

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

Ken McQueen  
Cabinet Secretary

Matthias Sayer  
Deputy 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: 11/3/2016

Well information;

Operator WAX, Well Name and Number 10 Lybrook 2nd 753H

API# 30-045-35815, Section 14, Township 28 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.

Chack Herin  
NMOCD Approved by Signature

2-10-2017  
Date

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. NOG14031948
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 EASTERN NAVAJO
2. Name of Operator WPX ENERGY LLC		7. If Unit or CA Agreement, Name and No. INITIAL MANCOS PA / NMNM135216A
3a. Address 720 S Main Aztec NM 87410		8. Lease Name and Well No. W LYBROOK UT 753H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. 30-045-35815
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface NESE / 1878 FSL / 691 FEL / LAT 36.224816 / LONG -107.751593 At proposed prod. zone SESW / 330 FSL / 2025 FWL / LAT 36.205996 / LONG -107.724669		10. Field and Pool, or Exploratory LYBROOK MANCOS W / LYBROOK MA
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 14 / 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 160	12. County or Parish SAN JUAN
17. Spacing Unit dedicated to this well 480.43	18. Distance from proposed location* to nearest well, drilling, completed, 691 feet applied for, on this lease, ft.	13. State NM
19. Proposed Depth 4714 feet / 15806 feet	20. BLM/BIA Bond No. on file IND: B001576	<b>OIL CONS. DIV DIST. 3</b> JAN 31 2017
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6719 feet	22. Approximate date work will start* 12/01/2016	23. Estimated duration 30 days

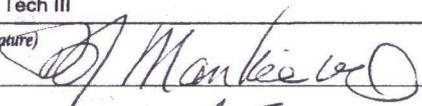
24. Attachments

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 (Electronic Submission)	Name (Printed/Typed) Lacey Granillo / Ph: (505)333-1816	Date 11/03/2016
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Title  
Permitting Tech III

Approved by (Signature) 	Name (Printed/Typed)	Date 1/27/17
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Title  
AFM  
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





## WPX Energy

### Operations Plan

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

**Date:** November 3, 2016  
**Well Name:** W Lybrook Unit 753H  
**SH Location:** NESE Sec 14 23N-09W  
**BH Location:** SESW Sec 19 23N-08W

**Field:** Lybrook Mancos W  
**Surface:**  
**Elevation:** 6719' GR  
**Minerals:**

**Measured Depth:** 15,806.33'

## **I. GEOLOGY**

Surface formation - NACIMIENTO

### **A. FORMATION TOPS: (GR)**

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	425.00	425.00	POINT LOOKOUT	3,631.00	3,492.00
KIRTLAND	587.00	587.00	MANCOS	3,819.00	3,667.00
PICTURED CLIFFS	1,155.00	1,155.00	GALLUP	4,184.00	4,006.00
LEWIS	1,274.00	1,274.00	KICKOFF POINT	4,099.69	3,926.77
CHACRA	1,458.00	1,456.00	TOP TARGET	5,096.00	4,714.00
CLIFF HOUSE	2,628.00	2,563.00	LANDING POINT	5,385.85	4,777.00
MENELEE	2,647.00	2,580.00	BASE TARGET	5,385.85	4,777.00
			TD	15,806.33	4,714.00

### **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 BOPE will be tested to 2,000 psi (High) for 10 minutes and the annular tested to 1,500 psi for 10 minutes. Pressure test surface casing to 1,500 psi for 30 minutes and intermediate casing to 1,500 psi for 30 minutes. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. 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"	5,385.85'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5235.85' - 15,806.33'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5235.85'	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. If losses are encountered during the drilling of the intermediate section a DV tool will be utilized and a 2 stage cement job may be planned to ensure cement circ back to surface. The 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, if no cement is seen at surface on the 1st stage the stage tool will be opened and a 2nd stage cement job will be pumped.

##### 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.

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

#### C. CEMENT:

##### 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:

Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 100 bbls, 284 sks, (560 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 59 bbls, 254 sks, (331 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 212 bbl Drilling mud or water. Total Cement: 159 bbls, 539 sks, (891 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 (1036 sx /1409 cuft /251 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-218bbl Fr Water. Total Cement (1036 sx /1409bbls).

**D. COMPLETION:**

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.

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**NOTES:**

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).

# **WPX Energy**

**T23N R9W**

**2309-14I WLU**

**W Lybrook UT #753H - Slot A2**

**Wellbore #1**

**Plan: Design #1 28Sept16 sam**

## **Standard Planning Report**

**28 September, 2016**



**WPX**  
Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well W Lybrook UT #753H (A2) - Slot A2
<b>Company:</b>	WPX Energy	<b>TVD Reference:</b>	GL @ 6719.00usft (Original Well Elev)
<b>Project:</b>	T23N R9W	<b>MD Reference:</b>	GL @ 6719.00usft (Original Well Elev)
<b>Site:</b>	2309-14I WLU	<b>North Reference:</b>	True
<b>Well:</b>	W Lybrook UT #753H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 28Sept16 sam		

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

<b>Site</b>	2309-14I WLU		
<b>Site Position:</b>	<b>Northing:</b>	1,901,091.09 usft	<b>Latitude:</b> 36.224833
<b>From:</b> Map	<b>Easting:</b>	524,273.81 usft	<b>Longitude:</b> -107.751036
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b> 13.200 in	<b>Grid Convergence:</b> 0.05 °

<b>Well</b>	W Lybrook UT #753H - Slot A2		
<b>Well Position</b>	<b>+N/-S</b>	-10.91 usft	<b>Northing:</b> 1,901,080.19 usft
	<b>+E/-W</b>	16.81 usft	<b>Easting:</b> 524,290.63 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Ground Level:</b>	6,719.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	9.99	63.07	50,612

<b>Design</b>	Design #1 28Sept16 sam			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (bearing)</b>
	0.00	0.00	0.00	130.77

<b>Plan Sections</b>										
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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,101.84	22.04	0.56	2,074.87	209.28	2.04	2.00	2.00	0.00	0.56	
4,099.69	22.04	0.56	3,926.77	958.84	9.35	0.00	0.00	0.00	0.00	
4,948.66	60.00	135.23	4,641.72	838.76	316.76	9.00	4.47	15.86	140.68	Start 60 Tan #753H
5,048.66	60.00	135.23	4,691.72	777.27	377.75	0.00	0.00	0.00	0.00	End 60 Tan #753H
5,219.15	75.34	135.23	4,756.30	665.64	488.48	9.00	9.00	0.00	0.00	
5,385.85	90.35	135.23	4,777.00	548.55	604.63	9.00	9.00	0.00	0.01	POE #753H
15,806.33	90.35	135.23	4,714.00	-6,849.83	7,942.63	0.00	0.00	0.00	0.00	BHL #753H

**WPX**  
Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well W Lybrook UT #753H (A2) - Slot A2
<b>Company:</b>	WPX Energy	<b>TVD Reference:</b>	GL @ 6719.00usft (Original Well Elev)
<b>Project:</b>	T23N R9W	<b>MD Reference:</b>	GL @ 6719.00usft (Original Well Elev)
<b>Site:</b>	2309-14I WLU	<b>North Reference:</b>	True
<b>Well:</b>	W Lybrook UT #753H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 28Sept16 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
<b>9 5/8"</b>										
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>										
1,500.00	10.00	0.56	1,497.47	43.52	0.42	-28.10	2.00	2.00	0.00	
2,000.00	20.00	0.56	1,979.82	172.76	1.69	-111.55	2.00	2.00	0.00	
2,101.84	22.04	0.56	2,074.87	209.28	2.04	-135.13	2.00	2.00	0.00	
<b>Hold 22.04 Inclination</b>										
2,500.00	22.04	0.56	2,443.95	358.67	3.50	-231.59	0.00	0.00	0.00	
3,000.00	22.04	0.56	2,907.42	546.26	5.33	-352.72	0.00	0.00	0.00	
3,500.00	22.04	0.56	3,370.89	733.85	7.16	-473.85	0.00	0.00	0.00	
4,000.00	22.04	0.56	3,834.36	921.44	8.99	-594.97	0.00	0.00	0.00	
4,099.69	22.04	0.56	3,926.77	958.84	9.35	-619.13	0.00	0.00	0.00	
<b>Start Build DLS 9.00 TFO 140.68</b>										
4,500.00	23.02	108.18	4,309.21	1,011.26	87.02	-594.54	9.00	0.25	26.88	
4,948.66	60.00	135.23	4,641.72	838.76	316.76	-307.91	9.00	8.24	6.03	
<b>Hold 60.00 Inclination</b>										
5,000.00	60.00	135.23	4,667.39	807.19	348.07	-263.58	0.00	0.00	0.00	
5,048.66	60.00	135.23	4,691.72	777.27	377.75	-221.57	0.00	0.00	0.00	
<b>Start Build DLS 9.00 TFO 0.00</b>										
5,219.15	75.34	135.23	4,756.30	665.64	488.48	-64.81	9.00	9.00	0.00	
<b>Start DLS 9.00 TFO 0.01</b>										
5,385.85	90.35	135.23	4,777.00	548.55	604.63	99.62	9.00	9.00	0.00	
<b>POE at 90.35 Inc 135.23 Deg</b>										
5,386.00	90.35	135.23	4,777.00	548.44	604.73	99.77	0.00	0.00	0.00	
<b>7"</b>										
5,500.00	90.35	135.23	4,776.31	467.50	685.01	213.42	0.00	0.00	0.00	
6,000.00	90.35	135.23	4,773.29	112.51	1,037.11	711.90	0.00	0.00	0.00	
6,500.00	90.35	135.23	4,770.26	-242.48	1,389.20	1,210.38	0.00	0.00	0.00	
7,000.00	90.35	135.23	4,767.24	-597.47	1,741.30	1,708.86	0.00	0.00	0.00	
7,500.00	90.35	135.23	4,764.22	-952.47	2,093.39	2,207.33	0.00	0.00	0.00	
8,000.00	90.35	135.23	4,761.20	-1,307.46	2,445.49	2,705.81	0.00	0.00	0.00	
8,500.00	90.35	135.23	4,758.17	-1,662.45	2,797.58	3,204.29	0.00	0.00	0.00	
9,000.00	90.35	135.23	4,755.15	-2,017.44	3,149.68	3,702.76	0.00	0.00	0.00	
9,500.00	90.35	135.23	4,752.13	-2,372.44	3,501.77	4,201.24	0.00	0.00	0.00	
10,000.00	90.35	135.23	4,749.10	-2,727.43	3,853.87	4,699.72	0.00	0.00	0.00	
10,500.00	90.35	135.23	4,746.08	-3,082.42	4,205.97	5,198.19	0.00	0.00	0.00	
11,000.00	90.35	135.23	4,743.06	-3,437.41	4,558.06	5,696.67	0.00	0.00	0.00	
11,500.00	90.35	135.23	4,740.04	-3,792.41	4,910.16	6,195.15	0.00	0.00	0.00	
12,000.00	90.35	135.23	4,737.01	-4,147.40	5,262.25	6,693.63	0.00	0.00	0.00	
12,500.00	90.35	135.23	4,733.99	-4,502.39	5,614.35	7,192.10	0.00	0.00	0.00	
13,000.00	90.35	135.23	4,730.97	-4,857.38	5,966.44	7,690.58	0.00	0.00	0.00	
13,500.00	90.35	135.23	4,727.94	-5,212.37	6,318.54	8,189.06	0.00	0.00	0.00	
14,000.00	90.35	135.23	4,724.92	-5,567.37	6,670.64	8,687.53	0.00	0.00	0.00	
14,500.00	90.35	135.23	4,721.90	-5,922.36	7,022.73	9,186.01	0.00	0.00	0.00	
15,000.00	90.35	135.23	4,718.87	-6,277.35	7,374.83	9,684.49	0.00	0.00	0.00	
15,500.00	90.35	135.23	4,715.85	-6,632.34	7,726.92	10,182.96	0.00	0.00	0.00	
15,806.33	90.35	135.23	4,714.00	-6,849.83	7,942.63	10,488.36	0.00	0.00	0.00	
<b>TD at 15806.33</b>										

**WPX**  
Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well W Lybrook UT #753H (A2) - Slot A2
<b>Company:</b>	WPX Energy	<b>TVD Reference:</b>	GL @ 6719.00usft (Original Well Elev)
<b>Project:</b>	T23N R9W	<b>MD Reference:</b>	GL @ 6719.00usft (Original Well Elev)
<b>Site:</b>	2309-14I WLU	<b>North Reference:</b>	True
<b>Well:</b>	W Lybrook UT #753H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 28Sept16 sam		

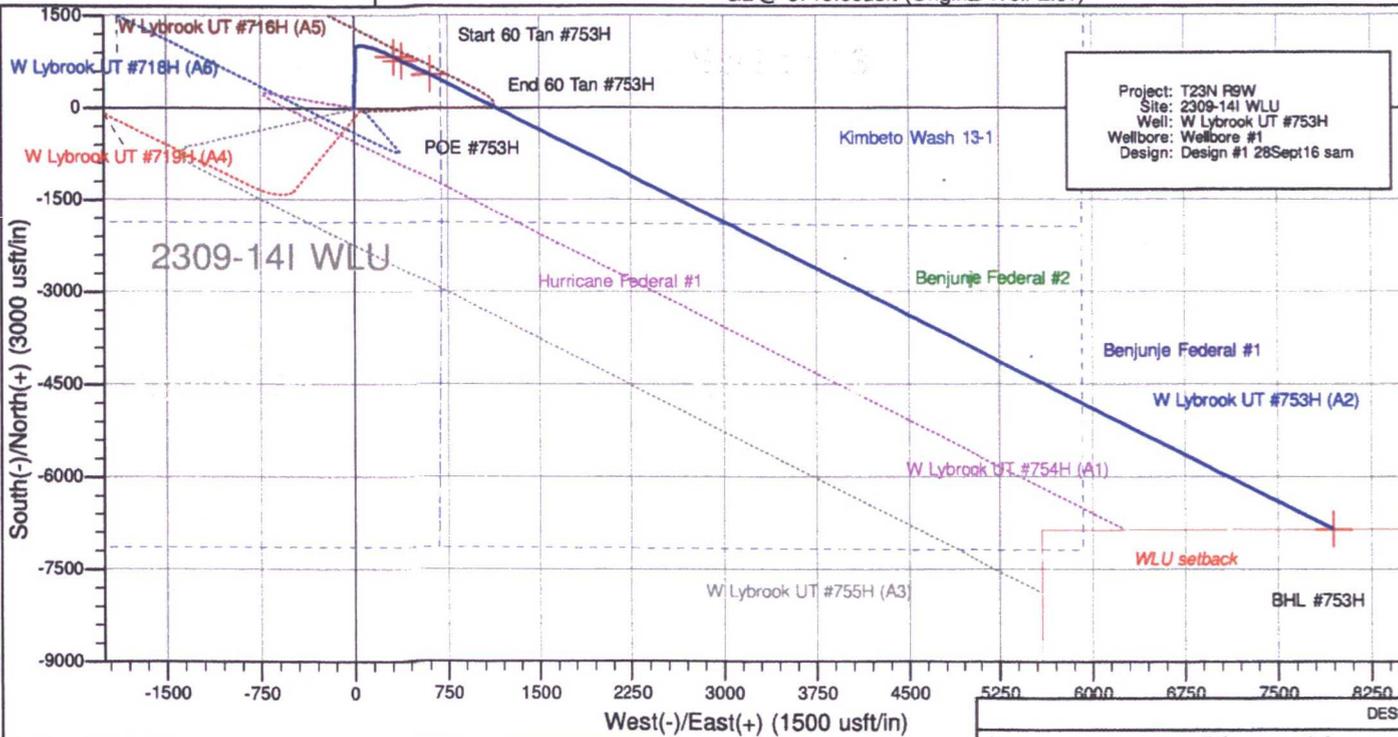
Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Start 60 Tan #753H - plan hits target center - Point	0.00	0.00	4,641.72	838.76	316.76	1,901,919.22	524,606.68	36.227107	-107.749905
End 60 Tan #753H - plan misses target center by 0.01usft at 5048.67usft MD (4691.72 TVD, 777.27 N, 377.75 E) - Point	0.00	0.00	4,691.72	777.28	377.76	1,901,857.79	524,667.73	36.226938	-107.749699
BHL #753H - plan hits target center - Point	0.00	0.00	4,714.00	-6,849.83	7,942.63	1,894,237.11	532,239.08	36.205982	-107.724057
POE #753H - plan hits target center - Point	0.00	0.00	4,777.00	548.55	604.63	1,901,629.25	524,894.79	36.226310	-107.748929

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	
5,386.00	4,777.00	7"	7.000	8.750	

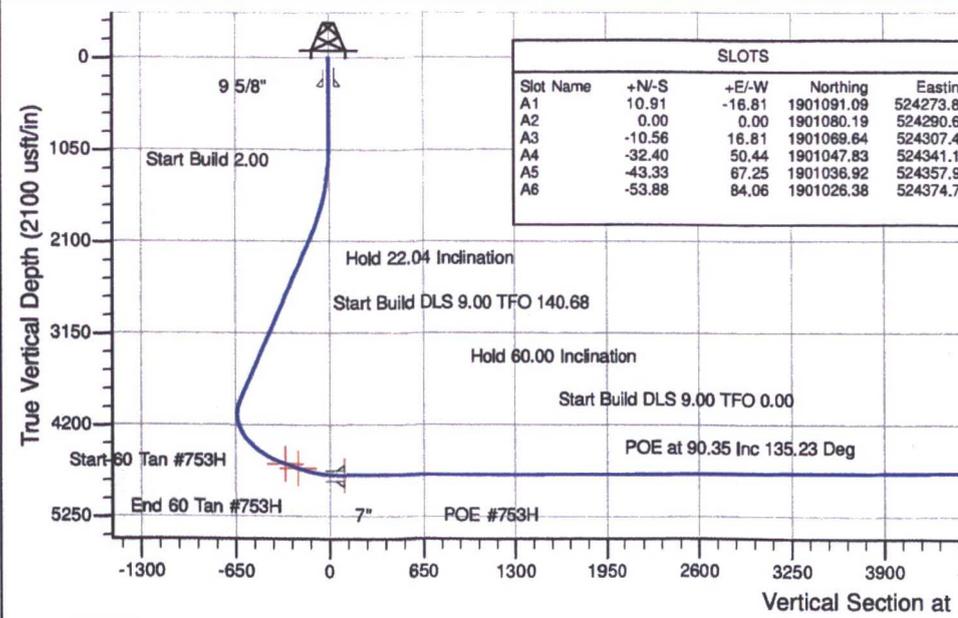
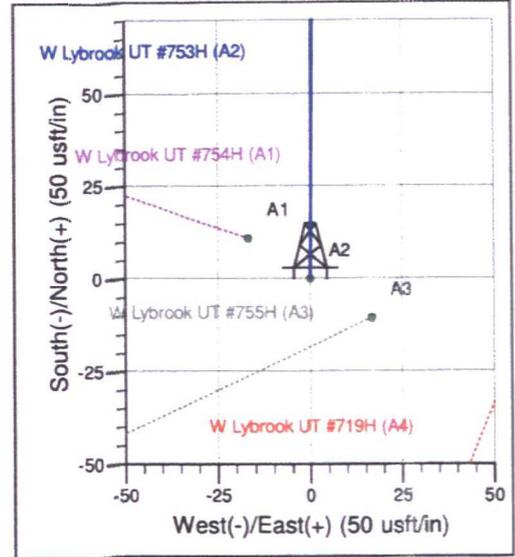
Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S	+E/-W		
		(usft)	(usft)		
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
2,101.84	2,074.87	209.28	2.04	Hold 22.04 Inclination	
4,099.69	3,926.77	958.84	9.35	Start Build DLS 9.00 TFO 140.68	
4,948.66	4,641.72	838.76	316.76	Hold 60.00 Inclination	
5,048.66	4,691.72	777.27	377.75	Start Build DLS 9.00 TFO 0.00	
5,219.15	4,756.30	665.64	488.48	Start DLS 9.00 TFO 0.01	
5,385.85	4,777.00	548.55	604.63	POE at 90.35 Inc 135.23 Deg	
15,806.33	4,714.00	-6,849.83	7,942.63	TD at 15806.33	



well name: W Lybrook UT #753H  
 Surface Location: 2309-14I WLU  
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
 Ground Elevation: 6719.00  
 +N/-S    +E/-W    Northing    Easting    Latitude    Longitude    Slot  
 0.00    0.00    1901080.19    524290.63    36.224803    -107.750979    A2  
 GL @ 6719.00usft (Original Well Elev)



Project: T23N R9W  
 Site: 2309-14I WLU  
 Well: W Lybrook UT #753H  
 Wellbore: Wellbore #1  
 Design: Design #1 28Sept16 sam



SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
A1	10.91	-16.81	1901091.09	524273.81
A2	0.00	0.00	1901080.19	524290.63
A3	-10.56	16.81	1901069.64	524307.45
A4	-32.40	50.44	1901047.83	524341.10
A5	-43.33	67.25	1901036.92	524357.92
A6	-53.88	84.06	1901026.38	524374.74

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #753H	4641.72	838.76	316.76	1901919.22	524606.68	36.227107	-107.749905	Point
End 60 Tan #753H	-	-	-	-	-	-	-	-
POE #753H	4691.72	777.28	377.76	1901857.79	524667.73	36.226938	-107.749698	Point
BHL #753H	4777.00	548.55	604.63	1901629.25	524894.79	36.226310	-107.748929	Point

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
1000.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
2074.87	2101.84	22.04	0.56	209.28	2.04	-135.13	209.29	Hold 22.04 Inclination	
3926.77	4099.69	22.04	0.56	958.84	9.35	-619.13	958.89	Start Build DLS 9.00 TFO 140.68	
4641.72	4948.66	60.00	135.23	838.76	316.76	-307.91	1365.56	Hold 60.00 Inclination	
4691.72	5048.66	60.00	135.23	777.27	377.75	-221.57	1452.16	Start Build DLS 9.00 TFO 0.00	
4756.30	5219.15	75.34	135.23	665.64	488.48	-64.81	1609.40	Start DLS 9.00 TFO 0.01	
4777.00	5385.85	90.35	135.23	548.55	604.63	99.62	1774.33	POE at 90.35 Inc 135.23 Deg	
4714.00	15806.33	90.35	135.23	-6849.83	7942.63	10488.36	12194.61	TD at 15806.33	

Vertical Section at 130.77bearing (1300 usft/in)

(Lat/Long) is recorded and full drill log report is completed and filed with WPX. The bed will not be energized for a minimum of 45 days.

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the wells are plugged, final reclamation will occur within the remainder of the project area. Reclamation is described in detail in the Surface Use Reclamation Plan (Appendix A).

## 7. METHODS FOR HANDLING WASTE

### A. Cuttings

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

### B. Drilling Fluids

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

### C. Spills

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

### D. Sewage

- 1 Portable toilets will be provided and maintained during construction, as needed (see Figures 3, 4, 6 and 7 in Appendix B for the location of toilets per wellpad).

### E. Garbage and other waste material

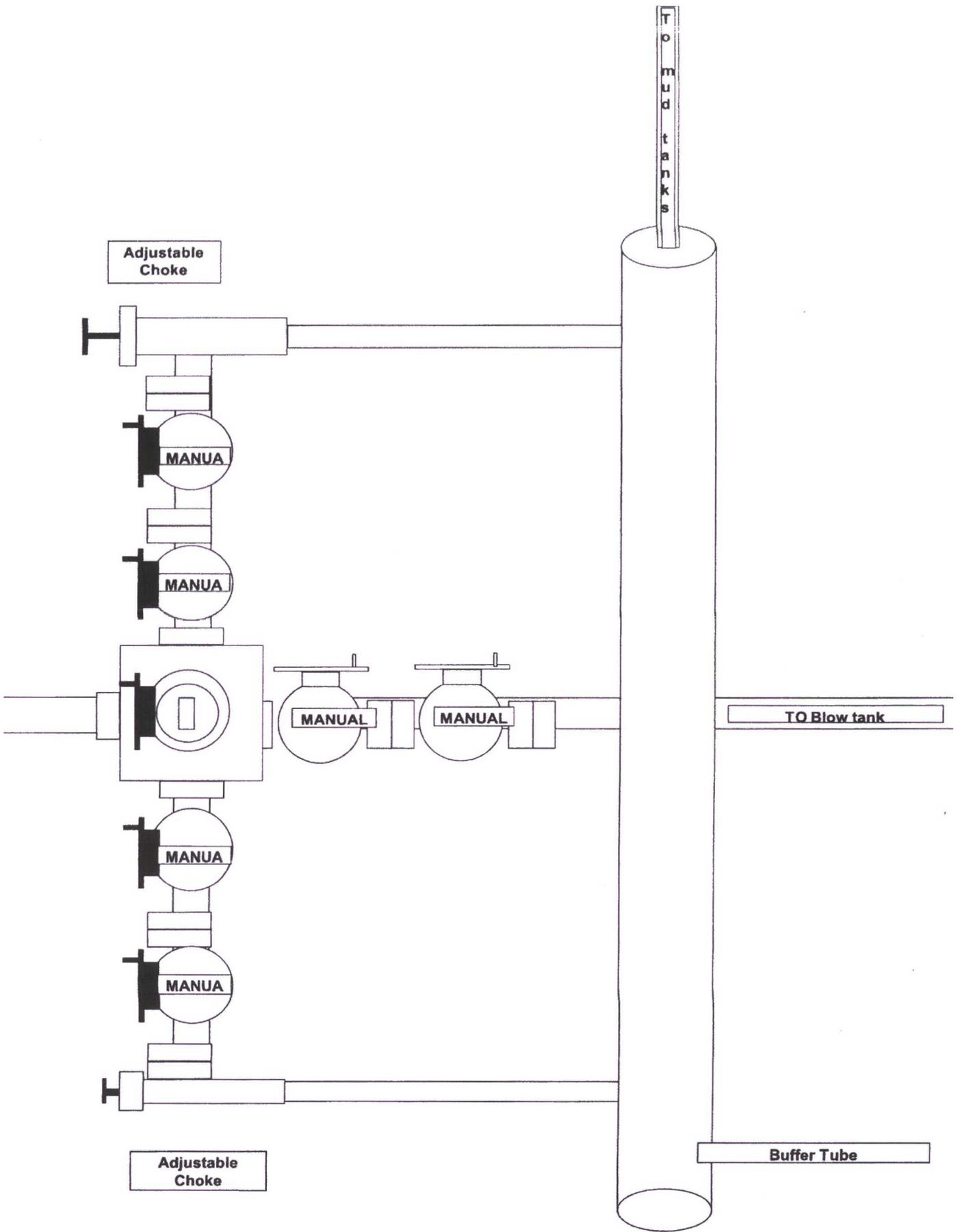
- 1 All garbage and trash will be placed in a metal trash basket. The trash and garbage will be hauled off site and dumped in an approved landfill, as needed.

### F. Hazardous Waste

- 1 No chemicals subject to reporting under Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
- 2 No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
- 3 All fluids (i.e., scrubber cleaners) used during washing of production equipment will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.

### G. Produced Water:

- 1 WPX Energy will dispose of produced water from this well at one of the following facilities:
  - Lybrook Yard WDW #1, API #30-039-27533, NMOCD permit #SWD-907, operated by Elm Ridge Resources, located in NE ¼, Section 14, Township 23 North, Range 7 West
  - Jillson Federal #1, NMOCD order #R-10168, operated by ConocoPhillips, located in NW ¼, Section 8, Township 24 North, Range 3 West
  - Basin Disposal, permit #NM-01-005, located in the NW ¼, Section 3, Township 29 North, Range 11 West
  - Sunco SWD #001, API #30-045-28653, NMOCD permit SWD-457, operated by Key Energy, located in NW ¼, Section 2, Township 29 North, Range 12 West
- 2 Water will be hauled by truck. Some produced water may also be used in drilling and completion operations as an alternative disposal method.



ROTATING  
HEAD

FLOWLINE

HYDRILL  
11" 3M

11" 3M  
PIPE RAMS

11" 3M  
BLIND RAMS

MUD  
CROSS

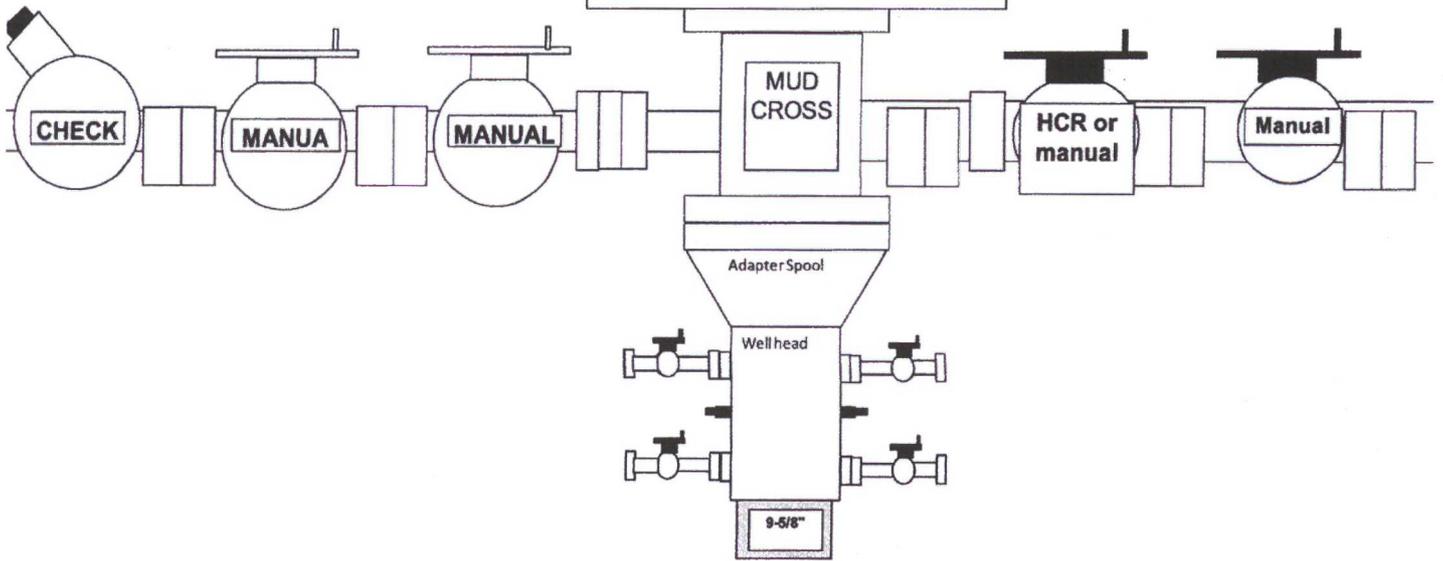
HCR or  
manual

Manual

Adapter Spool

Well head

9-5/8"



**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to WPX Energy Production, LLC W Lybrook Unit #753H**  
**1878' FSL & 691' FEL, Section 14, T23N, R9W, N.M.P.M., San Juan County, NM**

**Latitude: 36.224816°N Longitude: 107.751593°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 1.3 miles to begin WPX W Lybrook Unit #710H proposed access on right-hand side:

Go Right (North-westerly) along WPX W Lybrook Unit #710H proposed access for 3412.5' to fork in proposed access:

Go Left (South-westerly) continuing for 1344.8' to staked WPX W Lybrook Unit #753H location.