

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

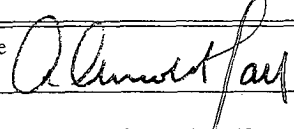
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		Split Estate		5. Lease Serial No. SHL:V-4949; BHL:NMNM 105211
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone				6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator MURCHISON OIL & GAS, INC. (15363)				7. If Unit or CA Agreement, Name and No. N/A
3a. Address 1100 MIRA VISTA BLVD. PLANO, TX 75093-4698		3b. Phone No. (include area code) 972-931-0700		8. Lease Name and Well No. (307018) PEQUENO MIKE BLU FEDERAL #4H
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface 3530' FNL & 200' FWL, LOT 12 At proposed prod. zone 3613' FNL & 330' FWL, LOT 12 Surface LOCATION		UNORTHODOX LOCATION		9. API Well No. 30-015-38664
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 24 MILES NE OF ARTESIA, NM		12. County or Parish EDDY		13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. 200' AT SURFACE 375' AT TOP OF WOLFCAMP (Also to nearest drig. unit line, if any)		16. No. of acres in lease 160		17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 798' NORTH OF API# 30-015-36907		19. Proposed Depth 12,085' MD 7,147' TVD PILOT 7,500' TVD		20. BLM/BIA Bond No. on file NM2163
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,753' GL		22. Approximate date work will start* 02/15/2011		23. Estimated duration 30 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed/Typed) A. ARNOLD NALL	Date 01/11/2011
Title VICE PRESIDENT OPERATIONS		
Approved by  JEANETTE MARTINEZ	Name (Printed/Typed)	Date MAR 24 2011
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

Application approval 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.
Conditions of approval, if any, are attached.

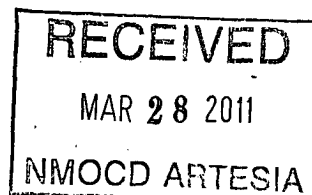
APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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.

(Continued on page 2)

*(Instructions on page 2)

Roswell Controlled Water Basin



KZ 04/04/11

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

ATTACHMENT TO FORM 3160-3 - REVISED**Murchison Oil & Gas, Inc.****Pequeno Mike BLU Federal #4H****SL: 3530' FNL & 200' FWL, Lot 12, Sec. 2, T16S, R29E****BHL: 3613' FNL & 330' FWL, Lot 12, Sec. 3, T16S, R29E****Eddy County, New Mexico**

1. Proration Unit Spacing: 160 acres
2. Ground Elevation: 3753' Est. RKB 3774'
3. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

	<u>DEPTH (RKB)</u>	<u>SUBSURFACE</u>
Salt	460'	+3314'
Salt - Base	835'	+2939'
Yates	1011'	+2763'
Seven Rivers	1160'	+2614'
Queen	1707'	+2067'
Grayburg	2123'	+1651'
Premier	2459'	+1315'
San Andres	2488'	+1286'
Glorietta	3945'	- 171'
Yeso	4043'	- 269'
Tubb	5490'	-1716'
Abo	5985'	-2211'
Wolfcamp	7089'	-3315'

*Pilot Hole - True Vertical Depth 7500' -3726'

PROPOSED HORIZONTAL WELL DEPTHS: TVD 7,147' and MD 12,085'

4. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

Fresh Water	110'	Seven Rivers
Oil/Gas	2488'	San Andres
Oil/Gas	3945'	Glorietta
Oil/Gas	5490'	Tubb
Oil/Gas	5985'	Abo
Oil/Gas	7089'	Wolfcamp

5. CASING AND CEMENTING PROGRAM

Hole Size	Casing Size	Wt./Ft.	Grade	Thread	Interval	Length	Condition
17-1/2"	13-3/8"	48.0#	H-40	ST&C	0'-400'	400'	New
12-1/4"	9-5/8"	36.0#	J-55	ST&C	0'-2,600'	2,600'	New
8-3/4"	7"	26.0#	HC P-110	LT&C	0'-6,550'	6,550'	New
6-1/8"	4-1/2"	11.6#	HC P-110	BT&C	6,450'-12,085'	5,635'	New

MINIMUM CASING DESIGN FACTORS:

Burst = 1.0; Tensile Strength = 1.8; Collapse = 1.125

An 8-3/4" vertical pilot hole is planned to 7,500' MD/TVD. Upon running CNL/LDT/CAL/GR/MSFL/HALS/GR open hole logs, we plan to run a combination 2-7/8" fiberglass tubing x 7" intermediate casing with bottom of the 7" steel casing to be landed at 6,550' +/- to isolate with cement and plugback the vertical hole for drilling the horizontal.

**Attachment to Form 3160-3
Murchison Oil & Gas, Inc.
Pequeno Mike BLU Federal #4H
Page 2 of 4**

CEMENTING PROGRAM:

13.375" Surface Casing – Cementing Program

Cement with 470 sacks of HalCem Class C + additives with yield = 1.35 cu.ft./sack; this volume calculates to be 100% excess above calculated hole volumes discounting for the volume of cement left in the shoe; sufficient volume of cement will be pumped to ensure cement is circulated to surface.

9.625" Intermediate Casing - Cementing Program

Cement lead with 905 sacks of EconoCem Class C + additives with yield = 1.82 cu.ft./sack, tail with 220 sacks HalCem Class C + additives with yield = 1.35 cu.ft./sack; combined volumes calculate to be 127% excess above calculated hole volume requirements discounting for the volume of cement left in the shoe; volumes are representative of previously pumped offset job volumes; sufficient volume of cement will be pumped to ensure cement is circulated to surface.

7" 2nd Intermediate Casing and 2-7/8" Fiberglass Tubing - Cementing Program

Cement lead with 1060 sacks of EconoCem-HLC + additives with yield = 1.83 cu.ft./sack, tail with 610 sacks HalCem Class H + additives with yield = 1.00 cu.ft./sack; combined volumes calculate to be 80% excess above calculated hole volume requirements discounting for the volume of cement to be left inside the 2-7/8" tubing stinger and 7" casing shoe joint; sufficient volume of cement will be pumped to ensure cement is circulated to surface. Will cement below 7" casing via 2-7/8" fiberglass tubing stinger to adequately plug back vertical pilot hole after logging and prior to drilling curve/horizontal section of well.

4.5" Production Casing - Cementing Program

Plan to utilize 4-1/2" 11.6# HCP-110 BTC Peak completion liner system from RSB packer @ 6,450' to TD of 12,085' MD. No cement required.

PRESSURE CONTROL EQUIPMENT:

400' – 2600' 13-5/8" 3000# ram type preventers with one set blind rams and one set pipe rams and a 3000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system.

A Kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

After setting the 13-3/8" casing, the blowout preventers and related control equipment shall be pressure tested to 3000 psi and 1500 psi respectively. Any equipment failing to test satisfactorily shall be repaired or replaced. Results of the BOP test will be recorded in the Driller's Log.

2600' – 12,085' 11" 3000# ram type preventers with one set blind rams and one set pipe rams and a 3000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6500'.

A Kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

After setting the 9 5/8" casing, the blowout preventers and related control equipment shall be pressure tested to 3000 psi and 1500 psi respectively. Any equipment failing to test satisfactorily shall be repaired or replaced. Results of the BOP test will be recorded in the Driller's Log.

Attachment to Form 3160-3
Murchison Oil & Gas, Inc.
Pequeno Mike BLU Federal #4H
Page 3 of 4

The BOP's will be maintained ready for use until drilling operations are completed. Pipe and blind rams shall be activated each trip. Annular preventer shall be functionally operated at least weekly.

BOP drills will be conducted as necessary to assure that equipment is operational and each crew is properly trained to carry out emergency duties.

Accumulator shall maintain a pressure capacity reserve at all times to provide for the close-open-close sequence of the blind and pipe rams of the hydraulic preventers.

MUD PROGRAM

- | | |
|----------------|---|
| 0' – 400' | Fresh water / native mud. Wt. 8.4 to 9.2 ppg, 4-6 PV, 8-12 YP, Lime for pH control. Mixture bulky fibrous materials for mild losses. Lost circulation may be encountered. |
| 400' – 2600' | Cut brine. Wt. 9.0 to 9.3 ppg, vis 28-34 sec, Lime for pH control. Bulky fibrous materials for mild losses. Lost circulation may be encountered. |
| 2600' - 7125' | Cut brine. Wt. 9.0 – 9.3 ppg, vis 28-29 sec, No control water loss, lime for pH control. |
| 7125' -12,085' | Mud up with XCD Polymer mud system. Wt. 9.0 – 9.5 ppg, Vis 32-40 sec, WL 12-15 cc. |

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run open-hole logs and casing, the viscosity and water loss may have to be adjusted to meet these needs.

Mud system monitoring equipment with derrick floor indicators and visual / audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until the production casing is run and cemented. Monitoring equipment shall consist of the following:

- A recording pit level indicator.
- A pit volume totalizer.
- A flowline sensor.

9. TESTING, LOGGING AND CORING PROGRAM

see COA

- A. Testing program: None planned.
 - B. Mud logging program. Two man unit from 2600' to TD.
 - C. Electric logging program: CNL/LDT/CAL/GR, MSFL/HALS/GR.
 - D. Coring program: None planned.
10. No abnormal temperatures or pressures are anticipated. Low levels of H₂S have been monitored in producing wells in the area, so H₂S may be present while drilling the well. An H₂S Plan is attached to the Drilling Program. Anticipated Bottom Hole Pressure is 3200 PSI (maximum), and anticipated static Bottom Hole Temperature is 135 degrees Fahrenheit.
11. Anticipated starting date is February 15, 2011. It should take approximately 30 – 40 days to drill the well and another 10-15 days to complete.

Attachment to Form 3160-3
Murchison Oil & Gas, Inc.
Pequeno Mike BLU Federal #4H
Page 4 of 4

12. A statement accepting responsibility for operations is attached.
13. The Multi-Point Surface Use & Operation Plan is attached.
14. If the Bureau of Land Management needs additional information to evaluate this application, please advise.

Murchison Oil & Gas

Eddy County (NAD27)

Pequeno Mike Blu Federal

#4H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

11 January, 2011

PATHFINDER

A Schlumberger Company

Pathfinder

Pathfinder X & Y Planning Report



Company: Murchison Oil & Gas
Project: Eddy County (NAD27)
Site: Pequeno Mike Blu Federal
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference: Site Pequeno Mike Blu Federal
MD Reference: Patterson #74 @ 3774.50usft (Original Well Elev)
North Reference: Patterson #74 @ 3774.50usft (Original Well Elev)
Survey Calculation Method: Grid
Database: Minimum Curvature
 EDM 5000.1 Single User Db

Project Eddy County (NAD27)

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site Pequeno Mike Blu Federal

Site Position: Northing: 711,462,800 usft Latitude: 32° 57' 20.050 N
 Easting: 586,009,700 usft Longitude: 104° 3' 10.554 W
Position Uncertainty: Map 0.00 usft Slot Radius: 13-3/16" Grid Convergence: 0.15°

Well #4H

Well Position +N-S 0.00 usft Latitude: 32° 57' 20.050 N
 +E-W 0.00 usft Longitude: 104° 3' 10.554 W
Position Uncertainty 0.00 usft Wellhead Elevation: usft Ground Level: 3,753.00 usft

Wellbore OH

Magnetics Model Name IGRF200510 Sample Date 01/30/11 Declination (°) 7.90 Dip Angle (°) 60.81 Field Strength (nT) 49,072

Design Plan #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

Vertical Section: Depth From (TVD) (usft) 0.00 +N-S (usft) 0.00 +E-W (usft) 0.00 Direction (°) 268.90

Survey Tool Program Date 01/11/11

From (usft) To (usft) Survey (Wellbore) Tool Name Description
 0.00 12,085.16 Plan #1 (OH) MWD MWD - Standard

Pathfinder

Pathfinder X & Y Planning Report



A Schlumberger Company

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 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Site Pequeno Mike Blu Federal
 Patterson #74 @ 3774.50ust (Original Well Elev)
 Patterson #74 @ 3774.50ust (Original Well Elev)
 Grid
 Minimum Curvature
 EDM 5000.1 Single User Db

Planned Survey	MD (ustf)	Inc (°)	Azi (°)	TVD (ustf)	TVDSS (ustf)	N/S (ustf)	E/W (ustf)	V. Sec (ustf)	D Leg (°/100ustf)	Northing (ustf)	Easting (ustf)
	0.00	0.00	0.00	0.00	3,774.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	100.00	0.00	0.00	100.00	3,674.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	200.00	0.00	0.00	200.00	3,574.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	300.00	0.00	0.00	300.00	3,474.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	400.00	0.00	0.00	400.00	3,374.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	500.00	0.00	0.00	500.00	3,274.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	600.00	0.00	0.00	600.00	3,174.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	700.00	0.00	0.00	700.00	3,074.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	800.00	0.00	0.00	800.00	2,974.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	900.00	0.00	0.00	900.00	2,874.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,000.00	0.00	0.00	1,000.00	2,774.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,100.00	0.00	0.00	1,100.00	2,674.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,200.00	0.00	0.00	1,200.00	2,574.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,300.00	0.00	0.00	1,300.00	2,474.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,400.00	0.00	0.00	1,400.00	2,374.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,500.00	0.00	0.00	1,500.00	2,274.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,600.00	0.00	0.00	1,600.00	2,174.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,700.00	0.00	0.00	1,700.00	2,074.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,800.00	0.00	0.00	1,800.00	1,974.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	1,900.00	0.00	0.00	1,900.00	1,874.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,000.00	0.00	0.00	2,000.00	1,774.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,100.00	0.00	0.00	2,100.00	1,674.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,200.00	0.00	0.00	2,200.00	1,574.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,300.00	0.00	0.00	2,300.00	1,474.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,400.00	0.00	0.00	2,400.00	1,374.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,500.00	0.00	0.00	2,500.00	1,274.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,600.00	0.00	0.00	2,600.00	1,174.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70

Pathfinder

Pathfinder X & Y Planning Report

Company: Murchison Oil & Gas
Project: Eddy County (NAD27)
Site: Pequeno Mike Blu Federal
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference: Patterson #74 @ 3774.50usft (Original Well Elev)
MD Reference: Patterson #74 @ 3774.50usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Site: Pequeno Mike Blu Federal
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Planned Survey	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
	2,700.00	0.00	0.00	2,700.00	1,074.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,800.00	0.00	0.00	2,800.00	974.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	2,900.00	0.00	0.00	2,900.00	874.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,000.00	0.00	0.00	3,000.00	774.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,100.00	0.00	0.00	3,100.00	674.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,200.00	0.00	0.00	3,200.00	574.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,300.00	0.00	0.00	3,300.00	474.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,400.00	0.00	0.00	3,400.00	374.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,500.00	0.00	0.00	3,500.00	274.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,600.00	0.00	0.00	3,600.00	174.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,700.00	0.00	0.00	3,700.00	74.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,800.00	0.00	0.00	3,800.00	-25.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	3,900.00	0.00	0.00	3,900.00	-125.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,000.00	0.00	0.00	4,000.00	-225.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,100.00	0.00	0.00	4,100.00	-325.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,200.00	0.00	0.00	4,200.00	-425.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,300.00	0.00	0.00	4,300.00	-525.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,400.00	0.00	0.00	4,400.00	-625.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,500.00	0.00	0.00	4,500.00	-725.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,600.00	0.00	0.00	4,600.00	-825.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,700.00	0.00	0.00	4,700.00	-925.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,800.00	0.00	0.00	4,800.00	-1,025.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	4,900.00	0.00	0.00	4,900.00	-1,125.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	5,000.00	0.00	0.00	5,000.00	-1,225.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	5,100.00	0.00	0.00	5,100.00	-1,325.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	5,200.00	0.00	0.00	5,200.00	-1,425.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
	5,300.00	0.00	0.00	5,300.00	-1,525.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70



A Schlumberger Company

Pathfinder

Pathfinder X & Y Planning Report

Company: Murchison Oil & Gas
Project: Eddy County (NAD27)
Site: Pequeno Mike Blu Federal
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
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Survey Calculation Method:
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Site Pequeno Mike Blu Federal
Patterson #74 @ 3774.50usft (Original Well Elev)
Patterson #74 @ 3774.50usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLag (°/100usft)	Northing (usft)	Easting (usft)
5,400.00	0.00	0.00	5,400.00	-1,825.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
5,500.00	0.00	0.00	5,500.00	-1,725.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
5,600.00	0.00	0.00	5,600.00	-1,825.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
5,700.00	0.00	0.00	5,700.00	-1,925.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
5,800.00	0.00	0.00	5,800.00	-2,025.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
5,900.00	0.00	0.00	5,900.00	-2,125.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,000.00	0.00	0.00	6,000.00	-2,225.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,100.00	0.00	0.00	6,100.00	-2,325.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,200.00	0.00	0.00	6,200.00	-2,425.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,300.00	0.00	0.00	6,300.00	-2,525.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,400.00	0.00	0.00	6,400.00	-2,625.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,500.00	0.00	0.00	6,500.00	-2,725.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,600.00	0.00	0.00	6,600.00	-2,825.50	0.00	0.00	0.00	0.00	711,462.80	586,009.70
6,669.47	0.00	0.00	6,669.47	-2,894.97	0.00	0.00	0.00	0.00	711,462.80	586,009.70
KOP-6669.47°MD,0.00°INC,0.00°AZI,6669.47°TVD										
6,675.00	0.66	268.90	6,675.00	-2,900.50	0.00	-0.03	0.03	12.00	711,462.80	586,009.67
6,700.00	3.66	268.90	6,699.98	-2,925.48	-0.02	-0.98	0.98	12.00	711,462.78	586,008.72
6,725.00	6.66	268.90	6,724.87	-2,950.37	-0.06	-3.22	3.23	12.00	711,462.74	586,006.48
6,750.00	9.66	268.90	6,749.62	-2,975.12	-0.13	-6.77	6.78	12.00	711,462.67	586,002.93
6,775.00	12.66	268.90	6,774.14	-2,999.64	-0.22	-11.61	11.61	12.00	711,462.58	585,998.09
6,800.00	15.66	268.90	6,798.38	-3,023.88	-0.34	-17.73	17.73	12.00	711,462.46	585,991.97
6,825.00	18.66	268.90	6,822.26	-3,047.76	-0.48	-25.10	25.11	12.00	711,462.32	585,984.60
6,850.00	21.66	268.90	6,845.73	-3,071.23	-0.65	-33.72	33.72	12.00	711,462.15	585,975.98
6,875.00	24.66	268.90	6,868.71	-3,094.21	-0.84	-43.55	43.56	12.00	711,461.96	585,966.15
6,900.00	27.66	268.90	6,891.15	-3,116.65	-1.05	-54.57	54.58	12.00	711,461.75	585,955.13
6,925.00	30.66	268.90	6,912.98	-3,138.48	-1.28	-66.75	66.76	12.00	711,461.52	585,942.95
6,950.00	33.66	268.90	6,934.14	-3,159.64	-1.54	-80.05	80.07	12.00	711,461.26	585,929.65

Pathfinder

Pathfinder X & Y Planning Report



A Schlumberger Company

Company: Murchison Oil & Gas
 Project: Eddy County (NAD27)
 Site: Pequeno Mike Blu Federal
 Well: #4H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Site Pequeno Mike Blu Federal
 TVD Reference: Patterson #74 @ 3774.50usft (Original Well Elev)
 MD Reference: Patterson #74 @ 3774.50usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V: Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
6,975.00	36.66	268.90	6,954.57	-3,180.07	-1.81	-94.45	94.46	12.00	711,460.99	585,915.25
7,000.00	39.66	268.90	6,974.23	-3,199.73	-2.11	-109.89	109.91	12.00	711,460.69	585,899.81
7,025.00	42.66	268.90	6,993.04	-3,218.54	-2.43	-126.34	126.36	12.00	711,460.37	585,883.36
7,050.00	45.66	268.90	7,010.98	-3,236.48	-2.76	-143.75	143.78	12.00	711,460.04	585,865.95
7,075.00	48.66	268.90	7,027.97	-3,253.47	-3.11	-162.08	162.11	12.00	711,459.69	585,847.62
7,100.00	51.66	268.90	7,043.99	-3,269.49	-3.48	-181.27	181.30	12.00	711,459.32	585,828.43
7,125.00	54.66	268.90	7,058.97	-3,284.47	-3.86	-201.27	201.31	12.00	711,458.94	585,808.43
7,150.00	57.66	268.90	7,072.89	-3,298.39	-4.26	-222.03	222.07	12.00	711,458.54	585,787.67
7,175.00	60.66	268.90	7,085.70	-3,311.20	-4.68	-243.49	243.54	12.00	711,458.12	585,766.21
7,200.00	63.66	268.90	7,097.38	-3,322.88	-5.10	-265.59	265.64	12.00	711,457.70	585,744.11
7,225.00	66.66	268.90	7,107.88	-3,333.38	-5.54	-288.27	288.33	12.00	711,457.26	585,721.43
7,250.00	69.66	268.90	7,117.17	-3,342.67	-5.98	-311.47	311.53	12.00	711,456.82	585,698.23
7,275.72	72.75	268.90	7,125.46	-3,350.96	-6.45	-335.81	335.88	12.00	711,456.35	585,673.89
Start 254.75 hold at 7275.72 MD										
7,300.00	72.75	268.90	7,132.66	-3,358.16	-6.89	-359.00	359.06	0.00	711,455.91	585,650.70
7,400.00	72.75	268.90	7,162.31	-3,387.81	-8.73	-454.48	454.57	0.00	711,454.07	585,555.22
7,500.00	72.75	268.90	7,191.97	-3,417.47	-10.56	-549.97	550.07	0.00	711,452.24	585,459.73
7,526.59	72.75	268.90	7,199.85	-3,425.35	-11.05	-575.36	575.46	0.00	711,451.75	585,434.34
PP(Top of Wolfcamp)										
7,530.47	72.75	268.90	7,201.00	-3,426.50	-11.12	-579.06	579.17	0.00	711,451.68	585,430.64
Start Build 11.17										
7,550.00	74.93	268.90	7,206.44	-3,431.94	-11.48	-597.82	597.93	11.17	711,451.32	585,411.88
7,600.00	80.52	268.90	7,217.06	-3,442.56	-12.42	-646.64	646.76	11.17	711,450.38	585,363.06
7,650.00	86.10	268.90	7,222.89	-3,448.39	-13.37	-696.27	696.40	11.17	711,449.43	585,313.43
7,693.88	91.00	268.90	7,224.00	-3,449.50	-14.21	-740.12	740.25	11.17	711,448.59	585,269.58
EOC-7693.88MD,91.00°INC,268.90°AZI,7224.00TVD										
7,700.00	91.00	268.90	7,223.89	-3,449.39	-14.33	-746.24	746.37	0.00	711,448.47	585,263.46
7,800.00	91.00	268.90	7,222.15	-3,447.65	-16.25	-846.20	846.36	0.00	711,446.55	585,163.50

Pathfinder

Pathfinder X & Y Planning Report



A Schlumberger Company

Company: Murchison Oil & Gas
Project: Eddy County (NAD27)
Site: Pequeno Mike Blt Federal
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Site Pequeno Mike Blt Federal
Patterson #74 @ 3774.50usft (Original Well Elev)
Patterson #74 @ 3774.50usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned Survey	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
	7,900.00	91.00	268.90	7,220.40	-3,445.90	-18.17	-946.17	946.34	0.00	711,444.63	585,063.53
	8,000.00	91.00	268.90	7,218.66	-3,444.16	-20.09	-1,046.14	1,046.33	0.00	711,442.71	584,963.56
	8,100.00	91.00	268.90	7,216.91	-3,442.41	-22.01	-1,146.10	1,146.31	0.00	711,440.79	584,863.60
	8,200.00	91.00	268.90	7,215.17	-3,440.67	-23.93	-1,246.07	1,246.30	0.00	711,438.87	584,763.63
	8,300.00	91.00	268.90	7,213.42	-3,438.92	-25.85	-1,346.03	1,346.28	0.00	711,436.95	584,663.67
	8,400.00	91.00	268.90	7,211.68	-3,437.18	-27.76	-1,446.00	1,446.27	0.00	711,435.04	584,563.70
	8,500.00	91.00	268.90	7,209.93	-3,435.43	-29.68	-1,545.97	1,546.25	0.00	711,433.12	584,463.73
	8,600.00	91.00	268.90	7,208.19	-3,433.69	-31.60	-1,645.93	1,646.24	0.00	711,431.20	584,363.77
	8,700.00	91.00	268.90	7,206.44	-3,431.94	-33.52	-1,745.90	1,746.22	0.00	711,429.28	584,263.80
	8,800.00	91.00	268.90	7,204.70	-3,430.20	-35.44	-1,845.87	1,846.21	0.00	711,427.36	584,163.83
	8,900.00	91.00	268.90	7,202.95	-3,428.45	-37.36	-1,945.83	1,946.19	0.00	711,425.44	584,063.87
	9,000.00	91.00	268.90	7,201.21	-3,426.71	-39.28	-2,045.80	2,046.18	0.00	711,423.52	583,963.90
	9,100.00	91.00	268.90	7,199.46	-3,424.96	-41.20	-2,145.77	2,146.16	0.00	711,421.60	583,863.93
	9,200.00	91.00	268.90	7,197.71	-3,423.21	-43.12	-2,245.73	2,246.15	0.00	711,419.68	583,763.97
	9,300.00	91.00	268.90	7,195.97	-3,421.47	-45.04	-2,345.70	2,346.13	0.00	711,417.76	583,664.00
	9,400.00	91.00	268.90	7,194.22	-3,419.72	-46.96	-2,445.66	2,446.11	0.00	711,415.84	583,564.04
	9,500.00	91.00	268.90	7,192.48	-3,417.98	-48.88	-2,545.63	2,546.10	0.00	711,413.92	583,464.07
	9,600.00	91.00	268.90	7,190.73	-3,416.23	-50.80	-2,645.60	2,646.08	0.00	711,412.00	583,364.10
	9,700.00	91.00	268.90	7,188.99	-3,414.49	-52.72	-2,745.56	2,746.07	0.00	711,410.08	583,264.14
	9,800.00	91.00	268.90	7,187.24	-3,412.74	-54.64	-2,845.53	2,846.05	0.00	711,408.16	583,164.17
	9,900.00	91.00	268.90	7,185.50	-3,411.00	-56.56	-2,945.50	2,946.04	0.00	711,406.24	583,064.20
	10,000.00	91.00	268.90	7,183.75	-3,409.25	-58.48	-3,045.46	3,046.02	0.00	711,404.32	582,964.24
	10,100.00	91.00	268.90	7,182.01	-3,407.51	-60.40	-3,145.43	3,146.01	0.00	711,402.40	582,864.27
	10,200.00	91.00	268.90	7,180.26	-3,405.76	-62.31	-3,245.39	3,245.99	0.00	711,400.49	582,764.31
	10,300.00	91.00	268.90	7,178.52	-3,404.02	-64.23	-3,345.36	3,345.98	0.00	711,398.57	582,664.34
	10,400.00	91.00	268.90	7,176.77	-3,402.27	-66.15	-3,445.33	3,445.96	0.00	711,396.65	582,564.37
	10,500.00	91.00	268.90	7,175.03	-3,400.53	-68.07	-3,545.29	3,545.95	0.00	711,394.73	582,464.41

Pathfinder

Pathfinder X & Y Planning Report

Company: Murchison Oil & Gas
 Project: Eddy County (NAD27)
 Site: Pequeno Mike Blu Federal
 Well: #4H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Site Pequeno Mike Blu Federal
 Patterson #74 @ 3774.50usft (Original Well Elev)
 Patterson #74 @ 3774.50usft (Original Well Elev)
 Grid
 Minimum Curvature
 EDM 5000.1 Single User Db

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
10,600.00	91.00	268.90	7,173.28	-3,398.78	-69.99	-3,645.26	3,645.93	0.00	711,392.81	582,364.44
10,700.00	91.00	268.90	7,171.54	-3,397.04	-71.91	-3,745.23	3,745.92	0.00	711,390.89	582,264.47
10,800.00	91.00	268.90	7,169.79	-3,395.29	-73.83	-3,845.19	3,845.90	0.00	711,388.97	582,164.51
10,900.00	91.00	268.90	7,168.05	-3,393.55	-75.75	-3,945.16	3,945.89	0.00	711,387.05	582,064.54
11,000.00	91.00	268.90	7,166.30	-3,391.80	-77.67	-4,045.13	4,045.87	0.00	711,385.13	581,964.57
11,100.00	91.00	268.90	7,164.55	-3,390.05	-79.59	-4,145.09	4,145.86	0.00	711,383.21	581,864.61
11,200.00	91.00	268.90	7,162.81	-3,388.31	-81.51	-4,245.06	4,245.84	0.00	711,381.29	581,764.64
11,300.00	91.00	268.90	7,161.06	-3,386.56	-83.43	-4,345.02	4,345.83	0.00	711,379.37	581,664.68
11,400.00	91.00	268.90	7,159.32	-3,384.82	-85.35	-4,444.99	4,445.81	0.00	711,377.45	581,564.71
11,500.00	91.00	268.90	7,157.57	-3,383.07	-87.27	-4,544.96	4,545.80	0.00	711,375.53	581,464.74
11,600.00	91.00	268.90	7,155.83	-3,381.33	-89.19	-4,644.92	4,645.78	0.00	711,373.61	581,364.78
11,700.00	91.00	268.90	7,154.08	-3,379.58	-91.11	-4,744.89	4,745.76	0.00	711,371.69	581,264.81
11,800.00	91.00	268.90	7,152.34	-3,377.84	-93.03	-4,844.86	4,845.75	0.00	711,369.77	581,164.84
11,900.00	91.00	268.90	7,150.59	-3,376.09	-94.95	-4,944.82	4,945.73	0.00	711,367.85	581,064.88
12,000.00	91.00	268.90	7,148.85	-3,374.35	-96.86	-5,044.79	5,045.72	0.00	711,365.94	580,964.91
12,085.84	91.00	268.90	7,147.35	-3,372.85	-98.51	-5,130.60	5,131.54	0.00	711,364.29	580,879.10
TD at 12085.84 - PBHL (PMBF#4)										

Plan Annotations	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
	6,669.47	6,669.47	0.00	0.00	KOP-6669.47MD,0.00°INC,0.00°AZI,6669.47TVD
	7,275.72	7,125.46	-6.45	-335.81	Start 254.75 hold at 7275.72 MD
	7,530.47	7,201.00	-11.12	-579.06	Start Build 11.17
	7,693.88	7,224.00	-14.21	-740.12	EOC-7693.88MD 91.00°INC,268.90°AZI,7224.00TVD
	12,085.84	7,147.35	-98.51	-5,130.60	TD at 12085.84

Pathfinder

Pathfinder X & Y Planning Report



A Schlumberger Company

Company: Murchison Oil & Gas
Project: Eddy County (NAD27)
Site: Pequeno Mike Blu Federal
Well: #4H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Site Pequeno Mike Blu Federal
Patterson #74 @ 3774.50usft (Original Well Elev)
Patterson #74 @ 3774.50usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

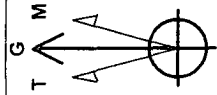
Checked By: _____

Approved By: _____

Date: _____

Murchison Oil & Gas

Project: Eddy County (NAD27)
 Site: Pequeno Mike Blu Federal
 Well: #4H
 Wellbore: OH
 Plan: Plan #1 (#4H/OH)

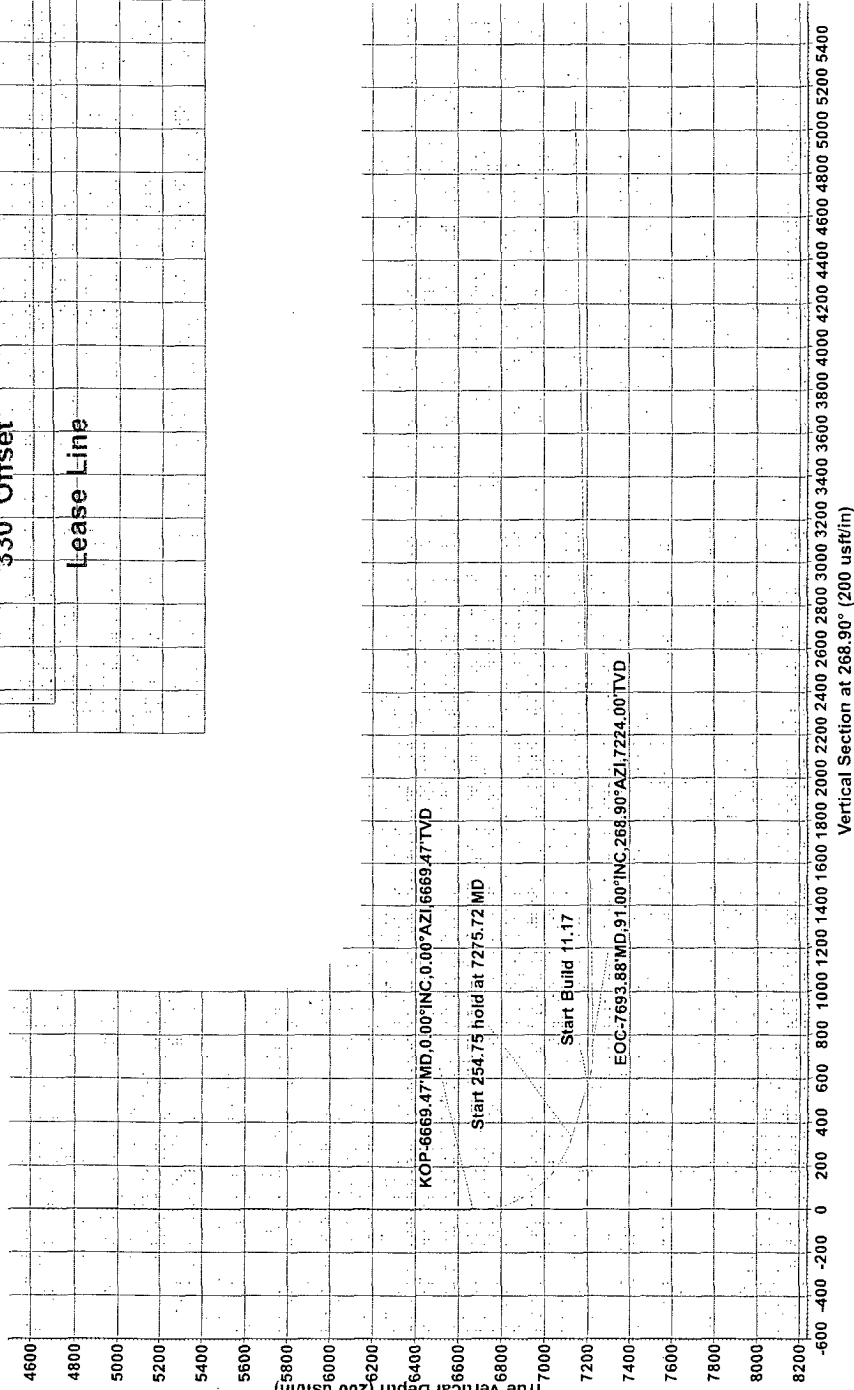


Azimuths to Grid North
 True North: -0.15°
 Magnetic North: 7.74°
 Magnetic Field
 Strength: 49072.2nT
 Dip Angle: 60.81°
 Date: 01/30/2011
 Model: IGRF200510

PATHFINDER
 A Schlumberger Company

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/S	+E/W	Dipg	TFace	VFace	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6669.47	0.00	0.00	6669.47	0.00	0.00	0.00	0.00	0.00	0.00
7275.72	0.00	0.00	7275.72	-37.57	1.00	268.90	0.00	0.00	0.00
7530.47	72.75	268.90	7275.00	-11.12	-579.06	0.00	0.00	0.00	0.00
7693.88	91.00	268.90	7224.00	-14.21	-740.12	11.17	0.00	0.00	740.25
12065.84	91.00	268.90	7147.35	-98.51	-5130.60	0.00	0.00	0.00	5131.54

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/S	+E/W	Northing	Easting
PBHL (PMB#4)	7147.35	-98.40	-5130.60	711364.400	580979.100
PP1 (top of Wellcamp)	201.00	-11.04	-979.00	711451.760	585434.300



West(-)/East(+) (200 usft/in)

South(-)/North(+) (200 usft/in)

330' Offset

Lease Line

WELL DETAILS: #4H

Ground Elevation: 3753.00
 RIG: 874 @ 3774.50usft (Original Well Elev)
 Rig Name: Original Well Elev
 Northing: 711462.300
 Easting: 580993.100
 Latitude: 32° 57' 20.00" N
 Longitude: 104° 3' 10.25" W
 Slot

PROJECT DETAILS: Eddy County (NAD27)
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level
 Local North: Grid

Plan: Plan #1 (#4H/OH)

Created By: Nase Bingham Date: 16:16, January 11 2011

EXHIBIT F

BOP STACK

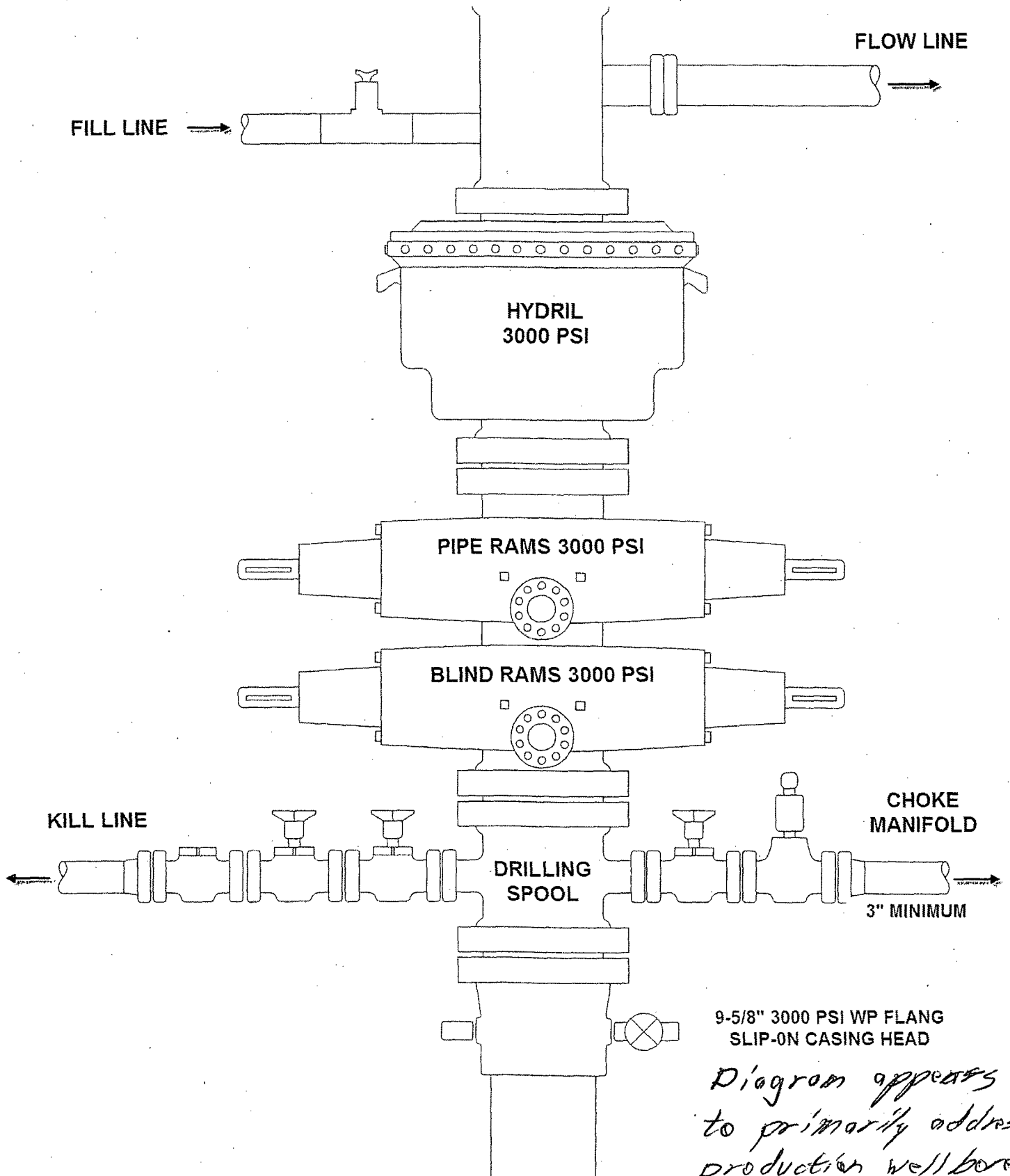
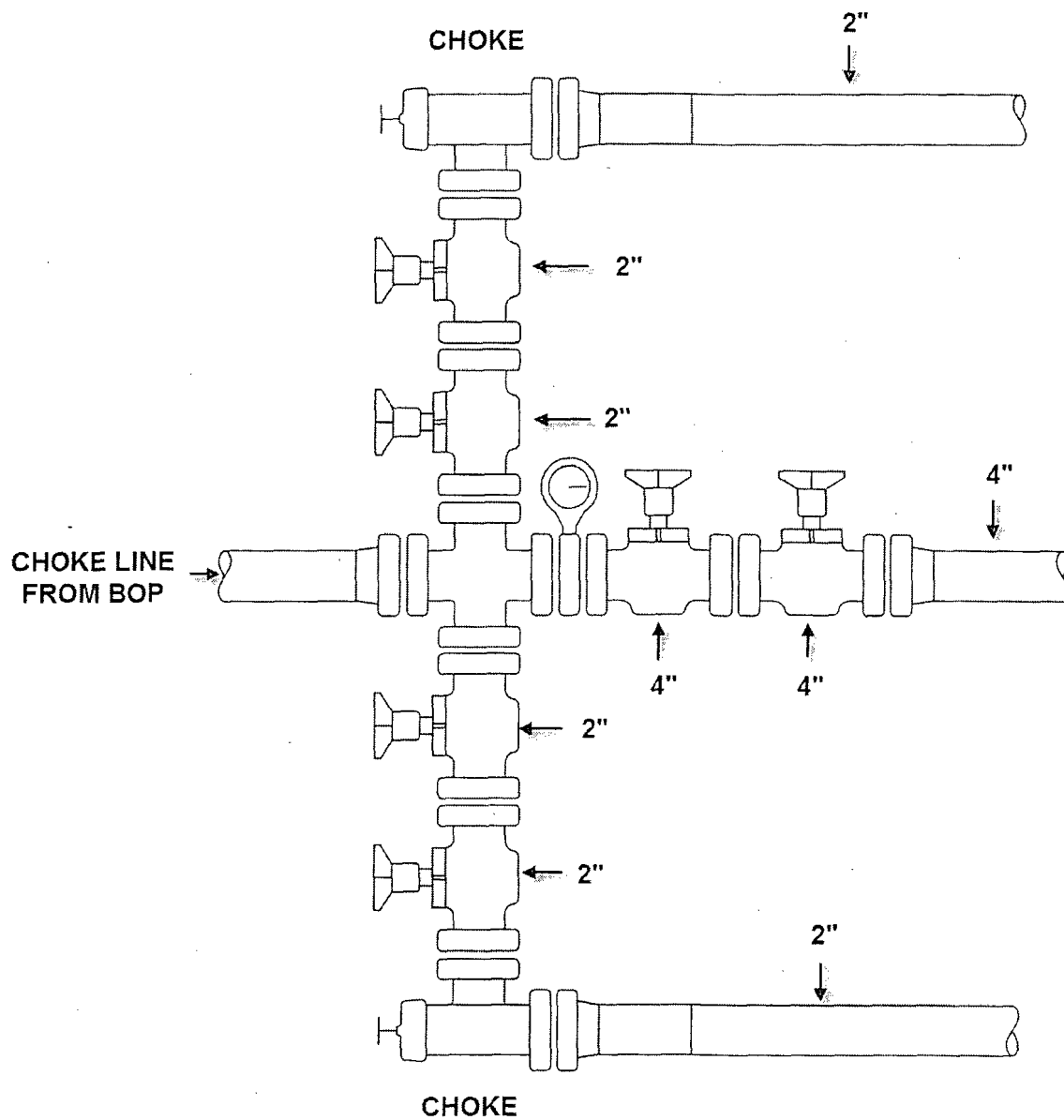
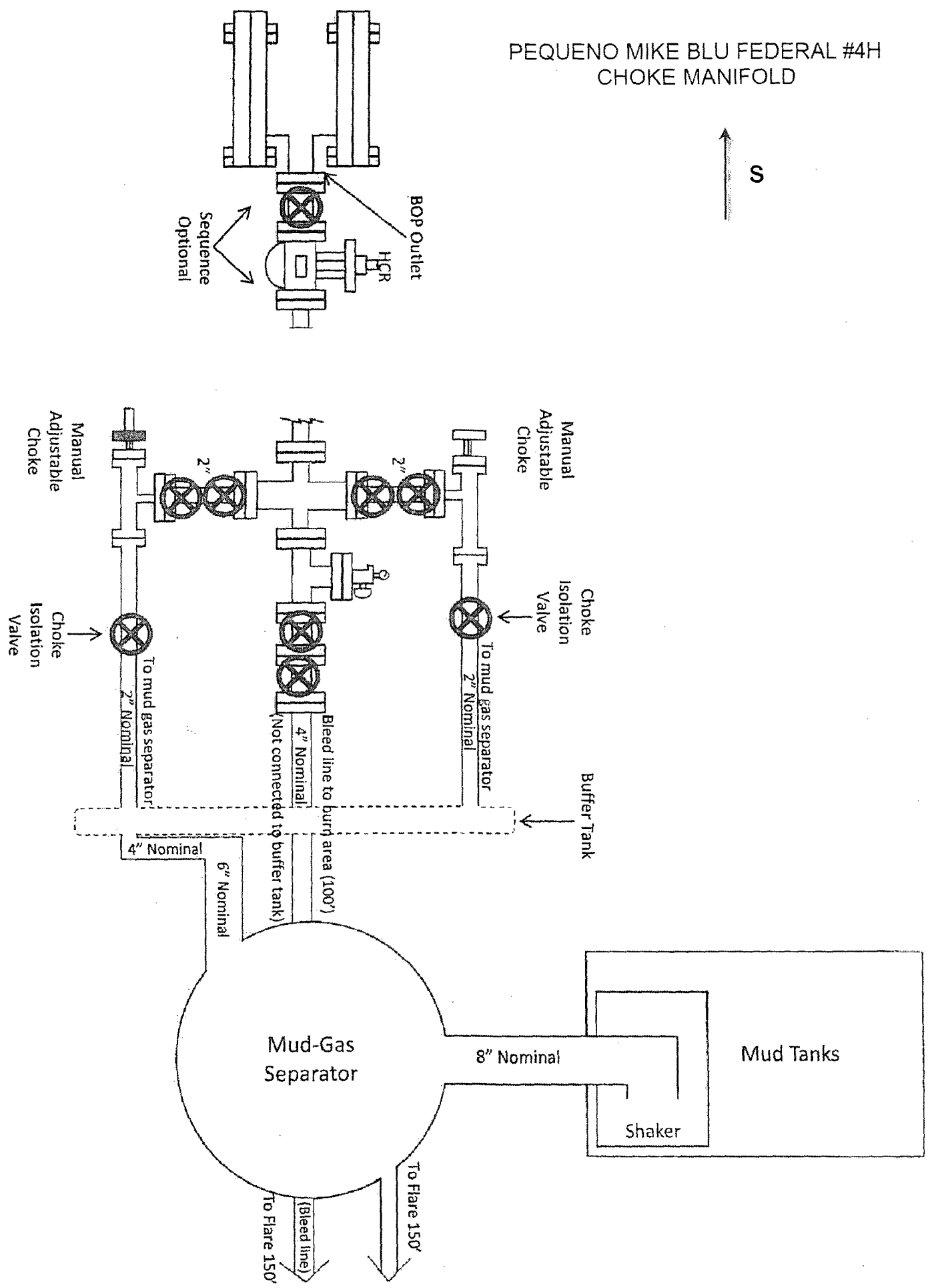
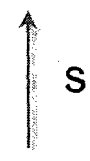


EXHIBIT G

CHOKE MANIFOLD



PEQUENO MIKE BLU FEDERAL #4H
CHOKE MANIFOLD



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator MURCHISON OIL & GAS INC OGRID # 15363
 Well Name & # 30706 PEQUENO MIKE BLU FED #4H Surface Type (F) (S) (P)
 Location: UL D12, Sect 2, Township 16 s, RNG 29 e, Sub-surface Type (F) (S) (P)
D12 B - 16 - 29

A. Date C101 rec'd / / C101 reviewed / /

B. 1. Check mark, Information is OK on Forms:

OGRID X, BONDING FED PROP CODE X, WELL # , SIGNATURE

2. Inactive Well list as of: 4411 # wells 95, # Inactive wells 1

a. District Grant APD but see number of inactive wells:

No letter required X; Sent Letter to Operator , to Santa Fe

3. Additional Bonding as of: 4411

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator , To Santa Fe

b. District Denial because of Inactive well list and Financial Assurance:

No Letter required X; Sent Letter to Operator , To Santa Fe

C. C102 YES X, NO , Signature

1. Pool COUNTY LINE TANK; APO, Code 97197

a. Dedicated acreage 160 What Units LOTS 9, 10, 11, 12

b. SUR. Location Standard ; Non-Standard Location X

c. Well shares acres: Yes , No , # of wells plus this well #

2. 2nd. Operator in same acreage, Yes , No

Agreement Letter , Disagreement letter

3. Intent to Directional Drill Yes , No

a. Dedicated acreage 160, What Units LOTS 9, 10, 11, 12

b. Bottomhole Location Standard X, Non-Standard Bottomhole

4. Downhole Commingle: Yes , No X

a. Pool #2 , Code , Acres

Pool #3 , Code , Acres

Pool #4 , Code , Acres

5. POTASH Area Yes , No FED

D. Blowout Preventer Yes X, No

E. H2S Yes , No Part FED APD

F. C144 Pit Registration Yes , No X, need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes , No X, NSL #

2. Non-Standard Proration: Yes , No X, NSP #

3. Simultaneous Dedication: Yes , No X, SD #

Number of wells Plus #

4. Injection order Yes , No X; PMX # or WFX #

5. SWD order Yes , NO X; SWD #

6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date / /

API #30-0 15-1288-28664

8. Reviewers