

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

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 1846' fml & 1155' fwl (se nw)

At proposed prod. zone Same

5. Lease Designation and Serial No.
NM-0560223

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Gats Claw No. 1
Joe #2

9. API Well No.

3004531429

10. Field and Pool, or Exploratory Area
Basin Fruitland

11. Sec., T., R., M., or BLK.

Section 29, T26N, R12W

12. County or Parish
San Juan13. State
NM

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

22 miles south of Farmington NM, near Chaco Plant

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

1300'

16. No. of Acres in Lease

320 acres

17. No. of Acres Assigned to This Well

320 acres

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

-2453'

19. Proposed Depth

-1250'

20. Rotary or Cable Tools

Rotary

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

6058' GR, 6063' 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	20 ppf or greater	~120' KB	~30 sx (36 cuft)
6-1/4"	4-1/2" J55	10.5 ppf or greater	~1250' KB	~104 sx (170 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 (36 cuft). Will drill 6-1/4" hole to TD @ approx 1250' 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 52 sx 'B' w/ 2% SMS (108 cuft) and tail in with 52 sx 'B' (62 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 and Fruitland intervals. Will test Fruitland 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 topographic map.

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 Production Engineer

Date February 25, 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.

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

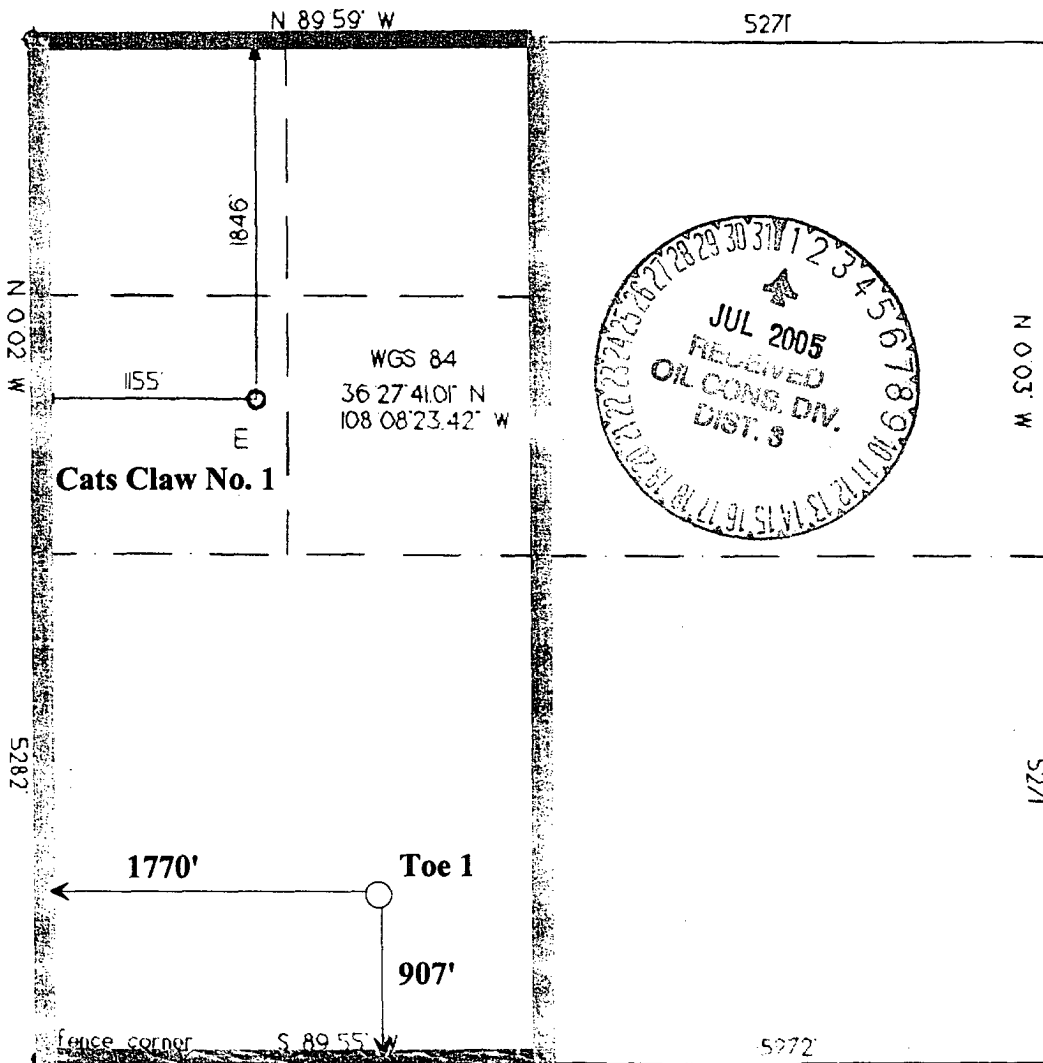
APA Number 30-045-31429	Pool Code	Pool Name Basin Fruitland Coal
Property Code 35200	Property Name 24733	Well Number 2
OGRD No. 14634	Operator Name MERRION OIL & GAS	Elevation 6070

Surface Location									
UL or Lot	Sec	Twp.	Rge.	Lot Idn.	Feet from	North/South	Feet from	East/West	County
E	29	26 N.	12 W.		1846'	NORTH	1155'	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 320	Joint ?	Consolidation	Order No.
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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	July 1, 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	
Signature and Seal of Professional Surveyor	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED

Budget Bureau No. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NM - 0560223
6. If Indian, Allottee or Tribe Name
7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. CATS CLAW #1
2. Name of Operator THOMPSON ENGINEERING & PRODUCTION CORP.		9. API Well No. 30-045-31429
3a. Address 7415 East Main St. Farmington, NM 87402	3b. Phone No. (include area code) (505) 327-4892	10. Field and Pool, or Exploratory Area BASIN FRUITLAND COAL
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1846' FNL & 1155' FWL SEC 29, T26N, R12W		11. County or Parish, State SAN JUAN COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize <input type="checkbox"/> Deepen <input type="checkbox"/> Production (Start/Resume) <input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Reclamation <input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair <input type="checkbox"/> New Construction <input type="checkbox"/> Recomplete <input checked="" type="checkbox"/> Other <u>RENAME WELL</u>
	<input type="checkbox"/> Change Plans <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection <input type="checkbox"/> Plug Back <input type="checkbox"/> Water Disposal

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, A Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

To comply to NMOCB nomenclature this well needs to be renamed.

Old Name: CATS CLAW #1

New Name: TOE #2

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

Name (Printed/Typed) Paul C. Thompson, P.E.	Title Agent
Signature <i>Paul C. Thompson</i>	Date April 28, 2003 7/28/05

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operation thereon.	Title	Date
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	Office	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 19932003 JUL -3 AM 10:40
SUNDRY NOTICES AND REPORTS ON WELLSDo not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT--" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Merrion Oil & Gas Corporation (14634)

3. Address and Telephone No.

610 Reilly Avenue, Farmington, NM 87401-2634 (505) 327-9801

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1846' fml & 1155' fwl (sw nw)
Section 29, T26N, R12W

5. Lease Designation and Serial No.

NM-0560223

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Cats Claw No. 1

9. API Well No.

3004531429

10. Field and Pool, or Exploratory Area

Basin Fruitland Coal

11. County or Parish, State

San Juan County,
New Mexico

12. CHECK APPROPRIATE BOX (s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment (Temporary)☐ Recompletion☐ Plugging Back☐ Casing Repair☐ Altering Casing☐ Other☒ Change of Plans☐ New Construction☐ Non-Routine Fracturing☐ Water Shut-Off☐ Conversion to Injection☐ Dispose Water

(Note: Report results of multiple completion on Completion or Recompletion Report and Log form.)

13. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Merrion Oil & Gas (MOG) proposes to change the location of the subject well. In the APD, the location was listed as 1895'fml & 1340'fwl. NAPI officials requested the location change due to their road and sprinkler plans. A new plan and road/pipeline survey are attached.

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

Signed

Connie S. Dinning

Title Production Engineer

Date 6/17/03

(This space for Federal or State office use)

Approved By

Title

Date

Conditions of approval, if any:

111000

Distribution: O+4 (BLM); 1-Accounting; 1-Land; 1-File

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT--" for such proposals

2003 JUL -3 AM 10:39

Lease Designation and Serial No.

NM-0560223

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Cats Claw No. 1

9. API Well No.

3004531429

10. Field and Pool, or Exploratory Area

Basin Fruitland Coal

11. County or Parish, State

San Juan County,
New Mexico

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

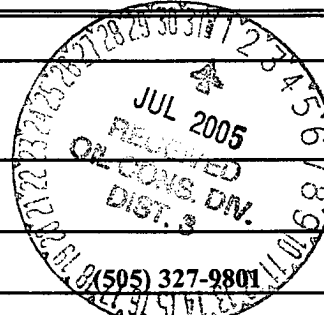
Merrion Oil & Gas Corporation (14634)

3. Address and Telephone No.

610 Reilly Avenue, Farmington, NM 87401-2634

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1846' fnl & 1155' fwl (sw nw)
Section 29, T26N, R12W



12. CHECK APPROPRIATE BOX (s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment (Temporary)

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other

☒ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ Dispose Water

(Note: Report results of multiple completion on Completion or Recompletion Report and Log form.)

13. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Merrion Oil & Gas (MOG) proposes to drill the subject well with air instead of mud as originally planned. Will drill 8 3/4" surface hole with native mud to +/-240', set 7", 20# (or greater) J-55 surface casing with 55sx "B" w/ 2% CaCl2 (66cf). Will drill 6 1/4" hole to TD @ approx. 1250' w/ compressed air. No open hole surveys will be run. Will set 4 1/2", 10.5# (or greater) J-55 production casing from TD to surface. Will cement in two stages. First stage from TD to DV tool @ +/-900' KB w/ 47sx Type III Cement w/ 1.75% SMS, 2% CaCl2, 5# LCM-1, 1/4# Celloflake (99cf). Second stage from DV tool to surface w/ 124sx "B" w/ 2% SMS (255 cf). If cement does not reach surface, a temperature log or cement bond log will be run to determine TOC.

All other drilling technical plans will remain the same as described in the original APD.

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

Signed

Connie S. Dinning

Title Production Engineer

Date 6/17/03

(This space for Federal or State office use)

Approved By

Conditions of approval, if any:

Title

AFM

Date

6-29-05

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statement or representations as to any matter within its jurisdiction.

NR000

Cats Claw # 1
well pad and section

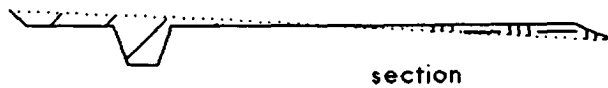
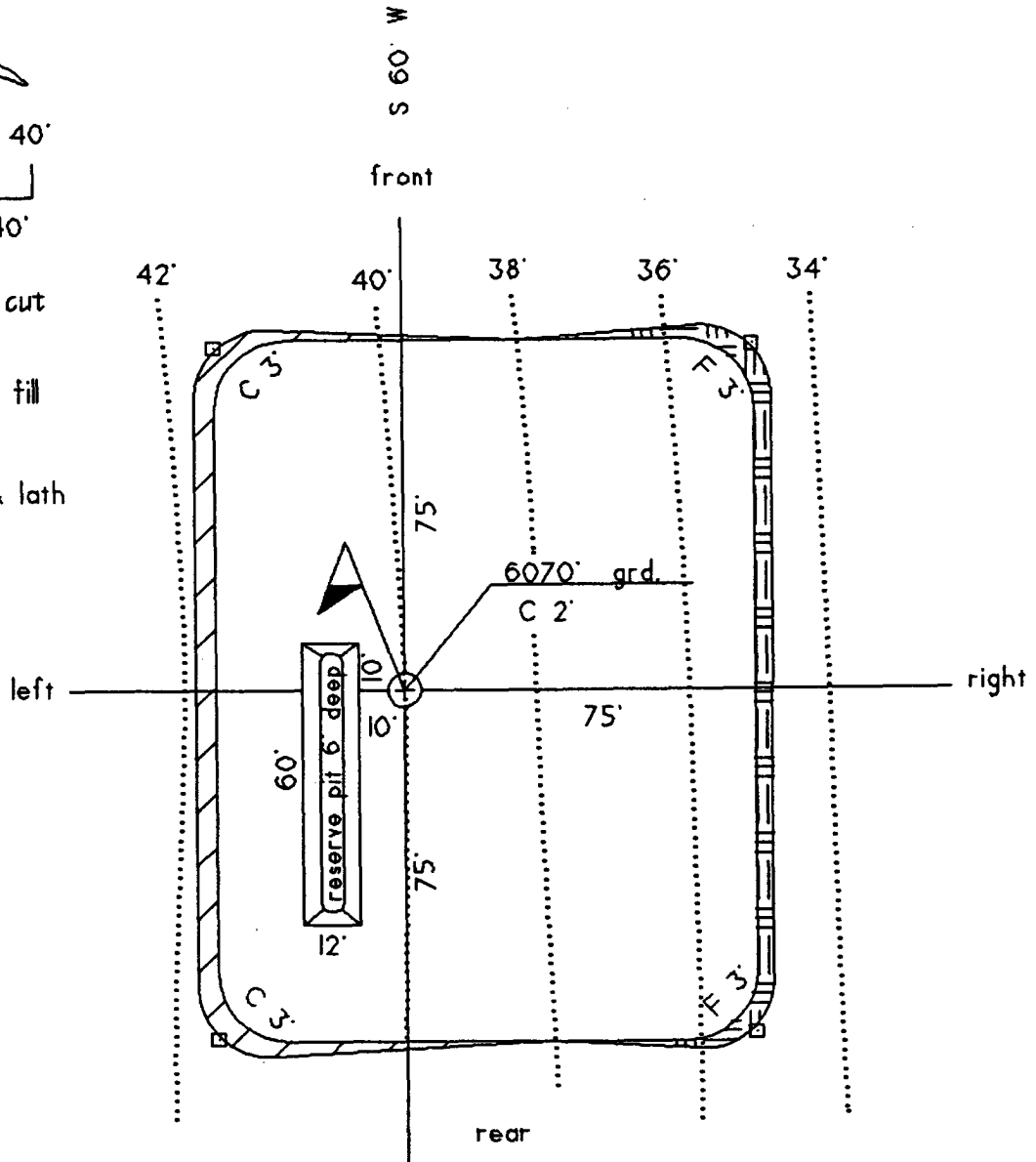


0' 40'
Scale 1" = 40'

cut

fill

□ set stake & lath



section

MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Cats Claw No. 1

1895' fnl & 1340' fw1 (se nw)
Section 29, T26N, R12W, NMPM
San Juan County, New Mexico

1. ESTIMATED FORMATION TOPS:

<u>FORMATION</u>	<u>DEPTH KB</u>	<u>EST PSI</u>
Quaternary	Surface	
Ojo Alamo	80'	
Kirtland Shale	194'	
Fruitland	804'	
Main Fruitland Coal	1049'	272 psi
Pictured Cliffs	1089'	283 psi
Total Depth	~1250'	

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 ~325psig 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 = 325 psi. Well Control Anticipated Surface Pressure (ASP) = 325 psi - (0.22 * 1250') = 50 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.

<u>INTERVAL</u>	<u>MUD SYSTEM</u>	<u>WEIGHT #/GAL</u>	<u>VISCOSITY SEC/QT</u>	<u>WATER LOSS CC</u>
0 - 120'	Native	< 9.0	35-55	NA
120' - 1250' ± 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 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.

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:

	<u>Description</u>	<u>Top</u>	<u>Bottom</u>
1	7" 20# J55 or greater	Surface	120 ft ±
2	4-1/2" 10.5# J55 or greater	Surface	1250 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.

Merrion Oil & Gas Corporation

Well Control Equipment Schematic for 1M Service

Attachment to APD Form 3160-3

Cats Claw No. 1

Location: 1846' fml & 1155' fwl (sw nw)
Sec 29, T26N, R12W
San Juan County, New Mexico

Date: September 18, 2003
Drawn By: Connie S. Dinning

