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: 5-21-15
Well information;
Operator WPX, Well Name and Number Rosa Unit 29 # 102H

API# 30-039-31326, Section 25, Township 31 (N)/S, Range 6 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
- o 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
- o 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.

NMOCD Approved by Signature

7-31-2015 KC
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

Form 3160-3 (September 2001)

OIL CONS. DIV DIST. 3

JUN 30 2015

RECEIVED

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Farmington Field Office
Bureau of Land Management

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. SF-078771
	6. If Indian, Allottee or Tribe Name
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	7. If Unit or CA Agreement, Name and No. Rosa Unit R-13457 NMNM-78407E
	8. Lease Name and Well No. Rosa UT 29 102H
2. Name of Operator WPX Energy Production, LLC	9. API Well No. 30-039-31326
3a. Address P.O. Box 640 Aztec, NM 87410	3b. Phone No. *(include area code)* (505) 333-1849
	10. Field and Pool, or Exploratory Basin Mancos
4. Location of Well *(Report location clearly and in accordance with any State requirements. *)* At surface A 1038' FNL & 324' FEL, sec 25, T31N, R6W At proposed prod. zone D 434' FNL & 560' FWL, sec 26, T31N, R6W	11. Sec., T., R., M., or Blk. and Survey or Area SHL: Section 25, T31N, R6W BHL: Section 26, T31N, R6W
14. Distance in miles and direction from nearest town or post office* Approximately 58 miles East from Bloomfield NM	12. County or Parish Rio Arriba / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 324'	16. No. of Acres in lease 2560.00 ~~592.16~~ / 17. Spacing Unit dedicated to this well 592.16 N2 Sec25 N2 Sec26 ~~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 16,465 MD / 7,160 TVD / 20. BLM/BIA Bond No. on file UTB000178
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6372' GR	22. Approximate date work will start* June 15, 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)* Andrea Felix	Date 5-21-2015
Title Regulatory Specialist Senior		
Approved by *(Signature)* /s/ Maulicio AFM	Name *(Printed/Typed)*	Date 6/24/15
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 29 101H / Rosa UT 29 103H / Rosa UT 29 104H / Rosa UT 29 105H / Rosa UT 29 106H / Rosa UT 29 107H / Rosa UT 29 108H.

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

No new access road is needed for this location as this location will be co-located with the existing WPX Rosa UT 165A.

New pipeline is approximately 725.1' on BLM surface on lease.

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

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

NMOCD

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

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

RECEIVED

MAY 21 2015

Farmington Field Office
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-039-31326	97232	BASIN MANCOS

4 Property Code	5 Property Name	6 Well Number
17033	ROSA UT ~~29~~	651H ~~402H~~

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6372'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	25	31N	6W	1	1038	NORTH	324	EAST	RIO ARRIBA

11 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
D	26	31N	6W		434	NORTH	560	WEST	RIO ARRIBA

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
592.16	N/2 - Section 25 N/2 - Section 26			

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

END-OF-LATERAL
434' FNL 560' FWL
SECTION 26, T31N, R6W
LAT: 36.876671 °N
LONG: 107.438665 °W
DATUM: NAD1927

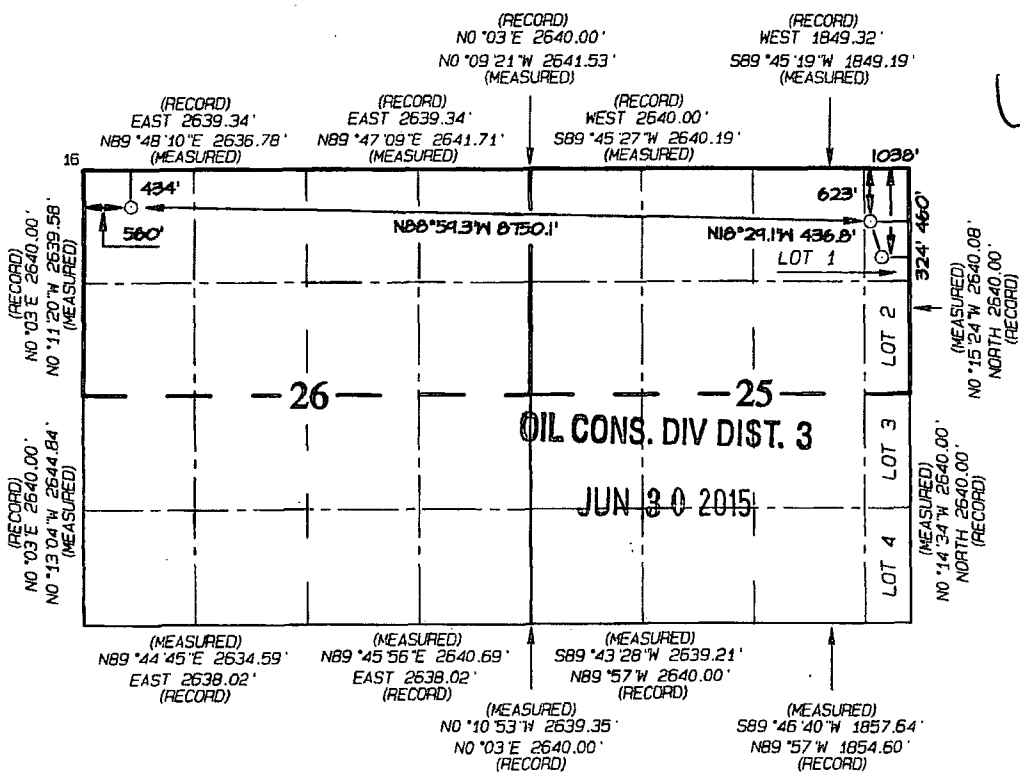
LAT: 36.876676 °N
LONG: 107.439269 °W
DATUM: NAD1983

POINT-OF-ENTRY
623' FNL 460' FEL
SECTION 25, T31N, R6W
LAT: 36.876143 °N
LONG: 107.408757 °W
DATUM: NAD1927

LAT: 36.876149 °N
LONG: 107.409360 °W
DATUM: NAD1983

SURFACE LOCATION
1038' FNL 324' FEL
SECTION 25, T31N, R6W
LAT: 36.875003 °N
LONG: 107.408290 °W
DATUM: NAD1927

LAT: 36.875009 °N
LONG: 107.408893 °W
DATUM: NAD1983



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 5-14-15 Date

Andrea Felix

Printed Name

Andrea.Felix@wpxenergy.com

E-mail Address

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: MARCH 20, 2015
Survey Date: FEBRUARY 6, 2015

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269

WPXENERGY

WPX ENERGY

Operations Plan

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

DATE:	5/15/15	**FIELD:**	Basin Mancos
WELL NAME:	ROSA UT 29 #102H	**SURFACE:**	BLM
SH Location:	NENE Sec 25-31N-06W	**ELEVATION:**	6372' GR
BH Location:	NWNW Sec 26-31N-06W Rio Arriba, NM	**MINERALS:**	BLM

MEASURED DEPTH: 16465'

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	2524	2512	Point Lookout	5722	5687
Kirtland	2647	2634	Mancos	6199	6160
Picture Cliffs	3169	3152	**Kickoff Point**	6651	6620
Lewis	3556	3536	Top Target	7328	7180
Chacra	4644	4616	**Landing Point**	7713	7307
Cliff House	5472	5439	Base Target	7713	7307
Menefee	5515	5481			
			TD	16465	7160

A. **MUD LOGGING PROGRAM:** Mudlogger on location from surface csg to TD.
B. **LOGGING PROGRAM:** LWD GR from surface casing to TD.
C. **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 ¾" Directional Vertical portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the curve and lateral portions of wellbore. 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"	6551'	7"	23#	N-80
Prod. Liner	6.125"	6401' – 16465'	4-1/2"	11.6#	P-110
Tie-Back String	N/A	Surf. - 6401'	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) 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.

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 (56 cu-ft) Water Spacer. **Lead Cement:** Extencem ™ System. Yield 1.36 cu ft/sk, 13.3 ppg, (805 sx / 1095 cu ft. / 194 bbls). **Tail Spacer:** 20 BBL of MMCR. **Displacement**: Displace w/ +/- 224 bbl Fr Water. Total Cement (1095 cu ft / 194 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 131,250# 100 mesh sand and 6,930,000# 40/70 mesh sand in 9,282,000 gallons water for 21 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# K-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).

The Drilling Rig will be rigged down at this point and Completion operations will begin.

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.

WPXENERGY

Well Name: ROSA UT 29 #102H
Surface Location: Pad 29
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6372.00

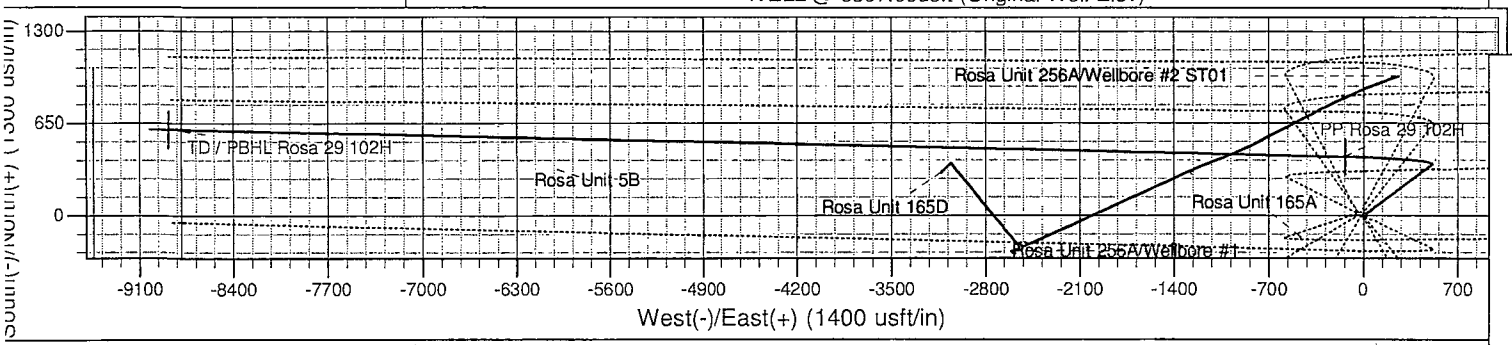
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2138040.67	624322.40	36.8750036	-107.4082897	A05

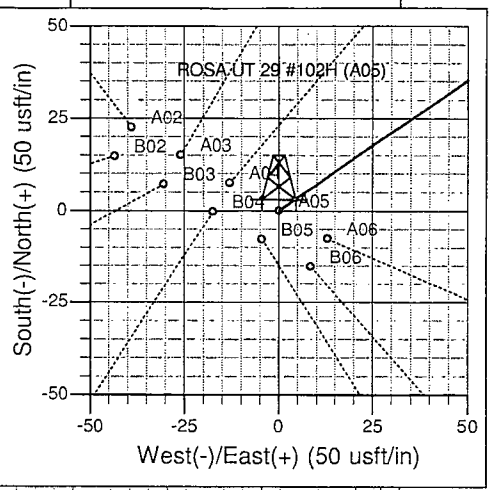
WELL @ 6397.00usft (Original Well Elev)

T M

Azimuths to True North
Magnetic North: 9.32°

Magnetic Field
Strength: 50499.7snT
Dip Angle: 63.56°
Date: 1/28/2015
Model: IGRF2010

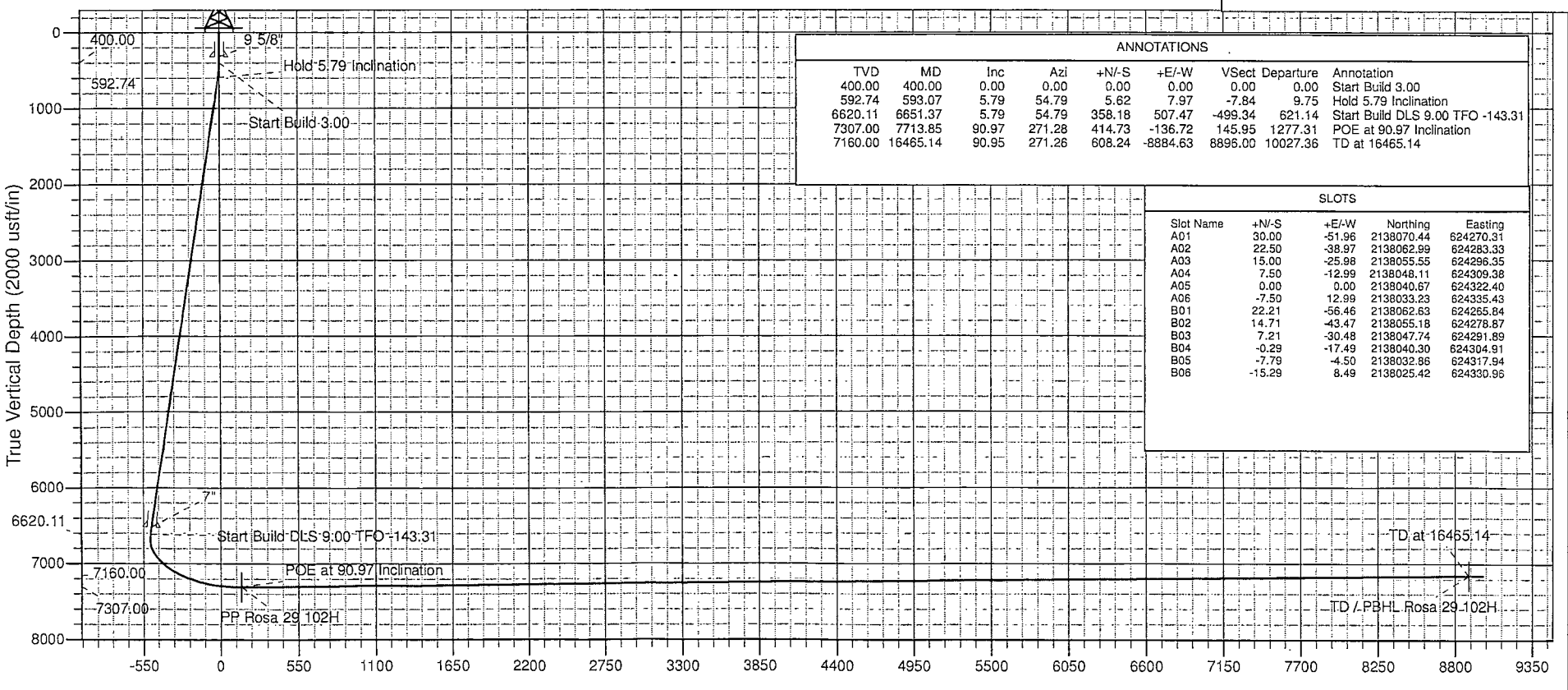




DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PP Rosa 29 102H	7307.00	414.73	-136.72	2138454.78	624183.84	36.8761428	-107.4087571	Point
- plan hits target center								
TD / PBHL Rosa 29 102H	7160.00	608.24	-8884.63	2138609.35	615435.15	36.8766705	-107.4386655	Point
- plan hits target center								

Project: T31N R6W Rosa Unit
Site: Pad 29
Well: ROSA UT 29 #102H
Design #2 12Mar15 sam



ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
400.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
592.74	593.07	5.79	54.79	5.62	7.97	-7.84	9.75	Hold 5.79 Inclination
6620.11	6651.37	5.79	54.79	358.18	507.47	-499.34	621.14	Start Build DLS 9.00 TFO -143.31
7307.00	7713.85	90.97	271.28	414.73	-136.72	145.95	1277.31	POE at 90.97 Inclination
7160.00	16465.14	90.95	271.26	608.24	-8884.63	8896.00	10027.36	TD at 16465.14

SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A01	30.00	-51.96	2138070.44	624270.31
A02	22.50	-38.97	2138062.99	624283.33
A03	15.00	-25.98	2138055.55	624296.35
A04	7.50	-12.99	2138048.11	624309.38
A05	0.00	0.00	2138040.67	624322.40
A06	-7.50	12.99	2138033.23	624335.43
B01	22.21	-56.46	2138062.63	624265.84
B02	14.71	-43.47	2138055.18	624278.87
B03	7.21	-30.48	2138047.74	624291.89
B04	-0.29	-17.49	2138040.30	624304.91
B05	-7.79	-4.50	2138032.86	624317.94
B06	-15.29	8.49	2138025.42	624330.96

WPX Energy

T31N R6W Rosa Unit
Pad 29
ROSA UT 29 #102H - Slot A05

Wellbore #1

Plan: Design #2 12Mar15 sam

Standard Planning Report - Geographic

18 March, 2015

WPX

Planning Report - Geographic

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well ROSA UT 29 #102H (A05) - Slot A05
Company:	WPX Energy	**TVD Reference:**	WELL @ 6397.00usft (Original Well Elev)
Project:	T31N R6W Rosa Unit	**MD Reference:**	WELL @ 6397.00usft (Original Well Elev)
Site:	Pad 29	**North Reference:**	True
Well:	ROSA UT 29 #102H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 12Mar15 sam		

Project	T31N R6W Rosa Unit		
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	Pad 29				
Site Position:		**Northing:**	2,138,085.32 usft	**Latitude:**	36.8751272
From:	Map	**Easting:**	624,244.26 usft	**Longitude:**	-107.4085562
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.25 °

Well	ROSA UT 29 #102H - Slot A05					
Well Position	**+N/-S**	0.00 usft	**Northing:**	2,138,040.67 usft	**Latitude:**	36.8750036
	+E/-W	0.00 usft	**Easting:**	624,322.41 usft	**Longitude:**	-107.4082898
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,372.00 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	1/28/2015	9.32	63.56	50,500

Design	Design #2 12Mar15 sam			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.00	0.00	0.00	271.28

Plan Sections

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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
593.07	5.79	54.79	592.74	5.62	7.97	3.00	3.00	0.00	54.79	
6,651.37	5.79	54.79	6,620.11	358.18	507.47	0.00	0.00	0.00	0.00	
7,713.85	90.97	271.28	7,307.00	414.73	-136.72	9.00	8.02	-13.51	-143.31	PP Rosa 29 102H
16,465.14	90.95	271.26	7,160.00	608.24	-8,884.63	0.00	0.00	0.00	-125.88	TD / PBHL Rosa 29 1

WPX

Planning Report - Geographic

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well ROSA UT 29 #102H (A05) - Slot A05
Company:	WPX Energy	**TVD Reference:**	WELL @ 6397.00usft (Original Well Elev)
Project:	T31N R6W Rosa Unit	**MD Reference:**	WELL @ 6397.00usft (Original Well Elev)
Site:	Pad 29	**North Reference:**	True
Well:	ROSA UT 29 #102H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 12Mar15 sam		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	2,138,040.67	624,322.41	36.8750036	-107.4082898
320.00	0.00	0.00	320.00	0.00	0.00	2,138,040.67	624,322.41	36.8750036	-107.4082898
9 5/8"									
400.00	0.00	0.00	400.00	0.00	0.00	2,138,040.67	624,322.41	36.8750036	-107.4082898
Start Build 3.00									
500.00	3.00	54.79	499.95	1.51	2.14	2,138,042.18	624,324.54	36.8750078	-107.4082825
593.07	5.79	54.79	592.74	5.62	7.97	2,138,046.32	624,330.35	36.8750191	-107.4082625
Hold 5.79 Inclination									
1,000.00	5.79	54.79	997.59	29.30	41.52	2,138,070.15	624,363.79	36.8750841	-107.4081478
1,500.00	5.79	54.79	1,495.04	58.40	82.74	2,138,099.43	624,404.89	36.8751640	-107.4080069
2,000.00	5.79	54.79	1,992.49	87.50	123.97	2,138,128.71	624,445.98	36.8752440	-107.4078659
2,500.00	5.79	54.79	2,489.94	116.59	165.19	2,138,157.99	624,487.08	36.8753239	-107.4077250
3,000.00	5.79	54.79	2,987.38	145.69	206.42	2,138,187.27	624,528.17	36.8754038	-107.4075841
3,500.00	5.79	54.79	3,484.83	174.79	247.64	2,138,216.55	624,569.27	36.8754837	-107.4074431
4,000.00	5.79	54.79	3,982.28	203.88	288.87	2,138,245.83	624,610.36	36.8755636	-107.4073022
4,500.00	5.79	54.79	4,479.73	232.98	330.09	2,138,275.11	624,651.46	36.8756436	-107.4071612
5,000.00	5.79	54.79	4,977.17	262.08	371.32	2,138,304.39	624,692.55	36.8757235	-107.4070203
5,500.00	5.79	54.79	5,474.62	291.17	412.54	2,138,333.67	624,733.65	36.8758034	-107.4068793
6,000.00	5.79	54.79	5,972.07	320.27	453.76	2,138,362.95	624,774.74	36.8758833	-107.4067384
6,500.00	5.79	54.79	6,469.52	349.37	494.99	2,138,392.23	624,815.84	36.8759633	-107.4065975
6,551.00	5.79	54.79	6,520.25	352.34	499.19	2,138,395.22	624,820.03	36.8759714	-107.4065831
7"									
6,651.37	5.79	54.79	6,620.11	358.18	507.47	2,138,401.10	624,828.28	36.8759874	-107.4065548
Start Build DLS 9.00 TFO -143.31									
7,000.00	26.93	278.17	6,957.42	380.09	442.04	2,138,422.72	624,762.75	36.8760476	-107.4067785
7,500.00	71.76	272.48	7,275.05	407.88	73.60	2,138,448.87	624,394.19	36.8761240	-107.4080381
7,713.85	90.97	271.28	7,307.00	414.73	-136.72	2,138,454.78	624,183.84	36.8761428	-107.4087572
POE at 90.97 Inclination									
8,000.00	90.97	271.28	7,302.15	421.11	-422.76	2,138,459.89	623,897.78	36.8761603	-107.4097351
8,500.00	90.97	271.28	7,293.69	432.26	-922.56	2,138,468.81	623,397.93	36.8761909	-107.4114439
9,000.00	90.97	271.28	7,285.23	443.39	-1,422.37	2,138,477.72	622,898.08	36.8762214	-107.4131527
9,500.00	90.97	271.27	7,276.79	454.51	-1,922.17	2,138,486.62	622,398.23	36.8762519	-107.4148615
10,000.00	90.97	271.27	7,268.35	465.62	-2,421.98	2,138,495.50	621,898.38	36.8762823	-107.4165702
10,500.00	90.97	271.27	7,259.92	476.72	-2,921.78	2,138,504.37	621,398.53	36.8763127	-107.4182790
11,000.00	90.96	271.27	7,251.50	487.81	-3,421.59	2,138,513.24	620,898.68	36.8763430	-107.4199878
11,500.00	90.96	271.27	7,243.09	498.89	-3,921.40	2,138,522.09	620,398.83	36.8763732	-107.4216966
12,000.00	90.96	271.27	7,234.68	509.95	-4,421.20	2,138,530.93	619,898.98	36.8764034	-107.4234054
12,500.00	90.96	271.27	7,226.29	521.00	-4,921.01	2,138,539.75	619,399.13	36.8764335	-107.4251142
13,000.00	90.96	271.27	7,217.90	532.04	-5,420.82	2,138,548.57	618,899.27	36.8764636	-107.4268230
13,500.00	90.96	271.26	7,209.52	543.07	-5,920.63	2,138,557.37	618,399.42	36.8764936	-107.4285318
14,000.00	90.96	271.26	7,201.15	554.09	-6,420.43	2,138,566.17	617,899.57	36.8765236	-107.4302406
14,500.00	90.96	271.26	7,192.79	565.10	-6,920.24	2,138,574.95	617,399.72	36.8765535	-107.4319494
15,000.00	90.96	271.26	7,184.43	576.09	-7,420.05	2,138,583.72	616,899.86	36.8765833	-107.4336582
15,500.00	90.96	271.26	7,176.09	587.08	-7,919.86	2,138,592.48	616,400.01	36.8766131	-107.4353670
16,000.00	90.96	271.26	7,167.75	598.05	-8,419.67	2,138,601.22	615,900.15	36.8766428	-107.4370758
16,465.14	90.95	271.26	7,160.00	608.24	-8,884.63	2,138,609.35	615,435.15	36.8766705	-107.4386655
TD at 16465.14									

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well ROSA UT 29 #102H (A05) - Slot A05
Company:	WPX Energy	**TVD Reference:**	WELL @ 6397.00usft (Original Well Elev)
Project:	T31N R6W Rosa Unit	**MD Reference:**	WELL @ 6397.00usft (Original Well Elev)
Site:	Pad 29	**North Reference:**	True
Well:	ROSA UT 29 #102H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 12Mar15 sām		

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 29 102 - plan hits target center - Point	0.00	0.00	7,160.00	608.24	-8,884.63	2,138,609.35	615,435.15	36.8766705	-107.4386655
PP Rosa 29 102H - plan hits target center - Point	0.00	0.00	7,307.00	414.73	-136.72	2,138,454.78	624,183.84	36.8761428	-107.4087572

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
6,551.00	6,520.25	7"	7.00	8.75

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
400.00	400.00	0.00	0.00	Start Build 3.00
593.07	592.74	5.62	7.97	Hold 5.79 Inclination
6,651.37	6,620.11	358.18	507.47	Start Build DLS 9.00 TFO -143.31
7,713.85	7,307.00	414.73	-136.72	POE at 90.97 Inclination
16,465.14	7,160.00	608.24	-8,884.63	TD at 16465.14

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 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

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 29 #102H

1038' FNL & 324' FEL, Section 25, T31N, R6W, N.M.P.M., Rio Arriba County, NM

Latitude: 36.875009°N Longitude: 107.408893°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 4.0 miles to 4-way intersection;

Go Straight (Northerly) for 0.4 miles to staked WPX Rosa UT 29 #102H location which overlaps existing WPX Rosa UT #165A location.

5,000 psi BOP Schematic