

BEREN CORPORATION



Government #4-27  
 NENE Section 27, T8N, R58W  
 Weld County, Colorado

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COLORADO OIL & GAS CONS. COMM.

TEN POINT OPERATIONAL PLAN

1. The surface formation is Cretaceous Fox Hills
2. Estimated important geologic markers are as follows:

Niobrara 5538'  
 Carlile 5831'  
 "D" Sand 6278'  
 "J" Sand 6362'

3. Operator expects to encounter hydrocarbons in the "D" Sand and the "J" Sand. No other formations are expected to contain oil, water or gas in measurable quantities.
4. The proposed casing program:

Surface Casing (New)

<u>Depth</u>	<u>Size</u>	<u>Grade</u>	<u>Weight</u>
+250'	8 5/8"	K-55	24#

Production Casing (New)

<u>Depth</u>	<u>Size</u>	<u>Grade</u>	<u>Weight</u>
+6450'	5 1/2"	J-55	14 & 15.5#

5. Operator's minimum specifications for pressure control equipment:

<u>Depth</u>	<u>Size</u>	<u>Series</u>	<u>Type</u>	<u>Rams</u>
250' to TD	10"	900	Cameron Dbl gate	Pipe & C.S.O.

A choke manifold is required with equivalent pressure rating as B.O.P. Prior to drilling out cement and surface casing shoe, pressure test of choke manifold and B.O.P. to rated pressure will be conducted for 15 minutes. Test B.O.P.E. each thirty (30) days thereafter. Cycle pipe rams daily and blind rams when pipe out of hole. Note on daily tour report. Schematic diagram is attached.

6. Proposed Drilling Fluid Program:

<u>Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-200'	Gel-Lime	8.9#/gal.	40 Sec/qt.	N/C
200-5500'	Native	9.2+	As needed	N/C
5500'-TD	Gel-Lime	9.6+	40	less than 10 ml

Total mud system volume will be approximately 600 barrels, excluding potential reserve pit volume.

7. Auxiliary Equipment to be used:

- (1) Kelly Cock
- (2) Bit floats will be available
- (3) Full opening floor valve with drill pipe thread
- (4) Mud system will be monitored visually

8. Drill stem tests will be made on the basis of sample shows and log analysis after TD has been reached. No cores are planned. The logging program will consist of IES from surface casing to TD, FDC-GR over zones of interest.

9. No abnormal pressures or temperatures are anticipated and no potential hazards, including hydrogen sulfide gas, are expected.

10. The anticipated starting date is August 1, 1982. An estimated ten (10) days will be required for operations.

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SURFACE USE PLAN



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1. EXISTING ROADS

A. Location of well:

The proposed well is approximately 1 3/4 mile north of New Raymer, Colorado. Attached are the surveyor's plat (Attachment "A") of the well location showing the ground elevation. Attachment "B" is the drill pad layout, including information for cuts and fills. Actual staking included directional reference stakes.

B. Proposed Route:

Maps I and II show the location in reference to the town of New Raymer, Colorado. Exit Colorado State Highway #14 at New Raymer, Colorado. The proposed location is approximately 1 3/4 mile north from New Raymer on existing County Road (gravel road) to access road (flagged), then NW to well pad location (660' FNL and 860' FEL, Section 27).

C. Types of Roads:

Highway 14 is an asphalt surface road maintained by the State of Colorado. Existing roads will be maintained as necessary to permit travel.

D. No road construction will be done. All access will be across the grass. The center line has been flagged. All vehicles will stay within a 16-foot wide track along the center line. Access roadway across grass (flagged) will commence at gravel County Road and continue northwest to well site pad. Neither the drilling rig nor any construction equipment will be moved onto the location while the ground is wet. If the well is plugged and abandoned, the access route will be restored and reseeded with native grasses, in accordance with requirements of the Pawnee National Grasslands. If any existing cattle guard on State Highway or County Road is damaged, it will be repaired.

2. PLANNED ACCESS ROADS

Refer to Map I.

If the well is completed as a producing oil or gas well, the Greeley District Office of the Forest Service and the Operator will decide what (if any) road construction is needed, depending on what kind of production occurs. Width, drainage design and necessary cattle guards will be decided upon at that time.

3. LOCATION OF EXISTING WELLS:

Existing dry holes, oil wells and water wells within a two-mile radius of the well site are shown on Map II.

4. LOCATION OF EXISTING and/or PROPOSED FACILITIES:

A. Operator controls a tank battery and production facilities located in the SE/4 and in the SWNE of Section 27, T8N, R58W.

B. Contemplated facilities in the event of production:

1. All details and specifications of the design and construction of these facilities and the location of flowlines will be decided upon and approved by Forest Service representative when the nature of production is known.

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2. Existing tank battery in SWNE would be utilized.
3. Attachment "C" illustrates tank battery facility as it now exists in SWNE Section 27.
4. Flowline will be installed to connect #4-27 to tank battery facility in SWNE Section 27.
5. A pumping unit, if installed, will be fenced.

C. Rehabilitation Plans:

Areas disturbed, but no longer needed for operations, will be restored to the specifications of the Greeley District office of the U. S. Forest Service. The details of restoration procedure and timetable are discussed in Section 10.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. Fresh water from the town of New Raymer, Colorado, will be hauled by truck over the county road and proposed access roads.
- B. No water supply well will be drilled.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. As stated in Section 2, the details of all construction will be agreed upon when the nature of the production is known. No construction materials will be used without prior approval of the Forest Service.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Cuttings not retained for evaluation purposes will be contained within the reserve pit which is fenced. Drilling fluids will be contained in steel mud tanks or in the reserve pit.
- B. Produced water will be dumped in the reserve pit. Produced oil will either be dumped in the reserve pit or collected in tanks depending on volume and occurrence. If produced oil is of sufficient quality, it will be trucked from the location.
- C. No trash pit will be allowed. All trash will be collected in a steel trash cage designed so that trash cannot be blown out of it. All trash will be hauled off to the county land fill.
- D. A portable toilet will be provided, human waste will be buried at the conclusion of operations. Sewage from trailers, if any, will be collected and buried.
- E. All engine oils, lubricants, etc. will be collected in steel containers and disposed of at an approved site outside of the Pawnee National Grasslands. Produced water and/or oil recovered during drill-stem testing will be held in the reserve pit. After drilling, any oil in the pits will be collected and sold or removed to an approved disposal site. After drying, the reserve pit will be filled and the surface restored according to the procedure in Section 10.
- F. After drilling operations are concluded and the rig is off locations, the area will be inspected to insure no waste materials have been left on the drill site.

8. ANCILLARY FACILITIES:

There will be no facilities outside of those on the well pad.

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9. WELLSITE LAYOUT:

Attachments "B" and "D" show the well site layout and all relevant details plus cross sections with cuts and fills. The reserve pit will be fenced at all times to protect cattle and wildlife. The entire well pad will be fenced if the Forest Service indicates that there are or will be cattle on the pasture. This fence will be built leaving enough room inside (approx. 30' beyond disturbed area) for all reclamation work to be done. Fences will meet the Forest Service standards shown in Attachment "E". The pits will be unlined. Topsoil will be stockpiled on north side of the location.

10. SURFACE RESTORATION PLANS:

All disturbed areas will be fenced to exclude livestock grazing as described in Section 9. The mud pits will be backfilled after they have dried. The topsoil will be spread evenly over the entire area from which it was removed and the surface will be contoured as it was before it was disturbed. Western wheatgrass will be drill seeded at 16 lbs. per acre. This will be done in the spring of 1983. All ruts in the access route will be filled in. If the well is abandoned, sections along the access route in which ruts were made will be reseeded as above. In the event of production, the pits will be fenced. Waste pits will be backfilled. Stockpiled topsoil will be distributed over the area.

11. OTHER INFORMATION:

A. Fire prevention:

All prudent precautions will be taken for fire prevention. No burning of trash will be allowed on the site. All trash will be removed to a county land-fill. In the event of production, the tank battery will be fire walled.

B. Abandonment of well:

The operator agrees to notify the Greeley Office of the Forest Service prior to plugging if the well is to be plugged and abandoned. The operator agrees to plug the well back to the depth requested by the Forest Service if the Forest Service wants to take over the well for use as a water well. A log of sands and depth of well will be furnished to the Greeley, Colorado, office after the logs have been run.

C. Topography, soils, geology, flora, fauna:

The proposed site is gently rolling. There are no trees and vegetation is sparse, consisting of native grasses. The soil is weathered shale and sand. Antelope, coyote, deer, and jackrabbits are the major wildlife in the area.

D. Other surface-use activities and ownership:

The only other apparent surface-use activity within the proposed well site location is cattle ranching. The surface ownership of the area is the U. S. Forest Service, Pawnee National Grasslands.

E. Cultural resources:

There are no known archaeological, historical or cultural sites in the area. (Archaeological Report attached).

12. OPERATOR'S REPRESENTATIVE:

The Operator's representative responsible for compliance with the surface use and operational plan is as follows:

Donald B. Lutke  
c/o Beren Corporation  
633-17th Street  
2160 First of Denver Plaza  
Denver, Colorado 80202

(303) 892-6541

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13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access routes; that I am familiar with the conditions which presently exist; that the statements made herein are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Beren Corporation and its contractors and sub-contractors in conformity and with this plan and the terms and conditions under which it is approved.

Date: July 19, 1982

By: Donald B Lutke  
Donald B. Lutke, Petroleum Engineer

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Attachments