OGLE PETROLEUM INC.

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March 25, 1981

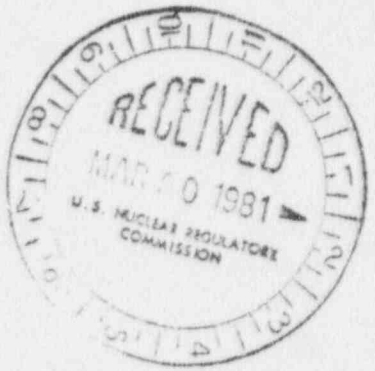
PLEASE DIRECT REPLY TO:

150 North Nichols Avenue
Casper, Wyoming 82601
(307) 266-6456

Mr. Ed Francis
Land Quality Division
Department of Environmental Quality
401 West Nineteenth Street
Cheyenne, Wyoming 82001

and

Mr. Dan Martin
Uranium Recovery Licensing Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



RE: DEQ License to Explore No. 38 with certain agreements stated in Ed Francis' letter dated November 17, 1978

and

NRC Source Material License No. SUA-1336, Docket No. 40-8693, Condition No. 17

SUBJECT: Special Report on Monitor Well Analytical Results

Gentlemen:

In accordance with the above-referenced licenses, Ogle Petroleum Inc. (OPI) herewith submits this special report on monitor well analytical results.

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INTRODUCTION

The analytical results from the February 4, 1981 routine biweekly sampling of monitor wells indicated that wells 303-6-M 2 and 303-6-M 4 (hereinafter referred to as wells M 2 and M 4, respectively) were in an apparent horizontal (lateral) excursion status. As per license conditions, a seven-day confirmation sampling period was commenced; and as a precautionary measure, corrective actions were initiated. By the end of the seven-day sampling period, well M 4 had been in compliance for three consecutive sampling rounds. Well M 2, while showing some decline in the excursion parameter values, did not drop below the upper control limits (UCL) during the seven-day period. It is felt, however, that the

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migration of lixiviant away from the wellfield had ceased and the excursion had been brought under control.

PROBLEM DESCRIPTION

OPI received commercial laboratory analytical results for the February 4 samples on February 17, 1981. The results showed that well M 2 had exceeded the UCLs for both chloride and carbonate plus bicarbonate, and that well M 4 had exceeded the UCLs for carbonate plus bicarbonate, chloride and specific conductivity. For the location of these two wells, see Figure 1 (well M 4 is within the commercial-scale wellfield).

During the past month or two, well M 2 has been experiencing above-normal values for chloride and carbonate plus bicarbonate which were believed to be caused by the normal outside sweep of the lixiviant during mining operations. An expanded outside sweep of the lixiviant was expected due to the increased injection capacity resulting from new injection wells being placed into operation in the southeast corner of the R & D wellfield.

The sudden increase over a two-week period in carbonate plus bicarbonate, chloride, and specific conductivity at well M 4 is believed to have resulted from a typical horizontal excursion which was most likely caused by localized over-injection on the south side of the wellfield.

CONFIRMATION ACTION

In accordance with license conditions, OPI began a seven-day confirmation sampling program on February 18, 1981. The seven-day sampling period continued through February 24, 1981.

During the seven-day sampling period, plant bleed to the pond was increased and wellfield operations were adjusted to lower the water level and increase the hydraulic gradient towards the wellfield. Analytical results from the seven-day sampling period and subsequent sampling rounds are shown on Tables 1 and 2 and graphically on Figures 2 through 17. For analytical results prior to January 8, 1981, please refer to OPI's Quarterly Report for the period ending January 31, 1981.

Well M 4 responded quickly to changes made in the wellfield during the seven-day sampling period, and all parameters were below their UCLs by February 22, 1981. OPI was unable to sample well M 4 on February 20, 1981 due to an extremely low water level in the well. Water levels for well M 2 and well M 4 are presented graphically on Figures 18 and 19, respectively.

In well M 2, the chloride and carbonate plus bicarbonate values showed some decline during the seven-day sampling period but did not drop below the UCLs. In light of this decline, OPI feels that the excursion had been brought under control by the end of the seven-day period.

CORRECTIVE ACTIONS

Upon receiving analytical results for the February 4, 1981 samples, OPI increased the plant bleed and began over-producing the south side of the wellfield and injecting only on the north side of the wellfield. On February 19, all injection to the wellfield was stopped and 45 to 50 gallons per minute (gpm) were bled to the pond in an effort to increase the hydraulic gradient toward the wellfield. Due to limited pond capacity, the plant bleed was reduced to five gpm on February 20, and injection was begun on the north side of the wellfield with the south and southeast portion of the field being over-produced. The field continued to operate in this manner until March 6, 1981 with the exception of plant bleed which was reduced to approximately 2.5 gpm on February 25.

In light of the relatively slow response of well M 2 to changes in wellfield operations during the seven-day sampling period, a control well was drilled 50 feet south of well M 2. The control well, R-1 (see Figure 1), was drilled and completed between March 3 and March 5, 1981. After completion of the well, a sample was collected and analyzed to determine the chloride content which was 38 mg/l (normal baseline value for production zone aquifer). Starting on March 6, 1981, fresh water from the production zone monitor well M-10 (see Figure 2) was injected into well R-1 in an attempt to increase the hydraulic gradient and thereby move the affected water back towards the wellfield. At the same time, wellfield operations were adjusted to over-produce the southeast corner of the field with the rest of the field balanced at 45 gpm. Plant bleed continued at approximately 2.2 gpm until March 13, 1981.

The wellfield was operated with a balanced flow from March 13 to March 16, 1981. On March 16, plant operations were adjusted and bleed to the pond was increased to 45 gpm. The wellfield was rebalanced on March 17 and bleed to the pond was reduced to five gpm. Since March 17, the bleed has been reduced to the range of two to five gpm because of limited pond capacity. For weekly plant bleed volumes during the period of corrective actions, please refer to Table 3.

RESULTS

The corrective actions described above reduced the excursion parameter values for well M 4 below their respective UCLs before the end of the seven-day sampling period, and with the exception of the exceedance of the UCL for one excursion parameter on March 11, 1981, all parameters are below their respective UCLs (see Figures 10 through 17).

In the case of well M 2, the corrective actions have had limited effect on carbonate plus bicarbonate; but there does seem to be a positive correlation between a relatively high bleed to the pond and a drop in the carbonate plus bicarbonate values (see Figure 5). The chloride values have shown a similar response to increases in bleed to the pond with the value from the latest sampling below the UCL (see Figure 6). OPI recognizes that one excursion parameter (carbonate plus bicarbonate) still exceeds its UCL and a second parameter (chloride) is very close to exceeding its UCL. OPI will be taking full cognizance of these factors in its current R & D mining operations.

Due to the positive correlation between a relatively high bleed and drop in excursion parameter values, OPI feels that it can control possible future horizontal excursions if adequate mechanisms are available to dispose of wellfield bleed. The present limited pond capacity at our R & D mining operation restricts the amount of bleed that can be routed to the pond. This situation hinders our ability to further reduce the concentrations of chloride and carbonate plus bicarbonate at well M 2 at least until another pond is constructed at the site. Because of this factor, OPI wishes to enter into discussions with DEQ and NRC personnel on the possibility of obtaining a permit to surface discharge water from the pond after it has been treated to meet the applicable discharge standards.

CONCLUSIONS

The results of the routine biweekly sampling of R & D monitor wells on February 4, 1981 showed that wells M 2 and M 4 exceeded their respective UCL values for at least two excursion parameters each. The seven-day confirmation sampling period verified that well M 2 was in an excursion status but indicated that well M 4 was not in an excursion status. The data to date from the sampling program indicate that the horizontal excursion at well M 2 is under control, and that technically speaking the well is no longer in excursion status.

The present concentrations of chloride and carbonate plus bicarbonate at well M 2, based on the most recent sampling (March 23, 1981), are 52 mg/l and 205 mg/l, respectively. These values do not represent a significant degradation of water quality in the production zone as compared with the natural pre-mining water quality. The drinking water standard for chloride is 250 mg/l; and while there is no drinking water standard for carbonate plus bicarbonate, the EPA reports that "alkalinity resulting from naturally occurring materials such as carbonate and bicarbonate is not considered a health hazard in drinking water supplies, per se, and naturally occurring maximum levels up to approximately 400 mg/l as calcium carbonate are not considered a problem to human health."

OPI feels that the excursion at well M 2 resulted from the affects of the outside sweep of the solution mining operation rather than from an uncontrolled

migration of lixiviant in a particular direction. The amount by which the UCLs were exceeded at well M 2 supports this hypothesis. OPI contends, and has stated during discussions with the DEQ and NRC staffs, that 200-foot monitor well spacing does not provide sufficient "working space" for in-situ solution mining operations. We feel that this recent excursion event at well M 2 is a result of monitor wells being too close to the wellfield. The 300-foot spacing adopted for the planned commercial operation will help alleviate this situation.

OPI will be most happy to answer any additional questions pertaining to this matter. We will keep the DEQ and NRC informed of any pertinent changes in the analytical results from our monitor well sampling program.

Sincerely,

OGLE PETROLEUM INC.

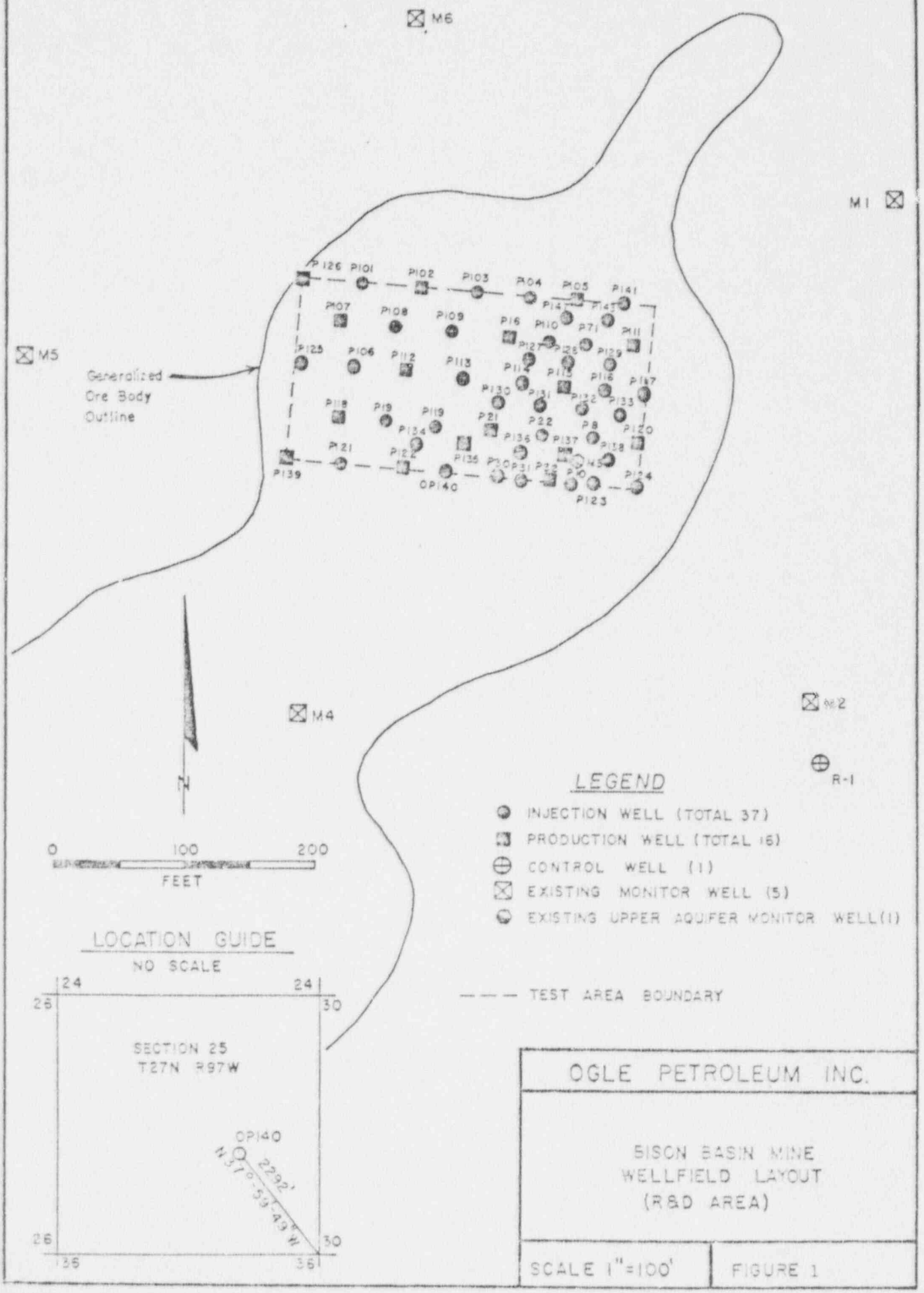
Gary A. Saunders
Environmental Engineer

Glenn J. Catchpole, Vice President
and Uranium Project Manager

GJC:GAS:jm

Enclosures

CC: Tony Mancini, Water Quality Division w/Enclosures
Region IV, NRC w/Enclosures
Dr. Minton Kelly, ORNL w/Enclosures
Document Management Branch w/Enclosures



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BISON BASIN MINE
WELLFIELD LAYOUT
(R&D AREA)

SCALE 1"=100' | FIGURE 1

FIGURE 2

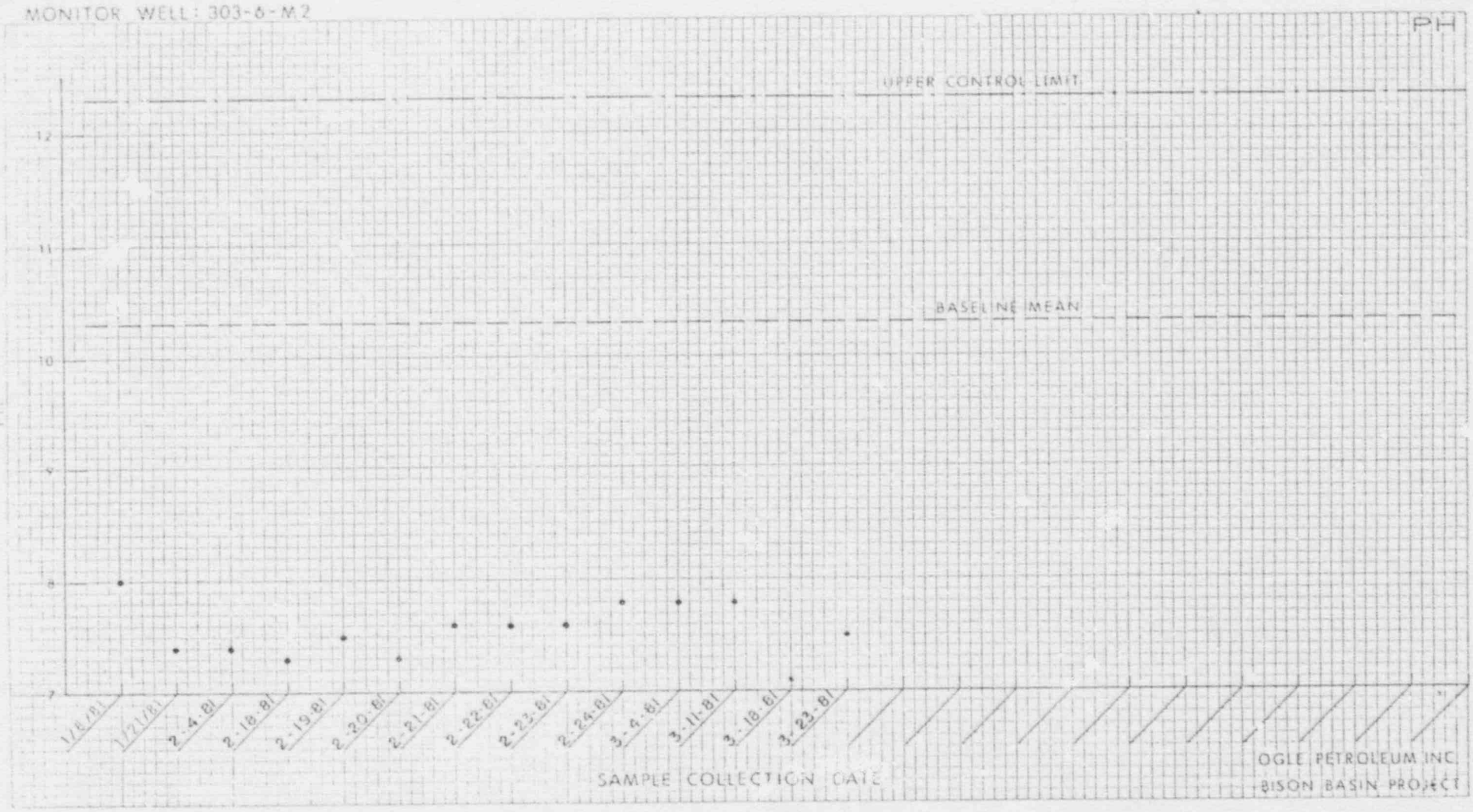

MONITOR WELL: 303-6-M2
PH
UPPER CONTROL LIMIT
BASELINE MEAN
12
11
10
9
8
7
PH
1/6/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 3

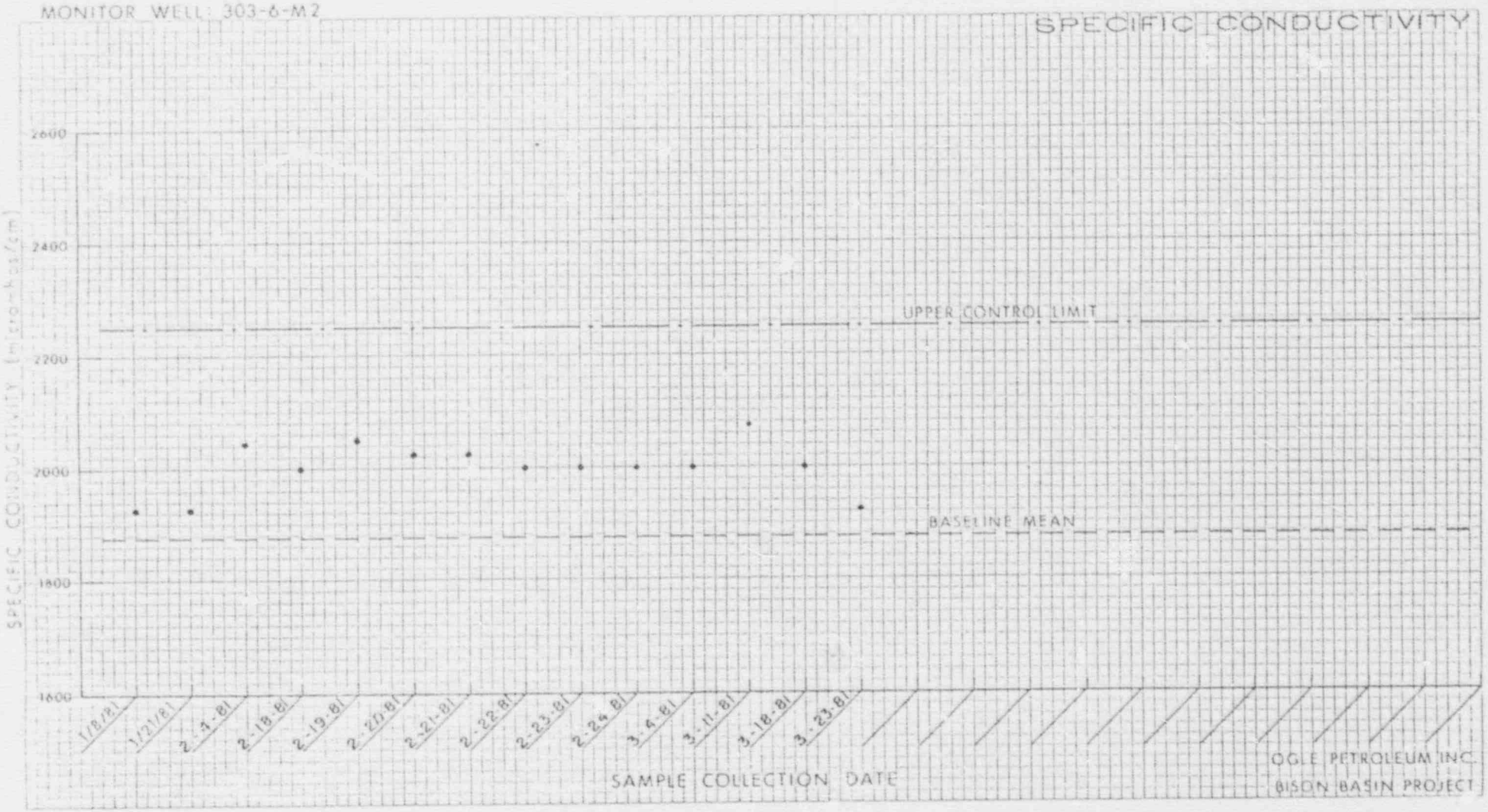

MONITOR WELL: 303-6-M2
SPECIFIC CONDUCTIVITY
SPECIFIC CONDUCTIVITY (micro-hos/cm)
2600
2400
2200
2000
1800
1600
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-3-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 4

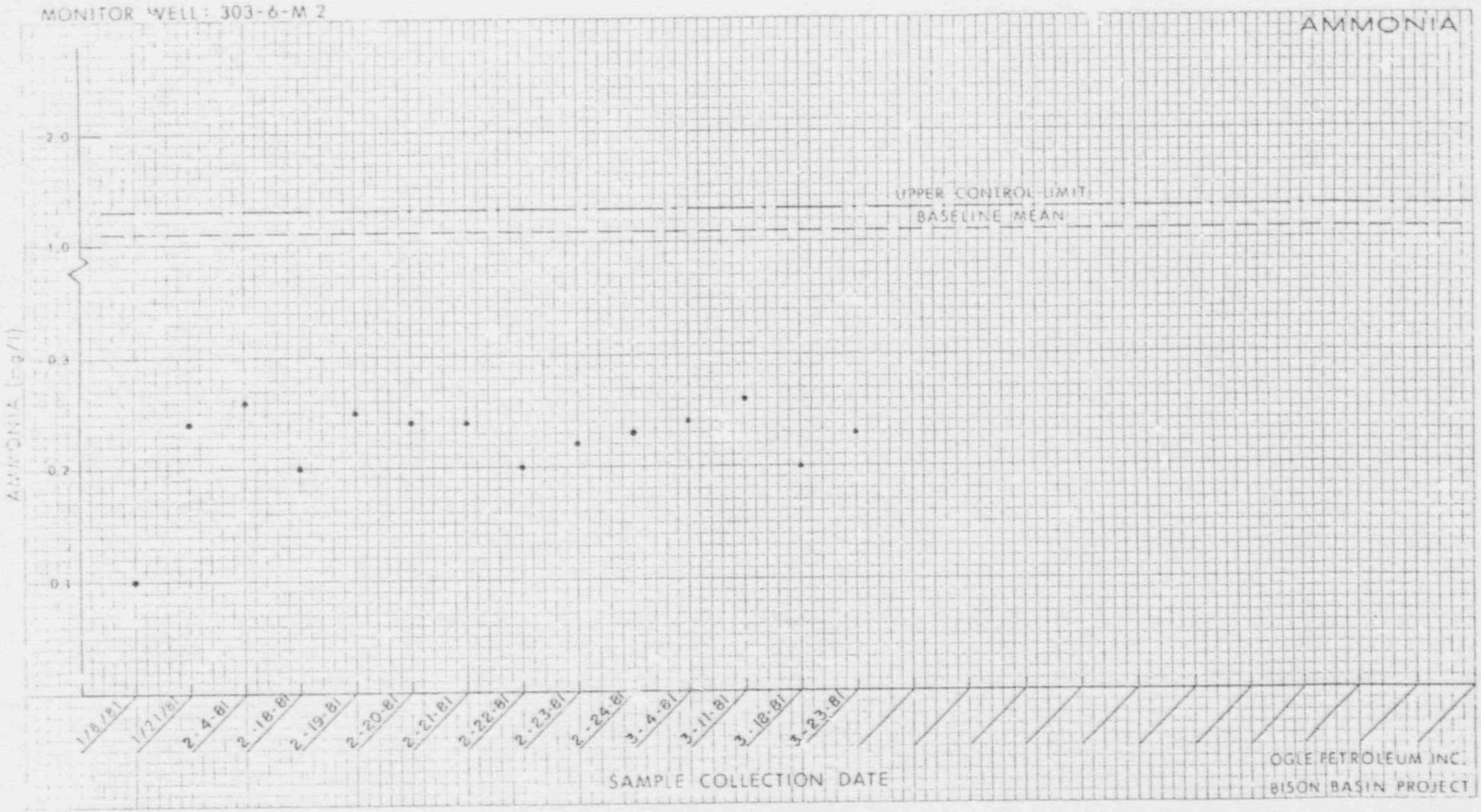

MONITOR WELL: 303-6-M 2
AMMONIA
2.0
1.0
0.3
0.2
0.1
AMMONIA (mg/l)
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 5

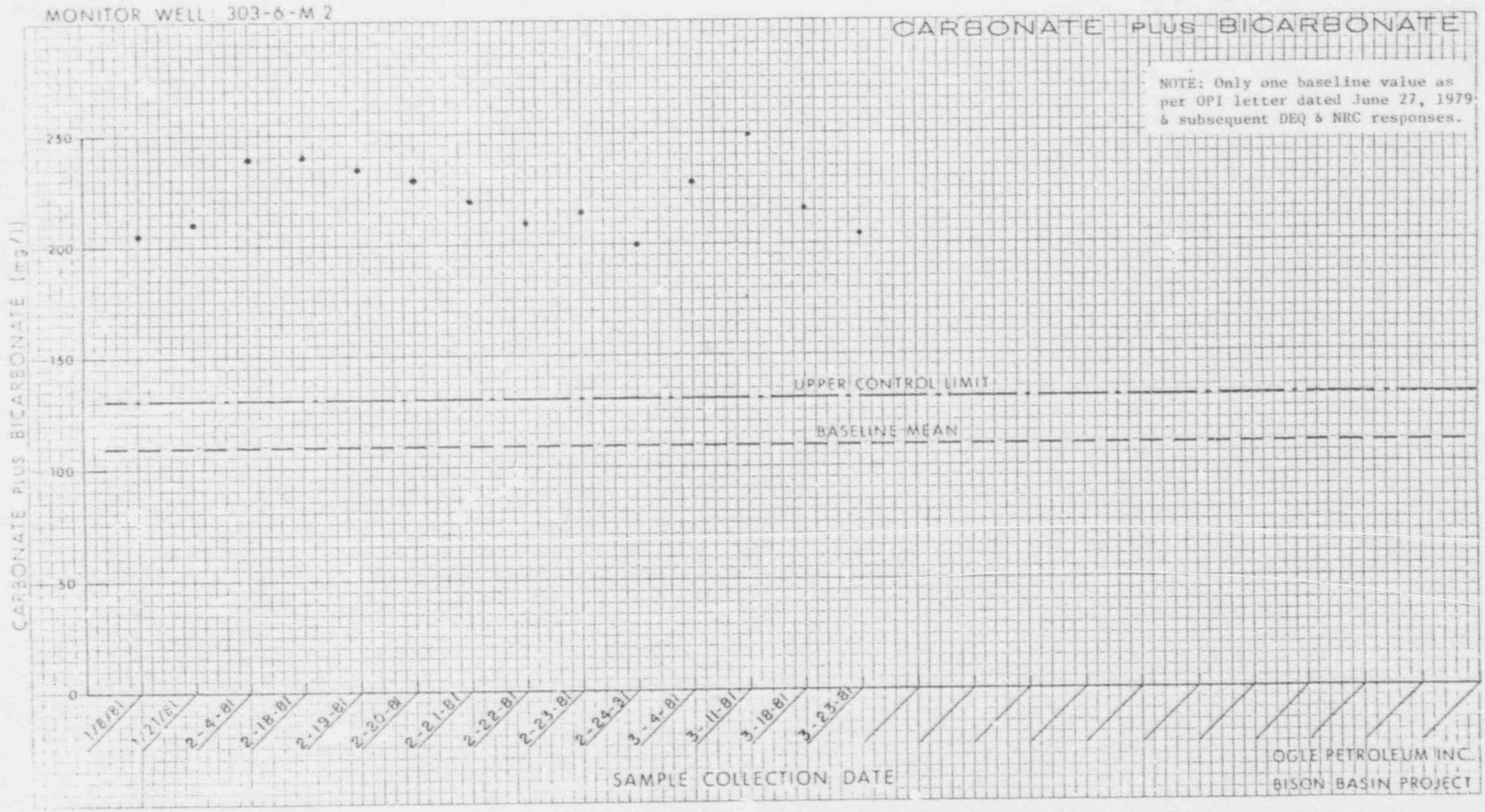

MONITOR WELL: 303-6-M 2
CARBONATE PLUS BICARBONATE
NOTE: Only one baseline value as per OPI letter dated June 27, 1979 & subsequent DEQ & NRC responses.
CARBONATE PLUS BICARBONATE (mg/l)
250
200
150
100
50
0
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 6

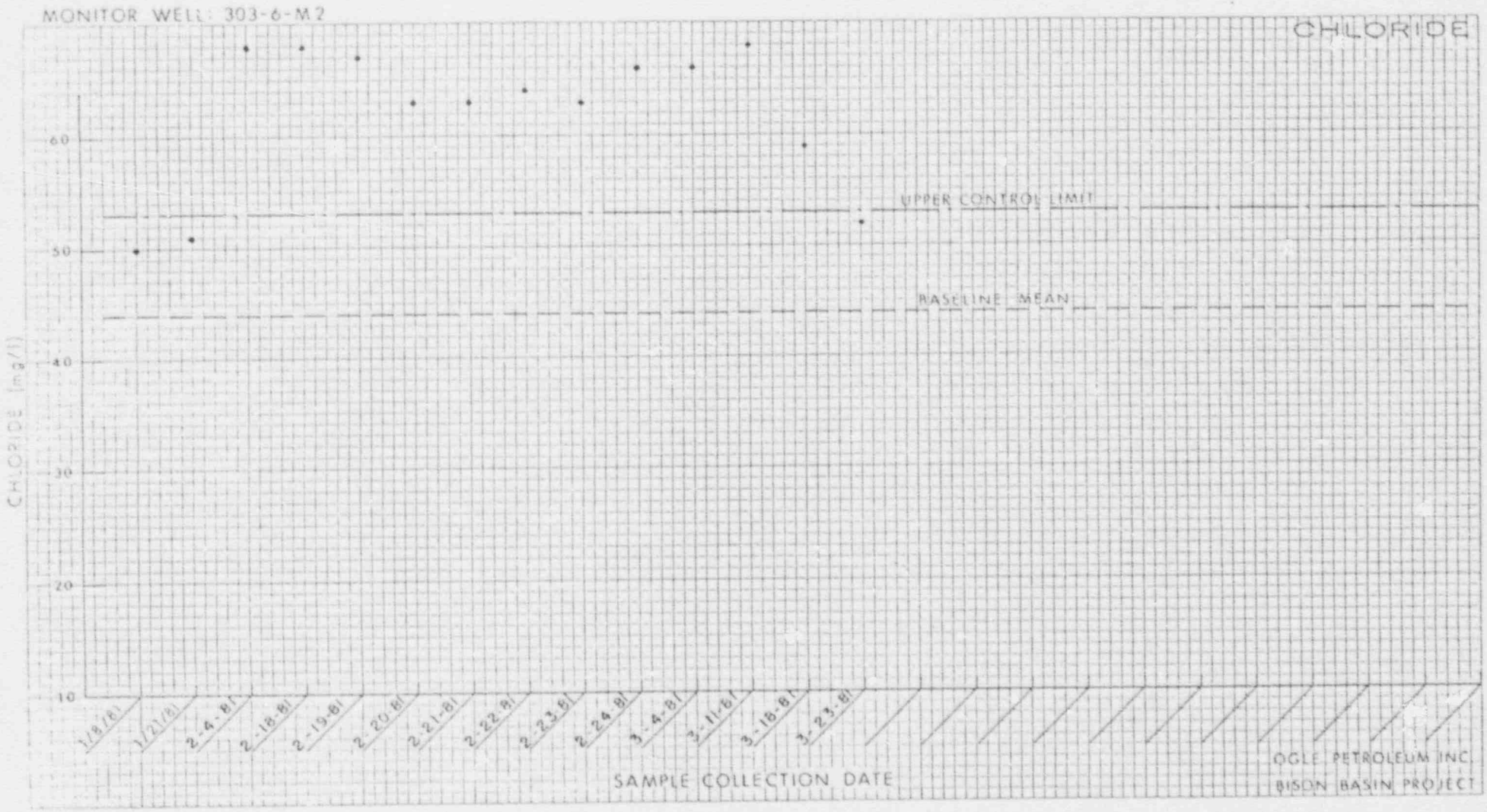

MONITOR WELL: 303-6-M2
CHLORIDE
UPPER CONTROL LIMIT
BASELINE MEAN
CHLORIDE (mg/l)
60
50
40
30
20
10
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 7

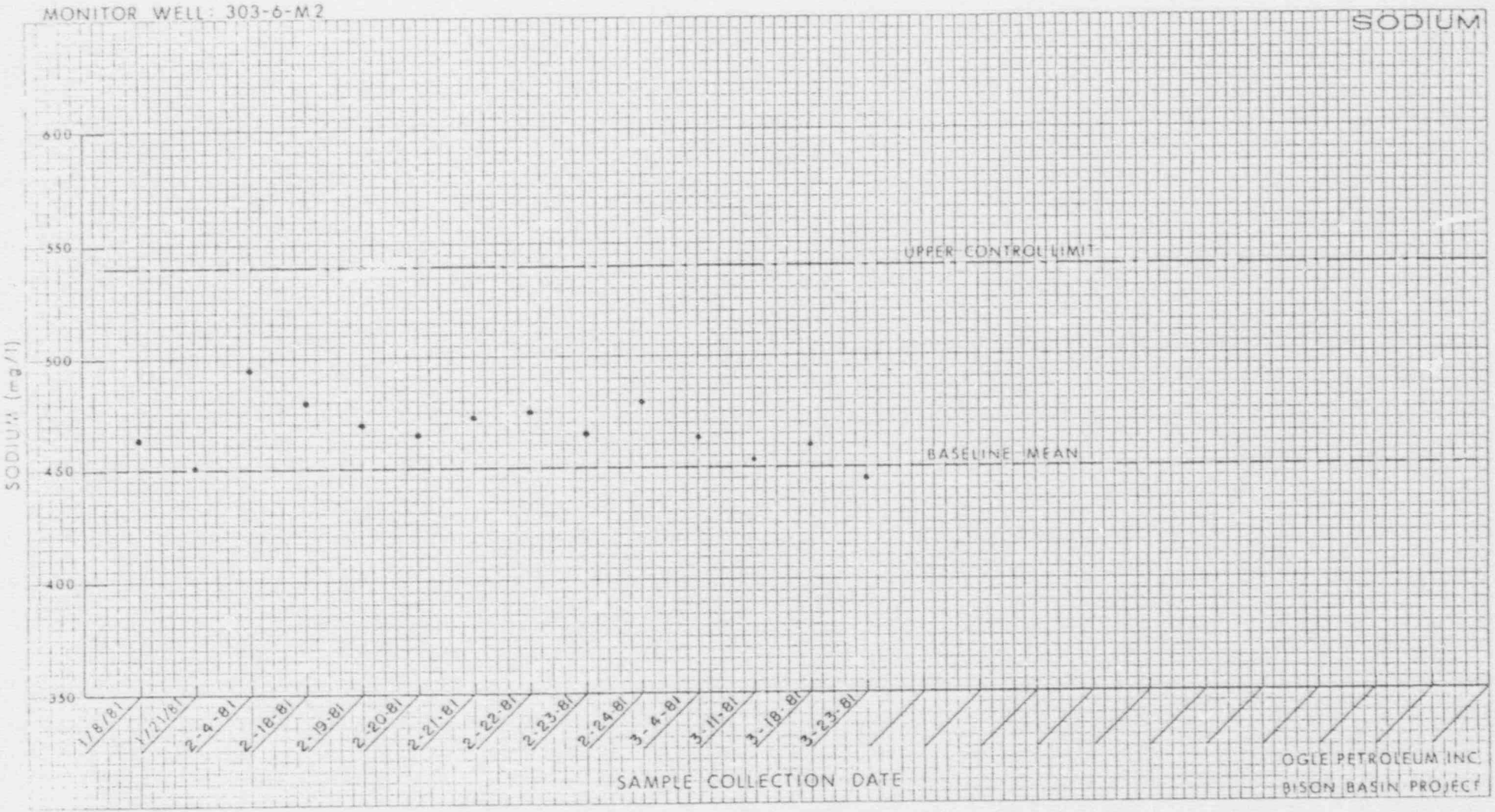

MONITOR WELL: 303-6-M2
SODIUM
600
550
500
450
400
350
SODIUM (mg/l)
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 8

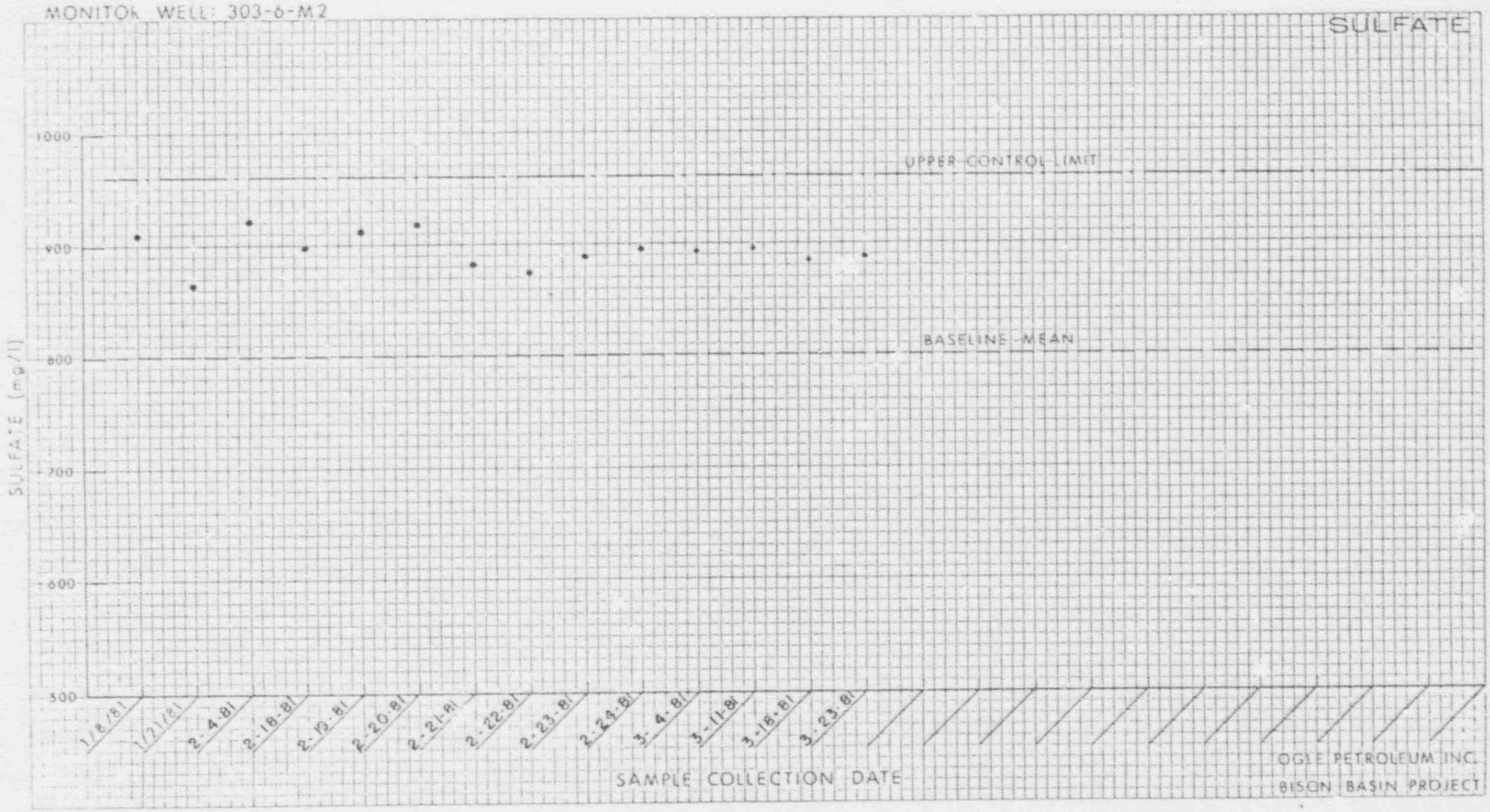

MONITOR WELL: 303-6-M2
SULFATE
1000
900
800
700
600
500
SULFATE (mg/l)
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 9

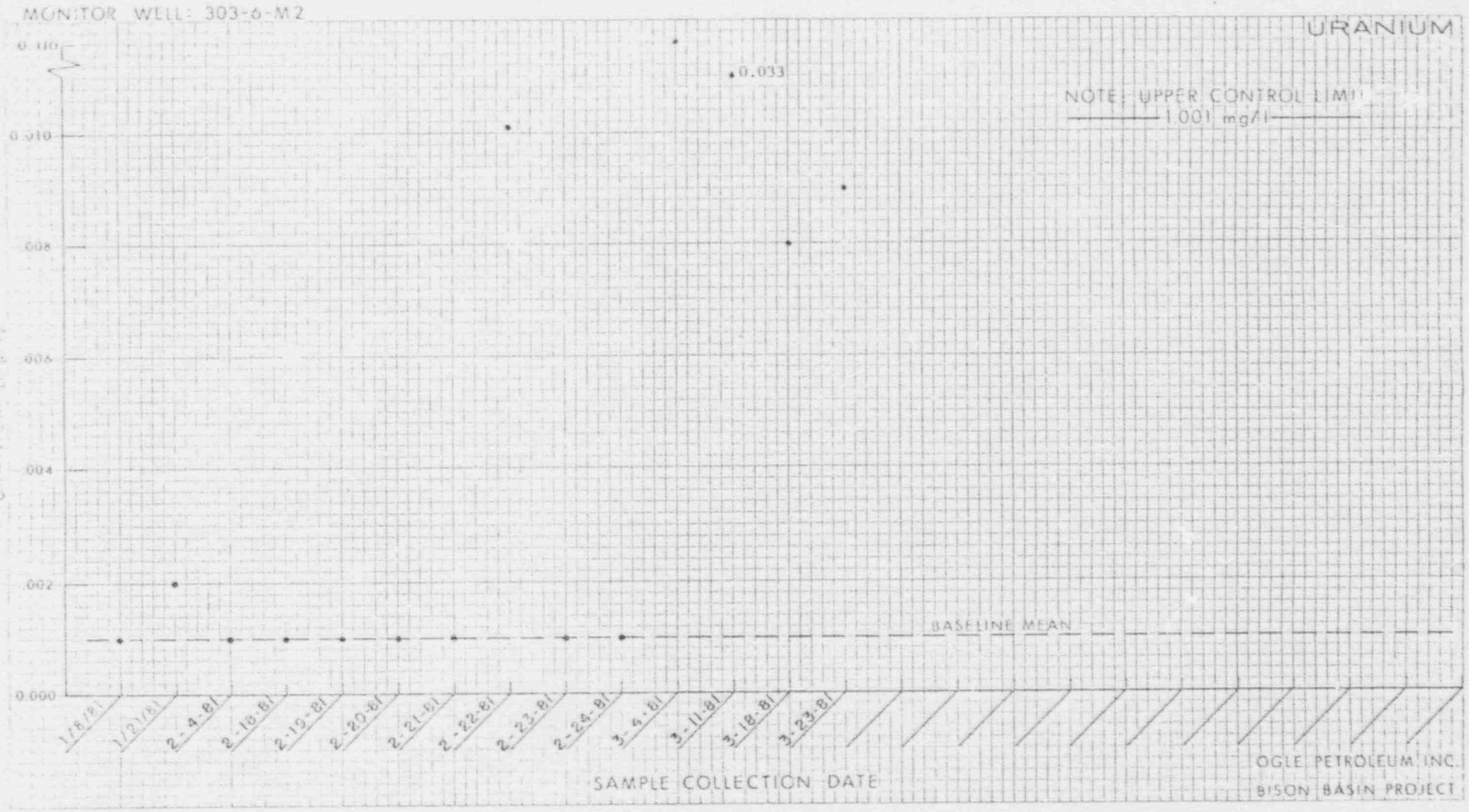

MONITOR WELL: 303-6-M2
URANIUM
0.033
NOTE: UPPER CONTROL LIMIT
1.001 mg/l
0.010
008
006
004
002
0.000
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-10-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 10

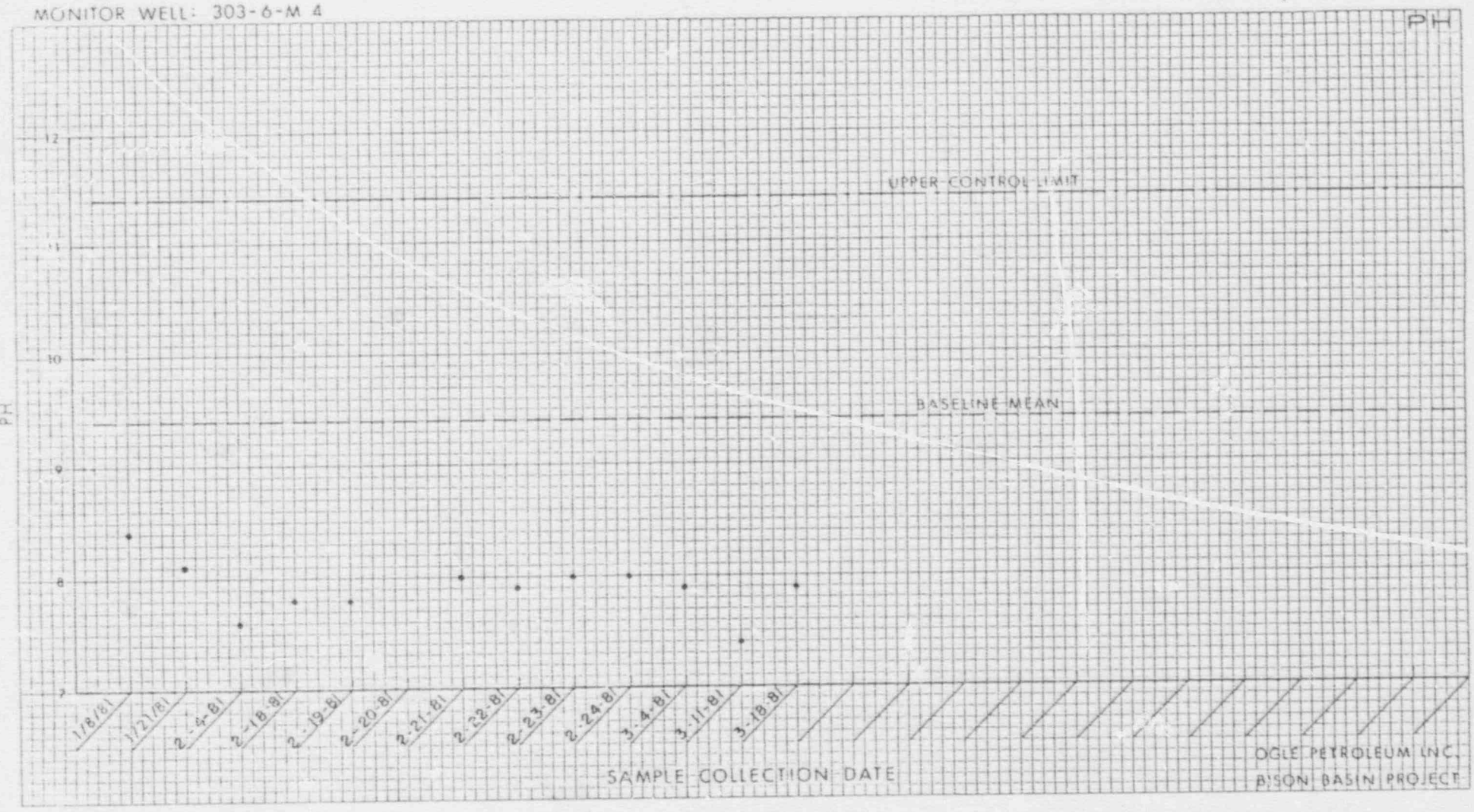

MONITOR WELL: 303-6-M 4
PH
12
11
10
9
8
7
PH
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 11

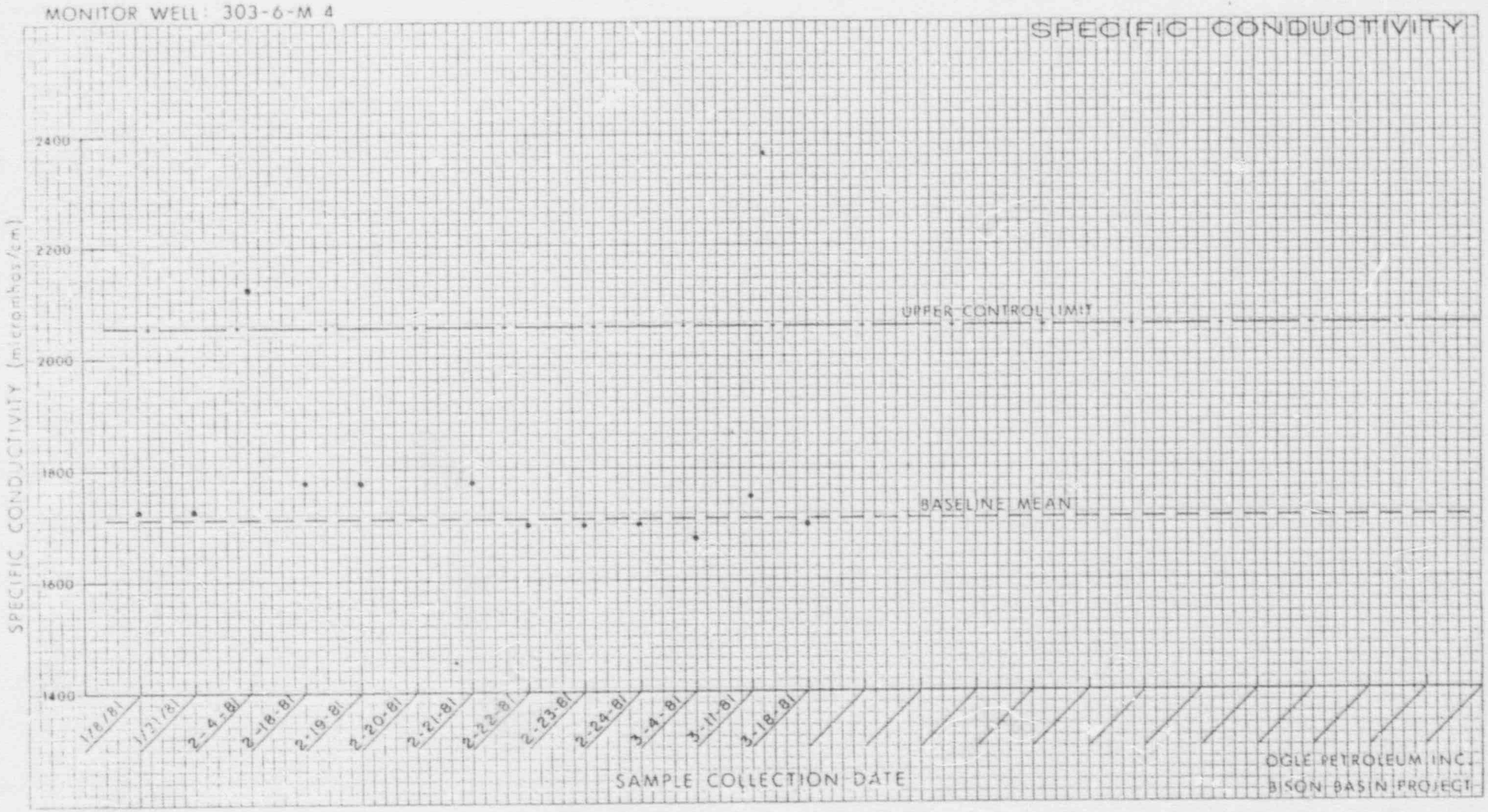
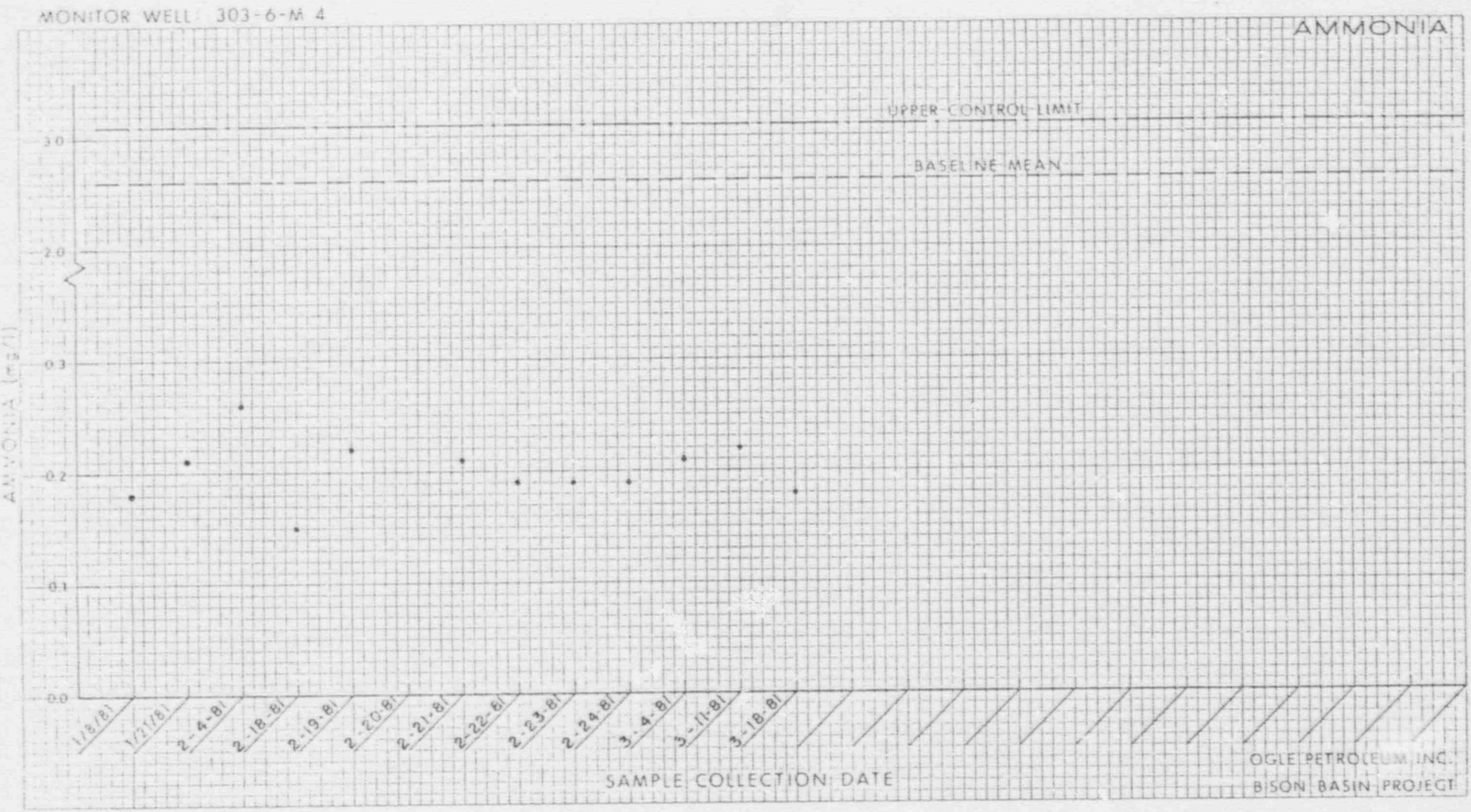

MONITOR WELL: 303-6-M 4
SPECIFIC CONDUCTIVITY
SPECIFIC CONDUCTIVITY (micromhos/cm)
2400
2200
2000
1800
1600
1400
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 12


MONITOR WELL: 303-6-M 4
AMMONIA
UPPER CONTROL LIMIT
BASELINE MEAN
3.0
2.0
0.3
0.2
0.1
0.0
AMMONIA (mg/l)
1/8/81
1/31/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
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BISON BASIN PROJECT

FIGURE 13

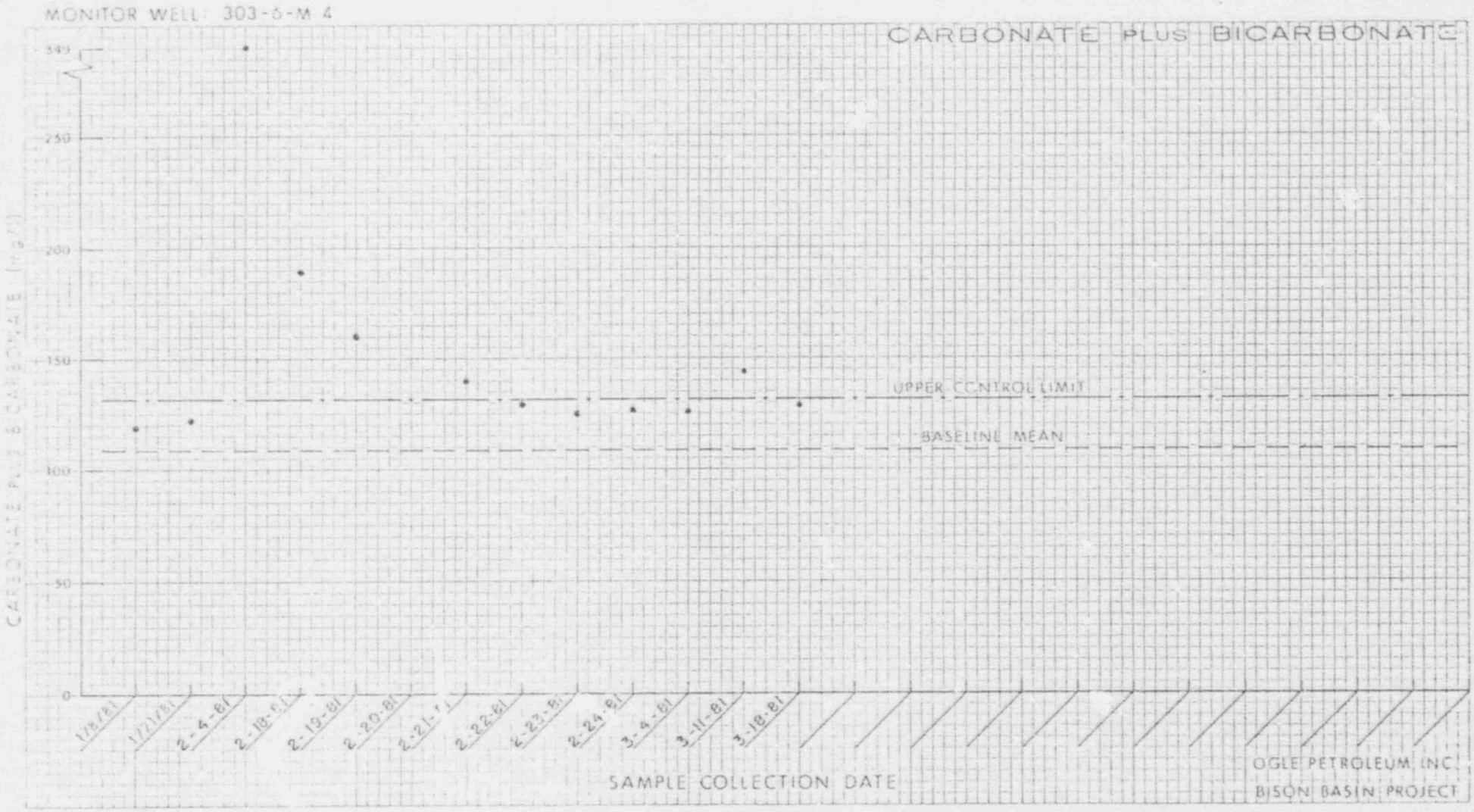
MONITOR WELL: 303-6-M 4
CARBONATE PLUS BICARBONATE
CARBONATE PLUS BICARBONATE (mg/l)
300
250
200
150
100
50
0
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
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FIGURE 14

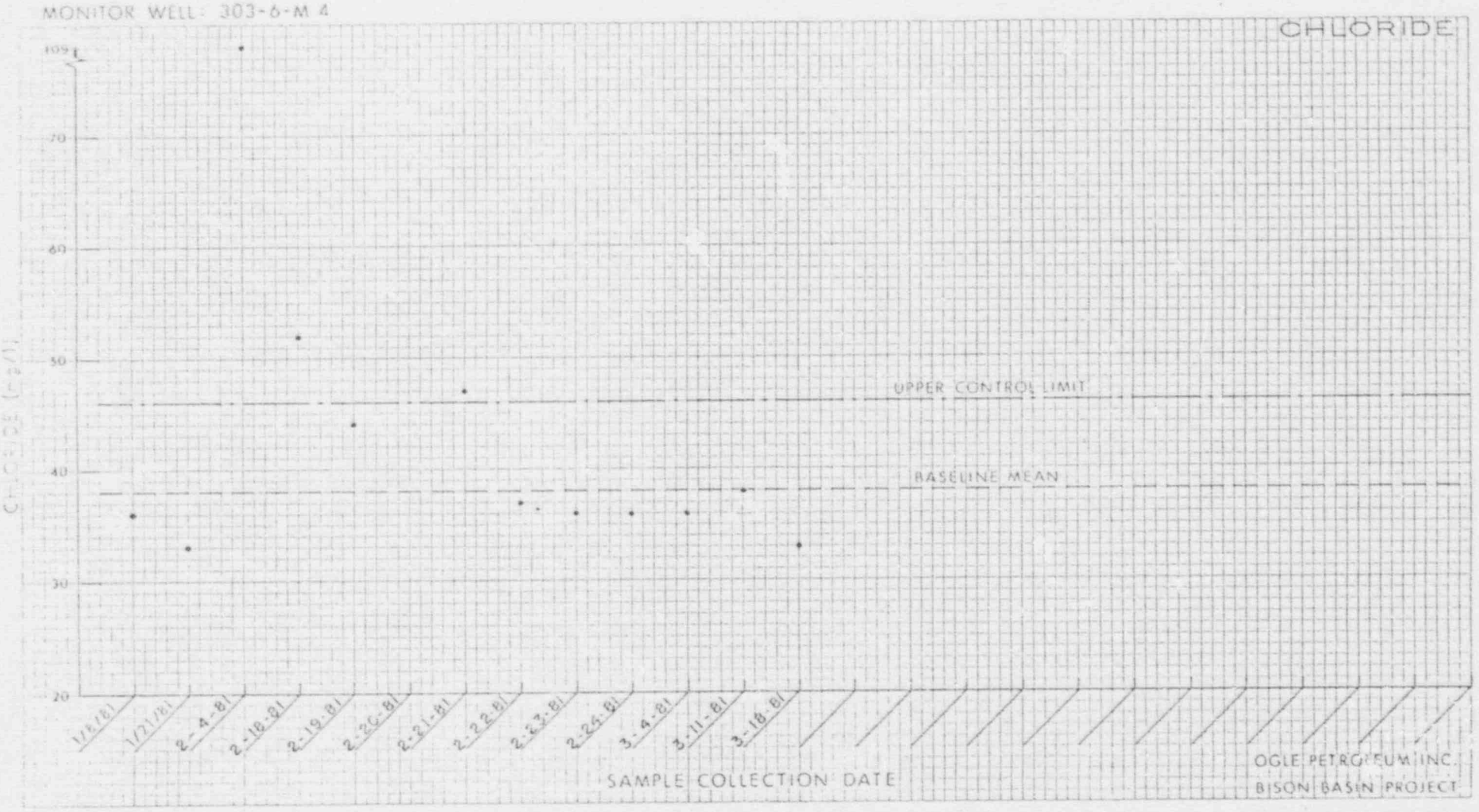
MONITOR WELL: 303-6-M 4
CHLORIDE
Chloride (mg/l)
100
70
60
50
40
30
20
UPPER CONTROL LIMIT
BASELINE MEAN
1/6/81
1/21/81
2-4-81
2-18-81
2-19-81
2-26-81
2-31-81
2-22-81
2-27-81
2-26-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
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FIGURE 15

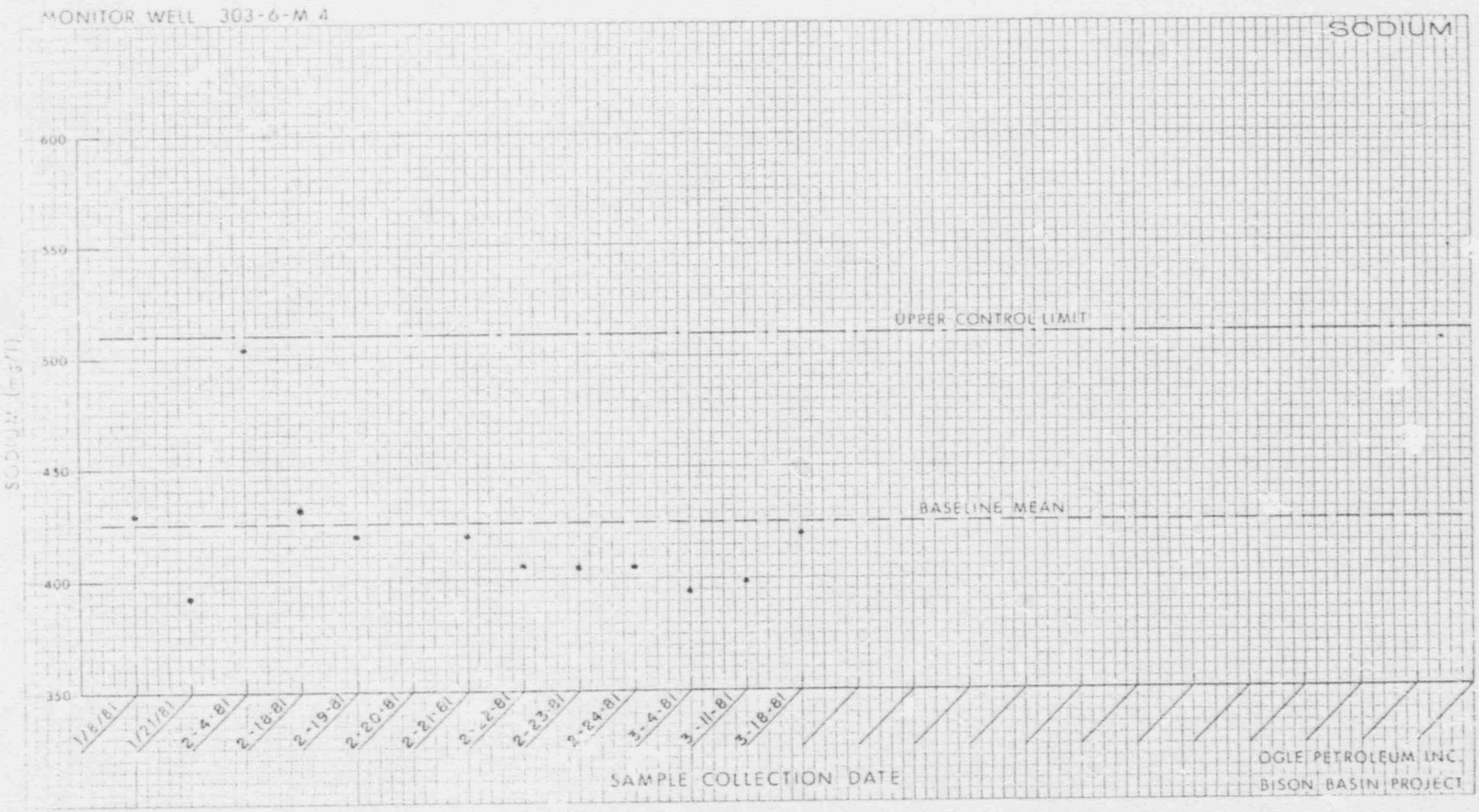

MONITOR WELL 303-6-M 4
SODIUM
600
550
500
450
400
350
SODIUM (mg/l)
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 16

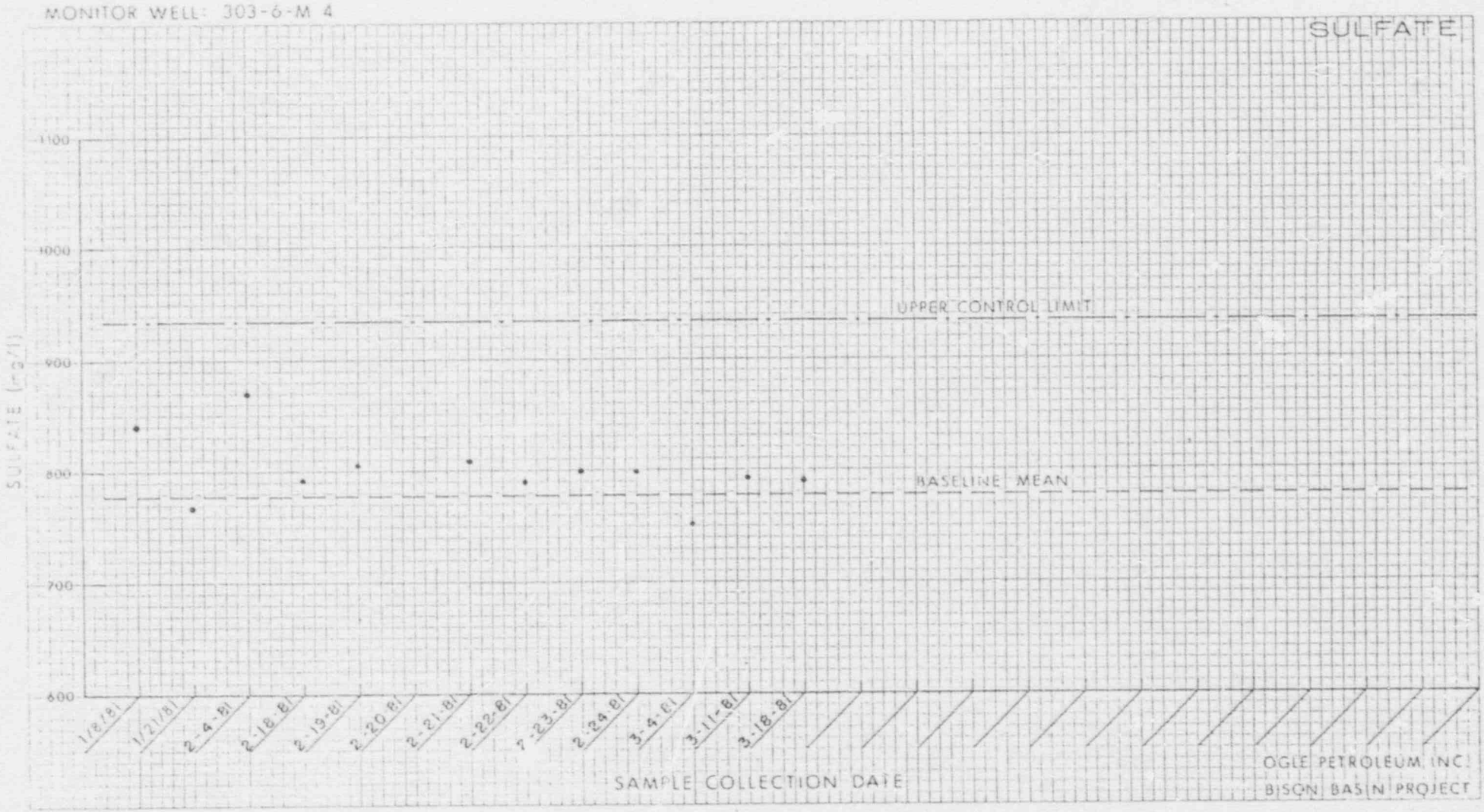
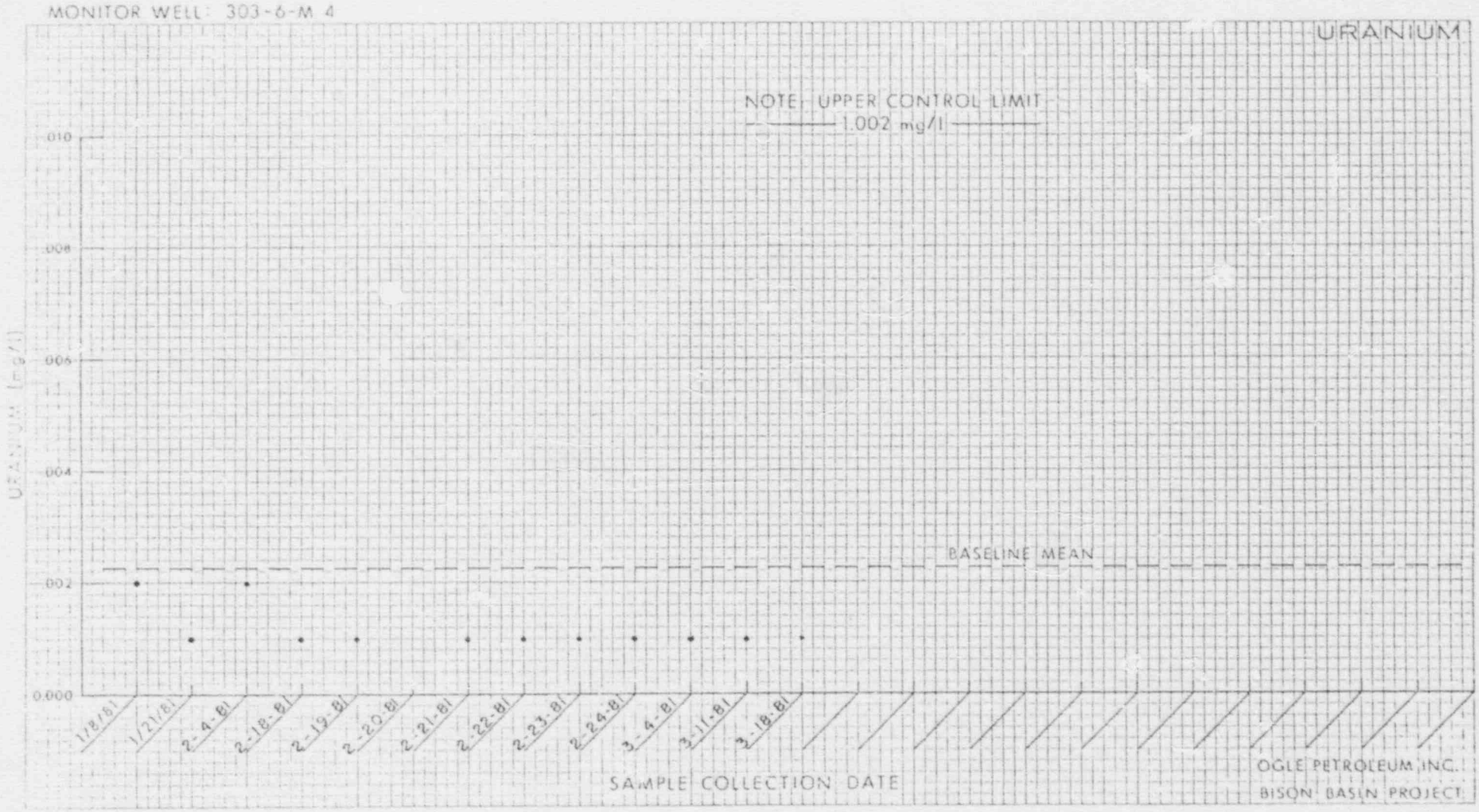

MONITOR WELL: 303-6-M 4
SULFATE
SULFATE (mg/l)
1100
1000
900
800
700
600
UPPER CONTROL LIMIT
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 17


MONITOR WELL: 303-6-M 4
URANIUM
NOTE: UPPER CONTROL LIMIT
1.002 mg/l
.010
.008
.006
.004
.002
0.000
URANIUM (mg/l)
BASELINE MEAN
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
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BISON BASIN PROJECT

FIGURE 18

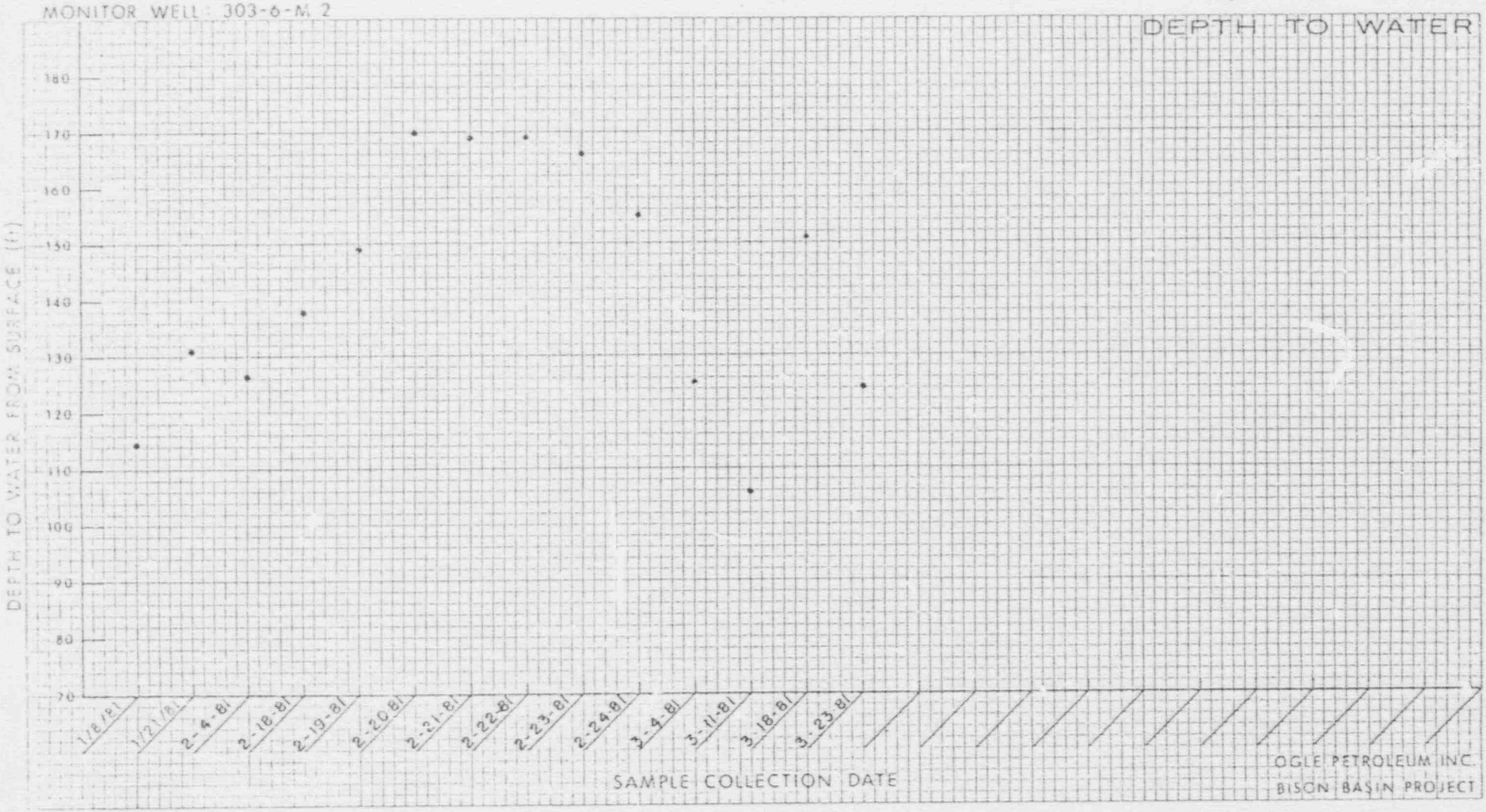
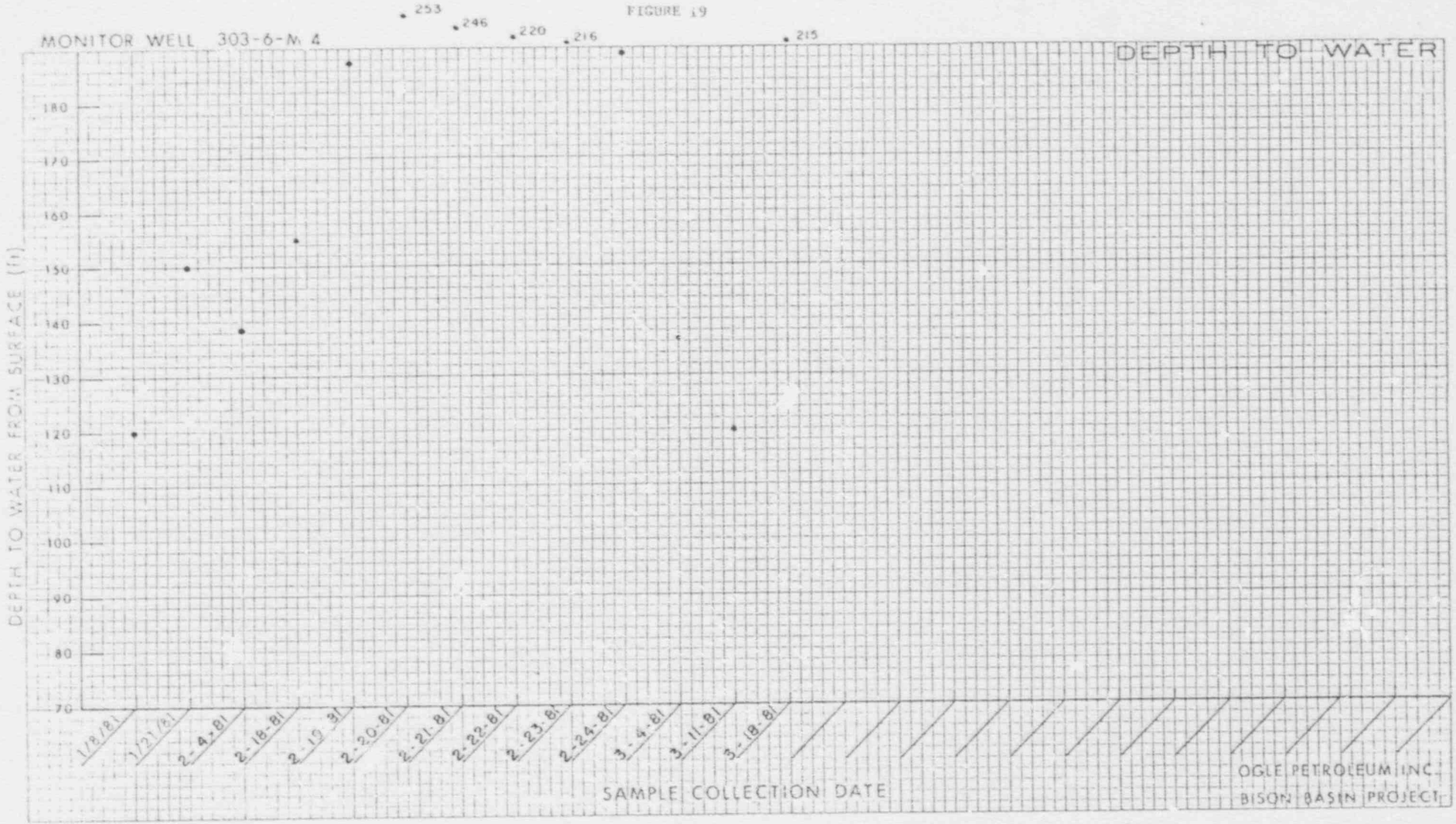
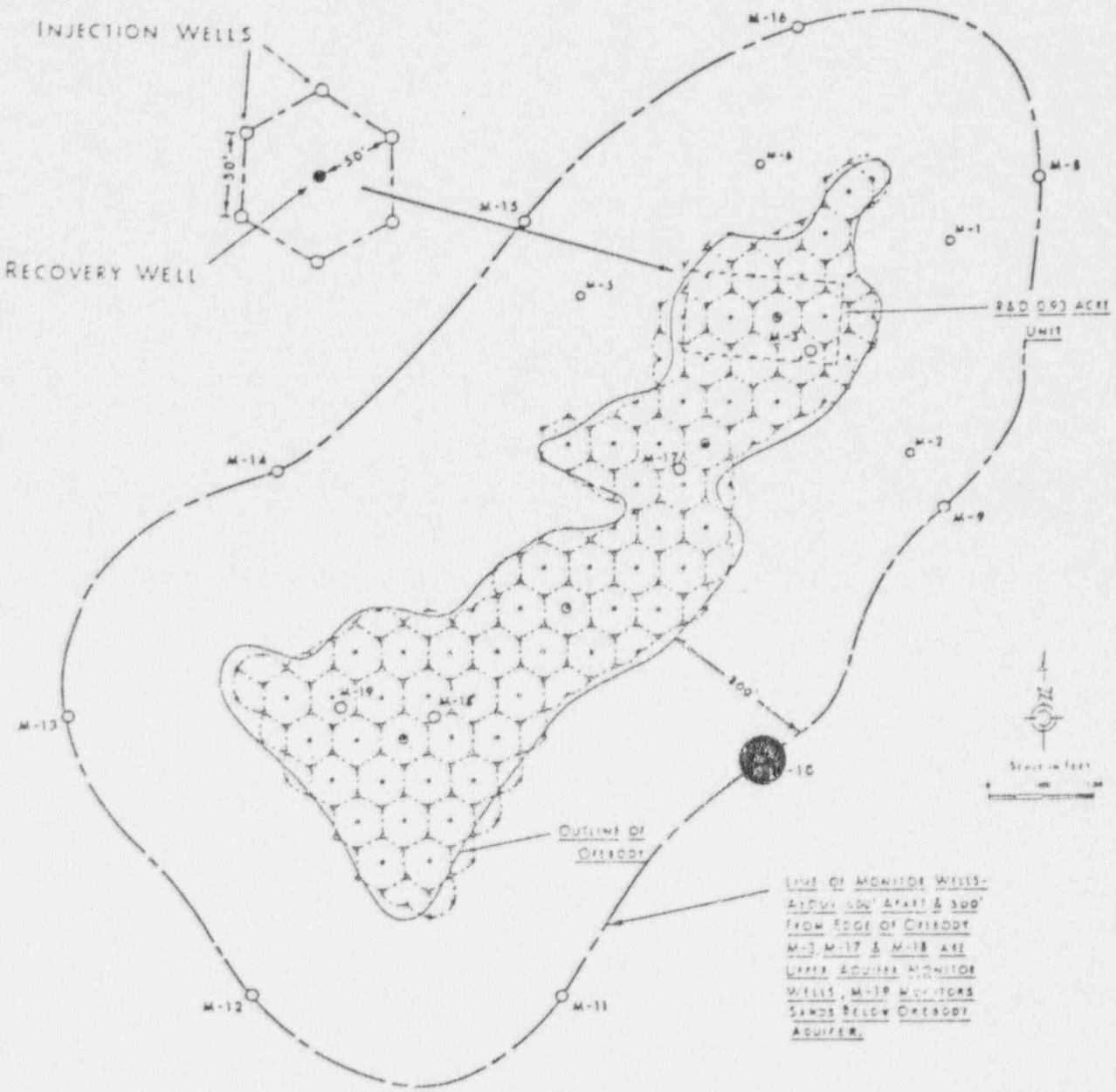

MONITOR WELL: 303-6-M 2
DEPTH TO WATER
DEPTH TO WATER FROM SURFACE (ft)
180
170
160
150
140
130
120
110
100
90
80
70
1/8/81
1/21/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
3-23-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT

FIGURE 19


MONITOR WELL 303-6-M 4
DEPTH TO WATER
253
246
220
216
215
DEPTH TO WATER FROM SURFACE (ft)
180
170
160
150
140
130
120
110
100
90
80
70
1/8/81
1/23/81
2-4-81
2-18-81
2-19-81
2-20-81
2-21-81
2-22-81
2-23-81
2-24-81
3-4-81
3-11-81
3-18-81
SAMPLE COLLECTION DATE
OGLE PETROLEUM INC.
BISON BASIN PROJECT



NOTES:

1. For Location Of This Mining Unit See Figure 15-6
2. The Number Of Wells Shown
   - Injection Wells 169
   - Recovery Wells 90
   - Total Used in Mining 259
   - OM Monitor Wells 17
   - Total Wells 276
3. Restoration Sampling Wells (4 Wells)
4. The Area Of Mining Unit No. 1 Orebody Is 504,322 Square Feet (11.7 Acres)

OGLE PETROLEUM INC.
BISON BASIN PROJECT BISON BASIN MINE
MINING UNIT NO. 1
FIGURE 20

3-24-80
Revised 5-20-80

TABLE 1

MONITOR WELL M 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE COLLECTED 01-08-81	SAMPLE COLLECTED 01-21-81	SAMPLE COLLECTED 02-04-81	SAMPLE COLLECTED 02-18-81	SAMPLE COLLECTED 02-19-81	SAMPLE COLLECTED 02-20-81	SAMPLE COLLECTED 02-21-81	SAMPLE COLLECTED 02-22-81
PH (pH units)	10.3	12.3	8.0	7.4	7.4	7.3	7.5	7.3	7.6	7.6
Total Dissolved Solids			1488		1628					
*Specific Conductance (mhos/cm)	1875	2250	1925	1925	2050	2000	2050	2025	2025	2000
*Ammonic (as N)	1.1	1.3	0.17	0.24	0.26	0.20	0.25	0.24	0.24	0.20
Nitrate (as N)			-0.01		0.01					
Nitrate (as N)			-0.01		-0.01					
Carbonate	48	58	0	0	0	0	0	0	0	0
Bicarbonate	61	73	205	210	238	241	234	229	220	210
*Carbonate+Bicarbonate[1]	109	131	205	210	238	241	234	229	220	210
Calcium			45		54					
*Chloride	44	53	50	51	68	68	67	63	63	64
Boron			- 1.0		- 1.0					
Fluoride			1.12		0.94					
Magnesium			11		13					
Potassium			5		7					
*Sodium	450	540	469	451	495	480	471	467	473	475
*Sulfate	802	962	910	864	922	897	912	917	883	875
Aluminum			- 0.1		- 0.1					
Arsenic			-0.01		-0.01					
Barium			-0.05		-0.05					
Cadmium			-0.01		-0.01					
Chromium			-0.05		-0.05					
Copper			-0.02		-0.02					
Iron			-0.03		0.04					
Lead			-0.05		-0.05					
Manganese			-0.01		-0.01					
Mercury			-0.001		-0.001					
Nickel			-0.04		-0.04					
Selenium			-0.01		-0.01					
Zinc			-0.01		-0.01					
Molybdenum			- 0.1		- 0.1					
Vanadium			-0.05		-0.05					
*Uranium	-0.001	1.001	-0.001	0.002	-0.001	-0.001	-0.001	-0.001	-0.001	0.011
Radium 226 (pCi/l)	2.75		N/A		N/A					
Thorium 230 (pCi/l)	6.19		N/A		N/A					

NOTES: All values in mg/l except as otherwise noted. - Means not detected at levels indicated. *Excursion parameters.

[1]NOTE: Only one baseline value as per UPI letter dated June 27, 1979 & subsequent DEQ & NRC responses.

TABLE 1

MONITOR WELL M 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE COLLECTED 02-23-81	SAMPLE COLLECTED 02-24-81	SAMPLE COLLECTED 03-04-81	SAMPLE COLLECTED 03-11-81	SAMPLE COLLECTED 03-18-81	SAMPLE COLLECTED 03-23-81	SAMPLE COLLECTED	SAMPLE COLLECTED
pH (pH units)	10.3	12.3	7.6	7.6	7.8	7.8	7.1	7.5		
Total Dissolved Solids										
*Specific Conductance (mhos/cm)	1875	2250	2000	2000	2000	2075	2000	1925		
*Ammonic (as N)	1.1	1.3	0.22	0.23	0.24	0.26	0.20	0.23		
Nitrate (as N)										
Nitrate (as N)										
Carbonate	48	58	0	0	0	0	0	0		
Bicarbonate	61	73	215	200	227	249	217	205		
*Carbonate+Bicarbonate	109	131	215	200	227	249	217	205		
Calcium										
*Chloride	44	53	63	66	66	68	59	52		
Boron										
Fluoride										
Magnesium										
Potassium										
*Sodium	450	540	465	479	463	453	460	445		
*Sulfate	802	962	889	895	893	894	885	889		
Aluminum										
Arsenic										
Barium										
Cadmium										
Chromium										
Copper										
Iron										
Lead										
Manganese										
Mercury										
Nickel										
Selenium										
Zinc										
Molybdenum										
Vanadium										
*Uranium	-0.001	1.001	-0.001	-0.001	0.110	0.033	0.008	0.009		
Radium 226 (pCi/l)	2.75									
Thorium 230 (pCi/l)	6.19									

NOTES: All values in mg/l except as otherwise noted. - Means not detected at levels indicated. *Excursion parameters.

TABLE 2

MONITOR WELL M 4

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE COLLECTED 01-08-81	SAMPLE COLLECTED 01-21-81	SAMPLE COLLECTED 02-04-81	SAMPLE COLLECTED 02-18-81	SAMPLE COLLECTED 02-19-81	SAMPLE COLLECTED 02-20-81	SAMPLE COLLECTED 02-21-81	SAMPLE COLLECTED 02-22-81
pH (pH units)	9.4	11.4	8.4	8.1	7.6	7.8	7.8		8.0	7.9
Total Dissolved Solids			1256		1712					
*Specific Conductance (mhos/cm)	1712	2054	1725	1725	2125	1775	1775		1775	1700
*Ammonia (as N)	2.6	3.1	0.18	0.21	0.26	0.15	0.22		0.21	0.19
Nitrate (as N)			0.22		-0.01					
Nitrate (as N)			-0.01		-0.01					
Carbonate	28	34	12	19	0	0	0		0	0
Bicarbonate	81	97	107	112	349	188	161		141	128
*Carbonate+Bicarbonate	109	131	119	122	349	188	161		141	128
Calcium			30		56					
*Chloride	38	46	36	33	109	52	44		4.	37
Boron			- 1.0		- 1.0					
Fluoride			1.29		1.02					
Magnesium			7		14					
Potassium			5		7					
*Sodium	425	510	424	392	503	433	419		419	406
*Sulfate	778	934	840	767	870	793	806		809	790
Aluminum			- 0.1		- 0.1					
Arsenic			-0.01		-0.01					
Barium			-0.05		-0.05					
Cadmium			-0.01		-0.01					
Chromium			-0.05		-0.05					
Copper			-0.02		-0.02					
Iron			-0.03		0.03					
Lead			-0.05		-0.05					
Manganese			-0.01		-0.01					
Mercury			-0.001		-0.001					
Nickel			-0.04		-0.04					
Selenium			-0.01		-0.01					
Zinc			-0.01		-0.01					
Molybdenum			-0.10		-0.10					
Vanadium			-0.05		-0.05					
*Uranium	0.002	1.002	0.002	0.001	0.002	-0.001	-0.001		-0.001	-0.001
Radium 226 (pCi/l)	79.43		N/A		N/A					
Thorium 230 (pCi/l)	7.58		N/A		N/A					

NO SAMPLE COLLECTED DUE TO LOW WATER LEVEL

NOTES: All values in mg/l except as otherwise noted. - Means not detected at levels indicated. *Excursion parameters.

TABLE 2

MONITOR WELL M 4

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE COLLECTED 02-23-81	SAMPLE COLLECTED 02-24-81	SAMPLE COLLECTED 03-04-81	SAMPLE COLLECTED 03-11-81	SAMPLE COLLECTED 03-18-81	SAMPLE COLLECTED	SAMPLE COLLECTED	SAMPLE COLLECTED
pH (pH units)	9.4	11.4	8.0	8.0	7.9	7.4	7.4			
Total Dissolved Solids										
*Specific Conductance (mhos/cm)	1712	2054	1700	1675	1675	1750	1700			
*Ammonia (as N)	2.6	3.1	0.19	0.20	0.21	0.22	0.18			
Nitrate (as N)										
Nitrate (as N)										
Carbonate	28	34	0	0	0	0	0			
Bicarbonate	81	97	127	110	127	144	129			
*Carbonate+Bicarbonate	109	131	127	110	127	144	129			
Calcium										
*Chloride	38	46	36	37	36	38	33			
Boron										
Fluoride										
Magnesium										
Potassium										
*Sodium	425	510	405	415	394	398	420			
*Sulfate	778	934	800	789	752	792	790			
Aluminum										
Arsenic										
Barium										
Cadmium										
Chromium										
Copper										
Iron										
Lead										
Manganese										
Mercury										
Nickel										
Selenium										
Zinc										
Molybdenum										
Vanadium										
*Uranium	0.002	1.002	-0.001	-0.001	-0.001	-0.001	-0.001			
Radium 226 (pCi/l)	79.43									
Thorium 230 (pCi/l)	7.58									

NOTES: All values in mg/l except as otherwise noted. - Means not detected at levels indicated. *Excursion parameters.

TABLE 3

PLANT BLEED VOLUMES

DATES	GALLONS BLED TO POND
02/04/81-02/10/81	4,317
02/11/81-02/17/81	96,000
02/18/81-02/24/81	297,680
02/25/81-03/03/81	25,530
03/04/81-03/10/81	22,480
03/11/81-03/17/81	113,796
03/18/81-03/24/81	41,600
TOTAL GALLONS BLED	601,403