

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: 5-5-15

Well information;

Operator WPX, Well Name and Number Rosa Unit 27 # 109H

API# 30-039-31320, 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.



NMOCD Approved by Signature

6-29-2015

Date

kc

JUN 19 2015

MAY 05 2015

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

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington 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 109H	
9. API Well No. 30-039-31320		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		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) 436'		16. No. of Acres in lease <del>1280.00</del> 2560.00	
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 18,294 MD / 7,158 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) Andrea Felix	Date 5-5-15
Title Regulatory Specialist Senior	Approved by (Signature) 	Name (Printed/Typed) AFM
Title AFM	Office FFO	Date 6/17/15

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 108H & 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.

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

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

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

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

MAY 05 2015

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-31320</b>		*Pool Code 97232	*Pool Name Farmington Field Office BASIN MANCOS Bureau of Land Management
*Property Code <b>314999</b>	*Property Name ROSA UT 27		*Well Number 109H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6305'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
C	19	31N	5W	1	955	NORTH	436	WEST	RIO ARRIBA

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

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
F	21	31N	5W		2042	NORTH	1919	WEST	RIO ARRIBA

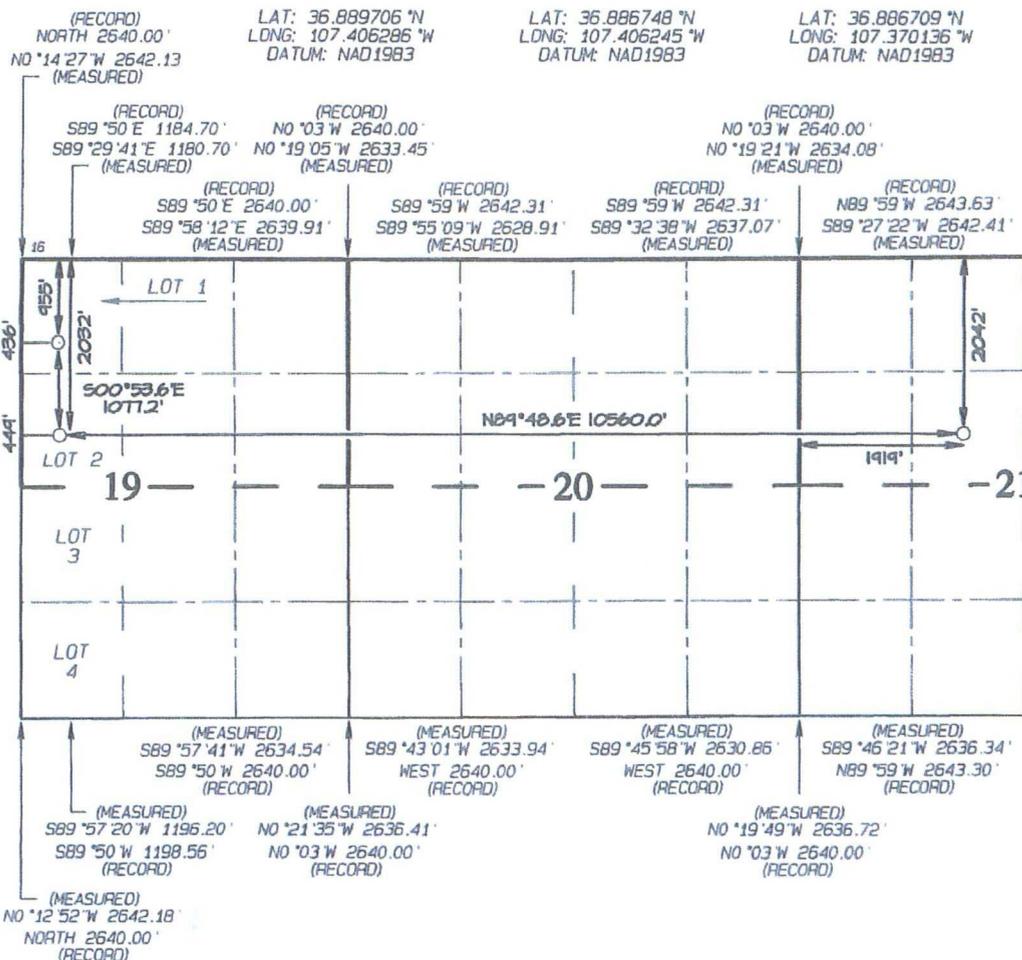
<sup>12</sup> Dedicated Acres 872.01	N/2 - Sections 19, 20, 21	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION  
955' FNL 436' FWL  
SECTION 19, T31N, R5W  
LAT: 36.889700°N  
LONG: 107.405683°W  
DATUM: NAD1927

POINT-OF-ENTRY  
2032' FNL 449' FWL  
SECTION 19, T31N, R5W  
LAT: 36.886742°N  
LONG: 107.405642°W  
DATUM: NAD1927

END-OF-LATERAL  
2042' FNL 1919' FWL  
SECTION 21, T31N, R5W  
LAT: 36.886703°N  
LONG: 107.369534°W  
DATUM: NAD1927



<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



### 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"	6559'	7"	23#	N-80
Prod. Liner	6.125"	6409' -18294'	4-1/2"	11.6#	P-110
Tie-Back String	N/A	Surf. -6409'	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.

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**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 #109H - Slot A07**

**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 #109H (A07) - Slot A07
<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 #109H	<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>Latitude:</b>	36.8897153
<b>From:</b>	Lat/Long	<b>Easting:</b>	625,077.55 usft	<b>Longitude:</b>	-107.4056260
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b>	0.26 °

<b>Well</b>	ROSA UT 27 #109H - Slot A07					
<b>Well Position</b>	<b>+N/-S</b>	-5.45 usft	<b>Northing:</b>	2,143,394.49 usft	<b>Latitude:</b>	36.8897003
	<b>+E/-W</b>	-16.62 usft	<b>Easting:</b>	625,060.95 usft	<b>Longitude:</b>	-107.4056828
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<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>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/18/2014	9.33	63.57	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>	<b>Direction (°)</b>
	0.00	0.00	0.00	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	
974.51	11.09	213.08	971.06	-44.83	-29.20	2.00	2.00	0.00	213.08	
6,660.80	11.09	213.08	6,551.15	-961.34	-626.18	0.00	0.00	0.00	0.00	
7,732.81	90.47	90.07	7,245.00	-1,077.09	11.97	9.00	7.40	-11.47	-122.44	PP Rosa 27 #109H
18,293.17	90.47	90.07	7,158.00	-1,089.36	10,571.97	0.00	0.00	0.00	0.00	TD / PBHL Rosa 27 #

**WPX**  
Planning Report

<b>Database:</b>	COMPASS-SANJUAN	<b>Local Co-ordinate Reference:</b>	Well ROSA UT 27 #109H (A07) - Slot A07
<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 #109H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 16Mar15 sam		

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	213.08	499.99	-0.94	-0.61	-0.61	2.00	2.00	0.00	
974.51	11.09	213.08	971.06	-44.83	-29.20	-29.14	2.00	2.00	0.00	
<b>Hold 11.09 Inclination</b>										
1,000.00	11.09	213.08	996.07	-48.94	-31.88	-31.82	0.00	0.00	0.00	
1,500.00	11.09	213.08	1,486.73	-129.53	-84.37	-84.21	0.00	0.00	0.00	
2,000.00	11.09	213.08	1,977.39	-210.11	-136.86	-136.60	0.00	0.00	0.00	
2,500.00	11.09	213.08	2,468.06	-290.70	-189.35	-189.00	0.00	0.00	0.00	
3,000.00	11.09	213.08	2,958.72	-371.29	-241.85	-241.39	0.00	0.00	0.00	
3,500.00	11.09	213.08	3,449.38	-451.88	-294.34	-293.79	0.00	0.00	0.00	
4,000.00	11.09	213.08	3,940.04	-532.47	-346.83	-346.18	0.00	0.00	0.00	
4,500.00	11.09	213.08	4,430.71	-613.06	-399.33	-398.58	0.00	0.00	0.00	
5,000.00	11.09	213.08	4,921.37	-693.65	-451.82	-450.97	0.00	0.00	0.00	
5,500.00	11.09	213.08	5,412.03	-774.24	-504.31	-503.37	0.00	0.00	0.00	
6,000.00	11.09	213.08	5,902.69	-854.83	-556.81	-555.76	0.00	0.00	0.00	
6,500.00	11.09	213.08	6,393.36	-935.42	-609.30	-608.16	0.00	0.00	0.00	
6,559.00	11.09	213.08	6,451.26	-944.93	-615.49	-614.34	0.00	0.00	0.00	
<b>7"</b>										
6,660.80	11.09	213.08	6,551.15	-961.34	-626.18	-625.01	0.00	0.00	0.00	
<b>Start Build/Turn DLS 9.00 TFO -122.44</b>										
7,000.00	26.14	109.73	6,877.60	-1,015.18	-572.37	-571.13	9.00	4.44	-30.47	
7,500.00	69.81	93.61	7,205.34	-1,069.99	-216.01	-214.70	9.00	8.73	-3.22	
7,732.81	90.47	90.07	7,245.00	-1,077.09	11.97	13.29	9.00	8.88	-1.52	
<b>POE at 90.47 Inclination</b>										
8,000.00	90.47	90.07	7,242.80	-1,077.40	279.15	280.47	0.00	0.00	0.00	
8,500.00	90.47	90.07	7,238.68	-1,077.98	779.14	780.45	0.00	0.00	0.00	
9,000.00	90.47	90.07	7,234.56	-1,078.56	1,279.12	1,280.44	0.00	0.00	0.00	
9,500.00	90.47	90.07	7,230.44	-1,079.14	1,779.10	1,780.42	0.00	0.00	0.00	
10,000.00	90.47	90.07	7,226.32	-1,079.72	2,279.08	2,280.40	0.00	0.00	0.00	
10,500.00	90.47	90.07	7,222.20	-1,080.31	2,779.07	2,780.38	0.00	0.00	0.00	
11,000.00	90.47	90.07	7,218.08	-1,080.89	3,279.05	3,280.37	0.00	0.00	0.00	
11,500.00	90.47	90.07	7,213.96	-1,081.47	3,779.03	3,780.35	0.00	0.00	0.00	
12,000.00	90.47	90.07	7,209.85	-1,082.05	4,279.01	4,280.33	0.00	0.00	0.00	
12,500.00	90.47	90.07	7,205.73	-1,082.63	4,779.00	4,780.32	0.00	0.00	0.00	
13,000.00	90.47	90.07	7,201.61	-1,083.21	5,278.98	5,280.30	0.00	0.00	0.00	
13,500.00	90.47	90.07	7,197.49	-1,083.79	5,778.96	5,780.28	0.00	0.00	0.00	
14,000.00	90.47	90.07	7,193.37	-1,084.37	6,278.95	6,280.27	0.00	0.00	0.00	
14,500.00	90.47	90.07	7,189.25	-1,084.95	6,778.93	6,780.25	0.00	0.00	0.00	
15,000.00	90.47	90.07	7,185.13	-1,085.53	7,278.91	7,280.23	0.00	0.00	0.00	
15,500.00	90.47	90.07	7,181.01	-1,086.11	7,778.89	7,780.21	0.00	0.00	0.00	
16,000.00	90.47	90.07	7,176.89	-1,086.69	8,278.88	8,280.20	0.00	0.00	0.00	
16,500.00	90.47	90.07	7,172.77	-1,087.27	8,778.86	8,780.18	0.00	0.00	0.00	
17,000.00	90.47	90.07	7,168.65	-1,087.86	9,278.84	9,280.16	0.00	0.00	0.00	
17,500.00	90.47	90.07	7,164.53	-1,088.44	9,778.82	9,780.15	0.00	0.00	0.00	
18,000.00	90.47	90.07	7,160.42	-1,089.02	10,278.81	10,280.13	0.00	0.00	0.00	
18,293.17	90.47	90.07	7,158.00	-1,089.36	10,571.97	10,573.29	0.00	0.00	0.00	
<b>TD at 18293.17</b>										

**WPX**  
Planning Report

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well ROSA UT 27 #109H (A07) - Slot A07
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 #109H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 16Mar15 sam		

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TD / PBHL Rosa 27 #10 - hit/miss target - Shape	0.00	0.00	7,158.00	-1,089.36	10,571.97	2,142,352.52	635,637.69	36.8867026	-107.3695336	
PP Rosa 27 #109H - plan hits target center - Point	0.00	0.00	7,245.00	-1,077.09	11.97	2,142,317.47	625,077.75	36.8867418	-107.4056419	

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		
6,559.00	6,451.26	7"	7.00	8.75		

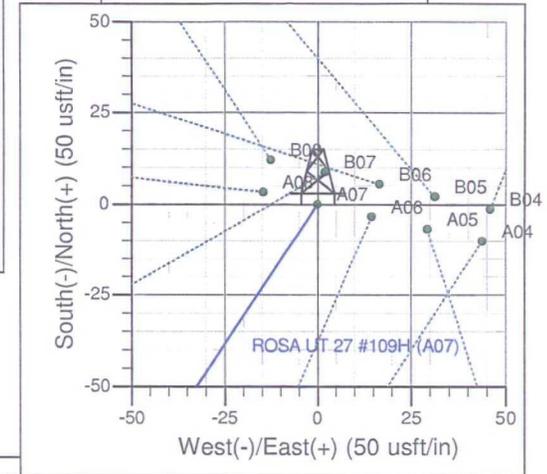
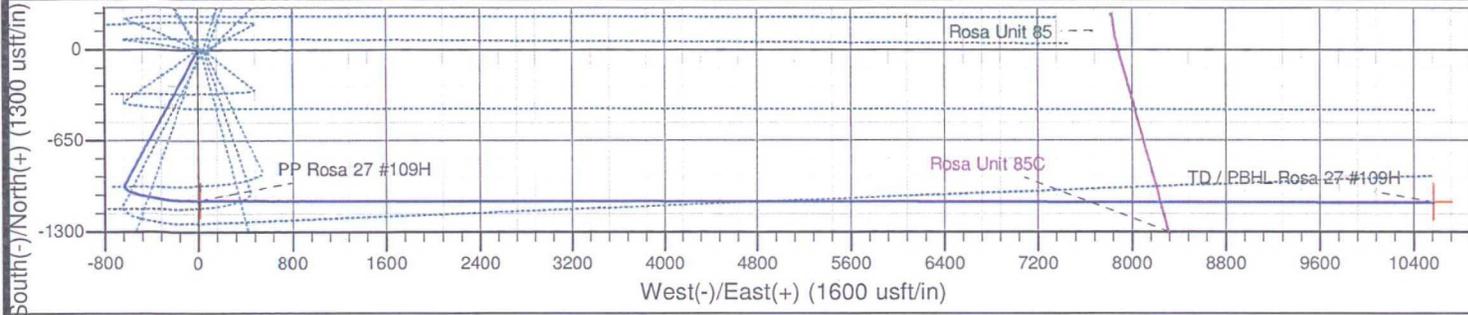
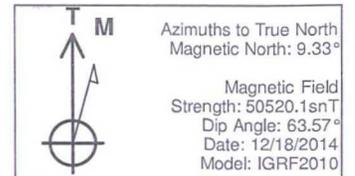
Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
420.00	420.00	0.00	0.00	Start Build 2.00	
974.51	971.06	-44.83	-29.20	Hold 11.09 Inclination	
6,660.80	6,551.15	-961.34	-626.18	Start Build/Turn DLS 9.00 TFO -122.44	
7,732.81	7,245.00	-1,077.09	11.97	POE at 90.47 Inclination	
18,293.17	7,158.00	-1,089.36	10,571.97	TD at 18293.17	



Well Name: ROSA UT 27 #109H  
 Surface Location: Pad 27  
 NAD 1927 (NADCON CONUS), US State Plane 1927 (Exact solution) New Mexico West 3003  
 Ground Elevation: 6305.00

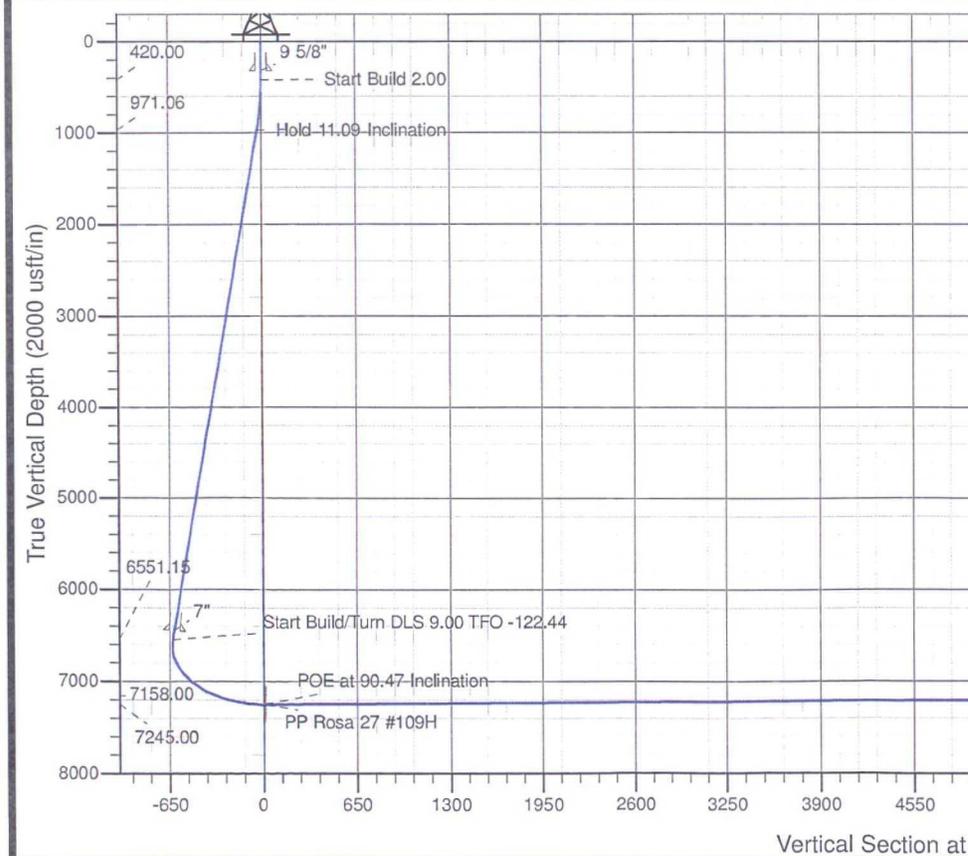
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2143394.50	625060.95	36.8897004	-107.4056828	A07

KB @ 6330.00usft (Aztec 1000)



Name	TVD	+N/-S	DESIGN TARGET DETAILS			Easting	Latitude	Longitude	Shape
			+E/-W	Northing					
PP Rosa 27 #109H	7245.00	-1077.09	11.97	2142317.47	625077.75	36.8867418	-107.4056418	Point	
TD / PBHL Rosa 27 #109H	7158.00	-1089.36	10571.97	2142352.52	635637.69	36.8867026	-107.3695336	Point	

Project: T31N R5W Rosa Unit  
 Site: Pad 27  
 Well: ROSA UT 27 #109H  
 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	
971.06	974.51	11.09	213.08	-44.83	-29.20	-29.14	53.50	Hold 11.09 Inclin	
6551.15	6660.80	11.09	213.08	-961.34	-626.18	-625.01	1147.29	Start Build/Turn DLS 9.00 TFO -122.44	
7245.00	7732.81	90.47	90.07	-1077.09	11.97	13.29	1824.05	POE at 90.47 Inclin	
7158.00	18293.17	90.47	90.07	-1089.36	10571.97	10573.29	12384.05	TD at 18293.17	

SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
A01	-19.95	87.76	2143374.94	625148.79
A02	-16.63	73.13	2143378.20	625134.16
A03	-13.28	58.44	2143381.48	625119.45
A04	-9.96	43.81	2143384.73	625104.81
A05	-6.65	29.25	2143387.97	625090.23
A06	-3.33	14.62	2143391.23	625075.59
A07	0.00	0.00	2143394.50	625060.95
A08	3.33	-14.63	2143397.76	625046.30
B01	-11.17	89.76	2143383.72	625150.75
B02	-7.86	75.12	2143386.98	625136.11
B03	-4.52	60.50	2143390.25	625121.47
B04	-1.20	45.87	2143393.50	625106.83
B05	2.12	31.25	2143396.76	625092.19
B06	5.45	16.62	2143400.02	625077.55
B07	8.77	1.99	2143403.27	625062.90
B08	12.09	-12.63	2143406.53	625048.26

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 #109H**  
**955' FNL & 436' FWL, Section 19, T31N, R5W, N.M.P.M., Rio Arriba County, NM**

**Latitude: 36.889706°N Longitude: 107.406286°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;

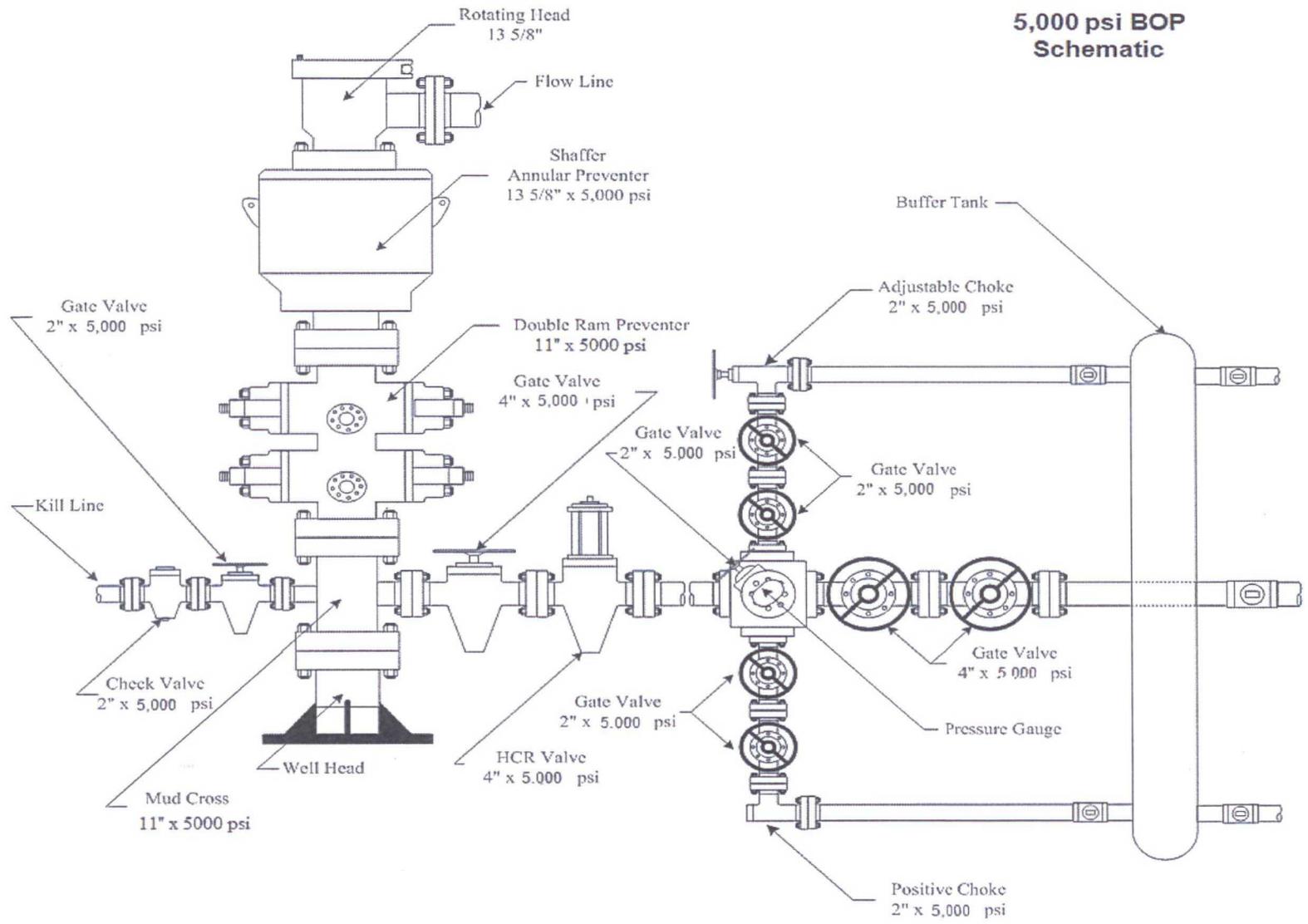
Go Left which is straight (North-easterly) remaining on Rosa Road for 5.9 miles to fork in road;

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 #109H location.



**5,000 psi BOP Schematic**

Rotating Head  
13 5/8"

Flow Line

Shaffer  
Annular Preventer  
13 5/8" x 5,000 psi

Buffer Tank

Gate Valve  
2" x 5,000 psi

Double Ram Preventer  
11" x 5000 psi

Adjustable Choke  
2" x 5,000 psi

Kill Line

Gate Valve  
4" x 5,000 psi

Gate Valve  
2" x 5,000 psi

Gate Valve  
2" x 5,000 psi

Check Valve  
2" x 5,000 psi

Well Head

HCR Valve  
4" x 5,000 psi

Gate Valve  
2" x 5,000 psi

Gate Valve  
4" x 5,000 psi

Pressure Gauge

Mud Cross  
11" x 5000 psi

Positive Choke  
2" x 5,000 psi