

RECEIVED

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 29 2015

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

Farmington Field Office
Bureau of Land Management

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		5. Lease Serial No. NMNM-23045
2. Name of Operator WPX Energy Production, LLC		6. If Indian, Allottee or Tribe Name
3a. Address PO Box 640 Aztec, NM 87410	3b. Phone No. (include area code) 505-333-1816	7. If Unit of CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL: 664' FSL & 1989' FWL, sec 32 - 31N 4W BHL: 700' FSL & 700' FWL, Sec 33, T31N, R4W		8. Well Name and No. Schalk 32 #4H
		9. API Well No. 30-039-31107
		10. Field and Pool or Exploratory Area Basin Fruitland
		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 requests to change the directional/ops plan, casing and cementing program and also the TD of the well. Please find attached plans to reflect all changes.

CONDITIONS OF APPROVAL

OIL CONS. DIV DIST. 3

Adhere to previously issued stipulations

MAY 11 2015

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

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) LACEY GRANILL		Title PERMIT TECH III
Signature 		Date 4/29/15
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by 		Title Petroleum Engineer
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.		Date 5-7-15
		Office FFO

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)

NMOCDAV

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
RECEIVED

APR 23 2015

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31107		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 301345	*Property Name SCHALK 32		*Well Number 4H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6938'

Farmington Field Office
Bureau of Land Management

¹⁰ Surface Location

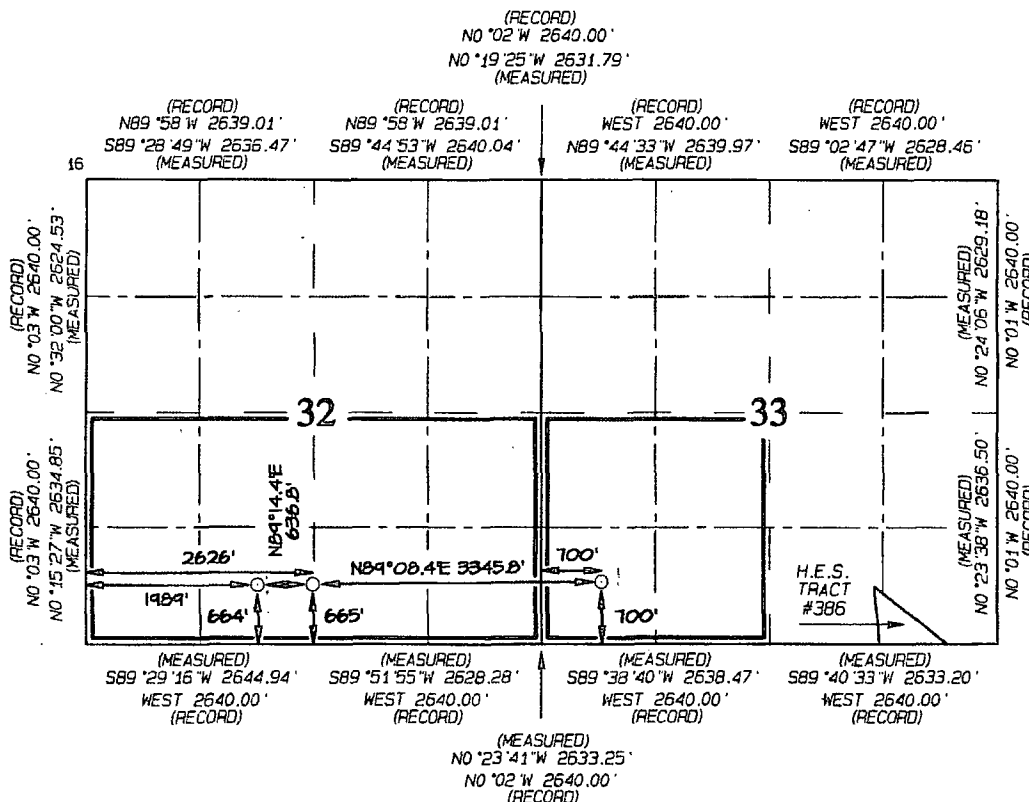
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	32	31N	4W		664	SOUTH	1989	WEST	RIO ARriba

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
M	33	31N	4W		700	SOUTH	700	WEST	RIO ARriba

¹² Dedicated Acres	320.0 - (S/2 Section 32)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
480.0	160.0 - (SW/4 Section 33)			

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



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: *Jason C. Edwards* Date: *4/29/15*
Printed Name: *Jason C. Edwards*
E-mail Address: *jason.edwards@wpenergy.com*

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: APRIL 24, 2015
Survey Date: SEPTEMBER 23, 2011

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

SURFACE LOCATION
LAT: 36.850733° N
LONG: 107.279871° W
DATUM: NAD1927

LAT: 36.850740° N
LONG: 107.280471° W
DATUM: NAD1983

POINT-OF-ENTRY
LAT: 36.850746° N
LONG: 107.277694° W
DATUM: NAD1927

LAT: 36.850753° N
LONG: 107.278294° W
DATUM: NAD1983

END-OF-LATERAL
LAT: 36.850830° N
LONG: 107.266260° W
DATUM: NAD1927

LAT: 36.850837° N
LONG: 107.266859° W
DATUM: NAD1983



WPX ENERGY

Operations Plan

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

DATE: 4/28/15 **API:** 30-039-31107
WELL NAME: Schalk 32 #004H **FIELD:** Basin Fruitland Coal
BH LOCATION: SWSW Sec. 33-T31N-R4W **SURFACE:** USFS
Rio Arriba, NM
ELEVATION: 6938' GR **MINERALS:** BLM
TOTAL DEPTH: 7,448'

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (6952' KB; NP = not penetrated)

NAME		TVD	MD		NAME		TVD	MD
San Jose		Surface	Surface		Top Target Coal		3,739	4,108
Nacimiento		1,967	1,967		Bottom Target Coal (NP)		3,755	
Ojo Alamo		3,133	3,133		Base Coal (NP)		3,771	
Kirtland		3,327	3,333		Picture Cliffs (NP)		3,772	
Fruitland		3,604	3,682		TD		3,739	7,448

B. LOGGING PROGRAM: No open-hole logs. MWD Gamma Ray in curve and lateral.

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

D. MUD LOGGING PROGRAM: Mud logger will be on location from surface casing to TD.

II. DRILLING

A. MUD PROGRAM: LSND mud through vertical and curve. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing casing. Notify Engineering of any mud losses. Produced water in lateral.

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 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.**

III. MATERIALS**A. CASING PROGRAM:**

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+ 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 4102'	7"	23# K-55
Prod. Liner	6-1/4"	+/- 4001' - 7448'	4-1/2"	11.6# K-55

Note: Intermediate casing is set at landing point. Production liner is 4-1/2" 11.6# Pre-perforated K-55.

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) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. (**NTL-FRA 90-1**).
3. PRODUCTION LINER: 4-1/2" 11.6# Pre-perforated K-55 liner.

C. CEMENTING:

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

1. SURFACE: Slurry: 150sx (269.4 cu.ft.) of "Type III" + 2% Cal-Seal 60 + ¼ # of poly-e-flake/sk + 0.3% Versaset + 2% Econolite + 6% Salt (Yield = 1.796 cu.ft./sk, Weight = 13.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead - 400 sx (1092 cu.ft.) of "EXTENDACEM" + 5 #/sk pheno-seal + 5% Cal-Seal 60 (Yield = 2.723 cu.ft./sk, Weight = 11.5 #/gal.). Tail - 100 sx (117.8cu.ft.) of Premium cement + 0.125 #/sk Poly-E-Flake, (Yield = 1.178 cu.ft./sk, Weight = 15.6#/gal.). Total volume = 1209.8 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface
3. PRODUCTION LINER: Un-cemented 4.5" perforated liner.

IV. COMPLETION**A. PRESSURE TEST**

1. Pressure test 7" casing to 1500 psi for 30 minutes.

B. STIMULATION

1. No stimulation

C. RUNNING TUBING

1. Fruitland Coal: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing approximately 50' above PBTD of 7" casing.



Project: Rio Arriba Co., NM
Site: Sec.32-T31N-R4W
Well: Schalk 32-4H
Wellbore: Wellbore #1
Design: Design #2



WELL DETAILS: Schalk 32-4H

		Ground Level:				
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2130515.832	198675.862	36.850730	-107.279870	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	3102.38	0.00	0.00	3102.38	0.00	0.00	0.00	0.00	0.00
3	4102.38	90.00	89.47	3739.00	5.87	636.59	9.00	89.47	636.62
4	7448.35	90.00	89.47	3739.00	36.69	3982.42	0.00	0.00	3982.59

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL Schalk 32-4H	3739.00	36.69	3982.42	36.850830	-107.268260	Point

CASING DETAILS

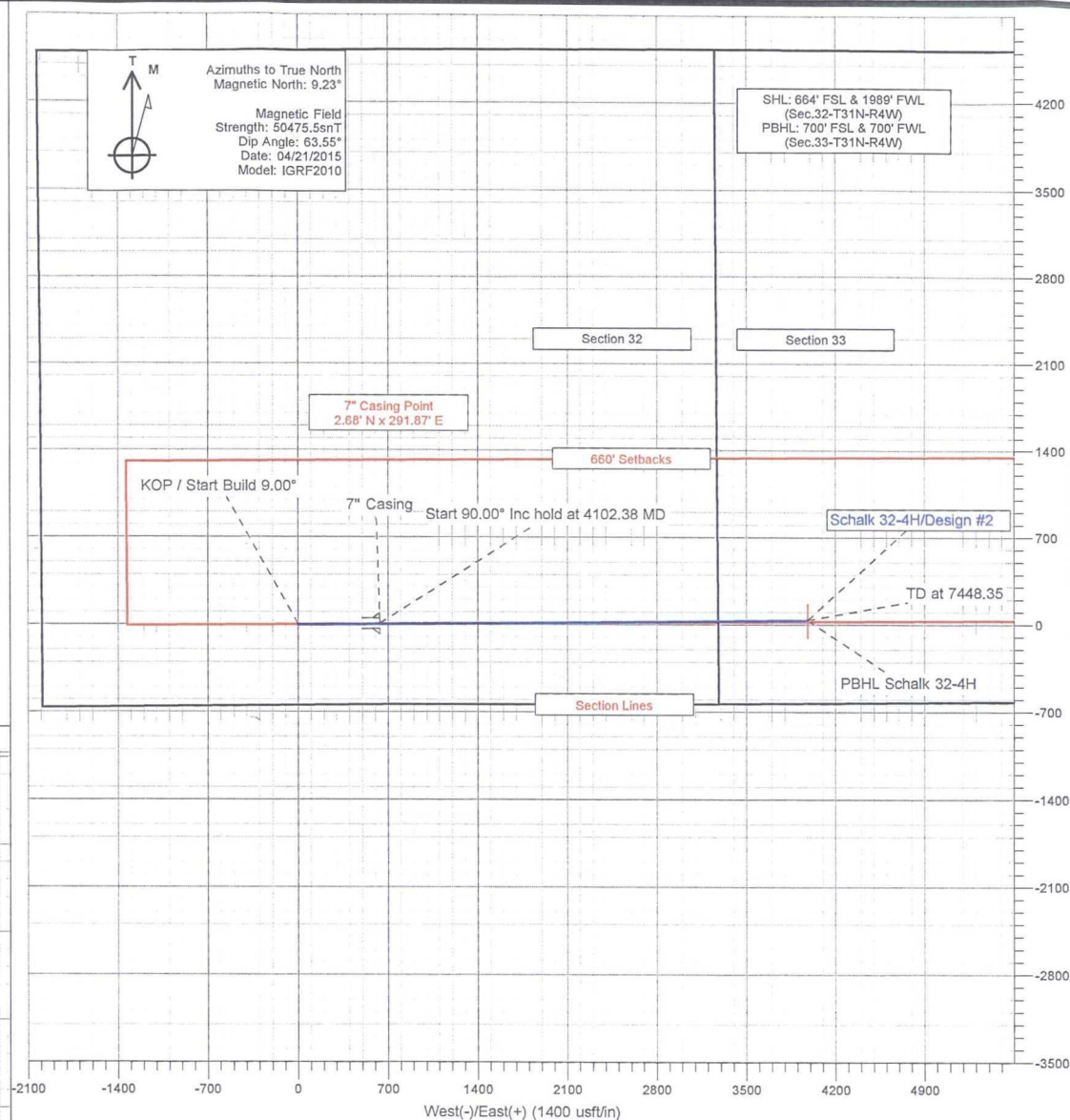
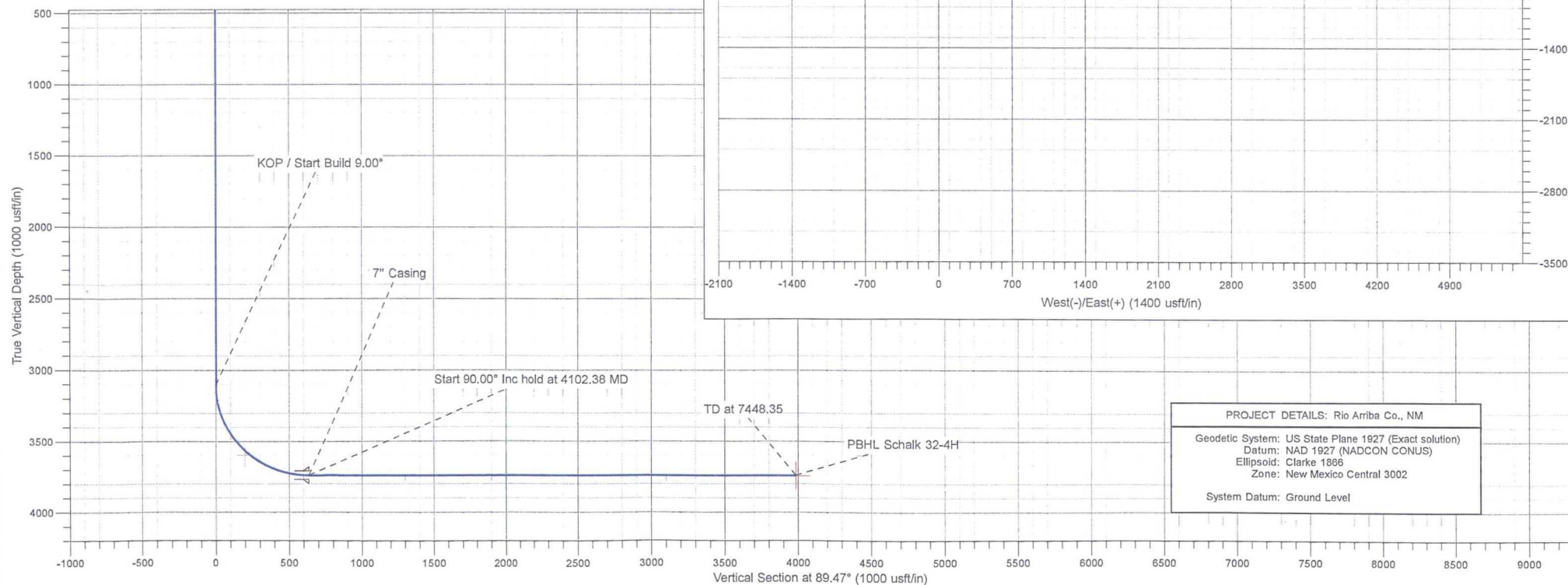
TVD	MD	Name
3739.00	4102.38	7" Casing

ANNOTATIONS

TVD	MD	Annotation
3102.38	3102.38	KOP / Start Build 9.00°
3739.00	4102.38	Start 90.00° Inc hold at 4102.38 MD
3739.00	7448.35	TD at 7448.35

Plan: Design #2 (Schalk 32-4H/Wellbore #1)

Created By: M. Ramich Date: 13:07, April 23 2015



PROJECT DETAILS: Rio Arriba Co., NM

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1886
Zone: New Mexico Central 3002

System Datum: Ground Level

WPXENERGY



WPX Energy Production, LLC

Rio Arriba Co., NM

Sec.32-T31N-R4W

Schalk 32-4H

Wellbore #1

Plan: Design #2

Standard Planning Report

23 April, 2015





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Schalk 32-4H
Company:	WPX Energy Production, LLC	TVD Reference:	WELL @ 6952.00usft (Original Well Elev)
Project:	Rio Arriba Co., NM	MD Reference:	WELL @ 6952.00usft (Original Well Elev)
Site:	Sec.32-T31N-R4W	North Reference:	True
Well:	Schalk 32-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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

Site	Sec.32-T31N-R4W				
Site Position:		Northing:	2,131,939.073 usft	Latitude:	36.854600
From:	Lat/Long	Easting:	197,365.670 usft	Longitude:	-107.284400
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.62 °

Well	Schalk 32-4H					
Well Position	+N/-S	-1,408.97 usft	Northing:	2,130,515.832 usft	Latitude:	36.850730
	+E/-W	1,325.53 usft	Easting:	198,675.862 usft	Longitude:	-107.279870
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,938.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	04/21/15	9.23	63.55	50,476

Design	Design #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	89.47

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,102.38	0.00	0.00	3,102.38	0.00	0.00	0.00	0.00	0.00	0.00	
4,102.38	90.00	89.47	3,739.00	5.87	636.59	9.00	9.00	0.00	89.47	PBHL Schalk 32-4H
7,448.35	90.00	89.47	3,739.00	36.69	3,982.42	0.00	0.00	0.00	0.00	PBHL Schalk 32-4H



Database: EDM 5000.1 Single User Db
Company: WPX Energy Production, LLC
Project: Rio Arriba Co., NM
Site: Sec.32-T31N-R4W
Well: Schalk 32-4H
Wellbore: Wellbore #1
Design: Design #2

Local Co-ordinate Reference: Well Schalk 32-4H
TVD Reference: WELL @ 6952.00usft (Original Well Elev)
MD Reference: WELL @ 6952.00usft (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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,102.38	0.00	0.00	3,102.38	0.00	0.00	0.00	0.00	0.00	0.00
KOP / Start Build 9.00°									
3,200.00	8.79	89.47	3,199.62	0.07	7.47	7.47	9.00	9.00	0.00
3,300.00	17.79	89.47	3,296.84	0.28	30.43	30.43	9.00	9.00	0.00
3,400.00	26.79	89.47	3,389.28	0.63	68.31	68.31	9.00	9.00	0.00
3,500.00	35.79	89.47	3,474.65	1.11	120.18	120.19	9.00	9.00	0.00
3,600.00	44.79	89.47	3,550.85	1.70	184.77	184.78	9.00	9.00	0.00
3,700.00	53.79	89.47	3,616.01	2.40	260.49	260.50	9.00	9.00	0.00
3,800.00	62.79	89.47	3,668.53	3.18	345.47	345.48	9.00	9.00	0.00
3,900.00	71.79	89.47	3,707.10	4.03	437.61	437.63	9.00	9.00	0.00
4,000.00	80.79	89.47	3,730.79	4.93	534.66	534.68	9.00	9.00	0.00
4,100.00	89.79	89.47	3,739.00	5.84	634.21	634.24	9.00	9.00	0.00
4,102.38	90.00	89.47	3,739.00	5.87	636.59	636.62	9.00	9.00	0.00
Start 90.00° Inc hold at 4102.38 MD - 7" Casing									
4,200.00	90.00	89.47	3,739.00	6.77	734.21	734.24	0.00	0.00	0.00
4,300.00	90.00	89.47	3,739.00	7.69	834.20	834.24	0.00	0.00	0.00
4,400.00	90.00	89.47	3,739.00	8.61	934.20	934.24	0.00	0.00	0.00
4,500.00	90.00	89.47	3,739.00	9.53	1,034.20	1,034.24	0.00	0.00	0.00
4,600.00	90.00	89.47	3,739.00	10.45	1,134.19	1,134.24	0.00	0.00	0.00
4,700.00	90.00	89.47	3,739.00	11.37	1,234.19	1,234.24	0.00	0.00	0.00
4,800.00	90.00	89.47	3,739.00	12.29	1,334.18	1,334.24	0.00	0.00	0.00
4,900.00	90.00	89.47	3,739.00	13.21	1,434.18	1,434.24	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Schalk 32-4H
Company:	WPX Energy Production, LLC	TVD Reference:	WELL @ 6952.00usft (Original Well Elev)
Project:	Rio Arriba Co., NM	MD Reference:	WELL @ 6952.00usft (Original Well Elev)
Site:	Sec.32-T31N-R4W	North Reference:	True
Well:	Schalk 32-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
5,000.00	90.00	89.47	3,739.00	14.14	1,534.17	1,534.24	0.00	0.00	0.00
5,100.00	90.00	89.47	3,739.00	15.06	1,634.17	1,634.24	0.00	0.00	0.00
5,200.00	90.00	89.47	3,739.00	15.98	1,734.17	1,734.24	0.00	0.00	0.00
5,300.00	90.00	89.47	3,739.00	16.90	1,834.16	1,834.24	0.00	0.00	0.00
5,400.00	90.00	89.47	3,739.00	17.82	1,934.16	1,934.24	0.00	0.00	0.00
5,500.00	90.00	89.47	3,739.00	18.74	2,034.15	2,034.24	0.00	0.00	0.00
5,600.00	90.00	89.47	3,739.00	19.66	2,134.15	2,134.24	0.00	0.00	0.00
5,700.00	90.00	89.47	3,739.00	20.59	2,234.14	2,234.24	0.00	0.00	0.00
5,800.00	90.00	89.47	3,739.00	21.51	2,334.14	2,334.24	0.00	0.00	0.00
5,900.00	90.00	89.47	3,739.00	22.43	2,434.14	2,434.24	0.00	0.00	0.00
6,000.00	90.00	89.47	3,739.00	23.35	2,534.13	2,534.24	0.00	0.00	0.00
6,100.00	90.00	89.47	3,739.00	24.27	2,634.13	2,634.24	0.00	0.00	0.00
6,200.00	90.00	89.47	3,739.00	25.19	2,734.12	2,734.24	0.00	0.00	0.00
6,300.00	90.00	89.47	3,739.00	26.11	2,834.12	2,834.24	0.00	0.00	0.00
6,400.00	90.00	89.47	3,739.00	27.04	2,934.12	2,934.24	0.00	0.00	0.00
6,500.00	90.00	89.47	3,739.00	27.96	3,034.11	3,034.24	0.00	0.00	0.00
6,600.00	90.00	89.47	3,739.00	28.88	3,134.11	3,134.24	0.00	0.00	0.00
6,700.00	90.00	89.47	3,739.00	29.80	3,234.10	3,234.24	0.00	0.00	0.00
6,800.00	90.00	89.47	3,739.00	30.72	3,334.10	3,334.24	0.00	0.00	0.00
6,900.00	90.00	89.47	3,739.00	31.64	3,434.09	3,434.24	0.00	0.00	0.00
7,000.00	90.00	89.47	3,739.00	32.56	3,534.09	3,534.24	0.00	0.00	0.00
7,100.00	90.00	89.47	3,739.00	33.49	3,634.09	3,634.24	0.00	0.00	0.00
7,200.00	90.00	89.47	3,739.00	34.41	3,734.08	3,734.24	0.00	0.00	0.00
7,300.00	90.00	89.47	3,739.00	35.33	3,834.08	3,834.24	0.00	0.00	0.00
7,400.00	90.00	89.47	3,739.00	36.25	3,934.07	3,934.24	0.00	0.00	0.00
7,448.35	90.00	89.47	3,739.00	36.69	3,982.42	3,982.59	0.00	0.00	0.00

TD at 7448.35

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
- Shape									
PBHL Schalk 32-4H	0.00	0.00	3,739.00	36.69	3,982.42	2,130,509.589	202,658.446	36.850830	-107.266260
- plan hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
4,102.38	3,739.00	7" Casing	7	8-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
3,102.38	3,102.38	0.00	0.00	KOP / Start Build 9.00°
4,102.38	3,739.00	5.87	636.59	Start 90.00° Inc hold at 4102.38 MD
7,448.35	3,739.00	36.69	3,982.42	TD at 7448.35