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Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington Field Office
Bureau of Land Management

MAY 29 2012

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		6. Lease Serial No. SF-078889
2. Name of Operator WPX Energy Production, LLC		7. If Unit of CA/Agreement, Name and/or No Rosa Unit
3a. Address PO Box 640 Aztec, NM 87410	3b. Phone No. (include area code) 505-333-1808	8. Well Name and No Rosa Unit #354A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sur 1333' FSL & 834' FWL – BHL 350' FNL & 220' FEL, Sec 19, T31N, R4W		9. API Well No. 30-039-27832
		10. Field and Pool or Exploratory Area Basin Fruitland Coal
		11. Country or Parish, State Rio Arriba, NM

12 CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☒ Recomplete	☐ Other _____
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation. Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

WPX Energy plans to re enter this existing wellbore and convert this well from a vertical cavitation to a horizontal completion as per attached plat, operation plan and directional plan. All disturbance will be on permitted location.

NOTE: Due to resurveyed data and advancements in technology the SHL from the existing C-102 is inconsistent with the attached. It is our belief that the more accurate C-102 is the most recent of the two and would like provide the attached for record.

RCVD JUN 1 '12
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Larry Higgins	Title Permit Supervisor
Signature <i>Larry Higgins</i>	Date 5/29/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Original Signed: Stephen Mason	Title	Date MAY 31 2012
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

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 page 2)

NMOCD *A*

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

RCVD JUN 12 '12

OIL CONS. DIV.

WELL LOCATION AND ACREAGE DEDICATION PLAT

DIST. 3

*API Number 30-039-27832	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 354A
*OGRID No 120782	*Operator Name WILLIAMS ENERGY PRODUCTION	*Elevation 6583'

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
I	19	31N	4W		1333	SOUTH	834	EAST	RIO ARriba

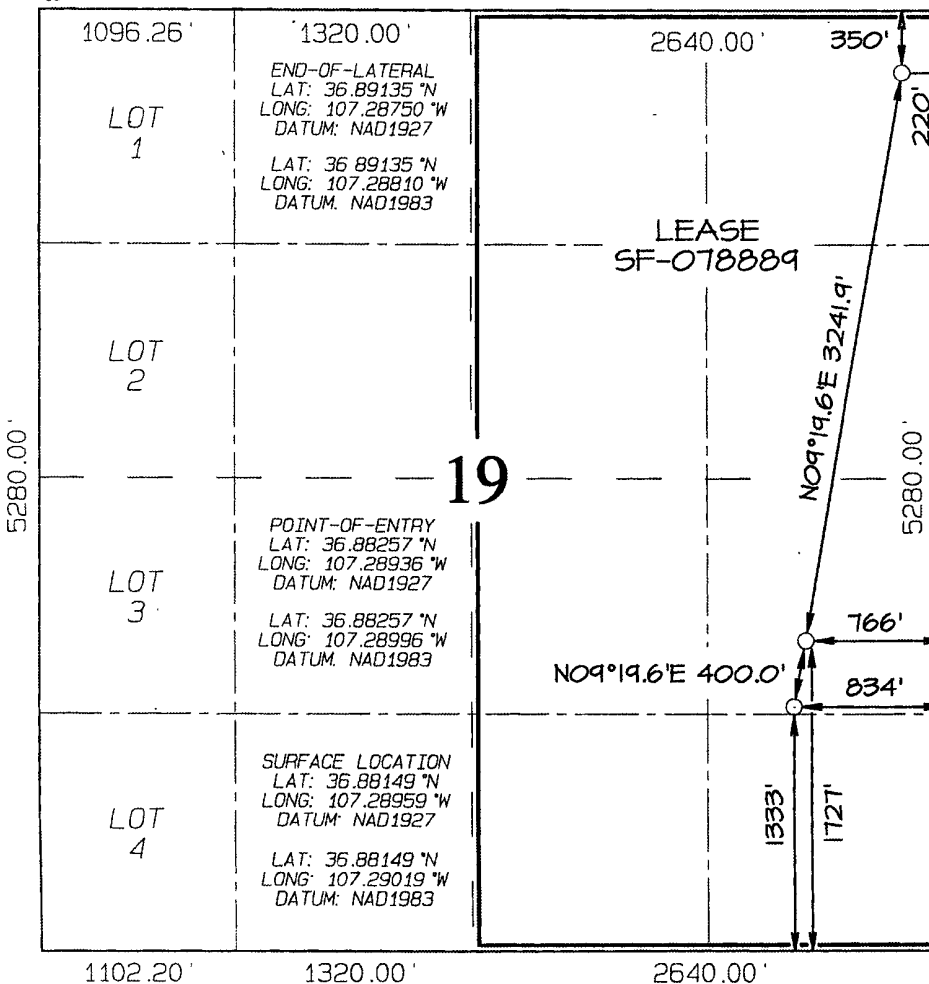
¹¹ Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	31N	4W		350	NORTH	220	EAST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (E/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No R13491 / 31571.92 acres
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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

¹⁶



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

Larry Higgins 6/11/12
Signature Date

Larry Higgins

Printed Name

larry.higgins@wpenergy.com

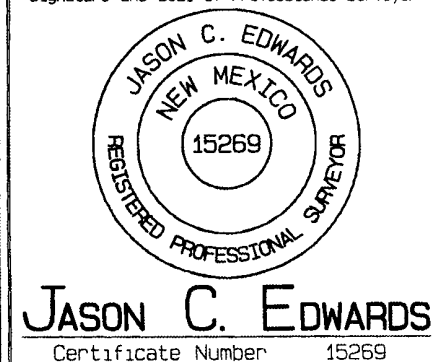
E-mail Address

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: MAY 16, 2012
Date of Survey: APRIL 27, 2004

Signature and Seal of Professional Surveyor



WPXENERGY

WPX Energy Production

Operations Plan

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

DATE: 5/24/2012

WELLNAME: Rosa Unit #354-A **FIELD:** Basin Fruitland Coal

BH LOCATION: NENE Sec. 19-T31N-R4W **SURFACE:** BLM
Rio Arriba, NM

ELEVATION: 6,585' GR **MINERALS:** Federal

TOTAL DEPTH: 6,868' **LEASE #** SF-078889

API#: 30-039-27832

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

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

NAME	TVD	MD
Kirtland	2,885	2,885
Fruitland	3,209	3,223
Top Target Coal	3,424	3,689
Bottom Target Coal	3,435	
Picture Cliffs	3,457	
TD	3,424	6,868

B. **LOGGING PROGRAM:** None

C. **NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

D. **MUD LOGGING PRORAM:** Mud logger will be on location from mill out to TD.

II. **PREPARATORY WORK**

- A. MIRU w/ workover rig
- B. POOH/LD rods and pump
- C. POOH/LD production tbg
- D. Set retrievable bridge plug at +/- 2,960' inside 7" casing for 12.35 deg ROT
- E. Top of Window +/- 2,937 ft. Hole size 6.25 in.
- F. Pressure test 7" csg and bridge plug to 1,500 psi for 30 minutes
- G. RDMO

III. **DRILLING**

A. **MUD PROGRAM:** LSND mud during mill out and while drilling curve. Treat for lost circulation as necessary. Notify Engineering of any mud losses.

B. **DRILLING FLUID:** Horizontal section will be drilled with Polymer mud system and produced

water.

- C. 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 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

IV. MATERIALS

A. CASING PROGRAM (as is):

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	327'	9-5/8"	36# K-55
Intermediate	8-3/4"	3,329'	7"	23#K-55
Prod. Liner	6-1/4"	3,267'- 3,545'	5-1/2"	17# N-80

B. CASING PROGRAM (after sidetrack):

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	327'	9-5/8"	36# K-55
Intermediate	8-3/4"	3,329'	7"	23# K-55
Prod. Liner (motherbore)	6-1/4"	3,267'- 3,545'	5-1/2"	17# N-80
Prod. Liner (sidetrack)	6-1/4"	~2,965'- 6,868'	4-1/2"	11.6# K-55

- Sidetrack production liner is pre-perforated below top of fruitland with blank pipe from window to top of fruitland and will be dropped off with top of liner in open hole 5-10' outside of window.

C. FLOAT EQUIPMENT:

- PRODUCTION LINER (sidetrack): No centralization

D. CEMENTING:

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

- PRODUCTION LINER (sidetrack): Open hole completion. No cement.

V. COMPLETION

A. STIMULATION

- No stimulation

B. RUNNING TUBING

- Fruitland Coal: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing at approximately 3,000' MD inside of motherbore.





Rosa Unit 354A
ST01
Sec 19 T31N R04W
Rio Arriba Co., NM

PATHFINDER
A Schlumberger Company

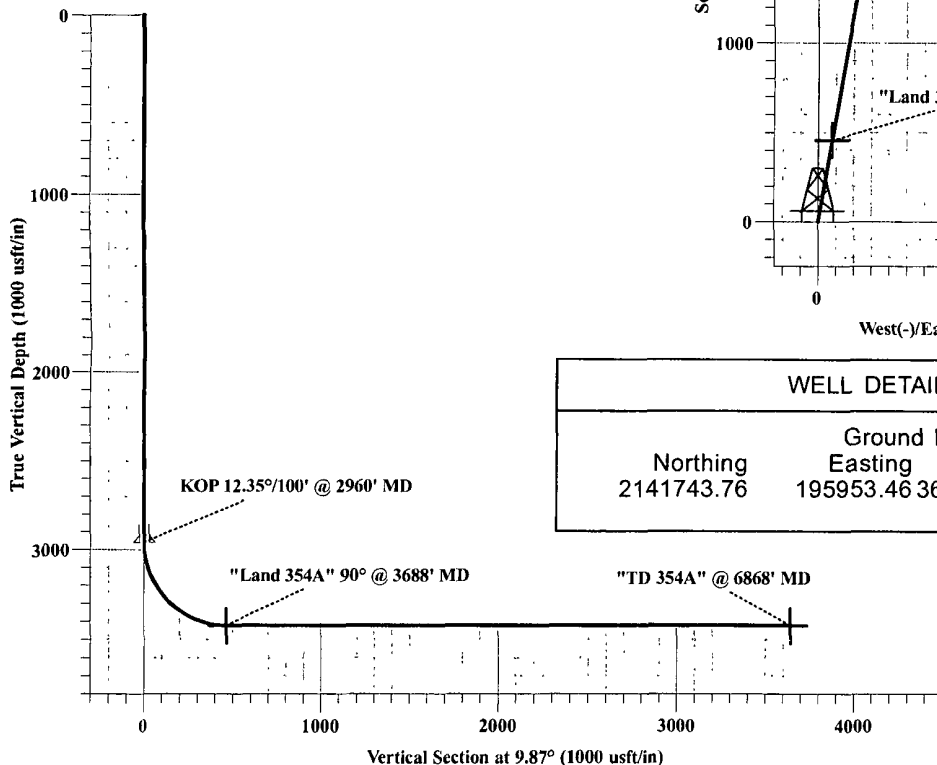
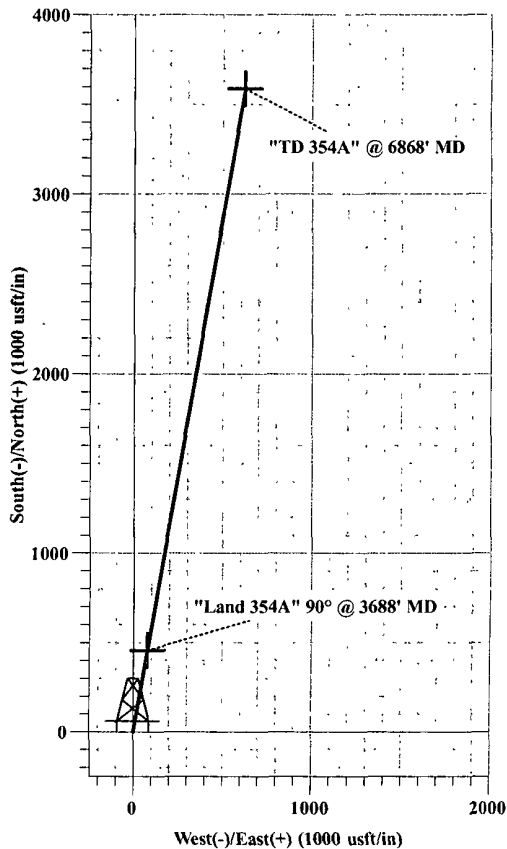
GE: 6583' / KB: 14'

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BHL 354A	3424.0	3589.9	624.7	2145326.63	196617.21	Point
Land 354A	3424.0	457.1	79.5	2142199.97	196037.93	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2885.0	2885.0	Kirtland
3209.0	3222.8	Fruitland
3424.0	3688.8	Target Top



WELL DETAILS: Rosa Unit 354A

Ground Level: 6583.0			
Northing	Easting	Latitude	Longitude
2141743.76	195953.46	36° 52' 53.350 N	107° 17' 22.528 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DlegT	Face	Vsect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2960.0	0.00	0.00	2960.0	0.0	0.0	0.00	0.00	0.0	
3688.8	90.00	9.87	3424.0	457.1	79.5	12.35	9.87	464.0	
6868.7	90.00	9.87	3424.0	3589.9	624.7	0.00	0.00	3643.8	BHL 354A

Plan: Design #1 (Rosa Unit 354A/ST01)

Created By: Breck Enoch

Date: 21-May-2012

WPXENERGY

WPXEnergy

Rio Arriba Co., NM
Sec 19 T31N R04W
Rosa Unit 354A

ST01

Plan: Design #1

Standard Planning Report

21 May, 2012

PATHFINDER

A Schlumberger Company

Database: EDM 5000.1 Single User Db
Company: WPXEnergy
Project: Rio Arriba Co , NM
Site: Sec 19 T31N R04W
Well: Rosa Unit 354A
Wellbore: ST01
Design: Design #1

Local Co-ordinate Reference: Well Rosa Unit 354A
TVD Reference: WELL @ 6597 0usft (Original Well Elev)
MD Reference: WELL @ 6597 0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project: Rio Arriba Co , NM
Map System: US State Plane 1927 (Exact solution) **System Datum:** Mean Sea Level
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico Central 3002

Site: Sec 19 T31N R04W
Site Position: **From:** Lat/Long **Northing:** 2,141,743.76 usft **Latitude:** 36° 52' 53.350 N
Position Uncertainty: 0.0 usft **Easting:** 195,953.46 usft **Longitude:** 107° 17' 22.528 W
Slot Radius: 13-3/16" **Grid Convergence:** -0.62°

Well: Rosa Unit 354A
Well Position: **+N/-S** 0.0 usft **Northing:** 2,141,743.76 usft **Latitude:** 36° 52' 53.350 N
+E/-W 0.0 usft **Easting:** 195,953.46 usft **Longitude:** 107° 17' 22.528 W
Position Uncertainty: 0.0 usft **Wellhead Elevation:** **Ground Level:** 6,583.0 usft

Wellbore: ST01
Magnetics: **Model Name:** IGRF2010 **Sample Date:** 05/15/12 **Declination (°):** 9.60 **Dip Angle (°):** 63.65 **Field Strength (nT):** 50,786

Design: Design #1
Audit Notes:
Version: **Phase:** PROTOTYPE **Tie On Depth:** 0.0
Vertical Section: **Depth From (TVD) (usft):** 0.0 **+N/-S (usft):** 0.0 **+E/-W (usft):** 0.0 **Direction (°):** 9.87

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,960.0	0.00	0.00	2,960.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,688.8	90.00	9.87	3,424.0	457.1	79.5	12.35	12.35	0.00	9.87	
6,668.7	90.00	9.87	3,424.0	3,589.9	624.7	0.00	0.00	0.00	0.00	BHL 354A

Database: EDM 5000 1 Single User Db
 Company: WPXEnergy
 Project: Rio Arriba Co , NM
 Site: Sec 19 T31N R04W
 Well: Rosa Unit 354A
 Wellbore: ST01
 Design: Design #1

Local Co-ordinate Reference: Well Rosa Unit 354A
 TVD Reference: WELL @ 6597 0usft (Original Well Elev)
 MD Reference: WELL @ 6597 0usft (Original Well Elev)
 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 0	0 00	0 00	0 0	0.0	0 0	0.0	0 00	0 00	0 00	
100 0	0 00	0 00	100 0	0.0	0 0	0.0	0 00	0 00	0 00	
200 0	0 00	0 00	200 0	0.0	0 0	0 0	0 00	0 00	0 00	
300 0	0 00	0 00	300 0	0.0	0 0	0 0	0 00	0 00	0 00	
400 0	0 00	0 00	400 0	0 0	0 0	0 0	0 00	0 00	0 00	
500 0	0 00	0 00	500 0	0.0	0 0	0 0	0 00	0.00	0.00	
600 0	0 00	0 00	600 0	0 0	0 0	0 0	0.00	0.00	0.00	
700 0	0.00	0 00	700.0	0 0	0 0	0 0	0 00	0.00	0.00	
800 0	0 00	0 00	800 0	0 0	0 0	0 0	0.00	0.00	0.00	
900 0	0 00	0 00	900 0	0 0	0 0	0 0	0 00	0.00	0.00	
1,000 0	0 00	0 00	1,000 0	0 0	0 0	0.0	0.00	0.00	0.00	
1,100 0	0 00	0 00	1,100 0	0 0	0 0	0 0	0.00	0.00	0.00	
1,200 0	0 00	0 00	1,200 0	0.0	0 0	0 0	0.00	0.00	0.00	
1,300 0	0 00	0 00	1,300 0	0 0	0 0	0.0	0.00	0.00	0.00	
1,400 0	0 00	0 00	1,400.0	0 0	0 0	0 0	0.00	0.00	0.00	
1,500.0	0.00	0 00	1,500.0	0 0	0 0	0 0	0.00	0.00	0.00	
1,600 0	0 00	0 00	1,600 0	0.0	0.0	0 0	0.00	0.00	0.00	
1,700 0	0 00	0 00	1,700 0	0 0	0 0	0 0	0.00	0.00	0.00	
1,800 0	0 00	0 00	1,800 0	0 0	0 0	0 0	0.00	0.00	0.00	
1,900.0	0 00	0 00	1,900 0	0 0	0 0	0 0	0.00	0.00	0.00	
2,000 0	0 00	0 00	2,000 0	0 0	0 0	0 0	0.00	0.00	0.00	
2,100 0	0.00	0 00	2,100 0	0.0	0 0	0 0	0.00	0.00	0.00	
2,200 0	0.00	0 00	2,200 0	0.0	0 0	0 0	0.00	0.00	0.00	
2,300 0	0 00	0 00	2,300 0	0.0	0 0	0 0	0.00	0.00	0.00	
2,400 0	0 00	0 00	2,400 0	0.0	0 0	0 0	0.00	0.00	0.00	
2,500.0	0 00	0 00	2,500 0	0 0	0 0	0 0	0.00	0.00	0.00	
2,600 0	0 00	0 00	2,600.0	0 0	0 0	0 0	0.00	0.00	0.00	
2,700 0	0 00	0 00	2,700.0	0 0	0 0	0 0	0.00	0.00	0.00	
2,800 0	0 00	0 00	2,800 0	0 0	0 0	0 0	0.00	0.00	0.00	
2,885 0	0 00	0 00	2,885 0	0 0	0 0	0.0	0.00	0.00	0.00	
Kirtland										
2,900 0	0 00	0 00	2,900 0	0.0	0 0	0 0	0.00	0.00	0.00	
2,960 0	0 00	0 00	2,960 0	0 0	0 0	0 0	0.00	0.00	0.00	
KOP 12.35°/100° @ 2960' MD										
2,975 0	1 85	9 87	2,975 0	0.2	0.0	0.2	12.35	12.35	0.00	
3,000 0	4 94	9 87	3,000 0	1.7	0.3	1.7	12.35	12.35	0.00	
3,025 0	8 03	9 87	3,024 8	4.5	0.8	4.5	12.35	12.35	0.00	
3,050 0	11 11	9 87	3,049 4	8.6	1.5	8.7	12.35	12.35	0.00	
3,075 0	14 20	9 87	3,073 8	14.0	2.4	14.2	12.35	12.35	0.00	
3,100 0	17 29	9.87	3,097 9	20.7	3.6	21.0	12.35	12.35	0.00	
3,125 0	20 37	9.87	3,121 5	28.6	5.0	29.0	12.35	12.35	0.00	
3,150 0	23 46	9.87	3,144 7	37.8	6.6	38.4	12.35	12.35	0.00	
3,175.0	26 55	9.87	3,167.4	48.2	8.4	48.9	12.35	12.35	0.00	
3,200 0	29 64	9.87	3,189 4	59.8	10.4	60.7	12.35	12.35	0.00	
3,222.8	32.46	9.87	3,209.0	71.4	12.4	72.5	12.35	12.35	0.00	
Fruitland										
3,225.0	32.72	9.87	3,210.8	72.5	12.6	73.6	12.35	12.35	0.00	
3,250 0	35 81	9.87	3,231 5	86.4	15.0	87.7	12.35	12.35	0.00	
3,275 0	38 90	9.87	3,251.4	101.4	17.6	102.9	12.35	12.35	0.00	
3,300 0	41 98	9.87	3,270.4	117.3	20.4	119.1	12.35	12.35	0.00	
3,325 0	45 07	9.87	3,288 5	134.3	23.4	136.3	12.35	12.35	0.00	
3,350.0	48 16	9.87	3,305 7	152.2	26.5	154.5	12.35	12.35	0.00	
3,375 0	51.25	9.87	3,321.8	171.0	29.8	173.5	12.35	12.35	0.00	

Database: EDM 5000 1 Single User Db
 Company: WPXEnergy
 Project: Rio Arriba Co., NM
 Site: Sec 19 T31N R04W
 Well: Rosa Unit 354A
 Wellbore: ST01
 Design: Design #1

Local Co-ordinate Reference: Well Rosa Unit 354A
 TVD Reference: WELL @ 6597 0usft (Original Well Elev)
 MD Reference: WELL @ 6597 0usft (Original Well Elev)
 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)
3,400.0	54.33	9.87	3,337.0	190.6	33.2	193.4	12.35	12.35	0.00
3,425.0	57.42	9.87	3,351.0	211.0	36.7	214.1	12.35	12.35	0.00
3,450.0	60.51	9.87	3,363.9	232.1	40.4	235.6	12.35	12.35	0.00
3,475.0	63.59	9.87	3,375.6	253.8	44.2	257.6	12.35	12.35	0.00
3,500.0	66.68	9.87	3,386.1	276.2	48.1	280.3	12.35	12.35	0.00
3,525.0	69.77	9.87	3,395.4	299.0	52.0	303.5	12.35	12.35	0.00
3,550.0	72.85	9.87	3,403.4	322.4	56.1	327.2	12.35	12.35	0.00
3,575.0	75.94	9.87	3,410.1	346.1	60.2	351.3	12.35	12.35	0.00
3,600.0	79.03	9.87	3,415.5	370.1	64.4	375.7	12.35	12.35	0.00
3,625.0	82.12	9.87	3,419.6	394.4	68.6	400.4	12.35	12.35	0.00
3,650.0	85.20	9.87	3,422.4	418.9	72.9	425.2	12.35	12.35	0.00
3,675.0	88.29	9.87	3,423.8	443.5	77.2	450.2	12.35	12.35	0.00
3,688.8	90.00	9.87	3,424.0	457.1	79.5	464.0	12.35	12.35	0.00
"Land 354A" 90° @ 3688' MD - Target Top									
3,700.0	90.00	9.87	3,424.0	468.1	81.5	475.2	0.00	0.00	0.00
3,800.0	90.00	9.87	3,424.0	566.6	98.6	575.2	0.00	0.00	0.00
3,900.0	90.00	9.87	3,424.0	665.2	115.7	675.2	0.00	0.00	0.00
4,000.0	90.00	9.87	3,424.0	763.7	132.9	775.2	0.00	0.00	0.00
4,100.0	90.00	9.87	3,424.0	862.2	150.0	875.2	0.00	0.00	0.00
4,200.0	90.00	9.87	3,424.0	960.7	167.2	975.2	0.00	0.00	0.00
4,300.0	90.00	9.87	3,424.0	1,059.2	184.3	1,075.2	0.00	0.00	0.00
4,400.0	90.00	9.87	3,424.0	1,157.8	201.5	1,175.2	0.00	0.00	0.00
4,500.0	90.00	9.87	3,424.0	1,256.3	218.6	1,275.2	0.00	0.00	0.00
4,600.0	90.00	9.87	3,424.0	1,354.8	235.8	1,375.2	0.00	0.00	0.00
4,700.0	90.00	9.87	3,424.0	1,453.3	252.9	1,475.2	0.00	0.00	0.00
4,800.0	90.00	9.87	3,424.0	1,551.8	270.0	1,575.2	0.00	0.00	0.00
4,900.0	90.00	9.87	3,424.0	1,650.4	287.2	1,675.2	0.00	0.00	0.00
5,000.0	90.00	9.87	3,424.0	1,748.9	304.3	1,775.2	0.00	0.00	0.00
5,100.0	90.00	9.87	3,424.0	1,847.4	321.5	1,875.2	0.00	0.00	0.00
5,200.0	90.00	9.87	3,424.0	1,945.9	338.6	1,975.2	0.00	0.00	0.00
5,300.0	90.00	9.87	3,424.0	2,044.4	355.8	2,075.2	0.00	0.00	0.00
5,400.0	90.00	9.87	3,424.0	2,142.9	372.9	2,175.2	0.00	0.00	0.00
5,500.0	90.00	9.87	3,424.0	2,241.5	390.0	2,275.2	0.00	0.00	0.00
5,600.0	90.00	9.87	3,424.0	2,340.0	407.2	2,375.2	0.00	0.00	0.00
5,700.0	90.00	9.87	3,424.0	2,438.5	424.3	2,475.2	0.00	0.00	0.00
5,800.0	90.00	9.87	3,424.0	2,537.0	441.5	2,575.2	0.00	0.00	0.00
5,900.0	90.00	9.87	3,424.0	2,635.5	458.6	2,675.2	0.00	0.00	0.00
6,000.0	90.00	9.87	3,424.0	2,734.1	475.8	2,775.2	0.00	0.00	0.00
6,100.0	90.00	9.87	3,424.0	2,832.6	492.9	2,875.2	0.00	0.00	0.00
6,200.0	90.00	9.87	3,424.0	2,931.1	510.1	2,975.2	0.00	0.00	0.00
6,300.0	90.00	9.87	3,424.0	3,029.6	527.2	3,075.2	0.00	0.00	0.00
6,400.0	90.00	9.87	3,424.0	3,128.1	544.3	3,175.2	0.00	0.00	0.00
6,500.0	90.00	9.87	3,424.0	3,226.7	561.5	3,275.2	0.00	0.00	0.00
6,600.0	90.00	9.87	3,424.0	3,325.2	578.6	3,375.2	0.00	0.00	0.00
6,700.0	90.00	9.87	3,424.0	3,423.7	595.8	3,475.2	0.00	0.00	0.00
6,800.0	90.00	9.87	3,424.0	3,522.2	612.9	3,575.2	0.00	0.00	0.00
6,868.7	90.00	9.87	3,424.0	3,589.9	624.7	3,643.8	0.00	0.00	0.00

"TD 354A" @ 6868' MD

Database: EDM 5000 1 Single User Db
Company: WPXEnergy
Project: Rio Arriba Co., NM
Site: Sec 19 T31N R04W
Well: Rosa Unit 354A
Wellbore: ST01
Design: Design #1

Local Co-ordinate Reference: Well Rosa Unit 354A
TVD Reference: WELL @ 6597.0usft (Original Well Elev)
MD Reference: WELL @ 6597.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Land 354A	- plan hits target center - Point	0.00	0.00	3,424.0	457.1	79.5	2,142,199.96	196,037.94	36° 52' 57.869 N	107° 17' 21.549 W
BHL 354A	- plan hits target center - Point	0.00	0.00	3,424.0	3,589.9	624.7	2,145,326.63	196,617.21	36° 53' 28.846 N	107° 17' 14.838 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,960.0	2,960.0	7"	7	8-3/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,885.0	2,885.0	Kirtland		0.00	
3,222.8	3,209.0	Fruitland		0.00	
3,688.8	3,424.0	Target Top		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
2,960.0	2,960.0	0.0	0.0	KOP 12 35°/100' @ 2960' MD
3,688.8	3,424.0	457.1	79.5	"Land 354A" 90° @ 3688' MD
6,868.7	3,424.0	3,589.9	624.7	"TD 354A" @ 6868' MD