

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

SEP 12 91 1:03

00 00 00 00 00

1a. Type of Work

DRILL ☒

DEEPEN ☐

b. Type of Well

Oil Well ☐ Gas Well ☒ Other ☐

Single Well ☒ Multiple Zone ☐

2. Name of Operator

Merrion Oil & Gas Corporation

3. Address and Telephone No.

610 Reilly Ave Farmington NM 87401
ph: (505) 327-9801

4. Location of Well (Footages)

At Surface 905' fml & 1640' fwl (ne nw)

At proposed prod. zone Same

14. Distance in Miles and Directions from Nearest Town or Post Office

±14 miles south of Bloomfield, NM near Hilltop Thriftway

15. Distance from Proposed Location to Nearest Property or Lease Line, Ft

905'

16. No. of Acres in Lease

160 acres

17. No. of Acres Assigned to This Well

160 acres

18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT

-100'

19. Proposed Depth

1512'

20. Rotary or Cable Tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc)

6150' GR, 6155' RKB

22. Approximate Date Work will Start

As soon as permitted

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	7" J55	23 ppf	~120' KB	~30 sx (35 cuft)
6-1/4"	4-1/2" J55	10.5 ppf	~1512' KB	~115 sx (184 cuft)

Merrion proposes to drill 8-3/4" hole with native mud to approx 120' and set 7" 23# J55 surface casing, cement to surface with ~30 sx 'B' w/ 2% CaCl2 (35 cuft). Will drill 6-1/4" hole to TD @ approx 1512' KB with low solids non-dispersed mud system. Run open hole surveys. Will set 4-1/2" 10.5 ppf J55 production casing from TD to surface. Will cement with 55 sx 'B' (113 cuft) lead slurry and tail in with 60 sx 'B' (71 cuft) cement to fill from total depth to surface. Top of Cement should circulate to surface (will adjust volumes based upon caliper log).

A water spacer will be pumped ahead of the lead slurry to prevent mud contamination of the cement. If cement does not reach surface, a temperature log or cement bond log will be run to determine top of cement.

Will test Pictured Cliffs through perforated casing. Will fracture stimulate and put on for production test. Drilling operations below surface casing will be conducted with a Bag type BOP in place, minimum working pressure 1000 psig. Additional drilling technical details attached.

The well will be drilled on the existing Blackrock D #1 pad. The road and pipeline for the Blackrock D #1 will also be utilized. There will be no additional surface disturbance for any of the drilling, completion or production operations.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal to deepen, give present productive zone and proposed new productive zone.

COPIES: BLM+4, WELL FILE+1

24. I hereby certify that the foregoing is true and correct

Signed

Connie S. Dinning Title Engineer

Date May 11, 2000

(This space for Federal or State office use)

Permit No.

Approval Date

Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any:

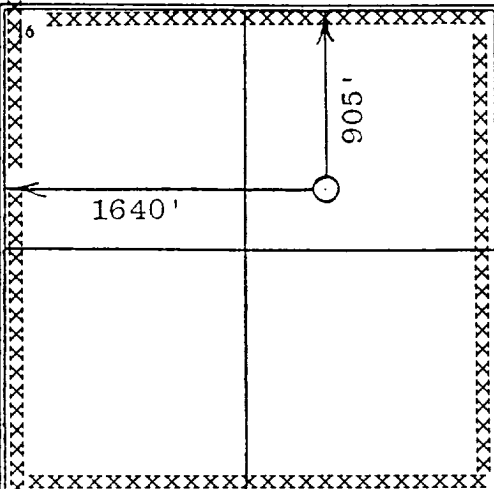
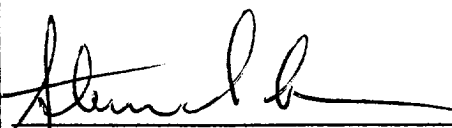

APPROVED BY:

TITLE

DATE

9/28/00

NMOCD

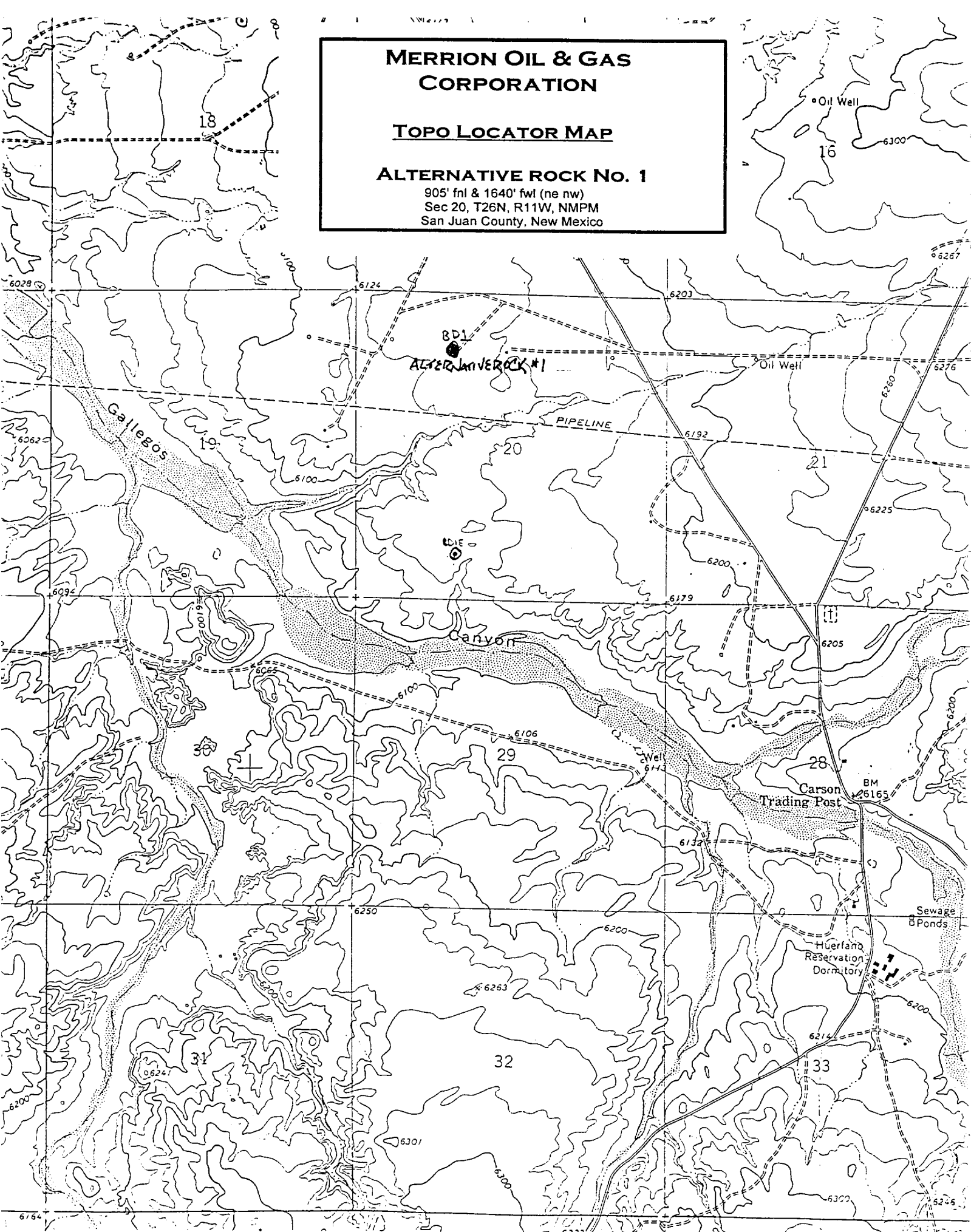
		<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p></p> <p>Signature Steven S. Dunn Printed Name Drlg & Prod Manager Title May 11, 2000 Date</p>
		<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify 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 belief</p> <p></p> <p>Date of Survey Signature and Seal of Professional Surveyor</p> <p>6844 Certificate Number</p>

MERRION OIL & GAS CORPORATION

TOPO LOCATOR MAP

ALTERNATIVE ROCK No. 1

905' fml & 1640' fwl (ne nw)
Sec 20, T26N, R11W, NMPM
San Juan County, New Mexico



MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Alternative Rock No. 1

905' fnl & 1640' fwl (ne nw)
Section 20, T26N, R11W, NMPM
San Juan County, New Mexico

1. ESTIMATED FORMATION TOPS:

<u>FORMATION</u>	<u>DEPTH KB</u>	<u>EST PSI</u>
Undif. Tertiary	Surface	
Ojo Alamo	296'	
Kirtland Shale	443'	
Fruitland	929'	
Main Fruitland Coal	1333'	347 psi
Pictured Cliffs	1362'	354 psi
Total Depth	~1512'	

2. WELL CONTROL SYSTEM

- A. Proposed blowout preventer system (schematic drawings attached) is a Bag type preventer, and will be used in 1000 psi service. Merrion requests a waiver from O&G Order No. 2 requirements for 2M service because the well is shallow and low pressure, with the surface pressure not expected to exceed ~393 psig at the wellhead. Such moderate conditions lower any chance of uncontrolled gas flow.
- B. Minimum required working pressure rating for BOP stack is 1000 psi. Maximum anticipated bottomhole pressure = 393 psi. Well Control Anticipated Surface Pressure (ASP) = 393 psi - $(0.22 * 1512') = 60$ psi, assuming a partially gas cut column per BLM guidelines.
- C. BOP pressure testing will be conducted at time of installation and prior to drillout of surface casing shoe. Bag type preventer will be tested to 250 psi. The BOPs will be activated on each trip for a bit and recorded in the driller's log. A choke manifold will be installed (Refer to schematic drawing). Working pressure for choke manifold is minimum 1000 psi. In addition, a kill line from the mud pump will be installed.
- D. Stabbing valves for drill pipe and drill collars will be available. Merrion requests an exception to the requirement for an upper kelly cock valve to be utilized during drilling; pull-down type rig to be used will not allow use of kelly cock valve.
- E. Anticipated formation pressures average 0.26 psi/ft gradient and formation fracture pressures are anticipated to exceed the maximum mud weight of 9.1 ppg.