

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**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

5. Lease Designation and Serial No.  
 NM-833047

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation  
 7804

2. Name of Operator  
**Merrion Oil & Gas Corporation**

8. Well Name and No.  
**Hi Roll No. 4R**

3. Address and Telephone No.  
 610 Reilly Ave Farmington NM 87401  
 ph: (505) 327-9801

9. API Well No.  
 30-045-29990

4. Location of Well (Footages)  
 At Surface **4740' fnl & 4740' fwl (se nw)**  
                   **791'      990'**  
 At proposed prod. zone      **Same**

10. Field and Pool, or Exploratory Area  
 WAW Fruitland/Pic. Cliffs

11. Sec., T., R., M., or BLK. and Survey or Area  
 Section 35, T27N, R13W

14. Distance in Miles and Directions from Nearest Town or Post Office  
 18 miles south of Farmington NM, near Chaco Plant

12. County or Parish  
 San Juan

13. State  
 NM

15. Distance from Proposed Location to Nearest Property or Lease Line, Ft  
 1710'

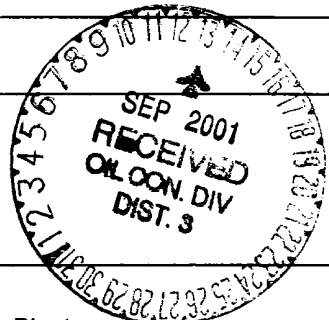
16. No. of Acres in Lease  
 640 acres

17. No. of Acres Assigned to This Well  
 160 acres **NW/4**

18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT  
 +/-100'

19. Proposed Depth  
 +/-1400'

20. Rotary or Cable Tools  
 Rotary



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 PROVISIONS**

**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	~1400' KB	~108 sx (167 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 1400' 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 45 sx 'B' w/ 2% SMS (92 cuft) and tail in with 63 sx 'B' (75 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).

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 and through any usable water zones. Turbo-centralizers will be placed just below and into the base of the lowest usable water zone.

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 Hi Roll No. 4 pad. The road and pipeline for the Hi Roll No. 4 will also be utilized. There will be no additional surface disturbance for any of the drilling, completion or production operations.

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  
 Signature: Steven S. Dunn Title Drilling & Prod Manager Date September 27, 1999

Permit No. \_\_\_\_\_ Approval Date 9/10/01  
 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 \_\_\_\_\_  
**HOLD C104 FOR change in States to**

District I  
 PO Box 1980, Hobbs, NM 88241-1980  
 District II  
 PO Drawer DD, Artesia, NM 88211-0719  
 District III  
 1000 Rio Huerfano Rd., Aztec, NM 87410  
 District IV  
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
 Energy, Minerals & Natural Resources Department

Form C-102  
 Revised February 21, 1994  
 Instructions on back  
 Submit to Appropriate District Office  
 State Lease - 4 Copies  
 Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
 PO Box 2088  
 Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-045-29990</b>		Pool Code 87190	Pool Name WAW Fruitland Sand Pictured Cliffs
Property Code <b>7804</b>	Property Name Hi Roll		Well Number 4R
GRID No. 014634	Operator Name MERRION OIL & GAS		Elevation 6055'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	35	27 N	13 W	NWNW	790	North	990	West	San Juan

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 160 NW	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	NM-033047	<sup>17</sup> OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>
		Signature  Printed Name Connie S. Dinning Title Engineer Date May 18, 2000
		<sup>18</sup> SURVEYOR CERTIFICATION <i>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.</i>
		Date of Survey Signature and Seal of Professional Surveyer:
		Certificate Number

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

Form 3160-5  
June 1990)

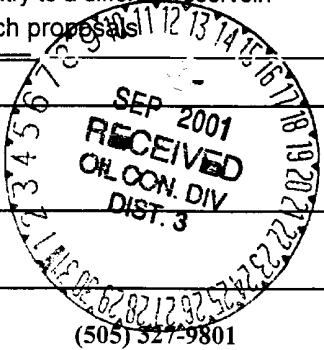
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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) 527-9801**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**790' fnl & 990' fwl (nw nw)  
Section 35, T27N, R13W**

5. Lease Designation and Serial No.  
**NM-033047**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.  
**Hi Roll No. 4R**

9. API Well No.

10. Field and Pool, or Exploratory Area  
**WAW Fruitland Sand Pictured Cliffs**

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	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Location Change</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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.)\*

NAPI representatives requested that the location of this well be changed to avoid conflict with their operations. We have restaked the location as listed above. A form C-102 and a cut/fill diagram are attached.

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

Signed Connie S. Dinning Title Engineer Date 5/18/00

(This space for Federal or State office use)

Approved By /s/ Joel Farrell Title \_\_\_\_\_ Date SEP 10

Conditions of approval, if any:

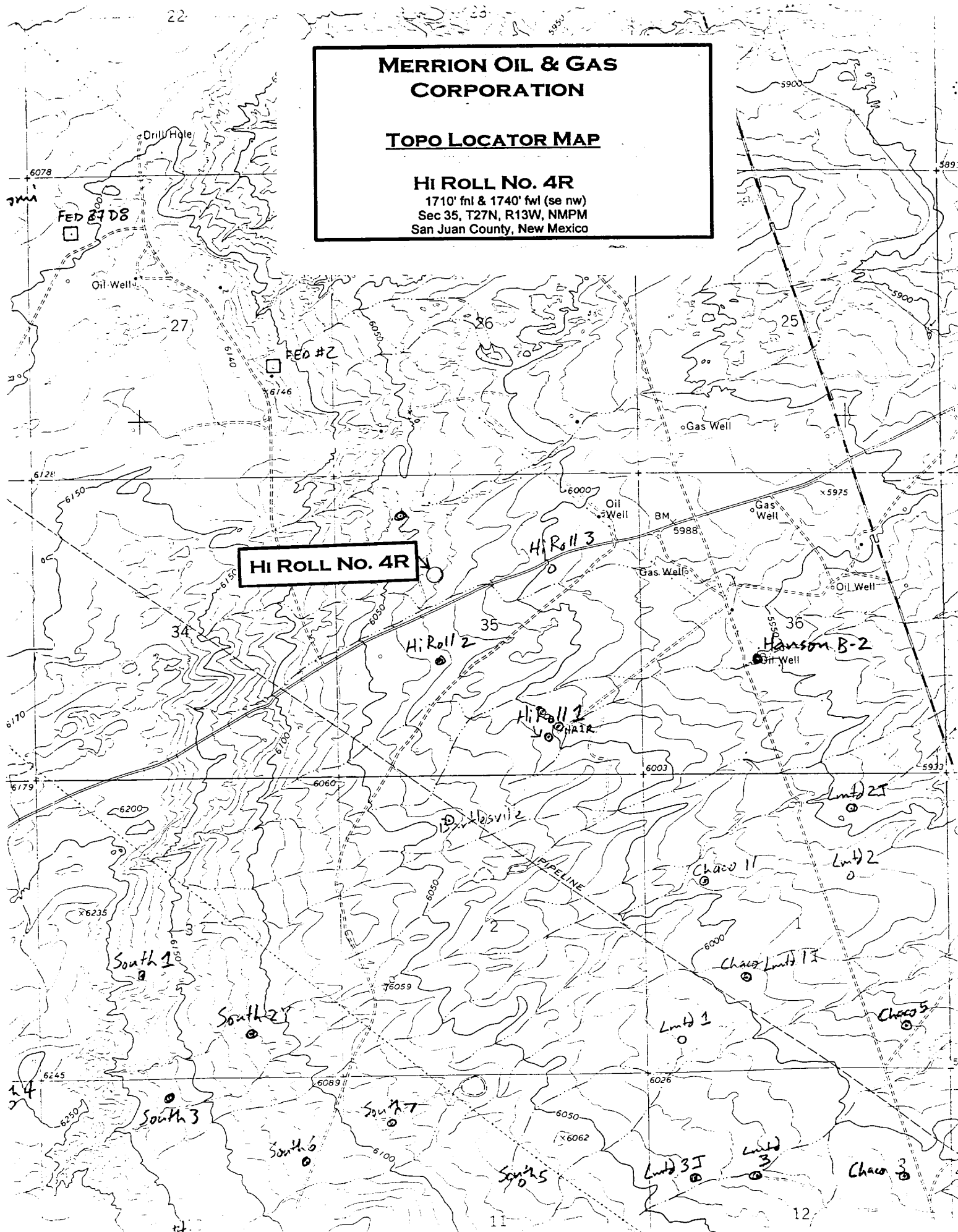
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

# MERRION OIL & GAS CORPORATION

## TOPO LOCATOR MAP

### Hi Roll No. 4R

1710' fnl & 1740' fwl (se nw)  
Sec 35, T27N, R13W, NMPM  
San Juan County, New Mexico



# Merrion Oil & Gas Corporation

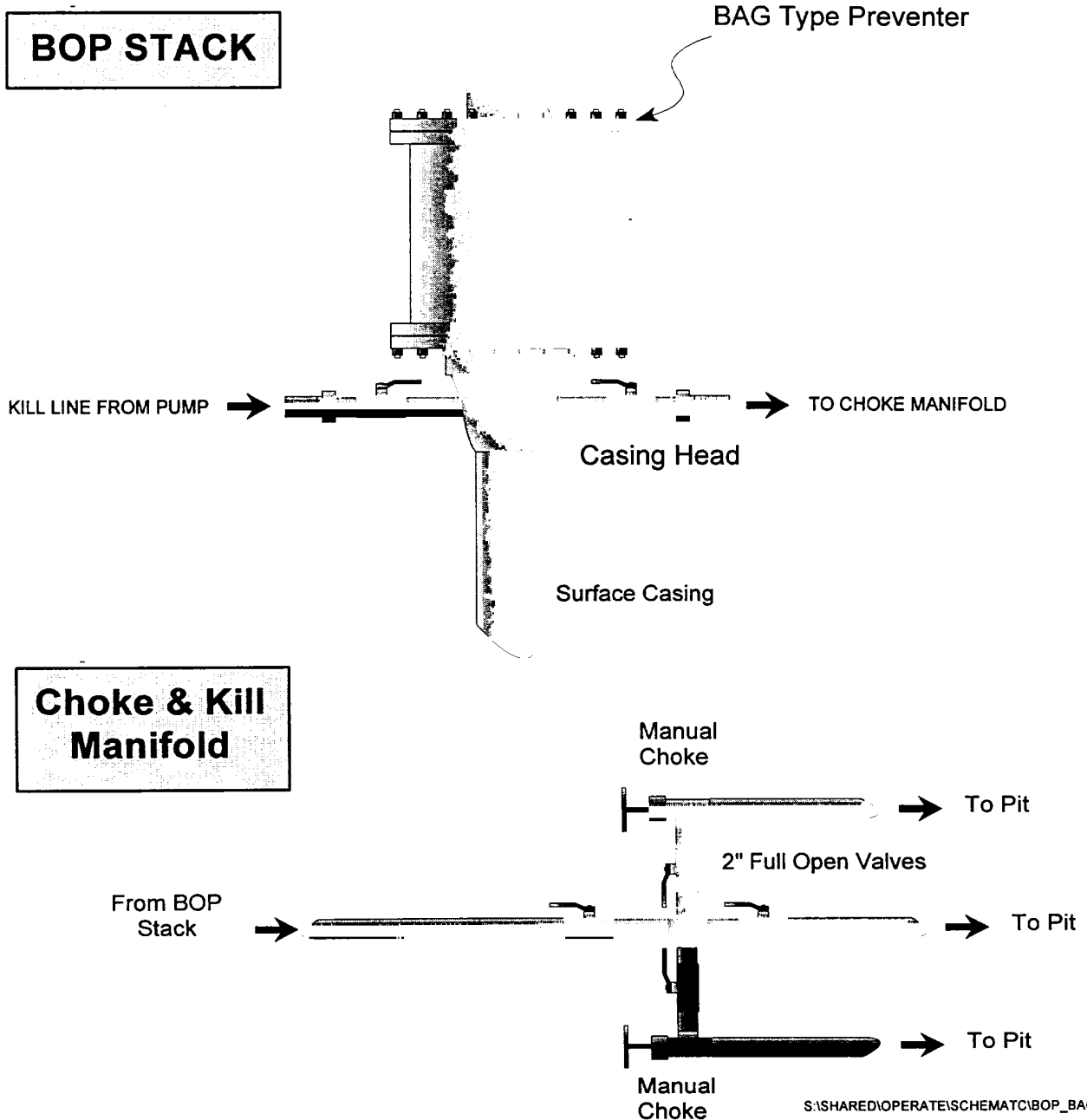
## Well Control Equipment Schematic for 1M Service

Attachment to APD Form 3160-3

### Hi Roll No. 4R

Location: 1710' fml & 1740' fwl (se nw)  
Sec 35, T27N, R13W, NMPM  
San Juan County, New Mexico

Date: September 27, 1999  
Drawn By: Steven S. Dunn



### 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' - 1400'±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<sub>2</sub>S is expected. However, should H<sub>2</sub>S 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" 23# J55	Surface	120 ft ±
2	4-1/2" 10.5# J55	Surface	1400 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 Wellbore Schematic

## Hi Roll No. 4R

### Proposed Wellbore Configuration

Location: 1710' fml & 1740' fwl (se nw)  
Sec 35, T27N, R13W, NMPM  
San Juan County, New Mexico

Elevation: 6035' GL  
6040' RKB

Date: September 27, 1999

Prepared by: Connie Dinning

