

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: 10-24-16

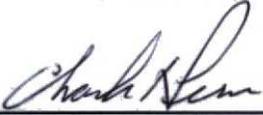
Well information;

Operator WPX, Well Name and Number W Lybrook Unit #735H

API# 30-045-35801, 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.


NMOCD Approved by Signature

12-8-2016
Date

Kessee - X70 energy
HB Prod unit
msite 7/22/15

NOS: 5
APDP: 5
MP: 5
SMA: AM
BOND: UTB000178
CA/PA: NML35216A

10400006828
ATS F010-17-04

Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM118731
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator WPX ENERGY LLC		7. If Unit or CA Agreement, Name and No. INITAL MANCOS PA / NMNM135216A
3a. Address 720 S MAIN AZTEC NM 87410		8. Lease Name and Well No. W LYBROOK 735H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. 30-045-35801
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface ^B LOT 0 / 554 FNL / 1469 FEL / LAT 36.189179 / LONG -107.77231 At proposed prod. zone ³ LOT 0 / 1926 FSL / 2256 FEL / LAT 36.10463 / LONG -107.792692		10. Field and Pool, or Exploratory BASIN MANCOS / LYBROOK MANCOS
14. Distance in miles and direction from nearest town or post office* 37.8 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 34 / T23N / R9W / NMP
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 1120	12. County or Parish SAN JUAN
17. Spacing Unit dedicated to this well 440	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, 554 feet applied for, on this lease, ft.	19. Proposed Depth 4600 feet / 15017 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* 12/01/2016	23. Estimated duration 30 days

OIL CONS. DIV DIST. 3

DEC 01 2016

KP

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 10/24/2016
Title Permitting Tech III		
Approved by (Signature) <i>Chip Harraden</i>	Name (Printed/Typed) Chip Harraden	Date 11/29/16
Title Acting AFM-Minerals	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)

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

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

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

NMOCD AV

WPXENERGY

WPX Energy

Operations Plan

(Note: This procedure will be adjusted onsite based upon actual conditions)

Date: October 17, 2016 **Field:** Lybrook Mancos W.
Well Name: W Lybrook #735H **Surface:**
SH Location: NWNE Sec 34 23N-09W **Elevation:** 6696' GR
BH Location: NWSE Sec 21 23N-09W **Minerals:**

Measured Depth: 15,016.97'

I. GEOLOGY: SURFACE FORMATION - NACIMIENTO

A. FORMATION TOPS (KB)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	327	327	POINT LOOKOUT	3507	3296
KIRTLAND	476	476	MANCOS	3663	3437
PICTURED CLIFFS	958	956	GALLUP	3859	3614
LEWIS	1062	1058	KICKOFF POINT	4,003.52	3,744.22
CHACRA	1319	1308	TOP TARGET	4977	4506
CLIFF HOUSE	2327	2231	LANDING POINT	5,242.91	4,561.67
MENELEE	2404	2301	BASE TARGET	5,242.91	4,561.67
			TD	15,016.97	4,600.00

B. MUD LOGGING PROGRAM: Mudlogger on location from surface csg to TD.

C. LOGGING PROGRAM: LWD GR from surface casing to TD.

D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

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"	5,242.91'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5092.91' - 15,016.97'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5092.91'	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: 95 bbls, 271 sks, (534 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/ +/- 206 bbl Drilling mud or water.
Total Cement: 187 bbls, 667 sks, (1049 cuft)
STAGE 2: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 23 bbls, 67 sks, (130 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/ +/- 48 bbl Drilling mud or water.
Total Cement: 39 bbls, 145 sks, (220 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 (973 sx /1323 cuft /236 bbls). Tail Spacer: 20 BBL of MMCR.
Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (973 sx /1323bbls).

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.

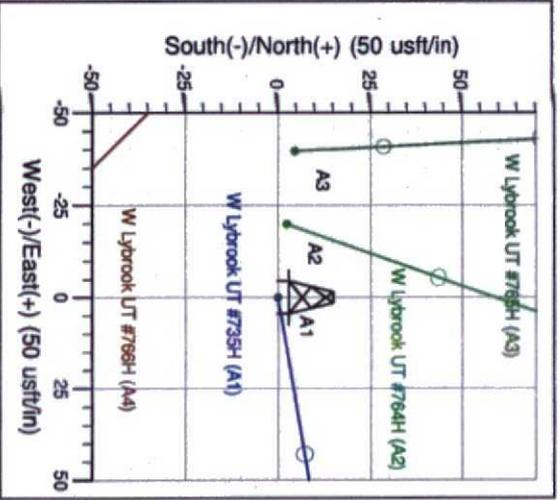
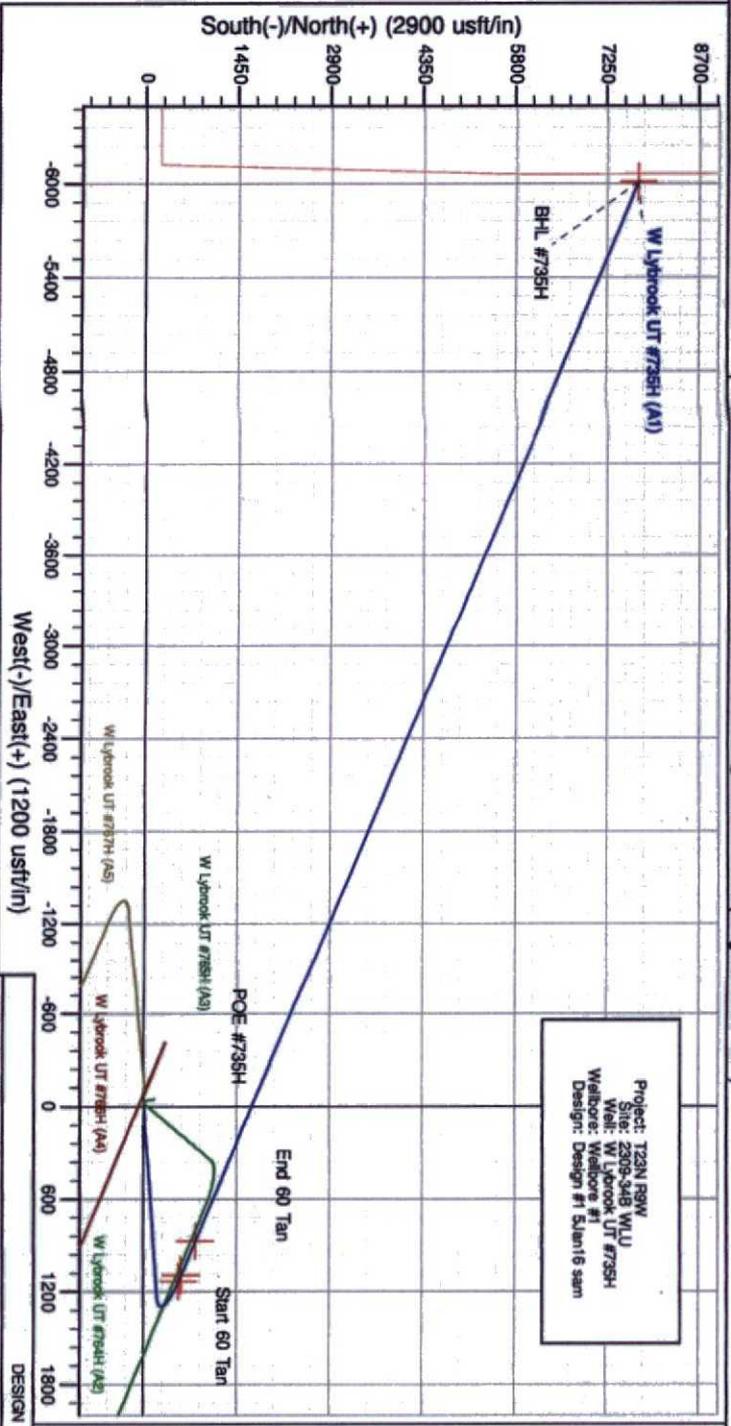
After cementing and TOL clean up operations are complete, the TOL will be tested to 1500 psi (per BLM).



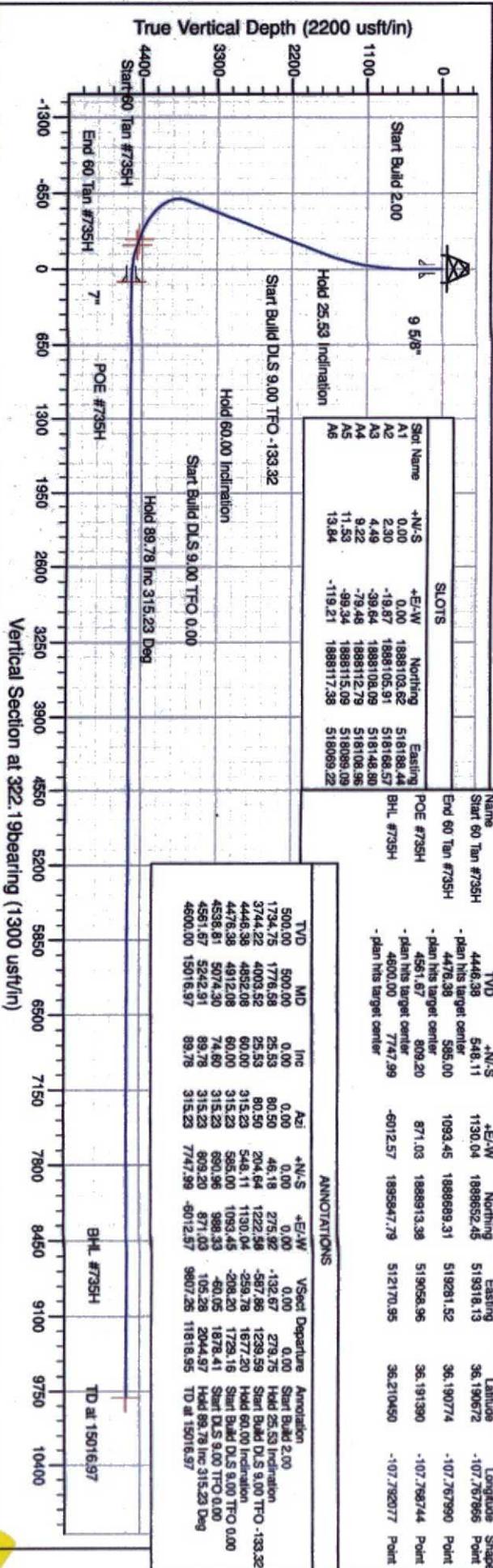
Well Name: W Lybrook UT #735H
 Surface Location: 2309-34B WLU
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 6696.00
 Slot A1
 +N-/S 0.00 +E-/W 0.00
 Northing 518188.44 Easting 36.189167
 Longitude -107.771696
 Latitude 36.189167
 GL @ 6696.00usft (Original Well Elev)

Project: T23N R9W
 Site: 2309-34B WLU
 Well: W Lybrook UT #735H
 Wellbore: Wellbore #1
 Designer: Design #1 Stan's sam

Magnetic Field
 Azimuths to True North
 Magnetic North: 9.35°
 Strength: 49971.58T
 Dip Angle: 62.88°
 Date: 1/8/2015
 Model: IGRF2015



Vertical Section at 322.19bearing (1300 usft/in)



DESIGN TARGET DETAILS

ANNOTATIONS

WPX Energy

T23N R9W

2309-34B WLU

W Lybrook UT #735H - Slot A1

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 #735H (A1) - Slot A1
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 #735H	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 #735H - Slot A1					
Well Position	+N/-S	-4.49 usft	Northing:	1,888,103.62 usft	Latitude:	36.189167
	+E/-W	39.64 usft	Easting:	518,188.44 usft	Longitude:	-107.771696
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
	IGRF2015	1/8/2016	(°)	(°)	(nT)
			9.35	62.88	49,872

Design	Design #1 5Jan16 sam			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(bearing)
	0.00	0.00	0.00	322.19

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Buld 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	
1,776.58	25.53	80.50	1,734.75	46.18	275.92	2.00	2.00	0.00	80.50	
4,003.52	25.53	80.50	3,744.22	204.64	1,222.58	0.00	0.00	0.00	0.00	
4,852.08	60.00	315.23	4,446.38	548.11	1,130.04	9.00	4.06	-14.76	-133.32	Start 60 Tan #735H
4,912.08	60.00	315.23	4,476.38	585.00	1,093.45	0.00	0.00	0.00	0.00	End 60 Tan #735H
5,074.30	74.60	315.23	4,538.81	690.96	988.33	9.00	9.00	0.00	0.00	
5,242.91	89.78	315.23	4,561.67	809.20	871.03	9.00	9.00	0.00	0.00	POE #735H
15,016.97	89.78	315.23	4,600.00	7,747.99	-6,012.57	0.00	0.00	0.00	0.00	BHL #735H

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook UT #735H (A1) - Slot A1
Company:	WPX Energy	TVD Reference:	GL @ 6896.00usft (Original Well Elev)
Project:	T23N R9W	MD Reference:	GL @ 6896.00usft (Original Well Elev)
Site:	2309-34B WLU	North Reference:	True
Well:	W Lybrook UT #735H	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	0.00
320.00	0.00	0.00	320.00	0.00	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	0.00
Start Build 2.00										
1,000.00	10.00	80.50	997.47	7.19	42.93	-20.64	2.00	2.00	0.00	
1,500.00	20.00	80.50	1,479.82	28.52	170.40	-81.93	2.00	2.00	0.00	
1,776.58	25.53	80.50	1,734.75	46.18	275.92	-132.67	2.00	2.00	0.00	
Hold 25.53 Inclination										
2,000.00	25.53	80.50	1,936.35	62.08	370.89	-178.34	0.00	0.00	0.00	
2,500.00	25.53	80.50	2,387.53	97.66	583.44	-280.54	0.00	0.00	0.00	
3,000.00	25.53	80.50	2,838.70	133.24	795.99	-382.74	0.00	0.00	0.00	
3,500.00	25.53	80.50	3,289.87	168.81	1,008.53	-484.94	0.00	0.00	0.00	
4,000.00	25.53	80.50	3,741.05	204.39	1,221.08	-587.14	0.00	0.00	0.00	
4,003.52	25.53	80.50	3,744.22	204.64	1,222.58	-587.86	0.00	0.00	0.00	
Start Build DLS 9.00 TFO -133.32										
4,500.00	31.84	336.36	4,202.57	349.71	1,278.45	-507.50	9.00	1.27	-20.97	
4,852.08	60.00	315.23	4,446.38	548.11	1,130.04	-259.78	9.00	8.00	-6.00	
Hold 60.00 Inclination										
4,912.08	60.00	315.23	4,476.38	585.00	1,093.45	-208.20	0.00	0.00	0.00	
Start Build DLS 9.00 TFO 0.00										
5,000.00	67.91	315.23	4,514.95	641.04	1,037.86	-129.85	9.00	9.00	0.00	
5,074.30	74.60	315.23	4,538.81	690.96	988.33	-60.05	9.00	9.00	0.00	
Start DLS 9.00 TFO 0.00										
5,242.91	89.78	315.23	4,561.67	809.20	871.03	105.28	9.00	9.00	0.00	
Hold 89.78 Inc 315.23 Deg										
5,243.00	89.78	315.23	4,561.67	809.27	870.97	105.37	0.00	0.00	0.00	
7"										
5,500.00	89.78	315.23	4,562.68	991.72	689.97	360.48	0.00	0.00	0.00	
6,000.00	89.78	315.23	4,564.64	1,346.67	337.83	856.79	0.00	0.00	0.00	
6,500.00	89.78	315.23	4,566.60	1,701.63	-14.30	1,353.10	0.00	0.00	0.00	
7,000.00	89.78	315.23	4,568.56	2,056.59	-366.44	1,849.42	0.00	0.00	0.00	
7,500.00	89.78	315.23	4,570.52	2,411.55	-718.57	2,345.73	0.00	0.00	0.00	
8,000.00	89.78	315.23	4,572.48	2,766.51	-1,070.71	2,842.04	0.00	0.00	0.00	
8,500.00	89.78	315.23	4,574.44	3,121.47	-1,422.85	3,338.35	0.00	0.00	0.00	
9,000.00	89.78	315.23	4,576.40	3,476.43	-1,774.98	3,834.67	0.00	0.00	0.00	
9,500.00	89.78	315.23	4,578.36	3,831.39	-2,127.12	4,330.98	0.00	0.00	0.00	
10,000.00	89.78	315.23	4,580.33	4,186.35	-2,479.26	4,827.29	0.00	0.00	0.00	
10,500.00	89.78	315.23	4,582.29	4,541.31	-2,831.39	5,323.60	0.00	0.00	0.00	
11,000.00	89.78	315.23	4,584.25	4,896.27	-3,183.53	5,819.92	0.00	0.00	0.00	
11,500.00	89.78	315.23	4,586.21	5,251.23	-3,535.66	6,316.23	0.00	0.00	0.00	
12,000.00	89.78	315.23	4,588.17	5,606.19	-3,887.80	6,812.54	0.00	0.00	0.00	
12,500.00	89.78	315.23	4,590.13	5,961.15	-4,239.94	7,308.85	0.00	0.00	0.00	
13,000.00	89.78	315.23	4,592.09	6,316.11	-4,592.07	7,805.17	0.00	0.00	0.00	
13,500.00	89.78	315.23	4,594.05	6,671.07	-4,944.21	8,301.48	0.00	0.00	0.00	
14,000.00	89.78	315.23	4,596.01	7,026.03	-5,296.35	8,797.79	0.00	0.00	0.00	
14,500.00	89.78	315.23	4,597.97	7,380.99	-5,648.48	9,294.10	0.00	0.00	0.00	
15,000.00	89.78	315.23	4,599.93	7,735.94	-6,000.62	9,790.42	0.00	0.00	0.00	
15,016.97	89.78	315.23	4,600.00	7,747.99	-6,012.57	9,807.26	0.00	0.00	0.00	
TD at 15016.97										

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook UT #735H (A1) - Slot A1
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 #735H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 5Jan16 sam		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Start 60 Tan #735H - plan hits target center - Point	0.00	0.00	4,446.38	548.11	1,130.04	1,888,652.45	519,318.13	36.190672	-107.767866
End 60 Tan #735H - plan hits target center - Point	0.00	0.00	4,476.38	585.00	1,093.45	1,888,689.32	519,281.52	36.190774	-107.767990
POE #735H - plan hits target center - Point	0.00	0.00	4,561.67	809.20	871.03	1,888,913.38	519,058.96	36.191390	-107.768744
BHL #735H - plan hits target center - Point	0.00	0.00	4,600.00	7,747.99	-6,012.57	1,895,847.79	512,170.95	36.210450	-107.792077

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)		Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8"		9.625	12.250
5,243.00	4,561.67	7"		7.000	8.750

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
500.00	500.00	0.00	0.00	Start Build 2.00	
1,776.58	1,734.75	46.18	275.92	Hold 25.53 Inclination	
4,003.52	3,744.22	204.64	1,222.58	Start Build DLS 9.00 TFO -133.32	
4,852.08	4,446.38	548.11	1,130.04	Hold 60.00 Inclination	
4,912.08	4,476.38	585.00	1,093.45	Start Build DLS 9.00 TFO 0.00	
5,074.30	4,538.81	690.96	988.33	Start DLS 9.00 TFO 0.00	
5,242.91	4,561.67	809.20	871.03	Hold 89.78 Inc 315.23 Deg	
15,016.97	4,600.00	7,747.99	-6,012.57	TD at 15016.97	

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

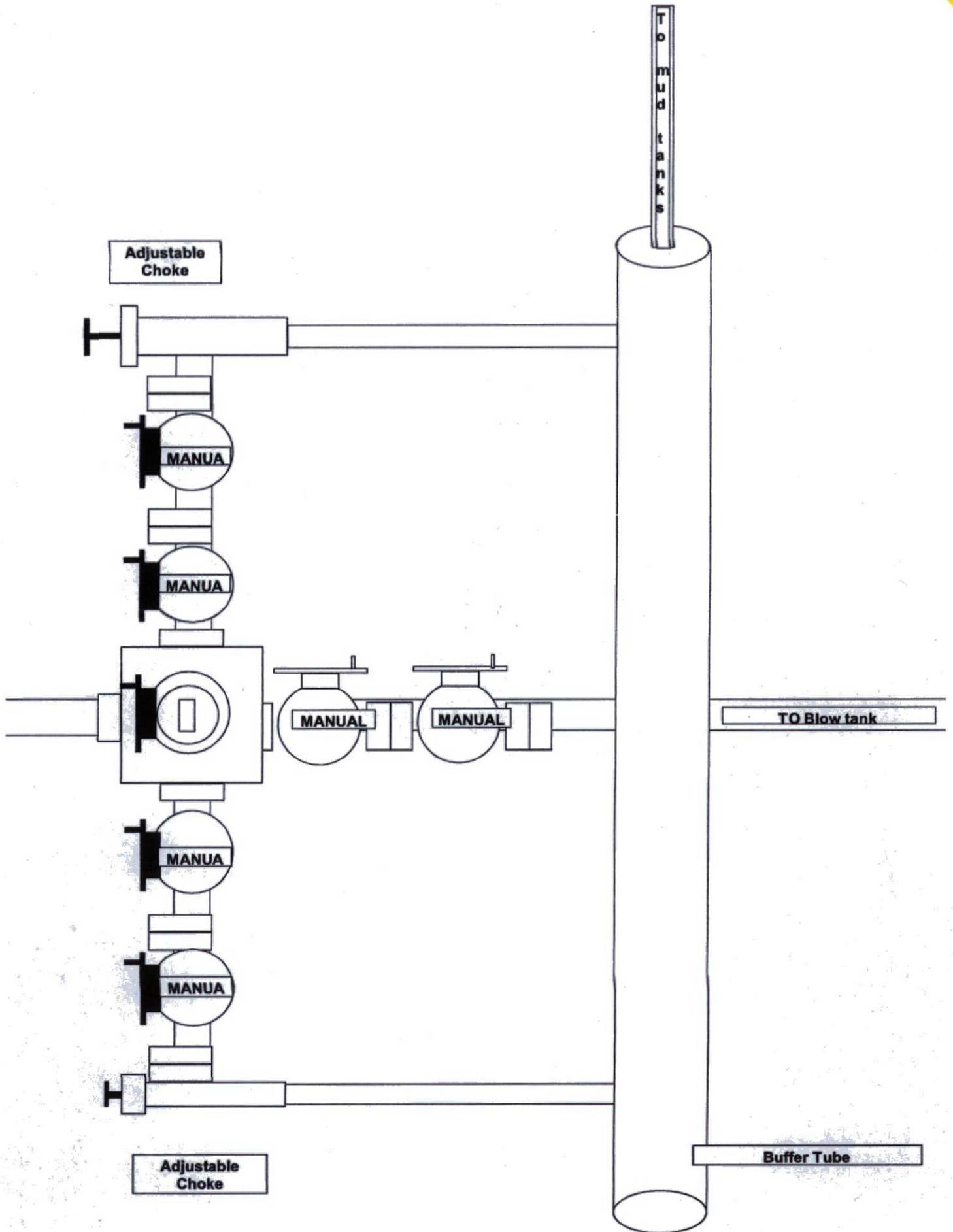
1. Any spills of non-freshwater fluids would be immediately cleaned up and removed to an approved disposal site.

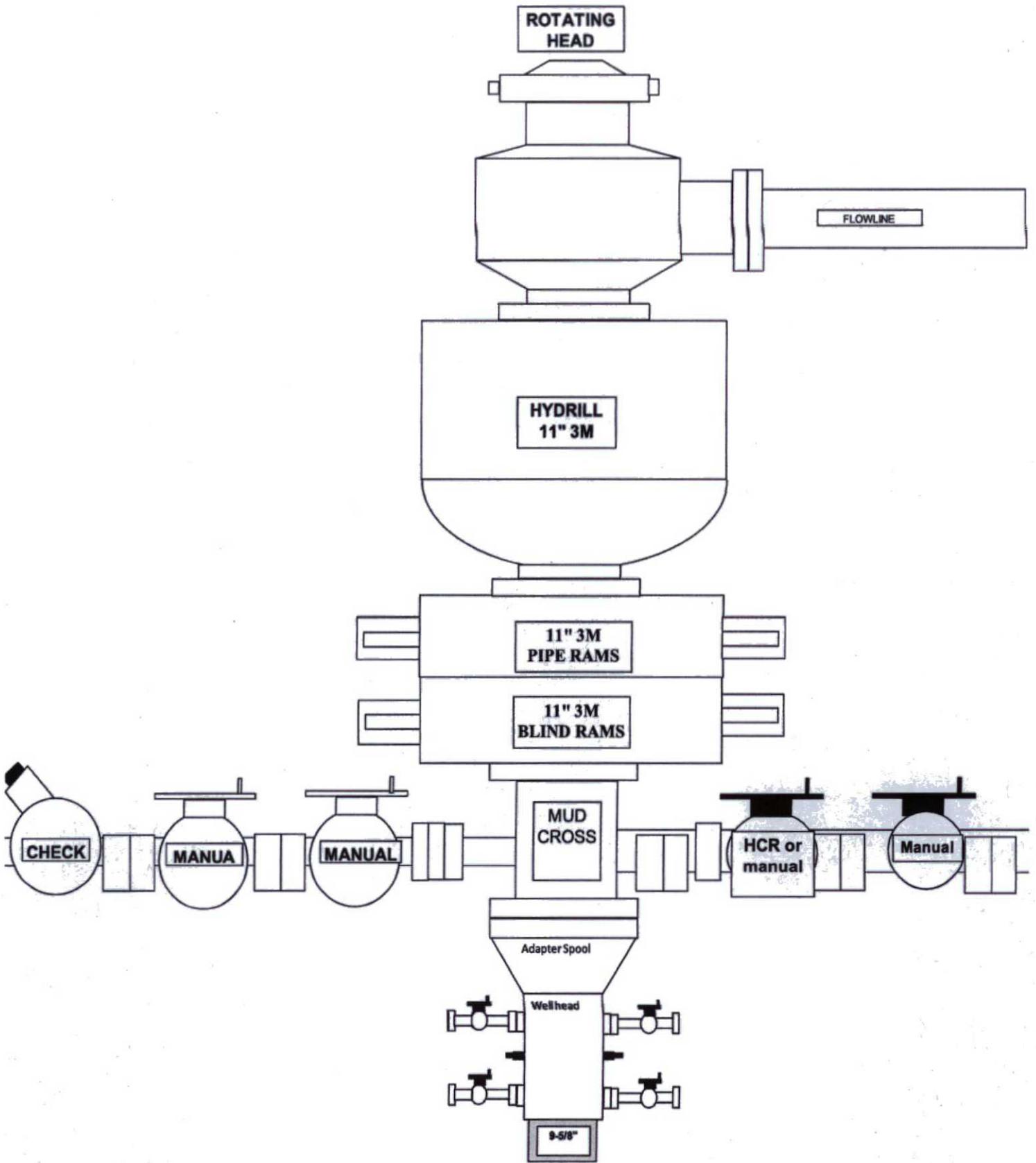
D. Sewage

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 #764H
552' FNL & 1489' FEL, Section 34, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.189186°N Longitude: 107.772377°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 #764H location.