

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
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: 5-4-15

Well information;

Operator WPX, Well Name and Number Rosa Unit 27 # 108H

API# 30-039-31319, Section 19, Township 31 N/S, Range 5 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
- ☒ 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.

*\* APD held for name change see Sunday*

*[Signature]*  
NMOCD Approved by Signature

*For Charlie Perrin*

7-24-15  
Date

JUN 30 2015

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAY 05 2015

APPLICATION FOR PERMIT TO DRILL OR REENTER

Blairmont Field Office  
Bureau of Land Management

5. Lease Serial No. SF-078769
6. If Indian, Allottee or Tribe Name
7. If Unit or CA Agreement, Name and No. Rosa Unit R-13457
8. Lease Name and Well No. Rosa UT 27 108H
9. API Well No. 30-039-31319
10. Field and Pool, or Exploratory Basin Mancos
11. Sec., T., R., M., or Blk. and Survey or Area SHL: Section 19, T31N, R5W BHL: Section 21, T31N, R5W
12. County or Parish Rio Arriba
13. State NM

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

WPX Energy Production, LLC

3a. Address

P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

(505) 333-1849

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At surface 946' FNL & 438' FWL, sec 19, T31N, R5W

At proposed prod. zone 1382' FNL & 1923' FWL, sec 21, T31N, R5W

14. Distance in miles and direction from nearest town or post office\*

Approximately 58 miles East from Bloomfield NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any) 438'

16. No. of Acres in lease

1280.00

17. Spacing Unit dedicated to this well

West Rosa Unit Project Area 24,118.76 Acres

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft. 15'

19. Proposed Depth

18,019 MD / 6,825 TVD

20. BLM/BIA Bond No. on file

UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

6305' GR

22. Approximate date work will start\*

June 1, 2015

23. Estimated duration

1 month

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall 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 shall 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 authorized officer.

25. Signature

Name (Printed/Typed)

Date

Andrea Felix

5-4-2015

Title

Regulatory Specialist Senior

Approved by (Signature)

Name (Printed/Typed)

Date

Title

Office

FFO

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.

\*(Instructions on reverse)

WPX Energy Production, LLC, proposes to develop the Basin Mancos Pool at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is on lease on BLM surface within the Rosa Unit and will be co-located with the Rosa UT 101H / Rosa UT 102H / Rosa UT 103H / Rosa UT 104H / Rosa UT 106H / Rosa UT 107H / Rosa UT 105H / Rosa UT 109H & Rosa UT 110H.

This location has been archaeologically surveyed by LaPlata Archeology. Copies of their report have been submitted directly to the BLM.

New access road is approximately 71.0' on lease on BLM surface.

New pipeline is approximately 5,956.7' with 1,623.4' on lease on BLM surface and 4,333.3' on NM Game & Fish surface. A grant of easement is currently being processed by the NM Game & Fish portion for their portion of the pipeline.

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

NMOCD

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



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

1220 05 2015

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-31319</b>	*Pool Code 97232	*Pool Name BASIN MANCOS	Farmington Field Office Bureau of Land Management
*Property Code <b>17033</b>	*Property Name ROSA UT <b>27</b>	*Well Number <b>647TH 108FT</b>	
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6305'	

<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
C	19	31N	5W	1	946	NORTH	438	WEST	RIO ARriba

<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
F	21	31N	5W		1382	NORTH	1923	WEST	RIO ARriba

<sup>12</sup> Dedicated Acres 872.01	N/2 - Sections 19, 20, 21	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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

SURFACE LOCATION  
946' FNL 438' FNL  
SECTION 19, T31N, R5W  
LAT: 36.889724°N  
LONG: 107.405676°W  
DATUM: NAD1927

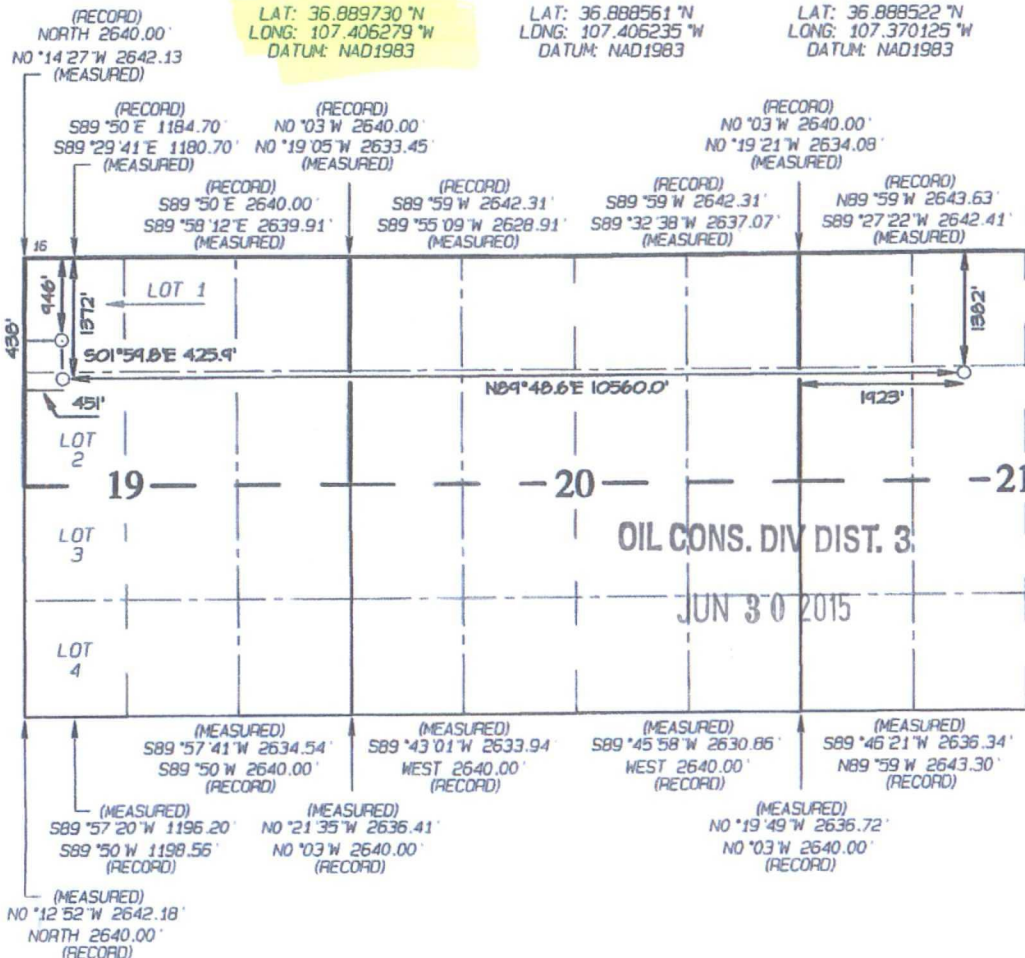
POINT-OF-ENTRY  
1372' FNL 451' FNL  
SECTION 19, T31N, R5W  
LAT: 36.888555°N  
LONG: 107.405632°W  
DATUM: NAD1927

END-OF-LATERAL  
1382' FNL 1923' FNL  
SECTION 21, T31N, R5W  
LAT: 36.888516°N  
LONG: 107.369523°W  
DATUM: NAD1927

LAT: 36.889730°N  
LONG: 107.406279°W  
DATUM: NAD1983

LAT: 36.888561°N  
LONG: 107.406235°W  
DATUM: NAD1983

LAT: 36.888522°N  
LONG: 107.370125°W  
DATUM: NAD1983



<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.

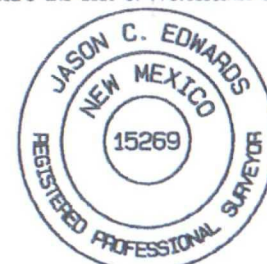
Signature: *[Signature]* Date: 4-8-2015  
Printed Name: Andrea Felix  
E-mail Address: andrea.felix@wpxenergy.com

<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: MARCH 17, 2015  
Date of Survey: JANUARY 2, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269



## WPX ENERGY

### Operations Plan

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

**DATE:** 4/14/15 **FIELD:** Basin Mancos

**WELL NAME:** ROSA UT 27 #108H **SURFACE:** BLM

**SH Location:** NWNW Sec 19-31N-05W **ELEVATION:** 6305' GR

**BH Location:** SENW Sec 21-31N-05W  
Rio Arriba, NM **MINERALS:** BLM

**MEASURED DEPTH:** 18019'

**I. GEOLOGY:** Surface formation – San Jose

**A. FORMATION TOPS:** ( KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	2447	2429	Point Lookout	5693	5639
Kirtland	2545	2526	Mancos	6002	5945
Picture Cliffs	3379	3351	<b>Kickoff Point</b>	6374	6327
Lewis	3653	3622	Top Target	6923	6809
Chacra	4616	4574	<b>Landing Point</b>	7456	7032
Cliff House	5418	5367	Base Target	7456	7032
Menefee	5463	5412			
			TD	18019	6825

- 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 and the 8 3/4" Directional Vertical hole of the wellbore. A LSND (WBM) or (OBM) will be used to drill the curve portion and the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.
- B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 5000 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **5000 psi (High) for 10 minutes**. Pressure test surface casing to **1500psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. **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) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	320'	9.625"	36#	J-55
Intermediate	8.75"	6272'	7"	23#	N-80
Prod. Liner	6.125"	6122' -18019'	4-1/2"	11.6#	P-110
Tie-Back String	N/A	Surf. -6122'	4-1/2"	11.6#	P-110

#### 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 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.
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). 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.
4. TIE-BACK CASING: Please see Notes below.

#### C. CEMENTING:

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

1. SURFACE: 5 bbl Fresh Water Spacer, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ Bbls). TOC at Surface.
2. INTERMEDIATE: 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: +/- 700 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1001 cu-ft / 178.3 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). WOC 12 hrs. Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (900 sx / 1246 cu-ft / 222 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
3. PRODUCTION 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 1.29 cu ft/sk, 13.5 ppg, (1010 sx / 1303 cu ft. / 232 bbls). **Tail Spacer**: 20 BBL of MMCR. **Displacement**: Displace w/ +/- 225 bbl Fr Water. Total Cement ( 1303 cu ft / 232 bbls).

**IV. COMPLETION****A. CBL**

1. Run CCL for perforating.

**B. 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.

**C. STIMULATION**

1. Stimulate with approximately 175,000# 100 mesh sand and 9,240,000# 40/70 mesh sand in 12,376,000 gallons water for 28 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs and flowback lateral.

**D. RUNNING TUBING**

1. Production Tubing: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing in the curve.

- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2) NMAC, and 19.15.16.15 B(4) NMAC.
- 

**NOTE:**

Installation of RSI sleeves at Toe of Lateral.

**Proposed Operations:**

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# N-80 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).

A 4-1/2" 11.6# P-110 tie-back string with seal assembly will be run and stung into the PBR of the liner hanger, tested to 1500 PSI and hung off at the surface.

# **WPX Energy**

**T31N R5W Rosa Unit**

**Pad 27**

**ROSA UT 27 #108H - Slot B07**

**Wellbore #1**

**Plan: Design #2 16Mar15 sam**

## **Standard Planning Report**

**13 April, 2015**



**WPX**  
Planning Report

<b>Database:</b>	COMPASS-SANJUAN	<b>Local Co-ordinate Reference:</b>	Well ROSA UT 27 #108H (B07) - Slot B07
<b>Company:</b>	WPX Energy	<b>TVD Reference:</b>	KB @ 6330.00usft (Aztec 1000)
<b>Project:</b>	T31N R5W Rosa Unit	<b>MD Reference:</b>	KB @ 6330.00usft (Aztec 1000)
<b>Site:</b>	Pad 27	<b>North Reference:</b>	True
<b>Well:</b>	ROSA UT 27 #108H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 16Mar15 sam		

<b>Project</b>	T31N R5W Rosa Unit		
<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>	Pad 27		
<b>Site Position:</b>		<b>Northing:</b>	2,143,400.02 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	625,077.55 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in
		<b>Latitude:</b>	36.8897153
		<b>Longitude:</b>	-107.4056260
		<b>Grid Convergence:</b>	0.26 °

<b>Well</b>	ROSA UT 27 #108H - Slot B07		
<b>Well Position</b>	<b>+N/-S</b>	3.32 usft	<b>Northing:</b> 2,143,403.27 usft
	<b>+E/-W</b>	-14.63 usft	<b>Easting:</b> 625,062.90 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Latitude:</b>	36.8897244
		<b>Longitude:</b>	-107.4056760
		<b>Ground Level:</b>	6,305.00 usft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2010	12/18/2014	9.33
			<b>Dip Angle (°)</b>
			63.57
			<b>Field Strength (nT)</b>
			50,520

<b>Design</b>	Design #2 16Mar15 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 (°)</b>
			90.07

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	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	
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00	
786.52	7.33	239.16	785.52	-12.00	-20.10	2.00	2.00	0.00	239.16	
6,374.07	7.33	239.16	6,327.41	-377.44	-632.24	0.00	0.00	0.00	0.00	
7,456.36	91.12	90.07	7,032.00	-425.70	12.94	9.00	7.74	-13.78	-148.81	PP Rosa 27 #108H
18,018.38	91.12	90.07	6,825.00	-438.12	10,572.93	0.00	0.00	0.00	0.00	TD / PBHL Rosa 27 #



**WPX**  
Planning Report

Database: COMPASS-SANJUAN  
Company: WPX Energy  
Project: T31N R5W Rosa Unit  
Site: Pad 27  
Well: ROSA UT 27 #108H  
Wellbore: Wellbore #1  
Design: Design #2 16Mar15 sam

Local Co-ordinate Reference: Well ROSA UT 27 #108H (B07) - Slot B07  
TVD Reference: KB @ 6330.00usft (Aztec 1000)  
MD Reference: KB @ 6330.00usft (Aztec 1000)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

**Planned Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	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>									
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
500.00	1.60	239.16	499.99	-0.57	-0.96	-0.96	2.00	2.00	0.00
786.52	7.33	239.16	785.52	-12.00	-20.10	-20.09	2.00	2.00	0.00
<b>Hold 7.33 Inclination</b>									
1,000.00	7.33	239.16	997.26	-25.96	-43.49	-43.46	0.00	0.00	0.00
1,500.00	7.33	239.16	1,493.17	-58.67	-98.27	-98.20	0.00	0.00	0.00
2,000.00	7.33	239.16	1,989.08	-91.37	-153.05	-152.93	0.00	0.00	0.00
2,500.00	7.33	239.16	2,485.00	-124.07	-207.82	-207.67	0.00	0.00	0.00
3,000.00	7.33	239.16	2,980.91	-156.77	-262.60	-262.41	0.00	0.00	0.00
3,500.00	7.33	239.16	3,476.82	-189.47	-317.38	-317.15	0.00	0.00	0.00
4,000.00	7.33	239.16	3,972.74	-222.17	-372.15	-371.88	0.00	0.00	0.00
4,500.00	7.33	239.16	4,468.65	-254.87	-426.93	-426.62	0.00	0.00	0.00
5,000.00	7.33	239.16	4,964.56	-287.58	-481.71	-481.36	0.00	0.00	0.00
5,500.00	7.33	239.16	5,460.48	-320.28	-536.49	-536.09	0.00	0.00	0.00
6,000.00	7.33	239.16	5,956.39	-352.98	-591.26	-590.83	0.00	0.00	0.00
6,272.00	7.33	239.16	6,226.17	-370.77	-621.06	-620.61	0.00	0.00	0.00
<b>7"</b>									
6,374.07	7.33	239.16	6,327.41	-377.44	-632.24	-631.78	0.00	0.00	0.00
<b>Start Build/Turn DLS 9.00 TFO -148.81</b>									
6,500.00	6.31	126.91	6,452.85	-385.75	-633.61	-633.14	9.00	-0.81	-89.14
7,000.00	50.16	93.31	6,883.89	-414.85	-408.29	-407.79	9.00	8.77	-6.72
7,456.36	91.12	90.07	7,032.00	-425.70	12.94	13.46	9.00	8.98	-0.71
<b>POE at 91.12 Inclination</b>									
7,500.00	91.12	90.07	7,031.14	-425.75	56.58	57.10	0.00	0.00	0.00
8,000.00	91.12	90.07	7,021.35	-426.33	556.48	557.00	0.00	0.00	0.00
8,500.00	91.12	90.07	7,011.55	-426.92	1,056.38	1,056.90	0.00	0.00	0.00
9,000.00	91.12	90.07	7,001.75	-427.51	1,556.29	1,556.81	0.00	0.00	0.00
9,500.00	91.12	90.07	6,991.95	-428.10	2,056.19	2,056.71	0.00	0.00	0.00
10,000.00	91.12	90.07	6,982.15	-428.69	2,556.09	2,556.62	0.00	0.00	0.00
10,500.00	91.12	90.07	6,972.35	-429.28	3,056.00	3,056.52	0.00	0.00	0.00
11,000.00	91.12	90.07	6,962.55	-429.86	3,555.90	3,556.42	0.00	0.00	0.00
11,500.00	91.12	90.07	6,952.75	-430.45	4,055.80	4,056.33	0.00	0.00	0.00
12,000.00	91.12	90.07	6,942.95	-431.04	4,555.71	4,556.23	0.00	0.00	0.00
12,500.00	91.12	90.07	6,933.15	-431.63	5,055.61	5,056.14	0.00	0.00	0.00
13,000.00	91.12	90.07	6,923.35	-432.22	5,555.52	5,556.04	0.00	0.00	0.00
13,500.00	91.12	90.07	6,913.55	-432.81	6,055.42	6,055.94	0.00	0.00	0.00
14,000.00	91.12	90.07	6,903.75	-433.39	6,555.32	6,555.85	0.00	0.00	0.00
14,500.00	91.12	90.07	6,893.96	-433.98	7,055.23	7,055.75	0.00	0.00	0.00
15,000.00	91.12	90.07	6,884.16	-434.57	7,555.13	7,555.66	0.00	0.00	0.00
15,500.00	91.12	90.07	6,874.36	-435.16	8,055.03	8,055.56	0.00	0.00	0.00
16,000.00	91.12	90.07	6,864.56	-435.75	8,554.94	8,555.46	0.00	0.00	0.00
16,500.00	91.12	90.07	6,854.76	-436.34	9,054.84	9,055.37	0.00	0.00	0.00
17,000.00	91.12	90.07	6,844.96	-436.92	9,554.74	9,555.27	0.00	0.00	0.00
17,500.00	91.12	90.07	6,835.16	-437.51	10,054.65	10,055.18	0.00	0.00	0.00
18,000.00	91.12	90.07	6,825.36	-438.10	10,554.55	10,555.08	0.00	0.00	0.00
18,018.38	91.12	90.07	6,825.00	-438.12	10,572.93	10,573.46	0.00	0.00	0.00
<b>TD at 18018.38</b>									

# WPX

## Planning Report

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well ROSA UT 27 #108H (B07) - Slot B07
Company:	WPX Energy	TVD Reference:	KB @ 6330.00usft (Aztec 1000)
Project:	T31N R5W Rosa Unit	MD Reference:	KB @ 6330.00usft (Aztec 1000)
Site:	Pad 27	North Reference:	True
Well:	ROSA UT 27 #108H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 16Mar15 sam		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD / PBHL Rosa 27 #10: - plan hits target center - Point	0.00	0.00	6,825.00	-438.12	10,572.93	2,143,012.53	635,637.69	36.8885155	-107.3695226
PP Rosa 27 #108H - plan hits target center - Point	0.00	0.00	7,032.00	-425.70	12.94	2,142,977.64	625,077.75	36.8885551	-107.4056318

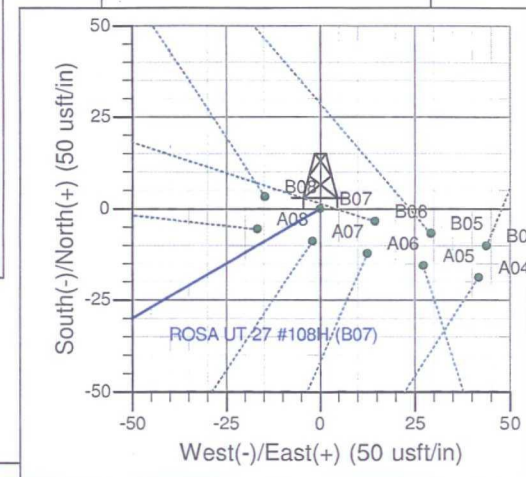
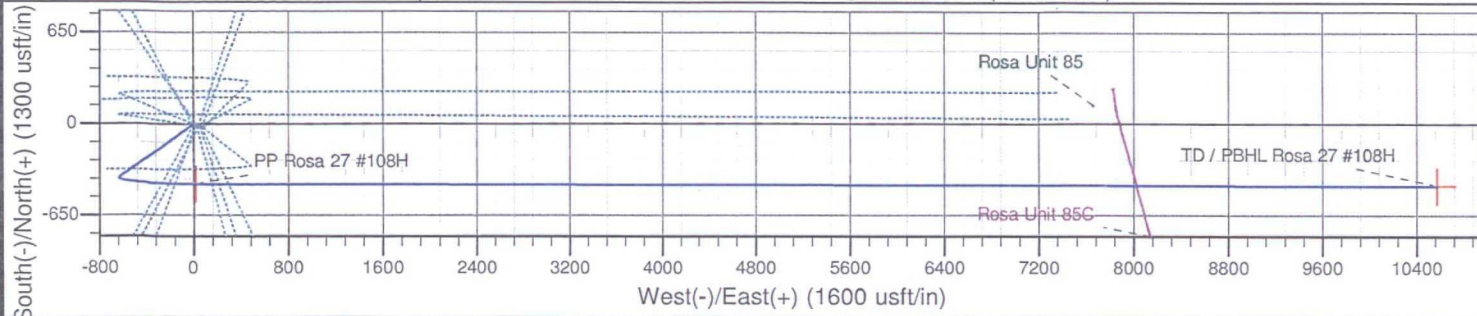
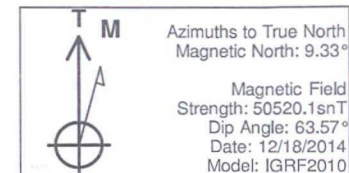
Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
320.00	320.00	9 5/8"	9.62	12.25	
6,272.00	6,226.17	7"	7.00	8.75	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
420.00	420.00	0.00	0.00	Start Build 2.00	
786.52	785.52	-12.00	-20.10	Hold 7.33 Inclination	
6,374.07	6,327.41	-377.44	-632.24	Start Build/Turn DLS 9.00 TFO -148.81	
7,456.36	7,032.00	-425.70	12.94	POE at 91.12 Inclination	
18,018.38	6,825.00	-438.12	10,572.93	TD at 18018.38	



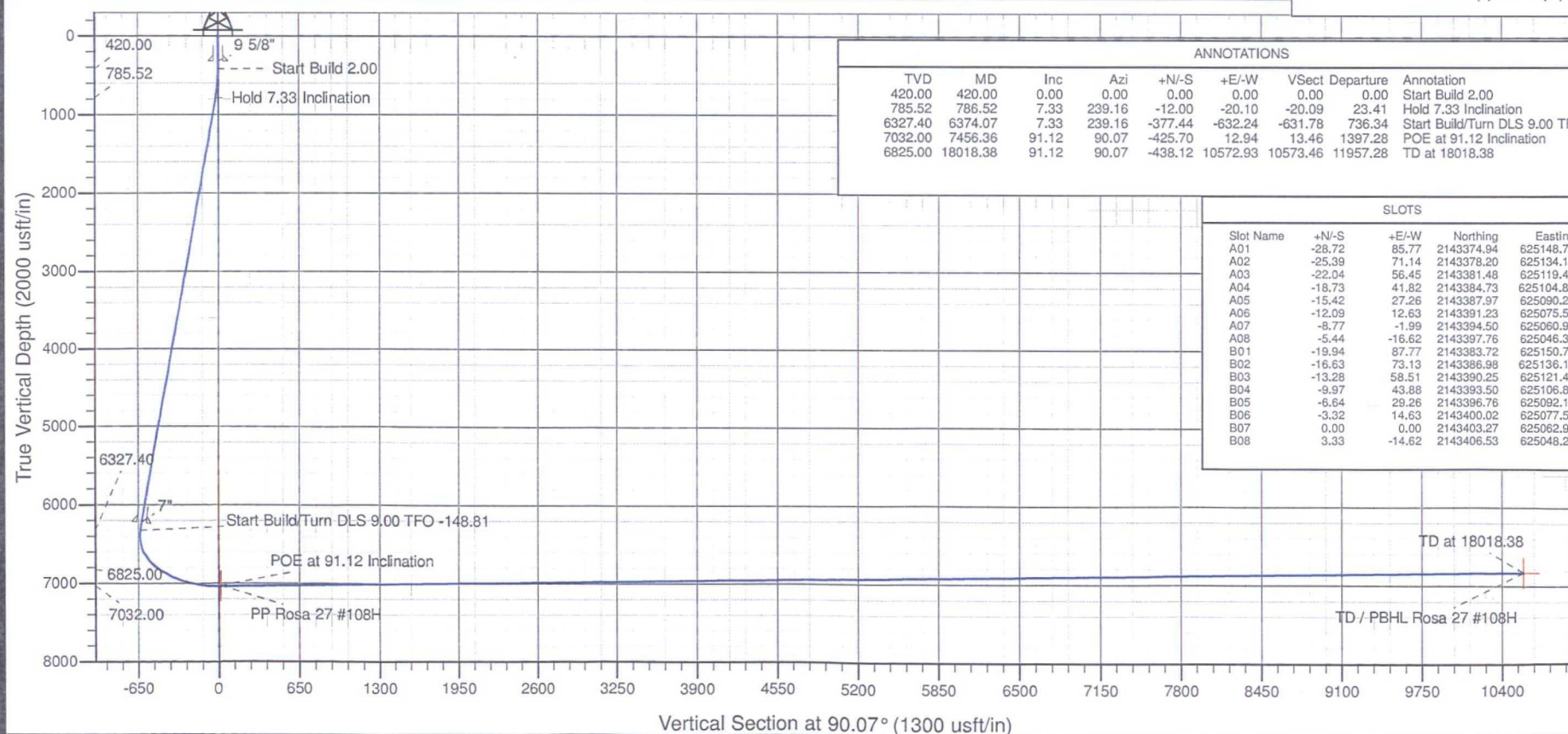


Well Name: ROSA UT 27 #108H  
Surface Location: Pad 27  
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
Ground Elevation: 6305.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 2143403.27 625062.90 36.8897244 -107.4056760 B07  
KB @ 6330.00usft (Aztec 1000)



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PP Rosa 27 #108H	7032.00	-425.70	12.94	2142977.64	625077.75	36.8885551	-107.4056317	Point
- plan hits target center								
TD / PBHL Rosa 27 #108H	6825.00	-438.12	10572.93	2143012.53	635637.69	36.8885155	-107.3695226	Point
- plan hits target center								

Project: T31N R5W Rosa Unit  
Site: Pad 27  
Well: ROSA UT 27 #108H  
Design #2 16Mar15 sam



#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
420.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
785.52	785.52	7.33	239.16	-12.00	-20.10	-20.09	23.41	Hold 7.33 Inclination
6327.40	6374.07	7.33	239.16	-377.44	-632.24	-631.78	736.34	Start Build/Turn DLS 9.00 TFO -148.81
7032.00	7456.36	91.12	90.07	-425.70	12.94	13.46	1397.28	POE at 91.12 Inclination
6825.00	18018.38	91.12	90.07	-438.12	10572.93	10573.46	11957.28	TD at 18018.38

#### SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A01	-28.72	85.77	2143374.94	625148.79
A02	-25.39	71.14	2143378.20	625134.16
A03	-22.04	56.45	2143381.48	625119.45
A04	-18.73	41.82	2143384.73	625104.81
A05	-15.42	27.26	2143387.97	625090.23
A06	-12.09	12.63	2143391.23	625075.59
A07	-8.77	-1.99	2143394.50	625060.95
A08	-5.44	-16.62	2143397.76	625046.30
B01	-19.94	87.77	2143383.72	625150.75
B02	-16.63	73.13	2143386.98	625136.11
B03	-13.28	58.51	2143390.25	625121.47
B04	-9.97	43.88	2143393.50	625106.83
B05	-6.64	29.26	2143396.76	625092.19
B06	-3.32	14.63	2143400.02	625077.55
B07	0.00	0.00	2143403.27	625062.90
B08	3.33	-14.62	2143406.53	625048.26

D. Well pad

1. The construction phase of the project will commence upon receipt of the approved APD.
2. Vegetation and topsoil removal, storage, and protection are described in detail in the Reclamation Plan (Appendix C).
3. The well pads would be leveled to provide space and a level surface for vehicles and equipment. Excavated materials from cuts will be used on fill portions of the well pad to level the pad. No additional surfacing materials will be required for construction.
4. As determined during the onsites on January 7, 2015 and March 11, 2015, the following best management practices will be implemented:
  - a. The Rosa UT 27 will be co-located with the Rosa Unit 204A.
  - b. The Rosa UT 29 will be co-located with the Rosa Unit 165A and facilities will be placed on the existing 165A well pad. The existing access road will be re-routed to accommodate for the new wells and production equipment.
  - c. No additional fill would be required to construct the pad.
  - d. Diversions will be installed upon reclamation.
5. All project activities will be confined to permitted areas only.
6. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and a dozer.
7. If drilling has not been initiated on the well pad within 120 days of the well pad being constructed, the operator will consult with the BLM to address a site-stabilization plan.

E. Production Facilities

1. As practical, access will be a teardrop-shaped road through the production area so that the center may be revegetated.
2. Within 90 days of installation, production facilities would be painted Juniper Green to blend with the natural color of the landscape and would be located, to the extent practical, to reasonably minimize visual impact.
3. Berms will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks. Berm walls will be compacted with appropriate equipment to assure containment.



F. Recycling Containment

1. Recycling containments are governed by the NMOCD and would be constructed in compliance with their rules.
2. Prior to constructing the Section 30 Recycling Containment, topsoil will be stripped and stockpiled for use as final cover during reclamation. Topsoil will be stockpiled within a Temporary Use Area (TUA), approximately 2 acres in size, located adjacent to and outside of the perimeter fence surrounding the recycling containment (Figure 8, Appendix B). Topsoil stockpiles will be reseeded and BMP's utilized as appropriate to reduce soil erosion.
3. The spoil from the holding pond will be utilized to reclaim a large, incised, abandoned arroyo directly west of the recycling containment. The area to be reclaimed is estimated at approximately 3 acres. Within the proposed arroyo reclaim area, spoil will be stockpiled approximately 10 feet above grade for the life of the recycling containment and then reclaimed back to blend with the surrounding grade upon final reclamation (Figure 8, Appendix B).
4. The holding pond would be approximately 700 feet by 300 feet and 25 feet deep. Total volume would be 622,708 barrels. The inside grade of the levee would be no steeper



than two horizontal feet to one vertical foot (2H:1V) and the outside grade no steeper than 3H:1V.

5. The recycling containments will be lined with a 45-mil LLDPE primary (upper) liner and a 30-mil LLDPE secondary (lower) liner with a leak detection system between the upper and lower geomembrane liners. Liners will be installed in a manner consistent with the manufacture's specifications.
6. The leak detection system will contain a 200-mil Hypernet drainage material between the primary and secondary liner that is sufficiently permeable to allow the transport of fluids to the drainage pipes and observation ports. When the holding pond contains fluid, the liners will be inspected daily.
7. The holding ponds will be netted with extruded polypropylene netting (3 ½ cm sized mesh). It will be supported by a system of perimeter and interior support poles and cables specifically designed to each individual pond for the purpose of excluding birds, bats and other small mammals. The entire perimeter of the netting enclosure will have a 2-foot net overhang on the ground to prevent small animals from entering the enclosure (See Appendix D). The support cable used along the perimeter and interior of the enclosure consists of ¼" 7 x 19 galvanized aircraft cable. The netting is woven to the perimeter cable with a 2.5 mm poly wire. The netting enclosure will be secured at ground level with a 4mm corrosion resistant poly wire. The netting enclosure will include double gates for access into the holding pond when needed. Appendix D further describes and illustrates the netting enclosure that will be implemented and how it will be constructed.
8. The outer perimeter of the recycling containment will be fenced to exclude wildlife and livestock. The game fence will be 8 feet tall. It will consist of woven wire fencing and two strands of 12½ GA barbed wire at the top and bottom. The first strand of barbed wire will be strung 2 inches from ground surface. The bottom of the woven wire will be placed 2 inches above the first strand of barbed wire. Two levels of woven wire fencing fabric, overlapping each other by 3 inches and totaling 7 feet 6 inches in height will be stapled to the wooden posts. A second strand of barbed wire will be strung 1 inch from the top of the woven wire. Two wooden stays will be stapled to the woven wire at 5-foot, 4-inch intervals between wooden posts. Refer to Appendix E – Game Fence Detail for specific construction and material details.
9. The entire disturbed area will be completely reclaimed when all drilling and completion activities have been concluded.

✓ G. Cuttings Disposal

1. Cuttings will be buried within the existing disturbance of two sandstone quarry pits. These pits were previously permitted under a free use permit with the BLM-FFO and have expired. WPX is in the process of renewing these free use permits in order to utilize the remaining material for road maintenance. Cuttings buried at the Section 23 Cuttings Disposal would be located within the existing Rosa Rock Pit #4 (FUP NM-070-90-04CX). Cuttings buried at the Section 25 Recycling Containment would be located within the existing Rosa Pit #165 (FUP NM-070-01-472CX). The cuttings will be utilized to reclaim and restore the area to near original land contours.
2. Once the quarry has been depleted of its resources, drill cuttings will be tested and placed within the pits and continue until storage of the cuttings disposal meets capacity or drilling of all permitted wells associated with the cuttings disposal is complete, whichever comes first, at which point it will be closed and the area reclaimed.

3. Cuttings disposal construction, operation and closure will be permitted and regulated under NMOCD Rule 17.

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

## **7.0 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 Section 23 cuttings disposal and/or a cuttings disposal at Section 25 recycling containment. 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. If oil-based mud drilling is used, a closed-loop system will be used to minimize potential impacts to surface and groundwater quality. A 30-mil reinforced liner will be placed under the drill rig mats and all drilling machinery. This area will be enclosed by a containment berm and ditches, which will drain to sump areas for spill prevention and control. The containment berm will be ramped to allow access to the solids control area.
3. Closed-loop tanks will be adequately sized for containment of all fluids.

### **B. Drilling Fluids**

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

### **C. Spills**

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

### **D. Sewage**

1. Portable toilets will be provided and maintained during construction, as needed (see Figure 11 and 12 in Appendix B for the location of toilets).

### **E. Garbage and other waste material**

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

### **F. Hazardous Waste**

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



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

**in Bloomfield, NM to WPX Energy Production, LLC Rosa UT 27 #108H**

**946' FNL & 438' FWL, Section 19, T31N, R5W, N.M.P.M., Rio Arriba County, NM**

**Latitude: 36.889730°N Longitude: 107.406279°W Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Easterly on US Hwy 64 for 38.0 miles to Mile Marker 102.3 to State Hwy 527 (Simms Hwy);

Go Left (North-westerly) on State Hwy 527 (Simms Hwy) for 7.9 miles to Rosa Road @ La Jara Station;

Go Right (Northerly) on Rosa Road for 6.5 miles to 4-way intersection;

Go Left which is straight (North-easterly) remaining on Rosa Road for 5.9 miles to fork in road;

Go Right (Easterly) for 0.25 miles to fork in roadway;

Go Right which is straight (Easterly) for 0.1 miles to fork in roadway;

Go Left which is straight (Easterly) for 1.3 miles to fork in roadway;

Go Right (Westerly) for 0.1 miles to new access on right-hand side of roadway which continues for 71.0' to staked WPX Rosa UT 27 #108H location.

