration for proposed ACL values. Beryllium, cadmium and Ra-226 plus Ra-228 concentrations are predicted not to exceed the present site standard at the POE and, therefore, risk analysis for these three constituents is not required.

Throughout this appendix, dose is used as a measure of intake of a chemical constituent (e.g. mg per kg-day by ingestion or inhalation). The conventional use of dose with respect to radiation exposures refers to absorbed energy from radiation per unit mass of absorbing medium, e.g. 100 ergs/gram (rad) of tissue. In order to convert a dose to risk, the total effective dose equivalent (TEDE) will be calculated rather than the radiological dose.

A.2 PATHWAY ANALYSIS AND EXPOSURE ESTIMATIONS

A.2.1 EXPOSURE PATHWAYS

An analysis of the environmental pathways that provide opportunities for human exposure to the site constituents includes: 1) an assessment of existing and potential water uses, 2) an identification of exposure pathways and estimates of exposure for the primary pathways, and 3) an evaluation of the likelihood that people will be exposed to the hazardous constituents.

People generally have potential contact with environmental contaminants by a variety of exposure pathways. The potential environmental pathways at this site for human exposure include:

- Ingestion of groundwater
- Ingestion of locally-raised food products (meat, milk, poultry, eggs, vegetables) that may have been impacted by constituents in the water or soil
- External radiation from radionuclides in water or soil
- Ingestion of constituents in water or soil
- Inhalation of airborne constituents in dust

While these pathways exist, it is very unlikely that Fraser alluvial ground water will be used for drinking purposes in the vicinity of the site since it is unlikely that anyone would live in this area. Currently, no wells exist. Cattle and wildlife graze in the area for a small portion of the year. Because of the climate conditions, vegetation is sparse and therefore cattle move over a large area during the grazing season. Because of the harsh winters, cattle are normally relocated during the winters.

Future residential development in the immediate vicinity of the site is very unlikely. A rancher desiring to establish a ranch house would be expected to locate several miles north of the site rather than in areas impacted by the extensive mining and milling disturbances throughout the Gas Hills area. Home gardening is not of significance due to the very short growing season. For this analysis, it has been assumed that the Fraser Draw alluvial water will not be used as a domestic water supply. There is also no

evidence that the alluvial water appears as surface water and therefore exposure to ACL constituents in surface water has not been considered.

Ground water in the Gas Hills area is generally poor quality. There are only two known springs within the area, other than mining pit water, available for watering livestock and wildlife. The two springs are more than five miles from the Lucky Mc site. The nearest well for agricultural use is estimated to be approximately 11 miles from the site. The most likely scenario for use of the Fraser Draw alluvial groundwater is for a rancher to place a well in the area for watering livestock. Since livestock are not normally wintered in the area, it is assumed that cattle will receive half of their water intake from this well at the projected POE concentrations. In order to complete the pathway to man, it is assumed that a family consumes all of its beef from this source.

Deer and Pronghorn antelope are common to the area. Because wildlife graze over a very large area and drink water from many sources, it is unlikely that wildlife would have a significant fraction of their water intake from any one source. Therefore the constituent uptake in wildlife would not be expected to be as high as in beef. If the family eating all of its beef from the site also ate wildlife from near the site, the displacement of beef from their diet by deer or antelope would tend to lower the average annual constituent intake. Therefore, consumption of 100 percent of a family's beef from cattle grown near the site is considered a realistic, but conservative, exposure pathway to humans. All other pathways have been considered and dismissed as insignificant or improbable.

A.2.2 QUANTIFYING EXPOSURES TO HUMANS

The basic methods for quantifying human exposures to a chemical are different for non-radioactive and radioactive constituents (EPA, 1989) and (NRC, 1992). Exposure estimates for uranium are assessed as both a toxic chemical and a radioactive material. Natural nickel and selenium are stable elements and thus are assessed for their chemical toxicity.

A.2.2.1 INTAKE RATES

Intake rates are an expression of the quantity, or dose, of the constituents that enters the human body per unit time. For chemical toxins, the time period is one day, given a rate unit of daily intake (DI). For radionuclides, the intake is described as the total quantity that enters the body over the period of exposure (TI). For assessing the chemical toxicity, the total intake at the POE, including that from natural background concentrations, is used. For carcinogens, it is customary to assess the incremental cancer risk above natural background. Since radionuclides are considered carcinogens, the intake rates for cancer risk assessments were calculated excluding the contribution from naturally occurring radionuclide concentrations in the soil and groundwater.

The average daily intake (DI) of uranium, selenium, and nickel describes the magnitude of human exposure from contact with environmental media. This is the average amount of each constituent that enters the body each day by any exposure pathway per unit body weight. The equation for calculating the daily intake of a constituent in tap water and food (EPA, 1989) is as follows:

$$DI = \{(C_w * IR + I_f)(EF * ED)\}/(BW * AT)$$

where:

DI	=	average daily intake of constituent per unit body weight (mg/kg-day)
C_w	=	concentration of constituent in tap water (mg/l)
IR	=	intake rate (l/day)
I_f	=	constituent ingestion rate from food (mg/day)
EF	=	exposure frequency (day/year)
ED	=	exposure duration (years)
BW	=	body weight (kg)
AT	=	averaging time (days)

The potential for toxic effects from uranium in hypothetical individuals eating beef grown near the site is evaluated by estimating the average daily intake of uranium and the retention in the kidney over a period of several years, and by comparing the concentration of retained uranium to a reference safe level.

The potential annual radiation dose to individuals eating beef grown near the site is evaluated by calculating the annual total effective dose equivalent (TEDE) from ingested uranium. The potential lifetime cancer risk from intake of radionuclides is estimated by multiplying the estimated lifetime intake of the radionuclides by appropriate risk factors. The equation to calculate the daily ingestion rate for the internal radiation dose equivalent and lifetime risk calculation for a radionuclide is as follows:

$$IRG = (C_w * IR) + I_f$$

where:

IRG = daily ingestion rate (mg/day)

The other parameters are the same as those defined in the previous equation.

Exposure to direct radiation from these constituents in the environment (e. g., build-up on irrigated lands) is an additional source of radiation dose. However, this pathway has not been included since irrigation is considered improbable.

A.2.2.2 VARIABILITY AMONG INDIVIDUALS

Within a single group of people (population), there is a wide variation in intake rates and, consequently, in the doses received by different people. However this individual variability within a single population is considered in developing the TEDE and chemical intake dose limits. It is, therefore, more important to determine the average exposure rates for the population.

The hypothetical individual impacted from beef from this site would be expected to be similar to the average population as far as socio-economics and other factors for which conservative default values for modeling parameters have been developed. The one difference is that the family would be reliant on beef grown on this site as the sole source.

A.2.2.3 EXPOSURE CONCENTRATIONS TERMS

The exposure concentration term is the concentration in the environmental pathway that is available for human intake. The exposure estimate for residents is the product of this concentration term for each environmental pathway and the human exposure parameter values. The ACL values projected at the POE are used for calculating intakes to humans and animals.

A.2.2.4 ENVIRONMENTAL BACKGROUND EXPOSURES

The soil and groundwater natural background concentrations are required to assess human and ecological exposures. Since the only pathway considered at the Lucky Mc site arises from beef drinking well water, only the groundwater constituent concentrations are of concern. The NRC, in developing the site groundwater standards, used the available data from the background well, Well T1-6. A recent analysis of all data in the background Well T1-6, as presented in Section 1.3.4, shows that the mean background concentrations for uranium, selenium, and nickel are 0.30 mg/l, 0.17 mg/l, 0.11 mg/l, respectively. When calculating the excess cancer risk from the radioactive constituent, uranium, the background value of 0.3 mg/l will be used rather than the NRC site standard which was based on a limited subset of the data from well T1-6.

A.3 EXPOSURES FROM AGRICULTURAL USES OF GROUND WATER

When groundwater is used for livestock watering, the transfer of ACL constituents through the food chain depends on four parameters. These include the agricultural biotransfer coefficients, livestock and human exposure factors such as the drinking water and food consumption rates, and the fraction of consumption that is locally raised.

The primary intake of ACL constituents in locally raised beef arises from the drinking water. As mentioned earlier, it is assumed that the beef animals graze on non-irrigated pasture for approximately 6 months. The pasture grass is not affected by the local groundwater.

The concentrations of ACL constituents in food products from livestock ingestion of water are quantified using the following equation.

Livestock Water to Animal Products:

$$C_f = C_w * Q * F_p * B$$

where:

C_f = Concentration of constituents in food products (mg/kg or pCi/kg)

C_w = Concentration in livestock water and feed (mg/l, mg/kg or pCi/kg)

Q = Livestock water and feed ingestion rate (l/day for water, kg (dry) /day for feed)

F_p = Fraction of the total annual a) livestock water from well is 0.5 (50%) and b) grass and hay grown by irrigation is 0 (0 %)

B = Biotransfer coefficient from livestock water and feed to food product concentration (days/kg)

Agricultural biotransfer factors are generic values describing the transfer of ACL constituents from feed to livestock product. These coefficients reflect differences in the bioavailability of the constituents in livestock. The transfer factors for animal feed to animal product are given in Table A.3-1.

Table A.3-1. Agricultural Biotransfer Coefficients from Feed to Livestock Product	
Constituent	Transfer Coefficient (day/kg)
Uranium	2.0E-04
Nickel	6.0E-03
Selenium	1.5E-02
NRC, 1992	

For the livestock intake to food product pathway the biotransfer coefficient (days/kg) is defined as:

$$\frac{mg\ (constituent)\ /\ kg\ (fresh\ animal\ product)}{mg\ /\ day\ (intake)}$$

or

$$\frac{pCi\ (constituent)\ /\ kg\ (fresh\ animal\ product)}{pCi\ /\ day\ (intake)}$$

The concentrations of ACL constituents in food products are a function of the concentrations in livestock watering and pasture grass, livestock watering and feed intake rates, and biotransfer factors. Table A.3-2 below lists feed and water intake rates for beef cattle. Since the groundwater ACL constituents do not affect the forage concentrations, a value of zero is used for the forage intake rate. A value of 50 liters/day has been used for the daily water consumption for one half of the year.

TABLE A.3-2. LIVESTOCK INTAKE RATES.

Livestock	Livestock Water Intake Rate (l/day)		Feed Intake Rate (kg/day –wet wt.)		Fraction of Feed
	Typical	Range[b]	Typical	Range[b]	Hay/Grass
Beef Cattle	50[a]	20 – 60	27[a]	15 – 30	0

[a] – from NRC, 1992
[b] – IAEA, 1994

Table A.3-3 provides the results of the ACL constituents transferred through the environment by groundwater to meat. The projected ACL constituent concentrations at the POE location are included along with the other important parameters in the calculation. Note that the selenium and nickel concentrations at the POE are expected to be near background levels and thus the 95th percentile background concentration values from Table 1.3-1 are used. The projected POE concentration for uranium was derived from groundwater modeling efforts.

TABLE A.3-3 EXPOSURE PATHWAY ESTIMATES FROM LIVESTOCK WATERING TO FOOD.

Livestock Watering - Beef - Meat		Uranium mg/kg	Uranium* pCi/kg	Selenium mg/kg	Nickel mg/l mg/kg
C_F = concentration in meat = C_W*Q*F_P*B (mg/kg or pCi/kg)		4.90E-03	2.27E+00	9.75E-02	2.25E-02
C_W = concentration in ground water (mg/l or pCi/l)		0.98	454	0.26	0.15
Q = water intake rate (l/day)	50				
F_P = fraction of water from well	0.5				
B = biotransfer coefficient to meat (day/kg)		2.00E-04	2.00E-04	1.50E-02	6.00E-03

* Calculation made using uranium concentration that excludes the natural background component (0.30 mg/l) of groundwater.

A.4 HUMAN EXPOSURE ESTIMATES FOR INGESTION OF LOCALLY-RAISED FOOD PRODUCTS

The ingestion of site ACL constituents from locally raised food products is determined by using the equation to estimate exposure in Section A.2.2, Quantifying Exposures to Residents. The total food intake rates were selected from sources recommended by the EPA as given in Table A.4-1. The last column provides the intake rates used in this analysis. Since beef is the only food product of concern, the ingestion rate for all other food products was assumed to be zero.

TABLE A.4-1. AVERAGE DAILY INGESTION RATES FOR FOOD PRODUCTS.

FOOD PRODUCT	TOTAL ADULT INGESTION RATE[a] (per day)	ADULT INGESTION RATE (local foods) (per day)
Beef	0.0929 kg	0.0929 kg
Poultry	0.0289 kg	0 kg
Milk	0.243 l	0 l
Eggs	0.0291 kg	0 kg
Leafy Vegetables	0.045 kg	0 kg
Root Vegetables	0.15 kg	0 kg

[a] = EPA, 1984; EPA, 1999

The exposure frequency is 350 days per year to adjust for the data being in terms of yearly intake rates (EPA, 1989).

Table A.4-2 presents the results of the total dose calculations for the ingestion of uranium, nickel, and selenium in food. The basic formula used and the input parameters are also given in the table. The total chemical dose in mg/day-kg is calculated using parameters that include the effect of natural background concentrations in the Fraser Draw alluvial aquifer. This is done to assess the chemical toxic effect of these constituents. For the radiological risk associated with the ingestion of uranium, the intake is calculated by using concentrations above natural background. This results in the incremental dose above that which the hypothetical individual would have received if the Lucky Mc Mill and Mine had never operated.

TABLE A.4-2. DOSE CALCULATION FOR INGESTION OF CONSTITUENTS IN FOOD.

	Dose to Humans from Eating Locally-Raised Beef			
	Elements (mg/day-kg)			Radionuclide (pCi/day-kg)
	Uranium	Nickel	Selenium	Uranium*
Groundwater Concentration at POE (mg/l or pCi/l)	0.98	0.15	0.26	454
Cw = Concentration in food (mg/kg or pCi/kg)	4.90E-03	2.25E-02	9.75E-02	2.27E+00
DI = Cw*(IR*EF*ED/BW*AT) mg/day-kg or pCi/day-kg	**6.24E-06**	**2.86E-05**	**1.24E-04**	**2.98E-03**

IR = Ingestion Rate	0.0929	
BW = Body Weight	70 kg	
EF = Exposure Frequency	350 day/y	
ED = Exposure Duration (y)	30 y	
AT = Averaging Time (days)	10950	(30y*365days/y)

*Excludes uptake in beef arising from natural background levels at POE ground water well.

The assumptions in the dose calculations are considered conservative. For example, it is unlikely that a beef animal would drink half of its water from this source over the two-year period that it normally takes before the animal is slaughtered. In addition, it was assumed that beef grown near this site was the sole source of beef eaten by an individual over a 30-year period. An exposure period of 30 years is considered conservative since a person exposed during childhood would be unlikely to have the same source of meat during adulthood. Also, ranchers quite often sell beef animals after approximately one year. The diet is then changed to grain for fattening purposes. This alone would make the intake estimate conservative by a factor of two.

A.5 REFERENCES

EPA, 1984. An Estimation of Daily Food Intake Based on Data from the 1977-1978 USDA Nationwide Food Consumption Survey. EPA 520/1-84-015.

EPA, 1989. Risk Assessment Guidance for Superfund. Volume I. Human Health Evaluation Manual (Part A). Interim Final. Washington D.C. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. EPA/540/1-89/002.

EPA, 1999. Cancer Risk Coefficients for Environmental Exposure to Radionuclides, EPA 402-R-99-001, Federal Guidance Report No. 13, September.

IAEA, 1994. International Atomic Energy Agency, Vienna, Austria Handbook of Parameter Values for the Prediction of Radionuclide Transfer in Temperate Environments. Technical Reports Series No. 364.

NRC, 1992. NUREG/CR 5512: Residual Radioactive Contamination from Decommissioning, Final Report. U.S. Nuclear Regulatory Commission, Washington, D.C.

APPENDIX B

HUMAN HEALTH HAZARDS

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B.1 INTRODUCTION

The objective of the toxicity assessment is to evaluate the potential adverse health effects from chronic or lifetime exposures to the ACL constituents at the projected POE concentrations. This toxicity assessment presents an overview of the current toxicity knowledge on the health effects associated with the expected exposures.

The route of exposure can include ingestion, inhalation, and/or dermal absorption. As demonstrated by the exposure estimates in Appendix A, the only viable pathway for human exposure to ground water is the ingestion of beef that have been watered from a well at the POE location. Thus, information that is relevant to the ingestion of these constituents (oral exposure) is the focus of this toxicity evaluation.

B.1.1 ESSENTIALITY AND BENEFICIALITY OF SELENIUM AND NICKEL

Selenium is an essential trace element necessary for good health in humans and other mammals. Daily selenium requirements may vary among individuals. In the human body, regulatory mechanisms maintain an adequate balance of trace elements by controlling their uptake and elimination within a relatively wide concentration range. The recommended daily allowance (RDA) for selenium is 0.055-0.070 mg/d (ATSDR, 1994).

Both the essentiality and toxicity of selenium vary according to its valence state when it is incorporated into either plant or animal biomolecules. Selenium is similar to sulfur, replacing it in complex organic compounds and proteins. Thus, selenium in the body is found primarily as an organic selenoamino acid like selenocysteine, which is a biologically active form of selenium. Selenocysteine acts as a co-enzyme for glutathione peroxidase, which plays a role in protecting tissues from free radical damage.

Nickel deficiency syndrome has not been identified in humans although studies on several species of animals have demonstrated the essentiality of nickel to good health. In animal studies, nickel deficiency primarily affects the liver, including abnormal morphology, oxidative metabolism, and lipid levels. Based on animal data, it has been suggested that 50 µg/kg (RDA) of diet would be reasonable for humans (ATSDR,1997)

corresponding to approximately 0.15 mg/d, or 0.002 mg/kg-d for a 70 kg person. Measurements show that in the U. S., oral intake levels are generally higher than 0.002 mg/kg-d. This may explain why nickel deficiency in humans has not been observed.

Current knowledge has not defined the line between the bioessentiality and the toxicity for either selenium or nickel. Likewise, the RDA is the minimal value that the average person would require for good health, and not a maximum or upper limit value for limiting daily intake.

B.2 CHRONIC HEALTH EFFECTS

The duration of exposure is an important factor in understanding the potential for adverse chronic health effects. The exposure analysis discussed in Appendix A conservatively assumes thirty years of exposure. This toxicity assessment considers the chemical toxicity and the cancer effects of these constituents separately, since the potential risk of the different toxicity end points is determined differently.

Potential selenium and nickel toxicity are evaluated by comparing the estimated total daily intake per unit body weight (including natural background levels) to their respective reference daily intake rates. The potential uranium toxicity is evaluated by comparing the estimated total uranium concentration in kidneys to a reference level at which no toxic effects are expected.

While some data exist to estimate toxic effects, the EPA has not published a reference oral dose (RFD) for chronic oral exposure to uranium (EPA, 2000a). They are, however, considering developing a maximum concentration limit (MCL) of 20 –80 μg/l, based on their current best estimate of a RFD (EPA, 2000b). An assessment of this exposure has been presented in this report.

Potential cancer risk from ingesting uranium is evaluated by multiplying the estimated lifetime incremental intake of the radionuclides by the appropriate risk factors, using guidance in Federal Guidance Report No. 13 (EPA, 1999).

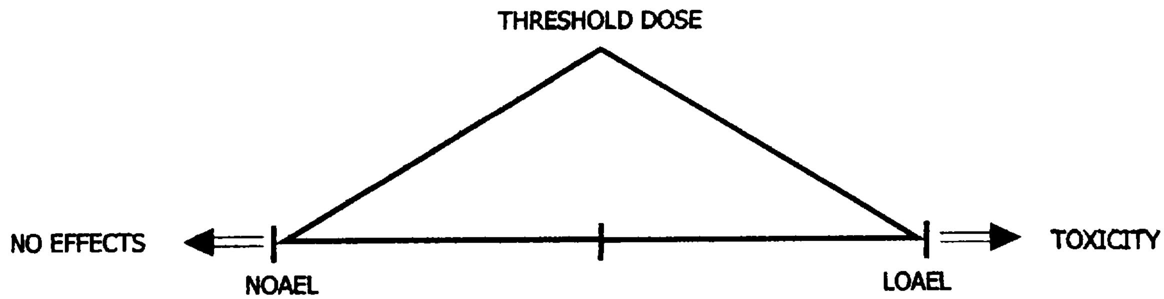
B.2.1 TARGET ORGANS

Target organs are those tissues or organs in the body where the most significant toxic effects, or the critical end points, are observed in humans and/or animals. Often, target organs are also the sites where a chemical bioaccumulates in the body. The target organs and critical toxic endpoints for chronic exposures to high levels of uranium, selenium, and nickel are listed in Table B.2-1.

TABLE B.2-1. SUMMARY OF THE CHRONIC TOXICITY OF URANIUM, SELENIUM, AND NICKEL		
Constituent	Chronic Health Effects	Target Organs(s)
Uranium		
Non-cancer	kidney damage	kidney
Cancer	bone cancer[a]	bone
Selenium	dermatitis, fatigue, liver degeneration, enlarged spleen[b]	cardiovascular, system
Nickel	dermatitis, abnormal lipid levels, abnormal growth, oxidative metabolism[c]	liver and skin
[a] - ATSDR, 1990	[b] - ATSDR, 1994	[c] -ATSDR, 1997

B.2.2 THRESHOLD DOSE AND ORAL REFERENCE DOSES

The critical dose is the key descriptor of the lowest, chronic intake estimate of a chemical that results in a dose that is associated with chronic toxicity. The critical dose, also called a threshold dose, is estimated from toxicology observations, preferably in humans; however, most observations are based on studies of laboratory animals. The threshold dose is a function of the intake rate and concentration of the chemical below which no permanent adverse health damage is expected to occur. The threshold dose falls somewhere between the highest dose of a chemical that does not produce an observable adverse effect, or the NOAEL (No Observed Adverse Effect Level), and the lowest dose which does produce an effect, or the LOAEL (Lowest Observed Adverse Effect Level).



To avoid the uncertainty that results from estimating a threshold dose value that usually is not known in humans, the chronic toxicity risks are based on a Reference Dose (RfD). The RfD is a more conservative, and therefore a more protective, intake value than is the threshold dose. The RfD is calculated from the NOAEL, or LOAEL (when a NOAEL is not available), by dividing by an appropriate uncertainty factor. The RfD is also defined by the route of entry (when data are available). In this risk assessment, the only significant route of entry is ingestion. Either animal or human data, or both, provide the basis for these RfD values.

B.2.3 UNCERTAINTY AND MODIFYING FACTORS

The RfD is a function of two variables: the toxicity value, which is the NOAEL or the LOAEL, and "uncertainty and modifying factors" (UFs). Built-in margins of safety are inherent in the RfD due to the reduction of the toxicity value by the application of uncertainty factors. The evidence as to whether a chemical poses a hazard to humans is weighted according to the following criteria: similar results are replicated in animal studies by different researchers; similar effects across sex, strains, species and routes of exposure; clear evidence exists for a dose-response relationship; there is a plausible mechanism of toxic action; similar toxicity is observed in structurally-related chemicals; and some evidence of the adverse effect is reported in humans.

The EPA has developed uncertainty and modifying factors to quantitatively incorporate these criteria into toxicity assessments. The commonly used uncertainty factors (UFs) are:

10 for extrapolation from animals to humans,

10 for inter-species variability,

10 for inter-individual (i.e. person to person) variability, and

10 for use of a LOAEL instead of a NOAEL.

In addition to these uncertainty factors, modifying factors (MFs) may be applied in the same manner to account for the severity of the toxicity and for the quality of the database used in the toxicity assessment. Modifying factors range from 1 to 10 and are a reflection of a professional assessment of additional uncertainties that are not addressed in the uncertainty factor. The default value for the MF is 1.

The EPA divides the LOAEL (or NOAEL) value by the product of the uncertainty (safety) and modifying factors to obtain a RfD value for standard setting purposes. These factors generally contain a significant amount of uncertainty and, therefore, a large margin of safety is introduced when calculating RfD for standard setting purposes.

Exposure guidelines for ingestion of contaminants in drinking water, food and soil are derived from the Oral Reference Dose (RfD), which is discussed in Section B.2.2. The RfD is calculated as follows:

$$RfD\ (mg\ /\ kg - day) = \frac{NOAEL\ (mg/kg - day)}{UC * MF}$$

where:

UC = uncertainty factor

MF = modifying factor

The non-cancer, chronic toxicity measurement criteria values for selenium, nickel, and uranium are presented in Table B.2-2.

TABLE B.2-2. NON-CANCER, CHRONIC TOXICITY MEASUREMENT CRITERIA VALUES			
Constituent	**Toxicity Criteria**		**Notes**
Selenium[c]	NOAEL	0.015 mg/kg-d	NOAEL in humans
	LOAEL	0.023 mg/kg-d	
	RfD	0.005 mg/kg-d	Chronic ingestion for sensitive individuals
	UC[a]	3	
	MF[a]	1	(default)
Nickel[d]	MCL	0.1 mg/l (withdrawn 2/9/95)	At or below the normal dietary intake of U. S. citizens
Uranium[e]	MCL	0.02-0.08 mg/l (proposed)	

[a] – UC = uncertainty factor, MF = modifying factor
[c] – ATSDR, 1994   [d] – ATSDR, 1997   [e] – EPA, 2000b

The EPA does not have a RfD or MCL for nickel. The MCL of 0.1 mg/l (equivalent to approximately 0.003 mg/kg-d) that was withdrawn in 1995 is near the lower range of normal dietary intake in the United States.

The EPA is considering an MCL for uranium in drinking water of 20 μg/l, 40 μg/l, or 80 μg/l, based on a NOAEL from a rat study. MCL's are normally developed with a high degree of conservatism. Typically, a factor of 10 or more conservatism has been used to assure protection of the most susceptible people within large populations. A review of the literature reveals that irreversible kidney damage occurs in many humans when the uranium in the kidney exceeds 1.0 μg U/g (microgram of uranium per g of kidney). Reviewers also noted that in order to protect against lesser effects, this threshold level should probably be reduced by a factor of ten, or 0.10 μg U/g. The long-term risk, if any, associated with these lesser effects is not currently understood.

The EPA has very recently evaluated the risk from the radiological properties (EPA, 1999; EPA, 2000b) of oral intake of uranium. Cancer risk factors have been developed for inhalation of radionuclides in air, for ingestion of radionuclides in ground water, and external exposure to radiation from radionuclides in air, on the ground surface, and

radionuclides in soil. These factors will be used to estimate the cancer risk associated with uranium radium exposure by multiplying the incremental intake by the risk factors.

B.3 HUMAN HEALTH RISK ASSESSMENT FOR INGESTION OF SELENIUM AND NICKEL

The selenium intake to humans from eating locally raised beef was calculated in Appendix A to be 1.24E-4 mg/kg-day (Table A.4-2), or 0.0087 mg/day for a 70 kg person. This is approximately 12 percent of the recommended daily dose for selenium discussed in Section B.1.1. This intake is also only 2.5 percent of EPA's reference oral dose (0.005 mg/day-kg shown in Table B-2-2). Therefore, the additional selenium intake from this pathway is not considered a significant health risk.

The nickel intake to humans from eating locally raised beef was calculated to be 2.86E-05 mg/kg-day (Table A.4-2), or 0.002 mg/day for a 70 kg person. It has been estimated that the general population in the U. S. takes in from 150-168 μg/day of nickel through food and 2 μg/day through water (Myron, et. al., 1978). Therefore the intake of an additional 2 μg/day clearly is a small incremental dose compared to normal oral intakes. In 1996, the EPA (EPA, 1996) developed an oral reference dose (RfD) of 0.02 mg/kg-day. Again, the dose from eating locally raised beef is less than one percent of this RfD. Therefore the additional nickel intake from this pathway is not considered a significant health risk.

B.4 HUMAN HEALTH RISK ASSESSMENT FOR INGESTION OF URANIUM

Uranium intake by the public is primarily from drinking water and food sources. The mean dietary intake of uranium, as estimated by the EPA for the United States, is 0.001 mg/day (EPA, 1991). In regions of high natural uranium the intake may be as high as 0.007 mg/day (Singh, 1990).

The health risk associated with natural uranium is a function of the total mass of uranium ingested for chemotoxicity, or of the pCi of radioactivity ingested for the radiological risk. Natural uranium is a mixture of three isotopes, where U-238 accounts for the predominant majority of the mass (>99%) and, hence, for the chemical toxicity. On the other hand, all three isotopes contribute to the radioactivity of natural uranium. U-238 and U-234 each comprise 48.9 % of the total activity and U-235 comprises the remaining 2.2% (ATSDR, 1990; NRC, 1992).

The concentrations used in this analysis correspond to the maximum projected concentrations at the POE location. For chemical toxicity assessments, the total hazardous constituent concentration has been used, including background levels. For calculating carcinogenic effects, the incremental effects are calculated by modeling the intakes using the concentrations above natural background levels.

B.4.1 NON-CANCER EFFECTS

Chemotoxicity in the kidney is recognized as the limiting adverse health effect from the ingestion of soluble uranium. In the bloodstream, uranium forms low-molecular weight bicarbonate complexes. About 60% of the uranium in this form in the bloodstream is eliminated with the urine. In acidic urine, the remaining 40% dissociates from the bicarbonate complex as soluble uranium oxide ions (UO_2^{2+}), which is a more bioavailable form of uranium. The uranium oxide ions bind to tissue protein in the kidney tubules where it accumulates.

Uranium targets the kidney tubule cells by initially interfering with their normal filtration function to preferentially extract water-soluble wastes from the bloodstream. Essential

biochemicals such as glucose, proteins, amino acids and water are not reabsorbed as required for good health. As the dose of uranium increases, damage occurs to the structure of the cells in the tubular lining, possibly by disabling the sodium transport mechanism, which then changes the permeability of the cell membrane. Calcium, for example, is transported to the kidney tubules where it can accumulate to toxic levels. This depletes the body of the calcium necessary for the production of cellular energy in the mitochondria, eventually leading to cell death.

At the critical dose in the kidney, it begins to shed dead cells as uranium accumulates in the interstitial tissue in the tubules. The kidney, however, has a large reserve functional capacity so the loss of these cells has not been observed to impact kidney function.

Reversible weight loss and biochemical changes in urine composition can develop at moderate uranium exposure levels, with no apparent permanent renal damage. A biomarker for early change in kidney function is an increased level of proteins in the urine, or proteinuria. These abnormalities return to normal levels after the uranium exposure ceases and the kidney cells have time to regenerate. Abnormalities on the cell surface remain, but the significance of this, and other similar biochemical or tissue changes that do not reflect measurable kidney damage, is not known.

Human data on the toxicity of soluble uranium as a chronic exposure come mainly from occupational health reports. In the workplace, soluble uranium usually is inhaled as a vapor that is complexed with a halogen (e.g. fluoride), which is also toxic (EPA, 1991, Leggett, 1989). In the occupational environment, the route of exposure, the concentration, the duration of exposure and usually the chemical form are not the same as the exposure parameters to hypothetical people affected by this site.

In one of the only reported cases of residents ingesting soluble uranium in drinking water at concentrations 10 to 35 times the Canadian Drinking Water Standard of 0.10 mg/l, no significant toxic effects were observed in the kidney when compared to non-exposed residents (Moss, et. al., 1983). While there was no evidence of renal damage, the

researchers did note an increase in b_2 micro globulin levels (b_2-m) in the urine with increasing exposure to uranium in drinking water. When the uranium exposure stopped, the b_2-m value decreased, thus supporting earlier observations of temporary, but not permanent, changes in the kidney. The researchers concluded, however, that the increase in b_2-m may be a sub-critical toxic effect related to low level, chronic exposures to uranium in drinking water (Moss et al., 1983). In this report, the focus is on the irreversible, permanent adverse effects of uranium on the kidney, since the relevance of b_2-m as a biomarker in kidney toxicity is currently unknown.

Uranium toxicity is characterized by a critical threshold concentration in the kidney, which is expressed as microgram of uranium per gram kidney (μg U/g). Threshold values for uranium in the kidney have been reported from observations in both humans and in laboratory animals. Data for humans are shown in Table B.4-1. In Table B.4-1, LOAEL is the "lowest observed adverse effect level" and NOAEL is the "no observed adverse effect level."

TABLE B.4-1. SUMMARY OF KIDNEY THRESHOLD VALUES.

Threshold Value (ug/g)	NOAEL or LOAEL*	Measurement Technique	Type of Exposure	Subject (number)	Comment	Safety Factor to Apply	Reference
0.3	NOAEL	alpha spec.	low level occup. (chronic)	Humans (7)	Autopsies		Russell, et.al., (1996)
2.6	NOAEL	not given	acute	Humans (3)	Urinary output and ICRP calculation	10	Zhao and Zhao (1990)
2 to 6	LOAEL	not given	acute	Humans	Based on body burden calculation humans		Bernard (1958)

At present, a threshold value of 1 μg U/g kidney is considered adequate to prevent irreversible kidney damage, based on current uranium toxicity knowledge. This threshold value, however, has not been "observed" in humans, but rather is an extrapolation from human and animal data combined with professional judgment

(Wrenn, 1985). It has been suggested by various researchers (e.g., Leggett, 1989) that in order to eliminate the more subtle effects discussed earlier in this section, reducing the intake by a factor of ten might be advisable.

From Table B.4-1 it can be seen that there are three studies involving human subjects (Russell, et. al., 1996; Zhao and Zhao, 1990; Bernard, 1958). In the two most recent studies, the kidney threshold differs by an order of magnitude (0.3 mg U/g kidney vs. 2.6 mg U/g kidney). This may represent variability in human populations, which can account for a safety factor of 10.

B.4.2 CANCER EFFECTS

Uranium is assumed to be a human carcinogen due to the alpha emissions from the radioactive isotopes, primarily U-238 and U-234 which together account for 97.8% of uranium's radioactivity. An extremely low level of gamma radiation is also emitted from uranium. The potential adverse health effects resulting from exposure to uranium's radioactivity have been assessed by the International Commission on Radiological Protection (ICRP), the National Council on Radiological Protection and Measurements (NCRP), and others. Generally, the most current generic dose and risk factors recommended by the NRC and EPA have been used in this report (NRC, 1992; EPA, 1999).

B.4.3 CHEMICAL TOXICITY FROM URANIUM ABSORPTION AND RETENTION IN THE KIDNEY

An important step in assessing the risk of ingesting uranium in food at this site is estimating the resulting kidney burden of uranium. This is done using a biokinetic model or a mathematical description of the absorption, distribution, storage and elimination of uranium in the body. With this biokinetic model, a prediction can be made of the mass of uranium in the kidney resulting from the anticipated ingestion of 0.437 μg/day (see Table A.4-2 in Appendix A). A simple schematic for a two-compartment kidney model of the biokinetics of uranium in uptake and retention in the human kidney is shown in Figure B.4-1.

TWO-COMPARTMENT KIDNEY BIOKINETIC MODEL

The International Commission on Radiological Protection (ICRP) two-compartment model of uranium toxicity (ICRP, 1995) in the kidney from oral ingestion was used to predict the uranium in the kidney following chronic uranium ingestion. This model allows for the distribution of the two forms of uranium in the blood, and consists of a kidney with two compartments, as well as several other compartments for uranium distribution, storage and elimination including the skeleton, liver, red blood cells (macrophages) and other soft tissues.

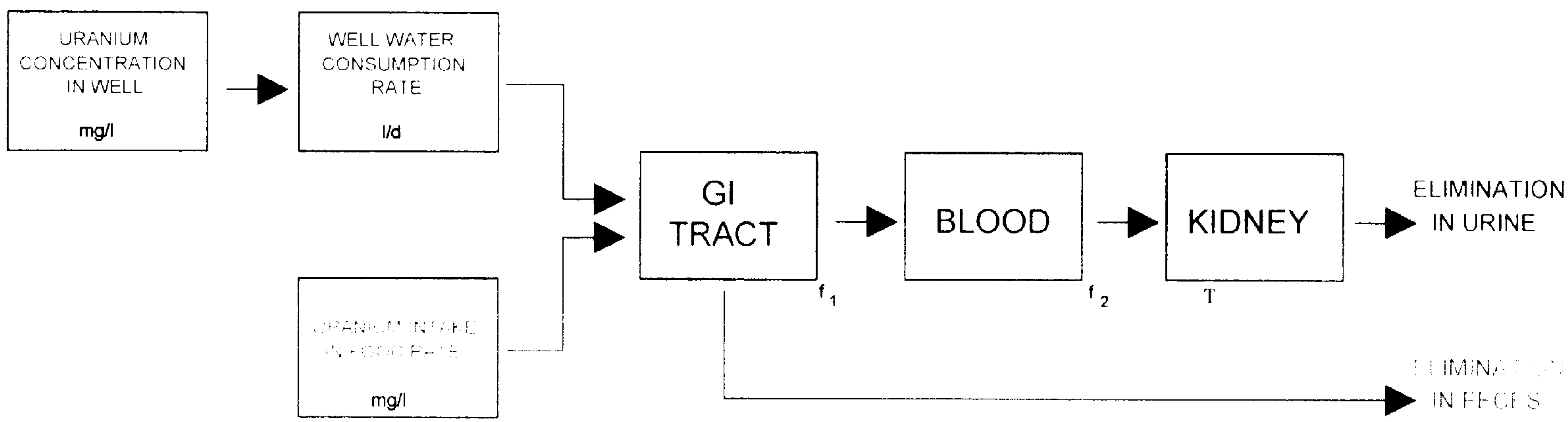


FIGURE B.4-1. SCHEMATIC FOR TWO COMPARTMENT BIOKINETIC MODEL OF URANIUM UPTAKE AND RETENTION IN KIDNEYS

Between one and two percent of ingested uranium is absorbed rapidly from the GI tract to the blood stream, where a small fraction (0.7 %) then binds with proteins in the red blood cells. Over 40 % of plasma uranium is deposited either in the skeleton (10.5 %) and soft tissues (35 %). According to the ICRP, about 8.4 % of plasma uranium reaches the kidney (ICRP, 1995). From Figure B.4-1, the mathematical representation for the kidney burden of uranium at steady state can be derived as follows:

$$Q_p = \frac{IR\, f_1}{\lambda_p\,(1 - f_{ps} - f_{pr} - f_{pl} - f_{pt} - f_{pk1})}$$

where:

- Q_p = uranium burden in the plasma, μg;
- IR = dietary consumption rate, mg U/d;
- f_1 = fractional transfer of uranium from GI tract to blood, unitless;
- f_{ps} = fractional transfer of uranium from plasma to skeleton, unitless;
- f_{pr} = fractional transfer of uranium from plasma to red blood cells, unitless;
- f_{pl} = fractional transfer of uranium from plasma to liver, unitless;
- f_{pt} = fractional transfer of uranium from plasma to soft tissue, unitless;
- f_{pk1} = fractional transfer of uranium from plasma to kidney compartment 1, unitless;
- λ_p = biological retention constant in the plasma, d^{-1}.

The burden in kidney compartment 1 is:

$$Q_{k1} = \lambda_p\, Q_p\, \frac{f_{pk1}}{\lambda_{k1}}$$

where:

- Q_{k1} = uranium burden in kidney compartment 1, mg;
- λ_{k1} = biological retention constant of uranium in kidney compartment 1, d^{-1}.

Similarly, for compartment 2 in the kidney, the burden is:

$$Q_{k2} = \lambda_p \, Q_p \, \frac{f_{pk2}}{\lambda \lambda_{k2}}$$

where:

Q_{k2} = uranium burden in kidney compartment 2, μg;

λ_{k2} = biological retention constant of uranium in kidney compartment 2, d^{-1};

f_{pk2} = fractional transfer of uranium from plasma to kidney compartment 2, unitless.

The total burden to the kidney is then the sum of the two compartments as follows:

$$Q_{k1} + Q_{k2} = \frac{IR \, f_1}{(1 - f_{ps} - f_{pr} - f_{pl} - f_{pt} - f_{pk1})} \left[\frac{f_{pk1}}{\lambda_{k1}} + \frac{f_{pk2}}{\lambda_{k2}} \right]$$

The parameter input values for the two-compartment kidney model include the daily intake of uranium estimated for the population of concern, and the ICRP recommended are listed below (ICRP, 1995).

The daily uranium intake rate is estimated in the pathway analysis in Table A.4-2 to be 0.668 μg/d from food intake.

IR	=	0.437 μg/day	f_{pk1}	=	0.00035
f_1	=	0.02	f_{pk2}	=	0.084
f_{ps}	=	0.105	λ_p	=	35/d
f_{pr}	=	0.007	λ_{k1}	=	ln(2)/5 yrs
f_{pl}	=	0.0105	λ_{k2}	=	ln(2)/7 days
f_{pt}	=	0.347	where ln(2) = 0.693...		

The biokinetic model was tested by comparing a prediction of the uranium burden in the kidney based on the model to actual values of the uranium burden in the kidneys of residents in New York City and Japan (Fisenne and Welford, 1986; Igarishi, et. al., 1985). A dietary intake of 1.2 μg U/day, the average value for residents of New York City (Fisenne, et. al., 1987), was assumed. The biokinetic model predicted a mass per kidney of 0.04 μg U. Using a kidney mass of 150 g, this corresponds to a concentration

of 0.26 μg U/kg kidney. The model prediction is in good agreement with the lower range of the uranium concentrations in the kidneys of New York residents that ranged from 0.26 to 0.89 μg U/kg (Fisenne and Welford, 1986), and with those values reported in a Japanese study that ranged from 0.12 to 0.80 μg U/kg kidney (Igarashi, et.al, 1985). Therefore, this model seems well suited for predicting the kidney burden of uranium resulting from chronic ingestion in food and water.

PREDICTION OF URANIUM BURDEN IN THE KIDNEY

Given a daily uranium intake of 0.437 μg/day from eating beef grown near the Lucky Mc site, the calculated excess concentration of uranium in the kidney is only 9.4E-5 μg U/g. This is only 0.01 percent of the 1.0 μg U/g value that has been assumed to protect the kidney from irreversible toxic effects of uranium. Therefore there is little concern regarding uranium toxicity in individuals eating beef grown near this site.

B.4.4 LIFETIME CANCER RISK FROM INGESTING URANIUM

The estimate of cancer risk from exposure to radionuclides in the environment resulting directly or indirectly from ground water at the proposed POE value is based on knowledge about the carcinogenicity of radiation on humans, and the calculated cancer potency of the radioactivity in natural uranium. The EPA and other agencies classify chemicals into six categories according to the weight of evidence of human carcinogenicity, which ranges from known human carcinogens (Category A) to those that are unequivocally non-carcinogenic, Category E. As for all radionuclides, uranium is classified by the EPA as Category A carcinogens (EPA, 1991).

For carcinogens, the risk assessment model assumes that the number of cancers increase linearly with any dose greater than "zero exposure", thus eliminating the use of a threshold concentration. Therefore, the expected carcinogenic action of a substance for chronic, low exposure conditions is a linear extrapolation of the dose factors developed from human data and adjusted for dose rate effects. The slope of this linear extrapolation is called the risk factor (also called the Slope Factor), which describes the rate of tumors observed per unit intake of a chemical.

The cancer risk is the probability that an exposed individual will develop a fatal cancer because of that exposure. The excess cancer risk is the product of the intake of radionuclides from all sources (with the exception of natural background), and the risk factors, or

$$CANCER\ RISK = IR*ED*R_f$$

where:

IR = Total intake of radionuclide (pCi)

ED = Exposure Duration

R_f = Risk factor (risk per pCi)

Cancer risks greater than 1 in 10,000 (1E-04) above natural background levels are considered by the NRC to require intervention or remedial action. Cancer risks close to 1E-04 may be acceptable values when the site-specific conditions are considered in the risk assessment.

The estimated ingestion rate of uranium (excluding that arising from background uranium in the water) in food pathways was developed in Appendix A (Table A.4-2). The intake was calculated to be 2.89E-03 pCi/day-kg. The ingestion risk factors for dietary intake of uranium isotopes are taken from EPA, 1999. The average mortality risk factor for dietary intake of the uranium isotopes whose concentrations are present in natural abundance ratios was calculated from the tables in EPA,1999 by using the activity-weighted average. The result is 1.59E-09/Bq. The potential lifetime risk from ingestion of uranium is calculated as follows:

$$Risk = IR\ *ED * R_f$$

where:

IR = daily ingestion rate, pCi/day

= 2.89E-03 pCi/day-kg * 70 kg

= 2.02E-01 pCi/day

= 2.02E-01 pCi/day*1Bq/27 pCi

= 7.05E-03 Bq/day

ED = duration of exposure

= 30 y

= 1.09E04 day

R_f = average mortality dietary intake risk factor

Risk = 7.05E-03 Bq/day * 1.09E4 day * 1.59E-09/Bq

= 1.2E-07

This value is less than one percent of the NRC criterion of 1.0E-04 (NRC, 1996) and does not present a significant risk to the critical group.

B.5 UNCERTAINTY IN HAZARD ANALYSES

The sources of uncertainty in this risk assessment have been discussed throughout the text. In summary, the following table lists some of the sources of uncertainty that influence the risk estimates for exposure to uranium, selenium and nickel at the POE values.

TABLE B.5-1. UNCERTAINTIES IN HAZARDS ANALYSES.

Probable Direction of Error	Source of Uncertainty
Underestimation of Risk	Lack of measured concentration data for chemicals in environmental media
Overestimation of Risk	POE concentrations are the maximum value that should occur at the POE location. Average 70 year concentrations may be significantly less than the POE concentration
	Use of conservative parameters in the ion migration simulations
	Conservative assumptions for human and animal exposure parameter values
Unknown direction	Variations in analytical measurements
	Uncertainties in hydrological modeling
	Toxicological interactions between chemical constituents or between the constituents and other biochemicals in the body
	Lack of adequate toxicity data relevant to exposure to these chemicals by ingesting food
	Use of generic agricultural biotransfer factors

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APPENDIX C

GROUND-WATER QUALITY DATA

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APPENDIX C

TABLES

TABLE C-1. PMC LUCKY Mc TAILINGS WATER QUALITY.

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
2-14	11/27/1996	5.85	4310	3600	219	1.24	10.2
	3/27/2000	6.35	7661	4500	215	0.810	0.380
2-15	11/27/1996	3.92	6880	10100	775	< 0.100	3.47
	3/27/2000	4.51	11324	10600	574	< 0.100	7.30
2-16	11/27/1996	5.04	4540	4010	340	0.250	1.27
2A-5	2/13/1997	5.30	12000	—	—	—	—
	2/14/1997	4.53	13000	—	—	—	—
2A-11	2/27/1997	2.64	12400	—	—	—	—
	4/11/1997	1.90	—	—	—	—	—
2A-17	11/27/1996	5.50	14450	10900	1130	12.5	0.747
2A-18	11/27/1996	3.71	12900	13200	960	1.44	5.33
2A-19	11/27/1996	—	—	16000	1090	< 0.100	28.1
2A-20	11/27/1996	—	—	10900	880	< 0.100	7.99
2A-21	11/27/1996	5.22	11950	12500	1170	0.600	5.41
	3/27/2000	5.57	15321	12700	1100	77.2	0.826
2A-22	11/27/1996	4.07	10550	13500	990	< 0.100	2.98
	3/27/2000	4.20	14544	15700	794	4.63	3.70
CT-1	10/26/1989	2.50	17400	19889	829	—	13.9
CT-2	10/31/1989	3.00	19400	14312	617	—	5.40
CT-3	10/31/1989	3.40	17700	14217	640	—	7.20
	3/27/2000	3.39	10436	13300	616	0.100	5.06
CT-4	10/26/1989	1.90	20800	14746	492	—	42.0
CT-5	10/31/1989	2.50	17700	16337	619	—	20.0
CT-6	10/31/1989	2.30	17300	12312	496	—	17.9
	3/27/2000	2.05	17763	23300	362	0.440	20.5
CT-7	10/24/1989	3.70	14500	13011	619	—	21.0
CT-8	7/30/1990	—	—	18547	912	—	36.0
CT-9	7/30/1990	—	—	11703	558	—	9.60
CT-10	7/30/1990	—	—	16419	625	—	26.0
OBS-1	8/16/1989	—	—	8437	464	—	0.510
OBS-4B	8/14/1989	3.50	9320	—	—	—	—
OBS-5	8/14/1989	3.60	6640	8868	206	—	6.90
OBS-6A	8/14/1989	4.10	7680	8252	399	—	3.80
OBS-6B	8/14/1989	4.30	9080	10038	602	—	2.70
OBS-8A	8/14/1989	5.80	3010	1402	33.0	—	0.180
OBS-8B	8/14/1989	3.00	7250	8222	410	—	14.8
TAILS	9/18/1992	2.80	16515	16149	571	1.40	12.7

TABLE C-1. PMC LUCKY Mc TAILINGS WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
TAILS	2/24/1993	3.26	17122	16345	556	6.29	16.0
	9/7/1993	3.36	11037	10735	686	31.7	6.52
	3/16/1994	3.47	9872	9357	661	2.18	6.91
	9/20/1994	3.40	9264	13846	695	0.430	7.89
	2/28/1995	3.92	6766	8672	615	45.5	3.59
	9/13/1995	3.67	6697	12307	597	0.800	7.37
	2/23/1996	3.49	15151	12245	725	0.180	6.30
	9/3/1996	2.47	29858	29900	2030	112	21.7
	2/28/1997	3.65	13000	—	—	—	—
	9/19/1997	2.61	25691	28700	2490	80.6	39.3
	3/13/1998	3.70	7400	7000	358	8.76	3.34
	7/28/1998	2.87	20309	26000	2000	95.6	42.1
	1/25/1999	3.76	9411	14500	748	0.920	8.16
	9/14/1999	4.12	8268	16900	995	3.55	8.09
	2/25/2000	4.01	15727	15000	856	7.20	7.54

TABLE C-1. PMC LUCKY Mc TAILINGS WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
2-14	11/27/1996	0.600	0.400	24.8	1.80	< 1.000	---	< 25.8
	3/27/2000	< 0.200	---	6.50	0.500	< 1.000	---	< 7.50
2-15	11/27/1996	9.90	1.80	1800	12.6	51.6	5.00	1852
	3/27/2000	17.6	3.60	617	22.1	29.4	1.80	646
2-16	11/27/1996	0.500	0.200	51.0	2.00	3.10	0.400	54.1
2A-17	11/27/1996	2.80	0.500	1.10	0.200	< 1.000	---	< 2.20
2A-18	11/27/1996	181	4.30	441	6.50	11.8	0.500	453
2A-19	11/27/1996	443	21.6	251	4.90	9.90	0.500	261
2A-20	11/27/1996	5.50	0.800	186	4.00	9.50	0.500	196
2A-21	11/27/1996	8.80	1.10	360	5.80	17.2	0.600	387
	3/27/2000	< 0.200	---	81.7	2.90	2.90	1.000	84.6
2A-22	11/27/1996	106	6.90	396	6.10	6.20	0.500	402
	3/27/2000	19.0	2.50	406	14.5	6.30	1.20	412
CT-1	10/26/1989	913	---	1253	---	18.2	---	1271
CT-2	10/31/1989	440	---	964	---	78.0	---	1042
CT-3	10/31/1989	1453	---	2206	---	26.0	---	2232
	3/27/2000	1430	40.9	675	24.2	41.4	2.10	716
CT-4	10/26/1989	12819	---	4177	---	69.0	---	4246
CT-5	10/31/1989	3926	---	2837	---	13.8	---	2851
CT-6	10/31/1989	2428	---	1919	---	12.8	---	1932
	3/27/2000	39200	214	3190	114	121	3.30	3193
CT-7	10/24/1989	292	---	650	---	9.90	---	660
CT-8	7/30/1990	12744	71.7	2554	22.5	7.80	4.50	2562
CT-9	7/30/1990	320	6.60	1868	19.2	35.0	4.40	1903
CT-10	7/30/1990	3314	51.6	1962	19.7	48.1	5.00	2010
OBS-1	8/16/1989	894	---	994	---	7.20	---	1001
OBS-5	8/14/1989	1246	---	870	---	5.20	---	875
OBS-6A	8/14/1989	3307	---	3554	---	7.40	---	3561
OBS-6B	8/14/1989	4039	---	3035	---	5.30	---	3040
OBS-8A	8/14/1989	159	---	13.8	---	< 1.000	---	< 14.8
OBS-8B	8/14/1989	2086	---	1429	---	5.80	---	1435
TAILS	9/18/1992	17.8	1.30	1058	11.6	352	17.3	1410
	2/24/1993	179	7.20	1426	11.0	188	12.0	1614
	9/7/1993	164	13.0	556	11.0	42.7	3.90	599
	3/16/1994	< 0.200	---	590	6.90	2.60	2.60	593
	9/20/1994	853	374	54.8	12.5	26.9	2.90	973
	2/28/1995	281	5.10	279	5.60	14.1	2.20	293
	9/13/1995	47.2	4.20	692	12.1	9.00	2.30	739

TABLE C-1. PMC LUCKY Mc TAILINGS WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
TAILS	2/23/1996	546	11.1	1798	18.0	44.7	4.50	1843
	9/3/1996	6197	77.6	1070	9.60	20.1	1.80	1090
	9/19/1997	10700	74.0	447	8.40	12.5	1.10	460
	3/13/1998	110	7.50	410	7.70	6.40	0.400	416
	7/28/1998	2700	29.0	257	6.30	14.5	1.40	272
	1/25/1999	251	7.90	769	11.7	40.1	3.30	809
	9/14/1999	223	12.8	543	11.8	20.4	1.80	563
	2/25/2000	368	21.7	78.8	2.80	9.00	0.300	87.8

TABLE C-1. PMC LUCKY Mc TAILINGS WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
2-14	11/27/1996	1.35	< 0.0100	< 0.0100	< 0.0500	0.450	< 0.0010
	3/27/2000	0.410	< 0.0100	0.0230	< 0.0500	0.440	0.178
2-15	11/27/1996	1.60	0.100	< 0.0100	< 0.0500	5.45	0.0090
	3/27/2000	8.50	0.0900	0.0980	< 0.0500	4.77	0.0370
2-16	11/27/1996	0.414	< 0.0100	< 0.0100	< 0.0500	0.650	< 0.0010
2A-17	11/27/1996	0.0040	< 0.0100	0.0200	< 0.0500	1.07	0.0010
2A-18	11/27/1996	6.27	0.150	< 0.0100	< 0.0500	6.90	0.0050
2A-19	11/27/1996	1.80	0.300	0.0500	0.130	6.01	0.0050
2A-20	11/27/1996	1.49	0.100	< 0.0100	0.550	5.40	< 0.0010
2A-21	11/27/1996	4.51	0.100	< 0.0010	< 0.0050	3.60	0.0020
	3/27/2000	0.674	< 0.0100	0.0410	< 0.0500	1.60	0.538
2A-22	11/27/1996	3.67	0.150	< 0.0100	< 0.0500	8.55	< 0.0010
	3/27/2000	4.56	0.160	0.107	< 0.0500	6.90	0.0860
CT-1	10/26/1989	134	0.700	1.40	0.560	6.70	0.160
CT-2	10/31/1989	3.10	0.280	0.240	0.460	5.60	0.0070
CT-3	10/31/1989	5.20	0.330	0.310	0.720	5.30	0.0100
	3/27/2000	10.00	0.180	0.131	0.190	4.00	0.116
CT-4	10/26/1989	16.0	0.520	0.370	2.10	5.00	0.380
CT-5	10/31/1989	6.20	0.330	0.310	1.40	6.30	0.140
CT-6	10/31/1989	24.0	0.200	0.730	1.30	4.10	0.0500
	3/27/2000	140	0.170	0.0900	1.10	8.00	15.3
CT-7	10/24/1989	1.20	0.480	0.0900	0.0700	5.30	0.0200
CT-8	7/30/1990	27.4	0.340	0.460	1.50	5.80	0.433
CT-9	7/30/1990	7.37	0.230	0.200	0.580	4.70	0.0660
CT-10	7/30/1990	9.47	0.170	0.100	0.310	1.30	0.0610
OBS-1	8/16/1989	23.0	0.0700	0.250	< 0.0500	0.760	< 0.0010
OBS-5	8/14/1989	0.490	0.180	0.100	0.0900	4.10	0.0100
OBS-6A	8/14/1989	3.50	0.150	0.150	< 0.0500	3.30	0.0030
OBS-6B	8/14/1989	2.30	0.160	0.200	< 0.0500	4.40	0.0070
OBS-8A	8/14/1989	0.0200	< 0.0500	< 0.0100	< 0.0500	< 0.0500	0.0090
OBS-8B	8/14/1989	1.40	0.140	0.0700	0.200	3.20	0.180
TAILS	9/18/1992	7.72	0.290	0.390	0.560	6.60	0.0020
	2/24/1993	5.78	0.260	0.230	0.500	8.26	0.0340
	9/7/1993	4.27	0.110	0.150	< 0.0500	4.73	0.0100
	3/16/1994	3.50	0.130	0.130	0.150	3.91	0.0060
	9/20/1994	3.01	0.220	< 0.0100	< 0.0500	7.06	0.0210
	2/28/1995	1.80	0.0900	0.0900	0.0800	2.45	0.0080
	9/13/1995	6.19	0.180	0.0100	0.180	4.32	0.0170

TABLE C-1. PMC LUCKY Mc TAILINGS WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
TAILS	2/23/1996	5.42	0.210	0.150	0.220	4.56	0.0160
	9/3/1996	5.04	0.570	0.0400	0.970	13.9	0.0660
	9/19/1997	10.8	0.390	0.210	0.720	12.6	1.25
	3/13/1998	0.829	0.0900	0.0590	< 0.0500	2.88	0.0760
	7/28/1998	3.60	0.470	0.300	0.570	14.8	0.662
	1/25/1999	1.92	0.250	< 0.0100	0.240	7.20	0.126
	9/14/1999	2.06	0.190	0.190	< 0.0500	6.70	0.141
	2/25/2000	1.12	0.210	0.146	0.0700	7.07	0.102

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY.

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
CT-1	10/26/1989	2.50	17400	19889	829	---	13.9
M-1	10/16/1992	---	---	2574	59.8	1.50	27.7
	3/24/1993	7.05	7205	3938	495	8.20	80.0
	6/2/1993	6.33	8955	5593	549	17.5	174
	8/26/1993	6.39	7355	3955	526	24.1	102
	12/21/1993	5.92	8902	6467	434	0.270	118
	3/11/1994	6.16	6307	4601	452	21.8	76.8
	6/7/1994	5.95	8060	7091	524	35.6	---
	9/12/1994	6.09	7148	7074	523	35.5	126
	11/30/1994	5.87	7465	7110	528	36.5	---
	3/8/1995	6.06	8304	7257	539	31.1	117
	6/26/1995	6.11	6727	7225	511	37.4	---
	9/21/1995	5.79	5838	6848	503	27.6	118
	12/11/1995	5.93	6405	6642	275	20.4	---
	3/27/1996	6.02	9990	6380	530	44.7	108
	5/29/1996	5.70	9200	6202	436	23.3	---
	9/3/1996	6.12	8771	6080	488	18.9	102
	12/11/1996	5.81	8970	5200	424	63.1	---
	3/10/1997	6.00	7800	6200	520	12.1	162
	6/17/1997	6.05	7000	6350	494	13.8	---
	9/2/1997	6.38	9002	5820	447	13.4	134
	12/8/1997	6.33	8993	6090	479	13.5	---
	2/3/1998	6.30	7575	---	---	---	---
	4/15/1998	6.47	7700	5500	482	9.02	183
	6/23/1998	6.60	7800	6330	496	12.5	---
	9/16/1998	6.03	8560	6000	473	16.3	205
	12/9/1998	6.59	6971	5200	419	20.4	---
	2/3/1999	6.30	7575	4980	564	13.9	164
	6/18/1999	4.94	2286	2050	19.7	22.1	---
	8/30/1999	6.67	2964	2730	188	10.3	48.3
	12/21/1999	6.74	7404	5100	363	12.4	---
	3/27/2000	6.60	8182	5120	421	15.2	69.0
M-3	10/14/1992	---	---	3822	7.80	16.2	13.2
	2/25/1993	3.85	5537	3383	56.2	102	10.3
	5/26/1993	3.66	5015	3494	59.4	42.4	6.55
	9/3/1993	3.71	4541	2898	479	51.8	7.27
	11/30/1993	3.44	4315	3267	48.1	39.0	10.1
	3/4/1994	3.75	4270	3540	60.7	48.1	6.47
	6/8/1994	3.56	3924	2981	53.1	40.0	---
	9/19/1994	3.68	3813	3342	59.0	36.7	11.0
	12/2/1994	3.46	3974	3256	64.0	41.4	---
	2/23/1995	3.43	4110	3233	56.0	43.1	11.2
	6/20/1995	3.74	4027	3325	78.0	42.6	---
	9/14/1995	3.28	3525	3294	72.3	47.6	9.55

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
M-3	12/12/1995	4.10	3927	3629	70.5	44.0	---
	2/28/1996	3.65	5283	3236	73.0	48.6	10.00
	5/28/1996	3.11	5300	3881	78.9	39.4	---
	9/17/1996	3.44	5173	4380	83.0	42.6	11.4
	12/11/1996	3.78	5124	3720	85.0	46.3	---
	3/11/1997	3.40	4830	4490	100.0	34.7	12.7
	6/17/1997	3.77	3850	4520	66.1	42.6	---
	9/22/1997	3.95	5725	4540	89.0	38.0	11.5
	12/3/1997	3.98	5297	4200	79.7	51.8	---
	1/26/1998	3.99	5030	---	---	---	---
	3/13/1998	4.12	4500	4600	94.4	41.5	14.4
	6/11/1998	4.14	5000	4730	85.1	41.6	---
	9/8/1998	4.04	4995	4500	90.2	41.1	13.9
	12/11/1998	3.85	5515	6060	90.5	45.8	---
	1/26/1999	3.99	5030	5490	124	41.8	13.1
	6/18/1999	3.80	4603	10000	84.2	37.2	---
	8/30/1999	3.52	4163	10700	151	37.1	17.0
	11/15/1999	3.75	4666	11500	138	32.9	---
	3/16/2000	4.03	7626	10400	140	32.2	11.6
M-4	10/14/1992	---	---	2712	17.3	17.5	2.86
	2/25/1993	6.32	5188	2515	163	152	2.03
	5/26/1993	6.12	4983	2755	143	46.2	3.05
	9/3/1993	6.28	4835	2450	140	70.6	3.68
	11/30/1993	6.38	4536	2662	139	44.9	3.67
	3/4/1994	6.30	4611	2892	184	94.4	2.18
	6/8/1994	6.17	4592	2637	161	74.7	---
	9/19/1994	6.11	3974	2718	129	50.5	3.60
	12/2/1994	6.29	4062	2698	126	55.4	---
	2/23/1995	6.20	4310	2712	143	77.2	3.76
	6/20/1995	6.46	3973	2675	123	76.6	---
	9/14/1995	6.08	3592	2616	112	70.0	2.82
	12/12/1995	6.32	3765	2715	118	62.5	---
	2/28/1996	6.76	5340	2419	200	111	1.15
	5/28/1996	5.71	4860	2589	136	67.7	---
	9/17/1996	5.61	4632	2580	101	68.2	2.49
	12/11/1996	6.10	4674	2550	108	85.3	---
	3/11/1997	6.13	4320	2770	195	89.5	1.79
	6/17/1997	6.26	3550	2360	233	128	---
	9/22/1997	7.34	5564	2320	258	132	0.275
	12/1/1997	7.14	5671	2520	242	139	---
	1/26/1998	6.84	4019	---	---	---	---
	3/13/1998	7.53	4400	2500	282	153	0.272
	6/11/1998	7.33	4220	2360	234	167	---
	9/16/1998	6.72	4860	2300	266	157	0.401

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
M-4	12/11/1998	7.02	4582	2320	238	181	---
	1/26/1999	6.84	4019	2290	338	164	0.305
	6/18/1999	7.06	3384	2240	232	176	—
	9/8/1999	7.23	4485	2280	316	149	0.190
	11/15/1999	7.24	3293	2380	260	164	—
	3/16/2000	7.12	4425	2190	277	174	0.229
M-5	10/16/1992	—	—	22675	94.2	16.8	72.8
	2/25/1993	3.89	17538	19717	1071	164	157
	5/26/1993	3.45	17290	22533	890	29.1	108
	9/3/1993	3.18	14716	18160	862	42.6	83.8
	11/30/1993	3.05	13243	17309	836	23.0	75.1
	3/4/1994	3.08	11813	16488	1049	39.6	109
	6/8/1994	3.09	10724	18094	910	43.6	—
	9/19/1994	3.25	11706	19451	1018	38.3	77.5
	12/2/1994	3.05	10758	—	672	37.5	—
	2/24/1995	3.05	10827	18514	972	42.2	94.5
	6/21/1995	3.24	10649	19530	1089	40.2	—
	9/14/1995	2.79	8195	19908	538	44.5	73.5
	12/12/1995	3.15	8976	19734	1025	34.8	—
	2/28/1996	3.24	18834	19075	951	40.6	71.8
	5/28/1996	2.77	13700	19728	876	38.4	—
	9/17/1996	3.11	15639	17900	1040	34.9	65.8
	12/11/1996	3.28	15684	17000	935	72.0	—
	3/11/1997	3.04	13700	18200	1000	31.5	87.6
	6/17/1997	3.36	10000	19000	226	37.4	—
	9/22/1997	3.45	16839	18100	967	33.2	75.1
	12/3/1997	3.46	14782	168	941	32.5	---
	1/26/1998	3.51	9417	—	—	—	---
	3/13/1998	3.52	14000	19000	1080	35.2	108
	6/11/1998	3.51	3400	19400	886	42.8	—
	9/16/1998	3.43	11500	14500	748	28.2	71.9
	12/11/1998	3.42	11931	18400	854	39.5	—
	1/26/1999	3.51	9417	18400	995	37.5	86.8
	6/18/1999	3.58	6736	18300	842	34.6	—
	8/30/1999	3.30	7459	19000	1000	34.1	65.6
	11/15/1999	3.75	6257	19700	976	39.3	—
	3/16/2000	3.71	11600	18300	859	38.4	87.0
OBS-2	8/14/1989	3.50	10300	12687	656	—	5.40
OBS-3	8/14/1989	3.50	10100	15643	637	---	16.5
OBS-4A	8/14/1989	5.20	4370	4753	67.0	—	0.0900
P-1	10/23/1980	---	---	12500	725	---	18.0
	3/13/1981	—	—	14600	350	—	52.0
	6/22/1981	---	---	16900	1000	—	31.0

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-1	9/30/1981	---	---	18100	660	---	28.0
	12/22/1981	---	---	19100	1063	---	46.0
	3/23/1982	---	---	19400	760	---	40.0
	6/21/1982	---	---	19000	930	---	0.100
	9/30/1982	---	---	18000	1000	---	26.0
	12/31/1982	---	---	18000	770	---	1.20
	2/11/1983	---	---	19000	899	---	41.0
	6/10/1983	---	---	16400	968	---	17.9
	9/3/1983	---	---	18100	952	---	45.0
P-2	10/31/1980	---	---	13400	975	---	31.0
	3/13/1981	---	---	2940	422	---	79.0
	6/22/1981	---	---	17400	1300	---	73.0
	9/30/1981	---	---	18800	940	---	48.0
	12/22/1981	---	---	19300	1169	---	68.0
	3/23/1982	---	---	19200	900	---	52.0
	6/14/1982	---	---	18000	1200	---	1.000
	9/30/1982	---	---	17000	1400	---	52.0
	12/28/1982	---	---	19000	980	---	1.50
	2/22/1983	---	---	15900	1111	---	32.0
	6/13/1983	---	---	18600	1236	---	27.0
	9/16/1983	---	---	16600	933	---	49.0
P-3	10/24/1980	3.83	14000	10800	1000	7.00	40.0
	3/16/1981	3.48	10720	11200	1000	38.0	48.4
	6/22/1981	3.50	13464	11400	1100	39.0	50.0
	9/30/1981	3.51	14740	11800	940	12.0	49.0
	12/22/1981	3.78	12340	10500	1169	51.4	52.0
	3/30/1982	3.45	14240	13000	810	36.0	60.0
	6/7/1982	3.41	14100	12000	1200	38.0	1.000
	9/29/1982	3.94	7425	6100	850	120	9.70
	12/12/1982	3.37	19200	15000	920	35.0	79.0
	1/27/1983	3.66	18000	12700	1164	30.5	68.9
	6/13/1983	3.45	15300	9500	1183	44.4	30.0
	9/16/1983	3.20	17000	14700	904	46.2	57.2
	11/11/1983	3.28	21240	14400	1060	20.2	86.6
	2/6/1984	3.33	14160	8900	2020	185	18.7
	6/11/1984	3.34	11800	12750	968	77.2	70.8
	9/14/1984	3.65	10620	14600	1479	65.1	110
	11/29/1984	3.61	10620	14500	990	122	48.7
	3/21/1985	3.57	11210	12600	859	83.5	80.4
	6/3/1985	3.85	7080	10050	1010	58.0	106
	9/26/1985	3.02	7080	12320	1111	51.0	65.7
	12/3/1985	3.52	21245	12900	990	77.8	75.4
	2/28/1986	3.14	15572	13600	1340	94.2	72.1
	5/12/1986	3.24	17183	12432	975	58.4	44.9

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-3	9/29/1986	3.28	9876	13583	939	80.0	31.0
	12/1/1986	3.05	11864	7770	1110	34.5	32.0
	12/3/1986	3.52	21245	12900	990	77.8	75.4
	2/11/1987	2.94	16109	13592	964	7.20	39.4
	5/21/1987	3.34	16017	13571	973	414	42.5
	8/13/1987	3.15	16297	13126	412	37.0	56.1
	10/27/1987	3.26	15971	12773	663	46.0	40.7
	1/25/1988	2.43	19700	17932	1014	2.00	35.3
	3/2/1988	2.43	19700	17932	1014	2.00	35.3
	5/3/1988	2.82	14200	13101	736	66.0	35.2
	9/8/1988	3.19	13587	11771	927	39.0	32.3
	12/12/1988	2.93	13571	13716	893	35.0	---
	3/15/1989	2.97	15160	11819	966	8.60	41.9
	6/22/1989	2.97	15440	12863	769	14.7	---
	9/28/1989	2.92	13580	12221	---	15.0	27.3
	9/29/1989	2.92	13580	12221	893	15.0	27.3
	12/13/1989	2.93	13200	13081	860	14.6	---
	3/30/1990	2.85	12400	11403	862	9.80	27.6
	6/12/1990	3.11	12070	11238	879	22.7	---
	9/19/1990	3.11	10330	10075	626	48.0	31.1
	12/31/1990	5.17	8600	3775	622	122	---
	2/13/1991	3.69	10790	7140	667	139	18.3
	5/30/1991	3.57	10300	7013	677	140	---
	9/12/1991	3.76	9520	6661	483	90.0	14.8
	11/26/1991	3.45	7050	4406	349	26.8	---
	2/13/1992	3.80	9990	5914	633	55.2	17.0
	6/1/1992	3.11	10200	6404	570	126	---
	9/16/1992	3.10	5735	3789	171	10.00	6.12
	12/16/1992	4.80	6440	3081	456	195	---
	2/23/1993	3.65	8540	4930	664	200	12.0
	6/24/1993	5.42	6307	3129	470	267	---
	9/2/1993	5.55	6229	3358	390	236	2.79
	11/29/1993	3.43	4446	3037	183	17.6	---
	3/15/1994	3.65	5571	3051	444	213	3.18
	6/14/1994	3.35	6656	4661	674	137	---
	9/20/1994	3.31	5950	4662	614	116	11.2
	12/6/1994	3.18	5708	4840	539	92.0	---
	2/13/1995	3.54	5886	4630	488	85.0	9.63
	6/14/1995	3.49	5013	4631	521	112	---
	9/11/1995	3.91	4364	4097	372	85.0	8.43
	12/8/1995	4.10	4463	3485	461	95.4	---
	2/23/1996	3.65	7169	3942	440	74.0	7.76
	5/22/1996	3.53	6600	3910	383	66.4	---
	9/3/1996	3.95	6056	3240	468	87.0	5.03

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-3	12/11/1996	5.72	7634	2910	832	191	---
	2/12/1997	3.12	4930	3450	385	64.9	6.73
	6/5/1997	2.95	4850	3540	214	49.3	—
	9/22/1997	3.82	5725	3220	399	59.1	4.36
	12/1/1997	3.59	5614	6370	310	55.9	—
	1/18/1998	3.52	4364	---	---	—	---
	3/10/1998	3.44	4900	3300	368	55.5	4.97
	6/8/1998	3.88	3910	3210	319	43.1	—
	7/28/1998	3.43	5300	4700	213	6.01	6.52
	10/22/1998	3.78	7010	7310	268	2.00	—
	1/18/1999	3.52	4364	3160	331	41.5	4.71
	6/1/1999	3.63	3573	3270	253	42.8	—
	8/31/1999	3.20	3492	3290	378	36.3	5.30
	11/9/1999	4.22	3220	3140	546	34.1	2.93
	2/23/2000	3.58	4747	2730	261	40.2	3.76
P-6	2/14/1991	2.49	11600	7971	350	0.0600	—
	5/30/1991	2.38	10100	9103	83.3	0.210	---
	9/12/1991	2.56	10340	8373	267	7.00	—
	11/22/1991	2.61	9420	8775	255	0.0800	—
	2/13/1992	2.51	10440	7750	428	0.100	---
	6/1/1992	2.53	7215	5122	206	2.51	---
	9/16/1992	2.65	6525	4161	166	5.30	---
	11/23/1992	2.50	5825	3683	165	6.70	---
	2/23/1993	2.73	4764	2821	146	10.4	---
	6/24/1993	3.01	3104	1708	56.0	3.60	—
	9/1/1993	2.77	3859	2425	87.0	10.00	—
	11/29/1993	3.18	2706	1488	58.4	2.30	---
	3/3/1994	4.73	1997	1131	35.5	0.610	---
	6/14/1994	4.88	2182	1163	29.6	1.30	—
	9/8/1994	4.08	2239	1888	55.3	3.72	---
	12/6/1994	4.95	2086	1166	36.2	3.84	---
	2/13/1995	5.65	1997	983	30.8	1.01	---
	6/21/1995	5.75	2346	1152	44.0	1.76	---
	9/11/1995	5.13	2021	1260	43.0	1.75	---
	12/7/1995	5.17	2460	1627	57.1	1.86	—
	2/23/1996	5.57	2313	1026	34.0	0.950	---
P-10	12/26/1990	3.59	13500	9686	615	36.0	—
	2/13/1991	4.07	11700	6751	843	103	4.58
	5/30/1991	3.85	10500	5814	567	35.0	---
	9/12/1991	3.76	10825	7459	507	53.0	17.8
	11/26/1991	4.09	10635	6909	507	32.3	---
	2/13/1992	4.18	10750	5973	641	51.1	19.0
	6/1/1992	4.43	10880	5743	775	15.3	---
	9/16/1992	3.95	9940	6093	682	77.7	16.2

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-10	11/23/1992	4.04	9625	5801	736	87.3	—
	2/23/1993	3.94	9770	5517	645	106	13.2
	6/24/1993	3.93	7794	4825	663	84.8	—
	9/1/1993	3.96	8109	5148	638	90.7	10.3
	11/29/1993	3.87	7684	5085	560	68.4	—
	3/3/1994	4.08	6766	5738	694	75.9	15.7
	6/14/1994	3.89	7411	6153	641	57.9	—
	9/20/1994	3.46	7514	7378	842	20.9	21.2
	12/1/1994	3.85	6641	5740	637	64.7	—
	3/6/1995	4.02	7543	7501	733	47.5	24.1
	6/20/1995	4.05	5584	3576	963	113	—
	9/14/1995	3.46	5445	4858	632	80.2	17.2
	12/8/1995	3.68	5197	4523	755	86.2	—
	2/28/1996	3.79	9187	4525	775	86.3	15.4
	5/23/1996	3.61	9100	4670	532	69.5	—
	9/6/1996	3.85	8000	4600	520	53.5	14.6
	12/11/1996	6.08	6971	4120	382	48.1	—
	2/28/1997	3.74	6100	—	—	—	—
	6/10/1997	5.46	6000	3750	481	87.5	—
	9/30/1997	6.41	7685	3690	598	103	7.58
	12/10/1997	6.40	8083	3720	475	142	—
	1/18/1998	4.61	4789	—	—	—	—
	4/14/1998	5.43	6000	3400	558	79.1	5.85
	6/23/1998	6.65	6200	3740	390	87.4	—
	9/10/1998	4.62	5489	3350	452	87.4	19.8
	10/22/1998	5.06	4927	3670	290	42.8	—
	1/18/1999	4.61	4789	3720	380	43.6	8.51
	5/17/1999	4.31	4043	3500	362	65.1	—
	8/31/1999	4.28	3905	3300	464	66.8	10.6
	11/9/1999	7.20	4962	4170	431	289	—
	3/27/2000	4.03	5239	3290	292	40.3	8.00
P-11	2/14/1991	2.83	5200	2988	176	13.0	2.67
	5/30/1991	2.83	4500	2839	397	0.700	—
	9/12/1991	2.85	4560	2621	43.0	6.30	3.26
	11/26/1991	3.01	4820	2737	93.6	0.150	—
	2/13/1992	2.88	4660	2680	153	0.630	4.50
	6/1/1992	3.19	4995	3070	99.8	0.630	—
	9/16/1992	3.13	5340	3502	135	4.80	6.45
	11/23/1992	3.03	4755	2884	110	4.50	—
	2/25/1993	3.14	5290	3270	121	31.2	5.50
	6/24/1993	3.12	—	3080	112	3.90	—
	9/1/1993	3.05	4995	3631	108	2.20	5.57
	11/29/1993	2.99	—	3303	110	2.30	—
	3/3/1994	3.27	4242	3320	106	1.82	5.98

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-11	6/14/1994	3.14	4220	3066	85.2	1.01	—
	9/8/1994	3.50	3469	2596	43.5	< 0.100	2.58
	12/6/1994	3.18	3952	3094	77.0	1.18	—
	2/13/1995	3.06	4242	3137	111	0.800	5.41
	6/14/1995	3.25	4057	3614	146	1.34	—
	9/11/1995	3.40	3648	3564	112	0.920	5.62
	12/8/1995	3.26	3910	3948	155	0.570	—
	3/27/1996	3.25	5599	3476	138	1.30	5.55
	5/22/1996	3.15	5400	3800	140	0.940	—
	9/17/1996	4.21	3050	1680	82.0	2.03	0.614
	12/11/1996	3.26	5742	3980	159	0.440	—
	2/12/1997	3.11	5000	—	—	—	—
	6/5/1997	3.02	4950	4450	140	0.180	—
	9/22/1997	3.61	6399	4500	221	0.230	5.11
	12/10/1997	3.00	6078	4930	157	0.300	—
	3/10/1998	3.61	6000	5300	229	1.38	6.77
	6/8/1998	3.53	3390	5100	163	1.80	—
	7/28/1998	3.88	5700	5040	161	1.85	8.62
	10/22/1998	3.55	4856	4680	141	1.97	—
	1/18/1999	3.79	4846	4480	186	2.07	4.75
	5/17/1999	3.69	3423	2850	84.2	5.49	—
	9/8/1999	4.40	3634	2580	100.0	20.3	1.46
	11/9/1999	4.22	2723	2560	81.7	6.88	—
	3/27/2000	3.85	4590	2950	103	0.860	2.22
P-12	2/14/1991	6.03	8140	3946	706	81.0	0.897
	6/11/1991	6.72	8570	4037	660	77.9	—
	9/18/1991	6.38	8900	3803	690	54.3	0.749
	12/5/1991	6.83	9050	3533	683	52.6	—
	2/28/1992	6.07	9040	4322	718	17.3	0.906
	6/8/1992	6.00	9880	4105	815	20.0	—
	9/9/1992	6.41	9885	4264	830	25.2	4.28
	12/1/1992	6.33	9880	4371	811	23.4	—
	3/24/1993	6.34	10401	4474	827	18.8	4.60
	6/1/1993	6.05	9907	3129	470	267	—
	8/30/1993	6.09	8782	2132	431	54.6	2.62
	12/20/1993	5.74	6551	3833	481	47.3	—
	3/11/1994	4.24	7400	6042	839	26.4	12.6
	6/7/1994	4.20	6816	6092	771	49.4	—
	9/6/1994	3.94	6412	5206	618	76.3	11.9
	11/29/1994	4.19	6038	3979	932	114	—
	3/3/1995	4.02	5477	4057	554	67.0	9.95
	6/22/1995	3.87	5500	4248	633	85.2	—
	9/14/1995	3.95	4681	3812	366	54.3	4.93
	12/7/1995	3.97	4214	3796	415	57.1	—

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-12	3/21/1996	3.96	7924	3702	650	86.6	9.70
	5/23/1996	4.01	6300	3457	489	70.0	—
	9/6/1996	3.94	5860	3400	440	60.3	6.31
	12/11/1996	3.70	5994	3300	421	53.1	—
	2/28/1997	4.04	5200	—	—	—	—
	6/10/1997	3.83	5030	3720	392	68.0	—
	9/3/1997	4.44	6367	3540	600	57.2	7.15
	12/10/1997	4.56	5905	3450	391	42.6	—
	4/14/1998	4.48	5200	3500	378	48.9	6.78
	6/23/1998	4.52	4600	3400	355	40.1	—
	9/10/1998	3.65	5050	3340	278	37.2	7.97
	10/22/1998	4.49	4206	3250	228	25.7	—
	1/18/1999	4.57	4065	3060	278	20.8	4.85
	5/17/1999	3.86	3951	3460	253	35.3	—
	8/31/1999	4.19	3457	2950	322	31.8	6.00
	11/15/1999	4.69	3293	3160	308	29.3	—
	2/23/2000	3.97	4629	3090	239	17.1	4.25
P-13	5/11/1993	5.78	6816	2645	445	228	1.70
	9/1/1993	6.14	5935	2699	406	169	1.91
	10/29/1993	5.87	5511	2505	402	76.8	2.39
	3/3/1994	5.96	5370	2539	436	197	2.09
	6/14/1994	6.08	5073	2441	381	166	—
	9/20/1994	6.11	4932	2547	340	152	1.67
	12/6/1994	6.21	4830	2604	300	137	—
	2/13/1995	6.14	4532	2587	319	113	1.95
	6/14/1995	6.77	4015	2508	204	91.1	—
	9/11/1995	6.15	3790	2353	176	72.5	1.45
	12/8/1995	6.18	4324	2949	239	132	—
	2/21/1996	6.25	6229	2770	242	96.9	1.54
	5/22/1996	6.05	4950	2429	156	46.8	—
	9/3/1996	6.38	4604	2250	104	26.9	1.02
	12/11/1996	6.05	4582	2320	130	38.5	—
	2/12/1997	6.33	3920	—	—	—	—
	6/5/1997	6.06	3990	2320	135	39.8	—
	9/16/1997	6.78	4678	2280	176	53.7	1.07
	12/10/1997	6.41	4868	2320	168	56.7	—
	3/10/1998	6.44	4850	2600	218	65.5	1.44
	6/8/1998	6.55	4000	2510	213	56.3	—
	7/28/1998	6.68	4622	2400	200	56.0	1.79
	10/22/1998	6.65	3905	2500	174	43.1	—
	1/18/1999	6.94	4031	2570	201	44.7	1.67
	5/17/1999	6.94	3538	2510	161	33.8	—
	8/31/1999	6.46	3291	2610	184	29.7	1.34
	11/9/1999	7.11	2876	2490	149	28.2	—

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-13	2/17/2000	6.79	4710	2180	168	38.5	1.14
P-14	5/12/1993	5.95	6720	2766	396	265	2.30
	9/1/1993	6.05	5808	2960	280	96.9	1.69
	11/29/1993	5.91	5050	2385	199	139	1.69
	3/3/1994	6.18	4597	1896	210	146	0.840
	6/14/1994	6.23	4703	2257	185	210	---
	9/20/1994	6.14	4539	2239	167	184	1.22
	12/6/1994	6.53	4501	2251	166	179	---
	2/13/1995	6.38	4242	2292	186	213	1.29
	6/14/1995	6.67	3994	2353	150	204	---
	9/11/1995	5.96	3790	2289	136	141	1.20
	12/8/1995	5.90	3548	2583	134	59.6	---
	2/21/1996	6.14	5477	2284	180	152	1.37
	5/22/1996	6.05	4700	2175	131	119	---
	9/3/1996	6.21	4827	2380	118	68.4	1.38
	12/11/1996	6.38	5496	1560	179	288	---
	2/12/1997	6.14	4230	---	---	---	---
	6/5/1997	5.75	4100	2050	142	140	---
	9/16/1997	6.87	4656	1850	166	161	0.634
	12/10/1997	6.56	5007	1890	143	161	---
	3/10/1998	6.45	4420	2000	183	168	0.780
	6/8/1998	6.52	3800	2000	177	158	---
	7/28/1998	6.80	4490	1800	179	157	0.944
	10/22/1998	6.64	3847	2080	161	133	---
	1/18/1999	7.18	3905	2100	176	146	0.862
	5/17/1999	7.29	3407	1960	161	116	---
	8/31/1999	6.47	3232	2220	185	99.3	0.0011
	11/9/1999	7.22	2854	2170	138	98.5	---
	2/17/2000	6.78	3512	1850	134	84.4	0.638
P-15	5/13/1993	6.10	10417	3156	297	700	0.180
	9/1/1993	6.70	9402	2985	260	777	0.194
	11/29/1993	6.11	9284	3037	227	915	0.247
	3/3/1994	6.45	8409	2722	237	1515	0.178
	6/14/1994	6.39	8875	3079	204	851	---
	9/20/1994	6.41	8852	4063	170	811	0.286
	12/6/1994	6.67	8563	3530	204	995	---
	3/28/1995	6.45	8409	3321	197	823	0.266
	6/21/1995	6.54	8307	5429	140	562	---
	9/13/1995	6.72	7297	4287	148	551	0.312
	12/8/1995	6.36	6652	4898	137	547	---
	2/21/1996	6.41	11598	3300	212	900	0.223
	5/23/1996	6.30	10900	2807	347	732	---
	9/3/1996	6.24	10963	4180	516	104	1.95
	12/11/1996	6.21	10565	3170	212	858	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-15	2/12/1997	6.52	8990	—	—	—	—
	6/10/1997	5.84	8900	2990	246	922	—
	9/16/1997	6.92	10910	2950	285	991	0.182
	12/10/1997	6.58	10992	3100	238	1010	—
	3/10/1998	6.71	9600	3100	253	979	0.225
	6/8/1998	6.67	8500	3150	262	1110	—
	7/28/1998	6.86	9661	2800	262	1040	0.276
	10/22/1998	6.72	7924	3000	275	1030	—
	1/18/1999	7.18	7809	3070	266	921	0.253
	5/17/1999	7.31	5768	3100	274	931	—
	9/2/1999	6.36	6316	3270	338	801	0.221
	11/9/1999	7.21	4962	3190	296	902	—
	2/17/2000	6.99	9128	2820	293	930	0.209
P-16	8/4/1995	5.71	4872	2080	425	405	2.54
	12/7/1995	5.85	4643	2027	370	372	2.01
	3/21/1996	5.81	7005	2151	364	298	2.54
	6/19/1996	5.65	6600	2154	354	301	3.07
	9/3/1996	6.04	6174	2220	287	222	1.96
	11/27/1996	5.79	5641	2220	276	138	2.11
	2/28/1997	5.77	4780	—	—	—	—
	6/10/1997	5.47	5020	2140	335	310	—
	9/8/1997	6.39	6699	2040	416	370	2.27
	12/10/1997	6.42	6699	2230	387	338	—
	4/14/1998	6.48	6000	2100	331	358	2.27
	6/23/1998	6.64	5800	2280	390	374	—
	9/10/1998	6.68	5709	2000	322	314	2.49
	10/22/1998	6.56	4835	2300	291	302	—
	1/18/1999	6.72	5076	2300	332	324	1.97
	5/17/1999	7.32	4192	2240	260	225	—
	9/2/1999	6.18	3929	2470	305	208	2.04
	11/9/1999	7.41	3568	2430	249	439	—
	3/27/2000	6.57	5950	2020	346	379	2.16
P-17	8/4/1995	6.10	7098	3064	443	1218	0.574
	12/7/1995	6.12	6321	3035	338	1159	0.153
	3/27/1996	6.69	12295	2884	330	1102	0.273
	6/19/1996	6.35	12600	2678	435	1139	0.711
	9/3/1996	6.39	4184	2690	302	1073	0.140
	11/27/1996	6.69	11139	2490	355	1023	0.226
	3/11/1997	6.25	9600	—	—	—	—
	6/10/1997	5.98	8010	2880	392	849	—
	9/16/1997	6.99	10447	2810	422	884	0.144
	12/10/1997	6.75	10585	2950	362	976	—
	4/15/1998	7.11	9500	2900	449	823	0.973
	6/8/1998	6.96	7900	3000	401	713	—

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-17	7/28/1998	7.05	8782	2700	414	670	0.223
	10/22/1998	6.92	7235	3070	413	725	---
	1/18/1999	7.17	7235	3050	365	752	0.228
	5/24/1999	7.15	5712	2950	351	652	---
	9/14/1999	6.93	5627	3050	409	719	0.208
	11/16/1999	7.59	6257	3140	334	775	---
	3/16/2000	7.09	8486	2730	321	849	0.244
P-18	8/24/1995	6.09	5613	2737	228	1391	0.212
	12/7/1995	6.29	6159	2446	279	1237	0.235
	6/19/1996	6.17	14300	2785	291	1453	0.366
	9/3/1996	6.92	11102	2570	371	850	0.293
	11/27/1996	6.98	11025	2520	403	920	0.350
	3/11/1997	6.61	10000	---	---	---	---
	6/10/1997	6.08	8800	2620	351	1040	---
	9/16/1997	6.96	10901	2450	360	997	0.240
	12/10/1997	6.47	9635	2890	366	946	---
	3/10/1998	6.66	9100	2800	414	802	0.405
	6/8/1998	7.04	9000	3160	343	997	---
	7/28/1998	7.10	9770	2700	362	901	0.411
	10/22/1998	7.09	8039	3170	357	924	---
	1/18/1999	7.01	7694	3000	330	810	0.436
	5/24/1999	7.20	5659	3050	309	591	---
	9/14/1999	6.99	5489	3360	366	565	0.432
	11/16/1999	7.68	5423	3310	311	562	---
	3/16/2000	7.22	7519	2880	290	527	0.396
P-19	8/7/1995	6.13	6890	3134	253	1250	0.151
	12/7/1995	6.14	7595	2851	86.0	2468	0.201
	3/27/1996	6.88	10565	4094	106	1783	0.362
	6/19/1996	6.28	11400	2711	363	866	0.130
	9/3/1996	6.42	12631	2830	275	1180	0.178
	12/16/1996	7.24	14010	3820	227	1155	0.311
	3/11/1997	7.09	13800	---	---	---	---
	6/10/1997	6.38	11900	6680	100.0	849	---
	9/16/1997	7.31	14648	5400	110	991	0.484
	12/10/1997	6.65	8244	3070	398	404	---
	3/10/1998	6.87	7500	3100	409	443	0.156
	6/8/1998	7.04	6500	3140	333	401	---
	7/28/1998	7.26	6257	2400	262	259	0.152
	10/22/1998	7.34	5742	2840	302	326	---
	1/18/1999	7.39	5466	3140	264	227	0.236
	5/24/1999	7.43	4289	2800	204	151	---
	9/14/1999	7.19	4123	2970	211	112	0.213
	11/16/1999	7.87	4117	3020	173	128	---
	3/16/2000	7.89	5478	2710	187	156	0.211

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-20	7/31/1995	2.81	7940	17667	703	0.250	27.8
	12/7/1995	3.27	5297	7810	440	1.05	10.9
	2/21/1996	3.20	15035	16790	720	0.300	25.7
	6/19/1996	3.09	15600	15156	710	0.250	22.3
	9/3/1996	3.18	4188	2310	420	5.32	0.995
	12/12/1996	3.12	13825	13800	715	0.230	22.6
	2/12/1997	2.98	10800	—	—	—	—
	6/5/1997	2.92	8800	11600	428	0.250	—
	9/22/1997	3.56	12349	11200	430	< 0.100	15.6
	12/10/1997	3.11	4859	3500	376	7.88	—
	3/10/1998	3.69	4250	3000	568	9.13	2.17
	6/8/1998	3.64	9000	10900	378	1.12	—
	7/28/1998	4.41	4062	2400	413	16.2	1.57
	10/22/1998	3.51	8039	11500	369	0.210	—
	1/18/1999	3.79	7924	10000	411	1.02	15.6
	5/17/1999	3.17	5536	7640	274	4.04	—
	9/2/1999	3.33	5662	10400	487	1.65	19.0
	11/9/1999	4.74	2635	2260	368	13.2	—
	2/23/2000	3.37	9450	8950	416	0.330	11.8
P-21	9/16/1999	6.49	4210	2510	382	533	1.66
	12/22/1999	7.02	9167	2820	271	824	1.15
	3/23/2000	6.92	7519	3690	224	538	0.663
P-22	9/16/1999	6.46	2245	1740	99.0	18.7	0.270
	12/22/1999	5.71	4348	2700	122	42.3	0.586
	3/23/2000	5.59	4082	2300	148	50.6	0.423
P-23	9/16/1999	6.61	3109	2590	316	47.2	1.87
	12/22/1999	7.21	4572	2630	256	49.6	2.10
	2/23/2000	7.08	6443	3200	368	101	1.17
P-24	9/16/1999	6.95	3660	2210	251	144	0.608
	12/22/1999	7.09	5312	2190	222	192	0.653
	2/17/2000	6.97	5058	1940	232	208	0.539
PS-1	6/18/1980	---	---	3712	620	390	0.520
	10/12/1981	---	---	3240	653	572	0.657
	6/25/1982	---	---	7500	1100	980	4.60
	12/28/1982	---	---	2700	470	370	0.600
	2/18/1983	---	---	2720	466	217	0.800
	6/14/1983	---	---	745	77.0	4.39	0.174
	9/16/1983	---	---	2860	514	391	0.800
	10/19/1983	---	---	2540	485	292	0.658
	2/6/1984	---	---	4100	505	492	0.594
	5/19/1984	---	---	4480	521	247	0.551
	7/31/1984	---	---	4600	699	764	0.538
	11/26/1984	---	---	4900	611	570	0.215

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-1	4/5/1979	3.20	16000	13000	925	---	66.0
	1/1/1980	3.28	18060	---	---	---	---
	4/1/1980	3.26	16458	11500	1200	6.80	31.0
	6/19/1980	3.60	14273	7300	850	1.70	28.9
	10/19/1980	2.30	19147	14800	730	0.500	20.0
	1/13/1981	2.40	17555	14200	219	32.0	0.750
	6/22/1981	2.37	19642	10100	1300	20.0	58.0
	9/30/1981	2.40	19655	18700	1000	22.0	77.0
	12/23/1981	2.34	18250	18600	1169	33.0	81.0
	3/23/1982	1.95	22630	19400	1200	33.0	41.0
	6/15/1982	2.38	15700	18000	1300	23.0	0.130
	9/30/1982	2.52	15900	17000	1300	22.0	55.0
	12/31/1982	2.52	20000	18000	1100	36.0	50.0
	2/7/1983	2.56	23700	15900	1375	22.7	33.9
	6/17/1983	2.49	22500	20100	1209	35.5	36.7
	9/3/1983	2.67	24000	18600	904	14.2	87.5
	10/19/1983	2.72	22420	18700	1010	28.8	77.5
	1/26/1984	2.55	22420	18400	2121	29.2	54.5
	4/22/1984	2.41	21240	19600	884	22.7	66.6
	7/16/1984	2.60	11446	17500	1236	19.4	83.6
	10/8/1984	2.64	17700	13150	1264	15.3	86.0
	1/24/1985	2.70	17700	19300	1063	12.6	70.1
	4/15/1985	2.81	10620	21200	1061	13.0	73.4
	7/29/1985	2.63	8850	15350	929	6.52	53.9
	11/12/1985	3.26	20451	13300	951	7.48	83.2
	1/20/1986	2.97	17015	15950	1237	7.03	64.5
	5/12/1986	2.86	20405	16949	821	44.6	33.7
	9/26/1986	2.70	15440	18391	693	2.16	21.1
	12/21/1986	2.65	19774	20200	882	3.00	22.8
	2/11/1987	2.70	18920	19478	824	0.140	34.4
	5/21/1987	2.72	18785	17865	853	312	33.4
	8/13/1987	2.96	17421	16852	475	0.120	11.0
	10/27/1987	3.08	17843	17352	687	1.30	36.5
	1/25/1988	2.83	18359	17932	747	1.90	35.3
	5/3/1988	2.72	14100	16315	517	1.32	25.9
	9/6/1988	2.80	12558	16980	761	2.30	33.3
	12/12/1988	2.64	15380	18413	756	2.20	---
	3/15/1989	2.97	15160	16494	1006	0.730	28.4
	6/22/1989	2.95	13173	10476	436	2.40	---
	9/29/1989	2.91	11790	10894	464	4.20	22.9
	12/13/1989	3.14	10580	8230	303	2.00	---
	3/30/1990	2.85	9190	7892	320	1.67	17.9
	6/12/1990	2.96	8440	7710	304	0.390	---
	9/28/1990	2.93	7550	7350	243	0.320	17.8

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-1	12/28/1990	3.01	9100	7185	223	0.0300	---
	2/12/1991	3.07	9620	8491	301	0.0100	16.9
	5/30/1991	2.83	9090	10403	256	0.0100	---
	9/12/1991	3.00	9280	8808	310	0.0800	22.7
	11/22/1991	2.63	11025	10003	287	0.0500	---
	2/13/1992	3.10	9990	7951	404	0.100	18.0
	6/1/1992	3.06	10320	8174	366	0.100	---
	9/16/1992	2.85	6725	5829	165	0.100	0.822
	11/23/1992	2.80	7455	5997	222	0.900	---
	2/23/1993	3.04	6999	5042	292	0.790	10.2
	6/24/1993	2.98	6981	5487	221	0.140	---
T1-2	4/3/1980	5.80	6994	3970	610	0.160	0.100
	6/19/1980	6.10	5376	4200	570	0.0500	0.140
	10/12/1980	5.95	7387	3950	420	0.0500	0.180
	1/11/1981	6.33	6660	16600	551	0.0500	0.150
	6/19/1981	6.20	6416	3070	460	0.400	0.140
	9/23/1981	6.63	5961	3050	410	0.150	0.130
	12/17/1981	6.74	4456	2800	308	4.29	0.110
	3/22/1982	6.56	3216	2200	170	0.110	0.120
	6/15/1982	6.47	4700	1700	270	0.0900	0.140
	9/21/1982	6.66	4750	2000	220	0.0500	0.0850
	12/15/1982	6.56	6018	2600	420	0.200	0.200
	1/28/1983	6.82	5900	2450	413	2.60	0.116
	5/17/1983	6.81	4838	2100	387	4.90	0.0900
	7/26/1983	6.83	5700	2320	386	11.2	0.0860
	10/11/1983	6.20	6490	2740	505	3.31	0.0660
	3/15/1984	6.55	8260	2800	465	2.92	0.125
	6/7/1984	6.20	7080	2200	398	0.140	0.107
	9/10/1984	6.44	4720	2290	413	0.0500	0.117
	11/29/1984	6.35	4366	2400	409	0.0600	0.135
	3/21/1985	6.42	5900	2770	459	0.0800	0.230
	5/31/1985	6.35	4130	2675	485	0.310	0.155
	9/25/1985	6.32	4860	2260	485	0.0800	0.0880
	12/2/1985	6.39	6038	2430	476	0.0900	0.0930
	3/5/1986	6.73	6176	2660	464	0.0700	0.134
	6/4/1986	5.80	6307	2672	501	0.150	0.0990
	9/8/1986	6.45	6174	2843	499	0.0100	0.0700
	11/18/1986	6.18	6038	2860	481	0.0700	0.134
	3/3/1987	6.15	6333	2954	289	0.0800	0.0850
	5/27/1987	6.56	5932	2677	449	0.220	0.207
	8/20/1987	6.39	5860	2470	435	0.0300	0.244
	10/28/1987	6.17	5304	2420	414	0.0800	0.169
	1/29/1988	5.97	6200	2670	438	0.200	0.0450
	6/2/1988	7.58	3100	1324	94.6	0.350	0.156

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-2	9/6/1988	6.37	4632	2178	298	0.240	0.0844
	12/6/1988	6.68	4884	2364	134	0.340	---
	3/6/1989	6.15	5160	2468	403	0.0500	0.0379
	6/19/1989	5.91	5700	2691	452	0.120	---
	9/1/1989	5.56	6440	3544	482	0.0800	0.0590
	12/11/1989	5.78	7000	4098	515	0.0500	---
	3/19/1990	5.29	6360	4137	468	0.190	0.0830
	6/12/1990	3.93	6620	5965	345	3.64	---
	9/19/1990	5.54	7320	5087	485	2.70	0.0760
	12/26/1990	5.44	8100	4916	426	0.860	---
	2/12/1991	5.49	7570	4481	527	0.0100	0.0076
	5/31/1991	5.62	6500	4053	464	0.0100	---
	9/18/1991	5.57	6755	3918	535	0.0100	0.175
	12/5/1991	6.31	6100	3086	482	0.0100	---
	2/27/1992	5.49	6800	3612	502	0.100	0.292
	6/8/1992	5.58	7400	4018	466	0.100	---
	9/4/1992	5.39	5930	4349	488	3.10	0.124
	12/1/1992	5.76	6960	4125	496	0.600	---
	3/15/1993	5.57	7331	3826	353	< 1.000	0.0930
	6/1/1993	4.76	7600	4974	511	0.300	---
	8/30/1993	4.58	7043	5012	574	1.10	0.246
	12/20/1993	5.13	6256	5020	574	0.330	---
	3/8/1994	4.59	6735	5920	1097	0.210	0.440
	5/17/1994	4.17	6806	7120	564	0.280	---
	8/22/1994	3.97	5613	7581	607	0.810	1.69
	11/29/1994	4.24	6367	---	---	< 0.100	---
	3/3/1995	4.10	7303	8514	580	0.120	4.64
	6/22/1995	4.14	5412	6448	497	1.09	---
	9/19/1995	3.82	5762	7726	386	< 0.100	6.71
	12/7/1995	4.00	5237	7674	507	0.270	---
	3/15/1996	4.06	10220	7360	555	< 0.100	6.34
	5/28/1996	3.50	8800	6398	459	< 0.100	---
	9/3/1996	3.79	10576	8530	565	0.490	12.4
	12/11/1996	3.81	11042	9320	599	< 0.100	---
	2/14/1997	3.83	8000	8920	636	< 0.100	10.9
	6/10/1997	3.82	4940	4080	356	0.370	---
	9/3/1997	4.42	7685	5950	489	0.240	2.25
	12/10/1997	4.08	5529	3600	340	0.550	---
	4/14/1998	4.79	7000	5800	488	< 0.100	2.42
	6/11/1998	4.61	5800	4460	372	< 0.100	---
	9/10/1998	4.33	7575	6200	503	13.0	8.05
	10/27/1998	3.89	6205	6720	372	2.08	---
	2/4/1999	4.05	5685	5400	442	0.190	5.06
	6/14/1999	4.59	5371	7040	347	< 0.100	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-2	9/16/1999	3.98	4076	6930	569	0.120	8.18
	12/22/1999	4.46	8714	7150	478	< 0.100	—
	3/23/2000	4.34	6874	6300	517	0.280	3.86
T1-3	1/2/1980	3.63	6700	—	—	—	—
	4/3/1980	3.53	8189	7380	320	18.8	0.0530
	10/24/1980	3.58	8464	7200	260	13.0	0.0270
	1/12/1981	3.72	7529	7490	239	0.930	0.0260
	4/11/1981	3.45	6720	7590	235	14.0	0.0260
	6/17/1981	3.45	6700	7510	290	11.0	0.0260
	9/23/1981	3.58	6473	6950	230	18.0	0.0360
	12/17/1981	3.77	6037	7900	255	10.3	0.0440
	3/30/1982	3.48	8226	7120	190	16.0	0.0490
	6/10/1982	3.50	7700	6400	240	17.0	0.0150
	9/20/1982	3.57	5140	7000	270	13.0	0.0220
	12/14/1982	3.58	9440	7900	220	14.0	0.0230
	1/26/1983	3.67	8260	6950	232	15.2	0
	5/17/1983	3.58	9000	6180	226	16.0	0
	9/3/1983	3.46	8000	7400	248	11.1	0.0450
	11/9/1983	3.45	7080	6400	237	15.4	0.0110
	3/12/1984	3.70	5900	6850	232	16.9	0.0130
	6/7/1984	3.63	4720	7080	247	12.0	0.0110
	9/10/1984	3.43	5900	5500	235	14.2	0.0120
	11/29/1984	3.53	5900	7600	236	12.1	0.0270
	5/14/1985	3.43	5900	8640	242	13.0	0.0130
	12/2/1985	3.41	8592	6800	252	13.6	0.0190
	6/4/1986	3.46	8409	7849	212	13.5	0.0580
	12/11/1986	3.00	8268	7850	238	—	0.100
	5/26/1987	3.60	8898	8417	197	468	0.0369
	10/29/1987	2.97	8423	7865	217	3.90	0.136
	1/29/1988	3.10	8700	—	—	—	0.0228
	6/1/1988	3.34	7400	7334	156	12.7	0.0764
	9/9/1988	3.42	2617	7441	168	12.7	0.0695
	12/7/1988	3.28	7559	9046	150	10.8	—
	3/6/1989	3.40	7924	8488	206	8.30	0.0325
	6/19/1989	3.47	4849	4151	49.7	4.00	—
	9/1/1989	3.25	8300	8147	138	4.30	0.105
	12/11/1989	3.26	7200	6592	153	1.50	—
	3/20/1990	3.15	7230	7541	159	2.00	0.0770
	6/12/1990	3.32	7140	8023	162	8.92	—
	9/19/1990	3.14	7760	8396	135	7.70	0.0120
	12/26/1990	3.21	8050	7513	108	9.30	—
	2/12/1991	3.29	7690	7570	171	8.90	0.164
	5/31/1991	3.33	6800	11036	130	6.91	—
	9/18/1991	3.27	7260	7006	121	6.29	0.0380

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-3	12/5/1991	3.04	7520	7727	226	5.50	---
	2/27/1992	3.16	7970	7127	168	4.10	0.222
	6/8/1992	3.15	7900	6837	154	8.13	---
	9/4/1992	3.19	7315	8081	180	10.5	0.179
	12/1/1992	3.28	7860	7851	182	7.10	---
	3/15/1993	3.25	7303	6978	176	10.6	0.0230
	6/1/1993	3.08	7454	7780	183	6.80	---
	8/30/1993	3.32	7303	7919	185	8.00	1.05
	12/20/1993	3.36	6617	7641	170	8.23	---
	3/8/1994	3.01	6661	7467	181	6.96	0.327
	5/17/1994	3.22	6623	7537	187	8.90	---
	8/22/1994	3.02	5254	7522	148	5.80	0.353
	11/29/1994	3.28	5489	7356	197	7.65	---
	3/3/1995	3.40	6229	8498	185	5.50	1.13
	6/21/1995	3.48	5370	7552	191	10.00	---
	9/19/1995	3.13	5305	8234	155	7.36	0.935
	12/7/1995	3.13	4781	8200	170	7.63	---
	3/21/1996	3.00	7858	7665	170	4.60	0.0750
	5/29/1996	2.72	8800	7771	142	5.60	---
	9/3/1996	2.98	7465	7520	160	7.05	0.0685
	12/11/1996	3.01	7756	7220	184	7.50	---
	2/14/1997	3.07	6300	8000	200	3.58	0.0600
	6/10/1997	2.82	5800	6850	173	7.39	---
	9/3/1997	3.65	7136	6940	168	9.32	0.0670
	12/10/1997	3.47	6813	6410	121	9.57	---
	4/14/1998	3.69	6200	6700	172	7.22	0.0850
	6/23/1998	3.70	5500	6060	128	8.50	---
	9/15/1998	3.40	5584	5400	165	8.63	0.0674
	10/27/1998	3.68	4883	3960	127	8.74	---
	2/4/1999	3.74	5030	5780	162	9.01	0.293
	6/14/1999	3.87	4282	5980	80.7	7.02	---
	9/16/1999	3.63	3784	6210	190	8.47	0.0631
	12/22/1999	3.97	6738	6380	147	8.32	---
	3/23/2000	3.71	5478	5630	162	7.17	0.0695
T1-4	4/3/1979	7.30	8480	3200	600	---	9.10
	10/27/1989	6.70	16000	6954	739	---	44.0
	6/11/1991	7.10	11900	6115	239	46.9	---
	9/23/1991	6.80	12030	5909	760	53.0	27.6
	12/5/1991	7.19	11800	6228	751	52.3	---
	2/27/1992	6.46	11110	5748	791	33.8	26.1
	6/8/1992	6.40	13430	6825	617	31.2	---
	9/4/1992	6.44	11865	6974	678	33.5	31.0
	12/1/1992	6.69	12350	6213	709	67.0	---
	3/15/1993	6.55	12028	6166	698	82.1	33.4

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-4	6/1/1993	6.45	11984	6794	714	18.5	—
	8/30/1993	6.11	10847	7146	590	20.6	33.5
	12/20/1993	6.28	9855	7147	560	32.1	—
	3/8/1994	6.13	9302	6342	687	26.3	30.6
	5/17/1994	6.29	9111	6961	641	33.8	—
	8/22/1994	6.37	7634	6823	642	21.1	33.1
	11/29/1994	6.15	7684	7190	611	19.4	—
	3/3/1995	6.20	8269	7444	586	17.5	31.1
	6/22/1995	6.31	8268	6963	582	24.0	—
	9/19/1995	6.30	7266	6787	666	26.3	34.7
	12/7/1995	6.22	6283	6699	613	25.6	—
	2/21/1996	6.34	10859	5345	670	49.6	15.7
	5/22/1996	6.29	7000	4401	411	30.8	—
	9/18/1996	6.38	8800	5610	470	21.5	17.1
	12/3/1996	6.15	7579	3990	365	24.9	—
	2/12/1997	6.20	6100	—	—	—	—
	6/5/1997	5.94	6000	3940	371	23.1	—
	9/16/1997	6.46	6290	3670	419	20.4	6.23
	12/10/1997	6.58	6901	3600	303	24.2	—
	3/10/1998	6.67	5800	3800	330	19.9	7.54
	6/8/1998	6.71	3250	3530	366	29.5	—
	7/28/1998	7.02	6257	3820	335	30.8	0.0210
	10/22/1998	6.79	7005	4300	382	40.8	—
	1/18/1999	6.86	5627	4170	405	45.7	8.45
	5/17/1999	6.95	4667	3850	291	45.2	—
	9/2/1999	6.61	4154	3490	281	30.8	7.11
	11/9/1999	7.71	4126	4770	287	55.1	—
	3/29/2000	7.06	7089	4240	330	53.2	7.95
T1-5	9/4/1992	7.27	4335	2003	218	94.6	0.0130
	8/30/1993	6.91	4520	2363	287	72.8	0.0950
	9/6/1994	6.74	4015	2091	253	51.6	0.0460
	9/19/1995	6.92	4090	2333	281	71.3	0.0518
	9/6/1996	6.48	4800	2290	350	69.3	0.0160
	9/3/1997	7.38	5430	2540	484	97.0	0.0720
	9/16/1998	7.06	4820	2630	385	110	0.0547
	8/30/1999	6.81	2502	2340	395	94.1	0.0758
T1-6	4/11/1979	7.70	3070	237	28.0	—	0.0120
	1/2/1980	7.41	3500	—	—	—	—
	4/5/1980	6.64	3000	2190	55.0	4.00	0.220
	10/17/1980	6.88	4408	2230	60.0	0.370	0.310
	4/17/1981	6.58	4067	1970	53.0	4.10	0.200
	12/18/1981	6.72	3470	1770	38.0	4.73	0.750
	6/17/1982	6.46	3500	2400	48.0	7.40	0.320
	12/22/1982	7.08	4130	2000	51.0	6.40	0.250

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-6	5/18/1983	6.99	4100	2380	56.0	11.0	0.261
	11/11/1983	7.43	4130	1720	43.0	4.17	0.109
	6/11/1984	6.53	3304	1920	70.0	5.60	0.293
	11/29/1984	6.84	2360	1850	63.0	4.84	0.402
	5/8/1985	7.30	2950	1610	50.0	1.50	0.292
	10/31/1985	6.85	4364	2310	55.0	4.93	0.255
	4/28/1986	6.85	3088	1920	48.7	2.90	0.148
	10/31/1986	6.95	3929	2250	57.0	5.00	0.189
	1/28/1987	7.52	3609	—	—	—	—
	5/26/1987	7.30	4152	2251	51.5	522	0.268
	8/19/1987	7.12	3635	1472	31.8	0.820	0.0744
	12/13/1987	6.07	4957	2562	75.7	8.80	—
	1/29/1988	6.73	3913	1784	40.0	3.40	0.0118
	9/9/1988	7.09	3521	1822	41.6	2.50	0.0993
	12/8/1988	6.40	3735	2209	53.0	5.40	—
	3/8/1989	6.00	4219	2584	78.9	9.30	0.440
	6/20/1989	6.51	4550	2637	72.9	7.80	—
	9/1/1989	6.14	4520	2614	55.8	8.80	0.366
	12/11/1989	6.41	4400	2460	72.3	10.1	—
	3/14/1990	6.26	4210	2491	67.4	8.30	0.436
	6/11/1990	6.88	3570	2006	50.1	3.73	—
	9/19/1990	6.73	3760	2496	52.1	3.86	0.156
	12/28/1990	6.80	3935	2012	39.4	4.60	—
	2/12/1991	6.47	3600	1983	48.3	5.10	0.159
	5/31/1991	6.25	3400	1755	46.4	4.03	—
	9/17/1991	6.69	3340	1748	48.4	2.20	0.165
	11/22/1991	6.80	3170	2076	46.5	1.26	—
	2/27/1992	6.80	3750	1932	46.5	2.60	0.127
	6/8/1992	6.74	3690	1754	46.4	3.46	—
	9/4/1992	6.87	3320	1723	39.3	4.50	0.209
	12/1/1992	6.88	3620	1868	43.0	5.50	—
	3/15/1993	6.89	4150	2219	60.2	10.6	0.611
	6/1/1993	6.70	3727	2135	53.6	4.00	—
	8/25/1993	6.79	3514	1737	43.1	3.00	1.75
	12/20/1993	6.73	3270	1755	37.9	3.10	—
	3/8/1994	6.48	3248	1852	45.2	3.19	0.197
	5/17/1994	6.51	3513	1761	42.1	2.98	—
	9/6/1994	6.52	3101	1857	47.4	2.50	0.103
	11/29/1994	6.47	2404	1836	39.1	2.04	—
	3/3/1995	6.72	2921	1691	37.4	2.02	0.223
	6/21/1995	6.83	2750	1562	27.0	0.520	—
	9/19/1995	6.90	2586	1426	26.0	0.190	0.117
	12/7/1995	6.76	2712	1631	32.2	0.990	—
	3/21/1996	6.60	3101	1588	32.0	0.930	0.0900

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-6	5/29/1996	6.03	3300	1811	40.0	2.63	---
	9/3/1996	6.55	3532	1930	47.0	3.95	0.139
	12/3/1996	6.02	3996	2300	70.0	6.30	---
	2/14/1997	6.07	3600	2640	160	6.88	0.283
	6/17/1997	6.31	3200	2960	93.4	9.72	---
	9/2/1997	6.99	4235	2570	80.1	9.83	0.425
	12/10/1997	6.86	4338	2700	82.7	9.68	---
	3/28/1998	7.03	3720	2700	91.6	6.72	0.309
	6/11/1998	6.89	3300	2490	83.3	8.50	---
	9/15/1998	6.29	3840	2500	101	8.74	0.661
	12/3/1998	7.48	3604	2630	87.1	9.47	---
	2/4/1999	6.72	3595	2650	91.1	9.21	0.689
	6/15/1999	7.80	3149	3320	84.2	9.18	---
	8/30/1999	6.59	2128	2640	110	8.12	0.346
	12/21/1999	7.10	4654	2640	88.2	9.90	---
	3/23/2000	6.86	3631	2250	91.4	7.85	0.286
T1-7	10/23/1980	6.56	9900	3290	675	72.5	0.710
	1/11/1981	7.05	5860	2150	850	91.0	0.130
	6/18/1981	6.84	6365	2210	85.0	76.0	0.970
	9/25/1981	6.34	4732	2910	720	144	1.70
	12/16/1981	6.20	6875	2660	787	70.6	2.60
	3/30/1982	6.10	8091	3110	630	60.0	2.50
	6/7/1982	6.18	7300	2500	900	76.0	1.70
	9/10/1982	6.28	6090	2900	1100	47.0	2.00
	12/15/1982	6.51	9204	3000	840	67.0	2.50
	1/28/1983	6.88	8260	2750	741	58.8	2.22
	5/5/1983	6.89	8260	2300	731	69.6	1.93
	9/22/1983	6.40	9000	2860	719	59.4	2.48
	10/16/1983	6.26	9440	3420	758	61.7	2.33
	3/14/1984	7.05	10620	3280	697	48.3	3.09
	6/6/1984	6.54	9440	3260	774	29.1	3.08
	9/13/1984	6.46	7080	3440	887	18.1	4.47
	11/15/1984	6.43	5900	3760	790	1.98	3.37
	3/21/1985	6.47	7080	4170	787	29.8	4.90
	5/31/1985	6.42	5900	3490	808	14.0	4.19
	8/29/1985	6.10	4130	3165	808	34.3	3.82
	12/3/1985	6.36	8672	3250	835	44.0	4.74
	3/4/1986	6.34	8981	3090	763	45.1	2.78
	6/5/1986	6.30	8935	3202	785	25.4	2.77
	9/9/1986	6.57	7924	3575	768	31.0	2.04
	11/18/1986	6.34	9331	3700	866	34.0	3.16
	3/3/1987	6.02	8705	3623	796	38.0	3.00
	5/27/1987	6.46	7119	3164	720	123	2.73
	8/19/1987	6.22	9693	3201	842	56.0	2.10

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-7	10/29/1987	6.05	8639	3570	748	149	4.83
	1/29/1988	6.04	8600	3227	691	142	3.08
	6/2/1988	6.37	8150	3206	734	109	2.62
	9/12/1988	6.45	7568	3253	745	93.0	2.98
	12/8/1988	6.20	8039	3759	794	30.0	—
	3/7/1989	6.45	7253	2943	827	27.0	3.52
	6/19/1989	6.15	8875	3489	811	52.0	—
	9/14/1989	6.18	8560	3535	892	29.0	3.29
	12/11/1989	6.20	7580	2873	836	62.0	—
	3/19/1990	6.30	7330	2791	816	73.0	2.05
	6/11/1990	6.30	6400	3365	720	72.4	—
	9/19/1990	6.03	7050	3640	713	79.0	2.20
	12/26/1990	6.19	7300	2842	671	108	—
	2/13/1991	6.22	6900	3079	675	106	2.06
	5/31/1991	6.24	6700	2901	595	99.7	---
	9/18/1991	6.53	6860	3022	549	116	2.17
	12/5/1991	7.06	8225	3354	568	65.2	—
	2/28/1992	6.29	6620	2902	518	10.1	1.73
	6/8/1992	6.22	8040	3294	519	64.9	—
	9/4/1992	6.30	6860	3292	516	96.9	1.48
	12/1/1992	6.59	6800	3055	472	128	—
	3/15/1993	6.32	6336	3108	434	120	0.611
	6/1/1993	6.25	8345	3987	540	5.20	—
	8/30/1993	6.08	7625	3955	463	87.4	1.75
	12/20/1993	6.71	4967	2687	294	53.4	—
	3/8/1994	6.59	4580	2721	306	42.3	1.43
	5/17/1994	6.63	4611	2798	236	38.7	—
	9/6/1994	6.61	4415	972	112	25.0	1.54
	11/29/1994	6.41	3930	2861	166	22.4	—
	3/3/1995	6.50	4027	2786	147	20.5	1.40
	6/23/1995	6.04	4210	2787	231	21.9	—
	9/19/1995	6.08	3838	2782	122	16.5	1.66
	12/7/1995	6.40	3179	2388	85.9	5.45	—
	3/27/1996	7.14	4611	2508	96.0	13.0	1.25
	5/29/1996	6.18	4750	2546	122	9.64	—
	9/3/1996	6.53	4378	2460	89.0	9.69	1.13
	12/3/1996	5.73	4899	3000	109	3.46	---
	2/14/1997	6.09	3800	2810	129	8.58	1.49
	6/10/1997	5.50	3930	2700	128	13.9	—
	9/3/1997	6.68	4995	2780	171	21.7	1.35
	12/10/1997	7.19	4356	2520	106	4.87	---
	4/14/1998	6.92	4390	2700	158	29.8	1.28
	6/23/1998	7.40	3400	2410	110	11.4	---
	9/10/1998	7.03	3645	2300	116	11.1	1.25

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-7	12/9/1998	7.16	4450	2780	163	37.7	—
	2/4/1999	7.08	3565	2490	132	17.2	1.22
	6/14/1999	6.89	3104	2440	112	15.3	—
	9/16/1999	7.02	2938	2090	125	12.7	1.31
	12/22/1999	7.54	4450	2580	116	21.0	—
	3/23/2000	7.00	3910	2210	190	28.9	2.49
T1-8	10/22/1980	4.62	12800	7150	1000	48.0	12.0
	1/11/1981	2.53	20861	2150	480	91.0	0.580
	6/19/1981	2.59	10240	11500	1200	6.80	62.0
	9/23/1981	2.54	19199	16900	1100	11.0	28.0
	12/16/1981	2.50	12636	14600	1382	18.9	39.0
	3/30/1982	2.58	15717	15000	1400	17.0	28.0
	6/15/1982	2.79	14600	14000	1500	17.0	2.00
	9/17/1982	2.86	12700	9600	1400	8.10	20.0
	12/14/1982	2.90	19200	13000	1300	15.0	—
	1/26/1983	2.86	18000	11500	1587	14.4	17.8
	5/16/1983	2.93	16500	9900	1344	20.6	7.92
	9/22/1983	2.99	12000	9550	1190	17.1	17.1
	10/16/1983	2.96	14160	11300	1212	12.3	29.5
	3/15/1984	3.00	16520	10650	1111	20.3	16.7
	6/7/1984	2.90	11800	9150	1183	14.7	22.2
	9/13/1984	2.97	10856	8050	1530	19.1	25.8
	11/29/1984	2.90	10620	10250	948	16.5	15.8
	3/21/1985	3.02	11210	10940	1148	17.5	0.398
	5/31/1985	2.96	9440	10300	1111	37.0	35.5
	8/29/1985	2.51	5900	9200	1091	16.9	14.0
	12/3/1985	2.97	14161	9080	1107	18.5	22.0
	3/5/1986	2.95	15241	9400	1443	17.9	38.0
	6/5/1986	2.75	15767	9722	975	28.8	26.4
	9/8/1986	3.01	13246	11144	1024	1.22	24.8
	12/11/1986	2.50	14498	11600	1140	1.80	21.9
	3/3/1987	2.78	12924	8646	1003	5.30	25.3
	5/27/1987	2.69	9887	5975	948	17.1	33.4
	8/20/1987	3.11	9409	5072	390	47.0	14.1
	10/29/1987	3.03	9935	5324	1005	36.0	20.9
	2/3/1988	2.70	10900	7308	1021	31.0	19.7
	6/2/1988	3.04	9700	7008	1068	29.0	11.7
	9/12/1988	3.00	10648	9034	969	14.0	29.3
	12/8/1988	2.88	10577	8373	923	21.0	—
	3/7/1989	3.20	9460	7231	1047	20.0	19.6
	6/19/1989	3.07	13716	13459	711	0.520	—
	9/1/1989	2.78	9349	6160	411	13.8	8.68
	12/11/1989	2.98	6620	3768	206	17.9	—
	3/20/1990	3.13	8610	6550	392	2.20	14.1

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-8	6/12/1990	3.07	7220	5700	311	6.91	—
	9/19/1990	2.92	6700	5391	233	10.7	10.8
	12/31/1990	3.22	7050	4649	172	2.60	—
	2/13/1991	3.18	6900	4627	261	2.20	8.43
	5/31/1991	3.09	5500	3558	272	2.36	—
	9/12/1991	2.97	4855	3154	225	430	5.33
	11/26/1991	3.04	5050	2979	120	0.370	—
	2/13/1992	3.21	5160	3260	147	0.450	0.600
	6/1/1992	2.92	5245	3144	185	11.7	—
	9/16/1992	3.08	4950	3155	133	2.70	3.53
	11/23/1992	3.65	5075	3196	155	9.00	—
	2/23/1993	3.04	5336	3189	220	8.20	4.70
	6/24/1993	3.62	6444	3308	528	30.6	—
	9/1/1993	3.66	4502	3184	147	4.90	3.14
	11/29/1993	3.82	4172	2674	133	7.10	—
	3/3/1994	3.87	3805	2696	132	5.82	3.48
	6/14/1994	3.99	3731	2674	127	4.00	—
	9/8/1994	3.61	3276	546	42.5	3.77	2.56
	12/6/1994	4.47	3842	2761	131	3.66	—
	2/13/1995	3.73	3780	2526	126	4.76	3.25
	6/14/1995	4.03	3279	2613	123	5.23	—
	9/11/1995	3.94	3079	2449	107	5.14	2.91
	12/8/1995	4.02	3264	2633	114	4.53	—
	2/23/1996	3.52	4434	2534	123	6.58	2.88
	5/22/1996	4.09	4200	2558	135	6.72	—
	9/3/1996	3.10	3729	2080	62.5	8.73	0.699
	12/3/1996	3.23	4410	2750	116	3.12	—
	3/12/1997	3.38	3870	3120	202	5.17	2.77
	6/5/1997	3.31	3940	2860	96.5	5.71	—
	9/22/1997	4.11	5276	3100	174	5.08	2.51
	12/1/1997	3.26	5323	3410	219	5.28	—
	3/10/1998	3.66	4220	3300	154	7.75	2.56
	6/8/1998	4.73	2790	1940	70.9	7.56	—
	7/28/1998	4.17	4501	3000	190	3.86	3.99
	10/22/1998	3.85	4180	3670	168	4.63	—
	1/18/1999	4.01	4054	3350	193	7.33	3.52
	5/17/1999	3.77	2952	2050	65.0	12.2	—
	9/2/1999	4.07	3275	2660	156	5.19	3.05
	11/9/1999	4.11	3041	3400	138	4.85	—
	3/23/2000	4.94	4017	2380	88.5	10.3	1.26
T1-9	10/7/1980	4.30	15022	9088	1150	63.0	9.50
	1/16/1981	4.02	13771	3420	1200	44.0	35.0
	6/18/1981	3.73	13400	11000	1200	10.00	33.0
	9/17/1981	4.00	10100	11000	890	8.60	19.0

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-9	12/18/1981	4.09	12636	11000	1169	13.9	29.6
	3/25/1982	3.65	10777	12300	870	21.0	35.0
	6/23/1982	3.80	14300	10000	1100	20.0	6.40
	9/1/1982	3.66	10300	6100	1100	32.0	22.0
	12/24/1982	4.03	10620	7200	1200	46.0	7.40
	2/9/1983	4.00	11682	6500	1069	43.1	10.2
	6/24/1983	5.93	9900	3360	1054	68.1	1.04
	8/8/1983	5.90	9500	3900	1066	86.0	4.08
	10/16/1983	6.05	10620	3620	1131	96.8	6.48
	3/10/1984	6.28	10620	3460	1111	86.5	6.45
	5/6/1984	6.39	10030	3380	1236	20.3	8.11
	9/20/1984	6.37	7670	2380	1428	77.2	11.0
	11/15/1984	6.49	7670	2920	1095	140	5.78
	3/8/1985	6.40	7316	3790	1106	139	9.21
	5/23/1985	6.38	5900	3225	1162	130	8.32
	9/16/1985	6.26	4130	3145	1030	173	4.41
	12/5/1985	6.26	8782	2960	1068	144	8.61
	3/12/1986	6.79	8304	3010	1031	134	8.43
	6/10/1986	6.15	8749	2662	934	21.3	5.70
	9/30/1986	7.26	5613	2843	950	160	4.26
	12/5/1986	7.26	8875	3240	1030	140	4.19
	3/26/1987	6.55	9355	2952	911	180	5.56
	5/29/1987	6.53	9047	2769	937	145	9.10
	8/26/1987	6.23	8517	2440	958	138	5.49
	12/14/1987	6.13	8639	2501	905	240	6.79
	3/4/1988	6.00	8861	—	—	—	4.96
	6/7/1988	6.23	7500	2748	934	210	4.27
	12/13/1988	6.32	7755	2802	897	150	5.21
	3/9/1989	6.18	7391	2402	927	252	4.87
	6/20/1989	6.33	8103	2605	919	185	—
	9/19/1989	6.15	7360	2477	927	264	4.22
	12/13/1989	6.07	7600	2717	845	96.9	—
	3/27/1990	3.62	8240	6199	453	39.0	11.5
	6/11/1990	4.32	6360	4002	367	207	—
	9/19/1990	5.48	5880	3116	365	263	0.677
	12/26/1990	6.41	4650	2151	153	141	—
	2/13/1991	6.33	4020	2188	109	78.0	0.955
	6/6/1991	6.07	4150	1918	109	95.3	—
	9/13/1991	4.28	5620	2718	169	61.6	2.17
	11/26/1991	5.19	5640	2592	360	65.1	—
	2/13/1992	6.09	6230	2358	591	14.9	2.79
	6/1/1992	6.23	6480	2415	593	66.6	—
	9/16/1992	6.20	6345	2682	623	67.2	5.01
	12/9/1992	6.42	7410	2511	668	207	—

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-9	2/24/1993	6.65	6813	2527	620	200	5.30
	5/26/1993	6.17	7148	2704	653	8.30	---
	9/20/1993	3.92	4426	3097	160	57.5	1.79
	11/30/1993	3.74	4172	2843	110	82.3	---
	3/4/1994	5.49	3222	1846	53.2	60.7	0.0460
	6/8/1994	5.90	5888	2121	524	358	---
	9/20/1994	6.09	2367	1346	37.6	21.4	0.0780
	12/1/1994	6.35	2393	1314	51.0	26.9	---
	2/23/1995	5.94	1997	1117	38.6	18.4	0.0390
	6/20/1995	6.56	2148	1121	48.0	20.4	---
	9/13/1995	5.95	2391	1248	68.4	23.3	0.0310
	12/8/1995	6.02	2238	1290	63.7	19.0	---
	2/28/1996	6.09	2672	1203	64.3	21.6	0.154
	5/23/1996	5.88	2350	1156	44.3	12.4	---
	9/3/1996	6.61	2641	1150	48.8	22.9	0.287
	12/3/1996	7.12	2653	1140	53.4	17.7	---
	3/11/1997	6.14	3300	1960	111	38.7	0.451
	6/10/1997	5.43	4820	1210	297	248	---
	9/22/1997	6.67	6736	2270	305	307	3.38
	12/1/1997	6.45	5842	2320	300	261	---
	3/13/1998	7.69	5800	2300	334	365	4.15
	6/8/1998	6.71	5000	2270	328	393	---
	7/28/1998	6.85	6367	2100	350	422	5.83
	10/22/1998	6.68	5283	2290	332	532	---
	1/25/1999	6.36	5704	2350	366	488	5.84
	6/2/1999	6.70	5468	2140	323	440	---
	9/14/1999	6.79	4617	1860	330	473	6.23
	11/15/1999	7.01	3733	2320	284	393	---
	3/14/2000	7.60	4404	2090	159	194	2,17
T1-10	9/16/1981	6.61	6484	4140	120	515	0.0160
	12/17/1981	6.53	5826	3980	1488	242	0.247
	3/31/1982	6.54	7680	4150	94.0	450	0.430
	6/16/1982	6.55	7835	3500	160	380	0.280
	8/31/1982	6.70	5730	1800	160	400	0.130
	12/31/1982	7.12	7198	3900	120	350	0.100
	2/10/1983	6.95	7434	3350	122	412	0.126
	5/16/1983	6.96	8850	3840	151	371	0.154
	9/3/1983	6.60	9000	3980	133	523	0.619
	11/3/1983	6.70	10030	4400	126	418	0.164
	3/10/1984	6.93	10620	3960	121	376	0.172
	6/6/1984	6.87	10520	3980	134	259	0.240
	9/14/1984	6.78	8850	3540	209	221	0.466
	11/15/1984	6.76	7080	4040	131	340	0.356
	3/21/1985	6.94	8850	4840	128	336	0.320

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (μmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-10	5/31/1985	6.75	5900	3490	131	330	0.290
	8/29/1985	6.28	4720	3960	129	325	0.568
	12/2/1985	6.98	9331	3590	136	294	0.349
	3/5/1986	7.01	8500	3980	139	513	0.672
	6/3/1986	6.67	9264	3777	124	167	0.208
	9/30/1986	6.67	7858	3941	130	420	0.114
	12/16/1986	6.88	9460	3900	144	410	0.361
	3/4/1987	6.77	8746	4081	117	510	0.889
	5/27/1987	6.82	7909	3675	119	420	0.278
	8/20/1987	6.63	9761	3809	135	260	1.27
	12/13/1987	6.40	8151	3752	130	440	0.188
	3/22/1988	6.63	9580	3998	471	480	0.146
	6/6/1988	6.82	8500	4105	171	336	0.191
	9/13/1988	6.70	8409	3834	142	420	---
	12/8/1988	6.49	8344	4284	119	400	---
	3/7/1989	6.60	7883	3756	124	348	---
	6/19/1989	6.48	9000	4253	120	264	---
	9/28/1989	6.70	8800	4297	119	348	0.152
	12/11/1989	6.51	8540	3793	126	420	---
	3/19/1990	7.03	8060	3713	150	366	---
	6/11/1990	4.72	7350	4737	345	272	---
	9/19/1990	4.25	5530	3748	186	71.6	2.89
	12/26/1990	4.53	4900	2817	125	41.0	---
	2/25/1991	4.68	4700	2808	141	80.0	---
	5/31/1991	4.92	5000	2623	93.2	38.7	---
	9/18/1991	5.67	5245	3057	156	68.0	0.534
	12/5/1991	4.23	5030	2618	160	39.6	---
	2/28/1992	4.31	5370	3145	117	37.7	---
	6/9/1992	5.53	5440	3169	121	94.3	---
	9/4/1992	4.50	5300	3253	125	29.8	1.74
	12/2/1992	4.75	5370	3260	106	98.5	---
	3/15/1993	4.34	5149	2902	115	70.6	---
	6/1/1993	4.66	5564	3235	153	88.3	---
	8/30/1993	5.80	8672	3967	734	91.7	2.37
	12/20/1993	4.30	4682	2600	106	26.0	---
	3/11/1994	4.23	4205	2782	119	133	---
	5/17/1994	4.27	4172	2124	111	114	---
	9/6/1994	4.40	3385	1943	113	77.0	0.643
	11/30/1994	5.09	2818	1780	72.0	46.7	---
	3/6/1995	5.09	2706	1515	55.0	30.6	---
	6/23/1995	4.36	2756	1630	78.0	29.2	---
	9/19/1995	5.04	2635	1566	60.4	24.3	0.190
	12/7/1995	4.82	2397	1537	60.4	17.6	---
	2/28/1996	6.09	2672	1405	58.5	30.4	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-10	5/29/1996	4.93	2900	1446	51.1	23.8	---
	9/5/1996	5.50	3100	1500	49.0	36.0	0.0852
	12/3/1996	5.41	3008	1370	51.2	27.8	---
	2/28/1997	5.54	3090	1730	62.2	60.3	---
	6/10/1997	5.38	3200	1880	71.4	81.9	---
	9/8/1997	6.71	7858	3730	125	279	0.417
	12/10/1997	6.69	7970	3570	215	319	---
	4/14/1998	6.90	7100	3730	121	297	---
	6/23/1998	6.98	6800	4260	128	315	---
	9/8/1998	6.75	5462	2260	341	465	5.14
	10/27/1998	6.73	6586	4320	125	325	---
	2/4/1999	7.00	6472	4230	119	327	---
	6/14/1999	6.97	5281	4370	123	294	---
	8/31/1999	6.63	5474	4350	133	318	0.222
	12/22/1999	7.55	9049	4410	135	306	---
	3/23/2000	6.87	7089	4340	125	294	---
T1-11	10/21/1981	6.75	5500	2120	453	736	0.685
	3/31/1982	6.36	2590	2280	370	240	0.780
	6/2/1982	6.68	6800	2200	450	220	0.620
	8/30/1982	6.64	4770	1800	450	230	0.730
	12/29/1982	6.77	7080	2200	460	320	0.760
	2/3/1983	6.75	6982	2060	635	226	0.761
	5/26/1983	6.80	5850	2060	516	254	0.595
	9/8/1983	6.80	6500	2080	514	310	0.940
	10/15/1983	6.61	7080	2340	505	305	0.809
	2/29/1984	6.57	7080	2340	586	266	1.16
	5/4/1984	6.67	7080	2500	667	183	1.74
	7/17/1984	6.70	7080	2640	1183	171	2.22
	12/11/1984	6.58	5900	2950	768	206	2.50
	3/20/1985	6.50	5900	3010	787	253	4.21
	6/3/1985	6.54	5900	2950	818	240	4.25
	9/16/1985	6.49	4130	3075	808	274	4.13
	12/5/1985	6.49	8563	2695	835	301	4.67
	2/25/1986	6.49	8563	3060	763	315	3.09
	5/29/1986	6.46	9331	2727	835	113	2.64
	9/24/1986	6.47	7858	2904	831	190	1.95
	12/5/1986	6.91	8068	3120	759	220	2.35
	3/12/1987	6.47	5857	2251	403	264	2.25
	5/26/1987	6.40	7909	2513	617	180	2.53
	8/23/1987	6.64	6311	1995	371	161	0.671
	11/10/1987	6.32	6519	2013	355	160	0.993
	2/8/1988	6.87	8000	2506	639	234	2.08
	6/20/1988	6.41	6700	2449	465	157	1.36
	9/21/1988	6.63	5613	2047	339	160	0.770

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-11	12/13/1988	6.48	5622	2036	309	130	—
	3/9/1989	6.48	5420	1989	316	160	0.947
	6/21/1989	6.39	6073	2145	302	125	—
	9/20/1989	6.69	5255	2042	237	102	0.620
	12/13/1989	7.00	5200	2241	194	72.0	—
	3/27/1990	6.35	5430	2115	290	151	0.736
	6/13/1990	6.23	5690	2083	301	225	—
	9/27/1990	6.30	5050	2715	284	210	0.842
	12/31/1990	6.18	6700	2283	417	214	—
	2/20/1991	6.56	6350	2393	379	210	0.439
	6/25/1991	6.57	6095	2032	309	221	—
	9/26/1991	6.76	6660	2104	459	158	0.933
	12/16/1991	6.58	6085	2245	440	251	—
	3/20/1992	6.36	5860	2181	358	115	1.14
	6/17/1992	6.54	6095	2034	404	190	—
	9/18/1992	6.69	6945	2186	391	59.5	0.840
	12/23/1992	6.44	6255	1897	391	49.5	—
	3/24/1993	6.79	6073	2096	386	156	0.604
	6/30/1993	6.89	5842	2083	396	231	—
	9/23/1993	6.83	5849	2244	399	203	0.740
	12/28/1993	6.33	5981	2062	379	276	—
	3/15/1994	6.05	5970	2000	460	314	0.727
	6/16/1994	6.43	4943	2065	418	404	—
	9/23/1994	6.35	5734	2091	414	476	0.726
	12/16/1994	6.15	5616	2031	398	503	—
	3/28/1995	6.36	5907	1706	336	471	0.668
	6/29/1995	6.37	5299	1964	330	549	—
	9/28/1995	6.23	4764	1880	328	485	0.616
	12/13/1995	6.34	4964	1883	278	415	—
	3/27/1996	6.51	6148	1839	274	463	0.545
	6/14/1996	6.07	6160	1842	255	407	—
	9/3/1996	6.52	6033	1860	200	425	0.400
	12/11/1996	6.50	5731	1760	189	276	—
	3/14/1997	6.38	3890	1940	249	242	0.442
	6/23/1997	7.61	4500	1790	211	209	—
	9/25/1997	6.81	5240	1740	188	204	0.352
	12/12/1997	7.19	4996	1850	190	165	—
	3/13/1998	7.20	4520	1800	200	140	0.364
	6/24/1998	7.48	3360	1770	127	5.19	—
	9/23/1998	6.75	2940	1700	200	106	0.405
	12/15/1998	6.93	4187	2010	188	99.6	—
	3/11/1999	7.33	3369	1800	136	1.23	0.135
	6/28/1999	7.73	2234	1850	140	1.58	—
	9/24/1999	6.84	3275	1810	243	192	0.603

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-11	12/29/1999	7.53	5132	2240	197	146	—
	3/29/2000	7.03	4296	2110	150	100.0	0.507
T1-12	10/12/1981	6.77	7600	2190	474	1156	0.360
	3/31/1982	6.38	9060	2400	390	640	0.360
	6/2/1982	6.71	8400	2300	540	560	0.320
	8/30/1982	6.72	7220	1600	520	590	0.340
	12/24/1982	6.77	7670	2200	450	640	0.340
	2/3/1983	6.74	7375	2070	487	449	0.294
	5/26/1983	6.72	9300	1800	495	399	0.358
	8/8/1983	6.67	9000	3220	486	712	0.441
	10/15/1983	6.63	9000	2660	505	663	0.433
	1/23/1984	6.62	11210	2580	485	530	—
	5/5/1984	6.82	9400	2460	478	258	0.452
	7/17/1984	6.73	9440	2900	645	513	0.464
	11/26/1984	6.78	7080	2440	484	480	0.522
	3/20/1985	6.60	5900	3250	472	430	0.577
	5/16/1985	6.85	5900	3130	495	473	0.618
	7/29/1985	6.63	5900	3180	485	511	0.567
	10/31/1985	6.65	9624	3080	466	534	0.466
	1/31/1986	6.75	8782	3060	433	459	0.597
	4/30/1986	6.88	7205	2343	452	234	0.412
	9/24/1986	6.61	7684	3270	458	310	0.269
	12/5/1986	7.10	8169	2670	533	390	0.415
	3/12/1987	6.41	7303	2586	429	480	0.528
	5/26/1987	6.80	7909	2544	419	336	0.607
	8/23/1987	6.40	8292	2513	440	250	0.366
	11/10/1987	6.34	8835	2379	413	420	0.483
	2/8/1988	6.30	9000	2571	411	504	0.448
	6/20/1988	6.30	7500	2668	415	330	0.539
	9/21/1988	6.56	7684	2652	419	370	0.442
	12/13/1988	6.38	7457	2782	380	360	—
	3/9/1989	6.48	6775	2412	399	294	0.531
	6/21/1989	6.26	8235	2681	397	246	—
	9/20/1989	6.41	7360	2708	391	342	0.366
	12/13/1989	6.56	7570	2770	371	336	—
	3/27/1990	6.22	7090	2746	368	294	0.384
	6/13/1990	6.21	6590	2709	348	353	—
	9/27/1990	6.44	5760	2970	358	256	0.411
	12/31/1990	6.44	7800	2409	463	378	—
	2/20/1991	6.64	7990	2411	482	390	0.248
	6/25/1991	6.68	7780	2111	411	387	—
	9/26/1991	6.92	8590	2150	482	362	0.379
	12/16/1991	6.74	8150	2303	453	491	—
	3/20/1992	6.73	8340	2199	467	451	0.219

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-12	6/17/1992	6.55	9235	2209	485	716	—
	9/18/1992	6.32	9215	2155	468	1466	0.260
	12/23/1992	6.79	9310	2067	468	829	—
	3/24/1993	6.88	9355	2109	468	874	0.187
	6/30/1993	6.71	8345	2077	453	1014	—
	9/23/1993	7.23	8270	4104	702	832	0.219
	12/28/1993	6.20	8477	2037	379	824	—
	3/15/1994	6.32	8029	2149	548	1076	0.250
	6/16/1994	6.51	7415	2084	431	897	—
	9/23/1994	6.46	7415	2208	425	840	0.290
	12/16/1994	6.60	6890	2207	434	961	—
	3/28/1995	6.70	8055	1765	381	1026	0.278
	6/29/1995	6.44	7235	2112	395	1007	—
	9/28/1995	6.37	6367	2111	392	1118	0.273
	12/13/1995	6.34	6939	2066	391	900	—
	3/27/1996	6.31	10210	1950	373	924	0.314
	6/14/1996	6.09	8600	1990	362	966	—
	9/3/1996	6.37	8821	1880	295	793	0.345
	12/11/1996	6.39	7924	1990	300	583	—
	3/14/1997	6.34	5700	2260	432	625	0.332
	6/23/1997	7.45	6500	1970	285	661	—
	9/25/1997	6.65	8970	1880	263	830	0.295
	12/12/1997	7.30	8420	1970	267	789	—
	4/15/1998	6.74	8800	1900	283	964	0.331
	6/25/1998	7.10	7700	1990	261	1050	—
	9/23/1998	6.58	4930	1800	258	945	0.403
	12/15/1998	6.79	7858	2050	258	1160	—
	3/11/1999	7.33	7784	2000	264	1090	0.327
	8/31/1999	6.41	6063	1780	266	933	0.341
	12/22/1999	7.21	8714	2240	262	738	—
	3/23/2000	6.73	7411	2170	284	836	0.308
T1-13	9/16/1999	7.43	3996	—	—	—	—
T1-14	5/29/1986	6.81	15918	5130	915	790	0.255
	9/24/1986	6.87	13246	5639	868	620	0.128
	12/5/1986	7.54	15127	6280	983	630	0.178
	3/12/1987	6.70	15503	6219	838	800	1.98
	5/26/1987	6.89	11666	6441	929	600	0.238
	9/1/1987	6.80	16336	6073	1037	680	1.61
	12/1/1987	6.61	17556	6534	1044	850	0.225
	2/8/1988	6.54	13400	7049	988	696	0.228
	6/21/1988	6.63	14400	7440	1099	268	0.220
	9/21/1988	6.76	15588	7386	1205	490	0.204
	12/13/1988	6.88	15639	7871	1035	490	—
	3/9/1989	6.76	14166	7504	1143	522	0.240

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-14	6/21/1989	6.61	18219	8037	1081	270	—
	9/20/1989	6.89	15870	8199	1086	468	0.211
	12/13/1989	7.18	16200	8367	1103	474	—
	3/27/1990	6.61	15100	8136	1107	450	0.231
	6/13/1990	6.46	13270	8246	1074	516	—
	9/27/1990	6.69	11550	8591	1057	415	0.246
	12/31/1990	6.53	18090	8375	1102	600	—
	2/20/1991	6.80	17850	8105	233	480	0.294
	6/25/1991	6.84	17100	11669	1081	464	—
	9/14/1991	7.20	18470	8113	1339	353	0.292
	12/16/1991	7.08	17340	8444	1063	450	—
	3/20/1992	6.97	17800	8151	1087	323	0.254
	6/17/1992	6.99	17850	8747	1021	398	—
	9/18/1992	6.75	17670	9325	1062	268	0.290
	12/23/1992	6.78	17510	8871	1060	479	—
	3/19/1993	6.39	17720	9170	1044	350	0.178
	6/30/1993	6.89	14600	8442	1154	399	—
	9/23/1993	7.10	14220	9404	989	370	0.234
	12/28/1993	6.89	13446	9092	450	390	—
	3/15/1994	6.82	13381	8597	1097	394	0.332
	6/16/1994	7.09	12062	9032	1007	384	—
	9/23/1994	7.09	12062	8890	1044	358	0.329
	12/16/1994	6.95	11369	9263	1044	371	—
	3/28/1995	6.97	12673	8251	928	328	0.346
	6/29/1995	6.80	11369	8978	953	382	—
	9/28/1995	6.52	8782	8984	862	352	0.324
	12/13/1995	6.71	10093	8906	807	307	—
	3/27/1996	6.84	16839	9045	755	354	0.321
	6/14/1996	6.76	14400	9204	701	414	—
	9/3/1996	6.86	16088	8330	600	441	0.266
	12/3/1996	6.92	15043	8190	593	217	—
	3/14/1997	7.39	9800	9510	750	274	0.303
	6/23/1997	8.04	10150	8730	524	304	—
	9/25/1997	7.10	14700	8180	449	279	0.229
	12/12/1997	7.30	13544	2510	487	268	—
	4/15/1998	7.18	12900	8200	473	270	0.271
	6/25/1998	7.41	10200	7340	486	284	—
	9/23/1998	6.85	6850	7000	487	394	0.351
	12/15/1998	7.25	11001	7690	536	324	—
	3/11/1999	7.68	10340	15000	523	283	0.306
	6/28/1999	7.92	5156	8000	614	278	—
	9/24/1999	6.98	6736	8320	578	260	0.312
	12/29/1999	7.69	13919	7950	675	262	—
	3/23/2000	7.25	12138	7840	671	264	0.286

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-15	2/20/1991	2.94	13980	11632	519	0.0100	—
	6/25/1991	2.84	12100	9438	567	0.170	—
	9/26/1991	2.64	13530	8762	498	7.20	—
	12/16/1991	2.82	13435	9948	435	0.100	—
	3/20/1992	3.01	14600	10860	127	0.100	—
	6/17/1992	2.76	11800	8288	71.5	8.13	—
	9/18/1992	2.63	14300	12695	601	0.150	—
	12/23/1992	2.75	14300	11584	665	0.100	—
	3/24/1993	2.91	10417	6541	739	11.1	—
	6/29/1993	2.99	6378	3443	643	176	—
	9/23/1993	3.28	4841	2587	266	17.9	—
	12/28/1993	2.75	4938	2997	394	30.2	—
	3/15/1994	2.86	5352	3723	492	34.0	—
	6/16/1994	3.07	4597	3066	305	21.1	—
	9/23/1994	3.07	4589	3109	305	16.8	—
	12/16/1994	3.11	4054	2944	242	13.7	—
	3/28/1995	2.90	4169	2864	349	20.9	—
	6/29/1995	2.55	3755	2434	208	2.21	—
	9/28/1995	2.95	3195	—	—	—	—
	12/13/1995	2.99	4365	3150	351	18.4	—
	3/27/1996	2.98	5052	2972	138	8.15	—
	6/14/1996	2.61	9600	3275	326	17.8	—
	9/25/1996	3.13	5835	3470	162	113	—
	12/3/1996	3.13	5053	2880	211	4.61	—
	3/14/1997	2.78	2830	—	—	—	—
	6/23/1997	3.56	3350	2450	128	9.26	—
	9/25/1997	3.33	8461	5530	494	12.4	30.1
	12/12/1997	3.19	7660	5240	302	7.50	—
	4/15/1998	3.98	4080	2800	149	13.3	—
	6/25/1998	4.28	2400	1410	99.3	10.8	—
	9/23/1998	3.48	46.3	—	—	—	—
	12/15/1998	3.43	6328	5600	268	4.14	—
	3/11/1999	3.37	5832	5360	304	3.69	—
	6/28/1999	2.95	3953	4420	284	22.8	—
	9/24/1999	3.54	3587	3780	225	14.8	—
	12/29/1999	4.29	8269	5940	408	7.03	—
	3/29/2000	3.86	7519	5910	379	6.76	—
T1-16	5/29/1986	6.34	8055	1925	422	650	2.52
	9/24/1986	6.22	7684	2599	570	530	1.61
	12/5/1986	7.16	8976	4080	574	600	2.92
	3/12/1987	6.31	8957	2129	402	800	2.10
	5/26/1987	6.99	8898	2039	413	714	2.02
	9/1/1987	6.16	9100	2393	539	280	0.988
	12/1/1987	5.83	9500	2135	399	800	1.88

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (μmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-16	2/8/1988	5.84	8600	2440	536	696	2.25
	6/21/1988	6.11	7900	2576	489	456	1.60
	9/21/1988	6.42	7947	2480	581	500	1.84
	12/13/1988	6.15	8300	2811	602	430	---
	3/9/1989	6.24	7637	2731	647	342	2.27
	6/21/1989	5.98	8955	2942	679	366	---
	9/20/1989	6.25	7670	2135	457	522	1.18
	12/13/1989	5.41	9300	5885	791	98.0	---
	3/27/1990	5.43	8350	4459	786	228	3.27
	6/13/1990	6.04	7020	2533	713	385	---
	9/27/1990	5.79	6140	3494	723	255	3.33
	12/31/1990	6.38	7950	2631	737	321	---
	2/20/1991	6.21	7750	2605	741	285	2.86
	6/25/1991	6.33	7190	2286	692	37.9	---
	9/26/1991	6.57	7730	2500	641	169	4.15
	12/16/1991	6.50	7005	2490	602	60.1	---
	3/20/1992	6.71	6380	2727	612	94.8	3.82
	6/17/1992	6.55	6765	2539	552	186	---
	9/18/1992	6.48	6970	2956	533	145	2.27
	12/23/1992	6.17	6855	2780	516	288	---
	3/24/1993	6.85	7303	1416	495	214	2.14
	6/30/1993	6.93	6446	2471	561	105	---
	9/23/1993	7.03	5250	3159	303	97.1	0.616
	12/28/1993	6.71	5424	2488	355	159	---
	3/15/1994	6.03	4838	3003	258	73.1	0.563
	6/16/1994	6.23	4647	2944	276	97.9	---
	9/23/1994	6.11	4271	3109	186	57.1	0.194
	12/16/1994	6.18	4249	3094	146	38.8	---
	3/28/1995	6.63	4415	2862	198	75.5	1.04
	6/29/1995	6.46	4146	2916	201	76.4	---
	9/28/1995	5.71	3535	2859	196	32.3	0.225
	12/13/1995	6.06	4176	2848	248	111	---
	3/27/1996	6.05	5388	2803	176	72.8	0.860
	6/14/1996	6.16	6000	2393	383	265	---
	9/3/1996	5.79	5562	2860	218	241	0.625
	12/3/1996	6.02	5288	2670	222	73.5	---
	3/14/1997	6.57	4490	2530	629	318	0.181
	6/23/1997	7.47	5250	2340	392	366	---
	9/25/1997	6.80	6934	2310	377	354	1.19
	12/12/1997	6.61	5662	2680	256	203	---
	4/15/1998	6.62	6500	2300	470	473	1.29
	6/25/1998	6.28	3570	2310	174	123	---
	9/23/1998	6.23	6740	2200	392	402	1.02
	12/15/1998	6.53	4974	2640	312	295	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-16	3/11/1999	6.46	5031	2590	374	301	0.658
	6/28/1999	6.49	3588	2450	288	230	—
	9/24/1999	6.19	3705	1960	323	294	0.664
	12/29/1999	7.23	6056	2570	282	237	—
	3/29/2000	6.32	5371	2250	265	241	0.474
T1-17	12/23/1992	6.30	7680	1956	485	684	1.64
	3/19/1993	6.16	7834	2377	298	586	0.428
	6/20/1993	6.87	6843	1954	692	500	—
	9/23/1993	6.96	6656	2574	343	398	0.959
	3/15/1994	6.30	6176	2081	527	379	1.52
	9/23/1994	6.52	5635	2141	505	340	1.71
	3/28/1995	6.92	5257	1911	495	359	1.47
	9/28/1995	6.05	5346	56.2	17.0	< 0.100	0.0470
	3/27/1996	7.02	6960	2393	301	290	0.631
	9/3/1996	6.15	7284	2150	324	510	1.13
	3/14/1997	6.67	4840	—	—	—	—
	9/25/1997	6.78	7286	2750	344	227	0.639
	4/15/1998	6.95	6800	2900	320	291	0.895
	9/23/1998	6.53	6180	3000	319	169	0.907
	3/11/1999	6.70	5391	3200	319	188	0.836
	9/24/1999	6.68	3952	2890	400	238	1.24
	3/29/2000	6.87	6660	2890	352	210	0.885
T1-18	12/10/1992	6.33	6555	1967	325	468	2.54
	2/25/1993	6.43	7491	1784	325	1013	0.547
	8/31/1993	6.00	6257	5161	239	238	3.42
	3/4/1994	6.02	5370	2392	258	481	1.34
	9/12/1994	6.15	4646	2559	295	256	2.12
	3/6/1995	6.04	4940	2510	294	274	2.48
	9/14/1995	6.08	4704	2130	349	446	1.31
	3/21/1996	5.78	7120	2330	351	332	2.98
	9/3/1996	5.98	5662	2930	332	262	1.65
	2/28/1997	5.75	4800	—	—	—	—
	9/3/1997	6.62	6624	2190	566	376	2.33
	4/14/1998	6.92	6100	1900	582	418	1.07
	9/10/1998	6.65	5477	1900	548	381	1.05
	2/10/1999	6.75	5321	2000	624	415	0.491
	9/19/1999	7.43	3996	1920	662	397	0.432
	3/23/2000	6.75	5231	1970	487	302	1.02
T1-19	12/16/1991	3.46	6830	4192	334	198	—
	3/20/1992	3.05	6790	4169	27.3	18.3	—
	6/1/1992	2.99	6770	3999	394	38.1	—
	9/16/1992	3.33	6725	3941	339	33.8	—
	11/23/1992	3.50	6660	4067	374	28.9	—

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-19	2/23/1993	3.21	6539	3701	373	68.1	---
	6/24/1993	3.46	6511	3640	437	76.8	---
	9/1/1993	2.98	5788	3830	399	74.9	---
	11/29/1993	3.88	5273	3170	284	38.2	---
	3/3/1994	3.88	4618	3210	301	40.3	---
	6/14/1994	4.11	4266	2870	234	28.1	---
	9/20/1994	5.24	2985	1771	119	16.4	---
	12/6/1994	6.61	2108	1064	30.0	2.64	---
	2/13/1995	6.68	1997	959	38.0	4.49	---
	6/14/1995	4.55	3479	2452	235	24.2	---
	9/11/1995	6.08	2113	1106	54.2	8.05	---
	12/8/1995	6.54	1949	957	50.6	3.53	---
	3/27/1996	6.72	2694	1053	59.6	1.99	---
	5/23/1996	6.61	2500	1124	58.7	6.51	---
	9/19/1996	6.45	3440	1110	58.0	5.41	---
	12/11/1996	5.62	3602	1780	129	12.6	---
	2/12/1997	6.35	2270	---	---	---	---
	6/5/1997	5.88	2500	1190	75.0	8.44	---
	9/22/1997	7.86	2975	1430	93.0	7.54	0.589
	12/12/1997	4.79	4034	2640	161	13.9	---
	3/10/1998	4.34	4130	2950	149	9.14	---
	6/8/1998	4.69	2400	2730	221	24.4	---
	7/28/1998	4.78	4150	---	---	---	---
	10/22/1998	4.77	3985	3150	184	22.1	---
	1/18/1999	4.53	3974	3240	193	13.7	---
	5/17/1999	4.00	3952	3400	200	10.2	---
	9/8/1999	6.53	2331	1320	70.9	6.66	---
	11/9/1999	3.94	3193	3560	213	11.9	---
	2/23/2000	4.14	5100	3760	208	13.8	---
T1-20	2/20/1991	3.27	7050	4652	562	0.130	---
	6/25/1991	3.21	6800	4239	514	0.170	---
	9/26/1991	3.05	8270	5559	612	3.90	---
	12/16/1991	2.98	8040	6164	412	0.100	---
	3/20/1992	2.93	9780	8205	564	0.100	---
	6/17/1992	2.81	9560	7498	497	0.100	---
	9/18/1992	2.55	10300	9623	416	0.100	---
	12/23/1992	2.77	9950	8227	407	0.600	---
	3/19/1993	2.93	9876	8168	549	< 0.100	---
	6/29/1993	3.19	9364	8497	709	0.230	---
	9/23/1993	3.17	7102	6620	526	2.00	---
	12/28/1993	2.77	6283	5664	513	2.38	---
	3/15/1994	2.94	7411	7771	652	1.98	---
	6/16/1994	3.18	5932	5889	562	0.830	---
	9/23/1994	3.29	2786	5023	569	1.94	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-20	12/16/1994	3.05	5110	4870	546	2.51	—
	3/28/1995	3.15	5370	5405	695	0.930	—
	6/29/1995	2.77	5386	5809	500	3.54	—
	9/28/1995	3.03	4391	4854	393	3.14	—
	12/13/1995	3.22	4794	5036	464	3.08	—
	3/27/1996	3.14	7297	5224	476	2.71	—
	6/14/1996	2.84	7200	6104	532	5.88	—
	9/25/1996	3.12	6900	4710	610	9.33	—
	12/11/1996	3.30	5829	3800	384	8.52	—
	3/14/1997	2.66	4380	—	—	—	—
	6/23/1997	3.67	5200	4700	311	16.5	—
	9/25/1997	3.88	6816	4390	840	11.9	17.7
	12/12/1997	3.22	6439	4860	402	11.7	—
	4/15/1998	3.71	6700	4820	397	30.0	—
	6/25/1998	4.22	4430	3670	436	26.2	—
	9/23/1998	3.32	3820	—	—	—	—
	12/15/1998	4.02	5218	4570	429	31.7	—
	3/11/1999	3.96	5112	4600	491	26.5	—
	6/28/1999	3.26	4082	5100	456	18.3	—
	9/24/1999	3.88	3634	5160	456	17.8	—
	12/29/1999	4.06	6375	4430	522	21.4	—
	3/29/2000	3.98	5585	4500	502	8.22	—
T1-21	6/23/1989	6.84	3289	1572	41.9	8.10	0.109
	9/29/1989	7.23	3200	1712	56.5	0.930	0.118
	12/13/1989	7.43	3230	1853	50.0	5.90	—
	3/29/1990	6.73	3085	1669	43.5	0.630	0.0130
	6/11/1990	6.92	3140	1645	42.8	0.0700	—
	9/17/1990	6.91	2650	2143	52.0	0.0100	0.0267
	12/28/1990	6.92	3240	1682	52.2	0.0800	—
	2/25/1991	6.86	3090	1599	55.0	2.70	0.515
	6/11/1991	7.40	3630	1652	117	20.0	—
	9/23/1991	7.16	3000	1565	68.0	0.0100	0.0380
	12/9/1991	7.44	3090	1824	54.9	15.0	—
	2/28/1992	6.82	3330	1677	65.6	4.50	0.0560
	6/9/1992	6.91	3220	1766	67.4	0.100	—
	9/9/1992	7.29	3480	1887	96.9	4.00	0.164
	12/2/1992	6.96	3270	1745	64.7	0.600	—
	3/25/1993	6.89	3293	1767	74.6	< 0.100	0.0490
	6/24/1993	6.75	3255	1683	75.8	0.170	—
	8/31/1993	6.67	3184	1843	76.6	0.700	0.0750
	12/21/1993	6.78	3121	1711	69.4	0.250	—
	3/11/1994	6.54	3027	1890	90.3	0.350	0.0780
	6/3/1994	6.67	2894	1812	81.7	0.140	—
	9/12/1994	6.95	2786	1777	86.7	1.000	0.100

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-21	11/28/1994	7.21	2877	1880	84.1	< 0.100	---
	3/8/1995	6.74	2922	1842	92.0	0.770	0.124
	6/19/1995	6.65	2404	2892	65.0	0.430	---
	9/21/1995	6.74	2750	1841	96.4	0.290	0.128
	12/11/1995	6.73	3008	1959	102	9.38	---
	3/15/1996	6.38	3520	1869	103	0.230	0.101
	5/29/1996	6.36	3200	1842	103	< 0.100	---
	9/3/1996	6.78	3074	1660	84.0	9.58	0.267
	12/11/1996	6.87	3491	1780	102	0.210	---
	2/26/1997	6.49	2900	---	---	---	---
	6/10/1997	5.79	2750	1820	103	0.100	---
	9/8/1997	7.20	3256	1790	128	0.180	0.110
	12/8/1997	7.07	3331	1900	107	0.200	---
	4/14/1998	7.00	3100	2000	133	0.930	0.154
	6/24/1998	7.56	2790	1860	114	< 0.100	---
	8/24/1998	7.71	2964	1700	113	1.33	0.104
	12/9/1998	7.50	3137	1970	114	< 0.100	---
	2/16/1999	7.40	3043	2000	127	< 0.100	0.116
	6/15/1999	7.79	2584	1760	112	0.540	---
	9/16/1999	7.70	2644	2060	163	13.5	0.132
	12/22/1999	7.93	3526	1900	118	0.340	---
	3/23/2000	7.65	3400	1670	140	12.6	0.232
T1-22	6/23/1989	6.87	7051	2855	136	414	0.356
	9/29/1989	6.85	8100	3367	208	432	0.394
	12/13/1989	7.42	7800	3464	182	414	---
	3/29/1990	6.53	7280	3309	224	372	0.404
	6/12/1990	6.33	7390	3389	241	463	---
	9/19/1990	6.60	7240	3749	248	362	0.0780
	12/26/1990	6.60	8200	3178	303	447	---
	2/25/1991	6.59	8150	3133	309	490	0.648
	5/31/1991	6.49	7850	3465	293	453	---
	9/20/1991	6.64	6365	3149	340	316	0.486
	12/6/1991	7.12	8100	2886	330	382	---
	2/28/1992	6.72	8300	3074	323	240	0.664
	6/9/1992	6.58	8560	3057	333	398	---
	9/4/1992	6.61	7865	3354	332	268	0.659
	12/2/1992	6.69	8120	3178	338	574	---
	3/24/1993	7.02	8199	1662	339	376	0.478
	6/1/1993	6.52	8067	3191	378	275	---
	8/31/1993	6.45	7575	3345	303	352	0.561
	12/20/1993	6.35	6921	3029	308	485	---
	3/11/1994	6.27	6349	3309	355	415	0.733
	6/7/1994	6.65	6464	3263	333	382	---
	9/6/1994	6.43	6307	3317	347	350	0.952

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-22	11/30/1994	6.30	5742	3368	344	356	—
	3/6/1995	6.67	6229	3146	415	438	1.04
	6/23/1995	6.25	5753	3370	354	415	—
	9/19/1995	6.36	5774	3012	365	379	0.904
	12/11/1995	6.45	5690	3144	351	416	—
	3/27/1996	6.28	8981	3020	362	427	0.975
	5/29/1996	5.93	8500	2991	356	459	—
	9/3/1996	6.39	8419	2930	332	492	0.729
	12/11/1996	6.13	8195	2890	353	436	—
	2/26/1997	6.26	7100	—	—	—	—
	6/10/1997	5.57	6800	2720	386	541	—
	9/8/1997	6.65	8327	2690	447	507	0.591
	12/10/1997	6.86	8756	2940	358	510	—
	4/14/1998	6.74	8000	2800	415	543	1.04
	6/23/1998	7.33	6900	2900	375	603	—
	9/10/1998	6.71	7517	2600	396	553	1.22
	12/11/1998	6.86	7098	2970	365	606	—
	2/10/1999	6.79	6855	3000	400	509	1.16
	6/14/1999	6.99	2325	2780	365	498	—
	8/31/1999	6.47	5291	2950	442	589	1.06
	12/22/1999	7.63	8696	2910	372	542	—
	3/23/2000	6.94	6982	2560	376	589	0.917
T1-23	9/29/1989	7.33	3600	2073	54.0	9.50	0.899
	12/13/1989	7.29	3750	2241	54.7	11.9	—
	3/29/1990	6.95	3640	2032	53.9	10.8	1.02
	6/11/1990	6.99	3190	1619	43.8	0.290	—
	9/17/1990	6.94	2880	2143	51.6	0.620	0.493
	2/14/1991	6.81	3880	1818	55.0	9.00	1.06
	6/6/1991	6.84	3760	2240	32.0	2.70	—
	9/13/1991	7.06	3660	1926	66.0	0.520	0.943
	12/16/1991	7.04	3690	2169	55.4	0.400	—
	2/28/1992	7.08	3680	2062	56.8	0.300	1.07
	6/2/1992	7.15	3830	2065	59.9	1.21	—
	9/14/1992	7.21	3590	2113	53.9	0.100	0.989
	12/16/1992	7.13	3925	2160	55.0	1.10	—
	2/24/1993	7.28	3785	2053	59.0	0.410	0.394
	6/24/1993	7.03	3617	2089	64.0	< 0.100	—
	9/29/1993	6.87	3500	1323	57.0	0.400	0.639
	11/30/1993	6.74	3369	2050	56.8	0.700	—
	3/15/1994	6.69	3403	2294	66.1	1.72	0.844
	6/8/1994	6.78	3215	2170	56.4	0.300	—
	9/21/1994	7.01	3184	2202	55.5	0.670	0.867
	12/2/1994	6.63	3293	2270	59.7	3.04	—
	3/1/1995	6.88	3314	2246	61.4	1.27	0.908

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-23	6/21/1995	6.92	2784	1759	41.0	6.55	---
	9/14/1995	6.54	2683	1739	59.3	10.2	0.908
	12/12/1995	6.92	2937	1763	91.5	18.4	---
	2/28/1996	6.68	3503	1758	111	28.7	0.783
	5/23/1996	6.67	3400	1681	110	32.8	---
	9/3/1996	6.61	3343	1580	99.0	57.8	0.534
	12/3/1996	7.09	3491	1700	112	61.0	---
	3/11/1997	6.71	3320	---	---	---	---
	6/10/1997	6.10	3300	1970	116	80.7	---
	9/22/1997	7.17	4041	2040	164	90.8	1.53
	12/10/1997	7.01	4187	2110	122	103	---
	3/13/1998	7.69	3500	2200	147	111	1.60
	6/11/1998	7.39	3350	2020	107	99.8	---
	9/8/1998	7.24	3359	1900	105	77.2	1.65
	10/23/1998	7.13	2974	2030	87.1	73.1	---
	1/26/1999	6.84	3078	2230	88.5	45.4	1.68
	6/18/1999	6.86	2909	2130	66.7	29.9	---
	9/14/1999	7.43	2816	2260	97.0	23.8	1.39
	11/16/1999	7.96	2755	2180	73.7	19.3	---
	3/23/2000	7.92	3201	1730	78.9	11.6	0.967
T1-24	2/14/1991	5.70	11370	5083	940	69.0	3.82
	6/6/1991	6.25	9400	6162	694	2.88	---
	9/18/1991	6.40	9585	4291	577	178	1.98
	12/5/1991	6.73	9400	3849	519	2.47	---
	2/28/1992	6.34	9565	3926	517	4.80	0.453
	6/9/1992	6.48	9560	4036	505	12.8	---
	9/9/1992	6.64	9000	3850	536	56.8	0.712
	12/1/1992	6.58	9660	4049	527	54.9	0.139
	3/25/1993	6.04	9058	4267	671	---	0.549
	5/19/1993	5.85	8662	4135	610	131	---
T1-25	12/16/1991	3.18	5600	3417	193	11.4	---
	6/17/1992	3.00	5390	3088	165	9.53	---
	12/23/1992	3.10	5420	2845	217	25.0	---
	6/30/1993	3.49	4818	2729	208	57.8	---
	12/28/1993	3.17	4505	2885	151	30.1	---
	6/16/1994	3.21	4182	2919	179	23.5	---
	12/16/1994	3.21	3790	2969	150	15.3	---
	3/28/1995	3.81	3942	2820	153	17.4	---
	6/29/1995	3.90	3824	2861	168	25.5	---
	12/13/1995	3.69	3469	2583	119	26.5	---
	12/3/1996	3.55	3855	2140	92.1	21.9	---
	6/23/1997	4.34	3350	2460	100.0	18.7	---
	9/25/1997	4.37	4066	2420	127	17.3	1.28
	12/12/1997	4.09	4019	2510	96.7	17.9	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T1-25	6/25/1998	4.31	3400	2540	110	21.1	—
	12/15/1998	4.48	3852	2840	151	26.8	—
	6/28/1999	4.38	3104	2810	133	28.3	—
	12/29/1999	4.35	4099	2380	116	29.9	—
T1-26	7/28/1998	3.88	3469	2000	95.0	3.58	1.16
	12/9/1998	3.96	5031	4360	168	1.13	—
	2/4/1999	4.36	4849	4450	248	0.400	8.28
	6/14/1999	4.54	3738	3750	133	2.08	—
	9/16/1999	4.24	3549	4240	198	1.47	9.00
	12/22/1999	4.44	5368	3630	144	1.26	6.29
	3/14/2000	3.75	4866	3000	117	0.180	4.14
T1-27	7/28/1998	4.18	3952	2500	153	4.08	3.04
	12/9/1998	6.50	4395	2740	218	8.37	—
	2/4/1999	4.86	3861	2940	220	5.51	1.68
	6/14/1999	4.28	3362	2980	190	13.0	—
	9/16/1999	4.04	3291	3320	312	18.1	2.95
	12/22/1999	4.22	5147	3060	242	21.2	3.32
	2/23/2000	4.51	5231	3200	243	6.64	2.61
T2-4	3/22/1993	5.49	10440	7290	1013	< 0.100	0.177
	3/7/1995	5.50	6848	6892	369	< 0.100	0.220
	3/13/1996	5.23	8499	5625	139	0.140	0.140
	2/25/1997	4.57	5900	5640	122	0.490	1.13
	4/6/1998	6.52	7000	5000	138	0.490	0.243
	2/1/1999	5.94	5112	4350	178	5.61	0.336
	3/7/2000	6.39	5800	4080	158	8.81	0.535
T2-5	10/14/1992	—	—	5342	33.2	—	0.680
	2/26/1993	4.09	8206	4350	420	226	1.07
	5/26/1993	3.59	6202	4468	190	3.60	0.597
	9/3/1993	3.82	5876	4539	128	10.3	0.658
	11/30/1993	3.70	6159	—	—	7.90	0.993
	3/4/1994	3.84	5434	4786	168	4.86	0.736
	6/8/1994	3.86	5660	5298	202	4.77	—
	9/19/1994	3.82	6014	5490	186	7.28	0.902
	12/2/1994	3.65	5489	5367	221	12.4	—
	2/24/1995	3.89	5991	5449	215	21.9	0.729
	6/20/1995	3.86	3888	4030	41.0	5.86	—
	9/13/1995	3.41	3918	4008	57.9	8.54	0.575
	12/12/1995	4.00	4378	4611	94.9	9.23	—
	2/28/1996	3.97	6723	4735	165	11.8	0.616
	5/22/1996	3.53	6400	4696	149	15.2	—
	9/19/1996	3.83	7268	4630	275	49.7	0.772
	12/11/1996	4.18	6890	4620	240	37.2	—
	3/7/1997	4.30	5900	5120	374	47.8	0.623

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T2-5	6/10/1997	3.56	5300	5170	228	65.2	---
	9/12/1997	4.33	8176	5660	89.5	89.2	0.698
	12/3/1997	4.15	7391	5850	267	91.5	---
	3/12/1998	4.01	7100	5500	348	100.0	0.751
	6/8/1998	4.40	5200	5110	170	51.0	---
	9/8/1998	4.32	6148	5390	178	62.0	0.624
	10/23/1998	4.30	3148	5550	174	65.4	---
	1/25/1999	4.08	5298	5000	267	59.4	0.627
	6/2/1999	4.47	4716	4710	168	47.1	---
	9/7/1999	3.81	3137	4840	154	49.1	0.526
	11/16/1999	4.38	4062	4990	190	62.9	---
	3/13/2000	4.53	5446	4250	213	75.4	0.435
T2-6	10/16/1992	---	---	8287	42.0	17.5	0.380
	2/26/1993	6.61	12349	7502	190	2.70	0.0950
	5/26/1993	6.53	12508	7994	165	0.200	0.0950
	9/3/1993	6.55	11338	8353	185	0.500	0.129
	11/30/1993	6.44	10105	7495	180	0.900	0.129
	3/4/1994	6.58	9986	6984	206	0.350	0.180
	6/8/1994	6.45	9072	7781	189	0.190	---
	9/19/1994	6.49	9129	7978	197	0.340	0.160
	12/2/1994	6.44	8672	5450	201	0.440	---
	2/24/1995	6.45	9145	7811	237	45.9	0.0030
	6/20/1995	6.73	8162	7650	191	3.48	---
	9/13/1995	6.84	6848	7574	200	0.640	0.113
	12/12/1995	6.62	7443	8025	191	0.870	---
	2/28/1996	6.41	13182	7300	183	0.890	0.119
	5/22/1996	6.48	13100	7808	191	1.42	---
	9/19/1996	6.36	13270	7810	185	2.82	0.120
	12/11/1996	6.86	11943	7130	177	4.12	---
	3/7/1997	7.53	9900	8060	219	3.28	0.108
	6/10/1997	6.08	9300	8000	207	4.55	---
	9/12/1997	6.79	12604	8290	203	1.69	0.121
	12/3/1997	7.08	11209	7950	190	6.12	---
	3/12/1998	6.92	12265	8000	193	3.45	0.137
	6/8/1998	7.06	8500	7890	213	13.4	---
	9/8/1998	7.17	9556	7690	201	7.42	0.255
	10/23/1998	7.26	6041	7950	201	4.73	---
	1/25/1999	6.93	8133	7500	201	1.20	0.182
	6/2/1999	6.95	7410	8170	133	9.82	---
	9/7/1999	6.81	5135	7620	190	3.62	0.142
	11/16/1999	7.75	5533	8130	194	1.98	---
	3/13/2000	7.68	10591	7220	203	3.00	0.120

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
CT-1	10/26/1989	913	—	1253	—	18.2	—	1271
M-1	10/16/1992	< 0.200	—	16.4	0.700	1.40	0.400	17.8
	3/24/1993	1.10	0.400	9.10	0.600	9.40	0.400	18.5
	6/2/1993	< 1.000	0	15.4	1.50	26.9	1.80	42.3
	8/26/1993	< 1.000	0	10.8	0.800	9.20	0.700	20.0
	12/21/1993	39.5	7.80	19.8	1.30	13.9	6.20	33.7
	3/11/1994	70.5	33.5	11.9	1.10	5.40	2.40	17.3
	9/12/1994	32.6	21.3	15.2	1.20	9.20	1.60	24.4
	3/8/1995	3.40	—	16.8	1.40	—	—	—
	9/21/1995	0.500	0.200	19.0	1.70	11.0	2.20	30.0
	3/27/1996	1.000	0.700	11.3	0.900	—	—	—
	9/3/1996	4.80	2.50	11.2	1.30	6.70	0.800	17.9
	3/10/1997	1.20	0.500	15.1	0.800	—	—	—
	9/2/1997	< 0.200	—	10.7	0.800	2.60	0.400	13.3
	4/15/1998	< 0.200	—	11.1	1.000	—	—	—
	9/16/1998	0.900	—	12.7	—	7.90	—	20.6
	2/3/1999	3.90	—	8.00	—	—	—	—
	8/30/1999	< 0.200	—	6.20	0.400	2.70	0.200	8.90
	3/27/2000	< 0.200	—	13.5	1.10	—	—	—
M-3	10/14/1992	< 0.200	—	6.30	0.500	2.80	0.500	9.10
	2/25/1993	2.00	1.000	5.40	0.300	6.10	0.900	11.5
	5/26/1993	< 1.000	0	5.70	1.000	6.70	1.80	12.4
	9/3/1993	1.60	0.200	5.00	0.600	4.20	0.700	9.20
	11/30/1993	2.40	0.200	4.10	0.400	5.30	0.500	15.4
	3/4/1994	13.5	9.90	5.60	0.900	1.30	1.20	6.90
	9/19/1994	26.1	11.7	10.2	1.000	3.80	1.20	14.0
	2/23/1995	< 0.200	—	9.00	1.20	—	—	—
	9/14/1995	1.000	0.500	7.50	1.10	10.00	2.10	17.5
	2/28/1996	6.90	1.50	8.30	0.800	—	—	—
	9/17/1996	4.20	—	15.5	1.60	5.50	0.700	21.0
	3/11/1997	2.30	0.700	13.3	0.800	—	—	—
	9/22/1997	2.80	1.000	15.5	0.900	< 1.000	—	< 16.5
	3/13/1998	2.20	0.900	22.1	1.50	—	—	—
	9/8/1998	1.90	—	17.9	—	6.20	—	24.1
	1/26/1999	7.30	—	23.4	—	—	—	—
	8/30/1999	5.60	1.50	48.5	3.00	3.70	0.400	52.2
	3/16/2000	4.70	1.10	41.7	1.90	—	—	—
M-4	10/14/1992	< 0.200	—	4.00	0.400	1.10	0.500	5.10
	2/25/1993	< 1.000	1.20	2.70	0.200	4.90	1.000	7.60
	5/26/1993	< 1.000	0	2.10	0.700	8.40	0.700	10.5
	9/3/1993	< 1.000	0	3.10	0.500	4.90	0.700	7.00
	11/30/1993	< 1.000	0	1.80	0.200	< 1.000	0	2.80
	3/4/1994	< 0.200	0	2.60	0.800	< 1.000	0	3.60

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
M-4	9/19/1994	< 0.200	0	3.00	0.600	< 1.000	0	4.00
	2/23/1995	< 0.200	---	3.50	0.800	---	---	---
	9/14/1995	< 0.200	---	3.60	0.800	2.90	1.20	6.50
	2/28/1996	< 0.200	---	1.50	0.400	---	---	---
	9/17/1996	< 0.200	---	2.70	0.300	< 1.000	---	3.70
	3/11/1997	< 0.200	---	3.20	0.400	---	---	---
	9/22/1997	< 0.200	---	1.10	0.200	< 1.000	---	< 2.10
	3/13/1998	< 0.200	---	1.10	0.200	---	---	---
	9/16/1998	< 0.200	---	1.50	0.300	2.70	---	4.20
	1/26/1999	< 0.200	---	1.30	---	---	---	---
	9/8/1999	< 0.200	---	1.20	0.200	3.10	0.200	4.30
	3/16/2000	< 0.200	---	1.80	0.300	---	---	---
M-5	10/16/1992	81.3	---	28.0	0.900	8.40	0.600	36.4
	2/25/1993	139	0.700	26.5	1.20	11.4	1.20	37.9
	5/26/1993	91.0	5.70	20.0	1.80	22.3	0.900	42.3
	9/3/1993	531	20.0	39.7	1.60	< 1.000	0	40.7
	11/30/1993	1014	51.4	30.3	1.70	---	0.600	33.5
	3/4/1994	3181	346	58.8	2.50	2.40	1.40	61.2
	9/19/1994	969	182	58.5	2.40	4.50	1.20	63.0
	2/24/1995	3063	72.0	59.6	3.10	---	---	---
	9/14/1995	589	21.0	32.2	2.10	8.10	1.90	40.3
	2/28/1996	875	39.1	26.4	1.30	---	---	---
	9/17/1996	947	41.8	56.0	2.50	7.30	0.500	63.3
	3/11/1997	1099	24.8	52.6	3.00	---	---	---
	9/22/1997	1100	16.7	80.8	2.90	3.70	0.200	84.5
	3/13/1998	993	41.7	79.2	2.70	---	---	---
	9/16/1998	390	---	42.5	---	7.50	---	50.0
	1/26/1999	348	---	46.8	---	---	---	---
	8/30/1999	317	8.60	62.1	2.40	10.3	1.000	72.4
	3/16/2000	2080	70.8	51.9	2.10	---	---	---
OBS-2	8/14/1989	1059	---	870	---	3.60	---	874
OBS-3	8/14/1989	218	---	106	---	2.00	---	108
OBS-4A	8/14/1989	27.0	---	12.4	---	2.20	---	14.6
P-1	10/23/1980	520	30.0	< 10.00	6.60	---	---	---
	3/13/1981	105	26.0	2.90	0.300	---	---	---
	6/22/1981	4100	100.0	3.10	0.600	---	---	---
	9/30/1981	1000	100.0	5.00	0.400	---	---	---
	12/22/1981	7.00	---	2.50	---	---	---	---
	3/23/1982	16.0	---	6.40	---	---	---	---
	6/21/1982	3.90	---	1.40	---	---	---	---
	9/30/1982	5.50	---	1.90	---	---	---	---
	12/31/1982	2.10	---	2.30	---	---	---	---
	2/11/1983	4.00	---	1.50	---	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
P-1	6/10/1983	0	---	0.200	---	---	---	---
P-2	10/31/1980	180	10.00	< 11.2	7.20	---	---	---
	3/13/1981	155	25.0	4.20	0.500	---	---	---
	6/22/1981	1000	100.0	2.60	0.600	---	---	---
	9/30/1981	580	20.0	3.80	0.400	---	---	---
	12/22/1981	9.00	---	3.30	---	---	---	---
	3/23/1982	3.00	---	3.60	---	---	---	---
	6/14/1982	7.10	---	3.30	---	---	---	---
	9/30/1982	11.0	---	3.50	---	---	---	---
	12/28/1982	5.70	---	4.80	---	---	---	---
	2/22/1983	0	---	3.30	---	---	---	---
	6/13/1983	4.80	---	2.60	---	---	---	---
P-3	10/24/1980	40.0	3.00	3.30	5.30	---	---	---
	3/16/1981	43.0	3.00	7.60	0.400	---	---	---
	6/22/1981	120	10.00	5.60	0.600	---	---	---
	9/30/1981	160	10.00	7.60	1.000	---	---	---
	12/22/1981	74.0	9.80	5.76	0.590	---	---	---
	3/30/1982	180	30.0	4.50	0.400	---	---	---
	6/7/1982	76.0	6.00	5.40	0.400	---	---	---
	9/29/1982	36.0	6.00	4.60	1.000	---	---	---
	12/12/1982	270	10.00	3.90	0.400	---	---	---
	1/27/1983	139	4.00	4.49	0.610	---	---	---
	6/13/1983	183	4.00	4.44	0.510	---	---	---
	9/16/1983	2080	90.0	1.50	0.410	---	---	---
	11/11/1983	240	6.00	6.82	0.710	---	---	---
	2/6/1984	141	22.0	155	21.0	---	---	---
	6/11/1984	102	6.00	2.35	0.280	---	---	---
	9/14/1984	368	23.0	2.67	0.480	---	---	---
	11/29/1984	366	16.0	2.80	0.330	---	---	---
	3/21/1985	161	18.0	4.62	0.380	---	---	---
	6/3/1985	223	8.00	2.39	0.270	---	---	---
	9/26/1985	348	9.00	12.0	0.500	---	---	---
	12/3/1985	---	0	---	---	---	---	---
	5/12/1986	563	19.3	28.9	1.80	---	---	---
	9/29/1986	364	14.1	27.3	1.80	---	---	---
	12/1/1986	358	15.5	28.1	1.80	---	---	---
	12/3/1986	0	---	4.65	0.380	---	---	---
	2/11/1987	351	11.1	52.3	2.40	---	---	---
	5/21/1987	400	12.2	29.0	1.50	---	---	---
	8/13/1987	423	15.9	42.7	1.70	---	---	---
	10/27/1987	1791	26.8	58.9	2.40	---	---	---
	1/25/1988	2441	53.0	36.1	1.60	---	---	---
	3/2/1988	2441	53.0	36.1	1.60	---	---	---
	5/3/1988	572	30.8	33.1	2.90	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
P-3	9/8/1988	395	30.4	33.0	3.30	1.80	3.70	34.8
	3/15/1989	396	14.5	17.5	1.000	< 1.000	---	< 18.5
	9/28/1989	55.5	7.90	20.7	---	< 1.000	---	21.7
	9/29/1989	55.5	7.90	20.7	1.10	< 1.000	---	< 21.7
	3/30/1990	61.9	5.50	3.00	0.300	< 1.000	---	< 4.00
	9/19/1990	10.4	0.200	11.2	1.30	< 1.000	---	< 12.2
	2/13/1991	96.1	10.4	9.40	0.700	27.6	0.900	37.0
	9/12/1991	39.1	3.10	10.3	0.900	< 1.000	---	< 11.3
	2/13/1992	0.200	---	9.40	0.700	< 1.000	---	< 10.4
	9/16/1992	4.20	0.400	4.10	0.400	< 1.000	---	< 5.10
	2/23/1993	10.9	2.10	5.20	0.300	7.10	0.500	12.3
	9/2/1993	< 1.000	---	1.60	0.400	3.80	0.800	5.40
	3/15/1994	< 0.200	---	12.0	1.10	1.90	1.50	13.9
	9/20/1994	89.7	66.5	9.40	0.900	< 1.000	---	< 10.4
	2/13/1995	45.8	6.30	9.60	1.30	2.30	1.000	11.9
	9/11/1995	9.70	1.000	8.50	1.30	5.60	1.80	14.1
	2/23/1996	28.0	3.00	9.40	1.10	2.40	0.700	11.8
	9/3/1996	16.0	2.60	9.40	0.900	< 1.000	---	< 10.4
	2/12/1997	20.0	2.10	9.60	0.600	< 1.000	---	< 10.6
	9/22/1997	18.9	2.60	10.3	1.000	< 1.000	---	< 11.3
	3/10/1998	16.2	2.50	11.7	1.40	< 1.000	---	< 12.7
	7/28/1998	51.7	3.60	4.20	0.400	< 1.000	---	< 5.20
	1/18/1999	23.8	2.70	13.4	1.90	< 1.000	---	< 14.4
	8/31/1999	15.0	1.90	10.4	1.000	4.20	0.200	14.6
	11/9/1999	---	---	9.40	1.30	---	---	---
	2/23/2000	14.7	2.40	12.1	1.10	3.10	0.200	15.2
P-10	2/13/1991	0.200	---	16.4	0.800	8.30	0.800	24.7
	2/13/1992	0.200	---	20.4	1.90	3.20	0.800	23.6
	2/23/1993	1.90	0.800	12.0	0.500	3.80	0.700	15.8
	3/3/1994	5.70	4.20	13.6	1.50	< 1.000	---	< 14.6
	3/6/1995	19.3	2.50	17.9	1.40	7.20	1.50	25.1
	2/28/1996	14.8	1.90	8.60	1.10	8.40	1.30	17.0
	4/14/1998	< 0.200	---	5.10	0.400	3.20	0.300	8.30
	1/18/1999	2.20	0.700	15.2	1.30	1.20	0.200	16.4
	3/27/2000	8.60	1.30	11.6	1.10	2.80	0.200	14.4
P-11	2/14/1991	23.4	4.00	1.70	0.300	< 1.000	---	2.70
	2/13/1992	0.200	---	3.30	0.400	3.20	0.900	6.50
	2/25/1993	23.9	0.900	2.40	0.200	2.70	0.800	5.10
	3/3/1994	< 0.200	---	2.50	0.600	< 1.000	---	3.50
	2/13/1995	139	17.3	2.60	0.800	1.000	0.700	3.60
	3/27/1996	57.9	4.30	4.90	0.500	6.30	0.900	11.2
	3/10/1998	66.2	4.80	3.50	0.300	< 1.000	---	< 4.50
	1/18/1999	40.6	2.60	2.60	0.300	< 1.000	---	< 3.60
	3/27/2000	33.4	2.80	5.60	0.400	< 1.000	---	< 6.60

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
P-12	2/14/1991	0.200	—	1.90	0.300	3.60	0.900	5.50
	2/28/1992	—	—	2.40	0.300	1.80	0.800	4.20
	3/24/1993	< 1.000	—	3.20	0.300	9.40	0.400	12.6
	3/11/1994	< 0.200	—	9.20	1.000	1.10	0.300	10.3
	3/3/1995	27.8	2.90	6.80	0.900	2.40	0.900	9.20
	3/21/1996	8.50	1.80	6.20	0.500	3.10	0.700	9.30
	4/14/1998	3.30	1.20	8.20	0.500	< 1.000	—	< 9.20
	1/18/1999	9.50	1.30	11.8	0.600	1.90	0.200	13.7
	2/23/2000	32.4	3.50	11.9	1.10	3.50	0.200	15.4
P-13	5/11/1993	< 1.000	—	2.20	0.600	< 1.000	—	< 3.20
	9/1/1993	< 1.000	—	3.20	0.500	6.30	1.30	9.50
	10/29/1993	< 1.000	—	3.60	0.400	< 1.000	0	< 4.60
	3/3/1994	< 0.200	—	4.10	0.800	< 1.000	—	< 5.10
	9/20/1994	< 0.200	—	2.90	0.600	< 1.000	—	< 3.90
	2/13/1995	< 0.200	—	2.70	1.000	< 1.000	—	< 3.70
	9/11/1995	0.900	0.300	3.70	1.000	1.90	1.20	5.60
	2/21/1996	0.700	0.400	3.30	0.400	2.70	0.600	6.00
	9/3/1996	< 0.200	—	2.60	0.300	< 1.000	—	< 3.60
	9/16/1997	< 0.200	—	3.40	0.300	< 1.000	—	< 4.40
	3/10/1998	< 0.200	—	2.60	0.300	< 1.000	—	< 3.60
	7/28/1998	< 0.200	—	3.60	0.400	< 1.000	—	< 4.60
	1/18/1999	< 0.200	—	3.80	0.400	< 1.000	—	< 4.80
	8/31/1999	< 0.200	—	3.00	0.300	4.80	0.300	7.80
	2/17/2000	< 0.200	—	3.30	0.300	2.00	0.200	5.30
P-14	5/12/1993	< 1.000	—	3.10	0.700	3.50	0.900	6.60
	9/1/1993	< 1.000	—	4.20	0.500	7.60	1.40	11.8
	11/29/1993	< 1.000	—	4.80	0.500	< 1.000	0	< 5.80
	3/3/1994	< 0.200	—	4.80	0.800	9.90	2.90	14.7
	9/20/1994	< 0.200	—	2.80	0.600	< 1.000	—	< 3.80
	2/13/1995	< 0.200	—	4.80	1.30	< 1.000	—	< 5.80
	9/11/1995	1.30	0.500	6.50	1.20	5.40	1.90	11.9
	2/21/1996	0.900	0.400	4.20	0.400	2.90	0.600	7.10
	9/3/1996	< 0.200	—	3.90	0.300	< 1.000	—	< 4.90
	9/16/1997	< 0.200	—	3.10	0.300	< 1.000	—	< 4.10
	3/10/1998	< 0.200	—	2.70	0.300	< 1.000	—	< 3.70
	7/28/1998	< 0.200	—	3.00	0.400	< 1.000	—	< 4.00
	1/18/1999	< 0.200	—	2.60	0.300	< 1.000	—	< 3.60
	8/31/1999	< 0.200	—	3.00	0.400	8.90	0.400	11.9
	2/17/2000	< 0.200	—	2.90	0.300	2.60	0.200	5.50
P-15	5/13/1993	< 1.000	—	0.700	0.300	< 1.000	—	< 1.70
	9/1/1993	< 1.000	—	1.70	0.400	3.30	0.600	5.00
	11/29/1993	< 1.000	—	2.00	0.500	7.40	0.700	9.40
	3/3/1994	< 0.200	—	2.00	0.600	5.80	3.50	7.80

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
P-15	9/20/1994	< 0.200	—	1.70	0.600	3.50	1.90	5.20
	3/28/1995	< 0.200	—	2.80	0.900	< 1.000	—	< 3.80
	9/13/1995	1.80	0.600	2.50	0.900	< 1.000	—	< 3.50
	2/21/1996	< 0.200	—	2.00	0.300	1.90	0.500	3.90
	9/3/1996	< 0.200	—	2.00	0.200	3.40	0.400	5.40
	9/16/1997	< 0.200	—	1.80	0.300	< 1.000	—	< 2.80
	3/10/1998	< 0.200	—	1.90	0.200	< 1.000	—	< 2.90
	7/28/1998	< 0.200	—	2.70	0.300	< 1.000	—	< 3.70
	1/18/1999	< 0.200	—	2.00	0.300	2.50	0.200	4.50
	9/2/1999	< 0.200	—	2.00	0.200	5.40	0.300	7.40
	2/17/2000	< 0.200	—	2.20	0.200	1.50	0.200	3.70
P-16	8/4/1995	0.600	0.400	7.90	1.40	8.90	2.60	16.8
	12/7/1995	1.10	0.600	4.40	0.900	2.10	0.700	6.50
	3/21/1996	0.900	0.500	5.50	0.500	5.30	0.900	10.8
	6/19/1996	1.20	0.500	4.30	0.700	6.10	0.600	10.4
	9/3/1996	< 0.200	—	4.10	0.300	3.20	0.400	7.30
	11/27/1996	1.000	0.300	83.4	3.30	< 1.000	—	< 84.4
	9/8/1997	1.50	0.900	4.50	0.400	2.60	0.200	7.10
	4/14/1998	0.900	0.500	5.50	0.400	2.70	0.300	8.20
	9/10/1998	< 0.200	—	5.00	0.400	2.70	0.300	7.70
	1/18/1999	< 0.200	—	10.00	1.000	5.00	0.200	15.0
	9/2/1999	< 0.200	—	4.40	0.300	11.9	1.000	16.3
	3/27/2000	0.400	0.200	9.00	0.900	4.90	0.200	13.9
P-17	8/4/1995	< 0.200	—	1.30	0.500	2.00	1.10	3.30
	12/7/1995	0.700	0.500	1.40	0.500	3.10	1.60	4.50
	3/27/1996	0.700	0.500	1.50	0.300	4.30	0.800	5.80
	6/19/1996	0.600	0.500	1.000	0.300	3.50	0.400	4.50
	9/3/1996	< 0.200	—	1.30	0.200	< 1.000	—	< 2.30
	11/27/1996	0.900	0.300	0.200	0.200	< 1.000	—	< 1.20
	9/16/1997	< 0.200	—	1.20	0.200	< 1.000	—	< 2.20
	4/15/1998	< 0.200	—	0.900	0.200	< 1.000	—	< 1.90
	7/28/1998	< 0.200	—	1.10	0.300	< 1.000	—	< 2.10
	1/18/1999	< 0.200	—	0.700	0.200	< 1.000	—	< 1.70
	9/14/1999	< 0.200	—	0.900	0.200	4.70	0.300	5.60
	3/16/2000	< 0.200	—	1.10	0.200	< 1.000	—	< 2.10
P-18	8/24/1995	1.80	0.600	3.50	0.700	< 1.000	—	< 4.50
	12/7/1995	0.700	0.600	3.00	0.600	2.00	1.40	5.00
	6/19/1996	0.500	0.300	2.00	0.500	< 1.000	—	< 3.00
	9/3/1996	< 0.200	—	1.80	0.200	< 1.000	—	< 2.80
	11/27/1996	1.000	0.300	2.00	0.200	< 1.000	—	< 3.00
	9/16/1997	< 0.200	—	2.20	0.300	3.10	0.200	5.30
	3/10/1998	< 0.200	—	1.60	0.200	< 1.000	—	< 2.60
	7/28/1998	< 0.200	—	2.10	0.500	< 1.000	—	< 3.10

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
P-18	1/18/1999	< 0.200	---	2.10	0.300	< 1.000	---	< 3.10
	9/14/1999	< 0.200	---	1.90	0.200	4.00	0.200	5.90
	3/16/2000	0.600	0.400	2.10	0.200	2.40	1.000	4.50
P-19	8/7/1995	3.90	0.900	1.60	0.700	< 1.000	---	< 2.60
	12/7/1995	0.700	0.600	4.50	1.000	2.60	2.10	7.10
	3/27/1996	1.40	0.800	3.70	0.500	2.90	0.900	6.60
	6/19/1996	0.500	0.400	0.900	0.300	< 1.000	---	1.90
	9/3/1996	< 0.200	---	1.70	0.200	4.10	0.400	5.80
	12/16/1996	1.10	0.400	1.80	0.200	< 1.000	---	< 2.80
	9/16/1997	0.900	0.500	1.60	0.300	2.80	0.200	4.40
	3/10/1998	< 0.200	---	1.30	0.200	< 1.000	---	< 2.30
	7/28/1998	< 0.200	---	< 0.200	---	< 1.000	---	< 1.20
	1/18/1999	< 0.200	---	1.000	0.200	< 1.000	---	< 2.00
	9/14/1999	< 0.200	---	0.800	0.200	2.80	0.200	3.60
	3/16/2000	< 0.200	---	0.700	0.300	< 1.000	---	< 1.70
P-20	7/31/1995	< 0.200	---	15.0	1.60	< 1.000	---	< 16.0
	12/7/1995	3.70	1.90	6.20	0.900	1.10	0.700	7.30
	2/21/1996	8.70	2.20	16.6	0.800	7.00	1.000	23.6
	6/19/1996	42.4	7.70	18.6	1.50	< 1.000	---	< 19.6
	9/3/1996	1.30	0.800	8.00	0.500	3.20	0.400	11.2
	12/12/1996	11.1	0.700	9.20	0.500	< 1.000	---	< 10.2
	9/22/1997	7.70	2.10	12.9	1.20	< 1.000	---	< 13.9
	3/10/1998	2.70	0.800	14.7	1.20	5.20	0.300	19.9
	7/28/1998	2.40	0.700	12.7	0.800	4.60	0.300	17.3
	1/18/1999	2.00	0.700	11.6	0.700	< 1.000	---	< 12.6
	9/2/1999	< 0.200	---	9.20	0.900	< 1.000	---	< 10.2
	2/23/2000	5.70	1.20	5.00	0.400	< 1.000	---	< 6.00
P-21	9/16/1999	< 0.200	---	6.30	0.400	8.00	0.900	14.3
	12/22/1999	0.600	0.400	9.90	0.900	< 1.000	---	< 10.9
	3/23/2000	< 0.200	---	5.70	0.400	2.20	0.200	7.90
P-22	9/16/1999	< 0.200	---	2.50	0.300	3.10	0.200	5.60
	12/22/1999	< 0.200	---	4.80	0.700	4.80	1.30	9.60
	3/23/2000	< 0.200	---	7.20	0.400	8.90	0.700	16.1
P-23	9/16/1999	< 0.200	---	2.40	0.200	4.40	0.200	6.80
	12/22/1999	< 0.200	---	5.30	0.400	3.30	1.20	8.60
	2/23/2000	< 0.200	---	1.10	0.200	3.00	0.200	4.10
P-24	9/16/1999	1.80	0.700	1.20	0.200	4.80	0.400	6.00
	12/22/1999	< 0.200	---	1.80	0.200	< 1.000	---	< 2.80
	2/17/2000	4.10	1.000	1.30	0.200	< 1.000	---	< 2.30
PS-1	6/18/1980	0.100	0.500	3.80	1.90	---	---	---
	10/12/1981	2.37	0.650	1.81	0.320	---	---	---
	6/25/1982	2.20	6.00	1.000	0.600	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
PS-1	12/28/1982	2.60	11.0	1.30	0.500	—	—	—
	2/18/1983	0	0.140	1.60	0.420	—	—	—
	6/14/1983	0	1.77	3.80	0.470	—	—	—
	9/16/1983	13.7	8.20	3.26	0.550	—	—	—
	10/19/1983	1.86	0.360	3.01	0.470	—	—	—
	2/6/1984	11.2	1.80	1.66	0.370	—	—	—
	5/19/1984	0.540	0.390	1.91	0.280	—	—	—
	7/31/1984	1.39	1.58	3.61	0.350	—	—	—
T1-1	4/5/1979	525	18.0	7.20	6.30	—	—	—
	4/1/1980	115	5.00	0	3.90	—	—	—
	6/19/1980	150	5.00	< 4.80	4.50	—	—	—
	10/19/1980	11700	100.0	25.0	50.0	—	—	—
	1/13/1981	10548	110	1.80	0.300	—	—	—
	6/22/1981	22000	1000	0.400	0.500	—	—	—
	9/30/1981	25000	1000	0	0.100	—	—	—
	12/23/1981	9166	95.0	1.45	0.310	—	—	—
	3/23/1982	54000	1000	0.100	0.200	—	—	—
	6/15/1982	38000	1000	0.100	0.100	—	—	—
	9/30/1982	23000	1000	1.30	0.400	—	—	—
	12/31/1982	15000	1000	0.400	0.200	—	—	—
	2/7/1983	10442	80.0	1.96	0.350	—	—	—
	6/17/1983	3860	40.0	1.91	0.280	—	—	—
	9/3/1983	5190	100.0	1.000	0.280	—	—	—
	10/19/1983	2200	300	2.06	0.360	—	—	—
	1/26/1984	2220	30.0	1.10	0.290	—	—	—
	4/22/1984	2220	90.0	2.00	0.270	—	—	—
	7/16/1984	2090	60.0	1.10	0.240	—	—	—
	10/8/1984	3530	80.0	1.10	0.220	—	—	—
	1/24/1985	1530	80.0	0.820	1.99	—	—	—
	4/15/1985	1620	40.0	0.468	0.173	—	—	—
	7/29/1985	1620	50.0	0.505	0.141	—	—	—
	11/12/1985	1806	40.0	0.740	0.190	—	—	—
	1/20/1986	—	0	0	0	—	—	—
	1/21/1986	—	—	30.7	2.10	—	—	—
	5/12/1986	766	22.5	14.5	1.30	—	—	—
	9/26/1986	479	16.1	24.6	1.80	—	—	—
	12/21/1986	950	25.2	—	—	—	—	—
	2/11/1987	582	13.8	16.0	1.30	—	—	—
	5/21/1987	579	14.5	11.9	0.900	—	—	—
	8/13/1987	406	15.1	9.40	0.800	—	—	—
	10/27/1987	1599	25.3	9.90	0.900	—	—	—
	1/25/1988	1032	35.0	6.80	0.700	—	—	—
	5/3/1988	288	22.2	13.5	1.90	—	—	—
	9/6/1988	498	36.6	8.30	1.80	2.20	4.40	10.5

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-1	3/15/1989	161	19.9	10.8	0.800	2.80	1.90	13.6
	9/29/1989	52.9	7.80	9.10	0.800	< 1.000	---	< 10.1
	3/30/1990	21.5	3.80	4.70	0.400	< 1.000	---	< 5.70
	9/28/1990	7.60	0.700	2.70	0.300	< 1.000	---	< 3.70
	2/12/1991	99.9	9.70	5.30	0.500	< 1.000	---	< 6.30
	9/12/1991	0.200	---	5.60	0.700	1.80	0.600	7.40
	2/13/1992	0.200	---	4.60	0.500	< 1.000	---	< 5.60
	9/16/1992	0.200	---	3.90	0.400	< 1.000	---	< 4.90
	2/23/1993	19.6	0.400	1.80	0.200	3.20	0.700	5.00
T1-2	4/3/1980	0.200	0.500	0	1.50	---	---	---
	6/19/1980	0.200	0.400	0.500	0.900	---	---	---
	10/12/1980	0.300	0.500	0.400	0.900	---	---	---
	1/11/1981	3.80	3.90	0.300	1.000	---	---	---
	6/19/1981	0.900	0.500	< 0.700	0.400	---	---	---
	9/23/1981	0.200	0.400	0.600	0.200	---	---	---
	12/17/1981	0.620	0.230	0.630	0.120	---	---	---
	6/15/1982	1.30	0.500	0.800	0.400	---	---	---
	12/15/1982	0.500	0.400	1.90	0.300	---	---	---
	5/17/1983	0.420	2.00	0.763	0.283	---	---	---
	10/11/1983	1.57	0.380	0.431	0.310	---	---	---
	3/15/1984	---	---	0.717	0.180	---	---	---
	6/7/1984	0.350	0.280	0.707	0.190	---	---	---
	11/29/1984	0.360	0.170	0.927	0.210	---	---	---
	5/31/1985	1.77	0.370	1.47	0.230	---	---	---
	9/25/1985	---	0	0	0	---	---	---
	12/2/1985	1.32	0.860	3.02	0.380	---	---	---
	6/4/1986	3.50	3.10	2.20	0.600	---	---	---
	11/18/1986	0.500	0	4.50	0.800	---	---	---
	5/27/1987	3.10	1.70	2.90	0.600	---	---	---
	10/28/1987	7.70	3.00	1.90	0.500	---	---	---
	1/29/1988	14.0	5.30	0.700	0.300	---	---	---
	6/2/1988	7.50	3.90	1.70	0.800	---	---	---
	9/6/1988	4.60	4.20	1.30	1.000	2.90	4.40	4.20
	3/6/1989	0.200	---	1.30	0.400	< 1.000	---	< 2.30
	9/1/1989	8.70	5.30	4.50	0.600	2.90	0.900	7.40
	3/19/1990	0.200	---	2.50	0.300	< 1.000	---	< 3.50
	9/19/1990	0.200	---	0.700	0.200	1.20	0.600	1.90
	2/12/1991	0.200	---	1.000	0.300	1.70	0.500	2.70
	9/18/1991	0.200	---	0.600	0.400	< 1.000	---	< 1.60
	2/27/1992	0.200	---	1.70	0.300	1.20	0.500	2.90
	9/4/1992	0.200	---	1.70	0.300	< 1.000	---	< 2.70
	12/1/1992	---	---	1.30	0.200	1.50	0.800	2.80
	3/15/1993	< 1.000	---	---	---	---	---	---
	6/1/1993	---	---	1.90	0.400	3.40	1.000	5.30

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-2	8/30/1993	< 1.000	---	---	---	---	---	---
	3/8/1994	< 0.200	---	1.70	0.500	3.50	2.60	5.20
	8/22/1994	< 0.200	---	1.20	0.400	4.10	1.40	5.30
	3/3/1995	< 0.200	---	2.20	0.600	4.60	1.20	6.80
	9/19/1995	< 0.200	---	1.30	0.600	3.10	1.20	4.40
	3/15/1996	0.700	0.600	2.60	0.300	< 1.000	---	< 3.60
	9/3/1996	< 0.200	---	3.10	0.300	< 1.000	---	< 4.10
	2/14/1997	< 0.200	---	1.60	0.300	< 1.000	---	< 2.60
	9/3/1997	< 0.200	---	1.80	0.300	< 1.000	---	< 2.80
	4/14/1998	< 0.200	---	1.50	0.200	< 1.000	---	< 2.50
	9/10/1998	< 0.200	---	2.00	0.400	< 1.000	---	< 3.00
	2/4/1999	< 0.200	---	1.30	0.200	1.70	0.200	3.00
	9/16/1999	2.10	1.20	1.30	0.200	3.70	0.200	5.00
	3/23/2000	1.10	0.600	1.30	0.200	2.10	0.200	3.40
T1-3	4/3/1980	2.10	0.800	1.30	2.20	---	---	---
	10/24/1980	2.40	0.800	0.600	1.70	---	---	---
	1/12/1981	2.80	0.800	3.50	1.90	---	---	---
	4/11/1981	15.0	3.00	1.000	0.200	---	---	---
	6/17/1981	10.00	2.00	0.800	0.500	---	---	---
	9/23/1981	13.0	1.000	1.20	0.100	---	---	---
	12/17/1981	7.28	0.600	1.24	0.180	---	---	---
	3/30/1982	12.0	2.00	1.50	0.200	---	---	---
	6/10/1982	1.70	0.700	1.50	0.200	---	---	---
	9/20/1982	7.80	2.80	1.000	0.400	---	---	---
	12/14/1982	2.80	1.10	2.80	0.200	---	---	---
	1/26/1983	1.79	0.210	0.710	0.220	---	---	---
	5/17/1983	4.72	2.25	1.02	0.230	---	---	---
	9/3/1983	8.15	0.640	4.09	0.510	---	---	---
	11/9/1983	2.67	0.280	1.67	0.250	---	---	---
	3/12/1984	2.10	0.130	1.94	0.310	---	---	---
	6/7/1984	3.30	1.05	1.10	0.210	---	---	---
	9/10/1984	12.2	4.20	3.77	0.430	---	---	---
	5/14/1985	---	6.98	1.41	0.230	---	---	---
	6/4/1986	5.70	5.70	10.9	1.10	---	---	---
	5/26/1987	16.9	3.20	9.80	1.000	---	---	---
	1/29/1988	30.3	6.90	4.80	0.600	---	---	---
	6/1/1988	8.80	4.10	6.00	1.40	---	---	---
	9/9/1988	27.0	5.80	3.70	1.30	3.30	4.30	7.00
	3/6/1989	51.2	5.00	6.90	0.700	< 1.000	---	< 7.90
	9/1/1989	80.5	8.90	16.5	1.000	2.50	0.500	19.0
	3/20/1990	0.200	---	4.10	0.400	< 1.000	---	< 5.10
	9/19/1990	3.20	0.200	2.50	0.300	< 1.000	---	< 3.50
	2/12/1991	0.200	---	2.60	0.400	< 1.000	---	< 3.60
	9/18/1991	0.200	---	2.00	0.500	< 1.000	---	< 3.00

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-3	2/27/1992	0.200	---	3.00	0.400	1.90	0.600	4.90
	9/4/1992	0.200	---	3.40	0.400	< 1.000	---	< 4.40
	3/15/1993	< 1.000	---	1.50	0.200	1.50	0.800	3.00
	8/30/1993	< 1.000	---	1.70	0.400	8.30	1.20	10.00
	3/8/1994	< 0.200	---	1.80	0.500	< 1.000	2.60	< 2.80
	8/22/1994	< 0.200	---	1.30	0.400	1.40	1.10	2.70
	3/3/1995	< 0.200	---	0.800	0.500	< 1.000	---	< 1.80
	9/19/1995	3.20	---	0.900	0.500	< 1.000	---	< 1.90
	3/21/1996	2.00	1.10	1.40	0.300	1.10	0.500	2.50
	9/3/1996	< 0.200	---	1.30	0.200	< 1.000	---	< 2.30
	2/14/1997	< 0.200	---	1.50	0.300	< 1.000	---	< 2.50
	9/3/1997	< 0.200	---	3.00	0.500	< 1.000	---	< 4.00
	4/14/1998	1.20	0.700	1.20	0.200	< 1.000	---	< 2.20
	9/15/1998	5.10	1.40	2.90	0.400	< 1.000	---	< 3.90
	2/4/1999	1.80	1.000	1.60	0.200	< 1.000	---	< 2.60
	9/16/1999	7.10	0.600	1.80	0.200	< 1.000	---	< 2.80
	3/23/2000	3.10	1.000	2.10	0.200	1.30	0.100	3.40
T1-4	4/3/1979	48.0	3.00	0.700	0.900	---	---	---
	10/27/1989	31.0	---	7.70	---	8.80	---	16.5
	2/27/1992	0.200	---	1.60	0.300	< 1.000	---	< 1.60
	3/15/1993	< 1.000	---	1.50	0.200	4.90	1.000	6.40
	3/8/1994	< 0.200	---	2.10	0.500	2.00	1.50	4.10
	3/3/1995	< 0.200	---	1.30	0.500	< 1.000	---	< 2.30
	2/21/1996	1.30	0.600	0.900	0.600	3.70	0.700	4.60
	3/10/1998	< 0.200	---	1.000	0.200	< 1.000	---	< 2.00
	1/18/1999	< 0.200	---	0.600	0.200	2.40	0.200	3.00
	3/29/2000	< 0.200	---	1.000	0.200	< 1.000	---	< 2.00
T1-6	4/11/1979	---	---	0.800	0.400	---	---	---
	4/5/1980	0.200	0.400	1.90	1.90	---	---	---
	10/17/1980	8.30	1.40	1.90	1.50	---	---	---
	4/17/1981	1.000	0.500	3.30	2.90	---	---	---
	12/18/1981	2.48	0.390	0.780	0.150	---	---	---
	6/17/1982	4.00	0.500	2.60	0.300	---	---	---
	12/22/1982	< 1.30	3.00	2.30	0.200	---	---	---
	5/18/1983	2.80	0.970	3.59	0.380	---	---	---
	11/11/1983	12.1	1.20	2.45	0.350	---	---	---
	6/11/1984	4.27	0.970	3.18	0.330	---	---	---
	5/8/1985	3.01	0.640	1.07	0.240	---	---	---
	4/28/1986	0.500	0.500	2.10	0.600	---	---	---
	5/26/1987	0.200	0	6.60	0.800	---	---	---
	1/29/1988	7.40	4.30	1.000	0.400	---	---	---
	9/9/1988	4.60	4.20	1.90	0.800	< 1.000	---	< 2.90
	3/8/1989	2.70	2.10	8.70	0.700	< 1.000	---	< 9.70
	9/1/1989	4.70	2.10	9.30	0.700	1.70	0.500	11.0

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-6	3/14/1990	0.200	---	7.40	0.500	< 1.000	---	< 8.40
	9/19/1990	0.200	---	0.900	0.200	< 1.000	---	< 1.90
	2/12/1991	0.200	---	3.60	0.400	2.60	0.600	6.20
	9/17/1991	0.200	---	1.10	0.400	< 1.000	---	< 2.10
	2/27/1992	0.200	---	2.10	0.300	< 1.000	---	< 3.10
	9/4/1992	0.200	---	3.70	0.400	< 1.000	---	< 4.70
	3/15/1993	< 1.000	---	0.900	0.100	9.00	1.20	9.90
	8/25/1993	< 1.000	---	0.600	0.300	< 1.000	---	< 1.60
	3/8/1994	< 0.200	---	3.40	0.600	< 1.000	---	< 4.40
	9/6/1994	< 0.200	---	2.60	0.500	< 1.000	---	< 3.60
	3/3/1995	< 0.200	---	2.50	0.600	1.80	0.700	4.30
	9/19/1995	< 0.200	---	2.30	0.600	1.80	0.900	4.10
	3/21/1996	< 0.200	---	1.50	0.400	1.20	0.300	2.70
	9/3/1996	< 0.200	---	2.80	0.400	< 1.000	---	< 3.80
	2/14/1997	< 0.200	---	2.70	0.400	< 1.000	---	< 3.70
	9/2/1997	< 0.200	---	4.20	0.500	< 1.000	---	< 5.20
	3/28/1998	< 0.200	---	3.10	0.300	< 1.000	---	< 4.10
	9/15/1998	< 0.200	---	3.40	0.500	< 1.000	---	< 4.40
	2/4/1999	< 0.200	---	3.60	0.400	< 1.000	---	< 4.60
	8/30/1999	< 0.200	---	3.20	0.300	2.40	0.200	5.60
	3/13/2000	< 0.200	---	3.70	0.300	< 1.000	---	< 4.70
T1-7	10/23/1980	0.300	0.400	4.20	1.80	---	---	---
	1/11/1981	26.0	2.00	3.00	0.300	---	---	---
	6/18/1981	0.700	0.400	1.50	1.40	---	---	---
	9/25/1981	0.600	0.500	2.00	0.300	---	---	---
	12/16/1981	---	---	2.39	0.200	---	---	---
	6/7/1982	2.80	1.80	3.10	0.700	---	---	---
	12/15/1982	< 0.200	0.400	1.60	0.400	---	---	---
	5/5/1983	2.78	1.48	4.23	0.510	---	---	---
	10/16/1983	4.99	0.660	1.91	0.350	---	---	---
	6/6/1984	0.487	0.820	2.06	0.280	---	---	---
	11/15/1984	0.875	0.330	1.75	0.270	---	---	---
	5/31/1985	5.16	0.660	1.43	0.240	---	---	---
	12/3/1985	2.83	0.570	2.65	0.300	---	---	---
	6/5/1986	35.4	5.50	2.30	0.600	---	---	---
	11/18/1986	2.90	1.70	7.30	0.900	---	---	---
	5/27/1987	1.90	1.000	1.60	0.400	---	---	---
	10/29/1987	184	8.90	1.50	0.500	---	---	---
	1/29/1988	95.1	11.0	1.10	0.300	---	---	---
	6/2/1988	60.0	12.0	2.80	1.20	---	---	---
	9/12/1988	21.7	5.40	1.60	0.700	3.70	4.20	5.30
	3/7/1989	0.500	0.300	0.600	0.300	< 1.000	---	< 1.60
	9/14/1989	6.70	5.20	1.50	0.300	< 1.000	---	< 2.50
	3/19/1990	0.200	---	2.20	0.300	< 1.000	---	< 3.20

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-7	9/19/1990	0.200	—	0.900	0.200	< 1.000	—	< 1.90
	2/13/1991	0.200	—	0.800	0.300	2.30	0.600	3.10
	9/18/1991	0.200	—	0.300	0.300	< 1.000	—	< 1.30
	2/28/1992	0.200	—	1.80	0.400	< 1.000	—	< 2.80
	9/4/1992	0.200	—	2.20	0.300	1.10	0.800	3.30
	3/15/1993	< 1.000	—	0.900	0.100	9.00	1.20	9.90
	8/30/1993	< 1.000	—	0.600	0.300	< 1.000	—	< 1.60
	3/8/1994	< 0.200	—	1.30	0.400	2.30	1.80	3.60
	9/6/1994	< 0.200	—	1.10	0.400	3.00	1.30	4.10
	3/3/1995	< 0.200	—	0.200	0.200	1.90	0.800	1.000
	9/19/1995	< 0.200	—	0.800	0.500	2.00	1.000	2.80
	3/27/1996	1.000	0.500	1.70	0.400	< 1.000	—	< 2.70
	9/3/1996	< 0.200	—	1.30	0.300	< 1.000	—	< 2.30
	2/14/1997	< 0.200	—	0.900	0.300	< 1.000	—	< 1.90
	9/3/1997	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20
	4/14/1998	< 0.200	—	1.30	0.300	< 1.000	—	< 2.30
	9/10/1998	< 0.200	—	1.40	0.300	< 1.000	—	< 2.40
	2/4/1999	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20
	9/16/1999	< 0.200	—	0.900	0.200	< 1.000	—	< 1.90
	3/23/2000	< 0.200	—	1.000	0.200	< 1.000	—	< 2.00
T1-8	10/22/1980	7.30	1.40	4.70	2.90	—	—	—
	1/11/1981	2100	100.0	2.50	0.400	—	—	—
	6/19/1981	2100	100.0	0.100	0.500	—	—	—
	9/23/1981	2800	100.0	0.700	0.200	—	—	—
	12/16/1981	2101	22.0	1.84	0.410	—	—	—
	3/30/1982	2400	100.0	0.700	0.200	—	—	—
	6/15/1982	1100	100.0	2.00	0.300	—	—	—
	9/17/1982	1300	100.0	0.200	0.800	—	—	—
	1/26/1983	790	52.0	0.350	0.370	—	—	—
	5/16/1983	436	8.00	1.40	0.370	—	—	—
	9/22/1983	75.1	3.70	1.20	0.390	—	—	—
	10/16/1983	360	6.00	1.55	0.290	—	—	—
	3/15/1984	317	18.0	1.84	0.380	—	—	—
	6/7/1984	214	7.00	1.47	0.230	—	—	—
	9/13/1984	643	20.0	1.15	0.370	—	—	—
	11/29/1984	393	15.0	0.873	0.263	—	—	—
	3/21/1985	1990	60.0	0.824	0.200	—	—	—
	5/31/1985	425	10.00	0.814	0.176	—	—	—
	8/29/1985	54.3	0.470	0.236	0.113	—	—	—
	12/3/1985	176	4.80	5.45	0.520	—	—	—
	3/5/1986	236	15.0	7.53	0.430	—	—	—
	6/5/1986	738	22.1	7.50	0.900	—	—	—
	9/8/1986	1045	48.3	11.2	1.20	—	—	—
	12/11/1986	483	17.1	6.80	0.900	—	—	—

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-8	3/3/1987	343	11.1	18.8	1.50	---	---	---
	5/27/1987	132	8.50	8.60	0.900	---	---	---
	8/20/1987	126	9.10	14.1	1.000	---	---	---
	10/29/1987	803	18.0	18.1	1.40	---	---	---
	2/3/1988	972	34.0	16.2	1.000	---	---	---
	6/2/1988	318	30.7	15.5	2.20	---	---	---
	9/12/1988	351	31.0	16.1	2.30	2.70	3.90	18.8
	3/7/1989	185	10.3	10.3	0.800	< 1.000	---	< 11.3
	9/1/1989	85.8	9.10	13.9	0.900	< 1.000	---	< 14.9
	3/20/1990	21.5	3.80	8.20	0.600	< 1.000	---	< 9.20
	9/19/1990	3.50	0.100	5.20	0.400	< 1.000	---	< 6.20
	2/13/1991	65.6	8.30	6.70	0.600	1.40	0.700	8.10
	9/12/1991	22.3	0.800	3.40	0.600	< 1.000	---	< 4.40
	2/13/1992	0.200	---	6.10	0.600	1.40	0.700	7.50
	9/16/1992	0.200	---	5.30	0.500	2.00	0.900	7.30
	2/23/1993	9.20	2.30	4.50	0.300	9.50	1.40	14.0
	9/1/1993	19.8	3.00	5.20	0.600	1.90	1.40	7.10
	3/3/1994	< 0.200	---	5.10	0.700	3.60	2.00	8.70
	9/8/1994	< 0.200	---	6.00	1.000	1.10	0.900	7.10
	2/13/1995	< 0.200	---	6.30	1.10	1.20	0.700	7.50
	9/11/1995	10.9	1.10	5.30	0.900	< 1.000	---	< 6.30
	2/23/1996	13.5	1.80	7.00	0.500	< 1.000	---	< 8.00
	9/3/1996	8.40	1.80	7.50	0.600	< 1.000	---	< 8.50
	3/12/1997	11.6	1.90	5.30	0.500	< 1.000	---	< 6.30
	9/22/1997	28.2	3.50	5.40	0.400	< 1.000	---	< 6.40
	3/10/1998	20.7	3.00	4.40	0.400	< 1.000	---	< 3.40
	7/28/1998	29.4	2.60	7.50	0.600	3.80	0.300	11.3
	1/18/1999	22.4	2.40	8.50	0.700	< 1.000	---	< 9.50
	9/2/1999	15.6	2.20	6.50	0.400	2.70	0.200	9.20
	3/23/2000	1.50	0.600	3.40	0.300	3.00	0.300	6.40
T1-9	10/7/1980	61.0	4.00	19.0	4.00	---	---	---
	1/16/1981	240	10.00	2.20	0.200	---	---	---
	6/18/1981	690	20.0	3.50	0.600	---	---	---
	9/17/1981	1500	100.0	4.50	0.300	---	---	---
	12/18/1981	1385	54.0	2.59	0.460	---	---	---
	3/25/1982	4200	100.0	4.70	0.400	---	---	---
	6/23/1982	1800	100.0	4.10	0.300	---	---	---
	9/1/1982	3100	100.0	4.20	0.900	---	---	---
	12/24/1982	69.0	2.00	2.00	0.600	---	---	---
	2/9/1983	87.1	1.60	0.520	0.320	---	---	---
	6/24/1983	4.92	1.08	5.70	0.820	---	---	---
	8/8/1983	3.04	2.42	4.71	0.500	---	---	---
	10/16/1983	2.78	0.570	4.84	0.560	---	---	---
	3/10/1984	4.00	1.39	2.77	0.420	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-9	5/6/1984	2.56	0.560	3.81	0.370	---	---	---
	9/20/1984	4.73	1.05	3.78	0.470	---	---	---
	11/15/1984	2.29	0.530	4.03	0.400	---	---	---
	3/8/1985	5.75	1.10	4.18	0.400	---	---	---
	5/23/1985	9.12	1.51	12.9	0.600	---	---	---
	9/16/1985	6.70	0.550	4.94	0.360	---	---	---
	12/5/1985	7.37	0.790	5.76	0.410	---	---	---
	3/12/1986	2.62	1.26	4.74	0.340	---	---	---
	6/10/1986	77.0	7.60	5.70	0.800	---	---	---
	9/30/1986	6.40	6.20	4.60	0.800	---	---	---
	12/5/1986	40.0	4.70	6.60	0.900	---	---	---
	3/26/1987	7.80	2.40	5.40	0.700	---	---	---
	5/29/1987	8.40	2.40	5.90	0.700	---	---	---
	8/26/1987	5.30	3.50	6.90	0.700	---	---	---
	12/14/1987	289	11.0	4.70	0.600	---	---	---
	3/4/1988	187	17.0	5.50	1.80	---	---	---
	6/7/1988	80.9	16.3	7.10	1.70	---	---	---
	12/13/1988	2.10	2.80	7.60	1.000	< 1.000	---	< 8.60
	3/9/1989	0.200	---	4.70	0.600	< 1.000	---	< 5.70
	9/19/1989	10.00	5.40	7.90	0.700	2.60	0.700	10.5
	3/27/1990	51.2	5.10	8.90	0.600	4.80	0.700	13.7
	9/19/1990	0.200	---	1.90	0.300	< 1.000	---	< 2.90
	2/13/1991	0.200	---	0.600	0.200	< 1.000	---	< 1.60
	9/13/1991	0.200	---	1.90	0.500	< 1.000	---	< 2.90
	2/13/1992	0.200	---	3.30	0.400	< 1.000	---	< 4.30
	9/16/1992	0.200	---	4.10	0.400	< 1.000	---	< 5.10
	2/24/1993	1.20	0.100	2.70	0.200	7.70	0.400	10.4
	9/20/1993	2.90	0.800	3.80	0.500	5.50	1.60	9.30
	3/4/1994	< 0.0200	---	1.20	0.400	1.90	0.600	3.10
	9/20/1994	< 0.0200	---	1.20	0.400	1.60	1.10	2.80
	2/23/1995	< 0.200	---	1.70	0.700	< 1.000	---	< 2.70
	9/13/1995	0.600	0.400	1.20	0.500	< 1.000	---	< 2.20
	2/28/1996	0.700	0.500	1.40	0.400	1.10	0.300	2.50
	9/3/1996	< 0.200	---	0.800	0.300	< 1.000	---	< 1.80
	3/11/1997	< 0.200	---	1.20	0.300	< 1.000	---	< 2.20
	9/22/1997	4.70	1.50	8.10	0.600	3.20	0.300	11.3
	3/13/1998	4.30	1.20	6.20	0.500	< 1.000	---	< 7.20
	7/28/1998	3.30	0.900	8.10	0.600	7.80	0.400	15.9
	1/25/1999	0.900	0.500	7.60	0.600	2.40	0.300	10.00
	9/14/1999	1.70	0.800	6.00	0.400	3.60	0.200	9.60
	2/25/2000	1.10	0.500	6.80	0.400	7.10	0.300	13.9
T1-10	9/16/1981	3.30	0.900	1.80	0.600	---	---	---
	12/17/1981	2.10	0.360	1.33	0.160	---	---	---
	3/31/1982	8.10	4.90	1.80	0.600	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-10	6/16/1982	2.80	1.90	0.600	0.200	---	---	---
	8/31/1982	1.50	3.10	3.00	0.800	---	---	---
	12/31/1982	0.600	5.40	0.400	0.200	---	---	---
	2/10/1983	0.320	0.320	0.740	0.300	---	---	---
	5/16/1983	---	1.19	0.457	0.193	---	---	---
	9/3/1983	60.9	11.1	2.11	0.480	---	---	---
	11/3/1983	0.230	0.195	1.28	0.250	---	---	---
	3/10/1984	0.679	0.227	1.53	0.390	---	---	---
	6/6/1984	1.23	0.700	1.99	0.260	---	---	---
	9/14/1984	0.266	0.430	1.36	0.350	---	---	---
	11/15/1984	0.568	0.668	1.66	0.260	---	---	---
	3/21/1985	3.74	1.20	1.45	0.250	---	---	---
	5/31/1985	2.20	0.300	1.37	0.210	---	---	---
	8/29/1985	0.354	0.490	1.34	0.190	---	---	---
	12/2/1985	1.32	0.310	5.58	0.500	---	---	---
	3/5/1986	1.54	0.390	1.79	0.220	---	---	---
	6/3/1986	2.00	1.40	3.00	0.600	---	---	---
	9/30/1986	0.500	0	3.90	0.700	---	---	---
	12/16/1986	2.00	1.40	1.80	0.500	---	---	---
	3/4/1987	0.900	1.60	1.60	0.400	---	---	---
	5/27/1987	0.200	0	2.40	0.500	---	---	---
	8/20/1987	0.200	---	1.30	0.400	---	---	---
	12/13/1987	15.2	3.50	1.50	0.500	---	---	---
	3/22/1988	25.6	7.10	1.60	0.500	---	---	---
	6/6/1988	5.90	3.80	2.20	1.10	---	---	---
	9/28/1989	0.400	---	3.90	0.400	---	---	---
	9/19/1990	0.200	---	2.60	0.400	---	---	---
	9/18/1991	0.200	---	0.500	0.200	---	---	---
	9/4/1992	0.200	---	5.80	0.500	---	---	---
	8/30/1993	< 1.000	---	1.70	0.200	---	---	---
	9/6/1994	< 0.200	---	2.40	0.500	---	---	---
	9/19/1995	< 0.200	---	1.50	0.700	---	---	---
	9/5/1996	< 0.200	---	0.600	0.200	---	---	---
	9/8/1997	< 0.200	---	1.80	0.200	---	---	---
	9/8/1998	3.50	1.20	5.90	0.200	---	---	---
	8/31/1999	< 0.200	---	1.000	0.200	---	---	---
T1-11	10/21/1981	1.67	0.340	1.90	0.340	---	---	---
	3/31/1982	14.0	5.00	2.90	0.900	---	---	---
	6/2/1982	14.0	5.00	3.20	0.700	---	---	---
	8/30/1982	1.90	1.40	2.30	0.700	---	---	---
	12/29/1982	1.10	4.10	0.500	0.400	---	---	---
	2/3/1983	0.920	0.180	0.450	0.240	---	---	---
	5/26/1983	1.83	1.000	0.970	0.258	---	---	---
	9/8/1983	0.0180	2.78	1.90	0.350	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-11	10/15/1983	3.80	0.620	1.31	0.300	---	---	---
	2/29/1984	1.12	0.480	1.73	0.370	---	---	---
	5/4/1984	1.06	0.620	2.75	0.320	---	---	---
	7/17/1984	0.0400	0.281	2.50	0.300	---	---	---
	2/8/1988	50.8	8.30	3.40	0.500	---	---	---
	9/21/1988	5.90	4.30	2.10	0.900	3.20	3.90	5.30
	3/9/1989	0.200	---	2.30	0.400	< 1.000	---	< 3.30
	9/20/1989	21.2	6.10	4.30	0.500	< 1.000	---	< 5.30
	3/27/1990	0.200	---	2.00	0.300	< 1.000	---	< 3.00
	9/27/1990	0.200	---	1.000	0.300	< 1.000	---	< 2.00
	2/20/1991	0.200	---	2.40	0.300	< 1.000	---	< 3.40
	9/26/1991	0.200	---	0.800	0.800	< 1.000	---	< 1.80
	3/20/1992	0.200	---	2.00	0.300	1.60	0.500	3.60
	9/18/1992	0.200	---	4.10	0.500	< 1.000	---	< 5.10
	3/24/1993	< 1.000	---	1.20	0.400	9.20	0.800	10.4
	9/23/1993	1.80	0.200	3.20	0.500	9.80	1.80	13.0
	3/15/1994	< 0.200	---	2.10	0.600	2.60	1.10	4.70
	9/23/1994	< 0.200	---	3.40	0.800	< 1.000	---	< 4.40
	3/28/1995	< 0.200	---	2.60	0.900	1.40	0.400	4.00
	9/28/1995	< 0.200	---	1.80	0.800	< 1.000	---	< 2.80
	3/27/1996	< 0.200	---	3.00	0.700	3.10	0.600	6.10
	9/3/1996	1.30	0.600	1.30	0.200	< 1.000	---	< 2.30
	3/14/1997	0.800	0.400	1.80	0.400	< 1.000	---	< 2.80
	9/25/1997	< 0.200	---	2.10	0.300	2.30	0.300	4.40
	3/13/1998	< 0.200	---	1.20	0.200	< 1.000	---	< 2.20
	9/23/1998	0.900	0.500	2.70	0.400	< 1.000	---	< 3.70
	3/11/1999	1.90	0.700	2.80	0.400	< 1.000	---	< 3.80
	9/24/1999	< 0.200	---	1.90	0.400	< 1.000	---	< 2.90
	3/14/2000	0.900	0.500	1.80	0.200	< 1.000	---	< 2.80
T1-12	10/12/1981	0.400	0.170	2.89	0.410	---	---	---
	3/31/1982	1.10	4.50	6.20	1.50	---	---	---
	6/2/1982	0.100	3.80	2.70	0.600	---	---	---
	8/30/1982	1.30	2.30	2.80	0.900	---	---	---
	12/24/1982	---	13.0	0.800	0.300	---	---	---
	2/3/1983	1.40	0.370	0.500	0.300	---	---	---
	5/26/1983	---	0.916	0.827	0.280	---	---	---
	8/8/1983	9.06	5.52	1.70	0.440	---	---	---
	10/15/1983	0.901	0.761	4.10	0.440	---	---	---
	1/23/1984	4.43	0.500	1.63	0.380	---	---	---
	5/5/1984	0.531	0.397	2.67	0.320	---	---	---
	7/17/1984	0.314	0.301	2.63	0.310	---	---	---
	2/8/1988	16.1	5.40	2.90	0.500	---	---	---
	9/21/1988	10.5	4.60	3.50	1.20	4.50	5.40	8.00
	3/9/1989	1.30	1.10	2.50	0.400	3.00	1.40	5.50

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-12	9/20/1989	0.800	0.200	1.80	0.400	< 1.000	---	< 2.80
	3/27/1990	0.200	---	2.30	0.300	< 1.000	---	< 3.30
	9/27/1990	2.00	1.50	0.600	0.200	2.30	1.10	2.90
	2/20/1991	0.200	---	1.80	0.300	< 1.000	---	< 2.80
	9/26/1991	0.200	---	0.200	---	< 1.000	---	< 1.20
	3/20/1992	0.200	---	1.80	0.300	< 1.000	---	< 2.80
	9/18/1992	0.200	---	3.00	0.500	< 1.000	---	< 4.00
	3/24/1993	< 1.000	---	3.80	0.500	1.70	1.000	5.50
	9/23/1993	< 1.000	---	1.70	0.400	< 1.000	---	< 2.70
	3/15/1994	< 0.200	---	2.20	0.700	6.90	4.60	9.10
	9/23/1994	< 0.200	---	2.90	0.700	1.70	1.000	4.60
	3/28/1995	< 0.200	---	3.10	1.000	< 1.000	---	< 4.10
	9/28/1995	0.600	0.300	2.50	0.700	< 1.000	---	< 3.50
	3/27/1996	< 0.200	---	3.80	0.700	2.80	0.600	6.60
	9/3/1996	0.600	0.500	2.10	0.300	< 1.000	---	< 3.10
	3/14/1997	< 0.200	---	2.70	0.400	< 1.000	---	< 3.70
	9/25/1997	< 0.200	---	2.50	0.300	3.20	0.200	5.70
	4/15/1998	< 0.200	---	2.10	0.200	< 1.000	---	< 3.10
	9/23/1998	< 0.200	---	2.00	0.400	< 1.000	---	< 3.00
	3/11/1999	< 0.200	---	2.20	0.400	< 1.000	---	< 3.20
	8/31/1999	1.10	0.800	1.50	0.200	3.90	0.200	5.40
	3/29/2000	< 0.200	---	1.70	0.200	3.80	0.300	5.50
T1-14	2/8/1988	6.70	4.20	2.70	0.500	---	---	---
	9/21/1988	0.200	---	6.90	1.60	6.70	5.80	13.6
	3/9/1989	3.60	2.20	2.80	0.500	< 1.000	---	< 3.80
	9/20/1989	0.200	---	3.20	0.500	< 1.000	---	< 4.20
	3/27/1990	0.200	---	3.60	0.400	< 1.000	---	< 4.60
	9/27/1990	0.200	---	1.30	0.300	< 1.000	---	< 2.30
	2/20/1991	3.20	0.400	2.60	0.400	< 1.000	---	< 3.60
	9/14/1991	0.200	---	3.00	1.10	< 1.000	---	< 4.00
	3/20/1992	0.200	---	2.00	0.300	1.80	0.600	3.80
	9/18/1992	0.200	---	4.20	0.500	< 1.000	---	< 5.20
	3/19/1993	< 1.000	---	1.60	0.400	2.10	1.10	3.70
	9/23/1993	< 1.000	---	3.60	0.500	3.20	2.00	6.80
	3/15/1994	< 0.200	---	2.10	0.700	5.10	3.80	7.20
	9/23/1994	< 0.200	---	0.700	0.500	< 1.000	---	< 1.70
	3/28/1995	< 0.200	---	2.40	0.700	< 1.000	---	< 3.40
	9/28/1995	< 0.200	---	1.30	0.600	< 1.000	---	< 2.30
	3/27/1996	< 0.200	---	2.10	0.600	< 1.000	---	< 3.10
	9/3/1996	< 0.200	---	1.90	0.300	< 1.000	---	< 2.90
	3/14/1997	< 0.200	---	2.30	0.400	< 1.000	---	< 3.30
	9/25/1997	< 0.200	---	2.10	0.300	< 1.000	---	< 3.10
	4/15/1998	< 0.200	---	1.80	0.200	< 1.000	---	< 2.80
	9/23/1998	< 0.200	---	2.10	0.400	< 1.000	---	< 3.10

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-14	3/11/1999	< 0.200	---	1.80	0.300	< 1.000	---	< 2.80
	9/24/1999	< 0.200	---	1.60	0.200	< 1.000	---	< 2.60
	3/23/2000	< 0.200	---	2.10	0.200	4.20	0.600	6.30
T1-15	9/25/1997	317	11.2	11.4	1.10	< 1.000	---	< 12.4
T1-16	2/8/1988	66.5	9.80	6.40	0.700	---	---	---
	9/21/1988	0.200	---	7.00	1.60	2.70	4.10	9.70
	3/9/1989	2.00	1.40	5.30	0.600	< 1.000	---	< 6.30
	9/20/1989	0.200	---	5.40	0.600	< 1.000	---	< 6.40
	3/27/1990	0.200	---	9.10	0.600	12.0	1.000	21.1
	9/27/1990	0.200	---	3.20	0.300	< 1.000	---	< 4.20
	2/20/1991	8.00	0.700	4.30	0.400	3.40	0.500	7.70
	9/26/1991	0.200	---	2.10	0.500	< 1.000	---	< 2.10
	3/20/1992	0.200	---	2.90	0.500	< 1.000	---	< 3.90
	9/18/1992	0.200	---	8.70	0.600	2.90	1.10	11.6
	3/24/1993	< 1.000	---	4.80	0.600	< 1.000	---	< 5.80
	9/23/1993	< 1.000	---	5.50	0.600	14.9	2.50	20.4
	3/15/1994	< 0.200	---	3.50	0.600	4.40	2.60	7.90
	9/23/1994	< 0.200	---	4.60	0.700	1.90	1.30	6.50
	3/28/1995	< 0.200	---	4.80	0.700	2.50	1.40	7.30
	9/28/1995	< 0.200	---	1.70	0.600	< 1.000	---	< 2.70
	3/27/1996	< 0.200	---	3.50	0.600	1.60	0.400	5.10
	9/3/1996	1.10	0.600	3.80	0.300	4.80	0.400	8.60
	3/14/1997	< 0.200	---	2.20	0.400	< 1.000	---	< 3.20
	9/25/1997	3.00	1.10	5.10	0.400	2.10	0.200	7.20
	4/15/1998	< 0.200	---	4.10	0.300	< 1.000	---	< 5.10
	9/23/1998	< 0.200	---	6.60	0.600	4.90	0.300	11.5
	3/11/1999	< 0.200	---	4.60	0.400	2.20	0.300	6.80
	9/24/1999	< 0.200	---	8.00	0.500	1.60	0.200	9.60
	3/29/2000	< 0.200	---	8.00	0.500	10.7	1.10	18.7
T1-17	12/23/1992	< 0.200	---	1.50	0.600	10.6	2.40	12.1
	3/19/1993	< 1.000	---	5.20	0.300	4.00	0.700	9.20
	9/23/1993	< 1.000	---	1.80	0.400	6.70	1.20	8.50
	3/15/1994	< 0.200	---	3.60	0.800	4.10	3.50	7.70
	9/23/1994	< 0.200	---	4.80	1.20	< 1.000	---	< 5.80
	3/28/1995	< 0.200	---	8.90	1.30	3.60	2.20	12.5
	9/28/1995	2.50	0.400	6.10	1.000	< 1.000	---	< 7.10
	3/27/1996	1.10	0.700	5.20	0.700	3.10	0.700	8.30
	9/3/1996	< 0.200	---	2.40	0.300	< 1.000	---	< 3.40
	9/25/1997	8.80	0.200	3.50	0.300	2.50	0.200	6.00
	4/15/1998	< 0.200	---	3.80	0.300	< 1.000	---	< 4.80
	9/23/1998	< 0.200	---	2.90	0.400	< 1.000	---	< 3.90
	3/11/1999	< 0.200	---	3.30	0.400	2.40	0.300	5.70
	9/24/1999	< 0.200	---	3.40	0.300	2.60	0.200	6.00

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-17	3/29/2000	< 0.200	---	2.50	0.300	3.80	0.300	6.30
T1-18	12/10/1992	< 0.200	---	1.50	0.600	10.6	2.40	12.1
	2/25/1993	< 1.000	---	5.20	0.300	4.00	0.700	9.20
	8/31/1993	< 0.200	---	1.80	0.400	6.70	1.20	8.50
	3/4/1994	< 0.200	---	3.60	0.800	6.90	3.90	10.5
	9/12/1994	< 0.200	---	6.20	1.000	1.80	1.000	8.00
	3/6/1995	< 0.200	---	4.70	0.800	4.90	1.30	9.60
	9/14/1995	0.800	0.200	4.50	0.800	4.70	1.40	9.20
	3/21/1996	< 0.200	---	5.10	0.500	1.10	0.300	6.20
	9/3/1996	< 0.200	---	6.50	0.400	4.80	0.400	11.3
	9/3/1997	5.40	1.60	2.60	0.300	2.50	0.200	5.10
	4/14/1998	< 0.200	---	1.60	0.200	2.50	0.200	4.10
	9/10/1998	< 0.200	---	2.90	0.400	< 1.000	---	< 3.90
	2/10/1999	< 0.200	---	1.80	0.300	2.90	0.300	4.70
	9/19/1999	< 0.200	---	2.10	0.300	1.90	0.200	4.00
	3/29/2000	< 0.200	---	3.70	0.300	6.20	0.300	9.90
T1-19	9/22/1997	7.60	2.00	0.900	0.200	1.50	0.200	2.40
T1-20	9/25/1997	51.1	5.10	55.3	2.30	4.30	0.200	59.6
T1-21	6/23/1989	0.200	---	0.800	0.300	< 1.000	---	< 1.80
	9/29/1989	2.10	1.000	1.30	0.400	< 1.000	---	< 2.30
	3/29/1990	0.200	---	1.50	0.300	< 1.000	---	< 2.50
	9/17/1990	0.200	---	0.300	0.200	< 1.000	---	< 1.30
	2/25/1991	0.200	---	0.400	0.200	< 1.000	---	< 1.40
	9/23/1991	0.200	---	< 0.200	---	< 1.000	---	< 1.20
	2/28/1992	0.200	---	0.500	0.200	< 1.000	---	< 1.50
	9/9/1992	0.200	---	1.30	0.200	2.80	1.20	4.10
	3/25/1993	< 1.000	---	< 0.200	---	0.300	0.400	< 0.500
	8/31/1993	< 1.000	---	1.20	0.300	11.8	2.70	13.0
	3/11/1994	< 0.200	---	0.300	0.300	6.00	2.90	6.30
	9/12/1994	< 0.200	---	0.700	0.300	< 1.000	---	< 1.70
	3/8/1995	< 0.200	---	< 0.200	---	4.40	1.60	< 4.60
	9/21/1995	< 0.200	---	1.10	0.500	< 1.000	---	< 2.10
	3/15/1996	< 0.200	---	0.800	0.400	< 1.000	---	< 1.80
	9/3/1996	< 0.200	---	0.600	0.200	< 1.000	---	< 1.60
	9/8/1997	< 0.200	---	1.10	0.200	< 1.000	---	< 2.10
	2/16/1998	---	---	---	---	---	---	< 1.20
	4/14/1998	< 0.200	---	0.500	0.100	< 1.000	---	< 1.50
	8/24/1998	< 0.200	---	< 0.200	---	< 1.000	---	< 1.20
	2/16/1999	< 0.200	---	< 0.200	---	< 1.000	---	< 1.20
	9/16/1999	< 0.200	---	0.700	0.200	1.80	0.200	2.50
	3/23/2000	< 0.200	---	1.40	0.200	< 1.000	---	< 2.40
T1-22	6/23/1989	15.0	3.10	2.00	0.400	< 1.000	---	< 3.00
	9/29/1989	45.6	7.40	4.30	0.500	< 1.000	---	< 5.30

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-22	3/29/1990	0.200	---	1.50	0.300	< 1.000	---	< 2.50
	9/19/1990	0.200	---	0.300	0.200	4.40	1.000	4.70
	2/25/1991	0.200	---	0.700	0.200	1.80	0.500	2.50
	9/20/1991	0.200	---	< 0.200	---	< 1.000	---	< 1.20
	2/28/1992	0.200	---	0.700	0.200	1.50	0.700	2.20
	9/4/1992	0.200	---	1.10	0.200	7.80	1.30	8.90
	3/24/1993	< 1.000	---	< 0.200	---	< 1.000	---	< 1.20
	8/31/1993	< 1.000	---	0.600	0.300	4.40	0.600	5.00
	3/11/1994	< 0.200	---	0.700	0.300	3.80	3.00	4.50
	9/6/1994	< 0.200	---	0.600	0.300	< 1.000	---	< 1.60
	3/6/1995	< 0.200	---	< 0.200	---	1.80	0.800	< 2.00
	9/19/1995	< 0.200	---	0.800	0.500	1.90	0.900	2.70
	3/27/1996	< 0.200	---	1.10	0.600	3.90	0.800	5.00
	9/3/1996	0.900	0.700	0.800	0.200	< 1.000	---	< 1.80
	9/8/1997	< 0.200	---	1.10	0.200	< 1.000	---	< 2.10
	4/14/1998	< 0.200	---	0.700	0.100	< 1.000	---	< 1.70
	9/10/1998	< 0.200	---	0.900	---	< 1.000	---	< 1.90
	2/10/1999	< 0.200	---	0.800	0.200	< 1.000	---	< 1.80
	8/31/1999	< 0.200	---	1.000	0.200	2.10	0.200	3.10
	3/27/2000	< 0.200	---	0.800	0.200	< 1.000	---	< 1.80
T1-23	9/29/1989	0.200	0.200	3.00	0.200	< 1.000	1.000	< 3.00
	3/29/1990	0.200	---	1.50	0.300	< 1.000	---	< 2.50
	9/17/1990	0.200	---	0.800	0.200	3.60	1.000	4.40
	2/14/1991	1.80	0.200	< 0.200	---	1.10	0.500	< 1.30
	9/13/1991	0.200	---	< 0.200	---	< 1.000	---	< 1.20
	2/28/1992	0.200	---	0.400	0.200	< 1.000	---	< 1.40
	9/14/1992	0.200	---	1.20	0.200	< 1.000	---	< 2.20
	2/24/1993	< 1.000	---	0.800	0.200	7.50	0.700	8.30
	9/29/1993	< 1.000	---	0.800	0.300	1.30	0.600	3.10
	3/15/1994	< 0.200	---	1.000	0.400	3.60	3.20	4.60
	9/21/1994	< 0.200	---	0.700	0.300	< 1.000	---	< 1.70
	3/1/1995	< 0.200	---	---	---	---	---	---
	3/6/1995	---	---	< 0.200	---	< 1.000	---	< 1.20
	9/14/1995	< 0.200	---	---	---	---	---	---
	9/19/1995	---	---	0.700	0.500	< 1.000	---	< 1.70
	2/28/1996	0.600	0.400	< 0.200	---	< 1.000	---	< 1.20
	9/3/1996	< 0.200	---	0.500	0.200	< 1.000	---	< 1.50
	9/22/1997	< 0.200	---	1.40	0.300	1.80	0.200	3.20
	3/13/1998	< 0.200	---	0.700	0.100	< 1.000	---	< 1.70
	9/8/1998	< 0.200	---	< 0.200	---	3.10	0.300	< 3.30
	1/26/1999	< 0.200	---	1.10	0.300	< 1.000	---	< 2.10
	9/14/1999	< 0.200	---	0.700	0.400	< 1.000	---	< 1.70
	3/23/2000	< 0.200	---	0.500	0.200	< 1.000	---	< 1.50
T1-24	12/1/1992	< 0.200	---	0.700	0.200	20.2	2.90	20.9

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T1-25	9/25/1997	6.30	1.60	5.70	0.400	6.20	0.200	11.9
T1-26	7/28/1998	16.8	2.50	2.60	0.400	< 1.000	---	< 3.60
	2/4/1999	43.7	3.30	3.60	0.400	< 1.000	---	< 4.60
	9/16/1999	30.3	3.20	3.70	0.400	5.30	0.200	9.00
	12/22/1999	---	---	2.50	0.300	---	---	---
	3/14/2000	30.6	2.70	2.30	0.300	< 1.000	---	< 3.30
T1-27	7/28/1998	3.30	1.000	5.50	0.600	< 1.000	---	< 6.50
	2/4/1999	< 0.200	---	2.70	0.400	< 1.000	---	< 3.70
	9/16/1999	16.4	2.40	6.90	0.500	5.50	0.200	12.4
	12/22/1999	---	---	5.30	0.400	---	---	---
	2/25/2000	3.80	1.000	6.00	0.400	4.80	0.300	10.8
T2-4	3/22/1993	< 1.000	---	1.50	0.500	---	---	---
	3/7/1995	< 0.200	---	0.900	0.300	---	---	---
	3/13/1996	1.10	0.700	1.40	0.300	---	---	---
	2/25/1997	< 0.200	---	3.20	0.400	---	---	---
	4/6/1998	< 0.200	---	1.10	0.200	---	---	---
	2/1/1999	< 0.200	---	0.800	---	---	---	---
	3/7/2000	0.500	0.300	0.900	0.200	---	---	---
T2-5	2/26/1993	1.20	0.100	4.30	0.300	3.10	0.500	7.40
	5/26/1993	34.8	4.60	1.40	0.600	16.9	0.900	18.3
	9/3/1993	30.9	0.900	1.50	0.400	< 1.000	0	2.50
	11/30/1993	< 1.000	0	1.50	0.300	1.40	0.600	2.90
	3/4/1994	< 0.200	0	1.000	0.400	1.40	0.500	2.40
	9/19/1994	< 0.200	0	1.60	0.500	---	---	---
	2/24/1995	< 0.200	---	2.70	0.700	---	---	---
	9/13/1995	64.1	6.80	3.20	0.800	---	---	---
	2/28/1996	41.0	4.00	1.30	0.400	---	---	---
	9/19/1996	43.1	4.70	1.50	0.200	---	---	---
	3/7/1997	9.10	2.00	2.00	0.400	---	---	---
	9/12/1997	10.4	2.60	1.50	0.200	---	---	---
	3/12/1998	2.90	1.30	2.20	0.300	---	---	---
	9/8/1998	1.80	---	2.10	0.100	---	---	---
	1/25/1999	3.60	---	1.70	---	---	---	---
	9/7/1999	5.70	1.30	1.90	0.300	---	---	---
	3/13/2000	1.30	0.700	0.900	0.200	---	---	---
T2-6	10/16/1992	< 0.200	---	1.70	0.200	< 1.000	---	2.70
	2/26/1993	< 1.000	---	0.900	0.300	2.40	0.600	3.30
	5/26/1993	< 1.000	0	1.10	0.500	9.80	0.900	10.9
	9/3/1993	< 1.000	0	1.30	0.300	1.40	0.700	2.70
	11/30/1993	< 1.000	0	0.500	0.300	1.40	0.600	1.90
	3/4/1994	< 0.200	0	0.300	0.200	1.80	0.900	2.10
	9/19/1994	< 0.200	0	0.400	0.400	---	---	---
	2/24/1995	< 0.200	---	0.700	0.500	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T2-6	9/13/1995	0.600	0.300	0.200	0.200	---	---	---
	2/28/1996	< 0.200	---	< 0.200	---	---	---	---
	9/19/1996	< 0.200	---	0.300	0.200	---	---	---
	3/7/1997	< 0.200	---	< 0.200	---	---	---	---
	9/12/1997	2.20	1.20	< 0.200	---	---	---	---
	3/12/1998	< 0.200	---	< 0.200	---	---	---	---
	9/8/1998	< 0.200	---	< 0.200	---	---	---	---
	1/25/1999	< 0.200	---	< 0.200	---	---	---	---
	9/7/1999	< 0.200	---	< 0.200	---	---	---	---
	3/13/2000	< 0.200	---	0.500	0.200	---	---	---

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
CT-1	10/26/1989	134	0.700	1.40	0.560	6.70	0.160
M-1	10/16/1992	0.0170	< 0.0500	< 0.0100	< 0.0500	0.310	0.0020
	3/24/1993	< 0.0010	< 0.0050	< 0.0100	0.120	1.16	0.0030
	6/2/1993	0.0010	< 0.0050	< 0.0100	0.130	2.76	0.0030
	8/26/1993	< 0.0010	< 0.0100	< 0.0100	0.110	1.68	0.0020
	12/21/1993	< 0.0010	< 0.0100	< 0.0100	0.160	3.57	< 0.0010
	3/11/1994	< 0.0010	< 0.0050	< 0.0100	0.0900	2.20	0.0010
	9/12/1994	< 0.0010	< 0.0100	< 0.0100	0.0900	2.93	0.0020
	3/8/1995	< 0.0010	0.0060	< 0.0100	0.0600	3.81	0.0040
	9/21/1995	< 0.0010	< 0.0100	< 0.0100	0.100	3.61	0.0080
	3/27/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	2.80	0.0190
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	3.22	0.0060
	3/10/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	2.30	0.0060
	9/2/1997	0.0210	< 0.0100	< 0.0100	0.0900	2.50	< 0.0010
	4/15/1998	0.0050	< 0.0100	0.0080	0.0600	2.26	0.0270
	9/16/1998	0.0030	< 0.0100	< 0.0500	0.0600	2.71	0.0810
	2/3/1999	0.0040	< 0.0100	< 0.0100	0.140	2.38	0.0430
	8/30/1999	0.0160	< 0.0100	0.0120	< 0.0500	0.270	0.0180
	3/27/2000	0.0110	< 0.0100	0.0190	< 0.0500	2.29	0.0020
M-3	10/14/1992	< 0.0010	0.0500	—	< 0.0500	1.91	0.0030
	2/25/1993	0.0010	0.0480	< 0.0100	< 0.0500	1.73	0.0020
	5/26/1993	0.0010	0.0430	< 0.0100	< 0.0500	1.67	0.0030
	9/3/1993	< 0.0010	0.0300	< 0.0100	< 0.0500	1.31	< 0.0010
	11/30/1993	< 0.0010	0.0300	< 0.0100	< 0.0500	1.19	< 0.0050
	3/4/1994	< 0.0010	0.0310	< 0.0100	< 0.0500	1.51	< 0.0010
	9/19/1994	< 0.0010	0.0300	< 0.0100	< 0.0500	1.09	0.0010
	2/23/1995	< 0.0010	0.0310	< 0.0100	< 0.0500	1.18	0.0060
	9/14/1995	0.0010	0.0400	< 0.0100	< 0.0500	1.42	< 0.0010
	2/28/1996	< 0.0010	0.0300	< 0.0100	< 0.0500	1.31	0.0080
	9/17/1996	< 0.0010	0.0500	< 0.0100	< 0.0500	2.17	0.0050
	3/11/1997	< 0.0010	0.0500	0.0100	< 0.0500	2.33	< 0.0010
	9/22/1997	0.0030	0.0500	0.0100	< 0.0500	2.69	0.0910
	3/13/1998	0.0050	0.0500	0.0150	< 0.0500	2.26	0.132
	9/8/1998	0.0060	0.0500	< 0.0500	< 0.0500	2.67	0.122
	1/26/1999	0.0170	0.0700	< 0.0100	< 0.0500	3.85	0.177
	8/30/1999	0.0120	0.130	0.0410	< 0.0500	7.70	0.147
	3/16/2000	0.0030	0.150	0.0270	< 0.0500	10.1	0.108
M-4	10/14/1992	0.0080	< 0.0500	< 0.0100	< 0.0500	0.210	0.0320
	2/25/1993	0.0080	< 0.0050	< 0.0100	< 0.0500	0.240	0.0560
	5/26/1993	0.0100	< 0.0050	< 0.0100	< 0.0500	0.270	0.0450
	9/3/1993	0.0080	< 0.0100	< 0.0100	< 0.0500	0.230	0.0350
	11/30/1993	0.0020	< 0.0050	< 0.0100	< 0.0500	0.240	0.0520
	3/4/1994	0.0040	< 0.0050	< 0.0100	< 0.0500	0.310	0.0290

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
M-4	9/19/1994	0.0020	< 0.0100	< 0.0100	< 0.0500	0.220	0.0210
	2/23/1995	0.0030	< 0.0050	< 0.0100	< 0.0500	0.160	0.0430
	9/14/1995	0.0060	< 0.0100	< 0.0100	< 0.0500	0.230	0.0200
	2/28/1996	0.0060	< 0.0100	< 0.0100	< 0.0500	0.0900	0.0130
	9/17/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.260	0.0190
	3/11/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.120	0.0310
	9/22/1997	0.0030	< 0.0100	0.0500	< 0.0500	< 0.0500	0.931
	3/13/1998	0.0370	< 0.0100	< 0.0050	< 0.0500	< 0.0500	1.02
	9/16/1998	0.0130	< 0.0100	< 0.0500	< 0.0500	< 0.0500	0.909
	1/26/1999	0.0630	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.899
	9/8/1999	0.0260	< 0.0100	0.0050	< 0.0500	< 0.0500	0.901
	3/16/2000	0.0080	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.847
M-5	10/16/1992	0.0120	0.500	0.160	0.430	14.8	0.0170
	2/25/1993	0.0070	0.961	0.300	1.24	32.0	0.0120
	5/26/1993	0.0070	0.445	0.130	0.460	18.1	0.0230
	9/3/1993	0.0010	0.450	0.120	1.20	13.1	0.0110
	11/30/1993	< 0.0010	0.523	0.190	1.18	13.0	0.0200
	3/4/1994	0.0010	0.417	0.160	0.950	12.0	0.0040
	9/19/1994	0.0030	0.210	0.100	0.520	6.37	0.0060
	2/24/1995	0.0020	0.460	0.170	1.03	12.8	0.0200
	9/14/1995	0.0070	0.360	0.110	0.720	11.9	0.0080
	2/28/1996	0.0060	0.400	0.160	0.810	10.9	0.0160
	9/17/1996	0.0100	< 0.0100	< 0.0100	1.02	13.7	0.0070
	3/11/1997	0.0020	0.400	0.130	0.850	11.4	0.0070
	9/22/1997	0.0030	0.390	0.190	0.940	11.8	0.758
	3/13/1998	0.0410	0.410	0.245	0.930	11.8	0.943
	9/16/1998	0.0270	0.320	0.120	0.630	10.4	0.590
	1/26/1999	0.0600	0.370	< 0.0100	0.870	13.0	1.06
	8/30/1999	0.0410	0.320	0.240	0.640	13.4	0.824
	3/16/2000	0.0180	0.280	0.187	0.360	10.1	0.739
OBS-2	8/14/1989	38.0	0.260	0.570	0.120	4.90	< 0.0010
OBS-3	8/14/1989	1.60	0.330	0.180	0.0700	5.90	0.0100
OBS-4A	8/14/1989	0.0300	< 0.0500	< 0.0100	< 0.0500	0.120	< 0.0010
P-1	10/23/1980	0.700	---	0.210	0.310	9.10	0.250
	3/13/1981	0.690	---	---	---	---	0.200
	6/22/1981	0.360	---	---	---	---	0.100
	9/30/1981	0.880	---	---	---	---	0.0500
	12/22/1981	0.0500	---	---	---	---	0.0100
	3/23/1982	0.500	---	---	---	---	0.0800
	6/21/1982	0.300	---	---	---	---	0.0200
	9/30/1982	0.700	---	---	---	---	0.0800
	12/31/1982	0.200	---	---	---	---	0.0200
	2/11/1983	0.0500	---	---	---	---	0.0070

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-1	6/10/1983	0.0500	---	---	---	---	0.0200
	9/3/1983	0.0200	---	---	---	---	0.0080
P-2	10/31/1980	1.60	---	0.280	0.580	9.50	0.560
	3/13/1981	1.10	---	---	---	---	0.600
	6/22/1981	1.05	---	---	---	---	0.500
	9/30/1981	0.760	---	---	---	---	0.400
	12/22/1981	0.800	---	---	---	---	0.0070
	3/23/1982	1.50	---	---	---	---	0.200
	6/14/1982	0.800	---	---	---	---	0.200
	9/30/1982	0.900	---	---	---	---	0.400
	12/28/1982	1.20	---	---	---	---	0.0500
	2/22/1983	0.900	---	---	---	---	0.0100
	6/13/1983	0.700	---	---	---	---	0.0400
	9/16/1983	0.200	---	---	---	---	0.0100
P-3	10/24/1980	0.910	---	0.260	0.220	7.20	1.30
	3/16/1981	0.470	---	---	---	---	0.960
	6/22/1981	0.460	---	---	---	---	0.640
	9/30/1981	0.420	---	---	---	---	0.360
	12/22/1981	0.0020	---	---	---	---	0.0170
	3/30/1982	0.430	---	---	---	---	0.650
	6/7/1982	0.320	---	---	---	---	0.390
	9/29/1982	0.160	---	---	---	---	0.540
	12/12/1982	0.200	---	---	---	---	0.670
	1/27/1983	0.0020	---	---	---	---	0.0160
	6/13/1983	0.0030	---	---	---	---	0.0200
	9/16/1983	0.0420	---	---	---	---	0.0150
	11/11/1983	0.0020	---	---	---	---	0.0180
	2/6/1984	0.0020	---	---	---	---	0.0120
	6/11/1984	0.0020	---	---	---	---	0.0130
	9/14/1984	0.0020	---	---	---	---	0.0110
	6/3/1985	0.0020	---	---	---	---	0.0130
	5/12/1986	0.0010	---	---	---	---	0.140
	5/21/1987	0.0010	---	---	---	---	0.0780
	1/25/1988	0.198	---	---	---	---	0.157
	3/2/1988	0.198	---	---	---	---	0.157
	5/3/1988	0.0070	---	---	---	---	0.387
	9/8/1988	0.0010	0.640	0.210	0.390	6.90	0.582
	3/15/1989	0.0010	0.560	0.220	0.490	7.10	0.254
	9/28/1989	0.0010	0.510	0.230	0.530	6.90	0.285
	9/29/1989	0.0010	0.510	0.230	0.530	6.90	0.285
	3/30/1990	0.0010	0.520	0.220	0.500	7.20	0.0230
	9/19/1990	0.0010	0.440	0.170	0.310	5.80	0.0060
	2/13/1991	0.0010	0.150	0.0600	0.100	2.13	0.0420
	9/12/1991	0.0010	0.290	0.140	0.210	3.96	0.0620

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-3	2/13/1992	0.0040	0.240	0.120	0.260	3.57	0.0140
	9/16/1992	0.123	0.120	0.0500	0.0700	2.08	0.0080
	2/23/1993	0.0290	0.190	0.0700	0.150	2.90	0.0180
	9/2/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.460	0.0080
	3/15/1994	< 0.0010	0.0440	0.0100	0.140	0.990	0.0010
	9/20/1994	< 0.0010	0.150	< 0.0100	< 0.0500	2.81	0.0050
	2/13/1995	0.0020	0.130	0.0400	0.0600	2.10	0.0040
	9/11/1995	< 0.0010	0.120	0.0400	0.0600	1.71	0.0140
	2/23/1996	0.0010	0.150	0.0600	0.0600	2.30	< 0.0010
	9/3/1996	< 0.0010	0.0800	0.0400	< 0.0500	1.30	0.0040
	2/12/1997	0.0010	0.0900	0.0400	< 0.0500	1.40	0.0040
	9/22/1997	0.0040	0.0800	0.0200	< 0.0500	1.28	0.433
	3/10/1998	0.0140	0.0800	0.0360	< 0.0500	1.22	0.477
	7/28/1998	0.0080	0.0900	< 0.0500	< 0.0500	1.71	0.264
	1/18/1999	0.0260	0.0700	< 0.0100	< 0.0500	1.30	0.507
	8/31/1999	0.0110	0.0600	0.0120	< 0.0500	1.34	0.401
	11/9/1999	0.0160	---	0.0220	< 0.0500	0.970	0.535
	2/23/2000	0.0030	0.0500	0.0340	< 0.0500	1.26	0.339
P-6	2/13/1995	0.0060	---	---	< 0.0500	---	---
P-10	2/13/1991	0.0010	0.140	0.0700	0.0500	2.35	0.0150
	9/12/1991	0.0010	0.0310	0.181	0.0650	5.22	0.0500
	2/13/1992	0.0010	0.220	0.130	0.0500	4.03	0.0700
	9/16/1992	0.0010	0.330	0.130	0.0700	4.78	0.0160
	2/23/1993	0.0020	0.154	0.0800	0.100	3.40	0.0140
	9/1/1993	< 0.0010	0.140	0.0700	< 0.0500	2.52	0.0070
	3/3/1994	< 0.0010	0.178	0.0800	< 0.0500	2.87	0.0020
	3/6/1995	< 0.0010	0.240	0.140	< 0.0500	4.22	0.0120
	9/14/1995	< 0.0010	0.160	0.0600	< 0.0500	2.50	0.0150
	2/28/1996	0.0050	0.200	0.100	< 0.0500	2.90	0.0020
	9/6/1996	< 0.0010	0.140	0.0800	< 0.0500	2.34	0.0090
	9/30/1997	0.0030	< 0.0100	0.0100	< 0.0500	0.240	0.538
	4/14/1998	0.0180	0.0200	0.0450	< 0.0500	1.48	0.550
	9/10/1998	0.0140	0.100	< 0.0500	< 0.0500	1.32	0.755
	1/18/1999	0.0220	0.100	< 0.0100	< 0.0500	1.71	0.491
	8/31/1999	0.0150	0.120	0.0500	< 0.0500	1.28	0.618
	3/27/2000	0.0060	0.0700	0.0450	< 0.0500	1.07	0.396
P-11	2/14/1991	0.0360	0.0600	0.0300	0.0500	0.940	0.0040
	9/12/1991	0.0160	0.0700	0.0350	0.0370	1.11	0.0020
	2/13/1992	0.0120	0.0700	0.0300	0.0500	1.09	0.0120
	9/16/1992	0.0080	0.170	0.0600	0.0600	2.60	0.0100
	2/25/1993	0.0220	0.0740	0.0200	< 0.0500	1.15	0.0080
	9/1/1993	0.0160	0.0800	0.0200	< 0.0500	1.36	0.0070
	3/3/1994	0.0070	0.0770	< 0.0100	< 0.0500	1.31	0.0040

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-11	2/13/1995	0.0510	0.0700	< 0.0100	0.0600	1.42	0.0020
	9/11/1995	0.0100	0.0700	< 0.0100	< 0.0500	1.21	0.0050
	3/27/1996	0.0070	0.100	0.0400	< 0.0500	1.70	< 0.0010
	9/17/1996	< 0.0010	0.0100	< 0.0100	< 0.0500	0.270	0.0060
	9/22/1997	0.0040	0.0900	0.0200	< 0.0500	1.88	0.143
	3/10/1998	0.0140	0.110	0.0570	0.0900	2.06	0.201
	7/28/1998	0.0140	0.100	< 0.0500	< 0.0500	1.96	0.339
	1/18/1999	0.0210	0.0800	< 0.0100	< 0.0500	1.87	0.292
	9/8/1999	0.0150	0.0300	0.0290	< 0.0500	0.610	0.262
	3/27/2000	0.0260	0.0300	0.0280	< 0.0500	0.720	0.225
P-12	2/14/1991	0.0010	0.0100	0.0100	0.0500	0.400	0.0040
	9/18/1991	0.0010	0.0100	0.0100	0.0100	0.260	0.0040
	2/28/1992	0.0010	0.0100	0.0100	0.0500	0.340	0.0270
	9/9/1992	0.0010	0.0100	0.0100	0.0500	0.650	0.0050
	3/24/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	1.05	0.0030
	8/30/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.560	< 0.0010
	3/11/1994	< 0.0010	0.114	0.0700	< 0.0500	2.45	0.0020
	9/6/1994	< 0.0010	0.170	< 0.0100	< 0.0500	2.85	0.0080
	3/3/1995	< 0.0010	0.120	0.0400	< 0.0500	1.76	0.0050
	9/14/1995	< 0.0010	0.0600	0.0300	< 0.0500	1.04	0.0060
	3/21/1996	0.0020	0.140	0.0400	< 0.0500	1.82	0.0020
	9/6/1996	< 0.0010	0.0900	0.0400	< 0.0500	1.21	0.0060
	9/3/1997	0.0030	0.110	< 0.0100	< 0.0500	1.60	1.10
	4/14/1998	0.0220	0.0800	0.0270	< 0.0500	1.12	0.817
	9/10/1998	0.0160	0.0800	< 0.0500	< 0.0500	1.27	1.02
	1/18/1999	0.0230	0.0500	< 0.0100	< 0.0500	1.11	0.461
	8/31/1999	0.0150	0.0700	0.0400	< 0.0500	0.900	0.640
	2/23/2000	0.0030	0.0500	0.0360	< 0.0500	0.870	0.294
P-13	5/11/1993	0.0010	< 0.0050	< 0.0100	< 0.0500	1.12	0.0130
	9/1/1993	0.0030	< 0.0100	< 0.0100	< 0.0500	0.990	0.0100
	10/29/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	1.23	0.0200
	3/3/1994	0.0020	< 0.0050	< 0.0100	< 0.0500	1.02	0.0020
	9/20/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.980	0.0100
	2/13/1995	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.950	< 0.0010
	9/11/1995	0.0020	< 0.0100	0.0200	< 0.0500	0.670	0.0080
	2/21/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	1.01	0.0040
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.520	0.0180
	9/16/1997	0.0010	< 0.0100	< 0.0100	< 0.0500	0.500	0.183
	3/10/1998	0.0100	< 0.0100	0.0060	< 0.0500	0.580	0.214
	7/28/1998	0.0060	< 0.0100	< 0.0500	< 0.0500	0.510	0.202
	1/18/1999	0.0100	< 0.0100	< 0.0100	< 0.0500	0.630	0.171
	8/31/1999	0.0040	< 0.0100	< 0.0050	< 0.0500	0.430	0.122
	2/17/2000	0.0010	< 0.0100	< 0.0050	< 0.0500	0.430	0.116

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-14	5/12/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	1.61	0.0170
	9/1/1993	0.0140	< 0.0100	0.0100	< 0.0500	1.22	0.0190
	11/29/1993	< 0.0010	< 0.0050	0.0200	< 0.0500	1.15	0.0110
	3/3/1994	< 0.0010	< 0.0050	0.0100	< 0.0500	0.840	0.0040
	9/20/1994	0.0010	< 0.0100	< 0.0100	< 0.0500	0.900	0.0100
	2/13/1995	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.980	0.0020
	9/11/1995	0.0030	< 0.0100	< 0.0100	< 0.0500	0.760	0.0110
	2/21/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	1.21	0.0040
	9/3/1996	0.0030	< 0.0100	< 0.0100	< 0.0500	0.740	0.0180
	9/16/1997	0.0260	< 0.0100	< 0.0100	< 0.0500	0.930	0.511
	3/10/1998	0.0170	< 0.0100	0.0050	< 0.0500	0.920	0.516
	7/28/1998	0.0100	< 0.0100	< 0.0500	< 0.0500	0.840	0.450
	1/18/1999	0.0170	< 0.0100	< 0.0100	< 0.0500	0.940	0.326
	8/31/1999	0.0010	< 0.0100	< 0.0050	< 0.0500	0.730	0.0110
	2/17/2000	< 0.0010	< 0.0100	0.0070	< 0.0500	0.650	0.160
P-15	5/13/1993	0.0010	< 0.0050	< 0.0100	< 0.0500	0.270	0.0450
	9/1/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.210	0.0410
	11/29/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.260	0.480
	3/3/1994	0.0050	< 0.0050	< 0.0100	< 0.0500	0.220	0.0150
	9/20/1994	0.0020	< 0.0100	< 0.0100	< 0.0500	0.920	0.0130
	3/28/1995	0.0040	< 0.0100	< 0.0100	< 0.0500	0.260	0.0120
	9/13/1995	0.0010	< 0.0100	< 0.0100	< 0.0500	0.430	0.0290
	2/21/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	0.300	0.0040
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.360	0.0110
	9/16/1997	0.0040	< 0.0100	< 0.0100	< 0.0500	0.190	2.29
	3/10/1998	0.0850	< 0.0100	< 0.0050	< 0.0500	0.190	2.75
	7/28/1998	0.0460	< 0.0100	< 0.0500	< 0.0500	0.180	2.81
	1/18/1999	0.120	< 0.0100	< 0.0100	< 0.0500	0.170	2.39
	9/2/1999	0.0600	< 0.0100	< 0.0050	< 0.0500	0.130	2.53
	2/17/2000	0.0160	< 0.0100	< 0.0050	< 0.0500	0.130	2.29
P-16	8/4/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	1.25	0.0060
	12/7/1995	0.0020	< 0.0100	< 0.0100	< 0.0500	1.77	0.0030
	3/21/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	1.79	0.0050
	6/19/1996	0.0030	< 0.0100	< 0.0100	< 0.0600	1.42	0.0100
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	1.45	0.0030
	11/27/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	1.18	0.0070
	9/8/1997	0.0020	< 0.0100	< 0.0100	< 0.0500	0.830	1.13
	4/14/1998	0.0340	< 0.0100	< 0.0050	< 0.0500	1.45	1.03
	9/10/1998	0.0150	< 0.0100	< 0.0500	< 0.0500	1.09	1.000
	1/18/1999	0.0590	< 0.0100	< 0.0100	< 0.0500	0.810	1.04
	9/2/1999	0.0210	< 0.0100	0.0090	< 0.0500	0.740	0.726
	3/27/2000	0.0110	< 0.0100	0.0050	< 0.0500	0.440	1.14
P-17	8/4/1995	0.0050	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0260

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-17	12/7/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0100
	3/27/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0150
	6/19/1996	0.0020	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0390
	9/3/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0180
	11/27/1996	0.0030	< 0.0100	< 0.0100	< 0.0500	0.0600	0.0110
	9/16/1997	0.0010	< 0.0100	< 0.0100	< 0.0500	0.0700	2.32
	4/15/1998	0.0810	< 0.0100	0.0070	< 0.0500	< 0.0500	2.57
	7/28/1998	0.0360	< 0.0100	< 0.0500	< 0.0500	0.0600	2.25
	1/18/1999	0.0940	< 0.0100	< 0.0100	< 0.0500	0.0700	2.02
	9/14/1999	0.0500	< 0.0100	0.0050	< 0.0500	0.0600	2.19
	3/16/2000	0.0150	< 0.0100	< 0.0050	< 0.0500	0.0600	2.18
P-18	8/24/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.120	0.0340
	12/7/1995	0.0060	< 0.0100	< 0.0100	< 0.0500	0.110	0.0210
	6/19/1996	0.0010	< 0.0100	< 0.0100	< 0.0500	0.240	0.0320
	9/3/1996	0.0050	< 0.0100	< 0.0100	< 0.0500	0.200	0.0330
	11/27/1996	0.0060	< 0.0100	< 0.0100	< 0.0500	0.120	0.0270
	9/16/1997	0.0010	< 0.0100	< 0.0100	< 0.0500	0.110	2.27
	3/10/1998	0.0750	< 0.0100	< 0.0050	< 0.0500	0.120	2.51
	7/28/1998	0.0440	< 0.0100	< 0.0500	< 0.0500	0.130	2.77
	1/18/1999	0.104	< 0.0100	< 0.0100	< 0.0500	0.130	2.10
	9/14/1999	0.0440	< 0.0100	0.0060	< 0.0500	0.110	1.84
	3/16/2000	0.0120	< 0.0100	< 0.0050	< 0.0500	0.100	1.51
P-19	8/7/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.250	0.0560
	12/7/1995	0.0080	< 0.0100	< 0.0100	< 0.0500	0.610	0.0260
	3/27/1996	0.0180	< 0.0100	< 0.0100	< 0.0500	0.750	0.0350
	6/19/1996	0.0010	< 0.0100	< 0.0100	< 0.0500	0.0900	0.0250
	9/3/1996	0.0110	< 0.0100	< 0.0100	< 0.0500	0.280	0.0220
	12/16/1996	0.0190	< 0.0100	< 0.0100	< 0.0500	0.560	0.0190
	9/16/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	1.07	3.05
	3/10/1998	0.0390	< 0.0100	< 0.0050	< 0.0500	0.0700	1.60
	7/28/1998	0.0170	< 0.0100	< 0.0500	< 0.0500	0.0700	1.16
	1/18/1999	0.0430	< 0.0100	< 0.0100	< 0.0500	0.0900	0.931
	9/14/1999	0.0130	< 0.0100	< 0.0050	< 0.0500	0.0800	0.588
	3/16/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.110	0.615
P-20	7/31/1995	0.0190	0.0200	< 0.0100	0.0900	7.65	0.0490
	12/7/1995	0.0030	0.210	0.0100	< 0.0500	4.04	0.0140
	2/21/1996	0.0190	0.460	0.290	0.0800	7.65	0.0370
	6/19/1996	0.0240	0.450	0.300	< 0.0500	7.75	0.0180
	9/3/1996	< 0.0010	0.0500	< 0.0100	< 0.0500	0.950	< 0.0010
	12/12/1996	0.0240	0.450	0.150	< 0.0500	7.80	0.0090
	9/22/1997	0.0110	0.290	< 0.0100	0.0500	4.92	0.0740
	3/10/1998	0.0200	0.0700	0.0190	< 0.0500	1.03	0.586
	7/28/1998	0.0160	0.0500	< 0.0500	< 0.0500	0.710	0.654

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-20	1/18/1999	0.0310	0.280	< 0.0100	< 0.0500	5.30	0.211
	9/2/1999	0.0250	0.240	0.120	< 0.0500	5.12	0.207
	2/23/2000	0.0060	0.260	0.120	< 0.0500	4.80	0.173
P-21	9/16/1999	0.0250	< 0.0100	0.0060	< 0.0500	0.540	1.08
	12/22/1999	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.280	1.01
	3/23/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.230	0.595
P-22	9/16/1999	0.0040	< 0.0100	0.0100	< 0.0500	0.310	0.0990
	12/22/1999	< 0.0010	0.0300	0.0150	< 0.0500	0.650	0.188
	3/23/2000	< 0.0010	0.0200	0.0300	< 0.0500	0.590	0.225
P-23	9/16/1999	0.0090	< 0.0100	0.0090	< 0.0500	0.170	0.307
	12/22/1999	0.0040	< 0.0100	0.0060	< 0.0500	0.190	0.303
	2/23/2000	< 0.0010	< 0.0100	0.0060	< 0.0500	0.190	0.355
P-24	9/16/1999	0.0140	< 0.0100	0.0050	< 0.0500	0.630	0.525
	12/22/1999	0.0060	< 0.0100	< 0.0050	< 0.0500	0.820	0.520
	2/17/2000	< 0.0010	< 0.0100	0.0060	< 0.0500	0.720	0.555
PS-1	6/18/1980	0.0200	—	—	—	—	0.920
	10/12/1981	0.0020	—	—	—	—	0.0020
	6/25/1982	0.0050	—	—	—	—	1.10
	12/28/1982	< 0.0050	—	—	—	—	0.0070
	2/18/1983	< 0.0020	—	—	—	—	0.0040
	6/14/1983	0.0040	—	—	—	—	0.0060
	9/16/1983	< 0.0020	—	—	—	—	< 0.0020
	10/19/1983	0.0020	—	—	—	—	0.0020
	2/6/1984	0.0020	—	—	—	—	0.0020
	5/19/1984	0.0020	—	—	—	—	0.0080
	7/31/1984	0.0020	—	—	—	—	0.0110
T1-1	4/5/1979	—	—	0.227	0.432	9.80	2.70
	4/1/1980	0.890	—	—	—	—	0.930
	6/19/1980	0.370	—	—	—	—	0.890
	10/19/1980	1.10	—	—	—	—	0.500
	1/13/1981	1.000	—	—	—	—	0.560
	6/22/1981	1.02	—	—	—	—	0.630
	9/30/1981	0.420	—	—	—	—	0.560
	12/23/1981	0.650	—	—	—	—	0.0050
	3/23/1982	1.30	—	—	—	—	0.380
	6/15/1982	0.790	—	—	—	—	0.150
	9/30/1982	1.10	—	—	—	—	0.450
	12/31/1982	0.500	—	—	—	—	0.0660
	2/7/1983	0.400	—	—	—	—	0.0130
	6/17/1983	0.400	—	—	—	—	0.0350
	9/3/1983	0.135	—	—	—	—	0.0140
	10/19/1983	0.0100	—	—	—	—	0.0200
	1/26/1984	0.120	—	—	—	—	0.0170

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-1	4/22/1984	0.0950	—	—	—	—	0.0100
	7/16/1984	0.110	—	—	—	—	0.0220
	4/15/1985	0.100	—	—	—	—	0.0140
	5/12/1986	0.0550	—	—	—	—	0.130
	5/21/1987	0.0130	—	—	—	—	0.0760
	1/25/1988	0.0210	—	—	—	—	0.121
	5/3/1988	0.0300	—	—	—	—	0.306
	9/6/1988	0.0170	1.10	0.220	0.170	9.60	0.427
	3/15/1989	0.0020	0.740	0.340	0.300	8.70	0.160
	9/29/1989	0.0470	0.500	0.160	0.280	6.80	0.203
	3/30/1990	0.0760	0.300	0.0900	0.120	4.00	0.0080
	9/28/1990	0.0440	0.270	0.0700	0.100	3.20	0.0030
	2/12/1991	0.0130	0.150	0.0600	0.0600	2.26	0.0210
	9/12/1991	0.0120	0.330	0.170	0.140	4.99	0.0370
	2/13/1992	0.0110	0.220	0.160	0.120	3.76	0.0610
	9/16/1992	0.0060	0.140	0.0500	0.0500	2.25	0.0010
	2/23/1993	0.0040	0.171	0.0400	0.0900	2.71	0.0030
T1-2	4/3/1980	0.0200	—	—	—	—	0.270
	6/19/1980	0.0020	—	—	—	—	0.180
	10/12/1980	0.0040	—	—	—	—	0.0580
	1/11/1981	0.0050	—	—	—	—	0.0140
	6/19/1981	0.0050	—	—	—	—	0.0390
	9/23/1981	0.0050	—	—	—	—	0.0060
	12/17/1981	0.0020	—	—	—	—	0.0160
	6/15/1982	0.0050	—	—	—	—	0.0170
	12/15/1982	0.0070	—	—	—	—	0.0190
	5/17/1983	0.0020	—	—	—	—	0.0140
	7/26/1983	0.0020	—	—	—	—	0.0020
	10/11/1983	0.0020	—	—	—	—	0.0140
	6/7/1984	0.0020	—	—	—	—	0.530
	5/31/1985	0.0020	—	—	—	—	0.0380
	6/4/1986	0.0010	—	—	—	—	0.0340
	11/18/1986	0.0010	—	—	—	—	0.0210
	5/27/1987	0.0010	—	—	—	—	0.0010
	1/29/1988	0.0020	—	—	—	—	0.0090
	6/2/1988	0.0010	—	—	—	—	0.0060
	9/6/1988	0.0010	0.0500	0.0100	0.0500	0.810	0.0080
	3/6/1989	0.0010	0.0500	0.0100	0.0500	0.770	0.0010
	9/1/1989	0.0040	0.0500	0.0300	0.0500	2.10	0.0270
	3/19/1990	0.0010	0.0500	0.0700	0.0500	4.70	0.0030
	9/19/1990	0.0010	0.0500	0.0200	0.0500	5.10	0.0030
	2/12/1991	0.0020	0.0500	0.0500	0.0500	4.62	0.0110
	9/18/1991	0.0010	0.0500	0.0500	0.0500	4.61	0.0040
	2/27/1992	0.0010	0.0500	0.0100	0.0500	4.01	0.0230

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-2	9/4/1992	0.0010	0.0600	0.0500	0.0600	4.43	0.0060
	12/1/1992	< 0.0010	0.0930	0.0300	0.100	7.25	0.0010
	6/1/1993	< 0.0010	0.0700	0.0300	0.0600	5.79	0.0030
	3/8/1994	< 0.0010	0.127	0.0400	0.0700	6.88	0.0030
	8/22/1994	< 0.0010	0.230	< 0.0100	< 0.0500	10.1	0.0080
	3/3/1995	< 0.0010	0.370	0.160	< 0.0500	8.98	0.0160
	9/19/1995	< 0.0010	0.360	0.170	< 0.0500	8.68	0.0140
	3/15/1996	0.0030	0.300	< 0.0100	< 0.0500	7.95	0.0070
	9/3/1996	< 0.0010	0.550	0.150	< 0.0500	9.40	0.0050
	2/14/1997	< 0.0010	0.500	0.100	< 0.0500	0	0.0050
	9/3/1997	0.0020	0.140	0.0500	< 0.0500	5.02	0.0480
	4/14/1998	0.0070	0.110	0.0810	< 0.0500	4.24	0.141
	9/10/1998	0.0070	0.240	< 0.0500	< 0.0500	5.78	0.237
	2/4/1999	0.0140	0.170	< 0.0100	< 0.0500	4.70	0.176
	9/16/1999	0.0060	0.190	0.114	< 0.0500	5.36	0.154
	3/23/2000	< 0.0010	0.150	0.102	< 0.0500	4.64	0.104
T1-3	4/3/1980	0.970	—	—	—	—	0.0700
	10/24/1980	0.800	—	—	—	—	0.0900
	1/12/1981	0.760	—	—	—	—	0.0700
	4/11/1981	0.470	—	—	—	—	0.0870
	6/17/1981	0.380	—	—	—	—	0.0090
	9/23/1981	0.360	—	—	—	—	0.0580
	12/17/1981	0.0020	—	—	—	—	0.0020
	6/10/1982	0.160	—	—	—	—	0.0730
	12/14/1982	0.150	—	—	—	—	0.0680
	5/17/1983	0.0040	—	—	—	—	0.0020
	11/9/1983	0.0030	—	—	—	—	0.0020
	6/7/1984	0.0040	—	—	—	—	0.0050
	5/14/1985	0.0020	—	—	—	—	0.0010
	6/4/1986	0.0050	—	—	—	—	0.0030
	5/26/1987	0.0010	—	—	—	—	0.0010
	1/29/1988	0.0040	—	—	—	—	0.0010
	6/1/1988	0.0040	—	—	—	—	0.0030
	9/9/1988	0.0030	0.100	0.0200	0.0500	1.60	0.0060
	3/6/1989	0.0060	0.200	0.0100	0.0500	1.90	0.0010
	9/1/1989	0.0440	0.170	0.0200	0.0500	1.80	0.0020
	3/20/1990	0.0040	0.160	0.0200	0.0500	1.70	0.0010
	9/19/1990	0.0110	0.0500	0.0900	0.0500	1.80	0.0010
	2/12/1991	0.0060	0.110	0.0500	0.0500	1.20	0.0010
	9/18/1991	0.0120	0.170	0.100	0.0500	1.83	0.0110
	2/27/1992	0.0060	0.160	0.0100	0.0500	1.64	0.0140
	9/4/1992	0.0120	0.160	0.0400	0.0500	1.84	0.0010
	3/15/1993	0.0080	0.160	0.0300	0.0400	1.88	0.0020
	8/30/1993	0.0040	0.160	0.0300	< 0.0500	1.93	< 0.0010

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-3	3/8/1994	< 0.0010	0.172	0.0300	< 0.0500	1.99	< 0.0010
	8/22/1994	0.0020	0.130	0.0300	< 0.0500	1.62	< 0.0010
	3/3/1995	< 0.0010	0.160	0.0400	< 0.0500	1.95	< 0.0010
	9/19/1995	0.0040	0.170	0.0400	< 0.0500	1.91	< 0.0010
	3/21/1996	0.0070	0.170	< 0.0100	< 0.0500	1.93	0.0020
	9/3/1996	0.0040	0.200	0.0500	< 0.0500	1.90	< 0.0010
	2/14/1997	0.0010	0.180	0.0200	< 0.0500	2.07	< 0.0010
	9/3/1997	0.0030	0.140	0.0300	< 0.0500	1.86	0.0560
	4/14/1998	0.0900	0.140	0.0330	< 0.0500	1.72	0.0880
	9/15/1998	0.0120	0.110	< 0.0500	< 0.0500	1.38	0.0910
	2/4/1999	0.0080	0.120	< 0.0100	< 0.0500	1.69	0.0760
	9/16/1999	0.0100	0.100	0.0340	< 0.0500	1.36	0.0730
	3/23/2000	0.0030	0.130	0.0340	< 0.0500	1.49	0.0490
T1-4	4/3/1979	0.0100	---	0.0100	0.0100	0.210	0.330
	10/27/1989	0.0090	< 0.0500	< 0.0100	< 0.0500	< 0.0500	0.0070
	9/23/1991	0.0010	< 0.0010	0.0050	0.0110	0.100	0.0120
	2/27/1992	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.140	0.0900
	9/4/1992	< 0.0010	< 0.0500	< 0.0100	< 0.0500	0.220	0.0300
	3/15/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	0.0160
	8/30/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.370	0.0090
	3/8/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.230	0.0100
	8/22/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.280	0.0080
	3/3/1995	< 0.0010	< 0.0100	0.0400	< 0.0500	0.310	0.0080
	9/19/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0700	0.0090
	2/21/1996	0.0020	< 0.0100	< 0.0100	0.130	0.370	0.0030
	9/18/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0070
	9/16/1997	0.0020	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.280
	3/10/1998	0.0150	< 0.0100	0.0060	< 0.0500	< 0.0500	0.302
	7/28/1998	< 0.0010	< 0.0100	< 0.0500	< 0.0500	< 0.0500	0.0120
	1/18/1999	0.0200	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.340
	9/2/1999	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.234
	3/29/2000	0.0070	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.442
T1-5	9/4/1992	< 0.0010	< 0.0500	< 0.0100	< 0.0500	0.0500	0.0120
	8/30/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0030
	9/6/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0020
	9/19/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0070
	9/6/1996	< 0.0010	< 0.0100	< 0.0500	< 0.0500	0.0500	0.0060
	9/3/1997	0.0020	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.642
	9/16/1998	0.0160	< 0.0100	< 0.0500	< 0.0500	< 0.0500	0.751
	8/30/1999	0.0160	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.717
T1-6	4/11/1979	0.0050	---	0.0160	0.0100	0.0690	0.0090
	4/5/1980	0.0070	---	---	---	---	0.0640
	10/17/1980	0.0060	---	---	---	---	0.0800

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-6	4/17/1981	0.0050	—	—	—	—	0.0320
	12/18/1981	0.0020	—	—	—	—	0.0020
	6/17/1982	0.0050	—	—	—	—	0.0650
	12/22/1982	0.0050	—	—	—	—	0.0070
	5/18/1983	0.0020	—	—	—	—	0.0020
	11/11/1983	0.0020	—	—	—	—	0.0020
	6/11/1984	0.0020	—	—	—	—	0.0040
	5/8/1985	0.0020	—	—	—	—	0.0010
	10/31/1985	0.0020	—	—	—	—	0.0010
	4/28/1986	0.0010	—	—	—	—	0.0010
	10/31/1986	0.0010	—	—	—	—	0.0010
	1/13/1987	0.0010	—	—	—	—	0.0010
	1/28/1987	0.0010	—	—	—	—	0.0020
	5/26/1987	0.0010	—	—	—	—	0.0010
	8/19/1987	0.0010	—	—	—	—	0.0010
	1/29/1988	0.0010	—	—	—	—	0.0010
	9/9/1988	0.0010	0.0500	0.0100	0.0500	0.0700	0.0020
	3/8/1989	0.0010	0.0500	0.0100	0.0500	0.280	0.0010
	9/1/1989	0.0120	0.0500	0.0100	0.0500	0.240	0.0020
	3/14/1990	0.0030	0.0500	0.0100	0.0500	0.220	0.0010
	9/19/1990	0.0010	0.0500	0.0100	0.0500	0.0800	0.0010
	2/12/1991	0.0010	0.0100	0.0100	0.0500	0.0800	0.0010
	9/17/1991	0.0010	0.0100	0.0100	0.0500	0.0700	0.0010
	2/27/1992	0.0010	0.0100	0.0100	0.0500	0.100	0.0010
	9/4/1992	0.0010	0.0500	0.0100	0.0500	0.0500	0.0010
	3/15/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.110	0.0090
	8/25/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.390	0.0040
	3/8/1994	0.0010	< 0.0050	< 0.0100	< 0.0500	0.0600	< 0.0010
	9/6/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0900	< 0.0010
	3/3/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/19/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0300	< 0.0010
	3/21/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0500	< 0.0010
	2/14/1997	< 0.0010	0.0200	< 0.0100	< 0.0500	0.130	0.0010
	9/2/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.120	0.159
	12/10/1997	< 0.0010	—	—	—	—	0.165
	3/28/1998	0.0060	< 0.0100	< 0.0050	< 0.0500	0.0500	0.145
	6/11/1998	0.0060	—	—	—	—	0.187
	9/15/1998	0.0050	< 0.0100	< 0.0500	< 0.0500	0.220	0.170
	12/3/1998	< 0.0010	—	—	—	—	0.174
	2/4/1999	0.0090	< 0.0100	< 0.0100	< 0.0500	0.0800	0.146
	6/15/1999	0.0090	—	—	—	—	0.250
	8/30/1999	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.149
	12/21/1999	< 0.0010	—	—	—	—	0.175

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-6	3/23/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.118
T1-7	10/23/1980	0.0240	---	0.0100	0.0300	0.0900	0.520
	1/11/1981	0.0050	---	---	---	---	0.700
	6/18/1981	0.0050	---	---	---	---	0.820
	9/25/1981	0.0050	---	---	---	---	0.200
	12/16/1981	0.0020	---	---	---	---	0.0020
	6/7/1982	0.0050	---	---	---	---	0.270
	12/15/1982	0.0080	---	---	---	---	0.140
	5/5/1983	0.0020	---	---	---	---	0.0060
	10/16/1983	0.0020	---	---	---	---	0.0030
	6/6/1984	0.0020	---	---	---	---	0.0060
	5/31/1985	0.0020	---	---	---	---	0.0020
	6/5/1986	0.0010	---	---	---	---	0.0020
	5/27/1987	0.0010	---	---	---	---	0.0070
	1/29/1988	0.0010	---	---	---	---	0.0040
	6/2/1988	0.0010	---	---	---	---	0.0110
	9/12/1988	0.0010	0.0500	0.0100	0.0500	0.130	0.0210
	3/7/1989	0.0010	0.0500	0.0100	0.0500	0.130	0.0010
	9/14/1989	0.0050	0.0500	0.0100	0.0500	0.130	0.0020
	3/19/1990	0.0010	0.0500	0.0100	0.0500	0.160	0.0020
	9/19/1990	0.0010	0.170	0.0200	0.0500	0.0700	0.0020
	2/13/1991	0.0010	0.0100	0.0100	0.0500	0.100	0.0030
	9/18/1991	0.0010	0.0100	0.0100	0.0500	0.180	0.0060
	2/28/1992	0.0010	0.0100	0.0100	0.0500	0.100	0.0680
	9/4/1992	0.0020	0.0500	0.0100	0.0500	0.0600	0.0010
	3/15/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.110	0.0090
	8/30/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.390	0.0040
	3/8/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	0.0040
	9/6/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0030
	3/3/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.100	< 0.0010
	9/19/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.250	< 0.0010
	3/27/1996	0.0020	0.0400	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	2/14/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/3/1997	0.0200	< 0.0100	< 0.0100	< 0.0500	0.380	0.135
	4/14/1998	0.0070	< 0.0100	< 0.0050	< 0.0500	0.0600	0.171
	9/10/1998	0.0020	< 0.0100	< 0.0500	< 0.0500	< 0.0500	0.112
	2/4/1999	0.0070	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0990
	9/16/1999	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.120
	3/23/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.170
T1-8	10/22/1980	0.100	---	0.120	0.100	4.20	1.10
	1/11/1981	0.0050	---	---	---	---	0.700
	6/19/1981	0.720	---	---	---	---	0.850
	9/23/1981	0.720	---	---	---	---	0.530

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-8	12/16/1981	0.700	—	—	—	—	0.0130
	3/30/1982	0.340	—	—	—	—	0.460
	6/15/1982	0.180	—	—	—	—	0.410
	9/17/1982	0.400	—	—	—	—	0.310
	12/14/1982	0.130	—	—	—	—	0.710
	1/26/1983	0.0110	—	—	—	—	0.0040
	5/16/1983	0.0060	—	—	—	—	0.0050
	9/22/1983	0.0070	—	—	—	—	0.0080
	10/16/1983	0.0020	—	—	—	—	0.0090
	3/15/1984	0.0050	—	—	—	—	0.0060
	6/7/1984	0.0070	—	—	—	—	0.0130
	9/13/1984	0.0070	—	—	—	—	0.0080
	5/31/1985	0.0060	—	—	—	—	0.0200
	6/5/1986	0.0050	—	—	—	—	0.0910
	5/27/1987	0.0010	—	—	—	—	0.0160
	2/3/1988	0.0030	—	—	—	—	0.0080
	6/2/1988	0.0020	—	—	—	—	0.0160
	9/12/1988	0.0010	0.460	0.200	0.130	6.70	0.276
	3/7/1989	0.0020	0.370	0.160	0.170	5.50	0.0480
	9/1/1989	0.0250	0.190	0.0800	0.270	3.40	0.0090
	3/20/1990	0.0070	0.250	0.120	0.140	3.70	0.0060
	9/19/1990	0.0310	0.0500	0.0800	0.0900	2.20	0.0010
	2/13/1991	0.0090	0.100	0.0300	0.0500	1.48	0.0060
	9/12/1991	0.0010	0.0800	0.0400	0.0500	1.39	0.0010
	2/13/1992	0.0010	0.0800	0.0400	0.0500	1.18	0.0140
	9/16/1992	0.0020	0.0700	0.0300	0.0500	1.02	0.0020
	2/23/1993	0.0010	0.0800	0.0300	< 0.0500	1.14	0.0020
	9/1/1993	< 0.0010	0.0500	0.0200	< 0.0500	0.870	0.0010
	3/3/1994	0.0020	0.0480	< 0.0100	< 0.0500	0.880	< 0.0010
	9/8/1994	0.0010	0.0300	< 0.0100	< 0.0500	0.430	0.0020
	2/13/1995	0.0030	0.0400	0.0300	< 0.0500	0.780	0.0040
	9/11/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0010
	2/23/1996	0.0030	0.0400	0.0200	< 0.0500	0.670	0.0010
	9/3/1996	< 0.0010	0.0300	0.0200	< 0.0500	0.530	< 0.0010
	3/12/1997	< 0.0010	0.0500	0.0300	< 0.0500	0.920	0.0020
	9/22/1997	0.0020	0.0600	0.0200	< 0.0500	1.13	0.166
	3/10/1998	0.0050	0.0600	0.0270	< 0.0500	1.11	0.201
	7/28/1998	0.0040	0.0600	< 0.0500	< 0.0500	1.23	0.213
	1/18/1999	0.0140	0.0600	< 0.0100	< 0.0500	1.47	0.219
	9/2/1999	0.0080	0.0400	0.0350	< 0.0500	0.730	0.214
	3/23/2000	< 0.0010	0.0300	0.0370	< 0.0500	0.710	0.204
T1-9	10/7/1980	0.660	—	—	—	—	1.20
	1/16/1981	0.450	—	—	—	—	0.680
	6/18/1981	0.230	—	—	—	—	0.370

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-9	9/17/1981	0.290	---	---	---	---	0.110
	12/18/1981	0.0020	---	---	---	---	0.0070
	3/25/1982	0.310	---	---	---	---	0.300
	6/23/1982	0.190	---	---	---	---	0.180
	9/1/1982	0.220	---	---	---	---	0.170
	12/24/1982	0.0700	---	---	---	---	0.0210
	2/9/1983	0.0020	---	---	---	---	0.0020
	6/24/1983	0.0020	---	---	---	---	0.0020
	8/8/1983	0.0020	---	---	---	---	0.0030
	10/16/1983	0.0020	---	---	---	---	0.0020
	3/10/1984	0.0020	---	---	---	---	0.0020
	5/6/1984	0.0020	---	---	---	---	0.0020
	9/20/1984	0.0020	---	---	---	---	0.0020
	5/23/1985	0.0020	---	---	---	---	0.0030
	6/10/1986	0.0010	---	---	---	---	0.0090
	5/29/1987	0.0010	---	---	---	---	0.0320
	3/4/1988	0.0010	---	---	---	---	0.0100
	6/7/1988	0.0010	---	---	---	---	0.0150
	12/13/1988	0.0010	0.0500	0.0200	0.0500	1.30	0.0020
	3/9/1989	0.0010	0.0500	0.0200	0.0500	1.20	0.0030
	9/19/1989	0.0010	0.0500	0.0100	0.0500	1.30	0.0120
	3/27/1990	0.0010	0.360	0.160	0.230	6.00	0.0010
	9/19/1990	0.0010	0.0500	0.0200	0.0500	0.710	0.0010
	2/13/1991	0.0010	0.0100	0.0100	0.0500	0.0500	0.0010
	9/13/1991	0.0010	0.0900	0.0300	0.0500	1.58	0.0040
	2/13/1992	0.0010	0.0100	0.0100	0.0500	0.670	0.0670
	9/16/1992	0.0010	0.0500	0.0200	0.0500	0.900	0.0120
	2/24/1993	< 0.0010	< 0.0050	0.0300	< 0.0500	1.37	0.0070
	9/20/1993	< 0.0010	0.0600	0.0200	< 0.0500	1.32	0.0010
	3/4/1994	0.0060	< 0.0050	< 0.0100	< 0.0500	0.380	< 0.0010
	9/20/1994	0.0060	< 0.0010	< 0.0100	< 0.0500	< 0.0500	0.0010
	2/23/1995	0.0080	< 0.0050	0.0100	< 0.0500	< 0.0500	0.0040
	9/13/1995	0.0070	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0020
	2/28/1996	0.0020	< 0.0100	< 0.0100	< 0.0500	0.0500	< 0.0010
	9/3/1996	0.0050	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0070
	3/11/1997	0.0020	< 0.0100	< 0.0100	< 0.0500	0.280	0.0020
	9/22/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	1.34	1.03
	3/13/1998	0.0470	< 0.0100	0.0180	< 0.0500	1.34	1.38
	7/28/1998	0.0260	< 0.0100	< 0.0500	< 0.0500	1.31	1.41
	1/25/1999	0.0860	< 0.0100	< 0.0100	< 0.0500	1.40	1.49
	9/14/1999	0.0440	< 0.0100	0.0240	< 0.0500	0.840	1.62
	3/14/2000	0.0030	< 0.0100	0.0140	< 0.0500	0.630	0.480
T1-10	9/16/1981	0.0050	---	---	---	---	0.100
	12/17/1981	0.0020	---	---	---	---	0.0020

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-10	3/31/1982	0.0050	---	---	---	---	0.160
	6/16/1982	0.0050	---	---	---	---	0.260
	12/31/1982	0.0050	---	---	---	---	0.0250
	5/16/1983	0.0020	---	---	---	---	0.0020
	11/3/1983	0.0020	---	---	---	---	0.0020
	3/10/1984	0.0020	---	---	---	---	0.0020
	6/6/1984	0.0020	---	---	---	---	0.0070
	5/31/1985	0.0020	---	---	---	---	0.0030
	6/3/1986	0.0010	---	---	---	---	0.0040
	5/27/1987	0.0010	---	---	---	---	0.0030
	6/6/1988	0.0010	---	---	---	---	0.0090
	9/28/1989	0.0050	---	---	---	---	---
	9/19/1990	0.0010	---	---	---	---	---
	9/18/1991	0.0010	---	---	---	---	---
	9/4/1992	0.0010	---	---	---	---	---
	8/30/1993	< 0.0010	---	---	---	---	---
	9/6/1994	< 0.0010	---	---	---	---	---
	3/6/1995	< 0.0010	---	---	< 0.0500	---	---
	9/19/1995	0.0110	---	---	---	---	---
	9/8/1997	< 0.0010	---	---	---	---	---
	9/8/1998	0.0240	---	---	---	---	---
	8/31/1999	< 0.0010	---	---	---	---	---
T1-11	10/21/1981	0.0020	---	---	---	---	0.0020
	3/31/1982	0.0050	---	---	---	---	0.400
	6/2/1982	0.0050	---	---	---	---	0.470
	8/30/1982	0.0050	---	---	---	---	0.360
	12/29/1982	0.0050	---	---	---	---	0.0580
	2/3/1983	0.0020	---	---	---	---	0.0050
	5/26/1983	0.0020	---	---	---	---	0.0060
	9/8/1983	0.0020	---	---	---	---	0.0040
	10/15/1983	0.0020	---	---	---	---	0.0080
	2/29/1984	0.0020	---	---	---	---	0.0060
	5/4/1984	0.0020	---	---	---	---	0.0100
	7/17/1984	0.0020	---	---	---	---	0.0300
	12/11/1984	0.0020	---	---	---	---	0.0120
	3/20/1985	0.0020	---	---	---	---	0.0110
	6/3/1985	0.0020	---	---	---	---	0.0060
	9/16/1985	0.0020	---	---	---	---	0.0050
	12/5/1985	0.0020	---	---	---	---	0.0090
	2/25/1986	0.0020	---	---	---	---	0.0030
	5/29/1986	0.0030	---	---	---	---	0.0170
	9/24/1986	0.0020	---	---	---	---	0.0120
	5/26/1987	0.0010	---	---	---	---	0.0480
	2/8/1988	0.0010	---	---	---	---	0.0220

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-11	6/20/1988	0.0020	—	—	—	—	0.0520
	9/21/1988	0.0010	0.0500	0.0100	0.0500	0.980	0.123
	3/9/1989	0.0010	0.0500	0.0100	0.0500	0.850	0.0470
	9/20/1989	0.0010	0.0500	0.0100	0.0500	0.640	0.0510
	3/27/1990	0.0010	0.0500	0.0100	0.0500	0.860	0.0140
	9/27/1990	0.0010	0.0500	0.0100	0.0500	1.10	0.0010
	2/20/1991	0.0010	0.0100	0.0100	0.0500	1.16	0.0070
	9/26/1991	0.0010	0.0100	0.0100	0.0500	1.21	0.0100
	3/20/1992	0.0020	0.0100	0.0100	0.0500	1.17	0.186
	9/18/1992	0.0030	0.0500	0.0100	0.0500	1.14	0.0270
	3/24/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	1.20	0.0290
	9/23/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	1.33	0.0170
	3/15/1994	0.0020	< 0.0050	< 0.0100	0.0600	1.64	0.0140
	9/23/1994	0.0010	< 0.0100	< 0.0100	< 0.0500	1.20	0.0110
	3/28/1995	0.0050	< 0.0100	< 0.0100	< 0.0500	1.14	0.0210
	9/28/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	1.11	0.0760
	3/27/1996	0.0110	< 0.0100	< 0.0100	< 0.0500	1.04	0.0260
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.920	0.0180
	3/14/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.830	0.0410
	9/25/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.870	0.570
	3/13/1998	0.0160	< 0.0100	< 0.0050	< 0.0500	0.680	0.499
	9/23/1998	0.0080	< 0.0100	< 0.0500	< 0.0500	0.500	0.371
	3/11/1999	0.0190	< 0.0100	< 0.0100	< 0.0500	0.0700	0.0180
	9/24/1999	0.0220	< 0.0100	0.0060	< 0.0500	0.690	0.547
	3/29/2000	0.0030	< 0.0100	0.0060	< 0.0500	0.930	0.191
T1-12	10/12/1981	0.0020	—	—	—	—	0.0020
	3/31/1982	0.0050	—	—	—	—	0.890
	6/2/1982	0.0050	—	—	—	—	0.380
	8/30/1982	0.0050	—	—	—	—	0.680
	12/24/1982	0.0050	—	—	—	—	0.0060
	2/3/1983	0.0020	—	—	—	—	0.0020
	5/26/1983	0.0020	—	—	—	—	0.0020
	8/8/1983	0.0020	—	—	—	—	0.0030
	10/15/1983	0.0020	—	—	—	—	0.0040
	1/23/1984	0.0020	—	—	—	—	0.0030
	5/5/1984	0.0020	—	—	—	—	0.0500
	7/17/1984	0.0020	—	—	—	—	0.0050
	5/16/1985	0.0020	—	—	—	—	0.0020
	7/29/1985	0.0020	—	—	—	—	0.0010
	10/31/1985	0.0020	—	—	—	—	0.0010
	1/31/1986	0.0020	—	—	—	—	0.0030
	4/30/1986	0.0010	—	—	—	—	0.0080
	9/24/1986	0.0010	—	—	—	—	0.0080
	12/5/1986	0.0010	—	—	—	—	0.0040

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-12	3/12/1987	0.0010	—	—	—	—	0.0120
	5/26/1987	0.0010	—	—	—	—	0.0220
	8/23/1987	0.0010	—	—	—	—	0.0200
	11/10/1987	0.0010	—	—	—	—	0.0050
	2/8/1988	0.0010	—	—	—	—	0.0060
	6/20/1988	0.0010	—	—	—	—	0.0130
	9/21/1988	0.0010	0.0500	0.0100	0.0500	0.330	0.0300
	3/9/1989	0.0010	0.0500	0.0100	0.0500	0.330	0.0040
	9/20/1989	0.0010	0.0500	0.0100	0.0500	0.340	0.0070
	3/27/1990	0.0010	0.0500	0.0100	0.0500	0.310	0.0020
	9/27/1990	0.0020	0.0500	0.0100	0.0500	0.290	0.0010
	2/20/1991	0.0010	0.0100	0.0100	0.0500	0.340	0.0040
	9/26/1991	0.0010	0.0100	0.0100	0.0500	0.150	0.0070
	3/20/1992	0.0010	0.0100	0.0100	0.0500	0.330	0.379
	9/18/1992	0.0020	0.0500	0.0100	0.0500	0.320	0.0380
	3/24/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.340	0.0340
	9/23/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.290	0.0260
	3/15/1994	0.0020	< 0.0050	< 0.0100	< 0.0500	0.320	0.0090
	9/23/1994	0.0010	< 0.0100	< 0.0100	< 0.0500	0.230	0.0090
	3/28/1995	0.0030	< 0.0100	< 0.0100	< 0.0500	0.210	0.0130
	9/28/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.230	0.0540
	3/27/1996	0.0050	< 0.0100	< 0.0100	< 0.0500	0.240	0.0090
	9/3/1996	0.0030	< 0.0100	< 0.0100	< 0.0500	0.260	0.0040
	3/14/1997	0.0020	< 0.0100	< 0.0100	< 0.0500	0.290	0.0090
	9/25/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.270	1.01
	4/15/1998	0.0510	< 0.0100	0.0110	< 0.0500	0.260	1.52
	9/23/1998	0.0210	< 0.0100	< 0.0500	< 0.0500	0.250	1.45
	3/11/1999	0.0650	< 0.0100	< 0.0100	< 0.0500	0.230	1.33
	8/31/1999	0.0360	< 0.0100	0.0080	< 0.0500	0.150	1.45
	3/23/2000	0.0070	< 0.0100	< 0.0050	< 0.0500	0.300	1.13
T1-14	5/29/1986	0.0010	—	—	—	—	0.0320
	5/26/1987	0.0010	—	—	—	—	0.0070
	2/8/1988	0.0010	—	—	—	—	0.0170
	6/21/1988	0.0010	—	—	—	—	0.0390
	9/21/1988	0.0010	0.0500	0.0100	0.0500	0.0500	0.124
	3/9/1989	0.0010	0.0500	0.0100	0.0500	0.150	0.0120
	9/20/1989	0.0010	0.0500	0.0100	0.0600	0.300	0.0280
	3/27/1990	0.0010	0.0500	0.0100	0.0500	0.0900	0.0030
	9/27/1990	0.0010	0.0500	0.0100	0.0500	0.130	0.0010
	2/20/1991	0.0010	0.0100	0.0100	0.0500	0.180	0.0040
	9/14/1991	0.0010	0.0100	0.0100	0.0500	0.130	0.0100
	3/20/1992	0.0010	0.0100	0.0100	0.0500	0.190	0.481
	9/18/1992	0.0010	0.0500	0.0100	0.0500	0.100	0.0360
	3/19/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.170	0.0240

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-14	9/23/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.140	0.0210
	3/15/1994	0.0020	< 0.0050	< 0.0100	< 0.0500	0.150	0.0050
	9/23/1994	0.0050	< 0.0100	< 0.0100	< 0.0500	0.130	0.0150
	3/28/1995	0.0030	< 0.0100	< 0.0100	< 0.0500	0.0800	0.0120
	9/28/1995	0.0020	< 0.0100	< 0.0100	< 0.0500	0.100	0.0710
	3/27/1996	0.0050	< 0.0100	< 0.0100	< 0.0500	0.0700	0.0100
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.100	0.0070
	3/14/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0900	0.0120
	9/25/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.100	1.06
	4/15/1998	0.0410	< 0.0100	< 0.0050	< 0.0500	0.100	1.24
	9/23/1998	0.0220	< 0.0100	< 0.0500	< 0.0500	0.0700	1.19
	3/11/1999	0.0510	< 0.0100	< 0.0100	< 0.0500	0.0800	1.03
	9/24/1999	0.0240	< 0.0100	0.0110	< 0.0500	0.0600	1.05
	3/23/2000	0.0020	< 0.0100	< 0.0050	< 0.0500	0.150	0.971
T1-15	3/28/1995	0.0050	—	—	< 0.0500	—	—
	9/25/1997	0.0030	0.340	0.0500	0.0800	3.32	0.254
T1-16	5/29/1986	0.0010	—	—	—	—	0.0160
	5/26/1987	0.0010	—	—	—	—	0.0410
	2/8/1988	0.0010	—	—	—	—	0.0100
	6/21/1988	0.0010	—	—	—	—	0.0330
	9/21/1988	0.0020	0.0500	0.0100	0.0500	0.380	0.0880
	3/9/1989	0.0010	0.0500	0.0100	0.0500	0.570	0.0100
	9/20/1989	0.0010	0.0500	0.0200	0.0500	0.220	0.0230
	3/27/1990	0.0010	0.0500	0.0700	0.0500	2.20	0.0040
	9/27/1990	0.0010	0.0500	0.0200	0.0500	0.960	0.0010
	2/20/1991	0.0010	0.0100	0.0100	0.0500	0.510	0.0030
	9/26/1991	0.0010	0.0100	0.0100	0.0500	0.200	0.0080
	3/20/1992	0.0010	0.0100	0.0100	0.0500	0.330	0.351
	9/18/1992	0.0010	0.0500	0.0100	0.0500	0.330	0.0330
	3/24/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.640	0.0190
	9/23/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.430	0.0090
	3/15/1994	0.0010	< 0.0050	< 0.0100	< 0.0500	0.550	0.0010
	9/23/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.440	0.0030
	3/28/1995	0.0020	< 0.0100	< 0.0100	< 0.0500	0.260	0.0070
	9/28/1995	—	< 0.0100	< 0.0100	< 0.0500	0.510	0.0220
	3/27/1996	0.0010	< 0.0100	< 0.0100	< 0.0500	0.320	0.0040
	9/3/1996	< 0.0010	< 0.0100	0.0300	< 0.0500	0.580	0.0060
	3/14/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0700	0.0050
	9/25/1997	0.0010	< 0.0100	< 0.0100	< 0.0500	0.210	0.981
	4/15/1998	0.0360	< 0.0100	0.0080	< 0.0500	0.270	1.30
	9/23/1998	0.0150	< 0.0100	< 0.0500	< 0.0500	0.460	0.906
	3/11/1999	0.0370	< 0.0100	< 0.0100	< 0.0500	0.690	0.629
	9/24/1999	0.0200	< 0.0100	0.0120	< 0.0500	0.310	0.751
	3/29/2000	0.0030	< 0.0100	0.0100	< 0.0500	0.480	0.547

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-17	12/23/1992	< 0.0010	—	—	—	—	—
	3/19/1993	0.0040	< 0.0050	< 0.0100	< 0.0500	—	—
	9/23/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	—	—
	3/15/1994	0.0010	< 0.0050	< 0.0100	< 0.0500	0.100	0.0070
	9/23/1994	0.0010	< 0.0100	< 0.0100	< 0.0500	0.0800	0.0150
	3/28/1995	0.0030	< 0.0100	< 0.0100	< 0.0500	0.0500	0.0110
	9/28/1995	0.0180	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	3/27/1996	0.0080	< 0.0100	< 0.0100	< 0.0500	0.110	0.0150
	9/3/1996	0.0010	< 0.0100	< 0.0100	< 0.0500	0.0700	0.0060
	9/25/1997	0.0010	< 0.0100	< 0.0100	< 0.0500	0.160	0.565
	4/15/1998	0.0290	< 0.0100	< 0.0050	< 0.0500	0.140	0.860
	9/23/1998	0.0130	< 0.0100	< 0.0500	< 0.0500	0.170	0.531
	3/11/1999	0.0280	< 0.0100	< 0.0100	< 0.0500	0.180	0.438
	9/24/1999	0.0220	< 0.0100	< 0.0050	< 0.0500	0.110	0.888
	3/29/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.230	0.599
T1-18	12/10/1992	< 0.0010	—	—	—	0.0600	0.910
	2/25/1993	0.0040	< 0.0050	< 0.0100	< 0.0500	0.100	0.0140
	8/31/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.130	0.0080
	3/4/1994	0.0010	< 0.0050	< 0.0100	< 0.0500	0.420	0.0030
	9/12/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.310	0.0050
	3/6/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.400	0.0040
	9/14/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.230	0.0140
	3/21/1996	0.0050	< 0.0100	< 0.0100	< 0.0500	0.300	0.0050
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0030
	9/3/1997	0.0020	< 0.0100	< 0.0100	< 0.0500	0.0800	0.816
	4/14/1998	0.0480	< 0.0100	< 0.0050	< 0.0500	< 0.0500	1.35
	9/10/1998	0.0210	< 0.0100	< 0.0500	< 0.0500	0.100	1.18
	2/10/1999	0.0560	< 0.0100	< 0.0100	< 0.0500	< 0.0500	1.10
	9/19/1999	0.0270	< 0.0100	0.0060	< 0.0500	< 0.0500	1.20
	3/23/2000	0.0060	< 0.0100	0.0090	0.0700	0.290	0.840
T1-19	2/13/1995	0.0080	—	—	< 0.0500	—	—
	9/22/1997	0.0150	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0610
T1-20	3/28/1995	0.0020	—	—	< 0.0500	—	—
	9/25/1997	0.0030	0.190	0.0300	< 0.0500	4.49	0.181
T1-21	6/23/1989	0.0010	0.0500	0.0100	0.0500	0.0500	0.0010
	9/29/1989	0.0010	0.0500	0.0100	0.0500	0.0500	0.0010
	3/29/1990	0.0010	0.0500	0.0100	0.0500	0.0500	0.0010
	9/17/1990	0.0010	0.0500	0.0100	0.0500	0.0500	0.0010
	2/25/1991	0.0010	0.0500	0.0100	0.0500	0.0500	0.0030
	9/23/1991	0.0010	0.0100	0.0100	0.0500	0.0500	0.0010
	2/28/1992	0.0010	0.0100	0.0100	0.0500	0.0500	0.0010
	9/9/1992	0.0020	0.0500	0.0100	0.0500	0.0500	0.0010
	3/25/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0600	< 0.0010

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-21	8/31/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	3/11/1994	0.0020	< 0.0050	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/12/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0050
	3/8/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/21/1995	0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	3/15/1996	0.0020	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/8/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0090
	4/14/1998	< 0.0010	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0090
	8/24/1998	0.0020	< 0.0100	< 0.0500	< 0.0500	< 0.0500	0.0120
	2/16/1999	0.0020	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0030
	9/16/1999	< 0.0010	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0240
	3/23/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.0500	0.0360
T1-22	6/23/1989	0.0010	0.0500	0.0100	0.0500	0.0500	0.0030
	9/29/1989	0.0020	0.0500	0.0100	0.0500	0.0500	0.0120
	3/29/1990	0.0010	0.0500	0.0100	0.0500	0.0500	0.0040
	9/19/1990	0.0030	0.0500	0.0100	0.0500	0.0500	0.0030
	2/25/1991	0.0010	0.0100	0.0100	0.0500	0.0500	0.0020
	9/20/1991	0.0010	0.0100	0.0100	0.0500	0.0500	0.0070
	2/28/1992	0.0010	0.0100	0.0100	0.0500	0.0500	0.0900
	9/4/1992	0.0010	0.0500	0.0100	0.0500	0.0800	0.0220
	3/24/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	0.0120
	8/31/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0130
	3/11/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.240	0.0030
	9/6/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0070
	3/6/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0700	0.0050
	9/19/1995	0.0020	< 0.0100	< 0.0100	< 0.0500	0.0600	0.0090
	3/27/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0080
	9/3/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0500	0.0080
	9/8/1997	0.0050	< 0.0100	< 0.0100	< 0.0500	0.110	1.07
	4/14/1998	0.0370	< 0.0100	< 0.0050	< 0.0500	< 0.0500	1.10
	9/10/1998	0.0180	< 0.0100	< 0.0500	< 0.0500	< 0.0500	1.09
	2/10/1999	0.0560	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.948
	8/31/1999	0.0260	< 0.0100	< 0.0050	< 0.0500	< 0.0500	1.12
	3/23/2000	0.0040	< 0.0100	< 0.0050	< 0.0500	0.100	0.982
T1-23	9/29/1989	0.0190	0.0500	0.0100	0.0500	0.0500	0.0050
	3/29/1990	0.0070	0.0500	0.0100	0.0500	0.0500	0.0020
	9/17/1990	0.0070	0.0500	0.0100	0.0500	0.0500	0.0010
	2/14/1991	0.0040	0.0100	0.0100	0.0500	0.0500	0.0030
	9/13/1991	0.0070	0.0100	0.0100	0.0500	0.0500	0.0030
	2/28/1992	0.0100	0.0100	0.0100	0.0500	0.0500	0.0020
	9/14/1992	0.0050	0.0500	0.0100	0.0500	0.0500	0.0010
	2/24/1993	0.0050	< 0.0050	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/29/1993	0.0080	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T1-23	3/15/1994	0.0100	< 0.0050	0.0200	< 0.0500	< 0.0500	< 0.0010
	9/21/1994	0.0050	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	3/6/1995	0.0080	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/19/1995	0.0090	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0010
	2/28/1996	0.0090	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/3/1996	0.0030	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0010
	9/22/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.0500	0.283
	3/13/1998	0.0170	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.410
	9/8/1998	0.0140	< 0.0100	< 0.0500	< 0.0500	< 0.0500	0.316
	1/26/1999	0.0170	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.204
	9/14/1999	0.0120	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.165
	3/23/2000	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0940
T1-24	2/14/1991	1.76	—	—	—	—	—
	2/28/1992	—	—	—	—	0.190	—
	12/1/1992	0.0020	—	—	—	0.200	0.102
	3/25/1993	—	—	—	—	1.46	—
T1-25	3/28/1995	0	—	—	< 0.0500	—	—
	9/25/1997	0.0030	0.0500	< 0.0100	< 0.0500	0.770	0.108
T1-26	7/28/1998	0.0050	0.0300	< 0.0500	< 0.0500	0.450	0.253
	2/4/1999	0.0170	0.100	< 0.0100	< 0.0500	2.00	0.177
	9/16/1999	0.0090	0.0700	0.0480	< 0.0500	1.17	0.216
	12/22/1999	0.0070	—	0.0350	< 0.0500	1.29	0.220
	3/14/2000	0.0030	0.0700	0.0330	< 0.0500	1.13	0.169
T1-27	7/28/1998	0.0040	0.0400	< 0.0500	< 0.0500	0.540	0.122
	2/4/1999	0.0060	< 0.0100	< 0.0100	< 0.0500	0.910	0.0960
	9/16/1999	0.0120	0.0500	0.0420	< 0.0500	1.09	0.279
	12/22/1999	0.0080	—	0.0330	< 0.0500	1.17	0.261
	2/23/2000	0.0020	0.0500	0.0470	< 0.0500	1.41	0.124
T2-4	3/22/1993	< 0.0010	0.0700	0.210	< 0.0500	11.2	< 0.0010
	3/7/1995	< 0.0010	0.0620	0.170	< 0.0500	8.34	< 0.0010
	3/13/1996	< 0.0010	0.0600	0.120	< 0.0500	5.45	0.0020
	2/25/1997	0.0020	0.150	0.130	< 0.0500	5.80	0.0020
	4/6/1998	0.0010	0.0400	0.0650	< 0.0500	3.52	0.0150
	2/1/1999	0.0060	0.0600	< 0.0100	< 0.0500	3.83	0.0620
	3/7/2000	< 0.0010	0.0400	0.0580	< 0.0500	2.78	0.0110
T2-5	10/14/1992	0.0020	—	0.130	< 0.0500	4.11	0.0050
	2/26/1993	< 0.0010	0.210	0.220	< 0.0500	7.69	0.0030
	5/26/1993	< 0.0010	0.165	0.0700	0.0800	4.41	0.0040
	9/3/1993	< 0.0010	0.140	0.0500	0.0600	3.32	< 0.0010
	11/30/1993	< 0.0010	0.184	0.0700	< 0.0500	4.00	0.0060
	3/4/1994	0.0010	0.155	0.0500	< 0.0500	3.82	< 0.0010
	9/19/1994	< 0.0010	—	—	—	—	—
	2/24/1995	0.0020	0.170	0.0900	< 0.0500	3.88	0.0050

TABLE C-2. PMC LUCKY Mc WIND RIVER GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T2-5	9/13/1995	< 0.0010	—	—	—	—	—
	2/28/1996	0.0060	0.140	0.0600	< 0.0500	3.27	0.0020
	9/19/1996	< 0.0010	—	—	—	—	—
	3/7/1997	0.0020	0.120	0.0800	< 0.0500	3.80	< 0.0010
	9/12/1997	< 0.0010	—	—	—	—	—
	3/12/1998	0.0090	0.130	0.103	< 0.0500	3.83	0.253
	9/8/1998	0.0050	—	—	—	—	—
	1/25/1999	0.0120	0.140	< 0.0100	< 0.0500	3.35	0.162
	9/7/1999	0.0050	—	—	—	—	—
	3/13/2000	< 0.0010	0.120	0.0610	< 0.0500	2.58	0.105
T2-6	10/16/1992	< 0.0010	< 0.0500	< 0.0100	< 0.0500	0.160	0.0220
	2/26/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0600	< 0.0010
	5/26/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/3/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	11/30/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0600	< 0.0010
	3/4/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/19/1994	< 0.0010	—	—	—	—	—
	2/24/1995	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0600	0.0060
	9/13/1995	< 0.0010	—	—	—	—	—
	2/28/1996	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/19/1996	< 0.0010	—	—	—	—	—
	3/7/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/12/1997	< 0.0010	—	—	—	—	—
	3/12/1998	0.0020	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0260
	9/8/1998	0.0020	—	—	—	—	—
	1/25/1999	0.0030	< 0.0100	< 0.0100	< 0.0500	< 0.0500	0.0140
	9/7/1999	< 0.0010	—	—	—	—	—
	3/13/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	< 0.0500	< 0.0010

C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY.

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-1	10/27/1980	7.05	2573	1140	29.0	1.94	0.770
	4/22/1981	7.55	2483	1175	34.0	1.80	0.810
	11/12/1981	7.18	1349	1100	33.0	12.8	0.318
	1/28/1986	7.56	3513	1320	175	123	0.741
	6/3/1986	6.78	4426	1590	197	123	0.493
	9/18/1986	7.47	4323	1767	208	150	0.468
	11/4/1986	6.90	4490	1509	187	150	0.437
	3/24/1987	7.83	4203	1671	213	210	0.762
	5/4/1987	7.63	4415	1700	223	134	0.885
	8/21/1987	6.99	5300	1766	243	183	0.903
	10/22/1987	6.65	3622	1728	237	190	0.944
	3/15/1988	6.02	4864	1811	217	180	0
	5/4/1988	7.06	5100	1769	217	188	0.786
	9/26/1988	7.26	4698	1770	234	162	0.795
	12/6/1988	7.09	4502	1877	222	160	0.818
	3/7/1989	7.10	3889	1664	216	155	0.947
	6/19/1989	6.63	3191	1771	220	158	---
	9/14/1989	6.88	4830	1803	229	173	0.899
	12/13/1989	6.93	4875	2003	225	191	---
	3/15/1990	7.02	4600	1758	214	177	0.641
	6/11/1990	6.78	4820	1824	220	162	0.976
	9/17/1990	6.97	3180	1802	152	65.2	0.493
	12/26/1990	7.03	3800	1648	158	69.0	---
	2/25/1991	6.85	3580	1564	149	62.0	0.210
	6/9/1991	7.56	2540	1256	44.2	3.69	1.000
	9/19/1991	7.42	3460	1679	141	43.0	0.389
	12/9/1991	7.09	4552	1696	97.0	6.20	0.426
	3/18/1992	7.68	3480	1724	150	51.6	0.330
	6/9/1992	6.66	3470	1609	125	11.0	---
	9/11/1992	7.22	6070	2216	498	183	0.0003
	12/2/1992	7.15	4820	1973	276	137	0.599
	3/25/1993	7.10	4184	1804	210	87.7	0.359
	5/28/1993	6.97	3994	1901	181	62.9	0.507
	8/27/1993	6.79	3552	637	22.8	0.400	0.272
	12/21/1993	6.70	3842	1949	158	52.7	0.685
	3/11/1994	6.50	3645	2056	152	55.6	0.470
	6/3/1994	6.55	3502	2034	162	51.6	0.241
	9/9/1994	6.61	3356	1993	135	37.0	0.495
	10/26/1994	6.58	3403	1980	129	40.6	1.06
	3/8/1995	6.76	3889	1969	91.9	12.5	0.579
	6/19/1995	7.08	5489	3496	510	203	2.04
	9/21/1995	6.71	5725	4343	597	203	2.65
	9/3/1996	6.81	5557	3120	276	85.2	1.67
	12/6/1996	6.59	5307	---	---	---	---

C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-1	2/26/1997	6.39	4500	2700	224	56.0	1.11
	6/10/1997	6.38	4090	2874	309	77.2	1.48
	9/8/1997	7.25	6106	3300	317	99.7	1.61
	12/8/1997	7.15	6407	3450	353	126	2.22
	2/11/1998	7.45	4108	—	—	—	—
	4/6/1998	7.28	6660	3300	369	130	1.98
	4/22/1998	—	—	2720	323	145	2.66
	6/24/1998	7.18	4600	—	—	—	—
	9/25/1998	7.54	3932	2200	221	136	1.18
	12/9/1998	7.37	4380	2140	233	157	1.15
	1/26/1999	7.38	4452	—	—	—	—
	2/11/1999	7.45	4108	2140	214	129	1.28
	6/15/1999	7.34	3659	1980	252	127	1.18
	8/6/1999	7.23	3041	2080	228	189	1.78
	12/1/1999	7.50	4666	2030	256	163	1.32
	1/26/2000	7.38	4452	2050	228	186	0.740
AL-4	1/27/1986	7.77	1647	532	25.0	0.780	1.07
	6/2/1986	6.78	1544	591	23.0	0.280	0.459
	11/5/1986	7.58	1515	691	30.0	0.310	0.595
	3/16/1987	7.33	1867	605	24.0	0.350	0.347
	5/4/1987	7.57	1470	634	22.0	0.310	0.394
	8/21/1987	7.07	1900	624	26.0	0.0700	0.317
	10/28/1987	7.26	1695	600	36.0	0.470	0.274
	3/22/1988	7.10	1670	655	25.0	0.680	0.264
	5/11/1988	7.01	2445	627	25.0	0.510	0.375
	9/27/1988	7.52	1756	747	26.4	0.390	—
	12/7/1988	6.80	1601	721	23.0	0.480	0.272
	3/7/1989	7.25	1566	658	20.9	0.760	0.287
	6/19/1989	6.85	1528	641	22.8	0.520	—
	9/14/1989	7.10	1670	654	22.3	0.400	0.254
	12/13/1989	7.04	1645	706	20.6	< 0.0500	—
	3/19/1990	7.16	1610	638	21.5	0.410	0.231
	6/11/1990	7.26	1700	668	21.0	0.330	—
	9/17/1990	6.93	1510	817	23.2	0.150	0.226
	12/26/1990	7.00	1560	698	24.5	0.340	—
	2/25/1991	7.01	1570	633	25.4	0.270	0.0687
	6/11/1991	7.51	1510	606	23.9	0.170	—
	9/23/1991	7.26	1560	635	32.0	0.0500	0.156
	12/9/1991	7.67	1680	772	31.4	0.720	—
	3/18/1992	7.71	1440	710	24.2	< 0.0100	0.203
	6/9/1992	6.85	1620	707	26.8	< 0.100	—
	9/11/1992	7.14	1560	613	23.6	< 0.100	0.204
	12/2/1992	7.07	1625	751	24.1	2.10	—
	3/25/1993	7.07	1611	678	29.6	4.50	0.211

C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-4	5/28/1993	6.90	1718	888	33.0	1.60	—
	8/27/1993	6.72	1711	1655	118	54.0	2.64
	12/21/1993	6.69	1636	752	24.2	1.15	—
	3/11/1994	6.48	1605	728	25.3	0.400	0.213
	6/3/1994	6.72	1572	1997	157	56.9	—
	9/9/1994	6.75	1709	859	29.8	1.08	0.195
	11/28/1994	6.52	1696	888	29.7	1.04	—
	3/8/1995	6.85	1882	873	32.3	1.90	0.299
	6/19/1995	7.05	1833	938	30.0	1.65	—
	9/21/1995	6.61	1695	823	31.8	1.65	0.236
	9/3/1996	6.49	2189	1090	28.0	1.48	0.349
	9/18/1996	7.26	1551	601	25.0	0.450	0.288
	12/6/1996	6.48	2279	995	29.0	1.71	—
	2/26/1997	6.31	1890	1030	30.6	0.980	0.431
	6/10/1997	6.31	1800	997	27.6	0.820	—
	9/8/1997	7.33	2054	993	25.9	2.00	0.394
	12/8/1997	7.26	1976	930	25.1	2.39	—
	2/16/1998	7.54	1588	—	—	—	—
	4/14/1998	7.25	1920	796	29.7	11.2	0.363
	6/24/1998	7.35	1600	825	27.0	1.34	0.326
	9/25/1998	7.81	1669	771	23.9	2.24	0.257
	12/9/1998	7.62	1719	789	27.7	3.26	—
	1/26/1999	7.83	1482	—	—	—	—
	2/16/1999	7.54	1588	703	23.9	1.43	0.272
	6/15/1999	7.67	1661	881	35.1	8.11	—
	8/6/1999	7.54	1482	823	33.7	8.23	0.312
	12/1/1999	8.02	1575	691	25.9	0.180	—
	1/26/2000	7.83	1482	648	23.3	0.120	0.131
AL-5	1/27/1986	7.60	3074	1290	67.0	8.87	1.09
	6/2/1986	6.86	2676	1580	52.0	4.00	1.03
	11/5/1986	7.60	2800	1540	58.0	5.00	1.07
	3/16/1987	7.33	3140	1376	49.0	4.40	0.886
	5/4/1987	7.39	2186	1392	47.0	3.90	0.910
	8/21/1987	6.98	1800	1364	46.0	3.10	0.951
	10/28/1987	7.21	2830	1320	59.0	3.30	0.875
	3/22/1988	6.87	2994	1335	46.0	4.20	0.984
	5/11/1988	7.08	1620	1225	46.0	3.20	1.34
	9/27/1988	6.68	2694	1299	44.0	5.00	—
	12/7/1988	6.91	2598	1409	46.2	4.20	1.00
	3/7/1989	7.25	2544	1259	49.8	5.00	1.08
	6/19/1989	6.84	2882	1374	53.8	5.20	—
	9/14/1989	7.05	2810	1308	48.3	4.00	0.930
	12/13/1989	7.11	2700	1342	46.0	4.10	—
	3/19/1990	7.18	2790	1317	50.8	5.40	0.833

C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-5	6/11/1990	7.04	2650	1310	42.0	2.41	---
	9/17/1990	6.97	2210	1486	38.7	1.16	1.01
	12/26/1990	7.06	2500	1171	37.7	1.26	---
	2/25/1991	7.03	2730	1357	50.4	3.85	0.859
	6/11/1991	7.54	2620	1433	46.8	3.04	---
	9/23/1991	7.32	2340	1151	42.0	0.800	0.0520
	12/9/1991	7.81	2535	1314	41.6	1.79	---
	3/18/1992	7.79	2150	1214	33.6	1.06	0.524
	6/9/1992	6.99	2520	1249	42.3	< 0.100	---
	9/11/1992	7.15	2410	1149	39.0	1.40	0.416
	12/2/1992	7.11	2350	1256	36.5	3.30	---
	3/25/1993	7.16	2373	1139	43.7	< 0.100	0.410
	5/28/1993	6.95	2631	1351	58.5	7.80	---
	8/27/1993	6.78	2584	1306	59.0	12.8	0.585
	12/21/1993	6.73	2635	1329	67.3	16.5	---
	3/11/1994	6.64	2694	1476	81.3	24.3	0.727
	6/3/1994	6.73	2687	1416	83.2	26.6	---
	9/9/1994	6.71	2838	1617	97.2	26.0	0.638
	11/28/1994	6.93	2714	1717	103	27.9	---
	3/8/1995	6.91	3153	1707	113	35.5	0.789
	6/19/1995	7.03	2975	1722	125	41.9	---
	9/21/1995	6.73	2896	1729	128	32.3	0.854
	9/3/1996	6.73	2928	1520	66.1	19.2	0.931
	9/18/1996	7.18	2714	1501	54.0	4.76	0.646
	12/6/1996	6.53	3065	1430	74.0	19.4	---
	2/26/1997	6.49	2580	1550	81.1	21.0	0.843
	6/10/1997	6.27	2580	1710	90.0	38.6	---
	9/8/1997	7.30	3480	1910	102	49.5	0.697
	12/8/1997	7.24	3414	1920	108	55.3	---
	2/16/1998	7.36	3390	---	---	---	---
	4/6/1998	7.47	3830	2000	120	65.0	0.675
	6/24/1998	7.40	2050	1940	106	65.1	---
	9/25/1998	7.61	3293	1960	107	66.0	0.586
	12/9/1998	7.50	3462	2130	114	81.8	---
	1/26/1999	7.73	3233	---	---	---	---
	2/16/1999	7.36	3390	1960	118	71.1	0.700
	6/15/1999	7.58	2878	2060	105	64.5	---
	8/6/1999	7.43	3041	1970	105	67.7	0.782
	12/1/1999	7.85	3643	1990	96.9	81.5	---
	1/26/2000	7.73	3232	1810	84.4	60.5	0.332
AL-6	1/27/1986	7.80	2470	1035	64.0	41.3	0.717
	6/2/1986	6.95	2985	1304	74.0	17.1	0.553
	9/15/1986	7.48	3184	1623	98.0	58.0	0.391
	11/5/1986	7.29	3370	1510	106	60.0	0.756

C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-6	3/16/1987	7.24	4200	1488	104	38.0	0.562
	5/4/1987	7.43	3470	1531	103	5340	0.607
	8/21/1987	6.85	3900	1518	118	72.0	0.561
	10/28/1987	7.32	4100	1470	131	91.0	0.470
	3/15/1988	6.55	3794	1590	119	70.0	0.473
	5/4/1988	7.18	3700	1519	126	64.0	0.535
	9/26/1988	6.97	3705	1589	140	63.0	—
	12/6/1988	7.03	3552	1686	132	69.0	0.502
	3/7/1989	7.35	3364	1562	137	65.0	0.572
	6/20/1989	6.98	3837	1542	145	59.0	—
	9/14/1989	7.00	3690	1578	153	67.0	0.508
	12/13/1989	7.04	3710	1641	153	70.0	—
	3/15/1990	7.14	3700	1619	154	71.0	0.436
	6/11/1990	6.89	3725	1636	152	53.5	—
	9/17/1990	6.93	3240	1973	151	59.9	0.513
	12/26/1990	7.05	3720	1580	165	69.0	—
	2/25/1991	7.02	3670	1540	150	62.0	0.401
	6/11/1991	7.42	3430	1748	137	58.2	—
	9/19/1991	7.43	3380	1616	156	36.0	0.496
	12/9/1991	7.77	3490	1558	144	28.9	—
	3/18/1992	7.68	3290	1682	131	33.0	0.364
	6/9/1992	6.93	3460	1784	123	55.2	—
	9/11/1992	7.10	3310	1613	108	14.4	0.483
	12/2/1992	7.07	3400	1646	110	31.1	—
	3/25/1993	7.05	3311	1651	122	30.0	0.382
	5/28/1993	6.94	3293	1661	107	17.5	—
	8/27/1993	6.73	3177	1743	118	4.70	1.18
	12/21/1993	6.81	3143	1611	99.4	24.7	—
	3/11/1994	6.56	3124	1581	108	31.8	0.526
	6/3/1994	6.76	2825	1521	87.6	16.3	—
	9/9/1994	6.73	2922	1691	106	2.17	0.430
	11/28/1994	6.86	2623	1685	88.6	10.4	—
	3/8/1995	6.83	2870	1616	91.9	12.5	0.668
	6/19/1995	7.05	2580	1561	84.4	7.38	—
	9/21/1995	6.70	2560	1456	54.2	8.75	0.522
	9/3/1996	6.78	2952	1580	75.8	8.22	0.0650
	12/6/1996	6.83	5512	2050	149	19.4	—
	2/26/1997	6.61	2730	1640	100.0	14.3	0.677
	6/10/1997	6.39	2300	1670	97.4	18.0	—
	9/8/1997	7.35	3199	1740	99.9	17.3	0.730
	12/8/1997	7.32	3331	1780	110	22.7	—
	2/10/1998	6.80	3160	—	—	—	—
	4/6/1998	7.53	3580	1900	136	30.6	0.919
	6/24/1998	7.44	2780	1840	170	31.9	—

C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-6	9/25/1998	7.66	3129	1830	121	30.0	0.862
	12/9/1998	7.62	3253	2010	134	40.0	—
	1/25/1999	7.80	3598	—	—	—	—
	2/10/1999	6.80	3160	1850	133	43.3	1.05
	6/15/1999	7.74	2855	1950	147	42.5	—
	8/6/1999	7.61	2498	1900	140	42.8	1.32
	12/1/1999	7.86	3831	2010	159	64.0	—
	1/25/2000	7.80	3598	1930	159	59.1	1.10

TABLE C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
AL-1	6/10/1997	—	—	2.20	0.300	—	—	—
	12/8/1997	—	—	8.80	0.500	—	—	—
	4/22/1998	—	—	0.600	0.200	—	—	—
	12/9/1998	—	—	1.70	0.200	—	—	—
	6/15/1999	—	—	3.00	0.300	—	—	—
	12/1/1999	—	—	3.10	0.400	—	—	—
	1/26/2000	< 0.200	—	< 0.200	—	2.20	0.100	< 2.40
AL-4	4/14/1998	< 0.200	—	0.600	0.200	< 1.000	—	< 1.60
	6/24/1998	< 0.200	—	0.600	0.200	1.70	1.20	2.30
	1/26/2000	< 0.200	—	< 0.200	—	2.50	0.100	< 2.70
AL-5	1/26/2000	< 0.200	—	0.500	0.200	3.00	0.100	3.50
AL-6	1/25/2000	0.400	0.200	1.60	0.300	2.20	0.100	3.80

TABLE C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
AL-1	10/27/1980	0.0190	---	---	---	---	0.0170
	4/22/1981	0.0020	---	---	---	---	0.0020
	11/12/1981	0.0100	---	---	---	---	0.0020
	1/28/1986	0.0070	---	---	---	---	0.0020
	6/3/1986	0.0060	---	---	---	---	0.0040
	9/18/1986	0.0070	---	---	---	---	0.0010
	11/4/1986	0.0040	---	---	---	---	0.0010
	3/24/1987	0.0040	---	---	---	---	0.0080
	5/4/1987	0.0040	---	---	---	---	0.0140
	8/21/1987	0.0060	---	---	---	---	0.0160
	10/22/1987	0.0060	---	---	---	---	0.195
	3/15/1988	0.0060	---	---	---	---	0.0020
	5/4/1988	0.0050	---	---	---	---	0.360
	9/26/1988	0.0130	---	---	---	---	0.0300
	12/6/1988	0.0070	---	---	---	---	< 0.0010
	3/7/1989	0.0070	---	---	---	---	0.0020
	9/14/1989	0.0070	---	---	---	---	0.0100
	3/15/1990	< 0.0010	---	---	---	---	0.0030
	6/11/1990	0.0040	---	---	---	---	0.0050
	9/17/1990	0.0060	---	---	---	---	< 0.0010
	2/25/1991	0.0050	---	---	---	---	< 0.0010
	6/9/1991	0.0050	---	---	---	---	0.0600
	9/19/1991	0.0050	---	---	---	---	0.0020
	12/9/1991	0.0020	---	---	---	---	0.0140
	3/18/1992	0.0070	---	---	---	---	0.0400
	6/9/1992	0.0170	---	---	---	---	0.0020
	9/11/1992	< 0.0010	---	---	---	---	0.0330
	12/2/1992	0.0010	---	---	---	---	0.0420
	3/25/1993	< 0.0010	---	---	---	---	0.0060
	5/28/1993	0.0020	---	---	---	---	0.0060
	8/27/1993	0.0020	---	---	---	---	< 0.0010
	12/21/1993	< 0.0010	---	---	---	---	< 0.0010
	3/11/1994	0.0010	---	---	---	---	0.0020
	6/3/1994	0.0010	---	---	---	---	0.115
	9/9/1994	< 0.0010	---	---	---	---	0
	10/26/1994	< 0.0010	---	---	---	---	< 0.0010
	3/8/1995	0.0040	---	---	---	---	< 0.0010
	6/19/1995	0.0020	---	---	---	---	0.0270
	9/21/1995	0.0010	---	---	---	---	0.0220
	9/3/1996	0.0070	---	---	---	---	0.0080
	2/26/1997	< 0.0010	---	---	---	---	0.0020
	6/10/1997	0.0030	---	< 0.0100	< 0.0500	< 0.0500	0.300
	9/8/1997	0.0020	---	---	---	---	0.0010
	12/8/1997	0.0130	---	< 0.0050	< 0.0500	< 0.0500	0.362

TABLE C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
AL-1	4/6/1998	0.0210	—	—	—	—	0.437
	4/22/1998	0.0190	—	< 0.0050	< 0.0500	< 0.0500	0.493
	12/9/1998	0.0140	—	< 0.0050	< 0.0500	< 0.0500	0.328
	2/11/1999	0.0200	—	—	—	—	0.308
	6/15/1999	0.0170	—	< 0.0050	< 0.0500	< 0.0500	0.288
	8/6/1999	0.0130	—	—	—	—	0.381
	12/1/1999	0.0100	—	< 0.0050	< 0.0500	< 0.0500	0.269
	1/26/2000	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.331
AL-4	1/27/1986	0.0050	—	—	—	—	0.0020
	6/2/1986	0.0040	—	—	—	—	0.0010
	11/5/1986	0.0100	—	—	—	—	0.0010
	3/16/1987	0.0030	—	—	—	—	0.0020
	5/4/1987	0.0010	—	—	—	—	0.0010
	8/21/1987	0.0040	—	—	—	—	0.0010
	10/28/1987	0.0060	—	—	—	—	0.0010
	3/22/1988	0.0040	—	—	—	—	0.0010
	5/11/1988	0.0050	—	—	—	—	0.0010
	12/7/1988	0.0040	—	—	—	—	< 0.0010
	3/7/1989	0.0040	—	—	—	—	< 0.0010
	9/14/1989	0.0060	—	—	—	—	0.0010
	3/19/1990	0.0030	—	—	—	—	< 0.0010
	9/17/1990	0.0050	—	—	—	—	< 0.0010
	2/25/1991	0.0030	—	—	—	—	< 0.0010
	9/23/1991	0.0040	—	—	—	—	< 0.0010
	3/18/1992	0.0050	—	—	—	—	0.0020
	9/11/1992	0.0010	—	—	—	—	0.0010
	3/25/1993	0.0020	—	—	—	—	< 0.0010
	8/27/1993	0.0040	—	—	—	—	< 0.0010
	3/11/1994	0.0010	—	—	—	—	< 0.0010
	9/9/1994	0.0020	—	—	—	—	< 0.0010
	3/8/1995	0.0030	—	—	—	—	< 0.0010
	9/21/1995	0.0030	—	—	—	—	< 0.0010
	9/3/1996	< 0.0010	—	—	—	—	< 0.0010
	9/18/1996	0.0070	—	—	—	—	0.0010
	2/26/1997	0.0020	—	—	—	—	< 0.0010
	9/8/1997	0.0030	—	—	—	—	< 0.0010
	4/14/1998	0.0060	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0730
	6/24/1998	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0340
	9/25/1998	0.0040	—	—	—	—	0.0290
	2/16/1999	0.0060	—	—	—	—	0.0230
	8/6/1999	0.0080	—	—	—	—	0.0300
	1/26/2000	0.0040	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0110
AL-5	1/27/1986	0.0050	—	—	—	—	0.0020
	6/2/1986	0.0060	—	—	—	—	0.0010

TABLE C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
AL-5	11/5/1986	0.0130	---	---	---	---	0.0010
	3/16/1987	0.0050	---	---	---	---	0.0020
	5/4/1987	0.0010	---	---	---	---	0.0010
	8/21/1987	0.0070	---	---	---	---	0.0010
	10/28/1987	0.0080	---	---	---	---	0.0010
	3/22/1988	0.0060	---	---	---	---	0.0010
	5/11/1988	0.0090	---	---	---	---	0.0010
	12/7/1988	0.0070	---	---	---	---	< 0.0010
	3/7/1989	0.0050	---	---	---	---	< 0.0010
	9/14/1989	0.0080	---	---	---	---	< 0.0010
	3/19/1990	0.0050	---	---	---	---	< 0.0010
	9/17/1990	0.0080	---	---	---	---	< 0.0010
	2/25/1991	0.0050	---	---	---	---	< 0.0010
	9/23/1991	0.0070	---	---	---	---	0.0010
	3/18/1992	0.0090	---	---	---	---	0.0170
	9/11/1992	0	---	---	---	---	< 0.0010
	3/25/1993	0.0040	---	---	---	---	< 0.0010
	8/27/1993	0.0030	---	---	---	---	< 0.0010
	3/11/1994	0.0030	---	---	---	---	< 0.0010
	9/9/1994	0.0020	---	---	---	---	< 0.0010
	3/8/1995	0.0040	---	---	---	---	< 0.0010
	9/21/1995	0.0040	---	---	---	---	0.0010
	9/3/1996	0.0030	---	---	---	---	< 0.0010
	9/18/1996	0.0080	---	---	---	---	0.0010
	2/26/1997	0.0030	---	---	---	---	< 0.0010
	9/8/1997	0.0040	---	---	---	---	< 0.0010
	4/6/1998	0.0080	---	---	---	---	0.121
	9/25/1998	0.0070	---	---	---	---	0.130
	2/16/1999	0.0140	---	---	---	---	0.137
	8/6/1999	0.0060	---	---	---	---	0.118
	1/26/2000	0.0050	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.108
AL-6	1/27/1986	0.0050	---	---	---	---	0.0020
	6/2/1986	0.0060	---	---	---	---	0.0010
	9/15/1986	0.0080	---	---	---	---	0.0010
	11/5/1986	0.0140	---	---	---	---	0.0010
	3/16/1987	0.0220	---	---	---	---	0.0150
	5/4/1987	0.0010	---	---	---	---	0.0050
	8/21/1987	0.0060	---	---	---	---	0.0070
	10/28/1987	0.0050	---	---	---	---	0.0040
	3/15/1988	0.0060	---	---	---	---	0.0010
	5/4/1988	0.0080	---	---	---	---	0.0060
	12/6/1988	0.0070	---	---	---	---	< 0.0010
	3/7/1989	0.0070	---	---	---	---	< 0.0010
	9/14/1989	0.0070	---	---	---	---	0.0040

TABLE C-3. PMC LUCKY Mc FRASER DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
AL-6	3/15/1990	0.0020	---	---	---	---	< 0.0010
	9/17/1990	0.0070	---	---	---	---	< 0.0010
	2/25/1991	0.0070	---	---	---	---	< 0.0010
	9/19/1991	0.0060	---	---	---	---	0.0010
	3/18/1992	0.0070	---	---	---	---	0.0390
	9/11/1992	0.0020	---	---	---	---	< 0.0010
	3/25/1993	0.0040	---	---	---	---	0.0010
	8/27/1993	0.0050	---	---	---	---	< 0.0010
	3/11/1994	0.0010	---	---	---	---	< 0.0010
	9/9/1994	0.0020	---	---	---	---	< 0.0010
	3/8/1995	0.0030	---	---	---	---	< 0.0010
	9/21/1995	0.0050	---	---	---	---	< 0.0010
	9/3/1996	0.0060	---	---	---	---	< 0.0010
	2/26/1997	0.0030	---	---	---	---	< 0.0010
	9/8/1997	0.0060	---	---	---	---	< 0.0010
	4/6/1998	0.0100	---	---	---	---	0.125
	9/25/1998	0.0080	---	---	---	---	0.106
	2/10/1999	0.0160	---	---	---	---	0.130
	8/6/1999	0.0050	---	---	---	---	0.128
	1/25/2000	0.0060	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.124

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY.

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-1	5/11/1979	8.20	3610	1900	610	---	---
	6/19/1980	7.32	11776	5840	120	1.000	0.100
	9/25/1980	7.24	11794	5900	78.0	0.100	0.150
	12/17/1980	7.31	11656	6120	180	0.0500	0.320
	6/16/1981	7.05	8229	5890	60.0	0.0800	0.0880
	12/17/1981	6.80	6800	5400	191	10.0	0.0800
	3/31/1982	6.94	9927	5540	130	4.80	0.420
	6/21/1982	6.77	6100	5100	140	3.20	0.330
	9/23/1982	6.86	6200	4700	200	3.50	0.420
	12/17/1982	7.00	8260	4400	290	9.60	0.890
	3/1/1983	7.12	9204	4750	142	6.10	0.430
	6/2/1983	7.07	7198	3720	215	17.3	0.0480
	9/22/1983	6.90	9000	5120	167	20.4	0.468
	11/11/1983	7.17	10620	4100	283	14.9	0.623
	3/13/1984	7.38	10620	4880	258	10.3	0.583
	6/11/1984	6.75	7080	4180	323	7.67	0.707
	9/26/1984	6.91	9440	4620	357	1.66	0.809
	12/5/1984	6.90	10620	5100	358	5.62	0.918
	3/11/1985	7.32	7080	5750	234	0.780	0.870
	5/23/1985	7.11	8260	5000	354	4.60	1.40
	9/26/1985	6.70	4130	4760	444	2.64	2.69
	12/5/1985	6.67	9880	5030	427	2.25	2.30
	3/6/1986	6.97	9500	5040	433	2.31	1.87
	6/11/1986	6.20	10202	5258	457	4.13	0.999
	9/9/1986	6.96	8268	5397	458	1.75	0.619
	12/12/1986	6.21	10293	6100	508	3.20	0.762
	3/5/1987	6.29	12232	5789	505	4.10	0.669
	6/1/1987	6.25	10678	5794	506	7.50	0.758
	9/17/1987	6.31	10600	5926	513	3.90	0.634
	10/29/1987	6.14	10583	5687	485	8.00	0.536
	3/29/1988	6.47	11240	6736	106	5.20	0.411
	6/1/1988	5.89	9800	6491	548	6.60	0.428
	9/26/1988	6.26	10103	6177	496	3.30	---
	12/8/1988	6.00	9736	7000	488	2.10	---
	3/9/1989	6.01	10221	6344	505	1.49	---
	6/19/1989	5.93	10704	6905	460	1.05	---
	9/28/1989	6.05	10500	6580	517	1.48	0.282
	12/12/1989	5.60	10340	7275	448	5.70	---
	3/14/1990	5.86	9200	6676	506	2.50	---
	6/12/1990	6.09	9380	6350	493	0.470	---
	9/17/1990	6.17	9240	6620	479	0.300	0.152
	12/13/1990	6.18	10060	6445	482	0.550	---
	2/26/1991	5.45	11900	6889	459	1.62	---
	6/10/1991	5.58	9980	7137	487	2.07	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-1	9/19/1991	6.68	9700	6093	485	0.0400	0.214
	12/9/1991	5.80	9770	6368	467	0.970	---
	3/17/1992	5.91	9370	6121	457	< 0.0100	0.136
	6/10/1992	5.35	9990	6112	451	3.19	---
	9/9/1992	5.23	9880	6343	464	0.800	0.265
	12/10/1992	7.23	9730	5216	369	< 0.100	---
	3/22/1993	5.66	9666	3072	461	< 0.100	0.116
	6/2/1993	7.03	9315	6781	497	1.90	---
	8/26/1993	4.38	7840	6734	406	3.50	0.310
	12/21/1993	4.46	8554	6035	426	0.950	---
	3/10/1994	5.16	7465	6266	565	0.650	0.194
	6/6/1994	4.79	6623	6276	448	1.06	---
	9/9/1994	5.23	6691	6302	442	0.480	0.122
	11/28/1994	4.70	6053	6631	430	0.860	---
	3/7/1995	4.72	6587	6258	413	1.000	0.623
	6/26/1995	4.79	5676	6116	381	1.40	---
	9/22/1995	4.28	5276	6077	288	0.730	0.602
	12/11/1995	4.30	6496	6361	262	3.39	---
	3/13/1996	5.38	9284	5545	306	0.140	0.157
	12/11/1996	4.26	8154	5410	261	0.430	---
	2/25/1997	3.88	6200	5500	222	0.780	0.934
	6/17/1997	4.58	6500	5650	214	0.620	---
	9/4/1997	5.93	7809	5340	211	0.970	0.0840
	12/8/1997	5.92	7660	4910	223	0.330	---
	2/1/1998	4.95	5312	---	---	---	---
	4/6/1998	4.28	6100	4900	134	6.46	0.946
	6/11/1998	5.41	6000	4600	121	2.43	---
	9/15/1998	5.29	6443	5090	174	2.22	0.239
	12/3/1998	4.82	5351	4810	168	5.55	---
	2/1/1999	4.95	5312	4230	193	13.9	0.531
	6/14/1999	5.67	4501	4580	144	5.98	---
	8/30/1999	4.04	3560	4950	140	9.03	0.631
	12/28/1999	4.36	7253	5150	167	8.74	---
	3/7/2000	4.32	5419	4540	159	13.2	0.861
C-3	4/6/1979	7.70	9160	3200	240	---	0.100
	6/10/1980	7.01	10214	4120	280	0.210	0.0320
	9/23/1980	7.00	9821	4100	250	0.0500	0.0320
	12/5/1980	6.98	9848	4450	240	0.0500	0.0250
	3/9/1981	6.97	7969	4160	278	0.0700	0.130
	6/16/1981	7.06	8134	4090	270	0.0500	0.0160
	9/18/1981	6.75	7424	4210	220	0.0500	0.0180
	12/15/1981	7.05	5600	3250	255	8.47	0.0090
	3/31/1982	6.85	7700	4320	200	0.150	0.0069
	6/10/1982	6.84	8000	3900	310	0.0500	0.0200

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-3	9/22/1982	6.81	8440	3500	260	0.0500	0.0320
	12/20/1982	7.14	9440	3800	286	0.0500	0.0460
	2/28/1983	7.08	9440	3500	243	2.26	0.0310
	6/1/1983	7.10	7080	2980	237	7.61	0.0570
	9/7/1983	6.98	8500	4080	238	10.6	0.0690
	11/11/1983	7.36	10620	3800	240	2.29	0.0450
	3/15/1984	7.08	11800	4020	242	2.94	0.0490
	5/31/1984	7.03	10620	4020	242	0.0500	0.0660
	9/24/1984	7.03	7670	2960	281	1.88	0.0650
	12/5/1984	7.13	7080	4200	274	0.400	0.193
	3/11/1985	7.13	7080	5130	247	0.0900	0.0880
	5/31/1985	6.98	5900	4640	253	0.610	0.0990
	9/26/1985	7.10	4720	3950	257	0.0800	0.0560
	12/4/1985	6.88	10103	4150	256	0.0700	0.0830
	3/4/1986	6.83	7297	4280	254	0.120	0.119
	6/11/1986	6.57	10239	4424	244	0.0600	0.0620
	9/11/1986	6.84	10293	4795	269	0.210	0.0370
	12/12/1986	6.80	10293	4830	270	1.02	0.0750
	3/25/1987	7.15	10511	4539	249	1.54	0.0390
	5/28/1987	6.67	10085	4807	280	0.110	0.0080
	8/20/1987	6.79	10800	4783	272	4.50	0.0354
	10/29/1987	6.79	10684	4636	268	4.50	0.666
	3/23/1988	6.92	11140	4741	264	0.330	0.0956
	5/11/1988	6.99	9300	4849	280	0.690	0.0280
	9/15/1988	6.81	9879	5000	284	0.130	---
	12/9/1988	6.80	9624	5068	261	0.0600	---
	3/9/1989	6.80	10106	4892	296	0.0300	---
	6/19/1989	6.76	10293	4827	261	0.0600	---
	9/28/1989	6.99	10690	5408	297	0.0500	0.0090
	12/12/1989	6.76	10100	5624	286	0.0500	---
	3/14/1990	6.88	8980	4519	274	0.0400	---
	6/12/1990	6.75	8620	4573	269	0.0400	---
	9/17/1990	6.89	8050	4978	262	< 0.0100	0.0185
	12/13/1990	6.92	9560	4476	272	4.50	---
	2/26/1991	6.64	10300	4596	295	0.300	---
	6/10/1991	---	9470	6235	279	7.17	---
	9/19/1991	7.46	9500	4480	268	< 0.0100	0.0070
	12/9/1991	7.65	9880	4844	281	0.190	---
	3/17/1992	7.58	9260	4667	224	< 0.100	---
	6/10/1992	6.83	10100	4429	269	< 0.100	---
	9/9/1992	7.21	10000	4770	284	< 0.100	0.0120
	12/10/1992	7.66	9730	4620	260	< 0.100	---
	3/24/1993	7.36	10301	4511	278	< 0.100	---
	6/1/1993	7.12	9535	4392	293	0.600	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-3	8/23/1993	6.65	9143	4763	287	< 0.100	0.0180
	12/21/1993	6.53	9040	4752	263	< 0.100	---
	3/10/1994	6.60	8154	4540	294	< 0.100	---
	6/6/1994	6.75	7185	4727	264	0.450	---
	9/9/1994	6.81	7308	4982	284	< 0.100	0.0130
	11/28/1994	6.54	6410	5052	284	< 0.100	---
	3/7/1995	6.72	7409	4779	286	< 0.100	---
	6/26/1995	6.79	6443	4697	259	< 0.100	---
	9/22/1995	6.59	5635	4550	260	< 0.100	0.0180
	12/11/1995	6.68	3489	4814	277	< 0.100	---
	3/14/1996	6.45	9985	4615	278	< 0.100	---
	12/11/1996	6.55	9637	4250	251	0.790	---
	2/25/1997	6.60	7900	4770	264	< 0.100	---
	6/18/1997	6.80	7500	4750	286	< 0.100	---
	9/4/1997	7.10	9318	4710	269	0.130	0.0100
	12/8/1997	7.04	9437	4400	263	< 0.100	---
	2/2/1998	7.01	6841	---	---	---	---
	4/6/1998	7.16	9100	4770	273	< 0.100	---
	6/23/1998	7.61	7200	4540	277	0.440	---
	9/15/1998	6.94	8591	4850	281	0.100	0.0354
	12/3/1998	7.20	7072	4810	275	< 0.100	---
	2/2/1999	7.01	6841	4730	274	< 0.100	---
	6/14/1999	7.21	6407	4660	270	1.01	---
	8/30/1999	6.65	4525	4940	281	0.180	0.0612
	12/28/1999	7.54	9773	4810	284	< 0.100	---
	3/7/2000	7.14	7651	4870	291	< 0.100	---
C-5	5/11/1979	8.70	7300	3050	290	---	0.0510
	6/4/1980	8.25	9158	4100	290	0.0700	0.0930
	9/23/1980	7.50	9166	4100	230	0.0500	0.0280
	12/5/1980	7.85	8480	4070	220	0.0500	0.0280
	3/9/1981	7.96	8229	4080	224	0.0700	0.0240
	6/16/1981	8.28	5760	4020	280	0.0500	0.0100
	9/17/1981	7.85	8635	4160	180	0.0500	0.0110
	12/15/1981	7.86	5185	3800	223	7.60	0.0070
	3/15/1982	7.88	5829	4100	160	0.0500	0.0029
	6/3/1982	7.57	10000	3900	190	0.0600	0.0210
	9/21/1982	7.90	7750	3700	260	0.0500	0.0280
	12/21/1982	8.00	9440	4000	200	0.0500	0.0400
	2/22/1983	8.06	9440	3300	201	1.72	0.0740
	6/3/1983	8.00	8850	3620	183	6.86	0.0330
	9/3/1983	7.64	8500	4480	190	19.9	0.0650
	11/11/1983	7.83	10620	4240	187	2.93	0.0700
	3/10/1984	8.02	10620	4540	192	2.43	0.0540
	5/17/1984	7.92	10030	4340	183	0.290	0.0870

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-5	9/25/1984	8.09	8260	7320	153	2.39	0.0250
	3/11/1985	8.10	5900	4920	170	0.170	0.0920
	9/26/1985	7.90	4130	3860	174	0.210	0.0330
	3/4/1986	7.28	9542	4250	155	0.0600	0.0960
	9/11/1986	7.75	8419	4308	170	4.84	0.0460
	3/18/1987	7.75	9214	4264	166	0.130	0.142
	8/17/1987	7.78	8600	4570	172	3.40	0.0256
	3/23/1988	7.20	9480	4666	170	0.200	0.0530
	9/15/1988	7.37	8981	4555	163	0.450	—
	12/9/1988	7.68	8376	4907	168	0.0800	0.0281
	3/8/1989	7.88	7991	4004	160	0.120	—
	6/20/1989	7.55	8749	4486	168	0.0300	—
	9/28/1989	7.76	8400	4618	168	0.170	0.0210
	12/12/1989	7.52	8350	4991	164	< 0.0500	—
	3/15/1990	7.56	7860	4345	163	0.680	—
	6/12/1990	7.65	7390	4458	160	0.0200	—
	9/17/1990	7.81	6550	4905	165	< 0.0100	0.0041
	12/26/1990	7.70	7680	4259	158	9.60	—
	2/26/1991	7.41	8500	4102	171	0.600	—
	6/10/1991	7.76	8230	3990	201	4.06	—
	9/19/1991	7.70	8500	4480	169	0.0400	0.0030
	12/9/1991	8.00	8590	4487	179	0.0300	—
	3/17/1992	7.96	8340	4565	163	< 0.100	—
	6/10/1992	7.60	8770	4086	161	< 0.100	—
	9/9/1992	7.92	8270	4502	165	< 0.100	0.0050
	12/10/1992	7.94	8300	4389	173	< 0.100	—
	3/24/1993	7.88	8514	4383	169	< 0.100	—
	6/1/1993	7.42	8078	4525	188	6.30	—
	8/26/1993	7.37	7634	4328	166	3.10	0.0100
	12/20/1993	7.59	7268	4313	161	0.190	—
	3/10/1994	7.44	7120	4530	158	< 0.100	—
	6/6/1994	7.37	6431	4342	152	0.640	—
	9/7/1994	7.35	6152	4564	153	0.740	0.0140
	11/28/1994	7.31	6308	4553	165	0.420	—
	3/7/1995	7.42	6585	4447	160	1.47	—
	6/26/1995	7.44	5262	3895	116	< 0.100	—
	9/22/1995	7.34	4939	3564	112	0.170	0.0220
	12/11/1995	7.29	5353	3784	128	0.250	—
	3/14/1996	6.81	7338	3670	122	1.56	—
	12/11/1996	7.54	8532	4190	148	2.09	—
	2/25/1997	7.50	6900	4320	146	< 0.100	—
	6/17/1997	7.21	6500	4440	164	< 0.100	—
	9/4/1997	7.95	8249	4620	149	< 0.100	0.0040
	12/8/1997	7.83	8104	4290	150	0.410	—

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-5	2/3/1998	7.57	6624	—	—	—	—
	4/6/1998	7.73	8100	4720	158	< 0.100	—
	6/23/1998	8.36	7000	4480	156	< 0.100	—
	9/15/1998	7.57	7410	4300	144	0.570	0.0340
	12/3/1998	7.74	6550	4550	151	< 0.100	—
	2/3/1999	7.57	6624	4320	140	0.550	—
	6/9/1999	7.58	5800	4490	147	1.59	—
	8/30/1999	7.28	4689	4850	147	0.340	0.0060
	12/28/1999	8.12	8288	4450	145	0.760	—
	3/7/2000	7.89	7013	4500	159	0.420	—
C-7	4/5/1979	6.70	9590	3140	430	—	4.70
	12/8/1995	6.46	5534	4162	357	30.4	4.81
	3/15/1996	4.74	9198	6572	466	< 0.100	—
	11/27/1996	6.49	5076	1620	227	1.88	0.730
	3/10/1997	6.74	3490	1080	216	0.410	0.399
	6/17/1997	6.61	4800	1220	195	0.290	—
	9/4/1997	7.26	4172	1220	187	1.33	0.454
	12/8/1997	7.14	4108	1230	186	< 0.100	—
	2/3/1998	7.00	6477	—	—	—	—
	4/14/1998	7.29	3870	1300	225	< 0.100	0.538
	6/23/1998	7.12	4510	1860	220	5.50	—
	9/15/1998	6.95	4897	1950	211	8.95	1.23
	12/3/1998	7.61	4154	2570	134	9.60	—
	2/3/1999	7.00	6477	—	—	—	—
	6/14/1999	7.05	5819	5660	260	17.6	—
	8/30/1999	—	—	4240	277	19.3	3.34
	9/8/1999	6.56	4701	4240	277	19.3	3.34
	12/28/1999	7.38	8687	4000	275	21.1	—
	3/27/2000	6.85	8674	4170	283	23.9	3.31
C-8	3/22/1993	6.78	5972	3041	366	< 0.100	0.0390
	3/22/1993	6.96	6201	3307	380	< 0.100	0.0640
	3/22/1993	6.98	6806	3680	395	< 0.100	0.210
	3/13/1996	6.27	8421	4350	246	0.320	0.979
	2/25/1997	6.35	6800	4600	260	0.350	0.665
	2/1/1998	7.00	6229	—	—	—	—
	4/6/1998	7.37	4600	3000	128	4.86	0.284
	2/1/1999	7.00	6229	—	—	—	—
	3/7/2000	7.27	6588	4130	246	1.96	0.0885
C-9	10/16/1992	—	—	10857	36.9	614	0.0730
	2/26/1993	6.78	21480	10936	373	879	0.0750
	6/4/1993	6.75	19438	12444	401	513	0.112
	9/3/1993	6.62	17704	11570	351	748	0.0980
	11/30/1993	6.84	15392	11287	331	666	0.233

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-9	3/4/1994	6.65	13854	11207	376	1091	0.165
	6/8/1994	6.71	12810	11656	357	740	---
	9/19/1994	6.79	11773	11839	365	676	0.140
	12/2/1994	6.80	12954	12071	380	632	---
	2/24/1995	6.57	13875	12038	370	659	0.294
	6/20/1995	7.08	12565	12101	368	669	---
	9/13/1995	6.24	5599	6214	239	526	0.0180
	12/12/1995	6.41	7391	5995	241	277	---
	2/28/1996	---	19304	9890	332	556	0.131
	5/22/1996	7.18	21000	12441	383	605	---
	9/12/1996	6.68	14782	10200	310	520	0.120
	12/11/1996	7.62	15389	8990	320	517	---
	3/7/1997	7.88	14500	11800	332	549	0.164
	6/10/1997	6.64	13800	12200	381	607	---
	9/16/1997	8.29	12377	7100	228	379	0.0900
	12/3/1997	7.58	17444	9730	318	524	---
	1/26/1998	7.41	13666	---	---	---	---
	3/12/1998	8.28	16000	12300	364	636	0.204
	6/11/1998	7.68	3800	10200	347	511	---
	9/8/1998	7.72	13031	11500	372	681	0.193
	10/23/1998	7.52	12518	11100	369	593	---
	1/26/1999	7.41	13666	---	---	---	---
	6/2/1999	7.47	9992	12200	372	601	---
	8/30/1999	---	---	12000	369	580	0.207
	9/8/1999	7.14	11324	12000	369	580	0.207
	11/16/1999	8.25	8563	12300	374	565	---
	3/13/2000	8.29	13104	11300	357	615	0.199
C-10	12/6/1992	6.90	17340	7722	667	745	0.411
	2/26/1993	6.67	21217	9125	895	1511	0.296
	6/4/1993	6.80	21479	11634	9758	1128	0.559
	9/3/1993	6.57	19248	10456	734	1383	0.449
	11/30/1993	7.09	17778	10505	726	1077	0.977
	3/4/1994	6.73	16466	10538	903	2510	0.903
	6/8/1994	6.53	15513	11106	910	1649	---
	9/19/1994	6.83	14506	11870	920	1562	0.908
	12/2/1994	6.75	15808	11699	920	1508	---
	2/24/1995	6.67	17344	12191	896	1664	1.21
	6/20/1995	7.10	15142	10880	875	1429	---
	9/13/1995	7.02	9205	12117	895	1254	0.947
	12/12/1995	6.72	13550	12683	869	1339	---
	2/28/1996	6.92	26413	12140	806	1209	0.888
	5/22/1996	7.21	25900	13081	886	1207	---
	9/12/1996	6.85	21850	12700	775	1267	0.993
	12/11/1996	7.83	22887	11100	776	1379	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
C-10	3/7/1997	7.85	9500	12300	657	1110	0.913
	6/10/1997	6.66	17000	12500	891	1310	—
	9/16/1997	7.46	23618	12000	876	1490	0.796
	12/3/1997	6.93	22496	11600	831	1290	—
	1/26/1998	7.35	16539	—	—	—	—
	3/12/1998	7.98	19500	12400	756	1540	1.15
	6/11/1998	7.36	20000	12200	851	1650	—
	9/8/1998	7.34	17565	13000	871	1740	1.29
	10/23/1998	7.27	12780	12700	871	1540	—
	1/26/1999	7.35	16537	2790	270	0.470	0.0862
	6/2/1999	7.54	12575	11800	842	1910	—
	8/30/1999	—	—	9700	737	2000	0.610
	9/8/1999	6.95	13471	—	—	—	—
	11/16/1999	8.22	10210	9850	761	2060	—
	3/13/2000	8.10	16112	9580	664	2160	0.841
P-5	12/9/1992	6.75	7710	2797	586	106	—
	11/30/1993	—	6448	2601	410	253	—
	12/1/1994	6.29	6147	2880	427	677	—
	2/13/1995	6.37	6727	2878	424	655	—
	12/8/1995	6.94	4992	3390	319	147	—
	12/11/1996	7.14	8133	2510	373	421	—
	12/1/1997	6.64	9771	2940	398	642	—
	10/22/1998	6.69	5500	3200	265	221	—
	11/15/1999	7.02	3875	3350	228	156	—
P-8	3/8/1985	6.70	12036	5270	372	0.340	0.520
	5/9/1985	6.76	10620	4850	414	250	0.442
	8/13/1985	6.38	10620	4120	465	0.250	0.402
	11/12/1985	6.72	13233	4680	524	621	0.445
	2/28/1986	6.55	12624	4660	464	619	0.377
	5/23/1986	6.48	12030	4207	464	490	0.338
	9/28/1986	6.77	14436	4764	538	565	0.209
	12/5/1986	7.35	13110	5090	556	570	0.358
	2/11/1987	6.24	11562	4957	383	740	0.308
	5/26/1987	7.54	8997	5233	568	1239	0.318
	8/13/1987	6.43	14600	5239	574	618	0.268
	10/27/1987	6.48	14320	5185	558	630	0.366
	1/26/1988	6.40	15000	5753	581	630	0.367
	3/3/1988	6.40	15000	5753	581	630	0.367
	5/3/1988	6.08	15000	5514	571	444	0.375
	9/8/1988	6.32	11752	4897	495	530	0.497
	12/12/1988	6.33	12448	5579	534	520	—
	3/15/1989	6.35	10707	5050	480	456	0.386
	6/22/1989	6.41	13747	5209	536	528	—
	9/28/1989	—	12060	5124	536	570	0.360

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-8	9/29/1989	6.36	12060	5124	536	570	0.360
	12/13/1989	6.68	11500	5637	546	606	---
	3/27/1990	6.35	11830	4942	561	540	0.455
	6/12/1990	6.25	10700	4834	534	500	---
	9/19/1990	6.17	10100	5294	467	415	0.452
	12/28/1990	6.48	11700	4891	527	475	---
	2/14/1991	6.29	12400	4385	560	510	1.34
	5/30/1991	6.03	10500	6253	552	70.7	---
	9/12/1991	6.85	11175	4452	542	336	0.447
	11/26/1991	6.45	11500	1818	227	82.1	---
	2/13/1992	6.50	12400	4232	546	251	1.000
	6/1/1992	6.35	11700	4186	544	421	---
	6/2/1992	6.35	11700	4186	544	421	---
	9/16/1992	6.30	11800	4436	567	204	1.09
	11/23/1992	6.43	11515	4128	567	273	---
	2/24/1993	6.56	11355	4281	570	532	0.646
	6/24/1993	6.41	10209	4194	552	424	---
	9/2/1993	6.91	10293	4775	463	431	0.964
	11/29/1993	6.41	8782	4525	339	269	---
	3/3/1994	6.32	7518	4358	419	290	1.05
	6/14/1994	6.84	6999	3778	212	254	---
	9/20/1994	6.27	7059	4026	379	231	1.20
	12/6/1994	6.48	6587	4104	340	208	---
	2/13/1995	6.53	6444	4353	488	205	1.37
	6/20/1995	6.74	5991	3907	317	213	---
	9/11/1995	6.24	5019	3907	309	206	1.03
	12/12/1995	6.34	6056	3911	312	310	---
	2/21/1996	6.43	9128	3634	424	167	1.96
	5/23/1996	6.08	4950	2513	152	47.5	---
	9/3/1996	6.13	5046	2440	148	44.8	1.18
	12/11/1996	6.52	8383	3650	308	254	---
	2/12/1997	6.40	7200	3880	382	238	1.16
	6/5/1997	5.90	7200	3780	351	257	---
	9/16/1997	6.89	8743	3650	366	276	0.911
	12/1/1997	6.42	8982	3810	369	314	---
	1/18/1998	6.95	7120	---	---	---	---
	3/10/1998	6.52	7100	3800	406	319	1.24
	6/8/1998	6.65	7100	4030	397	347	---
	7/28/1998	6.93	8000	4300	515	203	2.07
	10/22/1998	6.64	7010	3980	405	346	---
	1/18/1999	6.95	7120	4050	400	332	1.22
	5/17/1999	7.11	5685	3980	414	342	---
	8/31/1999	6.42	5437	4170	495	305	1.24
	11/9/1999	7.76	4552	4130	428	314	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-8	2/17/2000	6.68	8269	3410	405	389	1.17
P-9	9/22/1988	6.62	10511	4787	674	83.0	0.968
	12/13/1988	6.38	11229	5797	645	78.0	---
	3/15/1989	6.38	9402	4678	652	107	1.01
	6/22/1989	6.36	11813	5053	659	96.0	---
	9/29/1989	6.33	10565	4815	671	125	0.806
	12/13/1989	6.70	10200	5686	650	107	---
	3/29/1990	6.32	9050	4623	671	121	0.865
	6/12/1990	6.28	10340	5453	647	70.2	---
	9/19/1990	6.29	9300	5476	565	87.9	0.862
	12/26/1990	6.37	11200	5158	664	114	---
	2/26/1991	6.30	12400	5137	754	100.0	1.57
	5/31/1991	6.39	8100	5094	658	36.2	---
	9/23/1991	6.74	10740	4887	634	92.0	1.78
	12/16/1991	6.55	11025	4918	645	85.0	---
	2/28/1992	6.49	10720	4222	637	37.2	1.27
	6/2/1992	6.46	11800	5147	600	72.6	---
	9/9/1992	6.73	10185	4697	630	72.3	1.17
	12/2/1992	6.50	10630	4534	571	114	---
	2/24/1993	6.73	11115	4425	580	200	0.756
	6/24/1993	6.48	9991	4447	643	106	---
	9/2/1993	6.64	10087	4576	447	122	1.72
	11/29/1993	6.26	8782	4332	576	76.4	---
	3/4/1994	6.25	8592	4652	668	92.2	2.00
	6/14/1994	6.34	8231	3950	613	105	---
	9/20/1994	6.36	8068	5028	600	98.1	1.82
	12/1/1994	6.44	7904	5314	600	85.7	---
	2/13/1995	6.62	7410	4865	656	113	1.70
	6/20/1995	6.93	7883	5454	572	94.9	---
	9/11/1995	6.21	5791	4630	632	144	1.16
	12/12/1995	6.37	6939	4748	610	84.8	---
	2/21/1996	6.33	10846	4225	550	100.0	2.19
	5/23/1996	6.33	10970	4879	585	82.2	---
	9/3/1996	6.08	9973	4030	560	111	1.63
	12/11/1996	6.27	10565	4530	518	102	---
	2/12/1997	6.49	8900	4760	650	108	1.94
	6/5/1997	5.96	9100	5270	570	92.7	---
	9/12/1997	6.58	10328	4940	464	91.1	1.44
	12/1/1997	6.48	10961	4810	545	109	---
	1/18/1998	6.80	8039	---	---	---	---
	3/11/1998	6.60	9100	4900	542	113	2.23
	6/8/1998	6.76	8600	5320	579	114	---
	7/28/1998	6.81	9000	5000	540	103	2.67
	10/22/1998	6.78	7240	4020	660	137	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
P-9	1/18/1999	6.80	8039	4670	577	120	2.20
	6/1/1999	6.57	5613	4590	597	130	—
	9/8/1999	6.80	6927	4680	736	153	1.19
	11/15/1999	6.91	4929	4940	620	129	—
	2/25/2000	6.94	8699	4030	556	137	2.18
T2-1	6/29/1989	6.77	1755	460	70.8	0.340	0.0590
	9/28/1989	7.31	1980	—	—	—	0.144
T2-2	3/31/1982	—	—	8650	311	—	1.000
	6/2/1982	—	—	8300	460	—	0.700
	8/30/1982	—	—	5100	440	—	0.600
	12/31/1982	—	—	8200	380	—	0.500
	2/4/1983	—	—	7400	487	—	0.900
	5/26/1983	—	—	2220	473	—	0.700
	8/8/1983	—	—	7933	466	—	0.900

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
C-1	6/19/1980	0	0.400	0	0.500	—	—	—
	9/25/1980	< 0.100	0.300	0.400	0.800	—	—	—
	6/16/1981	0.300	0.300	0.400	1.000	—	—	—
	12/17/1981	0.900	0.200	0.440	0.130	—	—	—
	3/31/1982	< 0.200	0.500	0.300	0.100	—	—	—
	6/21/1982	0.700	0.700	0.300	0.100	—	—	—
	9/23/1982	< 2.40	2.50	0.300	0.100	—	—	—
	12/17/1982	0	0.500	0.200	0.100	—	—	—
	3/1/1983	0.160	0.190	0.320	0.200	—	—	—
	6/2/1983	0.236	0.146	0.450	0.214	—	—	—
	9/22/1983	0.921	0.340	0.277	—	—	—	—
	11/11/1983	0.318	0.167	1.42	0.280	—	—	—
	3/13/1984	6.66	0.970	0.545	0.172	—	—	—
	6/11/1984	0.310	0.578	0.516	0.153	—	—	—
	9/26/1984	1.05	0.450	0.531	0.169	—	—	—
	5/23/1985	0.620	0.200	1.11	0.190	—	—	—
	6/11/1986	10.3	3.40	2.80	0.600	—	—	—
	6/1/1987	0.200	—	2.00	0.500	—	—	—
	6/1/1988	6.90	6.80	5.00	1.20	—	—	—
	9/28/1989	1.30	0.600	1.70	0.300	—	—	—
	9/17/1990	< 0.200	—	1.000	0.300	—	—	—
	9/19/1991	< 0.200	—	0.900	0.200	—	—	—
	3/17/1992	< 0.200	—	0.300	0.200	—	—	—
	9/9/1992	< 0.200	—	3.20	0.400	—	—	—
	3/22/1993	< 1.000	—	< 0.200	—	—	—	—
	8/26/1993	< 1.000	—	1.000	0.200	—	—	—
	3/10/1994	< 0.200	—	0.700	0.400	—	—	—
	9/9/1994	< 0.200	—	0.300	0.300	—	—	—
	3/7/1995	< 0.200	—	1.40	0.500	—	—	—
	9/22/1995	< 0.200	—	4.00	0.800	—	—	—
	3/13/1996	< 0.200	—	0.500	0.200	—	—	—
	2/25/1997	< 0.0200	—	2.00	0.400	—	—	—
	9/4/1997	1.70	1.000	0.500	0.200	—	—	—
	4/6/1998	2.10	1.000	2.20	0.300	—	—	—
	9/15/1998	< 0.200	—	0.600	—	—	—	—
	2/1/1999	< 0.200	—	5.30	0.400	—	—	—
	8/30/1999	1.60	—	1.80	0.200	—	—	—
	3/7/2000	0.900	0.500	1.20	0.300	—	—	—
C-3	4/6/1979	5.30	1.30	0.300	0.400	—	—	—
	6/10/1980	0.700	0.600	0.100	0.500	—	—	—
	9/23/1980	0.400	0.500	0.200	0.300	—	—	—
	12/5/1980	< 0.100	0.400	< 0.100	0.300	—	—	—
	3/9/1981	9.10	1.40	1.60	1.20	—	—	—
	6/16/1981	0.600	0.400	0.300	0.400	—	—	—

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
C-3	9/18/1981	0.700	0.200	0.400	0.200	---	---	---
	12/15/1981	1.22	0.340	8.50	0.160	---	---	---
	6/10/1982	0.400	0.500	0.500	0.100	---	---	---
	12/20/1982	< 0.300	0.800	0.200	0.100	---	---	---
	6/1/1983	0.298	0.300	0.344	0.167	---	---	---
	11/11/1983	0.631	0.471	0.676	0.193	---	---	---
	5/31/1984	0.644	0.258	1.21	0.290	---	---	---
	5/31/1985	0	0.480	0.190	0.110	---	---	---
	6/11/1986	1.40	2.60	1.50	0.500	---	---	---
	5/28/1987	0.200	---	0.500	0.300	---	---	---
	5/11/1988	7.50	6.90	0.400	0.600	---	---	---
	9/28/1989	< 1.000	---	0.700	0.200	---	---	---
	9/17/1990	< 0.200	---	0.200	0.200	---	---	---
	9/19/1991	< 0.200	---	0.300	0.200	---	---	---
	9/9/1992	< 0.200	---	1.40	0.300	---	---	---
	8/23/1993	< 1.000	---	< 2.00	---	---	---	---
	9/9/1994	< 0.200	---	0.300	0.300	---	---	---
	9/22/1995	< 0.200	---	1.40	0.600	---	---	---
	9/4/1997	< 0.200	---	< 0.200	---	---	---	---
	9/15/1998	< 0.200	---	< 0.200	---	---	---	---
	8/30/1999	< 0.200	---	< 0.200	---	---	---	---
C-5	5/11/1979	0.100	0.500	0.600	0.400	---	---	---
	6/4/1980	0.200	0.500	0	0.500	---	---	---
	9/23/1980	0	0.300	0.200	0.300	---	---	---
	12/5/1980	< 0.200	0.400	0.400	0.400	---	---	---
	3/9/1981	0.200	0.300	0.300	0.400	---	---	---
	6/16/1981	0.800	0.500	0.900	0.400	---	---	---
	9/17/1981	0.100	0.200	0.200	0.100	---	---	---
	12/15/1981	1.44	0.260	0.610	0.130	---	---	---
	6/3/1982	0.400	0.300	1.000	0.200	---	---	---
	12/21/1982	< 0.200	0.300	0.200	0.100	---	---	---
	6/3/1983	0.0170	0.170	0.180	0.160	---	---	---
	11/11/1983	0.398	0.170	0.995	0.300	---	---	---
	5/17/1984	0.687	0.300	0.717	0.229	---	---	---
	9/26/1985	0.0562	0.300	12.3	0.700	---	---	---
	9/11/1986	0.500	0	0.600	0.800	---	---	---
	8/17/1987	3.40	2.40	0.800	0.400	---	---	---
	12/9/1988	3.30	2.70	0.300	0.400	---	---	---
	9/28/1989	< 1.000	---	0.800	0.200	---	---	---
	9/17/1990	< 0.200	---	< 0.200	---	---	---	---
	9/19/1991	< 0.200	---	< 0.200	---	---	---	---
	9/9/1992	< 0.200	---	1.10	0.200	---	---	---
	8/26/1993	< 1.000	---	0.500	0.100	---	---	---
	9/7/1994	< 0.200	---	< 0.200	---	---	---	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
C-5	9/22/1995	< 0.200	—	0.500	0.400	—	—	—
	9/4/1997	< 0.200	—	< 0.200	—	—	—	—
	9/15/1998	< 0.200	—	< 0.200	—	—	—	—
	8/30/1999	< 0.200	—	< 0.200	—	—	—	—
C-7	4/5/1979	84.0	4.00	6.80	2.20	—	—	—
	12/8/1995	0.600	0.500	12.8	1.40	1.40	0.900	14.2
	3/15/1996	0.600	3.00	17.5	1.50	4.30	0.900	21.8
	11/27/1996	< 0.200	—	4.30	0.500	< 1.000	—	< 5.30
	3/10/1997	< 0.200	—	6.60	0.600	—	—	—
	9/4/1997	< 0.200	—	7.40	0.400	—	—	—
	4/14/1998	< 0.200	—	7.70	0.500	—	—	—
	9/15/1998	< 0.200	—	16.3	1.70	—	—	—
	8/30/1999	< 0.200	—	10.9	1.10	—	—	—
	9/8/1999	< 0.200	—	10.9	1.10	—	—	—
	3/27/2000	0.900	0.600	10.9	1.000	—	—	—
C-8	3/22/1993	< 0.200	—	0.500	0.200	—	—	—
	3/22/1993	< 0.200	—	0.600	0.400	—	—	—
	3/22/1993	< 1.000	—	< 0.200	—	—	—	—
	3/13/1996	< 0.200	—	0.700	0.200	—	—	—
	2/25/1997	< 0.200	—	< 0.200	—	—	—	—
	4/6/1998	< 0.200	—	4.50	0.400	—	—	—
	3/7/2000	< 0.200	—	< 0.200	—	—	—	—
C-9	10/16/1992	< 0.200	—	1.50	0.200	4.10	0.700	5.50
	2/26/1993	< 1.000	—	0.300	0.200	13.3	0.700	13.6
	6/4/1993	< 1.000	0	15.7	1.50	< 1.000	0	16.7
	9/3/1993	1.20	0.100	4.00	0.500	2.30	0.500	6.30
	11/30/1993	< 1.000	0	0.400	0.200	1.80	0.800	2.20
	3/4/1994	< 0.200	0	0.300	0.300	2.60	1.60	2.90
	9/19/1994	< 0.200	0	1.80	1.70	—	—	—
	2/24/1995	< 0.200	—	1.40	0.800	—	—	—
	9/13/1995	< 0.200	—	0.900	0.500	—	—	—
	2/28/1996	< 0.200	—	0.900	0.400	—	—	—
	9/12/1996	< 0.200	—	1.20	0.200	—	—	—
	3/7/1997	< 0.200	—	0.900	0.300	—	—	—
	9/16/1997	< 0.200	—	0.900	0.200	—	—	—
	3/12/1998	< 0.200	—	0.700	0.200	—	—	—
	9/8/1998	< 0.200	—	0.700	—	—	—	—
	8/30/1999	< 0.200	—	0.700	0.200	—	—	—
	9/8/1999	< 0.200	—	0.700	0.200	—	—	—
	3/13/2000	< 0.200	—	< 0.200	—	—	—	—
C-10	12/6/1992	< 0.200	—	1.60	0.600	8.10	2.20	9.70
	2/26/1993	2.80	0.200	25.2	2.00	12.3	0.900	37.5
	6/4/1993	< 1.000	0	7.60	1.10	40.8	1.80	48.4

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
C-10	9/3/1993	< 1.000	0	1.90	0.500	< 1.000	0	2.90
	11/30/1993	< 1.000	0	0.600	0.300	5.10	0.700	5.70
	3/4/1994	< 0.200	0	1.30	0.700	1.20	0.500	2.50
	9/19/1994	< 0.200	0	2.20	0.700	---	---	---
	2/24/1995	< 0.200	---	2.50	1.000	---	---	---
	9/13/1995	4.30	1.20	1.60	0.900	---	---	---
	2/28/1996	2.30	1.40	2.60	0.800	---	---	---
	9/12/1996	2.20	1.70	1.90	0.300	---	---	---
	3/7/1997	2.90	1.70	2.30	0.400	---	---	---
	9/16/1997	4.40	2.10	2.30	0.300	---	---	---
	3/12/1998	3.40	1.90	2.70	0.300	---	---	---
	9/8/1998	1.90	---	2.40	---	---	---	---
	1/26/1999	3.80	---	0.500	---	---	---	---
	8/30/1999	< 0.200	---	2.20	0.400	---	---	---
	3/13/2000	2.00	0.600	2.00	0.300	---	---	---
P-8	3/8/1985	1.15	0.370	1.33	0.240	---	---	---
	5/9/1985	0.159	1.02	1.51	0.260	---	---	---
	5/23/1986	3.90	3.10	2.40	0.600	---	---	---
	12/5/1986	0.500	0	1.30	0.400	---	---	---
	5/26/1987	0.200	0	2.40	0.500	---	---	---
	10/27/1987	17.4	3.60	2.00	0.600	---	---	---
	1/26/1988	19.7	5.70	2.40	0.500	---	---	---
	3/3/1988	19.7	5.70	2.40	0.500	---	---	---
	5/3/1988	19.2	8.10	3.10	1.40	---	---	---
	9/8/1988	2.70	3.10	1.50	0.800	2.60	3.80	4.10
	3/15/1989	0.200	---	1.90	0.400	< 1.000	---	< 2.90
	9/28/1989	< 0.200	---	2.20	0.400	< 1.000	---	3.20
	9/29/1989	0.200	---	2.20	0.400	< 1.000	---	< 3.20
	3/27/1990	0.200	---	1.60	0.300	< 1.000	---	< 2.60
	9/19/1990	3.50	1.50	1.60	0.300	< 1.000	---	< 2.60
	2/14/1991	14.7	3.50	1.30	0.300	< 1.000	---	< 2.30
	9/12/1991	0.200	---	< 0.200	---	< 1.000	---	< 1.20
	2/13/1992	0.200	---	1.20	0.300	1.60	0.800	2.80
	9/16/1992	0.200	---	1.50	0.300	< 1.000	---	< 2.50
	2/24/1993	< 1.000	---	0.700	0.100	< 1.000	---	< 1.70
	9/2/1993	< 1.000	---	1.60	0.400	3.50	0.900	5.10
	3/3/1994	< 0.200	---	1.000	0.600	4.30	2.80	5.30
	9/20/1994	< 0.200	---	1.20	0.500	1.40	1.40	2.60
	2/13/1995	< 0.200	---	1.10	0.800	2.40	1.30	3.50
	9/11/1995	0.500	0.300	1.10	0.500	3.50	1.30	4.60
	2/21/1996	1.000	0.500	1.40	0.300	4.40	0.900	5.80
	9/3/1996	< 0.200	---	3.00	0.300	< 1.000	---	< 4.00
	2/12/1997	< 0.200	---	1.50	0.300	< 1.000	---	< 2.50
	9/16/1997	1.30	0.900	0.700	0.200	< 1.000	---	< 1.70

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
P-8	3/10/1998	< 0.200	—	1.20	0.200	< 1.000	—	< 2.20
	7/28/1998	< 0.200	—	1.60	0.300	3.20	0.300	4.80
	1/18/1999	< 0.200	—	1.000	0.300	< 1.000	—	< 2.00
	8/31/1999	< 0.200	—	1.000	0.200	3.20	0.200	4.20
	2/17/2000	< 0.200	—	1.30	0.200	1.30	0.100	2.60
P-9	9/22/1988	0.200	—	2.50	0.900	4.10	3.90	6.60
	3/15/1989	14.1	1.90	2.40	0.400	< 1.000	—	< 3.40
	9/29/1989	1.40	1.000	3.00	0.400	< 1.000	—	< 4.00
	3/29/1990	0.200	—	2.00	0.300	< 1.000	—	< 3.00
	9/19/1990	0.200	—	6.00	0.800	< 1.000	—	< 7.00
	2/26/1991	0.200	—	1.60	0.300	1.40	0.700	3.00
	9/23/1991	0.200	—	0.900	0.900	< 1.000	—	< 1.90
	2/28/1992	0.200	—	0.600	0.200	< 1.000	—	< 1.60
	9/9/1992	0.200	—	1.40	0.300	< 1.000	—	< 2.40
	2/24/1993	< 1.000	—	1.50	0.200	4.50	0.600	6.00
	9/2/1993	< 1.000	—	3.00	0.500	3.30	1.000	6.30
	3/4/1994	< 0.200	—	1.40	0.600	< 1.000	—	< 2.40
	9/20/1994	< 0.200	—	1.60	0.400	< 1.000	—	< 2.60
	2/13/1995	< 0.200	—	3.00	1.000	< 1.000	—	< 4.00
	9/11/1995	0.500	0.300	2.10	0.600	3.10	1.20	5.20
	2/21/1996	0.700	0.500	1.80	0.400	1.70	0.800	3.50
	9/3/1996	< 0.200	—	2.00	0.300	< 1.000	—	< 3.00
	2/12/1997	< 0.200	—	1.70	0.300	< 1.000	—	< 2.70
	9/12/1997	< 0.200	—	1.30	0.300	< 1.000	—	< 2.30
	3/11/1998	< 0.200	—	2.40	0.300	< 1.000	—	< 3.40
	7/28/1998	< 0.200	—	3.40	0.400	< 1.000	—	< 4.40
	1/18/1999	< 0.200	—	1.60	0.300	< 1.000	—	< 2.60
	9/8/1999	< 0.200	—	1.40	0.200	4.50	0.200	5.90
	2/25/2000	< 0.200	—	2.10	0.300	1.40	0.100	3.50
T2-2	6/2/1982	0.600	—	3.10	—	—	—	—
	12/31/1982	3.00	—	0.900	—	—	—	—
	5/26/1983	4.00	—	0.300	—	—	—	—

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
C-1	6/19/1980	0.0120	---	---	---	---	---
	9/25/1980	0.0260	---	---	---	---	---
	6/16/1981	0.0050	---	---	---	---	---
	12/17/1981	0.0020	---	---	---	---	---
	6/21/1982	0.0050	---	---	---	---	---
	12/17/1982	0.0070	---	---	---	---	---
	6/2/1983	0.0020	---	---	---	---	---
	11/11/1983	0.0020	---	---	---	---	---
	3/13/1984	0.0020	---	---	---	---	---
	6/11/1984	0.0020	---	---	---	---	---
	5/23/1985	0.0020	---	---	---	---	---
	6/11/1986	0.0010	---	---	---	---	---
	3/5/1987	0.0010	---	---	---	---	---
	6/1/1987	0.0010	---	---	---	---	---
	6/1/1988	0.0010	---	---	---	---	---
	9/28/1989	< 0.0010	---	---	---	---	---
	9/17/1990	0.0100	---	---	---	---	---
	9/19/1991	< 0.0010	---	---	---	---	---
	3/17/1992	0.0020	---	---	---	---	---
	9/9/1992	< 0.0010	---	---	---	---	---
	3/22/1993	< 0.0010	0.0300	0.0800	< 0.0500	5.31	0.0010
	8/26/1993	< 0.0010	---	---	---	---	---
	3/10/1994	0.0010	0.0500	0.100	< 0.0500	5.79	< 0.0010
	9/9/1994	< 0.0010	---	---	---	---	---
	3/7/1995	0.0030	0.0890	0.0500	< 0.0500	1.15	< 0.0010
	9/22/1995	0.0630	---	---	---	---	---
	3/13/1996	0.0150	0.0200	0.0600	< 0.0500	3.30	0.0130
	2/25/1997	0.0030	0.200	0.0800	< 0.0500	2.24	< 0.0010
	9/4/1997	0.0020	---	---	---	---	---
	4/6/1998	0.0040	0.200	0.0860	< 0.0500	3.79	0.107
	9/15/1998	0.0030	---	---	---	---	---
	2/1/1999	0.0100	0.0500	< 0.0100	< 0.0500	3.65	0.107
	8/30/1999	0.0030	---	---	---	---	---
	3/7/2000	0.0010	0.160	0.0790	< 0.0500	3.43	0.0300
C-3	4/6/1979	0.0100	---	0.0080	< 0.0050	0.0600	< 0.0500
	6/10/1980	0.0080	---	---	---	---	---
	9/23/1980	0.0330	---	---	---	---	---
	12/5/1980	0.0160	---	---	---	---	---
	3/9/1981	0.0050	---	---	---	---	---
	6/16/1981	0.0050	---	---	---	---	---
	9/18/1981	0.0050	---	---	---	---	---
	12/15/1981	0.0020	---	---	---	---	---
	6/10/1982	0.0050	---	---	---	---	---
	12/20/1982	0.0060	---	---	---	---	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
C-3	6/1/1983	0.0020	---	---	---	---	---
	11/11/1983	0.0020	---	---	---	---	---
	5/31/1984	0.0020	---	---	---	---	---
	5/31/1985	0.0020	---	---	---	---	---
	6/11/1986	0.0010	---	---	---	---	---
	5/28/1987	0.0010	---	---	---	---	---
	5/11/1988	0.0010	---	---	---	---	---
	9/28/1989	< 0.0010	---	---	---	---	---
	9/17/1990	0.0020	---	---	---	---	---
	9/19/1991	0.0010	---	---	---	---	---
	9/9/1992	< 0.0010	---	---	---	---	---
	8/23/1993	< 0.0010	---	---	---	---	---
	9/9/1994	< 0.0010	---	---	---	---	---
	9/22/1995	0.0120	---	---	---	---	---
	9/4/1997	0.0010	---	---	---	---	---
	9/15/1998	0.0020	---	---	---	---	---
	8/30/1999	< 0.0010	---	---	---	---	---
C-5	5/11/1979	0.0140	---	0.0040	< 0.0200	0.0900	0.0430
	6/4/1980	0.0060	---	---	---	---	---
	9/23/1980	0.0270	---	---	---	---	---
	12/5/1980	0.0150	---	---	---	---	---
	3/9/1981	0.0050	---	---	---	---	---
	6/16/1981	0.0050	---	---	---	---	---
	9/17/1981	0.0050	---	---	---	---	---
	12/15/1981	0.0020	---	---	---	---	---
	6/3/1982	0.0050	---	---	---	---	---
	12/21/1982	0.0100	---	---	---	---	---
	6/3/1983	0.0020	---	---	---	---	---
	11/11/1983	0.0020	---	---	---	---	---
	5/17/1984	0.0020	---	---	---	---	---
	9/26/1985	0.0020	---	---	---	---	---
	9/11/1986	0.0010	---	---	---	---	---
	8/17/1987	0.0010	---	---	---	---	---
	12/9/1988	< 0.0010	---	---	---	---	---
	9/28/1989	0.0020	---	---	---	---	---
	9/17/1990	0.0010	---	---	---	---	---
	9/19/1991	< 0.0010	---	---	---	---	---
	9/9/1992	< 0.0010	---	---	---	---	---
	8/26/1993	< 0.0010	---	---	---	---	---
	9/7/1994	< 0.0010	---	---	---	---	---
	9/22/1995	0.0010	---	---	---	---	---
	9/4/1997	< 0.0010	---	---	---	---	---
	9/15/1998	< 0.0010	---	---	---	---	---
	8/30/1999	0.0010	---	---	---	---	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
C-7	4/5/1979	0.0160	---	0.0110	0.0140	0.350	0.250
	12/8/1995	0.0030	< 0.0100	< 0.0100	< 0.0500	0.200	0.0010
	3/15/1996	0.0240	0.120	0.140	< 0.0500	6.50	< 0.0010
	11/27/1996	0.0070	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	3/10/1997	0.0110	< 0.0100	< 0.0100	< 0.0500	< 0.0500	< 0.0010
	9/4/1997	0.0110	---	---	---	---	---
	4/14/1998	0.0050	< 0.0100	< 0.0050	< 0.0500	< 0.0500	0.0050
	9/15/1998	0.0090	---	---	---	---	---
	8/30/1999	0.0080	---	---	---	---	---
	9/8/1999	0.0080	---	---	---	---	---
	3/27/2000	0.0100	< 0.0100	< 0.0050	< 0.0500	0.330	0.211
C-8	3/22/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.110	< 0.0010
	3/22/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.250	< 0.0010
	3/22/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.410	< 0.0010
	3/13/1996	0.0110	0.0100	< 0.0100	< 0.0500	1.40	< 0.0010
	2/25/1997	0.0010	< 0.0100	< 0.0100	< 0.0500	0.980	< 0.0010
	4/6/1998	0.0100	< 0.0100	< 0.0050	< 0.0500	0.0600	0.109
	3/7/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.420	< 0.0010
C-9	10/16/1992	< 0.0010	< 0.0500	< 0.0100	< 0.0500	< 0.0500	0.0370
	2/26/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0700	0.0260
	6/4/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0600	0.0330
	9/3/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0600	0.0300
	11/30/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.0900	0.0530
	3/4/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	0.0110
	9/19/1994	0.0010	---	---	---	---	---
	2/24/1995	< 0.0010	< 0.0050	< 0.0100	< 0.0500	< 0.0500	0.0170
	9/13/1995	< 0.0010	---	---	---	---	---
	2/28/1996	0.0060	< 0.0100	< 0.0100	< 0.0500	0.0800	< 0.0010
	9/12/1996	0.0060	---	---	---	---	---
	3/7/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.0800	0.0100
	9/16/1997	< 0.0010	---	---	---	---	---
	3/12/1998	0.0680	< 0.0100	< 0.0050	< 0.0500	< 0.0500	1.76
	9/8/1998	0.0330	---	---	---	---	---
	8/30/1999	0.0390	---	---	---	---	---
	9/8/1999	0.0390	---	---	---	---	---
	3/13/2000	0.0150	< 0.0100	< 0.0050	< 0.0500	0.0800	1.58
C-10	12/6/1992	< 0.0010	< 0.100	< 0.0100	< 0.0500	1.24	1.09
	2/26/1993	0.0030	< 0.0050	< 0.0100	< 0.0500	1.64	0.0380
	6/4/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	2.22	0.0550
	9/3/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	1.99	0.0210
	11/30/1993	< 0.0010	< 0.0050	< 0.0100	< 0.0500	2.54	0.0380
	3/4/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	2.11	< 0.0010
	9/19/1994	0.0020	---	---	---	---	---

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
C-10	2/24/1995	0.0020	< 0.0050	0.0100	< 0.0500	2.40	0.0210
	9/13/1995	0.0210	—	—	—	—	—
	2/28/1996	0.0240	< 0.0100	< 0.0100	< 0.0500	2.82	0.0120
	9/12/1996	0.0070	—	—	—	—	—
	3/7/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	1.71	0.0320
	9/16/1997	0.0060	—	—	—	—	—
	3/12/1998	0.0600	< 0.0100	0.0800	< 0.0500	1.93	3.19
	9/8/1998	0.0640	—	—	—	—	—
	1/26/1999	0.0030	< 0.0100	< 0.0100	< 0.0500	0.0600	0.233
	8/30/1999	0.0890	—	—	—	—	—
	3/13/2000	0.0450	< 0.0100	0.0050	< 0.0500	1.50	2.93
P-5	2/13/1995	0.0020	< 0.0500	—	—	—	—
P-8	3/8/1985	0.0020	—	—	—	—	0.0070
	5/9/1985	0.0020	—	—	—	—	0.0080
	5/23/1986	0.0010	—	—	—	—	0.0240
	12/5/1986	0.0010	—	—	—	—	0.0120
	5/26/1987	0.0010	—	—	—	—	0.0370
	10/27/1987	0.0010	—	—	—	—	0.0160
	1/26/1988	0.0025	—	—	—	—	0.0310
	3/3/1988	0.0025	—	—	—	—	0.0310
	5/3/1988	0.0010	—	—	—	—	0.0480
	9/8/1988	0.0010	0.0500	0.0100	0.0500	0.250	0.128
	3/15/1989	0.0010	0.0500	0.0100	0.0500	0.290	0.0230
	9/28/1989	< 0.0010	< 0.0500	0.0100	< 0.0500	0.340	0.0350
	9/29/1989	0.0010	0.0500	0.0100	0.0500	0.340	0.0350
	3/27/1990	0.0010	0.0500	0.0100	0.0500	0.410	0.0110
	9/19/1990	0.0010	0.0500	0.0100	0.0500	0.310	0.0070
	2/14/1991	0.0010	0.0100	0.0100	0.0500	0.300	0.0050
	9/12/1991	0.0010	0.0100	0.0100	0.0500	0.280	0.0180
	2/13/1992	0.0020	0.0100	0.0100	0.0500	0.0300	0.213
	9/16/1992	0.0010	0.0500	0.0100	0.0500	0.300	0.0400
	2/24/1993	< 0.0010	< 0.0050	< 0.0100	0.110	0.320	0.0200
	9/2/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.240	0.0200
	3/3/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.370	0.0040
	9/20/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.220	0.0070
	2/13/1995	< 0.0010	< 0.0050	0.0100	< 0.0500	0.170	< 0.0010
	9/11/1995	0.0010	0.360	< 0.0100	< 0.0500	0.190	0.0080
	2/21/1996	0.0040	< 0.0100	< 0.0100	< 0.0500	0.420	0.0180
	9/3/1996	0.0050	< 0.0100	< 0.0100	< 0.0500	0.610	0.0190
	2/12/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.100	0.0040
	9/16/1997	0.0030	< 0.0100	< 0.0100	< 0.0500	0.190	0.853
	3/10/1998	0.0390	< 0.0100	< 0.0050	< 0.0500	0.170	1.20
	7/28/1998	0.0100	< 0.0100	< 0.0500	< 0.0500	0.330	0.763
	1/18/1999	0.0560	< 0.0100	< 0.0100	< 0.0500	0.180	1.11

TABLE C-4. PMC LUCKY Mc CODY SHALE GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
P-8	8/31/1999	0.0270	< 0.0100	0.0050	< 0.0500	0.170	1.17
	2/17/2000	0.0050	< 0.0100	< 0.0050	< 0.0500	0.170	1.20
P-9	9/22/1988	0.0010	0.0500	0.0100	0.0500	0.450	0.0410
	3/15/1989	0.0010	0.0500	0.0100	0.0500	0.360	0.0100
	9/29/1989	0.0010	0.0500	0.0100	0.0500	0.360	0.0120
	3/29/1990	0.0010	0.0500	0.0100	0.0500	0.440	0.0030
	9/19/1990	0.0010	0.0500	0.0100	0.0500	0.530	0.0020
	2/26/1991	0.0010	0.0100	0.0100	0.0500	0.680	0.0040
	9/23/1991	0.0010	0.0100	0.0100	0.0500	0.540	0.0060
	2/28/1992	0.0010	0.0100	0.0100	0.0500	0.200	0.0520
	9/9/1992	0.0010	0.0500	0.0100	0.0500	0.370	0.0100
	2/24/1993	< 0.0010	< 0.0050	< 0.0100	0.270	0.680	0.0060
	9/2/1993	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.520	0.0060
	3/4/1994	< 0.0010	< 0.0050	< 0.0100	< 0.0500	0.460	0.0020
	9/20/1994	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.670	0.0040
	2/13/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.400	< 0.0010
	9/11/1995	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.170	0.0160
	2/21/1996	0.0080	< 0.0100	< 0.0100	< 0.0500	0.480	0.0010
	9/3/1996	0.0110	< 0.0100	< 0.0100	< 0.0500	0.300	0.0020
	2/12/1997	< 0.0010	< 0.0100	< 0.0100	< 0.0500	0.540	0.0050
	9/12/1997	0.0080	< 0.0100	< 0.0100	< 0.0500	0.410	0.619
	3/11/1998	0.0190	< 0.0100	< 0.0050	< 0.0500	0.510	0.560
	7/28/1998	0.0130	< 0.0100	< 0.0500	< 0.0500	0.620	0.578
	1/18/1999	0.0220	< 0.0100	< 0.0100	< 0.0500	0.390	0.472
	9/8/1999	0.0170	< 0.0100	0.0120	< 0.0500	0.280	0.654
	2/25/2000	< 0.0010	< 0.0100	< 0.0050	< 0.0500	0.290	0.463
T2-1	6/29/1989	0.0130	---	---	---	---	---
	9/28/1989	0.0640	---	---	---	---	---
T2-2	6/2/1982	< 0.0050	---	---	---	---	0.400
	12/31/1982	< 0.0050	---	---	---	---	0.0200
	5/26/1983	< 0.0020	---	---	---	---	0.0100

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY.

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
R-2	5/11/1979	7.40	6110	2930	77.0	—	0.0650
	6/10/1980	7.30	6120	2960	100.0	0.0600	0.0530
	9/22/1980	7.06	6030	3000	66.0	0.0500	0.0270
	12/5/1980	7.22	5469	2930	88.0	0.0500	0.0390
	3/9/1981	7.30	6032	2950	120	0.100	0.120
	6/15/1981	7.55	3129	2810	140	0.160	0.0310
	9/17/1981	7.07	6378	2830	150	0.0500	0.0890
	12/21/1981	6.97	6599	2970	159	3.78	0.0160
	3/15/1982	6.95	4808	3000	120	0.0500	0.0100
	6/3/1982	7.10	6500	2700	170	0.0500	0.0200
	9/20/1982	6.98	5900	2700	170	0.0500	0.0390
	12/16/1982	7.33	4700	2900	170	0.150	0.0420
	2/9/1983	7.37	6254	2540	180	2.24	0.0500
	6/7/1983	7.95	6844	2740	172	8.17	0.0330
	9/7/1983	7.35	6000	2960	190	13.8	0.150
	11/9/1983	7.48	7080	2940	187	3.03	0.0370
	3/12/1984	7.41	5900	3140	177	3.89	0.0240
	6/1/1984	7.30	5900	2750	177	0.170	0.0350
	9/25/1984	7.30	5900	2220	194	1.97	0.0240
	1/7/1985	7.24	5900	3420	115	0.220	0.0930
	5/14/1985	7.11	4720	—	—	—	—
	7/25/1985	7.37	4130	2710	149	0.160	0.0510
	1/24/1986	7.30	7684	2480	136	1.84	0.107
	7/31/1986	7.20	6691	2934	144	0.230	0.0280
	3/24/1987	7.80	6382	2952	128	0.340	0.0710
	5/27/1987	7.79	5042	—	—	—	—
	8/16/1987	7.09	6700	3049	146	0.860	0.0220
	3/28/1988	7.04	6915	3119	137	0.200	0.0260
	9/13/1988	7.14	6122	2792	147	2.50	0.194
	12/9/1988	7.16	6256	3126	141	0.110	—
	3/8/1989	7.06	5742	2786	146	0.110	—
	6/19/1989	6.93	6691	2822	151	0.620	—
	9/28/1989	7.36	6500	2981	146	0.410	0.0340
	12/12/1989	6.81	6570	3079	149	0.190	—
	3/15/1990	7.20	6290	2974	150	0.130	—
	6/13/1990	7.08	5800	3037	142	0.150	—
	9/17/1990	7.08	6230	3384	155	0.0400	0.0082
	12/26/1990	7.11	6500	2992	158	0.260	—
	2/26/1991	7.29	6350	2814	144	0.170	—
	6/10/1991	7.12	6070	3388	110	3.25	—
	9/20/1991	7.05	6885	2965	163	0.0500	0.0020
	12/6/1991	7.34	5990	2329	160	0.740	—
	3/17/1992	7.28	6175	2884	162	< 0.0100	—
	6/15/1992	7.08	5575	2851	149	< 0.0100	—

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
R-2	9/11/1992	7.14	6175	2777	201	< 0.100	0.0620
	12/10/1992	7.46	6280	2944	146	5.40	---
	3/24/1993	7.63	6113	2974	156	< 0.100	---
	6/2/1993	7.03	6307	3128	160	0.400	---
	8/31/1993	6.78	5585	2878	144	< 0.100	0.0190
	12/20/1993	6.68	6273	2947	136	1.12	---
	3/10/1994	6.87	6623	3077	145	0.310	---
	6/7/1994	6.90	4939	2919	138	4.00	---
	9/7/1994	6.83	4841	3060	163	0.690	0.0530
	11/30/1994	6.75	5041	3268	165	24.4	---
	3/6/1995	7.04	5219	3006	131	0.770	---
	6/26/1995	6.94	5047	726	95.0	0.500	---
	9/22/1995	6.80	4648	3051	131	1.18	0.183
	12/11/1995	6.78	4812	3358	123	0.720	---
	3/15/1996	6.77	6586	3217	76.8	0.200	---
	6/4/1996	6.46	6200	3232	92.2	< 0.100	---
	9/5/1996	6.60	6367	3300	71.0	0.560	0.0360
	12/11/1996	6.78	6511	3100	77.0	< 0.100	---
	3/10/1997	6.62	5300	3210	114	< 0.100	---
	6/10/1997	6.06	3480	3220	108	54.2	---
	9/12/1997	6.94	5950	3410	70.0	1.30	0.0380
	12/10/1997	7.17	5905	3310	71.3	4.66	---
	4/14/1998	7.03	5700	3300	72.7	0.820	---
	6/29/1998	7.39	4930	3290	75.6	0.110	---
	9/15/1998	6.67	5284	3310	74.1	0.660	1.48
	12/3/1998	7.00	4863	3410	73.0	0.320	---
	2/3/1999	7.60	4678	2410	67.6	0.320	---
	6/15/1999	7.48	4159	2710	79.9	1.44	---
	8/31/1999	6.64	4138	3370	81.6	0.890	0.196
	12/28/1999	7.45	6229	3460	76.4	1.39	---
	3/7/2000	7.24	5186	3450	82.0	0.910	---
R-4	5/11/1979	7.40	7870	4050	120	---	0.0510
	6/11/1980	7.34	9035	3970	130	0.320	0.0880
	9/23/1980	7.36	7581	---	---	0.190	0.0340
	12/8/1980	7.44	7160	3840	100.0	0.0500	0.0700
	3/9/1981	7.35	7768	3890	127	0.440	0.130
	6/15/1981	7.44	5695	3760	130	0.0600	0.0270
	9/18/1981	7.12	7600	3730	110	0.0500	0.0450
	12/16/1981	7.02	4630	3480	123	2.87	0.0240
	3/22/1982	7.10	5760	4000	90.0	0.0900	0.0100
	6/7/1982	6.89	4700	3600	140	0.450	0.0650
	9/20/1982	7.09	5160	3400	120	0.120	0.0390
	12/16/1982	7.25	7080	3800	130	0.0500	0.0540
	2/10/1983	7.50	7434	3600	106	1.76	0.0600

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
R-4	6/10/1983	7.24	7640	2940	112	3.90	0.0600
	9/8/1983	7.28	8000	3980	119	9.07	0.0650
	11/10/1983	7.35	2360	750	152	1.18	0.0260
	3/15/1984	7.09	10620	3670	121	2.73	0.0510
	6/1/1984	7.23	7080	3270	107	0.490	0.0690
	9/25/1984	7.34	10030	2900	148	2.09	0.0720
	3/21/1985	7.17	8850	5020	119	1.73	0.0870
	9/26/1985	7.19	9086	2480	81.0	1.16	0.0360
	3/6/1986	7.54	7500	3460	111	0.120	0.134
	9/17/1986	7.17	7883	2385	134	15.0	2.88
	3/24/1987	7.73	8029	3715	109	0.730	0.0910
	8/16/1987	7.22	8200	3961	117	1.42	0.0402
	3/29/1988	7.08	7540	3730	155	0.300	0.0190
	9/13/1988	7.14	6735	3779	131	0.430	0.179
	12/9/1988	7.22	7426	4043	112	0.490	---
	3/8/1989	7.36	7051	3645	115	0.120	---
	6/19/1989	6.95	6691	3053	155	0.300	---
	9/28/1989	7.29	7100	3668	135	0.700	0.0350
	12/12/1989	6.87	6570	3205	145	0.120	---
	3/15/1990	7.52	7300	3568	120	0.240	---
	6/13/1990	7.07	6890	3820	111	0.320	---
	9/17/1990	7.05	7380	4126	114	0.170	0.0226
	12/26/1990	7.06	6800	3839	131	1.70	---
	2/26/1991	7.20	7950	3663	123	0.590	---
	6/10/1991	7.18	6380	3706	115	2.88	---
	9/20/1991	7.04	8790	3734	119	0.270	0.0030
	12/6/1991	7.41	7520	3044	119	0.320	---
	3/17/1992	7.56	7410	3338	118	0.100	---
	6/15/1992	7.13	6685	3612	115	2.77	---
	9/11/1992	7.13	7600	3813	118	< 0.100	0.0210
	12/10/1992	7.77	7460	3745	103	1.70	---
	3/24/1993	7.47	7823	3944	122	5.10	---
	6/2/1993	7.01	7617	4000	115	0.400	---
	8/31/1993	6.80	7465	3610	156	10.00	0.450
	12/20/1993	7.00	7372	4499	101	24.5	---
	3/10/1994	6.96	6960	4407	119	13.9	---
	6/7/1994	6.91	7005	5461	86.7	5.90	---
	9/7/1994	6.76	6555	3085	64.9	5.95	0.133
	11/30/1994	6.67	5742	5863	85.3	6.17	---
	3/6/1995	6.98	6100	5432	226	48.8	---
	6/26/1995	6.84	5348	6331	75.0	5.30	---
	9/22/1995	6.69	5647	4000	110	19.7	0.288
	12/11/1995	6.76	6135	5645	86.8	13.1	---
	3/15/1996	6.85	9654	5523	81.5	10.2	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
R-4	6/4/1996	6.62	9500	5651	78.0	11.8	—
	9/5/1996	6.71	8892	5810	81.0	22.6	0.140
	12/11/1996	6.92	9205	5520	70.0	20.7	—
	3/10/1997	6.74	7800	5610	88.1	18.1	---
	6/10/1997	6.23	7200	5740	83.0	28.5	—
	9/12/1997	7.10	8970	5860	370	37.2	0.101
	12/10/1997	7.37	9093	5860	99.4	46.9	—
	4/14/1998	7.14	8700	5720	117	62.6	—
	6/24/1998	7.57	7800	5500	181	91.6	—
	9/15/1998	7.06	8269	5360	191	99.5	0.212
	12/3/1998	7.31	7549	5750	355	137	—
	2/3/1999	7.89	7267	5300	291	136	—
	6/15/1999	7.90	5506	5350	316	138	—
	8/31/1999	6.98	5570	5390	351	158	0.162
	12/28/1999	7.93	6201	5500	383	171	---
	3/7/2000	7.51	8288	5420	401	161	---
T4-1	6/11/1980	6.94	8174	3290	320	0.0700	0.940
	9/30/1980	7.06	7595	7500	280	0.750	0.300
	12/22/1980	6.75	7132	3330	260	0.0500	0.180
	3/20/1981	7.20	7634	342	135	0.130	0.280
	6/18/1981	7.29	8263	3180	310	0.160	0.130
	9/28/1981	7.00	6961	3190	250	457	0.200
	12/21/1981	6.90	7360	3360	276	6.30	0.0900
	3/26/1982	6.70	5961	3320	220	0.840	0.0680
	6/10/1982	7.04	5600	3100	360	0.670	0.0980
	9/28/1982	7.05	4950	2800	300	0.300	0.120
	12/31/1982	7.47	5750	2900	230	1.20	0.0960
	2/21/1983	7.17	7198	2940	264	4.48	0.0590
	6/10/1983	7.17	5900	2660	269	6.07	0.118
	9/8/1983	7.36	6500	3060	266	21.4	0.118
	11/13/1983	7.14	10030	3120	273	2.69	0.0750
	3/9/1984	7.44	8260	3340	263	4.19	0.157
	5/21/1984	7.35	7080	3340	271	2.49	0.205
	9/21/1984	7.13	7080	3080	301	2.47	0.161
	3/3/1985	7.08	7980	4270	287	2.29	0.135
	9/16/1985	6.80	4130	3020	271	2.22	0.0410
	3/12/1986	7.33	7148	3150	258	1.93	0.207
	9/30/1986	7.38	7684	3361	272	2.08	0.0660
	3/26/1987	7.18	8409	3257	253	1.38	0.0750
	12/13/1988	7.00	7218	3630	258	2.20	0.0595
	3/8/1989	6.92	7268	3515	267	1.62	---
	6/19/1989	7.02	7823	3336	257	0.500	---
	9/19/1989	6.89	6940	3274	248	0.700	0.0460
	12/12/1989	6.84	7680	3352	246	0.210	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T4-1	3/27/1990	6.85	6800	3252	258	0.670	—
	6/13/1990	6.74	6360	3219	257	0.910	—
	9/20/1990	6.85	5425	3603	248	0.270	0.0390
	2/14/1991	6.86	7750	3145	288	0.780	—
	6/6/1991	6.92	7000	3500	259	0.460	—
	9/13/1991	7.48	6850	3160	275	0.120	0.0360
	12/16/1991	7.12	6890	3399	274	1.000	—
	3/19/1992	7.06	7200	3484	281	< 0.100	—
	6/2/1992	7.08	7300	3138	263	3.64	—
	9/14/1992	7.01	6860	3149	263	< 0.100	0.0270
	12/16/1992	6.98	7215	3207	261	6.10	—
	2/26/1993	6.78	7093	3177	278	0.920	—
	6/4/1993	6.90	6766	3292	285	5.30	—
	9/22/1993	7.24	5849	3159	277	0.300	0.0700
	11/30/1993	6.97	6098	2977	240	1.60	—
	3/15/1994	6.85	6062	3344	285	2.85	—
	6/8/1994	6.89	5900	3287	258	10.5	—
	12/1/1994	7.11	5379	3393	266	7.45	—
	3/1/1995	6.92	1684	472	24.2	0.760	—
	6/21/1995	7.21	2086	372	32.0	0.980	—
	9/13/1995	7.18	2525	581	48.4	2.04	0.0230
	12/11/1995	7.09	3116	1017	85.1	1.12	—
	2/27/1996	6.54	3819	1217	104	0.220	—
	5/22/1996	6.71	4200	1493	128	0.190	—
	9/12/1996	6.84	4632	1720	130	0.250	0.0242
	12/11/1996	6.91	5053	1930	147	1.32	—
	3/7/1997	7.65	4530	2200	191	15.4	—
	6/18/1997	7.01	3700	2290	192	3.53	—
	9/16/1997	7.89	4883	2040	168	3.72	0.0510
	12/3/1997	7.13	5173	2360	175	7.17	—
	3/12/1998	7.64	4990	2360	191	8.32	—
	6/8/1998	7.44	3990	2440	206	0.360	—
	9/8/1998	7.52	5282	2500	204	3.30	11.9
	10/23/1998	7.38	4589	2630	201	3.38	—
	1/26/1999	7.41	4352	2500	207	0.730	—
	6/2/1999	7.43	4435	2860	207	4.19	—
	9/8/1999	7.48	4134	2390	239	0.700	0.0416
	11/16/1999	8.05	4040	2810	221	5.51	—
	3/13/2000	8.06	5478	2740	228	0.770	—
T4-2	11/30/1984	7.30	3540	1600	147	2.46	0.233
	3/8/1985	7.15	4720	3360	69.0	0.280	0.162
	9/16/1985	6.99	4720	2585	51.0	0.720	0.294
	3/12/1986	7.10	4205	2300	43.0	0.470	0.180
	9/30/1986	7.37	4708	2856	41.6	0.0600	0.134

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T4-2	3/26/1987	7.09	4943	2769	33.7	0.500	0.0640
	9/3/1987	7.39	4800	2818	40.2	0.190	0.101
	3/23/1988	6.88	4190	2961	41.5	1.85	1.10
	9/15/1988	7.16	4709	2690	33.3	1.45	0.0869
	12/13/1988	7.13	4927	3052	23.9	1.57	---
	3/8/1989	7.10	4927	2759	38.1	0.750	---
	6/19/1989	6.99	5043	2765	34.7	1.02	---
	9/19/1989	6.93	4625	2882	32.4	0.370	0.0990
	12/12/1989	6.82	4950	---	---	0.130	---
	3/27/1990	6.85	4700	2803	31.7	0.340	---
	6/13/1990	6.78	4610	2695	93.7	21.2	---
	9/20/1990	6.74	3900	3043	76.0	7.14	0.842
	12/28/1990	6.82	4945	2679	56.3	7.70	---
	2/14/1991	6.82	4870	2519	51.8	1.87	---
	6/6/1991	6.86	4800	3305	58.4	1.19	---
	9/13/1991	7.65	4830	2758	47.0	0.210	0.0540
	12/16/1991	7.09	4770	2927	35.0	0.400	---
	3/19/1992	7.03	4530	2920	33.5	0.180	---
	6/2/1992	6.82	4950	2929	34.5	< 0.100	---
	9/14/1992	6.88	4650	2832	30.9	< 0.100	0.0500
	12/16/1992	6.86	4695	2751	33.5	3.40	---
	2/26/1993	6.73	4840	2715	34.7	1.44	---
	6/4/1993	6.78	3437	2622	31.0	0.900	---
	9/20/1993	6.89	4478	2835	37.0	0.400	0.0500
	11/30/1993	6.78	4163	2747	27.9	6.00	---
	3/15/1994	6.64	4134	2990	30.1	0.630	---
	6/8/1994	6.64	4249	2944	29.8	1.07	---
	9/21/1994	6.77	4051	2926	29.1	0.310	0.0490
	12/1/1994	6.69	3952	3106	31.1	0.840	---
	3/1/1995	6.69	4270	2888	31.0	0.390	---
	6/20/1995	6.96	4081	2935	28.0	1.99	---
	9/13/1995	6.79	3705	2788	29.9	0.620	0.0490
	12/11/1995	---	---	2816	29.3	---	---
	2/27/1996	6.42	4782	2753	29.6	0.200	---
	5/22/1996	6.35	4700	2855	32.3	0.320	---
	9/12/1996	6.26	4577	2780	26.0	2.18	0.0727
	12/11/1996	6.79	4594	2700	35.6	4.86	---
	3/7/1997	7.54	3760	2800	34.7	1.29	---
	6/16/1997	6.67	3000	2720	32.6	1.09	---
	9/16/1997	7.39	4315	2720	30.9	1.06	0.0640
	12/3/1997	7.03	4390	2850	32.6	1.04	---
	3/12/1998	7.40	3990	2760	32.6	0.490	---
	6/11/1998	7.42	3890	2690	29.5	0.470	---
	9/8/1998	7.31	4061	2780	32.2	0.530	0.0441

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T4-2	10/23/1998	7.14	3801	2910	40.2	0.630	—
	1/26/1999	7.26	3594	2720	33.1	0.270	—
	6/2/1999	7.29	3514	2900	34.0	1.21	—
	9/8/1999	7.09	3206	2730	37.1	0.230	0.0432
	11/16/1999	7.85	3239	2930	38.2	2.33	—
	3/13/2000	7.90	4146	2860	38.0	0.150	—
T4-3	12/21/1982	6.78	5900	2400	210	130	3.50
	2/21/1983	6.95	5850	2360	201	72.9	2.81
	6/7/1983	7.10	5300	2340	—	104	2.08
	9/8/1983	6.75	5000	2380	195	165	4.30
	11/10/1983	7.07	5900	2400	212	106	4.10
	3/10/1984	6.87	5900	2700	212	83.0	2.79
	5/17/1984	6.87	5900	2500	204	21.4	4.68
	9/26/1984	6.84	5900	2520	235	74.5	4.84
	11/30/1984	6.76	5900	2760	202	91.0	3.36
	3/11/1985	6.85	4130	2890	202	58.4	5.27
	5/31/1985	6.75	4130	2310	207	75.0	4.36
	9/26/1985	6.80	4130	2225	204	80.6	5.00
	12/4/1985	6.47	5501	2280	206	88.0	5.79
	3/3/1986	6.68	4172	2420	186	71.7	4.47
	6/11/1986	6.34	5256	2480	175	64.6	3.23
	9/15/1986	6.93	5661	2660	183	50.0	2.35
	12/12/1986	6.53	5370	2720	185	68.0	2.96
	3/18/1987	6.61	5528	2617	171	78.0	3.42
	5/27/1987	6.43	6179	2758	171	150	3.59
	9/3/1987	6.77	4900	2657	195	64.0	3.42
	11/3/1987	6.52	5602	2684	199	72.0	2.94
	3/23/1988	6.67	5800	2948	195	78.0	3.74
	6/1/1988	6.72	5400	2899	175	61.0	3.44
	9/15/1988	6.74	5370	2744	213	60.0	—
	12/9/1988	—	5050	2835	196	61.0	—
	3/8/1989	6.70	5171	2709	195	63.0	—
	6/19/1989	6.70	5991	2717	189	50.0	—
	9/29/1989	6.80	5500	2976	194	60.0	3.22
	12/12/1989	6.53	5560	2804	196	58.0	—
	3/14/1990	6.69	5280	2664	194	49.0	—
	6/13/1990	6.68	4940	2565	189	76.4	—
	9/17/1990	6.87	4760	2995	193	51.8	3.78
	12/26/1990	6.71	5500	2721	200	58.5	—
	2/26/1991	6.65	5490	2416	206	63.0	—
	6/10/1991	6.76	5350	3271	201	61.5	—
	9/19/1991	7.22	5040	2621	221	41.0	0.0320
	12/9/1991	7.51	5250	2753	184	14.9	—
	3/17/1992	7.35	4970	4589	192	23.4	—

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
T4-3	6/12/1992	6.47	5500	3093	168	61.0	—
	9/11/1992	6.82	5075	2619	186	61.1	0.0500
	12/10/1992	7.11	5150	2523	169	48.8	—
	3/24/1993	7.15	5044	2444	183	39.1	—
	6/2/1993	6.69	5056	2540	199	37.6	—
	8/26/1993	6.67	4611	2390	150	135	3.19
	12/20/1993	6.40	4511	2562	177	43.5	—
	3/10/1994	6.47	4708	2928	221	59.3	—
	6/6/1994	6.71	4288	2686	165	50.9	—
	9/7/1994	6.58	4135	2584	—	53.5	2.58
	11/28/1994	6.72	4164	2857	174	46.7	—
	3/7/1995	6.69	4915	2999	157	39.8	—
	6/26/1995	6.68	3855	2558	152	43.1	—
	9/22/1995	6.48	3929	2386	162	43.6	2.31
	12/11/1995	6.64	4090	2715	181	37.8	—
	3/14/1996	6.20	5297	2602	158	44.0	—
	6/4/1996	6.21	11400	2663	167	43.8	—
	9/5/1996	6.33	5379	2700	176	39.5	2.44
	12/11/1996	6.57	5276	2600	168	69.6	—
	2/25/1997	6.39	4450	2790	193	37.3	—
	6/17/1997	6.48	4150	2790	178	37.8	—
	9/4/1997	7.05	5809	2870	189	37.2	2.15
	12/8/1997	7.07	5107	2840	168	36.8	—
	4/6/1998	7.19	5100	2900	177	36.0	—
	6/23/1998	7.52	4270	2740	188	37.0	—
	9/8/1998	6.63	4596	2710	188	39.5	3.18
	12/3/1998	7.32	4185	2770	184	40.7	—
	2/3/1999	7.50	4065	2730	183	37.8	—
	6/9/1999	7.30	3437	2760	179	33.1	—
	9/8/1999	6.55	3617	2790	193	37.3	3.32
	12/28/1999	7.55	5100	2800	192	45.2	—
	3/7/2000	7.05	4495	2750	185	35.9	—

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
R-2	5/11/1979	1.40	0.800	0.500	0.500	---	---	---
	6/10/1980	0	0.300	0.400	0.500	---	---	---
	9/22/1980	0.400	0.500	0.700	0.400	---	---	---
	12/5/1980	0.400	0.300	0.100	0.200	---	---	---
	3/9/1981	3.30	0.900	0.500	0.500	---	---	---
	6/15/1981	0.300	0.300	0.600	0.500	---	---	---
	9/17/1981	0.400	0.200	0.800	0.300	---	---	---
	12/21/1981	1.35	0.240	0.440	0.140	---	---	---
	6/3/1982	0.500	0.400	0.800	0.100	---	---	---
	12/16/1982	0.100	0.400	0	0.100	---	---	---
	6/7/1983	0	0.849	0.402	0.170	---	---	---
	11/9/1983	0.450	0.150	0.860	0.220	---	---	---
	6/1/1984	0.210	0.230	0.890	0.250	---	---	---
	7/25/1985	0.134	0.130	0.477	0.140	---	---	---
	7/31/1986	2.00	2.10	4.10	0.800	---	---	---
	8/16/1987	19.2	4.50	0.800	0.400	---	---	---
	9/13/1988	< 0.200	0	0.200	0.600	---	---	---
	9/28/1989	3.30	1.80	4.90	0.600	---	---	---
	9/17/1990	< 0.200	---	0.400	0.200	---	---	---
	9/20/1991	< 0.200	---	0.200	0.200	---	---	---
	9/11/1992	< 0.200	---	0.300	0.300	---	---	---
	8/31/1993	< 0.200	---	0.300	0.200	---	---	---
	9/7/1994	< 0.200	---	10.00	1.000	---	---	---
	9/22/1995	0.600	0.300	0.400	0.100	---	---	---
	9/5/1996	< 0.200	---	0.300	0.200	---	---	---
	9/12/1997	< 0.200	---	< 0.200	---	---	---	---
	9/15/1998	< 0.200	---	< 0.200	---	---	---	---
	8/31/1999	< 0.200	---	< 0.200	---	---	---	---
R-4	5/11/1979	0	0.500	1.10	0.500	---	---	---
	6/11/1980	0.100	0.500	0.600	0.500	---	---	---
	9/23/1980	0	0.400	0.800	0.500	---	---	---
	12/8/1980	1.10	0.500	0	0.200	---	---	---
	3/9/1981	0.300	0.400	0.200	0.400	---	---	---
	6/15/1981	0.600	0.400	0.400	0.400	---	---	---
	9/18/1981	0.800	0.200	0.500	0.100	---	---	---
	12/16/1981	0.710	0.220	1.49	0.210	---	---	---
	6/7/1982	< 0.200	0.300	1.30	0.200	---	---	---
	12/16/1982	< 2.10	2.50	0	0.100	---	---	---
	6/10/1983	1.74	0.470	0.320	0.170	---	---	---
	11/10/1983	0.150	0.0950	32.8	1.20	---	---	---
	6/1/1984	1.41	0.590	2.25	0.360	---	---	---
	9/26/1985	2.13	0.390	12.4	0.600	---	---	---
	9/17/1986	5.20	2.20	1.40	0.500	---	---	---
	8/16/1987	3.60	1.80	1.20	0.400	---	---	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
R-4	9/13/1988	< 0.200	---	0.500	0.600	---	---	---
	9/28/1989	< 1.000	---	3.40	0.400	---	---	---
	9/17/1990	2.00	1.50	0.700	0.300	---	---	---
	9/20/1991	< 0.200	---	< 0.200	---	---	---	---
	9/11/1992	< 0.200	---	1.10	0.200	---	---	---
	8/31/1993	< 1.000	---	0.500	0.100	---	---	---
	9/7/1994	< 0.200	---	0.400	0.300	---	---	---
	9/22/1995	0.800	0.300	< 0.200	---	---	---	---
	9/5/1996	0.700	0.500	< 0.200	---	---	---	---
	9/12/1997	< 0.200	---	0.600	0.200	---	---	---
	9/15/1998	< 0.200	---	< 0.200	---	---	---	---
	8/31/1999	< 0.200	---	0.300	0.200	---	---	---
T4-1	6/11/1980	0	0.400	0.100	0.800	---	---	---
	9/30/1980	< 0.200	0.300	0.600	0.400	---	---	---
	12/22/1980	10.3	1.50	0.500	1.20	---	---	---
	3/20/1981	6.20	1.20	0.300	0.500	---	---	---
	6/18/1981	0.400	0.300	< 0.700	0.400	---	---	---
	9/28/1981	6.70	0.700	0.900	0.100	---	---	---
	12/21/1981	2.39	0.700	0.210	0.110	---	---	---
	3/26/1982	1.50	1.50	---	---	---	---	---
	6/10/1982	< 0.100	0.300	0.800	0.100	---	---	---
	9/28/1982	< 0.200	0.500	---	---	---	---	---
	12/31/1982	4.20	0.800	0.100	0.200	---	---	---
	2/21/1983	0.300	0.0800	---	---	---	---	---
	6/10/1983	1.40	0.290	0.487	0.173	---	---	---
	9/8/1983	0.275	0.110	---	---	---	---	---
	11/13/1983	0.899	0.320	0.498	0.220	---	---	---
	3/9/1984	0.310	0.0840	---	---	---	---	---
	5/21/1984	3.20	0.260	0.503	1.79	---	---	---
	9/21/1984	1.58	0.360	---	---	---	---	---
	3/3/1985	0	0	0	0	---	---	---
	9/16/1985	1.36	0.230	1.03	0.180	---	---	---
	9/30/1986	0.500	0	0.700	0.400	---	---	---
	12/13/1988	3.10	2.70	1.60	0.500	---	---	---
	9/19/1989	< 1.000	---	1.20	0.300	---	---	---
	9/20/1990	< 0.200	---	0.800	0.300	---	---	---
	9/13/1991	< 0.200	---	1.50	0.300	---	---	---
	9/14/1992	< 0.200	---	2.30	0.300	---	---	---
	9/22/1993	< 1.000	---	0.700	0.100	---	---	---
	9/13/1995	0.600	0.400	0.600	0.500	---	---	---
	9/12/1996	< 0.200	---	0.700	0.200	---	---	---
	9/16/1997	< 0.200	---	1.10	0.300	---	---	---
	9/8/1998	< 0.200	---	1.20	0.100	---	---	---
	9/8/1999	< 0.200	---	0.600	0.200	---	---	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
T4-2	11/30/1984	0.324	0.214	1.53	0.320	---	---	---
	9/16/1985	0	0.196	1.31	0.200	---	---	---
	9/30/1986	3.30	2.30	1.50	0.500	---	---	---
	9/3/1987	11.1	4.00	0.400	0.300	---	---	---
	9/15/1988	< 0.200	---	1.000	0.700	---	---	---
	9/19/1989	< 1.000	---	3.20	0.400	---	---	---
	9/20/1990	< 0.200	---	0.400	0.200	---	---	---
	9/13/1991	< 0.200	---	0.500	0.300	---	---	---
	9/14/1992	< 0.200	---	1.80	0.400	---	---	---
	9/20/1993	< 1.000	---	0.800	0.100	---	---	---
	9/21/1994	< 0.200	---	0.600	0.300	---	---	---
	9/13/1995	< 0.200	---	0.800	0.600	---	---	---
	9/12/1996	< 0.200	---	0.500	0.200	---	---	---
	9/16/1997	< 0.200	---	0.700	0.300	---	---	---
	9/8/1998	< 0.200	---	0.600	0.100	---	---	---
	9/8/1999	< 0.200	---	0.300	0.200	---	---	---
T4-3	12/21/1982	2.90	1.80	0.500	0.100	---	---	---
	2/21/1983	0.410	0.150	1.16	0.300	---	---	---
	6/7/1983	1.04	0.350	0.577	0.166	---	---	---
	9/8/1983	0.576	0.292	0.584	0.216	---	---	---
	11/10/1983	21.5	2.50	1.87	0.420	---	---	---
	3/10/1984	< 1.89	6.10	0.864	0.199	---	---	---
	5/17/1984	0.190	0.185	1.16	0.220	---	---	---
	9/26/1984	5.15	1.76	0.772	0.190	---	---	---
	5/31/1985	0.540	0.420	0.420	0.150	---	---	---
	6/11/1986	37.9	11.5	1.40	0.500	---	---	---
	5/27/1987	0.200	---	1.20	0.400	---	---	---
	6/1/1988	63.1	---	2.50	1.10	---	---	---
	9/29/1989	1.10	0.800	0.900	0.200	---	---	---
	9/17/1990	< 0.200	---	0.300	0.300	---	---	---
	9/19/1991	< 0.200	---	< 0.200	---	---	---	---
	9/11/1992	< 0.200	---	1.80	0.400	---	---	---
	8/26/1993	< 1.000	---	0.400	0.100	---	---	---
	9/7/1994	< 0.200	---	0.300	0.300	---	---	---
	9/22/1995	< 0.200	---	< 0.200	---	---	---	---
	9/5/1996	< 0.200	---	< 0.200	---	---	---	---
	9/4/1997	< 0.200	---	0.600	0.200	---	---	---
	9/8/1998	< 0.200	---	0.600	0.100	---	---	---
	9/8/1999	< 0.200	---	< 0.200	---	---	---	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
R-2	5/11/1979	0.0090	---	0.0140	0.0300	0.0800	0.0380
	6/10/1980	0.0080	---	---	---	---	0.0210
	9/22/1980	0.0050	---	---	---	---	0.0190
	12/5/1980	0.0120	---	---	---	---	0.0370
	3/9/1981	< 0.0050	---	---	---	---	0.0070
	6/15/1981	< 0.0050	---	---	---	---	0.0140
	9/17/1981	< 0.0050	---	---	---	---	< 0.0050
	12/21/1981	< 0.0020	---	---	---	---	< 0.0020
	6/3/1982	< 0.0050	---	---	---	---	< 0.0050
	12/16/1982	0.0050	---	---	---	---	0.0050
	6/7/1983	< 0.0020	---	---	---	---	< 0.0020
	11/9/1983	< 0.0020	---	---	---	---	< 0.0020
	6/1/1984	< 0.0020	---	---	---	---	< 0.0020
	5/14/1985	< 0.0050	---	---	---	---	< 0.0010
	7/25/1985	< 0.0020	---	---	---	---	< 0.0020
	1/24/1986	< 0.0020	---	---	---	---	< 0.0010
	7/31/1986	0.0010	---	---	---	---	< 0.0010
	3/24/1987	< 0.0010	---	---	---	---	0.0020
	5/27/1987	< 0.0010	---	---	---	---	< 0.0010
	8/16/1987	< 0.0010	---	---	---	---	< 0.0010
	3/28/1988	< 0.0010	---	---	---	---	< 0.0010
	9/13/1988	< 0.0010	---	---	---	---	< 0.0010
	3/8/1989	< 0.0010	---	---	---	---	< 0.0010
	9/28/1989	0.0110	---	---	---	---	0.0010
	3/15/1990	0.0010	---	---	---	---	< 0.0010
	9/17/1990	0.0080	---	---	---	---	< 0.0010
	2/26/1991	< 0.0010	---	---	---	---	< 0.0010
	9/20/1991	< 0.0010	---	---	---	---	---
	12/6/1991	---	---	---	---	---	< 0.0010
	3/17/1992	< 0.0010	---	---	---	---	< 0.0010
	9/11/1992	< 0.0010	---	---	---	---	< 0.0010
	3/24/1993	< 0.0010	---	---	---	---	---
	8/31/1993	< 0.0010	---	---	---	---	< 0.0010
	3/10/1994	< 0.0010	---	---	---	---	< 0.0010
	9/7/1994	< 0.0010	---	---	---	---	---
	3/6/1995	< 0.0010	---	---	---	---	< 0.0010
	9/22/1995	< 0.0010	---	---	---	---	< 0.0010
	3/15/1996	< 0.0010	---	---	---	---	< 0.0010
	9/5/1996	< 0.0010	---	---	---	---	0.0010
	3/10/1997	< 0.0010	---	---	---	---	< 0.0010
	9/12/1997	0.0040	---	---	---	---	0.0090
	12/10/1997	< 0.0010	---	---	---	---	0.0280
	4/14/1998	0.0020	---	---	---	---	0.0370
	6/29/1998	0.0030	---	---	---	---	0.0340

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
R-2	9/15/1998	0.0160	---	---	---	---	0.579
	12/3/1998	< 0.0010	---	---	---	---	0.0550
	2/3/1999	0.0040	---	---	---	---	0.0720
	6/15/1999	0.0040	---	---	---	---	0.108
	8/31/1999	0.0010	---	---	---	---	0.110
	12/28/1999	< 0.0010	---	---	---	---	0.129
	3/7/2000	< 0.0010	< 0.0100	---	---	---	---
R-4	5/11/1979	0.0090	---	0.0140	0.0300	0.110	0.0650
	6/11/1980	0.0110	---	---	---	---	---
	9/23/1980	0.0050	---	---	---	---	---
	12/8/1980	0.0170	---	---	---	---	---
	3/9/1981	0.0050	---	---	---	---	---
	6/15/1981	0.0050	---	---	---	---	---
	9/18/1981	0.0050	---	---	---	---	---
	12/16/1981	0.0020	---	---	---	---	---
	6/7/1982	0.0050	---	---	---	---	---
	12/16/1982	0.0050	---	---	---	---	---
	6/10/1983	0.0020	---	---	---	---	---
	11/10/1983	0.0020	---	---	---	---	---
	6/1/1984	0.0020	---	---	---	---	---
	9/26/1985	0.0020	---	---	---	---	---
	9/17/1986	0.0020	---	---	---	---	---
	8/16/1987	0.0010	---	---	---	---	---
	9/13/1988	< 0.0010	---	---	---	---	---
	9/28/1989	0.0050	---	---	---	---	---
	9/17/1990	0.0030	---	---	---	---	---
	9/20/1991	< 0.0010	---	---	---	---	---
	9/11/1992	< 0.0010	---	---	---	---	---
	8/31/1993	< 0.0010	---	---	---	---	---
	9/22/1995	< 0.0010	---	---	---	---	---
	9/12/1997	< 0.0010	---	---	---	---	---
	9/15/1998	0.0660	---	---	---	---	---
	8/31/1999	0.156	---	---	---	---	---
T4-1	9/30/1980	0.0100	---	---	---	---	---
	12/22/1980	0.0170	---	---	---	---	---
	3/20/1981	0.0050	---	---	---	---	---
	6/18/1981	0.0050	---	---	---	---	---
	9/28/1981	0.0050	---	---	---	---	---
	12/21/1981	0.0020	---	---	---	---	---
	6/10/1982	0.0050	---	---	---	---	---
	12/31/1982	0.0100	---	---	---	---	---
	6/10/1983	0.0020	---	---	---	---	---
	11/13/1983	0.0020	---	---	---	---	---
	5/21/1984	0.0020	---	---	---	---	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T4-1	3/3/1985	0	---	---	---	---	---
	9/16/1985	0.0020	---	---	---	---	---
	9/30/1986	0.0010	---	---	---	---	---
	12/13/1988	0.0030	---	---	---	---	---
	9/19/1989	0.0030	---	---	---	---	---
	9/20/1990	0.0020	---	---	---	---	---
	9/13/1991	0.0040	---	---	---	---	---
	9/14/1992	< 0.0010	---	---	---	---	---
	9/22/1993	0.0010	---	---	---	---	---
	9/13/1995	0.0030	---	---	---	---	---
	9/12/1996	< 0.0010	---	---	---	---	---
	9/16/1997	0.0010	---	---	---	---	---
	9/8/1998	0.0120	---	---	---	---	---
	9/8/1999	< 0.0010	---	---	---	---	---
T4-2	11/30/1984	0.0020	---	---	---	---	---
	9/16/1985	0.0020	---	---	---	---	---
	9/30/1986	0.0030	---	---	---	---	---
	9/3/1987	0.0010	---	---	---	---	---
	9/15/1988	0.0010	---	---	---	---	---
	9/19/1989	0.0010	---	---	---	---	---
	9/20/1990	< 0.0010	---	---	---	---	---
	9/13/1991	0.0010	---	---	---	---	---
	9/14/1992	< 0.0010	---	---	---	---	---
	9/20/1993	0.0010	---	---	---	---	---
	9/21/1994	< 0.0010	---	---	---	---	---
	9/13/1995	< 0.0010	---	---	---	---	---
	9/12/1996	< 0.0010	---	---	---	---	---
	9/16/1997	< 0.0010	---	---	---	---	---
	9/8/1998	0.0020	---	---	---	---	---
	9/8/1999	< 0.0010	---	---	---	---	---
T4-3	12/21/1982	0.0050	---	---	---	---	---
	2/21/1983	0.0020	---	---	---	---	---
	6/7/1983	0.0020	---	---	---	---	---
	9/8/1983	0.0020	---	---	---	---	---
	11/10/1983	0.0020	---	---	---	---	---
	3/10/1984	0.0020	---	---	---	---	---
	5/17/1984	0.0020	---	---	---	---	---
	9/26/1984	0.0020	---	---	---	---	---
	5/31/1985	0.0020	---	---	---	---	---
	6/11/1986	0.0010	---	---	---	---	---
	5/27/1987	0.0010	---	---	---	---	---
	6/1/1988	0.0010	---	---	---	---	---
	9/17/1990	0.0030	---	---	---	---	---
	9/19/1991	< 0.0010	---	---	---	---	---

TABLE C-5. PMC LUCKY Mc REID DRAW ALLUVIAL GROUND-WATER QUALITY. (cont'd.)

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
T4-3	9/11/1992	< 0.0010	---	---	---	---	---
	8/26/1993	0.0020	---	---	---	---	---
	9/22/1995	0.0020	---	---	---	---	---
	9/5/1996	< 0.0010	---	---	---	---	---
	9/4/1997	0.0020	---	---	---	---	---
	9/8/1998	0.0050	---	---	---	---	---
	9/8/1999	0.0090	---	---	---	---	---

APPENDIX D

MODFLOW GROUND-WATER FLOW MODELING

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D.1 INTRODUCTION

The MODFLOW model (McDonald and Harbaugh, 1988) was used to model ground-water flow in the Lucky Mc aquifer at the Gas Hills site. The MODFLOW model is a multi-layer finite difference model but only a single layer was used for the Lucky Mc aquifer due to the direct connection of the Wind River Formation, tailings and Fraser Draw alluvium. The model has routines to allow incorporation of wells, recharge and constant head boundaries that were used in this model. The model allows variable cell size so the grid can be refined to give greater resolution in critical areas. However, cells must be rectangular and consequently, the grid is rectangular. Aquifer thickness and hydraulic properties can be assigned for each individual cell.

The model used for simulation of ground-water flow in the Lucky Mc aquifer was a single-layer model. The tailings are connected to the Wind River Channel on the east side of the No. 1 and No. 2 Tailings. The water levels in the tailings are such that lateral flow to the Wind River channel has occurred through these connections. All simulations were transient simulations where piezometric surfaces and flux rates could change with time. A calibration procedure using a specific period of operational characteristics to model the piezometric surfaces was employed.

The unit of time used in the modeling was days, and the unit of length was feet. Units of hydraulic conductivity and recharge were ft/day. The unit of flow for wells was ft^3/day and the unit of distribution coefficient to simulate retardation was ft^3/lb.

D.2 FLOW MODEL CALIBRATION PROPERTIES

The model area within the grid is shown in Figure D.2-1. The grid was 125 rows by 48 columns in size with the smallest cell being 50 feet by 50 feet. The finest grid was placed over the area of the Wind River Channel where the restoration system exists. Beyond this fine grid, the cell size was gradually expanded to a maximum cell size of 250 feet by 250 feet. Table D.2-1 presents the row and column dimensions for the grid.

D.2.1 AQUIFER PROPERTIES AND CHARACTERISTICS

The aquifer properties and characteristics for the Lucky Mc aquifer are input to the MODFLOW model in a series of arrays. For convenience, all aquifer characteristic values that included the elevation were reduced by 6000 feet. This reduced the number of required digits in the arrays without compromising results. The Lucky Mc aquifer is a bounded aquifer with the Lower Wind River clays and Cody Shale limiting the extent of this aquifer. The Lucky Mc aquifer was rendered inactive in areas with no saturation in the tailings, Wind River sands and Fraser Draw alluvium.

D.2.1.1 TAILINGS

The tailings were modeled as part of the Lucky Mc unconfined aquifer with connection to the Wind River Channel on the east sides of the No. 1 and No. 2 Tailings and the constant head cells downgradient of the No. 2A Dam. The active cell matrix for the Lucky Mc aquifer is presented in Table D.2-2. In this table, a value of 1 indicates a cell where flow is allowed. A value of 0 indicates a no-flow cell where no exchange occurs. A negative 1 (-1) shows cells where a constant head boundary was used. The hydraulic conductivity array for the Lucky Mc aquifer is presented in Table D.2-3. The values of hydraulic conductivity varied from less than 0.1 ft/day for slimes to slightly greater than 10 ft/day for sandy beach areas in the tailings. Hydraulic conductivity isopleths were drawn for the tailings area, and then intermediate values were interpolated.

The specific yield of the tailings aquifer was varied from greater than 0.15 for tailings sand to less than 0.08 for the slimes (see Table D.2-4). The base of the tailings was developed using pre-tailings topographical information with the constructed tailings dams

in place. Table D.2-5 presents the array for base of tailings, along with the base of the remainder of the Lucky Mc aquifer. Table D.2-6 presents the array of initial water-level elevation in the Lucky Mc aquifer in 1989 for the calibration runs. This surface was developed from the late 1988 monitor well data.

D.2.1.2 WIND RIVER CHANNEL

The Wind River Formation exists south of the Lucky Mc tailings site. The Wind River aquifer feeds the Wind River Channel and Fraser Draw alluvium south of the modeled area. The active cells presented for the Wind River Channel are shown in Table D.2-2, along with the remainder of the Lucky Mc aquifer. The Wind River Channel is a narrow channel on the east side of the No. 1 and No. 2 Tailings that contains Wind River sand and clays that conduct water from the south through the channel to the Fraser Draw alluvium. The base of the Wind River Channel is presented in Table D.2-4, along with the remainder of the Lucky Mc aquifer base.

The initial heads for the Wind River Channel material are presented in Table D.2-5 with the remainder of the Lucky Mc aquifer heads for early 1989. The hydraulic conductivities in the Wind River Channel area vary from greater than 25 ft/day to less than 0.1 ft/day. The majority of the channel contains a hydraulic conductivity of 10 ft/day into the lower permeability zone where the Wind River Channel transitions into weathered Cody Shale north of monitoring well T1-9. The specific yields from the Wind River Channel area are generally 0.2 but decrease to the north in the channel prior to the transition into Fraser Draw (see Table D.2-4).

D.2.1.3 FRASER DRAW ALLUVIUM

The Fraser Draw alluvium has four wells that have been used to define the model inputs in this portion of the Lucky Mc aquifer. Table D.2-2 presents the active cells in the Fraser Draw alluvium, along with the remainder of the Lucky Mc aquifer. Hydraulic conductivities in Fraser Draw vary from greater than 30 ft/day to less than 1 ft/day, based on pump tests from the wells in the Fraser Draw alluvium (see Table D.2-3 for values). The specific yield in the majority of the Fraser Draw alluvium was set at 0.15

(see Table D.2-4 for values). The base of the Fraser Draw alluvium is presented in Table D.2-5, along with the remainder of the Lucky Mc aquifer base of aquifer values. The initial heads, water-level elevations, for the Fraser Draw alluvium are also defined in Table D.2-6.

D.2.2 WATER LEVELS

The water-level elevation for the Lucky Mc aquifer for January 1989 is presented in Figure D.2-2. This historical water-level elevation map was used as the initial input to the calibration of the MODFLOW. Table D.2-6 presents the water-level elevation values for each of the cells. The water-level elevations have had 6000 subtracted from them in MODFLOW to reduce the size of the numbers. These historical water levels define the water-level elevations in the No. 1 Tailings, the Wind River Channel and the Fraser Draw areas.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE D.2-1: LUCKY MC MODFLOW MODEL GRID

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE D.2-1

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE D.2-2: WATER-LEVEL ELEVATION IN THE LUCKY MC AQUIFER JANUARY, 1989, FT-MSL

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE D.2-2

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

TABLE D.2-1. LUCKY MC MODEL GRID COLUMN AND ROW DIMENSIONS.

COLUMN NUMBER	DIMENSION ACROSS COLUMNS (FEET)	ROW NUMBER	DIMENSION ACROSS ROWS (FEET)	ROW NUMBER	DIMENSION ACROSS ROWS (FEET)
1	250	1	200	64	50
2	200	2	200	65	50
3	200	3	200	66	50
4	200	4	200	67	50
5	200	5	200	68	50
6	200	6	200	69	50
7	200	7	200	70	50
8	200	8	200	71	50
9	200	9	200	72	50
10	200	10	200	73	50
11	200	11	200	74	50
12	200	12	200	75	50
13	200	13	200	76	50
14	200	14	200	77	50
15	200	15	200	78	50
16	200	16	200	79	50
17	175	17	200	80	50
18	150	18	200	81	50
19	100	19	200	82	50
20	75	20	200	83	50
21	50	21	200	84	50
22	50	22	200	85	50
23	50	23	200	86	50
24	50	24	200	87	50
25	50	25	200	88	50
26	50	26	200	89	50
27	50	27	200	90	50
28	50	28	200	91	50
29	50	29	200	92	50
30	50	30	200	93	50
31	50	31	200	94	50
32	50	32	200	95	50
33	50	33	200	96	50
34	50	34	200	97	50
35	50	35	200	98	50
36	50	36	175	99	50
37	50	37	150	100	50
38	50	38	100	101	50
39	50	39	75	102	50
40	50	40	50	103	50
41	75	41	50	104	50
42	100	42	50	105	50
43	150	43	50	106	50
44	175	44	50	107	50
45	250	45	50	108	50
46	250	46	50	109	50
47	250	47	50	110	50
48	250	48	50	111	50
		49	50	112	50
		50	50	113	50
		51	50	114	50
		52	50	115	50
		53	50	116	50
		54	50	117	50
		55	50	118	50
		56	50	119	50
		57	50	120	75
		58	50	121	100
		59	50	122	150
		60	50	123	175
		61	50	124	250
		62	50	125	250
		63	50		

TABLE D.2-2. ACTIVE CELLS IN THE LUCKY Mc AQUIFER.

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0	0	0	0	0	0	0	0	0	0	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**
2	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
3	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
4	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
5	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
6	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
7	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
8	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
9	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
10	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
11	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
12	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
13	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
14	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
16	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
17	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	**-1**	**-1**	**-1**	0	0	0	0	0	0
43	0	0	0	0	0	0	**-1**	1	1	1	**-1**	**-1**	0	0	0	0
44	0	0	0	0	0	**-1**	1	1	1	1	1	1	0	0	0	0
45	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0
46	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	0	0	0
47	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0
48	0	0	0	**-1**	1	1	1	1	1	1	1	1	1	0	0	0
49	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0
50	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0
51	0	0	**-1**	1	1	1	1	1	1	1	1	1	1	0	0	0
52	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0
53	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0
54	0	**-1**	1	1	1	1	1	1	1	1	1	1	0	0	0	0
55	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
56	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
57	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
58	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
59	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
60	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
61	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
62	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
63	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-2. ACTIVE CELLS IN THE LUCKY Mc AQUIFER (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**-1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
15	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
16	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
17	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
18	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
19	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
32	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
33	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
34	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
35	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
36	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
37	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
38	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
39	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
40	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
41	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
42	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
43	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
44	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
45	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
46	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
47	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
48	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
49	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
50	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
51	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
52	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
53	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
54	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
55	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
56	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
57	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
58	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
59	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
60	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
61	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
62	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
63	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-2. ACTIVE CELLS IN THE LUCKY Mc AQUIFER (continued).

Row	Column 33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
26	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
27	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
28	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
29	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
30	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
31	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
32	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
33	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
34	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
35	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
36	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
37	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0
38	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0
39	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0
40	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
41	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
42	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
43	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
44	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
45	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
46	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0
47	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
48	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
49	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
50	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
51	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
52	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
53	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	**-1**
54	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	**-1**
55	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	**-1**
56	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	**-1**
57	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	**-1**
58	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	**-1**
59	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	**-1**
60	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
61	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
62	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
63	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-2. ACTIVE CELLS IN THE LUCKY Mc AQUIFER (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
65	**-1**	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
66	**-1**	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
67	**-1**	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0
68	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
69	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
70	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
71	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
72	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
73	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
75	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
76	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
77	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
78	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
79	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
80	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
81	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
82	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
83	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
84	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
85	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
86	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
87	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
88	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
89	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
90	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
91	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
92	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
93	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
94	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
96	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
97	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
98	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1	1
99	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1	1
100	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1
101	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1
102	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1
103	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1
104	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1
105	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1
106	0	0	0	0	0	0	0	**-1**	**-1**	1	1	1	1	1	1	1
107	0	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1
108	0	0	0	0	0	0	0	0	**-1**	1	1	0	0	0	0	1
109	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
110	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-2. ACTIVE CELLS IN THE LUCKY Mc AQUIFER (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
65	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0
66	0	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0
67	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0
68	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0
69	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0
70	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0
71	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0
72	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0
73	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1
74	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1
75	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1
76	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1
77	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
78	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
79	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
80	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
81	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
82	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
83	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
84	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
85	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
86	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
87	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1
88	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1
89	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1
90	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1
91	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1
92	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
93	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
94	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
96	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
97	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
98	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
99	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
100	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1
101	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1
102	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
103	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
104	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
105	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
106	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1
107	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
108	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
109	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
110	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
111	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1
112	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1
113	0	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1
114	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1
115	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1
116	0	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1
117	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1
118	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1
119	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1
120	0	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1
121	0	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1
122	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
123	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
124	0	0	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1
125	0	0	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-2. ACTIVE CELLS IN THE LUCKY Mc AQUIFER (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
65	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
66	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
67	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
68	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
69	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
70	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
71	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
72	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
73	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
74	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
75	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
76	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
77	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
78	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
79	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
80	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
81	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0
82	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
83	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
84	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
85	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
86	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
87	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
88	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
89	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
90	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
91	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
92	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
93	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
94	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0	0
95	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0
96	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
97	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
98	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
99	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
100	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
101	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
102	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
103	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
104	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
105	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
106	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
107	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
108	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
109	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
110	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
111	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
112	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
113	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
114	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
115	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
116	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
117	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
118	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
119	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
120	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
121	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
122	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
123	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
124	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
125	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-3. HYDRAULIC CONDUCTIVITY OF THE LUCKY Mc AQUIFER (FT/DAY).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	20.38	19.24	16.74	14.25	13.38	13.90	15.30	19.13	20.66	20.69	**20.69**	**20.68**	**20.66**	**20.65**	**20.63**	**20.62**
2	18.84	18.67	18.00	15.51	13.01	10.51	8.01	7.87	9.02	10.17	12.19	13.33	12.86	12.96	14.09	16.58
3	18.52	17.15	16.98	16.70	14.27	11.77	9.27	6.78	4.28	1.89	1.20	1.00	1.32	5.75	8.72	13.19
4	17.50	17.18	15.69	15.29	15.06	13.03	10.53	8.04	5.54	3.04	1.00	1.00	1.00	3.21	7.15	11.92
5	17.25	16.26	16.02	14.55	13.61	13.46	11.79	9.30	6.80	4.30	1.80	1.00	1.00	2.06	6.46	11.32
6	16.86	16.04	15.19	14.85	13.40	12.02	11.76	10.56	8.06	5.56	3.06	1.00	1.00	1.65	6.11	10.94
7	16.47	15.65	14.92	14.11	13.56	12.26	10.76	10.07	9.32	6.82	4.32	1.83	1.00	1.20	5.83	10.79
8	16.08	15.26	14.53	13.80	13.04	12.26	11.11	9.61	8.39	7.88	5.58	3.09	1.00	1.00	5.48	10.62
9	15.70	14.87	14.14	13.41	12.68	11.94	10.97	9.96	8.47	6.99	6.38	4.35	1.85	1.00	4.96	10.44
10	15.31	14.48	13.75	13.02	12.29	11.56	10.83	9.68	8.80	7.32	5.82	4.86	3.11	1.00	4.14	10.27
11	14.92	14.10	13.37	12.63	11.90	11.17	10.44	9.71	8.49	7.65	6.18	4.68	3.22	1.87	3.60	10.11
12	14.53	13.71	12.98	12.25	11.51	10.78	10.05	9.32	8.59	7.41	6.49	5.03	3.53	2.03	2.98	9.98
13	14.14	13.32	12.59	11.86	11.13	10.39	9.66	8.93	8.20	7.47	6.34	5.33	3.88	2.39	1.60	9.60
14	13.76	12.93	12.20	11.47	10.74	10.01	9.27	8.54	7.81	7.08	6.35	5.26	4.17	2.73	1.24	8.34
15	13.37	12.55	11.81	11.08	10.35	9.62	8.89	8.16	7.42	6.69	5.96	5.23	4.19	3.01	1.57	6.82
16	12.98	12.16	11.43	10.69	9.96	9.23	8.50	7.77	7.04	6.30	5.57	4.84	4.11	3.11	1.85	5.04
17	12.59	11.77	11.04	10.31	9.58	8.84	8.11	7.38	6.65	5.92	5.18	4.45	3.72	2.99	2.04	3.17
18	12.21	11.38	10.65	9.92	9.19	8.46	7.72	6.99	6.26	5.53	4.80	4.06	3.33	2.60	1.87	1.27
19	11.82	11.00	10.26	9.53	8.80	8.07	7.34	6.60	5.87	5.14	4.41	3.68	2.94	2.21	1.48	0.99
20	11.43	10.61	9.88	9.14	8.41	7.68	6.95	6.22	5.48	4.75	4.02	3.29	2.56	1.83	1.09	0.98
21	11.04	10.22	9.49	8.76	8.02	7.29	6.56	5.83	5.10	4.37	3.63	2.90	2.17	1.44	0.92	0.97
22	10.66	9.83	9.10	8.37	7.64	6.90	6.17	5.44	4.71	3.98	3.25	2.51	1.78	1.05	0.90	0.96
23	10.27	9.44	8.71	7.98	7.25	6.52	5.79	5.05	4.32	3.59	2.86	2.13	1.39	0.84	0.89	0.93
24	9.88	9.06	8.33	7.59	6.86	6.13	5.40	4.67	3.93	3.20	2.47	1.74	1.01	0.82	0.88	0.91
25	9.49	8.67	7.94	7.21	6.47	5.74	5.01	4.28	3.55	2.81	2.08	1.35	0.77	0.81	0.84	0.89
26	9.03	8.28	7.55	6.82	6.09	5.35	4.62	3.89	3.16	2.43	1.69	0.96	0.75	0.79	0.82	0.87
27	8.53	7.89	7.16	6.43	5.70	4.97	4.23	3.50	2.77	2.04	1.31	0.69	0.73	0.75	0.80	0.84
28	8.07	7.51	6.77	6.04	5.31	4.58	3.85	3.12	2.38	1.65	0.92	0.67	0.71	0.73	0.78	0.82
29	7.61	7.12	6.39	5.65	4.92	4.19	3.46	2.73	2.00	1.26	0.62	0.65	0.66	0.71	0.75	0.80
30	7.15	6.73	6.00	5.27	4.54	3.80	3.07	2.34	1.61	0.88	0.59	0.62	0.64	0.68	0.73	0.78
31	6.69	6.34	5.61	4.88	4.15	3.42	2.68	1.95	1.22	0.54	0.57	0.58	0.62	0.65	0.70	0.76
32	6.24	5.86	5.22	4.49	3.76	3.03	2.30	1.56	0.83	0.51	0.54	0.55	0.59	0.63	0.68	0.75
33	5.78	5.40	4.84	4.10	3.37	2.64	1.91	1.18	0.46	0.49	0.49	0.53	0.56	0.60	0.67	0.74
34	5.32	4.94	4.45	3.72	2.98	2.25	1.52	0.79	0.44	0.45	0.46	0.49	0.53	0.59	0.66	0.72
35	4.86	4.48	4.06	3.33	2.60	1.87	1.13	0.40	0.41	0.40	0.43	0.47	0.51	0.58	0.63	0.69
36	4.44	4.05	3.70	2.97	2.23	1.50	0.77	0.36	0.37	0.38	0.39	0.43	0.50	0.55	0.60	0.53
37	4.06	3.68	3.36	2.65	1.92	1.19	0.45	0.33	0.32	0.35	0.37	0.42	0.48	0.52	0.52	0.30
38	3.78	3.39	3.05	2.41	1.68	0.94	0.31	0.31	0.30	0.32	0.34	0.41	0.45	0.48	0.34	0.12
39	3.58	3.19	2.85	2.24	1.51	0.77	0.29	0.29	0.29	0.30	0.34	0.40	0.42	0.43	0.21	0.10
40	3.44	3.05	2.71	2.12	1.39	0.65	0.28	0.27	0.28	0.29	0.34	0.38	0.41	0.34	0.12	0.10
41	3.32	2.93	2.59	2.02	1.29	0.56	0.26	0.26	0.27	0.28	0.33	0.37	0.39	0.27	0.10	0.10
42	3.21	2.82	2.48	1.92	1.19	0.46	0.25	**0.25**	**0.26**	**0.27**	0.33	0.35	0.37	0.20	0.10	0.10
43	3.09	2.70	2.37	1.83	1.09	0.36	**0.25**	0.23	0.24	0.26	**0.32**	**0.33**	0.35	0.12	0.10	0.10
44	2.98	2.59	2.25	1.73	1.00	**0.27**	0.24	0.22	0.23	0.25	0.30	0.32	0.27	0.10	0.10	0.10
45	2.86	2.48	2.14	1.63	0.90	0.23	0.23	0.21	0.22	0.25	0.28	0.30	0.20	0.10	0.10	0.10
46	2.75	2.36	2.02	1.54	**0.80**	0.22	0.21	0.21	0.21	0.25	0.26	0.28	0.13	0.10	0.10	0.10
47	2.64	2.25	1.91	1.44	0.71	0.21	0.20	0.20	0.20	0.24	0.25	0.26	0.10	0.10	0.10	0.10
48	2.52	2.13	1.79	**1.34**	0.61	0.20	0.18	0.18	0.19	0.22	0.23	0.21	0.10	0.10	0.10	0.10
49	2.41	2.02	1.68	1.25	0.51	0.19	0.17	0.17	0.17	0.20	0.21	0.13	0.10	0.10	0.10	0.10
50	2.29	1.90	1.56	1.15	0.42	0.17	0.16	0.16	0.17	0.18	0.19	0.10	0.10	0.10	0.10	0.10
51	2.18	1.79	**1.45**	1.05	0.32	0.17	0.15	0.14	0.16	0.16	0.16	0.10	0.10	0.10	0.10	0.10
52	2.06	1.68	1.33	0.95	0.22	0.15	0.13	0.13	0.14	0.14	0.14	0.10	0.10	0.10	0.10	0.10
53	1.95	1.56	1.22	0.86	0.16	0.14	0.12	0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.10	0.10
54	1.84	**1.45**	1.10	0.76	0.15	0.13	0.11	0.10	0.18	0.42	0.10	0.10	0.10	0.10	0.10	0.10
55	1.72	1.33	0.99	0.65	0.13	0.11	0.38	0.58	1.00	0.94	0.38	0.10	0.10	0.10	0.10	0.10
56	1.61	1.22	0.87	0.54	0.12	0.14	1.00	1.00	1.00	1.00	0.50	0.10	0.10	0.10	0.10	0.10
57	1.49	1.10	0.76	0.42	0.11	0.45	1.00	1.00	1.00	1.00	0.50	0.10	0.10	0.10	0.10	0.10
58	1.38	0.99	0.64	0.31	0.18	0.78	1.00	1.00	1.00	0.93	0.44	0.10	0.10	0.10	0.10	0.10
59	**1.26**	0.88	0.53	0.19	0.38	1.00	1.00	0.68	0.38	0.38	0.12	0.10	0.10	0.10	0.10	0.10
60	**1.15**	0.76	0.41	0.10	0.62	1.00	1.00	0.22	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
61	**1.04**	0.65	0.30	0.23	1.00	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
62	**0.92**	0.53	0.19	0.44	1.00	1.00	0.49	0.10	0.10	0.29	0.10	0.10	0.10	0.10	0.10	0.10
63	**0.81**	0.42	0.14	0.96	1.00	1.00	0.15	0.10	0.10	0.50	0.10	0.10	0.10	0.10	0.10	0.10

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-3. HYDRAULIC CONDUCTIVITY OF THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**-1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
15	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
16	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
17	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
18	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
19	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
32	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
33	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
34	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
35	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
36	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
37	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
38	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
39	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
40	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
41	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
42	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
43	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
44	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
45	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
46	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
47	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
48	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
49	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
50	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
51	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
52	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
53	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
54	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
55	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
56	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
57	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
58	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
59	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
60	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
61	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
62	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
63	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-3. HYDRAULIC CONDUCTIVITY OF THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	21.39	21.46	21.53	21.60	21.67	21.74	21.81	21.88	21.96	22.09	22.26	22.41	22.86	23.55	23.66	23.70
2	21.38	21.45	21.52	21.59	21.66	21.73	21.80	21.87	21.96	22.08	22.15	22.55	23.14	23.83	24.01	24.04
3	21.38	21.45	21.52	21.59	21.66	21.73	21.78	21.81	21.86	22.03	22.38	22.83	23.41	24.11	24.35	24.39
4	21.37	21.44	21.49	21.52	21.57	21.63	21.75	21.89	22.07	22.31	22.65	23.10	23.69	24.38	24.70	24.74
5	21.29	21.36	21.48	21.62	21.75	21.89	22.03	22.17	22.34	22.58	22.93	23.38	23.97	24.66	25.05	25.08
6	21.48	21.62	21.75	21.89	22.03	22.17	22.31	22.45	22.62	22.86	23.21	23.66	24.25	24.94	25.40	25.43
7	21.76	21.89	22.03	22.17	22.31	22.45	22.59	22.72	22.90	23.14	23.49	23.94	24.52	25.22	25.74	25.78
8	22.03	22.17	22.31	22.45	22.59	22.72	22.86	23.00	23.17	23.42	23.76	24.21	24.80	25.49	26.08	26.12
9	22.31	22.45	22.59	22.73	22.86	23.00	23.14	23.28	23.45	23.69	24.04	24.49	25.08	25.77	26.42	26.47
10	22.59	22.73	22.86	23.00	23.14	23.28	23.42	23.56	23.73	23.97	24.32	24.77	25.36	26.05	26.74	26.81
11	22.87	23.00	23.14	23.28	23.42	23.56	23.70	23.83	24.01	24.25	24.59	25.04	25.63	26.32	27.02	27.15
12	23.14	23.28	23.42	23.56	23.70	23.83	23.97	24.11	24.28	24.53	24.87	25.32	25.91	26.60	27.29	27.49
13	23.42	23.56	23.70	23.84	23.97	24.11	24.25	24.39	24.56	24.80	25.15	25.60	26.19	26.88	27.57	27.82
14	23.69	23.83	23.97	24.12	24.25	24.39	24.53	24.67	24.84	25.08	25.43	25.88	26.46	27.16	27.85	28.16
15	23.97	24.13	24.28	24.43	24.58	24.71	24.85	24.98	25.14	25.36	25.70	26.15	26.74	27.43	28.13	28.50
16	24.30	24.47	24.64	24.79	24.93	25.10	25.24	25.38	25.54	25.76	26.05	26.43	27.02	27.71	28.40	28.84
17	24.61	24.80	24.97	25.15	25.30	25.48	25.70	25.83	26.01	26.25	26.55	26.91	27.33	27.99	28.68	29.19
18	25.10	25.31	25.50	25.67	25.85	26.01	26.17	26.33	26.50	26.75	27.14	27.50	27.92	28.35	28.96	29.52
19	24.72	25.19	25.65	26.12	26.53	26.71	26.88	27.03	27.22	27.46	27.78	28.16	28.62	29.03	29.38	29.86
20	23.79	24.25	24.72	25.19	25.66	26.13	26.60	27.06	27.65	28.38	28.70	29.05	29.45	29.85	30.00	30.00
21	26.02	26.31	26.61	27.08	27.50	27.87	28.12	28.37	28.68	29.11	29.73	30.00	30.00	30.00	30.00	30.00
22	29.30	29.93	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
23	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
24	29.94	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.43
25	27.87	29.77	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	26.97
26	27.24	29.54	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	25.51
27	27.22	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	24.60
28	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	23.68
29	25.00	29.73	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	22.76
30	21.98	25.60	28.37	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	28.00	21.85
31	9.94	14.21	19.29	21.91	23.97	25.93	27.90	29.87	30.00	30.00	30.00	30.00	30.00	30.00	25.54	20.93
32	8.35	8.70	9.14	9.61	10.88	14.90	18.66	21.26	23.86	27.68	30.00	30.00	30.00	30.00	23.08	20.01
33	6.35	6.68	7.10	7.57	8.07	8.60	9.15	9.72	12.40	17.50	23.74	30.00	30.00	29.03	21.78	19.10
34	0.56	0.77	2.58	5.22	5.72	6.24	6.78	7.35	8.09	9.20	13.23	20.48	25.94	26.57	20.86	18.18
35	0.28	0.10	0.10	0.10	0.10	0.34	1.44	3.84	5.42	6.51	8.20	11.72	17.05	21.01	19.95	17.26
36	1.17	0.46	0.09	0.07	0.06	0.07	0.08	0.08	0.43	2.35	5.37	7.60	11.56	16.49	19.03	16.41
37	1.00	0.93	0.31	0.07	0.05	0.05	0.05	0.05	0.23	0.58	0.92	5.42	9.12	14.42	18.17	15.66
38	1.00	1.00	0.60	0.10	0.05	0.05	0.05	0.10	0.25	0.45	0.75	2.80	7.64	12.82	17.43	15.09
39	1.18	1.16	0.74	0.24	0.08	0.06	0.07	0.15	0.26	0.43	0.70	1.53	6.56	11.70	16.25	14.69
40	1.53	1.26	0.82	0.31	0.09	0.07	0.11	0.19	0.30	0.46	0.68	0.98	5.74	10.90	15.05	14.40
41	1.72	1.40	0.93	0.39	0.09	0.08	0.14	0.23	0.34	0.49	0.71	0.96	5.06	10.26	14.19	14.17
42	2.00	1.78	1.18	0.52	0.09	0.09	0.17	0.26	0.37	0.52	0.72	0.93	4.39	9.87	13.50	13.94
43	2.00	2.00	1.59	0.71	0.10	0.12	0.21	0.30	0.41	0.53	0.70	0.91	3.80	9.77	12.82	13.71
44	2.00	2.00	2.00	1.03	0.10	0.15	0.24	0.31	0.39	0.51	0.67	0.88	3.22	9.89	12.13	13.48
45	2.00	2.00	2.00	1.70	0.34	0.15	0.22	0.29	0.37	0.49	0.65	0.86	2.88	10.00	11.44	13.25
46	2.00	2.00	2.20	2.34	0.79	0.13	0.20	0.27	0.35	0.46	0.63	0.84	2.76	10.00	10.76	12.79
47	2.00	2.25	3.13	2.98	1.55	0.11	0.18	0.25	0.33	0.44	0.61	0.83	2.64	10.00	10.07	**12.33**
48	2.29	3.18	4.06	3.94	2.57	0.42	0.16	0.23	0.31	0.43	0.60	0.82	2.52	10.00	10.00	**11.79**
49	3.22	4.10	4.99	5.00	4.77	1.29	0.14	0.21	0.30	0.42	0.59	0.81	2.40	10.00	10.00	**11.10**
50	2.76	3.94	5.00	5.00	5.00	2.15	0.14	0.21	0.29	0.41	0.58	0.80	2.28	10.00	10.00	**10.42**
51	2.42	3.79	5.00	5.00	5.00	2.76	0.14	0.20	0.29	0.41	0.58	0.80	2.16	10.00	10.00	**10.00**
52	2.11	3.68	5.00	5.00	5.00	2.65	0.14	0.21	0.29	0.41	0.57	0.79	2.04	10.00	10.00	**10.00**
53	2.13	3.66	5.75	8.95	8.09	2.04	0.14	0.21	0.29	0.41	0.57	0.79	1.92	10.00	10.00	**10.00**
54	2.15	3.66	6.47	10.00	10.00	1.18	0.15	0.21	0.29	0.41	0.57	0.78	1.82	10.00	10.00	**9.52**
55	3.40	4.38	9.00	19.89	11.98	0.35	0.16	0.22	0.30	0.41	0.57	0.78	1.72	10.00	10.00	**8.32**
56	9.81	25.00	25.00	25.00	9.82	0.10	0.10	0.14	0.23	0.36	0.54	0.77	1.62	10.00	10.00	**7.09**
57	25.00	25.00	25.00	25.00	0.62	0.10	0.10	0.10	0.10	0.22	0.40	0.64	1.50	10.00	10.00	**5.68**
58	25.00	25.00	25.00	8.89	0.10	0.10	0.10	0.10	0.10	0.10	0.25	0.49	1.38	10.00	10.00	**5.00**
59	25.00	25.00	25.00	0.41	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.35	1.25	10.00	10.00	**5.00**
60	25.00	25.00	4.39	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	1.10	10.00	10.00	**5.00**
61	25.00	9.21	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.98	10.00	10.00	**5.00**
62	25.00	0.64	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.93	10.00	10.00	**5.00**
63	0.88	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.90	10.00	7.61	**4.90**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-3. HYDRAULIC CONDUCTIVITY OF THE LUCKY Mc AQUIFER (FT/DAY) (continued).

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**-1**	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
65	**-1**	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
66	**-1**	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
67	**-1**	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0
68	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
69	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
70	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
71	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
72	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
73	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
75	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
76	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
77	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
78	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
79	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
80	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
81	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
82	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
83	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
84	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
85	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
86	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
87	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
88	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
89	**-1**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
90	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
91	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
92	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
93	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
94	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
96	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
97	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
98	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1	1
99	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1	1
100	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1
101	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1
102	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1	1
103	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1
104	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1
105	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1	1
106	0	0	0	0	0	0	0	**-1**	**-1**	1	1	1	1	1	1	1
107	0	0	0	0	0	0	0	0	**-1**	1	1	1	1	1	1	1
108	0	0	0	0	0	0	0	0	**-1**	1	1	0	0	0	0	1
109	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
110	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-3. HYDRAULIC CONDUCTIVITY OF THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	0.10	0.10	0.10	10.00	10.00	10.00	10.00	10.00	14.54	17.41	23.41	25.00	25.00	25.00	25.00	0.99
65	0.10	0.10	0.93	10.00	10.00	10.00	10.00	10.00	12.32	11.65	14.26	25.00	25.00	25.00	1.17	0.10
66	0.10	0.10	10.00	10.00	10.00	10.00	10.00	0.10	0.10	0.83	10.00	10.00	25.00	6.06	0.10	0.10
67	0.10	0.10	10.00	10.00	10.00	10.00	6.80	0.10	0.10	0.10	10.00	10.00	25.00	4.17	0.10	0.10
68	0.10	2.09	10.00	10.00	10.00	10.00	0.10	0.10	0.10	0.10	10.00	10.00	25.00	0.89	0.10	0.10
69	0.10	10.00	10.00	10.00	10.00	6.24	0.10	0.10	0.10	0.10	10.00	10.00	25.00	0.79	0.10	0.10
70	5.68	10.00	10.00	10.00	10.00	0.10	0.10	0.10	0.10	0.10	10.00	10.00	25.00	0.90	0.10	0.10
71	10.00	10.00	10.00	10.00	0.10	0.10	0.10	0.10	0.10	0.10	10.00	10.00	25.00	3.47	0.10	0.10
72	10.00	10.00	10.00	2.64	0.10	0.10	0.10	0.10	0.10	0.10	10.00	10.00	25.00	15.50	0.43	0.10
73	10.00	10.00	10.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	9.42	10.00	10.00	25.00	3.89	0.10
74	10.00	10.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.28	5.02	10.00	10.00	25.00	25.00	0.10
75	10.00	10.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.40	3.12	10.00	10.00	10.00	25.00	0.99
76	9.95	4.85	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.25	1.95	10.00	10.00	10.00	25.00	25.00
77	7.82	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.91	9.12	10.00	10.00	10.00	25.00
78	5.34	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.36	3.95	10.00	10.00	10.00	25.00
79	0.12	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.42	10.00	10.00	10.00	19.75
80	0.15	0.18	0.14	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.98	10.00	10.00	10.00	10.00
81	0.19	0.21	0.18	0.15	0.13	0.11	0.10	0.10	0.10	0.10	0.10	0.96	10.00	10.00	10.00	10.00
82	0.23	0.25	0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.10	0.10	2.24	10.00	10.00	10.00	10.00
83	0.27	0.29	0.25	0.23	0.21	0.19	0.18	0.16	0.14	0.13	0.11	3.11	10.00	10.00	10.00	10.00
84	0.30	0.32	0.29	0.26	0.24	0.23	0.21	0.20	0.18	0.15	0.10	3.98	10.00	10.00	10.00	25.00
85	0.34	0.36	0.33	0.30	0.28	0.27	0.25	0.23	0.19	0.16	0.13	4.73	10.00	10.00	10.00	25.00
86	0.37	0.39	0.37	0.34	0.32	0.31	0.28	0.24	0.21	0.16	0.10	4.49	10.00	10.00	10.00	10.00
87	0.40	0.43	0.41	0.38	0.36	0.33	0.31	0.27	0.22	0.16	0.11	3.50	10.00	10.00	10.00	10.00
88	0.42	0.47	0.45	0.42	0.39	0.37	0.34	0.29	0.23	0.20	0.13	1.86	9.59	10.00	10.00	10.00
89	0.47	0.52	0.48	0.45	0.43	0.41	0.36	0.33	0.30	0.24	0.17	0.65	7.82	10.00	10.00	10.00
90	0.68	0.80	0.69	0.54	0.48	0.45	0.42	0.39	0.35	0.30	0.23	0.45	7.81	10.00	10.00	10.00
91	1.00	1.11	1.07	0.94	0.80	0.62	0.49	0.46	0.43	0.39	0.26	2.96	7.63	10.00	10.00	10.00
92	1.20	1.49	1.67	1.83	2.34	2.45	2.22	0.90	0.78	0.71	1.04	5.00	7.21	9.79	10.00	10.00
93	1.43	1.78	2.20	2.61	3.72	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.89	7.80	10.00	10.00
94	1.65	2.02	2.59	3.23	4.21	5.00	5.00	5.00	5.00	5.00	0.71	0.50	0.50	0.98	7.98	10.00
95	1.74	2.20	2.88	3.68	4.67	5.00	5.00	5.00	5.00	5.00	0.50	0.50	0.50	0.74	4.17	10.00
96	1.83	2.36	3.15	4.03	4.77	5.00	5.00	5.00	5.00	0.83	0.50	0.50	0.50	0.62	2.46	10.00
97	1.86	2.59	3.35	4.28	4.65	4.94	5.00	5.00	4.71	0.63	0.50	0.50	0.50	0.50	1.34	7.67
98	1.88	2.69	3.45	4.22	4.61	4.89	5.00	4.70	2.86	0.55	0.50	0.50	0.50	0.50	0.96	4.90
99	1.83	2.68	3.52	4.20	4.62	4.91	4.29	3.24	1.89	0.50	0.50	0.50	0.50	0.50	0.90	4.55
100	1.80	2.64	3.52	4.22	4.67	4.99	3.80	2.55	1.29	0.50	0.50	0.50	0.50	0.50	0.84	4.18
101	1.78	2.58	3.55	4.27	4.74	4.61	3.25	2.13	0.94	0.50	0.50	0.50	0.50	0.50	0.78	3.78
102	1.75	2.49	3.59	4.34	4.83	4.15	2.59	1.19	0.51	0.50	0.50	0.50	0.50	0.50	0.72	3.34
103	1.73	2.47	3.66	4.43	4.94	3.70	2.18	0.80	0.50	0.50	0.50	0.50	0.50	0.50	0.69	2.86
104	1.69	2.53	3.74	4.53	4.80	3.51	2.17	0.88	0.50	0.50	0.50	0.50	0.50	0.50	0.67	2.52
105	1.43	2.61	3.84	4.65	4.48	3.39	2.31	1.23	0.50	0.50	0.50	0.50	0.50	0.50	0.67	2.33
106	1.19	2.39	3.94	4.77	4.32	3.35	2.38	1.40	0.72	0.50	0.50	0.50	0.50	0.50	0.66	2.24
107	0.95	2.16	3.84	4.91	4.04	3.16	2.28	1.37	0.80	0.56	0.50	0.50	0.50	0.50	0.64	2.15
108	0.61	1.93	3.63	4.90	3.70	2.79	1.92	1.09	0.85	0.73	0.61	0.50	0.50	0.50	0.62	2.06
109	0.50	1.57	3.61	4.62	3.42	2.47	1.50	0.98	0.91	0.85	0.78	0.67	0.55	0.50	0.59	1.96
110	0.50	1.11	3.86	4.32	3.15	2.21	1.26	0.95	0.89	0.82	0.76	0.69	0.63	0.56	0.56	1.86
111	0.50	0.89	4.00	3.85	2.71	1.84	1.00	0.94	0.88	0.82	0.75	0.69	0.62	0.56	0.54	1.76
112	0.50	0.74	4.34	3.31	2.01	1.19	0.94	0.92	0.86	0.80	0.74	0.68	0.62	0.56	0.55	1.65
113	0.50	0.68	4.75	2.80	1.14	0.98	0.90	0.81	0.74	0.78	0.74	0.68	0.62	0.56	0.55	1.55
114	0.50	0.63	4.80	2.55	1.00	0.95	0.86	0.77	0.68	0.59	0.58	0.61	0.61	0.56	0.55	1.44
115	0.50	0.55	4.82	2.37	1.00	0.91	0.82	0.73	0.64	0.55	0.46	0.38	0.41	0.45	0.59	1.86
116	0.50	0.52	5.00	2.98	0.98	0.89	0.79	0.70	0.60	0.51	0.42	0.33	0.24	0.21	0.65	2.19
117	0.50	0.51	5.00	3.63	0.98	0.88	0.79	0.69	0.60	0.50	0.41	0.32	0.22	0.13	0.70	2.46
118	0.50	0.50	5.00	4.51	0.98	0.88	0.79	0.69	0.59	0.50	0.40	0.31	0.21	0.12	0.75	2.63
119	0.50	0.50	5.00	5.00	0.98	0.88	0.78	0.68	0.59	0.49	0.39	0.30	0.20	0.10	0.79	2.74
120	0.45	0.50	5.00	4.53	0.99	0.88	0.78	0.67	0.57	0.47	0.37	0.27	0.17	0.33	0.83	2.85
121	0.44	0.57	2.28	1.83	0.98	0.88	0.76	0.65	0.54	0.43	0.33	0.22	0.12	0.47	0.87	3.00
122	0.38	0.45	0.85	0.82	0.80	0.74	0.66	0.58	0.50	0.40	0.28	0.16	0.25	0.54	0.93	2.57
123	0.30	0.37	0.62	0.57	0.55	0.53	0.45	0.37	0.29	0.21	0.13	0.10	0.12	0.42	0.89	1.75
124	0.20	0.26	**0.22**	0.29	0.24	0.21	0.18	0.10	0.10	0.10	0.10	0.10	0.10	0.45	0.88	1.00
125	0.10	0.14	**0.12**	**0.24**	**0.31**	**0.35**	**0.38**	**0.40**	**0.41**	**0.43**	**0.47**	**0.54**	**0.64**	**0.74**	**0.85**	**0.95**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-3. HYDRAULIC CONDUCTIVITY OF THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
65	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
66	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
67	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
68	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
69	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
70	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
71	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
72	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
73	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	**-1**
74	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
75	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
76	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
77	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
78	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
79	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
80	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	**-1**
81	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0
82	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
83	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
84	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
85	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
86	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
87	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0
88	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
89	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
90	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
91	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
92	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
93	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0
94	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0	0
95	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0
96	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
97	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
98	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
99	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
100	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
101	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
102	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
103	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
104	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
105	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
106	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
107	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
108	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
109	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
110	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
111	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
112	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
113	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
114	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
115	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
116	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
117	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
118	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
119	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
120	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
121	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
122	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
123	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
124	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
125	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-4. SPECIFIC YIELD OF THE LUCKY Mc AQUIFER.

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**
2	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.15	0.15	0.15	0.15
3	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.15	0.15	0.15	0.15
4	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.15	0.15	0.15	0.15	0.15
5	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15	0.15
6	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15	0.15
7	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14	0.15	0.15	0.15	0.15
8	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.15	0.15	0.15	0.15
9	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15
10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15
11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15
12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.15	0.15
13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15
14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15
15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.15
16	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15
17	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15
18	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.15
19	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15
20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15
21	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.10	0.10	0.10	0.10	0.12
22	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.10	0.10	0.10	0.10	0.10
23	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.10	0.10	0.10	0.10	0.10
24	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
25	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
26	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10
27	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10
28	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
29	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
30	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
31	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10
32	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10
33	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
34	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
35	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
36	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
37	0.10	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
38	0.10	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09
39	0.10	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09
40	0.10	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09
41	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09
42	0.10	0.10	0.10	0.09	0.08	0.08	0.08	**0.08**	**0.08**	**0.08**	0.08	0.09	0.09	0.09	0.09	0.09
43	0.10	0.10	0.10	0.09	0.08	0.08	**0.08**	0.08	0.08	0.08	**0.08**	**0.08**	0.09	0.09	0.09	0.09
44	0.10	0.10	0.10	0.09	0.08	**0.08**	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
45	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
46	0.10	0.10	0.10	0.09	**0.08**	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
47	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
48	0.10	0.10	0.10	**0.09**	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
49	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
50	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
51	0.10	0.10	**0.10**	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
52	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.09	0.10	0.10	0.08	0.08	0.08	0.09	0.09	0.09
53	0.10	0.10	0.09	0.08	0.08	0.08	0.09	0.10	0.14	0.14	0.08	0.08	0.08	0.09	0.09	0.09
54	0.10	**0.10**	0.09	0.08	0.08	0.08	0.10	0.14	0.15	0.15	0.09	0.08	0.09	0.09	0.09	0.09
55	0.10	0.10	0.09	0.08	0.08	0.09	0.13	0.15	0.15	0.15	0.08	0.08	0.09	0.09	0.09	0.09
56	0.10	0.10	0.09	0.08	0.08	0.10	0.15	0.15	0.15	0.15	0.08	0.08	0.09	0.09	0.09	0.09
57	0.10	0.10	0.09	0.08	0.08	0.15	0.15	0.15	0.15	0.13	0.08	0.08	0.09	0.09	0.09	0.09
58	0.10	0.10	0.09	0.08	0.09	0.15	0.15	0.12	0.12	0.09	0.08	0.08	0.08	0.09	0.09	0.09
59	**0.10**	0.10	0.09	0.08	0.12	0.15	0.14	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
60	**0.10**	0.10	0.09	0.08	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09
61	**0.10**	0.10	0.09	0.10	0.15	0.15	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
62	**0.10**	0.10	0.09	0.13	0.15	0.13	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
63	**0.10**	0.10	0.09	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-4. SPECIFIC YIELD OF THE LUCKY Mc AQUIFER (continued).

Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**0.13**	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
2	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
3	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
4	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
5	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
6	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
8	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
9	0.15	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
10	0.15	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
11	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
12	0.15	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
13	0.15	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
14	0.15	0.15	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
15	0.15	0.15	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
16	0.15	0.15	0.15	0.15	0.14	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
17	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
18	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.13	0.11	0.10	0.10	0.10	0.10	0.10	0.10
19	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.13	0.10	0.10	0.10	0.10	0.10
20	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.11	0.10	0.10	0.10
21	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.12	0.10	0.10
22	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.12	0.10
23	0.13	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.10
24	0.11	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
25	0.10	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
26	0.10	0.12	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
27	0.10	0.10	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
28	0.10	0.10	0.12	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
29	0.10	0.10	0.11	0.13	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
30	0.10	0.10	0.10	0.12	0.13	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
31	0.10	0.10	0.10	0.10	0.12	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
32	0.10	0.10	0.10	0.10	0.11	0.11	0.12	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15
33	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15
34	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.12	0.13	0.13	0.14	0.14	0.14	0.15
35	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.13
36	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11
37	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
38	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
39	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
40	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
41	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
42	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.12	0.12	0.12
43	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.13	0.13	0.13
44	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.13	0.14	0.15	0.15
45	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.14	0.15	0.15	0.15
46	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.14	0.15	0.15	0.15
47	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.13	0.14	0.15	0.15	0.15
48	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.13	0.14	0.15	0.15	0.15
49	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.13	0.14	0.15	0.15
50	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.13	0.14	0.15	0.15
51	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.12	0.13	0.14	0.15	0.15
52	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.15	0.15
53	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.12	0.13	0.14	0.15	0.15	0.15
54	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.13	0.13	0.14	0.15	0.15	0.15	0.17
55	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.15	0.15	0.15	0.15	0.15	0.17	0.18
56	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
57	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.14	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
58	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
59	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
60	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
61	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
62	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
63	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-4. SPECIFIC YIELD OF THE LUCKY Mc AQUIFER (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
2	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
3	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
4	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
5	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
6	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
8	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
9	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
14	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
16	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
17	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
18	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
19	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
21	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
22	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
23	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
24	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
25	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
26	0.15	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
27	0.15	0.15	0.15	0.14	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
28	0.15	0.15	0.15	0.15	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
29	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
30	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.10
31	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.10	0.10	0.10	0.10	0.10	0.10
32	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.13	0.10	0.10	0.10	0.10	0.10
33	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.10	0.10	0.10	0.10
34	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.10	0.10	0.10
35	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.10	0.10	0.10	0.10
36	0.11	0.11	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.13	0.15	0.15	0.15	0.10	0.10	0.10
37	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.08	0.08	0.10	0.15	0.15	0.11	0.10	0.10
38	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.13	0.10	0.10
39	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.10	0.10
40	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.13	0.15	0.15	0.10	0.10
41	0.11	0.11	0.11	0.11	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.12	0.15	0.15	0.10	0.10
42	0.12	0.12	0.12	0.11	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.11	0.15	0.15	0.11	0.10
43	0.13	0.13	0.13	0.12	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.10	0.15	0.15	0.12	0.10
44	0.15	0.15	0.14	0.12	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.15	0.15	0.13	0.10
45	0.15	0.15	0.15	0.15	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.14	0.10
46	0.15	0.15	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.10
47	0.15	0.15	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.10**
48	0.15	0.15	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.10**
49	0.15	0.15	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.12**
50	0.15	0.15	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.14**
51	0.15	0.15	0.15	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.15**
52	0.15	0.15	0.15	0.15	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.15**
53	0.16	0.16	0.16	0.16	0.13	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.15**
54	0.17	0.17	0.17	0.17	0.15	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.15**
55	0.19	0.19	0.19	0.19	0.15	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	**0.15**
56	0.20	0.20	0.20	0.20	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.14	0.15	0.15	**0.15**
57	0.20	0.20	0.20	0.20	0.10	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.14	0.15	0.15	**0.15**
58	0.20	0.20	0.20	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.08	0.14	0.15	0.15	**0.15**
59	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.14	0.15	0.15	**0.15**
60	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.14	0.15	0.15	**0.15**
61	0.20	0.16	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.14	0.15	0.15	**0.15**
62	0.20	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.08	0.14	0.15	0.15	**0.15**
63	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.08	0.14	0.15	0.15	**0.15**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-4. SPECIFIC YIELD OF THE LUCKY Mc AQUIFER (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**0.10**	0.09	0.08	0.15	0.15	0.09	0.08	0.08	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.09
65	**0.10**	0.09	0.09	0.15	0.15	0.09	0.08	0.08	0.11	0.10	0.08	0.08	0.08	0.08	0.08	0.09
66	**0.10**	0.09	0.09	0.15	0.15	0.09	0.08	0.08	0.14	0.12	0.08	0.08	0.08	0.08	0.08	0.08
67	**0.10**	0.09	0.10	0.15	0.14	0.08	0.08	0.08	0.15	0.13	0.08	0.08	0.08	0.08	0.08	0.08
68	**0.10**	0.09	0.11	0.15	0.11	0.08	0.08	0.09	0.15	0.10	0.08	0.08	0.08	0.08	0.08	0.08
69	**0.10**	0.09	0.11	0.15	0.10	0.08	0.08	0.09	0.15	0.09	0.08	0.08	0.08	0.08	0.08	0.08
70	**0.10**	0.09	0.12	0.15	0.10	0.08	0.08	0.10	0.15	0.08	0.08	0.08	0.08	0.08	0.08	0.08
71	**0.10**	0.09	0.12	0.15	0.09	0.08	0.08	0.12	0.15	0.08	0.08	0.08	0.08	0.08	0.08	0.08
72	**0.10**	0.09	0.13	0.15	0.09	0.08	0.08	0.14	0.15	0.08	0.08	0.08	0.08	0.08	0.08	0.10
73	**0.10**	0.09	0.13	0.15	0.09	0.08	0.08	0.15	0.15	0.08	0.08	0.08	0.08	0.08	0.08	0.20
74	**0.10**	0.09	0.13	0.15	0.09	0.08	0.09	0.15	0.12	0.08	0.08	0.08	0.08	0.08	0.09	0.20
75	**0.10**	0.09	0.13	0.15	0.09	0.08	0.09	0.15	0.10	0.08	0.08	0.08	0.08	0.09	0.10	0.20
76	**0.10**	0.09	0.13	0.15	0.09	0.08	0.10	0.15	0.09	0.08	0.08	0.08	0.09	0.09	0.12	0.20
77	**0.10**	0.09	0.13	0.15	0.08	0.08	0.10	0.15	0.08	0.08	0.08	0.08	0.09	0.10	0.14	0.20
78	**0.10**	0.09	0.12	0.15	0.08	0.08	0.12	0.15	0.08	0.08	0.08	0.09	0.10	0.10	0.13	0.20
79	**0.10**	0.09	0.12	0.15	0.08	0.08	0.15	0.15	0.08	0.08	0.08	0.09	0.10	0.10	0.11	0.19
80	**0.10**	0.09	0.12	0.15	0.08	0.08	0.15	0.15	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.13
81	**0.10**	0.09	0.11	0.15	0.08	0.09	0.15	0.15	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10
82	**0.10**	0.09	0.11	0.15	0.08	0.09	0.15	0.13	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10
83	**0.10**	0.09	0.11	0.15	0.08	0.10	0.15	0.11	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10
84	**0.10**	0.09	0.10	0.13	0.08	0.12	0.15	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10
85	**0.10**	0.09	0.10	0.11	0.08	0.14	0.15	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10
86	**0.10**	0.09	0.09	0.10	0.08	0.15	0.15	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10
87	**0.10**	0.10	0.08	0.08	0.08	0.15	0.15	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.09
88	**0.10**	0.10	0.08	0.08	0.08	0.11	0.12	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.09
89	**0.10**	0.10	0.08	0.08	0.08	0.10	0.09	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.09
90	0.10	0.10	0.09	0.08	0.08	0.09	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09
91	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
92	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
93	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
94	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
95	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
96	0.10	0.10	0.10	0.10	0.09	0.09	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
97	0.11	0.11	0.10	0.10	0.09	0.09	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09
98	0.11	0.11	0.10	0.10	0.09	**0.08**	0.08	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09
99	0.11	0.11	0.10	0.10	0.09	**0.09**	0.08	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.08	0.09
100	0.11	0.11	0.10	0.10	0.09	0.09	**0.08**	0.09	0.10	0.10	0.10	0.10	0.09	0.09	0.08	0.10
101	0.11	0.11	0.10	0.10	0.09	0.09	**0.09**	0.08	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.10
102	0.11	0.11	0.11	0.10	0.10	0.09	**0.09**	0.08	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.20
103	0.11	0.11	0.11	0.10	0.10	0.09	0.09	**0.08**	0.09	0.10	0.08	0.08	0.08	0.08	0.08	0.22
104	0.11	0.11	0.11	0.10	0.10	0.09	0.09	**0.08**	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.22
105	0.11	0.11	0.11	0.10	0.10	0.09	0.09	**0.08**	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.22
106	0.11	0.11	0.11	0.10	0.10	0.09	0.09	**0.09**	**0.08**	0.08	0.08	0.08	0.08	0.08	0.08	0.20
107	0.11	0.11	0.11	0.11	0.10	0.10	0.09	0.09	**0.08**	0.08	0.08	0.08	0.08	0.08	0.08	0.10
108	0.11	0.11	0.11	0.11	0.10	0.10	0.09	0.09	**0.09**	0.09	0.09	0.08	0.08	0.08	0.08	0.08
109	0.11	0.11	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
110	0.11	0.11	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
111	0.11	0.11	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
112	0.11	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
113	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.10	0.09	0.09	0.08	0.08	0.08
114	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.10	0.10	0.09	0.08	0.08	0.08
115	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.08	0.08
116	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.08	0.08
117	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.08
118	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.08
119	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.11	0.10	0.10	0.09	0.08
120	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.11	0.11	0.10	0.10	0.09	0.09
121	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.09
122	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10
123	0.12	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.11	0.10
124	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.12	0.11
125	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.12

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-4. SPECIFIC YIELD OF THE LUCKY Mc AQUIFER (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	0.09	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.10
65	0.09	0.10	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.10
66	0.09	0.09	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.10	0.10
67	0.09	0.09	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.11	0.20	0.20	0.19	0.10	0.10
68	0.09	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.10	0.10
69	0.08	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.10	0.10
70	0.17	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.10	0.10
71	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.10	0.10
72	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.10	0.10
73	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.20	0.20	0.20	0.20	0.10
74	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.20	0.20	0.20	0.20	0.10
75	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.20	0.20	0.20	0.20	0.14
76	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.20	0.20	0.20	0.20	0.20
77	0.20	0.10	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
78	0.20	0.10	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
79	0.10	0.10	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.20	0.20	0.20	0.20
80	0.10	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20
81	0.10	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20
82	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.20	0.20	0.20	0.20
83	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
84	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
85	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
86	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
87	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
88	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	0.20	0.20
89	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.18	0.20	0.20	0.20	0.20
90	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.20	0.20	0.20	0.20
91	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.16	0.20	0.20	0.20	0.20
92	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.16	0.20	0.20	0.20	0.20	0.20	0.20
93	0.09	0.10	0.10	0.10	0.10	0.10	0.13	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
94	0.09	0.10	0.10	0.10	0.16	0.20	0.20	0.20	0.20	0.20	0.13	0.10	0.10	0.17	0.20	0.20
95	0.10	0.10	0.13	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.20	0.20
96	0.10	0.10	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.15	0.10	0.10	0.10	0.10	0.20	0.20
97	0.10	0.21	0.24	0.23	0.21	0.20	0.20	0.20	0.20	0.10	0.09	0.09	0.09	0.10	0.15	0.20
98	0.14	0.25	0.26	0.24	0.23	0.21	0.20	0.20	0.20	0.09	0.08	0.09	0.09	0.10	0.10	0.20
99	0.27	0.30	0.28	0.26	0.24	0.23	0.22	0.20	0.14	0.09	0.08	0.09	0.09	0.10	0.10	0.20
100	0.30	0.30	0.30	0.27	0.25	0.24	0.22	0.21	0.10	0.08	0.08	0.09	0.09	0.10	0.10	0.16
101	0.30	0.30	0.30	0.28	0.26	0.24	0.22	0.19	0.09	0.08	0.08	0.09	0.09	0.10	0.10	0.13
102	0.30	0.30	0.30	0.29	0.26	0.24	0.21	0.14	0.09	0.08	0.09	0.09	0.09	0.10	0.10	0.12
103	0.30	0.30	0.30	0.29	0.26	0.23	0.21	0.10	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.11
104	0.30	0.30	0.30	0.29	0.26	0.23	0.20	0.09	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.11
105	0.29	0.30	0.30	0.30	0.25	0.22	0.14	0.09	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10
106	0.27	0.30	0.30	0.29	0.25	0.21	0.10	0.09	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10
107	0.24	0.30	0.30	0.29	0.24	0.20	0.10	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10
108	0.21	0.28	0.30	0.29	0.24	0.17	0.09	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10
109	0.12	0.26	0.30	0.29	0.22	0.11	0.09	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10
110	0.08	0.24	0.30	0.28	0.21	0.10	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10
111	0.08	0.23	0.30	0.27	0.17	0.09	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10
112	0.08	0.21	0.30	0.26	0.10	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
113	0.08	0.16	0.30	0.24	0.09	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
114	0.08	0.11	0.30	0.19	0.09	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
115	0.08	0.09	0.30	0.19	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
116	0.08	0.09	0.27	0.19	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11
117	0.08	0.09	0.21	0.19	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11
118	0.08	0.08	0.20	0.19	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11
119	0.08	0.08	0.20	0.18	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.12
120	0.08	0.08	0.17	0.14	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.12
121	0.09	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.12
122	0.09	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.11	0.12	0.13
123	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.11	0.13	0.14
124	0.09	0.10	**0.10**	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.15	0.15	0.15	0.15
125	0.10	0.13	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-4. SPECIFIC YIELD OF THE LUCKY Mc AQUIFER (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.14	0.15	0.15	**0.15**
65	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.15	0.15	0.15	**0.15**
66	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.15	0.15	0.15	**0.15**
67	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.15	0.15	0.15	**0.15**
68	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.15	0.15	0.15	**0.15**
69	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.15	0.15	0.15	**0.15**
70	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.15	0.15	0.15	**0.15**
71	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.15	0.15	0.15	**0.15**
72	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	**0.15**
73	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	**0.15**
74	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	**0.15**
75	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	**0.15**
76	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	**0.15**
77	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	**0.14**
78	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.13	**0.12**
79	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.12	**0.10**
80	0.20	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.15	0.15	0.11	**0.10**
81	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.15	0.15	0.10	0.10
82	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.15	0.14	0.10	0.10
83	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.13	0.10	0.10
84	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.12	0.10	0.10
85	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14	0.15	0.11	0.10	0.10
86	0.20	0.20	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.10	0.10	0.10
87	0.20	0.20	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.10	0.10	0.10
88	0.20	0.20	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.10	0.10	0.10
89	0.20	0.20	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.15	0.15	0.10	0.10	0.10
90	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.15	0.15	0.10	0.10	0.10
91	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.13	0.15	0.15	0.10	0.10	0.10
92	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14	0.15	0.15	0.10	0.10	0.10
93	0.20	0.20	0.16	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.14	0.15	0.15	0.10	0.10	0.10
94	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.15	0.15	0.15	0.10	0.10	0.10
95	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.15	0.15	0.15	0.10	0.10	0.10
96	0.20	0.20	0.20	0.19	0.11	0.10	0.10	0.10	0.11	0.13	0.15	0.15	0.15	0.10	0.10	0.10
97	0.20	0.20	0.20	0.20	0.16	0.13	0.12	0.11	0.12	0.13	0.15	0.15	0.15	0.10	0.10	0.10
98	0.20	0.20	0.20	0.20	0.19	0.17	0.15	0.13	0.12	0.14	0.15	0.15	0.15	0.11	0.10	0.10
99	0.20	0.20	0.20	0.20	0.20	0.19	0.17	0.16	0.13	0.14	0.15	0.15	0.15	0.12	0.10	0.10
100	0.19	0.19	0.19	0.20	0.19	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.13	0.10	0.10
101	0.16	0.17	0.17	0.18	0.19	0.18	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.14	0.10	0.10
102	0.14	0.15	0.16	0.17	0.17	0.18	0.17	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.11	0.12
103	0.13	0.14	0.15	0.15	0.16	0.17	0.17	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.13	0.14
104	0.12	0.12	0.13	0.14	0.15	0.15	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15
105	0.11	0.11	0.12	0.12	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
106	0.11	0.11	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
107	0.11	0.11	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
108	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
109	0.11	0.11	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
110	0.11	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
111	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14
112	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14
113	0.11	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14
114	0.11	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
115	0.12	0.12	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
116	0.12	0.12	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
117	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14
118	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
119	0.12	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
120	0.13	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14
121	0.13	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14
122	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14
123	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13
124	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13
125	**0.15**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.13**	**0.13**	**0.13**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-5. BASE OF THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	161	166	171	175	180	185	189	193	197	206	**200**	**200**	**200**	**200**	**200**	**200**
2	150	156	159	162	165	168	171	182	193	207	200	200	200	200	200	200
3	134	137	140	143	146	157	170	184	199	213	200	200	200	201	201	203
4	115	118	122	133	147	161	173	187	200	212	209	205	203	204	205	206
5	100	108	120	133	147	161	173	185	197	209	218	208	207	207	208	209
6	100	107	121	134	146	159	173	186	200	214	225	210	210	210	211	213
7	103	109	122	136	149	163	176	189	203	217	228	216	214	213	213	215
8	109	111	124	138	152	165	179	191	202	213	225	219	217	215	216	218
9	113	116	128	142	153	165	177	190	202	212	222	223	220	218	219	220
10	116	120	129	142	155	168	178	188	200	212	224	234	220	221	221	221
11	120	122	134	145	157	169	181	193	204	216	227	238	226	224	223	224
12	127	130	133	144	156	168	179	191	202	214	224	235	229	227	226	226
13	131	130	133	143	155	166	177	189	200	210	221	231	233	230	229	228
14	136	135	136	141	152	164	176	185	196	207	216	226	239	230	230	231
15	141	140	139	141	151	161	171	182	193	200	210	224	243	236	234	233
16	146	145	142	144	150	157	168	178	185	195	209	227	239	242	237	236
17	151	149	148	147	150	156	162	169	179	194	205	218	232	247	240	239
18	155	154	152	151	153	156	160	166	173	184	197	212	228	242	240	240
19	160	158	158	157	159	160	162	166	170	176	193	208	222	236	249	242
20	165	163	164	162	165	164	166	169	172	177	189	203	217	232	249	247
21	169	168	170	167	171	172	171	171	174	178	186	202	219	235	252	250
22	174	172	174	172	176	178	179	178	178	180	186	203	220	233	247	259
23	179	177	178	177	182	183	184	185	181	184	189	202	215	228	241	254
24	184	182	183	182	187	189	190	191	188	188	190	199	213	227	239	250
25	188	186	187	187	192	195	196	196	193	192	194	200	214	226	240	253
26	193	191	192	193	197	200	202	202	200	198	198	200	213	227	240	253
27	198	196	197	199	202	206	208	208	206	202	202	204	215	230	241	252
28	203	200	201	205	207	211	213	214	211	207	207	209	218	230	242	254
29	207	205	206	211	212	216	219	220	216	212	211	211	221	232	243	255
30	212	210	211	216	217	221	224	225	219	216	216	220	231	241	250	259
31	217	215	215	220	222	226	230	228	222	220	220	230	239	247	255	262
32	221	219	220	224	228	231	235	230	226	226	228	238	250	262	269	277
33	226	224	225	228	233	236	238	232	230	230	233	249	261	271	284	292
34	231	229	229	232	238	241	240	236	236	235	235	244	261	277	294	304
35	236	233	234	237	243	243	241	240	240	241	239	240	256	272	289	306
36	240	238	238	241	248	246	244	242	241	243	244	243	252	268	284	300
37	244	242	242	244	249	248	246	244	243	244	246	247	249	264	280	296
38	246	245	245	247	250	249	247	246	244	245	246	248	250	262	278	296
39	247	247	247	249	250	250	248	247	245	246	247	249	251	262	278	297
40	247	248	248	250	250	250	249	248	246	246	248	249	252	261	278	298
41	248	249	249	250	250	250	250	248	247	247	248	249	253	261	279	298
42	248	250	251	250	250	250	250	**249**	**247**	**247**	249	250	254	261	280	299
43	249	252	252	250	250	250	**250**	249	248	248	**249**	**251**	255	261	282	300
44	249	253	253	250	250	**250**	250	250	248	248	249	251	255	261	283	301
45	250	254	254	250	250	250	250	250	249	248	250	252	256	262	284	303
46	250	255	255	250	**250**	250	250	250	249	249	251	253	256	262	284	305
47	251	256	256	251	250	250	250	250	250	249	252	254	257	264	286	309
48	252	256	258	**253**	250	250	250	250	250	250	253	255	258	266	290	313
49	252	257	260	253	250	250	250	250	250	250	254	256	259	270	298	316
50	253	257	261	256	250	250	250	250	250	251	255	257	260	281	307	319
51	253	258	**263**	260	250	250	250	250	250	252	256	258	265	293	313	323
52	253	258	265	263	252	250	250	250	250	253	257	259	276	305	318	328
53	254	259	267	266	258	250	250	250	251	254	258	264	288	313	323	332
54	254	**259**	269	270	263	250	250	250	252	256	259	273	299	320	327	337
55	254	260	271	273	267	260	250	250	254	257	262	283	308	327	332	343
56	255	260	272	275	271	264	250	252	255	259	270	292	315	334	340	348
57	255	262	273	278	273	267	255	254	256	260	279	299	321	340	350	352
58	256	263	274	280	276	270	258	255	258	267	287	304	326	346	358	355
59	**256**	265	274	280	279	272	260	257	259	273	293	308	329	350	360	357
60	**256**	266	274	280	285	274	260	259	262	279	296	311	330	356	360	360
61	**257**	267	275	281	290	276	262	260	266	284	299	313	331	360	360	360
62	**257**	268	275	281	290	279	265	262	269	290	302	315	332	360	360	360
63	**258**	269	276	281	290	283	267	265	272	293	304	316	332	360	360	360

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-5. BASE OF THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**200**	213	215	216	216	217	217	217	218	218	219	219	220	220	220	220
2	200	218	220	220	221	221	221	222	222	222	222	222	222	223	223	223
3	208	220	221	224	224	224	224	224	224	224	224	225	225	225	226	226
4	209	222	226	227	226	226	225	226	226	227	228	228	228	228	228	228
5	210	228	228	227	228	228	229	229	230	230	230	230	230	230	230	230
6	217	230	229	230	231	232	232	232	233	232	232	232	232	231	231	231
7	218	231	233	234	234	235	235	234	234	234	233	233	233	232	233	234
8	220	234	236	237	237	236	236	235	235	234	234	234	235	236	237	238
9	222	232	239	238	237	237	236	236	235	236	237	238	240	240	240	240
10	225	229	239	238	238	237	237	238	239	241	242	242	242	242	242	242
11	226	229	240	239	239	240	241	243	244	245	244	244	244	244	244	244
12	228	230	237	242	244	245	246	247	246	246	246	246	246	246	246	246
13	230	230	233	247	248	248	248	248	248	248	248	248	248	248	248	248
14	231	234	237	240	250	250	250	250	250	250	250	250	250	250	250	250
15	233	235	238	239	248	252	252	252	252	252	252	252	252	252	252	252
16	236	237	239	240	240	244	252	254	254	254	254	254	254	254	254	254
17	238	238	240	240	240	240	243	251	254	256	256	256	256	256	256	256
18	240	241	242	243	244	245	246	247	249	253	257	258	258	258	258	258
19	242	243	244	245	246	247	248	249	249	250	250	255	259	259	259	258
20	246	246	247	247	247	248	249	250	250	250	250	250	252	260	259	259
21	250	249	249	250	250	250	251	252	252	253	254	255	257	259	260	259
22	250	252	252	252	252	252	253	253	254	255	256	256	257	258	259	261
23	257	255	254	254	255	255	255	255	256	257	257	258	259	259	260	260
24	260	258	258	257	257	257	257	258	258	258	259	260	260	260	260	260
25	266	260	260	260	260	260	260	260	260	260	261	261	262	262	263	264
26	267	264	263	262	262	262	262	262	263	263	263	263	264	265	266	267
27	262	269	267	266	265	265	265	265	265	265	266	266	266	267	267	268
28	264	274	270	269	269	269	268	268	268	268	268	269	269	269	269	270
29	265	275	271	270	270	270	270	270	270	270	270	271	271	271	271	272
30	266	273	278	277	276	275	275	274	273	273	273	273	273	273	273	273
31	270	276	281	281	279	278	277	277	276	276	275	275	275	275	275	275
32	284	291	296	288	281	280	280	279	279	279	278	278	277	277	277	277
33	299	306	303	294	288	283	280	280	280	280	280	280	280	280	279	279
34	314	320	310	303	297	290	283	282	282	282	282	282	282	282	282	282
35	321	330	316	304	296	289	287	287	286	286	286	285	285	285	286	286
36	320	332	331	318	305	297	294	291	290	289	289	288	288	289	289	290
37	322	340	336	332	330	321	313	307	302	298	295	292	290	290	290	290
38	321	340	339	336	333	332	329	325	321	314	308	302	298	292	290	290
39	322	340	340	338	336	334	332	330	326	321	315	310	304	298	293	290
40	322	340	341	340	339	337	335	332	329	323	317	313	308	301	297	296
41	321	341	344	342	341	339	337	334	331	324	318	314	309	302	300	300
42	320	344	346	344	342	340	338	335	332	325	318	314	310	303	300	300
43	318	346	347	345	343	341	339	335	332	325	318	314	310	303	300	307
44	317	350	349	346	344	341	338	334	331	323	317	313	309	303	305	310
45	318	350	350	347	343	341	336	333	329	321	316	312	310	310	310	310
46	320	350	350	348	343	340	335	330	325	319	314	310	310	310	310	310
47	325	350	350	349	344	339	332	328	322	318	313	310	310	310	310	310
48	331	350	350	350	346	341	331	325	320	316	312	311	311	312	312	311
49	336	350	350	350	348	342	332	321	319	315	313	313	312	312	313	313
50	342	350	350	350	350	344	333	320	317	315	315	314	313	313	314	314
51	346	350	350	350	350	347	334	320	318	317	316	315	315	314	315	315
52	349	350	350	350	350	350	336	321	319	318	317	317	316	315	316	316
53	350	350	350	350	350	350	337	321	320	319	319	318	317	317	316	317
54	352	351	350	350	350	350	338	322	320	320	320	319	319	318	317	318
55	353	352	350	350	350	350	338	322	320	320	320	320	320	319	318	319
56	354	353	351	350	350	350	339	323	320	320	320	320	320	320	320	320
57	355	354	353	352	351	350	337	323	320	320	320	320	320	320	320	325
58	357	355	354	353	351	350	330	323	320	320	320	320	320	330	330	331
59	358	357	355	353	351	348	328	323	320	320	320	320	325	330	330	332
60	360	357	355	353	351	342	328	325	322	320	320	320	325	330	332	334
61	360	358	355	352	351	336	330	328	326	324	320	320	322	330	333	335
62	360	358	354	352	348	330	330	330	330	330	323	320	320	330	333	336
63	360	358	354	351	335	330	332	334	335	332	327	320	324	332	335	338

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-5. BASE OF THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

Row	Column 33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	221	221	221	221	221	222	222	222	222	222	223	224	224	225	225	226
2	223	224	224	224	224	224	224	224	224	224	226	226	226	227	228	229
3	226	226	226	226	226	226	226	225	227	228	228	228	228	229	230	231
4	228	228	228	228	227	227	229	230	230	230	230	230	230	231	232	232
5	229	229	229	230	231	232	232	232	232	232	232	232	233	233	234	234
6	230	232	233	234	234	234	234	234	234	234	234	234	235	236	236	235
7	235	236	236	236	236	236	236	236	236	236	236	236	237	238	237	238
8	238	238	238	238	238	238	238	238	238	238	238	238	239	239	238	241
9	240	240	240	240	240	240	240	240	240	240	240	241	241	241	241	243
10	242	242	242	242	242	242	242	242	242	242	242	243	243	242	244	245
11	244	244	244	244	244	244	244	244	244	244	245	245	244	244	246	248
12	246	246	246	246	246	246	246	246	246	246	247	246	245	247	249	250
13	248	248	248	248	248	248	248	248	248	249	248	247	247	250	251	252
14	250	250	250	250	250	250	250	250	250	250	249	248	250	252	253	254
15	252	252	252	252	252	252	252	252	252	251	250	250	253	254	256	256
16	254	254	254	254	254	254	253	253	252	252	252	253	255	257	258	258
17	256	256	256	255	255	254	254	254	253	253	254	256	258	259	260	260
18	257	257	256	256	256	255	255	254	255	256	257	259	260	261	261	262
19	258	257	257	256	256	256	257	257	258	259	260	261	262	263	263	264
20	258	258	257	258	258	259	259	260	261	262	262	263	265	265	266	267
21	259	260	260	261	261	262	262	263	263	264	265	266	267	267	268	269
22	262	262	263	264	264	265	265	266	266	266	267	268	269	269	270	271
23	265	265	266	266	267	267	268	268	268	269	270	271	270	271	272	273
24	260	268	269	269	269	270	270	270	271	271	272	273	272	273	274	275
25	266	268	270	272	272	272	272	273	273	274	274	274	274	275	276	277
26	268	268	269	270	274	275	275	275	276	276	276	276	277	278	279	280
27	269	270	270	270	270	273	277	278	278	278	277	278	279	280	281	282
28	270	271	271	272	273	274	276	278	280	279	280	280	281	282	283	284
29	273	273	274	275	275	276	277	278	279	281	282	282	283	284	285	286
30	274	274	275	276	276	277	277	278	279	280	284	285	285	286	287	289
31	276	276	276	276	277	278	278	279	280	280	281	287	288	289	290	292
32	277	278	278	278	278	279	279	280	280	280	280	287	290	291	292	295
33	279	279	280	280	280	280	281	282	283	284	284	284	292	293	294	298
34	283	283	284	284	285	285	286	287	288	288	288	287	291	295	297	301
35	287	287	288	288	289	289	290	290	290	290	290	290	290	297	300	303
36	290	290	290	290	290	290	290	290	290	290	290	290	290	297	303	304
37	290	290	290	290	290	290	290	290	291	295	294	290	290	296	305	305
38	290	290	290	290	290	290	290	290	294	304	299	292	293	297	307	306
39	291	292	294	293	290	290	290	290	297	310	306	295	295	298	304	307
40	296	298	301	300	294	290	290	290	298	310	310	297	296	299	306	307
41	299	306	309	306	297	290	290	292	300	311	312	299	297	300	307	307
42	310	310	310	310	300	294	290	294	302	312	316	300	299	301	307	308
43	310	310	310	310	302	296	294	298	304	314	320	302	300	302	307	308
44	310	310	310	310	304	300	299	301	306	317	320	304	300	302	308	308
45	310	310	310	310	305	300	301	304	308	320	320	307	301	303	308	308
46	310	310	310	310	306	304	305	308	312	320	320	309	303	303	308	309
47	310	310	310	310	310	308	309	311	315	320	320	311	304	304	309	**309**
48	311	311	311	310	310	310	312	313	318	320	320	313	305	305	309	**309**
49	312	312	312	312	312	314	316	317	320	321	320	315	306	305	309	**310**
50	314	314	313	313	314	316	319	321	322	323	322	316	307	306	310	**310**
51	315	315	315	315	316	319	321	323	324	325	324	316	308	307	310	**310**
52	316	316	316	316	318	320	324	325	327	327	325	317	310	308	310	**311**
53	317	318	318	318	320	322	326	328	329	329	326	317	310	308	310	**311**
54	318	319	319	319	321	324	328	333	340	336	327	318	310	309	310	**312**
55	319	319	320	322	324	327	335	345	347	341	327	318	310	310	311	**312**
56	320	321	325	326	328	330	347	356	349	342	327	318	310	310	312	**313**
57	328	330	331	331	332	337	360	360	350	342	328	318	310	311	312	**313**
58	332	333	334	334	336	343	360	360	352	341	328	318	311	311	313	**314**
59	334	335	336	338	340	347	360	360	354	340	329	318	312	312	313	**314**
60	336	337	338	340	344	349	360	360	354	340	330	319	313	313	314	**315**
61	337	338	340	343	347	357	360	360	354	340	331	319	314	313	314	**316**
62	338	340	344	347	356	360	360	360	355	341	332	319	315	314	315	**316**
63	341	344	348	357	360	360	360	360	356	341	332	320	316	314	316	**317**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-5. BASE OF THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**258**	270	278	281	290	286	269	267	275	294	308	318	333	360	360	360
65	**259**	272	280	282	290	287	270	269	278	296	311	319	333	357	360	360
66	**259**	274	280	282	290	287	270	270	280	298	313	323	334	355	360	360
67	**260**	275	280	283	290	288	270	270	282	300	316	328	334	353	360	360
68	**260**	276	280	283	290	290	270	270	283	301	319	330	334	351	360	360
69	**260**	278	283	285	290	290	270	270	285	303	321	330	333	345	360	360
70	**260**	278	286	288	290	290	273	270	286	305	324	330	332	340	360	359
71	**260**	279	288	290	290	290	282	270	288	307	326	330	331	338	360	353
72	**260**	280	289	290	290	290	290	270	290	310	328	330	330	335	356	350
73	**260**	280	290	290	290	290	290	270	293	311	330	330	330	330	352	350
74	**260**	281	290	290	290	290	290	274	295	313	330	330	328	330	349	350
75	**260**	281	290	290	290	290	290	280	298	315	330	328	327	330	347	350
76	**260**	282	290	290	290	290	290	282	302	316	330	326	325	330	345	350
77	**260**	283	290	290	290	290	290	285	305	319	330	323	323	330	343	351
78	**260**	284	290	290	290	293	290	297	309	322	330	320	321	340	347	354
79	**261**	285	290	290	290	295	291	302	314	325	330	320	320	335	350	357
80	**262**	286	290	290	291	297	283	303	318	322	325	320	320	339	350	359
81	**262**	287	290	290	292	300	270	305	320	320	320	314	320	338	350	362
82	**263**	288	290	290	293	300	270	306	320	320	320	318	320	340	350	365
83	**264**	289	290	290	294	300	270	306	320	310	320	320	330	340	350	367
84	**264**	290	290	290	295	300	270	307	320	300	320	310	331	340	350	370
85	**265**	290	292	290	296	300	277	308	320	300	311	316	331	340	349	371
86	**266**	291	295	290	300	300	284	308	320	300	300	320	330	340	348	370
87	**266**	292	298	290	301	300	280	307	320	300	311	320	330	339	347	365
88	**267**	292	299	297	302	300	293	303	307	300	320	322	330	339	346	355
89	**269**	293	300	301	304	302	300	300	300	300	320	323	333	340	344	351
90	271	294	300	304	306	304	301	300	304	300	320	323	333	340	343	349
91	273	294	300	306	308	305	304	300	308	306	306	322	333	340	343	349
92	274	295	302	308	310	307	306	302	310	313	307	310	331	340	342	348
93	276	295	305	310	310	309	309	308	311	319	320	318	328	340	341	346
94	277	296	308	310	310	310	310	310	300	322	320	324	320	338	340	344
95	278	296	310	310	310	310	310	310	300	324	323	329	320	332	340	341
96	280	296	310	310	310	310	310	310	310	326	328	328	327	326	336	338
97	283	296	310	310	310	310	310	310	320	326	331	324	330	321	332	335
98	285	299	310	310	310	**310**	310	310	324	323	334	323	330	320	328	333
99	286	299	310	310	310	**310**	310	310	328	320	337	323	328	320	328	330
100	287	299	310	310	310	310	**310**	310	330	329	340	327	329	320	327	330
101	287	299	310	310	311	312	**312**	312	330	333	340	330	330	320	327	330
102	289	301	310	312	313	314	**316**	316	331	337	341	334	330	320	327	330
103	291	302	311	314	315	316	318	**318**	328	340	344	335	330	327	327	330
104	293	304	311	319	317	318	320	**320**	323	337	346	337	330	335	329	330
105	295	304	312	319	322	321	322	**323**	320	336	347	340	331	340	333	340
106	296	305	312	319	327	326	325	**325**	**320**	335	347	340	335	340	334	357
107	297	305	312	320	327	331	330	328	**328**	336	346	340	340	350	359	360
108	297	306	313	320	327	335	335	333	**332**	336	345	341	340	368	380	356
109	298	306	313	321	328	335	340	338	337	338	345	351	350	381	380	352
110	298	306	314	321	328	335	343	343	342	343	349	370	357	395	379	353
111	299	307	314	321	329	336	343	348	347	348	353	361	366	400	397	360
112	299	307	314	322	329	336	343	351	352	350	358	360	382	410	413	373
113	299	307	315	322	329	337	344	351	357	356	360	361	390	412	418	400
114	300	308	315	322	330	337	344	352	359	361	361	373	390	418	415	407
115	300	308	316	323	330	337	345	352	359	366	367	381	390	430	419	410
116	300	309	316	323	330	338	345	352	360	367	371	383	381	430	422	412
117	301	309	316	324	331	338	346	353	361	370	373	379	406	430	426	413
118	302	310	318	325	332	340	347	356	365	374	382	370	419	430	430	416
119	303	312	319	326	334	342	351	360	369	378	387	377	420	430	430	420
120	305	313	321	329	338	347	356	365	374	383	392	386	420	430	430	428
121	308	318	327	336	345	354	363	372	381	390	399	408	430	430	430	430
122	318	328	336	345	353	362	370	379	387	393	399	405	423	430	430	430
123	323	332	341	349	355	362	368	374	380	386	392	398	404	421	425	430
124	321	328	334	341	347	353	359	365	371	377	383	389	395	402	414	422
125	312	319	324	330	336	342	348	355	361	367	373	379	385	391	397	407

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-5. BASE OF THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	360	357	352	343	330	337	340	340	339	335	330	329	329	334	337	340
65	360	357	349	332	336	341	342	342	341	339	331	330	330	336	341	344
66	360	355	342	330	341	343	344	344	343	341	336	330	330	340	345	348
67	360	351	336	340	343	345	346	346	345	343	341	330	330	340	348	353
68	359	346	331	341	345	347	348	348	347	345	343	338	330	330	349	355
69	353	341	330	341	347	349	350	353	350	348	345	341	330	330	348	355
70	348	337	330	337	349	360	360	360	355	350	347	344	338	330	345	355
71	344	338	330	330	355	360	360	360	357	353	349	345	341	330	344	355
72	343	340	330	338	359	360	360	360	358	354	350	345	341	330	344	355
73	344	340	341	351	360	360	360	360	359	354	350	345	340	330	344	355
74	345	345	349	359	360	360	360	360	360	355	350	344	337	330	344	355
75	348	350	355	361	361	361	360	360	360	356	350	344	335	330	344	356
76	352	355	359	363	363	363	363	362	361	357	352	346	336	330	342	357
77	355	359	363	365	366	365	365	363	362	359	354	349	341	330	339	354
78	359	363	367	368	368	368	366	365	364	361	357	353	346	331	333	347
79	364	367	371	372	370	369	368	368	367	368	369	358	352	341	330	337
80	370	371	375	375	373	372	372	372	373	373	370	363	356	349	330	330
81	374	375	379	378	377	375	375	377	379	377	372	364	357	351	335	330
82	380	380	380	382	380	379	379	380	380	380	371	364	357	350	340	330
83	380	380	380	385	387	386	385	383	381	379	371	363	355	348	341	330
84	380	380	380	387	390	390	390	387	383	378	371	363	355	347	342	333
85	380	380	380	384	389	390	390	389	384	378	371	365	359	348	344	340
86	374	376	378	382	388	390	390	389	384	378	372	366	362	350	346	342
87	369	370	373	379	385	388	388	387	384	379	373	368	363	355	347	344
88	363	366	371	375	380	383	384	384	381	380	375	370	365	359	349	345
89	359	364	370	371	376	380	380	381	380	380	378	372	365	359	350	346
90	356	361	369	370	374	378	379	378	378	380	380	373	366	360	352	346
91	353	360	366	370	372	375	375	374	374	375	379	374	367	361	354	348
92	352	360	366	370	370	372	372	371	370	370	372	370	368	363	357	351
93	351	360	366	370	370	370	369	367	370	370	370	370	370	365	360	355
94	350	360	365	368	368	366	365	364	367	370	370	370	370	369	364	360
95	350	360	363	364	363	362	360	361	365	370	370	370	370	370	367	362
96	347	358	359	359	359	360	360	360	366	371	372	371	371	371	367	362
97	341	352	354	355	356	360	360	360	370	372	375	375	374	373	367	361
98	340	347	349	351	354	359	360	360	370	373	376	378	378	374	366	358
99	338	343	345	348	353	357	360	364	370	373	376	379	380	375	365	354
100	335	337	342	347	351	358	364	367	370	372	375	379	380	377	363	351
101	332	330	340	348	353	358	365	370	370	370	373	379	380	375	360	349
102	330	330	342	349	357	360	360	360	367	370	375	380	380	373	359	349
103	330	330	342	350	360	360	367	370	373	380	380	380	380	372	359	349
104	330	333	340	346	350	360	367	368	379	373	380	380	380	371	358	349
105	340	340	340	346	350	351	353	358	366	376	380	380	380	371	358	350
106	349	340	340	346	350	350	354	362	369	370	380	380	380	370	358	350
107	357	345	340	348	350	354	359	372	377	380	380	380	380	369	359	352
108	340	350	340	350	353	358	363	372	377	380	380	380	379	369	360	354
109	350	350	340	344	353	358	360	361	370	380	380	380	379	370	361	355
110	350	351	340	344	352	360	360	370	377	382	380	380	378	370	362	356
111	354	354	340	351	360	360	372	380	382	387	386	383	378	371	364	356
112	380	352	340	350	360	360	370	381	385	390	388	383	378	371	364	358
113	380	360	340	349	367	371	377	383	388	390	388	383	379	371	365	359
114	370	366	340	348	372	380	380	385	389	390	388	384	379	372	366	360
115	385	370	340	349	371	376	380	386	390	390	388	384	379	372	367	361
116	400	366	340	350	363	370	381	392	398	396	389	384	380	373	367	362
117	400	371	340	347	362	377	393	400	400	400	390	385	379	373	367	362
118	407	368	344	347	368	387	400	400	400	400	392	385	379	373	367	362
119	403	370	355	350	366	384	400	400	400	400	391	385	378	372	367	361
120	386	380	350	352	368	384	400	400	400	393	387	382	377	371	366	361
121	408	375	377	380	389	400	400	395	388	384	380	377	374	370	365	360
122	400	401	400	400	398	396	393	390	386	382	378	375	372	369	364	358
123	422	412	400	400	400	400	399	397	395	390	386	382	377	369	363	358
124	423	417	**404**	400	400	400	400	399	397	396	392	384	375	366	360	358
125	399	394	**388**	**384**	**381**	**378**	**371**	[illegible]	**367**	**366**	**363**	**360**	**360**	**359**	**358**	**358**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-5. BASE OF THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	344	348	355	361	362	361	361	360	356	342	333	321	316	315	316	**317**
65	347	354	361	363	365	364	363	362	356	342	334	323	317	316	317	**318**
66	352	361	363	365	367	367	366	363	355	342	334	324	318	316	317	**318**
67	357	363	366	368	369	369	367	363	355	342	335	325	319	317	318	**319**
68	359	364	368	370	370	370	368	362	353	341	335	326	320	318	318	**320**
69	360	368	370	370	370	370	368	361	351	340	335	327	320	318	319	**320**
70	361	370	370	370	370	370	366	360	350	340	335	328	320	319	320	**320**
71	363	370	370	370	370	369	363	356	348	339	335	329	320	320	320	**321**
72	364	370	370	370	370	366	359	354	346	339	335	330	320	320	321	**321**
73	366	370	370	370	368	362	357	351	344	339	335	330	321	321	321	**322**
74	366	370	370	370	368	361	355	350	343	338	335	330	323	321	321	**322**
75	367	370	370	370	370	362	355	348	341	338	335	331	323	322	322	**323**
76	366	370	370	370	370	364	355	348	340	338	335	331	324	322	322	**323**
77	364	370	370	370	370	364	356	348	341	338	335	331	325	323	323	**324**
78	359	368	370	370	370	365	356	348	341	338	335	331	326	323	323	**324**
79	351	362	370	370	370	365	357	349	341	338	335	331	326	323	324	**324**
80	341	354	368	370	370	365	357	349	342	338	335	331	326	324	324	**325**
81	334	345	361	370	370	366	357	350	343	338	335	331	327	324	324	325
82	330	340	356	370	370	366	358	350	343	339	335	331	327	325	325	325
83	330	338	355	370	370	367	359	351	344	339	335	331	328	325	325	326
84	330	339	360	370	370	369	360	352	345	339	336	331	328	326	326	326
85	337	340	363	370	370	370	361	353	345	339	336	332	329	326	326	327
86	340	340	365	370	370	370	362	354	347	339	336	332	329	326	327	327
87	340	341	367	370	370	370	364	355	347	339	336	332	329	327	327	327
88	341	341	370	370	370	370	366	356	347	339	336	332	330	327	328	328
89	341	340	370	370	370	370	367	357	347	339	336	332	330	328	328	328
90	342	340	370	370	370	370	368	357	347	339	336	332	330	328	328	328
91	343	340	366	370	370	370	368	359	347	339	336	332	330	329	329	329
92	345	340	354	370	370	370	368	357	347	339	336	332	330	329	329	329
93	350	342	343	370	370	370	368	356	346	339	336	332	330	329	329	330
94	354	348	340	354	370	370	366	356	346	339	336	332	330	330	330	330
95	356	349	340	340	361	370	364	355	345	339	336	333	330	330	330	330
96	355	346	340	340	345	361	359	352	344	339	337	334	330	331	331	331
97	352	341	340	340	340	349	349	346	340	338	336	334	331	331	331	331
98	348	340	340	340	340	340	342	340	339	338	336	334	331	332	331	332
99	345	340	340	340	340	340	340	340	339	338	336	334	332	332	332	332
100	344	340	340	340	340	340	340	340	340	338	337	334	332	333	332	332
101	343	340	340	340	340	340	340	340	340	339	337	335	333	333	333	333
102	343	340	340	340	340	340	340	340	340	339	337	335	333	333	333	333
103	344	340	340	340	340	340	340	340	340	339	338	335	334	334	334	333
104	345	340	340	340	340	340	340	340	340	340	338	336	335	334	334	334
105	345	341	340	340	340	340	340	340	340	340	338	336	335	335	335	334
106	346	342	340	340	340	340	340	340	340	340	338	336	336	335	335	335
107	347	343	340	340	340	340	340	340	340	340	339	337	336	336	336	335
108	348	344	340	340	340	340	340	340	340	340	339	337	337	336	336	336
109	349	345	341	340	340	340	340	340	340	340	339	338	337	337	337	336
110	349	346	342	340	340	340	340	340	340	340	340	338	338	337	337	337
111	350	346	344	342	341	340	340	340	340	340	340	339	338	338	337	337
112	350	347	345	343	343	342	341	341	340	340	340	339	339	338	338	338
113	350	348	346	345	344	343	342	342	341	341	340	340	339	339	338	338
114	351	348	347	346	345	344	343	343	342	341	341	340	340	339	339	339
115	352	349	347	346	345	345	344	343	342	342	341	341	340	340	339	339
116	352	349	348	347	346	345	344	344	343	342	342	342	341	340	340	340
117	352	349	348	347	346	346	345	344	344	343	343	342	342	341	341	340
118	352	349	348	347	347	346	346	345	344	344	343	343	342	342	341	341
119	352	349	349	348	347	347	346	345	345	344	344	344	343	343	342	342
120	352	350	349	349	348	347	347	346	345	345	345	345	344	343	343	342
121	351	350	350	350	349	348	348	347	346	346	346	346	345	345	344	344
122	351	350	350	350	350	350	349	348	348	348	348	347	347	346	346	346
123	355	353	352	351	351	351	351	350	350	350	350	350	349	349	349	348
124	357	357	356	355	355	355	355	355	354	353	353	353	352	352	351	351
125	**358**	**358**	**357**	**357**	**357**	**357**	**357**	**357**	**357**	**356**	**356**	**356**	**355**	**354**	**353**	**352**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-6. 1989 INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	220	220	220	220	220	220	220	220	220	220	**220**	**220**	**220**	**220**	**220**	**220**
2	223	223	222	221	220	220	220	220	220	220	220	220	220	220	220	220
3	226	226	225	224	224	223	222	221	220	220	220	220	220	221	221	222
4	229	228	228	227	227	226	225	225	224	223	223	223	223	223	224	224
5	231	231	231	230	230	229	229	228	227	227	226	226	226	226	227	227
6	233	233	233	233	232	232	231	231	230	230	229	229	229	229	230	230
7	234	234	235	235	234	234	234	233	233	232	232	232	232	232	232	232
8	235	236	236	236	236	236	236	236	235	235	235	234	235	235	235	235
9	236	237	237	237	238	238	238	238	238	238	237	237	237	237	237	238
10	237	238	238	238	239	239	240	240	240	240	240	239	240	240	240	240
11	238	239	239	239	240	240	241	241	241	242	241	241	242	242	242	242
12	239	240	240	241	241	241	242	242	243	243	243	243	243	244	244	245
13	240	241	241	242	242	242	243	243	244	244	244	245	245	246	246	246
14	241	242	242	243	243	243	244	244	245	245	245	246	247	248	248	248
15	242	243	243	244	244	244	245	245	246	246	247	247	248	249	250	250
16	243	244	244	245	245	246	246	246	247	247	248	248	250	251	252	252
17	244	245	245	246	246	247	247	247	248	248	249	250	251	253	253	254
18	246	246	246	247	247	248	248	248	249	249	250	251	252	254	255	255
19	247	247	247	248	248	249	249	249	250	250	251	252	254	255	257	257
20	248	248	248	249	249	250	250	251	251	251	252	254	255	256	258	259
21	249	249	250	250	250	251	251	252	252	252	254	255	256	258	259	260
22	250	250	251	251	251	252	252	253	253	254	255	256	258	259	261	262
23	251	251	252	252	252	253	253	254	254	255	256	258	259	260	262	264
24	252	252	253	253	253	254	254	255	255	256	258	259	260	262	263	265
25	253	253	254	254	255	255	255	256	256	258	259	260	262	263	265	266
26	254	254	255	255	256	256	256	257	258	259	260	261	263	264	266	267
27	255	255	256	256	257	257	257	258	259	260	261	263	264	266	267	269
28	256	256	257	257	258	258	259	259	260	262	263	264	265	267	268	270
29	257	258	258	258	259	259	260	260	261	263	264	265	267	268	270	272
30	258	259	259	259	260	260	261	262	263	264	265	266	268	269	272	274
31	259	260	260	260	261	261	262	263	264	265	266	268	269	272	274	276
32	260	261	261	261	262	262	263	264	265	266	267	269	271	274	276	277
33	261	262	262	263	263	263	264	265	266	267	269	270	274	276	277	279
34	262	263	263	264	264	264	265	266	267	268	270	273	276	278	278	280
35	263	264	264	265	265	266	267	267	268	270	273	276	278	278	280	282
36	264	265	265	266	266	267	268	268	269	272	275	278	279	280	282	285
37	265	266	266	266	267	268	268	269	271	274	277	279	279	281	284	291
38	265	266	267	267	268	268	269	270	273	276	279	279	280	283	289	297
39	266	266	267	268	268	269	269	270	274	277	279	279	281	286	293	299
40	266	267	267	268	268	269	270	271	275	278	280	280	282	289	294	300
41	266	267	268	268	269	269	270	272	275	279	280	280	284	290	295	302
42	266	267	268	268	269	270	270	**273**	**276**	**279**	280	280	286	291	297	303
43	267	267	268	269	269	270	**270**	273	277	280	**280**	**281**	287	292	298	304
44	267	268	268	269	269	**270**	276	277	280	281	281	282	288	293	299	305
45	267	268	269	269	270	271	278	281	282	283	282	280	289	294	300	306
46	267	268	269	269	**270**	276	280	283	284	284	284	285	290	295	301	307
47	268	268	269	270	270	277	282	284	286	286	286	287	291	297	302	308
48	268	269	269	**270**	272	279	284	286	288	288	288	289	292	298	304	310
49	268	269	270	270	274	281	286	288	290	290	290	291	293	300	306	312
50	268	269	270	270	276	282	288	290	292	292	292	292	294	301	307	313
51	268	269	**270**	272	277	285	290	292	294	294	294	293	295	302	308	315
52	269	270	270	274	279	287	292	295	296	297	296	295	297	303	309	316
53	269	270	270	275	281	289	295	297	298	299	298	296	298	304	310	317
54	269	**270**	272	277	284	292	297	299	300	301	300	298	300	306	312	318
55	269	270	275	279	287	295	300	301	301	301	301	299	303	307	314	320
56	269	270	276	282	290	297	300	301	302	302	302	302	307	310	315	322
57	270	270	278	284	293	299	301	302	303	303	303	304	312	313	317	323
58	270	270	280	287	296	300	302	303	304	304	304	308	317	316	319	325
59	**270**	274	282	290	297	301	302	304	305	305	306	312	322	319	323	326
60	**270**	275	284	293	298	301	303	304	307	309	310	316	326	322	326	329
61	**270**	276	286	295	299	302	304	306	311	314	314	320	331	326	329	333
62	**270**	278	289	296	300	303	304	309	315	318	317	323	336	331	332	336
63	**271**	279	292	297	301	303	305	313	320	321	320	327	341	336	335	339

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-6. 1989 INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**220**	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
2	220	220	220	220	220	220	220	220	221	221	221	221	221	221	221	221
3	222	222	222	222	222	223	223	223	223	223	223	223	223	223	223	223
4	224	224	224	225	225	225	225	225	225	225	225	225	225	225	226	226
5	227	227	227	228	228	228	228	228	228	228	228	228	229	229	229	229
6	230	230	230	230	231	231	231	231	231	231	231	231	231	231	231	231
7	233	233	233	233	233	233	233	233	233	233	234	234	234	234	234	234
8	235	235	235	236	236	236	236	236	236	236	236	236	236	236	236	236
9	238	238	238	238	238	238	238	238	238	238	238	239	239	239	239	239
10	240	240	240	240	241	241	241	241	241	241	241	241	241	241	241	241
11	243	243	243	243	243	243	243	243	243	243	243	243	243	244	244	244
12	245	245	245	245	245	245	245	245	246	246	246	246	246	246	246	246
13	247	247	247	247	248	248	248	248	248	248	248	248	248	248	248	248
14	249	249	249	249	249	250	250	250	250	250	250	250	250	250	250	250
15	250	251	251	251	251	251	252	252	252	252	252	252	252	252	252	252
16	252	253	253	253	253	253	253	254	254	254	254	254	254	254	254	254
17	254	254	255	255	255	255	255	255	256	256	256	255	255	255	255	255
18	256	256	256	256	257	257	257	257	257	257	257	257	257	257	257	257
19	257	258	258	258	258	258	258	258	258	259	259	259	259	259	259	259
20	259	259	259	259	260	260	260	260	260	260	260	260	260	260	260	260
21	261	261	261	261	261	261	261	262	262	262	262	262	262	262	262	262
22	262	263	263	263	263	263	263	263	264	264	264	264	264	264	264	264
23	264	264	265	265	265	265	265	265	265	265	266	266	266	266	266	266
24	266	266	266	267	267	267	267	267	267	267	267	267	267	267	267	268
25	268	268	268	268	268	268	269	269	269	269	269	269	269	269	269	269
26	269	270	270	270	270	270	270	270	270	271	271	271	271	271	271	271
27	270	272	272	272	272	272	272	272	272	273	273	273	273	273	273	273
28	272	274	274	274	274	274	274	274	275	275	275	275	275	275	275	275
29	274	275	276	276	276	276	276	276	277	277	277	277	277	277	277	277
30	276	277	278	278	278	278	278	278	278	278	278	278	278	278	279	279
31	277	279	280	280	280	280	281	281	281	281	281	280	280	280	280	280
32	279	280	282	283	283	283	283	283	283	283	283	283	283	283	283	283
33	280	282	284	285	286	287	287	287	287	287	287	287	287	286	286	286
34	283	285	287	289	290	292	291	291	291	291	291	291	290	290	290	290
35	285	290	294	297	298	299	299	298	297	297	297	296	296	296	296	296
36	292	296	300	304	306	307	306	304	303	302	301	301	301	301	300	300
37	297	304	307	310	312	314	315	313	311	309	308	308	307	306	306	305
38	302	307	311	313	315	317	318	317	316	315	314	313	312	312	310	310
39	304	309	313	315	317	318	320	319	318	317	317	316	316	315	315	314
40	306	311	314	317	318	320	321	321	320	319	318	318	318	317	317	317
41	307	312	315	318	319	321	322	322	321	320	319	319	319	319	319	319
42	308	313	316	319	320	322	323	323	323	321	321	321	321	320	320	320
43	309	314	317	320	321	323	324	325	324	323	322	322	322	322	322	321
44	310	315	318	321	323	324	325	326	325	324	324	323	323	323	323	323
45	311	316	319	322	324	325	326	327	326	326	325	325	324	324	324	324
46	312	317	320	323	325	326	327	328	328	327	326	326	326	325	325	325
47	313	318	321	324	326	327	329	330	329	328	328	327	327	327	326	326
48	315	320	323	326	327	329	330	331	331	330	329	329	328	328	328	328
49	317	321	325	327	329	331	332	333	332	331	331	330	330	329	329	329
50	319	324	327	329	331	332	334	334	334	333	332	332	331	330	330	330
51	321	326	329	331	333	335	336	336	335	334	334	333	332	332	332	332
52	322	327	331	334	335	337	338	338	337	336	336	335	334	334	333	333
53	323	328	332	335	337	339	340	340	339	338	337	337	336	335	335	334
54	324	330	334	336	338	340	341	341	340	340	339	339	338	337	337	336
55	326	331	335	338	340	342	341	341	341	340	340	340	340	339	338	338
56	328	333	337	340	342	343	342	342	341	341	341	341	341	340	340	339
57	329	334	338	341	343	343	343	342	342	342	342	341	341	341	341	340
58	331	336	340	343	345	344	343	343	342	342	342	342	342	342	341	341
59	332	337	341	344	345	344	344	343	343	343	343	343	342	342	342	342
60	334	339	343	346	346	345	344	344	344	344	343	343	343	343	343	343
61	335	341	345	347	346	345	345	345	344	344	344	344	344	344	343	343
62	339	342	346	348	347	346	346	345	345	345	344	344	344	344	344	344
63	342	345	348	349	348	347	347	346	346	345	345	345	345	345	345	345

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-6. 1989 INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	220	220	220	220	220	220	220	220	220	220	220	220	220	220	221	221
2	221	221	221	221	221	221	221	221	221	222	222	222	222	222	223	223
3	223	223	223	223	223	223	223	224	224	224	224	224	225	225	226	226
4	226	226	226	226	226	226	226	227	227	227	227	227	228	228	228	229
5	229	229	229	229	229	229	229	229	229	230	230	230	230	231	231	231
6	231	231	232	232	232	232	232	232	232	232	232	232	233	233	233	234
7	234	234	234	234	234	234	234	234	234	235	235	235	235	236	236	236
8	236	236	236	237	237	237	237	237	237	237	237	237	238	238	238	238
9	239	239	239	239	239	239	239	239	239	240	240	240	240	240	240	240
10	241	242	242	242	242	242	242	242	242	242	242	242	242	242	242	242
11	244	244	244	244	244	244	244	244	244	244	244	244	244	244	244	243
12	246	246	246	246	246	246	246	246	246	246	246	246	246	245	245	245
13	248	248	248	248	248	248	248	248	248	248	248	248	247	247	247	247
14	250	250	250	250	250	250	250	250	250	250	249	249	249	249	249	249
15	252	252	252	252	252	252	252	251	251	251	251	251	251	251	251	251
16	254	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253
17	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
18	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257
19	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259
20	260	260	260	260	260	260	260	260	260	260	261	261	261	261	261	261
21	262	262	262	262	262	262	262	262	262	263	263	263	263	263	263	263
22	264	264	264	264	264	264	264	264	264	265	265	265	265	265	265	266
23	266	266	266	266	266	266	266	266	267	267	267	267	267	267	267	268
24	268	268	268	268	268	268	269	269	269	269	269	269	269	269	270	271
25	269	269	269	270	270	271	271	271	271	271	271	271	271	271	272	274
26	271	271	271	271	271	272	273	273	273	273	273	273	273	274	275	276
27	273	273	273	273	273	274	274	274	275	275	275	275	275	276	278	279
28	275	275	275	275	276	276	276	276	276	277	277	277	278	279	280	281
29	277	277	277	277	277	278	278	278	278	278	279	279	280	281	283	284
30	279	279	279	279	279	279	280	280	280	280	281	282	283	284	285	286
31	281	281	281	281	281	281	281	282	282	282	283	285	285	287	288	289
32	283	283	283	283	283	283	283	284	284	284	285	286	288	289	290	291
33	286	286	286	286	285	285	286	286	286	286	287	288	291	292	293	294
34	290	290	289	289	289	289	289	289	289	289	290	291	292	294	295	297
35	295	295	294	294	294	293	293	293	293	293	293	294	295	297	298	299
36	300	299	299	299	298	298	297	297	297	296	296	296	297	299	300	302
37	305	305	304	304	303	302	301	300	299	299	298	298	299	301	303	304
38	310	310	309	309	309	308	308	307	306	302	300	300	301	303	304	305
39	314	314	313	313	313	313	313	312	311	307	301	301	302	304	305	307
40	317	316	316	316	316	316	316	316	314	310	303	302	303	304	306	308
41	318	318	318	318	318	318	318	318	317	312	305	303	304	305	306	308
42	320	320	320	320	320	320	320	320	319	314	307	304	304	306	307	309
43	321	321	321	321	321	321	321	321	320	315	309	305	305	306	308	310
44	322	322	322	322	322	322	322	322	321	316	310	306	306	307	308	310
45	323	323	323	323	323	323	323	323	321	317	311	307	307	307	309	311
46	324	324	324	324	324	324	324	324	322	318	312	307	308	308	309	311
47	326	325	325	325	325	325	325	325	323	319	313	308	308	309	310	**312**
48	327	327	327	326	326	326	326	326	324	320	315	309	309	310	311	**312**
49	329	328	328	328	328	328	327	327	326	322	316	310	310	310	311	**313**
50	330	330	330	330	329	329	329	329	328	323	318	311	311	311	312	**314**
51	331	331	331	331	331	330	330	330	329	325	319	311	311	312	313	**314**
52	333	332	332	332	332	331	331	331	329	326	320	312	312	312	313	**315**
53	334	333	333	333	332	332	332	331	329	327	321	313	312	313	314	**315**
54	335	334	334	334	333	333	333	331	329	327	322	314	313	314	314	**316**
55	337	336	335	334	334	334	333	331	329	327	323	316	314	314	315	**316**
56	339	338	337	336	335	335	333	331	329	327	323	317	314	315	316	**317**
57	340	340	339	338	337	335	333	332	330	327	323	317	315	316	316	**317**
58	341	341	340	340	339	337	335	333	331	328	324	318	316	316	317	**318**
59	342	342	341	341	340	338	337	335	332	329	325	319	317	317	317	**319**
60	343	342	342	342	340	339	337	335	333	331	326	320	318	318	318	**319**
61	343	343	343	342	341	339	337	336	334	331	327	322	319	319	319	**320**
62	344	344	344	342	341	339	338	336	334	331	328	323	320	319	319	**320**
63	345	345	345	343	342	340	339	337	335	332	329	324	321	320	320	**321**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-6. 1989 INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**272**	280	294	298	301	304	308	316	322	323	323	333	346	340	338	342
65	**272**	282	295	299	302	304	310	319	324	324	327	339	350	345	341	345
66	**273**	284	296	299	303	305	313	322	325	326	331	345	355	350	345	348
67	**274**	286	296	300	303	306	316	325	326	328	334	350	360	355	350	351
68	**275**	287	297	301	304	308	318	326	327	329	337	355	365	360	355	354
69	**275**	288	297	301	304	310	320	327	329	330	339	358	365	364	359	357
70	**276**	289	297	302	305	312	322	328	330	331	341	360	365	365	364	360
71	**277**	289	298	302	305	313	323	330	331	333	343	361	365	365	365	364
72	**277**	289	298	303	307	315	325	330	331	333	345	362	366	365	365	365
73	**278**	289	298	303	308	316	326	331	332	334	347	363	367	366	366	365
74	**278**	289	299	304	308	317	327	331	333	335	349	365	368	367	367	366
75	**279**	289	299	305	309	318	329	331	333	335	351	365	368	368	368	367
76	**280**	290	299	305	310	319	330	332	334	337	353	366	369	369	369	367
77	**280**	290	300	306	310	320	330	332	334	338	355	366	369	370	370	368
78	**281**	290	300	306	311	321	331	333	334	339	357	366	370	371	371	368
79	**281**	290	301	307	312	322	331	333	335	341	359	367	370	372	371	369
80	**282**	291	301	308	313	323	331	334	335	344	361	367	371	373	372	370
81	**282**	291	301	309	314	324	331	334	337	347	363	368	371	373	373	372
82	**283**	292	302	310	314	325	332	335	339	351	365	369	372	374	375	375
83	**283**	292	303	311	315	325	332	335	340	355	366	370	373	375	376	378
84	**284**	293	304	311	316	326	333	336	342	357	367	371	374	376	378	381
85	**284**	294	305	312	317	327	334	337	344	360	367	372	375	378	380	383
86	**284**	295	306	313	318	327	335	338	348	363	368	373	376	379	382	386
87	**285**	296	307	314	319	329	336	340	352	365	369	373	377	380	384	389
88	**286**	298	308	315	320	330	337	342	356	366	370	374	378	381	385	391
89	**287**	299	309	316	321	331	338	344	359	367	371	375	379	382	387	392
90	288	299	310	317	323	333	339	347	362	367	371	376	379	383	388	392
91	289	300	311	318	325	335	342	351	365	368	372	376	380	384	389	393
92	290	301	311	319	327	337	344	354	366	369	373	377	381	385	390	393
93	290	302	313	320	329	339	347	357	366	370	373	377	382	386	391	394
94	291	303	312	321	330	340	349	359	367	370	374	378	382	387	391	394
95	292	304	313	322	331	342	351	361	367	370	374	378	383	388	391	395
96	293	304	314	323	330	343	353	363	367	371	374	379	384	388	392	395
97	294	305	315	324	330	341	355	365	368	371	374	379	384	389	392	395
98	295	306	316	324	331	**338**	354	365	368	371	375	379	385	389	393	396
99	296	307	316	325	331	**338**	348	366	368	371	375	379	385	389	393	396
100	296	308	317	325	332	338	**345**	361	369	371	375	379	385	390	393	396
101	297	308	318	325	332	339	**345**	355	369	372	375	379	386	390	394	397
102	298	309	318	326	332	339	**346**	353	368	372	375	380	386	390	394	397
103	299	310	319	326	333	340	346	**353**	362	372	375	380	386	391	394	397
104	300	311	320	327	333	340	347	**353**	360	372	375	380	386	391	394	398
105	301	312	320	327	334	340	347	**354**	360	369	375	381	387	391	395	398
106	301	312	321	327	334	341	347	**354**	**361**	368	375	381	387	391	395	399
107	302	313	321	328	334	341	348	355	**361**	368	375	381	387	391	395	399
108	303	314	321	328	335	342	348	355	**362**	368	375	381	387	391	395	399
109	304	314	322	328	335	342	349	355	362	369	375	380	386	391	395	398
110	305	315	322	329	336	342	349	356	362	369	375	380	386	391	395	399
111	305	316	323	329	336	343	349	356	363	370	375	380	386	391	396	399
112	306	316	323	330	336	343	350	357	363	370	375	380	385	391	396	399
113	307	317	323	330	337	343	350	357	364	370	375	379	385	391	396	400
114	308	317	324	330	337	344	351	357	364	370	375	379	385	391	396	400
115	309	317	324	331	338	344	351	358	364	370	375	379	384	390	396	400
116	309	318	325	331	338	345	351	358	365	370	375	379	384	390	396	400
117	310	318	325	332	338	345	352	359	365	370	374	379	384	390	396	400
118	311	319	325	332	339	345	352	359	365	370	374	379	384	389	395	401
119	311	319	326	332	339	346	353	359	365	370	374	379	384	389	395	401
120	312	319	326	333	340	346	353	360	365	369	374	379	384	389	394	400
121	313	320	327	334	340	347	354	360	365	369	374	379	384	389	394	400
122	314	321	328	335	341	348	355	360	364	369	374	379	384	389	393	399
123	315	322	329	336	343	349	355	359	364	369	374	379	384	388	393	398
124	317	324	331	338	344	350	354	359	364	369	374	379	383	388	393	398
125	319	326	333	340	345	349	354	359	364	369	374	378	383	388	393	398

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-6. 1989 INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	345	348	350	349	349	348	348	347	347	346	346	346	346	346	346	346
65	348	352	353	350	350	349	348	348	347	347	347	347	347	347	347	347
66	351	355	355	352	351	350	349	349	348	348	347	347	347	347	347	347
67	354	357	356	354	352	351	350	349	349	348	348	348	348	348	348	348
68	357	358	356	355	354	353	352	350	350	349	349	349	349	349	349	349
69	360	358	357	356	355	354	353	352	351	350	350	350	350	350	350	351
70	362	359	357	356	356	356	355	354	352	351	350	350	351	351	351	352
71	362	359	357	357	357	357	356	355	354	353	352	352	352	352	353	353
72	362	359	358	357	357	357	357	357	356	355	353	354	354	354	354	355
73	362	359	358	358	358	358	358	358	357	356	355	355	355	355	355	357
74	362	360	359	359	359	359	359	359	358	357	355	355	355	355	355	358
75	362	360	360	360	360	360	360	360	360	358	355	355	355	355	355	358
76	361	360	360	360	360	360	360	360	360	359	355	355	355	355	355	359
77	360	363	360	360	360	360	360	360	360	360	358	355	355	355	355	356
78	363	365	362	360	360	360	360	360	360	360	360	356	355	355	355	355
79	366	368	365	362	360	360	360	360	360	360	360	359	356	356	355	356
80	369	370	368	365	363	361	360	360	360	360	360	360	358	357	357	358
81	372	373	371	368	366	364	363	361	360	360	360	360	359	359	359	360
82	375	375	374	371	369	367	366	364	363	361	360	360	360	360	360	360
83	379	378	376	374	372	370	369	367	366	364	362	361	360	360	360	360
84	382	381	379	377	375	373	372	370	369	367	365	364	360	360	360	360
85	385	383	381	380	378	376	375	373	372	370	368	365	361	360	360	360
86	388	386	384	383	381	379	378	376	374	373	370	366	363	361	361	361
87	391	388	387	385	384	382	381	379	377	375	371	369	365	364	363	364
88	393	391	389	388	387	385	384	382	380	376	374	371	367	366	366	366
89	395	394	392	390	390	388	387	385	382	379	377	372	369	367	368	368
90	395	395	394	393	392	391	390	387	384	382	379	374	371	370	370	368
91	395	395	395	395	395	394	392	390	387	385	381	376	373	372	371	369
92	395	395	395	395	395	395	394	392	390	387	383	379	375	373	372	370
93	395	395	395	395	395	395	394	393	391	389	385	381	377	374	372	370
94	396	396	395	395	395	395	395	394	392	390	387	382	378	374	372	370
95	396	396	396	396	396	396	395	395	393	392	388	382	376	372	371	370
96	397	397	397	397	397	396	396	395	395	393	386	380	374	370	369	369
97	397	397	397	397	397	397	396	396	396	391	384	378	371	367	367	367
98	397	398	398	398	398	397	397	397	396	390	382	376	369	365	365	365
99	398	398	398	398	398	398	398	397	397	390	381	374	367	363	363	363
100	398	399	399	399	399	398	398	398	398	389	380	371	365	361	361	361
101	398	400	400	400	399	399	399	399	398	389	380	371	363	359	359	359
102	399	400	400	400	400	400	400	399	398	389	379	370	361	357	357	357
103	399	400	400	400	400	400	400	400	397	388	379	370	361	355	355	355
104	400	401	401	401	401	401	400	398	392	389	380	371	361	356	356	356
105	400	401	401	401	401	401	401	397	391	385	380	371	362	357	357	357
106	401	401	402	402	401	401	401	396	390	384	377	372	363	358	358	358
107	401	402	402	402	402	402	401	394	388	382	376	370	363	359	359	359
108	401	402	402	402	402	402	399	393	387	381	375	369	362	360	360	360
109	402	403	403	403	403	402	398	392	386	380	373	367	362	361	361	361
110	402	403	403	403	403	403	397	390	384	378	372	367	363	361	361	361
111	402	404	404	403	403	401	395	389	383	377	372	368	363	361	361	361
112	402	404	404	404	404	400	394	388	382	377	373	368	363	362	362	362
113	402	404	404	404	404	399	393	387	383	378	373	368	363	362	362	362
114	402	405	405	405	403	397	392	388	383	378	373	369	364	363	363	363
115	403	405	405	405	402	397	393	388	383	378	374	369	364	363	363	363
116	403	405	405	405	401	398	393	388	383	379	374	369	364	363	363	363
117	403	406	405	406	401	397	392	388	384	379	374	369	365	364	364	364
118	404	406	406	405	400	396	392	387	383	379	374	370	365	364	364	364
119	404	406	406	405	399	395	391	387	383	378	374	370	365	365	365	364
120	404	407	407	404	398	394	390	386	382	377	373	369	367	366	365	365
121	405	407	407	402	397	393	389	385	380	376	374	373	372	371	370	370
122	405	408	408	401	395	391	388	385	382	381	381	380	379	378	376	375
123	404	408	406	401	397	395	393	392	391	389	387	386	384	383	382	381
124	402	407	**410**	407	403	401	399	397	395	394	394	392	391	389	388	386
125	402	406	**409**	**408**	**406**	**404**	**402**	**401**	**400**	**399**	**398**	**398**	**397**	**397**	**397**	**396**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.2-6. 1989 INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	346	346	345	344	343	341	340	338	336	333	330	325	322	321	321	**322**
65	347	347	346	345	343	342	341	339	337	334	331	326	323	322	322	**322**
66	348	348	347	345	344	343	341	340	339	336	332	327	324	323	322	**323**
67	349	349	347	346	345	344	342	341	339	337	333	328	325	324	323	**323**
68	350	350	348	347	346	344	343	342	340	338	334	329	326	325	324	**324**
69	352	350	349	348	346	345	344	342	341	338	335	330	327	326	325	**325**
70	352	351	350	348	347	346	344	343	341	339	336	331	328	327	326	**325**
71	353	352	350	349	348	346	345	344	342	340	336	332	330	328	327	**326**
72	354	352	351	350	348	347	346	344	343	340	337	333	331	329	328	**327**
73	357	354	352	350	349	348	346	345	343	341	338	333	331	330	328	**327**
74	359	357	356	354	353	351	349	347	344	342	338	334	332	331	329	**328**
75	359	358	356	354	353	351	350	348	346	344	340	335	333	332	330	**328**
76	360	358	356	355	353	352	350	349	347	344	340	335	334	332	331	**329**
77	360	358	357	355	354	352	351	349	347	345	341	336	335	333	331	**330**
78	360	359	357	356	354	353	351	350	348	345	341	337	335	334	332	**330**
79	357	359	358	356	355	353	352	350	348	345	341	338	336	334	333	**331**
80	359	360	359	357	355	354	352	351	349	346	342	339	337	335	333	**332**
81	360	360	359	358	356	355	353	351	349	346	342	339	337	336	334	333
82	360	360	360	358	357	355	353	351	349	346	342	340	338	336	335	334
83	360	360	360	358	357	355	353	351	349	346	343	341	339	337	336	335
84	360	360	360	358	356	355	353	351	349	346	343	342	339	338	337	337
85	360	360	359	358	356	355	353	351	349	346	344	342	340	338	338	338
86	362	362	360	358	357	355	353	352	350	347	345	343	341	339	340	339
87	364	363	361	359	357	355	354	352	350	347	346	344	342	340	341	340
88	365	363	361	360	358	356	354	353	351	348	346	345	343	341	342	341
89	366	364	362	360	359	357	355	353	351	348	347	346	344	343	343	341
90	367	365	363	361	359	357	356	354	352	349	348	347	345	345	344	342
91	367	365	364	362	360	358	356	355	352	350	349	347	346	346	346	343
92	368	366	364	363	361	359	357	354	352	350	350	348	347	347	347	344
93	368	366	364	362	360	358	356	354	351	351	350	349	348	349	348	344
94	368	366	364	362	360	358	356	354	351	351	351	350	349	350	349	345
95	367	365	363	361	359	357	355	353	352	352	351	350	350	351	350	346
96	367	365	363	361	359	357	355	353	352	352	352	351	351	352	351	346
97	366	365	362	360	358	356	354	353	353	352	352	351	351	353	352	347
98	364	364	362	360	358	356	354	353	353	353	352	352	352	353	352	348
99	363	362	361	360	357	355	354	354	354	353	353	352	352	354	353	349
100	361	360	359	359	357	355	354	354	354	354	353	353	353	355	354	349
101	359	358	358	357	356	355	355	355	355	354	354	354	354	355	355	350
102	357	356	356	355	355	355	355	355	355	355	354	354	354	355	355	351
103	355	355	356	356	356	356	356	356	356	355	355	355	355	356	356	352
104	356	356	357	357	357	357	357	357	356	356	355	355	355	356	356	352
105	357	357	358	358	358	358	358	357	357	357	356	356	356	356	357	353
106	358	359	359	359	358	358	358	358	358	357	356	356	356	357	357	354
107	359	360	360	360	359	359	359	359	358	358	357	357	357	357	357	355
108	360	360	360	360	360	360	360	359	359	359	358	358	357	357	357	355
109	361	361	361	361	360	360	360	360	360	359	359	358	358	358	358	356
110	361	361	361	361	361	361	361	360	360	360	359	359	358	358	358	357
111	361	361	361	361	361	361	361	361	361	360	360	359	359	358	358	358
112	362	362	362	362	361	361	361	361	361	361	360	360	359	359	359	358
113	362	362	362	362	362	362	362	362	361	361	361	360	360	359	359	359
114	363	362	362	362	362	362	362	362	362	362	361	361	360	359	359	359
115	363	363	363	363	363	362	362	362	362	362	361	361	360	360	359	359
116	363	363	363	363	363	363	363	363	362	362	362	361	361	360	360	360
117	364	364	363	363	363	363	363	363	363	363	362	362	361	360	360	360
118	364	364	364	364	364	364	363	363	363	363	363	362	362	361	360	360
119	364	364	364	364	364	364	364	364	364	363	363	362	362	361	361	361
120	365	365	365	365	364	364	364	364	364	364	363	363	362	362	361	361
121	369	368	367	366	366	365	365	365	365	364	364	364	363	362	362	362
122	374	373	372	372	371	370	369	368	367	366	365	364	364	363	363	363
123	380	380	378	377	376	375	374	373	372	371	370	368	366	365	364	364
124	385	385	384	384	383	383	382	382	381	380	379	378	376	374	372	368
125	**396**	**395**	**395**	**395**	**394**	**394**	**393**	**392**	**391**	**390**	**388**	**386**	**382**	**379**	**375**	**371**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

D.3 CALIBRATION

The first subsection presents the inputs that were used in the calibration of the Lucky Mc MODFLOW model. The results of the calibration are presented in the second subsection. The calibration of MODFLOW was from the start of use of fresh-water injection in 1989 to the end of 1991. This period was selected for calibration because it contains a large, well-defined stress change on the aquifer. Tailings dewatering started in 1989.

D.3.1 MODEL WELLS, RECHARGE LINES AND CONSTANT HEAD CELLS

A combination of well cells, recharge line cells and constant head cells were used to model the water flow in the Lucky Mc aquifer. Well cells were used to model all collection, injection and recharge line operation in both the Wind River and tailings systems.

D.3.1.1 COLLECTION WELLS

Collection wells have been used to intercept seepage-impacted water in the Wind River Channel for over 20 years. Tables D.3-1 through D.3-3 present the row, column, and extraction rates for the Wind River Channel collection wells and the tailings dewatering wells for the three separate stress rates. The collection rate values are in ft^3/day.

D.3.1.2 RECHARGE LINES AND WELLS

Recharge lines and wells are used to mound ground water to move seepage in the Wind River Channel to the collection wells. Although the recharge lines are constructed as buried perforated pipelines, the lines were modeled as wells in the cells that contain the recharge lines. This allowed precise control of the flux into the drain lines, which is not possible with a drain cell approach. Tables D.3-4 through D.3-7 present the row, column, and injection rates for the recharge lines and wells for four separate injection rates.

D.3.1.3 DEWATERING WELLS

Dewatering wells are the primary means of removing water from the tailings. The locations of the existing dewatering wells and initial (baseline) dewatering rates are presented in Tables D.3-1 through D.3-3 for the three separate stress rates. These dewatering rates are based on historical well yields.

D.3.1.4 CONSTANT HEAD BOUNDARIES

Constant head boundaries are used in the Lucky Mc model to control influx of water from the Wind River aquifer on the south side of the model and influx to the Fraser Draw alluvium. Table D.2-2 defines all constant head cells with a negative one (-1). The constant head cells are also highlighted on Table D.2-2 and other array tables for ease in finding these cell values. The highlighted cells in column 48 on pages D.2-9 and D.2-12 of Table D.2-2 show the Fraser Draw alluvial upgradient constant head cells. The row 124 and 125 constant heads on pages D.2-11 and D.2-12 are the upgradient constant heads for the Wind River aquifer. The constant head cells for outlet on the downstream side of the No. 2A Dam and the Fraser Draw alluvial downgradient flow are also highlighted on the array tables.

D.3.1.5 RECHARGE

The recharge used during the calibration of the Lucky Mc model was 0.0002 ft/day. This is equivalent to a recharge rate of 0.88 inches/year. A recharge rate of 10 times this value was used on the No. 1 Tailings to calibrate this area due to the sandy nature of the tailings.

D.3.2 CALIBRATION RESULTS

The drawdown predicted from the 1989 to end of 1991 model run was compared to the 1989 to 1991 observed water-level changes. Aquifer properties were adjusted to obtain the fit of the observed water-level changes presented in Figure D.3-1. Parameters that were varied during the calibration included the recharge rate, the hydraulic conductivity and specific yield of the Lucky Mc aquifer. This period was selected to use tailings dewatering and fresh-water injection during the calibration. The negative (magenta)

contours are predicted water-level rises, while the positive (blue) contours are predicted drawdowns. A green contour is shown for zero. The data by wells shows the observed water-level change (positive is drawdown and negative is water-level rise).

The drawdowns in the No. 1 Tailings show good fits to the observed drawdowns. The overall water-level rise in the Wind River Channel is also a good fit to the observed water-level rise due to the fresh-water injection.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE D.3-1: SIMULATED DRAWDOWN CONTOURS AND OBSERVED DRAWDOWNS END OF 1991, FT

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE D.3-1

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

TABLE D.3-1 WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY, 1989 TO JANUARY 1990, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-96	P3
80	32	-96	P4
48	31	-96	P5
86	29	-192	P6
58	24	-676	P8
69	19	-192	P9
80	32	-481	T1-1
75	28	-481	T1-8
57	25	-192	PS-1
48	27	-192	PS-2
101	18	-231	CT3
104	19	-231	CT4
107	23	-77	CT5
111	19	-231	CT6

TABLE D.3-2 WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY, 1990 TO JANUARY, 1991, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-96	P3
80	32	-96	P4
48	31	-96	P5
86	29	-482	P6
58	24	-576	P8
69	19	-192	P9
61	27	-96	P10
80	32	-862	T1-1
75	28	-674	T1-8
66	28	-96	T1-19
57	25	-96	PS-1
48	27	0	PS-2
101	18	-770	CT3
104	19	-770	CT4
107	23	-466	CT5
111	19	-528	CT6
108	18	-308	CT8
116	19	-231	CT9
104	18	-600	CT10
102	17	-600	CT11

TABLE D.3-3 WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY, 1991 TO JANUARY 1992, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-96	P3
80	32	0	P4
48	31	-48	P5
86	29	-500	P6
58	24	-569	P8
69	19	-347	P9
61	27	-96	P10
77	30	-770	P11
80	32	-924	T1-1
75	28	-500	T1-8
66	28	-366	T1-19
57	25	0	PS-1
48	27	0	PS-2
101	18	-770	CT3
104	19	-1000	CT4
107	23	-200	CT5
111	19	-340	CT6
108	18	-560	CT8
116	19	-540	CT9
104	18	-1140	CT10
102	17	-1000	CT11

TABLE D.3-4 WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY, 1989 TO JUNE 1989, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
86	32	0	P1
83	31	0	P2
85	32	0	RECHARGE
84	31	0	RECHARGE
82	30	0	RECHARGE
81	30	0	RECHARGE
81	29	0	RECHARGE
80	29	0	RECHARGE

TABLE D.3-5 WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JUNE, 1989 TO JANUARY 1990, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
86	32	1500	P1
83	31	1500	P2
85	32	140	RECHARGE
84	31	140	RECHARGE
82	30	140	RECHARGE
81	30	140	RECHARGE
81	29	140	RECHARGE
80	29	140	RECHARGE

TABLE D.3-6 WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY, 1990 TO JANUARY 1991, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
86	32	2000	P1
83	31	2000	P2
85	32	170	RECHARGE
84	31	170	RECHARGE
82	30	170	RECHARGE
81	30	170	RECHARGE
81	29	170	RECHARGE
80	29	170	RECHARGE

TABLE D.3-7 WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY, 1991 TO JANUARY 1992, CALIBRATION

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
86	32	1000	P1
83	31	1000	P2
85	32	200	RECHARGE
84	31	200	RECHARGE
82	30	200	RECHARGE
81	30	200	RECHARGE
81	29	200	RECHARGE
80	29	200	RECHARGE

TABLE D.3-8. RECHARGE TO THE LUCKY Mc AQUIFER (FT/DAY).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	**.00001**	**.00001**	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	**.00001**	**.00001**	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020
48	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020
49	.00020	.00020	.00020	.00012	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020
50	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020
51	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020
52	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020
53	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020
54	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020
55	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020
56	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020
57	.00020	.00018	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020
58	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020
59	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
60	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
61	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
62	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
63	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.3-8. RECHARGE TO THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
48	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
49	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
50	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
51	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
52	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
53	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
54	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
55	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
56	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
57	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
58	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
59	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
60	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
61	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
62	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
63	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.3-8. RECHARGE TO THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
48	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
49	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
50	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
51	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
52	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
53	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
54	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
55	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
56	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
57	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
58	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
59	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
60	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
61	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
62	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
63	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.3-8. RECHARGE TO THE LUCKY Mc AQUIFER (FT/DAY) (continued).

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
65	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
66	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
67	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
68	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
69	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
70	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
71	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
72	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
73	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
74	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
75	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
76	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
77	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
78	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
79	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
80	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
81	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
82	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
83	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
84	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
85	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
86	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
87	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
88	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
89	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
90	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
91	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
92	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
93	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
94	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
95	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
96	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
97	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
98	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
99	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
100	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
101	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00130
102	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
103	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
104	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
105	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
106	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00200
107	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00200
108	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00200
109	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
110	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
111	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
112	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
113	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
114	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
115	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00200
116	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.3-8. RECHARGE TO THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
65	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
66	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
67	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
68	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
69	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
70	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
71	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
72	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
73	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
74	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
75	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
76	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
77	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
78	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
79	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
80	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
81	.00001	.00001	.00001	.00001	.00001	.00001	.00011	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
82	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
83	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
84	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
85	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
86	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
87	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
88	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
89	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
90	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
91	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
92	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
93	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020
94	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020
95	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020
96	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020
97	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020
98	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020
99	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
100	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
101	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
102	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
103	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
104	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
105	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020
106	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00007	.00020	.00020	.00020	.00020	.00020	.00020
107	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
108	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
109	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
110	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020
111	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
112	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
113	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
114	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
115	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
116	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00001	.00001	.00001	.00001	.00001	.00001	.00004	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00014	.00001	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00001	.00001	.00001	.00001	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.3-8. RECHARGE TO THE LUCKY Mc AQUIFER (FT/DAY) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
65	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
66	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
67	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
68	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
69	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
70	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
71	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
72	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
73	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
74	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
75	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
76	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
77	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
78	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
79	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
80	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
81	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
82	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
83	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
84	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
85	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
86	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
87	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
88	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
89	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
90	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
91	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
92	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
93	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
94	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
95	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
96	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
97	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
98	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
99	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
100	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
101	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
102	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
103	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
104	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
105	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
106	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
107	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
108	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
109	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
110	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
111	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
112	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
113	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
114	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
115	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
116	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

D.4 FUTURE SIMULATION INPUTS

Recharge to the Lucky Mc aquifer will occur at reduced rates over the tailings area after the installation of the infiltration barriers. In the modeling, all active cells had recharge with a value of 0.0002 ft/day, except in the tailings where a value of 0.00001 ft/day was used. The tailings recharge rate was estimated from the expected reduced hydraulic conductivity, grain size and compaction efforts. Table D.4-1 presents the recharge to the Lucky Mc aquifer.

The pumping rates from the tailings and Wind River Channel wells are presented in Table D.4-2 for the initial stress period from January 2000 to January 2001. The total collection rate from the Wind River Channel of 25 gpm is presented in this tabulation and a dewatering rate of 27 gpm for the tailings. Table D.4-3 presents the second stress rates for the Scenario #1 simulation and presents the collection and dewatering rates for 2001 through September. The recharge rates are presented in Tables D.4-4 and D.4-5 for the two stress periods for Scenario #1. Injection was off during the first portion of 2000 and was assumed to be constant from May of 2000 through September of 2001.

Tables D.4-6 and D.4-7 present the same pumping rates through 2001 for Scenario #2 as those used for Scenario #1. Table D.4-8 presents the pumping and dewatering rates for 2002, which are slightly reduced due to the expected decline in yields with time. Table D.4-9 presents the Wind River Channel pumping and tailings dewatering rates for the last nine months of the Scenario #2 simulation through September of 2003. Tables D.4-10 through D.4-13 present the fresh-water injection rates for Scenario #2.

The additional model parameter that was changed for the future simulation is the initial water-level elevation. The 2000 water-level elevations are presented in the main body of the text and were used to develop the water-level elevation values for each cell presented in Table D.4-14. These early 2000 water-level elevations are the initial heads for the future simulations of the Lucky Mc aquifer.

TABLE D.4-1. RECHARGE TO THE LUCKY Mc AQUIFER DURING SIMULATION (FT/DAY).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00020**	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	**.00020**	**.00020**	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
48	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
49	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
50	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
51	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
52	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
53	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
54	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
55	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
56	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
57	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
58	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
59	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
60	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
61	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
62	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
63	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-1. RECHARGE TO THE LUCKY Mc AQUIFER DURING SIMULATION (FT/DAY) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
48	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
49	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
50	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
51	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
52	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
53	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
54	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
55	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
56	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
57	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
58	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
59	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
60	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
61	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
62	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
63	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-1. RECHARGE TO THE LUCKY Mc AQUIFER DURING SIMULATION (FT/DAY) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
48	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
49	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
50	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
51	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
52	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
53	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
54	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
55	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
56	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
57	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
58	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
59	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
60	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
61	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
62	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
63	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-1. RECHARGE TO THE LUCKY Mc AQUIFER DURING SIMULATION (FT/DAY) (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
65	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
66	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
67	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
68	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
69	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
70	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
71	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
72	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
73	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
74	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
75	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
76	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
77	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
78	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
79	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
80	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
81	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
82	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
83	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
84	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
85	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
86	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
87	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
88	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
89	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
90	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
91	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
92	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
93	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
94	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
95	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
96	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
97	.00020	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
98	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
99	.00020	.00020	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
100	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
101	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
102	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
103	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
104	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
105	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001
106	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001
107	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00001**	.00001	.00001	.00001	.00001	.00001	.00001	.00001
108	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00001	.00001	.00001	.00001	.00001	.00001	.00001
109	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001
110	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00001	.00001	.00001	.00001	.00001	.00001	.00001
111	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00001	.00010	.00020	.00020	.00020	.00020	.00001
112	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
113	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
114	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
115	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
116	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-1. RECHARGE TO THE LUCKY Mc AQUIFER DURING SIMULATION (FT/DAY) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
65	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
66	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
67	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
68	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
69	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
70	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
71	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
72	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
73	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
74	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
75	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
76	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
77	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
78	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
79	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
80	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
81	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
82	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
83	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
84	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
85	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
86	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
87	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
88	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
89	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
90	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
91	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
92	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
93	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
94	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
95	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
96	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
97	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
98	.00020	.00150	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
99	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
100	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
101	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
102	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
103	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
104	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
105	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
106	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
107	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
108	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
109	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
110	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
111	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
112	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
113	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
114	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
115	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
116	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00200	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00050	.00200	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00200	.00200	.00200	.00200	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-1. RECHARGE TO THE LUCKY Mc AQUIFER DURING SIMULATION (FT/DAY) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
65	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
66	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
67	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
68	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
69	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
70	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
71	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
72	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
73	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
74	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
75	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
76	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
77	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
78	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
79	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
80	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
81	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
82	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
83	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
84	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
85	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
86	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
87	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
88	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
89	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
90	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
91	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
92	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
93	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
94	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
95	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
96	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
97	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
98	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
99	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
100	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
101	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
102	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
103	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
104	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
105	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
106	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
107	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
108	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
109	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
110	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
111	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
112	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
113	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
114	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
115	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
116	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-2 WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY 2000 THROUGH DECEMBER 2000, SCENARIO #1.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-578	P3
80	32	-385	P5
58	24	-385	P8
69	19	-193	P9
64	28	-385	P12
43	30	-193	P15
44	28	-385	P17
45	31	-385	P18
95	34	-385	P20
63	29	-193	P23
48	35	-385	P24
116	31	-385	T1-4
66	28	-385	T1-19
65	28	-193	T1-27
101	18	-193	CT3
104	19	-193	CT4
111	19	-193	CT6
108	18	-193	CT8
116	19	-193	CT9
100	17	-193	CT18
96	9	-96	2-1
94	13	-96	2-12
93	9	-193	2-15
66	4	-385	2A-2
57	7	-385	2A-3
57	9	-192	2A-4
72	8	-385	2A-5
83	7	-385	2A-7
57	9	-385	2A-12
74	8	-770	2A-21
84	7	-770	2A-22

TABLE D.4-3 WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY 2001 THROUGH SEPTEMBER 2001, SCENARIO #1.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-468	P3
80	32	-275	P5
58	24	-275	P8
69	19	-83	P9
64	28	-275	P12
43	30	-83	P15
44	28	-275	P17
45	31	-275	P18
95	34	-275	P20
63	29	-83	P23
48	35	-275	P24
116	31	-275	T1-4
66	28	-275	T1-19
65	28	-83	T1-27
101	18	-193	CT3
104	19	-193	CT4
111	19	-193	CT6
108	18	-193	CT8
116	19	-193	CT9
100	17	-193	CT18
96	9	-96	2-1
94	13	-96	2-12
93	9	-193	2-15
66	4	-385	2A-2
57	7	-385	2A-3
57	9	-192	2A-4
72	8	-385	2A-5
83	7	-385	2A-7
57	9	-385	2A-12
74	8	-770	2A-21
84	7	-770	2A-22

TABLE D.4-4. WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY 2000 THROUGH APRIL 2000, SCENARIO #1.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
57	25	0	PS-1
48	27	0	PS-2
86	32	0	P1
83	31	0	P2
86	29	0	P6
72	19	0	P7
61	27	0	P10
77	30	0	P11
57	32	0	P13
56	34	0	P14
53	34	0	P16
46	29	0	P19
69	30	0	P22
80	32	0	T1-1
75	28	0	T1-8
59	28	0	T1-24
76	30	0	T1-26
85	32	0	RECHARGE
84	31	0	RECHARGE
82	30	0	RECHARGE
81	30	0	RECHARGE
81	29	0	RECHARGE
80	29	0	RECHARGE
91	33	0	RECHARGE
90	32	0	RECHARGE
89	31	0	RECHARGE
88	31	0	RECHARGE
87	30	0	RECHARGE
86	30	0	RECHARGE
85	30	0	RECHARGE
84	31	0	RECHARGE
82	30	0	RECHARGE
81	29	0	RECHARGE
80	28	0	RECHARGE
79	28	0	RECHARGE
78	27	0	RECHARGE
77	27	0	RECHARGE
76	27	0	RECHARGE
75	27	0	RECHARGE
79	31	0	RECHARGE
78	31	0	RECHARGE
77	31	0	RECHARGE
76	30	0	RECHARGE
75	29	0	RECHARGE
57	26	0	RECHARGE
56	27	0	RECHARGE
56	28	0	RECHARGE
55	28	0	RECHARGE
57	24	0	RECHARGE
88	28	0	RECHARGE
86	28	0	RECHARGE
84	28	0	RECHARGE
82	28	0	RECHARGE
80	28	0	RECHARGE
78	28	0	RECHARGE
76	26	0	RECHARGE
74	26	0	RECHARGE
72	27	0	RECHARGE
70	27	0	RECHARGE

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
68	27	0	RECHARGE
66	26	0	RECHARGE
64	25	0	RECHARGE
62	25	0	RECHARGE
60	25	0	RECHARGE
114	30	0	RECHARGE
112	30	0	RECHARGE
110	30	0	RECHARGE
108	30	0	RECHARGE
106	30	0	RECHARGE
104	30	0	RECHARGE
102	30	0	RECHARGE
100	31	0	RECHARGE
98	31	0	RECHARGE
96	30	0	RECHARGE
94	30	0	RECHARGE
92	30	0	RECHARGE
90	30	0	RECHARGE
49	27	0	RECHARGE
50	27	0	RECHARGE
51	27	0	RECHARGE
52	28	0	RECHARGE
53	29	0	RECHARGE
48	28	0	RECHARGE
48	29	0	RECHARGE
47	30	0	RECHARGE
48	26	0	RECHARGE
49	25	0	RECHARGE
49	24	0	RECHARGE

TABLE D.4-5 WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM MAY 2000 THROUGH SEPTEMBER 2001, SCENARIO #1.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
57	25	385	PS-1
48	27	193	PS-2
86	32	578	P1
83	31	385	P2
86	29	578	P6
72	19	385	P7
61	27	578	P10
77	30	578	P11
57	32	963	P13
56	34	578	P14
53	34	578	P16
46	29	933	P19
69	30	385	P22
80	32	963	T1-1
75	28	578	T1-8
59	28	578	T1-24
76	30	385	T1-26
85	32	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	29	21.7	RECHARGE
91	33	21.7	RECHARGE
90	32	21.7	RECHARGE
89	31	21.7	RECHARGE
88	31	21.7	RECHARGE
87	30	21.7	RECHARGE
86	30	21.7	RECHARGE
85	30	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	28	21.7	RECHARGE
79	28	21.7	RECHARGE
78	27	21.7	RECHARGE
77	27	21.7	RECHARGE
76	27	21.7	RECHARGE
75	27	21.7	RECHARGE
79	31	21.7	RECHARGE
78	31	21.7	RECHARGE
77	31	21.7	RECHARGE
76	30	21.7	RECHARGE
75	29	21.7	RECHARGE
57	26	21.7	RECHARGE
56	27	21.7	RECHARGE
56	28	21.7	RECHARGE
55	28	21.7	RECHARGE
57	24	21.7	RECHARGE
88	28	21.7	RECHARGE
86	28	21.7	RECHARGE
84	28	21.7	RECHARGE
82	28	21.7	RECHARGE
80	28	21.7	RECHARGE
78	28	21.7	RECHARGE
76	26	21.7	RECHARGE
74	26	21.7	RECHARGE
72	27	21.7	RECHARGE
70	27	21.7	RECHARGE
68	27	21.7	RECHARGE
66	26	21.7	RECHARGE
64	25	21.7	RECHARGE
62	25	21.7	RECHARGE
60	25	21.7	RECHARGE
114	30	21.7	RECHARGE
112	30	21.7	RECHARGE
110	30	21.7	RECHARGE
108	30	21.7	RECHARGE
106	30	21.7	RECHARGE
104	30	21.7	RECHARGE
102	30	21.7	RECHARGE
100	31	21.7	RECHARGE
98	31	21.7	RECHARGE
96	30	21.7	RECHARGE
94	30	21.7	RECHARGE
92	30	21.7	RECHARGE
90	30	21.7	RECHARGE
49	27	21.7	RECHARGE
50	27	21.7	RECHARGE
51	27	21.7	RECHARGE
52	28	21.7	RECHARGE
53	29	21.7	RECHARGE
48	28	21.7	RECHARGE
48	29	21.7	RECHARGE
47	30	21.7	RECHARGE
48	26	21.7	RECHARGE
49	25	21.7	RECHARGE
49	24	21.7	RECHARGE

TABLE D.4-6 WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY 2000 THROUGH DECEMBER 2000, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-578	P3
80	32	-385	P5
58	24	-385	P8
69	19	-193	P9
64	28	-385	P12
43	30	-193	P15
44	28	-385	P17
45	31	-385	P18
95	34	-385	P20
63	29	-193	P23
48	35	-385	P24
116	31	-385	T1-4
66	28	-385	T1-19
65	28	-193	T1-27
101	18	-193	CT3
104	19	-193	CT4
111	19	-193	CT6
108	18	-193	CT8
116	19	-193	CT9
100	17	-193	CT18
96	9	-96	2-1
94	13	-96	2-12
93	9	-193	2-15
66	4	-385	2A-2
57	7	-385	2A-3
57	9	-192	2A-4
72	8	-385	2A-5
83	7	-385	2A-7
57	9	-385	2A-12
74	8	-770	2A-21
84	7	-770	2A-22

TABLE D.4-7. WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY 2001 THROUGH DECEMBER 2001, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-468	P3
80	32	-275	P5
58	24	-275	P8
69	19	-83	P9
64	28	-275	P12
43	30	-83	P15
44	28	-275	P17
45	31	-275	P18
95	34	-275	P20
63	29	-83	P23
48	35	-275	P24
116	31	-275	T1-4
66	28	-275	T1-19
65	28	-83	T1-27
101	18	-193	CT3
104	19	-193	CT4
111	19	-193	CT6
108	18	-193	CT8
116	19	-193	CT9
100	17	-193	CT18
96	9	-96	2-1
94	13	-96	2-12
93	9	-193	2-15
66	4	-385	2A-2
57	7	-385	2A-3
57	9	-192	2A-4
72	8	-385	2A-5
83	7	-385	2A-7
57	9	-385	2A-12
74	8	-770	2A-21
84	7	-770	2A-22

TABLE D.4-8. WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY 2002 DECEMBER 2002, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-468	P3
80	32	-275	P5
58	24	-275	P8
69	19	-83	P9
64	28	-275	P12
43	30	-83	P15
44	28	-275	P17
45	31	-275	P18
95	34	-275	P20
63	29	-83	P23
48	35	-275	P24
116	31	-275	T1-4
66	28	-275	T1-19
65	28	-83	T1-27
101	18	-136	CT3
104	19	-136	CT4
111	19	-136	CT6
108	18	-136	CT8
116	19	-136	CT9
100	17	-136	CT18
96	9	-40	2-1
94	13	-40	2-12
93	9	-136	2-15
66	4	-329	2A-2
57	7	-329	2A-3
57	9	-136	2A-4
72	8	-329	2A-5
83	7	-329	2A-7
57	9	-329	2A-12
74	8	-713	2A-21
84	7	-713	2A-22

TABLE D.4-9. WIND RIVER CHANNEL COLLECTION WELLS AND TAILINGS DEWATERING WELLS FROM JANUARY 2003 THROUGH SEPTEMBER, 2003, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
62	29	-468	P3
80	32	-275	P5
58	24	-275	P8
69	19	-83	P9
64	28	-275	P12
43	30	-83	P15
44	28	-275	P17
45	31	-275	P18
95	34	-275	P20
63	29	-83	P23
48	35	-275	P24
116	31	-275	T1-4
66	28	-275	T1-19
65	28	-83	T1-27
101	18	-136	CT3
104	19	-136	CT4
111	19	-136	CT6
108	18	-136	CT8
116	19	-136	CT9
100	17	-136	CT18
96	9	-40	2-1
94	13	-40	2-12
93	9	-136	2-15
66	4	-329	2A-2
57	7	-329	2A-3
57	9	-136	2A-4
72	8	-329	2A-5
83	7	-329	2A-7
57	9	-329	2A-12
74	8	-713	2A-21
84	7	-713	2A-22

TABLE D.4-10. WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY 2000 THROUGH APRIL 2000, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
57	25	0	PS-1
48	27	0	PS-2
86	32	0	P1
83	31	0	P2
86	29	0	P6
72	19	0	P7
61	27	0	P10
77	30	0	P11
57	32	0	P13
56	34	0	P14
53	34	0	P16
46	29	0	P19
69	30	0	P22
80	32	0	T1-1
75	28	0	T1-8
59	28	0	T1-24
76	30	0	T1-26
85	32	0	RECHARGE
84	31	0	RECHARGE
82	30	0	RECHARGE
81	30	0	RECHARGE
81	29	0	RECHARGE
80	29	0	RECHARGE
91	33	0	RECHARGE
90	32	0	RECHARGE
89	31	0	RECHARGE
88	31	0	RECHARGE
87	30	0	RECHARGE
86	30	0	RECHARGE
85	30	0	RECHARGE
84	31	0	RECHARGE
82	30	0	RECHARGE
81	29	0	RECHARGE
80	28	0	RECHARGE
79	28	0	RECHARGE
78	27	0	RECHARGE
77	27	0	RECHARGE
76	27	0	RECHARGE
75	27	0	RECHARGE
79	31	0	RECHARGE
78	31	0	RECHARGE
77	31	0	RECHARGE
76	30	0	RECHARGE
75	29	0	RECHARGE
57	26	0	RECHARGE
56	27	0	RECHARGE
56	28	0	RECHARGE
55	28	0	RECHARGE
57	24	0	RECHARGE
88	28	0	RECHARGE
86	28	0	RECHARGE
84	28	0	RECHARGE
82	28	0	RECHARGE
80	28	0	RECHARGE
78	28	0	RECHARGE
76	26	0	RECHARGE
74	26	0	RECHARGE
72	27	0	RECHARGE
70	27	0	RECHARGE

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
68	27	0	RECHARGE
66	26	0	RECHARGE
64	25	0	RECHARGE
62	25	0	RECHARGE
60	25	0	RECHARGE
114	30	0	RECHARGE
112	30	0	RECHARGE
110	30	0	RECHARGE
108	30	0	RECHARGE
106	30	0	RECHARGE
104	30	0	RECHARGE
102	30	0	RECHARGE
100	31	0	RECHARGE
98	31	0	RECHARGE
96	30	0	RECHARGE
94	30	0	RECHARGE
92	30	0	RECHARGE
90	30	0	RECHARGE
49	27	0	RECHARGE
50	27	0	RECHARGE
51	27	0	RECHARGE
52	28	0	RECHARGE
53	29	0	RECHARGE
48	28	0	RECHARGE
48	29	0	RECHARGE
47	30	0	RECHARGE
48	26	0	RECHARGE
49	25	0	RECHARGE
49	24	0	RECHARGE

TABLE D.4-11 WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM MAY 2000 THROUGH DECEMBER 2001, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
57	25	385	PS-1
48	27	193	PS-2
86	32	578	P1
83	31	385	P2
86	29	578	P6
72	19	385	P7
61	27	578	P10
77	30	578	P11
57	32	963	P13
56	34	578	P14
53	34	578	P16
46	29	933	P19
69	30	385	P22
80	32	963	T1-1
75	28	578	T1-8
59	28	578	T1-24
76	30	385	T1-26
85	32	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	29	21.7	RECHARGE
91	33	21.7	RECHARGE
90	32	21.7	RECHARGE
89	31	21.7	RECHARGE
88	31	21.7	RECHARGE
87	30	21.7	RECHARGE
86	30	21.7	RECHARGE
85	30	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	28	21.7	RECHARGE
79	28	21.7	RECHARGE
78	27	21.7	RECHARGE
77	27	21.7	RECHARGE
76	27	21.7	RECHARGE
75	27	21.7	RECHARGE
79	31	21.7	RECHARGE
78	31	21.7	RECHARGE
77	31	21.7	RECHARGE
76	30	21.7	RECHARGE
75	29	21.7	RECHARGE
57	26	21.7	RECHARGE
56	27	21.7	RECHARGE
56	28	21.7	RECHARGE
55	28	21.7	RECHARGE
57	24	21.7	RECHARGE
88	28	21.7	RECHARGE
86	28	21.7	RECHARGE
84	28	21.7	RECHARGE
82	28	21.7	RECHARGE
80	28	21.7	RECHARGE
78	28	21.7	RECHARGE
76	26	21.7	RECHARGE
74	26	21.7	RECHARGE
72	27	21.7	RECHARGE
70	27	21.7	RECHARGE
68	27	21.7	RECHARGE
66	26	21.7	RECHARGE
64	25	21.7	RECHARGE
62	25	21.7	RECHARGE
60	25	21.7	RECHARGE
114	30	21.7	RECHARGE
112	30	21.7	RECHARGE
110	30	21.7	RECHARGE
108	30	21.7	RECHARGE
106	30	21.7	RECHARGE
104	30	21.7	RECHARGE
102	30	21.7	RECHARGE
100	31	21.7	RECHARGE
98	31	21.7	RECHARGE
96	30	21.7	RECHARGE
94	30	21.7	RECHARGE
92	30	21.7	RECHARGE
90	30	21.7	RECHARGE
49	27	21.7	RECHARGE
50	27	21.7	RECHARGE
51	27	21.7	RECHARGE
52	28	21.7	RECHARGE
53	29	21.7	RECHARGE
48	28	21.7	RECHARGE
48	29	21.7	RECHARGE
47	30	21.7	RECHARGE
48	26	21.7	RECHARGE
49	25	21.7	RECHARGE
49	24	21.7	RECHARGE

TABLE D.4-12. WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY 2002 THROUGH DECEMBER 2002, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
57	25	328	PS-1
48	27	136	PS-2
86	32	521	P1
83	31	328	P2
86	29	521	P6
72	19	328	P7
61	27	521	P10
77	30	521	P11
57	32	906	P13
56	34	521	P14
53	34	521	P16
46	29	876	P19
69	30	328	P22
80	32	906	T1-1
75	28	521	T1-8
59	28	521	T1-24
76	30	328	T1-26
85	32	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	29	21.7	RECHARGE
91	33	21.7	RECHARGE
90	32	21.7	RECHARGE
89	31	21.7	RECHARGE
88	31	21.7	RECHARGE
87	30	21.7	RECHARGE
86	30	21.7	RECHARGE
85	30	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	28	21.7	RECHARGE
79	28	21.7	RECHARGE
78	27	21.7	RECHARGE
77	27	21.7	RECHARGE
76	27	21.7	RECHARGE
75	27	21.7	RECHARGE
79	31	21.7	RECHARGE
78	31	21.7	RECHARGE
77	31	21.7	RECHARGE
76	30	21.7	RECHARGE
75	29	21.7	RECHARGE
57	26	21.7	RECHARGE
56	27	21.7	RECHARGE
56	28	21.7	RECHARGE
55	28	21.7	RECHARGE
57	24	21.7	RECHARGE
88	28	21.7	RECHARGE
86	28	21.7	RECHARGE
84	28	21.7	RECHARGE
82	28	21.7	RECHARGE
80	28	21.7	RECHARGE
78	28	21.7	RECHARGE
76	26	21.7	RECHARGE
74	26	21.7	RECHARGE
72	27	21.7	RECHARGE
70	27	21.7	RECHARGE
68	27	21.7	RECHARGE
66	26	21.7	RECHARGE
64	25	21.7	RECHARGE
62	25	21.7	RECHARGE
60	25	21.7	RECHARGE
114	30	21.7	RECHARGE
112	30	21.7	RECHARGE
110	30	21.7	RECHARGE
108	30	21.7	RECHARGE
106	30	21.7	RECHARGE
104	30	21.7	RECHARGE
102	30	21.7	RECHARGE
100	31	21.7	RECHARGE
98	31	21.7	RECHARGE
96	30	21.7	RECHARGE
94	30	21.7	RECHARGE
92	30	21.7	RECHARGE
90	30	21.7	RECHARGE
49	27	21.7	RECHARGE
50	27	21.7	RECHARGE
51	27	21.7	RECHARGE
52	28	21.7	RECHARGE
53	29	21.7	RECHARGE
48	28	21.7	RECHARGE
48	29	21.7	RECHARGE
47	30	21.7	RECHARGE
48	26	21.7	RECHARGE
49	25	21.7	RECHARGE
49	24	21.7	RECHARGE

TABLE D.4-13. WIND RIVER CHANNEL RECHARGE LINES AND WELLS FROM JANUARY 2003 THROUGH SEPTEMBER 2003, SCENARIO #2.

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
57	25	271	PS-1
48	27	79	PS-2
86	32	464	P1
83	31	271	P2
86	29	464	P6
72	19	271	P7
61	27	464	P10
77	30	464	P11
57	32	849	P13
56	34	464	P14
53	34	464	P16
46	29	819	P19
69	30	271	P22
80	32	849	T1-1
75	28	464	T1-8
59	28	464	T1-24
76	30	271	T1-26
85	32	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	29	21.7	RECHARGE
91	33	21.7	RECHARGE
90	32	21.7	RECHARGE
89	31	21.7	RECHARGE
88	31	21.7	RECHARGE
87	30	21.7	RECHARGE
86	30	21.7	RECHARGE
85	30	21.7	RECHARGE
84	31	21.7	RECHARGE
82	30	21.7	RECHARGE
81	29	21.7	RECHARGE
80	28	21.7	RECHARGE
79	28	21.7	RECHARGE
78	27	21.7	RECHARGE
77	27	21.7	RECHARGE
76	27	21.7	RECHARGE
75	27	21.7	RECHARGE
79	31	21.7	RECHARGE
78	31	21.7	RECHARGE
77	31	21.7	RECHARGE
76	30	21.7	RECHARGE
75	29	21.7	RECHARGE
57	26	21.7	RECHARGE
56	27	21.7	RECHARGE
56	28	21.7	RECHARGE
55	28	21.7	RECHARGE
57	24	21.7	RECHARGE
88	28	21.7	RECHARGE
86	28	21.7	RECHARGE
84	28	21.7	RECHARGE
82	28	21.7	RECHARGE
80	28	21.7	RECHARGE
78	28	21.7	RECHARGE
76	26	21.7	RECHARGE
74	26	21.7	RECHARGE
72	27	21.7	RECHARGE
70	27	21.7	RECHARGE

Row Number	Column Number	Well Extraction Rate (ft^3/day)	Well Name
68	27	21.7	RECHARGE
66	26	21.7	RECHARGE
64	25	21.7	RECHARGE
62	25	21.7	RECHARGE
60	25	21.7	RECHARGE
114	30	21.7	RECHARGE
112	30	21.7	RECHARGE
110	30	21.7	RECHARGE
108	30	21.7	RECHARGE
106	30	21.7	RECHARGE
104	30	21.7	RECHARGE
102	30	21.7	RECHARGE
100	31	21.7	RECHARGE
98	31	21.7	RECHARGE
96	30	21.7	RECHARGE
94	30	21.7	RECHARGE
92	30	21.7	RECHARGE
90	30	21.7	RECHARGE
49	27	21.7	RECHARGE
50	27	21.7	RECHARGE
51	27	21.7	RECHARGE
52	28	21.7	RECHARGE
53	29	21.7	RECHARGE
48	28	21.7	RECHARGE
48	29	21.7	RECHARGE
47	30	21.7	RECHARGE
48	26	21.7	RECHARGE
49	25	21.7	RECHARGE
49	24	21.7	RECHARGE

TABLE D.4-14. INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER IN 2000 (FEET ABOVE MSL MINUS 6000).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	217	217	216	216	216	216	217	217	217	217	**218**	**218**	**218**	**218**	**219**	**219**
2	220	220	219	219	219	218	218	218	218	219	219	219	219	219	220	220
3	223	222	222	222	221	221	221	220	220	220	220	220	221	221	222	222
4	225	225	225	224	224	224	224	223	223	223	222	223	224	224	225	225
5	227	228	227	227	227	227	226	226	226	225	225	226	226	227	227	228
6	228	229	229	230	229	229	229	229	228	228	228	228	229	230	230	230
7	229	230	231	231	232	232	232	231	231	231	231	231	232	232	233	233
8	230	231	232	232	233	233	234	234	234	233	233	233	234	235	235	236
9	232	232	233	233	234	235	235	236	236	236	236	236	237	237	238	238
10	233	233	234	235	235	236	236	237	237	238	238	238	239	240	240	241
11	234	234	235	236	236	237	237	238	239	239	240	240	241	242	242	243
12	235	236	236	237	237	238	239	239	240	240	241	242	243	244	244	245
13	236	237	237	238	238	239	240	240	241	241	242	244	245	246	246	247
14	237	238	238	239	240	240	241	241	242	243	243	245	247	248	249	249
15	238	239	240	240	241	241	242	242	243	244	245	247	249	250	250	251
16	239	240	241	241	242	242	243	244	244	245	246	248	251	252	252	252
17	241	241	242	242	243	244	244	245	245	246	248	250	252	253	254	254
18	242	242	243	244	244	245	245	246	246	248	250	252	253	254	255	255
19	243	243	244	245	245	246	246	247	248	249	251	253	254	256	257	257
20	244	245	245	246	246	247	248	248	249	251	253	254	256	257	258	259
21	245	246	246	247	247	248	249	249	250	252	254	256	257	258	259	260
22	246	247	247	248	249	249	250	250	252	254	256	257	258	259	261	262
23	247	248	249	249	250	250	251	251	254	256	257	258	259	261	263	264
24	248	249	250	250	251	251	252	253	255	257	258	259	261	264	265	266
25	250	250	251	251	252	253	253	255	257	258	259	261	262	266	267	268
26	251	251	252	253	253	254	254	256	258	259	261	262	266	268	269	270
27	252	252	253	254	254	255	256	258	259	261	262	265	269	270	271	272
28	253	254	254	255	255	256	257	259	261	262	263	269	271	272	273	274
29	254	255	255	256	256	257	259	261	262	263	267	272	273	274	275	275
30	255	256	256	257	258	259	261	262	263	266	271	274	275	276	276	277
31	256	257	258	258	259	260	262	263	264	270	275	276	277	277	278	279
32	257	258	259	259	260	262	263	264	268	274	276	277	278	279	280	281
33	259	259	260	260	261	263	264	267	272	278	278	279	280	280	281	282
34	260	260	261	262	263	265	266	271	276	279	280	281	281	282	283	284
35	261	261	262	263	265	266	269	275	280	281	282	283	283	284	285	285
36	262	263	263	264	266	267	273	278	282	283	284	284	285	285	286	289
37	263	263	264	265	267	271	276	282	283	284	285	285	286	286	287	291
38	264	264	265	266	268	273	279	284	285	285	286	286	287	287	290	294
39	264	265	265	267	269	275	280	285	285	286	286	287	287	287	291	295
40	264	265	266	267	271	276	282	285	286	287	287	287	288	288	292	295
41	265	265	266	268	272	277	283	286	286	287	287	288	288	289	293	295
42	265	266	266	268	273	278	284	**286**	**287**	**287**	288	288	288	290	294	296
43	265	266	267	268	274	279	**285**	286	287	288	**288**	**288**	288	291	293	297
44	265	266	267	269	275	**280**	286	287	288	288	288	289	289	292	293	298
45	266	266	268	270	276	281	287	287	288	288	289	289	289	292	293	300
46	266	267	268	271	**277**	282	287	288	288	289	289	289	289	292	295	302
47	266	267	268	272	278	283	288	288	289	289	289	289	290	291	296	304
48	267	267	268	**273**	279	284	288	289	289	289	290	290	291	291	298	306
49	267	268	269	274	280	285	289	289	290	290	290	290	290	293	301	308
50	267	268	270	275	281	286	289	289	290	291	293	294	293	294	301	309
51	267	268	**271**	276	282	287	289	290	291	293	298	300	300	299	302	309
52	268	268	272	277	283	288	290	291	292	295	301	303	303	305	307	310
53	268	269	273	278	284	289	291	293	294	297	302	306	307	306	311	315
54	268	**269**	274	279	285	290	293	295	295	298	304	308	310	308	313	318
55	269	269	275	280	286	293	296	297	296	299	305	310	314	310	315	320
56	269	270	276	281	289	296	298	299	298	300	307	311	317	314	317	322
57	269	271	277	284	293	300	300	301	299	301	308	312	320	317	319	323
58	269	272	279	287	297	302	303	303	301	303	309	313	323	321	320	325
59	**269**	274	281	289	301	304	305	306	304	305	311	315	325	324	322	327
60	**269**	276	283	291	302	306	308	309	308	308	312	317	328	328	324	329
61	**269**	277	285	295	304	309	311	311	311	310	313	318	330	332	326	331
62	**270**	278	286	300	306	310	313	314	313	311	314	321	333	335	329	332
63	**270**	279	288	301	307	312	315	315	314	312	315	325	335	339	333	334

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-14. INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER IN 2000 (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**219**	219	219	219	220	220	220	220	220	220	220	220	220	220	220	221
2	220	221	221	221	222	222	222	222	222	222	223	223	223	223	223	223
3	223	223	224	224	224	224	225	225	225	225	225	225	226	226	226	226
4	226	226	227	227	227	227	227	227	228	228	228	228	228	228	229	229
5	228	229	229	230	230	230	230	230	230	230	231	231	231	231	231	231
6	231	232	232	232	232	233	233	233	233	233	233	233	234	234	234	234
7	234	234	235	235	235	235	235	235	236	236	236	236	236	236	237	237
8	236	237	237	237	238	238	238	238	238	238	239	239	239	239	239	239
9	239	239	240	240	240	240	240	240	241	241	241	241	241	241	241	241
10	241	242	242	242	242	242	242	243	243	243	243	243	243	243	243	243
11	243	244	244	244	244	245	245	245	245	245	245	245	245	245	245	246
12	245	246	246	246	247	247	247	247	247	247	247	247	247	248	248	248
13	248	248	248	249	249	249	249	249	249	249	249	249	249	249	249	249
14	250	250	250	251	251	251	251	251	251	251	251	251	251	251	251	251
15	251	252	252	252	252	252	252	253	253	253	253	253	253	253	253	253
16	253	253	254	254	254	254	254	254	254	254	254	254	254	254	254	255
17	254	255	255	255	255	256	256	256	256	256	256	256	256	256	256	256
18	256	256	257	257	257	257	257	257	257	258	258	258	258	258	258	258
19	258	258	258	258	259	259	259	259	259	259	259	259	259	260	260	260
20	259	259	260	260	260	260	260	261	261	261	261	261	261	261	261	261
21	261	261	262	262	262	262	262	262	263	263	263	263	263	263	263	263
22	263	263	264	264	264	264	264	264	264	265	265	265	265	265	265	265
23	265	265	266	266	266	266	266	266	266	266	266	267	267	267	267	267
24	267	267	268	268	268	268	268	268	268	268	268	268	269	269	269	269
25	269	269	270	270	270	270	270	270	270	270	270	270	270	271	271	271
26	271	271	271	272	272	272	272	272	272	272	272	272	272	273	273	273
27	273	273	273	274	274	274	274	274	274	274	274	274	274	274	275	275
28	274	275	276	276	276	276	276	276	276	276	276	276	276	276	277	277
29	276	277	277	278	278	278	278	278	278	278	278	278	278	278	279	279
30	278	279	279	280	280	280	280	280	280	280	280	280	281	281	281	281
31	280	280	281	283	283	283	283	283	283	283	283	283	284	284	284	284
32	281	282	284	286	287	286	286	286	286	286	286	287	287	287	287	287
33	283	285	288	290	291	290	290	289	289	289	289	290	290	290	290	290
34	286	289	291	293	294	294	294	293	293	293	294	294	294	294	294	294
35	289	292	295	297	298	298	298	298	298	298	298	298	298	298	298	298
36	292	296	298	300	302	303	302	302	302	302	303	303	303	303	302	302
37	295	297	301	304	305	307	307	307	307	307	307	307	307	307	307	306
38	296	300	304	306	308	310	310	310	310	310	310	310	310	310	310	310
39	297	302	306	309	312	314	315	315	315	314	314	314	315	315	315	315
40	299	304	308	312	314	316	318	318	318	318	318	318	318	318	318	318
41	300	305	310	314	316	318	320	321	321	321	321	320	320	320	321	321
42	301	308	313	316	319	321	322	323	323	323	323	323	322	323	323	323
43	303	310	315	318	321	323	325	325	326	326	326	325	325	325	326	326
44	305	312	317	320	323	325	327	328	328	329	328	328	328	328	328	327
45	307	314	319	322	325	327	329	330	331	331	331	331	330	330	330	329
46	310	316	321	325	327	329	331	333	333	333	333	332	332	332	332	331
47	312	318	323	327	329	331	333	335	335	335	335	334	334	334	334	333
48	314	320	325	328	330	332	334	336	336	335	335	335	335	335	335	335
49	315	321	326	329	331	333	335	336	336	336	336	336	336	336	336	335
50	316	322	326	329	332	333	335	337	337	337	336	336	336	336	336	336
51	316	322	327	330	332	334	336	337	337	337	337	337	337	337	336	336
52	317	323	327	331	333	335	336	338	338	338	337	337	337	337	337	337
53	317	323	328	331	333	335	337	338	338	338	338	338	338	337	337	337
54	323	324	328	332	334	336	338	339	339	339	338	338	338	338	338	337
55	324	328	331	332	335	336	338	339	339	339	339	339	338	338	338	338
56	326	330	333	335	337	338	339	340	340	340	339	339	339	339	338	338
57	328	332	335	337	339	340	340	341	340	340	340	339	339	339	339	339
58	330	334	337	339	340	341	341	341	341	340	340	340	340	339	339	339
59	332	336	339	341	342	341	341	342	341	341	340	340	340	340	340	339
60	333	337	340	343	341	342	342	342	342	341	341	341	341	340	340	340
61	335	339	342	342	342	342	342	343	343	342	342	341	341	341	341	341
62	337	341	344	342	342	343	343	343	343	343	342	342	342	342	342	342
63	339	343	344	343	343	343	343	344	344	343	343	343	343	343	343	342

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-14. INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER IN 2000 (FEET ABOVE MSL MINUS 6000) (continued).

Row	Column 33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	221	221	221	221	221	222	222	222	222	222	223	223	224	225	226	226
2	223	224	224	224	224	224	224	225	225	225	225	226	227	227	228	229
3	226	226	227	227	227	227	227	227	228	228	228	229	229	230	231	232
4	229	229	229	229	230	230	230	230	230	230	231	231	232	233	233	234
5	232	232	232	232	232	232	232	233	233	233	233	234	235	235	236	236
6	234	234	234	235	235	235	235	235	235	236	236	236	237	237	238	238
7	237	237	237	237	237	238	238	238	238	238	238	239	239	240	240	241
8	239	239	239	239	240	240	240	240	240	240	240	241	241	242	242	242
9	241	241	242	242	242	242	242	242	242	242	243	243	243	244	244	244
10	244	244	244	244	244	244	244	244	244	245	245	245	245	245	245	246
11	246	246	246	246	246	246	246	246	246	246	247	247	247	247	247	247
12	248	248	248	248	248	248	248	248	248	248	248	248	249	249	249	249
13	249	249	250	250	250	250	250	250	250	250	250	250	250	250	251	251
14	251	251	251	251	251	251	251	251	251	252	252	252	252	252	252	253
15	253	253	253	253	253	253	253	253	253	253	253	253	254	254	254	255
16	255	255	255	255	255	255	255	255	255	255	255	255	255	256	256	256
17	256	256	256	256	256	256	256	257	257	257	257	257	257	258	258	258
18	258	258	258	258	258	258	258	258	258	258	259	259	259	259	260	260
19	260	260	260	260	260	260	260	260	260	260	260	261	261	261	262	262
20	262	262	262	262	262	262	262	262	262	262	262	263	263	263	264	264
21	263	263	263	264	264	264	264	264	264	264	264	264	265	265	266	266
22	265	265	265	265	265	266	266	266	266	266	266	266	267	267	268	268
23	267	267	267	267	267	267	267	267	268	268	268	268	269	269	270	271
24	269	269	269	269	269	269	269	269	270	270	270	270	271	271	272	273
25	271	271	271	271	271	271	271	271	271	272	272	272	273	273	274	276
26	273	273	273	273	273	273	273	273	273	274	274	274	274	276	277	278
27	275	275	275	275	275	275	275	275	275	276	276	276	277	278	279	281
28	277	277	277	277	277	277	277	277	277	277	278	278	279	281	282	283
29	279	279	279	279	279	279	279	279	279	279	280	281	282	283	285	286
30	281	281	281	281	281	282	282	282	282	282	283	283	285	286	287	288
31	284	284	284	284	285	285	285	285	285	285	285	286	287	288	290	291
32	287	287	287	287	288	288	288	288	288	288	289	289	290	291	292	293
33	290	290	291	291	291	291	291	291	291	291	291	292	292	293	295	295
34	294	294	294	294	294	294	294	294	293	293	293	294	295	296	297	298
35	298	297	297	297	296	296	296	296	296	295	295	296	297	298	299	300
36	301	300	300	299	299	299	298	298	298	298	297	298	299	301	301	302
37	306	306	305	304	303	301	300	300	300	299	299	300	301	302	303	304
38	311	311	311	311	311	311	311	310	309	306	304	301	302	303	304	305
39	315	315	315	315	315	315	314	314	313	310	307	302	303	304	305	306
40	318	318	318	318	318	317	317	317	316	314	308	303	304	305	306	307
41	321	320	320	320	320	319	319	319	318	315	309	304	304	306	307	307
42	323	322	322	322	321	321	321	321	320	316	310	304	305	306	307	308
43	325	324	324	323	323	323	322	322	321	317	311	305	306	307	308	308
44	327	326	325	325	324	324	324	323	322	317	312	306	306	307	308	309
45	329	328	327	326	326	325	325	325	323	319	313	306	307	308	309	309
46	330	329	329	328	327	327	326	326	324	320	314	307	307	309	309	310
47	332	331	330	329	329	328	328	327	326	321	314	308	308	309	310	**311**
48	334	333	332	331	330	329	329	328	327	322	315	309	309	310	310	**311**
49	335	334	334	333	332	331	330	329	328	323	317	310	309	310	311	**312**
50	336	335	335	334	333	332	331	331	329	324	318	311	310	311	312	**313**
51	336	336	335	335	335	334	333	332	330	325	318	310	311	312	312	**313**
52	336	336	336	336	335	335	334	333	330	326	319	311	312	312	313	**314**
53	337	337	336	336	336	335	335	334	331	326	320	313	312	313	314	**315**
54	337	337	337	336	336	336	335	334	331	327	322	314	313	314	314	**315**
55	338	337	337	337	336	336	336	335	333	329	323	315	314	314	315	**316**
56	338	338	337	337	337	336	336	334	333	330	324	317	315	315	316	**317**
57	338	338	338	338	337	337	336	334	333	330	325	318	316	316	316	**317**
58	339	339	338	338	338	337	335	334	332	330	327	319	316	317	317	**318**
59	339	339	339	338	338	336	335	334	332	330	327	320	317	317	318	**319**
60	340	339	339	339	337	336	335	334	332	330	327	322	318	318	318	**319**
61	340	340	339	339	337	336	335	333	332	330	326	322	319	319	319	**320**
62	341	340	340	338	337	336	335	333	332	329	326	322	320	319	320	**320**
63	342	341	340	339	338	336	335	334	332	330	327	323	320	320	320	**321**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-14. INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER IN 2000 (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**270**	280	289	302	309	313	315	315	315	314	318	328	338	343	337	336
65	**270**	281	291	302	310	314	315	315	315	315	320	331	342	346	340	338
66	**271**	282	293	303	311	315	315	315	315	315	321	333	345	350	344	340
67	**273**	283	295	305	312	315	315	315	315	315	322	335	346	352	347	342
68	**274**	285	297	307	313	315	315	315	315	316	324	336	347	354	351	345
69	**275**	286	300	309	313	315	315	314	315	318	326	337	348	355	354	349
70	**276**	287	301	310	314	315	315	313	315	319	328	339	350	356	357	352
71	**277**	289	302	311	315	315	315	312	315	321	330	342	351	358	360	355
72	**278**	289	303	311	315	315	315	311	314	322	333	344	353	359	360	356
73	**278**	290	305	312	315	315	315	310	314	324	336	346	354	360	360	358
74	**279**	291	306	313	315	315	314	310	316	326	339	347	355	360	360	360
75	**279**	292	308	313	315	315	314	310	317	329	341	348	356	360	360	360
76	**280**	293	309	314	315	315	313	310	318	332	342	349	357	360	360	360
77	**280**	294	310	314	315	315	313	310	320	334	344	350	357	360	360	360
78	**281**	295	311	315	315	315	312	310	322	337	346	351	358	360	360	361
79	**281**	296	311	315	315	315	311	312	326	339	346	352	358	360	360	361
80	**282**	297	312	315	315	315	310	314	328	341	347	353	358	360	360	362
81	**283**	298	312	315	315	315	310	316	331	342	348	353	358	360	361	362
82	**283**	300	313	315	315	315	310	318	333	343	349	354	358	360	361	362
83	**284**	301	314	315	315	315	310	320	336	345	350	354	358	361	362	363
84	**284**	301	314	315	315	315	310	322	337	346	351	355	358	361	362	363
85	**285**	301	314	315	315	315	310	325	339	347	351	355	358	361	362	364
86	**285**	301	314	315	315	315	313	328	340	349	351	355	358	361	363	364
87	**286**	302	314	315	315	315	315	330	342	350	351	355	358	361	363	364
88	**287**	302	314	315	315	315	317	331	344	350	351	355	358	360	363	365
89	**287**	302	315	315	316	316	319	332	345	350	351	355	357	360	363	366
90	288	302	315	316	316	317	320	333	344	349	350	354	357	360	363	369
91	288	303	315	316	317	318	321	334	343	347	349	353	356	360	364	372
92	289	304	315	316	318	318	322	334	342	346	348	351	356	360	365	375
93	290	306	315	317	318	319	324	334	341	345	348	350	356	360	367	375
94	290	308	315	317	318	319	325	334	341	344	347	349	355	360	369	375
95	291	309	316	317	318	319	325	334	340	344	347	349	356	361	370	375
96	292	310	317	317	318	320	326	334	340	343	346	349	356	362	371	375
97	293	310	317	319	318	320	326	334	340	343	346	349	356	363	371	375
98	294	311	317	321	320	**320**	325	334	340	343	346	349	356	364	370	375
99	295	311	317	322	323	**322**	323	334	340	343	346	349	356	365	370	375
100	296	312	317	322	326	325	**322**	330	340	343	346	349	356	365	369	373
101	296	312	317	322	327	327	**323**	325	339	343	347	350	357	366	369	373
102	298	312	317	322	326	330	**329**	324	336	343	347	350	357	366	369	373
103	299	312	317	322	326	331	331	**324**	333	343	347	351	358	366	369	373
104	301	312	317	321	326	331	334	**328**	329	344	348	352	358	366	369	373
105	302	312	317	321	326	331	336	**336**	326	345	349	352	359	366	369	372
106	303	312	316	321	326	331	336	**338**	**325**	346	349	353	360	366	370	372
107	304	312	316	321	326	331	336	341	**334**	346	350	353	360	366	370	372
108	305	312	316	321	326	331	336	341	**343**	347	351	355	361	366	370	372
109	305	311	316	321	326	331	336	341	345	348	352	356	361	366	370	372
110	305	311	316	321	326	331	336	341	346	349	353	358	362	365	369	372
111	306	311	316	321	326	331	336	341	346	350	355	359	364	365	369	372
112	306	311	316	321	326	331	336	341	346	352	356	361	365	365	369	372
113	306	311	316	321	326	331	336	341	346	352	358	362	367	367	368	372
114	306	311	316	321	326	331	336	341	346	353	359	364	368	370	369	372
115	306	311	316	321	326	331	336	341	346	354	361	365	370	372	371	372
116	306	311	316	321	326	331	336	341	347	354	362	367	371	374	373	372
117	306	311	316	321	326	331	336	341	347	355	363	368	373	376	375	375
118	306	311	316	321	326	331	336	341	348	356	363	370	374	378	377	377
119	306	311	316	321	326	331	336	341	348	356	364	371	376	380	379	379
120	306	311	316	321	326	331	336	342	349	357	365	372	377	382	382	381
121	305	311	316	321	326	331	336	343	350	358	366	373	380	385	386	385
122	305	311	316	321	326	330	337	344	352	360	367	375	383	388	391	390
123	305	311	316	321	325	331	339	347	354	362	370	377	385	393	398	397
124	305	311	315	320	326	334	342	349	357	365	372	380	388	395	403	406
125	305	310	315	322	330	337	345	353	360	368	376	383	391	399	403	408

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-14. INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER IN 2000 (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	341	345	343	343	343	344	344	344	344	344	344	344	344	344	343	343
65	343	346	343	344	344	344	344	345	345	345	345	345	345	344	344	344
66	344	345	344	344	344	345	345	345	345	346	346	345	345	345	345	344
67	346	345	344	345	345	345	345	345	346	347	347	346	346	346	346	345
68	348	344	345	345	345	345	345	346	347	348	348	347	347	347	347	346
69	348	345	345	345	345	345	346	347	348	349	348	348	348	348	348	348
70	348	345	345	345	345	346	347	348	349	349	349	349	349	349	349	349
71	349	345	345	345	346	347	348	348	350	352	351	351	351	350	350	350
72	351	348	345	345	347	347	349	352	354	354	354	354	354	354	354	353
73	354	350	347	346	349	351	354	356	357	357	357	357	357	357	357	357
74	356	352	350	352	354	356	358	359	360	360	360	360	360	360	360	359
75	357	354	354	357	359	359	360	361	361	361	361	361	361	361	361	361
76	359	356	357	358	359	360	361	362	361	362	362	362	362	362	362	362
77	360	358	358	359	360	361	362	363	362	362	362	363	363	363	363	363
78	361	359	359	360	361	362	363	364	364	363	363	363	364	364	364	365
79	361	361	361	361	362	363	364	364	365	365	364	364	365	365	365	366
80	361	363	362	363	363	364	364	365	366	366	365	365	365	366	367	367
81	362	365	364	365	365	365	366	366	367	368	367	367	367	368	368	368
82	362	366	366	366	367	367	367	368	368	369	368	369	369	369	370	369
83	364	367	367	368	368	369	369	369	370	370	370	370	370	370	370	370
84	365	368	369	370	370	370	371	371	371	371	371	370	370	370	370	370
85	367	370	371	371	372	372	372	372	372	372	371	370	370	370	370	370
86	368	371	373	373	373	373	373	373	372	372	372	370	370	370	370	370
87	370	372	374	374	374	374	374	373	373	373	372	371	370	370	370	370
88	371	373	375	375	375	374	374	374	374	373	373	371	370	370	370	370
89	372	374	375	375	375	375	375	374	374	374	374	371	370	370	370	370
90	374	375	375	375	375	375	375	375	375	375	374	371	370	370	370	369
91	375	375	375	375	375	375	375	375	375	375	375	372	370	370	369	369
92	375	375	375	375	375	375	375	375	375	375	375	373	370	370	369	369
93	375	375	375	375	375	375	375	375	375	375	375	374	371	370	369	368
94	375	375	375	375	375	375	375	375	375	375	375	374	372	370	369	368
95	375	375	375	375	375	375	375	375	375	375	375	374	372	370	369	369
96	375	375	375	375	375	375	375	375	375	375	375	374	373	371	370	369
97	375	375	375	375	375	375	375	375	375	375	374	373	372	371	370	369
98	375	375	375	375	375	375	375	375	375	375	374	373	372	371	370	369
99	375	375	375	375	375	375	375	375	375	374	373	372	372	371	370	369
100	375	375	375	375	375	375	375	375	375	374	373	373	372	371	370	369
101	375	375	375	375	375	375	375	375	375	374	373	373	372	371	370	369
102	375	375	375	375	375	375	375	375	375	375	374	373	372	371	370	370
103	375	375	375	375	375	375	375	375	375	375	374	373	372	371	370	370
104	375	375	375	375	375	375	375	375	375	374	374	373	372	371	370	370
105	375	375	375	375	375	375	375	375	375	374	373	372	372	371	370	370
106	375	375	375	375	375	375	375	375	375	374	373	372	371	370	370	370
107	375	375	375	375	375	375	375	375	375	374	373	372	371	370	370	370
108	374	375	375	375	375	375	375	375	374	373	373	372	371	371	371	370
109	374	375	375	375	375	375	375	375	374	373	372	372	371	371	371	371
110	374	375	375	375	375	375	375	375	374	373	372	372	372	371	371	371
111	374	375	375	375	375	375	375	375	374	373	372	372	372	372	372	372
112	374	375	375	375	375	375	375	374	373	373	373	372	372	372	372	372
113	374	375	375	375	375	375	375	374	373	373	373	373	373	373	372	372
114	374	375	375	375	375	375	375	374	373	373	373	373	373	373	373	373
115	374	375	375	375	375	375	374	374	374	374	374	373	373	373	373	373
116	374	375	375	375	375	375	374	374	374	374	374	374	374	374	374	373
117	375	375	375	375	375	375	375	375	375	374	374	374	374	374	374	374
118	376	377	376	377	375	375	375	375	375	375	375	375	374	374	374	374
119	378	379	379	379	378	376	376	376	376	375	375	375	375	375	375	374
120	381	381	381	381	381	378	377	377	376	376	376	376	376	375	375	375
121	384	384	385	385	385	383	380	378	378	378	377	377	377	376	376	375
122	389	389	389	390	390	390	388	384	381	379	379	379	378	378	377	377
123	396	396	396	396	397	397	397	**394**	391	388	385	383	382	380	379	379
124	405	404	**404**	404	404	403	402	401	400	398	395	392	391	389	387	385
125	409	408	**407**	**406**	**406**	**405**	**405**	**404**	**403**	**402**	**401**	**400**	**398**	**397**	**395**	**394**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE D.4-14. INITIAL WATER-LEVEL ELEVATION IN THE LUCKY Mc AQUIFER IN 2000 (FEET ABOVE MSL MINUS 6000) (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	342	342	341	340	338	337	336	335	333	331	328	324	321	321	321	**322**
65	343	343	342	340	339	338	337	336	334	332	329	325	322	322	322	**322**
66	344	344	342	341	340	339	338	337	335	333	330	326	323	322	322	**323**
67	345	344	343	342	341	340	339	337	336	334	331	327	324	323	323	**323**
68	346	345	344	343	342	340	339	338	337	335	332	328	325	324	324	**324**
69	347	346	345	344	342	341	340	339	337	335	332	328	326	325	324	**325**
70	348	347	346	344	343	342	341	340	338	336	333	329	327	326	325	**325**
71	349	348	346	345	344	343	342	341	339	337	334	330	328	326	326	**326**
72	352	350	349	348	346	345	344	342	341	338	335	331	328	327	327	**327**
73	355	354	352	351	350	348	347	345	344	341	338	332	329	328	327	**327**
74	357	356	355	353	352	350	349	348	346	343	339	332	330	329	328	**328**
75	360	358	357	355	354	353	351	350	348	345	339	332	331	329	329	**329**
76	362	360	359	358	356	355	353	351	348	344	339	333	331	330	329	**329**
77	364	362	361	360	358	355	353	351	348	344	339	333	332	331	330	**330**
78	365	364	362	360	357	355	353	351	348	344	338	334	333	332	331	**331**
79	366	366	363	359	357	355	353	350	348	344	338	335	333	332	332	**331**
80	367	367	366	361	357	355	352	350	347	343	338	335	334	333	332	**332**
81	368	368	368	364	360	356	352	350	347	343	338	336	335	334	333	333
82	369	369	369	368	363	359	354	350	347	343	338	337	335	335	334	334
83	370	370	370	370	366	362	358	353	348	343	339	337	336	335	335	334
84	370	370	370	369	366	363	359	355	350	343	339	338	337	336	336	335
85	370	370	369	369	366	363	359	355	350	344	340	339	338	337	336	336
86	370	370	369	369	366	363	359	355	350	344	341	339	338	338	337	337
87	370	369	369	368	366	363	359	355	350	344	342	340	339	338	338	337
88	369	369	368	368	366	363	359	355	350	345	342	341	340	339	339	338
89	369	369	368	367	366	363	359	355	351	346	343	342	341	340	339	339
90	369	368	368	367	366	363	359	355	351	346	344	343	342	341	340	340
91	368	368	367	367	366	363	359	355	352	347	345	344	343	342	341	341
92	368	368	367	367	366	363	359	356	353	348	346	345	344	343	342	341
93	368	367	367	366	366	363	360	357	353	349	347	346	346	344	342	342
94	368	367	367	366	365	363	360	357	354	349	348	347	347	345	343	343
95	368	367	367	366	365	364	361	359	355	351	349	348	348	346	344	344
96	368	368	367	366	365	364	363	361	357	353	350	349	349	347	345	344
97	368	368	367	366	366	365	363	361	359	355	353	351	350	348	345	345
98	369	368	367	366	366	365	364	362	360	356	354	352	351	349	346	346
99	369	368	367	367	366	365	364	363	361	358	355	353	352	350	347	347
100	369	368	367	367	366	365	365	363	362	359	356	354	353	351	348	347
101	369	368	367	367	366	366	365	364	362	360	357	355	354	352	349	348
102	369	369	368	368	367	367	366	365	363	361	358	357	355	353	349	349
103	370	369	369	368	368	367	366	365	364	362	359	358	356	354	350	350
104	370	370	369	369	368	368	367	366	364	362	360	359	357	355	351	350
105	370	370	370	370	369	368	367	366	365	363	361	360	358	355	352	351
106	370	370	370	370	370	369	368	367	365	364	362	361	359	356	353	352
107	370	370	370	370	370	370	369	368	366	364	363	361	360	357	354	353
108	370	370	370	370	370	370	369	368	367	365	363	362	360	358	355	353
109	371	370	370	370	370	370	370	369	367	366	364	363	361	359	356	354
110	371	371	371	370	370	370	370	369	368	366	365	363	361	359	357	355
111	371	371	371	371	371	370	370	370	369	367	365	364	362	360	358	356
112	372	372	371	371	371	371	370	370	369	368	366	364	363	361	358	356
113	372	372	372	372	371	371	371	370	370	368	367	365	363	361	359	357
114	372	372	372	372	372	371	371	371	370	369	367	365	364	362	360	358
115	373	373	372	372	372	371	371	371	370	370	368	366	364	362	360	359
116	373	373	373	372	372	372	371	371	371	370	368	367	365	363	361	359
117	373	373	373	373	372	372	372	371	371	370	369	367	365	363	361	360
118	374	373	373	373	372	372	372	372	371	370	369	368	366	364	362	360
119	374	374	373	373	373	372	372	372	371	371	370	368	366	364	363	361
120	374	374	374	373	373	373	372	372	372	371	370	368	367	365	363	361
121	375	374	374	374	374	373	373	373	372	372	371	369	367	366	363	362
122	376	375	375	375	374	374	374	373	373	372	371	370	368	366	364	363
123	378	378	377	377	376	375	375	375	374	373	373	371	369	366	365	364
124	383	381	380	379	379	378	378	377	376	375	374	373	370	367	366	366
125	**393**	**391**	**390**	**388**	**387**	**385**	**383**	**381**	**379**	**379**	**377**	**375**	**370**	**369**	**368**	**367**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

D.5 MODELING SCENARIOS

Two scenarios were evaluated with the modeling to reflect two potential ground-water remediation scenarios. The two scenarios reflect various degrees of continuation of the current ground-water remediation and dewatering programs. The current ground-water remediation system is functioning as successful water-quality restoration in the Lucky Mc aquifer.

Continuation of the program was extended to lower the piezometric surface in the No. 1 Tailings below the outlet base for Scenario #1. The second scenario was the simulation of the CAP for an additional two years.

D.5.1 SCENARIO #1

The modeling for scenario #1 was done with the assumption that the dewatering and ground-water remediation systems are shut down in September 2001. The modeled time period was 100 years. The stored water in the tailings at the start of simulation was 160 Mgal. The simulation indicates a volume of 125 Mgal at the end of September 2001. The seepage rate from the No. 2 Tailings was determined by comparing tailings head matrices from the MODFLOW output at the end of each stress period. The present seepage rate from the No. 2 Tailings is estimated at a very few gpm. As the stored volume in the tailings declined, the seepage rate from the No. 2 Tailings also declined to an average of less than 0.2 gpm for the first ten years of simulation. The cells in the connection area of the No. 1 Tailings all went dry during the simulation by September of 2001.

The predicted water-level elevations at the end of the CAP in Scenario #1, September 2001, are presented in Figure D.5-1. This figure presents the predicted water-level elevations for the Lucky Mc aquifer. A small, dashed line is used to show the new edge of the saturated limits of the Lucky Mc aquifer. This zero saturation shows that the connection east of the No. 1 Tailings is not saturated in September of 2001. Some additional unsaturated areas exist in the tailings and Wind River Channel due to the decline in water levels. Water-level gradients in the No. 1 Tailings are from the east to

the west in September 2001. Water levels in the main portion of the Wind River Channel are slightly above 6380 ft-msl due to the operation of the injection system to this point. Water levels have been increased some near the contact with the No. 2 Tailings due to the operation of the injection system.

Figure D.5-2 shows the predicted water-level elevation at the end of 2005 or an additional 4 years and 3 months since the cessation of operation of the CAP. These predicted water-level elevations show significant additional decline in water levels in the No. 1 and No. 2 Tailings with a continuation of the zero saturation zone in the connection area east of No. 1. Some reduction in the width of the saturated zone between the No. 2 Tailings and the Wind River Channel is also shown at this time. A significant amount of decay in water levels in the Wind River Channel to a maximum water-level elevation of 6368 ft-msl just east of the No. 1 Tailings has occurred in this time period of 4 years and 3 months. Water-level elevations in the Wind River Channel and the Fraser Draw alluvium are approaching steady-state conditions, while tailings water levels are continuing to significantly decline at the end of 2005.

The predicted water-level elevations at the end of 2010 are shown on Figure D.5-3. Water-level elevations in the middle of the No. 1 Tailings have declined an additional three feet during this five-year period and are significantly below the base of the sand in the No. 1 outlet. Water-level elevations are gradually defining the remainder of the tailings as the tailings water gradually seeps through the No. 2 Dam. Movement in the Fraser Draw alluvium is fairly similar to rates observed five years earlier.

The predicted water level at the end of 2020 is presented in Figure D.5-4. This water-level elevation is fairly similar to the one presented for 2010 showing that the Lucky Mc aquifer is approaching steady-state conditions except for the gradual continual decay of water levels in the tailings. The final piezometric surface presented for Scenario #1 is a 2100 predicted piezometric surface in Figure D.5-5.

D.5.2 SCENARIO #2

The modeling for Scenario #2 was done with the assumption that the current dewatering and ground-water remediation systems are operated until September 2003. The modeled time period was one hundred years. The stored water in the tailings at the end of September 2003 was 112 Mgal. The dewatering and collection rates are reduced slightly during the simulation to reflect some expected declines in well yields with the declining water levels. The seepage rates from the No. 2 Tailings following cessation of dewatering were very similar to those predicted for Scenario #1 after ceasing dewatering in the first scenario.

The predicted water-level elevation at the end of operation of the CAP for Scenario #2 is presented in Figure D.5-6. This figure presents the predicted water-level elevation for September 2003. Water-level elevations in the Wind River Channel are several feet higher than those predicted at the end of Scenario #1 due to the additional two years of operation of the CAP. Water levels are also a few feet lower in the tailings. Water levels are generally four to five feet lower in the No. 1 Tailings. Figure D.5-7 presents the predicted water-level elevations at the end of 2004 for Scenario #2. This shows that after slightly greater than one year after the end of the CAP water levels are still mounded in the Wind River Channel area.

Figure D.5-8 presents the predicted water-level elevations at the end of 2010 for Scenario #2. This figure shows continual decline in water levels in the tailings with water levels gradually declining in the Wind River Channel area. The predicted piezometric surface at the end of 2020 (see Figure D.5-9) shows continual gradual decline in the water-level elevations in the Wind River Channel area. The levels are still showing some effect from the injection of water during operation of the CAP.

The predicted water-level elevations for 2100 are presented in Figure D.5-10 and show steady-state conditions for the Wind River Channel and Fraser Draw.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE D.5-1: PREDICTED WATER-LEVEL ELEVATION FOR SCENARIO #1, 9/2001, FT-MSL

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE D.5-1

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

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THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE D.5-10: PREDICTED WATER-LEVEL ELEVATION FOR SCENARIO #2, 2100, FT-MSL

WITHIN THIS PACKAGE...OR, BY SEARCHING USING THE DRAWING NUMBER: FIGURE D.5-10

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

D.6 SUMMARY AND CONCLUSIONS

Two scenarios present two potential dewatering and Lucky Mc aquifer remediation options. Scenario #1 and #2 both drop the water levels in the No. 1 Tailings below the base of the outlet to the Wind River Channel. Scenario #2 dewatering and remediation efforts add very little benefit in terms of reduction in the rate of tailings seepage from the No. 2 Tailings to the Wind River Channel. No reduction in the tailings seepage was predicted for the two years of additional operation.

D.7 REFERENCES

McDonald, M.G. and A.W. Harbaugh, 1988. A Modular Three-Dimensional Finite-Difference Ground-Water Flow Model (MODFLOW), Book 6, Modeling Techniques, United States Geological Survey.

APPENDIX E

MT3D TRANSPORT MODELING

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FIGURES

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FIGURES
(continued)

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TABLES

E.1 INTRODUCTION

The MT3D model (S.S. Papodopulous & Assoc., 1992) was used to model transport of constituents in ground-water flow in the Lucky Mc aquifer at the Gas Hills site. The MT3D used the cell by cell flow terms produced by the MODFLOW model. The same features incorporated in the MODFLOW are incorporated in the transport modeling. Cell references are relative to the modeling grid described in Appendix D. An updated version of the MT3D model that incorporates an implicit solution was used for the modeling described in this appendix.

The MT3D modeling was based on the scenarios used in the ground-water flow modeling described in Appendix D. The modeling start time was January 2000, with a year and nine months of continued dewatering system and collection/injection system operation.

The unit of time used in the modeling was days, and the unit of length was feet. Units of hydraulic conductivity and recharge were ft/day. Units of concentration were the same as those used in the body of this report (mg/l for uranium, selenium, nickel, cadmium and beryllium and pCi/l for Ra-226 + Ra-228) in the MT3D modeling.

E.2 TRANSPORT MODELING

The tailings was the source of elevated concentrations of these constituents. Flow from the tailings carries these constituents to the Wind River aquifer, where they mix with resident water. There are natural measurable concentrations of the modeled constituents and these were incorporated in the modeling.

E.2.1 DISPERSION AND ATTENUATING PROCESSES

With the extremely heterogenous hydraulic conductivity in the Lucky Mc aquifer, and the resulting non-uniform flow field, the dispersivity of the Lucky Mc aquifer does have some impact on the transport process. The longitudinal dispersivity used in the modeling was 65 feet for the Lucky Mc aquifer. The ratio of transverse dispersivity to longitudinal dispersivity was set at 0.1 for the Lucky Mc aquifer. Figures E.2-1 and E.2-2 show the fits of the observed chloride data for wells P-3 and T1-12, respectively, to dispersivities of 13, 65 and 325 feet. Chloride concentrations were used to obtain the dispersivity because no retardation of this conservative constituent should occur at this site. A dispersivity of 65 feet was selected as the best dispersivity for the Lucky Mc aquifer. The initial concentration for constituents in the Lucky Mc aquifer was assigned to the model based on the 2000 concentration. The diffusion coefficient was set at zero because diffusion is trivial in comparison to convection driven processes.

Retardation was considered in the transport modeling to account for the adsorption process. Adsorption/desorption processes in the absence of decay processes act to slow down constituent migration and to spread a "pulse" of the constituent. The spreading does reduce peak concentrations at downgradient location, with the reduction proportional to the effective length of the pulse and the distance downgradient. Decay processes or other permanent removal processes were not considered in the modeling. With the use of a distribution coefficient, the constituent velocity was reduced relative to the convective velocity. The selection of distribution coefficients for each constituent is presented in each constituent's subsection. The distribution coefficient and a bulk density of 120 lb/ft^3 were used, along with the specific yields from MODFLOW, to calculate the retardation factor used in the MT3D simulations.

E.2.2 AQUIFER PROPERTIES

The effective porosity for the Lucky Mc aquifer was set to the specific yield values used in MODFLOW. The Lucky Mc aquifer thickness from MODFLOW was also used in the MT3D simulations.

E.2.3 INITIAL CONCENTRATIONS AND MONITORING POINTS

The initial concentrations in the Lucky Mc aquifer were set at the measured 2000 concentrations in the Lucky Mc aquifer. Geochemical processes described in Section 2.1.1 limit the mobile concentration of some constituents. Tables in each of the constituent transport sections of this appendix present the initial concentration for simulation of each constituent. Recharge and injection concentrations to the Lucky Mc aquifer used in the modeling are presented in Table E.2-1. The concentrations for the constant head influx cells are presented in the initial concentration tables presented in each constituent's subsection. The constant head cell concentrations are highlighted in the initial concentration tables to show which cells are constant head cells.

TABLE E.2-1. RECHARGE AND INJECTION CONCENTRATIONS USED IN THE SIMULATIONS.

	U	Cl	Ni	Ra-226 + Ra-228	Cd	Se	Be
Recharge	0.1	90	0.02	3	0.002	0.01	0.002
Injection	0.006	25	0.02	1	0.002	0.01	0.002

Note: Units are in mg/l, except Ra-226 + Ra-228 which is in pCi/l

A series of monitoring points were included in the modeling to allow analysis of constituent migration and the eventual concentrations in the Lucky Mc aquifer. A selected monitoring point was Wind River well P-20, which exists in the Wind River Channel east of the No. 1 Tailings. This well was selected because it defines an area of existing concentrations in the Lucky Mc aquifer and defines how the concentrations in the Lucky Mc aquifer in this area decline with time. Well P-9 was the second well selected because it defines the concentrations that are exiting from the No. 2 Tailings and flowing through the weathered Cody Shale in this area to the Wind River Channel. The third well selected is well P-3, which is located at the confluence of the Wind River

Channel and the outlet from the No. 2 Tailings. The fourth well selected is POC well T1-12. This well was selected to present the POC concentrations versus time. Well T1-22, which is further north of well T1-12, was selected to define the changes in concentration as the Wind River Channel water flows through the weathered Cody material in this area to the Fraser Draw alluvium. Two Fraser Draw alluvial wells are the last wells selected to present the modeling concentration results. These two wells exist on the western side of the Fraser Draw alluvium and are Fraser Draw alluvial wells AL-1 and proposed POE location AL-6.

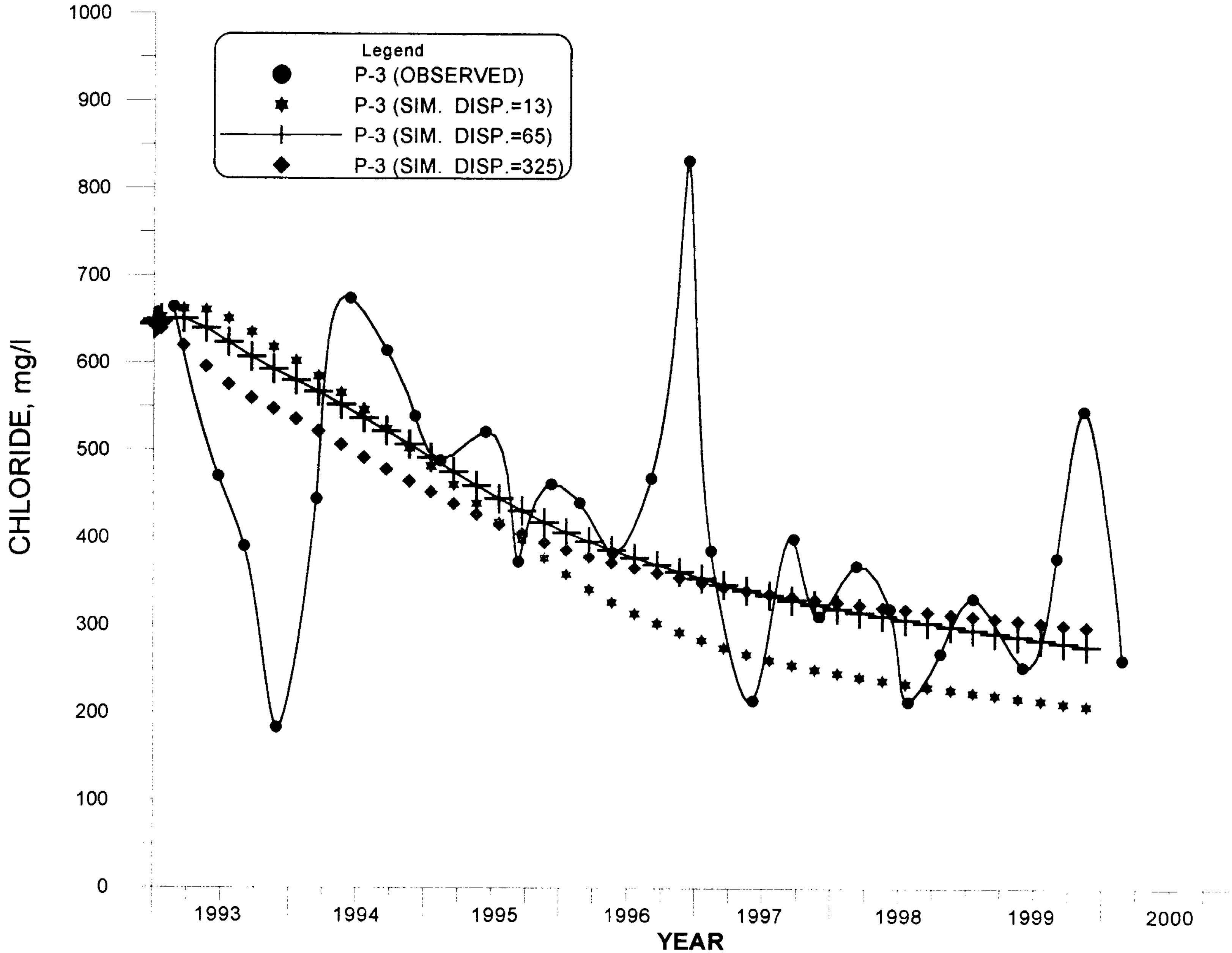

FIGURE E.2-1. CHLORIDE MODEL FIT FOR DISPERSIVITY (FT.) FOR WELL P-3.

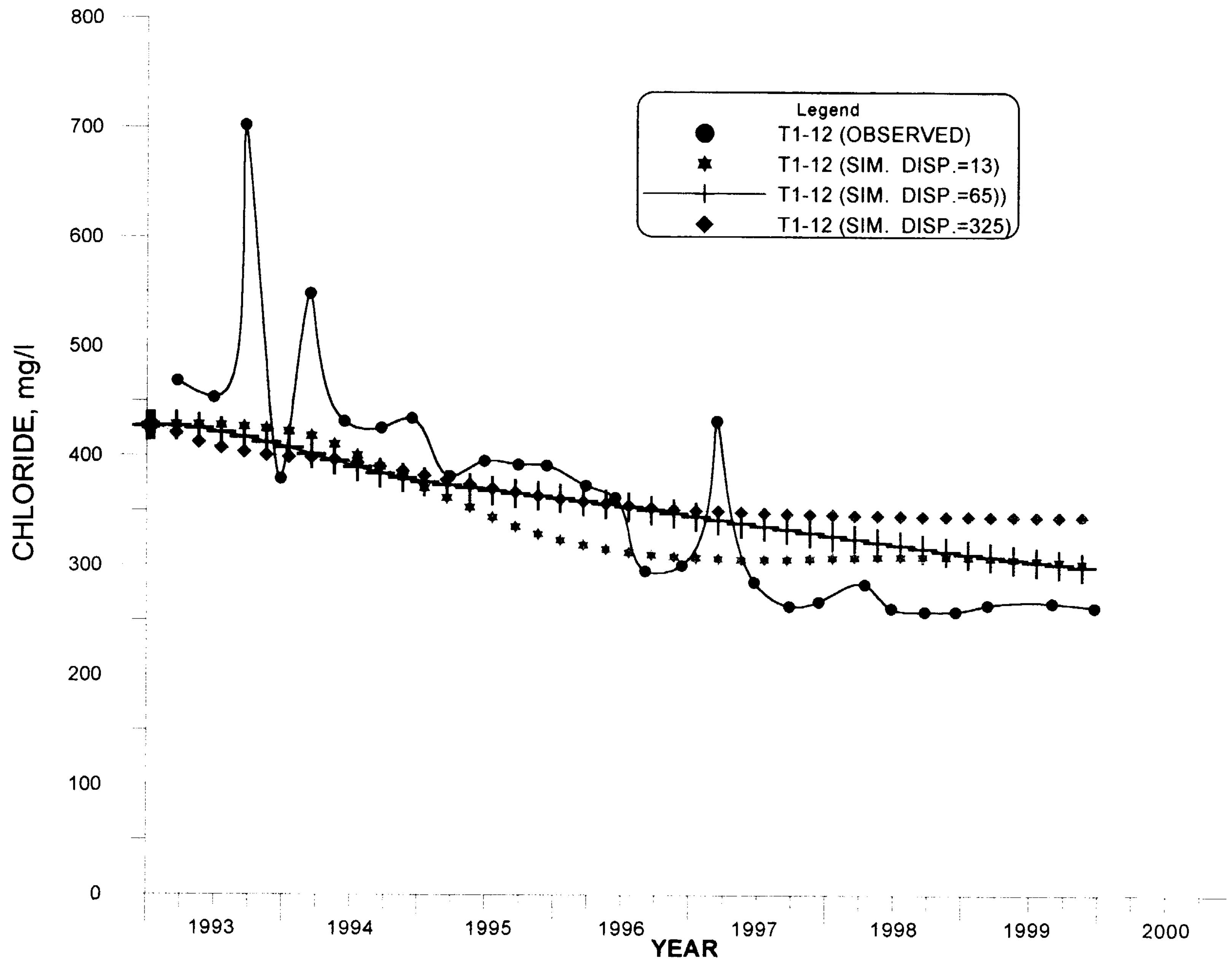

FIGURE E.2-2. CHLORIDE MODEL FIT FOR DISPERSIVITY (FT.) FOR WELL T1-12.

E.3 URANIUM TRANSPORT

The retardation of uranium concentrations was calibrated by varying the distribution coefficient in MT3D to determine what retardation factor needs to be applied. Uranium concentrations have been significantly attenuated at the Lucky Mc Site. The distribution coefficient, which varies the retardation factor, was varied to determine the best fit of observed uranium concentrations for well P-3. Figure E.3-1 presents the observed uranium concentrations in well P-3 from 1993 through early 2000 and three predicted curves based on distribution coefficients of 0.0033, 0.0167 and 0.0835 ft^3/lb. The distribution coefficient of 0.0167 best fits the observed data. This distribution coefficient is equivalent to a retardation factor of 11 where the specific yield is 0.2. The variations with these same three distribution coefficients are presented for well T1-12 in Figure E.3-2. A distribution coefficient of 0.0167 ft^3/lb best fits the observed uranium variations at well T1-12 also. The initial uranium concentrations from the 2000 contours used in the simulations are tabulated in Table E.3-1.

The predicted uranium concentrations versus time for Scenario #1, with the extension of the CAP through September of 2001 and Scenario #2, with the extension of the CAP through September of 2003 are both presented for several wells with time in Figure 2.2-1. These two predictions show that maximum concentrations for the two different scenarios are expected to be very similar for each of these wells. The timing of the peak concentration is slightly different for the two different scenarios. A peak concentration of 1.7 mg/l is predicted for POC well T1-12. This peak concentration should gradually decline to a maximum value of 1.2 mg/l at well T1-22. The maximum predicted concentration after ceasing the CAP at POE well AL-6 is 0.98 mg/l.

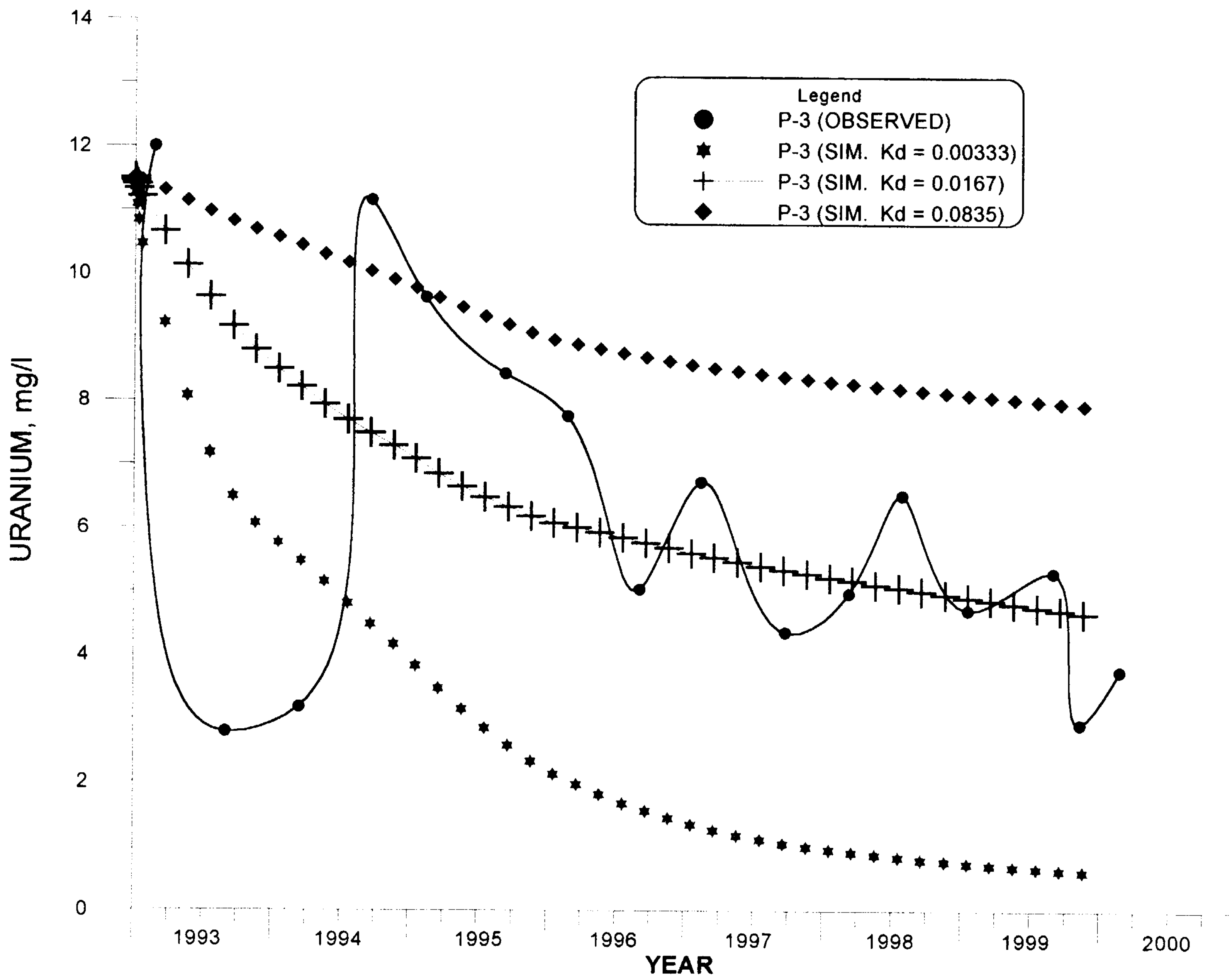

FIGURE E.3-1. URANIUM MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL P-3.

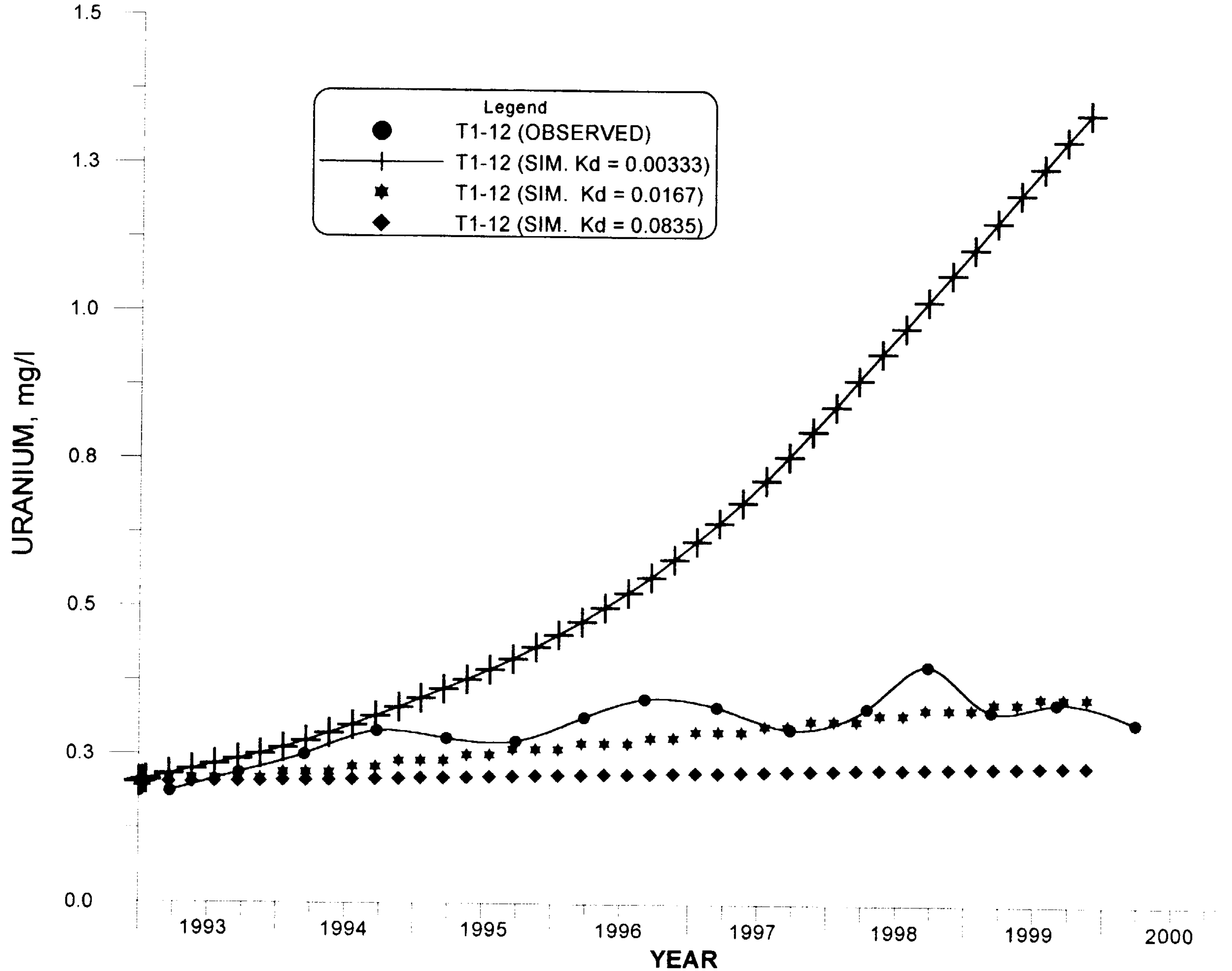

FIGURE E.3-2. URANIUM MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL T1-12.

TABLE E.3-1. INITIAL URANIUM CONCENTRATIONS, 2000, IN mg/l.

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.0200	0.0200	0.0206	0.0249	0.0292	0.0334	0.0371	0.0421	0.0529	0.0747	**0.0979**	**0.0929**	**0.0879**	**0.0830**	**0.0780**	**0.0730**
2	0.0213	0.0261	0.0304	0.0346	0.0389	0.0431	0.0474	0.0536	0.0627	0.0799	0.0986	0.0936	0.0887	0.0838	0.0789	0.0740
3	0.0251	0.0331	0.0401	0.0443	0.0486	0.0529	0.0571	0.0614	0.0676	0.0807	0.0997	0.0948	0.0899	0.0850	0.0801	0.0752
4	0.0252	0.0324	0.0393	0.0467	0.0540	0.0614	0.0668	0.0711	0.0753	0.0815	0.0968	0.0959	0.0914	0.0869	0.0824	0.0780
5	0.0252	0.0325	0.0390	0.0455	0.0529	0.0602	0.0675	0.0749	0.0823	0.0893	0.0944	0.0987	0.0942	0.0897	0.0853	0.0808
6	0.0253	0.0326	0.0391	0.0456	0.0520	0.0592	0.0665	0.0738	0.0811	0.0885	0.0959	0.1000	0.0971	0.0926	0.0881	0.0836
7	0.0253	0.0326	0.0391	0.0456	0.0521	0.0586	0.0651	0.0727	0.0800	0.0873	0.0947	0.1000	0.0999	0.0954	0.0910	0.0865
8	0.0254	0.0327	0.0392	0.0457	0.0521	0.0586	0.0651	0.0716	0.0790	0.0863	0.0936	0.1000	0.1000	0.0983	0.0938	0.0893
9	0.0255	0.0327	0.0392	0.0457	0.0522	0.0587	0.0652	0.0717	0.0782	0.0846	0.0926	0.0999	0.1000	0.1000	0.0966	0.0915
10	0.0255	0.0328	0.0393	0.0458	0.0523	0.0588	0.0652	0.0717	0.0782	0.0847	0.0912	0.0989	0.1000	0.1000	0.0984	0.0924
11	0.0256	0.0329	0.0394	0.0459	0.0523	0.0588	0.0653	0.0718	0.0783	0.0848	0.0913	0.0977	0.1000	0.1000	0.0992	0.0922
12	0.0256	0.0329	0.0394	0.0459	0.0524	0.0589	0.0654	0.0719	0.0783	0.0848	0.0913	0.0971	0.0992	0.1000	0.0996	0.0924
13	0.0257	0.0330	0.0395	0.0460	0.0525	0.0589	0.0654	0.0719	0.0784	0.0849	0.0914	0.0956	0.0976	0.0997	0.1000	0.0938
14	0.0258	0.0331	0.0395	0.0460	0.0525	0.0590	0.0655	0.0720	0.0785	0.0850	0.0914	0.0941	0.0961	0.0982	0.1000	0.0957
15	0.0258	0.0331	0.0396	0.0461	0.0526	0.0591	0.0655	0.0720	0.0785	0.0850	0.0905	0.0925	0.0946	0.0967	0.0988	0.0984
16	0.0259	0.0332	0.0397	0.0461	0.0526	0.0591	0.0656	0.0721	0.0786	0.0851	0.0890	0.0910	0.0931	0.0952	0.0973	0.0994
17	0.0259	0.0332	0.0397	0.0462	0.0527	0.0592	0.0657	0.0722	0.0786	0.0851	0.0874	0.0895	0.0916	0.0937	0.0958	0.0981
18	0.0260	0.0333	0.0398	0.0463	0.0528	0.0592	0.0657	0.0722	0.0787	0.0839	0.0859	0.0880	0.0901	0.0922	0.0943	0.0969
19	0.0261	0.0334	0.0398	0.0463	0.0528	0.0593	0.0658	0.0723	0.0788	0.0823	0.0844	0.0865	0.0886	0.0907	0.0931	0.1000
20	0.0261	0.0334	0.0399	0.0464	0.0529	0.0594	0.0659	0.0723	0.0788	0.0808	0.0829	0.0850	0.0871	0.0893	0.0933	0.1000
21	0.0262	0.0335	0.0400	0.0465	0.0529	0.0594	0.0659	0.0724	0.0773	0.0793	0.0814	0.0835	0.0856	0.0880	0.0990	0.1000
22	0.0262	0.0335	0.0400	0.0465	0.0530	0.0595	0.0660	0.0725	0.0757	0.0778	0.0799	0.0820	0.0842	0.0911	0.1000	0.1000
23	0.0263	0.0336	0.0401	0.0466	0.0531	0.0595	0.0660	0.0722	0.0742	0.0763	0.0784	0.0805	0.0832	0.0968	0.1000	0.1000
24	0.0264	0.0337	0.0401	0.0466	0.0531	0.0596	0.0661	0.0706	0.0727	0.0748	0.0769	0.0792	0.0889	0.1000	0.1000	0.1000
25	0.0264	0.0337	0.0402	0.0467	0.0532	0.0597	0.0661	0.0691	0.0712	0.0733	0.0754	0.0810	0.0946	0.1000	0.1000	0.1000
26	0.0265	0.0338	0.0403	0.0468	0.0532	0.0597	0.0656	0.0676	0.0697	0.0718	0.0742	0.0867	0.1000	0.1000	0.1000	0.1000
27	0.0265	0.0338	0.0403	0.0468	0.0533	0.0598	0.0641	0.0661	0.0682	0.0704	0.0788	0.0924	0.1000	0.1000	0.1000	0.1000
28	0.0266	0.0339	0.0404	0.0469	0.0534	0.0599	0.0625	0.0646	0.0667	0.0709	0.0845	0.0981	0.1000	0.1000	0.1000	0.1000
29	0.0268	0.0340	0.0405	0.0469	0.0534	0.0590	0.0610	0.0631	0.0654	0.0766	0.0902	0.1000	0.1000	0.1000	0.1000	0.1000
30	0.0270	0.0340	0.0405	0.0470	0.0535	0.0574	0.0595	0.0616	0.0687	0.0823	0.0959	0.1000	0.1000	0.1000	0.1000	0.1000
31	0.0272	0.0341	0.0406	0.0471	0.0535	0.0559	0.0580	0.0608	0.0744	0.0880	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
32	0.0275	0.0341	0.0406	0.0471	0.0524	0.0544	0.0566	0.0665	0.0801	0.0937	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
33	0.0277	0.0342	0.0407	0.0472	0.0508	0.0529	0.0585	0.0721	0.0858	0.0994	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
34	0.0279	0.0343	0.0408	0.0472	0.0493	0.0516	0.0642	0.0779	0.0915	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
35	0.0281	0.0343	0.0408	0.0457	0.0478	0.0563	0.0699	0.0836	0.0972	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
36	0.0283	0.0344	0.0409	0.0443	0.0481	0.0617	0.0753	0.0889	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
37	0.0285	0.0344	0.0409	0.0431	0.0527	0.0663	0.0799	0.0935	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
38	0.0286	0.0345	0.0401	0.0426	0.0563	0.0699	0.0835	0.0971	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
39	0.0287	0.0345	0.0394	0.0451	0.0587	0.0724	0.0860	0.0996	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
40	0.0288	0.0345	0.0389	0.0469	0.0605	0.0742	0.0878	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
41	0.0288	0.0345	0.0386	0.0483	0.0620	0.0756	0.0892	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
42	0.0289	0.0345	0.0382	0.0498	0.0634	0.0770	0.0906	**0.1000**	**0.1000**	**0.1000**	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
43	0.0289	0.0346	0.0379	0.0512	0.0648	0.0784	**0.0920**	0.1000	0.1000	0.1000	**0.1000**	**0.1000**	0.1000	0.1000	0.1000	0.1000
44	0.0290	0.0346	0.0390	0.0526	0.0662	**0.0799**	0.0935	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
45	0.0290	0.0346	0.0404	0.0540	0.0677	0.0813	0.0949	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
46	0.0291	0.0346	0.0419	0.0555	**0.0691**	0.0827	0.0963	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
47	0.0292	0.0342	0.0433	0.0569	0.0705	0.0841	0.0977	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0962
48	0.0292	0.0338	0.0447	**0.0583**	0.0719	0.0855	0.0992	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0924
49	0.0293	0.0335	0.0461	0.0598	0.0734	0.0870	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0992	0.0885
50	0.0293	0.0339	0.0476	0.0612	0.0748	0.0884	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0953	0.0847
51	0.0294	0.0354	**0.0490**	0.0626	0.0762	0.0907	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0915	0.0808
52	0.0294	0.0368	0.0504	0.0640	0.0816	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0983	0.0877	0.0770
53	0.0295	0.0382	0.0518	0.0710	0.0890	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0945	0.0838	0.0732
54	0.0295	**0.0418**	0.0595	0.0773	0.0950	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0906	0.0800	0.0693
55	0.0296	0.0470	0.0649	0.0827	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0988	0.0868	0.0762	0.0655
56	0.0296	0.0508	0.0698	0.0878	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0880	0.0759	0.0638
57	0.0297	0.0532	0.0743	0.0926	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0893	0.0772	0.0651
58	0.0297	0.0557	0.0784	0.0972	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0905	0.0784	0.0663
59	**0.0298**	0.0580	0.0818	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0918	0.0797	0.0676
60	**0.0298**	0.0601	0.0854	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0930	0.0809	0.0688
61	**0.0299**	0.0628	0.0888	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0943	0.0822	0.0701
62	**0.0299**	0.0654	0.0927	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0955	0.0834	0.0769
63	**0.0300**	0.0682	0.0971	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0968	0.0847	0.0865

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.3-1. INITIAL URANIUM CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**0.0684**	0.0644	0.0613	0.0591	0.0576	0.0564	0.0552	0.0539	0.0527	0.0515	0.0502	0.0490	0.0478	0.0466	0.0453	0.0441
2	0.0695	0.0655	0.0624	0.0603	0.0587	0.0575	0.0563	0.0551	0.0538	0.0527	0.0516	0.0505	0.0493	0.0482	0.0471	0.0460
3	0.0709	0.0673	0.0645	0.0625	0.0611	0.0600	0.0589	0.0578	0.0567	0.0555	0.0544	0.0533	0.0522	0.0511	0.0500	0.0488
4	0.0738	0.0701	0.0673	0.0654	0.0640	0.0629	0.0617	0.0606	0.0595	0.0584	0.0573	0.0562	0.0550	0.0539	0.0528	0.0517
5	0.0766	0.0730	0.0702	0.0682	0.0668	0.0657	0.0646	0.0635	0.0623	0.0612	0.0601	0.0590	0.0578	0.0565	0.0552	0.0538
6	0.0794	0.0758	0.0730	0.0711	0.0697	0.0685	0.0674	0.0661	0.0647	0.0634	0.0621	0.0608	0.0594	0.0581	0.0568	0.0554
7	0.0823	0.0787	0.0756	0.0733	0.0717	0.0703	0.0690	0.0677	0.0664	0.0650	0.0637	0.0624	0.0610	0.0597	0.0584	0.0571
8	0.0849	0.0806	0.0772	0.0749	0.0733	0.0719	0.0706	0.0693	0.0680	0.0666	0.0653	0.0640	0.0627	0.0613	0.0600	0.0587
9	0.0865	0.0822	0.0789	0.0766	0.0750	0.0736	0.0723	0.0708	0.0693	0.0678	0.0663	0.0648	0.0633	0.0619	0.0604	0.0589
10	0.0868	0.0820	0.0782	0.0756	0.0738	0.0723	0.0708	0.0693	0.0678	0.0663	0.0648	0.0633	0.0618	0.0603	0.0589	0.0574
11	0.0857	0.0807	0.0770	0.0744	0.0726	0.0712	0.0697	0.0682	0.0668	0.0653	0.0637	0.0622	0.0606	0.0590	0.0575	0.0559
12	0.0856	0.0797	0.0753	0.0723	0.0702	0.0686	0.0669	0.0652	0.0636	0.0619	0.0603	0.0587	0.0572	0.0557	0.0542	0.0528
13	0.0867	0.0806	0.0759	0.0726	0.0702	0.0683	0.0665	0.0647	0.0629	0.0610	0.0592	0.0574	0.0556	0.0538	0.0521	0.0504
14	0.0887	0.0825	0.0778	0.0745	0.0721	0.0703	0.0684	0.0665	0.0646	0.0627	0.0608	0.0589	0.0571	0.0552	0.0533	0.0514
15	0.0912	0.0849	0.0801	0.0767	0.0742	0.0723	0.0703	0.0684	0.0664	0.0645	0.0626	0.0606	0.0587	0.0568	0.0548	0.0528
16	0.0944	0.0876	0.0823	0.0786	0.0760	0.0739	0.0718	0.0697	0.0676	0.0655	0.0634	0.0612	0.0591	0.0570	0.0548	0.0527
17	0.0982	0.0908	0.0850	0.0810	0.0781	0.0758	0.0735	0.0712	0.0689	0.0665	0.0642	0.0619	0.0596	0.0573	0.0549	0.0526
18	0.1000	0.0948	0.0887	0.0843	0.0812	0.0787	0.0763	0.0737	0.0711	0.0686	0.0660	0.0634	0.0609	0.0583	0.0557	0.0531
19	0.1000	0.0979	0.0909	0.0860	0.0825	0.0798	0.0770	0.0743	0.0715	0.0687	0.0659	0.0632	0.0604	0.0576	0.0548	0.0521
20	0.1000	0.1000	0.0937	0.0881	0.0841	0.0809	0.0779	0.0747	0.0715	0.0685	0.0654	0.0623	0.0592	0.0562	0.0532	0.0501
21	0.1000	0.1000	0.0975	0.0912	0.0867	0.0832	0.0797	0.0761	0.0726	0.0691	0.0656	0.0622	0.0587	0.0553	0.0518	0.0485
22	0.1000	0.1000	0.1000	0.0956	0.0907	0.0868	0.0828	0.0789	0.0750	0.0711	0.0671	0.0632	0.0594	0.0555	0.0517	0.0478
23	0.1000	0.1000	0.1000	0.1000	0.0951	0.0907	0.0862	0.0817	0.0772	0.0727	0.0683	0.0639	0.0595	0.0550	0.0506	0.0461
24	0.1000	0.1000	0.1000	0.1000	0.0993	0.0941	0.0890	0.0838	0.0786	0.0734	0.0683	0.0631	0.0579	0.0527	0.0477	0.0427
25	0.1000	0.1000	0.1000	0.1000	0.1000	0.0974	0.0920	0.0865	0.0811	0.0756	0.0702	0.0647	0.0592	0.0538	0.0483	0.0428
26	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0953	0.0894	0.0834	0.0775	0.0716	0.0657	0.0598	0.0539	0.0480	0.0421
27	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0978	0.0914	0.0851	0.0788	0.0725	0.0662	0.0598	0.0535	0.0472	0.0409
28	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0934	0.0866	0.0798	0.0731	0.0663	0.0595	0.0528	0.0460	0.0392
29	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0956	0.0889	0.0822	0.0756	0.0688	0.0622	0.0555	0.0488	0.0421
30	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0930	0.0861	0.0791	0.0721	0.0650	0.0580	0.0509	0.0439
31	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0977	0.0903	0.0828	0.0754	0.0678	0.0603	0.0528	0.0452
32	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0996	0.0922	0.0848	0.0775	0.0702	0.0628	0.0556	0.0483
33	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0997	0.0928	0.0858	0.0788	0.0719	0.0651	0.0582	0.0513
34	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0955	0.0887	0.0819	0.0751	0.0683	0.0615	0.0547
35	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0983	0.0915	0.0848	0.0780	0.0711	0.0643	0.0575
36	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0936	0.0861	0.0786	0.0711	0.0636	0.0561
37	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0994	0.0926	0.0869	0.0812	0.0773	0.0698	0.0623	0.0548
38	0.1000	0.1000	0.1000	0.1000	0.1000	0.0986	0.0959	0.0933	0.0901	0.0836	0.0783	0.0723	0.0680	0.0633	0.0608	0.0539
39	0.1000	0.1000	0.1000	0.0979	0.0945	0.0919	0.0892	0.0866	0.0834	0.0771	0.0703	0.0649	0.0601	0.0557	0.0525	0.0492
40	0.1000	0.1000	0.0977	0.0931	0.0897	0.0871	0.0844	0.0819	0.0786	0.0725	0.0658	0.0592	0.0541	0.0495	0.0455	0.0430
41	0.1000	0.1000	0.0939	0.0892	0.0859	0.0832	0.0806	0.0780	0.0747	0.0688	0.0620	0.0552	0.0494	0.0445	0.0399	0.0370
42	0.1000	0.0967	0.0901	0.0854	0.0821	0.0794	0.0767	0.0742	0.0708	0.0651	0.0582	0.0516	0.0449	0.0396	0.0348	0.0303
43	0.1000	0.0929	0.0862	0.0816	0.0782	0.0756	0.0730	0.0703	0.0670	0.0614	0.0546	0.0479	0.0411	0.0351	0.0300	0.0335
44	0.0977	0.0891	0.0824	0.0777	0.0744	0.0717	0.0692	0.0664	0.0631	0.0577	0.0509	0.0441	0.0375	0.0306	0.0356	0.0401
45	0.0939	0.0852	0.0786	0.0739	0.0706	0.0679	0.0655	0.0626	0.0592	0.0539	0.0473	0.0403	0.0338	0.0336	0.0408	0.0467
46	0.0900	0.0814	0.0747	0.0701	0.0668	0.0641	0.0618	0.0587	0.0554	0.0501	0.0436	0.0367	0.0300	0.0380	0.0456	0.0527
47	0.0862	0.0776	0.0709	0.0662	0.0629	0.0603	0.0579	0.0548	0.0515	0.0462	0.0399	0.0330	0.0349	0.0430	0.0506	0.0576
48	0.0824	0.0737	0.0671	0.0624	0.0591	0.0565	0.0540	0.0510	0.0477	0.0423	0.0362	0.0308	0.0398	0.0482	0.0560	0.0631
49	0.0785	0.0699	0.0632	0.0586	0.0553	0.0528	0.0502	0.0471	0.0438	0.0385	0.0325	0.0356	0.0447	0.0535	0.0617	0.0689
50	0.0747	0.0660	0.0594	0.0547	0.0514	0.0491	0.0463	0.0432	0.0399	0.0346	0.0316	0.0407	0.0497	0.0586	0.0674	0.0752
51	0.0709	0.0622	0.0556	0.0509	0.0476	0.0453	0.0424	0.0394	0.0361	0.0307	0.0365	0.0455	0.0546	0.0638	0.0729	0.0814
52	0.0670	0.0584	0.0517	0.0471	0.0438	0.0416	0.0386	0.0355	0.0322	0.0332	0.0409	0.0501	0.0591	0.0682	0.0777	0.0870
53	0.0632	0.0545	0.0479	0.0432	0.0401	0.0377	0.0347	0.0316	0.0345	0.0404	0.0475	0.0546	0.0623	0.0714	0.0810	0.0906
54	0.0594	0.0507	0.0441	0.0394	0.0364	0.0339	0.0308	0.0344	0.0464	0.0484	0.0549	0.0620	0.0691	0.0762	0.0832	0.0919
55	0.0555	0.0469	0.0402	0.0356	0.0326	0.0300	0.0341	0.0501	0.0587	0.0576	0.0623	0.0694	0.0765	0.0835	0.0906	0.0977
56	0.0525	0.0431	0.0364	0.0317	0.0364	0.0485	0.0590	0.0672	0.0719	0.0686	0.0697	0.0767	0.0838	0.0909	0.0980	0.1000
57	0.0537	0.0439	0.0363	0.0364	0.0577	0.0719	0.0858	0.0883	0.0863	0.0807	0.0785	0.0841	0.0912	0.0983	0.1000	0.1000
58	0.0550	0.0451	0.0443	0.0498	0.0755	0.0927	0.1000	0.1000	0.1000	0.0930	0.0889	0.0915	0.0986	0.1000	0.1000	0.1000
59	0.0562	0.0524	0.0540	0.0633	0.0890	0.1176	0.1387	0.1597	0.1808	0.1827	0.1016	0.0989	0.1000	0.1000	0.1000	0.1000
60	0.0600	0.0621	0.0637	0.0768	0.1054	0.1506	0.2002	0.2525	0.3003	0.3214	0.4065	0.4181	0.2562	0.1058	0.1000	0.1000
61	0.0696	0.0717	0.0733	0.0903	0.1351	0.1804	0.2256	0.2708	0.3160	0.3612	0.4792	0.5000	0.3894	0.2264	0.1000	0.1000
62	0.0793	0.0814	0.0830	0.1076	0.1591	0.2003	0.2415	0.2826	0.3180	0.3535	0.3869	0.4372	0.3932	0.2361	0.1000	0.1000
63	0.0890	0.0910	0.0926	0.1320	0.1794	0.2172	0.2548	0.2924	0.3124	0.3077	0.3029	0.2982	0.2934	0.2742	0.1478	0.1000

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.3-1. INITIAL URANIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	0.0429	0.0417	0.0405	0.0392	0.0380	0.0368	0.0356	0.0343	0.0328	0.0308	0.0280	0.0244	0.0195	0.0129	0.0100	0.0100
2	0.0449	0.0438	0.0426	0.0415	0.0404	0.0393	0.0382	0.0370	0.0356	0.0337	0.0309	0.0268	0.0211	0.0145	0.0100	0.0100
3	0.0477	0.0466	0.0455	0.0444	0.0432	0.0421	0.0410	0.0399	0.0383	0.0360	0.0327	0.0284	0.0228	0.0161	0.0100	0.0100
4	0.0506	0.0494	0.0482	0.0469	0.0456	0.0443	0.0429	0.0416	0.0400	0.0376	0.0343	0.0300	0.0244	0.0177	0.0111	0.0100
5	0.0525	0.0512	0.0499	0.0485	0.0472	0.0459	0.0445	0.0432	0.0416	0.0392	0.0359	0.0316	0.0260	0.0193	0.0127	0.0100
6	0.0541	0.0528	0.0515	0.0501	0.0488	0.0475	0.0462	0.0448	0.0432	0.0409	0.0375	0.0332	0.0276	0.0210	0.0143	0.0100
7	0.0557	0.0544	0.0531	0.0518	0.0504	0.0491	0.0478	0.0465	0.0448	0.0425	0.0392	0.0348	0.0292	0.0226	0.0157	0.0100
8	0.0573	0.0560	0.0547	0.0534	0.0520	0.0507	0.0493	0.0480	0.0464	0.0440	0.0403	0.0354	0.0291	0.0216	0.0142	0.0100
9	0.0574	0.0559	0.0544	0.0529	0.0514	0.0499	0.0484	0.0469	0.0451	0.0425	0.0387	0.0339	0.0276	0.0201	0.0126	0.0100
10	0.0559	0.0544	0.0529	0.0514	0.0499	0.0484	0.0469	0.0454	0.0436	0.0410	0.0372	0.0324	0.0260	0.0186	0.0111	0.0100
11	0.0544	0.0529	0.0513	0.0499	0.0484	0.0469	0.0454	0.0439	0.0420	0.0394	0.0357	0.0308	0.0245	0.0171	0.0100	0.0100
12	0.0513	0.0498	0.0484	0.0469	0.0455	0.0440	0.0426	0.0411	0.0393	0.0367	0.0331	0.0283	0.0221	0.0148	0.0100	0.0100
13	0.0487	0.0472	0.0455	0.0439	0.0423	0.0407	0.0392	0.0376	0.0357	0.0329	0.0293	0.0245	0.0183	0.0110	0.0118	0.0100
14	0.0495	0.0476	0.0457	0.0438	0.0419	0.0401	0.0382	0.0363	0.0339	0.0307	0.0261	0.0211	0.0146	0.0100	0.0121	0.0100
15	0.0509	0.0489	0.0470	0.0450	0.0430	0.0411	0.0391	0.0372	0.0347	0.0313	0.0264	0.0200	0.0116	0.0100	0.0122	0.0100
16	0.0506	0.0485	0.0463	0.0442	0.0421	0.0400	0.0379	0.0358	0.0331	0.0293	0.0240	0.0170	0.0100	0.0100	0.0123	0.0100
17	0.0503	0.0480	0.0457	0.0434	0.0410	0.0387	0.0363	0.0340	0.0311	0.0270	0.0212	0.0135	0.0100	0.0108	0.0123	0.0100
18	0.0506	0.0480	0.0454	0.0429	0.0403	0.0377	0.0351	0.0326	0.0294	0.0249	0.0184	0.0101	0.0100	0.0140	0.0124	0.0100
19	0.0493	0.0466	0.0438	0.0411	0.0384	0.0356	0.0329	0.0301	0.0266	0.0218	0.0150	0.0100	0.0100	0.0160	0.0125	0.0100
20	0.0471	0.0441	0.0411	0.0382	0.0351	0.0322	0.0293	0.0263	0.0227	0.0176	0.0104	0.0100	0.0100	0.0161	0.0126	0.0100
21	0.0451	0.0417	0.0384	0.0350	0.0317	0.0284	0.0251	0.0218	0.0177	0.0121	0.0100	0.0100	0.0100	0.0162	0.0127	0.0100
22	0.0439	0.0400	0.0361	0.0323	0.0285	0.0246	0.0208	0.0170	0.0122	0.0100	0.0100	0.0100	0.0126	0.0162	0.0127	0.0100
23	0.0417	0.0374	0.0330	0.0286	0.0243	0.0199	0.0155	0.0112	0.0100	0.0100	0.0100	0.0100	0.0158	0.0163	0.0128	0.0100
24	0.0378	0.0328	0.0280	0.0231	0.0183	0.0135	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0190	0.0164	0.0129	0.0100
25	0.0373	0.0318	0.0264	0.0209	0.0154	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0102	0.0199	0.0164	0.0130	0.0100
26	0.0363	0.0304	0.0245	0.0186	0.0127	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0134	0.0200	0.0165	0.0131	0.0100
27	0.0346	0.0283	0.0220	0.0157	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0166	0.0201	0.0166	0.0131	0.0100
28	0.0325	0.0258	0.0191	0.0123	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0106	0.0197	0.0202	0.0167	0.0132	0.0100
29	0.0353	0.0286	0.0218	0.0151	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0138	0.0229	0.0203	0.0168	0.0133	0.0100
30	0.0368	0.0296	0.0225	0.0154	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0170	0.0233	0.0203	0.0168	0.0133	0.0100
31	0.0377	0.0301	0.0225	0.0148	0.0100	0.0100	0.0100	0.0100	0.0100	0.0131	0.0201	0.0234	0.0204	0.0169	0.0134	0.0100
32	0.0410	0.0338	0.0266	0.0194	0.0123	0.0100	0.0100	0.0100	0.0114	0.0163	0.0233	0.0234	0.0205	0.0170	0.0135	0.0100
33	0.0445	0.0377	0.0309	0.0241	0.0174	0.0106	0.0100	0.0111	0.0146	0.0194	0.0258	0.0235	0.0206	0.0171	0.0136	0.0101
34	0.0479	0.0411	0.0343	0.0275	0.0208	0.0140	0.0114	0.0142	0.0177	0.0226	0.0259	0.0236	0.0206	0.0171	0.0137	0.0102
35	0.0500	0.0425	0.0350	0.0276	0.0200	0.0146	0.0146	0.0174	0.0209	0.0258	0.0259	0.0237	0.0207	0.0172	0.0137	0.0102
36	0.0486	0.0411	0.0336	0.0261	0.0187	0.0186	0.0182	0.0203	0.0238	0.0278	0.0260	0.0237	0.0208	0.0173	0.0138	0.0103
37	0.0473	0.0398	0.0323	0.0249	0.0222	0.0221	0.0216	0.0229	0.0264	0.0278	0.0261	0.0238	0.0208	0.0174	0.0139	0.0104
38	0.0464	0.0389	0.0314	0.0250	0.0250	0.0248	0.0243	0.0249	0.0284	0.0279	0.0261	0.0238	0.0209	0.0174	0.0139	0.0104
39	0.0457	0.0382	0.0307	0.0269	0.0268	0.0266	0.0261	0.0263	0.0291	0.0279	0.0262	0.0239	0.0209	0.0174	0.0140	0.0105
40	0.0407	0.0377	0.0302	0.0283	0.0282	0.0279	0.0275	0.0273	0.0291	0.0279	0.0262	0.0239	0.0210	0.0175	0.0140	0.0105
41	0.0349	0.0336	0.0298	0.0294	0.0292	0.0290	0.0285	0.0280	0.0292	0.0279	0.0262	0.0239	0.0210	0.0175	0.0140	0.0105
42	0.0310	0.0330	0.0333	0.0329	0.0320	0.0304	0.0296	0.0289	0.0292	0.0280	0.0262	0.0240	0.0210	0.0175	0.0140	0.0105
43	0.0376	0.0403	0.0407	0.0404	0.0394	0.0374	0.0340	0.0299	0.0292	0.0280	0.0262	0.0240	0.0210	0.0175	0.0140	0.0105
44	0.0442	0.0475	0.0481	0.0478	0.0467	0.0444	0.0406	0.0340	0.0292	0.0280	0.0262	0.0240	0.0210	0.0175	0.0141	0.0106
45	0.0508	0.0547	0.0555	0.0553	0.0541	0.0513	0.0471	0.0374	0.0292	0.0280	0.0263	0.0240	0.0211	0.0176	0.0141	0.0106
46	0.0574	0.0615	0.0629	0.0627	0.0613	0.0579	0.0523	0.0407	0.0292	0.0280	0.0263	0.0240	0.0211	0.0176	0.0141	0.0106
47	0.0640	0.0681	0.0703	0.0701	0.0683	0.0645	0.0558	**0.0441**	0.0317	0.0280	0.0263	0.0241	0.0211	0.0176	0.0141	**0.0106**
48	0.0696	0.0747	0.0777	0.0776	0.0752	0.0700	0.0575	**0.0475**	0.0351	0.0281	0.0263	0.0241	0.0211	0.0176	0.0141	**0.0107**
49	0.0751	0.0811	0.0850	0.0849	0.0819	0.0740	0.0608	**0.0509**	0.0385	0.0281	0.0264	0.0241	0.0211	0.0176	0.0141	**0.0107**
50	0.0819	0.0873	0.0920	0.0922	0.0877	0.0776	0.0642	**0.0543**	0.0418	0.0281	0.0264	0.0241	0.0211	0.0177	0.0142	**0.0107**
51	0.0889	0.0949	0.0990	0.0994	0.0919	0.0806	0.0676	**0.0577**	0.0452	0.0281	0.0264	0.0241	0.0212	0.0177	0.0142	**0.0107**
52	0.0957	0.1000	0.1000	0.1000	0.0958	0.0813	0.0710	**0.0610**	0.0486	0.0312	0.0264	0.0241	0.0212	0.0177	0.0142	**0.0107**
53	0.1000	0.1000	0.1000	0.1000	0.0993	0.0843	0.0744	**0.0644**	0.0520	0.0346	0.0264	0.0242	0.0212	0.0177	0.0142	**0.0108**
54	0.1000	0.1000	0.1000	0.1000	0.1000	0.0877	0.0777	**0.0678**	0.0554	0.0380	0.0264	0.0242	0.0212	0.0177	0.0142	**0.0108**
55	0.1000	0.1000	0.1000	0.1000	0.1000	0.0911	0.0811	**0.0712**	0.0587	0.0413	0.0265	0.0242	0.0212	0.0177	0.0143	**0.0108**
56	0.1000	0.1000	0.1000	0.1000	0.1000	0.0945	0.0845	**0.0746**	0.0621	0.0447	0.0265	0.0242	0.0213	0.0178	0.0143	**0.0108**
57	0.1000	0.1000	0.1000	0.1000	0.1000	0.0978	0.0879	**0.0779**	0.0655	0.0481	0.0265	0.0242	0.0213	0.0178	0.0143	**0.0108**
58	0.1000	0.1000	0.1000	0.1000	0.1000	0.0976	0.0913	**0.0813**	0.0689	0.0515	0.0266	0.0243	0.0213	0.0178	0.0143	**0.0108**
59	0.1000	0.1000	0.1000	0.1000	0.0999	0.0975	0.0947	**0.0847**	0.0723	0.0549	0.0300	0.0243	0.0213	0.0178	0.0144	**0.0109**
60	0.1000	0.1000	0.1000	0.1000	0.0998	0.0974	0.0950	**0.0881**	0.0757	0.0582	0.0334	0.0243	0.0213	0.0178	0.0144	**0.0109**
61	0.1000	0.1000	0.1000	0.1000	0.0997	0.0973	0.0948	**0.0915**	0.0790	0.0616	0.0368	0.0243	0.0213	0.0179	0.0144	**0.0109**
62	0.1000	0.1000	0.1000	0.1000	0.0996	0.0972	0.0947	**0.0924**	0.0824	0.0650	0.0401	0.0243	0.0214	0.0179	0.0144	**0.0109**
63	0.1000	0.1000	0.1000	0.1000	0.0995	0.0971	0.0946	**0.0922**	0.0858	0.0684	0.0435	0.0243	0.0214	0.0179	0.0144	**0.0109**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.3-1. INITIAL URANIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**0.0312**	0.0714	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.0980	0.0936	0.0962
65	**0.0326**	0.0749	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
66	**0.0342**	0.0784	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
67	**0.0357**	0.0818	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
68	**0.0371**	0.0851	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
69	**0.0386**	0.0883	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1010	0.1000
70	**0.0401**	0.0910	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1679	0.1222
71	**0.0415**	0.0933	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1576	0.2307	0.1790
72	**0.0429**	0.0950	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1211	0.2347	0.2934	0.2328
73	**0.0442**	0.0960	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.2006	0.3113	0.3562	0.2830
74	**0.0454**	0.0966	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1040	0.2811	0.3899	0.4183	0.3249
75	**0.0464**	0.0969	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1861	0.3618	0.4692	0.4796	0.3746
76	**0.0474**	0.0969	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.2710	0.4439	0.5000	0.5000	0.4174
77	**0.0477**	0.0967	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1462	0.3585	0.5000	0.5000	0.5000	0.4668
78	**0.0478**	0.0964	0.1000	0.1000	0.1000	0.1000	0.1251	0.1000	0.1000	0.1000	0.2416	0.4493	0.5000	0.5000	0.5000	0.5162
79	**0.0479**	0.0960	0.1000	0.1000	0.1099	0.1351	0.1602	0.1313	0.1133	0.1553	0.3360	0.5000	0.5000	0.5000	0.5000	0.5656
80	**0.0480**	0.0955	0.1000	0.1199	0.1450	0.1702	0.1953	0.1749	0.1735	0.2343	0.4268	0.5000	0.5000	0.5000	0.5000	0.6075
81	**0.0480**	0.0950	0.1299	0.1550	0.1801	0.2053	0.2304	0.2175	0.2310	0.3097	0.5000	0.5000	0.5000	0.5000	0.5000	0.6267
82	**0.0480**	0.0943	0.1650	0.1901	0.2152	0.2404	0.2655	0.2619	0.2882	0.3802	0.5000	0.5000	0.5000	0.5000	0.5000	0.5978
83	**0.0480**	0.0936	0.1747	0.2252	0.2503	0.2754	0.3006	0.3077	0.3443	0.4466	0.5000	0.5000	0.5000	0.5000	0.4388	0.5689
84	**0.0479**	0.0929	0.1742	0.2603	0.2854	0.3105	0.3357	0.3543	0.3971	0.5000	0.5000	0.5000	0.5000	0.5000	0.3743	0.5400
85	**0.0475**	0.0919	0.1735	0.2626	0.3205	0.3456	0.3708	0.4010	0.4501	0.5000	0.5000	0.5000	0.5000	0.4572	0.3099	0.5111
86	**0.0471**	0.0908	0.1714	0.2634	0.3468	0.3807	0.4059	0.4476	0.5000	0.5000	0.5000	0.5000	0.5000	0.3927	0.2550	0.5000
87	**0.0466**	0.0895	0.1686	0.2621	0.3493	0.4158	0.4445	0.4943	0.5000	0.5000	0.5000	0.5000	0.5000	0.3243	0.2035	0.5000
88	**0.0461**	0.0881	0.1656	0.2605	0.3527	0.4365	0.4877	0.5000	0.5000	0.5000	0.5000	0.5000	0.4905	0.2576	0.1476	0.4565
89	**0.0456**	0.0867	0.1618	0.2579	0.3546	0.4434	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.4210	0.1844	0.1000	0.3893
90	0.0450	0.0852	0.1570	0.2549	0.3531	0.4487	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.3511	0.1113	0.1000	0.3375
91	0.0444	0.0837	0.1519	0.2511	0.3512	0.4513	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.2804	0.1000	0.1000	0.3035
92	0.0437	0.0821	0.1466	0.2472	0.3484	0.4507	0.5000	0.5000	0.5000	0.5000	0.5000	0.4608	0.2090	0.1000	0.1000	0.2760
93	0.0431	0.0807	0.1408	0.2420	0.3438	0.4457	0.5000	0.5000	0.5000	0.5000	0.5000	0.3910	0.1362	0.1000	0.1000	0.2600
94	0.0426	0.0791	0.1348	0.2365	0.3364	0.4352	0.5000	0.5000	0.5000	0.5000	0.5000	0.3244	0.1000	0.1000	0.1000	0.2448
95	0.0419	0.0777	0.1267	0.2226	0.3207	0.4187	0.5000	0.5000	0.5000	0.5000	0.5000	0.2629	0.1000	0.1000	0.1000	0.2335
96	0.0415	0.0771	0.1405	0.2215	0.3025	0.3952	0.4948	0.5000	0.5000	0.5000	0.4522	0.2106	0.1000	0.1000	0.1000	0.2390
97	0.0412	0.0760	0.1543	0.2353	0.3163	0.3973	0.4783	0.5000	0.5000	0.5000	0.4009	0.1628	0.1000	0.1000	0.1000	0.2444
98	0.0405	0.0871	0.1681	0.2491	0.3301	**0.4038**	0.4656	0.5000	0.5000	0.5000	0.3557	0.1241	0.1000	0.1000	0.1000	0.2499
99	0.0395	0.1009	0.1819	0.2629	0.3280	**0.3971**	0.4662	0.4923	0.5000	0.4430	0.3145	0.1000	0.1000	0.1000	0.1347	0.2780
100	0.0384	0.1147	0.1955	0.2595	0.3286	0.3977	**0.4614**	0.4820	0.4887	0.4025	0.2775	0.1000	0.1000	0.1000	0.1808	0.3139
101	0.0374	0.1220	0.1911	0.2602	0.3293	0.3984	**0.4509**	0.4716	0.4765	0.4117	0.2724	0.1217	0.1000	0.1000	0.2251	0.3522
102	0.0449	0.1226	0.1917	0.2608	0.3299	0.3990	**0.4429**	0.4610	0.4644	0.4210	0.2817	0.1423	0.1000	0.1374	0.2754	0.3967
103	0.0455	0.1233	0.1923	0.2614	0.3305	0.3996	0.4348	**0.4502**	0.4523	0.4303	0.2909	0.1516	0.1909	0.1992	0.3290	0.4448
104	0.0462	0.1239	0.1930	0.2621	0.3312	0.3974	0.4267	**0.4392**	0.4401	0.4395	0.3002	0.1609	0.1878	0.2641	0.3863	0.4963
105	0.0468	0.1245	0.1936	0.2627	0.3318	0.3869	0.4175	**0.4280**	0.4280	0.4274	0.3095	0.1702	0.1677	0.3383	0.4447	0.5803
106	0.0474	0.1252	0.1943	0.2633	0.3324	0.3789	0.4076	**0.4164**	**0.4159**	0.4153	0.3188	0.1794	0.1475	0.3855	0.5060	0.6728
107	0.0481	0.1258	0.1949	0.2640	0.3331	0.3708	0.3974	0.4043	**0.4037**	0.4032	0.3280	0.1887	0.1275	0.3653	0.5935	0.7685
108	0.0487	0.1264	0.1955	0.2646	0.3334	0.3627	0.3871	0.3921	**0.3916**	0.3910	0.3373	0.1980	0.1073	0.3452	0.6305	0.8693
109	0.0493	0.1271	0.1962	0.2652	0.3229	0.3546	0.3766	0.3800	0.3795	0.3789	0.3466	0.2072	0.0872	0.3251	0.6082	0.9589
110	0.0500	0.1277	0.1968	0.2659	0.3148	0.3466	0.3659	0.3679	0.3673	0.3668	0.3559	0.2165	0.0836	0.3050	0.5858	0.9366
111	0.0506	0.1283	0.1974	0.2665	0.3068	0.3385	0.3550	0.3557	0.3552	0.3546	0.3541	0.2258	0.0864	0.2849	0.5635	0.9142
112	0.0512	0.1290	0.1980	0.2671	0.2987	0.3304	0.3438	0.3436	0.3430	0.3425	0.3419	0.2351	0.0957	0.2648	0.5411	0.8919
113	0.0519	0.1296	0.1987	0.2589	0.2906	0.3223	0.3320	0.3315	0.3309	0.3303	0.3298	0.2443	0.1050	0.2447	0.5187	0.8695
114	0.0525	0.1302	0.1993	0.2508	0.2825	0.3126	0.3199	0.3193	0.3188	0.3182	0.3177	0.2536	0.1143	0.2246	0.4964	0.8357
115	0.0531	0.1309	0.2000	0.2427	0.2744	0.3026	0.3078	0.3072	0.3066	0.3061	0.3055	0.2629	0.1235	0.2045	0.4740	0.8018
116	0.0538	0.1315	0.2006	0.2347	0.2664	0.2922	0.2956	0.2951	0.2945	0.2940	0.2934	0.2721	0.1328	0.1844	0.4517	0.7680
117	0.0544	0.1321	0.1949	0.2266	0.2583	0.2817	0.2835	0.2829	0.2824	0.2818	0.2813	0.2806	0.1421	0.1643	0.4293	0.7341
118	0.0550	0.1328	0.1868	0.2185	0.2502	0.2708	0.2713	0.2708	0.2702	0.2697	0.2691	0.2686	0.1513	0.1442	0.4069	0.7001
119	0.0557	0.1334	0.1787	0.2104	0.2422	0.2596	0.2592	0.2586	0.2581	0.2575	0.2570	0.2564	0.1606	0.1241	0.3846	0.6661
120	0.0564	0.1342	0.1686	0.2003	0.2321	0.2446	0.2440	0.2435	0.2429	0.2424	0.2418	0.2413	0.1722	0.0989	0.3566	0.6236
121	0.0576	0.1228	0.1545	0.1862	0.2177	0.2234	0.2228	0.2222	0.2217	0.2211	0.2206	0.2200	0.1884	0.0637	0.3175	0.5642
122	0.0591	0.1026	0.1343	0.1660	0.1921	0.1930	0.1924	0.1919	0.1913	0.1908	0.1902	0.1897	0.1891	0.0723	0.2616	0.4792
123	0.0407	0.0763	0.1081	0.1398	0.1541	0.1536	0.1530	0.1525	0.1519	0.1513	0.1508	0.1502	0.1497	0.1024	0.1889	0.3688
124	0.0100	0.0420	0.0737	0.1024	0.1025	0.1020	0.1014	0.1009	0.1003	0.0998	0.0992	0.0987	0.0981	0.0976	0.1006	0.2244
125	0.0100	0.0100	0.0334	0.0424	0.0419	0.0413	0.0408	0.0402	0.0396	0.0391	0.0385	0.0380	0.0374	0.0369	0.0363	0.0545

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.3-1. INITIAL URANIUM CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	0.0986	0.1000	0.1000	0.1554	0.2024	0.2239	0.2191	0.2144	0.2097	0.2049	0.2002	0.1954	0.1907	0.1859	0.1809	0.1000
65	0.1000	0.1000	0.1123	0.1318	0.1259	0.1212	0.1164	0.1117	0.1069	0.1022	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
66	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
67	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
68	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
69	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
70	0.1326	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
71	0.1820	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
72	0.2314	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
73	0.2808	0.1541	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
74	0.3302	0.2116	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
75	0.3796	0.2692	0.1356	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
76	0.4290	0.3267	0.1931	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
77	0.4784	0.3843	0.2507	0.1572	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
78	0.5277	0.4418	0.3082	0.2147	0.1479	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
79	0.5771	0.4994	0.3658	0.2723	0.2055	0.1520	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
80	0.6265	0.5569	0.4233	0.3298	0.2630	0.2096	0.1561	0.1027	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
81	0.6759	0.6145	0.4809	0.3874	0.3205	0.2671	0.2137	0.1602	0.1068	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
82	0.7253	0.6720	0.5384	0.4449	0.3781	0.3247	0.2712	0.2178	0.1643	0.1109	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
83	0.7747	0.7296	0.5960	0.5024	0.4357	0.3822	0.3288	0.2753	0.2219	0.1705	0.1243	0.1000	0.1000	0.1000	0.1000	0.1000
84	0.8241	0.7871	0.6535	0.5600	0.4932	0.4398	0.3863	0.3456	0.3155	0.3044	0.2025	0.1082	0.1000	0.1000	0.1000	0.1000
85	0.8253	0.8447	0.7111	0.6175	0.5507	0.5207	0.5081	0.4980	0.4879	0.4778	0.3452	0.1953	0.1030	0.1000	0.1000	0.1000
86	0.7964	0.9022	0.7686	0.7143	0.7017	0.6916	0.6575	0.6185	0.5912	0.6488	0.5531	0.3460	0.1807	0.1017	0.1000	0.1000
87	0.7675	0.9598	0.8790	0.8108	0.7621	0.7230	0.6839	0.7412	0.7988	0.8564	0.8245	0.5231	0.3290	0.1724	0.1066	0.1000
88	0.7385	0.9935	0.9056	0.8373	0.7885	0.8337	0.8913	0.9488	1.0000	1.0000	1.0000	0.8234	0.5816	0.3631	0.1782	0.1322
89	0.6922	0.9338	0.9321	0.9118	0.9837	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9469	0.6870	0.4624	0.2250
90	0.6279	0.8670	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9156	0.6896	0.4836
91	0.5580	0.7931	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8183	0.5682
92	0.4851	0.7134	0.9720	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8976	0.6832
93	0.4362	0.6229	0.8969	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8452
94	0.4157	0.5281	0.8223	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
95	0.4212	0.5000	0.7591	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
96	0.4266	0.5000	0.7120	0.9670	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
97	0.4321	0.5000	0.6846	0.9339	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
98	0.4375	0.5000	0.6773	0.9098	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8385
99	0.4430	0.5000	0.6965	0.9111	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.6483
100	0.4484	0.5000	0.7535	0.9489	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.5782
101	0.4539	0.5529	0.8290	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.5419
102	0.4761	0.6656	0.9248	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.5153
103	0.5534	0.7869	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4950
104	0.6701	0.9081	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4791
105	0.7830	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4671
106	0.8922	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4575
107	0.9783	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4540
108	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4636
109	0.9371	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9760	0.4732
110	0.8965	0.9935	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9331	0.4826
111	0.8572	0.7881	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8950	0.4919
112	0.8261	0.7475	0.8889	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8645	0.5005
113	0.7978	0.7070	0.6773	0.9003	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8410	0.5044
114	0.7696	0.6746	0.6141	0.6887	0.8480	0.9755	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.8175	0.5077
115	0.7414	0.6464	0.5745	0.5370	0.6364	0.7639	0.8913	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.7957	0.5105
116	0.7131	0.6182	0.5451	0.4965	0.4703	0.5523	0.6797	0.8072	0.9346	1.0000	1.0000	1.0000	1.0000	1.0000	0.7549	0.4409
117	0.6849	0.5899	0.5168	0.4657	0.4302	0.4088	0.4681	0.5956	0.7230	0.8505	0.9779	1.0000	1.0000	0.9575	0.6792	0.1251
118	0.6567	0.5617	0.4886	0.4375	0.4009	0.3717	0.3473	0.3840	0.5114	0.6389	0.7663	0.8938	1.0000	0.8566	0.5450	0.0500
119	0.6285	0.5335	0.4604	0.4092	0.3727	0.3435	0.3142	0.2860	0.2998	0.4273	0.5547	0.6822	0.8096	0.6778	0.2174	0.0976
120	0.5932	0.4982	0.4251	0.3739	0.3374	0.3082	0.2789	0.2497	0.2205	0.1933	0.2902	0.4177	0.3540	0.0675	0.0833	0.0890
121	0.5438	0.4488	0.3757	0.3245	0.2880	0.2588	0.2295	0.2003	0.1711	0.1418	0.1126	0.0975	0.0959	0.0936	0.0879	0.0817
122	0.4732	0.3782	0.3051	0.2540	0.2174	0.1882	0.1589	0.1297	0.1005	0.0870	0.0864	0.0854	0.0822	0.0776	0.0744	0.0683
123	0.3655	0.2864	0.2133	0.1622	0.1257	0.0964	0.0728	0.0723	0.0718	0.0711	0.0703	0.0692	0.0672	0.0638	0.0592	0.0546
124	0.2221	0.1664	**0.0933**	0.0540	0.0533	0.0528	0.0522	0.0516	0.0510	0.0502	0.0493	0.0481	0.0464	0.0440	0.0412	0.0366
125	0.0526	0.0320	**0.0308**	**0.0296**	**0.0286**	**0.0276**	**[illegible]**	**0.0262**	**0.0254**	**0.0245**	**0.0236**	**0.0229**	**0.0225**	**0.0213**	**0.0204**	**0.0194**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.3-1. INITIAL URANIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	0.1000	0.1000	0.1000	0.1000	0.0994	0.0970	0.0945	0.0921	0.0892	0.0718	0.0469	0.0244	0.0214	0.0179	0.0144	**0.0110**
65	0.1000	0.1000	0.1000	0.1000	0.0993	0.0969	0.0944	0.0920	0.0890	0.0752	0.0503	0.0244	0.0214	0.0179	0.0145	**0.0110**
66	0.1000	0.1000	0.1000	0.1000	0.0992	0.0967	0.0943	0.0919	0.0889	0.0785	0.0537	0.0244	0.0214	0.0180	0.0145	**0.0110**
67	0.1000	0.1000	0.1000	0.1000	0.0991	0.0966	0.0942	0.0918	0.0888	0.0819	0.0570	0.0247	0.0215	0.0180	0.0145	**0.0110**
68	0.1000	0.1000	0.1000	0.1000	0.0990	0.0965	0.0941	0.0917	0.0887	0.0846	0.0604	0.0281	0.0215	0.0180	0.0145	**0.0110**
69	0.1000	0.1000	0.1000	0.1000	0.0989	0.0964	0.0940	0.0916	0.0886	0.0843	0.0638	0.0315	0.0215	0.0180	0.0145	**0.0111**
70	0.1000	0.1000	0.1000	0.1000	0.0988	0.0963	0.0939	0.0915	0.0885	0.0842	0.0672	0.0349	0.0215	0.0180	0.0146	**0.0111**
71	0.1000	0.1000	0.1000	0.1000	0.0987	0.0962	0.0938	0.0914	0.0884	0.0841	0.0706	0.0382	0.0215	0.0181	0.0146	**0.0111**
72	0.1000	0.1000	0.1000	0.1000	0.0985	0.0961	0.0937	0.0913	0.0883	0.0840	0.0739	0.0416	0.0216	0.0181	0.0146	**0.0111**
73	0.1000	0.1000	0.1000	0.1000	0.0984	0.0960	0.0936	0.0912	0.0882	0.0839	0.0773	0.0450	0.0216	0.0181	0.0146	**0.0111**
74	0.1000	0.1000	0.1000	0.1000	0.0983	0.0959	0.0935	0.0911	0.0881	0.0838	0.0778	0.0484	0.0216	0.0181	0.0146	**0.0112**
75	0.1000	0.1000	0.1000	0.1000	0.0982	0.0958	0.0934	0.0910	0.0879	0.0837	0.0777	0.0518	0.0216	0.0181	0.0147	**0.0112**
76	0.1000	0.1000	0.1000	0.1000	0.0981	0.0957	0.0933	0.0909	0.0878	0.0836	0.0776	0.0552	0.0216	0.0182	0.0147	**0.0112**
77	0.1000	0.1000	0.1000	0.1000	0.0980	0.0956	0.0932	0.0908	0.0877	0.0835	0.0775	0.0585	0.0217	0.0182	0.0147	**0.0112**
78	0.1000	0.1000	0.1000	0.1000	0.0979	0.0955	0.0931	0.0907	0.0876	0.0834	0.0774	0.0619	0.0217	0.0182	0.0147	**0.0112**
79	0.1000	0.1000	0.1000	0.1000	0.0978	0.0954	0.0930	0.0906	0.0875	0.0833	0.0772	0.0653	0.0230	0.0182	0.0147	**0.0112**
80	0.1000	0.1000	0.1000	0.1000	0.0977	0.0953	0.0929	0.0905	0.0874	0.0832	0.0771	0.0687	0.0264	0.0182	0.0147	**0.0113**
81	0.1000	0.1000	0.1000	0.1000	0.0976	0.0952	0.0928	0.0904	0.0873	0.0831	0.0770	0.0692	0.0298	0.0183	0.0148	0.0113
82	0.1000	0.1000	0.1000	0.0999	0.0975	0.0951	0.0927	0.0902	0.0872	0.0830	0.0769	0.0691	0.0332	0.0183	0.0148	0.0113
83	0.1000	0.1000	0.1000	0.0998	0.0974	0.0950	0.0926	0.0901	0.0871	0.0829	0.0768	0.0690	0.0365	0.0183	0.0148	0.0113
84	0.1000	0.1000	0.1000	0.0997	0.0973	0.0949	0.0924	0.0900	0.0870	0.0828	0.0767	0.0689	0.0399	0.0183	0.0148	0.0113
85	0.1000	0.1000	0.1000	0.0996	0.0972	0.0948	0.0924	0.0899	0.0869	0.0827	0.0766	0.0688	0.0433	0.0183	0.0148	0.0114
86	0.1000	0.1000	0.1000	0.0995	0.0971	0.0947	0.0923	0.0898	0.0868	0.0826	0.0765	0.0687	0.0467	0.0184	0.0149	0.0114
87	0.1000	0.1000	0.1000	0.0994	0.0970	0.0946	0.0921	0.0897	0.0867	0.0825	0.0764	0.0686	0.0501	0.0184	0.0149	0.0114
88	0.1185	0.1211	0.1403	0.0961	0.0969	0.0945	0.0920	0.0896	0.0866	0.0824	0.0763	0.0684	0.0535	0.0184	0.0149	0.0114
89	0.1804	0.1883	0.1894	0.0895	0.0948	0.0943	0.0919	0.0895	0.0865	0.0823	0.0762	0.0683	0.0568	0.0184	0.0149	0.0114
90	0.3404	0.2153	0.1236	0.0996	0.0876	0.0934	0.0918	0.0894	0.0864	0.0822	0.0761	0.0682	0.0580	0.0184	0.0149	0.0115
91	0.4469	0.2659	0.0581	0.1393	0.0804	0.0863	0.0917	0.0893	0.0863	0.0821	0.0760	0.0681	0.0578	0.0184	0.0150	0.0115
92	0.5523	0.3336	0.0830	0.1127	0.0732	0.0791	0.0849	0.0892	0.0862	0.0819	0.0759	0.0680	0.0577	0.0185	0.0150	0.0115
93	0.7215	0.4596	0.0847	0.0642	0.0660	0.0719	0.0777	0.0836	0.0861	0.0818	0.0758	0.0679	0.0576	0.0206	0.0150	0.0115
94	1.0000	0.8054	0.1132	0.0742	0.0588	0.0647	0.0705	0.0764	0.0837	0.0817	0.0757	0.0678	0.0575	0.0240	0.0150	0.0115
95	1.0000	1.0000	0.1124	0.0851	0.0516	0.0575	0.0633	0.0692	0.0765	0.0816	0.0756	0.0677	0.0574	0.0274	0.0150	0.0116
96	1.0000	0.4535	0.0121	0.0932	0.0511	0.0503	0.0561	0.0620	0.0693	0.0795	0.0755	0.0676	0.0573	0.0308	0.0151	0.0116
97	0.6429	0.1227	0.0421	0.0986	0.0540	0.0431	0.0489	0.0548	0.0621	0.0724	0.0754	0.0675	0.0572	0.0341	0.0151	0.0116
98	0.3579	0.0123	0.0606	0.0962	0.0496	0.0359	0.0417	0.0476	0.0549	0.0651	0.0753	0.0674	0.0571	0.0375	0.0151	0.0116
99	0.1142	0.0339	0.0778	0.0803	0.0415	0.0296	0.0345	0.0404	0.0477	0.0580	0.0726	0.0673	0.0570	0.0409	0.0151	0.0116
100	0.0060	0.0461	0.0914	0.0710	0.0342	0.0296	0.0290	0.0332	0.0405	0.0508	0.0654	0.0672	0.0569	0.0443	0.0151	0.0116
101	0.0043	0.0555	0.0966	0.0627	0.0300	0.0295	0.0289	0.0284	0.0333	0.0436	0.0582	0.0671	0.0568	0.0447	0.0152	0.0117
102	0.0093	0.0675	0.0870	0.0549	0.0299	0.0294	0.0289	0.0283	0.0277	0.0364	0.0510	0.0670	0.0567	0.0446	0.0152	0.0117
103	0.0153	0.0844	0.0779	0.0480	0.0298	0.0293	0.0288	0.0283	0.0276	0.0292	0.0438	0.0628	0.0566	0.0445	0.0152	0.0117
104	0.0244	0.0968	0.0700	0.0423	0.0297	0.0292	0.0287	0.0282	0.0275	0.0266	0.0366	0.0556	0.0565	0.0444	0.0152	0.0117
105	0.0367	0.0896	0.0641	0.0383	0.0296	0.0291	0.0286	0.0281	0.0274	0.0265	0.0294	0.0484	0.0564	0.0443	0.0152	0.0118
106	0.0466	0.0859	0.0605	0.0351	0.0296	0.0290	0.0285	0.0280	0.0273	0.0264	0.0252	0.0412	0.0563	0.0442	0.0153	0.0118
107	0.0543	0.0837	0.0579	0.0322	0.0295	0.0290	0.0285	0.0279	0.0273	0.0264	0.0251	0.0340	0.0562	0.0441	0.0182	0.0118
108	0.0537	0.0822	0.0549	0.0300	0.0294	0.0289	0.0284	0.0278	0.0272	0.0263	0.0250	0.0268	0.0517	0.0440	0.0216	0.0118
109	0.0501	0.0815	0.0512	0.0299	0.0294	0.0288	0.0283	0.0278	0.0271	0.0262	0.0249	0.0232	0.0445	0.0439	0.0250	0.0118
110	0.0468	0.0811	0.0470	0.0298	0.0293	0.0287	0.0282	0.0277	0.0271	0.0261	0.0248	0.0231	0.0373	0.0438	0.0284	0.0118
111	0.0468	0.0782	0.0405	0.0298	0.0292	0.0287	0.0281	0.0276	0.0270	0.0261	0.0247	0.0230	0.0301	0.0437	0.0316	0.0119
112	0.0515	0.0754	0.0357	0.0297	0.0292	0.0286	0.0281	0.0276	0.0269	0.0260	0.0247	0.0230	0.0229	0.0436	0.0315	0.0119
113	0.0579	0.0749	0.0375	0.0297	0.0291	0.0286	0.0280	0.0275	0.0268	0.0259	0.0246	0.0229	0.0207	0.0435	0.0314	0.0119
114	0.0693	0.0735	0.0390	0.0296	0.0291	0.0285	0.0280	0.0275	0.0268	0.0258	0.0245	0.0228	0.0206	0.0378	0.0313	0.0119
115	0.0911	0.0710	0.0399	0.0296	0.0290	0.0285	0.0280	0.0274	0.0268	0.0258	0.0244	0.0228	0.0205	0.0306	0.0312	0.0119
116	0.0969	0.0688	0.0407	0.0296	0.0291	0.0285	0.0279	0.0274	0.0267	0.0258	0.0244	0.0227	0.0204	0.0234	0.0311	0.0120
117	0.0915	0.0670	0.0412	0.0297	0.0291	0.0285	0.0280	0.0274	0.0267	0.0257	0.0244	0.0226	0.0204	0.0178	0.0310	0.0120
118	0.0852	0.0636	0.0411	0.0297	0.0291	0.0286	0.0280	0.0274	0.0267	0.0257	0.0243	0.0226	0.0203	0.0177	0.0308	0.0120
119	0.0795	0.0606	0.0410	0.0297	0.0292	0.0286	0.0280	0.0275	0.0268	0.0257	0.0243	0.0225	0.0202	0.0176	0.0307	0.0120
120	0.0748	0.0587	0.0414	0.0298	0.0292	0.0287	0.0281	0.0275	0.0268	0.0258	0.0244	0.0225	0.0202	0.0175	0.0221	0.0133
121	0.0698	0.0561	0.0425	0.0299	0.0294	0.0288	0.0282	0.0276	0.0269	0.0259	0.0244	0.0226	0.0201	0.0174	0.0148	0.0183
122	0.0612	0.0519	0.0428	0.0318	0.0290	0.0284	0.0279	0.0275	0.0269	0.0261	0.0246	0.0227	0.0202	0.0174	0.0146	0.0181
123	0.0492	0.0433	0.0350	0.0293	0.0281	0.0270	0.0260	0.0254	0.0245	0.0237	0.0225	0.0210	0.0190	0.0167	0.0144	0.0118
124	0.0319	0.0300	0.0281	0.0263	0.0250	0.0243	0.0231	0.0223	0.0217	0.0203	0.0194	0.0178	0.0159	0.0135	0.0112	0.0100
125	**0.0188**	**0.0183**	**0.0183**	**0.0177**	**0.0171**	**0.0168**	**0.0162**	**0.0157**	**0.0155**	**0.0150**	**0.0145**	**0.0132**	**0.0121**	**0.0100**	**0.0100**	**0.0100**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

E.4 SELENIUM TRANSPORT

Selenium concentrations prior to the third quarter of 1997 are not complete measurements of total selenium and, therefore, are not useful in calibrating distribution coefficients for this constituent. The short period of meaningful selenium data makes it difficult to calibrate the distribution coefficient. A distribution coefficient of 0.0033 ft^3/lb was used for this constituent because it has been shown not to be nearly as attenuated as other constituents such as uranium. Initial selenium concentrations for the simulations are listed in Table E.4-1.

Figure 2.2-2 shows the predictions of selenium concentrations versus time for the next 200 years. Selenium concentrations are expected to migrate at a faster rate due to less attenuation. This prediction shows that the low levels of selenium in the P-20 area will gradually increase for a few years to nearly 0.3 mg/l and then gradually decline. Concentrations at POC well T1-12 will steadily decline for several years and then approach a low concentration. The POC concentration at the end of the CAP is predicted to be 1.1 mg/l at T1-12. This concentration becomes the ACL for the Lucky Mc Site for selenium. Selenium concentrations are predicted to peak downgradient of T1-12 at T1-22 slightly less than the POC concentration. The concentrations at the POE well AL-6 are predicted to stay near 0.1 mg/l for greater than 100 years and then gradually decline. The concentration at well AL-6 is predicted to be below the upper range of the background concentrations and, therefore, the 95% level of the background concentration is the POE concentration at this site. The 95% confident level is used to be more confident that the POE level could not be exceeded by background concentrations. The 95% level for selenium is 0.26 mg/l (see Section 1.3.4).

TABLE E.4-1. INITIAL SELENIUM CONCENTRATIONS, 2000, IN mg/l.

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	**.01000**	**.00950**	**.00870**	**.00780**	**.00690**
2	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00910	.00820	.00740
3	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00950	.00860	.00780
4	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01510	.01000	.00910	.00820
5	.00970	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.02180	.01470	.00950	.00860
6	.00920	.00950	.00970	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01320	.02680	.02030	.01010	.00910
7	.00870	.00900	.00930	.00950	.00980	.01000	.01000	.01000	.01000	.01000	.01000	.02210	.03000	.02730	.01600	.00960
8	.00820	.00850	.00880	.00900	.00930	.00960	.00980	.01000	.01000	.01000	.01000	.02260	.03000	.03000	.02100	.01030
9	.00770	.00800	.00830	.00860	.00880	.00910	.00940	.00960	.00990	.01000	.01000	.01680	.03000	.03000	.02410	.01430
10	.00720	.00750	.00780	.00810	.00830	.00860	.00890	.00910	.00940	.00970	.01000	.01000	.03000	.03000	.02640	.01740
11	.00680	.00710	.00730	.00760	.00790	.00810	.00840	.00870	.00890	.00920	.00950	.00980	.02880	.03000	.02800	.01970
12	.00630	.00660	.00680	.00710	.00740	.00760	.00790	.00820	.00850	.00870	.00900	.00960	.01970	.03000	.02990	.02190
13	.00580	.00610	.00640	.00660	.00690	.00720	.00740	.00770	.00800	.00830	.00890	.00940	.01000	.03000	.03000	.02370
14	.00530	.00560	.00590	.00620	.00640	.00670	.00690	.00720	.00750	.00810	.00870	.00920	.00980	.03000	.03000	.02580
15	.00480	.00510	.00540	.00570	.00590	.00620	.00650	.00680	.00740	.00790	.00850	.00910	.00960	.02310	.03000	.02770
16	.00440	.00470	.00490	.00520	.00550	.00570	.00600	.00660	.00720	.00770	.00830	.00890	.00950	.01420	.03000	.02960
17	.00390	.00420	.00440	.00470	.00500	.00530	.00580	.00640	.00700	.00760	.00820	.00870	.00930	.01000	.03000	.03000
18	.00340	.00370	.00400	.00420	.00450	.00510	.00570	.00620	.00680	.00740	.00800	.00860	.00920	.00980	.02620	.03000
19	.00290	.00320	.00350	.00380	.00430	.00490	.00550	.00610	.00670	.00730	.00790	.00850	.00920	.00980	.02190	.03000
20	.00240	.00270	.00300	.00360	.00420	.00470	.00540	.00600	.00660	.00720	.00790	.00850	.00910	.00970	.01820	.03000
21	.00190	.00230	.00280	.00340	.00400	.00470	.00530	.00590	.00650	.00710	.00780	.00840	.00900	.00960	.01520	.02940
22	.00150	.00210	.00270	.00330	.00400	.00460	.00520	.00580	.00640	.00700	.00760	.00830	.00890	.00950	.01150	.02640
23	.00140	.00210	.00270	.00330	.00390	.00450	.00510	.00570	.00630	.00690	.00750	.00810	.00870	.00930	.00990	.02330
24	.00130	.00200	.00260	.00320	.00390	.00450	.00510	.00560	.00620	.00680	.00740	.00800	.00860	.00920	.00970	.01990
25	.00130	.00200	.00260	.00320	.00380	.00440	.00500	.00550	.00610	.00670	.00730	.00790	.00850	.00900	.00960	.01620
26	.00130	.00200	.00260	.00320	.00370	.00430	.00490	.00550	.00610	.00660	.00720	.00780	.00830	.00890	.00950	.01160
27	.00130	.00200	.00260	.00310	.00370	.00430	.00490	.00540	.00600	.00660	.00710	.00770	.00820	.00880	.00940	.00990
28	.00130	.00200	.00250	.00310	.00370	.00420	.00480	.00540	.00590	.00650	.00700	.00760	.00810	.00870	.00920	.00980
29	.00140	.00200	.00260	.00310	.00370	.00420	.00480	.00530	.00590	.00640	.00690	.00750	.00800	.00860	.00910	.00960
30	.00140	.00200	.00260	.00310	.00360	.00420	.00470	.00530	.00580	.00640	.00690	.00740	.00790	.00850	.00900	.00950
31	.00140	.00200	.00260	.00310	.00360	.00420	.00470	.00520	.00570	.00630	.00680	.00730	.00780	.00840	.00890	.00940
32	.00140	.00200	.00250	.00310	.00360	.00410	.00470	.00520	.00570	.00620	.00680	.00730	.00790	.00850	.00910	.00970
33	.00140	.00200	.00250	.00310	.00370	.00430	.00490	.00550	.00610	.00660	.00720	.00780	.00840	.00900	.00960	.01000
34	.00180	.00250	.00310	.00360	.00420	.00480	.00540	.00600	.00650	.00710	.00770	.00830	.00890	.00950	.01000	.01000
35	.00180	.00300	.00350	.00410	.00470	.00530	.00590	.00650	.00700	.00760	.00820	.00880	.00940	.01000	.01000	.01000
36	.00180	.00300	.00400	.00460	.00520	.00580	.00630	.00690	.00750	.00810	.00870	.00930	.00980	.01000	.01000	.01000
37	.00180	.00320	.00420	.00500	.00560	.00620	.00670	.00730	.00790	.00850	.00910	.00970	.01000	.01000	.01000	.01000
38	.00170	.00320	.00440	.00520	.00590	.00650	.00710	.00760	.00820	.00880	.00940	.01000	.01000	.01000	.01000	.01000
39	.00170	.00330	.00440	.00540	.00610	.00670	.00730	.00780	.00840	.00900	.00960	.01000	.01000	.01000	.01000	.01000
40	.00170	.00330	.00450	.00560	.00630	.00680	.00740	.00800	.00860	.00920	.00970	.01000	.01000	.01000	.01000	.01000
41	.00170	.00340	.00460	.00560	.00640	.00690	.00750	.00810	.00870	.00930	.00990	.01000	.01000	.01000	.01000	.01000
42	.00170	.00340	.00470	.00570	.00660	.00710	.00770	**.00820**	**.00880**	**.00940**	.01000	.01000	.01000	.01000	.01000	.01000
43	.00170	.00340	.00470	.00580	.00670	.00730	**.00780**	.00840	.00900	.00950	**.01000**	**.01000**	.01000	.01000	.01000	.01000
44	.00170	.00340	.00480	.00600	.00690	**.00750**	.00790	.00850	.00910	.00970	.01000	.01000	.01000	.01000	.01000	.01000
45	.00160	.00340	.00490	.00610	.00700	.00770	.00810	.00860	.00920	.00980	.01000	.01000	.01000	.01000	.01000	.01000
46	.00160	.00350	.00490	.00620	**.00720**	.00790	.00830	.00870	.00930	.00990	.01000	.01000	.01000	.01000	.01000	.01000
47	.00150	.00360	.00500	.00630	.00730	.00810	.00850	.00890	.00940	.01000	.01000	.01000	.01000	.01000	.01000	.01000
48	.00150	.00360	.00510	**.00640**	.00750	.00830	.00870	.00900	.00960	.01000	.01000	.01000	.01000	.01000	.01000	.01000
49	.00140	.00360	.00520	.00650	.00770	.00850	.00900	.00920	.00970	.01000	.01000	.01000	.01000	.01000	.01000	.01000
50	.00130	.00360	.00530	.00670	.00790	.00870	.00930	.00950	.00980	.01000	.01000	.01000	.01000	.01000	.01000	.01000
51	.00130	.00360	**.00530**	.00690	.00810	.00900	.00950	.00970	.00990	.01000	.01000	.01000	.01000	.01000	.01000	.01000
52	.00120	.00360	.00550	.00700	.00830	.00930	.00980	.01060	.01140	.01180	.01120	.01000	.01000	.01000	.01000	.01000
53	.00120	.00370	.00560	.00720	.00860	.00950	.01140	.01390	.01490	.01520	.01450	.01240	.01000	.01000	.01000	.01000
54	.00120	**.00390**	.00580	.00740	.00880	.00990	.01430	.01710	.01830	.01850	.01760	.01530	.01140	.01000	.01000	.01000
55	.00120	.00400	.00600	.00770	.00910	.01170	.01720	.02040	.02180	.02190	.02070	.01780	.01430	.01130	.01000	.01000
56	.00110	.00410	.00630	.00800	.00950	.01410	.02000	.02350	.02520	.02530	.02370	.02040	.01720	.01350	.01100	.01000
57	.00110	.00420	.00660	.00840	.01000	.01660	.02270	.02670	.02870	.02860	.02660	.02260	.01950	.01430	.01360	.01280
58	.00100	.00440	.00680	.00880	.01200	.01900	.02520	.02970	.03210	.03180	.02950	.02530	.02160	.01300	.01470	.01580
59	**.00100**	.00450	.00710	.00920	.01410	.02130	.02780	.03280	.03560	.03510	.03210	.02790	.02280	.01170	.01580	.01880
60	**.00100**	.00470	.00740	.00970	.01630	.02360	.03040	.03580	.03900	.03820	.03460	.02990	.02150	.01040	.01680	.02180
61	**.00110**	.00490	.00780	.01070	.01840	.02580	.03290	.03870	.04240	.04120	.03630	.03120	.02030	.01000	.01790	.02530
62	**.00110**	.00510	.00820	.01250	.02040	.02800	.03530	.04160	.04580	.04390	.03830	.03010	.01900	.01030	.01900	.02760
63	**.00110**	.00540	.00860	.01440	.02230	.03010	.03760	.04430	.04910	.04630	.03930	.02880	.01770	.01140	.02000	.02870

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.4-1. INITIAL SELENIUM CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**.00610**	.00540	.00490	.00450	.00430	.00400	.00380	.00360	.00340	.00320	.00300	.00270	.00250	.00230	.00210	.00190
2	.00660	.00590	.00530	.00490	.00470	.00450	.00430	.00400	.00380	.00360	.00330	.00310	.00290	.00260	.00240	.00220
3	.00700	.00630	.00570	.00530	.00500	.00480	.00450	.00430	.00410	.00380	.00360	.00330	.00310	.00290	.00260	.00240
4	.00740	.00660	.00600	.00560	.00530	.00510	.00480	.00460	.00430	.00410	.00380	.00360	.00330	.00310	.00280	.00260
5	.00780	.00700	.00640	.00590	.00560	.00540	.00510	.00490	.00460	.00440	.00410	.00380	.00360	.00330	.00310	.00280
6	.00820	.00740	.00670	.00630	.00600	.00570	.00540	.00520	.00490	.00460	.00440	.00410	.00380	.00360	.00330	.00300
7	.00860	.00780	.00710	.00660	.00630	.00600	.00580	.00550	.00520	.00490	.00470	.00440	.00410	.00380	.00350	.00320
8	.00900	.00820	.00750	.00700	.00660	.00640	.00610	.00580	.00550	.00520	.00500	.00470	.00440	.00410	.00380	.00350
9	.00950	.00860	.00790	.00740	.00700	.00670	.00640	.00610	.00580	.00550	.00520	.00490	.00460	.00430	.00400	.00370
10	.00990	.00900	.00820	.00770	.00730	.00700	.00670	.00640	.00610	.00580	.00550	.00520	.00490	.00460	.00430	.00400
11	.01210	.00930	.00860	.00800	.00770	.00740	.00700	.00670	.00640	.00610	.00580	.00550	.00520	.00490	.00450	.00420
12	.01450	.00970	.00890	.00840	.00800	.00770	.00740	.00700	.00670	.00640	.00610	.00580	.00550	.00510	.00480	.00450
13	.01660	.01040	.00930	.00870	.00830	.00800	.00770	.00740	.00700	.00670	.00640	.00610	.00580	.00540	.00510	.00480
14	.01870	.01260	.00970	.00910	.00870	.00830	.00800	.00770	.00740	.00710	.00670	.00640	.00610	.00570	.00540	.00510
15	.02080	.01490	.01040	.00950	.00910	.00880	.00840	.00810	.00780	.00750	.00710	.00680	.00640	.00610	.00580	.00540
16	.02300	.01730	.01300	.01010	.00960	.00930	.00890	.00860	.00830	.00790	.00760	.00720	.00690	.00660	.00620	.00590
17	.02540	.01990	.01580	.01300	.01100	.00990	.00950	.00920	.00890	.00850	.00820	.00780	.00750	.00710	.00670	.00640
18	.02780	.02250	.01860	.01590	.01400	.01250	.01100	.00990	.00950	.00920	.00880	.00840	.00800	.00760	.00720	.00680
19	.03000	.02500	.02120	.01860	.01670	.01520	.01360	.01210	.01050	.00970	.00930	.00890	.00850	.00800	.00760	.00720
20	.03000	.02710	.02310	.02040	.01830	.01670	.01510	.01340	.01180	.01010	.00960	.00910	.00870	.00830	.00780	.00740
21	.03000	.02900	.02490	.02190	.01970	.01800	.01620	.01440	.01260	.01080	.00980	.00930	.00890	.00840	.00800	.00750
22	.03000	.03000	.02680	.02350	.02110	.01920	.01730	.01540	.01340	.01150	.00990	.00940	.00900	.00850	.00810	.00760
23	.03000	.03000	.02880	.02520	.02260	.02060	.01840	.01630	.01420	.01200	.01000	.00950	.00910	.00860	.00820	.00770
24	.04110	.04160	.03210	.02710	.02430	.02200	.01970	.01740	.01500	.01260	.01020	.00960	.00920	.00870	.00830	.00780
25	.04670	.04890	.03720	.02940	.02620	.02370	.02110	.01850	.01590	.01330	.01070	.00970	.00920	.00880	.00830	.00790
26	.03460	.05000	.04310	.03400	.02870	.02580	.02300	.02010	.01720	.01420	.01120	.00970	.00930	.00890	.00840	.00800
27	.03150	.05000	.04970	.04050	.03380	.02900	.02570	.02230	.01890	.01540	.01180	.00980	.00940	.00890	.00850	.00800
28	.02330	.04400	.05000	.04730	.04050	.03570	.03080	.02600	.02110	.01630	.01230	.00980	.00940	.00900	.00850	.00810
29	.01610	.03660	.05000	.05000	.04730	.04200	.03650	.03110	.02550	.01990	.01420	.00990	.00940	.00900	.00860	.00820
30	.01000	.03110	.04810	.05000	.05000	.04800	.04170	.03530	.02890	.02230	.01560	.00990	.00950	.00910	.00860	.00820
31	.00990	.02690	.04430	.05000	.05000	.05000	.04850	.04090	.03320	.02550	.01760	.01000	.00960	.00910	.00870	.00830
32	.01000	.02340	.04110	.05000	.05000	.05000	.05000	.04840	.03910	.02980	.02030	.01070	.00960	.00920	.00880	.00830
33	.01000	.01980	.03780	.05000	.05000	.05000	.05000	.05000	.04720	.03570	.02420	.01240	.00970	.00930	.00880	.00840
34	.01000	.01620	.03450	.04730	.05000	.05000	.05000	.05000	.05000	.04480	.03010	.01540	.00970	.00930	.00900	.00860
35	.01000	.01310	.03140	.04420	.04040	.02010	.03910	.09050	.07590	.06000	.04200	.02210	.01000	.01000	.01000	.01000
36	.01000	.01020	.02880	.04190	.04640	.02620	.02810	.10000	.10000	.09650	.07570	.05430	.01610	.01000	.01000	.01000
37	.01000	.01000	.02680	.04020	.04980	.03330	.01620	.08130	.10000	.10000	.10000	.10000	.07980	.05690	.03400	.01600
38	.01000	.01000	.02510	.03880	.04870	.03460	.01620	.07450	.10000	.10000	.10000	.10000	.10000	.09550	.06870	.04530
39	.01000	.01000	.02380	.03780	.04780	.03570	.01600	.07350	.10770	.11500	.12230	.12960	.13680	.12430	.10150	.06820
40	.01000	.01000	.02270	.03690	.04710	.03670	.01590	.07330	.11610	.13960	.15320	.16050	.16760	.15160	.12470	.08720
41	.01000	.01000	.02170	.03610	.04650	.03750	.01590	.07750	.11890	.14020	.16300	.18520	.18770	.17750	.15230	.10010
42	.01000	.01000	.02070	.03550	.04600	.03810	.01580	.08230	.12570	.15650	.17710	.19770	.20000	.20000	.18920	.11940
43	.01000	.01000	.01980	.03480	.04560	.03860	.01570	.08740	.12760	.15890	.19030	.20000	.20000	.20000	.20000	.13420
44	.01000	.01000	.01870	.03420	.04520	.03910	.01590	.09190	.12710	.15530	.17780	.20000	.20000	.20000	.18870	.13360
45	.01000	.01000	.01770	.03350	.04480	.03980	.01620	.09690	.10000	.11200	.13440	.15530	.17930	.17270	.16000	.12810
46	.01000	.01000	.01650	.03270	.04440	.04040	.01660	.10000	.10000	.10000	.10000	.10000	.10000	.10690	.12330	.10000
47	.01000	.01000	.01540	.03200	.04390	.04110	.01680	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.09960
48	.01000	.01000	.01500	.03170	.04370	.04170	.01710	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.09920
49	.01000	.01000	.01500	.03150	.04340	.04220	.01640	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.09890
50	.01000	.01000	.01500	.03150	.04330	.04190	.01480	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.09860
51	.01000	.01000	.01500	.03170	.04370	.04080	.01320	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000
52	.01000	.01000	.01630	.03210	.04400	.03960	.01160	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000	.10000
53	.01000	.01000	.01890	.03400	.04500	.03760	.01050	.06940	.09100	.10000	.10000	.10000	.10000	.10000	.10000	.10000
54	.01000	.01000	.02130	.03580	.04640	.03400	.01540	.04280	.06840	.09850	.10000	.10000	.10000	.10000	.10000	.09530
55	.01000	.01190	.02350	.03740	.04770	.03030	.01860	.05040	.08220	.10000	.10000	.09510	.10000	.10000	.10000	.08020
56	.01000	.01700	.02800	.03950	.04930	.02760	.02680	.06580	.09750	.10000	.09100	.08210	.09130	.09500	.08430	.06620
57	.01260	.02130	.03170	.04230	.04550	.02390	.04040	.08680	.10000	.08970	.07330	.06680	.07390	.07660	.07390	.05750
58	.01700	.02510	.03550	.04510	.03960	.01960	.05980	.10000	.10000	.07540	.05540	.05000	.05950	.05820	.05690	.05110
59	.02130	.02840	.03870	.04760	.03340	.01340	.06210	.10000	.09640	.05970	.05000	.05000	.05000	.05000	.05000	.04710
60	.02290	.03040	.04140	.05000	.02650	.01760	.05400	.07780	.06910	.04940	.04790	.04640	.04490	.04650	.04470	.04130
61	.02580	.03240	.04370	.04250	.02210	.01530	.02400	.04200	.06390	.04760	.04230	.03940	.03790	.03770	.03590	.03350
62	.02850	.03470	.04580	.04230	.03260	.02490	.02800	.03670	.04630	.04580	.03950	.03460	.03080	.03000	.02970	.02920
63	.03130	.03760	.04780	.05000	.04310	.03530	.03360	.04090	.04950	.04320	.03650	.03040	.03000	.02920	.02830	.02780

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.4-1. INITIAL SELENIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	.00170	.00140	.00130	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
2	.00190	.00170	.00140	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
3	.00210	.00190	.00160	.00140	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
4	.00230	.00210	.00180	.00150	.00130	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
5	.00250	.00230	.00200	.00170	.00140	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
6	.00270	.00250	.00220	.00190	.00160	.00130	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
7	.00300	.00270	.00240	.00210	.00180	.00150	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
8	.00320	.00290	.00260	.00230	.00200	.00170	.00140	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
9	.00340	.00310	.00280	.00250	.00220	.00190	.00160	.00130	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
10	.00370	.00340	.00310	.00270	.00240	.00210	.00180	.00150	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100
11	.00390	.00360	.00330	.00300	.00270	.00230	.00200	.00170	.00130	.00100	.00100	.00100	.00100	.00100	.00100	.00100
12	.00420	.00390	.00350	.00320	.00290	.00260	.00220	.00190	.00150	.00100	.00100	.00100	.00100	.00100	.00100	.00100
13	.00440	.00410	.00380	.00350	.00310	.00280	.00250	.00210	.00170	.00110	.00100	.00100	.00100	.00100	.00100	.00100
14	.00470	.00440	.00410	.00370	.00340	.00310	.00270	.00240	.00200	.00130	.00100	.00100	.00100	.00100	.00100	.00100
15	.00510	.00470	.00440	.00410	.00370	.00340	.00300	.00270	.00220	.00160	.00100	.00100	.00100	.00100	.00100	.00100
16	.00550	.00520	.00480	.00440	.00410	.00370	.00340	.00300	.00250	.00190	.00100	.00100	.00100	.00100	.00100	.00100
17	.00600	.00560	.00530	.00490	.00450	.00410	.00370	.00330	.00280	.00210	.00110	.00100	.00100	.00100	.00100	.00100
18	.00640	.00600	.00560	.00520	.00480	.00440	.00400	.00350	.00300	.00230	.00120	.00100	.00100	.00100	.00100	.00100
19	.00670	.00630	.00590	.00540	.00500	.00460	.00410	.00370	.00320	.00240	.00130	.00100	.00100	.00100	.00100	.00100
20	.00690	.00650	.00610	.00560	.00520	.00470	.00430	.00390	.00330	.00250	.00140	.00100	.00100	.00100	.00100	.00100
21	.00710	.00660	.00620	.00580	.00530	.00490	.00440	.00400	.00340	.00260	.00150	.00100	.00100	.00100	.00100	.00100
22	.00720	.00680	.00630	.00590	.00540	.00500	.00450	.00410	.00350	.00270	.00160	.00100	.00100	.00100	.00100	.00100
23	.00730	.00680	.00640	.00600	.00550	.00510	.00460	.00420	.00360	.00290	.00170	.00100	.00100	.00100	.00100	.00100
24	.00740	.00690	.00650	.00610	.00560	.00520	.00470	.00430	.00370	.00300	.00190	.00100	.00100	.00100	.00100	.00100
25	.00750	.00700	.00660	.00610	.00570	.00530	.00480	.00440	.00380	.00310	.00200	.00100	.00100	.00100	.00100	.00100
26	.00750	.00710	.00670	.00620	.00580	.00530	.00490	.00450	.00390	.00320	.00210	.00100	.00100	.00100	.00100	.00100
27	.00760	.00720	.00670	.00630	.00590	.00540	.00500	.00450	.00400	.00320	.00220	.00100	.00100	.00100	.00100	.00100
28	.00770	.00720	.00680	.00640	.00590	.00550	.00510	.00460	.00410	.00330	.00230	.00100	.00100	.00100	.00100	.00100
29	.00770	.00730	.00690	.00640	.00600	.00560	.00520	.00470	.00420	.00340	.00240	.00100	.00100	.00100	.00100	.00100
30	.00780	.00740	.00690	.00650	.00610	.00570	.00520	.00480	.00430	.00350	.00250	.00110	.00100	.00100	.00100	.00100
31	.00790	.00740	.00700	.00660	.00620	.00570	.00530	.00490	.00430	.00360	.00250	.00120	.00100	.00100	.00100	.00100
32	.00790	.00750	.00710	.00670	.00620	.00580	.00540	.00500	.00440	.00370	.00260	.00130	.00100	.00100	.00100	.00100
33	.00800	.00760	.00720	.00670	.00630	.00590	.00550	.00510	.00450	.00380	.00270	.00140	.00100	.00100	.00100	.00100
34	.00820	.00780	.00740	.00700	.00660	.00630	.00590	.00550	.00500	.00430	.00340	.00210	.00100	.00100	.00100	.00100
35	.01000	.01000	.00970	.00930	.00890	.00850	.00810	.00770	.00730	.00660	.00560	.00260	.00100	.00100	.00100	.00100
36	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00990	.00940	.00870	.00650	.00290	.00100	.00100	.00100	.00100
37	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00780	.00360	.00100	.00100	.00100	.00100
38	.03370	.02830	.02020	.01980	.01800	.01620	.01470	.01300	.01000	.01000	.00860	.00390	.00100	.00100	.00100	.00100
39	.04580	.03730	.03390	.03030	.02740	.02500	.02280	.01910	.01460	.01000	.00850	.00400	.00100	.00100	.00100	.00100
40	.05620	.04390	.04010	.03610	.03310	.03010	.02660	.02290	.01840	.01210	.00860	.00400	.00100	.00100	.00100	.00100
41	.07150	.04930	.04420	.04030	.03680	.03320	.02960	.02600	.02150	.01520	.00860	.00410	.00100	.00100	.00100	.00100
42	.08180	.06060	.04790	.04380	.03990	.03630	.03270	.02910	.02460	.01680	.00860	.00420	.00100	.00100	.00100	.00100
43	.08820	.06970	.05330	.04680	.04300	.03940	.03530	**.03060**	.02500	.01660	.00840	.00410	.00100	.00100	.00100	.00100
44	.09210	.07620	.06160	.04950	.04530	.04090	.03640	**.03170**	.02540	.01640	.00830	.00400	.00100	.00100	.00100	.00100
45	.09420	.08010	.06740	.05560	.04760	.04280	.03790	**.03260**	.02550	.01560	.00810	.00400	.00100	.00100	.00100	.00100
46	.09330	.08140	.06960	.05770	.05000	.04430	.03830	**.03240**	.02480	.01400	.00780	.00380	.00100	.00100	.00100	.00100
47	.08600	.07870	.06690	.05500	.05000	.04500	.03830	**.03180**	.02360	.01220	.00750	.00370	.00100	.00100	.00100	**.00100**
48	.08130	.06900	.06230	.05230	.04830	.04270	.03620	**.02960**	.02130	.01000	.00730	.00360	.00100	.00100	.00100	**.00100**
49	.08100	.06300	.05220	.05000	.04590	.03880	.03300	**.02680**	.01860	.00960	.00700	.00340	.00100	.00100	.00100	**.00100**
50	.08060	.06490	.05000	.05000	.04470	.03760	.03050	**.02360**	.01570	.00920	.00670	.00330	.00100	.00100	.00100	**.00100**
51	.09850	.08480	.06050	.05000	.04340	.03630	.02920	**.02220**	.01330	.00880	.00640	.00320	.00100	.00100	.00100	**.00100**
52	.10000	.10000	.09790	.05310	.04310	.03570	.02830	**.02080**	.01150	.00860	.00620	.00310	.00100	.00100	.00100	**.00100**
53	.10000	.10000	.09620	.06220	.04360	.03500	.02670	**.01870**	.00990	.00830	.00600	.00290	.00100	.00100	.00100	**.00100**
54	.08310	.08120	.07580	.06190	.04370	.03390	.02450	**.01550**	.00950	.00800	.00590	.00290	.00100	.00100	.00100	**.00100**
55	.06220	.06220	.05540	.05000	.04280	.03180	.02110	**.01130**	.00910	.00770	.00570	.00280	.00100	.00100	.00100	**.00100**
56	.05000	.05000	.05000	.05000	.03980	.02800	.01670	**.00970**	.00880	.00750	.00550	.00270	.00100	.00100	.00100	**.00100**
57	.05000	.04930	.04460	.04190	.03350	.02250	.01100	**.00940**	.00850	.00720	.00530	.00260	.00100	.00100	.00100	**.00100**
58	.04430	.03960	.03490	.03150	.02640	.01640	.00970	**.00900**	.00820	.00690	.00510	.00250	.00100	.00100	.00100	**.00100**
59	.04000	.03170	.02510	.02040	.01600	.01030	.00940	**.00870**	.00790	.00670	.00490	.00240	.00100	.00100	.00100	**.00100**
60	.03750	.02940	.02110	.01290	.01000	.00960	.00900	**.00850**	.00770	.00650	.00470	.00240	.00100	.00100	.00100	**.00100**
61	.03140	.02760	.02090	.01420	.01000	.00950	.00890	**.00820**	.00740	.00630	.00460	.00230	.00100	.00100	.00100	**.00100**
62	.02890	.02570	.01900	.01230	.00980	.00930	.00870	**.00820**	.00730	.00610	.00450	.00230	.00100	.00100	.00100	**.00100**
63	.02740	.02390	.01720	.01050	.00970	.00910	.00860	**.00800**	.00730	.00610	.00440	.00220	.00100	.00100	.00100	**.00100**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.4-1. INITIAL SELENIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**.00110**	.00560	.00910	.01610	.02420	.03210	.03990	.04680	.05000	.04730	.03870	.02750	.01640	.01240	.02110	.02980
65	**.00130**	.00590	.00960	.01770	.02600	.03410	.04200	.04930	.05000	.04780	.03740	.02630	.01520	.01350	.02220	.03080
66	**.00140**	.00620	.01010	.01920	.02780	.03590	.04400	.05000	.05000	.04720	.03610	.02500	.01390	.01460	.02320	.03190
67	**.00160**	.00650	.01140	.02070	.02950	.03780	.04600	.05000	.05000	.04590	.03480	.02370	.01260	.01560	.02430	.03300
68	**.00180**	.00680	.01240	.02200	.03110	.03960	.04790	.05000	.05000	.04470	.03350	.02240	.01130	.01670	.02540	.03400
69	**.00200**	.00720	.01310	.02320	.03250	.04130	.04970	.05000	.05000	.04340	.03220	.02110	.01000	.01780	.02640	.03510
70	**.00220**	.00750	.01390	.02400	.03380	.04290	.05000	.05000	.05000	.04250	.03100	.01990	.01010	.01880	.02750	.03620
71	**.00240**	.00790	.01490	.02480	.03500	.04440	.05000	.05000	.05000	.04160	.02970	.01860	.01120	.01990	.02860	.03720
72	**.00260**	.00820	.01610	.02570	.03570	.04570	.05000	.05000	.05000	.03960	.02840	.01730	.01230	.02100	.02960	.03830
73	**.00270**	.00850	.01690	.02680	.03640	.04670	.05000	.05000	.05000	.03820	.02710	.01600	.01330	.02200	.03070	.03930
74	**.00270**	.00880	.01750	.02740	.03730	.04720	.05000	.05000	.05000	.03650	.02590	.01470	.01440	.02310	.03180	.03860
75	**.00280**	.00910	.01810	.02780	.03760	.04730	.05000	.05000	.05000	.03430	.02460	.01340	.01550	.02420	.03280	.03660
76	**.00280**	.00940	.01860	.02830	.03780	.04500	.05000	.05000	.05000	.03240	.02330	.01220	.01660	.02520	.03210	.03410
77	**.00290**	.00970	.01910	.02830	.03470	.04110	.04820	.05000	.04760	.02930	.02200	.01090	.01760	.02630	.03170	.03150
78	**.00290**	.01000	.01800	.02440	.03080	.03710	.04230	.04900	.04340	.02610	.02070	.01000	.01870	.02570	.02930	.02900
79	**.00300**	.01000	.01400	.02040	.02680	.03320	.03650	.04020	.03660	.02290	.01970	.01110	.01970	.02500	.02680	.02640
80	**.00310**	.01000	.01010	.01650	.02290	.02930	.03070	.03140	.02740	.01810	.01620	.01210	.01930	.02450	.02420	.02380
81	**.00330**	.01000	.01000	.01250	.01890	.02530	.02490	.02260	.01710	.01120	.01270	.01320	.01850	.02200	.02160	.02130
82	**.00350**	.01000	.01000	.01000	.01500	.02140	.01920	.01370	.01000	.01000	.01000	.01290	.01800	.01940	.01910	.01870
83	**.00370**	.01000	.01000	.01000	.01100	.01740	.01360	.01000	.01000	.01000	.01000	.01200	.01720	.01690	.01650	.01620
84	**.00400**	.01000	.01000	.01000	.01000	.01350	.01000	.01000	.01000	.01000	.01000	.01140	.01470	.01430	.01400	.01360
85	**.00420**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01100	.01210	.01180	.01140	.01100
86	**.00440**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
87	**.00470**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
88	**.00500**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
89	**.00660**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
90	.00720	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
91	.00750	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
92	.00770	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01090
93	.00800	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01360
94	.00820	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01250	.01630
95	.00850	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01140	.01520	.01900
96	.00880	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01030	.01410	.01790	.02180
97	.00910	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01300	.01690	.02070	.02450
98	.00940	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.01000	.01000	.01270	.01960	.02340	.02720
99	.00970	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.01000	.01000	.01240	.02060	.02610	.02990
100	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.01000	.01300	.02180	.02790	.03260
101	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.01000	.01370	.02260	.02940	.03490
102	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.01000	.01520	.02450	.03120	.03670
103	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01160	.01750	.02620	.03290	.03890
104	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01150	.02060	.02740	.03570	.04110
105	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01040	.02150	.02990	.03790	.04330
106	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	**.01000**	.01000	.01010	.01050	.01870	.03150	.03960	.04600
107	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01010	.01060	.01600	.02870	.04140	.04870
108	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	**.01000**	.01000	.01020	.01070	.01320	.02590	.03870	.05800
109	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01030	.01070	.01110	.02320	.03590	.05030
110	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01040	.01080	.01130	.02040	.03310	.04590
111	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01050	.01090	.01130	.01760	.03030	.04310
112	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01010	.01060	.01100	.01140	.01480	.02760	.04030
113	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01020	.01060	.01110	.01150	.01200	.02480	.03750
114	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01030	.01070	.01120	.01160	.01200	.02200	.03480
115	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01040	.01080	.01120	.01170	.01210	.01920	.03200
116	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01050	.01090	.01130	.01180	.01220	.01650	.02920
117	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01010	.01050	.01100	.01140	.01180	.01230	.01370	.02640
118	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01020	.01060	.01110	.01150	.01190	.01230	.01280	.02370
119	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01030	.01070	.01110	.01160	.01200	.01240	.01290	.02090
120	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01040	.01080	.01120	.01170	.01210	.01250	.01300	.01740
121	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01010	.01050	.01090	.01140	.01180	.01220	.01270	.01310	.01350
122	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01030	.01070	.01110	.01160	.01200	.01240	.01290	.01330	.01380
123	.01000	.01000	.01000	.01000	.01000	.01000	.01010	.01050	.01100	.01140	.01180	.01230	.01270	.01320	.01360	.01400
124	.01000	.01000	.01000	.01000	.01000	.01000	.01050	.01090	.01130	.01180	.01220	.01260	.01310	.01350	.01390	.01430
125	.01000	.01000	.01000	.01000	.01000	.01040	.01090	.01130	.01160	.01200	.01240	.01270	.01300	.01320	.01330	.01340

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.4-1. INITIAL SELENIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	.03360	.04120	.04980	.05000	.05000	.04580	.03970	.04610	.04660	.03940	.03260	.02970	.02880	.02790	.02700	.02640
65	.03660	.04290	.05000	.05000	.05000	.05000	.04850	.04820	.04170	.03470	.02950	.02840	.02750	.02650	.02560	.02490
66	.03990	.04450	.05000	.05000	.05000	.05000	.04810	.04200	.03590	.02990	.02840	.02700	.02610	.02520	.02430	.02350
67	.04110	.04630	.05000	.05000	.04880	.04840	.04620	.04070	.03510	.02960	.02740	.02590	.02470	.02380	.02290	.02210
68	.04220	.04830	.05000	.04790	.04630	.04530	.04490	.04100	.03540	.02990	.02620	.02480	.02340	.02250	.02150	.02070
69	.04320	.05000	.04770	.04550	.04400	.04270	.04190	.04100	.03570	.03020	.02490	.02370	.02220	.02110	.02020	.01930
70	.04430	.04870	.04530	.04310	.04160	.04030	.03920	.03850	.03600	.03050	.02500	.02240	.02120	.01970	.01880	.01790
71	.04540	.04630	.04300	.04080	.03920	.03800	.03670	.03560	.03490	.03080	.02530	.02120	.02000	.01860	.01750	.01660
72	.04400	.04370	.04120	.03840	.03680	.03560	.03440	.03310	.03200	.03060	.02560	.02000	.01870	.01750	.01610	.01520
73	.04140	.04110	.04070	.03640	.03450	.03320	.03200	.03070	.02950	.02860	.02590	.02040	.01740	.01620	.01500	.01380
74	.03890	.03860	.03840	.03540	.03270	.03090	.02960	.02840	.02710	.02590	.02440	.02070	.01610	.01490	.01370	.01250
75	.03630	.03600	.03580	.03510	.03170	.02950	.02740	.02600	.02480	.02350	.02220	.02020	.01540	.01360	.01240	.01120
76	.03370	.03350	.03320	.03310	.03110	.02850	.02620	.02420	.02240	.02110	.01990	.01830	.01570	.01230	.01120	.01000
77	.03120	.03090	.03070	.03050	.03040	.02790	.02530	.02300	.02100	.01890	.01750	.01610	.01400	.01110	.01000	.01000
78	.02860	.02830	.02810	.02800	.02780	.02780	.02480	.02210	.01980	.01770	.01570	.01390	.01220	.01000	.01000	.01000
79	.02610	.02580	.02550	.02540	.02530	.02520	.02470	.02160	.01900	.01670	.01450	.01250	.01040	.01000	.01000	.01000
80	.02350	.02320	.02300	.02280	.02270	.02260	.02250	.02140	.01840	.01580	.01350	.01130	.01000	.01000	.01000	.01000
81	.02100	.02060	.02040	.02030	.02020	.02010	.02000	.01990	.01820	.01520	.01260	.01030	.01000	.01000	.01000	.01000
82	.01840	.01810	.01790	.01770	.01760	.01750	.01740	.01730	.01720	.01500	.01210	.01000	.01000	.01000	.01000	.01000
83	.01580	.01550	.01530	.01520	.01510	.01500	.01490	.01480	.01470	.01460	.01180	.01000	.01000	.01000	.01000	.01000
84	.01330	.01300	.01270	.01260	.01250	.01240	.01230	.01220	.01210	.01200	.01190	.01000	.01000	.01000	.01000	.01000
85	.01070	.01040	.01020	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000
86	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01030	.01130	.01220	.01000	.01000	.01000	.01000	.01000
87	.01000	.01000	.01000	.01000	.01000	.01020	.01110	.01210	.01300	.01400	.01350	.01160	.01000	.01000	.01000	.01000
88	.01000	.01000	.01000	.01070	.01190	.01290	.01380	.01480	.01570	.01650	.01560	.01370	.01100	.01000	.01000	.01000
89	.01000	.01000	.01180	.01350	.01470	.01560	.01660	.01750	.01850	.01840	.01790	.01580	.01350	.01090	.01000	.01000
90	.01000	.01210	.01450	.01620	.01740	.01830	.01930	.02020	.02080	.02080	.02030	.01840	.01610	.01350	.01140	.01000
91	.01180	.01480	.01720	.01890	.02010	.02100	.02200	.02290	.02330	.02350	.02260	.02090	.01860	.01620	.01380	.01040
92	.01450	.01760	.01990	.02160	.02280	.02370	.02470	.02540	.02560	.02600	.02490	.02390	.02130	.01910	.01590	.01250
93	.01720	.02030	.02270	.02430	.02550	.02650	.02740	.02800	.02870	.02890	.02780	.02640	.02390	.02130	.01800	.01460
94	.01990	.02300	.02540	.02700	.02820	.02920	.03000	.03060	.03150	.03130	.03070	.02900	.02680	.02340	.02010	.01670
95	.02260	.02570	.02810	.02980	.03100	.03190	.03260	.03350	.03420	.03410	.03380	.03170	.02890	.02550	.02210	.01880
96	.02530	.02840	.03080	.03250	.03370	.03460	.03540	.03640	.03720	.03710	.03680	.03430	.03100	.02760	.02430	.02090
97	.02800	.03110	.03350	.03520	.03640	.03730	.03830	.03940	.04000	.04040	.03940	.03640	.03310	.02970	.02630	.02270
98	.03080	.03390	.03620	.03790	.03920	.04010	.04140	.04240	.04310	.04380	.04180	.03850	.03510	.03140	.02700	.02270
99	.03350	.03660	.03900	.04060	.04200	.04310	.04440	.04550	.04630	.04710	.04390	.04010	.03570	.03150	.02720	.02300
100	.03620	.03930	.04170	.04340	.04490	.04610	.04750	.04870	.04980	.05220	.04460	.04040	.03610	.03190	.02760	.02340
101	.03890	.04200	.04440	.04630	.04790	.04920	.05310	.05890	.06410	.08070	.07130	.06190	.05260	.04320	.03380	.02440
102	.04140	.04470	.04710	.04930	.05580	.06320	.06920	.07390	.08090	.10930	.09990	.09050	.08110	.07170	.06230	.05290
103	.04350	.04730	.05010	.06580	.07530	.08130	.08600	.08940	.10850	.13780	.12840	.11910	.10970	.10030	.09090	.07740
104	.04580	.04960	.07150	.08690	.09560	.10110	.10920	.11730	.13620	.16640	.15700	.14760	.13670	.11790	.09910	.08040
105	.04820	.06670	.09280	.11270	.12790	.13920	.15150	.16400	.17990	.19490	.17720	.15830	.13940	.12050	.10170	.08280
106	.05450	.08610	.11930	.14420	.16140	.17540	.19060	.19730	.19090	.18450	.17720	.15910	.14040	.12160	.10280	.08400
107	.07120	.10720	.14820	.17450	.19340	.19660	.19050	.18410	.17760	.17040	.16310	.15450	.14020	.12170	.10310	.08440
108	.08650	.13490	.17650	.19880	.19150	.18580	.17930	.17280	.16580	.15790	.15070	.14160	.13360	.12130	.10290	.08440
109	.10000	.16280	.19840	.18960	.18210	.17570	.16960	.16290	.15540	.14800	.13980	.13220	.12230	.11270	.10100	.08400
110	.12950	.18980	.18880	.18030	.17330	.16680	.16020	.15370	.14720	.13950	.13110	.12260	.11280	.10400	.09230	.08100
111	.13360	.19630	.17910	.17110	.16450	.15790	.15140	.14490	.13840	.13130	.12350	.11440	.10580	.09560	.08590	.07390
112	.11190	.18700	.16950	.16160	.15560	.14910	.14260	.13600	.12950	.12300	.11610	.10850	.09980	.08930	.07940	.06780
113	.09020	.17720	.15990	.15230	.14680	.14030	.13370	.12720	.12070	.11420	.10760	.10110	.09310	.08460	.07420	.06360
114	.07540	.16570	.15030	.14260	.13790	.13140	.12490	.11840	.11180	.10530	.09880	.09230	.08580	.07930	.07020	.05990
115	.06440	.15440	.14060	.13300	.12910	.12260	.11610	.10950	.10300	.09650	.09000	.08340	.07690	.07040	.06390	.05580
116	.05330	.14340	.13140	.12330	.12030	.11370	.10720	.10070	.09420	.08760	.08110	.07460	.06810	.06150	.05500	.04850
117	.04230	.13240	.12210	.11390	.11140	.10490	.09840	.09180	.08530	.07880	.07230	.06580	.05920	.05270	.04620	.03960
118	.03220	.12130	.11280	.10450	.10260	.09610	.08950	.08300	.07650	.07000	.06340	.05690	.05040	.04390	.03730	.03080
119	.03160	.11030	.10350	.09430	.09340	.08720	.08070	.07420	.06760	.06110	.05460	.04810	.04150	.03500	.02850	.02200
120	.02940	.09780	.09180	.08190	.08150	.07620	.06960	.06310	.05660	.05010	.04350	.03700	.03050	.02400	.01750	.01140
121	.02450	.08030	.07160	.06390	.06460	.06070	.05420	.04760	.04110	.03460	.02810	.02150	.01500	.01210	.01170	.01130
122	.01760	.02900	.04290	.03950	.04020	.03860	.03210	.02550	.01900	.01350	.01320	.01280	.01250	.01220	.01180	.01140
123	.01440	.01770	.01500	.01500	.01500	.01500	.01490	.01470	.01440	.01410	.01380	.01340	.01300	.01240	.01190	.01150
124	.01460	.01490	**.01500**	.01500	.01500	.01500	.01500	.01500	.01500	.01500	.01440	.01380	.01320	.01260	.01200	.01140
125	.01360	.01370	**.01380**	**.01380**	**.01390**	**.01410**	**.01420**	**.01430**	**.01430**	**.01410**	**.01360**	**.01310**	**.01260**	**.01200**	**.01150**	**.01100**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.4-1. INITIAL SELENIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	.02600	.02200	.01530	.01000	.00950	.00890	.00840	.00780	.00710	.00610	.00430	.00210	.00100	.00100	.00100	**.00100**
65	.02460	.02010	.01350	.00990	.00930	.00880	.00820	.00760	.00690	.00590	.00430	.00210	.00100	.00100	.00100	**.00100**
66	.02320	.01830	.01160	.00970	.00920	.00860	.00800	.00750	.00680	.00580	.00430	.00210	.00100	.00100	.00100	**.00100**
67	.02180	.01640	.01000	.00960	.00900	.00840	.00790	.00730	.00660	.00560	.00420	.00210	.00100	.00100	.00100	**.00100**
68	.02040	.01460	.00990	.00940	.00880	.00820	.00770	.00710	.00640	.00540	.00400	.00200	.00100	.00100	.00100	**.00100**
69	.01890	.01270	.00980	.00920	.00860	.00810	.00750	.00690	.00620	.00520	.00380	.00200	.00100	.00100	.00100	**.00100**
70	.01750	.01080	.00960	.00900	.00850	.00790	.00730	.00680	.00610	.00510	.00360	.00180	.00100	.00100	.00100	**.00100**
71	.01570	.01000	.00940	.00890	.00830	.00770	.00720	.00660	.00590	.00490	.00350	.00170	.00100	.00100	.00100	**.00100**
72	.01380	.00980	.00930	.00870	.00810	.00750	.00700	.00640	.00570	.00470	.00340	.00170	.00100	.00100	.00100	**.00100**
73	.01200	.00960	.00910	.00850	.00790	.00740	.00680	.00620	.00560	.00470	.00340	.00170	.00100	.00100	.00100	**.00100**
74	.01010	.00950	.00890	.00830	.00780	.00720	.00670	.00620	.00560	.00470	.00340	.00170	.00100	.00100	.00100	**.00100**
75	.00990	.00930	.00880	.00830	.00780	.00720	.00670	.00620	.00560	.00470	.00340	.00170	.00100	.00100	.00100	**.00100**
76	.00980	.00930	.00880	.00830	.00770	.00720	.00670	.00620	.00550	.00460	.00330	.00170	.00100	.00100	.00100	**.00100**
77	.00990	.00940	.00880	.00830	.00770	.00720	.00670	.00620	.00550	.00460	.00330	.00160	.00100	.00100	.00100	**.00100**
78	.01000	.00950	.00890	.00840	.00780	.00720	.00670	.00620	.00550	.00460	.00330	.00160	.00100	.00100	.00100	**.00100**
79	.01000	.00960	.00900	.00850	.00790	.00740	.00680	.00620	.00550	.00460	.00330	.00160	.00100	.00100	.00100	**.00100**
80	.01000	.00970	.00910	.00860	.00800	.00740	.00690	.00630	.00560	.00470	.00330	.00160	.00100	.00100	.00100	**.00100**
81	.01000	.00970	.00920	.00860	.00810	.00750	.00700	.00640	.00570	.00470	.00340	.00160	.00100	.00100	.00100	.00100
82	.01000	.00980	.00930	.00870	.00820	.00760	.00710	.00650	.00580	.00490	.00350	.00160	.00100	.00100	.00100	.00100
83	.01000	.00990	.00940	.00880	.00830	.00770	.00720	.00660	.00590	.00490	.00360	.00160	.00100	.00100	.00100	.00100
84	.01000	.01000	.00950	.00890	.00840	.00780	.00720	.00670	.00600	.00500	.00360	.00160	.00100	.00100	.00100	.00100
85	.01000	.01000	.00960	.00900	.00850	.00790	.00730	.00680	.00610	.00510	.00360	.00160	.00100	.00100	.00100	.00100
86	.01000	.01000	.00970	.00910	.00860	.00800	.00740	.00690	.00620	.00510	.00360	.00160	.00100	.00100	.00100	.00100
87	.01000	.01000	.00970	.00920	.00860	.00810	.00750	.00700	.00620	.00520	.00360	.00160	.00100	.00100	.00100	.00100
88	.01000	.01000	.00980	.00930	.00870	.00820	.00760	.00700	.00630	.00520	.00360	.00160	.00100	.00100	.00100	.00100
89	.01000	.01000	.00990	.00940	.00890	.00830	.00770	.00710	.00630	.00520	.00360	.00150	.00100	.00100	.00100	.00100
90	.01000	.01000	.01000	.00960	.00900	.00830	.00770	.00710	.00630	.00520	.00360	.00150	.00100	.00100	.00100	.00100
91	.01000	.01000	.01000	.00950	.00890	.00830	.00770	.00700	.00630	.00510	.00360	.00150	.00100	.00100	.00100	.00100
92	.01000	.01000	.01000	.00950	.00890	.00820	.00760	.00700	.00620	.00510	.00350	.00150	.00100	.00100	.00100	.00100
93	.01130	.01000	.01000	.00950	.00880	.00820	.00760	.00690	.00620	.00510	.00350	.00150	.00100	.00100	.00100	.00100
94	.01340	.01000	.01000	.00940	.00880	.00820	.00750	.00690	.00610	.00500	.00350	.00140	.00100	.00100	.00100	.00100
95	.01540	.01210	.01000	.00940	.00870	.00810	.00750	.00690	.00610	.00500	.00340	.00140	.00100	.00100	.00100	.00100
96	.01760	.01410	.01000	.00930	.00870	.00810	.00750	.00680	.00610	.00500	.00340	.00140	.00100	.00100	.00100	.00100
97	.01830	.01400	.01000	.00930	.00870	.00810	.00750	.00680	.00610	.00500	.00340	.00140	.00100	.00100	.00100	.00100
98	.01840	.01410	.01000	.00940	.00870	.00810	.00750	.00680	.00610	.00500	.00340	.00140	.00100	.00100	.00100	.00100
99	.01870	.01450	.01020	.00940	.00880	.00810	.00750	.00690	.00610	.00500	.00340	.00130	.00100	.00100	.00100	.00100
100	.01920	.01490	.01070	.00950	.00880	.00820	.00760	.00690	.00610	.00500	.00340	.00130	.00100	.00100	.00100	.00100
101	.01970	.01550	.01120	.00950	.00890	.00830	.00760	.00700	.00620	.00500	.00340	.00130	.00100	.00100	.00100	.00100
102	.04360	.03420	.01810	.00960	.00900	.00830	.00770	.00700	.00620	.00510	.00340	.00130	.00100	.00100	.00100	.00100
103	.05860	.03980	.02100	.00970	.00910	.00840	.00780	.00710	.00630	.00510	.00340	.00130	.00100	.00100	.00100	.00100
104	.06160	.04280	.02390	.00980	.00920	.00850	.00780	.00720	.00630	.00510	.00340	.00130	.00100	.00100	.00100	.00100
105	.06390	.04500	.02610	.00990	.00920	.00850	.00790	.00720	.00630	.00520	.00340	.00120	.00100	.00100	.00100	.00100
106	.06510	.04630	.02740	.01000	.00930	.00860	.00790	.00720	.00640	.00520	.00340	.00120	.00100	.00100	.00100	.00100
107	.06570	.04690	.02810	.01000	.00930	.00860	.00790	.00720	.00640	.00520	.00340	.00120	.00100	.00100	.00100	.00100
108	.06580	.04720	.02850	.01000	.00930	.00860	.00790	.00720	.00640	.00520	.00340	.00120	.00100	.00100	.00100	.00100
109	.06550	.04700	.02850	.01000	.00930	.00860	.00790	.00720	.00640	.00510	.00340	.00120	.00100	.00100	.00100	.00100
110	.06510	.04670	.02820	.01000	.00930	.00860	.00790	.00720	.00630	.00510	.00340	.00110	.00100	.00100	.00100	.00100
111	.06130	.04610	.02780	.01000	.00920	.00850	.00780	.00700	.00620	.00500	.00320	.00100	.00100	.00100	.00100	.00100
112	.05600	.04300	.02670	.01000	.00920	.00840	.00770	.00690	.00600	.00480	.00310	.00100	.00100	.00100	.00100	.00100
113	.05150	.03940	.02460	.00990	.00910	.00830	.00750	.00680	.00580	.00460	.00280	.00100	.00100	.00100	.00100	.00100
114	.04800	.03620	.02280	.00990	.00910	.00820	.00740	.00670	.00570	.00430	.00250	.00100	.00100	.00100	.00100	.00100
115	.04580	.03370	.02140	.00990	.00900	.00810	.00730	.00650	.00550	.00410	.00220	.00100	.00100	.00100	.00100	.00100
116	.04200	.03210	.02010	.00980	.00890	.00800	.00720	.00630	.00530	.00390	.00190	.00100	.00100	.00100	.00100	.00100
117	.03310	.02660	.01890	.00980	.00880	.00790	.00700	.00610	.00510	.00360	.00160	.00100	.00100	.00100	.00100	.00100
118	.02430	.01780	.01120	.00970	.00870	.00780	.00680	.00590	.00480	.00330	.00120	.00100	.00100	.00100	.00100	.00100
119	.01540	.01060	.01020	.00960	.00860	.00760	.00670	.00570	.00460	.00300	.00100	.00100	.00100	.00100	.00100	.00100
120	.01100	.01060	.01020	.00950	.00850	.00740	.00640	.00540	.00420	.00250	.00100	.00100	.00100	.00100	.00100	.00100
121	.01090	.01060	.01020	.00930	.00820	.00710	.00600	.00490	.00360	.00190	.00100	.00100	.00100	.00100	.00100	.00100
122	.01100	.01060	.01010	.00900	.00770	.00640	.00520	.00400	.00260	.00100	.00100	.00100	.00100	.00100	.00100	.00100
123	.01090	.01040	.00980	.00830	.00680	.00530	.00390	.00250	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
124	.01080	.01020	.00870	.00670	.00480	.00300	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
125	**.01050**	**.00970**	**.00840**	**.00320**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**	**.00100**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

E.5 NICKEL TRANSPORT

Nickel concentrations have been significantly attenuated in the Lucky Mc aquifer. Figure E.5-1 shows the calibration of the distribution coefficients for nickel at well P-3. Distribution coefficients of 0.1, 0.02 and 0.004 ft^3/lb are presented and compared to the observed changes in nickel concentrations from 1993 through early 2000. This plot shows that a distribution coefficient of 0.02 ft^3/lb best fits the observed data. This distribution coefficient is equivalent to a retardation factor of 13 when the specific yield is 0.2. The variations in nickel concentrations versus predictions are presented in Figure E.5-2 for POC well T1-12. This plot shows the variations expected for these same three distribution coefficients. The distribution coefficient of 0.02 ft^3/lb best fits the T1-12 data also. Table E.5-1 presents the initial nickel concentrations used in the modeling of this constituent.

Figure 2.2-3 shows the predictions of nickel concentrations versus time for Scenarios 1 and 2. The concentration in POC well T1-12 is predicted to peak at 0.85 mg/l. The simulations indicate that the concentrations further downgradient at T1-22 will peak at a lower level of 0.55 mg/l. The concentrations have been greatly attenuated further downgradient in Fraser Draw and these simulations predict that the maximum concentration at POE well AL-6 will be less than the site standard of 0.05 mg/l. A POE concentration of 0.15 mg/l is proposed, based on the 95% confident level of the nickel data for background well T1-6. This POE concentration will make it unlikely that the POE level could be exceeded by only natural background concentrations.

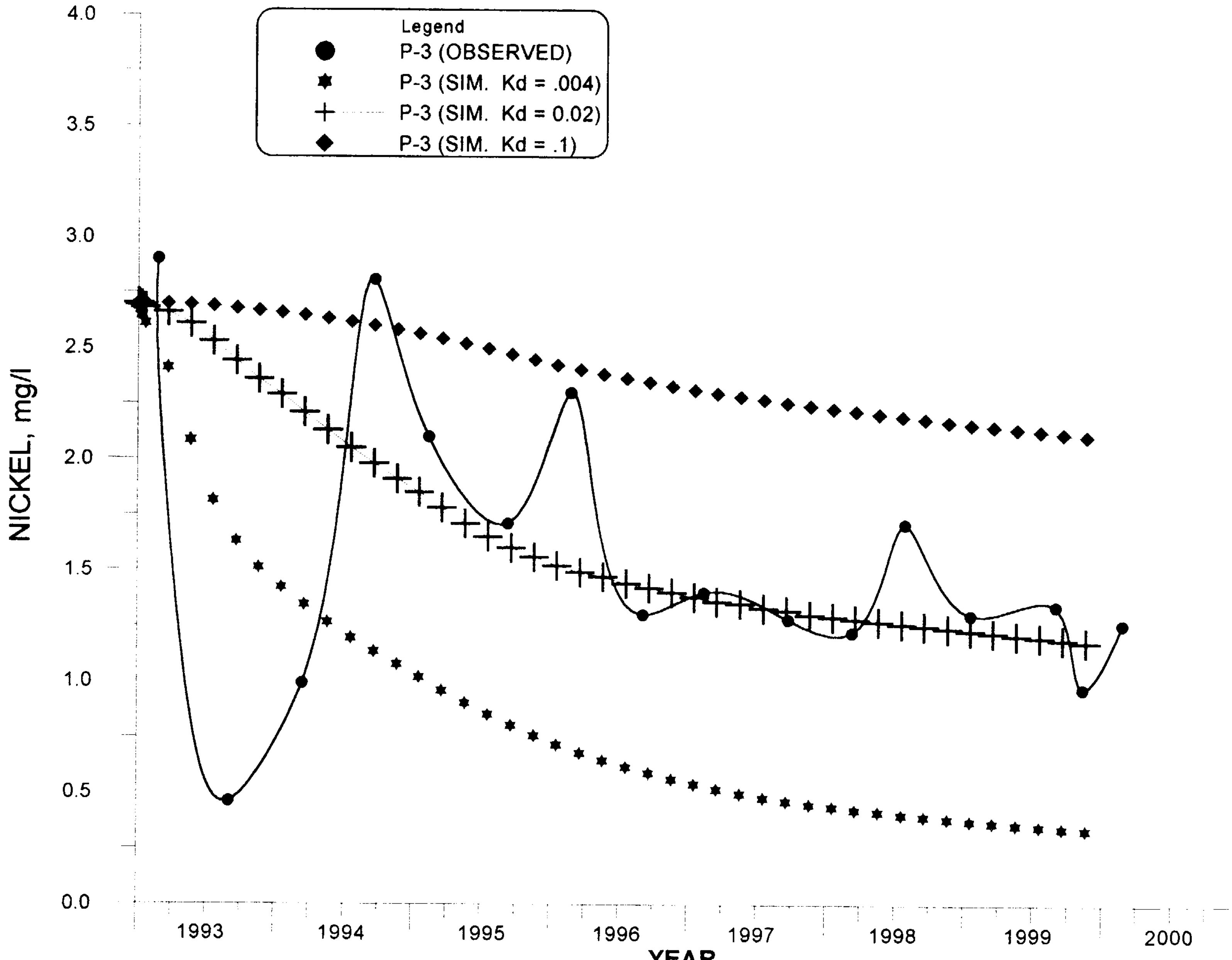

FIGURE E.5-1. NICKEL MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL P-3.

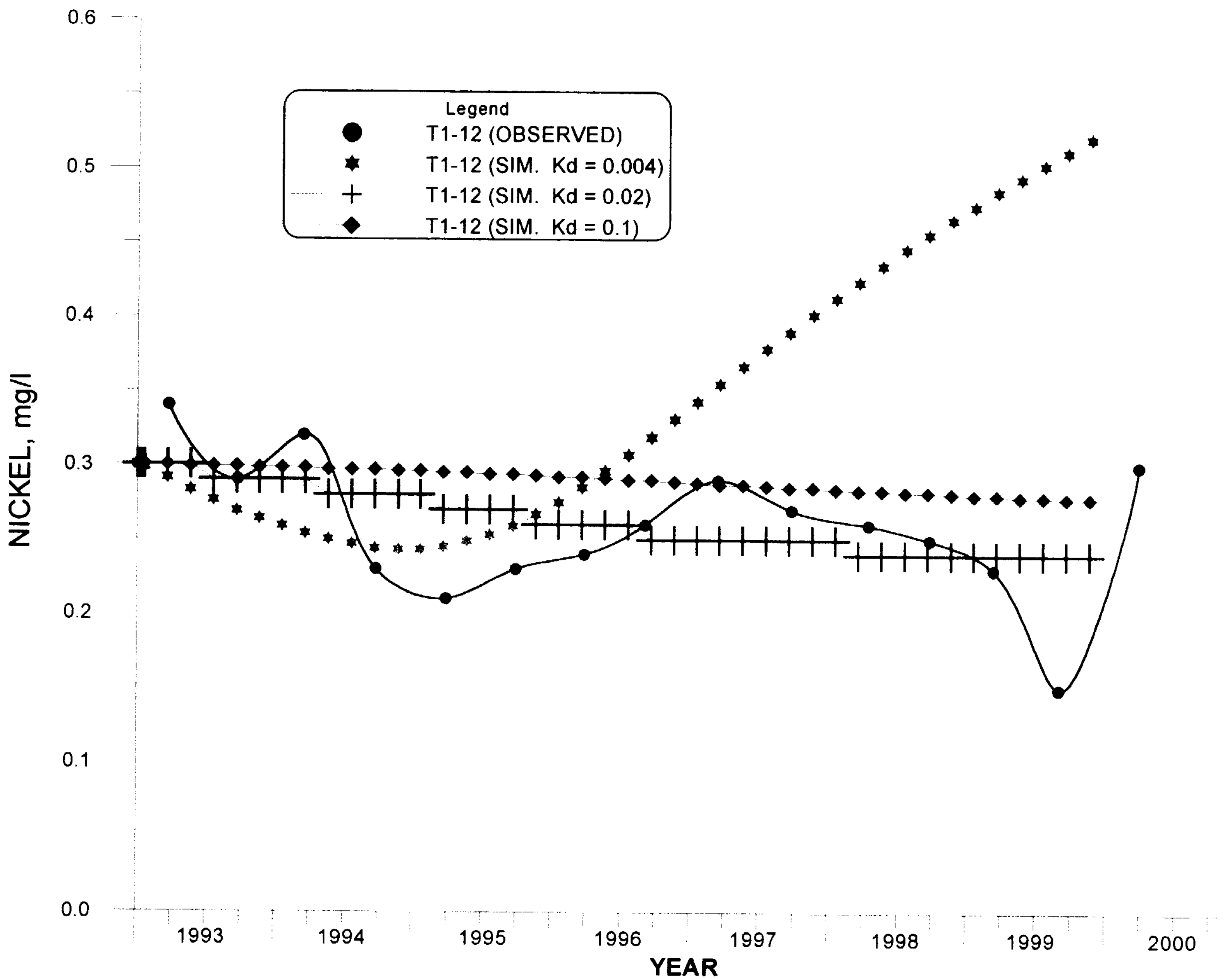

FIGURE E.5-2. NICKEL MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL T1-12.

TABLE E.5-1. INITIAL NICKEL CONCENTRATIONS, 2000, IN mg/l.

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
2	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
3	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
4	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
5	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
6	.00210	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
7	.00200	.00270	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
8	.00200	.00250	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
9	.00200	.00220	.00310	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
10	.00200	.00200	.00280	.00240	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
11	.00200	.00200	.00260	.00340	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
12	.00200	.00200	.00230	.00310	.00390	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
13	.00200	.00200	.00210	.00290	.00370	.00210	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
14	.00200	.00200	.00200	.00260	.00340	.00430	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
15	.00200	.00200	.00200	.00240	.00320	.00400	.00440	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
16	.00200	.00200	.00200	.00220	.00300	.00380	.00460	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
17	.00200	.00200	.00200	.00200	.00270	.00350	.00430	.00520	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
18	.00200	.00200	.00200	.00200	.00250	.00330	.00410	.00490	.00400	.00200	.00200	.00200	.00200	.00200	.00200	.00200
19	.00200	.00200	.00200	.00200	.00220	.00300	.00390	.00470	.00550	.00200	.00200	.00200	.00200	.00200	.00200	.00200
20	.00200	.00200	.00200	.00200	.00200	.00280	.00360	.00440	.00520	.00610	.00200	.00200	.00200	.00200	.00200	.00200
21	.00200	.00200	.00200	.00200	.00200	.00250	.00340	.00420	.00500	.00580	.00370	.00200	.00200	.00200	.00200	.00200
22	.00200	.00200	.00200	.00200	.00200	.00230	.00310	.00390	.00470	.00560	.00640	.00200	.00200	.00200	.00200	.00200
23	.00200	.00200	.00200	.00200	.00200	.00210	.00290	.00370	.00450	.00530	.00610	.00590	.00200	.00200	.00200	.00200
24	.00200	.00200	.00200	.00200	.00200	.00200	.00260	.00340	.00430	.00510	.00590	.00670	.00330	.00200	.00200	.00200
25	.00200	.00200	.00200	.00200	.00200	.00200	.00240	.00320	.00400	.00480	.00560	.00640	.00730	.00200	.00200	.00200
26	.00200	.00200	.00200	.00200	.00200	.00200	.00210	.00300	.00380	.00460	.00540	.00620	.00700	.00560	.00200	.00200
27	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00270	.00350	.00430	.00510	.00600	.00680	.00760	.00300	.00200
28	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00250	.00330	.00410	.00490	.00570	.00650	.00730	.00790	.00200
29	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00220	.00300	.00380	.00470	.00550	.00630	.00710	.00790	.00520
30	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00280	.00360	.00440	.00520	.00600	.00680	.00770	.00850
31	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00250	.00340	.00420	.00500	.00580	.00660	.00740	.00820
32	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00230	.00310	.00390	.00470	.00550	.00640	.00720	.00800
33	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00290	.00370	.00450	.00530	.00610	.00690	.00770
34	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00260	.00340	.00420	.00510	.00590	.00670	.00750
35	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00240	.00320	.00400	.00480	.00560	.00640	.00720
36	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00210	.00300	.00380	.00460	.00540	.00620	.00700
37	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00270	.00360	.00440	.00520	.00440	.00200
38	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00260	.00340	.00200	.00200	.00200	.00200
39	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00230	.00200	.00200	.00200	.00200	.00200
40	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00390	.00520	.00540	.00450	.00200	.00200	.00200	.00200	.00200
41	.00200	.00200	.00200	.00200	.00200	.00200	.00540	.00830	.00970	.00960	.00850	.00220	.00200	.00200	.00200	.00200
42	.00200	.00200	.00200	.00200	.00200	.00480	.01000	[illegible]	.01410	.01380	.01230	.00560	.00200	.00200	.00200	.00200
43	.00200	.00200	.00200	.00200	.00200	.00900	.01450	.01740	.01860	.01790	.01620	.00910	.00200	.00200	.00200	.00200
44	.00200	.00200	.00200	.00200	.00470	.01330	.01890	.02190	.02300	.02210	.02000	.01260	.00200	.00200	.00200	.00200
45	.00200	.00200	.00200	.00200	.00880	.01740	.02330	.02640	.02750	.02610	.02380	.01600	.00360	.00200	.00200	.00200
46	.00200	.00200	.00200	.00420	.01280	.02160	.02780	.03090	.03190	.03030	.02750	.01960	.00660	.00200	.00200	.00200
47	.00200	.00200	.00200	.00810	.01680	.02570	.03220	.03540	.03640	.03430	.03130	.02340	.00900	.00200	.00200	.00200
48	.00200	.00200	.00370	.01190	.02070	.02980	.03660	.03990	.04090	.03840	.03490	.02720	.01090	.00200	.00200	.00200
49	.00200	.00200	.00730	.01570	.02470	.03390	.04100	.04440	.04530	.04240	.03850	.03120	.01300	.00200	.00200	.00200
50	.00200	.00470	.01080	.01940	.02850	.03790	.04540	.04890	.04980	.04650	.04240	.03450	.01590	.00200	.00200	.00200
51	.00260	.00800	.01440	.02300	.03230	.04190	.04980	.08330	.07450	.05210	.04640	.03770	.01950	.00200	.00200	.00200
52	.00560	.01120	.01790	.02660	.03610	.04590	.11090	.21290	.09860	.06910	.05140	.04210	.02480	.00200	.00200	.00200
53	.00840	.01430	.02130	.03010	.03970	.04980	.26650	.39250	.26900	.08500	.06380	.04770	.03070	.00200	.00200	.00200
54	.01110	.01740	.02460	.03340	.04340	.10930	.42410	.50000	.44720	.09990	.07590	.05710	.03730	.00310	.00200	.00200
55	.01380	.02040	.02800	.03670	.04690	.23520	.50000	.50000	.50000	.26240	.08780	.06780	.04470	.01020	.00200	.00200
56	.01610	.02300	.03080	.03980	.05360	.35720	.50000	.50000	.50000	.42280	.09940	.07860	.05370	.01780	.00200	.00200
57	.01840	.02550	.03340	.04290	.09440	.47000	.50000	.50000	.50000	.50000	.27400	.08970	.06380	.02600	.00200	.00200
58	.02050	.02790	.03600	.04600	.19170	.50000	.50000	.50000	.50000	.50000	.44140	.10950	.07220	.03450	.00200	.00200
59	.02200	.03020	.03860	.04890	.29520	.50000	.50000	.50000	.50000	.50000	.50000	.20930	.07860	.04240	.00200	.00200
60	.02340	.03270	.04110	.06860	.38600	.50000	.50000	.50000	.50000	.50000	.50000	.22990	.11720	.05000	.01020	.00200
61	.02480	.03470	.04330	.09260	.47020	.50000	.50000	.50000	.50000	.50000	.50000	.27870	.16030	.07830	.01880	.00200
62	.02620	.03660	.04520	.15460	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.32750	.20340	.10840	.02720	.00200
63	.02760	.03840	.04710	.23390	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.37630	.24660	.14590	.03550	.01080

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.5-1. INITIAL NICKEL CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**.00200**	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
2	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
3	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
4	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
5	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
6	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
7	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
8	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
9	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
10	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
11	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
12	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
13	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
14	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
15	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
16	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
17	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
18	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
19	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
20	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
21	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
22	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
23	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
24	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
25	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
26	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
27	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
28	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
29	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
30	.00310	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
31	.00800	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
32	.00870	.00680	.00210	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
33	.00850	.00920	.00690	.00370	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
34	.00830	.00890	.00940	.00860	.00620	.00430	.00240	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
35	.00800	.00870	.00920	.00950	.00980	.00920	.00730	.00550	.00360	.00230	.00200	.00200	.00200	.00200	.00200	.00200
36	.00780	.00640	.00200	.00200	.00360	.00510	.00660	.00780	.00890	.00990	.00870	.00780	.00690	.00630	.00560	.00500
37	.00200	.00200	.00200	.00200	.00260	.00370	.00480	.00580	.00670	.00750	.00820	.00900	.00970	.00940	.00860	.00790
38	.00200	.00200	.00200	.00200	.00250	.00350	.00450	.00550	.00650	.00750	.00850	.00950	.01000	.01000	.01080	.00970
39	.00200	.00200	.00200	.00200	.00280	.00410	.00510	.00610	.00710	.00810	.00910	.01000	.01000	.01150	.01790	.01370
40	.00200	.00200	.00200	.00200	.00290	.00420	.00540	.00660	.00760	.00860	.00960	.01000	.01010	.01650	.02290	.02080
41	.00200	.00200	.00200	.00200	.00300	.00420	.00550	.00670	.00790	.00890	.00990	.01000	.01410	.02050	.02690	.02670
42	.00200	.00200	.00200	.00200	.00290	.00420	.00550	.00670	.00800	.00920	.01000	.01170	.01810	.02450	.03000	.03000
43	.00200	.00200	.00200	.00200	.00270	.00400	.00530	.00660	.00790	.00910	.01000	.01000	.01250	.01820	.02720	.03000
44	.00200	.00200	.00200	.00200	.00260	.00390	.00510	.00640	.00750	.00860	.00970	.01000	.01000	.01000	.01990	.02450
45	.00200	.00200	.00200	.00200	.00240	.00370	.00490	.00600	.00710	.00820	.00930	.01000	.01000	.01000	.01390	.02660
46	.00200	.00200	.00200	.00200	.00220	.00330	.00440	.00550	.00660	.00770	.00880	.00990	.01000	.01000	.01760	.03050
47	.00200	.00200	.00200	.00200	.00200	.00310	.00420	.00530	.00640	.00750	.00850	.00960	.01000	.01000	.02310	.03580
48	.00200	.00200	.00200	.00200	.00200	.00300	.00400	.00510	.00620	.00720	.00830	.00930	.01000	.01210	.02640	.04080
49	.00200	.00200	.00200	.00200	.00200	.00280	.00390	.00490	.00590	.00700	.00800	.00900	.01000	.01440	.02860	.04230
50	.00200	.00200	.00200	.00200	.00200	.00260	.00360	.00470	.00570	.00680	.00780	.00880	.00990	.01900	.03060	.04080
51	.00200	.00200	.00200	.00200	.00200	.00250	.00360	.00460	.00570	.00680	.00790	.00890	.01000	.02000	.02940	.03760
52	.00200	.00200	.00200	.00200	.00200	.00240	.00350	.00460	.00570	.00680	.00790	.00900	.01040	.01930	.02730	.03540
53	.00200	.00200	.00200	.00200	.00200	.00270	.00390	.00510	.00630	.00750	.00870	.00990	.01010	.01810	.02620	.03430
54	.00200	.00200	.00200	.00200	.00200	.00330	.00580	.00700	.00820	.00940	.01000	.01000	.01000	.01830	.02690	.03500
55	.00200	.00200	.00200	.00200	.00200	.00420	.00720	.00890	.01000	.01000	.01000	.01000	.01000	.01740	.02710	.03640
56	.00200	.00200	.00200	.00200	.00210	.00510	.00780	.01000	.01000	.01000	.01000	.01000	.01000	.01510	.02530	.03580
57	.00200	.00200	.00200	.00200	.00290	.00500	.00710	.00910	.01000	.01000	.01000	.01000	.01000	.01180	.02220	.03220
58	.00200	.00200	.00200	.00200	.00870	.01180	.01500	.01810	.01470	.01000	.01000	.01000	.01000	.01020	.02020	.02870
59	.00200	.00200	.00200	.00340	.01500	.02350	.02670	.02980	.02930	.02550	.01320	.01000	.01000	.02150	.03490	.04830
60	.00200	.00200	.00200	.00890	.02310	.03050	.03840	.04150	.04580	.05620	.07620	.08160	.06100	.04130	.05000	.05000
61	.00200	.00200	.00380	.01750	.02890	.04000	.04660	.05440	.06570	.08210	.10000	.10000	.09940	.05000	.05000	.05000
62	.00200	.00200	.01200	.02510	.03710	.04670	.05190	.06310	.07550	.08830	.10000	.10000	.10000	.05000	.05000	.05000
63	.00200	.00520	.01540	.03110	.04280	.05000	.05570	.06430	.07420	.08620	.09830	.10000	.06030	.05000	.05000	.05000

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.5-1. INITIAL NICKEL CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
2	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
3	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
4	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
5	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
6	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
7	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
8	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
9	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
10	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
11	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
12	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
13	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
14	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
15	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
16	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
17	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
18	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
19	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
20	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
21	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
22	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
23	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
24	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
25	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
26	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
27	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
28	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
29	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
30	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
31	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
32	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
33	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
34	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
35	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
36	.00450	.00400	.00350	.00300	.00260	.00210	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
37	.00720	.00660	.00620	.00550	.00500	.00430	.00350	.00270	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
38	.00900	.00840	.00780	.00710	.00630	.00540	.00470	.00370	.00240	.00200	.00200	.00200	.00200	.00200	.00200	.00200
39	.01060	.00950	.00870	.00790	.00710	.00620	.00520	.00410	.00260	.00200	.00200	.00200	.00200	.00200	.00200	.00200
40	.01810	.01270	.00960	.00870	.00780	.00690	.00570	.00450	.00280	.00200	.00200	.00200	.00200	.00200	.00200	.00200
41	.02410	.01890	.01290	.00950	.00860	.00750	.00630	.00500	.00300	.00200	.00200	.00200	.00200	.00200	.00200	.00200
42	.03000	.02570	.01990	.01330	.00950	.00830	.00700	.00560	.00350	.00200	.00200	.00200	.00200	.00200	.00200	.00200
43	.03000	.03000	.02660	.02010	.01370	.00940	.00800	.00650	.00410	.00200	.00200	.00200	.00200	.00200	.00200	.00200
44	.03230	.03360	.03200	.02560	.01910	.01360	.00940	.00770	.00500	.00200	.00200	.00200	.00200	.00200	.00200	.00200
45	.03730	.03790	.03750	.03100	.02530	.02000	.01390	.00910	.00610	.00200	.00200	.00200	.00200	.00200	.00200	.00200
46	.04230	.04260	.04290	.03650	.03200	.02640	.01980	.01310	.00780	.00200	.00200	.00200	.00200	.00200	.00200	.00200
47	.04740	.04740	.04800	.04360	.03890	.03250	.02560	.01820	.00830	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
48	.05000	.05000	.05000	.05000	.04500	.03730	.02860	.02070	.01080	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
49	.05000	.05000	.05000	.05000	.04700	.03910	.03120	.02330	.01340	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
50	.05000	.05000	.05000	.05000	.04750	.03960	.03170	.02380	.01400	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
51	.04480	.05000	.05000	.05000	.04780	.03990	.03200	.02410	.01420	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
52	.04350	.05000	.05000	.05000	.04860	.04070	.03270	.02470	.01460	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
53	.04240	.05000	.05000	.05000	.05000	.04190	.03360	.02550	.01510	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
54	.04260	.04970	.05000	.05000	.05000	.04310	.03470	.02630	.01560	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
55	.04570	.05000	.05000	.05000	.05000	.04410	.03550	.02680	.01600	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
56	.04640	.05000	.05000	.05000	.05000	.04470	.03590	.02720	.01620	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
57	.04140	.04940	.05000	.05000	.05000	.04420	.03570	.02710	.01630	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
58	.04190	.05000	.05000	.05000	.04760	.04190	.03440	.02640	.01610	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
59	.05000	.05000	.05000	.04710	.04300	.03910	.03310	.02570	.01580	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
60	.05000	.05000	.04810	.04400	.03990	.03580	.03080	.02470	.01570	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
61	.05000	.04900	.04490	.04080	.03680	.03270	.02860	.02310	.01460	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
62	.05000	.04590	.04180	.03770	.03360	.02960	.02550	.02140	.01360	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
63	.04690	.04280	.03870	.03460	.03050	.02640	.02240	.01830	.01250	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.5-1. INITIAL NICKEL CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**.02900**	.03980	.04890	.31170	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.42510	.28970	.18840	.04390	.02040
65	**.03040**	.04140	.05860	.38790	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.47390	.33280	.23410	.06520	.03000
66	**.03180**	.04280	.08080	.46180	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.37590	.28160	.11470	.03970
67	**.03330**	.04420	.10440	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.41780	.33380	.16520	.04960
68	**.03470**	.04560	.16680	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.46320	.37870	.21700	.10910
69	**.03620**	.04700	.23140	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.43070	.27640	.17050
70	**.03770**	.04840	.29850	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.48350	.33870	.23080
71	**.03920**	.04980	.35920	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49710	.50000	.50000	.40090	.29060
72	**.04070**	.06340	.41500	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.47510	.47980	.48450	.46260	.35050
73	**.04220**	.07530	.46570	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.45320	.45790	.46250	.50000	.40920
74	**.04380**	.08790	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.43290	.43590	.44060	.50000	.46670
75	**.04540**	.11780	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.48540	.41540	.41400	.41870	.50000	.50000
76	**.04690**	.23780	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.47050	.39680	.39210	.39680	.50000	.50000
77	**.04850**	.31950	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.45570	.37810	.37010	.37480	.48200	.50000
78	**.05040**	.35430	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.44080	.36270	.34820	.35290	.46360	.50000
79	**.07600**	.38120	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.42600	.34780	.32630	.33100	.44530	.50000
80	**.10390**	.40290	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.48930	.41110	.33300	.30430	.30900	.42690	.50000
81	**.15700**	.42100	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.47440	.39630	.31810	.28240	.28710	.40850	.50000
82	**.21150**	.43670	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.45960	.38140	.30330	.26050	.26710	.39010	.50000
83	**.28630**	.45040	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.44470	.36660	.28840	.23860	.24360	.37170	.50000
84	**.30890**	.45160	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.43690	.35170	.27360	.21980	.22010	.35330	.50000
85	**.32080**	.45740	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.43110	.33690	.25870	.20110	.19670	.33490	.50000
86	**.32590**	.45940	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.42180	.32220	.24390	.18200	.17330	.30160	.50000
87	**.32260**	.45620	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.41160	.30700	.22900	.16310	.14990	.27190	.49240
88	**.31510**	.45300	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.39980	.28910	.21320	.14440	.12830	.22020	.41880
89	**.30710**	.45040	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.38780	.27180	.19020	.12580	.10990	.15910	.36440
90	.30050	.44580	.50000	.50000	.50000	.50000	.50000	.50000	.49380	.37380	.25310	.16600	.10720	.10000	.10900	.32080
91	.28550	.43900	.50000	.50000	.50000	.50000	.50000	.50000	.47170	.35750	.23580	.14100	.10000	.10000	.10000	.28780
92	.26240	.43010	.50000	.50000	.50000	.50000	.50000	.50000	.45190	.34160	.21680	.11460	.10000	.10000	.10000	.27470
93	.21090	.41300	.50000	.50000	.50000	.50000	.50000	.50000	.45540	.32670	.20130	.10000	.10000	.10000	.10000	.27050
94	.16180	.38830	.50000	.50000	.50000	.50000	.50000	.50000	.45880	.31680	.19080	.10000	.10000	.10000	.10680	.26640
95	.11490	.35440	.45470	.50000	.50000	.50000	.50000	.50000	.46220	.32020	.18250	.10000	.10000	.10000	.11710	.26220
96	.06100	.30150	.39460	.44890	.49240	.50000	.50000	.50000	.46550	.32360	.18170	.10000	.10000	.10000	.12950	.25810
97	.00200	.23650	.33250	.37620	.44770	.48140	.50000	.50000	.46890	.32700	.18510	.10000	.10000	.10000	.14640	.25390
98	.00200	.17630	.27230	.30800	.40960	**.44520**	.49170	.50000	.47230	.33040	.18920	.10000	.10000	.10000	.16600	.25660
99	.00200	.11730	.21880	.26380	.37090	**.39880**	.44930	.50000	.47570	.33380	.20940	.10000	.10000	.11360	.18660	.27610
100	.00200	.06010	.17020	.22480	.33130	.35250	**.40680**	.49870	.47910	.33720	.26040	.10000	.10200	.15840	.21680	.29570
101	.00200	.00540	.12270	.18720	.28530	.30610	**.36360**	.45630	.48250	.35870	.29570	.15950	.16100	.20390	.24060	.32010
102	.00200	.00200	.07440	.14640	.23900	.25980	**.31950**	.41250	.48590	.40530	.33120	.22960	.22010	.25050	.27670	.34600
103	.00200	.00200	.02720	.10260	.19050	.21560	.27490	**.36650**	.48650	.45630	.38910	.30010	.27920	.29990	.31620	.37240
104	.00200	.00200	.00200	.05630	.13730	.17260	.23010	**.31860**	.43150	.50000	.45090	.37010	.33910	.34740	.35570	.40130
105	.00200	.00200	.00200	.00660	.08410	.12940	.18440	**.26930**	.37490	.44320	.48100	.43930	.39900	.39690	.39510	.43240
106	.00200	.00200	.00200	.00200	.03100	.08590	.13790	**.21950**	**.31640**	.36950	.40200	.48950	.45890	.44720	.43770	.46360
107	.00200	.00200	.00200	.00200	.00200	.04240	.09370	.16450	**.25610**	.29560	.32190	.39700	.46980	.49820	.48190	.49720
108	.00200	.00200	.00200	.00200	.00200	.00200	.04520	.10890	**.19200**	.22130	.24070	.30390	.37410	.42010	.46000	.45780
109	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.05170	.12580	.14690	.15830	.20900	.27990	.33870	.39410	.39570
110	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.05960	.07260	.07570	.11250	.18680	.25880	.33060	.33990
111	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.01520	.09410	.17940	.26900	.31020
112	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00310	.10130	.20970	.27870
113	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.02420	.15390	.24020
114	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.10000	.20160
115	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.04620	.16310
116	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.12450
117	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.08600
118	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.04750
119	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.01570
120	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00880
121	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00300
122	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
123	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00940
124	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.05070
125	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.09380

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.5-1. INITIAL NICKEL CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	.01000	.00930	.01730	.03270	.04390	.05080	.05940	.06810	.07670	.08540	.09730	.10000	.07070	.05000	.05000	.04790
65	.01880	.01440	.01920	.03460	.04570	.05000	.05550	.06760	.07980	.08920	.09780	.10000	.08380	.05100	.04890	.04480
66	.02740	.02210	.02130	.03650	.04380	.05000	.05000	.05000	.05390	.06600	.09660	.10000	.08630	.05930	.04750	.04360
67	.03560	.02980	.02580	.03530	.04020	.04660	.05000	.05000	.05000	.05000	.05000	.05000	.05750	.05000	.04810	.04420
68	.04370	.03740	.02950	.03000	.03630	.04290	.04930	.05000	.05000	.05000	.05000	.05000	.05000	.05000	.05190	.04840
69	.05940	.04510	.03000	.03000	.03380	.03980	.04590	.05000	.05000	.05000	.05000	.05000	.05000	.05000	.05000	.05630
70	.10500	.04830	.03170	.03110	.03290	.03640	.04240	.04850	.05000	.05000	.05000	.05000	.05000	.05000	.05000	.05940
71	.13370	.04980	.03630	.03550	.03540	.03680	.03900	.04510	.05000	.05000	.05000	.05000	.05310	.05740	.05830	.06200
72	.15870	.05500	.04010	.03990	.03970	.03960	.04060	.04290	.04770	.05000	.05000	.05310	.05790	.06270	.06660	.07020
73	.19290	.06540	.04410	.04430	.04410	.04400	.04380	.04430	.04680	.05000	.05310	.05790	.06260	.06760	.07540	.08070
74	.23510	.07630	.04890	.04860	.04850	.04830	.04820	.04810	.04790	.05150	.05800	.06310	.06750	.07950	.08760	.07650
75	.28060	.08860	.06440	.05680	.05140	.05000	.05000	.05000	.05000	.05400	.06170	.06870	.10000	.10000	.09220	.07230
76	.34670	.11020	.08560	.07800	.07260	.06830	.06390	.05890	.05400	.05210	.06270	.10000	.10000	.10000	.08800	.06810
77	.41010	.15860	.08300	.07410	.06770	.06250	.05740	.05230	.04710	.04200	.04970	.06980	.08380	.08160	.08050	.06390
78	.47930	.18600	.09790	.06590	.05950	.05430	.04920	.04410	.03890	.03380	.03730	.04290	.04950	.05800	.06390	.05970
79	.50000	.21340	.13310	.08110	.06110	.04610	.04100	.03590	.03070	.02560	.02490	.02730	.02920	.03210	.04120	.05550
80	.50000	.24070	.16830	.11520	.07740	.06070	.04460	.02860	.02250	.01740	.01250	.01390	.01000	.01000	.01000	.02790
81	.50000	.26810	.20340	.15040	.11260	.08230	.06020	.04420	.02820	.01210	.00410	.01000	.01000	.01000	.01000	.01000
82	.50000	.29540	.23860	.18560	.14780	.11750	.08720	.05980	.04380	.02770	.01170	.01000	.01000	.01000	.01000	.01000
83	.50000	.32280	.27380	.22080	.18300	.15270	.12240	.09210	.06180	.04330	.01570	.01000	.01000	.01000	.01000	.01000
84	.50000	.35200	.30900	.25600	.21820	.18790	.15760	.12730	.09700	.06670	.02710	.01000	.01000	.01000	.01000	.01000
85	.50000	.38400	.34420	.29120	.25330	.22310	.19280	.16250	.13220	.10350	.06490	.01000	.01000	.01000	.01000	.01000
86	.50000	.41590	.37940	.32640	.28850	.25820	.22800	.20680	.17570	.13180	.09260	.06180	.01000	.01000	.01000	.01000
87	.50000	.44790	.41460	.36160	.32370	.29620	.28250	.24790	.21310	.17970	.12910	.08710	.05930	.01700	.01000	.01000
88	.49380	.47990	.44980	.39680	.37180	.35810	.32000	.29660	.27110	.22020	.15810	.10000	.08620	.06310	.04100	.02140
89	.43990	.50000	.48500	.45090	.43370	.40440	.38010	.35570	.31100	.24890	.19110	.15790	.12520	.09780	.08470	.07790
90	.43290	.50000	.50000	.50000	.48800	.46360	.43920	.40190	.34230	.28540	.24520	.20890	.17590	.16710	.16370	.17600
91	.42870	.50000	.50000	.50000	.50000	.50000	.49360	.43660	.37970	.33260	.29260	.25380	.24370	.24440	.24510	.26520
92	.42460	.50000	.50000	.50000	.50000	.50000	.50000	.47400	.41990	.37640	.32960	.32030	.32100	.32170	.32240	.33130
93	.42040	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.46020	.40540	.39690	.39760	.39830	.39900	.39960	.40030
94	.41620	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.48110	.47350	.47420	.47490	.47550	.47620	.47690	.47760
95	.41210	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49750	.49510	.49260	.49010	.48750	.48490	.48230
96	.40790	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49800	.49540	.49280	.49020	.48760	.48500	.48270
97	.40380	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49790	.49530	.49270	.49010	.48780	.48570	.45850
98	.39960	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49780	.49520	.49280	.49050	.47330	.44130	.40920
99	.39550	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49780	.49530	.48820	.45610	.42410	.39200	.35990
100	.39130	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49750	.47090	.43890	.40680	.37480	.34270	.31060
101	.38720	.50000	.50000	.50000	.50000	.50000	.50000	.50000	.49560	.46480	.43400	.40310	.37220	.34130	.31040	.27950
102	.40760	.50000	.50000	.50000	.50000	.49990	.49450	.48960	.47920	.45640	.42680	.39590	.36500	.33410	.30320	.27230
103	.43270	.50000	.50000	.48700	.47790	.47100	.46450	.45880	.45270	.43460	.41240	.38870	.35780	.32690	.29600	.26510
104	.46000	.49900	.47590	.46060	.45060	.44280	.43550	.42850	.42170	.40900	.39010	.36830	.34880	.31970	.28880	.25790
105	.48850	.47560	.45110	.43480	.42410	.41560	.40730	.39940	.39170	.38160	.36460	.34550	.32420	.30490	.28160	.25070
106	.48660	.45240	.42680	.40970	.39770	.38830	.37920	.37030	.36150	.35290	.33760	.32010	.30100	.28020	.26080	.24130
107	.46500	.42980	.40310	.38500	.37230	.36280	.35250	.34270	.33340	.32360	.31020	.29340	.27550	.25640	.23610	.21680
108	.44460	.40730	.37970	.36090	.34750	.33690	.32630	.31590	.30550	.29510	.28290	.26620	.24900	.23090	.21190	.19200
109	.42430	.38550	.35680	.33730	.32320	.31200	.30090	.28980	.27820	.26670	.25450	.23880	.22210	.20450	.18630	.16730
110	.40400	.36390	.33450	.31400	.29940	.28770	.27580	.26430	.25220	.23920	.22680	.21150	.19480	.17780	.16000	.14170
111	.37790	.34240	.31230	.29120	.27610	.26390	.25170	.23950	.22630	.21290	.19930	.18430	.16730	.15070	.13340	.11550
112	.33940	.32120	.29090	.26880	.25350	.24080	.22800	.21470	.20170	.18750	.17320	.15750	.13980	.12340	.10650	.08720
113	.30080	.30060	.26940	.24730	.23120	.21780	.20470	.19150	.17740	.16260	.14720	.13120	.11330	.09540	.07620	.05620
114	.26230	.28030	.24840	.22570	.20910	.19600	.18220	.16820	.15360	.13860	.12270	.10560	.08500	.06390	.04590	.02840
115	.22370	.26060	.22760	.20460	.18760	.17420	.16000	.14550	.13080	.11520	.09850	.07840	.05650	.03790	.02210	.00960
116	.18520	.23780	.20710	.18380	.16660	.15260	.13850	.12370	.10840	.09170	.07290	.05250	.03800	.02190	.00950	.00810
117	.14670	.19920	.18670	.16320	.14590	.13170	.11710	.10220	.08580	.06820	.04950	.03810	.02470	.00990	.00840	.00690
118	.10810	.16070	.16680	.14300	.12540	.11100	.09630	.08080	.06410	.04800	.03810	.02670	.01360	.00890	.00740	.00580
119	.06960	.12210	.14730	.12290	.10520	.09110	.07630	.06050	.04690	.03800	.02820	.01690	.00940	.00790	.00640	.00480
120	.04640	.07390	.11440	.09860	.08320	.06760	.05270	.04400	.03600	.02730	.01740	.00960	.00810	.00660	.00510	.00360
121	.04920	.08010	.09520	.07550	.05960	.04730	.03910	.03080	.02310	.01440	.00930	.00780	.00640	.00490	.00340	.00200
122	.05830	.09960	.07160	.05100	.04070	.03260	.02440	.01620	.00970	.00820	.00680	.00540	.00390	.00250	.00200	.00200
123	.09010	.07120	.04570	.03200	.02200	.01400	.00930	.00790	.00660	.00520	.00380	.00230	.00200	.00200	.00200	.00200
124	.07960	.04280	**.02210**	.00970	.00810	.00680	.00540	.00410	.00270	.00200	.00200	.00200	.00200	.00200	.00200	.00200
125	.05100	.01580	**.00780**	**.00530**	**.00370**	**.00240**	**.00200**	[illegible]	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.5-1. INITIAL NICKEL CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	.04380	.03970	.03560	.03150	.02740	.02330	.01920	.01520	.01000	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
65	.04070	.03660	.03250	.02840	.02430	.02020	.01620	.01230	.00740	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
66	.03970	.03580	.03190	.02790	.02400	.02010	.01620	.01220	.00730	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
67	.04020	.03620	.03230	.02830	.02420	.02030	.01650	.01310	.00870	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
68	.04500	.04160	.03810	.03470	.03120	.02780	.02440	.02030	.01080	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
69	.05290	.04940	.04600	.04260	.03910	.03480	.02720	.01970	.01020	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
70	.06070	.05730	.05390	.04930	.04180	.03420	.02670	.01910	.00970	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
71	.06860	.06380	.05630	.04860	.04100	.03340	.02570	.01800	.00850	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
72	.06810	.06160	.05470	.04710	.03940	.03180	.02410	.01640	.00680	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
73	.06510	.05850	.05200	.04560	.03780	.03010	.02250	.01480	.00520	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
74	.06200	.05550	.04900	.04240	.03590	.02870	.02090	.01320	.00360	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
75	.05900	.05250	.04590	.03940	.03290	.02640	.01960	.01180	.00210	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
76	.05590	.04940	.04290	.03640	.02980	.02330	.01680	.01020	.00200	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
77	.05290	.04640	.03980	.03330	.02680	.02030	.01370	.00730	.00200	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
78	.04990	.04330	.03680	.03030	.02380	.01840	.01260	.00660	.00200	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
79	.04680	.04040	.03560	.03020	.02460	.01840	.01230	.00580	.00200	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
80	.04850	.04330	.03770	.03170	.02530	.01880	.01180	.00480	.00200	.00200	.00200	.00200	.00200	.00200	.00200	**.00200**
81	.03620	.04650	.03990	.03340	.02600	.01880	.01130	.00360	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
82	.01790	.04990	.04250	.03480	.02710	.01910	.01070	.00240	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
83	.01000	.03710	.04530	.03690	.02850	.01990	.01110	.00220	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
84	.01000	.02940	.04750	.03870	.02960	.02050	.01130	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
85	.01000	.02530	.04920	.03980	.03040	.02090	.01140	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
86	.01000	.02300	.04920	.04060	.03090	.02120	.01140	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
87	.01000	.02300	.04790	.04100	.03110	.02120	.01130	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
88	.02390	.05000	.06520	.05910	.04520	.03120	.01720	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
89	.07880	.07900	.08340	.08200	.06770	.04500	.02280	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
90	.19680	.24910	.25420	.09660	.07430	.05200	.02960	.00450	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
91	.34650	.45780	.48000	.23280	.08750	.06510	.03900	.00860	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
92	.41160	.48000	.48000	.35660	.10920	.07350	.04310	.01280	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
93	.45690	.48000	.48000	.32390	.10890	.07300	.04450	.01600	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
94	.48000	.48000	.47580	.25720	.09610	.06860	.04150	.01450	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
95	.48000	.48000	.40660	.21140	.07950	.05550	.03230	.00700	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
96	.47570	.42280	.38620	.21500	.08480	.04570	.02470	.00880	.00300	.00200	.00200	.00200	.00200	.00200	.00200	.00200
97	.42650	.39440	.34110	.22150	.09650	.05950	.03530	.01590	.00510	.00200	.00200	.00200	.00200	.00200	.00200	.00200
98	.37720	.34510	.31310	.25630	.14140	.07620	.04790	.02870	.00780	.00200	.00200	.00200	.00200	.00200	.00200	.00200
99	.32790	.29580	.26380	.23170	.17140	.09070	.06460	.04320	.01490	.00200	.00200	.00200	.00200	.00200	.00200	.00200
100	.27860	.24650	.21450	.18240	.15040	.09690	.07600	.05540	.02650	.00200	.00200	.00200	.00200	.00200	.00200	.00200
101	.24860	.21770	.18680	.15590	.12490	.10000	.09030	.06840	.03730	.00200	.00200	.00200	.00200	.00200	.00200	.00200
102	.24140	.21050	.17960	.14860	.11770	.10000	.10000	.08250	.04550	.00200	.00200	.00200	.00200	.00200	.00200	.00200
103	.23420	.20330	.17230	.14140	.11050	.10000	.10000	.09450	.05280	.00200	.00200	.00200	.00200	.00200	.00200	.00200
104	.22700	.19600	.16510	.13420	.10330	.10000	.10000	.09450	.05280	.00200	.00200	.00200	.00200	.00200	.00200	.00200
105	.21970	.18880	.15790	.12700	.10000	.10000	.10000	.07940	.04190	.00200	.00200	.00200	.00200	.00200	.00200	.00200
106	.21250	.18160	.15070	.11980	.10000	.10000	.08580	.05750	.02550	.00200	.00200	.00200	.00200	.00200	.00200	.00200
107	.19730	.17440	.14350	.11260	.10000	.09110	.06230	.03580	.00840	.00200	.00200	.00200	.00200	.00200	.00200	.00200
108	.17280	.15330	.13370	.10540	.09230	.06740	.03980	.01490	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
109	.14790	.12880	.10930	.08870	.06580	.05850	.05270	.00470	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
110	.12280	.10380	.08850	.06890	.03840	.01240	.06410	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
111	.09660	.07410	.05130	.03960	.00980	.00630	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
112	.06580	.04430	.02430	.00930	.00660	.00330	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
113	.03690	.01760	.00890	.00680	.00410	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
114	.01000	.00850	.00680	.00470	.00220	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
115	.00820	.00680	.00500	.00300	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
116	.00670	.00520	.00350	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
117	.00540	.00390	.00220	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
118	.00430	.00280	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
119	.00330	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
120	.00210	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
121	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
122	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
123	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
124	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200	.00200
125	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**	**.00200**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

E.6 RADIUM-226 PLUS RADIUM-228 TRANSPORT

The radium concentrations in the Lucky Mc aquifer have been highly attenuated and the predictions show that this constituent's migration will be greatly affected by attenuation in the future. Figure E.6-1 shows the Ra-226 + Ra-228 data from 1993 through early 2000 with three different distribution coefficients. A distribution coefficient of 0.02 ft^3/lb best fits the observed radium data. This distribution coefficient is equal to a retardation factor of 13 where the specific yield is 0.2. The radium fit to these distribution coefficients is also presented for POC well T1-12 in Figure E.6-2. The initial radium concentrations developed from the 2000 contours are tabulated in Table E.6-1.

Figure 2.3-4 presents the predicted radium concentrations versus time for selected wells in the Lucky Mc aquifer. This prediction shows that concentrations will slightly increase from present levels in well P-20 to approximately 7 pCi/l and then gradually decrease. Ra-226 + Ra-228 concentrations in POC well T1-12 are predicted to increase to 7.5 pCi/l and then gradually decrease with time. Concentrations are predicted to decrease to approximately 6 pCi/l in monitoring well T1-22, which is further downgradient of T1-12. The concentrations in POE well AL-6 are predicted to gradually increase with time to the background levels used for this site.

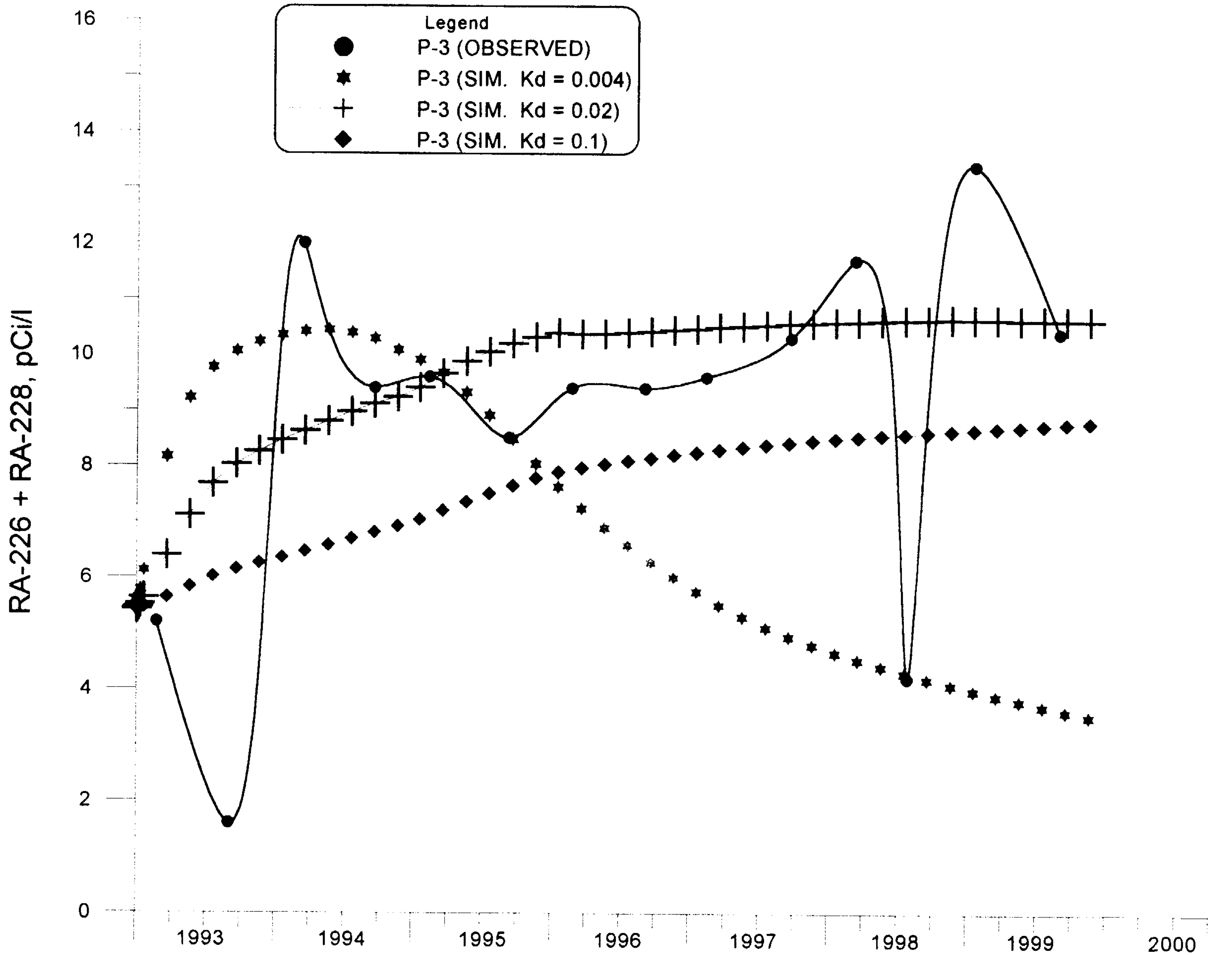

FIGURE E.6-1. RA-226 + RA-228 MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL P-3.

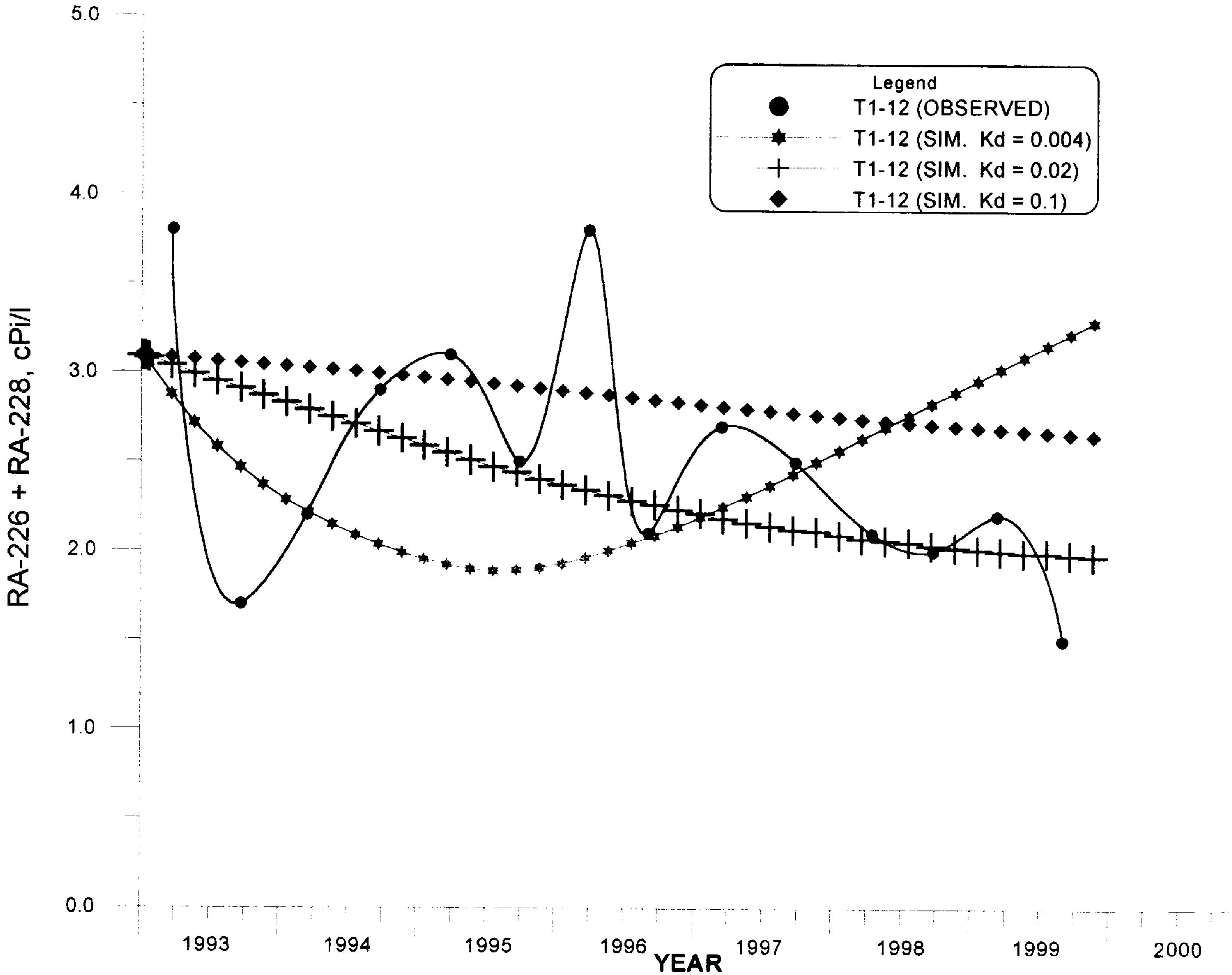

FIGURE E.6-2. RA-226 + RA-228 MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL T1-12.

TABLE E.6-1. INITIAL RA-226 + RA-228 CONCENTRATIONS, 2000, IN mg/l.

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**	**0.100**
2	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
3	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
4	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
5	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
6	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
7	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
8	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
9	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
10	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
11	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
12	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
13	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
14	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
15	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
16	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
17	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
18	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
19	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
20	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
21	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
22	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
23	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.101	0.101	0.101	0.102	0.102	0.103
24	0.102	0.104	0.104	0.105	0.105	0.105	0.106	0.106	0.107	0.107	0.107	0.108	0.108	0.109	0.109	0.110
25	0.101	0.107	0.111	0.111	0.112	0.112	0.113	0.113	0.114	0.114	0.114	0.115	0.115	0.116	0.116	0.117
26	0.102	0.107	0.112	0.117	0.119	0.119	0.120	0.120	0.120	0.121	0.121	0.122	0.122	0.123	0.123	0.123
27	0.102	0.108	0.112	0.117	0.122	0.126	0.127	0.127	0.127	0.128	0.128	0.129	0.129	0.130	0.130	0.130
28	0.103	0.108	0.113	0.118	0.122	0.127	0.133	0.134	0.134	0.135	0.135	0.136	0.136	0.136	0.137	0.137
29	0.103	0.109	0.114	0.118	0.123	0.128	0.132	0.137	0.141	0.142	0.142	0.143	0.143	0.143	0.144	0.144
30	0.114	0.109	0.114	0.119	0.124	0.128	0.133	0.138	0.142	0.148	0.149	0.150	0.150	0.150	0.151	0.151
31	0.136	0.146	0.133	0.119	0.124	0.129	0.134	0.139	0.143	0.148	0.153	0.156	0.157	0.157	0.158	0.158
32	0.144	0.183	0.180	0.167	0.153	0.140	0.134	0.139	0.144	0.149	0.154	0.158	0.163	0.164	0.165	0.165
33	0.147	0.196	0.227	0.215	0.201	0.188	0.174	0.161	0.147	0.149	0.154	0.159	0.163	0.168	0.172	0.172
34	0.147	0.201	0.241	0.262	0.249	0.235	0.222	0.208	0.195	0.181	0.168	0.159	0.164	0.169	0.173	0.178
35	0.150	0.201	0.250	0.284	0.297	0.283	0.270	0.256	0.243	0.229	0.216	0.202	0.189	0.175	0.174	0.179
36	0.153	0.208	0.249	0.298	0.325	0.328	0.314	0.301	0.287	0.274	0.260	0.247	0.233	0.220	0.206	0.193
37	0.160	0.215	0.260	0.298	0.345	0.361	0.353	0.340	0.326	0.313	0.299	0.286	0.272	0.259	0.245	0.232
38	0.168	0.223	0.270	0.307	0.347	0.378	0.383	0.369	0.356	0.342	0.329	0.315	0.302	0.288	0.275	0.261
39	0.171	0.232	0.273	0.318	0.346	0.392	0.402	0.390	0.377	0.363	0.350	0.336	0.323	0.309	0.296	0.282
40	0.175	0.237	0.281	0.325	0.355	0.395	0.410	0.405	0.392	0.378	0.365	0.351	0.338	0.324	0.311	0.297
41	0.179	0.239	0.288	0.325	0.363	0.395	0.419	**0.417**	0.404	0.390	0.377	0.363	0.350	0.336	0.323	0.309
42	0.182	0.241	0.295	0.332	0.371	0.395	0.427	**0.429**	**0.416**	**0.402**	0.389	0.375	0.362	0.348	0.335	0.315
43	0.187	0.247	0.299	0.340	0.380	0.402	**0.436**	0.440	0.428	0.414	**0.401**	**0.387**	0.374	0.360	0.344	0.322
44	0.192	0.252	0.301	0.348	0.381	**0.412**	0.443	**0.450**	0.439	0.426	0.412	0.399	0.385	0.372	0.349	0.337
45	0.196	0.258	0.307	0.357	0.390	0.422	0.443	**0.458**	0.451	0.438	0.424	0.411	0.397	0.377	0.364	0.347
46	0.201	0.265	0.314	0.361	**0.399**	0.433	0.449	**0.467**	0.463	0.450	0.436	0.423	0.406	0.391	0.377	0.358
47	0.209	0.271	0.321	0.366	0.409	0.437	0.460	**0.476**	0.475	0.462	0.448	0.434	0.418	0.406	0.387	0.370
48	0.222	0.279	0.330	**0.375**	0.420	0.448	0.471	**0.486**	0.485	0.474	0.460	0.445	0.433	0.418	0.399	0.382
49	0.233	0.286	0.338	0.384	0.424	0.459	0.483	**0.494**	0.496	0.486	0.472	0.460	0.448	0.428	0.410	0.394
50	0.244	0.297	0.347	0.394	0.434	0.471	0.495	**0.581**	0.589	0.499	0.487	0.475	0.458	0.439	0.422	0.406
51	0.255	0.310	**0.356**	0.403	0.444	0.482	0.582	**0.734**	0.748	0.658	0.526	0.489	0.469	0.450	0.434	0.419
52	0.264	0.323	0.367	0.414	0.456	0.493	0.736	**0.890**	0.908	0.829	0.698	0.499	0.480	0.462	0.446	0.430
53	0.273	0.334	0.380	0.425	0.467	0.556	0.895	**1.112**	1.154	1.003	0.870	0.622	0.491	0.474	0.459	0.441
54	0.280	**0.346**	0.393	0.437	0.479	0.707	1.132	**1.503**	1.524	1.353	1.004	0.758	0.520	0.487	0.471	0.452
55	0.288	0.356	0.406	0.449	0.492	0.854	1.526	**1.890**	1.889	1.703	1.330	0.893	0.634	0.499	0.483	0.463
56	0.295	0.368	0.418	0.462	0.557	0.997	1.920	**2.276**	2.255	2.052	1.655	1.027	0.737	0.585	0.494	0.474
57	0.301	0.377	0.429	0.475	0.691	1.370	2.314	**2.664**	2.619	2.400	1.980	1.317	0.833	0.678	0.539	0.485
58	0.306	0.386	0.440	0.488	0.822	1.748	2.709	**3.051**	2.982	2.739	2.306	1.607	0.931	0.771	0.627	0.496
59	**0.311**	0.395	0.451	0.511	0.952	2.139	3.103	**3.436**	3.339	3.078	2.614	1.896	1.086	0.862	0.714	0.544
60	**0.316**	0.405	0.462	0.629	1.263	2.522	3.497	**3.818**	3.699	3.411	2.920	2.175	1.400	0.953	0.801	0.621
61	**0.317**	0.414	0.473	0.748	1.678	2.915	3.891	**4.195**	4.050	3.746	3.226	2.455	1.715	1.156	0.888	0.699
62	**0.319**	0.421	0.483	0.870	2.093	3.314	4.285	**4.581**	4.405	4.071	3.528	2.738	2.037	1.482	0.975	0.779
63	**0.317**	0.428	0.492	0.996	2.508	3.717	4.680	**4.966**	4.752	4.396	3.817	3.021	2.365	1.808	1.207	0.859

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.6-1. INITIAL RA-226 + RA-228 CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**0.100**	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
2	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
3	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
4	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
5	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
6	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
7	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
8	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
9	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
10	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
11	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
12	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
13	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
14	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
15	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
16	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
17	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
18	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
19	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
20	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
21	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
22	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
23	0.103	0.103	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.105	0.105	0.105	0.105	0.105	0.105	0.105
24	0.110	0.110	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.112	0.112	0.112	0.112	0.112	0.112
25	0.117	0.117	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.119	0.119	0.119	0.119	0.119
26	0.124	0.124	0.124	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.126	0.126	0.126	0.126	0.126
27	0.131	0.131	0.131	0.132	0.132	0.132	0.132	0.132	0.132	0.132	0.132	0.132	0.133	0.133	0.133	0.133
28	0.138	0.138	0.138	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.140	0.140	0.140	0.140
29	0.145	0.145	0.145	0.145	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.147	0.147	0.147
30	0.152	0.152	0.152	0.152	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.154	0.154
31	0.159	0.159	0.159	0.159	0.159	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.161	0.161
32	0.165	0.166	0.166	0.166	0.166	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.168
33	0.172	0.173	0.173	0.173	0.173	0.173	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.175
34	0.179	0.180	0.180	0.180	0.180	0.180	0.180	0.181	0.181	0.181	0.181	0.181	0.181	0.181	0.181	0.181
35	0.183	0.187	0.187	0.187	0.187	0.187	0.187	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.187
36	0.185	0.188	0.191	0.192	0.194	0.194	0.194	0.194	0.194	0.194	0.194	0.194	0.194	0.194	0.194	0.194
37	0.219	0.208	0.200	0.194	0.195	0.196	0.197	0.198	0.199	0.200	0.200	0.221	0.235	0.241	0.246	0.252
38	0.249	0.238	0.229	0.223	0.219	0.216	0.207	0.222	0.276	0.330	0.378	0.416	0.452	0.476	0.489	0.503
39	0.270	0.259	0.243	0.225	0.220	0.216	0.218	0.274	0.361	0.421	0.475	0.529	0.578	0.619	0.652	0.673
40	0.285	0.260	0.248	0.240	0.235	0.233	0.239	0.247	0.333	0.425	0.515	0.589	0.648	0.704	0.754	0.794
41	0.285	0.271	0.259	0.252	0.245	0.250	0.256	0.262	0.306	0.398	0.490	0.582	0.669	0.742	0.731	0.519
42	0.296	0.281	0.271	0.263	0.262	0.267	0.273	0.279	0.288	0.372	0.463	0.555	0.647	0.739	0.652	0.550
43	0.307	0.293	0.283	0.273	0.278	0.284	0.290	0.295	0.301	0.345	0.437	0.529	0.620	0.712	0.783	0.637
44	0.319	0.306	0.294	0.288	0.295	0.301	0.307	0.312	0.318	0.329	0.410	0.502	0.594	0.686	0.751	0.782
45	0.331	0.317	0.304	0.305	0.312	0.318	0.324	0.329	0.335	0.341	0.384	0.476	0.567	0.659	0.719	0.745
46	0.343	0.328	0.314	0.322	0.329	0.335	0.341	0.346	0.352	0.358	0.371	0.449	0.541	0.633	0.687	0.709
47	0.355	0.339	0.329	0.339	0.346	0.352	0.357	0.363	0.369	0.374	0.381	0.422	0.514	0.606	0.656	0.671
48	0.367	0.350	0.346	0.356	0.363	0.369	0.374	0.380	0.386	0.391	0.397	0.412	0.488	0.579	0.621	0.636
49	0.378	0.360	0.363	0.373	0.380	0.386	0.391	0.397	0.403	0.408	0.414	0.423	0.461	0.553	0.588	0.601
50	0.389	0.370	0.380	0.390	0.397	0.403	0.408	0.414	0.420	0.425	0.431	0.437	0.454	0.526	0.550	0.553
51	0.400	0.383	0.397	0.407	0.414	0.419	0.425	0.431	0.436	0.442	0.448	0.453	0.465	0.500	0.511	0.538
52	0.411	0.400	0.414	0.424	0.431	0.436	0.442	0.448	0.453	0.459	0.465	0.470	0.476	0.495	0.661	0.866
53	0.422	0.417	0.431	0.441	0.448	0.453	0.459	0.465	0.470	0.476	0.482	0.487	0.493	0.564	0.792	1.026
54	0.431	0.433	0.448	0.457	0.465	0.470	0.476	0.482	0.487	0.493	0.499	0.500	0.500	0.622	0.850	1.077
55	0.441	0.450	0.465	0.474	0.481	0.487	0.493	0.498	0.500	0.500	0.500	0.500	0.500	0.635	0.848	1.058
56	0.451	0.467	0.481	0.491	0.498	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.631	0.827	1.015
57	0.466	0.484	0.498	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.621	0.759	0.887
58	0.483	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.596	0.725
59	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.563
60	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.569	0.714	0.203	0.327	0.500	0.500	0.500	0.500
61	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.644	0.902	1.140	0.934	0.795	0.500	0.500	0.496
62	0.573	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.602	0.888	1.244	1.500	1.500	0.500	0.494	0.469
63	0.651	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.810	1.432	1.500	1.500	0.494	0.467	0.442

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.6-1. INITIAL RA-226 + RA-228 CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
2	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
3	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
4	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
5	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
6	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
7	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
8	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
9	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
10	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
11	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
12	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
13	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
14	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
15	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
16	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
17	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
18	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
19	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
20	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
21	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
22	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.101	0.102	0.102
23	0.105	0.105	0.105	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.107	0.107	0.107	0.108	0.108	0.109
24	0.112	0.112	0.112	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.114	0.114	0.114	0.115	0.115	0.109
25	0.119	0.119	0.119	0.119	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.121	0.121	0.122	0.120	0.108
26	0.126	0.126	0.126	0.126	0.126	0.127	0.127	0.127	0.127	0.127	0.127	0.128	0.128	0.129	0.120	0.109
27	0.133	0.133	0.133	0.133	0.133	0.134	0.134	0.134	0.134	0.134	0.134	0.135	0.135	0.131	0.120	0.109
28	0.140	0.140	0.140	0.140	0.140	0.140	0.141	0.141	0.141	0.141	0.141	0.142	0.141	0.131	0.120	0.109
29	0.147	0.147	0.147	0.147	0.147	0.147	0.148	0.148	0.148	0.148	0.148	0.149	0.141	0.132	0.123	0.109
30	0.154	0.154	0.154	0.154	0.154	0.154	0.154	0.155	0.155	0.155	0.155	0.151	0.144	0.135	0.123	0.110
31	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.162	0.162	0.158	0.153	0.146	0.136	0.124	0.110
32	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.167	0.163	0.161	0.156	0.149	0.138	0.125	0.111
33	0.175	0.175	0.175	0.175	0.175	0.174	0.172	0.170	0.170	0.167	0.165	0.161	0.152	0.140	0.127	0.112
34	0.182	0.182	0.180	0.178	0.178	0.178	0.176	0.176	0.175	0.174	0.170	0.165	0.155	0.143	0.128	0.112
35	0.186	0.186	0.186	0.185	0.185	0.184	0.184	0.184	0.181	0.179	0.177	0.169	0.160	0.144	0.128	0.112
36	0.193	0.193	0.193	0.193	0.192	0.191	0.191	0.190	0.190	0.186	0.182	0.174	0.160	0.145	0.130	0.113
37	0.258	0.262	0.252	0.239	0.225	0.210	0.200	0.198	0.197	0.192	0.185	0.176	0.164	0.148	0.131	0.114
38	0.509	0.510	0.489	0.457	0.428	0.398	0.355	0.304	0.228	0.196	0.189	0.180	0.166	0.148	0.131	0.114
39	0.685	0.678	0.629	0.587	0.557	0.513	0.460	0.400	0.327	0.200	0.192	0.181	0.166	0.149	0.131	0.114
40	0.672	0.773	0.719	0.682	0.640	0.588	0.537	0.487	0.409	0.229	0.192	0.181	0.166	0.149	0.131	0.114
41	0.531	0.508	0.791	0.749	0.702	0.654	0.611	0.560	0.459	0.247	0.193	0.181	0.166	0.149	0.131	0.114
42	0.539	0.512	0.656	0.766	0.772	0.732	0.689	0.635	0.495	0.268	0.193	0.181	0.167	0.149	0.132	0.114
43	0.562	0.616	0.742	0.800	0.800	0.800	0.777	0.698	0.576	0.303	0.193	0.182	0.167	0.149	0.132	0.114
44	0.747	0.738	0.800	0.800	0.800	0.800	0.800	0.800	0.703	0.347	0.193	0.182	0.167	0.149	0.132	0.114
45	0.781	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.431	0.193	0.182	0.167	0.149	0.132	0.114
46	0.747	0.795	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.595	0.194	0.182	0.167	0.150	0.132	0.114
47	0.711	0.755	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.630	0.194	0.182	0.167	0.150	0.132	**0.114**
48	0.668	0.709	0.764	0.800	0.800	0.800	0.800	0.800	0.800	0.662	0.194	0.182	0.167	0.150	0.132	**0.114**
49	0.620	0.655	0.702	0.760	0.800	0.800	0.800	0.800	0.800	0.569	0.194	0.183	0.168	0.150	0.132	**0.114**
50	0.563	0.588	0.629	0.679	0.731	0.774	0.795	0.800	0.800	0.514	0.194	0.183	0.168	0.150	0.132	**0.114**
51	0.579	0.508	0.549	0.600	0.653	0.692	0.720	0.721	0.646	0.423	0.195	0.183	0.168	0.150	0.132	**0.114**
52	1.044	1.234	0.909	0.522	0.577	0.620	0.651	0.593	0.520	0.270	0.193	0.183	0.168	0.150	0.132	**0.115**
53	1.269	1.400	1.400	0.903	0.511	0.564	0.523	0.464	0.392	0.199	0.192	0.181	0.167	0.150	0.132	**0.114**
54	1.303	1.400	1.400	1.247	0.764	0.468	0.402	0.340	0.263	0.198	0.190	0.180	0.166	0.150	0.132	**0.114**
55	1.260	1.400	1.400	1.400	0.901	0.468	0.395	0.325	0.239	0.197	0.189	0.179	0.165	0.149	0.132	**0.114**
56	1.177	1.306	1.400	1.400	0.941	0.456	0.380	0.305	0.214	0.195	0.188	0.178	0.164	0.148	0.131	**0.114**
57	1.015	1.111	1.186	1.246	0.643	0.433	0.356	0.280	0.199	0.194	0.186	0.176	0.163	0.147	0.131	**0.113**
58	0.853	0.875	0.874	0.728	0.470	0.401	0.327	0.252	0.198	0.193	0.185	0.175	0.162	0.146	0.130	**0.113**
59	0.664	0.619	0.546	0.496	0.430	0.364	0.296	0.222	0.198	0.192	0.184	0.174	0.161	0.145	0.129	**0.113**
60	0.498	0.475	0.457	0.437	0.413	0.339	0.264	0.200	0.197	0.191	0.184	0.173	0.160	0.145	0.129	**0.112**
61	0.471	0.445	0.418	0.394	0.362	0.333	0.259	0.200	0.196	0.191	0.183	0.173	0.159	0.144	0.128	**0.112**
62	0.443	0.418	0.392	0.367	0.335	0.296	0.253	0.199	0.195	0.190	0.182	0.172	0.159	0.143	0.127	**0.111**
63	0.416	0.391	0.365	0.340	0.314	0.280	0.234	0.199	0.195	0.189	0.182	0.171	0.158	0.142	0.127	**0.111**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.6-1. INITIAL RA-226 + RA-228 CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**0.316**	0.435	0.518	1.433	3.057	4.125	5.074	5.337	5.100	4.722	4.107	3.330	2.693	2.130	1.506	0.938
65	**0.313**	0.443	0.629	1.885	3.547	4.561	5.468	5.705	5.444	5.047	4.397	3.649	3.020	2.454	1.799	1.050
66	**0.312**	0.450	0.742	2.342	3.995	4.968	5.862	6.085	5.783	5.373	4.688	3.964	3.346	2.774	2.093	1.320
67	**0.311**	0.456	0.851	2.775	4.435	5.419	6.256	6.463	6.125	5.685	4.982	4.281	3.670	3.085	2.383	1.590
68	**0.309**	0.462	0.968	3.184	4.866	5.880	6.651	6.840	6.465	5.994	5.274	4.597	3.993	3.393	2.670	1.857
69	**0.308**	0.468	1.282	3.605	5.343	6.358	7.045	7.218	6.815	6.302	5.570	4.914	4.313	3.698	2.953	2.122
70	**0.307**	0.473	1.635	4.006	5.845	6.801	7.439	7.577	7.142	6.608	5.876	5.233	4.635	3.991	3.221	2.374
71	**0.305**	0.478	1.881	4.408	6.353	7.216	7.833	7.926	7.468	6.898	6.198	5.556	4.949	4.281	3.488	2.624
72	**0.304**	0.483	2.127	4.794	6.863	7.768	8.238	8.273	7.789	7.193	6.520	5.879	5.269	4.565	3.749	2.873
73	**0.303**	0.486	2.321	5.178	7.290	8.330	8.683	8.618	8.114	7.496	6.840	6.202	5.582	4.850	4.002	3.232
74	**0.301**	0.488	2.437	5.424	7.777	8.893	9.149	8.956	8.440	7.801	7.158	6.520	5.885	5.126	4.249	3.590
75	**0.300**	0.491	2.559	5.629	8.280	9.455	9.622	9.294	8.756	8.110	7.477	6.839	6.188	5.386	4.486	3.949
76	**0.299**	0.493	2.687	5.855	8.722	10.000	10.531	9.628	9.067	8.422	7.795	7.157	6.470	5.641	4.808	4.308
77	**0.297**	0.495	2.808	6.043	9.053	10.000	13.982	9.958	9.378	8.745	8.114	7.468	6.746	5.880	5.167	4.666
78	**0.296**	0.493	2.846	6.235	9.391	10.000	17.213	13.383	9.688	9.067	8.433	7.776	7.029	6.107	5.526	5.025
79	**0.295**	0.491	2.795	6.285	9.669	11.435	19.548	17.258	10.003	9.388	8.753	8.084	7.284	6.385	5.884	5.384
80	**0.293**	0.488	2.749	6.339	9.885	13.755	21.867	21.130	14.651	9.710	9.071	8.376	7.527	6.744	6.243	5.743
81	**0.292**	0.486	2.687	6.394	10.000	16.074	24.187	24.821	19.404	10.581	9.388	8.666	7.743	7.102	6.602	6.101
82	**0.291**	0.484	2.618	6.444	10.281	18.394	26.506	28.553	24.194	16.674	9.701	8.928	7.961	7.461	6.961	6.460
83	**0.289**	0.483	2.542	6.465	11.184	20.713	28.826	32.264	29.081	22.896	10.250	9.181	8.320	7.820	7.319	6.819
84	**0.288**	0.482	2.419	6.422	11.512	23.033	31.145	35.691	34.108	29.422	17.301	9.388	8.679	8.179	7.678	7.178
85	**0.287**	0.481	2.215	6.344	11.734	24.026	33.465	39.178	39.269	36.065	24.299	9.567	9.038	8.537	8.037	7.536
86	**0.285**	0.478	1.983	6.236	11.838	24.481	35.785	42.532	44.588	42.893	31.108	9.897	9.396	8.896	8.396	7.895
87	**0.284**	0.476	1.732	6.112	10.512	24.788	37.029	46.027	50.000	50.000	37.336	10.000	9.755	9.255	8.754	8.254
88	**0.283**	0.473	1.463	5.934	10.000	23.376	37.735	48.536	50.000	50.000	43.395	10.000	10.000	9.613	9.113	8.613
89	**0.282**	0.470	1.180	5.537	10.000	21.180	36.241	50.000	50.000	50.000	49.270	12.985	10.000	9.972	9.472	8.971
90	0.280	0.467	0.970	5.057	9.485	18.985	34.045	50.000	50.000	50.000	50.000	16.028	10.000	10.000	9.831	9.330
91	0.279	0.464	0.894	4.370	8.261	16.789	31.296	50.000	50.000	50.000	50.000	18.622	10.000	10.000	10.000	9.689
92	0.278	0.461	0.833	3.336	6.758	13.019	27.477	50.000	50.000	50.000	50.000	20.625	10.000	10.000	10.000	10.000
93	0.276	0.458	0.751	2.177	4.967	8.824	22.573	50.000	50.000	50.000	50.000	21.793	10.000	10.000	10.000	10.378
94	0.275	0.455	0.637	0.975	3.044	6.083	15.725	44.644	50.000	50.000	50.000	22.132	10.000	10.000	10.000	14.186
95	0.274	0.451	0.500	0.798	0.998	3.295	8.896	32.073	50.000	50.000	49.286	21.336	10.000	10.000	10.000	17.867
96	0.272	0.446	0.492	0.616	0.821	0.970	5.942	18.156	40.376	47.040	42.123	19.691	10.000	10.000	10.000	21.391
97	0.271	0.442	0.482	0.496	0.646	0.816	3.028	8.844	26.736	36.707	34.622	16.558	10.000	10.000	11.440	24.256
98	0.270	0.437	0.472	0.486	0.498	**0.659**	0.948	6.254	13.520	26.377	26.833	12.210	10.000	10.000	14.849	27.035
99	0.268	0.433	0.461	0.476	0.488	**0.500**	0.774	3.829	8.491	16.078	18.860	10.000	10.000	10.000	17.575	30.242
100	0.267	0.428	0.451	0.466	0.477	0.491	**0.607**	1.527	6.621	9.404	10.860	10.000	10.000	10.000	19.940	33.356
101	0.266	0.424	0.441	0.455	0.467	0.481	**0.499**	0.879	4.945	7.980	9.250	8.991	10.000	10.000	22.179	36.720
102	0.264	0.418	0.431	0.445	0.456	0.472	**0.490**	0.721	3.433	6.634	8.410	7.877	10.000	10.000	24.183	39.664
103	0.263	0.408	0.421	0.434	0.446	0.462	0.481	**0.564**	2.041	5.578	7.571	6.878	10.000	10.000	26.022	42.280
104	0.262	0.397	0.411	0.424	0.436	0.453	0.472	**0.496**	0.969	4.689	6.731	6.112	9.006	10.033	28.408	44.701
105	0.260	0.387	0.400	0.413	0.426	0.444	0.464	**0.487**	0.800	3.866	5.891	5.279	7.893	11.509	30.071	47.006
106	0.259	0.377	0.390	0.403	0.416	0.434	0.456	**0.480**	**0.628**	3.151	5.051	4.477	6.779	12.929	31.866	49.391
107	0.258	0.366	0.380	0.392	0.407	0.425	0.448	0.472	**0.498**	2.411	4.212	3.640	5.665	11.860	33.494	51.162
108	0.256	0.356	0.370	0.382	0.398	0.417	0.440	0.465	**0.492**	1.578	3.372	2.806	4.551	7.261	30.318	56.248
109	0.255	0.346	0.360	0.371	0.388	0.409	0.432	0.459	0.485	1.000	2.532	1.965	3.288	6.072	25.719	55.714
110	0.254	0.335	0.349	0.361	0.379	0.401	0.425	0.453	0.479	0.844	1.692	1.117	1.414	3.609	20.754	52.129
111	0.252	0.325	0.339	0.352	0.370	0.393	0.417	0.446	0.473	0.561	0.977	0.943	0.963	1.145	14.143	48.544
112	0.251	0.315	0.328	0.342	0.362	0.385	0.411	0.439	0.466	0.497	0.862	0.885	0.923	0.978	7.531	44.959
113	0.249	0.305	0.317	0.333	0.354	0.377	0.406	0.433	0.461	0.492	0.778	0.831	0.890	0.950	1.810	41.374
114	0.246	0.295	0.307	0.324	0.345	0.370	0.400	0.427	0.455	0.488	0.706	0.777	0.861	0.921	0.983	33.634
115	0.244	0.285	0.297	0.314	0.338	0.364	0.394	0.420	0.450	0.484	0.654	0.743	0.832	0.893	0.965	23.463
116	0.241	0.274	0.287	0.306	0.330	0.358	0.387	0.414	0.445	0.480	0.609	0.720	0.803	0.864	0.946	14.552
117	0.236	0.264	0.278	0.298	0.323	0.353	0.380	0.408	0.441	0.476	0.575	0.697	0.775	0.849	0.927	5.694
118	0.232	0.253	0.268	0.290	0.317	0.347	0.374	0.403	0.437	0.472	0.543	0.681	0.746	0.830	0.910	0.993
119	0.227	0.243	0.259	0.283	0.311	0.341	0.368	0.397	0.433	0.468	0.528	0.657	0.732	0.812	0.897	0.978
120	0.215	0.230	0.249	0.274	0.304	0.333	0.360	0.392	0.427	0.464	0.516	0.621	0.710	0.797	0.882	0.961
121	0.197	0.213	0.235	0.264	0.294	0.322	0.350	0.385	0.421	0.460	0.501	0.599	0.694	0.782	0.862	0.931
122	0.172	0.192	0.220	0.249	0.279	0.306	0.340	0.375	0.415	0.457	0.500	0.592	0.679	0.748	0.817	0.884
123	0.139	0.171	0.201	0.230	0.258	0.291	0.328	0.369	0.412	0.455	0.500	0.552	0.621	0.690	0.759	0.814
124	0.113	0.146	0.176	0.204	0.239	0.280	0.323	0.369	0.416	0.463	0.500	0.500	0.546	0.615	0.684	0.708
125	0.100	0.117	0.148	0.192	0.239	0.288	0.335	0.382	0.429	0.476	0.500	0.500	0.500	0.526	0.565	0.559

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.6-1. INITIAL RA-226 + RA-228 CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	0.728	0.560	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.634	1.500	1.500	1.137	0.499	0.467	0.435
65	0.803	0.632	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	1.012	1.227	0.561	0.500	0.471	0.439
66	0.876	0.704	0.541	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.476	0.444
67	0.947	0.762	0.632	0.551	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.480	0.448
68	1.063	0.830	0.712	0.605	0.529	0.500	0.500	0.500	0.500	0.500	0.500	0.592	0.821	0.919	0.490	0.456
69	1.327	0.907	0.767	0.654	0.561	0.500	0.500	0.500	0.500	0.500	0.500	0.738	1.000	1.000	0.498	0.463
70	1.686	0.970	0.818	0.690	0.587	0.500	0.500	0.500	0.500	0.500	0.500	0.875	1.000	1.000	0.721	0.470
71	2.045	1.012	0.861	0.724	0.615	0.523	0.500	0.500	0.500	0.500	0.543	1.000	1.000	1.000	0.820	0.474
72	2.404	1.329	0.909	0.763	0.662	0.557	0.500	0.500	0.500	0.500	0.572	0.981	1.000	1.000	0.830	0.477
73	2.762	1.637	0.963	0.826	0.695	0.590	0.500	0.500	0.500	0.500	0.511	0.967	1.000	1.000	0.727	0.476
74	3.112	1.946	1.000	0.854	0.723	0.619	0.517	0.500	0.500	0.500	0.500	0.745	0.795	0.687	0.500	0.468
75	3.445	2.255	1.023	0.875	0.747	0.647	0.547	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.465
76	3.773	2.564	1.332	0.901	0.779	0.680	0.580	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.496	0.461
77	4.101	2.873	1.641	0.940	0.817	0.716	0.614	0.509	0.500	0.500	0.500	0.500	0.500	0.500	0.493	0.458
78	4.430	3.182	1.983	0.983	0.857	0.755	0.650	0.543	0.500	0.500	0.500	0.500	0.500	0.500	0.480	0.452
79	4.758	3.491	2.288	1.194	0.900	0.795	0.688	0.578	0.500	0.500	0.500	0.500	0.500	0.500	0.476	0.443
80	5.087	3.800	2.606	1.524	0.945	0.837	0.730	0.622	0.513	0.500	0.500	0.500	0.500	0.500	0.471	0.438
81	5.415	4.109	2.940	1.891	0.992	0.885	0.777	0.668	0.559	0.500	0.500	0.500	0.500	0.498	0.466	0.434
82	5.743	4.417	3.343	2.290	1.339	0.933	0.824	0.720	0.617	0.500	0.500	0.500	0.500	0.493	0.461	0.429
83	6.072	4.921	3.755	2.774	1.807	0.990	0.895	0.799	0.689	0.561	0.500	0.500	0.500	0.488	0.456	0.424
84	6.545	5.290	4.242	3.273	2.311	1.607	0.991	0.897	0.788	0.653	0.500	0.500	0.500	0.483	0.451	0.419
85	6.946	5.728	4.762	3.852	2.914	2.569	1.921	1.201	0.916	0.678	0.500	0.500	0.500	0.478	0.446	0.414
86	7.255	6.237	5.388	4.507	4.079	3.569	2.968	2.284	1.514	0.901	0.611	0.500	0.500	0.473	0.441	0.409
87	7.564	6.765	6.061	5.252	5.115	4.621	4.068	3.414	2.670	1.482	0.879	0.581	0.500	0.468	0.445	0.421
88	7.872	7.362	6.825	6.415	6.159	5.726	5.223	4.593	3.772	2.387	1.003	0.806	0.607	0.490	0.466	0.441
89	8.352	8.080	7.679	7.571	7.249	6.886	6.425	5.811	4.677	3.292	2.381	1.218	0.827	0.625	0.492	0.466
90	8.956	8.878	8.720	8.712	8.413	8.090	7.663	6.966	5.651	4.892	3.831	2.577	1.103	0.804	0.625	0.489
91	9.586	9.772	9.904	9.837	9.632	9.359	8.951	8.030	7.316	6.384	5.241	3.910	1.889	0.940	0.749	0.573
92	12.093	14.745	16.531	16.704	15.849	14.471	12.131	9.711	8.882	7.873	6.668	4.683	2.651	1.000	0.851	0.684
93	17.109	20.750	23.493	24.360	24.141	23.197	21.321	18.188	13.124	9.422	7.761	6.228	4.434	2.354	0.936	0.778
94	21.836	26.491	30.325	32.069	32.433	32.117	30.830	28.613	24.221	18.270	9.805	7.716	5.513	3.310	1.106	0.848
95	26.455	32.105	36.984	39.665	40.725	41.041	40.692	39.338	36.753	32.787	27.516	22.832	18.149	13.466	5.190	0.911
96	30.707	37.281	43.259	47.020	49.048	50.113	50.512	50.548	50.336	49.822	45.752	36.410	27.062	17.714	8.363	0.968
97	34.735	42.297	49.378	53.304	55.202	56.268	56.907	56.979	56.764	56.341	47.727	37.206	28.459	19.449	10.300	1.072
98	38.467	46.993	54.619	58.862	61.001	62.311	63.267	63.411	63.191	62.678	50.814	38.949	28.120	19.554	10.811	1.917
99	42.021	51.556	59.715	64.294	66.719	68.232	69.467	69.842	69.619	65.764	53.900	42.036	30.171	19.001	10.510	1.884
100	45.433	56.366	64.773	69.601	72.348	74.077	75.554	76.274	76.026	68.851	56.986	45.122	33.258	21.393	9.862	1.436
101	48.637	61.219	69.761	74.819	77.877	79.727	81.461	82.684	82.430	71.937	60.073	48.208	36.344	24.480	12.615	0.994
102	52.709	66.030	74.766	79.984	83.246	85.383	87.289	89.090	86.888	75.023	63.159	51.295	39.430	25.857	11.937	0.961
103	57.322	70.913	79.754	85.163	88.489	90.888	92.969	95.094	89.974	78.110	64.796	50.695	36.451	22.130	7.802	0.905
104	61.891	75.844	84.805	90.273	93.705	96.269	98.562	97.014	88.212	73.978	59.648	45.319	30.977	16.591	2.204	0.831
105	66.377	80.696	89.903	95.392	98.939	97.251	91.278	86.344	80.249	64.180	52.587	38.412	24.238	9.998	0.929	0.742
106	70.463	85.589	94.979	98.862	93.079	88.598	84.367	76.053	69.996	63.484	47.415	31.347	16.961	2.786	0.824	0.636
107	75.387	90.650	99.549	91.226	85.333	80.369	75.714	70.881	61.369	53.648	46.719	30.651	14.582	0.902	0.705	0.510
108	80.503	95.622	92.641	84.152	78.003	72.855	67.674	62.830	56.197	46.685	37.342	29.954	13.886	0.754	0.563	0.475
109	83.589	99.811	86.267	77.365	70.927	65.930	60.385	54.973	49.946	41.513	32.001	22.490	13.189	0.606	0.486	0.454
110	88.922	94.672	80.128	70.904	64.549	58.975	53.520	47.611	41.811	36.340	26.829	17.317	7.806	0.500	0.472	0.437
111	94.170	89.772	74.833	65.056	57.915	52.796	47.023	41.359	35.067	28.693	21.656	12.145	2.633	0.500	0.470	0.431
112	92.794	84.547	69.695	59.405	52.345	46.413	40.987	34.969	28.868	22.215	15.525	6.972	0.893	0.500	0.467	0.429
113	83.908	78.715	65.306	54.266	46.916	41.090	35.027	29.178	22.868	16.425	9.351	1.799	0.886	0.500	0.465	0.427
114	74.751	73.120	61.231	49.789	41.778	35.898	29.960	23.580	17.390	10.767	3.873	0.870	0.694	0.500	0.463	0.424
115	65.301	67.098	55.847	45.764	37.556	31.029	24.879	18.796	12.190	5.588	0.934	0.727	0.505	0.483	0.454	0.414
116	55.456	61.233	50.115	41.634	33.531	26.964	20.416	13.903	7.663	0.996	0.803	0.603	0.484	0.456	0.428	0.400
117	45.612	53.729	44.295	36.340	29.506	22.939	16.373	9.806	3.290	0.890	0.702	0.500	0.471	0.437	0.403	0.374
118	35.768	45.714	38.273	30.743	24.907	18.914	12.347	5.781	0.963	0.815	0.657	0.496	0.461	0.427	0.393	0.358
119	25.924	37.699	32.250	24.720	19.342	14.560	8.322	1.756	0.894	0.765	0.625	0.493	0.457	0.421	0.385	0.350
120	13.619	27.627	24.229	17.192	11.813	7.511	2.822	0.939	0.829	0.719	0.604	0.497	0.459	0.422	0.384	0.346
121	1.000	12.087	10.725	6.652	1.274	0.994	0.930	0.860	0.785	0.707	0.625	0.534	0.473	0.432	0.390	0.349
122	0.947	0.926	0.931	0.900	0.873	0.849	0.811	0.773	0.735	0.697	0.654	0.578	0.503	0.450	0.399	0.347
123	0.846	0.740	0.707	0.701	0.683	0.653	0.615	0.577	0.540	0.502	0.500	0.500	0.500	0.465	0.394	0.325
124	0.682	0.595	**0.500**	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.430	0.336	0.243
125	0.500	0.361	**0.247**	**0.221**	**0.266**	**0.286**	**0.301**	**[illegible]**	**0.343**	**0.333**	**0.305**	**0.239**	**0.199**	**0.197**	**0.194**	**0.192**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.6-1. INITIAL RA-226 + RA-228 CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	0.403	0.371	0.339	0.312	0.287	0.261	0.227	0.199	0.195	0.189	0.181	0.171	0.158	0.142	0.126	**0.111**
65	0.408	0.376	0.344	0.312	0.280	0.248	0.216	0.198	0.195	0.189	0.181	0.171	0.158	0.142	0.127	**0.111**
66	0.412	0.380	0.348	0.315	0.282	0.248	0.214	0.198	0.194	0.189	0.181	0.171	0.158	0.142	0.127	**0.111**
67	0.416	0.384	0.350	0.315	0.281	0.246	0.211	0.198	0.194	0.189	0.181	0.171	0.158	0.142	0.127	**0.111**
68	0.422	0.387	0.352	0.317	0.282	0.247	0.211	0.198	0.194	0.189	0.181	0.171	0.158	0.142	0.127	**0.111**
69	0.428	0.392	0.357	0.321	0.284	0.248	0.212	0.198	0.194	0.189	0.181	0.171	0.158	0.142	0.127	**0.112**
70	0.433	0.397	0.360	0.323	0.287	0.250	0.213	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
71	0.437	0.400	0.363	0.326	0.288	0.251	0.213	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
72	0.440	0.402	0.365	0.327	0.289	0.252	0.214	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
73	0.439	0.402	0.365	0.327	0.290	0.252	0.215	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
74	0.434	0.399	0.363	0.326	0.290	0.253	0.216	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
75	0.429	0.394	0.358	0.323	0.287	0.252	0.215	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
76	0.425	0.390	0.354	0.319	0.284	0.248	0.213	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
77	0.423	0.387	0.352	0.317	0.281	0.246	0.211	0.198	0.194	0.189	0.181	0.171	0.158	0.143	0.127	**0.112**
78	0.419	0.384	0.350	0.314	0.279	0.244	0.208	0.198	0.194	0.189	0.181	0.171	0.158	0.142	0.127	**0.112**
79	0.412	0.380	0.346	0.311	0.276	0.241	0.206	0.198	0.194	0.188	0.181	0.171	0.158	0.142	0.127	**0.112**
80	0.406	0.374	0.341	0.308	0.274	0.239	0.204	0.197	0.194	0.188	0.181	0.171	0.158	0.142	0.127	**0.112**
81	0.401	0.369	0.337	0.305	0.271	0.236	0.202	0.197	0.193	0.188	0.180	0.170	0.157	0.142	0.127	0.112
82	0.396	0.364	0.332	0.300	0.268	0.234	0.200	0.197	0.193	0.188	0.180	0.170	0.157	0.142	0.127	0.111
83	0.392	0.359	0.327	0.295	0.263	0.231	0.200	0.197	0.193	0.188	0.180	0.170	0.157	0.142	0.126	0.111
84	0.387	0.354	0.322	0.290	0.258	0.227	0.200	0.197	0.193	0.187	0.180	0.170	0.157	0.141	0.126	0.111
85	0.382	0.350	0.318	0.290	0.260	0.228	0.199	0.196	0.193	0.187	0.179	0.169	0.156	0.141	0.126	0.111
86	0.380	0.354	0.326	0.297	0.264	0.229	0.199	0.196	0.192	0.187	0.179	0.169	0.156	0.141	0.126	0.110
87	0.395	0.368	0.338	0.305	0.269	0.228	0.199	0.196	0.192	0.187	0.179	0.169	0.156	0.141	0.125	0.110
88	0.414	0.384	0.351	0.309	0.269	0.227	0.199	0.196	0.192	0.187	0.179	0.169	0.156	0.140	0.125	0.110
89	0.432	0.395	0.357	0.317	0.272	0.227	0.199	0.196	0.192	0.186	0.179	0.169	0.155	0.140	0.125	0.109
90	0.452	0.413	0.370	0.326	0.278	0.226	0.198	0.195	0.192	0.186	0.178	0.168	0.155	0.140	0.124	0.109
91	0.478	0.434	0.389	0.337	0.285	0.227	0.198	0.195	0.191	0.186	0.178	0.168	0.155	0.140	0.124	0.109
92	0.532	0.463	0.412	0.356	0.290	0.224	0.198	0.195	0.191	0.186	0.178	0.168	0.155	0.139	0.124	0.109
93	0.631	0.497	0.431	0.364	0.298	0.227	0.198	0.195	0.191	0.186	0.178	0.168	0.155	0.139	0.124	0.109
94	0.687	0.533	0.470	0.402	0.311	0.221	0.198	0.195	0.191	0.185	0.178	0.168	0.155	0.139	0.124	0.108
95	0.759	0.620	0.492	0.400	0.308	0.215	0.197	0.194	0.191	0.185	0.178	0.168	0.154	0.139	0.124	0.108
96	0.815	0.658	0.499	0.402	0.305	0.209	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.139	0.124	0.108
97	0.838	0.672	0.506	0.403	0.302	0.202	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.139	0.124	0.108
98	0.848	0.678	0.508	0.401	0.298	0.200	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.139	0.124	0.108
99	0.846	0.675	0.504	0.397	0.292	0.200	0.197	0.194	0.190	0.184	0.177	0.167	0.154	0.139	0.124	0.108
100	0.836	0.663	0.494	0.390	0.285	0.199	0.196	0.193	0.190	0.184	0.177	0.167	0.154	0.139	0.124	0.108
101	0.816	0.640	0.480	0.379	0.277	0.199	0.196	0.193	0.190	0.184	0.177	0.167	0.154	0.139	0.123	0.108
102	0.782	0.603	0.462	0.370	0.276	0.199	0.196	0.193	0.190	0.184	0.177	0.167	0.154	0.138	0.123	0.108
103	0.727	0.550	0.442	0.358	0.273	0.200	0.196	0.193	0.190	0.184	0.177	0.167	0.154	0.138	0.123	0.108
104	0.653	0.492	0.420	0.346	0.270	0.200	0.197	0.194	0.190	0.184	0.177	0.167	0.154	0.138	0.123	0.108
105	0.563	0.462	0.402	0.335	0.266	0.200	0.197	0.194	0.190	0.184	0.177	0.167	0.154	0.138	0.123	0.108
106	0.487	0.437	0.382	0.322	0.263	0.200	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.138	0.123	0.107
107	0.460	0.414	0.366	0.314	0.259	0.200	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.138	0.123	0.107
108	0.437	0.395	0.352	0.304	0.255	0.202	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.138	0.123	0.108
109	0.417	0.379	0.339	0.297	0.252	0.204	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.139	0.123	0.108
110	0.403	0.366	0.330	0.290	0.249	0.206	0.197	0.194	0.190	0.185	0.177	0.167	0.154	0.139	0.123	0.108
111	0.393	0.358	0.323	0.285	0.246	0.207	0.197	0.194	0.191	0.185	0.177	0.167	0.154	0.139	0.123	0.108
112	0.391	0.352	0.314	0.278	0.243	0.205	0.198	0.195	0.191	0.185	0.178	0.168	0.154	0.139	0.124	0.108
113	0.388	0.350	0.312	0.273	0.235	0.200	0.197	0.194	0.190	0.185	0.178	0.168	0.155	0.139	0.124	0.108
114	0.385	0.346	0.306	0.267	0.227	0.199	0.196	0.193	0.190	0.184	0.177	0.167	0.154	0.139	0.124	0.109
115	0.374	0.335	0.295	0.256	0.216	0.198	0.195	0.193	0.189	0.184	0.176	0.167	0.154	0.139	0.124	0.109
116	0.364	0.324	0.284	0.245	0.205	0.198	0.195	0.192	0.188	0.183	0.176	0.166	0.154	0.139	0.124	0.109
117	0.346	0.313	0.274	0.234	0.200	0.197	0.194	0.191	0.188	0.183	0.175	0.166	0.154	0.139	0.124	0.109
118	0.324	0.292	0.263	0.224	0.199	0.196	0.193	0.191	0.187	0.182	0.175	0.166	0.153	0.139	0.124	0.110
119	0.315	0.280	0.246	0.211	0.198	0.195	0.193	0.190	0.187	0.182	0.175	0.165	0.153	0.139	0.124	0.110
120	0.309	0.271	0.235	0.200	0.197	0.194	0.192	0.189	0.186	0.181	0.174	0.165	0.153	0.139	0.125	0.110
121	0.307	0.265	0.222	0.199	0.195	0.192	0.189	0.186	0.183	0.178	0.172	0.163	0.152	0.139	0.125	0.110
122	0.295	0.244	0.200	0.196	0.193	0.190	0.187	0.184	0.180	0.175	0.168	0.160	0.148	0.135	0.122	0.109
123	0.257	0.200	0.197	0.193	0.190	0.187	0.184	0.181	0.177	0.172	0.164	0.155	0.144	0.130	0.117	0.104
124	0.198	0.195	0.192	0.189	0.186	0.183	0.180	0.177	0.173	0.168	0.160	0.150	0.137	0.124	0.111	0.100
125	**0.190**	**0.187**	**0.185**	**0.182**	**0.179**	**0.176**	**0.174**	**0.171**	**0.167**	**0.162**	**0.155**	**0.145**	**0.132**	**0.117**	**0.103**	**0.100**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

E.7 CADMIUM TRANSPORT

The cadmium concentrations have been highly attenuated in the Lucky Mc aquifer. This attenuation limits the calibration of the distribution coefficient for cadmium. Figure E.7-1 presents the calibration of the distribution coefficients for the observed concentrations at well P-3. This calibration indicates that a distribution coefficient of 0.013 ft^3/lb best fits the observed data for well P-3. No other calibration fit was made due to the limit of movement of this constituent further downgradient. Table E.7-1 presents the initial cadmium concentrations used in the simulations.

This distribution coefficient was used in the simulations of cadmium. Figure 2.3-5 presents the predicted cadmium concentrations versus time. Cadmium concentrations in well P-20 are predicted to gradually decline from their present levels. Concentrations at POC well T1-12 are predicted to peak at slightly less than 0.02 mg/l. This becomes the POC concentration for cadmium, which is only slightly greater than the present site standard of 0.01 mg/l. Concentrations further downgradient at well T1-22 are predicted to reach the present site standard of 0.01 mg/l. The concentrations at POE well AL-6 are predicted to never approach the present site standard.

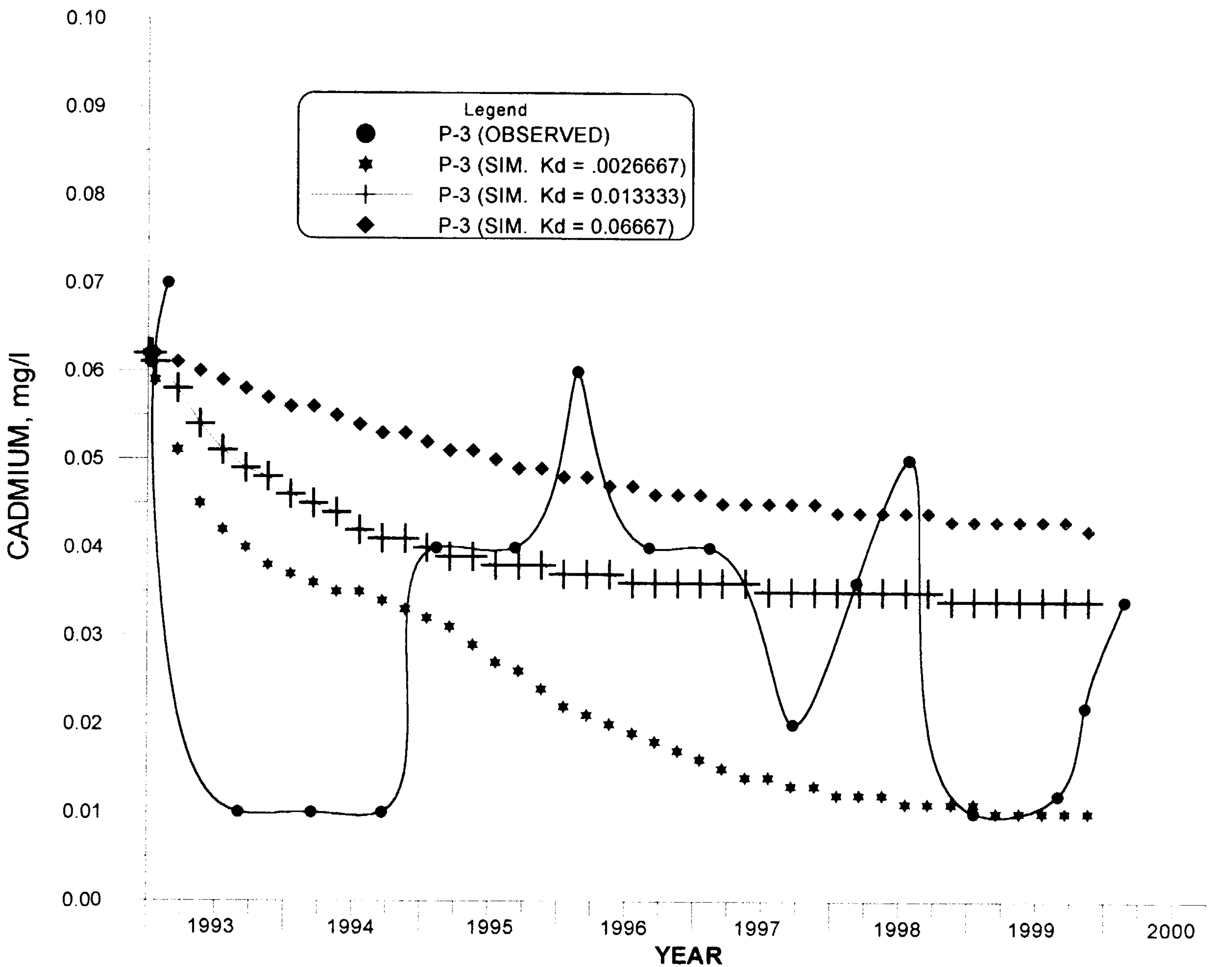

FIGURE E.7-1. CADMIUM MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL P-3.

TABLE E.7-1. INITIAL CADMIUM CONCENTRATIONS, 2000, IN mg/l.

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00030	.00030	.00030	.00030	.00030	.00030	.00030	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00030	.00030	.00040	.00040	.00040	.00040	.00040	.00040	.00030	.00030	.00020	.00020	.00020	.00020	.00020
41	.00020	.00030	.00040	.00040	.00040	.00040	.00040	.00040	.00040	.00040	.00040	.00020	.00020	.00020	.00020	.00020
42	.00020	.00030	.00040	.00040	.00050	.00050	.00050	**[illegible]**	**.00050**	**.00050**	.00040	.00030	.00020	.00020	.00020	.00020
43	.00030	.00040	.00040	.00050	.00050	.00050	**.00060**	.00060	.00060	.00060	**.00050**	**.00040**	.00020	.00020	.00020	.00020
44	.00030	.00040	.00050	.00050	.00060	**.00060**	.00060	.00060	.00060	.00060	.00060	.00040	.00030	.00020	.00020	.00020
45	.00030	.00040	.00050	.00060	.00060	.00070	.00070	.00070	.00070	.00070	.00060	.00050	.00030	.00020	.00020	.00020
46	.00040	.00040	.00050	.00060	**.00070**	.00070	.00070	.00080	.00080	.00080	.00070	.00060	.00040	.00020	.00020	.00020
47	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00080	.00080	.00070	.00050	.00020	.00020	.00020
48	.00040	.00050	.00060	**.00070**	.00070	.00080	.00090	.00090	.00090	.00090	.00080	.00070	.00050	.00020	.00020	.00020
49	.00040	.00050	.00060	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00090	.00080	.00060	.00020	.00020	.00020
50	.00050	.00060	.00070	.00080	.00080	.00090	.00100	.00250	.00280	.00230	.00100	.00090	.00070	.00020	.00020	.00020
51	.00050	.00060	**.00070**	.00080	.00090	.00090	.00290	.00490	.00480	.00450	.00310	.00100	.00070	.00020	.00020	.00020
52	.00050	.00060	.00070	.00080	.00090	.00100	.00480	.00500	.00500	.00500	.00500	.00270	.00090	.00020	.00020	.00020
53	.00060	.00070	.00070	.00090	.00090	.00310	.00500	.00500	.00500	.00500	.00500	.00500	.00100	.00020	.00020	.00020
54	.00060	**.00070**	.00080	.00090	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00280	.00020	.00020	.00020
55	.00060	.00070	.00080	.00090	.00140	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00390	.00020	.00020	.00020
56	.00060	.00070	.00080	.00090	.00430	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00390	.00020	.00020	.00020
57	.00060	.00080	.00090	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00490	.00350	.00020	.00020	.00020
58	.00070	.00080	.00090	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00450	.00310	.00020	.00020	.00020
59	**.00070**	.00080	.00090	.00300	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00410	.00270	.00020	.00020	.00020
60	**.00070**	.00080	.00090	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00360	.00230	.00020	.00020	.00020
61	**.00070**	.00080	.00090	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00460	.00320	.00190	.00020	.00020	.00020
62	**.00070**	.00090	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00420	.00280	.00140	.00020	.00020	.00020
63	**.00070**	.00090	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00380	.00240	.00130	.00030	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.7-1. INITIAL CADMIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00030
48	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00040
49	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00040	.00040	.00050
50	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00040	.00040	.00050	.00050	.00050
51	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00050	.00060	.00060	.00060
52	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00040	.00050	.00060	.00070	.00070
53	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00040	.00040	.00040	.00050	.00050	.00060	.00070	.00070
54	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00050	.00050	.00060	.00060	.00070	.00070	.00080
55	.00020	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00050	.00060	.00060	.00060	.00070	.00070	.00080	.00080
56	.00020	.00020	.00020	.00020	.00030	.00030	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090
57	.00020	.00020	.00020	.00020	.00030	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100
58	.00020	.00020	.00020	.00030	.00040	.00050	.00060	.00060	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100
59	.00020	.00020	.00020	.00040	.00050	.00050	.00060	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100	.00100
60	.00020	.00020	.00030	.00040	.00050	.00060	.00070	.00070	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100
61	.00020	.00020	.00030	.00040	.00060	.00060	.00070	.00080	.00090	.00100	.00400	.00400	.00100	.00100	.00100	.00100
62	.00020	.00020	.00040	.00050	.00060	.00070	.00070	.00080	.00090	.00100	.00400	.00400	.00350	.00100	.00100	.00100
63	.00020	.00020	.00040	.00050	.00060	.00070	.00080	.00090	.00090	.00130	.00400	.00400	.00310	.00100	.00100	.00100

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.7-1. INITIAL CADMIUM CONCENTRATIONS, 2000, IN mg/l (continued).

Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
6	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
7	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
8	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
9	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
10	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
11	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
12	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
13	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
14	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
15	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
16	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
17	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
18	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
19	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
20	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
21	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
22	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
23	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
24	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
25	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
26	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
27	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
28	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
29	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
30	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
31	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
32	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
33	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
34	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
35	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
36	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
37	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
38	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
39	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
40	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
41	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
42	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
43	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
44	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
45	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
46	.00020	.00030	.00030	.00020	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
47	.00030	.00040	.00040	.00030	.00020	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
48	.00040	.00040	.00050	.00040	.00030	.00030	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
49	.00050	.00050	.00060	.00050	.00040	.00040	.00030	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
50	.00060	.00060	.00060	.00060	.00050	.00050	.00040	**.00030**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
51	.00070	.00070	.00070	.00070	.00060	.00060	.00050	**.00040**	.00030	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**
52	.00070	.00080	.00080	.00080	.00070	.00070	.00060	**.00050**	.00040	.00030	.00020	.00020	.00020	.00020	.00020	**.00020**
53	.00080	.00090	.00090	.00090	.00090	.00080	.00070	**.00060**	.00050	.00040	.00020	.00020	.00020	.00020	.00020	**.00020**
54	.00080	.00090	.00100	.00100	.00100	.00090	.00080	**.00070**	.00060	.00050	.00030	.00020	.00020	.00020	.00020	**.00020**
55	.00090	.00090	.00100	.00100	.00100	.00100	.00090	**.00080**	.00070	.00060	.00040	.00020	.00020	.00020	.00020	**.00020**
56	.00090	.00100	.00100	.00100	.00100	.00100	.00090	**.00080**	.00070	.00060	.00040	.00020	.00020	.00020	.00020	**.00020**
57	.00100	.00100	.00100	.00100	.00100	.00100	.00090	**.00090**	.00080	.00070	.00050	.00020	.00020	.00020	.00020	**.00020**
58	.00100	.00100	.00100	.00100	.00100	.00090	.00090	**.00090**	.00080	.00070	.00050	.00030	.00020	.00020	.00020	**.00020**
59	.00100	.00100	.00100	.00100	.00100	.00090	.00090	**.00080**	.00080	.00070	.00060	.00030	.00020	.00020	.00020	**.00020**
60	.00100	.00100	.00100	.00100	.00090	.00090	.00090	**.00080**	.00080	.00070	.00060	.00040	.00020	.00020	.00020	**.00020**
61	.00100	.00100	.00100	.00090	.00090	.00090	.00080	**.00080**	.00070	.00070	.00060	.00040	.00020	.00020	.00020	**.00020**
62	.00100	.00100	.00100	.00090	.00090	.00090	.00080	**.00080**	.00070	.00070	.00050	.00040	.00020	.00020	.00020	**.00020**
63	.00100	.00100	.00090	.00090	.00090	.00080	.00080	**.00070**	.00070	.00060	.00050	.00040	.00020	.00020	.00020	**.00020**

(Column headers 33–48 are printed under the spanning heading "Column".)

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.7-1. INITIAL CADMIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**.00070**	.00090	.00290	.00500	.00500	.00500	.00500	.00500	.00500	.00470	.00360	.00240	.00140	.00050	.00020	.00020
65	**.00070**	.00090	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00470	.00360	.00250	.00160	.00070	.00020	.00020
66	**.00080**	.00090	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00470	.00360	.00260	.00160	.00100	.00040	.00020
67	**.00080**	.00090	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00470	.00360	.00250	.00210	.00120	.00060	.00040
68	**.00080**	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00460	.00350	.00300	.00260	.00130	.00080	.00060
69	**.00080**	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00450	.00390	.00350	.00300	.00150	.00100	.00080
70	**.00080**	.00100	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00480	.00440	.00390	.00320	.00160	.00120	.00100
71	**.00080**	.00150	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00530	.00490	.00440	.00330	.00180	.00140	.00120
72	**.00090**	.00280	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00580	.00530	.00490	.00350	.00190	.00150	.00140
73	**.00090**	.00410	.00500	.00500	.00500	.00500	.00500	.00500	.00500	.00630	.00580	.00520	.00360	.00210	.00170	.00150
74	**.00090**	.00500	.00510	.00510	.00500	.00500	.00500	.00500	.00540	.00670	.00630	.00530	.00380	.00220	.00190	.00170
75	**.00090**	.00510	.00560	.00560	.00550	.00550	.00500	.00500	.00610	.00720	.00670	.00550	.00390	.00240	.00210	.00190
76	**.00090**	.00530	.00610	.00610	.00600	.00600	.00540	.00500	.00700	.00770	.00710	.00560	.00410	.00250	.00230	.00210
77	**.00090**	.00540	.00630	.00660	.00650	.00650	.00630	.00650	.00790	.00810	.00730	.00580	.00420	.00270	.00250	.00230
78	**.00090**	.00550	.00640	.00710	.00710	.00700	.00720	.00790	.00900	.00860	.00740	.00590	.00440	.00290	.00270	.00250
79	**.00100**	.00560	.00650	.00740	.00750	.00750	.00800	.00920	.01000	.00910	.00760	.00610	.00450	.00300	.00290	.00270
80	**.00100**	.00580	.00670	.00750	.00810	.00800	.00890	.01000	.01000	.00930	.00780	.00620	.00470	.00320	.00300	.00290
81	**.00180**	.00590	.00680	.00770	.00860	.00850	.00970	.01000	.01000	.00940	.00790	.00640	.00480	.00330	.00320	.00310
82	**.00500**	.00600	.00690	.00780	.00870	.00900	.01000	.01000	.01000	.00960	.00800	.00650	.00500	.00350	.00340	.00320
83	**.00510**	.00610	.00700	.00790	.00880	.00950	.01000	.01000	.01000	.00960	.00820	.00670	.00510	.00370	.00360	.00340
84	**.00520**	.00620	.00710	.00800	.00890	.00980	.01000	.01000	.01000	.00960	.00830	.00680	.00530	.00390	.00380	.00360
85	**.00530**	.00630	.00720	.00810	.00900	.01000	.01000	.01000	.01000	.00960	.00810	.00700	.00540	.00410	.00400	.00380
86	**.00530**	.00640	.00730	.00820	.00910	.01000	.01000	.01000	.01000	.00950	.00800	.00710	.00560	.00430	.00420	.00390
87	**.00480**	.00620	.00730	.00820	.00920	.01000	.01000	.01000	.01000	.00940	.00790	.00690	.00580	.00450	.00430	.00400
88	**.00440**	.00580	.00700	.00830	.00920	.01000	.01000	.01000	.01000	.00930	.00770	.00650	.00590	.00460	.00450	.00410
89	**.00390**	.00530	.00660	.00780	.00910	.01000	.01000	.01000	.01000	.00910	.00750	.00630	.00570	.00480	.00470	.00420
90	.00350	.00490	.00610	.00740	.00860	.01000	.01000	.01000	.01000	.00890	.00730	.00600	.00530	.00500	.00490	.00430
91	.00310	.00440	.00570	.00690	.00820	.01000	.01000	.01000	.01000	.00870	.00710	.00570	.00500	.00500	.00500	.00450
92	.00270	.00390	.00520	.00650	.00780	.01000	.01000	.01000	.00980	.00840	.00680	.00540	.00500	.00500	.00500	.00540
93	.00230	.00350	.00470	.00600	.00750	.00960	.01000	.01000	.00940	.00810	.00660	.00510	.00500	.00500	.00500	.00640
94	.00190	.00300	.00430	.00550	.00710	.00900	.01000	.00990	.00910	.00790	.00630	.00500	.00500	.00500	.00500	.00630
95	.00150	.00260	.00380	.00510	.00660	.00850	.00950	.00940	.00880	.00760	.00620	.00500	.00500	.00500	.00500	.00670
96	.00110	.00210	.00340	.00470	.00620	.00790	.00890	.00890	.00830	.00750	.00610	.00500	.00500	.00500	.00500	.00690
97	.00070	.00160	.00290	.00410	.00560	.00730	.00830	.00840	.00780	.00720	.00600	.00500	.00500	.00500	.00530	.00740
98	.00030	.00120	.00240	.00360	.00500	**.00670**	.00770	.00790	.00730	.00670	.00610	.00500	.00500	.00500	.00580	.00780
99	.00020	.00070	.00190	.00300	.00430	**.00620**	.00720	.00740	.00680	.00620	.00560	.00500	.00500	.00500	.00620	.00820
100	.00020	.00030	.00130	.00240	.00370	.00560	**.00670**	.00680	.00630	.00570	.00510	.00500	.00500	.00520	.00660	.00850
101	.00020	.00020	.00070	.00180	.00320	.00500	**.00620**	.00630	.00580	.00520	.00460	.00490	.00500	.00560	.00690	.00880
102	.00020	.00020	.00020	.00110	.00260	.00450	**.00570**	.00580	.00520	.00470	.00420	.00480	.00530	.00600	.00720	.00900
103	.00020	.00020	.00020	.00050	.00220	.00400	.00530	**.00530**	.00470	.00410	.00410	.00460	.00530	.00640	.00740	.00910
104	.00020	.00020	.00020	.00020	.00170	.00360	.00480	**.00480**	.00420	.00360	.00400	.00450	.00520	.00650	.00760	.00910
105	.00020	.00020	.00020	.00020	.00120	.00310	.00440	**.00430**	.00370	.00330	.00390	.00430	.00520	.00650	.00780	.00920
106	.00020	.00020	.00020	.00020	.00070	.00260	.00400	**.00380**	**.00320**	.00320	.00380	.00410	.00520	.00650	.00780	.00910
107	.00020	.00020	.00020	.00020	.00020	.00220	.00360	.00320	**.00270**	.00310	.00360	.00400	.00520	.00650	.00770	.00900
108	.00020	.00020	.00020	.00020	.00020	.00170	.00330	.00270	**.00240**	.00290	.00350	.00400	.00520	.00650	.00770	.00900
109	.00020	.00020	.00020	.00020	.00020	.00130	.00280	.00220	.00230	.00280	.00330	.00400	.00520	.00650	.00770	.00900
110	.00020	.00020	.00020	.00020	.00020	.00090	.00230	.00170	.00210	.00270	.00320	.00400	.00520	.00650	.00770	.00900
111	.00020	.00020	.00020	.00020	.00020	.00050	.00180	.00140	.00200	.00260	.00310	.00400	.00520	.00650	.00770	.00880
112	.00020	.00020	.00020	.00020	.00020	.00020	.00120	.00130	.00190	.00250	.00290	.00400	.00520	.00650	.00770	.00850
113	.00020	.00020	.00020	.00020	.00020	.00020	.00070	.00120	.00180	.00230	.00280	.00400	.00520	.00650	.00760	.00810
114	.00020	.00020	.00020	.00020	.00020	.00020	.00050	.00110	.00160	.00220	.00270	.00400	.00520	.00650	.00750	.00760
115	.00020	.00020	.00020	.00020	.00020	.00020	.00040	.00090	.00150	.00210	.00270	.00400	.00520	.00640	.00720	.00720
116	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00080	.00140	.00190	.00270	.00400	.00520	.00630	.00680	.00680
117	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00070	.00130	.00180	.00270	.00400	.00520	.00620	.00640	.00630
118	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00060	.00120	.00170	.00270	.00390	.00510	.00590	.00590	.00590
119	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00050	.00100	.00160	.00270	.00390	.00500	.00550	.00550	.00550
120	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00030	.00090	.00140	.00270	.00390	.00480	.00500	.00490	.00490
121	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00070	.00140	.00270	.00370	.00420	.00420	.00420	.00410
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00040	.00140	.00240	.00310	.00310	.00310	.00310	.00310
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00110	.00170	.00170	.00170	.00170	.00160	.00160
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.7-1. INITIAL CADMIUM CONCENTRATIONS, 2000, IN mg/l (continued).

Row	Column 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	.00020	.00030	.00040	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00350	.00360	.00150	.00100	.00100	.00100
65	.00020	.00040	.00050	.00060	.00070	.00080	.00080	.00090	.00090	.00100	.00130	.00180	.00100	.00100	.00100	.00100
66	.00030	.00050	.00050	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100
67	.00030	.00040	.00050	.00060	.00070	.00070	.00070	.00080	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100
68	.00050	.00040	.00050	.00060	.00060	.00070	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100
69	.00070	.00060	.00050	.00050	.00060	.00060	.00060	.00070	.00080	.00090	.00090	.00100	.00100	.00350	.00100	.00100
70	.00090	.00080	.00070	.00060	.00050	.00050	.00060	.00070	.00080	.00080	.00090	.00100	.00350	.00350	.00100	.00090
71	.00110	.00100	.00090	.00070	.00060	.00050	.00060	.00070	.00080	.00080	.00090	.00120	.00350	.00350	.00100	.00100
72	.00130	.00120	.00110	.00090	.00070	.00060	.00060	.00070	.00080	.00090	.00090	.00220	.00350	.00350	.00100	.00100
73	.00140	.00140	.00120	.00100	.00080	.00070	.00060	.00070	.00080	.00090	.00090	.00290	.00350	.00350	.00100	.00100
74	.00160	.00150	.00130	.00110	.00090	.00070	.00060	.00070	.00080	.00090	.00100	.00350	.00350	.00350	.00100	.00100
75	.00180	.00170	.00150	.00120	.00100	.00080	.00070	.00070	.00080	.00090	.00100	.00330	.00350	.00350	.00150	.00100
76	.00200	.00190	.00160	.00130	.00110	.00090	.00070	.00070	.00080	.00080	.00090	.00210	.00350	.00350	.00260	.00100
77	.00220	.00200	.00160	.00140	.00120	.00100	.00080	.00070	.00080	.00090	.00090	.00150	.00260	.00280	.00240	.00120
78	.00240	.00210	.00170	.00140	.00120	.00110	.00090	.00070	.00080	.00090	.00090	.00110	.00160	.00180	.00150	.00100
79	.00260	.00220	.00180	.00150	.00130	.00120	.00100	.00080	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100
80	.00270	.00230	.00190	.00160	.00140	.00120	.00110	.00090	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100
81	.00290	.00240	.00200	.00170	.00150	.00130	.00120	.00100	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100
82	.00300	.00250	.00210	.00180	.00160	.00140	.00120	.00110	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100
83	.00310	.00250	.00210	.00190	.00160	.00150	.00130	.00110	.00100	.00090	.00100	.00100	.00100	.00100	.00100	.00100
84	.00320	.00260	.00220	.00190	.00170	.00160	.00140	.00120	.00110	.00090	.00100	.00100	.00100	.00100	.00100	.00100
85	.00320	.00270	.00230	.00200	.00180	.00160	.00150	.00130	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100
86	.00330	.00280	.00240	.00210	.00190	.00170	.00160	.00140	.00120	.00110	.00100	.00100	.00100	.00100	.00100	.00100
87	.00340	.00290	.00250	.00220	.00200	.00180	.00160	.00150	.00140	.00140	.00140	.00100	.00100	.00100	.00100	.00100
88	.00350	.00300	.00250	.00230	.00210	.00220	.00220	.00220	.00230	.00230	.00250	.00220	.00170	.00140	.00100	.00100
89	.00360	.00310	.00300	.00300	.00310	.00310	.00310	.00320	.00320	.00340	.00350	.00330	.00260	.00320	.00420	.00330
90	.00370	.00380	.00390	.00400	.00400	.00400	.00410	.00410	.00420	.00440	.00450	.00440	.00420	.00490	.00500	.00550
91	.00460	.00470	.00480	.00490	.00490	.00490	.00500	.00510	.00520	.00540	.00550	.00510	.00500	.00500	.00500	.00540
92	.00560	.00560	.00570	.00580	.00580	.00590	.00600	.00610	.00620	.00630	.00590	.00540	.00500	.00500	.00500	.00500
93	.00650	.00660	.00670	.00670	.00680	.00690	.00690	.00710	.00710	.00670	.00620	.00560	.00500	.00500	.00500	.00500
94	.00740	.00750	.00760	.00770	.00780	.00780	.00790	.00790	.00760	.00710	.00640	.00570	.00510	.00500	.00500	.00500
95	.00820	.00840	.00850	.00870	.00870	.00880	.00870	.00840	.00790	.00720	.00650	.00580	.00520	.00500	.00500	.00500
96	.00850	.00940	.00950	.00960	.00960	.00950	.00920	.00870	.00800	.00730	.00670	.00600	.00560	.00540	.00520	.00500
97	.00920	.01000	.01000	.01000	.01000	.01000	.00950	.00890	.00830	.00760	.00680	.00650	.00630	.00610	.00590	.00560
98	.00970	.01000	.01000	.01000	.01000	.01000	.00990	.00920	.00850	.00760	.00740	.00720	.00700	.00660	.00600	.00540
99	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00930	.00850	.00830	.00810	.00750	.00700	.00640	.00580	.00520
100	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00930	.00900	.00850	.00790	.00730	.00680	.00620	.00560	.00500
101	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00950	.00890	.00830	.00770	.00710	.00650	.00590	.00540	.00470
102	.01000	.01000	.01000	.01000	.01000	.01000	.00990	.00930	.00870	.00810	.00750	.00690	.00630	.00570	.00510	.00450
103	.01000	.01000	.01000	.01000	.01000	.01000	.00970	.00910	.00850	.00790	.00730	.00670	.00610	.00550	.00490	.00430
104	.01000	.01000	.01000	.01000	.01000	.01000	.00960	.00890	.00820	.00770	.00710	.00650	.00590	.00530	.00470	.00410
105	.01000	.01000	.01000	.01000	.01000	.01000	.00930	.00860	.00800	.00740	.00680	.00630	.00570	.00510	.00450	.00390
106	.01000	.01000	.01000	.01000	.01000	.00970	.00900	.00830	.00760	.00700	.00650	.00590	.00540	.00490	.00430	.00370
107	.01000	.01000	.01000	.01000	.01000	.00940	.00870	.00790	.00730	.00670	.00610	.00550	.00500	.00450	.00400	.00350
108	.01000	.01000	.01000	.01000	.00980	.00910	.00830	.00760	.00690	.00630	.00560	.00510	.00450	.00410	.00360	.00310
109	.00980	.01000	.01000	.00990	.00920	.00860	.00790	.00710	.00640	.00580	.00520	.00460	.00410	.00360	.00310	.00260
110	.00940	.00990	.00970	.00930	.00830	.00790	.00730	.00670	.00590	.00530	.00470	.00410	.00350	.00300	.00250	.00210
111	.00900	.00940	.00920	.00880	.00820	.00730	.00650	.00600	.00540	.00470	.00410	.00350	.00300	.00240	.00200	.00150
112	.00850	.00890	.00880	.00820	.00780	.00720	.00640	.00560	.00480	.00410	.00360	.00290	.00230	.00180	.00130	.00090
113	.00810	.00850	.00840	.00780	.00740	.00690	.00630	.00550	.00470	.00390	.00310	.00230	.00170	.00110	.00090	.00070
114	.00760	.00800	.00790	.00740	.00690	.00650	.00610	.00540	.00460	.00380	.00300	.00220	.00130	.00080	.00060	.00040
115	.00720	.00750	.00740	.00690	.00650	.00610	.00570	.00520	.00450	.00370	.00290	.00210	.00120	.00060	.00030	.00020
116	.00680	.00700	.00690	.00650	.00610	.00570	.00530	.00480	.00430	.00360	.00280	.00200	.00110	.00060	.00020	.00020
117	.00630	.00650	.00650	.00610	.00560	.00530	.00490	.00450	.00400	.00340	.00270	.00190	.00100	.00050	.00020	.00020
118	.00590	.00610	.00600	.00570	.00520	.00490	.00450	.00410	.00360	.00310	.00250	.00180	.00090	.00040	.00020	.00020
119	.00540	.00560	.00550	.00530	.00480	.00450	.00410	.00370	.00330	.00280	.00220	.00160	.00090	.00030	.00020	.00020
120	.00490	.00490	.00500	.00470	.00430	.00400	.00360	.00320	.00280	.00240	.00180	.00130	.00070	.00020	.00020	.00020
121	.00410	.00410	.00420	.00390	.00360	.00320	.00290	.00250	.00210	.00180	.00130	.00080	.00020	.00020	.00020	.00020
122	.00300	.00300	.00310	.00280	.00260	.00220	.00180	.00150	.00110	.00070	.00040	.00020	.00020	.00020	.00020	.00020
123	.00160	.00160	.00160	.00130	.00110	.00090	.00050	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.7-1. INITIAL CADMIUM CONCENTRATIONS, 2000, IN mg/l (continued).

Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	.00100	.00100	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	**.00020**
65	.00100	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	**.00020**
66	.00100	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00060	.00050	.00040	.00020	.00020	.00020	**.00020**
67	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00060	.00040	.00030	.00020	.00020	.00020	**.00020**
68	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
69	.00090	.00090	.00080	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
70	.00090	.00090	.00080	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
71	.00090	.00090	.00080	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
72	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
73	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00060	.00040	.00030	.00020	.00020	.00020	**.00020**
74	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00060	.00040	.00030	.00020	.00020	.00020	**.00020**
75	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
76	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
77	.00100	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00060	.00050	.00040	.00030	.00020	.00020	.00020	**.00020**
78	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00060	.00050	.00040	.00020	.00020	.00020	.00020	**.00020**
79	.00100	.00090	.00090	.00080	.00070	.00070	.00070	.00060	.00060	.00050	.00040	.00020	.00020	.00020	.00020	**.00020**
80	.00100	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00060	.00050	.00040	.00020	.00020	.00020	.00020	**.00020**
81	.00100	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00060	.00050	.00030	.00020	.00020	.00020	.00020	.00020
82	.00100	.00100	.00090	.00090	.00080	.00070	.00070	.00060	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
83	.00100	.00100	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
84	.00100	.00100	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
85	.00100	.00100	.00100	.00090	.00090	.00080	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
86	.00100	.00100	.00100	.00090	.00090	.00080	.00080	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
87	.00100	.00100	.00100	.00090	.00090	.00080	.00080	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
88	.00100	.00100	.00100	.00100	.00090	.00090	.00080	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
89	.00410	.00310	.00160	.00100	.00090	.00080	.00080	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020
90	.00780	.00990	.01000	.00440	.00420	.00390	.00360	.00320	.00270	.00110	.00030	.00020	.00020	.00020	.00020	.00020
91	.00740	.00990	.01000	.00330	.00300	.00280	.00250	.00230	.00200	.00160	.00100	.00020	.00020	.00020	.00020	.00020
92	.00580	.00820	.00760	.00210	.00190	.00160	.00140	.00120	.00090	.00050	.00030	.00020	.00020	.00020	.00020	.00020
93	.00500	.00500	.00530	.00100	.00090	.00090	.00080	.00070	.00060	.00050	.00030	.00020	.00020	.00020	.00020	.00020
94	.00500	.01130	.00560	.00100	.00090	.00090	.00080	.00070	.00060	.00050	.00030	.00020	.00020	.00020	.00020	.00020
95	.00500	.01200	.00270	.00100	.00090	.00090	.00080	.00070	.00060	.00050	.00030	.00020	.00020	.00020	.00020	.00020
96	.00500	.00700	.00240	.00100	.00100	.00090	.00080	.00070	.00070	.00050	.00030	.00020	.00020	.00020	.00020	.00020
97	.00500	.00440	.00300	.00100	.00100	.00090	.00080	.00080	.00070	.00050	.00030	.00020	.00020	.00020	.00020	.00020
98	.00480	.00420	.00340	.00240	.00100	.00090	.00090	.00080	.00070	.00060	.00040	.00020	.00020	.00020	.00020	.00020
99	.00460	.00410	.00330	.00250	.00170	.00100	.00090	.00080	.00070	.00060	.00040	.00020	.00020	.00020	.00020	.00020
100	.00440	.00390	.00320	.00230	.00150	.00100	.00100	.00090	.00080	.00060	.00040	.00020	.00020	.00020	.00020	.00020
101	.00420	.00360	.00300	.00220	.00140	.00100	.00100	.00090	.00080	.00070	.00040	.00020	.00020	.00020	.00020	.00020
102	.00400	.00340	.00290	.00210	.00130	.00100	.00100	.00100	.00090	.00070	.00040	.00020	.00020	.00020	.00020	.00020
103	.00370	.00310	.00280	.00200	.00120	.00100	.00100	.00100	.00090	.00070	.00040	.00020	.00020	.00020	.00020	.00020
104	.00350	.00290	.00250	.00180	.00100	.00100	.00100	.00100	.00090	.00070	.00040	.00020	.00020	.00020	.00020	.00020
105	.00330	.00270	.00230	.00170	.00100	.00100	.00100	.00100	.00080	.00060	.00030	.00020	.00020	.00020	.00020	.00020
106	.00310	.00250	.00200	.00160	.00100	.00100	.00100	.00090	.00070	.00050	.00020	.00020	.00020	.00020	.00020	.00020
107	.00290	.00230	.00170	.00150	.00100	.00100	.00090	.00070	.00060	.00040	.00020	.00020	.00020	.00020	.00020	.00020
108	.00270	.00210	.00150	.00120	.00100	.00090	.00070	.00060	.00040	.00030	.00020	.00020	.00020	.00020	.00020	.00020
109	.00220	.00180	.00130	.00100	.00080	.00070	.00060	.00040	.00030	.00020	.00020	.00020	.00020	.00020	.00020	.00020
110	.00160	.00120	.00090	.00080	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
111	.00110	.00090	.00070	.00060	.00040	.00030	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
112	.00080	.00060	.00050	.00040	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
113	.00050	.00040	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
114	.00030	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
115	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
116	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
117	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
118	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
119	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
120	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
121	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
122	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
123	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

E.8 BERYLLIUM TRANSPORT

The beryllium concentrations are also highly attenuated at this site. Figure E.8-1 shows the beryllium concentrations at well P-3 versus three different distribution coefficients. A distribution coefficient of 0.0083 ft^3/lb was used to predict the movement of beryllium concentrations in the future in the Lucky Mc aquifer. The initial beryllium concentrations used in the modeling are listed in Table E.8-1. Figure 2.3-6 shows the predictions for several wells. Concentrations at well P-20 should gradually decline with time. Concentrations at POC well T1-12 are predicted to peak at approximately 0.07 mg/l. The concentrations further downgradient at well T1-22 are predicted to approach the present site standard of 0.05 mg/l. The predictions indicate that the present site standard will never be approached at POE well AL-6.

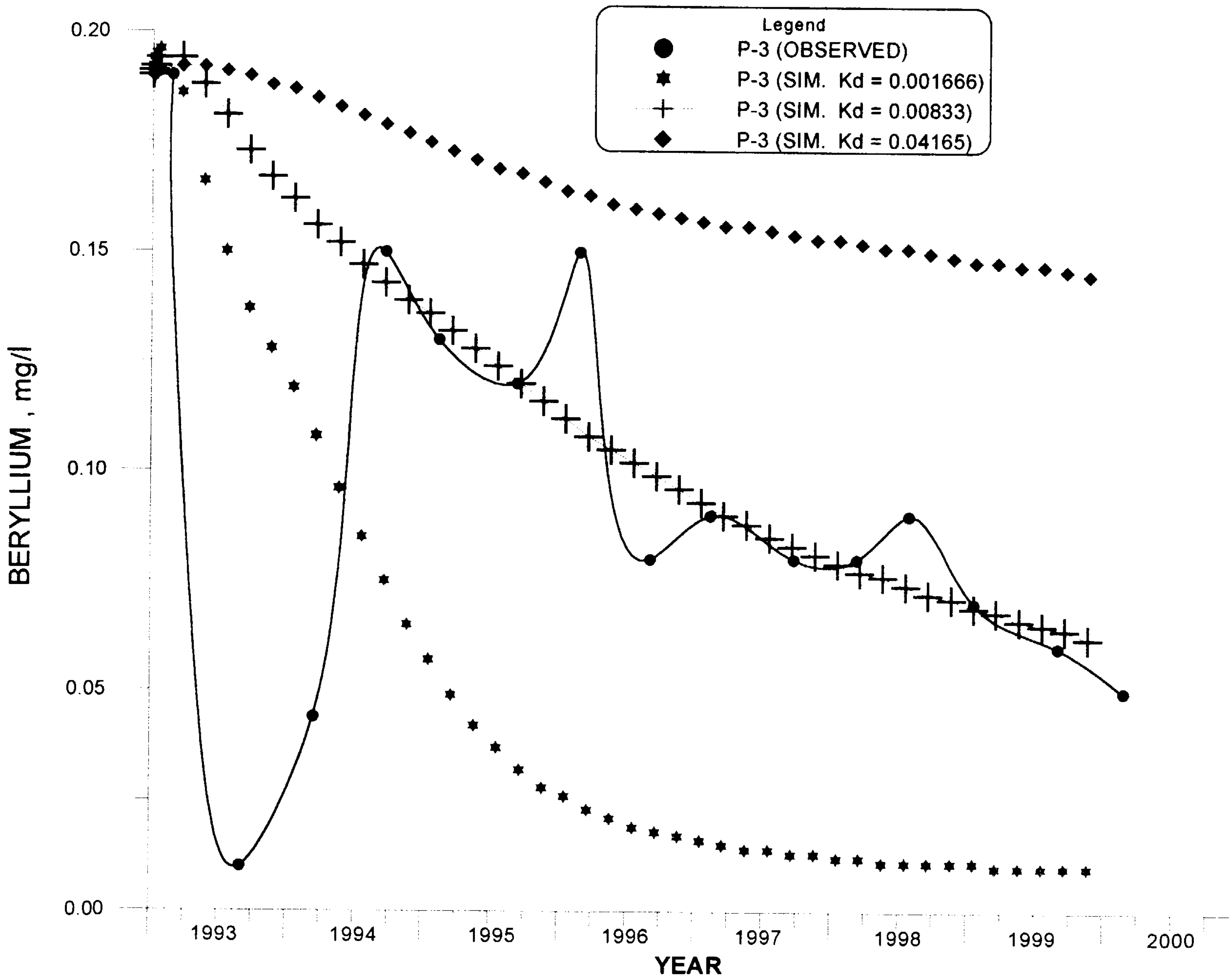

FIGURE E.8-1. BERYLLIUM MODEL FIT FOR DISTRIBUTION COEFFICIENT (FT^3/LB) FOR WELL P-3.

TABLE E.8-1. INITIAL BERYLLIUM CONCENTRATIONS, 2000, IN mg/l.

Row	Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00020	.00020	.00020	.00020	.00030	.00030	.00030	.00030	.00030	.00030	.00040	.00040	.00040	.00040	.00040	.00040
4	.00020	.00020	.00020	.00030	.00040	.00040	.00040	.00040	.00050	.00050	.00050	.00050	.00060	.00060	.00070	.00070
5	.00020	.00020	.00030	.00040	.00040	.00050	.00060	.00060	.00060	.00060	.00060	.00070	.00070	.00080	.00090	.00090
6	.00020	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00070	.00070	.00080	.00080	.00090	.00100	.00100	.00100
7	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100
8	.00030	.00040	.00040	.00050	.00060	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100
9	.00030	.00040	.00050	.00050	.00060	.00070	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
10	.00030	.00040	.00050	.00060	.00060	.00070	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
11	.00030	.00040	.00050	.00060	.00060	.00070	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
12	.00030	.00040	.00050	.00060	.00070	.00070	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
13	.00030	.00040	.00050	.00060	.00070	.00070	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
14	.00030	.00040	.00050	.00060	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
15	.00030	.00040	.00050	.00060	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
16	.00030	.00040	.00050	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100
17	.00030	.00040	.00050	.00060	.00060	.00070	.00080	.00080	.00090	.00100	.00100	.00100	.00100	.00100	.00100	.00100
18	.00030	.00040	.00040	.00050	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100	.00100
19	.00030	.00040	.00040	.00050	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100
20	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100	.00100
21	.00030	.00030	.00040	.00050	.00050	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100	.00100
22	.00030	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100
23	.00020	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100	.00100
24	.00020	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100
25	.00020	.00030	.00040	.00040	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100
26	.00020	.00030	.00040	.00040	.00050	.00050	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100	.00100
27	.00020	.00030	.00040	.00040	.00050	.00050	.00060	.00060	.00070	.00070	.00080	.00090	.00090	.00100	.00100	.00100
28	.00020	.00030	.00040	.00040	.00050	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100
29	.00020	.00030	.00040	.00040	.00050	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100
30	.00020	.00030	.00040	.00040	.00050	.00050	.00060	.00060	.00070	.00070	.00080	.00080	.00090	.00090	.00100	.00100
31	.00020	.00030	.00040	.00040	.00050	.00050	.00060	.00060	.00070	.00090	.00100	.00110	.00120	.00130	.00140	.00100
32	.00020	.00040	.00050	.00060	.00070	.00080	.00100	.00110	.00120	.00130	.00140	.00160	.00170	.00180	.00150	.00120
33	.00070	.00080	.00090	.00110	.00120	.00130	.00140	.00150	.00170	.00180	.00190	.00200	.00220	.00200	.00170	.00130
34	.00070	.00130	.00140	.00150	.00160	.00180	.00190	.00200	.00210	.00230	.00240	.00250	.00260	.00230	.00190	.00140
35	.00080	.00140	.00190	.00200	.00210	.00220	.00240	.00250	.00260	.00270	.00290	.00300	.00280	.00240	.00200	.00160
36	.00080	.00150	.00200	.00240	.00260	.00270	.00280	.00290	.00300	.00320	.00330	.00320	.00300	.00260	.00220	.00180
37	.00080	.00160	.00220	.00260	.00290	.00310	.00320	.00330	.00340	.00350	.00370	.00350	.00310	.00280	.00240	.00200
38	.00090	.00160	.00230	.00270	.00310	.00340	.00350	.00360	.00370	.00380	.00380	.00360	.00330	.00300	.00260	.00210
39	.00090	.00170	.00230	.00290	.00320	.00350	.00370	.00380	.00390	.00400	.00400	.00370	.00340	.00310	.00270	.00220
40	.00090	.00170	.00230	.00300	.00340	.00360	.00380	.00390	.00410	.00420	.00410	.00380	.00350	.00320	.00280	.00230
41	.00100	.00180	.00240	.00300	.00340	.00370	.00390	**.00410**	.00420	.00430	.00420	.00390	.00360	.00330	**.00280**	**.00240**
42	.00100	.00180	.00250	.00300	.00360	.00380	.00410	**.00420**	**.00430**	**.00430**	.00420	.00400	.00370	.00340	.00290	.00240
43	.00100	.00190	.00250	.00310	.00370	.00390	**.00410**	.00430	.00440	.00440	**.00430**	**.00410**	.00380	.00350	.00300	.00250
44	.00100	.00190	.00260	.00320	.00370	**.00410**	.00420	**.00440**	.00450	.00450	.00440	.00420	.00390	.00350	.00310	.00260
45	.00100	.00190	.00270	.00320	.00380	.00420	.00440	**.00450**	.00470	.00460	.00450	.00430	.00400	.00360	.00320	.00260
46	.00100	.00200	.00280	.00330	**.00390**	.00430	.00450	**.00460**	.00480	.00470	.00460	.00440	.00420	.00380	.00330	.00260
47	.00110	.00200	.00280	.00350	.00400	.00440	.00460	**.00470**	.00490	.00490	.00470	.00450	.00420	.00390	.00340	.00260
48	.00110	.00210	.00280	**.00360**	.00410	.00450	.00480	**.00490**	.00500	.00490	.00480	.00460	.00430	.00400	.00340	.00260
49	.00110	.00220	.00290	.00360	.00420	.00470	.00490	.00590	.00710	.00630	.00490	.00480	.00450	.00410	.00340	.00260
50	.00110	.00220	.00300	.00370	.00440	.00480	.00720	.00960	.01000	.00910	.00650	.00490	.00460	.00420	.00340	.00250
51	.00120	.00230	**.00320**	.00390	.00450	.00500	.01000	**.01000**	.01000	.01000	.00930	.00570	.00470	.00420	.00340	.00250
52	.00120	.00230	.00320	.00400	.00460	.00760	.01000	.01000	.01000	.01000	.01000	.00810	.00490	.00420	.00330	.00250
53	.00130	.00240	.00330	.00410	.00480	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00580	.00420	.00330	.00240
54	.00130	**.00250**	.00340	.00430	.00500	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00800	.00410	.00330	.00240
55	.00140	.00260	.00360	.00440	.00770	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00940	.00590	.00320	.00240
56	.00140	.00270	.00370	.00460	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00940	.00750	.00370	.00230
57	.00150	.00280	.00390	.00480	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00940	.00750	.00560	.00230
58	.00150	.00300	.00410	.00500	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00940	.00750	.00560	.00370
59	**.00150**	.00310	.00420	.00750	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00930	.00740	.00550	.00360
60	**.00160**	.00320	.00440	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00930	.00740	.00550	.00360
61	**.00160**	.00330	.00460	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00930	.00740	.00550	.00360
62	**.00170**	.00340	.00480	.01000	.01000	.01000	.01000	**.01000**	.01000	.01000	.01000	.01000	.00930	.00740	.00540	.00360
63	**.00180**	.00360	.00510	.01000	.01000	.01000	.01000	**.01000**	.01000	.00940	.01000	.01000	.00920	.00730	.00540	.00380

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.8-1. INITIAL BERYLLIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00040	.00040	.00040	.00040	.00040	.00030	.00030	.00030	.00030	.00030	.00030	.00030	.00030	.00030	.00030	.00030
4	.00060	.00050	.00050	.00050	.00050	.00050	.00050	.00050	.00040	.00040	.00040	.00040	.00040	.00040	.00040	.00040
5	.00070	.00070	.00060	.00060	.00060	.00060	.00060	.00060	.00060	.00060	.00050	.00050	.00050	.00050	.00050	.00050
6	.00090	.00080	.00080	.00070	.00070	.00070	.00070	.00070	.00070	.00070	.00060	.00060	.00060	.00060	.00060	.00060
7	.00100	.00090	.00090	.00080	.00080	.00080	.00080	.00080	.00070	.00070	.00070	.00070	.00070	.00070	.00070	.00060
8	.00100	.00100	.00100	.00090	.00090	.00090	.00090	.00090	.00080	.00080	.00080	.00080	.00080	.00070	.00070	.00070
9	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00090	.00090	.00090	.00090	.00090	.00080	.00080	.00080	.00080
10	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00090	.00090	.00090	.00090	.00080
11	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00090
12	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
13	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
14	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
15	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
16	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
17	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
18	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
19	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
20	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
21	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
22	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
23	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
24	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
25	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
26	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
27	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
28	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
29	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
30	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
31	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
32	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
33	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
34	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
35	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
36	.00130	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
37	.00140	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
38	.00160	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
39	.00170	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
40	.00180	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
41	.00180	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
42	.00180	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
43	.00180	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
44	.00190	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
45	.00190	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
46	.00190	.00120	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
47	.00180	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
48	.00180	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
49	.00180	.00110	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
50	.00170	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
51	.00170	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
52	.00160	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
53	.00160	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
54	.00160	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
55	.00150	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
56	.00150	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
57	.00150	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
58	.00140	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100
59	.00180	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00150	.00280	.00370	.00330	.00280	.00230	.00190	.00150
60	.00180	.00100	.00100	.00100	.00100	.00110	.00170	.00230	.00360	.00610	.01000	.00770	.00410	.00330	.00270	.00240
61	.00200	.00100	.00100	.00100	.00160	.00210	.00320	.00380	.00480	.00770	.01000	.00970	.00480	.00390	.00350	.00310
62	.00220	.00100	.00100	.00130	.00200	.00260	.00310	.00380	.00490	.00680	.00900	.00790	.00500	.00450	.00400	.00360
63	.00230	.00110	.00100	.00150	.00230	.00280	.00340	.00400	.00460	.00560	.00650	.00570	.00500	.00460	.00410	.00370

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.8-1. INITIAL BERYLLIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
2	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
3	.00030	.00030	.00030	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
4	.00040	.00040	.00030	.00030	.00030	.00030	.00030	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
5	.00050	.00040	.00040	.00040	.00040	.00040	.00030	.00030	.00030	.00030	.00020	.00020	.00020	.00020	.00020	.00020
6	.00050	.00050	.00050	.00050	.00050	.00040	.00040	.00040	.00040	.00030	.00030	.00020	.00020	.00020	.00020	.00020
7	.00060	.00060	.00060	.00060	.00050	.00050	.00050	.00050	.00040	.00040	.00040	.00030	.00020	.00020	.00020	.00020
8	.00070	.00070	.00070	.00060	.00060	.00060	.00060	.00050	.00050	.00050	.00040	.00030	.00020	.00020	.00020	.00020
9	.00070	.00070	.00070	.00070	.00070	.00060	.00060	.00060	.00050	.00050	.00040	.00030	.00020	.00020	.00020	.00020
10	.00080	.00080	.00080	.00070	.00070	.00070	.00070	.00060	.00060	.00050	.00040	.00030	.00020	.00020	.00020	.00020
11	.00090	.00090	.00080	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00030	.00020	.00020	.00020	.00020
12	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00060	.00050	.00030	.00020	.00020	.00020	.00020
13	.00100	.00090	.00090	.00080	.00080	.00080	.00070	.00070	.00060	.00060	.00050	.00030	.00020	.00020	.00020	.00020
14	.00100	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020
15	.00100	.00100	.00090	.00090	.00090	.00080	.00080	.00070	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020
16	.00100	.00100	.00100	.00090	.00090	.00090	.00080	.00080	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020
17	.00100	.00100	.00100	.00100	.00090	.00090	.00080	.00080	.00070	.00060	.00050	.00040	.00020	.00020	.00020	.00020
18	.00100	.00100	.00100	.00100	.00100	.00090	.00090	.00080	.00080	.00070	.00050	.00040	.00020	.00020	.00020	.00020
19	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00090	.00080	.00070	.00060	.00040	.00020	.00020	.00020	.00020
20	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00090	.00080	.00070	.00060	.00040	.00020	.00020	.00020	.00020
21	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00090	.00080	.00060	.00040	.00020	.00020	.00020	.00020
22	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00080	.00060	.00040	.00020	.00020	.00020	.00020
23	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00070	.00040	.00020	.00020	.00020	.00020
24	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00070	.00050	.00020	.00020	.00020	.00020
25	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00080	.00050	.00020	.00020	.00020	.00020
26	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00080	.00050	.00020	.00020	.00020	.00020
27	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00050	.00020	.00020	.00020	.00020
28	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00060	.00020	.00020	.00020	.00020
29	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00060	.00020	.00020	.00020	.00020
30	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00090	.00060	.00020	.00020	.00020	.00020
31	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00060	.00020	.00020	.00020	.00020
32	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00060	.00020	.00020	.00020	.00020
33	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00060	.00020	.00020	.00020	.00020
34	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
35	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
36	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
37	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
38	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
39	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
40	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
41	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
42	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
43	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
44	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
45	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
46	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	.00020
47	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
48	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
49	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
50	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
51	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
52	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
53	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
54	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
55	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
56	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00070	.00020	.00020	.00020	**.00020**
57	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00060	.00020	.00020	.00020	**.00020**
58	.00100	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00060	.00020	.00020	.00020	**.00020**
59	.00120	.00100	.00100	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00100	.00060	.00020	.00020	.00020	**.00020**
60	.00200	.00170	.00130	.00100	.00100	.00100	.00100	**.00100**	.00100	.00100	.00090	.00050	.00020	.00020	.00020	**.00020**
61	.00270	.00240	.00210	.00170	.00130	.00100	.00100	**.00100**	.00100	.00100	.00090	.00060	.00020	.00020	.00020	**.00020**
62	.00310	.00270	.00220	.00180	.00140	.00130	.00120	**.00110**	.00100	.00100	.00090	.00060	.00020	.00020	.00020	**.00020**
63	.00320	.00280	.00230	.00190	.00160	.00150	.00140	**.00130**	.00120	.00100	.00090	.00070	.00020	.00020	.00020	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.8-1. INITIAL BERYLLIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
64	**.00190**	.00380	.00690	.01000	.01000	.01000	.01000	.01000	.00870	.00850	.01000	.01000	.00920	.00730	.00560	.00400
65	**.00200**	.00390	.00870	.01000	.01000	.01000	.01000	.00830	.00720	.00780	.00960	.01000	.00920	.00740	.00580	.00420
66	**.00200**	.00410	.01000	.01000	.01000	.01000	.00960	.00600	.00570	.00710	.00930	.01000	.00910	.00750	.00600	.00440
67	**.00210**	.00430	.01000	.01000	.01000	.01000	.00780	.00500	.00500	.00680	.00890	.01000	.00920	.00770	.00610	.00450
68	**.00230**	.00450	.01000	.01000	.01000	.01000	.00610	.00500	.00500	.00640	.00860	.01000	.00910	.00760	.00610	.00460
69	**.00230**	.00480	.01000	.01000	.01000	.01000	.00500	.00500	.00500	.00610	.00820	.01000	.00900	.00750	.00600	.00450
70	**.00240**	.00510	.01000	.01000	.01000	.01000	.00500	.00500	.00500	.00600	.00790	.01000	.00920	.00770	.00620	.00470
71	**.00260**	.00600	.01000	.01000	.01000	.01000	.00500	.00500	.00500	.00610	.00820	.01000	.00930	.00780	.00640	.00490
72	**.00280**	.00690	.01000	.01000	.01000	.00910	.00500	.00500	.00500	.00630	.00840	.01000	.00950	.00800	.00650	.00500
73	**.00290**	.00760	.01000	.01000	.01000	.00800	.00500	.00500	.00500	.00660	.00870	.01000	.00970	.00820	.00670	.00520
74	**.00310**	.00830	.01000	.01000	.01000	.00720	.00500	.00500	.00500	.00700	.00900	.01000	.00980	.00830	.00690	.00540
75	**.00330**	.00870	.01000	.01000	.01000	.00670	.00500	.00500	.00500	.00750	.00940	.01000	.01000	.00850	.00700	.00550
76	**.00350**	.00910	.01000	.01000	.01000	.00640	.00500	.00500	.00500	.00820	.00990	.01000	.01000	.00870	.00720	.00570
77	**.00370**	.00950	.01000	.01000	.01000	.00630	.00500	.00500	.00600	.00900	.01000	.01000	.01000	.00890	.00740	.00590
78	**.00390**	.00980	.01000	.01000	.01000	.00630	.00500	.00500	.00730	.00990	.01000	.01000	.01000	.00900	.00750	.00600
79	**.00410**	.01000	.01000	.01000	.01000	.00650	.00500	.00500	.00870	.01000	.01000	.01000	.01000	.00920	.00770	.00620
80	**.00430**	.01000	.01000	.01000	.01000	.00690	.00540	.00730	.01000	.01000	.01000	.01000	.01000	.00940	.00790	.00640
81	**.00450**	.01000	.01000	.01000	.01000	.00800	.00760	.00990	.01000	.01000	.01000	.01000	.01000	.00950	.00800	.00670
82	**.00470**	.01000	.01000	.01000	.01000	.00910	.00970	.01000	.01000	.01000	.01000	.01000	.01000	.00970	.00820	.00710
83	**.00500**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00990	.00840	.00740
84	**.00530**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00860	.00770
85	**.00570**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00870	.00800
86	**.00610**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00910	.00830
87	**.00650**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00990	.01000	.00940	.00860
88	**.00680**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00970	.00910	.00890	.00920	.00980	.00890
89	**.00700**	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00970	.00900	.00820	.00780	.00770	.00940	.00920
90	.00690	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00990	.00920	.00830	.00740	.00680	.00620	.00780	.00960
91	.00690	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00950	.00870	.00770	.00660	.00580	.00500	.00650	.00980
92	.00690	.00980	.01000	.01000	.01000	.01000	.01000	.00990	.00910	.00830	.00720	.00580	.00500	.00500	.00570	.01000
93	.00690	.00900	.00990	.01000	.01000	.01000	.01000	.00950	.00870	.00790	.00670	.00510	.00500	.00500	.00540	.00930
94	.00690	.00820	.00910	.00990	.01000	.01000	.01000	.00920	.00840	.00760	.00640	.00500	.00500	.00500	.00550	.00880
95	.00640	.00740	.00830	.00910	.01000	.01000	.00980	.00890	.00810	.00720	.00610	.00500	.00500	.00500	.00570	.00860
96	.00560	.00660	.00740	.00830	.00920	.01000	.00960	.00870	.00780	.00700	.00580	.00500	.00500	.00500	.00590	.00840
97	.00480	.00580	.00660	.00750	.00830	.00950	.00930	.00850	.00760	.00670	.00570	.00500	.00500	.00500	.00600	.00830
98	.00400	.00490	.00580	.00670	.00790	**.00930**	.00910	.00830	.00750	.00660	.00560	.00500	.00500	.00500	.00620	.00820
99	.00310	.00410	.00500	.00640	.00790	**.00910**	.00890	.00810	.00730	.00650	.00550	.00500	.00500	.00500	.00640	.00820
100	.00230	.00330	.00490	.00640	.00790	.00880	**.00860**	.00780	.00710	.00630	.00550	.00500	.00500	.00520	.00660	.00830
101	.00160	.00330	.00490	.00640	.00760	.00860	**.00840**	.00760	.00680	.00600	.00530	.00500	.00500	.00550	.00680	.00840
102	.00160	.00330	.00490	.00640	.00740	.00830	**.00810**	.00730	.00660	.00580	.00500	.00490	.00530	.00580	.00710	.00860
103	.00160	.00330	.00490	.00620	.00720	.00810	.00790	**.00710**	.00630	.00560	.00480	.00470	.00520	.00630	.00740	.00890
104	.00160	.00330	.00490	.00600	.00690	.00780	.00760	**.00680**	.00610	.00530	.00450	.00450	.00500	.00690	.00760	.00910
105	.00160	.00330	.00480	.00570	.00670	.00750	.00740	**.00660**	.00580	.00510	.00430	.00440	.00480	.00680	.00790	.00940
106	.00160	.00330	.00450	.00550	.00640	.00720	.00710	**.00640**	**.00560**	.00480	.00410	.00420	.00460	.00660	.00850	.00960
107	.00160	.00330	.00430	.00530	.00620	.00690	.00690	.00610	**.00540**	.00460	.00390	.00410	.00450	.00640	.00840	.00990
108	.00160	.00310	.00410	.00500	.00600	.00660	.00660	.00590	**.00510**	.00430	.00380	.00390	.00430	.00620	.00820	.00990
109	.00160	.00290	.00380	.00480	.00570	.00630	.00630	.00560	.00490	.00410	.00360	.00370	.00410	.00610	.00800	.00960
110	.00160	.00260	.00360	.00450	.00550	.00600	.00600	.00540	.00460	.00380	.00350	.00360	.00390	.00590	.00780	.00910
111	.00130	.00240	.00340	.00430	.00530	.00570	.00570	.00510	.00440	.00360	.00330	.00340	.00380	.00570	.00770	.00870
112	.00110	.00220	.00310	.00410	.00500	.00540	.00540	.00490	.00410	.00340	.00320	.00320	.00360	.00550	.00750	.00820
113	.00090	.00190	.00290	.00380	.00480	.00520	.00520	.00470	.00390	.00310	.00300	.00310	.00340	.00540	.00730	.00780
114	.00060	.00170	.00260	.00360	.00450	.00490	.00490	.00440	.00360	.00290	.00290	.00290	.00320	.00520	.00710	.00730
115	.00040	.00150	.00240	.00340	.00430	.00460	.00460	.00420	.00340	.00260	.00270	.00270	.00300	.00500	.00690	.00690
116	.00020	.00120	.00220	.00310	.00410	.00430	.00430	.00390	.00320	.00240	.00250	.00260	.00290	.00480	.00640	.00640
117	.00020	.00100	.00190	.00290	.00380	.00400	.00400	.00370	.00290	.00230	.00240	.00240	.00270	.00460	.00600	.00600
118	.00020	.00070	.00170	.00260	.00360	.00370	.00370	.00340	.00270	.00210	.00220	.00220	.00250	.00450	.00560	.00560
119	.00020	.00050	.00150	.00240	.00340	.00340	.00340	.00320	.00240	.00200	.00200	.00210	.00230	.00430	.00510	.00510
120	.00020	.00020	.00120	.00210	.00310	.00310	.00310	.00290	.00210	.00180	.00180	.00180	.00210	.00410	.00450	.00450
121	.00020	.00020	.00070	.00170	.00250	.00250	.00250	.00240	.00170	.00150	.00150	.00150	.00180	.00370	.00380	.00380
122	.00020	.00020	.00020	.00110	.00180	.00180	.00180	.00180	.00110	.00110	.00110	.00110	.00130	.00270	.00270	.00270
123	.00020	.00020	.00020	.00030	.00090	.00090	.00090	.00090	.00060	.00060	.00060	.00060	.00070	.00120	.00120	.00120
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.8-1. INITIAL BERYLLIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
64	.00250	.00130	.00100	.00180	.00250	.00310	.00370	.00420	.00450	.00470	.00500	.00500	.00500	.00470	.00420	.00380
65	.00270	.00140	.00100	.00210	.00280	.00320	.00360	.00390	.00420	.00440	.00490	.00500	.00500	.00480	.00430	.00390
66	.00290	.00160	.00130	.00210	.00260	.00300	.00330	.00360	.00380	.00430	.00480	.00500	.00500	.00480	.00440	.00390
67	.00300	.00180	.00120	.00190	.00240	.00270	.00310	.00330	.00370	.00420	.00470	.00500	.00500	.00490	.00450	.00400
68	.00310	.00180	.00100	.00170	.00220	.00250	.00280	.00310	.00360	.00410	.00450	.00500	.00500	.00500	.00460	.00410
69	.00310	.00190	.00100	.00150	.00190	.00220	.00250	.00300	.00350	.00400	.00440	.00490	.00500	.00500	.00470	.00420
70	.00330	.00210	.00130	.00120	.00160	.00190	.00240	.00290	.00340	.00380	.00430	.00480	.00500	.00500	.00470	.00430
71	.00350	.00230	.00150	.00100	.00140	.00180	.00230	.00270	.00320	.00370	.00420	.00470	.00500	.00500	.00480	.00440
72	.00360	.00250	.00180	.00130	.00120	.00170	.00220	.00260	.00310	.00360	.00410	.00460	.00500	.00500	.00490	.00450
73	.00380	.00280	.00210	.00150	.00130	.00180	.00230	.00260	.00300	.00350	.00400	.00450	.00500	.00500	.00500	.00470
74	.00400	.00300	.00230	.00190	.00170	.00190	.00240	.00300	.00340	.00370	.00400	.00440	.00490	.00500	.00500	.00480
75	.00410	.00330	.00260	.00230	.00210	.00200	.00240	.00300	.00350	.00410	.00460	.00490	.00500	.00500	.00500	.00480
76	.00440	.00360	.00290	.00270	.00250	.00230	.00250	.00310	.00360	.00410	.00470	.00500	.00500	.00500	.00500	.00490
77	.00470	.00380	.00330	.00310	.00290	.00270	.00260	.00310	.00360	.00420	.00470	.00500	.00500	.00500	.00500	.00500
78	.00500	.00410	.00370	.00340	.00320	.00310	.00300	.00320	.00370	.00420	.00480	.00500	.00500	.00500	.00500	.00500
79	.00520	.00440	.00410	.00380	.00360	.00350	.00330	.00330	.00380	.00430	.00480	.00500	.00500	.00500	.00500	.00500
80	.00560	.00480	.00440	.00420	.00400	.00390	.00370	.00360	.00390	.00440	.00490	.00500	.00500	.00500	.00500	.00500
81	.00590	.00520	.00480	.00460	.00440	.00420	.00410	.00400	.00390	.00450	.00500	.00500	.00500	.00500	.00500	.00500
82	.00620	.00560	.00520	.00500	.00480	.00460	.00450	.00430	.00420	.00450	.00500	.00500	.00500	.00500	.00500	.00500
83	.00650	.00590	.00560	.00530	.00520	.00500	.00490	.00470	.00460	.00460	.00500	.00500	.00500	.00500	.00500	.00500
84	.00680	.00630	.00600	.00570	.00550	.00540	.00520	.00510	.00500	.00480	.00500	.00500	.00500	.00500	.00500	.00500
85	.00720	.00670	.00630	.00610	.00590	.00580	.00560	.00550	.00530	.00540	.00500	.00500	.00500	.00500	.00500	.00500
86	.00750	.00710	.00670	.00650	.00630	.00620	.00600	.00650	.00770	.00890	.00820	.00520	.00500	.00500	.00500	.00500
87	.00790	.00750	.00710	.00680	.00650	.00760	.00880	.01000	.01000	.01000	.01000	.00840	.00550	.00500	.00500	.00500
88	.00830	.00780	.00730	.00840	.00990	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.00910	.00570	.00500	.00500
89	.00870	.00800	.00980	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01050	.01140	.01230	.01040	.00670	.00500
90	.00890	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01010	.01100	.01190	.01280	.01370	.01360	.01190	.01010
91	.00990	.01000	.01000	.01000	.01000	.01000	.01000	.01050	.01150	.01240	.01330	.01420	.01510	.01600	.01600	.01390
92	.01000	.01000	.01000	.01000	.01000	.01010	.01110	.01200	.01290	.01380	.01470	.01560	.01650	.01740	.01800	.01760
93	.01000	.01000	.01000	.01000	.01060	.01150	.01240	.01340	.01430	.01520	.01610	.01700	.01790	.01880	.01970	.02150
94	.01000	.01000	.01000	.01090	.01200	.01290	.01390	.01480	.01570	.01660	.01750	.01840	.01930	.02020	.02110	.02240
95	.01000	.01000	.01070	.01230	.01340	.01430	.01530	.01620	.01710	.01800	.01890	.01980	.02070	.02160	.02250	.02340
96	.01000	.01000	.01210	.01370	.01480	.01570	.01670	.01760	.01850	.01940	.02030	.02120	.02210	.02300	.02390	.02450
97	.01000	.01120	.01350	.01510	.01620	.01710	.01810	.01880	.01950	.02020	.02090	.02160	.02220	.02270	.02320	.02370
98	.01000	.01260	.01440	.01560	.01650	.01730	.01800	.01880	.01930	.01980	.02030	.02080	.02140	.02190	.02240	.02290
99	.01020	.01250	.01430	.01560	.01640	.01690	.01740	.01800	.01850	.01900	.01950	.02010	.02060	.02110	.02160	.02210
100	.01010	.01250	.01400	.01490	.01560	.01610	.01670	.01720	.01770	.01820	.01880	.01930	.01980	.02030	.02090	.02120
101	.01020	.01190	.01320	.01420	.01480	.01540	.01590	.01640	.01690	.01750	.01800	.01850	.01900	.01960	.02010	.02020
102	.01000	.01120	.01250	.01340	.01400	.01460	.01510	.01560	.01620	.01670	.01720	.01770	.01830	.01880	.01930	.01920
103	.01000	.01040	.01170	.01260	.01330	.01380	.01430	.01480	.01540	.01590	.01640	.01690	.01750	.01800	.01850	.01830
104	.01000	.01000	.01090	.01180	.01250	.01300	.01350	.01410	.01460	.01510	.01560	.01620	.01670	.01720	.01770	.01730
105	.01000	.01000	.01010	.01110	.01170	.01220	.01280	.01330	.01380	.01430	.01490	.01540	.01590	.01640	.01690	.01640
106	.01000	.01000	.01000	.01030	.01090	.01150	.01200	.01250	.01300	.01350	.01410	.01460	.01510	.01570	.01590	.01540
107	.01000	.01000	.01000	.01000	.01010	.01070	.01120	.01170	.01230	.01280	.01330	.01380	.01440	.01490	.01490	.01440
108	.01000	.01000	.01000	.01000	.01000	.01000	.01040	.01090	.01150	.01200	.01250	.01310	.01360	.01410	.01400	.01340
109	.00910	.01000	.01000	.01000	.01000	.01000	.01000	.01020	.01070	.01120	.01170	.01230	.01280	.01330	.01300	.01250
110	.00880	.00840	.01000	.01000	.01000	.01000	.01000	.01000	.01000	.01040	.01100	.01150	.01200	.01250	.01200	.01150
111	.00840	.00800	.00770	.00860	.00940	.01000	.01000	.01000	.01000	.01000	.01020	.01070	.01120	.01160	.01110	.01050
112	.00800	.00760	.00730	.00710	.00700	.00730	.00800	.00870	.00940	.01000	.01000	.01000	.01050	.01060	.01010	.00850
113	.00760	.00720	.00690	.00670	.00660	.00650	.00640	.00630	.00660	.00730	.00800	.00870	.00940	.00890	.00730	.00550
114	.00720	.00680	.00650	.00630	.00620	.00610	.00600	.00590	.00580	.00570	.00560	.00580	.00650	.00610	.00490	.00480
115	.00680	.00640	.00610	.00590	.00580	.00570	.00560	.00550	.00540	.00530	.00520	.00500	.00490	.00480	.00470	.00450
116	.00640	.00600	.00570	.00550	.00540	.00530	.00520	.00510	.00500	.00490	.00470	.00460	.00460	.00460	.00440	.00430
117	.00600	.00560	.00530	.00510	.00500	.00490	.00480	.00470	.00460	.00450	.00430	.00430	.00430	.00430	.00420	.00400
118	.00560	.00520	.00490	.00470	.00460	.00450	.00440	.00430	.00420	.00410	.00400	.00400	.00400	.00400	.00390	.00380
119	.00510	.00480	.00450	.00430	.00420	.00410	.00400	.00390	.00380	.00360	.00360	.00360	.00360	.00360	.00360	.00350
120	.00450	.00430	.00400	.00380	.00370	.00360	.00350	.00340	.00330	.00330	.00330	.00330	.00330	.00330	.00330	.00320
121	.00380	.00360	.00330	.00310	.00300	.00290	.00280	.00270	.00270	.00270	.00270	.00270	.00270	.00270	.00270	.00270
122	.00270	.00260	.00230	.00210	.00200	.00190	.00190	.00190	.00190	.00190	.00190	.00190	.00190	.00190	.00190	.00190
123	.00120	.00120	.00100	.00090	.00090	.00090	.00090	.00090	.00090	.00090	.00090	.00090	.00090	.00090	.00090	.00090
124	.00020	.00020	**.00020**	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	.00020	.00020	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

TABLE E.8-1. INITIAL BERYLLIUM CONCENTRATIONS, 2000, IN mg/l (continued).

	Column															
Row	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
64	.00330	.00290	.00240	.00200	.00190	.00180	.00170	.00160	.00140	.00120	.00100	.00070	.00020	.00020	.00020	**.00020**
65	.00340	.00300	.00250	.00230	.00210	.00200	.00190	.00180	.00160	.00150	.00100	.00070	.00020	.00020	.00020	**.00020**
66	.00350	.00300	.00260	.00250	.00240	.00230	.00220	.00200	.00190	.00170	.00110	.00070	.00020	.00020	.00020	**.00020**
67	.00360	.00310	.00290	.00270	.00260	.00250	.00240	.00230	.00210	.00170	.00120	.00070	.00020	.00020	.00020	**.00020**
68	.00370	.00320	.00310	.00300	.00290	.00270	.00260	.00250	.00220	.00180	.00130	.00070	.00020	.00020	.00020	**.00020**
69	.00380	.00340	.00330	.00320	.00310	.00300	.00280	.00260	.00230	.00190	.00130	.00060	.00020	.00020	.00020	**.00020**
70	.00380	.00370	.00360	.00350	.00340	.00310	.00290	.00270	.00240	.00200	.00140	.00070	.00020	.00020	.00020	**.00020**
71	.00410	.00390	.00380	.00370	.00340	.00320	.00300	.00270	.00250	.00210	.00150	.00070	.00020	.00020	.00020	**.00020**
72	.00430	.00420	.00400	.00380	.00350	.00330	.00310	.00280	.00250	.00220	.00160	.00080	.00020	.00020	.00020	**.00020**
73	.00450	.00430	.00410	.00380	.00360	.00340	.00310	.00290	.00260	.00220	.00170	.00090	.00020	.00020	.00020	**.00020**
74	.00460	.00440	.00410	.00390	.00370	.00350	.00320	.00300	.00270	.00230	.00170	.00100	.00020	.00020	.00020	**.00020**
75	.00460	.00440	.00410	.00390	.00370	.00350	.00320	.00300	.00270	.00230	.00170	.00100	.00020	.00020	.00020	**.00020**
76	.00470	.00440	.00420	.00390	.00370	.00340	.00320	.00300	.00270	.00230	.00170	.00100	.00020	.00020	.00020	**.00020**
77	.00480	.00450	.00430	.00400	.00380	.00350	.00330	.00300	.00270	.00230	.00170	.00100	.00020	.00020	.00020	**.00020**
78	.00480	.00460	.00430	.00410	.00390	.00360	.00340	.00310	.00280	.00240	.00180	.00100	.00020	.00020	.00020	**.00020**
79	.00490	.00470	.00440	.00420	.00390	.00370	.00340	.00320	.00290	.00250	.00190	.00110	.00020	.00020	.00020	**.00020**
80	.00500	.00470	.00450	.00430	.00400	.00380	.00350	.00330	.00300	.00250	.00190	.00110	.00020	.00020	.00020	**.00020**
81	.00500	.00480	.00460	.00430	.00410	.00390	.00360	.00340	.00310	.00260	.00200	.00120	.00020	.00020	.00020	.00020
82	.00500	.00490	.00470	.00440	.00420	.00390	.00370	.00340	.00310	.00270	.00210	.00120	.00020	.00020	.00020	.00020
83	.00500	.00500	.00470	.00450	.00430	.00400	.00380	.00350	.00320	.00280	.00220	.00120	.00020	.00020	.00020	.00020
84	.00500	.00500	.00480	.00460	.00430	.00410	.00390	.00360	.00330	.00290	.00220	.00120	.00020	.00020	.00020	.00020
85	.00500	.00500	.00490	.00470	.00440	.00420	.00390	.00370	.00340	.00290	.00220	.00120	.00020	.00020	.00020	.00020
86	.00500	.00500	.00500	.00470	.00450	.00430	.00400	.00380	.00340	.00290	.00220	.00120	.00020	.00020	.00020	.00020
87	.00500	.00500	.00500	.00480	.00460	.00430	.00400	.00380	.00340	.00290	.00220	.00120	.00020	.00020	.00020	.00020
88	.00500	.00500	.00500	.00490	.00460	.00430	.00400	.00380	.00340	.00290	.00220	.00120	.00020	.00020	.00020	.00020
89	.00500	.00640	.00860	.00580	.00540	.00510	.00480	.00450	.00410	.00360	.00290	.00190	.00020	.00020	.00020	.00020
90	.01030	.01160	.01260	.00970	.00650	.00620	.00590	.00560	.00520	.00470	.00390	.00250	.00020	.00020	.00020	.00020
91	.01430	.01550	.01610	.01320	.00760	.00730	.00700	.00670	.00630	.00570	.00460	.00250	.00020	.00020	.00020	.00020
92	.01810	.01960	.01970	.01670	.00860	.00830	.00800	.00770	.00730	.00630	.00460	.00230	.00020	.00020	.00020	.00020
93	.02160	.02370	.02340	.02010	.01200	.00940	.00900	.00830	.00730	.00570	.00350	.00140	.00020	.00020	.00020	.00020
94	.02500	.02500	.02500	.02490	.01330	.00840	.00750	.00660	.00550	.00390	.00250	.00140	.00020	.00020	.00020	.00020
95	.02500	.02500	.02500	.02500	.01000	.00700	.00580	.00490	.00400	.00350	.00260	.00150	.00020	.00020	.00020	.00020
96	.02500	.02500	.02500	.02490	.01120	.00690	.00490	.00460	.00410	.00360	.00270	.00150	.00020	.00020	.00020	.00020
97	.02420	.02490	.02440	.02250	.01260	.00790	.00530	.00470	.00430	.00370	.00280	.00160	.00020	.00020	.00020	.00020
98	.02320	.02380	.02200	.01790	.01420	.00890	.00650	.00490	.00440	.00380	.00290	.00160	.00020	.00020	.00020	.00020
99	.02220	.02270	.02130	.01850	.01530	.01020	.00770	.00530	.00460	.00400	.00300	.00170	.00020	.00020	.00020	.00020
100	.02130	.02160	.02070	.01790	.01510	.01220	.00890	.00660	.00480	.00410	.00310	.00170	.00020	.00020	.00020	.00020
101	.02030	.02050	.01960	.01730	.01450	.01160	.01000	.00790	.00490	.00420	.00320	.00170	.00020	.00020	.00020	.00020
102	.01930	.01940	.01840	.01670	.01390	.01100	.01000	.00880	.00530	.00430	.00320	.00170	.00020	.00020	.00020	.00020
103	.01820	.01820	.01730	.01610	.01330	.01040	.01000	.01000	.00590	.00430	.00320	.00180	.00020	.00020	.00020	.00020
104	.01720	.01700	.01610	.01510	.01270	.01000	.01000	.01000	.00570	.00430	.00320	.00180	.00020	.00020	.00020	.00020
105	.01620	.01590	.01500	.01400	.01210	.01000	.01000	.00900	.00500	.00430	.00320	.00170	.00020	.00020	.00020	.00020
106	.01510	.01470	.01380	.01280	.01150	.01000	.00940	.00670	.00480	.00410	.00310	.00170	.00020	.00020	.00020	.00020
107	.01410	.01360	.01260	.01170	.01070	.00930	.00680	.00490	.00450	.00400	.00300	.00170	.00020	.00020	.00020	.00020
108	.01310	.01240	.01150	.01050	.00890	.00640	.00490	.00470	.00430	.00380	.00290	.00160	.00020	.00020	.00020	.00020
109	.01200	.01130	.01030	.00960	.00630	.00490	.00470	.00450	.00410	.00360	.00280	.00160	.00020	.00020	.00020	.00020
110	.01090	.01010	.00810	.00630	.00490	.00470	.00440	.00420	.00400	.00340	.00260	.00160	.00020	.00020	.00020	.00020
111	.00950	.00740	.00530	.00490	.00470	.00450	.00420	.00400	.00370	.00340	.00260	.00150	.00020	.00020	.00020	.00020
112	.00650	.00500	.00480	.00470	.00450	.00430	.00410	.00390	.00350	.00310	.00260	.00140	.00020	.00020	.00020	.00020
113	.00490	.00470	.00460	.00450	.00430	.00410	.00390	.00370	.00350	.00300	.00230	.00140	.00020	.00020	.00020	.00020
114	.00470	.00450	.00440	.00430	.00410	.00390	.00370	.00350	.00330	.00290	.00220	.00140	.00020	.00020	.00020	.00020
115	.00440	.00430	.00420	.00400	.00390	.00370	.00350	.00330	.00310	.00280	.00220	.00130	.00020	.00020	.00020	.00020
116	.00420	.00410	.00390	.00380	.00370	.00350	.00330	.00320	.00290	.00260	.00210	.00120	.00020	.00020	.00020	.00020
117	.00390	.00380	.00370	.00360	.00350	.00330	.00320	.00300	.00270	.00240	.00190	.00120	.00020	.00020	.00020	.00020
118	.00370	.00360	.00350	.00340	.00330	.00320	.00300	.00280	.00250	.00220	.00170	.00110	.00020	.00020	.00020	.00020
119	.00340	.00330	.00320	.00310	.00300	.00300	.00280	.00260	.00230	.00200	.00150	.00090	.00020	.00020	.00020	.00020
120	.00310	.00300	.00290	.00280	.00270	.00270	.00250	.00230	.00210	.00180	.00130	.00070	.00020	.00020	.00020	.00020
121	.00260	.00250	.00240	.00240	.00230	.00230	.00220	.00200	.00180	.00140	.00100	.00040	.00020	.00020	.00020	.00020
122	.00190	.00180	.00180	.00170	.00170	.00170	.00160	.00150	.00130	.00100	.00050	.00020	.00020	.00020	.00020	.00020
123	.00090	.00090	.00090	.00090	.00080	.00080	.00080	.00080	.00070	.00040	.00020	.00020	.00020	.00020	.00020	.00020
124	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020	.00020
125	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**	**.00020**

NOTE: BOLD/SHADED VALUES INDICATE CONSTANT HEAD/FLUX CELLS.

E.9 SUMMARY AND CONCLUSION

The modeling of uranium, selenium, nickel, radium, cadmium and beryllium at the Lucky Mc Site has been used to predict the maximum concentrations at POC well T1-12 and POE well AL-6. The numerical modeling of the transport of these constituents sets the POC concentrations for this site. Predicted peak concentrations from the modeling also set the POE concentrations for uranium. The 95% background level was used to set the selenium, nickel and radium POE concentration, while the present site standards are used for the cadmium and beryllium POE levels. Proposed POC and POE concentrations for the Lucky Mc aquifer are presented in Table E.9-1. These concentrations are based on Scenario #1 with operation of the CAP through September 2001. The extension of the CAP in Scenario #2 through September 2003 does not show significant decreases in the POC and POE concentrations and, therefore, is not warranted.

TABLE E.9-1. PROPOSED POE AND POC CONCENTRATIONS.

CONSTITUENTS	POE CONCENTRATIONS	POC CONCENTRATIONS
URANIUM	0.98	1.70
SELENIUM	0.26	1.10
NICKEL	0.15	0.85
RA-226 + RA-228	5.60	7.50
CADMIUM	0.01	0.02
BERYLLIUM	0.05	0.07

NOTE: Concentrations are in mg/l, except Ra-226 + Ra-228, which is in pCi/l.

E.10 REFERENCES

S.S. Papdopulos and Associates, Inc., 1992. MT3D, A Modular Three-Dimensional Transport Model, Version 1.5. Bethesda, Maryland, 20814.