

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: 9/21/2016

Well information;

Operator WPR, Well Name and Number N Escudado Unit 312H

API# 30-043-21294, 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.

Charles Bern  
NMOCD Approved by Signature

3-10-2017  
Date

lease WPX  
XG 12/1/18  
into 11/20/10

1040000 3000

Form 3160-3  
(March 2012)

NOS: \_\_\_\_\_  
ADDP: \_\_\_\_\_  
MP: \_\_\_\_\_  
SMA: \_\_\_\_\_  
BOND: \_\_\_\_\_  
CA/PA: NM135217X

OIL CONS. DIV DIST. 3

MAR 03 2017

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. NOG13121808
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. /A/N ESCAVADA UNIT / NMNM135217X
3a. Address 720 S MAIN AZTEC NM 87410		8. Lease Name and Well No. N ESCAVADA UT 312H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. 30-043-21294
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SWSE / 515 FSL / 2378 FEL / LAT 36.147895 / LONG -107.543854 At proposed prod. zone NWSW / 2304 FSL / 501 FWL / LAT 36.16764 / LONG -107.569398		10. Field and Pool, or Exploratory BASIN MANCOS
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) 20 feet	16. No. of acres in lease 160	12. County or Parish SANDOVAL
17. Spacing Unit dedicated to this well 960	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, 515 feet applied for, on this lease, ft.	19. Proposed Depth 5051 feet / 15312 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* 10/01/2016	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:

- |  |   |
|--|---|
| 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 09/21/2016
Title Permitting Tech III		
Approved by (Signature) 	Name (Printed/Typed) D. Montenegro	Date 3/1/17
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)

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

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

\*(Instructions on page 2)

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

NMOCD AV



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 30-043-21294	*Pool Code 98172	*Pool Name NORTH ESCAVADA UNIT; MANCOS POOL
*Property Code 316006	*Property Name N ESCAVADA UT	*Well Number 312H
*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		515	SOUTH	2378	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
L	3	22N	7W		2304	SOUTH	501	WEST	SANDOVAL

<sup>12</sup> Dedicated Acres  
440.0  
N/2 SW/4, SE/4 SW/4  
SW/4 SE/4 - Section 3  
N/2 NE/4, SE/4 NE/4 - Section 10  
SW/4 NW/4, N/2 SW/4  
SE/4 SW/4 - Section 11

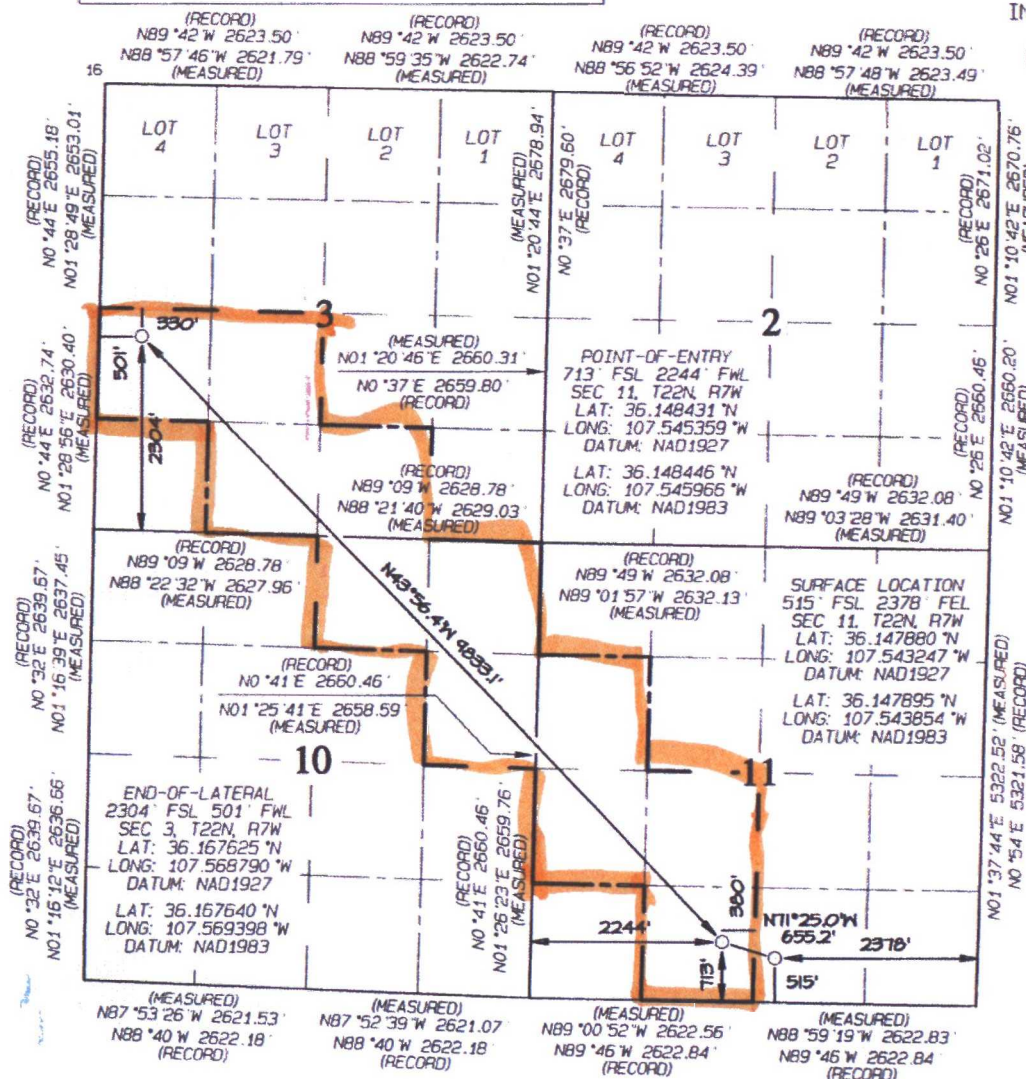
<sup>13</sup> Joint or Infill

<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 heretofore entered by the division.

Signature: *Lacey Granillo* Date: 3/2/17  
Printed Name: Lacey Granillo  
E-mail Address: lacey.granillo@wpxenergy.com

<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: OCTOBER 17, 2016  
Date of Survey: MARCH 16, 2016

Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269



## **WPX Energy**

### **Operations Plan**

OIL CONS. DIV DIST. 3

MAR 03 2017

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

<b>Date:</b>	September 12, 2016	<b>Field:</b>	N Escavada Unit; Mancos Pool
<b>Well Name:</b>	N Escavada UT #312H	<b>Surface:</b>	
<b>SH Location:</b>	SWSE Sec 11 22N-07W	<b>Elevation:</b>	6961' GR
<b>BH Location:</b>	NWSW Sec 3 22N-07W	<b>Minerals:</b>	

**Measured Depth:** 15,311.56'

## **I. GEOLOGY**

Surface formation - NACIMIENTO

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

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	886.00	886.00	POINT LOOKOUT	3,823.00	3,811.00
KIRTLAND	1,064.00	1,064.00	MANCOS	3,980.00	3,967.00
PICTURED CLIFFS	1,424.00	1,423.00	GALLUP	4,322.00	4,308.00
LEWIS	1,507.00	1,506.00	KICKOFF POINT	4,350.60	4,336.32
CHACRA	1,805.00	1,802.00	TOP TARGET	5,256.00	5,012.00
CLIFF HOUSE	2,912.00	2,904.00	LANDING POINT	5,480.01	5,051.00
MENELEE	2,951.00	2,943.00	BASE TARGET	5,480.01	5,051.00
			TD	15,311.56	5,051.00

### **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"	5,480.01'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5330.01' - 15,311.56'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5330.01'	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: 102 bbls, 292 sks, (575 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/ +/- 216 bbl Drilling mud or water. Total Cement: 161 bbls, 547 sks, (906 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 (978 sx /1330 cuft /237 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-210bbl Fr Water. Total Cement (978 sx /1330bbls).

**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 #312H - Slot A2**

**Wellbore #1**

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

## **Standard Planning Report**

**10 August, 2016**



# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well N Escavada UT #312H (A2) - Slot A2
<b>Company:</b>	WPX Energy	<b>TVD Reference:</b>	GL @ 6961.00usft
<b>Project:</b>	T22N R7W	<b>MD Reference:</b>	GL @ 6961.00usft
<b>Site:</b>	2207-110 NEU	<b>North Reference:</b>	True
<b>Well:</b>	N Escavada UT #312H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 6Aug16 sam		

<b>Project</b>	T22N R7W		
<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>	2207-110 NEU		
<b>Site Position:</b>		<b>Northing:</b>	1,873,205.88 usft
<b>From:</b>	Map	<b>Easting:</b>	585,684.50 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	36.147904
		<b>Longitude:</b>	-107.543115
		<b>Grid Convergence:</b>	0.17 °

<b>Well</b>	N Escavada UT #312H - Slot A2		
<b>Well Position</b>	<b>+N/-S</b>	-8.73 usft	<b>Northing:</b> 1,873,197.03 usft
	<b>+E/-W</b>	-38.98 usft	<b>Easting:</b> 585,645.55 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Latitude:</b>	36.147880
		<b>Longitude:</b>	-107.543247
		<b>Ground Level:</b>	6,961.00 usft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2015	1/13/2016	9.24
			<b>Dip Angle (°)</b>
			62.89
			<b>Field Strength (nT)</b>
			49,875

<b>Design</b>	Design #1 6Aug16 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>
	0.00	0.00	0.00
			<b>Direction (bearing)</b>
			313.63

<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	
1,272.04	5.44	197.52	1,271.63	-12.31	-3.89	2.00	2.00	0.00	197.52	
4,350.60	5.44	197.52	4,336.32	-290.66	-91.78	0.00	0.00	0.00	0.00	
5,046.67	60.00	315.30	4,915.71	-87.22	-338.85	9.00	7.84	16.92	120.38	Start 60 Tan #312H
5,146.67	60.00	315.30	4,965.71	-25.67	-399.77	0.00	0.00	0.00	0.00	End 60 Tan #312H
5,316.47	75.28	315.30	5,030.11	85.62	-509.90	9.00	9.00	0.00	0.00	
5,480.01	90.00	315.30	5,051.00	200.58	-623.68	9.00	9.00	0.00	-0.01	POE #312H
15,311.56	90.00	315.30	5,051.00	7,188.39	-7,539.60	0.00	0.00	0.00	0.00	BHL #312H



# WPX

## Planning Report

Database: COMPASS  
 Company: WPX Energy  
 Project: T22N R7W  
 Site: 2207-110 NEU  
 Well: N Escavada UT #312H  
 Wellbore: Wellbore #1  
 Design: Design #1 6Aug16 sam

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

Well N Escavada UT #312H (A2) - Slot A2  
 GL @ 6961.00usft  
 GL @ 6961.00usft  
 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
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,272.04	5.44	197.52	1,271.63	-12.31	-3.89	-5.68	2.00	2.00	0.00
<b>Hold 5.44 Inclination</b>									
1,500.00	5.44	197.52	1,498.56	-32.92	-10.39	-15.19	0.00	0.00	0.00
2,000.00	5.44	197.52	1,996.31	-78.13	-24.67	-36.06	0.00	0.00	0.00
2,500.00	5.44	197.52	2,494.06	-123.34	-38.94	-56.92	0.00	0.00	0.00
3,000.00	5.44	197.52	2,991.81	-168.55	-53.22	-77.79	0.00	0.00	0.00
3,500.00	5.44	197.52	3,489.55	-213.76	-67.49	-98.65	0.00	0.00	0.00
4,000.00	5.44	197.52	3,987.30	-258.96	-81.77	-119.52	0.00	0.00	0.00
4,350.60	5.44	197.52	4,336.32	-290.66	-91.78	-134.15	0.00	0.00	0.00
<b>Start Build DLS 9.00 TFO 120.38</b>									
4,500.00	11.66	294.58	4,484.52	-291.14	-107.71	-122.94	9.00	4.16	64.97
5,000.00	55.82	314.82	4,890.92	-115.20	-310.93	145.54	9.00	8.83	4.05
5,046.67	60.00	315.30	4,915.71	-87.22	-338.85	185.06	9.00	8.96	1.03
<b>Hold 60.00 Inclination</b>									
5,146.67	60.00	315.30	4,965.71	-25.67	-399.77	271.63	0.00	0.00	0.00
<b>Start Build DLS 9.00 TFO 0.00</b>									
5,316.47	75.28	315.30	5,030.11	85.62	-509.90	428.13	9.00	9.00	0.00
<b>Start DLS 9.00 TFO -0.01</b>									
5,480.00	90.00	315.30	5,051.00	200.58	-623.68	589.80	9.00	9.00	0.00
<b>7"</b>									
5,480.01	90.00	315.30	5,051.00	200.58	-623.68	589.81	9.00	9.00	0.00
<b>POE at 90.00 Inc 315.30 Deg</b>									
5,500.00	90.00	315.30	5,051.00	214.79	-637.74	609.79	0.00	0.00	0.00
6,000.00	90.00	315.30	5,051.00	570.17	-989.47	1,109.58	0.00	0.00	0.00
6,500.00	90.00	315.30	5,051.00	925.54	-1,341.19	1,609.37	0.00	0.00	0.00
7,000.00	90.00	315.30	5,051.00	1,280.92	-1,692.91	2,109.16	0.00	0.00	0.00
7,500.00	90.00	315.30	5,051.00	1,636.30	-2,044.63	2,608.95	0.00	0.00	0.00
8,000.00	90.00	315.30	5,051.00	1,991.67	-2,396.35	3,108.74	0.00	0.00	0.00
8,500.00	90.00	315.30	5,051.00	2,347.05	-2,748.07	3,608.53	0.00	0.00	0.00
9,000.00	90.00	315.30	5,051.00	2,702.43	-3,099.79	4,108.32	0.00	0.00	0.00
9,500.00	90.00	315.30	5,051.00	3,057.80	-3,451.51	4,608.11	0.00	0.00	0.00
10,000.00	90.00	315.30	5,051.00	3,413.18	-3,803.23	5,107.90	0.00	0.00	0.00
10,500.00	90.00	315.30	5,051.00	3,768.56	-4,154.95	5,607.69	0.00	0.00	0.00
11,000.00	90.00	315.30	5,051.00	4,123.93	-4,506.67	6,107.48	0.00	0.00	0.00
11,500.00	90.00	315.30	5,051.00	4,479.31	-4,858.39	6,607.27	0.00	0.00	0.00
12,000.00	90.00	315.30	5,051.00	4,834.69	-5,210.11	7,107.06	0.00	0.00	0.00
12,500.00	90.00	315.30	5,051.00	5,190.06	-5,561.83	7,606.85	0.00	0.00	0.00
13,000.00	90.00	315.30	5,051.00	5,545.44	-5,913.56	8,106.64	0.00	0.00	0.00
13,500.00	90.00	315.30	5,051.00	5,900.82	-6,265.28	8,606.43	0.00	0.00	0.00
14,000.00	90.00	315.30	5,051.00	6,256.19	-6,617.00	9,106.22	0.00	0.00	0.00
14,500.00	90.00	315.30	5,051.00	6,611.57	-6,968.72	9,606.01	0.00	0.00	0.00
15,000.00	90.00	315.30	5,051.00	6,966.95	-7,320.44	10,105.79	0.00	0.00	0.00
15,311.56	90.00	315.30	5,051.00	7,188.39	-7,539.60	10,417.23	0.00	0.00	0.00
<b>TD at 15311.56</b>									

# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well N Escavada UT #312H (A2) - Slot A2
<b>Company:</b>	WPX Energy	<b>TVD Reference:</b>	GL @ 6961.00usft
<b>Project:</b>	T22N R7W	<b>MD Reference:</b>	GL @ 6961.00usft
<b>Site:</b>	2207-11O NEU	<b>North Reference:</b>	True
<b>Well:</b>	N Escavada UT #312H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 6Aug16 sam		

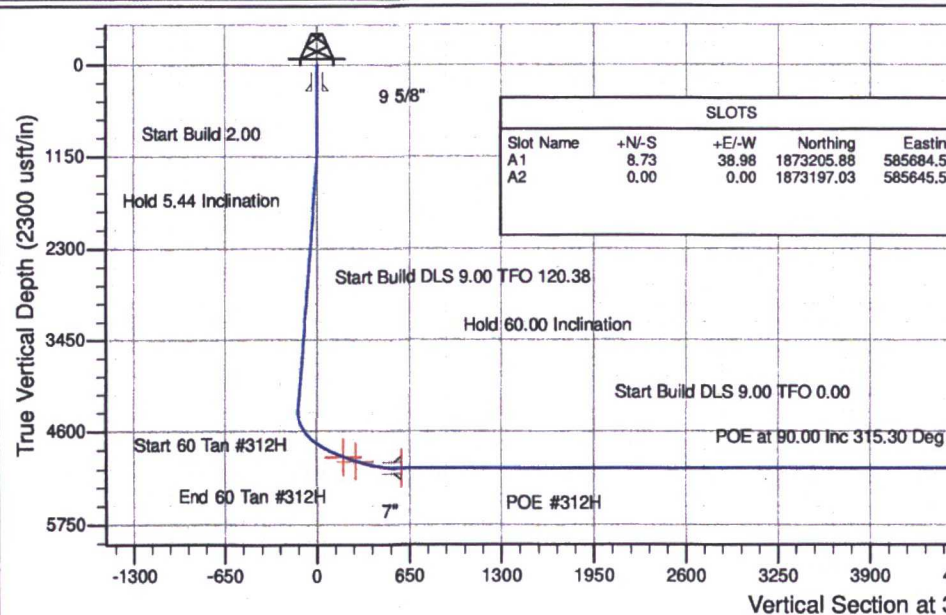
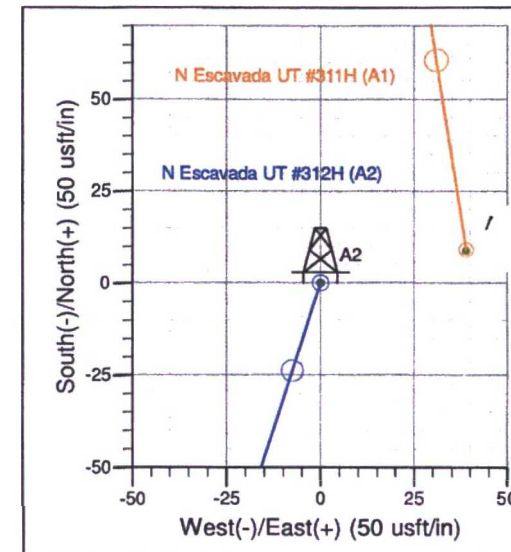
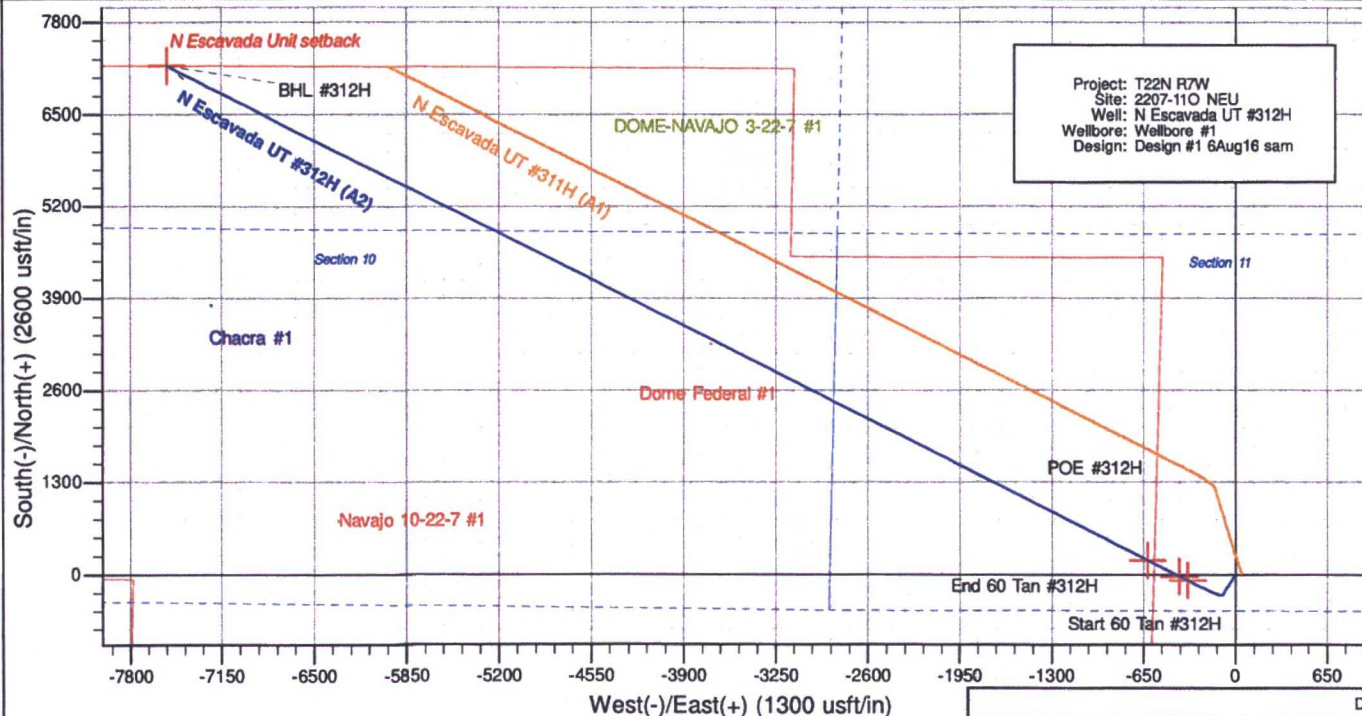
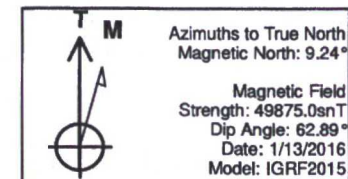
Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Start 60 Tan #312H - plan hits target center - Point	0.00	0.00	4,915.71	-87.22	-338.85	1,873,108.80	585,306.97	36.147640	-107.544395
End 60 Tan #312H - plan hits target center - Point	0.00	0.00	4,965.71	-25.66	-399.77	1,873,170.18	585,245.86	36.147810	-107.544601
BHL #312H - plan hits target center - Point	0.00	0.00	5,051.00	7,188.39	-7,539.60	1,880,362.87	578,084.51	36.167625	-107.568791
POE #312H - plan hits target center - Point	0.00	0.00	5,051.00	200.58	-623.68	1,873,395.75	585,021.27	36.148431	-107.545360

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
320.00	320.00	9 5/8"	9.625	13.500	
5,480.00	5,051.00	7"	7.000	8.750	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,272.04	1,271.63	-12.31	-3.89	Hold 5.44 Inclination	
4,350.60	4,336.32	-290.66	-91.78	Start Build DLS 9.00 TFO 120.38	
5,046.67	4,915.71	-87.22	-338.85	Hold 60.00 Inclination	
5,146.67	4,965.71	-25.67	-399.77	Start Build DLS 9.00 TFO 0.00	
5,316.47	5,030.11	85.62	-509.90	Start DLS 9.00 TFO -0.01	
5,480.01	5,051.00	200.58	-623.68	POE at 90.00 Inc 315.30 Deg	
15,311.56	5,051.00	7,188.39	-7,539.60	TD at 15311.56	



Well Name: N Escavada UT #312H  
 Location: 2207-110 NEU  
 US State Plane 1927 (Exact solution) New I 3003  
 Ground Elevation: 6961.00  
 +N/-S 0.00 +E/-W 0.00 Northing 1873197.03 Easting 585645.55 Latitude 36.147880 Longitude -107.543247 Slot A2  
 GL @ 6961.00usft



DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #312H	4915.71	-87.22	-338.85	1873108.80	585306.96	36.147640	-107.544395	Point
End 60 Tan #312H	4965.71	-25.66	-399.77	1873170.18	585245.86	36.147810	-107.544601	Point
POE #312H	5051.00	200.58	-623.68	1873395.75	585021.27	36.148431	-107.545359	Point
BHL #312H	5051.00	7188.39	-7539.60	1880362.87	578084.51	36.167625	-107.568790	Point

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation		
1000.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00		
1271.63	1272.04	5.44	197.52	-12.31	-3.89	-5.68	12.91	Hold 5.44 Inclination		
4336.32	4350.60	5.44	197.52	-290.66	-91.78	-134.15	304.81	Start Build DLS 9.00 TFO 120.38		
4915.71	5046.67	60.00	315.30	-87.22	-338.85	185.06	632.31	Hold 60.00 Inclination		
4965.71	5146.67	60.00	315.30	-25.67	-399.77	271.63	718.91	Start Build DLS 9.00 TFO 0.00		
5030.11	5316.47	75.28	315.30	85.62	-509.90	428.13	875.48	Start DLS 9.00 TFO -0.01		
5051.00	5480.01	90.00	315.30	200.58	-623.68	589.81	1037.23	POE at 90.00 Inc 315.30 Deg		
5051.00	15311.56	90.00	315.30	7188.39	-7539.60	10417.23	10868.78	TD at 15311.56		

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

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✓ 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.



**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to WPX Energy Production, LLC N Escavada UT #312H**  
**515' FSL & 2378' FEL, Section 11, T22N, R7W, N.M.P.M., Sandoval County, NM**

**Latitude: 36.147895°N Longitude: 107.543854°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 Straight (Southerly) for 0.8 miles to fork on existing roadway;

Go Left (North-easterly) for 0.8 miles to new access on right-hand side of existing roadway which continues for an additional 1690.7' to staked WPX N Escavada UT #312H location.

