

# **EXHIBIT 8**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8  
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**UNDERGROUND INJECTION CONTROL PROGRAM**

**Final Permit**

Class V Injection Well

**Permit No. CO51237-08412**

Issued to:  
**Powertech (USA) Inc.  
5575 DTC Parkway, Suite 140  
Greenwood Village, Colorado 80111**

Date Prepared: March 2010

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**PART I. AUTHORIZATION TO OPERATE A CLASS V WELL  
AUTHORIZATION TO INJECT**

Pursuant to the Underground Injection Control (UIC) Regulations of the U. S. Environmental Protection Agency (EPA) codified in Title 40 of the Code of Federal Regulations (40 CFR) Parts 124, 144, 146, and 147,

**Powertech (USA) Incorporated  
5575 DTC Parkway, Suite 140  
Greenwood Village, Colorado 80111**

is hereby authorized to inject groundwater pumped from the Upper Fox Hills Formation back into the Upper Fox Hills Formation using the injection well identified as IN08-33-PW1 shown in Figure 1 of Appendix A of this permit. The purpose of this injection activity is to recharge the Upper Fox Hill Formation aquifer with water extracted from it during the aquifer-pump test.

All conditions set forth herein refer to 40 CFR, Parts 124, 144, 146, and 147 and are regulations that are in effect on the date that this permit becomes effective.

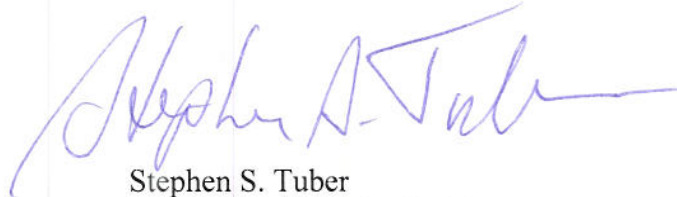
This permit is based on representations made by the applicant and on other information contained in the Administrative Record. Misrepresentation of information or failure to fully disclose all relevant information may be cause for: termination, revocation and reissuance, modification of this permit, and/or formal enforcement action. It is the permittee's responsibility to read and understand all provisions of this permit.

The authorization to inject is issued for a period of ten (10) years from the date it becomes effective, unless the permit is terminated as provided in Part III, Section B. The permit also may be terminated upon delegation of primary enforcement responsibility for the Class V UIC Program to the State of Colorado.

Please be advised that this area permit only authorizes underground injection in accordance with the specific terms of the permit. Compliance with the terms of this permit does not annul, alter, or exempt the permittee from complying with, other applicable federal, state, or local laws.

Issued this day of DEC 03 2010.

This permit shall become effective JAN 03 2011.



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

## PART II. SPECIFIC PERMIT CONDITIONS

### A. GENERAL

Copies of all reports and notifications required by this permit shall be signed and certified in accordance with the requirements under Part III, Section E.9 of this permit and shall be submitted to the EPA:

U.S. Environmental Protection Agency - Region 8  
Shallow Well Compliance Lead, Mailcode: 8ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202-2699

The EPA permit number the UIC Program Director (hereafter referred to as the "Director") has assigned to this permit is CO51237-08412. All correspondence should reference the site name and address and include the EPA permit number.

### B. SHALLOW INJECTION WELL CONSTRUCTION

1. Construction Requirements. The method for construction of any injection well shall not allow the movement of a fluid containing any contaminant into any underground source of drinking water (USDW), if the presence of that contaminant may cause a violation of the primary drinking water standards under 40 CFR Part 141, other health-based standards, or may otherwise adversely affect the health of persons. The construction design for the proposed injection is shown in Figure 2 of Appendix A of this permit. Well construction shall meet the specifications shown in Figure 2. Mechanical integrity testing shall be performed on the well and results submitted to the Director before commencing injection.

2. Proposed Changes. The permittee shall give advance notice to the Director as soon as possible and no later than thirty (30) days **before** any planned physical alterations or additions to the permitted injection well(s) or the injection system. Any alterations to the injection system shall meet all conditions as set forth in this permit. An alteration or addition shall be considered any work performed that affects the quantity or quality of the fluid being injected or changes in the design of the injection system from the construction design diagram in Appendix A of this permit.

After approval by the Director, the permittee shall provide plans, as-built schematics, sketches, or other test data, to EPA within sixty (60) days of completion of the alteration or addition that took place.

### C. CORRECTIVE ACTION

No corrective action is required prior to issuance of this permit.



D. SHALLOW INJECTION WELL OPERATION AND MAINTENANCE

1. Injection Locations. Injection location shall be limited to the injection well shown in Figure 1 of Appendix A of this permit.

2. Injection Fluid Limitation. The permittee shall not inject any hazardous substances, as defined by 40 CFR, Part 261, at any time during the operation of the injection well; and further, no substances other than the groundwater pumped from the A2 Sandstone of the Upper Fox Hills Formation shall be injected, unless allowed by permit modification.

3. Injection Fluid Analysis. Before the aquifer-pump test begins, samples of A2 sandstone groundwater shall be collected from the injection well. Before injection begins, composite samples of the groundwater pumped from the A2 Sandstone of the Upper Fox Hills Formation shall be collected from the storage tanks. These samples shall be analyzed for Total Coliforms using an EPA approved method, Total Metals as shown in Table 1, Volatile Organic Compounds using EPA Method 524.2, Semi-volatile Organic Compounds using EPA Method 525.2, and Total Petroleum Hydrocarbons using EPA Method 1664. Alternative analytical methods may be used with approval by EPA before sample analyses are performed.

**Table 1: Permit Limits and Approved Analytical Methods for Total Metals**

Parameter Name	Permit Limit (µg/L)	Standard Type*	Analytical Methods
Arsenic	10	MCL	200.7, 200.8, 200.9
Barium	2,000	MCL	200.7, 200.8
Cadmium	5	MCL	200.7, 200.8, 200.9
Chromium(total)	100	MCL	200.7, 200.8, 200.9
Lead	15	MCL-TT	200.8, 200.9
Mercury (inorganic)	2	MCL	245.1, 245.2, 200.8
Selenium	50	MCL	200.8, 200.9
Silver	100	HA-Lifetime	200.7, 200.8, 200.9

4. Best Management Practices. The permittee shall operate the injection system in such a way that best environmental management practices are followed. Best Management Practices in the case of this permit shall consist of preventing the contamination of groundwater extracted from the A2 sandstone of the Upper Fox Hill Formation before it is reinjected. To verify the storage tanks will not contaminate the A2 sandstone groundwater during storage, the permittee shall verify that requirements of the Division of Reclamation, Mining, and Safety (DRMS) have been met by submitting the following information to the Director:

- i. Written documentation that the requirement for cleaning of the storage tanks has been fulfilled.
- ii. Written documentation that the requirement for providing the history of tank contents, including at least the most recent previous tank use event, has been fulfilled.

- iii. Written documentation that the requirement for sampling and analysis of rinse water collected from the storage tanks, after they have been cleaned, has been fulfilled.

E. SAMPLING, REPORTING OF RESULTS, AND NOTIFICATION REQUIREMENTS

1. Sampling Program.

- (a) Sampling of Groundwater from Injection Well. Before the aquifer-pump test begins, the Permittee shall collect groundwater samples from the A2 sandstone of the Upper Fox Hill Formation from the injection well and analyze the samples as described in Section D.3.
- (b) Sampling of Injectate. Before injection begins, the permittee shall collect composite samples from the storage tanks containing the groundwater pumped from the A2 Sandstone of the Upper Fox Hills Formation and analyze the samples as described in Section D.3.

The permittee shall notify the Director in advance of any modifications in injection procedures that might result in the potential for the injectate to move outside the A2 sandstone. After reviewing the proposed changes, the Director may add additional monitoring requirements as deemed necessary for the protection of USDWs.

2. Sampling Information. Records of any sample collection activity required under this permit shall include:

- (a) The date, exact place, and the time of fluid sampling;
- (b) The name of the individual(s) who performed the fluid sampling;
- (c) A certification by the individual(s) who performed the sampling as to the date, exact place, and the time of the sampling;
- (d) The name and address of the laboratory that performed the analysis of the fluid;
- (e) The exact sampling method(s) used to take the samples;
- (f) The date the fluid sample was sent to the laboratory;
- (g) The date(s) laboratory analyses were performed;
- (h) The name of the individual(s) who performed the analyses;
- (i) The analytical techniques or methods and quality control used by laboratory personnel; and
- (j) The results of the analyses.

3. Reporting of Results. The permittee shall submit to the Director the following reports to the Director for review and approval:

- (a) the analytical results from samples required under Section E.1, and
- (b) a summary of the aquifer-pump test results.



4. Aquifer-pump Test Results. The Director shall review the summary of the aquifer-pump test results
- (a) to determine that the integrity of the confinement zones is adequately characterized, and
  - (b) to evaluate the potential for migration of Fox Hill Formation fluids into the overlying Laramie Formation during reinjection of the A2 sandstone groundwater.

If a breach in confinement is indicated by the aquifer-pump test results, the authorization to inject may require additional monitoring requirement during injection, as deemed necessary by the Director.

5. Permit Limits. Injection activities shall not allow the movement of a fluid containing any contaminant into any underground source of drinking water (USDW), if the presence of that contaminant may cause a violation of the primary drinking water standards under 40 CFR Part 141, other health-based standards, or may otherwise adversely affect the health of persons.

The Director will review the analytical results from the samples of stored groundwater required under Section E.1(b) to verify that they meet permit limits. If the concentration of any constituent does not meet the permit limit, then the concentration will be compared with the concentration measured in the groundwater sample collected from the injection wells as described in Section E.1(a). If the concentration of any analyzed constituent over the permit limit also shows a significant increase from the levels measured in the groundwater sample described in Section E.1(a), then corrective action shall be performed before the Director issues an Authorization to Inject. Corrective action may include additional sampling and analysis, disinfection, or treatment of the stored groundwater. After corrective action has been completed, follow-up sampling and analysis of the injectate shall be performed. The Director shall review the results of any follow-up sampling to determine if they meet the conditions of this permit.

If the analytical results for Total Coliforms in the sample required under Section E.1(b) show the presence of Total Coliforms above the permit limit, then the permittee shall either collect follow-up samples of the groundwater in each storage tank to analyze separately for regulated microbiological constituents or disinfect the groundwater in all tanks. If regulated microbiological constituents are detected above permit limits in the stored groundwater, then the permittee shall disinfect the stored groundwater. After disinfection, the permittee shall collect follow-up samples of the disinfected groundwater to be analyzed for regulated microbes. At the discretion of the Director, neutralization of disinfectant may be required before reinjection.

6. Notification Requirements. The release of an unauthorized fluid as described in Part II, Section D.2 into any of the injection well shall be considered a permit violation subject to enforcement action. If the permittee has any reason to believe that injection activity has cause migration of fluids out of the authorized injection zone, this information shall be reported to EPA. Any such incidents shall be reported to the EPA within twenty-four (24) hours in accordance with Part III, Section E.10(c).

## F. MECHANICAL INTEGRITY (MI) TEST REQUIREMENTS

Injection into a well that lacks MI is prohibited. An injection well has MI if there is no significant leak in the casing, tubing, or packer (Part I); and there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

1. Requirement to Demonstrate MI. The permittee shall demonstrate MI prior to commencing injection. Well construction dictates the methods for demonstrating MI. A demonstration of mechanical integrity shall include both internal (Part I) and external (Part II). The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluids into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director for review before injection begins.

2. Methods for Demonstrating MI. The permittee shall demonstrate Part I MI by a standard tubing-casing annulus pressure test using a pressure of 100 psi that shall be held for 15 minutes with less than 10 % pressure loss. Test results shall be submitted to the Director for review.

The permittee shall demonstrate Part II MI by submitting to the Director a well completion report, including information about the cementing of the annulus between the well casing and the borehole.

## G. AUTHORIZATION TO INJECT

The Director shall review the report of analytical results required under Section E.3 and the demonstration of mechanical integrity required under Section F.2. After determining that

- (a) the analytical results from the injectate sample demonstrate that the A2 sandstone groundwater meets permit limits or does not exceed the concentrations of the samples collected under Section E.1(a),
- (b) results of the Part I MI test and the well completion report demonstrate adequate mechanical integrity, and
- (c) the summary of the aquifer-pump test results meets the requirements of Section E.4,

the Director shall issue an Authorization to Inject notification letter to the permittee. Injection of the stored A2 sandstone groundwater before receiving the Authorization to Inject notification letter shall be considered a violation of this permit. If the results of the aquifer-pump test shows that there is a breach in the confinement zones of the A2 sandstone, the authorization to inject may contain additional monitoring requirements during injection, as deemed necessary by the Director. The results of that monitoring will be submitted to EPA for review.



## H. RECORD KEEPING

1. Record Retention Requirement. The permittee shall retain records of all monitoring activity and results (whether or not required by this permit) and other information required by this permit for the time periods specified below. These time periods may be extended at the request of the Director at any time. The following types of records shall be retained.

### 2. Records to Retain and Retention Time

- (a) All data required to complete the Permit Application for this permit for a period of at least three (3) years after the Permit Application was submitted.
- (b) Copies of all reports required by this permit for a period of at least three (3) years after the reports were submitted.
- (c) Records regarding the nature and composition of all injected fluids. The permittee shall continue to retain these records for a period of three (3) years after the closure of the injection well system unless the records are delivered to the Director or written approval to discard the records is obtained from the Director. This period may be extended by request of the Director at any time.
- (d) Records of sampling information as specified under Part II, Section E.2.

## I. PLUGGING AND ABANDONMENT

The well identified as IN08-33-PW1 will be used for injection for a limited interval of time, during which period pump tests will be conducted for the purpose of characterization of aquifer and geologic properties. After this period of time, the well will be used for long term monitoring of uranium mining and aquifer restoration activities. After that time, it will be plugged and abandoned under the conditions of permits in effect at that time. If, for some reason, the injection well needs to be plugged before being regulated under subsequent permits, then the permittee shall use the plugging and abandonment procedures of this permit.

1. Plugging and Abandonment Requirements. The method for plugging and abandonment of any injection well shall not allow the movement of a fluid containing any contaminant into any underground source of drinking water (USDW), if the presence of that contaminant may cause a violation of the primary drinking water standards under 40 CFR Part 141, other health-based standards, or may otherwise adversely affect the health of persons.

2. Notice of Plugging and Abandonment. The permittee shall notify the Director in writing and provide a Plugging and Abandonment Plan at least thirty (30) calendar days before plugging and abandonment of the injection well. The Plugging and Abandonment Plan shall meet the requirements found in the section above.

3. Plugging and Abandonment Plan Approval. The permittee shall plug and abandon the injection well as provided in the Plugging and Abandonment Plan. The Plugging



and Abandonment method shall be approved by EPA prior to the plugging and abandonment of the injection well. EPA reserves the right to change the manner in which the injection well will be plugged and abandoned, if it is deemed that the designated closure method is not protective of any USDW.

4. Cessation of Injection Activity. The well identified as IN08-33-PW1 will be used for injection for a limited interval of time, during which period pump tests will be conducted for the purpose of characterization of aquifer and geologic properties. After this period of time, the well will be used for long term monitoring of uranium mining and aquifer restoration activities. For this reason, the closure requirement usually required after a cessation of injection activity for two years is waived under this permit.

5. Plugging and Abandonment Report. If the closure of the injection well(s) shall be conducted under the requirement, the permittee shall submit a narrative plugging and abandonment report to the Director within sixty (60) calendar days after plugging the well. The person who performed the plugging operation shall certify per the requirements found in Part III, Section E.9(d) that the report is accurate. The report shall consist of either: (1) a statement that the well(s) were plugged in accordance with the approved Plugging and Abandonment Plan; or (2) a statement that the actual plugging procedures differed from the plan, including the different procedures that were followed with supporting justification for the selected closure method.

### **PART III. GENERAL PERMIT CONDITIONS**

#### **A. EFFECT OF PERMIT**

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, as authorized by this permit, shall not construct, operate, maintain, convert, plug and/or abandon, or conduct any other injection activity in a manner that allows the movement of contaminated fluid into any USDW, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR, Part 141, or otherwise adversely affect the health of persons. Any underground injection activity not authorized in this permit, or otherwise authorized by permit or rule, is prohibited.

Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA); or any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health, or the environment; nor does it serve as a shield to the permittee's independent obligation to comply with all UIC regulations.

## B. PERMIT ACTIONS

1. Modification, Reissuance, or Termination. The Director may, for cause or upon a request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR, Sections 124.5, 144.12, 144.39, and 144.40. Also, the permit is subject to minor modifications for cause as specified in 40 CFR, Section 144.41. The filing of a request for a permit modification, revocation and reissuance, termination, the notification of planned changes, or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

2. Conversions. The Director may, for cause or upon a request from the permittee, allow conversion of the well from a Class V injection well to a non-Class V well.

3. Transfers. This permit is not transferable to any person except after notice is provided to the Director and the requirements of 40 CFR, Section 144.38 is complied with. The Director may require a modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

## C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be thereby affected.

## D. CONFIDENTIALITY

In accordance with 40 CFR, Part 2 and 40 CFR, Section 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim shall be asserted at the time of submission by stamping the words "**Confidential Business Information**" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim shall be assessed in accordance with the procedures in 40 CFR, Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the permittee; and
- Information about the existence, absence, or level of contaminants in drinking water.



## E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for: termination, revocation and reissuance, modification of this permit, and/or formal enforcement action. Such noncompliance may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA).

### 2. Continuation of Expiring Permit.

(a) Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall submit a complete application for a new permit at least one hundred and eighty (180) days before this permit expires.

(b) Permit Extensions. The conditions of an expired permit may continue in force in accordance with 5 United States Code (U.S.C.) 558(c) until the effective date of a new permit, if:

- (i) The permittee has submitted a timely application that is a complete application for a new permit; and
- (ii) The Director, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit.

(c) Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the Director may choose to do any or all of the following:

- (i) Initiate enforcement action based upon the permit that has been continued;
- (ii) Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
- (iii) Issue a new permit under 40CFR Part 124 with appropriate conditions; or
- (iv) Take other actions authorized by these regulations.

(d) State Continuation. An EPA issued permit does not continue in force beyond its expiration date under Federal law if at that time a State has primary enforcement authority. A State authorized to administer the UIC program may continue either the EPA or State-issued permits until the effective date of the new permits, only if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State-issued new permit.



3. Penalties for Violations of Permit Conditions. Any person who violates any requirement of the UIC Program is subject to enforcement action under Section 1423 of the SDWA (42 U.S.C. Section 300h-2, **et seq.**). Violations of this permit may be subject to such other actions pursuant to RCRA. If the violation is willful, criminal penalties and/or imprisonment may result in accordance with Title 18 of the U.S.C.

4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective performance, adequate funding, adequate operator staffing, and training. This provision requires the implementation of Best Management Practices specified under Part II, Section D.4 to achieve compliance with the conditions of this permit.

7. Duty to Provide Information. If at any time, the Director issues a written request for information: to determine whether cause exists for modifying; to revoke and reissue, or terminate this permit; or to determine compliance with this permit, the permittee shall furnish the requested information within the time specified. The permittee also shall furnish to the Director, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records shall be kept under the condition of this permit;
- (b) Have access to and copy, at reasonable times, records that shall be kept under conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

9. Signatory Requirements. All reports or other information requested by the Director shall be signed and certified as follows:

- (a) All reports required by this permit and other information requested by the Director shall be signed as follows:
  - (i) for a corporation—by a responsible corporate officer, such as a president, secretary treasurer, or vice president of the corporation in charge of principal business function, or any other person who performs similar policy or decision-making functions for the corporation;
  - (ii) for partnership or sole proprietorship—by general partner or the proprietor, respectively; or
  - (iii) for municipality, state, federal, or other public agency—by either a principal executive or a ranking elected official.
- (b) A duly authorized representative of the official designated in paragraph (a) above also may sign only if:
  - (i) the authorization is made in writing by a person described in paragraph (a) above;
  - (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and
  - (iii) the written authorization is submitted to the Director.
- (c) If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section shall be submitted to the Director prior to or together with any reports, information or applications to be signed by an authorized representative.
- (d) Any person signing a document under paragraph (b) of this section shall make the following certification:

*I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.*



10. Reporting of Noncompliance.

- (a) Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.
- (b) Compliance Schedules. Reports of compliance or noncompliance with or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted **no later than thirty (30) calendar days following** each schedule date. The permittee will be notified by EPA in writing upon being subject to such a compliance schedule.
- (c) Twenty-four (24) Hour Reporting.
- (i) **The permittee shall report to the Director any noncompliance that may endanger health or the environment.** Information shall be provided, either orally or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning **303.312.6704 and asking for the EPA Region 8 UIC Program Compliance and Enforcement Director (during normal business hours)**, or by contacting the **EPA Region 8 Emergency Operations Center at 303.293.1788 (for reporting at all other times)**. The following information shall be included in the verbal report:
- Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW.
  - Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.
- (ii) Written notice of any noncompliance that may endanger health or the environment **shall be provided to the Director within five (5) calendar days** of the time the permittee becomes aware of the noncompliance. The written notice shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to prevent or reduce recurrence of the noncompliance.
- (d) Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time of analysis submission. The reports shall contain the information listed in Part III, Section E.10 of this permit.

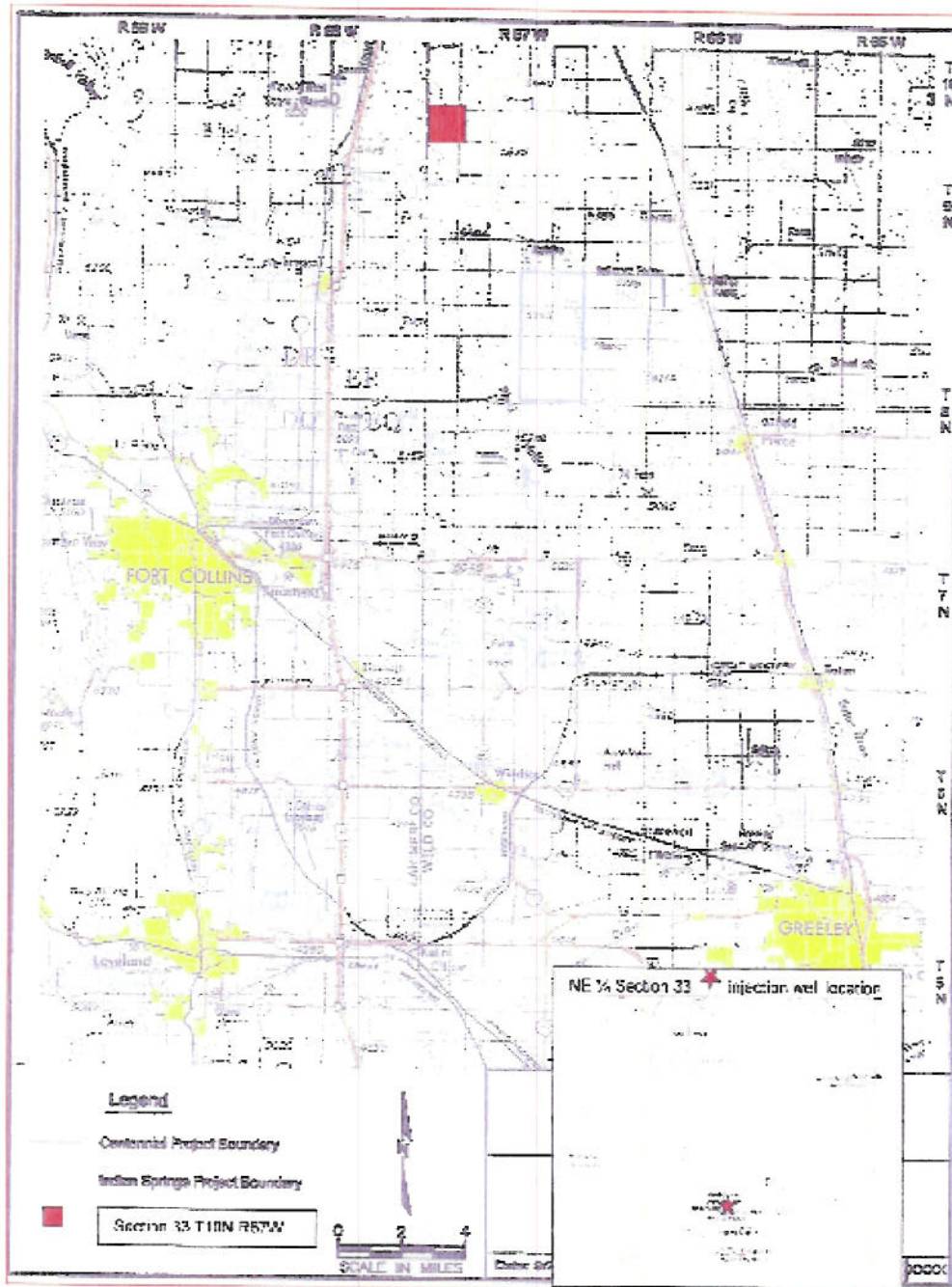


- (e) Other Information. When the permittee becomes aware that any relevant facts were not submitted in the permit application, or incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such correct facts or information within fourteen (14) calendar days of the time such information becomes known.

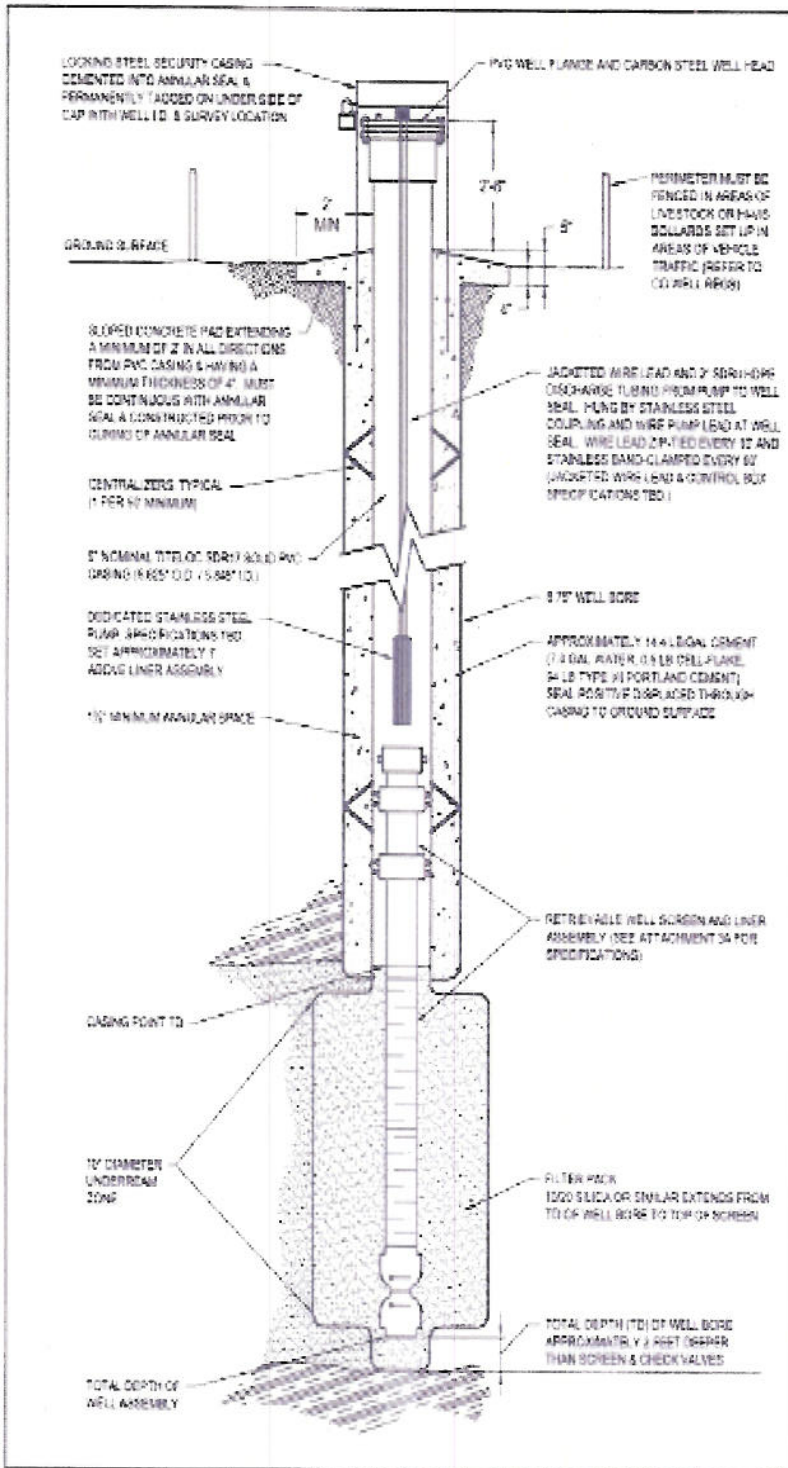
11. Oil Spill and Chemical Release Reporting. The operator shall comply with all other reporting requirements related to oil spills and chemical releases or other potential impacts to human health or the environment by contacting the National Response Center (NRC) at 1.800.424.8802 or 202.267.2675, or through the NRC website at <http://www.nrc.uscg.mil/nrchp.html>.

## **APPENDIX A**





**Figure 1. Location of Pump Test/Injection Well, IND8-33-PW1**



**ATTACHMENT C - Centennial Project  
Monitoring Well Construction Detail  
Wells Constructed with Positive Displacement**



**Powertech (USA) Inc.**

CHECK SHEET	NO. 1001	DATE	2001	REVISED	2001
PROJECT	Centennial	NO. 1001	2001	2001	2001
DATE	2001	DATE	2001	DATE	2001
BY	J. HARRIS	BY	J. HARRIS	BY	J. HARRIS
DATE	2001	DATE	2001	DATE	2001

**Figure 2. Injection Well Construction Design**



# **EXHIBIT 9**

CR 13

CR 15

CR 17

CR 19

CR 21

CR 23

CR 25

CR 27

CR 116

CR 114

CR 112

CR 110

CR 108

CR 106

CR 104

CR 102

CR 100

CR 98

CR 96

CR 94

CR 92

Map showing 3,500 abandoned exploration drill holes

Sec. 33

Larimer County

Weld County

Nunn Road



Legend

- Model
- BH\*P
- FXP
- WE
- BH\*C
- BH



Topo and Drill Hole Location Map  
INDIAN SPRINGS AND CENTENNIAL URANIUM PROJECTS  
Weld County, Colorado

Sheet 3 of 307

Drawn by JDM

1040 27 - State Plane Colorado North (feet)



# **EXHIBIT 10**

**ExxonMobil**  
**Refining and Supply Company**  
Downstream-Safety, Health & Environment  
3225 Gallows Road  
Fairfax, Virginia 22037

RECEIVED

**ExxonMobil**  
*Refining & Supply*

May 12, 2003

MAY 19 2003

Tony Waldron  
State of Colorado  
Division of Minerals and Geology  
Department of Natural Resources  
1313 Sherman Street, Room 215  
Denver, Colorado 80203-2273

Division of Minerals and Geology

RE: Reclamation Activities at the Indian Springs Prospecting Project

Dear Mr. Waldron:

This letter provides documentation of the reclamation activities for the Indian Springs Project (Project), Prospecting Permit Number P-80-090. The Project was conducted by Mobil Oil Corporation (Mobil), and consisted of uranium exploration in Larimer and Weld Counties in the late 1970s and early 1980s. In 1999, Mobil became a wholly owned subsidiary of Exxon Mobil Corporation (Exxon Mobil). Statewide Prospecting Bond No. 17-003-193 provides financial surety for the Project. Based on the completed status of the Project reclamation, Exxon Mobil is requesting that the Prospecting Permit be cancelled and the Project be released from financial surety.

Prospecting was conducted as described in three *Notices of Intent to Conduct Prospecting Operations* submitted to the Colorado Department of Natural Resources, Mined Land Reclamation Board, dated August 23, 1977, November 10, 1978, and October 27, 1980 (Attachment A). A total of 492 uranium exploration boreholes were drilled during this period. A map displaying the locations of the boreholes is presented in Attachment B. Drilling operations were completed on April 13, 1981.

Ms. Linda Walker, of Mined Land Reclamation Division inspected surface reclamation on November 18, 1983. In a letter to Mr. Robert B. Lundahl, Mobil, dated November 22, 1983, Ms. Walker classified the Project surface reclamation as "excellent" (Attachment C).

Mr. J. J. Faulhaber, of Alternative Energy, in an interoffice memo, dated May 28, 1985 (Attachment D) summarized borehole abandonment procedures and standards for the Project. Boreholes were abandoned with drilling mud consisting of varying viscosities from the bottom of the hole to ten feet below ground surface. Cement plugs were installed from ten feet to the surface or two feet below the surface depending upon local cultivation practices.

The borehole abandonment standards varied over the course of the Project, but the most stringent standards applied to the 1980 drilling program where 1) the *Notice of Intent to Conduct Prospecting Operations* (October 27, 1980) states that "All dry holes (those encountering no aquifers) shall be plugged from bottom to within ten feet of surface with a high viscosity drill mud... Any drill hole which encounters an aquifer(s) shall be plugged as follows: High viscosity mud shall be used to plug the hole as outlined above, except for the interval(s) containing the



aquifer which shall be cemented off top and bottom.", and 2) the House Bill 1195, which states "Drill holes which have encountered an aquifer in volcanic or sedimentary rock...shall be sealed utilizing a sealing procedure which is adequate to prevent fluid communication between aquifers."

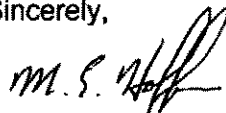
The boreholes were drilled into the stratigraphic horizon that contains the Laramie-Fox Hills aquifer, a regional hydrogeologic unit that spans the base of the Laramie Formation and the top of the Fox Hills Formation. In a letter to Mr. Kenneth Holmes (Mobil), dated February 23, 1982 (Attachment E), Ms. Walker expressed concerns over the use of drilling mud in an interval of an aquifer, and the potential for contaminants in the upper Laramie Formation to enter the Laramie-Fox Hills aquifer.

However, in the area of the Project, the Laramie-Fox Hills *interval* appears to have low potential as a significant aquifer. Mr. Faulhaber's memo cites numerous reports describing the interval as consisting of clay rich siltstone and sandstone. Mr. Faulhaber concluded that "it would appear that the Laramie-Fox Hills interval, although potentially water bearing, does not possess sufficient permeability to constitute a significant aquifer." Based on this conclusion, the use of drilling mud in borehole abandonment is appropriate and consistent with the standards previously discussed.

The Project reclamation activities described above are consistent with the standards described in the *Notices of Intent to Conduct Prospecting Operations* reports, and House Bill 1195. Therefore, Exxon Mobil requests that the Prospecting Permit be cancelled and the Project be released from financial surety provided under Statewide Prospecting Bond No. 17-003-193.

If you have any questions about the attached information, please call me at (703) 846-1150.

Sincerely,



Mark E. Hoffman, P.E.  
Project Manager

MEH/ps  
Attachments

c: P. Sorek -- MFG  
file

**RECEIVED**

**MAY 19 2003**

**Division of Minerals and Geology**

**ATTACHMENT A**

# Mobil Oil Corporation

Room 1428  
1400 BUREAU  
DENVER, COLORADO 80217  
ENERGY MINERALS DIVISION - U.S.

October 27, 1980

Board of Land Commissioners  
Department of Natural Resources  
State of Colorado  
620 Centennial Building  
1313 Sherman Street  
Denver, Colorado 80203

## APPLICATION FOR PROSPECTING PERMIT

Gentlemen:

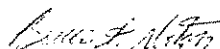
Mobil Oil Corporation requests permission from the Colorado Board of Land Commissioners to conduct prospecting operations on the following state-owned lands:

T-9-N,	R-67-W,	Section 16
T-10-N,	R-67-W,	Section 16
T-10-N,	R-67-W,	South half, SW/4, Section 22
T-10-N,	R-67-W,	Section 28

Mobil currently holds a mining lease with the state covering the above described lands, and proposes to commence operations on or about the 11th of November, 1980. Attached please find a copy of the intent to prospect form required by the Colorado Mined Land Reclamation Board which contains the information requested for your prospecting permit. Also, please refer to Mobil's Statewide Bond currently in force (#8063-03-11) for the surety requirements.

We would appreciate approval of the requested permit at your earliest convenience. Should you require additional information, please don't hesitate to call me at (303) 572-2622.

Very truly yours,



Bruce A. Norton  
Field Coordinator

BAN:bb

Attachment



Mobil proposes to use the following plugging procedures, if approved, in the permit area.

All dry holes (those encountering no aquifers) shall be plugged from bottom to within ten feet of surface with a high viscosity drill mud. From the top of this mud plug to a minimum depth compatible with local cultivation practices, a concrete surface plug shall be installed.

Any drill hole which encounters an aquifer(s) shall be plugged as follows:

High viscosity mud shall be used to plug the hole as outlined above, except for the interval(s) containing the aquifer which shall be cemented off top and bottom. A concrete surface plug shall be installed as above.

A telephone conversation with a drilling inspector from the State Engineer's Office indicated that the interval grouting procedures outlined above would satisfy their requirements regarding plugging of aquifers. Also, the procedures outlined for dry holes are designed to conform to the standards outlined in the State Engineer's Abandonment Regulations.

8. RECLAMATION MEASURES.

State the measures to be taken to reclaim any affected land consistent with the applicable requirements of Rule 6 and any applicable regulations promulgated thereunder by the Board.

All drill cuttings, mud and trash will be removed from the drill site and properly disposed of. Any significant surface disturbances will be graded to blend with the surrounding land surface. Should any significant area of vegetative cover be destroyed, an appropriate seed mix will be used to reseed the disturbed area, and any appropriate measures needed to ensure revegetation will be taken (mulching, scarification, etc.). All aspects of this project should be completed within a year of commencement of prospecting.

9. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:

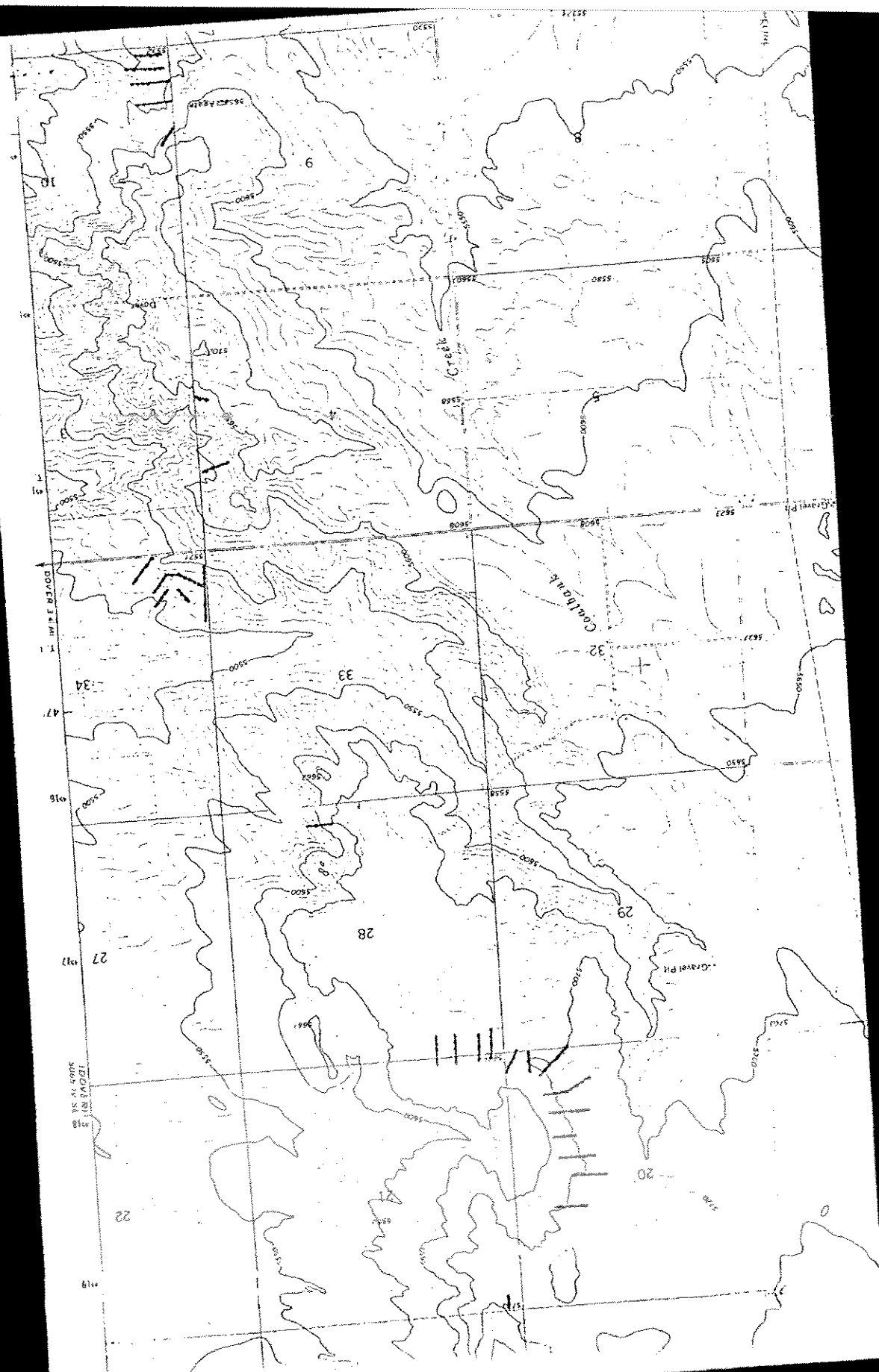
1. Reclamation measures shall be fulfilled in a timely manner.
2. The prospecting operations described in this notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 6, precautions to be taken include:
  - a. Confinement of operations to areas near existing roads or trails, where practicable,
  - b. Timely plugging or capping of drill holes in a proper, inconspicuous and safe manner upon completion or abandonment,
  - c. Reclamation of affected lands upon completion of operations or phases of an operation,
  - d. Dispersing or burying materials removed from any such hole,
  - e. Backfilling and revegetating any pits, and
  - f. In the case where drill holes in sedimentary rock produce water, sealing separately from one another, aquifers that are separate and discrete, to prevent intermingling of water.
3. The prospecting operations shall be conducted in such a manner as to comply with all applicable state and federal air and water quality laws and regulations.
4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife.
5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to prevent significant alteration to the geomorphic processes at the site.
6. The operator will post surety in the amount of <sup>Please refer to Statewide Bond No. 8063-03-11 submitted Feb. 24, 1977.</sup>
7. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended, and any rules and regulations promulgated pursuant thereto.
8. The Board shall determine (when there is a question) if an operation is prospecting or mining.

Date

Signature of appropriate person(s) from 2 and/or 3

Date

For the Board





NOTICE OF INTENT TO CONDUCT PROSPECTING OPERATIONS

1978

IMPORTANT: Pursuant to the terms of Rule 5, all information provided the Board in this Notice of Intent to Conduct Prospecting Operations shall be protected as confidential information by the Board and not be a matter of public record in the absence of a written release from the operator or upon a finding by the Board that reclamation is satisfactory, whichever may first occur.

I. DATE OF FILING OF THIS NOTICE OF INTENT: November 10, 1978

II. PROSPECTOR: Name, address, and phone of person or organization doing the prospecting: Mobil Oil Corporation

Energy Minerals Division - U.S.

P.O. Box 5444, Denver, Colorado 80217

III. CONTACT: Submit name, address, and phone number of person in that organization who should be contacted concerning reclamation:

Peter A. Burkett, Mobil Oil Corporation, Energy Minerals Division - U.S.

P. O. Box 5444, Denver, Colorado 80217

IV. DESCRIPTION OF THE LANDS: Site Name, if applicable: Indian Springs Project

Location: The lands are described as lying primarily within

T11N, T10N

Township T9N, T8N, Range R67W-R68W

Estimated acreage of affected land only 20 acres

Supply longitude and latitude if the area has not been surveyed. area has been surveyed

(Operators posting statewide surety must file a Notice of Intent to Conduct Prospecting Operations with the Board for each primary township to be prospected.)

V. DATE OF COMMENCEMENT:

The above described prospecting activity is scheduled to commence on approximately November 27, 1978

VI. TYPE OF OPERATION:

Describe the type of operations which will be undertaken in conducting the prospecting operations. For example: "The prospecting operations will involve drilling, trenching, bulk sample removal, shaft sinking, etc. The drilling will be conducted by use of a truck mounted rig, mud drilling, air drilling, etc."

The prospecting operations involve drilling with a truck mounted rig, with mud. Approximate hole size will be 4-3/4" in diameter.

*This notice  
Covers the  
Dec 1978 to  
May 1979  
program.*

RECEIVED

NOV 14 1978

RECLAMATION SECTION  
Colo. Dept. of Natural Resources

*10/4/83*

*Note: This form also  
filed in Connex. file by year*

VII. RECLAMATION MEASURES:

State the measures to be taken to reclaim any affected land consistent with the applicable requirements of Rule 6 and any applicable regulations promulgated thereunder by the Board.

All cuttings and mud will be removed from each drill site and disposed of in an adequate manner. If reseeding is found to be necessary, then each of these sites will be evaluated and a seed bed prepared and then seeded with the most applicable grass and/or shrub that the particular site may require

VIII. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:

1. Reclamation measures shall be fulfilled in a timely manner.
2. The prospecting operations described in this notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 6, precautions to be taken include:
  - a. Confinement of operations to areas near existing roads or trails, where practicable,
  - b. Timely plugging or capping of drill holes in a proper, inconspicuous and safe manner upon completion or abandonment,
  - c. Reclamation of affected lands upon completion of operations or phases of an operation,
  - d. Dispersing or burying materials removed from any such hold,
  - e. Backfilling and revegetating any pits, and
  - f. In the case where drill holes in sedimentary rock produce water, sealing separately from one another, aquifers that are separate and discrete, to prevent intermingling of water.
3. The prospecting operations shall be conducted in such a manner as to comply with all applicable state and federal air and water quality laws and regulations.
4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife.
5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to prevent landslides, flood or erosion.  
Please refer to Statewide Bond No. 8063-03-11 submitted 2/24/77.
6. The operator will post surety in the amount of 2/24/77.
7. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended, and any rules and regulations promulgated pursuant thereto.

November 10, 1978  
Date

Peter A. Burdett  
Signature of appropriate person(s) from II and/or III

Date

For the Board

NOTICE OF INTENT TO CONDUCT PROSPECTING OPERATIONS

IMPORTANT: Pursuant to the terms of Rule 5, all information provided the Board in this Notice of Intent to Conduct Prospecting Operations shall be protected as confidential information by the Board and not be a matter of public record in the absence of a written release from the operator or upon a finding by the Board that reclamation is satisfactory, whichever may first occur.

- I. DATE OF FILING OF THIS NOTICE OF INTENT: November 10, 1978
- II. PROSPECTOR: Name, address, and phone of person or organization doing the prospecting: MOBIL Oil Corporation  
Energy Minerals - U.S.  
P.O. Box 5444 T.A. Denver, Colorado 80217
- III. CONTACT: Submit name, address, and phone number of person in that organization who should be contacted concerning reclamation: Phone (303) 572-2720  
Peter A. Burkett, Mobil Oil Corporation  
ENERGY Minerals, U.S. P.O. Box 5444 T.A. Denver, CO  
80217
- IV. DESCRIPTION OF THE LANDS: Site Name, if applicable: INDIAN Springs Project

Location: The lands are described as lying primarily within:  
T11N, T10N,  
Township T9N, T8N, Ranges R68W - R67W  
Estimated acreage of affected land only 20 acres

Supply longitude and latitude if the area has not been surveyed. Area has been surveyed

(Operators posting statewide surety must file a Notice of Intent to Conduct Prospecting Operations with the Board for each primary township to be prospected.)

V. DATE OF COMMENCEMENT:

The above described prospecting activity is scheduled to commence on approximately November 27, 1978.

VI. TYPE OF OPERATION:

Describe the type of operations which will be undertaken in conducting the prospecting operations. For example: "The prospecting operations will involve drilling, trenching, bulk sample removal, shaft sinking, etc. The drilling will be conducted by use of a truck mounted rig, mud drilling, air drilling, etc."

The prospecting operations involve Drilling with a  
TRUCK mounted Rig, with mud. Approximate hole  
Size will be 4 3/4" in Diameter.



VII. RECLAMATION MEASURES:

State the measures to be taken to reclaim any affected land consistent with the applicable requirements of Rule 6 and any applicable regulations promulgated thereunder by the Board.

All cuttings AND mud will Be Removed from each Drill site AND Disposed of in AN ADEQUATE MANNER. IF Re seeding is found to Be Necessary, Then EACH of These sites will Be evaluated AND A seed Bed prepared AND then seeded with the most applicable grass AND/OR Shrub that the particular site MAY Require.

VIII. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:

1. Reclamation measures shall be fulfilled in a timely manner.
2. The prospecting operations described in this notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 6, precautions to be taken include:
  - a. Confinement of operations to areas near existing roads or trails, where practicable,
  - b. Timely plugging or capping of drill holes in a proper, inconspicuous and safe manner upon completion or abandonment,
  - c. Reclamation of affected lands upon completion of operations or phases of an operation,
  - d. Dispersing or burying materials removed from any such hold,
  - e. Backfilling and revegetating any pits, and
  - f. In the case where drill holes in sedimentary rock produce water, sealing separately from one another, aquifers that are separate and discrete, to prevent intermingling of water.
3. The prospecting operations shall be conducted in such a manner as to comply with all applicable state and federal air and water quality laws and regulations.
4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife.
5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to prevent landslides, flood or erosion.
6. The operator will post surety in the amount of *PLEASE REFER TO STATEWIDE BOND NO. 8063-03-11 SUBMITTED 24 FEBRUARY, 1977*
7. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended, and any rules and regulations promulgated pursuant thereto.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of appropriate person(s) from II and/or III

\_\_\_\_\_  
Date

\_\_\_\_\_  
For the Board

ADDENDUM TO NOTICE OF INTENT TO CONDUCT PROSPECTING

1. Additional Information -

- a. Additional townships may be placed on an additional page.
- b. Additional information that cannot be placed on this form may be included as additional exhibits.

2. The filing of a notice of intent does not necessarily place responsibility for all disturbances made under that notice. The prospector will be held responsible only for those disturbances which meet the definition of prospecting as defined in the Act and the Rules and Regulations.

NOTE: Two or more disturbances within 300 feet of each other will be considered to be in the same acre of land.

NOTICE OF INTENT TO CONDUCT PROSPECTING OPERATIONS

1977

IMPORTANT: Pursuant to the terms of Rule 5, all information provided the Board in this Notice of Intent to Conduct Prospecting Operations shall be protected as confidential information by the Board and not be a matter of public record in the absence of a written release from the operator or upon a finding by the Board that reclamation is satisfactory, whichever may first occur.

I. DATE OF FILING OF THIS NOTICE OF INTENT: August 23, 1977

II. PROSPECTOR: Name, address, and phone of person or organization doing the prospecting: MOBIL OIL CORPORATION

Energy Minerals - U.S. & Canada

P.O. Box 5444 T.A., Denver, Colorado 80217

III. CONTACT: Submit name, address, and phone number of person in that organization who should be contacted concerning reclamation: Phone (303) 572-2000

Charles Greenberg, MOBIL OIL CORPORATION,

Energy Minerals U.S. & Canada, P.O. Box 5444 T.A.  
Denver, Colorado 80217

IV. DESCRIPTION OF THE LANDS: Site Name, if applicable: Indian Springs Project

Location: The lands are described as lying primarily within  
T11N, T10N,

Township S: T9N, T8N, Ranges: R68W, R67W

Estimated acreage of affected land only 20 acres

Supply longitude and latitude if the area has not been surveyed. Area has been surveyed.

(Operators posting statewide surety must file a Notice of Intent to Conduct Prospecting Operations with the Board for each primary township to be prospected.)

V. DATE OF COMMENCEMENT:

The above described prospecting activity is scheduled to commence on approximately October 1, 1977

VI. TYPE OF OPERATION:

Describe the type of operations which will be undertaken in conducting the prospecting operations. For example: "The prospecting operations will involve drilling, trenching, bulk sample removal, shaft sinking, etc. The drilling will be conducted by use of a truck mounted rig, mud drilling, air drilling, etc."

The prospecting operations involve drilling with a truck mounted rig, with mud. Approximate hole size will be 4 3/4" in diameter.

NOTE: This notice includes the 1977-1978 drilling program.

out to JAN 1978  
(193 ± holes)

holes this year also

see prospecting plan to you

RB 10/1/83



VII. RECLAMATION MEASURES:

State the measures to be taken to reclaim any affected land consistent with the applicable requirements of Rule 6 and any applicable regulations promulgated thereunder by the Board.

All cuttings and mud will be removed from each drill site and disposed of in an adequate manner. If reseeding is found to be necessary, then each of these sites will be evaluated and a seed bed prepared by discing, harrowing and then seeded with the most applicable grass and/or shrub that the particular site may require.

VIII. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:

1. Reclamation measures shall be fulfilled in a timely manner.
2. The prospecting operations described in this notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 6, precautions to be taken include:
  - a. Confinement of operations to areas near existing roads or trails, where practicable,
  - b. Timely plugging or capping of drill holes in a proper, inconspicuous and safe manner upon completion or abandonment,
  - c. Reclamation of affected lands upon completion of operations or phases of an operation,
  - d. Dispersing or burying materials removed from any such hold,
  - e. Backfilling and revegetating any pits, and
  - f. In the case where drill holes in sedimentary rock produce water, sealing separately from one another, aquifers that are separate and discrete, to prevent intermingling of water.
3. The prospecting operations shall be conducted in such a manner as to comply with all applicable state and federal air and water quality laws and regulations.
4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife.
5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to prevent landslides, flood or erosion.
6. The operator will post safety in the amount of submitted 24 February Please refer to State-wide bond No. 8063-03-
7. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended, and any rules and regulations promulgated pursuant thereto.

August 23, 1977  
Date

Charles Greenberg  
Signature of appropriate person ( ) from II and/or II

\_\_\_\_\_  
Date

\_\_\_\_\_  
For the Board



VII. RECLAMATION MEASURES:

State the measures to be taken to reclaim any affected land consistent with the applicable requirements of Rule 6 and any applicable regulations promulgated thereunder by the Board.

All cuttings and mud will be removed from each drill site and disposed of in an adequate manner. If reseeding is found to be necessary, then each of these sites will be evaluated and a seed bed prepared by discing, harrowing and then seeded with the most applicable grass and/or shrub that the particular site may require.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

VIII. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:

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  - b. Timely plugging or capping of drill holes in a proper, inconspicuous and safe manner upon completion or abandonment,
  - c. Reclamation of affected lands upon completion of operations or phases of an operation,
  - d. Dispersing or burying materials removed from any such hold,
  - e. Backfilling and revegetating any pits, and
  - f. In the case where drill holes in sedimentary rock produce water, sealing separately from one another, aquifers that are separate and discrete, to prevent intermingling of water.
3. The prospecting operations shall be conducted in such a manner as to comply with all applicable state and federal air and water quality laws and regulations.
4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife.
5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to prevent landslides, flood or erosion.

Please refer to State-wide bond No. 8063-03-11
6. The operator will post surety in the amount of submitted 24 February 19
7. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended, and any rules and regulations promulgated pursuant thereto.

August 23, 1977  
Date

Charles Greenberg  
Signature of appropriate person(s) from II and/or III

\_\_\_\_\_  
Date

\_\_\_\_\_  
For the Board

ADDENDUM TO NOTICE OF INTENT TO CONDUCT PROSPECTING

1. Additional Information -

- a. Additional townships may be placed on an additional page.
  - b. Additional information that cannot be placed on this form may be included as additional exhibits.
2. The filing of a notice of intent does not necessarily place responsibility for all disturbances made under that notice. The prospector will be held responsible only for those disturbances which meet the definition of prospecting as defined in the Act and the Rules and Regulations.

NOTE: Two or more disturbances within 300 feet of each other will be considered to be in the same acre of land.



**ATTACHMENT B**

**ATTACHMENT C**



Richard D. Lamm  
Governor

DEPARTMENT OF NATURAL RESOURCES  
David H. Getches, Executive Director

**MINED LAND RECLAMATION DIVISION**  
DAVID C. SHELTON, Director



CC G.D.P. s.w. 4/29/83

Rec  
Box  
4/20/83

November 22, 1983

Mr. Robert B. Lundahl  
Mobil Oil Corp.  
P.O. Box 17772  
Denver, Colorado 80217

Dear Mr. Lundahl:

On November 18, 1983, I inspected, with you and Sally White, Mobil's exploration reclamation for the three prospecting Notices for Indian Springs, filed August 23, 1977, November 10, 1978 and October 27, 1980.

The specific areas we spot checked are as follows.

- |            |   |
|------------|---|
| T10N, R67W | Section line between 18 + 19. There was no trace of the drill sites.  |
| T10N, R67W | Section line between 17 + 20. This was a plowed field, so there was no trace of the drill sites.  |
| T10N, R67W | SE 1/4 Section 20. A reclaimed dozer cut already had a good vegetative cover. The regrading was excellent. The plugged drill holes in this area were marked with yellow rope.                     |
| T9N, R67W  | Section 10. Disturbance was not visible.  |
| T10N, R67W | SW 1/4 Section 34. There were 5-6 drill holes plugged and marked with yellow rope. There was no other sign of surface disturbance except for a former mud pit with slightly different vegetation. |

Reclamation was excellent. This was largely due to the fact that little surface disturbance was incurred during drilling. Mobil is to be commended for keeping surface disturbance so minimal.


Mr. Robert B. Lundahl

-2-

November 22, 1983

Once the paperwork has been completed by you, we should be able to release these three Notices.

Sincerely,



Linda Walker  
Reclamation Specialist

LW/th

Doc. No. 7195



**ATTACHMENT D**

INTEROFFICE CORRESPONDENCE

TO File

Alternative Energy  
DATE May 28, 1985

CC

INDIAN SPRINGS PROJECT  
PLUGGING AND ABANDONMENT PROCEDURES  
AND AQUIFER PROTECTION  
1977, 1978 and 1980 DRILLING PROGRAMS

The following are notes and comments regarding the question of plugging and abandonment and aquifer protection in the Indian Springs project area.

° Laramie-Fox Hills Aquifer in the Indian Springs Area

- In her letter of February 23, 1982 to Mr. Kenneth Holmes of Mobil, Linda Walker with the Colorado MLRD expressed concern that in our drilling programs, we had penetrated the Laramie-Fox Hills aquifer, an aquifer found at the base of the Laramie formation and top of the Fox Hills formation. Her concern was that in doing so, we established the potential for possible contaminants found in the Laramie Formation to enter the aquifer.
- Mobil's stratigraphic determinations of the Indian Springs property place the principal target sand, the K sand, near the base of the Laramie formation. A secondary sand of possible interest, the M sand, was placed at the top of the Fox Hills Formations. Other sands in the interval are the J&L sands. Thus based on stratigraphic nomenclature, it appears that the target interval in our drilling is stratigraphically equivalent to the Laramie-Fox Hills aquifer.
- Several items point to the Laramie-Fox Hills aquifer interval as having a low potential as an aquifer in Mobil's Indian Springs project. The first of these are the general lithologic descriptions supplied by Michael Rice of Mobil to Linda Walker in connection with the 1980 Indian Springs abandonment report (attached Fig. 1). In those descriptions, the basal Laramie and upper Fox Hills Formations were described as silty sandstone and siltstone with mudstone. In addition, in his 1980 report on the Indian Springs property, R. L. Potucek (attached Fig. 2) describes the J&K sands in the interval as being muddy sandy siltstone rather than sandstone. The lithology of the L&M sands is not described; however, their character on the example log in Hickey's 1977 report (Fig. 2) Attached Fig. 3 suggests that they are similarly rich in clay content, with the M sand perhaps

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being a little more clay rich. Based on these descriptions and the fact that the holes were plugged as dry holes (using mud rather than cement), it would appear that the "Laramie-Fox Hills" interval, although potentially water bearing, does not possess sufficient permeability to constitute a significant aquifer.

Plugging and Abandonment Procedures

1980 Program

Applicable Standards

Section 6 of "Operational Instructions - Relating to Exploration on State-owned Lands and Minerals" issued by the Board of Land Commissioners, State of Colorado (ref. SLB 9/80) and attached to prospecting permit No. 854 from the Mineral Department of the State Board of Land Commissioners (for the Indian Springs Project) states:

"All holes shall be substantially and safely plugged according to the State Engineer's requirements for water wells. Cement all geologic formation contacts. Cement all aquifers top and bottom. ...Uranium exploration holes shall be cemented from bottom to three feet below plow depth. Any other method of plugging uranium exploration holes shall be submitted for Board approval prior to use."

Attached to permit No. 854 was a proposed "Mobil" plugging procedure (see attached Fig. 4). This method was approved by T. E. Bretz, Mineral Director, on November 12, 1980. Briefly, the proposed Mobil procedure states that we will plug all dry holes (those encountering no aquifers) from bottom to within ten feet of the surface with a "high viscosity drill mud". Viscosity, mud weight and gel strength were not specified. Any aquifers encountered were to be "cemented off top and bottom". In the upper ten feet of all holes, we proposed plugging with a concrete surface plug from ten feet to a minimum depth "compatible with local cultivation practices".

In correspondence from Linda Walker, Mined Land Reclamation to Bruce Norton (attached Fig. 5) in reference to the Indian Springs program, Ms Walker states: "Note: Drill holes must be plugged in compliance with House Bill 1195. When the regulations and drill hole reporting forms are approved, I will forward them to Mobil." House Bill 1195 stipulates (Section 34-32-113 (b) (11)) (attached Fig. 6) that "Drill holes which have encountered any aquifer in volcanic or sedimentary rock.... shall be sealed using a sealing procedure which is adequate to prevent fluid communication between aquifers". No more specific standards are mentioned. In addition, Sections 34-32-113 (h) (I) specifies cementation of aquifers which produce artesian flow to the surface. Section 34-32-113 (b) (III) specifies, in general terms, surface capping procedures.

Procedure Followed



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The 1980 Drilling Program began on November 17, 1980 and ended on December 15, 1980. Copies of drilling tickets and invoices for the 1980 program were

obtained from Materi Exploration, drilling contractor on the project. Based on these documents, the program used a high-yield sodium bentonite gel with brand names of Petroplus Gel or Red Devil Gel as a hole abandonment mud. The mud was used on an average rate of .089 lbs/foot of hole. Mixing and circulating took approximately 20-30 minutes per hole.

Existing records do not indicate what the final mud weight or viscosity was. However, Bob Timmer, currently with Mobil in Midland recalled that a viscosity measuring funnel was used at least on an occasional basis. He could not recall what the character of final product was. An attachment to a 1977 letter from Charlie Greenberg to the State of South Dakota (attached, Fig. 7) described a Mobil hole abandonment procedure in which the abandonment fluid would have a weight of nine pounds per gallon and a tunnel viscosity of 45 seconds/quart.

It should be noted that in a recent telephone conversation, Marti Gardner, mud engineer with Advanced Fluid Systems, Denver indicated that, as a rule of thumb, when mixed solely with water, Petroplus Gel and Red Devil Gel are required at a rate of approximately .5 lbs/foot of hole for a five inch diameter hole in order to meet current Wyoming standards. Although this is considerably more than our 1980 usage, Bob Goble, with Western Exploration, indicated that over our 1980 usage was consistent with industry practice at the time. In addition, if we mixed the gel with natural formation mud from the drilling, we would have obtained a higher viscosity than if we had mixed the gel with water.

In his letter of April 13, 1981 (attached Fig. 8) to Linda Walker (MLR) Bruce Norton, Field Coordinator for Mobil stated that "No artesian flow was encountered in any hole. All holes were plugged from bottom to within ten feet of surface with a high viscosity drilling fluids".

A cement surface plug was installed from the top of the mud plug (ten feet below the surface) to within two feet of the surface or to the surface, depending on local cultivation practices. Invoiced cement usage of slightly more than one bag per hole is consistent with this surface plug installation.

Based on the above findings, it appears that Mobil plugged the drill holes in a manner consistent with the procedure approved by Bretz of the State Board of Land Commissioners. However, it is uncertain if it complies with the wishes of the Mined Land Reclamation Board.

#### 1978-79 Program

##### Applicable Standards

Page 2 of the 1978-79 program permit (Colorado Prospecting Permit No. 665) states with regard to hole plugging:

To File  
Page 5  
May 28, 1985

"In the case where drill holes in sedimentary rock produce water, sealing separate from one another, aquifers that are separate and discrete, to prevent intermingling of water".

State Mind Land Reclamation Board regulations (attached Fig. 9) apparently in effect at the time, contain the same clause as quoted above.

I have been unable to obtain any more detailed standards.

#### Procedure Followed

The attachments to our contract with Mineral Exploration Drilling Company, Inc. states that (attached Fig. 10) "All drill holes will be filled with drilling mud with a viscosity specified by the company before logging and cementing". In addition, the contractor was required to set a ten foot cement plug at a minimum of six feet below the surface after the hole was geophysically logged.

Two contractors worked on the 1978-79 program. They were Mineral Exploration Drilling Company, Inc. (MEDCO) and Tres Drilling, Inc. Tres was dismissed early in the program for poor performance. Invoices were obtained from MEDCO for 43,321' of the approximately 113,700' drilled. Based on these invoices, the Aqua Gel and Quick Trol were apparently used as a hole abandonment mud at a rate of .2447 lbs/ft of Aqua Gel and .0039 lbs/ft of Quik Trol. These products when used together apparently produce an abandonment mud similar to the Petrolplus Gel used in the 1980 program (Marti Gardner, telephone conversation). Thirty-three sacks of cement were indicated on the available invoices. This does not appear sufficient for the footage drilled. Presumably, the additional cement was invoiced elsewhere.

#### 1977-78 Program

#### Applicable Standards

The standards applicable to this program appear to be identical to that for the 1978-79 program.

#### Procedure Followed

Two contractors were apparently active on this job. They were Mineral Exploration Drilling Company, Inc. (MEDCO) and Tres Drilling, Inc. Both contractors had the same address (P. O. Box 769, Ft. Collins, Colorado) and referenced the same individual (A. D. Taylor). Attachments to those contracts specified that: "All drill holes will be filled with drilling mud before logging and cementing". In addition, a ten foot cement plug was to be set a minimum of three feet below the surface, with greater minimum depths for plowed fields and for roadways (attached Fig. 11).

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Invoices and tower sheets were obtained from MEDCO (with an address now different from Tres) covering 85 of the 198 holes and 58,959 feet of the 117,000 total footage drilled. These invoices indicate a total usage of 18 bags of Quick Gel, 40 bags of beet pulp and 161 bags of cement for the 85 holes. Comparing this usage with the daily tower sheets indicates that the beet pulp and Quick Gel were used to improve circulation. The holes were apparently abandoned using only natural mud. The surface plug was then set using approximately two bags of cement per hole.

Weak artesian flow was encountered in one hole from this program (No. 10-67-16-028). Water was produced from a depth of less than 500', possibly from a sand at 350' (see attached Fig. 12). The K sand, the uppermost target sand, was reported at 950 feet in the project files. This hole was apparently amended after attempts to convert it to a water well were abandoned.

JJF/ah

J. J. Faulhaber

D. Lithologic log (Excluding information regarding mineral occurrence or zonation)

Rock Units (i.e. sandstone)	Formation Name	Interval in feet	Water Encountered or circulation Lost
	Township 9 North - Range 67 West		
Sandstone	Ogallala	0 - 20'	
Silt, mudstone with coal seams	Laramie	20' - 300'	
Silty sandstone	Laramie and Fox Hills	~300' - 340'	
Siltstone with mudstone	Fox Hills	~340' - 400'	

*Fig. 1a*



The target "sand," which has been termed the K-sand by Nufuels' personnel (RMEC's A-sand), is located near the base of the Laramie Formation (and near the top of the Fox Hills Formation) and is not a sandstone at all, but rather a muddy and sandy siltstone that is quite carbonaceous. Abundant bi-valved shell fragments are found slightly above, in, and below the K unit.

This fossil-bearing zone can serve as a marker for the approximate stratigraphic position of the K unit, but the shells are too ubiquitous to pinpoint the mineralized portion of the unit any closer than  $\pm$  40 feet. The shell fragments were found in every section of ground drilled, increasing in quantity towards the northwest. In general, the K unit contains very fine sand that is composed of quartz and feldspar. The feldspar content is usually below 10%. Although considered rare, pyrite is ubiquitous throughout the Indian Springs area, mostly occurring in the reduced strata. Trace amounts of selenite were found in the K unit as well, but only in the reduced ground. Chlorite content varied depending upon which side of the geochemical interface the hole was located and drilled. In all cases, it dropped to minor amounts or none, when drilling in oxidized ground.

Directly above the K-sand, a unit termed the J-sand occurs. Its characteristics are identical to the K-sand. Although the J-sand is not ubiquitous throughout Mobil's lease area, it will carry uranium mineralization that is commonly ore grade,

FIG. 2

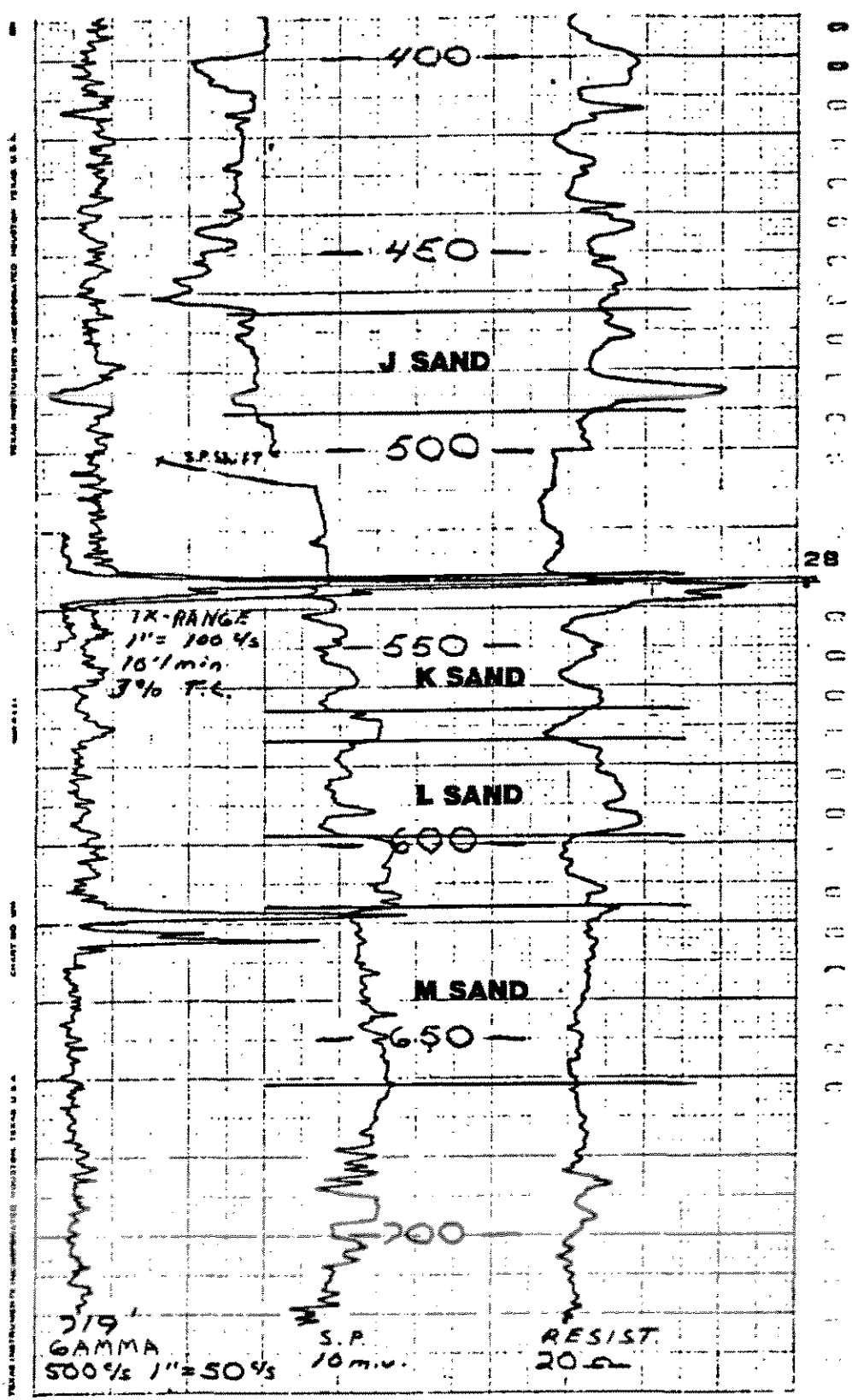


Figure 2  
 Sample Log Showing  
 J-, K-, L-, and M-Sands

Fig. 3

Mobil proposes to use the following plugging procedures, if approved, in the permit area.

All dry holes (those encountering no aquifers) shall be plugged from bottom to within ten feet of surface with a high viscosity drill mud. From the top of this mud plug to a minimum depth compatible with local cultivation practices, a concrete surface plug shall be installed.

Any drill hole which encounters an aquifer(s) shall be plugged as follows:

High viscosity mud shall be used to plug the hole as outlined above, except for the interval(s) containing the aquifer which shall be cemented off top and bottom. A concrete surface plug shall be installed as above.

A telephone conversation with a drilling inspector from the State Engineer's Office indicated that the interval grouting procedures outlined above would satisfy their requirements regarding plugging of aquifers. Also, the procedures outlined for dry holes are designed to conform to the standards outlined in the State Engineer's Abandonment Regulations.

*Plugging method ok J.C. Burt 11/12/50*

*FIG. 4*



STATE OF COLORADO RICHARD D. LAMM, Governor  
DEPARTMENT OF NATURAL RESOURCES  
Harris D. Sherman, Executive Director

### MINED LAND RECLAMATION

423 Centennial Building, 1313 Sherman Street  
Denver, Colorado 80203 Tel. (303) 839 3567

*Original to Charlie Howell  
for filing.*

DATE October 31, 1980

NAME BRUCE A. NORTON

ADDRESS MOBIL OIL CORP., Energy Minerals Division  
P.O. Box 5444  
Denver, Co. 80217

RE: Receipt of Notice of Intent to Conduct Prospecting Operations,

Dear Mr. Norton:

The Division of Mined Land Reclamation has received your Notice of Intent to Conduct Prospecting Operations on the following lands;

Site Name Indian Springs

Legal Description T9, 10N R67W 6<sup>th</sup> PM County Weld

Information submitted on this operation has been found

Complete

Incomplete

Surety has been:

Accepted

Rejected

Not recieved

*Note: drill holes must be plugged in compliance with House Bill 1195. When the regulations and drill hole reporting forms are approved, I will forward them to Mobil.*

The following information is required before the Notice can be considered complete:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Compliance with the Colorado Mined Land Reclamation Act of 1976 (34-32-101 et. seq.) and the rules and regulations adopted pursuant thereto is necessary throughout prospecting and reclamation operations. A photographic record of the site at the start of prospecting operations and after reclamation will greatly expedite release of surety.

If there are any questions, please contact us.

Sincerely,

*Linda Walker*  
Linda Walker

FIG. 5

apply to holes drilled in conjunction with a mining operation for which the board has issued a permit nor to wells or holes regulated pursuant to section 34-33-117 and to article 60 of this title or article 80, 90, 91, or 92 of title 37, C.R.S. 1973.

(b) Drill holes sunk for the purpose of prospecting shall be abandoned in the following manner:

(I) Any artesian flow of groundwater to the surface shall be eliminated by a plug made of cement or similar material or by a procedure sufficient to prevent such artesian flow.

(II) Drill holes which have encountered any aquifer in volcanic or sedimentary rock, as aquifer is defined in section 37-90-103 (2), C.R.S. 1973, shall be sealed utilizing a sealing procedure which is adequate to prevent fluid communication between aquifers.

(III) Each drill hole shall be securely capped at a minimum depth compatible with local cultivation practices or at a minimum of two feet below either the original land surface or the collar of the hole, whichever is the lower elevation. The cap is to be made of concrete or other material which is satisfactory for such capping. The site shall be backfilled above the cap to the original land surface.

(IV) If any drill hole is to be ultimately used as or converted to a water well, the user shall comply with the applicable provisions of title 37, C.R.S. 1973.

(V) Each drill site shall be reclaimed pursuant to section 34-32-116, including, if necessary, reseeding if grass or any other crop was destroyed.

(c) Abandonment in the manner provided in paragraph (b) of this subsection (5.5) shall occur immediately following the drilling of the hole and the probing for minerals in the prospecting process. However, a drill hole may be maintained as temporarily abandoned without being plugged, sealed, or capped. However, no drill hole which is to be temporarily abandoned without being plugged, sealed, or capped shall be left in such a condition as to allow fluid communication between aquifers. Such temporarily abandoned drill holes shall be securely covered in a manner which will prevent injury to persons and animals.

(d) No later than sixty days after the completion of the abandonment pursuant to paragraph (b) of this subsection (5.5) of any drill hole which has artesian flow at the surface, the person conducting the prospecting shall submit to the director of the division of mined land reclamation within the department a report containing the location of such hole to within two hundred feet of its actual location, the estimated rate of flow of such artesian flow (if such is known), and the facts of the technique



MOBIL OIL CORPORATION  
ENERGY MINERALS - U.S. & CANADA

*Referred to letter dated  
July 7, 1977 from Charlie  
Cremens to State of South Dakota  
(Fox Hills Notice of Intent).  
Referred to in letter as "our  
hole plugging and abandonment  
procedures."*

HOLE ABANDONMENT AND PLUGGING PROCEDURES

Normal Abandonment

A drilling fluid containing sodium bentonite and other hole conditioning and stabilizing materials, including the cuttings that remain in suspension, will be left in each hole to surface. Drill site tests performed by the drill crews will insure that the abandonment fluid, by the addition of high yield sodium bentonite, meets or exceeds the following specifications.

- Weight - 9 pounds per gallon
- Funnel Viscosity - 45 seconds/quart
- (These tests shall be performed in accordance with accepted A.P.I. procedures.)

The weight of the resulting high gel-strength fluid in the hydrostatic column will be sufficient to confine any water encountered to the next formation, with the exception of artesian flow to surface.

Artesian Abandonment

In event of artesian flow of ground water on the surface, each artesian aquifer will be isolated by a continuous cement plug starting 50 feet below the aquifer and extending across and above the aquifer to a height sufficient to stop the flow (a minimum of 10 feet). Any remaining flowing aquifers above will be isolated in the same manner. The portions of the hole between plugs will be filled with drilling fluid meeting the above specifications. Should the hole contain a surface string of casing, a 100 foot plug shall be centered across the shoe of the casing. The casing shall be cut off at a depth of 6 feet below the surface and the top 10 feet filled with cement.

Isolation of High Saline or Mineralized Zones

Zones of usable-quality water shall be isolated from zones of saline or mineralized water by the installation of a 100 foot cement plug centered across the top of the saline zone. The remainder of the hole shall be filled with drilling fluid and plugged in the manner outlined below.

Surface Plugging

Upon completion of all drilling and logging operations, the hole will be filled with drilling mud. A 10 foot cement plug will be placed in each hole, the top of which will be located three feet below the surface. The surface location of each hole will be marked with a wooden stake with identifying number attached.

*Mobil  
Abandonment  
Procedures &*

*FIG. 7*

3  
Nufuels Corporation

PO BOX 5444  
DENVER COLORADO 80217

April 13, 1981

RECEIVED

Mined Land Reclamation  
Department of Natural Resources  
423 Centennial Building  
1313 Sherman Street  
Denver, Colorado 80203

APR 14 1981

MINED LAND RECLAMATION  
Colo. Dept. of Natural Resources

Attention: Linda Walker

NOTICE OF COMPLETION OF  
PROSPECTING OPERATIONS

Gentlemen:

Mobil's 1980 drilling program on the Indian Springs Project has been completed. A total of 109 exploratory holes were drilled in Townships 9 north and 10 north, Range 67 west. No artesian flow was encountered in any hole. All holes were plugged from bottom to within ten feet of surface with a high viscosity drilling fluid. From the top of this mud plug to a minimum of two feet below surface, a cement plug was installed. In cultivated land, the remaining two feet were backfilled with topsoil. In grazing land, this cement plug was installed to the ground surface to prevent injury to livestock.

Reclamation was completed February 12th and consisted of cleaning each site of cuttings and debris, and, where necessary, recontouring disturbed areas. Reseeding will be accomplished using a mixture of buffalo grass and blue grama, and will commence the last part of April, weather permitting.

Hole location reports will be submitted when forms have been received from your office. If there are any questions regarding our drilling program or reclamation, please contact me at 572-2622. Thank you for your cooperation during our program.

Very truly yours,



Bruce A. Norton  
Field Coordinator

BAN:bb

I looked at

FIG. 8

- (4) Dispersing or burying materials removed from any hole;
- (5) Backfilling and revegetating any pits; and
- (6) In the case where drill holes in sedimentary rock produce water, sealing separately from one another, aquifers that are separate and discrete so as to prevent intermingling of water.

- 5.32 The prospecting operation shall be conducted so as to minimize adverse effects upon wildlife.
- 113(4) 5.33 Upon filing the Notice of Intent to Conduct Prospecting, the person shall post surety in an amount determined by the Board not to exceed two thousand dollars per acre of the land to be disturbed, or shall post a statewide bond. If a statewide prospecting surety is posted, the person posting the surety must otherwise comply with the provisions of this section for every area to be prospected. (Further information on surety procedures may be found in RULE 7.)
- 113(5) 5.34 Upon completion of the prospecting, there shall be filed with the Board a Notice of Completion of Prospecting Operations. Within ninety (90) days after the filing of the Notice of Completion the Board shall notify the person who had conducted the prospecting operations of the steps necessary to reclaim the land. (In most cases this will simply involve a conference to discuss the reclamation plans outlined in the Notice of Intent previously submitted by that person.)
- 113(6) 5.35 The Board shall inspect the lands prospected within thirty (30) days after the person prospecting the lands completes the reclamation and notifies the Board that the reclamation is finished. If the Board finds the reclamation satisfactory, the Board shall release the surety.
- 113(7) 5.36 The surety shall not be held for more than thirty (30) days after the completion of the reclamation.
- 5.37 All prospecting operations shall be conducted in such a manner as to comply with all applicable state and federal air and water quality laws and regulations, the 1976 Act, and these Rules and Regulations.

FIG. 9

HOURLY (DAYWORK) RATES

Operating time (cementing (subsurface plugs), running casing, re-drilling, circulating. \$ 90.00 per hour.

Operating time for coring with company providing coring equipment.

\$ 90.00 per hour.

Standby time with crew (waiting on orders, waiting on Mobil - provided materials, waiting on cement to set) - \$ 65.00 per hour.

OTHER PROVISIONS

1. Contractor will furnish trash cans on each driller's pickup. Contractor will not permit drill crews to bury any trash or junk, or allow bags, rags, or trash of any type to blow away from locations.
2. Company will arrange for water. If water hauls are over ten miles round-trip, Company will pay Contractor \$0.25 per mile for excess mileage. Rig stand-by time due to long water hauls will not be paid, except in the case that lost circulation conditions are encountered.
3. All drill holes will be filled with drilling mud with a viscosity specified by the Company before logging and cementing.

Contractor will be responsible for plugging all holes upon notification by Company that an adequate downhole electric log has been obtained.

Drill hole abandonment procedures require setting of a ten (10) foot cement plug at a minimum of six (6) feet below the surface. For holes drilled in roadways, the plug must be a minimum of eight (8) feet below surface. The surface location of each drill hole will be marked by a length of nylon line set in the cement plug and extending at least one (1) foot on the surface.

In the event artesian conditions are encountered at any time the Contractor will be responsible for control of the flow. The Contractor must be capable of mixing a standard cement slurry and pumping the slurry through drill pipe to a depth specified by the Company.

Fig. 10

HOURLY (DAYWORK) RATES

Operating time with crew (coring, cementing, (subsurface plugs), running casing, re-drilling, circulating) - \$ 80 per hour.

Standby time with crew (waiting on orders, waiting on Mobil-provided materials, waiting on cement to set) - \$ 60 per hour.

IT IS FURTHER AGREED AND UNDERSTOOD THAT THE FOLLOWING SPECIAL PROVISIONS WILL APPLY THROUGHOUT THE TERM OF THIS CONTRACT:

- 1. Contractor will furnish trash cans on each driller's pickup. Contractor will not permit drill crews to bury any trash or junk, or allow bags, rags, or trash of any type to blow away from locations.
- 2. Company will arrange for water. If water hauls are over ten miles round-trip, Company will pay Contractor \$0.25 per mile for excess mileage. Rig stand-by time due to long water hauls will not be paid, except in the case that lost circulation conditions are encountered.

Contractor will submit to Mobil's Representative a daily water haul and mileage record on an approved form.

- 3. All drill holes will be filled with drilling mud before logging and cementing.

Contractor will be responsible for plugging all holes upon notification by Company that an adequate downhole electric log has been obtained.

Drill hole abandonment procedures require setting of a ten (10) foot cement plug at a minimum of three (3) feet below surface. Holes drilled in cultivated fields require the plug to be set a minimum of six (6) feet below surface. For holes drilled in roadways, the plug must be a minimum of eight (8) feet below surface.

Company will reimburse contractor at cost for all cement used, but will not reimburse contractor for the time or labor necessary to plug the holes, as this is included in the footage (turnkey) rate.

- 4. Footage charges will be based on probed depth if the hole is probed within 1-1/2 hours of the pipe being retrieved out of the hole.

In the event the hole can not be probed to the drilled depth within the one-and-one-half hour time period, through no fault of Company or logging operator, Contractor will wash the hole out at his sole expense, or drill a new hole at Contractor's sole expense, at Contractor's discretion.

*Fig. 11*



**ATTACHMENT E**



Richard D. Lamm  
Governor

DEPARTMENT OF NATURAL RESOURCES

D. Monte Pascoe, Executive Director

**MINED LAND RECLAMATION DIVISION**

DAVID C. SHELTON Director



February 23, 1982

Mr. Kenneth Holmes  
Mobil Oil Corporation  
P.O. Box 5444  
Denver, Colorado 80217

Dear Mr. Holmes:

The Division has received Nufuels Corporation's drill hole abandonment forms for the Indian Springs drilling program.

Clarification is needed in the area of aquifer protection.

It is our understanding that the Laramie-Fox Hills aquifer is found between the Laramie and Fox Hills formations. This is potable water which is artesian in that it rises above its own formation. There are possible contaminants found in the Laramie formation, which should not be allowed to enter this aquifer. There did not seem to be any mention made of the aquifer. Was it unnoticeable in drilling? Also, drilling mud does not have the same characteristics as abandonment fluid in protecting aquifers. Can you assure the Division that the drilling mud will protect the aquifer?

The Division would appreciate a written response to these issues.

Let me know if an inspection is needed to release surface reclamation for the Indian Springs Notice of Intent, dated 10/27/80. I inspected some of the work done for the Indian Springs project in the fall of 1980. Another trip will only be necessary if access roads or large (greater than 1600 square feet) drill sites were disturbed and reclaimed since that last inspection. Also, please clarify whether the Notices dated 8/23/77 and 11/10/78 should be released.

Sincerely,

Linda Walker  
Reclamation Specialist

LW/mt

# STATE OF COLORADO

## DIVISION OF MINERALS AND GEOLOGY

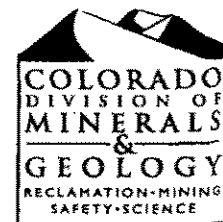
Department of Natural Resources

1313 Sherman St., Room 215

Denver, Colorado 80203

Phone: (303) 866-3567

FAX: (303) 832-8106



November 6, 2003

ExxonMobil Refining and Supply Company  
Downstream-Safety, Health & Environment  
Mr. Mark Hoffman-Project Manager  
3225 Gallows Road  
Fairfax, VA 22031

Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Ronald W. Cattany  
Division Director  
Natural Resource Trustee

RE: Indian Springs Prospect; DMG File # P-1980-090

Dear Mr. Hoffman:

You submitted a request for a full performance and financial warranty release request for the Indian Springs Prospect on May 19, 2003. The site was inspected with Louis Miller of MFG Consultants on September 17, 2003. The result of that inspection was that reclamation had been completed in accordance with the requirements of the Notice of Intent, Rules and Regulations and the Act. Therefore, this site is released from all applicable performance and financial warranties associated with reclamation at this site.

Since this is just one of the activities covered under Statewide Prospecting Bond No. 17-003-193, the bond is not eligible for release at this time. However, when all of the prospects associated with this bond are fully reclaimed and released, the bond will be eligible for final release at that time.

If you have any questions about this file or any other aspect of the bond, please contact me at (303) 866-4926.

Sincerely,

Anthony J. Waldron  
Environmental Protection Specialist

cc: Suzi Ericksen-DMG  
Louis Miller- MFG

# **EXHIBIT 11**



# ROCKY MOUNTAIN ENERGY

Ref: UR 82-209

A Subsidiary of  
Union Pacific Corporation

October 6, 1982

Ms. Linda Walker  
Mined Land Reclamation Division  
423 Centennial Building  
1313 Sherman Street  
Denver, Colorado 80203

≡ 1980-094

## REGISTERED MAIL

Dear Linda:

Title: Notice of Completion of Final  
Reclamation P-1978-049

Re: Notices of Intent Submitted on  
1/6/78, 11/3/78, 2/20/79, and  
4/8/80 for the Weld County Projects

Pursuant to the rules and regulations of the Colorado Mined Land Reclamation Board, as amended June 1978, Rocky Mountain Energy (RME) submits this Notice of Completed Reclamation for all activities conducted in Weld County before January, 1981.

The majority of the operations were conducted on agricultural lands used to grow winter wheat with the balance of the activities on native range. Surface reclamation primarily consisted of scattering or plowing under the drill cuttings. A few drill pads were built which were recontoured and broadcast seeded with a rangeland pasture mix. The seed mix consisted of:

Thickspike wheatgrass ( <i>Agropyron dasystachyum</i> )	50%
Western wheatgrass ( <i>Agropyron smithii</i> )	30%
Indian ricegrass ( <i>Oryzopsis hymenoides</i> )	10%
Yellow sweetclover ( <i>Melilotus officinalis</i> )	10%

The application rate was 35 pounds P.L.S. per acre.

Ms. Linda Walker  
October 6, 1982  
Page Two

Approximately 2,142 holes were drilled and abandoned during 1978, 1979 and 1980. A list of the holes, including locations and depths, is enclosed.

RME requests that these drill holes be released from our statewide surety. Please call me at (303) 469-8844 if you have any questions.

Sincerely,

*Ivan Urnovitz*

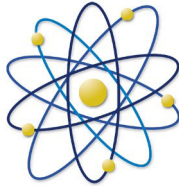
R.K. (Ivan) Urnovitz  
Licensing Specialist

Enclosures

cc: R.E. Iwanicki  
J.A. Bonner  
K.A. Nibbelink



# **EXHIBIT 12**



## **POWERTECH (USA) INC.**

### **ACTIVITY UPDATE**

Powertech (USA) Inc. is in the early planning stages of the Centennial Project, which seeks to recover uranium rights in Northern Weld County. The uranium will be used domestically for electricity generation in the United States. The company plans to submit permit applications in the latter part of 2008 to the federal, state and local agencies responsible for regulating uranium recovery.

Currently, the company is engaged in the collection of preliminary environmental data for use in planning and for use in permit applications. That collection includes test-well drilling, water sampling, geologic mapping and other activities.

Powertech aims to keep the community informed of its activities and locations of its work, and will contact interested community members with regular “activity updates.” If you wish to be removed from this list, please respond to this email message ([powertech@pwpr.com](mailto:powertech@pwpr.com)) with the word “remove” in the subject line.

#### Week of August 6- 10

Five crews on site were working on the following projects:

- 1.) Exploration Drilling to define the geology and geochemistry of the site (Sec 3 & 11, T8N, R67W)
- 2.) Engineering/Geotechnical Boring Investigation for possible Slurry Wall(Sec 3 & 11, T8N, R67W)
- 3.) Development of old monitoring wells (Sec 3 & 11, T8N, R67W)
- 4.) Installation of new monitoring wells (Sec 9, T9N, R67W)
- 5.) Installation of new monitoring wells (Sec 15, T9N, R67W)

#### Activities Week of August 13- 17

Four crews on site were working on the following projects:

- 1.) Exploration Drilling to define the geology and geochemistry of the site (Sec 3 & 11, T8N, R67W)
- 2.) Complete Engineering/Geotechnical Boring Investigation in Sec 11, T8N, R67W Monday, Starting Tuesday Develop old wells Sec 3, T8N, R67W and set protective casings on new wells in Sec 9 and 15, T9N, R67W.
- 3.) Installation of new monitoring wells (Sec 9, T9N, R67W)

4.) Installation of new monitoring wells (Sec 15, T9N, R67W)

Our team in the field, including the Centennial Project Site Manager for Powertech's Environmental Baseline Monitoring Program, would like the community to know the following additional details:

- 1.) Nature of work: There is no mining or extracting of uranium happening at present. The permits that Powertech obtained a few weeks ago were permits to conduct environmental and engineering investigations, to gather necessary information to file a permit application for mining/extraction operations.
- 2.) Purpose – We are performing environmental compliance activities mandated by and under the direction of the State of Colorado. We are working closely with the Minerals Division, Water Resource Division, and Department of Public Health and the Environment. We have had site inspections by both the Minerals and Water Resources Divisions, multiple times in the last 6 weeks. We are working under permits and procedures obtained through those offices.
- 3.) Setting - The sites we are working on are historically range and dryland farm lands. As with any landowner out here, we have no reason to expect to encounter any hazardous materials. The only known chemicals used in the region are traditional agri-chemicals – fertilizers, pesticides and herbicides.
- 4.) Drilling Methods and New Well Installation - The drilling methods we are using are standard mud, air rotary and augering methods utilized commonly in the region. The most frequently used method is air rotary, the drilling method used by the homeowners in the region to install their domestic use wells. In fact, one of our drillers is the same contractor who installed many of the homeowner wells. So the equipment, the drillers and the subsurface conditions are the same as every homeowner encountered when drilling their own wells.
- 5.) Repairing Old Wells - There are some wells south of CR 100 that Rocky Mountain Energy installed in the early 1980s in accordance with the regulations of the period. We are attempting to find those old wells and repair them. The Water Resource Division has inspected some of these wells and our repair activities. We will either bring them back to useful purpose by repairing them physically and flushing the screened zone according to Colorado standards, or, if found to be useless we will abandon them by grouting them closed, again using Colorado regulatory standards. Some of the activities that may be seen from the roadways are:

- a.) Some of the wells are covered by protective steel casings from the 1980s.



b.) Some wells were broken off at ground surface during the intervening 20 plus years. We have attempted to locate wells with GPS system and hand digging. Some wells we could not locate this way and we used a backhoe to find the buried well. We gently raked 4 inches at a time searching for the casing. We did not break any wells with our backhoe. The photos found on some websites are actually jagged broken casings that were buried for 20 plus years.



c.) To repair these broken wells we cut the PVS pipe flush and add PVC pipe above the ground surface. We then add a protective steel casing and secure the well with a concrete pad.



d.) After the physical repairs are complete, we clean out the old well by flushing it out with air or a combination of air and water to lift out the sediment that has fallen into the hole and any other material that may be impeding flow through the well. This procedure is called well development. This is the same procedure that homeowner's well contractor used after installing new wells and when rehabilitating a poorly functioning well. This is natural well water which simply has a lot of sediment and fine grained-aquifer material in it. It spills onto the ground during the process and infiltrates or evaporates. The water may be discolored due any number of reasons: top soil falling into the well over the years, the fines from the subsurface lignite zones, etc.

QUESTIONS: If you have questions about Powertech activity in your community, please contact the Powertech hotline at 303-898-4240 or toll free at 1-877-798-4240. We will respond to your questions and include related details in upcoming Activity Updates.

Thank you,  
Richard Blubaugh, VP – Environmental, Health and Safety Powertech (USA) Inc.

# **EXHIBIT 13**



**PowertechExposed.com**  
**False and Misleading Statements / Content**

**Statement 1:** [http://www.powertechexposed.com/open\\_well\\_casings.htm](http://www.powertechexposed.com/open_well_casings.htm)

Powertech contractor leaves open, unprotected well casings next to county road right-of-ways

*Powertech violates Colorado regulations requiring capped wells*

The photos below were taken on July 15, 2007. A contractor working for Powertech excavated two test well casings located on the northeast corner of Weld County Roads 96 and 19. The wells were left uncapped for several days in violation of Colorado regulations:

"10.1.3 All wells and boreholes, when unattended, shall be securely sealed, capped or covered. It is the responsibility of the well construction contractor and pump installation contractor to ensure the well is securely covered while unattended during well construction and pump installation and securely sealed or capped upon completion of the well. Thereafter, it is the responsibility of the well owner to ensure that the well is securely sealed or capped."

The wells are on land owned by Rocky Mountain Energy Co. of Houston, Texas. Rocky Mountain Energy is owned by Union Pacific Resources Group Inc., which is a wholly-owned subsidiary of Anadarko Petroleum Corporation. Anadarko's corporate offices are in Houston, and the company has offices in Algeria, Brazil, China, Indonesia, Tunisia, and Qatar. Powertech purchased the uranium mining rights on this property from Anadarko on September 27, 2006. The contract requires Powertech to pay Anadarko a 5-6% royalty on all processed "yellow cake" uranium sold.

**Response:** False / Misleading. While these open well casings are on property owned by Powertech, these are not wells that were drilled by Powertech or its contractors. In fact, the wells left unprotected were drilled by previous exploratory efforts in the 1980s, and were uncovered by Powertech's geotechnical teams while in the process of locating each bore site. Because it has newly acquired the properties and rights, Powertech is in the process of ensuring that all wells on its properties meet state and local safety requirements and standards. The State is extremely satisfied with Powertech's initiative to repair and cap the wells, which included casing each with blue steel protective casings and locking mechanisms. You can confirm their findings by calling Carl Mount (303.866.3567) or Allen Sorenson at the Colorado Reclamation, Mining and Safety Division of the Department of Natural Resources.

**Statement 2:** [http://www.powertechexposed.com/NOI\\_approval.htm](http://www.powertechexposed.com/NOI_approval.htm)

**Colorado mining officials approve secret plan to drill 23 exploratory wells in Weld County**  
*Powertech refuses request to waive confidentiality*

Colorado regulator approves additional monitor wells for Powertech  
News Release - Peter Webb Public Relations, Inc. - June 27, 2007

Notice of Intent to Conduct Prospecting Operations for Hard Rock/Metal Mines - Colorado Division of Reclamation, Mining and Safety (pdf)