

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
Budget Bureau No. 1004-0136
Expires: February 28, 1995ROW/APD
RECEIVED

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 Well ☐

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 670' fsl & 1951' fel (sw 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

670'

16. No. of Acres in Lease

320 acres

17. No. of Acres Assigned to This Well

320 acres *S/Z*

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

-1441'

19. Proposed Depth

-1525'

20. Rotary or Cable Tools

Rotary

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

6120' GR, 6125' 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	~1525' KB	~120 sx (201 cuft)

Merrion proposes to drill 8-3/4" hole with native mud to approx 120' and set 7" 20# or greater J55 surface casing, cement to surface with ~30 sx 'B' w/ 2% CaCl₂ (36 cuft). Will drill 6-1/4" hole to TD @ approx 1525' 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 67 sx 'B' w/ 2% SMS (138 cuft) and tail in with 53 sx 'B' (63 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 3165.3
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+4, WELL FILE+1

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

Signed

Connie S. Dinning Title Production Engineer

Date August 12, 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

NMOC

State of New Mexico
Energy, Minerals & Mining Resources Department
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C - 102

☐ AMENDED REPORT

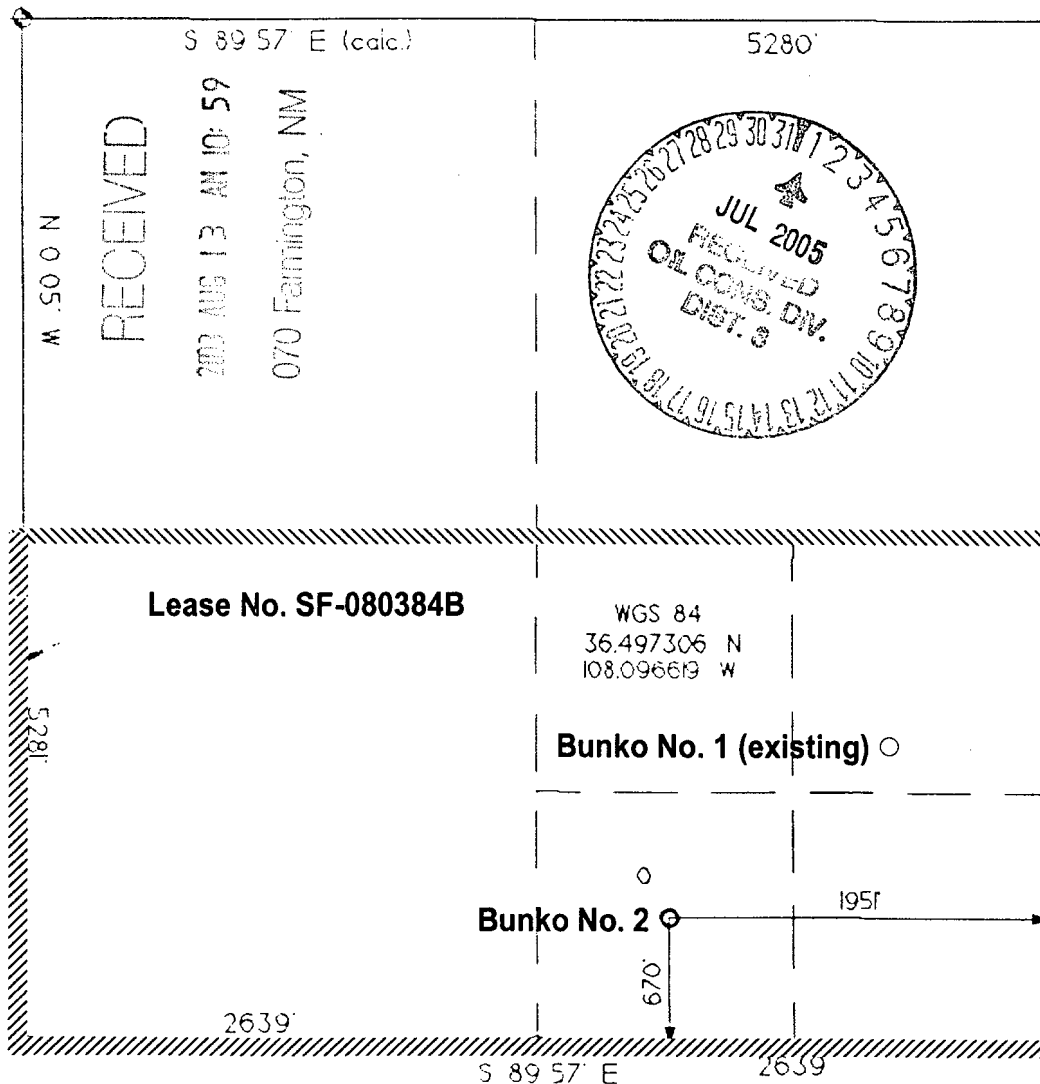
WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045-31836	Pool Code 71629	Pool Name Basin Fruitland Coal
Property Code 7803	Property Name BLUNTO Hickman A	Well Number 4
OGRD No. 014634	Operator Name MERRION OIL & GAS	Elevation 6120'

Surface Location									
UL or Lot 0	Sec. 10	Twp. 26 N.	Rge. 12 W.	Lot Ldn. SWSE	Feet from > 670'	North/South SOUTH	Feet from > 195'	East/West EAST	County SAN JUAN

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Ldn.	Feet from >	North/South	Feet from >	East/West	County
Dedication 320	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



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 7, 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 4/07/03	
Signature	
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.

2005 JUL 18 10 12 39

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☐ Oil Well☒ Gas Well☐ Other

070 FARMINGTON

2. Name of Operator

Merriion Oil & Gas Corporation

3a. Address

610 Reilly Avenue, Farmington, NM 87401

3b. Phone No. (include area code)

505.324.5300

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

670' fsl & 1951' fsl

Sec 10, T26N, R12W

5. Lease Serial No.
SF-080384B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Hickman A No. 4

9. API Well No.

30-045-31836

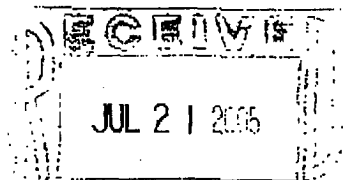
10. Field and Pool, or Exploratory Area
Basin Fruitland Coal11. County or Parish, State
San Juan

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 recomplete 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.)

Merriion Oil and Gas did not follow the NMOCD naming convention for this well originally. The original name was Bunko No. 2. The correct name is Hickman A No. 4. A corrected C-102 form is attached.

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

ACCEPTED FOR RECORD

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

JUL 19 2005

Date

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.

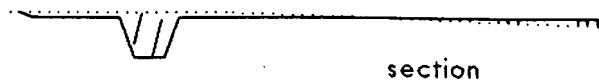
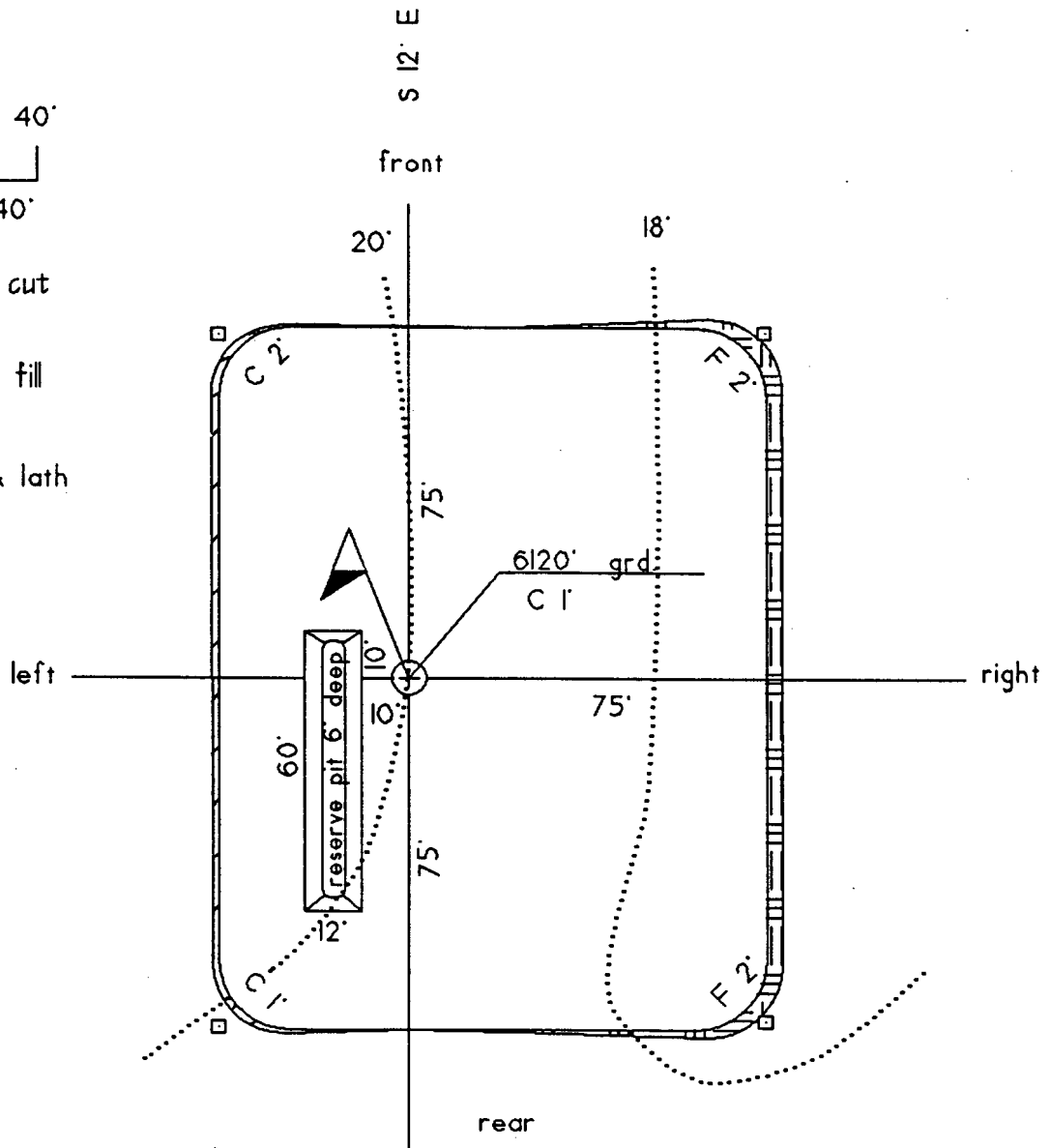
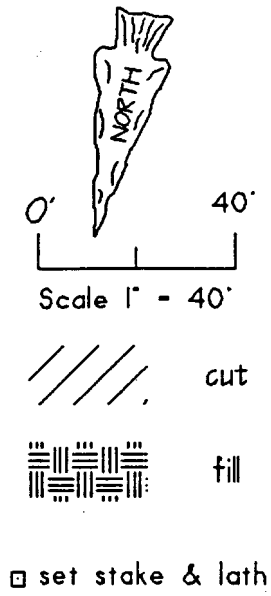
FARMINGTON DISTRICT OFFICE
BY

Office

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 or to any matter within its jurisdiction.

OPERATOR

Bunko # 2
 well pad and section



MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Bunko No. 2

670' fsl & 1951' fel (sw se)
Section 10, T26N, R12W, 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	229'	
Kirtland Shale	309'	
Fruitland	1095'	
Main Fruitland Coal	1355'	352 psi
Pictured Cliffs	1375'	358 psi
Total Depth	~1525'	

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 ~397psig 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 = 397 psi. Well Control Anticipated Surface Pressure (ASP) = $397 \text{ psi} - (0.22 * 1525') = 62 \text{ psi}$, 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' - 1525'±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	1525 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

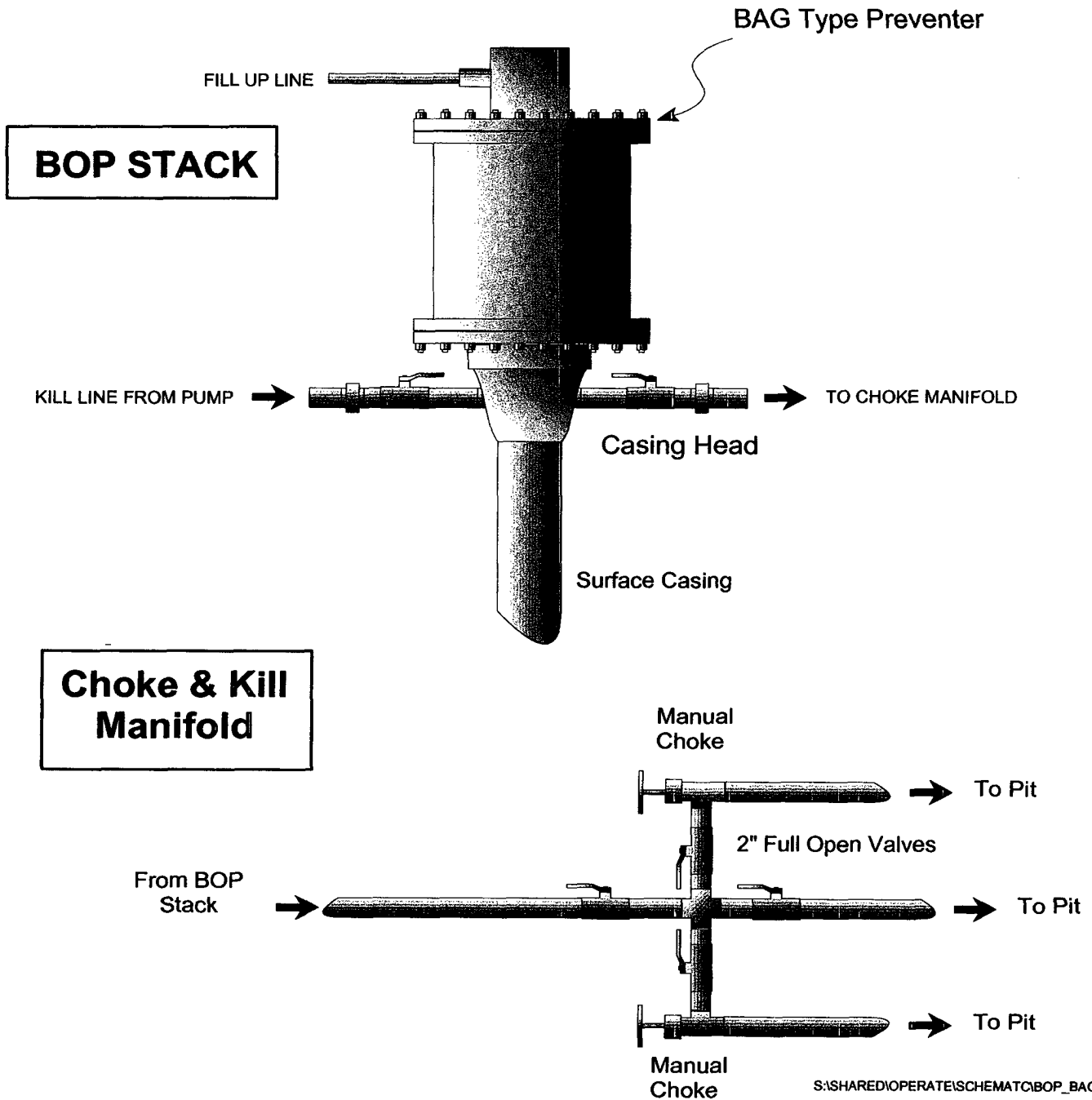
Well Control Equipment Schematic for 1M Service

Attachment to APD Form 3160-3

Bunko No. 2

Location: 670' fsl & 1951' fel (sw se)
Sec 10, T26N, R12W
San Juan County, New Mexico

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



Merriam Oil & Gas Corporation

Wellbore Schematic

Bunko No. 2

Proposed Wellbore Configuration

Location: 670' fsl, 1951 fel.
Sec.10, T26N, R12W
San Juan County, New Mexico

Elevation: 6120' GL
6125' KB

