

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/> <b>PLUG BACK</b> <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-03153	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Energy Reserves Group, Inc.		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR Box 3280 Casper, Wyoming 82602		8. FARM OR LEASE NAME O. H. Randel	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1620' FSL & 790' FEL NE/SE At proposed prod. zone		9. WELL NO. 1 - E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approximately 16½ miles south of Bloomfield, NM		10. FIELD AND POOL, OR WILDCAT Basin Dakota	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1620'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 9, T26N - R11W	
16. NO. OF ACRES IN LEASE 1920		12. COUNTY OR PARISH San Juan	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320		13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2700'		19. PROPOSED DEPTH 6350'	
20. ROTARY OR CABLE TOOLS Rotary		21. APPROX. DATE WORK WILL START* Jan-Feb 1980	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6316 GR (ungraded)		22. APPROX. DATE WORK WILL START*	

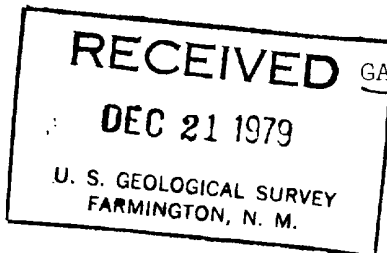
## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12¼"	8-5/8"	20#	700+ '	Cmt to Surface
7-7/8"	4½"	10.5#	6350'	500sx

This is a new location. Well previously submitted at another location

PLEASE CANCEL PREVIOUS APPLICATION

Energy Reserves Group, Inc. proposes to drill the above referenced well with rotary tools from surface to T.D. Proposed zone of completion is the Dakota "A" Sand @ 6300'.



GAS DEDICATED TO THE EL PASO NATURAL GAS COMPANY

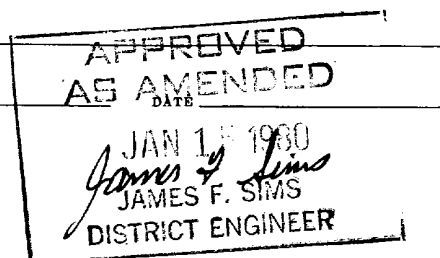
ADDITIONAL WELL NEEDED PURSUANT TO NEW MEXICO  
U.S.G.S. RATIFICATION DATED JUNE 8, 1979.

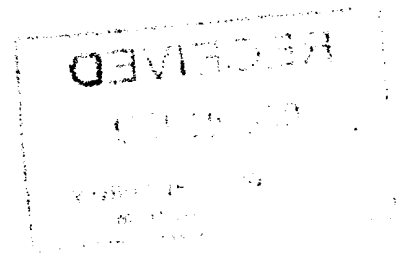
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED William J. [Signature] TITLE Field Services Administ DATE 12-17-79  
(This space for Federal or State office use)PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

oh Bank NMOCG

\*See Instructions On Reverse Side





## OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088  
SANTA FE, NEW MEXICO 87501Form C-102  
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

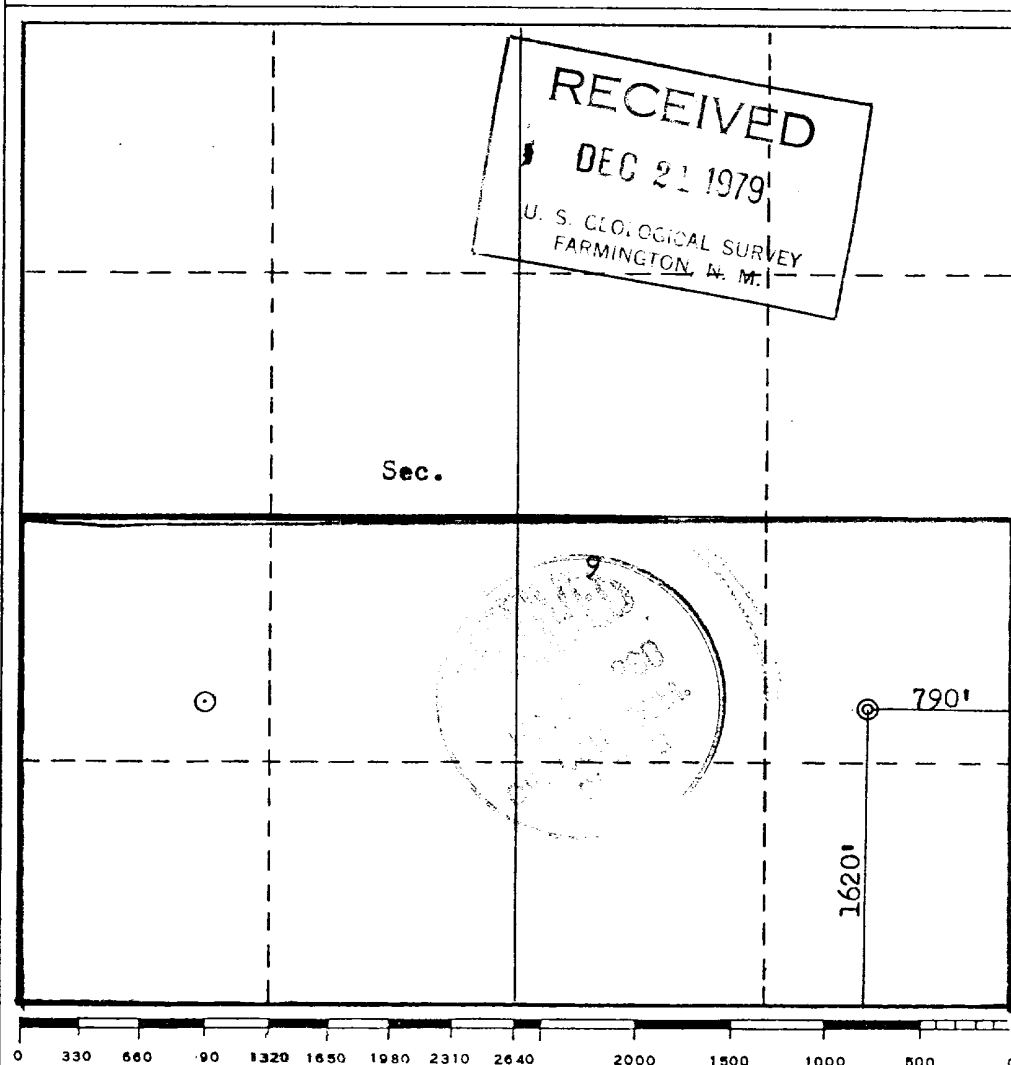
Operator <b>ENERGY RESERVES GROUP</b>			Lease <b>RANDALL</b>		Well No. <b>1-E</b>
Unit Letter <b>I</b>	Section <b>9</b>	Township <b>26N</b>	Range <b>11W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1620</b> feet from the <b>South</b> line and <b>790</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6316</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin Dakota</b>	Dedicated Acreage: <b>320</b> ( <del>1600</del> ) Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



## CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name \_\_\_\_\_  
Position \_\_\_\_\_  
Field Services Administrator  
Company  
Energy Reserves Group, Inc.  
Date  
December 18, 1979

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed  
November 20, 1979  
Registered Professional Engineer  
and/or Land Surveyor  
Fred B. Kerr, Jr.  
Certificate No.  
3950

Supplemental to Form 9-331C

1. The geologic name of the surface formation.

*Nacimiento*

2. The estimated tops of important geologic markers.

<i>Ojo Alamo</i>	<i>200'</i>
<i>Kirtland</i>	<i>750'</i>
<i>Pictured Cliffs</i>	<i>1700'</i>
<i>Lewis</i>	<i>2000'</i>
<i>Mesa Verde</i>	<i>2600'</i>
<i>Mancos</i>	<i>4400'</i>
<i>Gallup</i>	<i>5260'</i>
<i>Dakota "A"</i>	<i>6300'</i>
<i>T.D.</i>	<i>6350'</i>

3. The estimated depths at which anticipated water, oil, gas, or other mineral-bearing formations are expected to be encountered.

<i>Ojo Alamo</i>	<i>@</i>	<i>200'</i>	<i>Water</i>
<i>Pictured Cliffs</i>	<i>@</i>	<i>5260'</i>	<i>Possible gas</i>
<i>Gallup</i>	<i>@</i>	<i>6300'</i>	<i>Possible oil and gas</i>
<i>Dakota</i>	<i>@</i>	<i>6300'</i>	<i>gas</i>

4. The proposed casing program, including the size, grade, and weight-per-foot of each string and whether new or used.

<i>8-5/8"</i>	<i>K-55</i>	<i>20#</i>	<i>New</i>
<i>4-1/2"</i>	<i>K-55</i>	<i>10.5#</i>	<i>New</i>

5. The lessee's or operator's minimum specifications for pressure control equipment which is to be used, a schematic diagram thereof showing sizes, pressure ratings (or API series), and the testing procedures and testing frequency.

*An 8" series 900 dual ram hydraulic BOP will be used. It will be pressure tested to 800 psi after installation and prior to drilling out from under surface casing. The BOP will be operated on each trip.*

6. The type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting material to be maintained.

*A fresh water base chemical gel mud will be used for drilling operations. Adequate supplies will be on location to handle minor lost circulation and blow out prevention.*

7. The auxiliary equipment to be used, such as (1) kelly cocks, (2) floats at the bit, (3) monitoring equipment on the mud system, (4) a sub on the floor with a full opening valve to be stabbed into drill pipe when the kelly is not in the string.

*A kelly cock, a sub w/drill pipe thread and a full opening valve on ria will be used*

8. The testing, logging, fracing, and coring programs to be followed with provision made for required flexibility.

*No coring is planned. Three DST's may be run depending on shows encountered. One of Pictured Cliffs, Gallup, and Dakota. Logs will consist of DIL, Gamma Ray, and Density - Neutron. Fracing will consist of 100,000 gal gel water & 250,000 #20/40 sand.*

9. Any anticipated abnormal pressures or temperatures expected to be encountered or potential hazards such as hydrogen sulfide gas, along with plans for mitigating such hazards.

*None are anticipated.*

10. The anticipated starting date and duration of the operations.

*It is expected that the drilling of this well will commence sometime in October of 1979. It will take approximately 15-20 days to drill, complete, and test this well.*

1. EXISTING ROADS

A-E. See attached map

F. Existing roads will not require any improvement to allow for rig traffic. They are currently maintained by Energy Reserves Group, Inc. and Southern Union Refinery Company.

2. PLANNED ACCESS ROADS

Approximately 800' of new access road will be required.

- (1) Maximum width will be a 20' running surface
- (2) Maximum grade will be less than 2%
- (3) No turn outs are planned
- (4) Drainage will be constructed as per BLM recommendations
- (5) No major cuts or fills are required
- (6) No surfacing is planned
- (7) No gates, cattle guards, or fence cuts are required

3. LOCATION OF EXISTING WELLS

See attached map

Energy Reserves Group, Inc. Lease covers Section 9, 10, & 15

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. (Existing)

See attached map

- (1) There are tank batteries located @ Wells #1, #2, & #5
- (2) Wells #1 & #2 are equipped with pumping units. Wells #3 & #5 have a separator only
- (3) Oil gathering lines are very short, running from the well head to the battery located at the edge of the well site.
- (4) Gas is sold to El Paso Natural Gas Company @ the well head. Gathering lines are buried and they belong to El Paso Natural Gas Company
- (5) NA
- (6) NA

B. (Proposed)

- (1&2) See attached plat  
It will probably be necessary to set a 200-400 barrel tank at the edge of the well site to collect condensate
- (3) Standard oil field construction methods will be used. No outside construction materials will be needed
- (4) All pits and any rotating machinery will be fenced or guarded so as to protect livestock & wildlife

C. (Rehabilitation)

Those disturbed areas no longer needed after drilling and completion operations will be recontoured and reseeded as per BLM recommendations.

5. LOCATION & TYPE OF WATER SUPPLY

- A. Water will be obtained from the San Juan River located approximately 16 miles north
- B. Water will be hauled by trucks over existing roads.
- C. No water wells are planned

6. SOURCE OF CONSTRUCTION MATERIALS

None needed

7. METHODS OF HANDLING WASTE DISPOSAL

- (1-5) Cuttings, drilling fluids and produced water will be contained in the reserve pit. Any oil produced will be put into tanks. A portable toilet will be used during drilling and completion operations. Garbage and other trash will be placed in a deep pit and buried.
- (6) Upon completion of operations the location will be policed up and all trash and garbage placed in the trash pit. The pit will then be covered to prevent scattering. The reserves pit will be fenced and allowed to dry. After drying it will be back-filled and recontoured to as near its original contour as possible.

8. ANCILLARY FACILITIES

No camps or airstrips are planned

PAGE TWO

9. WELL SITE LAYOUT

See attached

10. PLANS FOR RESTORATION OF THE SURFACE

See 7. (6)

If the drilling results in a dry hole or failure, the entire disturbed area including access road will be contoured and reseeded as per BLM recommendations. The location rehabilitation will commence as soon as the pit has sufficiently dried to allow back-filling.

11. OTHER INFORMATION

The area is generally arid, high desert type country. The area near the location is relatively flat with gentle rolling hills with numerous small gullies and dry washes. Vegetation is sparse, consisting of sage brush and assorted native grasses. Wildlife is also sparse with an occasional mule deer, coyotes, rabbits, badgers, and other small rodents and birds. There are no nearby occupied dwellings. An Archaeological Inspection is planned.

12. LESSEE'S OR OPERATOR'S REPRESENTATIVES

The below listed personnel will be responsible for assuring compliance with the approved surface use plan.

Mr. T.C. Durham  
P.O. Box 977  
Farmington, New Mexico 87401  
Home Phone 505-325-7978  
Office Phone 505-327-1639  
Mobil Phone 505-325-1873 #539

Mr. Harland Gould  
2124 Summit Drive  
Farmington, New Mexico 87401  
Home Phone 505-325-3235  
Office Phone 505-334-6200  
Mobil Phone 505-325-0474

Mr. Bill Fiant  
P.O. Box 3280  
Casper, Wyoming 82602  
Home Phone 307-265-2529  
Office Phone 307-265-7331

13. CERTIFICATION

See attached

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by \_\_\_\_\_

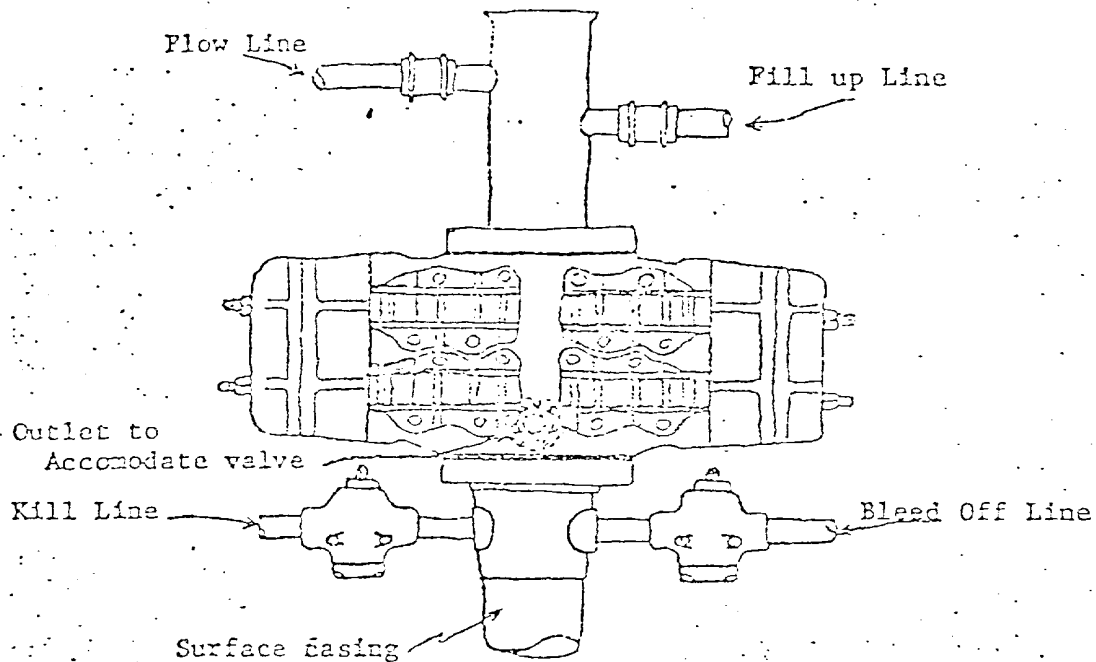
Jack Fritz  
and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

12-17-79

Date

William J. [Signature]  
Name and Title  
FIELD SERVICES ADMINISTRATOR





Blowout preventer is Shaffer double hydraulic equipped with drill pipe rams in the top and blind rams in the bottom.

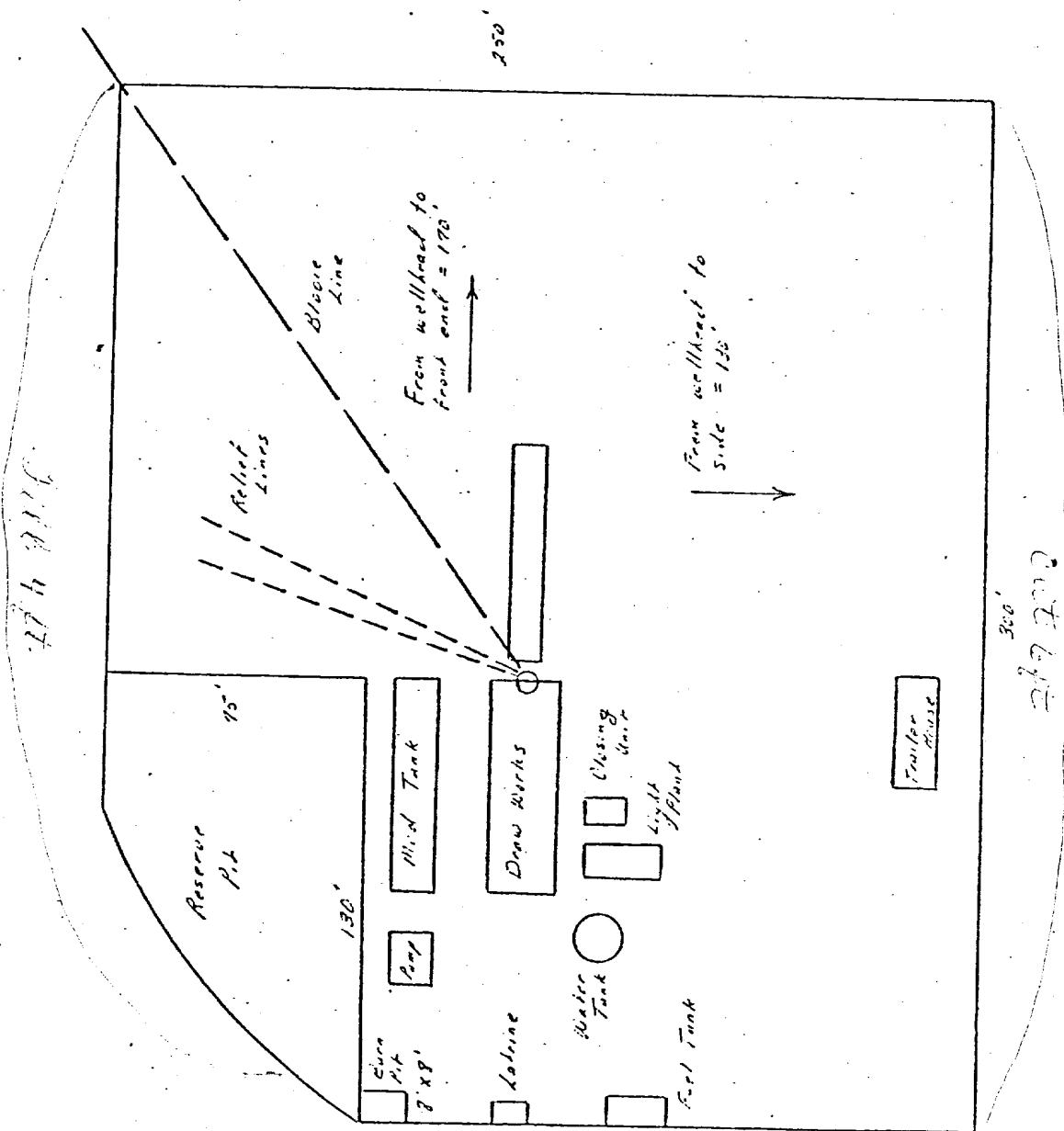
Blowout preventer closing unit is Kookey 30 gallon accumulator unit.

When choke manifold is used, it will be installed downstream from bleed off valve.

Kill line or bleed off line may be installed at flanged opening in blowout preventer.

S

Typical location plot for Mesa Verde and Dakota Wells  
Randall #1E NESE 9-26-11



NE  
↑

RECEIVED  
JUN 14 1917  
U.S. DEPT. OF THE INTERIOR

E

**RMD CASPER**

10

Vicinity Map for  
ENERGY RESERVES GROUP #1-E RANDALL  
1620'FSL 790'FEL Sec 9-T26N-R11W  
SAN JUAN COUNTY, NEW MEXICO

RECEIVED

DEC 1 1979

RMD CASPER

Well Name Randall # 1E  
Location NE SW 9-26-11  
Formation Dakota

We, the undersigned, have inspected this location and road.

U. S. Forest Service  
Tommy Ford  
Archaeologist  
Date 12/7/79

Bureau of Indian Affairs Representative  
Bob Ball  
Bureau of Land Management Representative  
Date 12-7-79

Andy Stinson  
U. S. Geological Survey Representative  
Date 12/7/79

Seed Mixture: TI

Equipment Color: brown

Road and Row: (Same) or (Separate)

Remarks:



# United States Department of the Interior

GEOLOGICAL SURVEY  
FARMINGTON DISTRICT  
DURANGO DISTRICT

Above Data Required on Well Sign

## GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

These requirements apply generally to all oil and gas operations on Federal and Indian leases. They apply specifically to the above-described well. Special requirements that apply and are effective for this well, if any, are check-marked in Section 15 of these General Requirements.

### I. GENERAL

- A. Full compliance with applicable laws and regulations, with the approved Permit to Drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease name or unit name, well number, location of the well, and the lease serial number.
- C. A complete copy of the approved Application for Permit to Drill and the accompanying Surface Use and Operations Plan, along with any conditions of approval, shall be available to authorized personnel at the drillsite whenever active construction or drilling operations are under way.
- D. A drilling operations progress report is to be submitted daily from spud date until the well is completed and the Well Completion Report (Form 9-330) is filed. The report should be on paper not less than 5 X 8 inches in size, and each page should identify the well by operator's name, well name and number, and by well location.
- E. Immediate notice is required of all blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life. (See NTL-3A.)
- F. No construction activities, such as roads, well sites, tank battery sites, pits, or other work involving surface disturbance of previously non-disturbed land will be commenced until a Surface Use and Operations Plan is submitted and approval obtained.
- G. If, during operations, any archeological or historical sites, or any object of antiquity subject to the Antiquities Act of June 8, 1906, are discovered, all operations which would affect such sites are to be suspended and the discovery reported promptly to the appropriate office of the Geological Survey.
- H. Prior approval of the District Engineer is required for variance from the approved drilling program and before commencing plugging operations, plugback work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval does not waive the written report requirements.

- I. Blowout prevention equipment is to be installed, tested, and in working order before drilling below the surface casing, and shall be maintained ready for use until drilling operations are completed.
  - J. All shows of fresh water and minerals will be reported and protected.
  - K. Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation, and appearance. All waste associated with the drilling operations will be contained and will be buried in place (in a separate trash pit) or removed and deposited in an approved sanitary landfill. All garbage (metal containers will be crushed) and debris left on site will be buried at least two feet deep. All trash and debris will be buried or removed from the site within one month after removal of the drilling rig and/or completion rig, and the wellsite will be kept clean and in an aesthetically satisfactory condition for the life of the well.
  - L. Unless drilling operations are commenced within one year, approval of an Application for Permit to Drill will expire. A written request for extension may be granted if timely submitted.
2. CONSTRUCTION ACTIVITIES (Refer to Surface Operating Standards for Oil and Gas Exploration and Development--Second Edition)

- A. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the Surface Use Plan, the conditions of approval, and a copy of Sections 2 and 3 of these General Requirements.
- B. No gravel or other related minerals from new or existing pits on Federal land will be used in construction of roads, well sites, etc., without prior approval from the surface management agency.
- C. Vegetative materials removed during construction must be disposed of in such manner that it does not detract from the aesthetics of the area and does not accelerate erosion. Vegetation removed during clearing operations should be placed in drainages, washes, gullies, etc., and "walked down" by crawler-type tractor. If there are no drainages in the immediate area, the vegetation should be "walked down" in place. All trash resulting from construction activities will not be piled or left in rows, but will be left so it does not detract from the natural appearance of the area. Any available topsoil encountered during construction should be stockpiled for use in restoring the pit area after the pits are covered. A drainage ditch must be constructed above the cut slope of the pad.
- D. Unless otherwise approved, all access roads should be limited to 20 feet in width, excluding turnouts.
  - (1) Water bars will be constructed on the access road to the well location and conform to surface management agency specifications. The maximum slope distance between water bars will be:

<u>% Slope</u>	<u>Slope Distance</u>
Less than 1% . . . . .	.400 feet
1% - 5% . . . . .	.300 feet
5% - 15% . . . . .	.200 feet
15% - 25% . . . . .	.100 feet
Greater than 25% . . . . .	.50 feet

When the access road is graded, water bars will be left in the road or replaced immediately upon completion of grading.

- E. Each existing fence to be crossed by the permittee will be braced and tied off before cutting so as to prevent slacking of the wire. The opening will be protected as necessary during construction to prevent the escape of livestock and upon completion of construction, the fence will be repaired back to the original standard of the existing fence. A cattleguard will be installed

in any fence where a road is to be regularly traveled. A twelve-foot gate will be installed adjacent to the cattleguard when necessary.

NOTE: Sections 2-C and 2-D above apply primarily to Federal surface. If the land is privately owned, these requirements may be varied to comply with the operator-landowner agreement.

### 3. DRILLING PITS

- A. Mud pits will be constructed so as not to leak, break, or allow discharge of liquids. Pits are not to be located in natural drainage. Any plastic material used to line pits must be removed to below-ground level before pits are covered.
- B. All unguarded pits containing liquids will be fenced.
- C. Liquids in pits will be allowed to evaporate, or be properly disposed of otherwise, before pits are recontoured. Under no circumstances will pits be cut and drained.

### 4. CASING AND CEMENTING REQUIREMENTS

- A. Surface casing is to be set at sufficient depth to protect fresh water zones and provide well control; and cement circulated to the surface.
- B. Intermediate and production casing strings are to be set and cemented as necessary to effectively isolate and seal off all water, oil, gas, or coal-bearing strata encountered in the well down to the casing point.
- C. Prior to drilling the plug after cementing, all casing strings shall be pressure tested. Test pressure shall not be less than 600 psi for surface casing, and a minimum of 1,500 psi or 0.2 psi/ft., whichever is greater, for other casing strings. If the pressure declines more than 10 percent in 30 minutes, or if there is other indication of a leak, the casing shall be recemented, repaired, or an additional casing string run, and the casing shall be tested again in the same manner.
- D. After cementing but before commencing any tests, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe, except that in no case shall tests be initiated until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log.

### 5. BLOWOUT PREVENTION

- A. Blowout preventers and related well control equipment shall be installed, tested, and used in such manner necessary to prevent blowouts. All wells must be equipped with at least one blowout preventer while drilling below surface casing.
- B. While drill pipe is in use, ram-type blowout preventers shall be actuated to test proper functioning once each trip, but in no event less than once each day. The annular-type blowout preventer shall be actuated on the drill pipe at least once each week.
- C. Blowout preventers are to have proper rams for the operations being performed. Casing rams are required when running casing.
- D. Blowout preventers are to have handwheels installed.
- E. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.
- F. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.

- G. Drill string safety valve(s) to fit all pipe in the drill string are to be maintained on the rig floor while drilling operations are in progress.
- H. Blowout prevention drills are to be conducted as necessary to assure that equipment is operational and that each crew is properly trained to carry out emergency duties. All BOP tests and drills are to be recorded in the driller's log.
- I. The maximum pressure to be allowed on blowout preventers during well control operations is to be posted for each casing string.
- J. The characteristics, use, and testing of drilling mud and the conduct of related drilling procedures shall be such as are necessary for well control. Quantities of mud materials sufficient to insure well control shall be maintained, readily accessible for use at all times.
- K. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the toolpusher shall maintain rig floor surveillance at all times, unless the well is secured with blowout preventers or cement plugs.

#### 6. REPORTS

- A. The following reports shall be filed with the District Engineer within 15 days after the work is completed:
  - (1) Five copies of Sundry Report, Form 9-331, giving complete information concerning:
    - (a) Setting of each string of casing. Show size, grade and weight of casing set, size hole, depth set, amount and type of cement used, whether cement circulated, top of cement behind casing if determined, depth of cementing tools if used, casing test method and results, and date work was done. Show spud date on first report submitted.
    - (b) Intervals tested, perforated, acidized, or fractured, and results obtained. Show date work was done.
  - (2) Five copies of Well Completion Report, Form 9-330. Show formation tops, drill stem test information, completion data, and production tests. Show all oil and gas zones and important water sands under Item 37. Data on water sands should include rate of water inflow and elevation to which water rose in hole.
  - (3) Two copies of all electrical and radioactivity logs run.

#### 7. DRILLER'S LOG

- A. The following shall be entered in the daily driller's log:
  - (1) Blowout preventer pressure tests, including test pressures and results.
  - (2) Blowout preventer tests for proper functioning.
  - (3) Blowout prevention drills conducted.
  - (4) Casing run, including size, grade, weight and depth set.
  - (5) How pipe was cemented, including amount of cement, type, whether cement circulated, location of cementing tools, etc.
  - (6) Waiting on cement time for each casing string.
  - (7) Casing pressure tests after cementing, including test pressure and results.



#### 8. DRILLSTEM TESTS

- A. Estimated amounts of oil and gas recovered and/or produced during drillstem tests are to be shown in the driller's log and reported in accordance with NTL-4.

#### 9. GAS FLARING

- A. Approval is granted to flare gas while drilling and completion testing.
- B. When gas is used for drilling, the blooey line will be located where no damage to vegetation will occur. If this is not possible, an earthen baffle will be constructed to keep the heat and residue within the operating area.
- C. Failure to request permission to vent gas after 60 days following the date the well is completed will result in compensation due the United States being the full value of the gas so wasted. (See NTL-4.)

#### 10. WATER DISPOSAL

- A. An application for approval of the disposal method for water production from all new wells must be filed with the District Engineer pursuant to Section VII of NTL-28. Failure to timely file such application will be considered an incident of non-compliance and will be grounds for issuing a shut-in order until the application is submitted.

#### 11. SAFETY

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Drilling rig engines should have water-cooled exhausts.
- C. Rig safety lines are to be installed.
- D. Hard hats must be utilized.

#### 12. SUBSEQUENT OR CHANGE OF PLANS

- A. Any additional construction, re-construction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, will require the filing of a suitable plan and prior approval by the Survey after clearance with the surface management agency.

#### 13. REMOVAL OF DRILLING RIG

- A. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drillsite without prior approval from the Survey.

#### 14. ABANDONMENT

- A. If the well is dry and is to be plugged, approval of the proposed plugging program may be obtained orally; however, oral approval must be confirmed in writing by immediately filing a Notice of Intention to Abandon on Form 9-331 in quintuplicate with the District Engineer. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc.
- B. Upon completion of approved plugging, erect a regulation well marker which should not be less than 4 inches in diameter and extend at least 4 feet above general ground level. Heap up the dirt around the base of the marker about 12 inches to take care of any settling of the cellar. The top of the marker must be closed or capped. The following minimum information shall be permanently placed on the marker with a plate, cap, or welded bead:

- (1) Operator
- (2) Well number and name
- (3) Section, Township and Range
- (4) Footage location

If approval is obtained to omit the dry hole marker, casings should be cut off four feet below ground level.

- C. Within 15 days after plugging the well, a Subsequent Report of Abandonment is to be filed on Form 9-331 in quintuplicate, showing the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were placed, and the date plugging was completed. When all surface restoration work is completed, advise the District Office so that a field inspection of the wellsite can be made.
- D. If, upon abandonment of wells on Federal surface, the retention of the well pad and/or access road is not considered necessary for the management and multiple use of the natural resources, they will be ripped a minimum of 12" in depth. After ripping, water bars will be installed as stated in 2-D-(1). All ripped surfaces are to be protected from vehicular travel by construction of a dead-end ditch and earthen barricade at the entrance to these ripped areas. (Reseeding of the affected areas may be required.)
- E. Surface restoration after abandonment of wells on non-Federal surface normally will be in accordance with the operator-landowner agreement; however, minimum Federal restoration requirements on private surface-Federal minerals will be required.

#### 15. SPECIAL STIPULATIONS

The following special requirements apply and are effective when checked:

- ☐ A. \_\_\_\_\_ surface casing should be set at \_\_\_\_\_ feet and cement circulated to the surface.
- ☐ B. Ram-type blowout preventers and related control equipment shall be pressure tested with water to the rated working pressure of the stack assembly (except that the annular-type preventer may be tested to 70 percent of rated working pressure) (a) when installed; (b) before drilling possible abnormally-pressured zones; and (c) following repairs that require disconnecting a pressure seal in the assembly.
- ☐ C. Minimum required fill of cement behind the \_\_\_\_\_ casing is to \_\_\_\_\_.
- ☒ D. All above-ground permanent structures and equipment will be painted a non-glare color that simulates the natural color of the site, as follows:
  - ☐ Brown, Federal Standard 595a-30318
  - ☐ Green, Federal Standard 595a-34127
  - ☐ Gray, Federal Standard 595a-36357
  - ☒ Sand, Federal Standard 5952-30277
- ☐ E. A kelly cock will be installed and maintained in operable condition.
- ☒ F. The District Office is to be notified in sufficient time for a representative to witness cementing of ~~the~~ all casing.
- ☐ G. A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the U. S. Geological Survey, P. O. Box 26124, Albuquerque, New Mexico 87125. The effective date of the agreement must be prior to any sales.

- ☒ H. Compacted areas will be plowed or ripped before reseeding. Reseeding of the disturbed lands is required upon completion of drilling and completion activities and abandonment of the well. All seeding will be done between July 1 and September 15. Seeding will be done with a disc-type drill with two boxes for various seed sizes. The drill rows will be eight to ten inches apart. The seed will be planted not less than one-half inch deep or more than one inch deep. The seeder will be followed with a drag, packer, or roller to insure uniform coverage of the seed, and adequate compaction. Drilling of the seed will be done on the contour where possible, not up and down the slope. Where slopes are too steep for contour drilling, a "cyclone" hand-seeder or similar broadcast seeder will be used. Seed will then be covered to the depth described above by whatever means is practical.

If, in the opinion of the surface management agency, the seeding is unsuccessful, the lessee/operator may be required to make subsequent seedings until revegetation is successful.

Species to be planted in pounds pure-live-seed per acre:

<input type="checkbox"/>	Seed Mix No. 1	
	Crested Wheatgrass ( <i>Agropyron desertorum</i> )-----	2½
	Smooth Brome ( <i>Bromus Inermis</i> )-----	2½
	Fourwing Saltbush (Dewinged) ( <i>Atriplex canescens</i> )-----	½
	Nomad Alfalfa ( <i>Medicago sitiva</i> )-----	1
<input type="checkbox"/>	Seed Mix No. 2	
	Crested Wheatgrass ( <i>Agropyron desertorum</i> )-----	3½
	Fourwing Saltbush (Dewinged) ( <i>Atriplex canescens</i> )-----	1
	Sand Dropseed ( <i>Sporobolus cryptandrus</i> )-----	¾
	Alkali Sacaton ( <i>Sporobolus airoides</i> )-----	¾
<input type="checkbox"/>	Seed Mix No. 3	
	Fourwing Saltbush (Dewinged) ( <i>Atriplex canescens</i> )-----	1
	Sand Dropseed ( <i>Sporobolus cryptandrus</i> )-----	1½
	Alkali Sacaton ( <i>Sporobolus airoides</i> )-----	1½
	Shad Scale ( <i>Atriplex confertifolia</i> )-----	¾
<input checked="" type="checkbox"/>	Seed Mix No. 4--NIPP	
	Indian Ricegrass-----	1
	Sand Dropseed-----	1
	Galletta-----	2
<input type="checkbox"/>	Seed Mix No. 5--NIPP	
	Alkali Sacaton-----	1
	Sand Dropseed-----	1
	Galletta-----	2
<input type="checkbox"/>	Seed Mix No. 6--BIA	
	Alkali Sacaton-----	1
	Sand Dropseed-----	1
	Galletta-----	2
		Minimum % PLS accept.
		76%
		76%
		55%

PLS (Pure Live Seed) = Germination X Purity

After drilling is completed, the pad will be seeded with the recommended seed mix. Seed will be drilled to a depth of not less than ¼ inch and not more than ¾ inch, followed by a drag or packer. Compacted areas will be plowed (disced) to a depth of 4-6 inches before seeding. Areas too steep to be drilled will be broadcast seeded with a "cyclone" hand-held seeder or similar device, using 150% of the recommended drilled rate of seed per acre. The cut slope will be dressed up and seeded according to the above stipulation.

- ☐ I. No well and/or production equipment within the irrigable fields of the Navajo Indian Irrigation Project will exceed two feet above the natural ground surface elevation, and will be adequately barricaded for safety.
- ☒ J. Any production piping systems <sup>outside the well area</sup> shall be installed with at least four feet of cover.
- ☐ K. In addition to the well-control equipment stipulated in Section 5, either an annular blowout preventer or a rotating head must be used while drilling below surface casing to. \_\_\_\_\_.
- ☐ L. Other:

DIRECTORY OF FEDERAL PERSONNEL  
OIL AND GAS OPERATIONS IN FARMINGTON AND DURANGO DISTRICTS

Surface Use and Rehabilitation

Bureau of Land Management  
P. O. Box 568, or  
900 La Plata Highway  
Farmington, New Mexico 87401

Office hours: 7:45 a.m. to 4:30 p.m.

Office phones: (505) 325-3581, 325-3582, and 325-2922

Names of people involved with Oil and Gas Operations:

Bob Calkins, Area Manager  
Bob Moore, Lands & Minerals Supervisor  
Russ Pigors, Inspector  
Bob Marler, Inspector  
Steve Friedman, Inspector

Drilling and Producing Operations

U. S. Geological Survey--Oil and Gas Operations  
P. O. Box 959, or  
3535 East 30th Street  
Farmington, New Mexico 87401

Office hours: 8:00 a.m. to 4:30 p.m.

Office phones: (505) 325-4572 or 325-4573

Home Phones

Jim Sims, District Supervisor.....  
Errol Becher, Petroleum Engineer.....325-3886  
Mildred Kuchera, Petroleum Engineer.....325-3448  
Bill Spence, Petroleum Engineer.....327-2193  
Ray Swanson, Petroleum Engineering Technician.....325-8189  
Ken Baker, Petroleum Engineering Technician.....327-2170  
Fred Edwards, Petroleum Engineering Technician.....325-7885  
Andrew Stump, Environmental Scientist.....327-0507  
George Carlson, Environmental Scientist.....325-0757

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U. S. Geological Survey--Oil and Gas Operations  
Federal Building  
701 Camino del Rio  
Durango, Colorado 81301

Office hours: 8:00 a.m. to 4:30 p.m.

Office phone: (303) 247-5144

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Terry Galloway, Petroleum Engineering Technician.....247-3646  
Randall Walker, Petroleum Engineering Technician.....247-0487  
John Keller, Environmental Scientist.....247-5308  
Donald Englishman, Environmental Scientist.....563-4314