

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Tony Delfin
Acting Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 9-10-110

Well information;

Operator WPX, Well Name and Number Wlybrook Unit # 767H

API# 30-045-35797, Section 34, Township 23 (N/S), Range 9 (E/W)

Conditions of Approval: (See the below checked and handwritten conditions)

- Notify Aztec OCD 24hrs prior to casing & cement.
- Hold C-104 for directional survey & "As Drilled" Plat
- Hold C-104 for (NSL) NSP, DHC
- Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Chad R. Catanach
NMOCD Approved by Signature

12-8-2016
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

5. Lease Serial No. NMNM57164		6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No. INITAL MANCOS PA / NMNM135216A		8. Lease Name and Well No. W LYBROOK 767H	
9. API Well No. 30-045-35797		10. Field and Pool, or Exploratory BASIN MANCOS	
11. Sec., T. R. M. or Blk. and Survey or Area SEC 34 / T23N / R9W / NMP		12. County or Parish SAN JUAN	
13. State NM		14. Distance in miles and direction from nearest town or post office*	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 20 feet	16. No. of acres in lease 2240	17. Spacing Unit dedicated to this well 200	
18. Distance from proposed location* to nearest well, drilling, completed, 543 feet applied for, on this lease, ft.	19. Proposed Depth 4941 feet / 11518 feet	20. BLM/BIA Bond No. on file FED: UTB000178	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6696 feet	22. Approximate date work will start* 10/01/2016	23. Estimated duration 30 days	

OIL CONS. DIV DIST. 3

DEC 01 2016

MP

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 (Electronic Submission)	Name (Printed/Typed) Lacey Granillo / Ph: (505)333-1816	Date 09/06/2016
--	--	--------------------

Title Permitting Tech III		
------------------------------	--	--

Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 11/28/16
---	----------------------	------------------

Title AEN	Office FARMINGTON	
--------------	----------------------	--

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.

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)

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

BLM'S APPROVAL OR ACCEPTANCE OF THIS
ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS

This action is subject to
technical and procedural review
pursuant to 43 CFR 3165.3 and
appeal pursuant to 43 CFR 3165.4

NMOCD AV

14

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6181 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

AMENDED REPORT

OIL CONS. DIV DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-3597		*Pool Code 98157	*Pool Name LYBROOK MANCOS W	
*Property Code 3152SD		*Property Name W LYBROOK UNIT		*Well Number 767H
*GRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6696'

DEC 06 2016

10 Surface Location

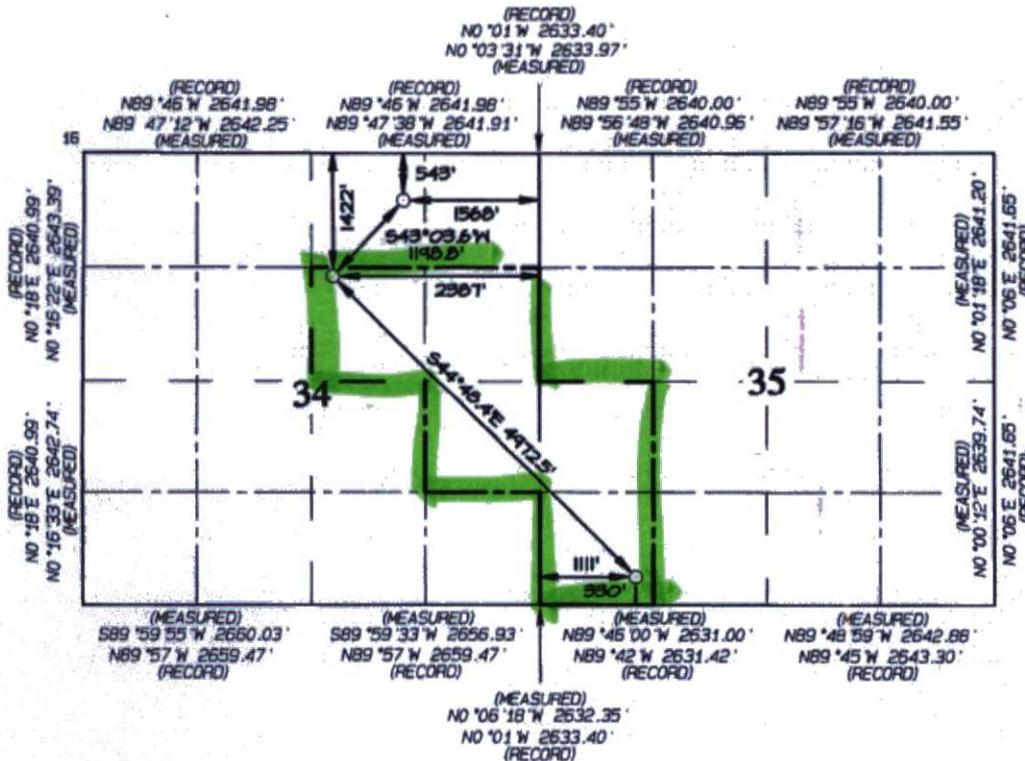
UL or lot no.	Section	Township	Range	Lot In	Feet from the	North/South line	Feet from the	East/West line	County
B	34	23N	9W		543	NORTH	1568	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot In	Feet from the	North/South line	Feet from the	East/West line	County
M	35	23N	9W		330	SOUTH	1111	WEST	SAN JUAN

*Dedicated Acres 200.0 W/2 SW/4 - Section 35 S/2 NE/4, NE/4 SE/4 - Section 34	*Joint or Int'l'l	*Consolidation Code	*Order No. R-14051 - 12,807.24 Acres
---	-------------------	---------------------	---

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



POINT-OF-ENTRY
1422' FNL 2387' FEL
SEC 34, T23N, R9W
LAT: 36.186794° N
LONG: 107.774808° W
DATUM: NAD1927

SURFACE LOCATION
543' FNL 1568' FEL
SEC 34, T23N, R9W
LAT: 36.189198° N
LONG: 107.772033° W
DATUM: NAD1927

END-OF-LATERAL
330' FSL 1111' FNL
SEC 35, T23N, R9W
LAT: 36.177096° N
LONG: 107.762942° W
DATUM: NAD1927

LAT: 36.186808° N
LONG: 107.775422° W
DATUM: NAD1983

LAT: 36.189213° N
LONG: 107.772646° W
DATUM: NAD1983

LAT: 36.177110° N
LONG: 107.763555° W
DATUM: NAD1983

17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: 8-30-16
Printed Name: *[Name]*
E-mail Address: *[Email]*

18 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 belief.

Date Revised: JANUARY 27, 2016
Date of Survey: JUNE 5, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320.00'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	5,216.41'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5066.41' - 10,189.28'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5066.41'	4.5"	11.6 LBS	P-110 or equiv	LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.

2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. **A DV tool will be placed 100' above the top of the Chacra formation. If cement is circulated back to surface on the first stage, a cancelation device will be dropped to shift the dv tool closed and the 2nd stage cement job will be aborted at that time.**

3. PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + 1 RSI (Sliding Sleeve) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. Surface 5 bbl Fresh Water Spacer, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ Bbls).TOC at Surface.

2. Intermediate STAGE 1: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 94 bbls, 269 sks, (529 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 92 bbls, 396 sks, (515 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 205 bbl Drilling mud or water.
Total Cement: 186 bbls, 665 sks, (1044 cuft)
STAGE 2: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 22 bbls, 64 sks, (125 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 16 bbls, 78 sks, (90 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 47 bbl Drilling mud or water.
Total Cement: 38 bbls, 143 sks, (215 cuft)

3. PROD. LINER: Spacer #1:10 bbl (56.cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem™ System. Yield 1.36 cuft/sk 13.3 ppg (502 sx /682 cuft /122 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (502 sx /682bbls).

I.
COMPLETION

A. **CBL**

Run CCL for perforating

A. **PRESSURE TEST**

1. Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

B. **STIMULATION**

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N2 for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs and flowback lateral.

C. **RUNNING TUBING**

1. Production Tubing: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner.

- If this horizontal well is drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2)NMAC, and 19.15.16.15. B(4) NMAC.

NOTE:

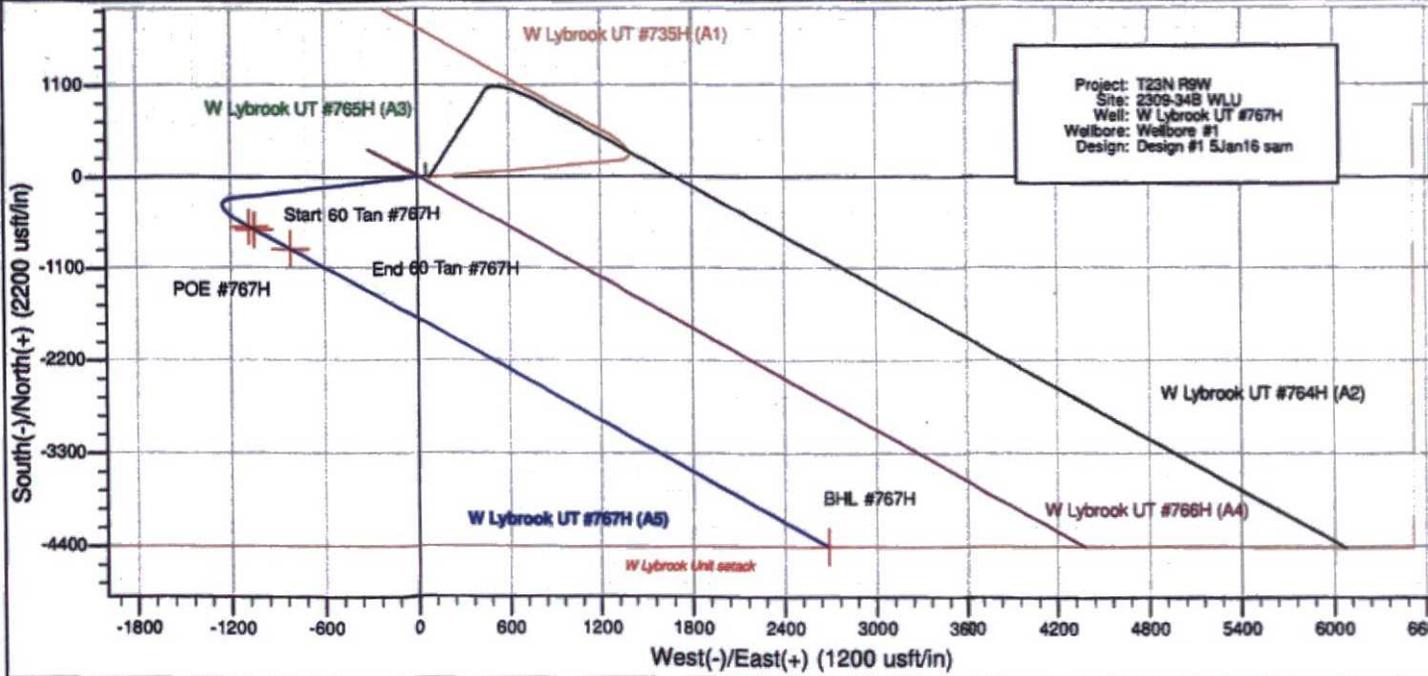
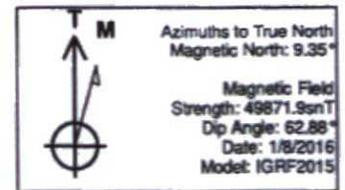
Proposed Operations:

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-55 Intermediate casing with a Liner Hanger and pack-off assembly then cemented to top of liner hanger.

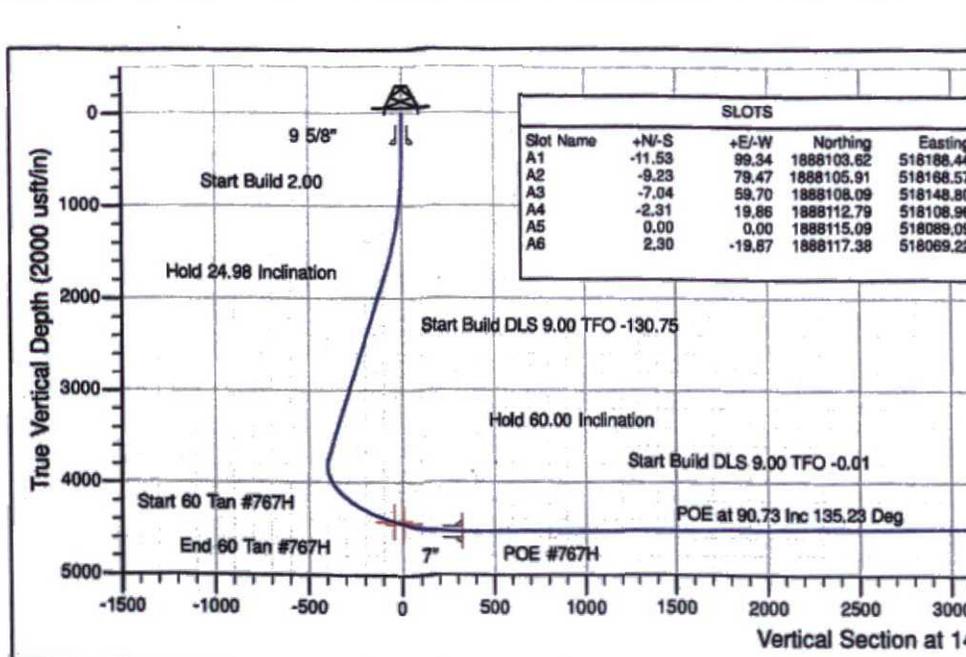
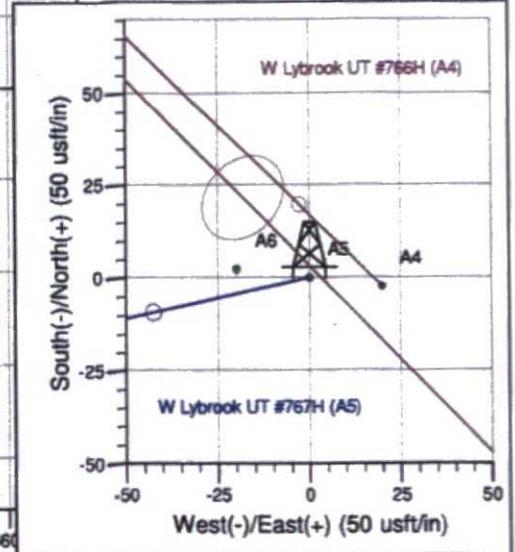
After cementing and TOL clean up operations are complete, the TOL will be tested to 1500 psi (per BLM).



well name: W Lybrook UT #767H
 Surface Location: 2309-34B WLU
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 6696.00
 +N/-S 0.00 +E/-W 0.00 Northing 1888115.09 Easting 518089.09 Latitude 36.189198 Longitude -107.772032 Slot A5
 GL @ 6696.00usft (Original Well Elev)



Project: T23N R9W
 Site: 2309-34B WLU
 Well: W Lybrook UT #767H
 Wellbore: Wellbore #1
 Design: Design #1 5Jan16 sam



Slot Name	+N/-S	+E/-W	Northing	Easting
A1	-11.53	99.34	1888103.62	518188.44
A2	-9.23	79.47	1888105.91	518168.57
A3	-7.04	59.70	1888108.09	518148.80
A4	-2.31	19.86	1888112.79	518108.96
A5	0.00	0.00	1888115.09	518089.09
A6	2.30	-19.87	1888117.38	518069.22

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #767H	4420.76	-606.55	-1085.51	1887507.85	517003.96	36.187532	-107.775711	Point
End 60 Tan #767H	4450.76	-643.43	-1048.90	1887471.00	517040.60	36.187431	-107.775587	Point
POE #767H	4536.00	-875.13	-819.04	1887239.44	517270.60	36.186794	-107.774808	Point
BHL #767H	4473.00	-4405.27	2682.90	1883711.52	520774.77	36.177096	-107.762942	Point

ANNOTATIONS								
TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Departure	Annotation
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1709.96	1749.16	24.98	257.54	-57.85	-261.74	-86.73	268.06	Hold 24.98 Inclination
3732.91	3980.95	24.98	257.54	-281.29	-1182.12	-391.72	1210.66	Start Build DLS 9.00 TFO -130.75
4420.76	4815.01	60.00	135.23	-806.55	-1085.51	-46.59	1644.78	Hold 60.00 Inclination
4450.76	4875.01	60.00	135.23	-843.44	-1048.91	3.95	1696.74	Start Build DLS 9.00 TFO -0.01
4516.28	5049.29	75.69	135.22	-757.66	-935.59	160.46	1857.65	Start DLS 9.00 TFO 0.02
4536.00	5216.41	90.73	135.23	-875.13	-819.04	321.40	2023.12	POE at 90.73 Inc 135.23 Deg
4473.00	10189.28	90.73	135.23	-4405.27	2682.90	5157.94	6995.59	TD at 10189.28

WPX Energy

T23N R9W

2309-34B WLU

W Lybrook UT #767H - Slot A5

Wellbore #1

Plan: Design #1 5Jan16 sam

Standard Planning Report

08 January, 2016

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook UT #767H (A5) - Slot A5
Company:	WPX Energy	TVD Reference:	GL @ 6696.00usft (Original Well Elev)
Project:	T23N R9W	MD Reference:	GL @ 6696.00usft (Original Well Elev)
Site:	2309-34B WLU	North Reference:	True
Well:	W Lybrook UT #767H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 5Jan16 sam		

Project	T23N R9W		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	2309-34B WLU				
Site Position:		Northing:	1,888,108.09 usft	Latitude:	36.189179
From:	Lat/Long	Easting:	518,148.80 usft	Longitude:	-107.771830
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.04 °

Well	W Lybrook UT #767H - Slot A5					
Well Position	+N/-S	7.04 usft	Northing:	1,888,115.09 usft	Latitude:	36.189198
	+E/-W	-59.70 usft	Easting:	518,089.09 usft	Longitude:	-107.772033
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level:	6,696.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/8/2016	9.35	62.68	49,872

Design	Design #1 5Jan16 sam			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	148.66

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,749.16	24.98	257.54	1,709.96	-57.85	-261.74	2.00	2.00	0.00	257.54	
3,980.95	24.98	257.54	3,732.91	-261.29	-1,182.12	0.00	0.00	0.00	0.00	
4,815.01	60.00	135.23	4,420.76	-606.55	-1,085.51	9.00	4.20	-14.66	-130.75	Start 60 Tan #767H
4,875.01	60.00	135.23	4,450.76	-643.44	-1,048.91	0.00	0.00	0.00	0.00	End 60 Tan #767H
5,049.29	75.69	135.22	4,516.28	-757.66	-935.59	9.00	9.00	0.00	-0.01	
5,216.41	90.73	135.23	4,536.00	-875.13	-819.04	9.00	9.00	0.00	0.02	POE #767H
10,189.28	90.73	135.23	4,473.00	-4,405.27	2,682.90	0.00	0.00	0.00	0.00	BHL #767H

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook UT #767H (A5) - Slot A5
Company:	WPX Energy	TVD Reference:	GL @ 6696.00usft (Original Well Elev)
Project:	T23N R9W	MD Reference:	GL @ 6696.00usft (Original Well Elev)
Site:	2300-34B WLU	North Reference:	True
Well:	W Lybrook UT #767H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 5Jan16 sam		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	0.00	0.00	
9 5/8"										
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
1,000.00	10.00	257.54	997.47	-9.39	-42.50	-14.08	2.00	2.00	0.00	
1,500.00	20.00	257.54	1,479.82	-37.29	-168.70	-55.90	2.00	2.00	0.00	
1,749.16	24.98	257.54	1,709.96	-57.85	-261.74	-86.73	2.00	2.00	0.00	
Hold 24.98 Inclination										
2,000.00	24.98	257.54	1,937.32	-80.72	-365.18	-121.01	0.00	0.00	0.00	
2,500.00	24.98	257.54	2,390.54	-126.30	-571.38	-189.34	0.00	0.00	0.00	
3,000.00	24.98	257.54	2,843.75	-171.87	-777.58	-257.67	0.00	0.00	0.00	
3,500.00	24.98	257.54	3,296.97	-217.45	-983.78	-325.99	0.00	0.00	0.00	
3,980.95	24.98	257.54	3,732.91	-261.29	-1,182.12	-391.72	0.00	0.00	0.00	
Start Build DLS 9.00 TFO -130.75										
4,000.00	23.90	254.33	3,750.26	-263.20	-1,189.77	-394.06	9.00	-5.70	-16.84	
4,500.00	34.70	153.18	4,208.16	-426.01	-1,224.89	-273.28	9.00	2.16	-20.23	
4,815.01	60.00	135.23	4,420.76	-606.55	-1,085.51	-46.59	9.00	8.03	-5.70	
Hold 60.00 Inclination										
4,876.01	60.00	135.23	4,460.76	-643.44	-1,048.91	3.95	0.00	0.00	0.00	
Start Build DLS 9.00 TFO -0.01										
5,000.00	71.25	135.23	4,502.26	-724.13	-968.86	114.51	9.00	9.00	0.00	
5,049.29	75.69	135.22	4,516.28	-757.66	-935.59	160.46	9.00	9.00	0.00	
Start DLS 9.00 TFO 0.02										
5,216.00	90.69	135.23	4,536.01	-874.84	-819.33	321.01	9.00	9.00	0.00	
7"										
5,216.41	90.73	135.23	4,536.00	-875.13	-819.04	321.40	9.00	9.00	0.00	
POE at 90.73 Inc 135.23 Deg										
5,500.00	90.73	135.23	4,532.41	-1,076.45	-619.34	597.22	0.00	0.00	0.00	
6,000.00	90.73	135.23	4,526.07	-1,431.39	-267.23	1,083.51	0.00	0.00	0.00	
6,500.00	90.73	135.23	4,519.74	-1,786.33	84.87	1,589.80	0.00	0.00	0.00	
7,000.00	90.73	135.23	4,513.40	-2,141.27	436.98	2,056.10	0.00	0.00	0.00	
7,500.00	90.73	135.23	4,507.07	-2,496.21	789.08	2,542.39	0.00	0.00	0.00	
8,000.00	90.73	135.23	4,500.74	-2,851.14	1,141.19	3,028.68	0.00	0.00	0.00	
8,500.00	90.73	135.23	4,494.40	-3,206.08	1,493.29	3,514.97	0.00	0.00	0.00	
9,000.00	90.73	135.23	4,488.07	-3,561.02	1,845.40	4,001.26	0.00	0.00	0.00	
9,500.00	90.73	135.23	4,481.73	-3,915.96	2,197.50	4,487.56	0.00	0.00	0.00	
10,000.00	90.73	135.23	4,475.40	-4,270.90	2,549.61	4,973.85	0.00	0.00	0.00	
10,189.28	90.73	135.23	4,473.00	-4,405.27	2,682.90	5,157.94	0.00	0.00	0.00	
TD at 10189.28										

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook UT #767H (A5) - Slot A5
Company:	WPX Energy	TVD Reference:	GL @ 6696.00usft (Original Well Elev)
Project:	T23N R9W	MD Reference:	GL @ 6696.00usft (Original Well Elev)
Site:	2309-34B WLU	North Reference:	True
Well:	W Lybrook UT #767H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 5Jan16 sam		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Start 60 Tan #767H - plan hits target center - Point	0.00	0.00	4,420.76	-606.55	-1,085.51	1,887,507.86	517,003.96	36.187532	-107.775711
End 60 Tan #767H - plan misses target center by 0.01usft at 4875.01usft MD (4450.76 TVD, -643.44 N, -1048.91 E) - Point	0.00	0.00	4,450.76	-643.43	-1,048.90	1,887,471.00	517,040.60	36.187431	-107.775587
BHL #767H - plan hits target center - Point	0.00	0.00	4,473.00	-4,405.27	2,682.90	1,883,711.52	520,774.77	36.177096	-107.782942
POE #767H - plan hits target center - Point	0.00	0.00	4,536.00	-875.13	-819.04	1,887,239.44	517,270.60	36.186794	-107.774808

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(usft)	(usft)		(in)	(in)	
320.00	320.00	9 5/8"	9.625	12.250	
5,216.00	4,536.01	7"	7.000	8.750	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
		(usft)	(usft)	
500.00	500.00	0.00	0.00	Start Build 2.00
1,749.16	1,709.96	-57.85	-261.74	Hold 24.98 Inclination
3,980.95	3,732.91	-261.29	-1,182.12	Start Build DLS 9.00 TFO -130.75
4,815.01	4,420.76	-606.55	-1,085.51	Hold 60.00 Inclination
4,875.01	4,450.76	-643.44	-1,048.91	Start Build DLS 9.00 TFO -0.01
5,049.29	4,516.28	-757.66	-935.59	Start DLS 9.00 TFO 0.02
5,216.41	4,536.00	-875.13	-819.04	POE at 90.73 Inc 135.23 Deg
10,189.28	4,473.00	-4,405.27	2,682.90	TD at 10189.28

20 percent Shiprock soils. Doak soils occur on slopes from 0 to 5 percent and are well drained. Doak soils are deep and have a moderately slow permeability. Sheppard soils occur on slopes from 0 to 15 percent and are deep, somewhat excessively drained, and rapidly permeable. Shiprock soils occur on 0 to 5 percent slopes and are deep, well drained, and have a moderately rapid permeability. They formed in eolian material and slope alluvium. Effective rooting depth for this unit is 60 inches or greater. This unit is mainly used for livestock grazing and wildlife habitat. The major limitations of this mapping unit are: (1) the hazard of soil blowing and (2) the hazard of water erosion. (USDA/NRCS 2015).

7.0 Methods for Handling Waste

A. Cuttings

1. Drilling operations would utilize a closed-loop system. Drilling of the horizontal laterals would be accomplished with water-based mud. All cuttings would be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX would follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit would be used.
2. Closed-loop tanks would be adequately sized for containment of all fluids.

B. Drilling Fluids

1. Drilling fluids would be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids would be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids would be hauled to a commercial disposal facility.

C. Spills

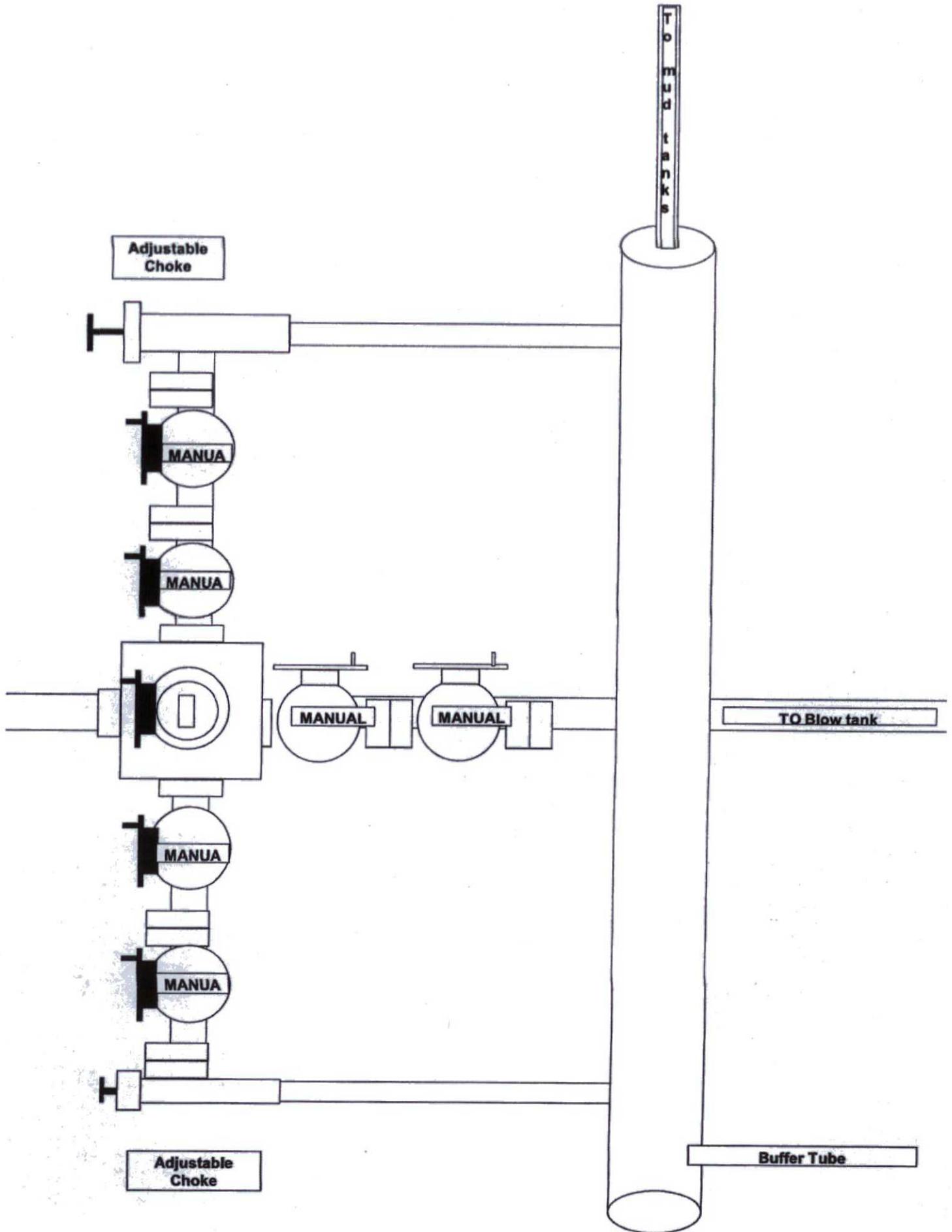
1. Any spills of non-freshwater fluids would be immediately cleaned up and removed to an approved disposal site.

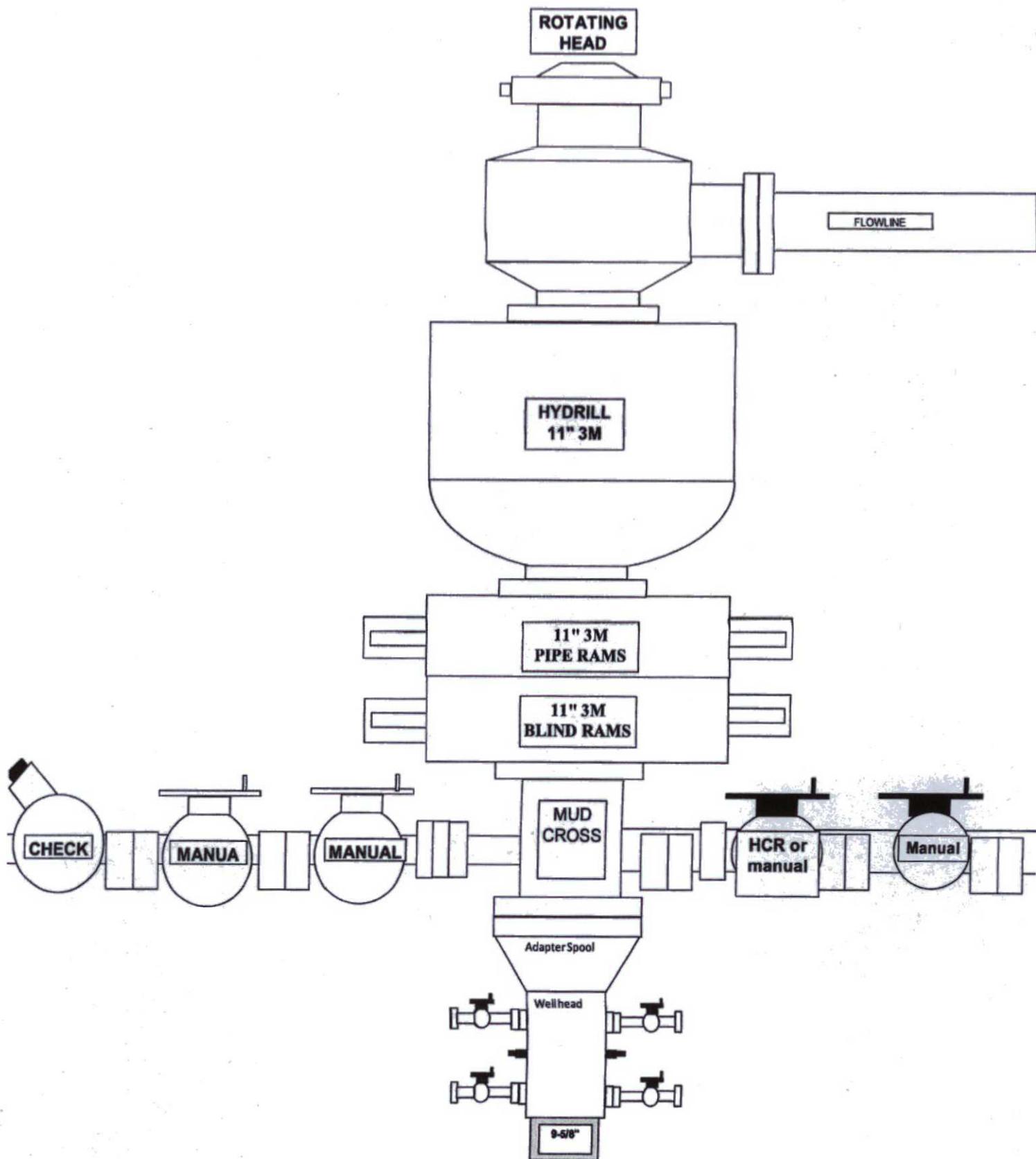
D. Sewage

1. Portable toilets would be provided and maintained as needed during construction (see Figures 4 & 5 in Appendix B for the location of toilets).

E. Garbage and other water material

1. All garbage and trash would be placed in a metal trash basket. The trash and garbage would be hauled off site and dumped in an approved landfill, as needed (see Figures 4 & 5 in Appendix B for the location of trash basket).





Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to WPX Energy Production, LLC W Lybrook Unit #767H
543' FNL & 1568' FEL, Section 34, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.189213°N Longitude: 107.772646°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 37.8 miles to Mile Marker 113.4;

Go Right (South-westerly) on County Road #7890 for 0.8 miles to fork in roadway;

Go Left (Southerly) remaining on County Road #7890 for 1.9 miles to fork in roadway;

Go Right (South-westerly) remaining on County Road #7890 for 2.4 miles to begin access on right-hand side of existing roadway which continues for 3910.5' to staked WPX W Lybrook Unit #767H location.