

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☐

DEEPEN ☐

PLUG BACK ☒

b. TYPE OF WELL

OIL  
WELL ☒

GAS  
WELL ☐

OTHER ☐

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

MERRION OIL & GAS CORPORATION

3. ADDRESS OF OPERATOR

P. O. Box 840, Farmington, New Mexico 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface

1,980' FNL and 990' FWL

At proposed prod. zone bottomhole location horizontal section:  
Begin - 2,435' FNL & 727' FWL End - 3,604' FNL & 52' FWL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

Approximately 23 miles south of Counselors, NM

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any) 330'

16. NO. OF ACRES IN LEASE

120'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

\* subject to Coop. Agr.

18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT. None

19. PROPOSED DEPTH

6,925'

20. ROTARY OR CABLE TOOLS

rotary

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

6,617' KB 6614 GL

22. APPROX. DATE WORK WILL START\*

November 17, 1989

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
6-1/8"	4-1/2" liner	11.6 lb/ft	~ 6,925'	75 sx

\* Merriam Oil and Gas Corporation hereby requests approval to plug back, sidetrack, and directionally drill horizontally through the Entrada formation in the Federal 15 No. 2 well at a surface location as described above. The horizontal wellbore will be drilled in a southerly direction across the Papers Wash field. Merriam has applied for an order of the New Mexico Oil Conservation Division authorizing this project. Merriam also is presently seeking approval for a cooperative agreement from the BLM wherein all leases in the Papers Wash Entrada pool would be combined and share in the production from the proposed horizontal well based on a formula designed to protect correlative rights. (See attached Program)

No additional surface disturbance beyond the existing location will be required.

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OIL CON. DIV  
DIST. 3

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or sidetrack, describe location of new productive zone. If proposal is to drill or deepen direct preventive program, if any.

24.

SIGNED

Steven S. Dunn

(This space for Federal or State office use)

PERMIT NO.

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

1/16/01 C-104 H

Title 18 U.S.C. Section 1001, makes it a crime under the laws of the United States any false, fictitious or fraud

productive zone and proposed new productive zone. If proposal is to deepen or sidetrack, describe location of new productive zone. If proposal is to drill or deepen direct preventive program, if any.

DATE 11/17/89

APPROVED

any department or agency of the United States within its jurisdiction.

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

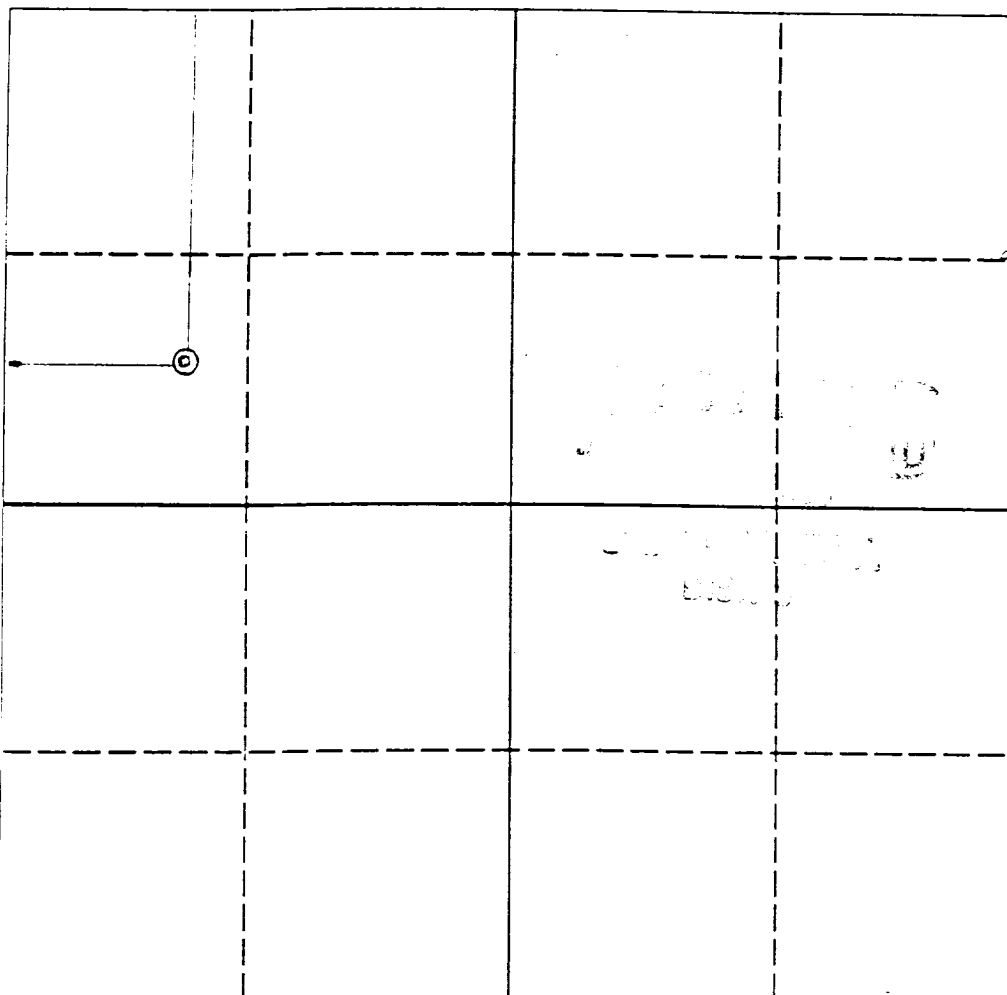
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Merrion Oil & Gas Corporation			Lease Federal 15		Well No. 2
Unit Letter E	Section 15	Township 19N	Range 5W	County McKinley	
Actual Footage Location of Well: 1980 feet from the North line and 990 feet from the West line					
Ground level Elev. 6,604'	Producing Formation Entrada		Pool Papers Wash	Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
☐ Yes ☐ No If answer is "yes" type of consolidation \_\_\_\_\_  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, 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

Steven S. Dunn

Position

Operations Manager

Company

Merrion Oil & Gas Corp.

Date

11/29/89

SURVEYOR CERTIFICATION

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 knowledge and belief.

Date Surveyed

Signature & Seal of  
Professional Surveyor

Certificate No.

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

**FEDERAL 15 NO. 2**  
1,980' FNL & 990' FWL  
Sec. 15, T19N, R5W  
McKinley County, New Mexico

I. PROGRAM

The workover and drilling procedure is as follows: (Wellbore schematic attached)

1. MIRU workover rig.
2. POH with 3-1/2" tubing and submersible pump.
3. RIH with casing scraper to clean casing. POH.
4. Gyro survey well to find wellbore location.
5. Plug back Entrada by spotting 70 sx class "B" or equivalent cement (83 cu. ft) from PBTD to 5,000' KB, covering the Entrada perms.
6. If casing requires repair, remedially cement with volumes to be determined by length of bad casing section or replace bad casing by backoff and pull out of hole.
7. Drill out cement with a bit and casing scraper.
8. If casing in adequate shape, set packstock about 4,800' oriented with Gyro to approximately 208° azimuth.
9. Cut window and dress. Use drilling mud during operation.
10. Pick up, build motor assembly and drill curve section with 6-1/8" bit. Estimate will take a minimum of 3 bit runs. Propose to use steering tool for kickoff and first bit run in build section. Will use measurement-while-drilling from second build motor to total depth.
11. Finish build to approximately 89.5° and drill lateral reach section through Entrada. Reach section length estimated to be 1,350' long.
12. Estimated TD @ 6,925' measured depth. Condition wellbore and run multishot survey.
13. Run 4-1/2" 11.6 lb/ft K-55 BT & C preperforated liner, estimate 1,350 ft long, followed by openhole inflatable packer, est. 700 ft of blank 4-1/2" liner and liner hanger. Liner hanger @ approximately 4,660'.
14. Inflate open hole packer and cement blank liner back to liner top with 75 sx "H" 2% gel (89 ft<sup>3</sup>)

**R** E C E I V E D

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DIST. 3

15. Wait on cement.
16. RIH w/ 2-3/8" tubing and circulate out drilling mud to TD. Clean up.
17. POH w/ 2-3/8" tubing. RIH w/ pump string and bottom hole equipment. Pump test with electric submersible or pump jack.

II. WELL CONTROL SYSTEM

- A. Proposed blowout preventer system is double ram BOPs with choke manifold.
- B. Minimum required working pressure rating for BOP stack is 3000 psi. (Schematics Attached)
- C. BOP pressure testing will be conducted at time of installation and prior to drillout. The pipe and blindrams will be activated at minimum on each trip for a bit and recorded in driller's log.
- D. An upper kelly cock valve with handle and a safety valve with subs to fit all drill strings in use will be available on site during operation.

III. DRILLING MUD PROGRAM

- A. 6-1/8" hole will be drilled with low solids, light weight mud using fresh water, minimum clay, polymer, and other products to control PH, viscosity, weight, and water loss characteristics as necessary.
- B. Mud trip monitoring will be done visually.

IV. HAZARDS

- A. No abnormal pressure is anticipated. However, BOPs will be used during all operations.
- B. No water flows are expected.
- C. No H<sub>2</sub>S is expected to be encountered. However, should H<sub>2</sub>S be found during drilling, detection and warning equipment will be installed.

V. LOGGING AND TESTING

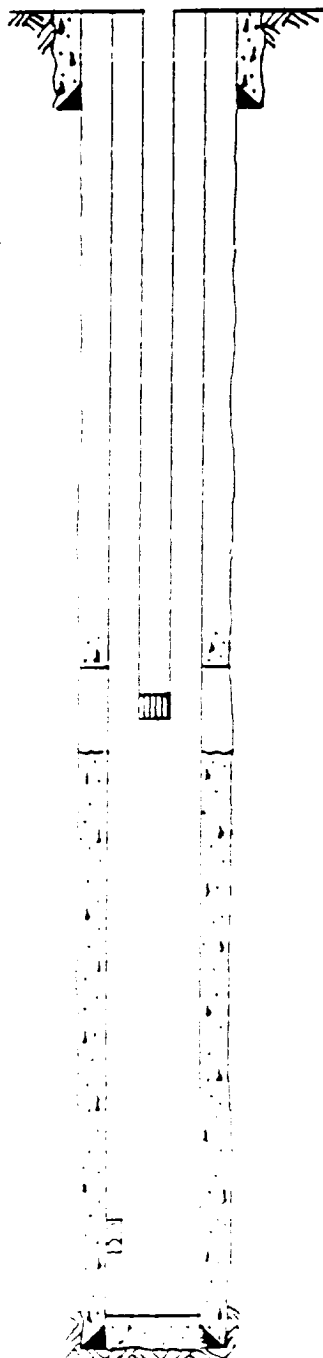
- A. Measurement while drilling, electronic multishot survey and conventional logs are contemplated as necessary.
- B. No drill stem testing is planned.

MERRION OIL & GAS  
WELLBORE SCHEMATIC

Well: Federal 15 No 2  
Field: Papers Wash

Location: 1980' FNL & 990' FWL  
Sec. 15. T19N. R6W  
McKinley Co. New Mexico

Elevation: 6.616' KB  
6.604' GL



TOC @ Surface  
Bit Size - 12 1/4"

10 3/4" 32.75# H-40 Surface @ 203'KB w/ 200sx

Top	Depth
Lewis	Surface
La Ventana	522
Pt Lookout	2.025
Gallup	2.945
Dakota	4.142
Morrison	4.260
Entrada	5.182

FOC - Unknown

2nd Stage- 305sx 65/35. 100sx 1A (no circulation)

DV Tool @ 2.785'KB

FOC @ 3.290' (CBL)

Well Equipment
> 3 1/2" EUE Tbg ~ 3053'
> Reda G110 Submersible @ 2.073'KB

Hole size - 3 3/4"

ENTRADA Peris: 5.184'-92' 2pr  
1" 23# K-55 Casing @ 5.128'KB w/ 129sx 65 35 doz. 30sx A  
heat -- 1st stage  
ID @ 5.128' KB. PRTD @ 5.370'KB

Capacities: 1 7/8" Tbg - 0.00579 Bbl Ft  
1" 23# Csg - 0.0394 Bbl Ft  
Annulus - 0.2172 Bbl Ft

12/10/89  
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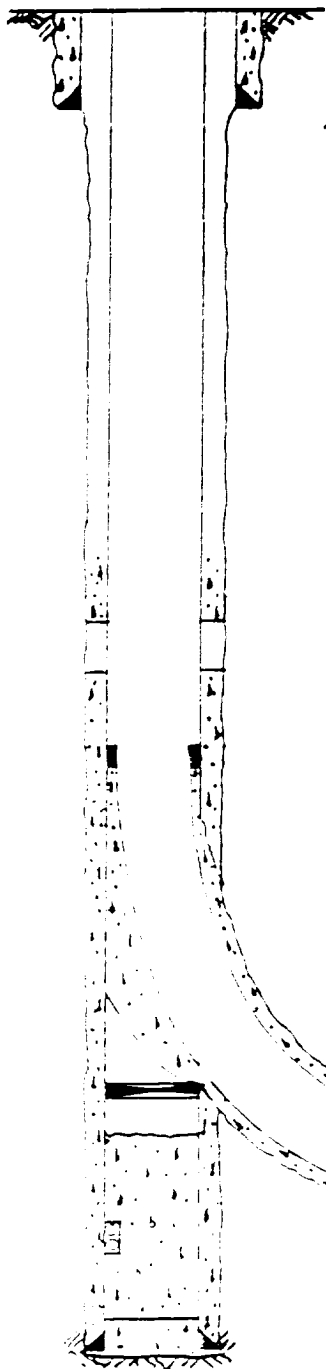
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**MERRION OIL & GAS  
WELLBORE SCHEMATIC  
PROPOSED HORIZONTAL PROFILE**

Well: Federal 15 No 2  
Field: Papers Wash

Location: 1980' FNL & 990' FWL  
Sec. 15, T19N, R6W  
Mckinley Co. New Mexico

Elevation: 6,616' KB  
6,604' GL



TOC @ Surface  
Bit Size - 12 1/4"

10 3/4" 32.75# H-40 Surface @ 203' KB w/ 200sx

Tops	Depth
Lewis	Surface
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Pt Lookout	2.025
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Dakota	4.142
Morrison	4.260
Entrada	5.182

FOC - Unknown

2nd Stage- 305sx 65/35, 100sx 'A' (no circulation)

DV Tool @ 2.785' KB

FOC @ 3.290' (CBL)

Liner Hanger ≈ 4.660'

Kick off Point ≈ 4.800'

Cement Filled Packer ≈ 5.400'

Uncemented Preperforated 4.5" Liner

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Capacities:

13.03sg-

0.0394 bbl Ft

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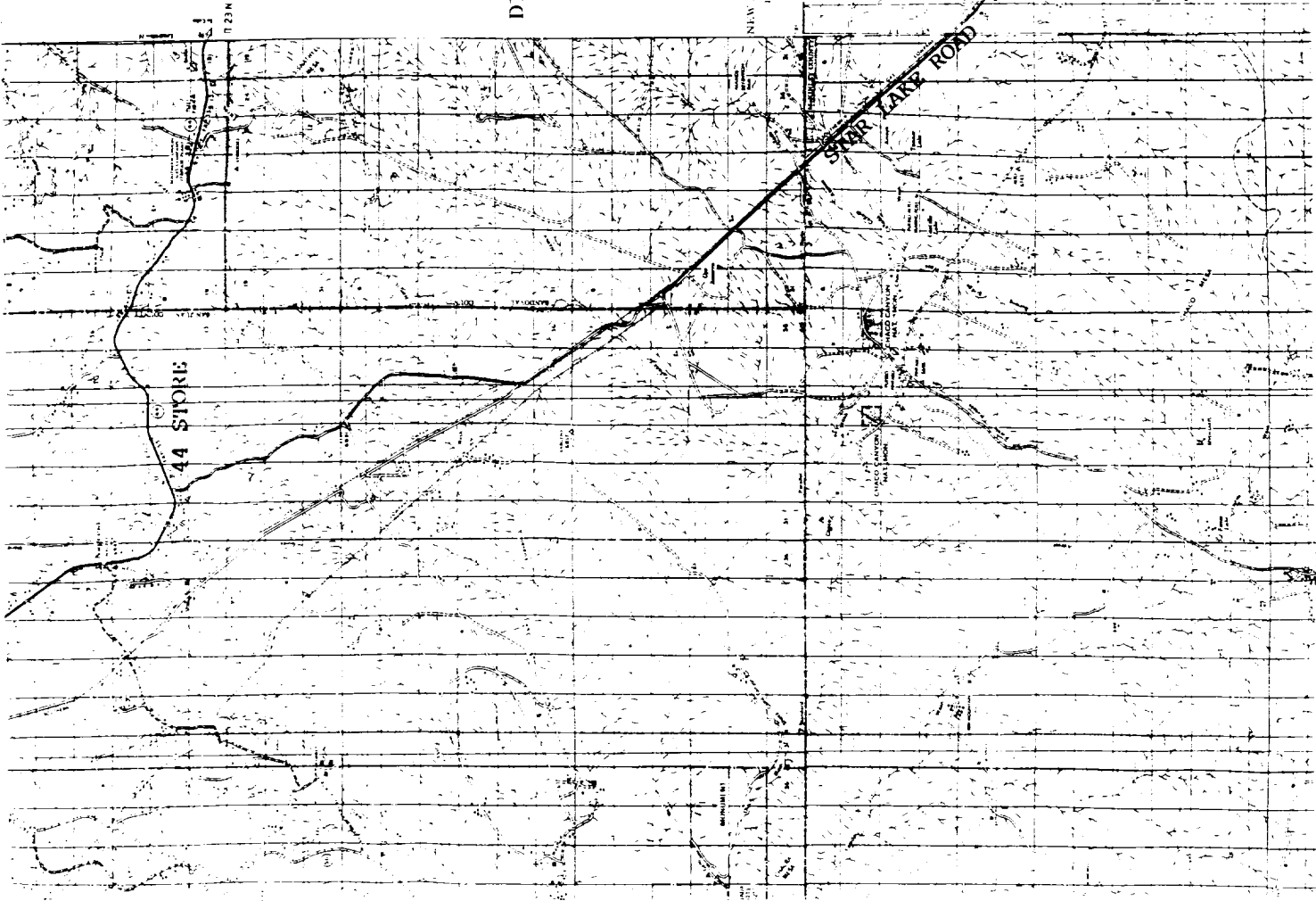
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PBL 3

MERRION OIL & GAS CORPORATION  
DIRECTION MAP  
FEDERAL 15 No. 2  
1,980' FNL & 990' FWL  
Sec. 15, T19N, R5W  
McKinley County, New Mexico

DIRECTIONS:

Hwy 44 to 44 Store  
 Right on Star Lake  
 Road



NEW MEXICO STATE HIGHWAY DEPARTMENT  
PLANNING AND PROGRAMMING DIVISION  
IN REPLY TO FIELD REQUEST

CABEZON  
MCKINLEY

