

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

1a. Type of Work

DRILL ☒

DEEPEN ☐ 02 SEP 16 AM 11:17

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 812' fml & 818' fwl (nw nw)

At proposed prod. zone Same

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

12 miles North of Lindrith, NM

15. Distance from Proposed Location to Nearest

Property or Lease Line, Ft 812'

16. No. of Acres in Lease

160 acres

17. No. of Acres Assigned to This Well

640 acres

18. Distance from Proposed Location To Nearest Well Drilling, Completed.

Or Applied for, on this Lease, FT None

19. Proposed Depth

-7700'

20. Rotary or Cable Tools

Rotary

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

7482' GR, 7495' RKB

22. Approximate Date Work will Start

October, 2002

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14 3/4"	10 3/4" J55	40.5 ppf	~320' KB	~225 sx (266 cuft) 301 5x 2.6
9 7/8"	7 7/8" N80 & J55	29.7 & 26.4 ppf	~7010' KB	~101 sx (165 cuft)
6 3/4"	5 1/2" N80 Liner	15.5 ppf	~7700' KB	~100 sx (165 cuft)

Merrion proposes to drill 14 3/4" hole with spud mud to ~320' and set 10 3/4" 40.5# J55 surface casing, cement to surface with ~225 sx 'B' w/ 2% CaCl2 (266 cuft). Will drill 9 7/8" hole to ~7010' KB with low solids non-dispersed mud system. Run open hole surveys.

Will set 7 7/8" 29.7 ppf N80 & 26.4 ppf J55 intermediate casing from ~7010' KB to surface in 2 stages. First stage will cement with 10 bbls of mud cleaner, 5 bbls of H2O, followed by ~384 sx Premium Lite w/ 5 pps LCM, 0.25 pps Cello-Flake, 0.7% fluid loss additive, 0.2% dispersant, 3 pps compressive strength enhancer (808 cuft) and tail in with ~161 sx Type III w/ 5 pps LCM, 0.25 pps Cello-Flake, 0.4% fluid loss additive, 0.2% dispersant (237 cuft) cement to fill from total depth to ~4000' KB or above the Mesaverde top at 5575' KB. 2nd stage DV tool will be set ~4000' KB into the Lewis shale. Will cement 2nd stage with 10 bbls of mud cleaner, 5 bbls of H2O, followed by ~505 sx Premium Lite w/ 3% CaCl2, 5 pps LCM, 0.25 pps Cello-Flake, 0.8% bentonite (1102 cuft) and tail in with ~107 sx Type III w/ 3% CaCl2, 5 pps LCM, 0.25 pps Cello-Flake (148 cuft) cement to fill from ~4000' to surface. Top of Cement should circulate to surface (will adjust volumes based upon caliper log if available). If cement does not reach surface, a temperature log or cement bond log will be run to determine top of cement.

If cement does not reach surface, a temperature log or cement bond log will be run to determine top of cement. A cementing chronology will be recorded and submitted to the BLM after completion of the job.

Will wait on cement minimum of 12 hours. Will rig up air equipment and air drill out with 6 3/4" bit and air hammer to total depth ~7700' KB through Niobrara fractured interval. Will circulate hole clean and test for natural inflows. If inflows are adequate will run production tubing and leave as an open-hole completion. If inflows are inadequate, will run a 5 1/2" 15.5ppf N80 production liner from ~6900' KB to TD @ 7700' KB. Will cement with 20 bbls gel water spacer, 5 bbl fresh water spacer followed by ~52 sx of Premium Lite w/ 0.25 pps Cello-Flake, 0.7% fluid loss additive, 0.2% dispersant (101 cuft) to bring cement above liner hanger.

The production liner will be centralized through the fractured Niobrara interval.

Will test Niobrara through perforated casing. Will fracture stimulate and put on for production test. Drilling operations below surface casing will be conducted with a double ram BOP with a rotating head for air drilling in place, minimum working pressure 2000 psig. Additional drilling technical details attached.

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 *Steven S. Dunn*

Steven S. Dunn

Title Drilling & Production Manager

Date Sep. 11, 2002

(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 Surface cement 1356 cuft, casing strings will be cemented, well log

APPROVED BY

Steve Anderson

TITLE

Cost Field Mgr

DATE

OCT 31 2002

Form C - 102

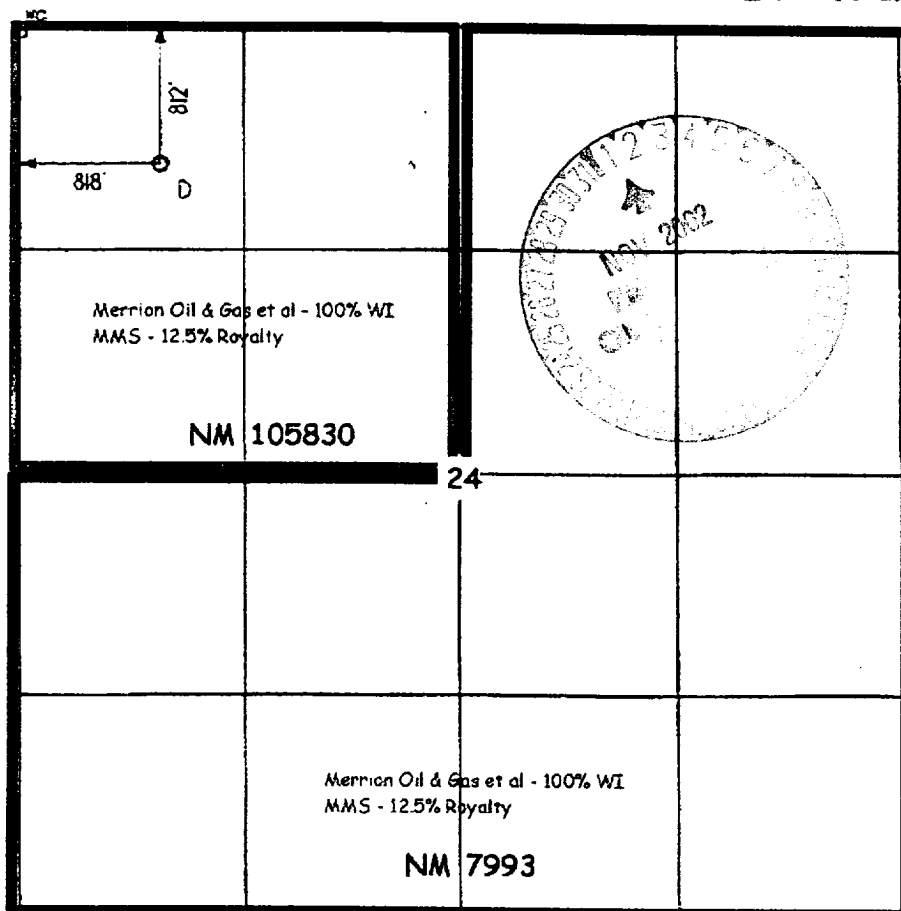
☐ AMENDED REPORT

APA Number 30-039-27247	Pool Code	Pool Name Gavilan Mancos
Property Code 30805	Property Name GUEA PIG COM	Well Number 1
OGRIID No. 014634	Operator Name MERRION OIL & GAS	Elevation 7482'

Surface Location									County
UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from >	North/South	Feet from >	East/West	
D	24	26 N.	2 W.		812'	NORTH	818'	WEST	RIO ARriba

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from >	North/South	Feet from >	East/West	County
Dedication 640	Joint ? No		Consolidation P		Order No.				

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



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

Signature _____

Printed Name: Steven S. Dunn

Title
Drig & Prod Manager

Date September 11, 2002

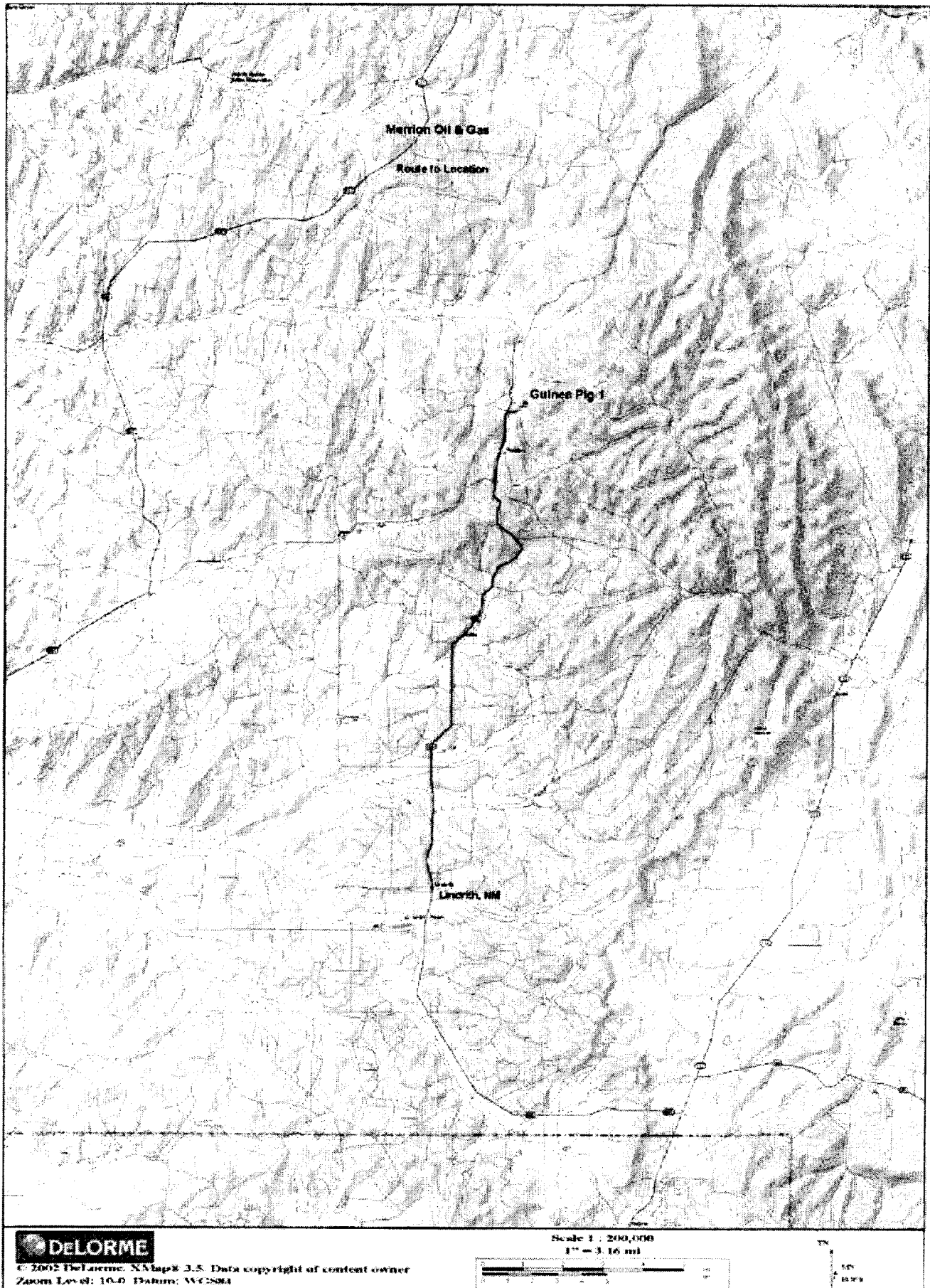
I hereby certify that the well location on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey _____

Signature of Professional Surveyor

CE 6844

REGISTERED LAND SURVEYOR



MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Guinea Pig Com No. 1

812' fnl & 818' fwl (nw nw)
Section 24, T26N, R2W, NMPM
Rio Arriba County, New Mexico

1. *ESTIMATED FORMATION TOPS:*

<u>Formation</u>	<u>Depth-MD</u>	<u>Formation</u>	<u>Depth-MD</u>
San Jose	Surface	Menefee	5690'
Nacimiento	1815'	Point Lookout	6182'
Ojo Alamo	3225'	Niobrara	6427'
Kirtland	3355'	Niobrara 'A'	7052'
Fruitland	3615'	Niobrara 'B'	
Pictured Cliffs	3775'	Niobrara 'C'	
Lewis	3995'	Total Depth	7700'
Cliffhouse	5575'		

2. *WELL CONTROL SYSTEM*

- A. Proposed blowout preventer system (schematic drawings follows) is a double-ram type preventer, and will be used in 2000 psi service.
- B. Minimum required working pressure rating for BOP stack is 2000 psi. Maximum anticipated bottomhole pressure = 2079 psi. Well Control Anticipated Surface Pressure (ASP) = 2079 psi - $(0.22 * 7700') = 385$ 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. Ram type preventer will be tested to 1000 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 the enclosed schematic drawing). Working pressure for choke manifold is greater than 2000 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 on the rig floor. A kelly cock valve will be installed.
- E. Anticipated formation pressures average 0.27 psi/ft gradient and formation fracture pressures are anticipated to exceed the maximum mud weight of 9.2 ppg (absent natural fractures).

3. *DRILLING MUD PROGRAM*

- A. A 14 3/4" surface hole will be drilled with fresh water system, lime and gel added to provide viscosity as needed.
- B. A 9 3/8" hole will be drilled to ~7010' 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 be stored on location.

Mud weighting materials will be stored on location.

<u>INTERVAL</u>	<u>MUD SYSTEM</u>	<u>WEIGHT #/GAL</u>	<u>VISCOSITY SEC/QT</u>	<u>WATER LOSS CC</u>
0 - 320'	Native	< 9.0	35-55	NA
320' - 7010'±	LSND	8.6-9.2	28-45	NA
7010' - 7700'±	Air	NA		

Maximum anticipated mud weight is 9.2 lb./gal (0.48 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 expected in this area thru the Pictured Cliffs interval and Mesaverde interval. Lost circulation materials will be stored on location and mud weights will be controlled.
- C. No H₂S is expected. However, should H₂S 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 on the vertical well.

5. *LOGGING AND TESTING*

- A. An induction, neutron-density log will be run in the intermediate casing hole across zones of interest. In addition, an induction-density log will be run from total depth back to intermediate casing.
- 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:

	<u>Description</u>	<u>Top</u>	<u>Bottom</u>
1	10 ¾" 40.5ppf J55	Surface	320 ft ±
2	7 ⅝" 26.4 & 29.7ppf J55 & N80	Surface	7010 ft ±
2	5 ½" 15.5ppf N80	Surface	6900 ft ±

Merrion Oil & Gas Corporation Wellbore Schematic

Guinea Pig No. 1

Proposed Wellbore Configuration

Location: 812' fml & 818' fml (nw nw)
Sec 24, T26N, R2W, N44PM
Rio Arriba Co. New Mexico
Modified: 09/09/02

Elevation: 7,482' GL
7,495' RKB

By: Steven Dunn

