

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: 04/17/2017

Well information;

Operator WPE Energy, Well Name and Number W Escavada Unit 304 H

API# 30-043-21307, Section 17, Township 22 N, Range 07 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.

Chant Her  
NMOCD Approved by Signature

8-17-2017  
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505  
Phone (505) 476-3441 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

HELD FOR  
Unit approval  
Decision  
6-5-18

AUG 10 2017

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NOG13121807
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. NMNM135218X
3a. Address 720 S Main Aztec NM 87410		8. Lease Name and Well No. W ESCAVADA UNIT 304H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. 30-043-21307
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SESE / 235 FSL / 248 FEL / LAT 36.132771 / LONG -107.590097 At proposed prod. zone NWSW / 2301 FSL / 1087 FWL / LAT 36.153251 / LONG -107.620968		10. Field and Pool, or Exploratory BASIN MANCOS / ESCAVADA MANCO
14. Distance in miles and direction from nearest town or post office* 53.9 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 17 / T22N / R7W / 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	17. Spacing Unit dedicated to this well 480.94
18. Distance from proposed location* to nearest well, drilling, completed, 235 feet applied for, on this lease, ft.	19. Proposed Depth 4793 feet / 16014 feet	20. BLM/BIA Bond No. on file FED: UTB000178 / IND: B001576
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6878 feet	22. Approximate date work will start* 06/01/2017	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:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. 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 04/17/2017
Title Permitting Tech III		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 7/31/17
Title <i>AFM</i>	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)

**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 1.61 and appeal pursuant to 43 CFR 3160.4

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

NMOCDAV



District I  
1625 N. French Drive, Hobbs, NM 88240  
Phone: (575) 393-6161 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

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30043-21307</b>		*Pool Code <b>98225</b>	*Pool Name <b>ESCAVADA w; mancos</b>
*Property Code <b>317688 321258</b>	*Property Name <b>W ESCAVADA UNIT</b>		*Well Number <b>304H</b>
*OGRID No. <b>120782</b>	*Operator Name <b>WPX ENERGY PRODUCTION, LLC</b>		*Elevation <b>6878'</b>

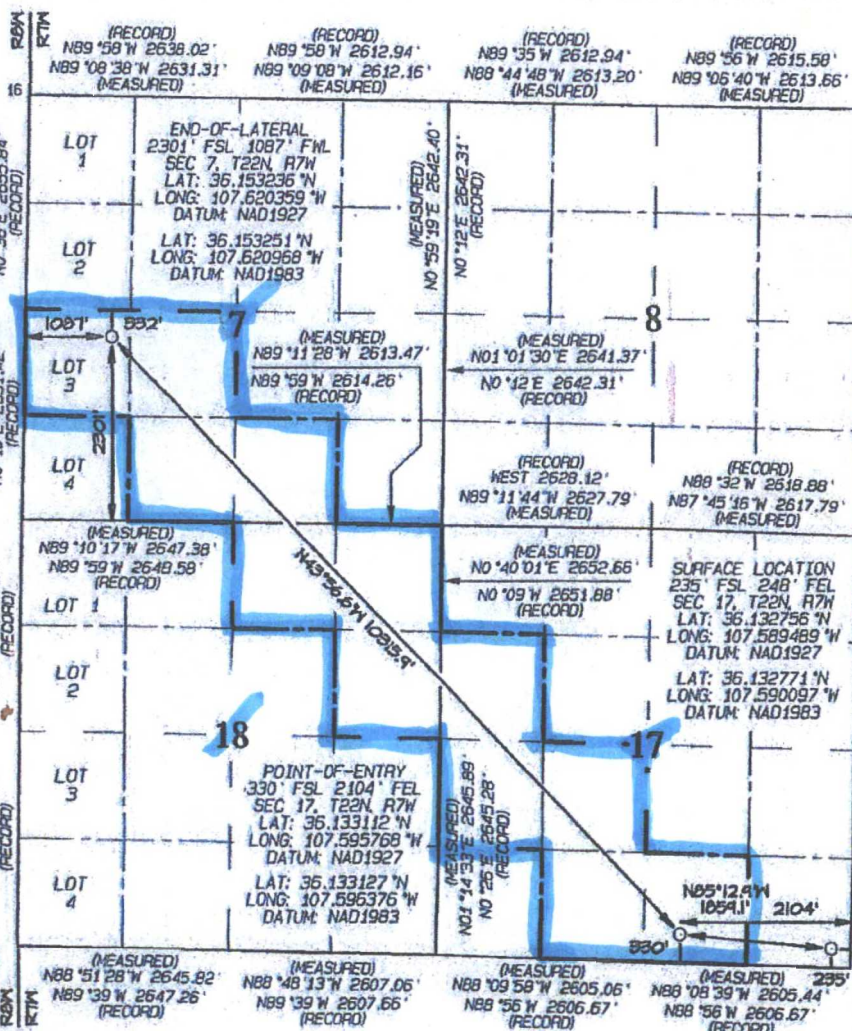
10 Surface Location

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	22N	7W		235	SOUTH	248	EAST	SANDOVAL

11 Bottom Hole Location If Different From Surface

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	7	22N	7W	3	2301	SOUTH	1087	WEST	SANDOVAL

*Dedicated Acrea <b>480.94</b>		*Joint or Infill		*Consolidation Code	*Order No. <b>R-14100</b>
N/2 SW/4, SE/4 SW/4 SW/4 SE/4 - Section 7 N/2 NE/4, SE/4 NE/4 - Section 18 SW/4 NW/4, N/2 SW/4 SE/4 SW/4, SW/4 SE/4 - Section 17		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			



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: **3/21/17**

Printed Name: **Lacey Granillo**

E-mail Address: **lacey.granillo@wpxenergy.com**

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: **MARCH 15, 2017**  
Date of Survey: **MARCH 3, 2016**

Signature and Seal of Professional Surveyor



**JASON C. EDWARDS**  
Certificate Number **15269**

OGRID 372286 - Enduring Blanket Sundry for op  
Change rec'd April 2018.





## **WPX Energy**

### **Operations Plan**

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

**Date:** April 17, 2017  
**Well Name:** W Escavada UT #304H  
**SH Location:** SESE Sec 17 22N-07W  
**BH Location:** NWSW Sec 7 22N-07W

**Field:** Lybrook Gallup  
**Surface:**  
**Elevation:** 6878' GR  
**Minerals:**

**Measured Depth:** 16,013.56'

## **I. GEOLOGY**

Surface formation - NACIMIENTO

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

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	628.00	628.00	POINT LOOKOUT	3,721.00	3,553.00
KIRTLAND	806.00	806.00	MANCOS	3,890.00	3,709.00
PICTURED CLIFFS	1,166.00	1,165.00	GALLUP	4,258.00	4,050.00
LEWIS	1,251.00	1,248.00	KICKOFF POINT	4,408.01	4,188.33
CHACRA	1,555.00	1,544.00	TOP TARGET	5,225.00	4,754.00
CLIFF HOUSE	2,740.00	2,646.00	LANDING POINT	5,699.42	4,793.00
MENEFEE	2,782.00	2,685.00	BASE TARGET	5,699.42	4,793.00
			TD	16,013.56	4,793.00

### **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"	5,699.42'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5549.42' - 16,013.56'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5549.42'	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.

#### C. CEMENT:

*(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:

Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 109 bbls, 311 sks, (612 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/ +/- 224 bbl Drilling mud or water. Total Cement: 168 bbls, 565 sks, (943 cuft)

3. Prod Liner:

Spacer #1: 10 bbl (56 cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Treated Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem™ System. Yield 1.36 cuft/sk 13.3 ppg (1026 sx / 1395 cuft / 248 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 220 bbl Fr Water. Total Cement (1026 sx / 1395 bbls).

**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:**

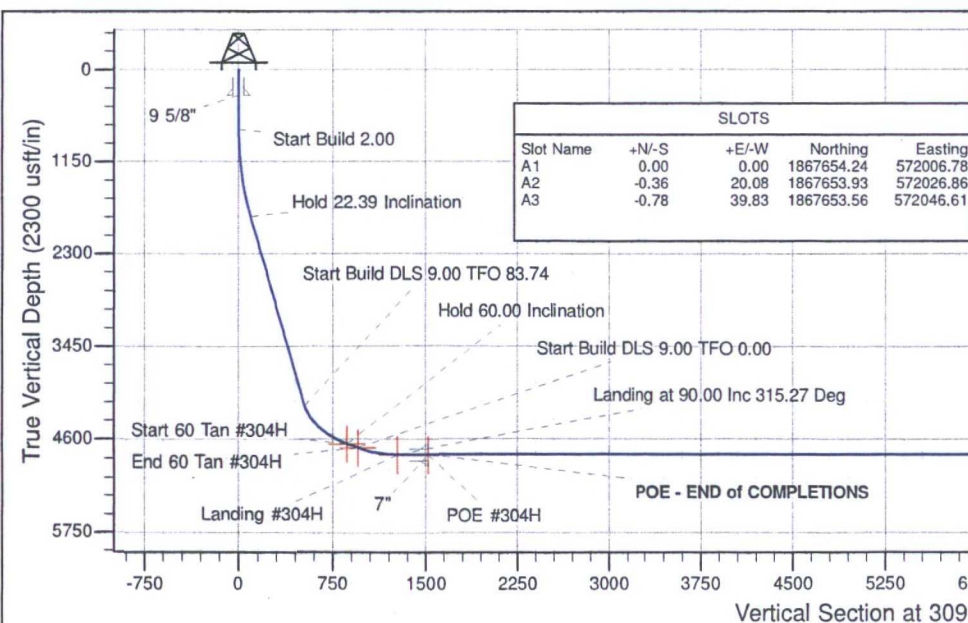
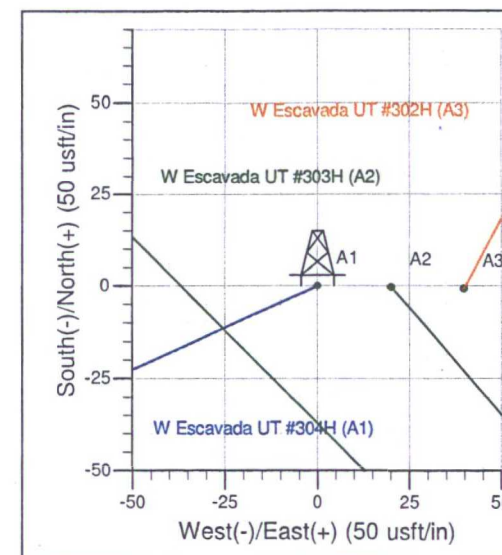
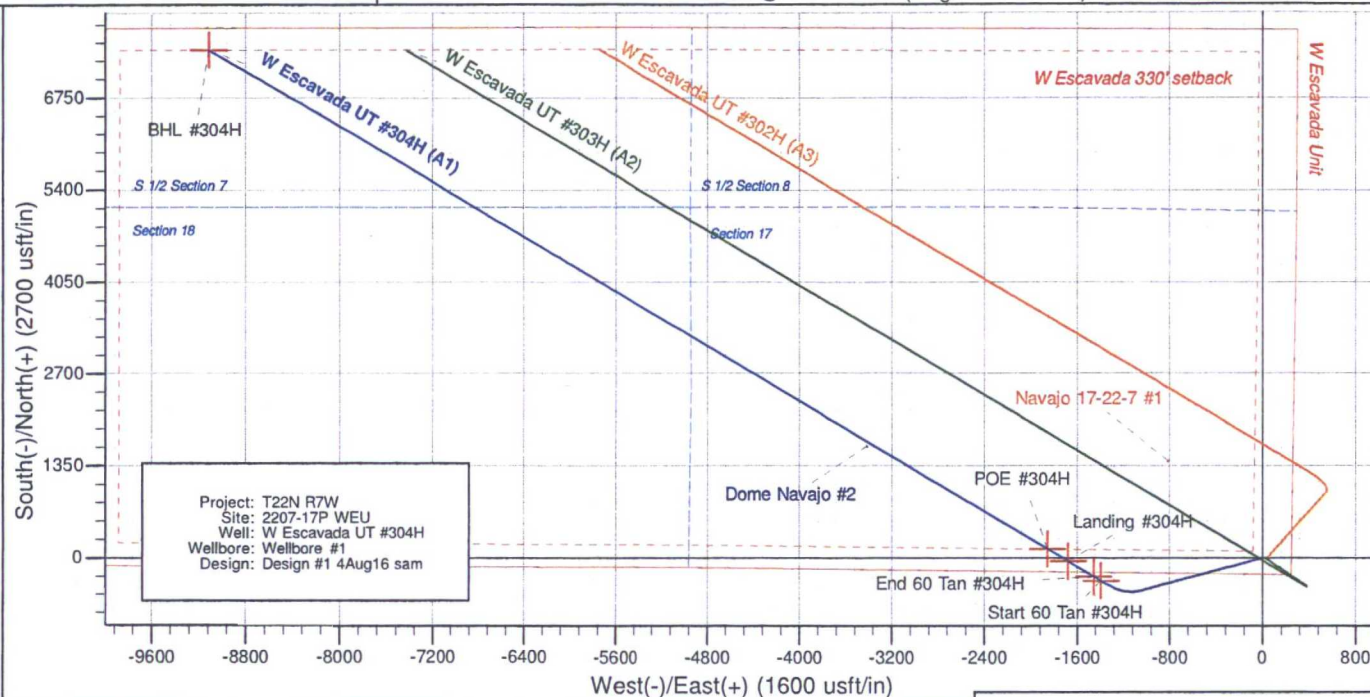
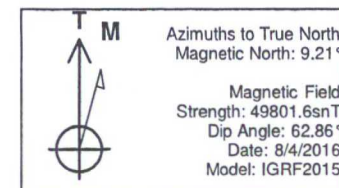
A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-55 Intermediate casing with a Liner Hanger and pack-off assembly then cemented to top of liner hanger.

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





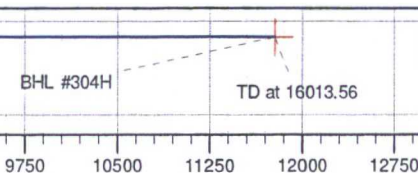
Well Name: W Escavada UT #304H  
 Surface Location: 2207-17P WEU  
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
 Ground Elevation: 6878.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1867654.24 572006.78 36.132756 -107.589489 A1  
 GL @ 6878.00usft (Original Well Elev)



SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
A1	0.00	0.00	1867654.24	572006.78
A2	-0.36	20.08	1867653.93	572026.86
A3	-0.78	39.83	1867653.56	572046.61

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #304H	4657.71	-335.77	-1393.37	1867314.97	570614.26	36.131833	-107.594207	Point
End 60 Tan #304H	4707.71	-274.24	-1454.32	1867376.35	570553.15	36.132003	-107.594414	Point
Landing #304H	4793.00	-48.12	-1678.35	1867601.91	570328.56	36.132624	-107.595173	Point
POE #304H	4793.00	129.47	-1854.30	1867779.06	570152.16	36.133112	-107.595768	Point
BHL #304H	4793.00	7456.53	-9113.50	1875087.87	562874.60	36.153236	-107.620359	Point

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation		
750.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00		
1841.30	1869.58	22.39	245.70	-88.89	-196.86	96.07	216.00	Hold 22.39 Inclination		
4188.33	4408.00	22.39	245.70	-486.82	-1078.16	526.17	1182.97	Start Build DLS 9.00 TFO 83.74		
4657.71	5016.09	60.00	315.27	-335.77	-1393.37	865.78	1550.31	Hold 60.00 Inclination		
4707.71	5116.09	60.00	315.27	-274.25	-1454.32	951.92	1636.91	Start Build DLS 9.00 TFO 0.00		
4772.10	5285.85	75.28	315.27	-163.04	-1564.49	1107.60	1793.45	Start DLS 9.00 TFO -0.01		
4793.00	5449.42	90.00	315.27	-48.12	-1678.35	1268.50	1955.22	Landing at 90.00 Inc 315.27 Deg		
4793.00	5699.42	90.00	315.27	129.47	-1854.30	1517.14	2205.22	POE - END OF COMPLETIONS		
4793.00	16013.56	90.00	315.27	7456.49	-9113.53	11775.21	12519.36	TD at 16013.56		



# **WPX Energy**

**T22N R7W**

**2207-17P WEU**

**W Escavada UT #304H - Slot A1**

**Wellbore #1**

**Plan: Design #1 4Aug16 sam**

## **Standard Planning Report**

**04 August, 2016**



# WPX Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Escavada UT #304H (A1) - Slot A1
Company:	WPX Energy	TVD Reference:	GL @ 6878.00usft (Original Well Elev)
Project:	T22N R7W	MD Reference:	GL @ 6878.00usft (Original Well Elev)
Site:	2207-17P WEU	North Reference:	True
Well:	W Escavada UT #304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 4Aug16 sam		

Project	T22N R7W		
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		2207-17P WEU			
Site Position:		Northing:	1,867,653.56 usft	Latitude:	36.132754
From:	Map	Easting:	572,046.61 usft	Longitude:	-107.589354
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.14 °

Well	W Escavada UT #304H - Slot A1					
Well Position	+N/-S	0.78 usft	Northing:	1,867,654.24 usft	Latitude:	36.132756
	+E/-W	-39.83 usft	Easting:	572,006.78 usft	Longitude:	-107.589489
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,878.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/4/2016	9.21	62.86	49,802

Design	Design #1 4Aug16 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	309.29

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	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,869.58	22.39	245.70	1,841.30	-88.89	-196.86	2.00	2.00	0.00	245.70	
4,408.01	22.39	245.70	4,188.33	-486.82	-1,078.16	0.00	0.00	0.00	0.00	
5,016.09	60.00	315.27	4,657.71	-335.77	-1,393.37	9.00	6.18	11.44	83.74	Start 60 Tan #304H
5,116.09	60.00	315.27	4,707.71	-274.25	-1,454.32	0.00	0.00	0.00	0.00	End 60 Tan #304H
5,285.85	75.28	315.27	4,772.10	-163.04	-1,564.49	9.00	9.00	0.00	0.00	
5,449.42	90.00	315.27	4,793.00	-48.12	-1,678.35	9.00	9.00	0.00	-0.01	Landing #304H
5,699.42	90.00	315.27	4,793.00	129.47	-1,854.30	0.00	0.00	0.00	0.00	POE #304H
16,013.56	90.00	315.27	4,793.00	7,456.53	-9,113.50	0.00	0.00	0.00	0.00	BHL #304H



# WPX Planning Report

Database: COMPASS  
Company: WPX Energy  
Project: T22N R7W  
Site: 2207-17P WEU  
Well: W Escavada UT #304H  
Wellbore: Wellbore #1  
Design: Design #1 4Aug16 sam

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

Well W Escavada UT #304H (A1) - Slot A1  
GL @ 6878.00usft (Original Well Elev)  
GL @ 6878.00usft (Original Well Elev)  
True  
Minimum Curvature

## 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
<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
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,000.00	5.00	245.70	999.68	-4.49	-9.94	4.85	2.00	2.00	0.00
1,500.00	15.00	245.70	1,491.46	-40.17	-88.97	43.42	2.00	2.00	0.00
1,869.58	22.39	245.70	1,841.30	-88.89	-196.86	96.07	2.00	2.00	0.00
<b>Hold 22.39 Inclination</b>									
2,000.00	22.39	245.70	1,961.88	-109.33	-242.14	118.17	0.00	0.00	0.00
2,500.00	22.39	245.70	2,424.19	-187.72	-415.73	202.89	0.00	0.00	0.00
3,000.00	22.39	245.70	2,886.49	-266.10	-589.32	287.61	0.00	0.00	0.00
3,500.00	22.39	245.70	3,348.79	-344.48	-762.92	372.32	0.00	0.00	0.00
4,000.00	22.39	245.70	3,811.09	-422.86	-936.51	457.04	0.00	0.00	0.00
4,408.01	22.39	245.70	4,188.33	-486.82	-1,078.16	526.17	0.00	0.00	0.00
<b>Start Build DLS 9.00 TFO 83.74</b>									
4,500.00	24.64	265.78	4,272.82	-495.46	-1,113.31	547.91	9.00	2.44	21.83
5,000.00	58.70	314.53	4,649.51	-345.54	-1,383.57	852.01	9.00	6.81	9.75
5,016.09	60.00	315.27	4,657.71	-335.77	-1,393.37	865.78	9.00	8.08	4.61
<b>Hold 60.00 Inclination</b>									
5,116.09	60.00	315.27	4,707.71	-274.25	-1,454.32	951.92	0.00	0.00	0.00
<b>Start Build DLS 9.00 TFO 0.00</b>									
5,285.85	75.28	315.27	4,772.10	-163.04	-1,564.49	1,107.60	9.00	9.00	0.00
<b>Start DLS 9.00 TFO -0.01</b>									
5,449.42	90.00	315.27	4,793.00	-48.12	-1,678.35	1,268.50	9.00	9.00	0.00
<b>Landing at 90.00 Inc 315.27 Deg</b>									
5,500.00	90.00	315.27	4,793.00	-12.19	-1,713.95	1,318.80	0.00	0.00	0.00
5,699.42	90.00	315.27	4,793.00	129.47	-1,854.30	1,517.14	0.00	0.00	0.00
<b>POE - END of COMPLETIONS</b>									
5,700.00	90.00	315.27	4,793.00	129.89	-1,854.71	1,517.71	0.00	0.00	0.00
<b>7"</b>									
6,000.00	90.00	315.27	4,793.00	343.00	-2,065.85	1,816.08	0.00	0.00	0.00
6,500.00	90.00	315.27	4,793.00	698.20	-2,417.76	2,313.36	0.00	0.00	0.00
7,000.00	90.00	315.27	4,793.00	1,053.39	-2,769.67	2,810.65	0.00	0.00	0.00
7,500.00	90.00	315.27	4,793.00	1,408.58	-3,121.57	3,307.93	0.00	0.00	0.00
8,000.00	90.00	315.27	4,793.00	1,763.77	-3,473.48	3,805.21	0.00	0.00	0.00
8,500.00	90.00	315.27	4,793.00	2,118.97	-3,825.39	4,302.49	0.00	0.00	0.00
9,000.00	90.00	315.27	4,793.00	2,474.16	-4,177.29	4,799.78	0.00	0.00	0.00
9,500.00	90.00	315.27	4,793.00	2,829.35	-4,529.20	5,297.06	0.00	0.00	0.00
10,000.00	90.00	315.27	4,793.00	3,184.55	-4,881.10	5,794.34	0.00	0.00	0.00
10,500.00	90.00	315.27	4,793.00	3,539.74	-5,233.01	6,291.62	0.00	0.00	0.00
11,000.00	90.00	315.27	4,793.00	3,894.93	-5,584.92	6,788.90	0.00	0.00	0.00
11,500.00	90.00	315.27	4,793.00	4,250.12	-5,936.82	7,286.19	0.00	0.00	0.00
12,000.00	90.00	315.27	4,793.00	4,605.32	-6,288.73	7,783.47	0.00	0.00	0.00
12,500.00	90.00	315.27	4,793.00	4,960.51	-6,640.64	8,280.75	0.00	0.00	0.00
13,000.00	90.00	315.27	4,793.00	5,315.70	-6,992.54	8,778.03	0.00	0.00	0.00
13,500.00	90.00	315.27	4,793.00	5,670.90	-7,344.45	9,275.31	0.00	0.00	0.00
14,000.00	90.00	315.27	4,793.00	6,026.09	-7,696.35	9,772.60	0.00	0.00	0.00
14,500.00	90.00	315.27	4,793.00	6,381.28	-8,048.26	10,269.88	0.00	0.00	0.00
15,000.00	90.00	315.27	4,793.00	6,736.47	-8,400.17	10,767.16	0.00	0.00	0.00
15,500.00	90.00	315.27	4,793.00	7,091.67	-8,752.07	11,264.44	0.00	0.00	0.00
16,000.00	90.00	315.27	4,793.00	7,446.86	-9,103.98	11,761.72	0.00	0.00	0.00



# WPX Planning Report

Database: COMPASS  
Company: WPX Energy  
Project: T22N R7W  
Site: 2207-17P WEU  
Well: W Escavada UT #304H  
Wellbore: Wellbore #1  
Design: Design #1 4Aug16 sam

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

Well W Escavada UT #304H (A1) - Slot A1  
GL @ 6878.00usft (Original Well Elev)  
GL @ 6878.00usft (Original Well Elev)  
True  
Minimum Curvature

## 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)
16,013.56	90.00	315.27	4,793.00	7,456.50	-9,113.53	11,775.21	0.00	0.00	0.00
TD at 16013.56									

## 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 #304H - plan hits target center - Point	0.00	0.00	4,657.71	-335.77	-1,393.37	1,867,314.98	570,614.26	36.131834	-107.594208
End 60 Tan #304H - plan misses target center by 0.01usft at 5116.09usft MD (4707.71 TVD, -274.25 N, -1454.32 E) - Point	0.00	0.00	4,707.71	-274.24	-1,454.32	1,867,376.35	570,553.16	36.132003	-107.594414
Landing #304H - plan hits target center - Point	0.00	0.00	4,793.00	-48.12	-1,678.35	1,867,601.91	570,328.56	36.132624	-107.595173
POE #304H - plan hits target center - Point	0.00	0.00	4,793.00	129.47	-1,854.30	1,867,779.06	570,152.16	36.133112	-107.595769
BHL #304H - plan misses target center by 0.04usft at 16013.56usft MD (4793.00 TVD, 7456.49 N, -9113.53 E) - Point	0.00	0.00	4,793.00	7,456.53	-9,113.50	1,875,087.87	562,874.60	36.153237	-107.620359

## 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
5,700.00	4,793.00	7"	7.000	8.750

## Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
750.00	750.00	0.00	0.00	Start Build 2.00
1,869.58	1,841.30	-88.89	-196.86	Hold 22.39 Inclination
4,408.01	4,188.33	-486.82	-1,078.16	Start Build DLS 9.00 TFO 83.74
5,016.09	4,657.71	-335.77	-1,393.37	Hold 60.00 Inclination
5,116.09	4,707.71	-274.25	-1,454.32	Start Build DLS 9.00 TFO 0.00
5,285.85	4,772.10	-163.04	-1,564.49	Start DLS 9.00 TFO -0.01
5,449.42	4,793.00	-48.12	-1,678.35	Landing at 90.00 Inc 315.27 Deg
5,699.42	4,793.00	129.47	-1,854.30	POE - END of COMPLETIONS
16,013.56	4,793.00	7,456.50	-9,113.53	TD at 16013.56



The Natural Resources Conservation Service (NRCS) has mapped the soils in the proposed W Escavada 302H/303H/304H Project area. Complete soil information is available in the NRCS's *Soil Survey of Sandoval County, New Mexico, Eastern Part* (USDA/NRCS 2015). The soil map units within the proposed project area footprint are described in the sections below.

A. Blancot – Lybrook association, gently sloping

- 1 Within the project area, this soil map unit is found across the well pad and a small area where the access and pipeline leave the well pad. As such, excavated soils during construction of the well pad, access road, and well-connect pipeline would consist of native borrow and subsoils from the Blancot –Lybrook association, gently sloping soil map unit. A brief description of this soil can be found below.
- 2 The Blancot-Lybrook soil association is composed of 55 percent Blancot and similar soils, 25 percent Lybrook and similar soils, and 20 percent of other minor components. This soil map unit is considered a well-drained soil, with the depth to water table and depth to restrictive layer being more than 80 inches. This soil association has a moderate to high potential for water erosion and low to moderate potential for wind erosion. The Blancot-Lybrook association is typically found ranging in elevation from 6,600 to 7,000 feet in elevation along valley sides, valley floors, stream terraces and ridges (0- to 8-percent slopes) and within loamy and salt flat ecological sites (USDA/NRCS 2015).

B. Blancot – Councelor- Tsosie association, gently sloping

- 1 Within the project area, this soil map unit is found throughout the majority of the access road and well-connect pipeline. As such, excavated soils during construction of the access road and well-connect pipelines would consist of native borrow and subsoils from the Blancot –Councelor-Tsosie association, gently sloping soil map unit. A brief description of this soil can be found below.
- 2 The Blancot-Councelor-Tsosie soil association is composed of 40 percent Blancot and similar soils, 30 percent Councelor and similar soils, 25 percent Tsosie and similar soils, and 5 percent of other minor components. This soil map unit is considered a well-drained soil, with the depth to water table and depth to restrictive layer being more than 80 inches. This soil association has a moderate to high potential for water erosion and low to moderate potential for wind erosion. The Blancot-Councelor-Tsosie association is typically found ranging in elevation from 6,600 to 7,000 feet in elevation along valley sides, ridges, fan remnants, stream terraces, valley floors and alluvial fans (0- to 5-percent slopes) and within loamy, sandy and salt flat ecological sites (USDA/NRCS 2015).

## 7. METHODS FOR HANDLING WASTE

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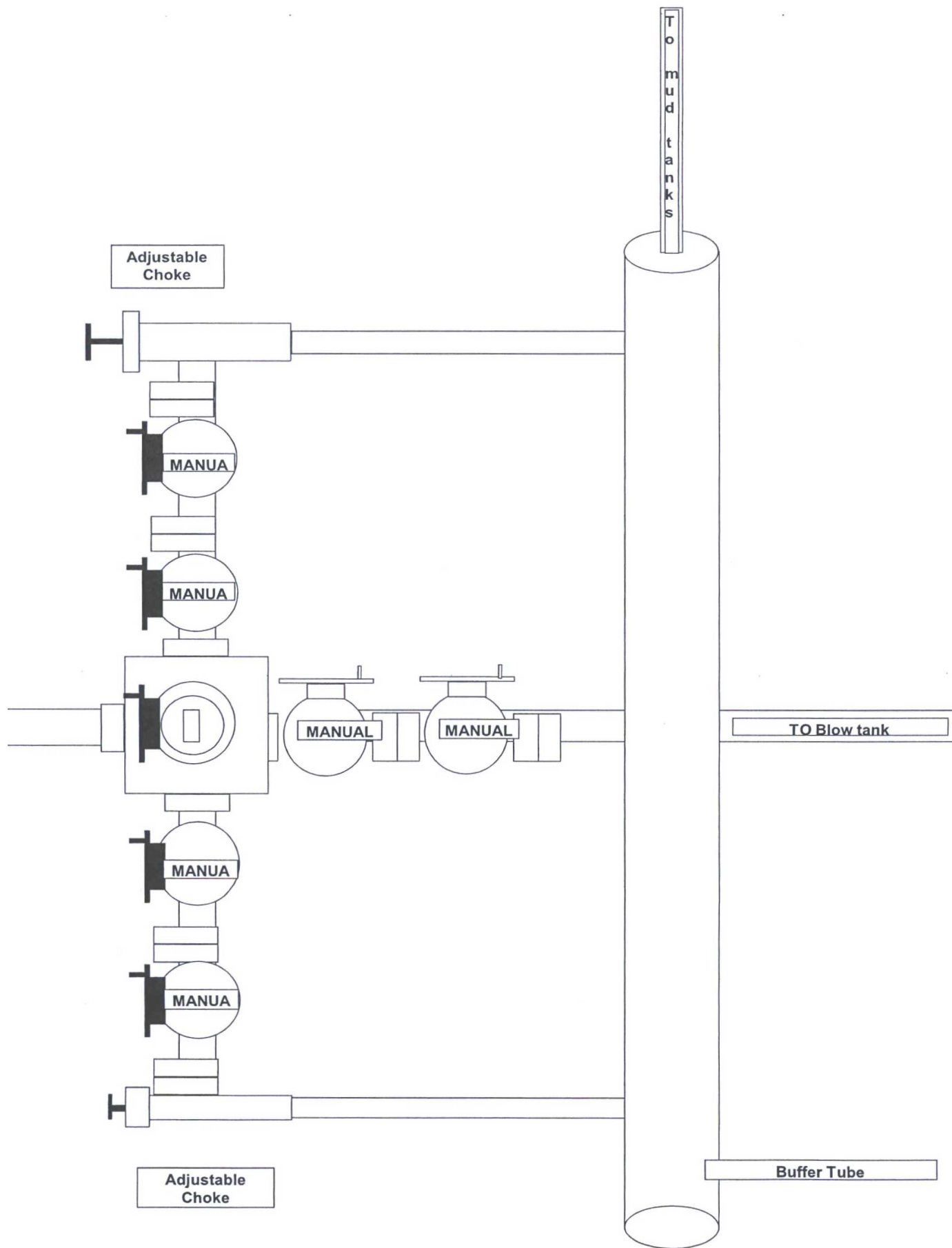
✓ A. Cuttings

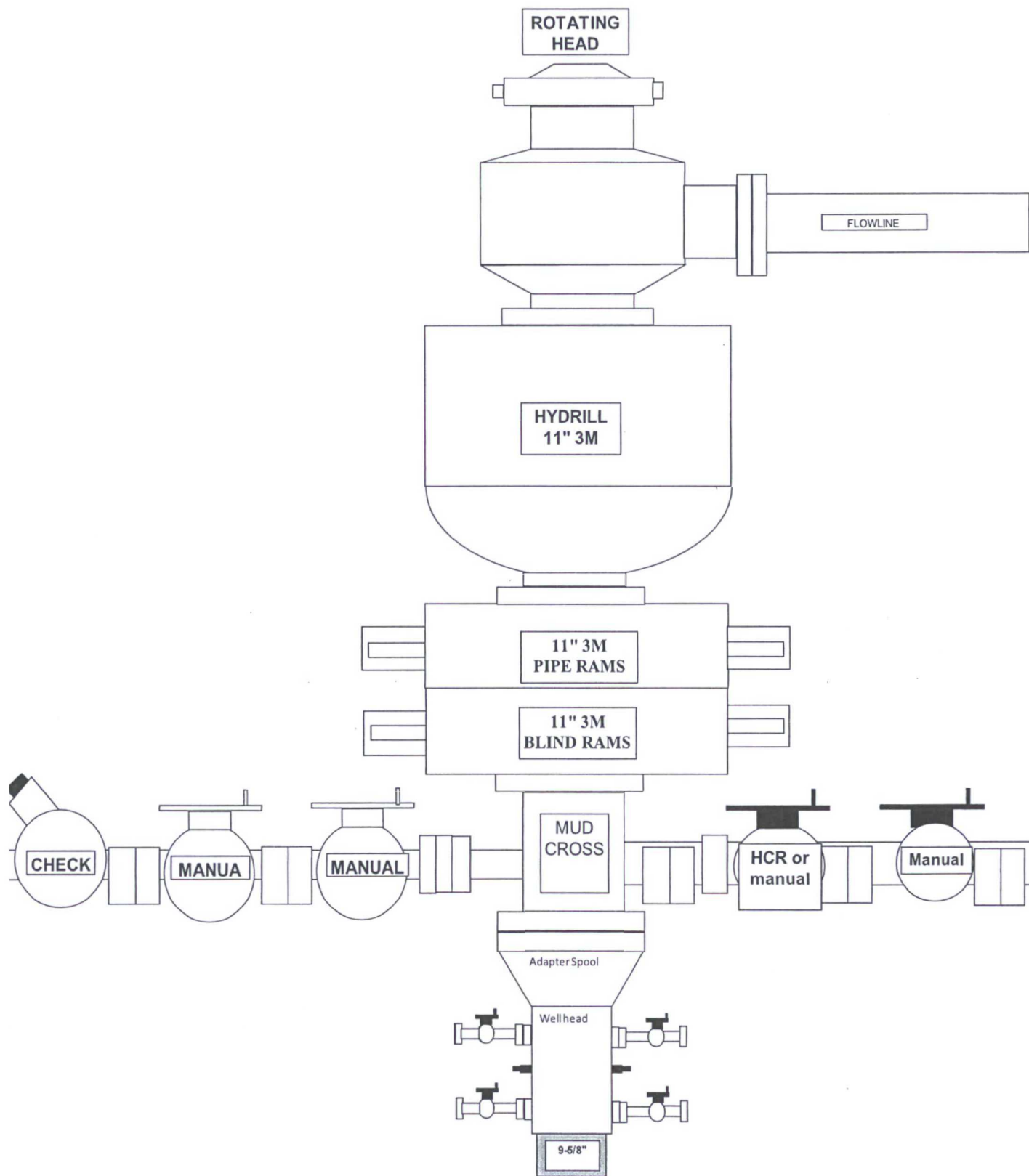
- 1 Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals will be accomplished with water-based mud. All cuttings will be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX will follow Onshore Oil and Gas Order No. 1 regarding the 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









**Directions from the Intersection of US Hwy 550 & US Hwy 64**

**in Bloomfield, NM to WPX Energy Production, LLC W Escavada Unit #304H**

**235' FSL & 248' FEL, Section 17, T22N, R7W, N.M.P.M., Sandoval County, NM**

**Latitude: 36.132771°N Longitude: 107.590097°W Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 53.6 miles to Mile Marker 97.7;

Go Right (Southerly) on Indian Service Route #474 for 4.9 miles to fork in roadway;

Go Right (Westerly) exiting Indian Service Route #474 for 2.5 miles to fork in roadway;

Go Right (Westerly) which is straight for 0.3 miles to fork in roadway;

Go Right (Westerly) which is straight for 1.0 miles to 4-way intersection;

Go Straight (Westerly) for 1.2 miles to 4-way intersection;

Go Left (Southerly) for 1.7 miles to 4-way intersection;

Go Right (Westerly) for 1.9 miles to begin WPX N Escavada Unit #317H proposed access on left-hand side of existing roadway;

Go Left (South-westerly) which is straight following along WPX N Escavada Unit #317H & WPX W Escavada Unit #300H proposed access's for 2685.0' to fork in proposed roadway;

Go Left (Southerly) which is straight for an additional 4258.6' to staked WPX W Escavada Unit #304H location.