

# ALTAIR RESOURCES INC.

40-8745  
8926

(307) 266-6456

2510 East 15th, Suite #8  
Casper, Wyoming 82609

April 9, 1986

Mr. Richard Chancellor  
Engineering Supervisor  
Land Quality Division  
Herschler Building  
Third Floor West  
122 West 25th Street  
Cheyenne, WY 82002



RE: Decommissioning Project  
Bison Basin Mine

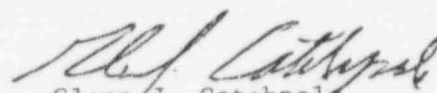
Dear Mr. Chancellor:

Altair Resources Inc. herewith submits its Statement of Qualifications (three copies) for the decommissioning of the Bison Basin in-situ uranium mine located in southern Fremont County, Wyoming.

Please get in contact with me if you have any questions regarding Altair's Statement of Qualifications.

Sincerely,

ALTAIR RESOURCES INC.

  
Glenn J. Catchpole  
President & General Manager

GJC:csg

Enclosure

cc: R. Dale Smith, NRC w/encl. ✓  
Mark Moxley, LQD w/encl.  
Tony Mancini, WQD w/encl.

OFFICIAL DOCKET COPY

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PDR ADOCK 04008926  
C PDR

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STATEMENT OF QUALIFICATIONS

BISON BASIN  
DECOMMISSIONING PROJECT

PERMIT TO MINE #504  
SOURCE MATERIAL LICENSE SUA-1396

FOR

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

AND

U.S. NUCLEAR REGULATORY COMMISSION

BY

ALTAIR RESOURCES INC.  
CASPER, WYOMING

APRIL, 1986

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Mark Moxley, LQD w/encl.  
Tony Mancini, WQD w/encl.



## STATEMENT OF QUALIFICATIONS

### 1.0 FIRM RESUME & QUALIFICATIONS

Altair Resources Inc. (ARI) is a privately held firm incorporated in the state of Wyoming in November of 1985. One hundred percent of the ARI stock is jointly owned by Glenn J. and Judith S. Catchpole. Mr. and Mrs. Catchpole have been continuous residents of the state of Wyoming for the past nine years, and they make their home in Casper, Wyoming. Since its incorporation ARI has been the contractor for the Bison Basin project providing maintenance, security and environmental monitoring at the in-situ uranium mine. ARI provides the above services under a contract with Western Fuel, Inc., a 50% owner in the OPI-Western Joint Venture.

In addition to its Bison Basin mine contract, ARI provides engineering and environmental services on a consulting basis to industry and government. Currently ARI is also serving as a sub-consultant on an environmental assessment of the Naval Petroleum Reserve No. 3. ARI's portion of the Naval Petroleum Reserve contract will be substantially completed prior to the commencement of decommissioning activities at the Bison Basin mine.

The employees of ARI were all key employees of the operation of the OPI-Western Joint Venture (Bison Basin mine) during both the R & D phase and commercial phase of the project. Mr. Catchpole, the President and General Manager of ARI, served as the Project Manager for the Bison Basin mine from the start of the project in 1978 until November, 1985 when the operator of the

facility, Ogle Petroleum, went out of business. Mr. Joe G. Vialpando who presently works part time for ARI was the Mine Superintendent at the Bison Basin project for both the R & D and commercial phases of the project. Mr. Vialpando will work full time for ARI as the Project Superintendent if ARI is awarded the contract to decommission the Bison Basin mine. Mr. Kurtis J. Brown who is presently the Facilities Superintendent at the Bison Basin mine was the Wellfield Engineer/Geologist and Radiation Safety Officer (R.S.O.) at the Bison Basin project for both the R & D and commercial phases. The other full time ARI employee, Mr. James L. Ball, was the Mine Foreman at the Bison Basin mine for both the R & D and commercial phases of the project. ARI's organizational chart for the Bison Basin mine is presented in Figure 1.

The key members of Altair Resources Inc. staff that will be involved with the decommissioning (Messrs. Catchpole, Brown, Vialpando, and Ball) each have over six years experience working at the Bison Basin mine. Collectively, they have over 28 man-years of experience at the in-situ mining facility that the DEQ and NRC desire to have decommissioned. These four key staff members have been involved with the Bison Basin project through all stages of development and operation including the following:

1. 25 GPM R & D Mining
2. R & D Restoration
3. 100 GPM R & D operations
4. 600 GPM Plant Design and Construction
5. 600 GPM Commercial Operations
6. Standby Operations.

# ALTAIR RESOURCES INC.

## ORGANIZATIONAL CHART FOR BISON BASIN DECOMMISSIONING

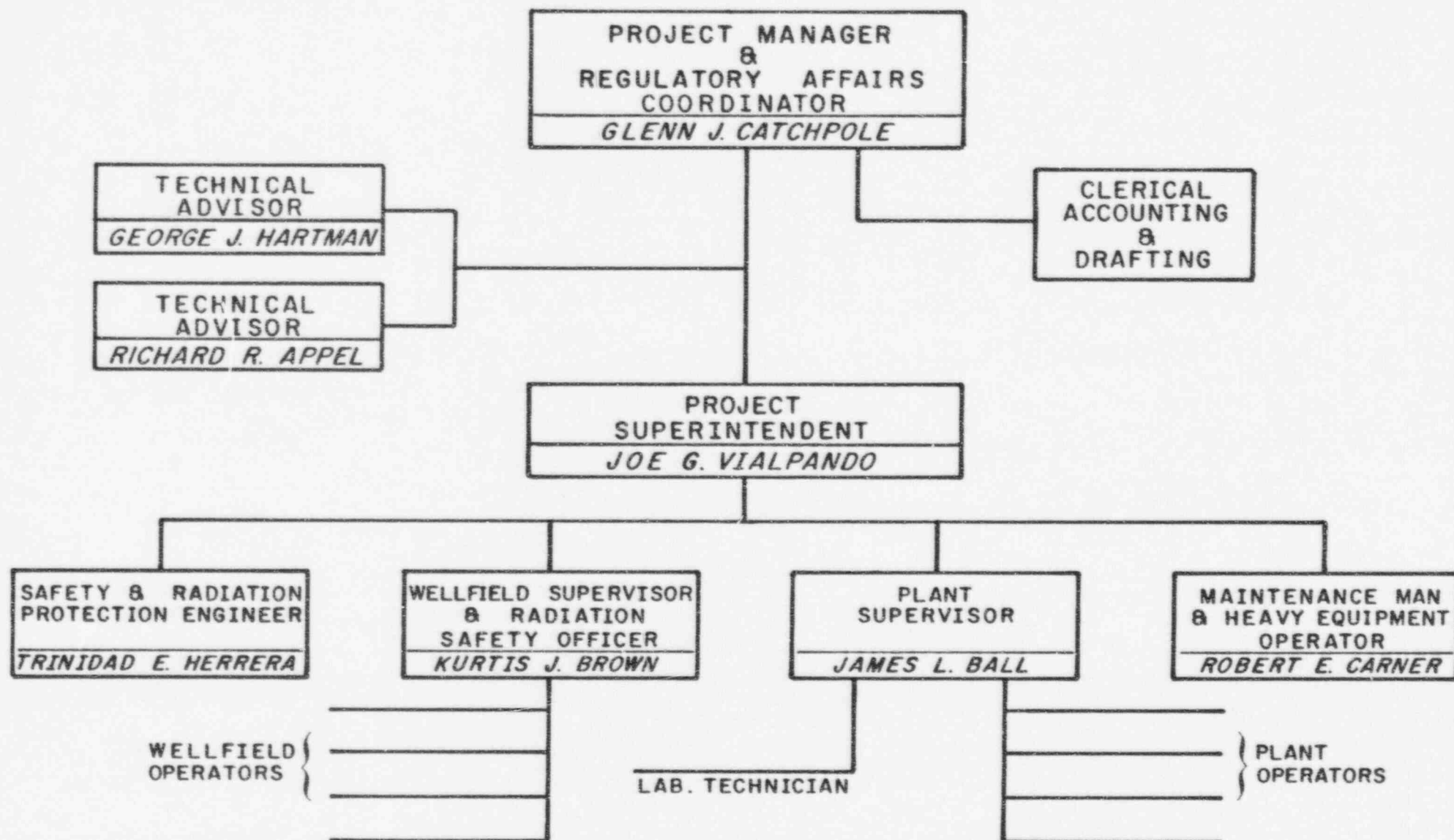


FIGURE 1

Consequently ARI is intimately familiar with the production zone aquifer to be restored, and the staff has actual experience operating and maintaining the equipment that will be used during the decommissioning of the facility. Mr. Trinidad E. Herrera, the fifth member of our staff, will serve as the Safety and Radiation Protection Engineer. Mr. Herrera served in this same capacity at the Bison Basin mine for almost five years during the commercial phase of the operation. He is qualified by the NRC, MSHA and the State Mine Inspector to serve in this capacity, and he is a certified EMT. A sixth member of the ARI team, Mr. Bob Carner, was the maintenance man and heavy equipment operator during the commercial phase of the Bison Basin operation. Mr. Carner, with his previous experience maintaining the mine equipment and operating the snow removal equipment, will be extremely valuable to the decommissioning effort.

One of the critical and complicated aspects of decommissioning the Bison Basin mine is the restoration of the production zone aquifer. The OPI-Western staff successfully demonstrated its capability to restore the production zone aquifer at the Bison Basin mine during the R & D phase of the project. The Project Manager, Plant Superintendent, and Wellfield Engineer for the OPI-Western Joint Venture are now employees of ARI and will serve in the same capacity during the decommissioning operations. Mr. George J. Hartman who was the Manager of Mining for the Joint Venture during the R & D mining and restoration phases, and commercial phase will be available as a technical consultant during ARI's decommissioning of the Bison

Basin mine. Mr. Hartman was the Solution Mining Manager for Uranerz U.S.A., Inc. during the successful restoration of the Ruth property ISL R & D operation. Mr. Hartman will provide technical support in the areas of water chemistry, process engineering, and selection of a water treatment unit. He also has actual experience in the addition of reductants to achieve restoration goals. Mr. Richard R. Appel will be retained as a technical advisor to provide support in the area of site and equipment radioactive decontamination, and land reclamation activities. Mr. Appel served as the contract site manager for the decommissioning of the UNC-Teton Leuenberger ISL uranium solution mining facility.

The fact that the staff of ARI has successfully operated both an R & D sized and commercial sized facility at the Bison Basin mine, and has successfully restored the production zone aquifer demonstrates qualifications in the following areas:

1. In-situ uranium mining
2. Groundwater hydrology
3. Project Management
4. Groundwater Restoration
5. Radiation Safety
6. Radiological Surveys
7. Mine Decommissioning and Decontamination Procedures
8. Transportation of Radioactive Materials
9. Water Sampling
10. Report Preparation
11. Land Reclamation

As part of operating a commercial in-situ uranium mine the staff of ARI has experience in radiation safety and surveys (NRC Source Material License SUA-1396), decontamination of equipment in accordance with NRC guidelines, and transportation of radioactive materials. During commercial operations at Bison Basin the staff at ARI was involved with the preparation and reporting of eleven (11) shipments of yellowcake. These shipments were made in compliance with NRC regulations and included proper reporting utilizing NRC form 741. All yellowcake shipments were made without incident or accident. The ARI staff has collected and analyzed hundreds of water samples from the Bison Basin area.

In terms of land reclamation, the staff at ARI has set up two test plots at the Bison Basin mine using the approved seed mix and reclamation procedures. These two test plots demonstrate that acceptable land reclamation is achievable at Bison Basin, and that the ARI staff is qualified to conduct and manage land reclamation activities.

The firm of Altair Resources Inc. has excellent credentials in the field of groundwater hydrology. Mr. Catchpole, the designated Project Manager, is a registered professional engineer specializing in the field of hydrology. Mr. Brown, the designated Wellfield Supervisor, is a geohydrologist and has over seven years of hydrologic experience with the aquifer to be restored. Both individuals have conducted pump tests in the Bison Basin area and have written reports on the local groundwater hydrology.

In summary, the key individuals that Altair Resources will employ for the decommissioning project are the same individuals that filled the key positions during the R & D and commercial mining operations, including the successful demonstration restoration of the production zone aquifer. All of the key people currently live in Fremont County, an economically depressed area, with the exception of Mr. Catchpole who lives in Casper. To the maximum extent possible, employees for the project will be recruited from the Fremont County area. ARI does not propose to conduct any large, expensive studies of the hydrology and geochemistry as the staff has already acquired the knowledge to perform the decommissioning activities. ARI has designed its personnel organization to provide an experienced and knowledgeable staff that is competent, trim and cost effective.

Firm References:

Western Fuel, Inc.  
R. H. (Hubert) Hall, Jr.  
(704) 373-4371

Civil Engineering Professionals, Inc.  
Colin Cunningham  
(307) 266-4346

Uranerz U.S.A., Inc.  
George J. Hartman  
(307) 234-9169

In-Situ, Inc.  
Donald G. Bailey  
(307) 742-8213



## 2.0 PERSONNEL RESUMES AND QUALIFICATIONS

Altair Resources Inc. intends to employ as key personnel for the Bison Basin mine decommissioning the same individuals who were the key personnel during the R & D and commercial phases of the Bison Basin ISL project. These key individuals are shown on the organizational chart on figure 1, and their names and positions are listed below:

|  |                     |
|--|---------------------|
| Project Manager                                      | Glenn J. Catchpole  |
| Project Superintendent                               | Joe G. Vialpando    |
| Wellfield Supervisor<br>and Radiation Safety Officer | Kurtis J. Brown     |
| Plant Supervisor                                     | James L. Ball       |
| Safety and Radiation<br>Protection Engineer          | Trinidad E. Herrera |
| Maintenance Man and Heavy<br>Equipment Operator      | Robert E. Carner    |

Summary resumes of the qualifications of each of the above key individuals are presented in the following paragraphs. Detailed personal resumes for each individual are contained in Appendix A.

### 2.1 PROJECT MANAGER - GLENN J. CATCHPOLE

Mr. Glenn J. Catchpole is currently the President and General Manager of Altair Resources Inc., an engineering and environmental consulting company providing services in civil engineering, water resources, hydrology, regulatory permitting, and monitoring, and mine decommissioning. Prior to forming his own company in November, 1985, Mr. Catchpole was the Project Manager for nearly eight years for the OPI-Western Bison Basin ISL uranium mining project. His duties with the OPI-Western Joint Venture in addition to overall project management included



regulatory affairs, hydrology, construction management and mine operations. Before joining the OPI-Western Joint Venture Mr. Catchpole spent two years with the Land Quality Division of DEQ as the senior hydrologist and technical support group supervisor. He has also worked for the State Engineer of Colorado as a hydrologist and he was a commissioned officer in the U.S. Navy for seven years. Mr. Catchpole has a B.S. degree in mechanical engineering from the University of Wyoming and an M.S. degree in Civil Engineering (hydrology) from Colorado State University.

References:

R. H. (Hubert) Hall, Jr.  
Western Fuel Inc. (Duke Power)  
(704) 373-4371

W. R. (Bill) Merrill  
Ogle Petroleum Inc. of California  
(805) 964-9911

George J. Hartman  
Uranerz U.S.A., Inc.  
(307) 234-9169

## 2.2 PROJECT SUPERINTENDENT - JOE G. VIALPANDO

Mr. Joe G. Vialpando is currently a part-time employee of Altair Resources involved with maintenance, surveillance, and environmental monitoring at the Bison Basin mine. From March, 1979 until November, 1985, Mr. Vialpando was the Mine Superintendent at the Bison Basin in-situ uranium solution mine. He was responsible for the day to day operations at the mine and he directed all activity at the site including the operation and maintenance of all equipment. Mr. Vialpando was the Mine Superintendent during the R & D mining phase, the R & D restoration phase, the commercial construction phase, the commercial operations phase and the post shut-down phase at the OPI-Western

Bison Basin mine. He is very knowledgeable in process and aquifer restoration chemistry as he was directly involved in the restoration of the R & D production zone aquifer at the Bison Basin mine. Prior to joining the OPI-Western staff Mr. Vialpando worked as a metallurgical engineer for the Wyoming Mineral Corporation where he was involved with both ISL uranium mining and aquifer restoration. He has proven himself capable of managing and administering field operations at the remote Bison Basin mine.

References:

Mr. George J. Hartman  
Uranerz U.S.A., Inc.  
(307) 234-9169

Dr. Harold R. Grady  
Foote Mineral Company  
(215) 363-6500

Mr. F. L. Hanagarne  
Metallurgical Consultant  
(505) 327-3897

Glenn J. Catchpole  
Altair Resources Inc.  
(307) 266-6456

### 2.3 WELLFIELD SUPERVISOR AND RADIATION SAFETY OFFICER - KURTIS J. BROWN

Mr. Kurtis J. Brown is currently employed by Altair Resources as Facilities Superintendent at the Bison Basin mine responsible for day to day operations at the site. He is also the Radiation Safety Officer and the Wellfield Engineer for the project. From December, 1977 until November, 1985, a period of almost eight years, Mr. Brown has been employed by the OPI-Western Joint Venture as the Wellfield Engineer/Geologist for the Bison Basin ISL uranium solution mine. He has an extensive

knowledge of the geology and hydrology in the Bison Basin area acquired during the R & D mining and restoration phases, and the commercial phase of the ISL operations. Mr. Brown has conducted numerous geologic and hydrogeologic investigations in the Bison Basin area and he has written reports on these investigations. He also supervised the wellfield drilling program and he is very experienced in completion and abandonment procedures for in-situ mining wells. Mr. Brown is also an NRC approved Radiation Safety Officer and is knowledgeable in radiation monitoring and decontamination procedures. He personally wrote the radiation portion of the decommissioning plan for the Bison Basin mine. Mr. Brown has a B.A. degree in geology from the University of Wyoming.

References:

Mr. Arnold M. Hannum  
Wyoming State Inspector of Mines  
(307) 362-5222

Mr. Arnold D. Cunningham  
Consultant Geologist  
(303) 773-3588

Mr. George J. Hartman  
Uranium U.S.A., Inc.  
(307) 234-9169

Glenn J. Catchpole  
Altair Resources Inc.  
(307) 266-6456

#### 2.4 PLANT SUPERVISOR - JAMES L. BALL

Mr. James L. Ball is currently employed by ARI as the Project Foreman at the Bison Basin mine. He was employed by the operator of the Bison Basin project for over seven years as the Mine Foreman. Mr. Ball is very knowledgeable in the operation of the ISL process equipment and the reverse osmosis unit located at the Bison Basin site as he was responsible for the day to day

operations of the plant during both the R & D mining and restoration phases, and the commercial operations phase. Since the Bison Basin mining operations were shut down in 1982, Mr. Ball has performed the required maintenance at the site and he has also operated the snow removal equipment. As a line supervisor he has demonstrated an excellent ability to manage and motivate the operator personnel. Prior to working for the OPI-Western Joint Venture, Mr. Ball worked for Wyoming Mineral Corporation (Westinghouse) at both their Irigary ISL uranium mining facility and their Grover, Colorado ISL facility.

References:

Joe G. Vialpando  
(307) 332-3753

George J. Hartman  
(307) 234-9169

Glenn J. Catchpole  
(307) 266-6456

2.5 SAFETY AND RADIATION PROTECTION -  
TRINIDAD E. HERRERA

Mr. Trinidad E. Herrera is currently a part-time employee of Altair Resources involved with surveillance at the Bison Basin mine. From December, 1981 until November, 1985, Mr. Herrera worked for the OPI-Western Joint Venture as the Safety and Radiation Protection Engineer (SRPE) at the Bison Basin mine. He is an NRC approved SRPE and is familiar with all aspects of radiation monitoring and protection. As part of his duties at the Bison Basin mine he routinely performed radiation surveys and decontamination surveys. He surveyed all yellowcake shipments to insure compliance with NRC and DOT regulations, and he completed

all reporting forms including NRC form 741. Mr. Herrera is also a licensed Emergency Medical Technician (EMT) which is a significant asset at the remote Bison Basin location. Prior to working at the Bison Basin mine, Mr. Herrera was the corporate safety engineer for the Wyoming Mineral Corporation.

References:           Roland Collins  
                          (307) 544-2291

                          Bart Conroy  
                          (303) 969-8511

                          Donna Witchers  
                          (307) 235-1221

                          George J. Hartman  
                          (307) 234-9169

#### 2.6 MAINTENANCE MAN AND HEAVY EQUIPMENT OPERATOR - ROBERT E. CARNER

Mr. Robert E. Carner was the Maintenance Foreman and Heavy Equipment Operator at the Bison Basin mine during the commercial phase of the project. He is familiar with the maintenance procedures and schedules for the equipment at the Bison Basin mine. Additionally, Mr. Carner operated all the heavy equipment at the mine including the large rotary snow plow. He has demonstrated excellent skill in the care, maintenance, and operation of the mobile equipment at the Bison Basin mine. Mr. Carner lives at Sweetwater Station and is thus accessible during off duty hours for emergency maintenance or snow removal.

References:           George J. Hartman  
                          (307) 234-9169

                          Glenn J. Catchpole  
                          (307) 266-6456

3.0 APPENDIX A

PERSONAL RESUMES

Confidential Resume of:

GLENN J. CATCHPOLE

4067 East Fourteenth Street  
Casper, Wyoming 82609  
Telephone: (307) 266-6456 (w) or  
(307) 235-0598 (h)

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PERSONAL:                      Age:            42  
                                 Health:        Excellent  
                                 Married:       3 children

EDUCATION:                   Univ. of Wyoming, Laramie, WY, B.S. in Mechanical Engineering, 1965.  
                                 Colorado State Univ., Ft. Collins, CO, M.S. in Civil Engineering, 1973.  
                                 Univ. of Wyoming, Casper, WY, MBA in progress (night school).

EXPERIENCE:

November, 1985                President and General Manager of Altair Resources Inc., an engineering consulting company providing services in civil engineering, water resources, hydrology, and regulatory permitting, monitoring and mine decommissioning. Altair Resources is the contractor for the operation of the Bison Basin in-situ uranium mine performing maintenance, surveillance, decommissioning plan preparation, and regulatory compliance monitoring and reporting.

January, 1978                Employed by Ogle Petroleum Inc. of California (OPIC) as the President of the company, and General Manager of the Bison Basin uranium mine located in west central Wyoming. Initially hired as Senior Hydrologist and Regulatory Affairs Specialist. Promoted to Project Manager after six months with company. Managed all aspects of project from initial planning stage through the design, permitting, and construction stages, and into the mine operation stage. Directed and coordinated environmental studies in connection with the regulatory permitting process and personally wrote the federal and state mine permit applications. Served as OPI's chief representative and spokesman in dealings with regulatory agencies during the permitting process.

March, 1976 to                Technical Support Group Supervisor and Senior Hydrologist for the January, 1978                Division of Land Quality, Department of Environmental Quality, State of Wyoming. Directed the efforts of the Technical Support Group and reviewed mine permit applications to assess the impact of proposed operations on the hydrologic regime (surface and groundwater). Ensured that mine permit applications contained all the hydrologic information required by law. Inspected proposed mine sites for the purpose of verifying information submitted in the application. Inspected on-going mine operations to ensure compliance with the mine and reclamation plans. Served as an expert witness in the field of hydrology at contested case hearings and court proceedings. Reported directly to the Division Administrator.



December, 1973  
to March, 1976

Water Resources Engineer, State Engineer's Office, Colorado Division of Water Resources. Member of Planning and Investigations Branch. Assembled and analyzed data pertaining to various hydrologic investigations (e.g., river transit losses, ground water recharge, river depletion caused by alluvial wells, flood frequency, flood routing, unit hydrographs, urban runoff, return flows, and consumptive use). Performed statistical analyses with the aid of computers on hydrologic events. Performed design of hydraulic structures. Conducted hydrologic studies relative to interstate compacts and Colorado water law.

September, 1965  
to August, 1972

Commissioned Officer in the U.S. Navy. Aircrewman aboard carrier based F-4 jet fighter with two combat tours of duty in Southeast Asia. Assistant Professor of Naval Science, University of New Mexico, Albuquerque, New Mexico - instructed university students in engineering subjects including steam turbine power equipment, and electrical systems.

LICENSES:

Registered Professional Engineer - Wyoming and Colorado.

Private Pilot.

ORGANIZATIONS:

Past Chairman, Wyoming Mining and Metals Section of A.I.M.E.

President, Casper Amateur Hockey Club

Sigma Tau, Engineering Honorary

MISCELLANEOUS:

While attending undergraduate and graduate schools spent summer vacations working for engineering firms. Experience with these firms included land surveying, water system design, construction inspection, water rights investigations, soils testing, and design of hydraulic structures. Civil engineering masters degree curriculum concentrated in hydrology, water resources, hydraulics, and engineering systems analysis.



RESUME'

OF

JOE G. VIALPANDO  
1040 West Cascade Avenue  
Lander, Wyoming 82520

(307) 332-3753

PERSONAL INFORMATION

Height: 5' 6"      Weight: 140 pounds      Marital Status: Married  
Dependant Children: None; four (4) non-dependant children

MILITARY SERVICE

U. S. Army - Honorable discharge; served two (2) years of Active Service; and served six (6) years of Inactive Reserve Duty.

HEALTH

Good health; no disabilities

EDUCATION

Two (2) years at Highlands University, Las Vegas, Nevada  
Courses in Chemical and Metallurgy  
West Chester State Technical College, West Chester Pennsylvania

Grade Average: C

Employment Objectives:

My employment objective is to make a valuable contribution to the company with whom I am employed in particular position congruous with my education, knowledge and experience. In each of the positions I have held with various companies, I feel I have made valuable contributions. At this time I feel a change is now necessary because of the uranium market being depressed.

EMPLOYMENT HISTORY

OPI-Western Joint Venture  
2510 East 15th, Suite Eight  
Casper, Wyoming 82601

March, 1979 - Present

Title: Mine Superintendent

Salary: \$3,000.00 (+) per month

Immediate supervisor: Glenn J. Catchpole, VIP Project Manager

Duties and/or work performed:

- (a) The responsibility of directing the day to day operation of a uranium solution mining and extraction plant, reporting to the company VIP.
- (b) The responsibility of setting up and operation of a successful research and development phase of the project.
- (c) The responsibility of designing and installation of the production plant equipment.
- (d) The training of seven (7) staff and 20 operating personnel in the operation and control of flows, laboratory and chemical additions.

Accomplishments:

The successfully operation and installation of a research and development plant using for the first time in solution mining of a alternate solution for extracting uranium. The successfully restoration of ground waters after the R & D operation in the shortest time in uranium and solution mining history. The installation and operation of a production plant with the least possible cost. The production plant operated successfully until the demand and prices of uranium fell.

Reason for leaving:

Uranium production in the U. S. is at a standstill for now and will possibly be this way for four (4) or five (5) years. The imports are being produced at a much lower cost from higher grade ores.

Wyoming Mineral Corporation  
Post Office Box 1038  
Buffalo, Wyoming 82834

March, 1975 - March, 1979

Title: Metallurgical Engineer

Salary: \$3,000.00 per month

Immediate supervisor: Jim Krebs

Duties and/or work performed:

- (a) December, 1978, transferred as the engineer in charge of testing of a new lixiviant for solution mining of uranium. This plant is now in operation.

Duties: Making sure the installing of equipment is being carried as per plans. After statup the controlling of chemical and metallurgical.

- (b) January, 1978, Process Engineer in the production plant.

Duties: Assisting the operation personnel in the starting of the production plant, also the responsibility of the metallurgical and chemical in the plant.

- (c) March, 1977, transferred to the engineer to represent the company (WMC) in a joint venture with Minatome and Uranerz. This test was operated to test an alternate lixiviant, a calcium bicarbonate lixiviant.

Duties: The direct supervision of the operation crews. Directing the operating crews in installing the test plant. The purchase of all equipment for the plant. While still assigned to the USMT spent a month in Colorado directing the installation of the USMT process type plant.

- (d) March, 1975, foreman and metallurgist; this test plant was then being operated at Shirley Basin, Wyoming. The test was operated in the winter months for testing PVC pipe as well casing in cold weather, the test was successfully run.

Duties: The direct supervision of operating crews. The controls of chemical and metallurgical. The responsibility of directing the activities of moving the test plant from Shirley Basin to the irrigaray site, where the test was carried on for two (2) more years.

Utah International, Inc.  
Shirley Basin, Wyoming 82615

July 26, 1972 - March, 1975

Title: Metallurgical Supervisor

Salary: \$2,200 per month

Immediate supervisor: Donald K. McCreedy, Mill Superintendent

Duties and/or work performed:

- (a) The responsibility of directing the activities of the metallurgical department. The metallurgical responsibilities are to apply sound metallurgical practices to the process to recover uranium oxide utilizing an ore grinding, acid leach, and resin extraction.
- (b) Maintaining thorough records and data of the milling process by process flow sampling.
- (c) Advising the operating personnel of the chemical changes required to maintain peak process efficiency at the least cost.
- (d) The preparation of a monthly metallurgical balance utilizing ore feed data, and monthly ore blend pile reserves.

The test work and incorporate of a drum filter for the filtration of yellow cake for an efficient way to wash the impurities out of the uranium oxide. The testing of a better way of drying uranium oxide.

Accomplishments:

The test work, use of a drum filter for better wash of yellowcake. This was installed in the plant and has worked very well. The testing of a new rotating hearth with an infra-red generator on a yellow cake dryer. This dryer is now in operation and is working successfully.

RESUME

Kurtis J. Brown  
975 Cascade St.  
Lander, WY 82520  
(307) 332-6449

Age: 35

Marital Status: Married-Wife's Name: Karen

Dependents: Two-Ages 14 & 4 Yrs.

Position Desired: Hydrologist/Hydrogeologist

EDUCATION: Laramie Senior High School, Laramie, WY  
Graduated 1968 Required Subjects

University of Wyoming, Laramie, WY  
Degreed 1972 BA Geology

SPECIAL

EDUCATION: 1973, 40 Hrs.: "Elements Of Supervision"  
1976, 36 Hrs.: "Management Development Seminar"  
1979, 40 Hrs.: MSHA Instructors Training Course  
1980, 36 Hrs.: "Radiation Protection & Envir. Surveillance"  
1982, 36 Hrs.: "Radiation Protection"  
1983, 36 Hrs.: "Radiation Protection & Envir. Surveillance II"

PROFESSIONAL

SOCIETIES: American Assoc. Of Petroleum Geologists, Charter Member Energy  
Minerals Division.

Society Of Mining Engineers of AIME

EMPLOYMENT

HISTORY: OPI-Western J.V. (Ogle Petroleum & Western Fuels Of  
Duke Power), Casper, WY  
Date: Dec. 1977 To Present  
Supervisors: Glenn Catchpole, Project Manager  
George Hartman, Manager Of Mining  
Position: Wellfield Engineer  
Reason For Leaving: Very Depressed Uranium Market  
Experience: Wide range of duties and responsibilities including  
permitting and daily involvement in governmental  
agency regulation. I have researched and written  
various geologic and hydrogeologic sections for  
federal environmental impact statements, licenses  
to explore, and state commercial mining permits.

Experienced in water well design and installation  
using rotary techniques with plastic and steel  
casing from depths of 100 to 900 feet. I also  
have a thorough knowledge of well cementing and  
have worked with various types of well completion  
methods including open hole with telescoped screen,  
integral using shale buckets, extensive use of

## RESUME

Kurtis J. Brown

Page Two

## EMPLOYMENT

### HISTORY CONT'D

the under reamer, and casing perforation methods using jets or shaped charges. Total number of wells completed was approximately 450 with an aggregate drilled footage of 180,000 feet for production, environmental, observational, and industrial make up purposes.

Responsibility also extended to planning, construction, and mangement of a 600 gpm insitu uranium mining wellfield. Duties included daily operation of wells, regulation of injection/production flow balances, studing and implementing various wellfield flow regimes, and conducting project engineering as needed. I'm experienced in the use of plastic and iron pipe and fittings, submersible pump applications and maintenance, well yield maintenance, damaged well workover, and fishing with a variety of tools.

Experienced in groundwater resource development and with hydrologic principles and practices. I have conducted single well and multiple wellfield aquifer pump tests for the determination of hydraulic characteristics and to locate barrier/recharge areas for use in permitting or operational activities. My responsibilities for these tests included planning, data gathering, interpreting, and developing regional and local groundwater pictures and preparing the written reports on any impact mining would have upon the model.

As the wellfield engineer, I also supervised a portion of the environmental program. This included monitoring for the excursion of insitu leaching contaminates from mining areas through bimonthly sampling of environmental wells. Duties required physical sampling, a working knowledge of water chemistry and analytical testing methods, and remedial action in the wellfield if an excursion occurred.

Although mainly experienced in Tertiary basins, I have a working background of the entire Rocky Mtn. area. I have a high degree of knowledge in electric logging for water well and uranium exploration and in the use of logs for correlation of data. All phases of work and study have been followed by comprehensive maps and reports. These reports have covered a wide range of planning and technical topics directed to various levels of management.

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WORKING

HISTORY CONT'D

Other areas of involvement have been in company management, function as the radiation safety officer, for which formal classroom training was required by the NRC, and a supervisory role which at one time included 22 contract and hourly personnel.

Energy Development Co. (Iowa Public Service Co.), Hanna, WY

Date: Aug. 1972-Dec., 1977

Supervisor: Arnold Hannum, Chief Engineer

Position: Staff Geologist

Reason For Leaving: Located A Position In a New Field

Experience: Conducted coal exploration for strip and deep mine reserves in Hanna Basin, Wyo. Duties included acquisition of environmental permits, planning, contracting, and implementing drilling programs. Each project required detailed maps and mineability reports prepared for management. Additional evaluations were made on potential properties throughout the Rocky Mtn. region in Wyo., Mont., Utah, and Colo. These reports were in geologic, engineering, and economic categories.

A considerable amount of time was spent working with mining engineers on problems related to ground stability and operating conditions in the underground mines managed by EDC. I also participated in a dewatering program conducted by the company to check excessively wet underground mining conditions. My responsibilities included well installation and pumping, a surface water inventory, and hydrogeologic report on the mine overburden.

The company also operated contract surface coal mines. In this area, duties included generating development plans, reclamation studies, collecting surface inventories of soil and water drainage, and preparing geologic information needed for state or federal mining permits.

Other responsibilities included the construction, supervision, and operation of a complete coal analysis laboratory, and on occasion, I acted as the liaison between EDC and the strip contractor.



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WORKING

HISTORY CONT'D

Gulf Mineral Resources, Denver, CO

Date: July, 1972-August, 1972

Reason For Leaving: Found Permanent Position

Experience: Collect geologic data in exploration and evaluate  
metallic mineral deposits, surveying exploration  
areas, mapping & sampling surface geologic  
features and outcrops. Basic knowledge of  
operation and placement of instruments used to  
collect data.

REFERENCES:

Mr. George Hartman

Manager, Uranerz, USA

1979-Present

2221 Valcaro, Casper, WY 82601

Phone Office: 307 234-9169 Home: 265-6773

Mr. Glenn J. Catchpole

Project Manager, OPI-Western

1979-Present

4067 E. 14th St., Casper, WY 82601

Phone Office: 307 266-6456 Home: 235-0598

Mr. Arnold M. Hannum

Wyo. State Inspector Of Mines

1972-Present

State Mine Inspector Office, P.O. 1094, Rock Springs, WY 82901

Phone: 307 362-5222

Mr. Arnold D. Cunningham

Consultant Geologist

1973-Present

7517 South Cove Circle, Littleton, CO 80120

Phone Office: 303 773-3588 Home: 770-6643

HOBBIES:

Golfing, Alpine Skiing, Fishing, Family Outings, & Electronics.



RESUME

PERSONAL DATA

Name: James Leland Ball  
Address: Rt. 62 Box 40 L  
Wagonhammer Ln.  
Lander, Wyoming  
82520  
Phone: (307) 332-3360  
Date of Birth: 6/26/48  
Sex: Male  
Marital Status: Married-3 children

SALARY: Open

Looking for opportunities  
to increase my personnel  
skills with an organization  
offering growth potential.

EDUCATION

College: Central Wyoming College  
Certificates: Basic Electronics  
Basic Electricity  
Date: 1972-1974

Industrial Schooling: Mountain Plains  
Certificates: Electrician  
Date: 1/1974-8/1974

Industrial Schooling: Rocky Mountain Industrial  
Relations Counselor's Inc.  
Certificates: Supervisor Training  
Programs # 1&2  
Date: 9/77

Certificate: Mining Enforcement  
Safety Administration  
First-aid Methods  
Date: 5/19/78

Certificate: Mining Enforcement  
Safety Administration  
Accident Prevention  
Date: 5/78

High School: Natrona County High School  
G.E.D. 1965

WORK EXPERIENCE

Date: 8/78-Presently Employed  
Company: O.P.I.-Western  
Address: 2510 West 15th Street  
Suite #8  
Casper, Wyo.  
82609  
Position: Mine Foreman  
Supervisor: Joe Vialpando  
Present Duties Include:

O.P.I.-Western is involved in the solution mining of Uranium.

During the approximately 7 years of my employment, I have held the position of maintenance foreman before becoming mine foreman 6 years ago.

My current responsibilities are for all phases of the operation, modification of plant, wellfield control and the restoration system.

My crew consisted of 15 people divided among 6 shifts. It was my function to see that the plant operated in an efficient manner and that all operational requirements and plant operating changes were properly incorporated into the operation and that all data resulting from the operation was transmitted to the process group located in laboratory facilities. I scheduled all shifts, safety meetings, maintenance work, sampling routines, and other tasks necessary to keep the plant operating 24 hours a day, 7 days per week. As the mine foreman, I was on call on a 24 hour per day basis.

In addition to the supplemental courses I have taken to increase my skills, I have acquired additional skills during my employment with O.P.I.-Western. These include a functional knowledge of alkaline solution leaching chemistry, basic plant electronics, electrical systems, chemical process, piping systems and materials, knowledge of pumps used in handling corrosive chemicals and many other skills associated with the operation of chemical process systems.

My responsibilities for the assignment of and direction of shift personnel and the necessary paper work involved with people handling has developed even further skills in personnel handling, budgeting, and general administration.

Date: 11/77-7/10/78  
Company: Wyoming Mineral Corporation  
Address: 1709 Heath Parkway  
Ft. Collins, Colo.  
80524  
Position: General Foreman  
Supervisor: Bob Kirchman

Date: 8/1/77-11/77  
Company: Wyoming Mineral Corporation  
Address: P.O. Box 1038  
Buffalo, Wyo.  
82834  
Position: Shift Foreman  
Supervisor: Bob Kirchman

Date: 9/74-8/1/77  
Company: Wyoming Mineral Corporation  
Address: P.O. Box 1038  
Buffalo, Wyo.  
82834  
Position: Various (Final Position-Lead Operator)

Date: 6/65-6/72  
Company: U.S. Army  
Address: Ft. Bragg, North Carolina  
Position: Radio Relay and Carrier Supervisor  
Supervisor: S.F.C. Franklin

HOBBIES:

Fishing, camping, bowling, and reading

REFERENCES:

Personal: Mrs. Theresa Alfertig  
735 Highway 789  
332-4419  
Lander, Wyo.  
82520  
Position: Business Office Manager

Mr. Bernard Meckem  
259 Foothills Cr.  
Gillette, Wyo.  
82716  
Position: Warehouseman

Mr. Keith Barrett  
1102 Goldenrod Cr.  
(303) 469-2248  
Broomfield, Colo.  
80020  
Position: Operations Manager

REFERENCES:

Business:

Mr. Bill Kauffman  
320 Browning Ct.  
(312) 260-0654  
Wheaton, Ill.  
60187  
Position: V.P. Singer Corp.

Mr. Glenn Catchpole  
2510 East 15th St.  
Suite #8  
(307) 265-6542  
Casper, Wyo.  
82609  
Position: President-O.P.I.-Western

Mr. Joe Vialpando  
1040 Cascade  
Lander, Wyo.  
82520  
Position: Mine Superintendent

## TRINIDAD E. HERRERA

### ADDRESS

P.O. Box 1341  
Lander, Wyoming 82520  
Telephone - Home: (307) 332-6574

### PERSONAL INFORMATION:

Date of Birth: December 16, 1942  
Weight: 170 lbs.  
Height: 5 ft 9 in.  
Interests: Hunting, Fishing  
Health: Good  
Physical Handicaps: Injury to sciatic nerve causing some numbness in left leg  
Marital Status: Married - two children

### CAREER GOAL:

Position in Safety Management or Safety Training.

### EDUCATION:

Sunrise High School, Sunrise, Wyoming. Graduated in 1960.  
Eastern Wyoming College, Torrington, Wyoming. Graduated in 1967.  
Degree: Associate of Arts, emphasis in Engineering.  
University of Wyoming, Laramie, Wyoming. Attended 1967-69.  
Major: Electrical Engineering.

### SPECIAL EDUCATION AND TRAINING:

Twenty-hour Mine Rescue Training course completed in 1973.  
Twenty-four-hour MESA Radiation Monitoring course completed in 1975.  
Two-week MESA Ventilation course completed in 1977.  
Four-day MSHA Underground Instructors course completed in 1978.  
Forty-hour Problem Solving and Decision Making for Engineers course in 1978.  
Forty-hour Eberline Radiation Protection course in 1979.  
Twenty-four-hour Transportation of Hazardous Materials Seminar in 1980.  
Sixteen-hour Videotaping Seminar in 1980.  
One-week course in Mine Rescue Instructors Training completed in 1981.  
Eighty-hour Emergency Medical Technician (EMT I) course completed in 1984.

### EXPERIENCE:

December 1981 to Present: Ogle Petroleum Incorporation - Western Joint Venture, Bison Basin,  
Wyoming

Safety Radiation Protection Engineer

Specific Responsibilities: Maintaining safety programs as mandated by the Mine Safety and Health Administration and the Nuclear Regulatory Commission.

Includes: Training in Industrial Safety, Nuclear Safety, First Aid and CPR; Gas Sampling for Radon gas, Acid Mists, CO, and Oxygen; inspecting for potential violations of safety standards; investigating accidents; and record keeping.

Major Accomplishments:

1) Developed a Radiation Training Program consistent with the needs of the Corporation and assuring compliance with the NRC.

## EXPERIENCE (Cont.):

December 1980 to 1981 - Wyoming Mineral Corporation (WMC), Irigaray, Wyoming.  
Mine Radiation Protection Officer and Safety Engineer.

**Specific Responsibilities:** Perform duties of site RPO as provided in the NRC license. Continue to function as Corporate Safety Engineer as described in prior position responsibilities.

September 1977 to December 1980: Wyoming Mineral Corporation (WMC), Denver, Colorado.  
Corporate Safety Engineer.

**Specific Responsibilities:** Coordinate various plant and mine safety policy actions to ensure a uniform corporate approach to safety. Ensure necessary internal corporate communication by interfacing with all WMC departments and personnel as needed. Assume the responsibility for defining the technical content of industrial safety programs. Function in an advisory capacity to management, plant and mine safety policy organizations, and other WMC personnel on all matters of industrial hygiene and safety. Develop alternative solutions to existing safety problems.

### Major Accomplishments:

- 1) Coordinated the safety policies of the safety engineer/technician at three in-site uranium mines, one uranium recovery plant and one analytical laboratory.
- 2) Developed the training programs to comply with MSHA regulations.
- 3) Developed an employee's safety manual.
- 4) Assisted the Colorado Safety Association in developing a National Safety Council Supervisor's Training Development Course that would meet the requirements of CFR 30, Part 48, MSHA annual refresher training.
- 5) Edited a periodical "The WMC Supervisor" for distribution to all supervisors. Included with the periodical were a series of "Tool Box Talks" to be presented by the supervisor to his subordinates.

March 1975 to September 1977: Western Nuclear Inc., Jeffrey City, Wyoming. Safety and Ventilation Engineer.

**Specific Responsibilities:** Initiate and maintain safety programs. Design and construct ventilation systems to maintain air quality in underground mines. Direct and train mine rescue teams.

### Major Accomplishments:

- 1) Assisted in developing a Safety Incentive Program.
- 2) Assisted in organizing a mine rescue team that won 1st place in the National Salt Mine Rescue contest and the National Metal-Non-Metal Mine Rescue contest in 1975.

April 1972 to March 1975: Western Nuclear Inc., Jeffrey City, Wyoming.

**Longhole Driller:** Drilled test holes for underground exploration, utilizing GD-123 DH, GD-93, GD-83, and MSI-450 air drills.

**Ore Control Sampler:** Sampled and maintained quality control of uranium ore in underground mines.

March 1970 to April 1972: Bucher and Willis Consulting Engineers, Kansas City, Missouri.

**Surveyor's Helper:** Instrument man on survey crew.

## GENERAL EXPERIENCE:

U.S. Forest Service - Survey Crew

CF & I Corporation, Sunrise, Wyoming - survey crew, mill labor

USAF - Bomb-Nav Systems Mechanic B-52D.

GEORGE JOE HARTMAN  
2221 Valcaro Road  
Casper, Wyoming 82604  
307-265-6773

### SUMMARY

Sixteen years in non ferrous process development and production with substantial management and supervisory experience. Have been in complete charge of many projects.

### QUALIFICATIONS

Business Management: M.S. in Mineral Economics (Colorado School of Mines, 1976). Job Titles Held: Manager of Mining, Mines Manager, Operations Manager, Mine Superintendent, and Production Supervision.

Technical: B.S. in Chemistry (University of Denver, 1967). Passed Colorado State Professional Engineers examination. Held responsible engineering positions through Senior Project Engineer. Four patents have been issued in my name. Extensive experience in process development and production, including several facility startups.

### EXPERIENCE

#### MANAGER OF OPERATIONS

(Please do not contact company at this time).

Uranerz USA, 190 Pronghorn Avenue, Casper, Wyoming: 1982 To present.

Was asked to join Uranerz while project was in process of failing. Took charge of operations, and at this time project is successful and plans are being made to proceed to commercial production. Thoroughly familiar with all aspects of budget preparation, corporate finance, project planning and economic analysis. I possess the ability to hire, train, motivate, and develop staff members into an effective team. Possess knowledge of environmental considerations, federal and state regulations, and procedures. Interested in business law and very familiar with contract negotiation, aspects and obligations.

#### MANAGER OF MINING AND PRESIDENT

Ogle Petroleum Inc. of California (OPIC), 150 North Nichols Avenue, Casper, Wyoming 1979 to 1982.

Reported directly to Chairman of the Board in headquarters located in Santa Barbara, California. Progressed from Manager of Mining to President. In overall charge of the OPIC company involving a joint venture with a subsidiary of Duke Power, Western Fuel. Responsible for the development and commercial exploitation of a large uranium ore body employing in situ mining technology. Controlled all funds relating to the company. Familiar with financing procedures and assisted in obtaining a 3 million dollar project loan.



Specific Accomplishments:

-Managed the design, procurement and construction of the commercial scale in situ mine and process facility with a savings of over two million dollars as compared to an independent engineering cost study.

-Successfully sold mine production and negotiated a number of other contracts in very tight economic times.

This project is described in "Engineering and Mining Journal" December 1979, page 123, and June, 1981, page 57. Resigned position when mine was shut down to await better market conditions.

**MINES MANAGER**

Wyoming Mineral Corp., Mines Manager for the Bruni and Lampprecht Mines, Texas, 1976 to 1979.

Progressed from Senior Metallurgical Engineer, to Operations Superintendent, to Mine Manager, to Mines Manager in less than 18 months. As Mines Manager responsible for the complete management of two mines and production plants. Prepared and adhered to annual budgets, including operational and capital funds through the use of A.R. and A.F.E. documents. Controlled funds within profit plan guidelines and insured productions quotas were met through mine planning and development.

Specific Accomplishment:

-Negotiated with regulatory agencies and minimized liability in an environmental law suit.

-Was instrumental in obtaining livable operating permits and production authorizations.

-Exceeded profit plans two years running and thereby produced product for less than budgeted estimates. Equipment included large production fields, calcium removal system, ion exchange resin columns, product precipitation, multiple hearth drying furnace, and reverse osmosis units. Mines are described in "Engineering and Mining Journal" June 1976 and July, 1977.

**SENIOR PROCESS ENGINEER**

The Alumet Joint Venture, Golden, Colorado. Process Development Division, 1973 to 1976.

In charge of one of three sections of the large pilot plant. Responsible for the engineering and planning of the operation which also included writing feasibility reports and periodic engineering progress reports. Directed a maintenance crew when necessary.

**PRODUCTION SUPERVISOR**

S.W. Shattuck Chemical Company, Denver, Colorado, 1972 to 1973. Responsible for the operation of entire production plant during one shift and every fourth weekend. Supervised as many as fifteen union operators. Plant equipment included two seven-hearth roasting furnaces, together with the air pollution prevention scrubbing complex, two leach sections, two crystallizers, liquid ion exchange rhodium production plant, warehouse, and boiler section. Assumed duties and responsibilities of Production Manager in his absence.



## PROJECT ENGINEER

Colorado School of Mines Research Institute, Chemical Engineering Division, Golden, Colorado, 1968 to 1972. Involved in process development research including supervision of laboratory investigations, pilot plant operation, and project management. Projects included precious metal projects involving solubilization, concentration, and analytical geo-chemical exploration development. Vanadium production from various materials. Sulfur process research. Worked with various liquid ion exchange solvent extraction processes involving copper, nickel, vanadium uranium, and molybdenum. Also engaged in high temperature technology research encompassing iron, ferrovanadium, ferronickel, and titanium.

## PATENTS

Patents Granted: 3,996,334 Process for Recovering Aluminum from Alunite. An ion exchange procedure which changed potassium sulfate to potassium hydroxide and greatly improved the economic position of the process.

4,064,217 Process for Recovering Aluminum from Alunite ore. A process that improved the overall efficiency of the potassium sulfate crystallizer.

4,230,678 Extraction of aluminum from alunite roasted ore.

4,427,235 Method of Solution Mining Subsurface Orebodies to Reduce Restoration Activities.

## EDUCATION

M.S. Degree in Mineral Economics, Colorado School of Mines, 1976

B.S. Degree in Chemistry, University of Denver, 1967

Associate of Science Degree, San Antonio College, 1964.

Various engineering courses through special offering programs.

## PROFESSIONAL AFFILIATIONS

American Institute of Mining Engineers. Elected to Vice Chairman 1982. Elected to Chairman 1983 and placed on the Board of Directors 1984 of the Wyoming SME-AIME.

Appointed Chairman of the In Situ Committee, Wyoming Mining Association 1983-1984.

## MILITARY

Eight years active service in U.S. Air Force. Top Secret Security Clearance. Honorable discharge.

## PERSONAL DATA

Born in 1940. Married; two children. Excellent health. Enjoy hunting, fishing and member of Toast Masters Club.

## REFERENCES

Professional and personal references will be provided upon request.

RICHARD R. APPEL  
Environmental Consultant  
1738 South Poplar  
Casper, Wyoming 82604  
Telephone: (307) 265-3310 (Office)  
(307) 266-4758 (Residence)

## A SUMMARY OF IN-SITU MINING EXPERIENCE IN THE AREAS OF GROUND WATER RESTORATION, DECONTAMINATION, AND DECOMMISSIONING

Although somewhat familiar with several in situ mine sites in Wyoming, Texas, and New Mexico, I have worked briefly on three sites in Wyoming. The majority of hands on field and management experience below was obtained as an operations management consultant to UNC Teton at their Leuenberger in situ uranium site over the past four years. I am also familiar with the process of in situ coal gasification and worked for one year on an operating site.

### Ground Water Restoration and Stability

Handled and submitted all data for successful completion of the N mining zone demonstration of restoration and stability at the UNC Teton Leuenberger site. This was the restoration of a 5 spot R&D pattern achieved by ground water sweep. Resultant data submitted to obtain commercial operating licenses from the State of Wyoming Department of Environmental Quality and the U.S. Nuclear Regulatory Commission.

Worked closely with the plant manager, ground water hydrologist, and process chemist to develop and implement a restoration program for an 11 well pattern in the M mining zone at the UNC Teton Leuenberger site using best practical technology. Assisted with on site operations as a plant operator to monitor recycling of process flows through restoration circuits to achieve targeted restoration goals. Responsible for collection and submission of ground water stability sample data, including final clean up of hot spot wells. Submitted all reports and data to the State of Wyoming Department of Environmental Quality and the U.S. Nuclear Regulatory Commission for restoration and stability approval and commercial operating approvals.

### Decommissioning Planning

Wrote and submitted to the U.S. Nuclear Regulatory Commission and State of Wyoming Department of Environmental Quality approved plans for Decommissioning, Decontamination, and Reclamation of the UNC Teton Leuenberger site. This plan covered all aspects of decontamination and decommissioning of the well field (including well abandonment procedures), solar evaporation ponds, plant and process equipment, health physics and

### Decommissioning Planning (continued)

radiation safety programs and final surface reclamation, in keeping with applicable State of Wyoming Department of Environmental Quality, U.S. Nuclear Regulatory Commission, and U.S. Environmental Protection Agency standards and criteria.

### Project Management

Contract on site manager for the Leuenberger site decommissioning. Selected and supervised on site contractors, coordinated all decommissioning site activities. Maintained all site records and data, prepared and submitted reports to regulatory authorities. Activities and responsibilities accomplished using appropriate mill decommissioning procedures included transportation of radioactive contaminants and process equipment to licensed disposal facilities, pond water treatment for discharge, regulated discharges, pond dismantling and disposal of sludge liners, leak detection system, and contaminated earthen materials. Dismantling and disposal of process equipment and facilities. Well and well field abandonment in keeping with the requirements of the State Engineer, Land Quality Division, and Water Quality Division regulations.

### Radiation Safety and Health Physics

As site supervisor, approved by the U.S. Nuclear Regulatory Commission at the Radiation Technical level, in order to conduct on site sampling and direct safety and health physics programs on a daily basis. Backed up by an approved Radiation Safety Officer available as needed. Some daily activities included radiation surveys and sampling to determine contamination levels for selecting appropriate techniques to handle and transport equipment and waste. Contract personnel, surveys and record-keeping. Directed decontamination on site related equipment and contractor equipment released for unrestricted use and conducted sampling and surveys to confirm the decontamination to appropriate standards for such release. Conducted all site soil radiation sampling and surveys to confirm clean up to EPA standards.

Final reclamation, background surveys and reports to be completed spring or early summer 1986.

RICHARD R. APPEL  
1738 South Poplar, Suite 2E  
Casper, Wyoming 82604  
Telephone: (307) 265-3310 (Office)  
(307) 266-4758 (Residence)

#### Career Objective

To provide quality services to industry in the areas of environmental evaluations and assessments, for both planning and development, operating permits, licenses, and associated regulatory compliance activities for ongoing projects and reclamation/mitigation work for successful project completions.

#### Experience

Independent Environmental Consultant to Energy Industries, Casper, Wyoming. March 1982 to Present. For oil and gas, open pit, and in-situ mining for coal, uranium, and bentonite.

Coordinator - Permits and Licensing, UNC Teton Exploration Drilling, Inc., Casper, Wyoming. February 1980 to March 1982. Uranium in-situ permits, research and development and commercial, in Wyoming and New Mexico.

Administrator of Permits and Licensing, The Cleveland-Cliffs Iron Company, Casper, Wyoming. October 1978 to February 1980. Uranium in-situ solution and underground mining.

Resident General Manager, Kings Point Energy, Casper Office, Casper, Wyoming. December 1977 to October 1978.

Environmental Engineer, Kings Point Energy, Casper Office, Casper, Wyoming. April 1977 to December 1977. In charge of permits and licenses for uranium and coal - underground and open pit mining.

ERDA In-Situ Coal Gasification and Field Operation and Research, April 1976 to April 1977.

#### Education

University of Wyoming, M.S. Zoology and Physiology, emphasis on Ecology, 1971.

Utah State University, B.S. Natural Resources and Wildlife Management, 1961.

#### Other Experience

Trust, Marketing and Customer Relations - First National Bank and Trust Company, Cheyenne, Wyoming.

#### Military

Lieutenant, U.S. Navy Pilot. Duties - Marine Operations Division Officer, Pilot Training, Air Intelligence, Publication Information and Leadership Training.

#### Detailed Experience and References

Available upon request.