

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: 1/26/2017

Well information:

Operator WPX, Well Name and Number N Escudado Unit 311H

API# 43-21302, Section 11, Township 22 N/S, Range 7 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.

Charlie D. Sayer  
NMOCD Approved by Signature

3-10-2017  
Date



MAR 03 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. N0G13121808
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. N ESCAVADA UNIT / NMNM135217A
3a. Address 720 S Main Aztec NM 87410		8. Lease Name and Well No. N ESCAVADA UT 311H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. 30-043-21302
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE / 524 FSL / 2339 FEL / LAT 36.147919 / LONG -107.543721 At proposed prod. zone NESW / 2313 FSL / 2060 FWL / LAT 36.1676 / LONG -107.564116		10. Field and Pool, or Exploratory BASIN MANCOS / ESCAVADA N, MANC
14. Distance in miles and direction from nearest town or post office* 53 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 11 / T22N / R7W / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 524 feet	16. No. of acres in lease 160	17. Spacing Unit dedicated to this well 360
18. Distance from proposed location* to nearest well, drilling, completed, 515 feet applied for, on this lease, ft.	19. Proposed Depth 5071 feet / 13343 feet	20. BLM/BIA Bond No. on file IND: B001576
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6961 feet	22. Approximate date work will start* 04/01/2017	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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 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). | 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 01/26/2017
Title Permitting Tech III		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 3/1/17
Title AFN	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

NMOCDA



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  
OIL CONS. DIV DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

MAR 03 2017

*API Number <b>30.043-21302</b>		*Pool Code 98172	*Pool Name ESCAVADA N; MANCOS (OIL)
*Property Code 316006	*Property Name N ESCAVADA UT		*Well Number 311H
*GRID No 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6961'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	11	22N	7W		524	SOUTH	2339	EAST	SANDOVAL

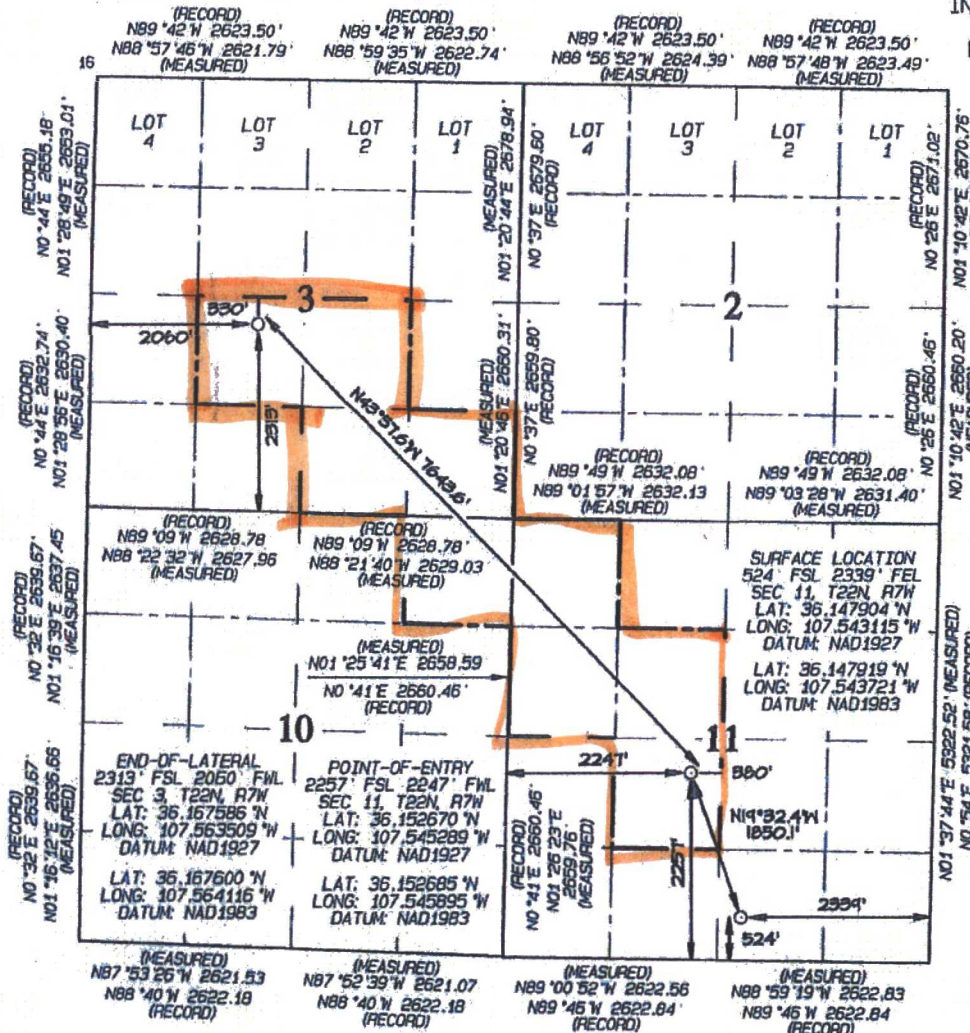
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	3	22N	7W		2313	SOUTH	2060	WEST	SANDOVAL

<sup>12</sup> Dedicated Acres  
360.0  
NE/4 SW/4, W/2 SE/4  
SE/4 SE/4 - Section 3  
NE/4 NE/4 - Section 10  
NW/4 NW/4, S/2 NW/4  
NE/4 SW/4 - Section 11

<sup>13</sup> Joint or Infill  
<sup>14</sup> Consolidation Code  
<sup>15</sup> Order No  
R-14080

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



<sup>17</sup> 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 hereafter approved by the division.

Signature: *Lacey Granillo* Date: 1/18/17  
Printed Name: lacey.granillo@wpxenergy.com  
E-mail Address:

<sup>18</sup> 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 17, 2017  
Date of Survey: MARCH 16, 2016

Signature and Seal of Professional Surveyor

**JASON C. EDWARDS**  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
15269

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





## **WPX Energy**

### **Operations Plan**

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

<b><u>Date:</u></b>	January 17, 2017	<b><u>Field:</u></b>	N Escavada Unit; Mancos Pool
<b><u>Well Name:</u></b>	N Escavada UT #311H	<b><u>Surface:</u></b>	
<b><u>SH Location:</u></b>	SWSE Sec 11 22N-07W	<b><u>Elevation:</u></b>	6961' GR
<b><u>BH Location:</u></b>	NESW Sec 3 22N-07W	<b><u>Minerals:</u></b>	

**Measured Depth:** 13,342.57'

## **I. GEOLOGY**

Surface formation - NACIMIENTO

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

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	906.00	906.00	POINT LOOKOUT	3,991.00	3,831.00
KIRTLAND	1,084.00	1,084.00	MANCOS	4,147.00	3,987.00
PICTURED CLIFFS	1,447.00	1,443.00	GALLUP	4,522.00	4,328.00
LEWIS	1,532.00	1,526.00	KICKOFF POINT	4,775.25	4,564.46
CHACRA	1,842.00	1,822.00	TOP TARGET	5,476.00	5,032.00
CLIFF HOUSE	3,020.00	2,924.00	LANDING POINT	5,700.11	5,071.00
MENESEE	3,062.00	2,963.00	BASE TARGET	5,700.11	5,071.00
			TD	13,342.57	5,071.00

### **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"	5,700.11'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5550.11' - 13,342.57'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5550.11'	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) Tuned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem™ System. Yield 1.36 cuft/sk 13.3 ppg (763 sx /1038 cuft /185 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-179bbl Fr Water. Total Cement (763 sx /1038bbls).

**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**

**T22N R7W**

**2207-110 NEU**

**N Escavada UT #311H - Slot A1**

**Wellbore #1**

**Plan: Design #1 6Aug16 sam**

## **Standard Planning Report**

**10 August, 2016**



# WPX Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well N Escavada UT #311H (A1) - Slot A1
Company:	WPX Energy	TVD Reference:	GL @ 6961.00usft
Project:	T22N R7W	MD Reference:	GL @ 6961.00usft
Site:	2207-110 NEU	North Reference:	True
Well:	N Escavada UT #311H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 6Aug16 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	2207-110 NEU		
Site Position:		Northing:	1,873,205.88 usft
From:	Map	Easting:	585,684.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	36.147904
		Longitude:	-107.543115
		Grid Convergence:	0.17 °

Well	N Escavada UT #311H - Slot A1		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	36.147904
		Longitude:	-107.543115
		Ground Level:	6,961.00 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	8/6/2016	9.19
			Dip Angle
			(°)
			62.88
			Field Strength
			(nT)
			49,815

Design	Design #1 6Aug16 sam		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			319.96

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(bearing)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,890.14	20.80	351.21	1,867.44	184.57	-28.55	2.00	2.00	0.00	351.21	
4,775.25	20.80	351.21	4,564.46	1,197.18	-185.16	0.00	0.00	0.00	0.00	
5,266.77	60.00	315.28	4,935.71	1,447.21	-356.89	9.00	7.97	-7.31	-46.76	Start 60 Tan #311H
5,366.77	60.00	315.28	4,985.71	1,508.74	-417.83	0.00	0.00	0.00	0.00	End 60 Tan #311H
5,536.57	75.28	315.28	5,050.11	1,619.99	-528.00	9.00	9.00	0.00	0.00	
5,700.11	90.00	315.28	5,071.00	1,734.92	-641.82	9.00	9.00	0.00	-0.01	POE #311H
13,342.57	90.00	315.28	5,071.00	7,164.92	-6,019.76	0.00	0.00	0.00	0.00	BHL #311H



# WPX Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well N Escavada UT #311H (A1) - Slot A1
Company:	WPX Energy	TVD Reference:	GL @ 6961.00usft
Project:	T22N R7W	MD Reference:	GL @ 6961.00usft
Site:	2207-110 NEU	North Reference:	True
Well:	N Escavada UT #311H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 6Aug16 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
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	3.00	351.21	999.93	3.88	-0.60	3.36	2.00	2.00	0.00
1,500.00	13.00	351.21	1,494.44	72.56	-11.22	62.78	2.00	2.00	0.00
1,890.14	20.80	351.21	1,867.44	184.57	-28.55	159.67	2.00	2.00	0.00
Hold 20.80 Inclination									
2,000.00	20.80	351.21	1,970.14	223.12	-34.51	193.03	0.00	0.00	0.00
2,500.00	20.80	351.21	2,437.54	398.61	-61.65	344.85	0.00	0.00	0.00
3,000.00	20.80	351.21	2,904.94	574.10	-88.80	496.68	0.00	0.00	0.00
3,500.00	20.80	351.21	3,372.35	749.59	-115.94	648.50	0.00	0.00	0.00
4,000.00	20.80	351.21	3,839.75	925.08	-143.08	800.32	0.00	0.00	0.00
4,500.00	20.80	351.21	4,307.16	1,100.57	-170.22	952.14	0.00	0.00	0.00
4,775.25	20.80	351.21	4,564.46	1,197.18	-185.16	1,035.72	0.00	0.00	0.00
Start Build DLS 9.00 TFO -46.76									
5,000.00	37.53	326.79	4,760.67	1,294.91	-229.22	1,138.89	9.00	7.44	-10.87
5,266.77	60.00	315.28	4,935.71	1,447.21	-356.89	1,337.62	9.00	8.42	-4.31
Hold 60.00 Inclination									
5,366.77	60.00	315.28	4,985.71	1,508.74	-417.83	1,423.93	0.00	0.00	0.00
Start Build DLS 9.00 TFO 0.00									
5,500.00	71.99	315.28	5,039.81	1,595.06	-503.31	1,545.01	9.00	9.00	0.00
5,536.57	75.28	315.28	5,050.11	1,619.99	-528.00	1,579.98	9.00	9.00	0.00
Start DLS 9.00 TFO -0.01									
5,700.00	89.99	315.28	5,071.00	1,734.84	-641.74	1,741.07	9.00	9.00	0.00
7"									
5,700.11	90.00	315.28	5,071.00	1,734.92	-641.82	1,741.18	9.00	9.00	0.00
POE at 90.00 Inc 315.28 Deg									
6,000.00	90.00	315.28	5,071.00	1,947.99	-852.85	2,040.07	0.00	0.00	0.00
6,500.00	90.00	315.28	5,071.00	2,303.24	-1,204.69	2,538.40	0.00	0.00	0.00
7,000.00	90.00	315.28	5,071.00	2,658.49	-1,556.54	3,036.72	0.00	0.00	0.00
7,500.00	90.00	315.28	5,071.00	3,013.74	-1,908.39	3,535.05	0.00	0.00	0.00
8,000.00	90.00	315.28	5,071.00	3,369.00	-2,260.23	4,033.38	0.00	0.00	0.00
8,500.00	90.00	315.28	5,071.00	3,724.25	-2,612.08	4,531.70	0.00	0.00	0.00
9,000.00	90.00	315.28	5,071.00	4,079.50	-2,963.92	5,030.03	0.00	0.00	0.00
9,500.00	90.00	315.28	5,071.00	4,434.75	-3,315.77	5,528.36	0.00	0.00	0.00
10,000.00	90.00	315.28	5,071.00	4,790.01	-3,667.62	6,026.69	0.00	0.00	0.00
10,500.00	90.00	315.28	5,071.00	5,145.26	-4,019.46	6,525.01	0.00	0.00	0.00
11,000.00	90.00	315.28	5,071.00	5,500.51	-4,371.31	7,023.34	0.00	0.00	0.00
11,500.00	90.00	315.28	5,071.00	5,855.76	-4,723.16	7,521.67	0.00	0.00	0.00
12,000.00	90.00	315.28	5,071.00	6,211.02	-5,075.00	8,020.00	0.00	0.00	0.00
12,500.00	90.00	315.28	5,071.00	6,566.27	-5,426.85	8,518.32	0.00	0.00	0.00
13,000.00	90.00	315.28	5,071.00	6,921.52	-5,778.69	9,016.65	0.00	0.00	0.00
13,342.57	90.00	315.28	5,071.00	7,164.92	-6,019.76	9,358.07	0.00	0.00	0.00
TD at 13342.57									



**WPX**  
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well N Escavada UT #311H (A1) - Slot A1
Company:	WPX Energy	TVD Reference:	GL @ 6961.00usft
Project:	T22N R7W	MD Reference:	GL @ 6961.00usft
Site:	2207-110 NEU	North Reference:	True
Well:	N Escavada UT #311H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 6Aug16 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 #311H - plan hits target center - Point	0.00	0.00	4,935.71	1,447.21	-356.89	1,874,652.02	585,323.29	36.151880	-107.544324
End 60 Tan #311H - plan hits target center - Point	0.00	0.00	4,985.71	1,508.75	-417.83	1,874,713.38	585,262.17	36.152049	-107.544531
BHL #311H - plan hits target center - Point	0.00	0.00	5,071.00	7,164.92	-6,019.76	1,880,352.78	579,643.36	36.167586	-107.563509
POE #311H - plan hits target center - Point	0.00	0.00	5,071.00	1,734.92	-641.82	1,874,938.87	585,037.50	36.152670	-107.545289

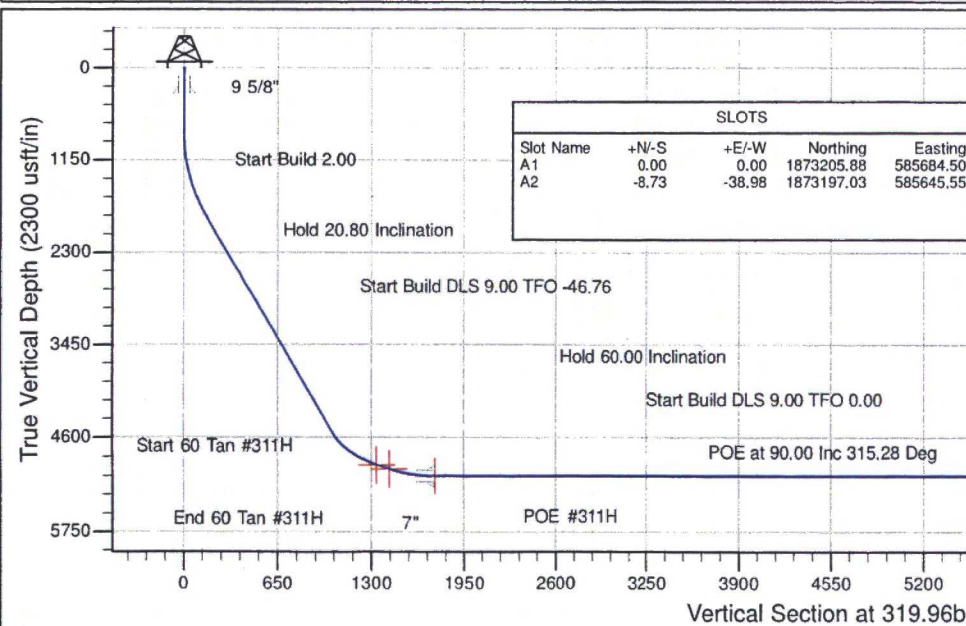
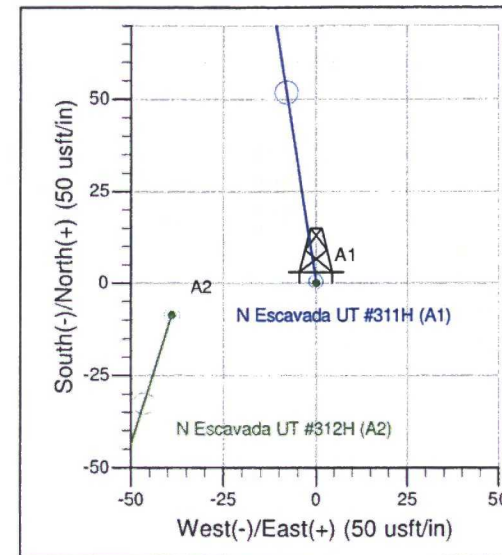
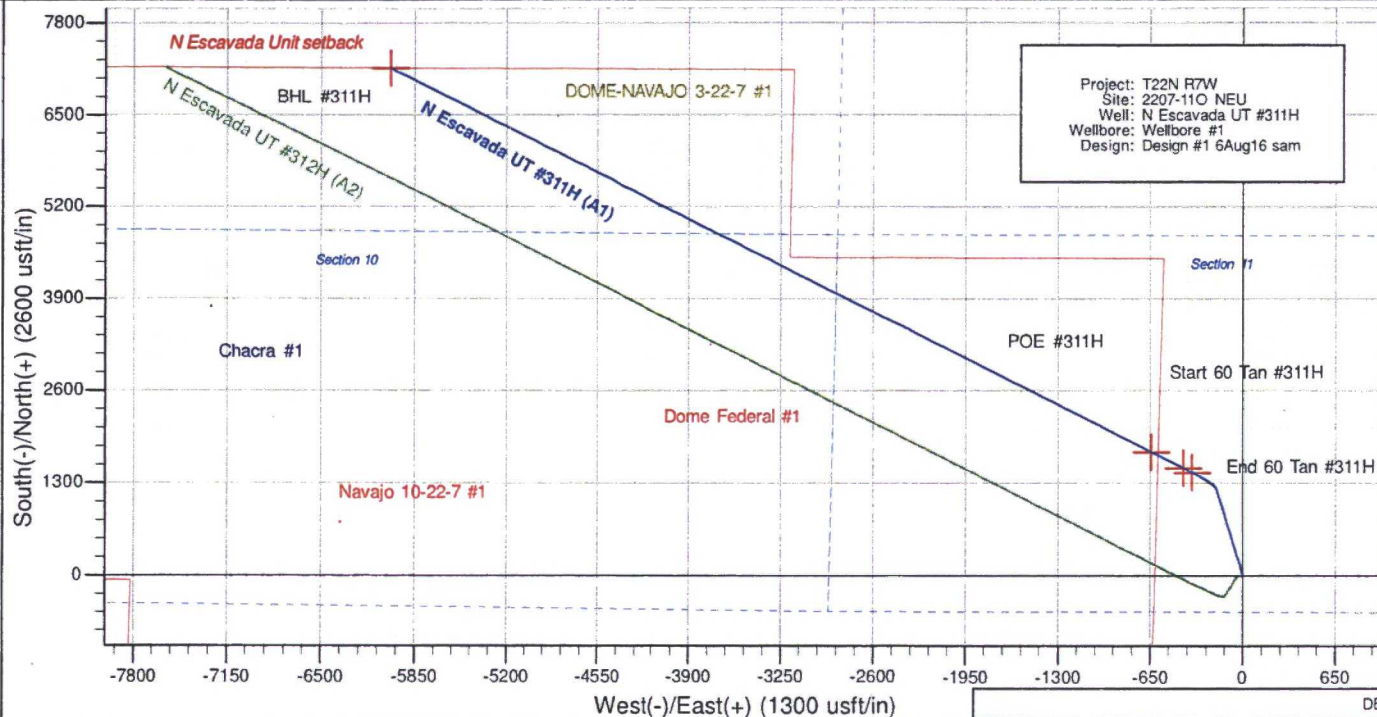
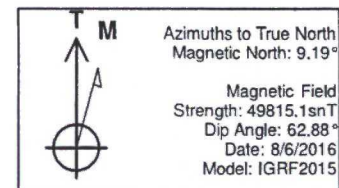
Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
320.00	320.00	9 5/8"	9.625	12.250	
5,700.00	5,071.00	7"	7.000	8.750	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
850.00	850.00	0.00	0.00	Start Build 2.00
1,890.14	1,867.44	184.57	-28.55	Hold 20.80 Inclination
4,775.25	4,564.46	1,197.18	-185.16	Start Build DLS 9.00 TFO -46.76
5,266.77	4,935.71	1,447.21	-356.89	Hold 60.00 Inclination
5,366.77	4,985.71	1,508.74	-417.83	Start Build DLS 9.00 TFO 0.00
5,536.57	5,050.11	1,619.99	-528.00	Start DLS 9.00 TFO -0.01
5,700.11	5,071.00	1,734.92	-641.82	POE at 90.00 Inc 315.28 Deg
13,342.57	5,071.00	7,164.92	-6,019.76	TD at 13342.57





Well Name: N Escavada UT #311H  
 Surface Location: 2207-110 NEU  
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
 Ground Elevation: 6961.00  
 +N/-S +E/-W Northing Easting Latitude Longitude  
 0.00 0.00 1873205.88 585684.50 36.147904 -107.543115  
 GL @ 6961.00usft Slot  
 A1

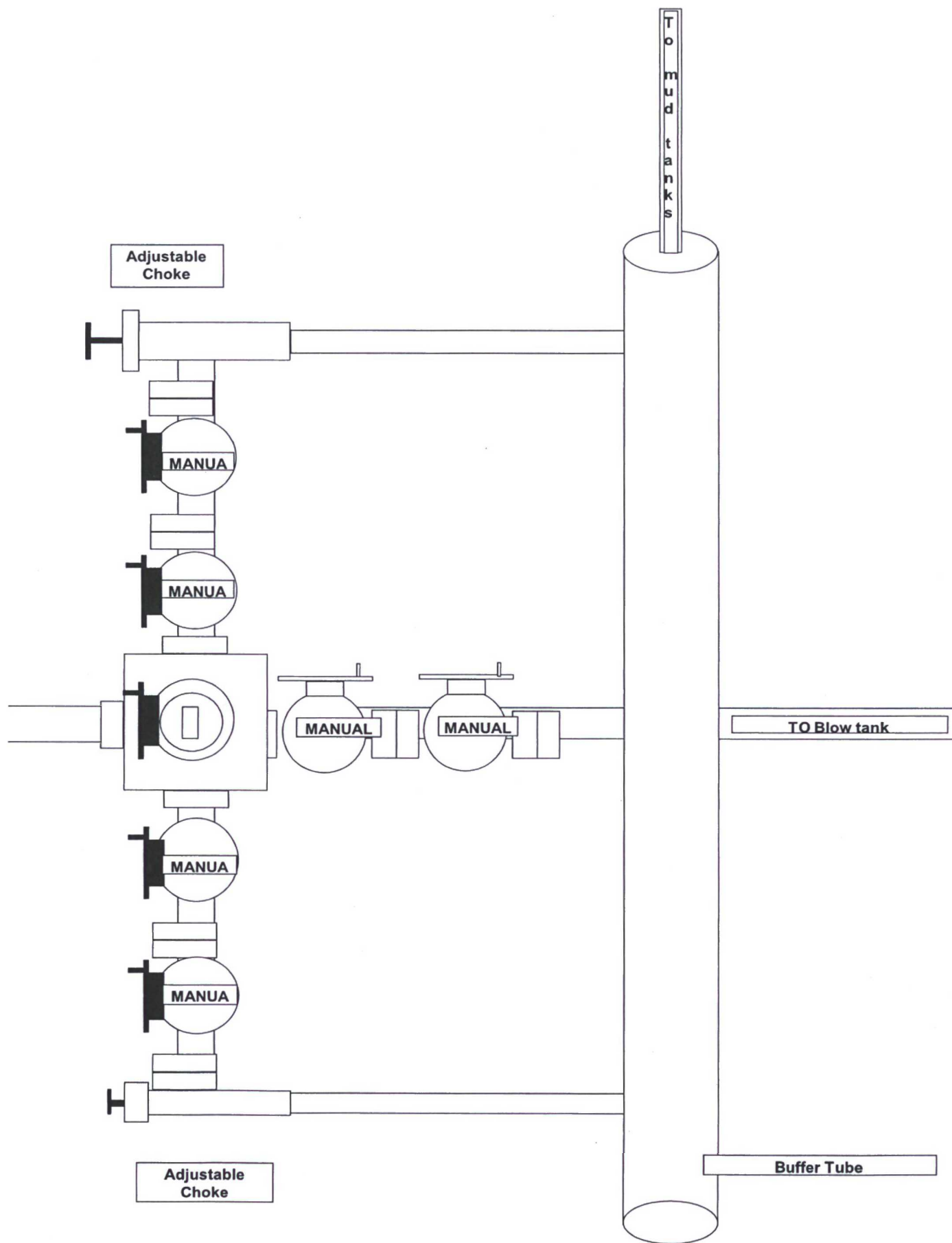


SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
A1	0.00	0.00	1873205.88	585684.50
A2	-8.73	-38.98	1873197.03	585645.55

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #311H	4935.71	1447.21	-356.89	1874652.02	585323.29	36.151880	-107.544324	Point
End 60 Tan #311H	4985.71	1508.75	-417.83	1874713.37	585262.16	36.152049	-107.544530	Point
POE #311H	5071.00	1734.92	-641.82	1874938.87	585037.50	36.152670	-107.545289	Point
BHL #311H	5071.00	7164.92	-6019.76	1880352.78	579643.36	36.167586	-107.563509	Point

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSection	Departure	Annotation	
850.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
1867.44	1890.14	20.80	351.21	184.57	-28.55	159.67	186.76	Hold 20.80 Inclination	
4564.46	4775.25	20.80	351.21	1197.18	-185.16	1035.72	1211.41	Start Build DLS 9.00 TFO -46.76	
4935.71	5266.77	60.00	315.28	1447.21	-356.89	1337.62	1518.47	Hold 60.00 Inclination	
4985.71	5366.77	60.00	315.28	1508.74	-417.83	1423.93	1605.07	Start Build DLS 9.00 TFO 0.00	
5050.11	5536.57	75.28	315.28	1619.99	-528.00	1579.98	1761.64	Start DLS 9.00 TFO -0.01	
5071.00	5700.11	90.00	315.28	1734.92	-641.82	1741.18	1923.39	POE at 90.00 Inc 315.28 Deg	
5071.00	13342.57	90.00	315.28	7164.92	-6019.76	9358.07	9565.84	TD at 13342.57	







Landforms associated with these soils are ridges, valley sides, stream terraces, and valley floors. Both soils have a depth to restrictive layer more than 80 inches. (USDA/NRCS 2015).

B. Doakum, Betonnie fine sandy loams, 0 to 8 percent slopes

Within the project area, this soil map unit is found characterized by rolling elevated hills dominated by dense sagebrush. As such, excavated soils during construction of the access road, access road pullouts, TUA, segments of well-connect pipeline, and the well pad, would consist of native borrow and subsoils from the Doakum, Betonnie fine sandy loams, 0 to 8 percent slope soil map unit. A brief description of this soil can be found below.

Doakum, Betonnie fine sandy loams are composed of 55 percent Doakum, 35 percent Betonnie, and 10 percent other minor components. The parent material of these soils are derived from shale and sandstone. Doakum occurs on slopes of 0 to 5 percent and has a permeability of .2 to .6 inches per hour (moderately slow). Betonnie soil is typical located on slopes from 5 to 8 percent with a permeability of 2 to 6 inches per hour (moderately rapid). Landforms associated with these soils are hills, mesas, valley sides, bajadas, fan remnants, plateaus, and cuestas. Both soils have a depth to restrictive layer more than 80 inches. These soils are well drained and runoff potential is low. (USDA/NRCS 2015).

## 7. 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 3 and 4 in Appendix B for the location of toilets per project phase).

E. Garbage and other waste material

- 1 All garbage and trash would be placed in an enclosed metal trash containment. The trash and garbage would be hauled off site and dumped in an approved landfill, as needed.



