

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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 730' fsl & 835' fel (se se)

At proposed prod. zone Same

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

730'

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

-2765'

19. Proposed Depth

-1500'

20. Rotary or Cable Tools

Rotary

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

6182' GR, 6187' 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	~1500' KB	~121 sx (195 cuft)

Merrion proposes to drill 8-3/4" hole with native mud to approx 120' and set 7" 20# J55 (or greater) surface casing, cement to surface with ~30 sx 'B' w/ 2% CaCl₂ (35 cuft). Will drill 6-1/4" hole to TD @ approx 1500' 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 60 sx 'B' w/ 2% SMS (123 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.

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.

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

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.5
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-5, WELL FILE+1

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

Signed

Connie S. Dinning Title Production Engineer

Date January 5, 2004

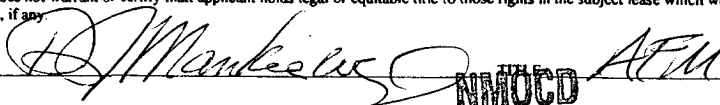
(This space for Federal or State office use)

Permit No.

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:



NMUCD

DATE

6-29-05

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

NPA Number 30-045-32101	Pool Code 71629	Pool Name Basin Fruitland Coal
Property Code 35261	Property Name Hoss Com Bridge com	Well Number 2
OCRD No. 014634	Operator Name MERRION OIL & GAS	Elevation 682'

Surface Location									
UL or Lot	Sec	Twp.	Rge.	Lot 1/4	Feet from	North/South	Feet from	East/West	County
P	20	26 N.	1 W.	SESE	730'	SOUTH	835'	East	SAN JUAN.

Bottom Hole Location if Different From Surface									
UL or Lot	Sec	Twp.	Rge.	Lot 1/4	Feet from	North/South	Feet from	East/West	County
Dedication 320 Ac	Joint ?	Consolidation	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

S 39.5' E

S293'



SF-078899

WGS 84
26 28 08.34" N
105 06.508" W

Hoss Com No. 1

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	December 19, 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 12/20/03	
Signature and Seal of Professional Surveyor 	

Form 3160-5
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other _____		5. Lease Serial No. SF-078899
2. Name of Operator Merriam Oil & Gas Corporation		6. If Indian, Allottee or Tribe Name
3a. Address 610 Reilly Avenue, Farmington, NM 87401	3b. Phone No. (include area code) 505.324.5300	7. If Unit or CA/Agreement, Name and/or No.
4b. Location of Well (Footage, Sec. T., R., M., or Survey Description) 730' 61 & 835' 61 Sec 20, T26N, R11W		8. Well Name and No. Bridle No. 2
		9. API Well No.
		10. Field and Pool, or Exploratory Area Basin Fruitland Coal
		11. County or Parish, State San Juan

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

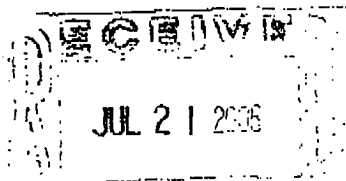
TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Report	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Name Change _____
	<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 starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplet 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.)

Merriam Oil and Gas did not follow the NMOC naming convention for this well originally. The original name was Hoss No.

1. The correct name is Bridle No. 2.

2005 JUL 18 PM 12 42
RECEIVED
OTO FARMINGTON NM

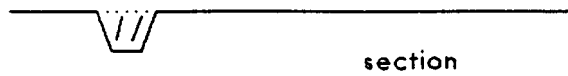
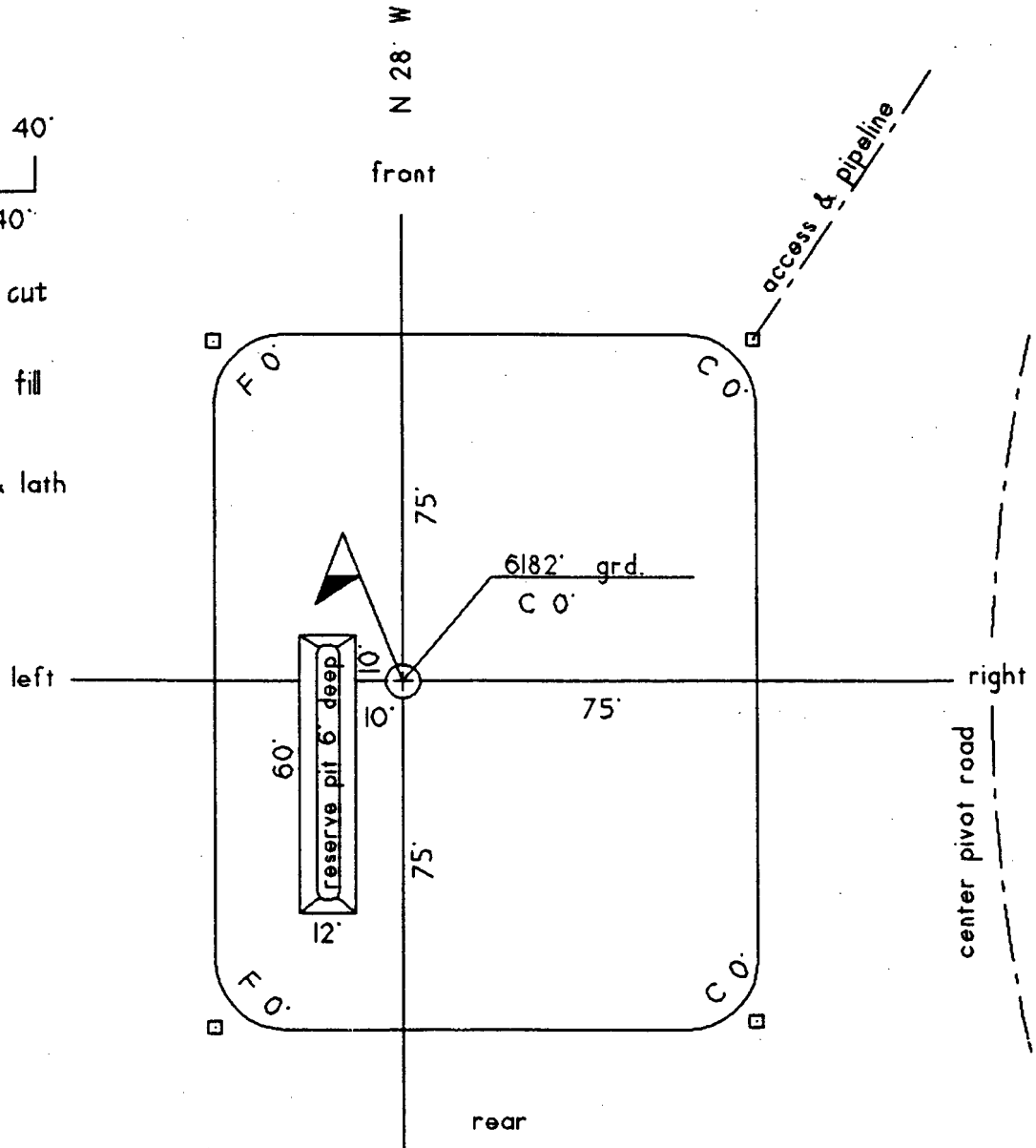
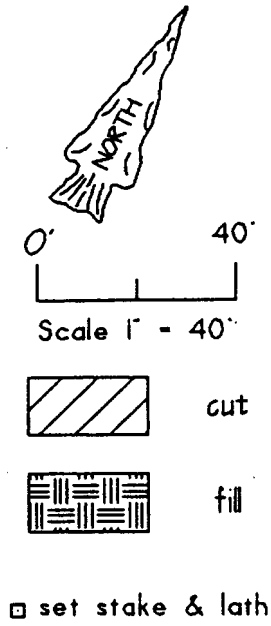


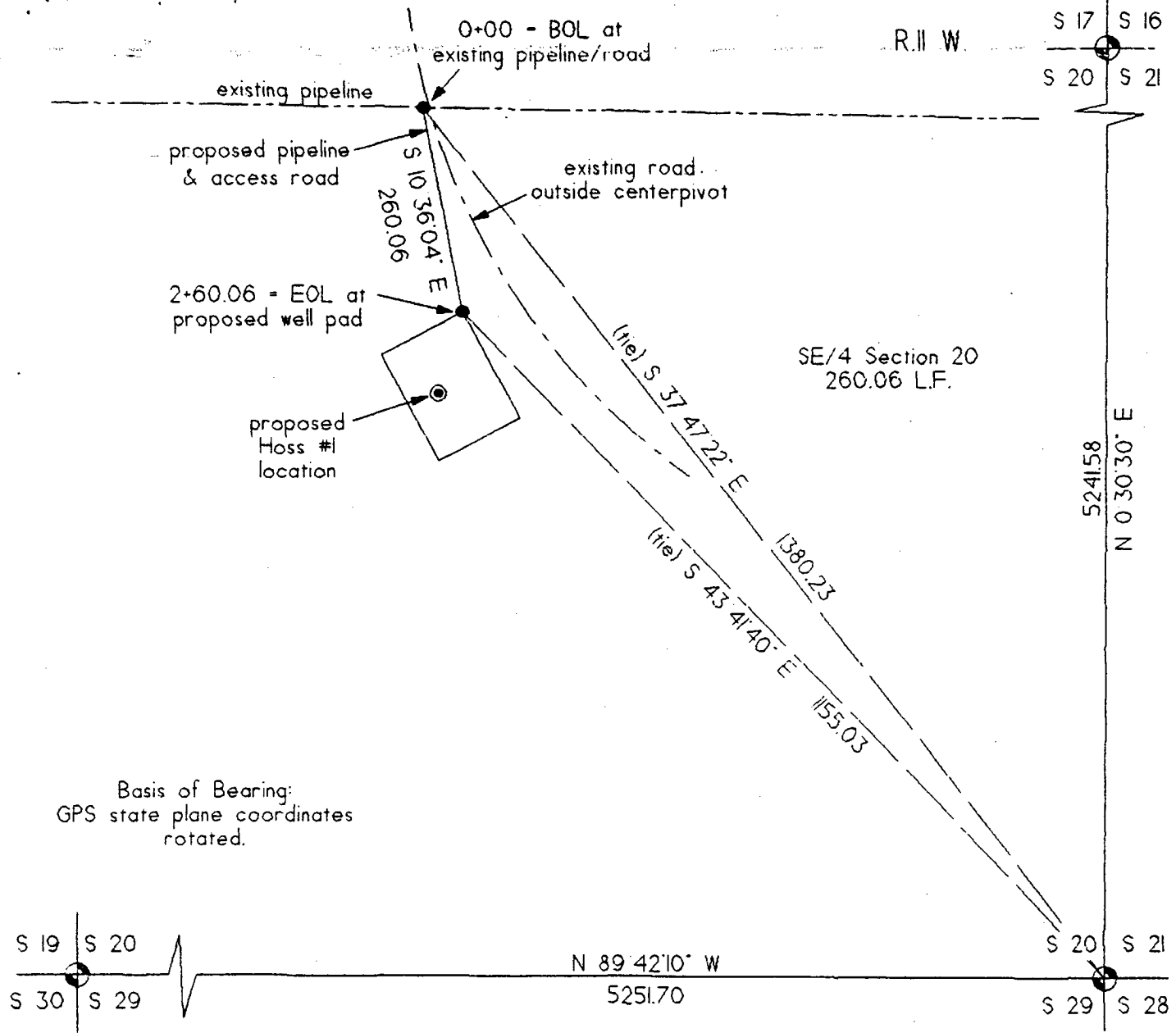
14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Connie S. Dinning		Title Production Engineer
Signature 		Date July 14, 2005
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by		Date JUL 19 2005
Conditions of approval, if any, are attached. Approval of this notice 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 operations thereon.		FARMINGTON DISTRICT OFFICE BY

Title 18 USC Section 1001 and Title 43 USC Section 1212 make 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.

OPERATOR

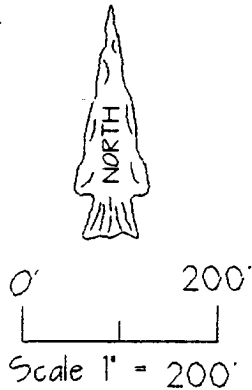
Hoss # 1
 well pad and section





Basis of Bearing:
GPS state plane coordinates
rotated.

T.26 N.



- ⊙ fnd. std. GLO monument
- survey centerline PI

MERRION OIL & GAS CORPORATION

Proposed Hoss #1 pipeline and access road
right-of-way -

SE/4 of Section 20,
T.26 N., R.11 W., NMPM.
San Juan County, New Mexico

June 2003

HUDDLESTON LAND SURVEYING
P.O. DRAWER KK / CORTEZ, CO 81321 / 970-565-3330

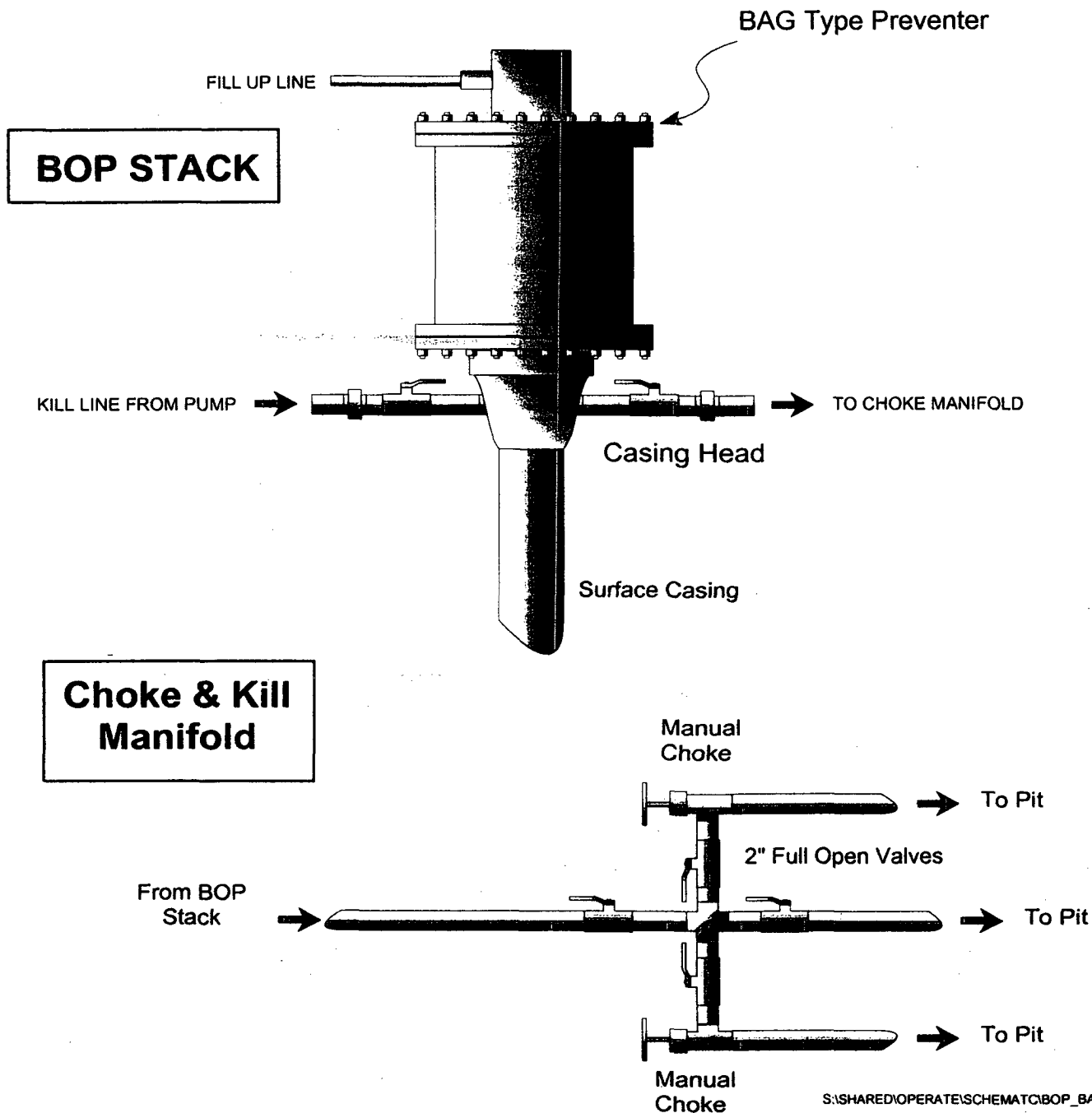
Merrion Oil & Gas Corporation
Well Control Equipment Schematic for 1M Service

Attachment to APD Form 3160-3

Hoss Com No. 1

Location: 730' fsl & 835' fel (se se)
Sec 20, T26N, R11W
San Juan County, New Mexico

Date: December 22, 2003
Drawn By: Connie S. Dinning



MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Hoss No. 1

730' fsl & 835' fel (se se)
Section 20, T26N, R11W, NMPM
San Juan County, New Mexico

1. ESTIMATED FORMATION TOPS:

<u>FORMATION</u>	<u>DEPTH KB</u>	<u>EST PSI</u>
Undif Tertiary	Surface	
Ojo Alamo	407'	
Kirtland Shale	542'	
Fruitland	990'	
Main Fruitland Coal	1322'	344 psi
Pictured Cliffs	1342'	349 psi
Total Depth	~1500'	

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 ~390 psig 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 = 390 psi. Well Control Anticipated Surface Pressure (ASP) = 390 psi - $(0.22 * 1500') = 60$ 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' - 1500' ±	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	1500 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.