Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROW/APD

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

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

RECEIVED
2003 FEB -5 AM 11:23
070 Farmington, NM

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: 1654' fsl & 815' fwl (nw sw)
At proposed prod. zone: Same

5. Lease Designation and Serial No.
I-149-IND-9108

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation
7818

8. Well Name and No.
Navajo No. 1R

9. API Well No.
30045 31373

10. Field and Pool, or Exploratory Area
West Kutz Pictured Cliffs

11. Sec., T., R., M., or BLK. and Survey or Area
L Section 3, T26N, R11W

12. County or Parish: San Juan
13. State: NM

14. Distance in Miles and Directions from Nearest Town or Post Office
14 miles south of Bloomfield NM

15. Distance from Proposed Location to Nearest Property or Lease Line, Ft (Also to nearest drlg. unit line, if any)	16. No. of Acres in Lease	17. No. of Acres Assigned to This Well
815'	160 acres	160 acres SW/4
18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT	**19. Proposed Depth**	**20. Rotary or Cable Tools**
~700'	~1950'	Rotary
21. Elevations (Show whether DF, RT, GR, etc)		**22. Approximate Date Work will Start**
6338' GR, 6343' RKB		As soon as permitted

JUN 2003
RECEIVED
OIL CONS. DIV.
DIST. 3

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	20 ppf or greater	~120' KB	~30 sx (35 cuft)
6-1/4"	4-1/2" J55	10.5 ppf or greater	~1950' KB	~153 sx (260 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. 1950' KB with low solids non-dispersed mud system. Run open hole surveys. Will set 4-1/2" 10.5 ppf J55 production casing (or greater) from TD to surface. Will cement with 91 sx 'B' w/ 2% SMS (188 cuft) and tail in with 61 sx 'B' (72 cuft) cement to fill from total depth to surface. A cementing chronology will be recorded and submitted to the BLM after completion of the job. Top of Cement should circulate to surface (will adjust volumes based upon caliper log if available).

A ~5 bbl 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.

The production casing will be centralized through the Pictured Cliffs interval.

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.

A pipeline route approval is also proposed as part of this APD as per the enclosed plat.

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

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

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 Production Engineer Date January 28, 2003

(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:

/s/ David J. Mankiewicz JUN 25 2003

APPROVED BY: _____ TITLE _____ DATE _____

NMOCD

State of New Mexico
Energy, Minerals & Mining Resources Department
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C - 102

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number	Pool Code	Pool Name
30-045-31373	71629	Basin Fruitland Coal

Property Code	Property Name	Well Number
7818	NAVAJO	1-R

OGRID No.	Operator Name	Elevation
014634	MERRION OIL & GAS	6338'

Surface Location

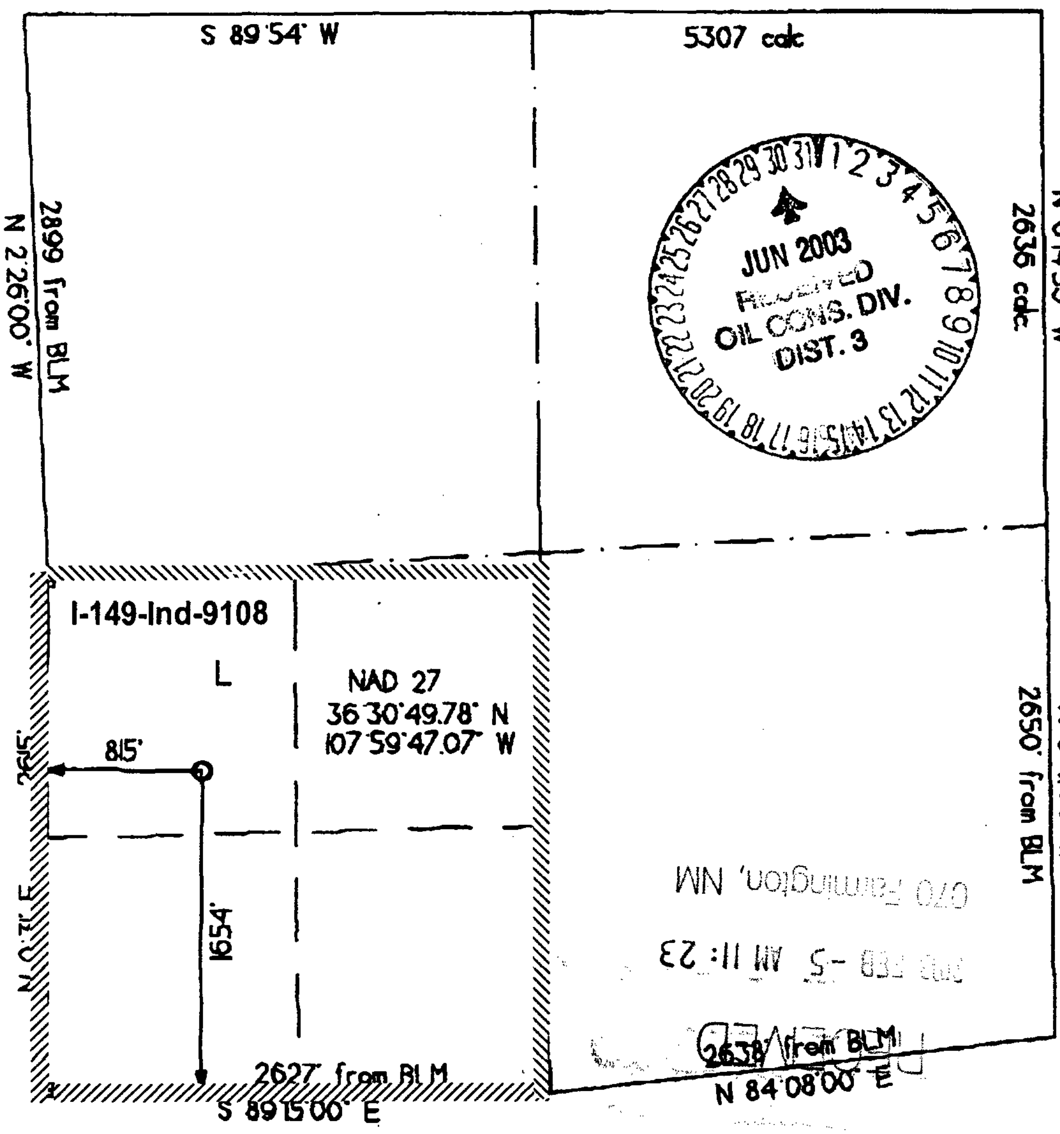
UL or Lot	Sec.	Twp.	Rge.	Lot Idn.	Feet from>	North/South	Feet from>	East/West	County
L	3	26 N.	1 W.	nwsw	1654'	SOUTH	815'	WEST	SAN JUAN

Bottom Hole Location If Different From Surface

UL or Lot	Sec.	Twp.	Rge.	Lot Idn.	Feet from>	North/South	Feet from>	East/West	County

Dedication	Joint ?	Consolidation	Order No.
160			

NO ALLOWABLE WILL ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Signature

Printed Name Connie S. Dinning

Title Production Engineer

Date January 15, 2003

SURVEYOR CERTIFICATION

I hereby certify that the well location 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.

Date of Survey

1 - 7 - 2003 revised

Signature and Seal of Professional Surveyor

GERALD ECCLESTON NEW MEXICO 6844 REGISTERED LAND SURVEYOR

MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Navajo No. 1R

1654' fsl & 815' fwl (nw sw)
Section 3, T26N, R11W, NMPM
San Juan County, New Mexico

1. ESTIMATED FORMATION TOPS:

FORMATION	DEPTH KB	EST PSI
Undif Tertiary	Surface	
Ojo Alamo	698'	
Kirtland Shale	808'	
Fruitland	1335'	
Main Fruitland Coal	1725'	380 psi
Pictured Cliffs	1745'	383 psi
Total Depth	~1950'	

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 ~429psig 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 = 507 psi. Well Control Anticipated Surface Pressure (ASP) = 507 psi - (0.22 * 1950') = 78 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.

3. DRILLING MUD PROGRAM

A. A 8-3/4" surface hole will be drilled with fresh water system, lime and gel added to provide viscosity as needed.

B. A 6-1/4" hole will be drilled to total depth utilizing a low solids non-dispersed mud system. Additives such as starch, cmc, and others will be used to control mud characteristics as necessary. No materials of a hazardous nature will be added to the drilling fluid in hazardous quantities. Lost circulation materials will not be stored on location. Mud weighting materials will not be stored on location.

INTERVAL	*MUD SYSTEM*	*WEIGHT #/GAL*	*VISCOSITY SEC/QT*	*WATER LOSS CC*
0 - 120'	Native	< 9.0	35-55	NA
120' - 1950'±LSND	8.6-9.1	28-45	NA	

Maximum anticipated mud weight is 9.1 lb./gal (0.47 psi/ft).

C. Mud trip monitoring will be done visually.

4. HAZARDS

A. Abnormal Pressure is not expected to be a problem in this area.

B. Lost circulation is not expected to be a problem in this area.

C. No H_2S is expected. However, should H_2S be found during drilling, detection and warning equipment will be installed.

D. Unintentional hole deviation is not expected to be a problem. Single shot surveys giving hole inclination will be run a minimum of every 500 feet.

5. LOGGING AND TESTING

A. An Induction, Density Log will be run from TD across zones of interest.

B. Drill stem tests will not be run.

C. No coring is anticipated.

D. A mud logging unit may be used during drilling.

6. CASING PROGRAM

A. Casing:

	Description	Top	Bottom
1	7" 20# J55 or greater	Surface	120 ft ±
2	4-1/2" 10.5# J55 or greater	Surface	1950 ft ±

Merrion requests that a variance be granted to allow us to set surface casing at the proposed depth of ± 120' because this setting depth has been shown to be adequate as demonstrated by the innumerable wells that have been previously drilled in the area without incident. In addition, the potential for a gas kick is very low.
Estimated formation pore pressure gradient is ~0.26 psi/ft.

B. A proposed wellbore schematic is attached.