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: 6-18-15
Well information;
Operator WPX, Well Name and Number Chaco 2407 35I #901H
API# 30-039-31334, Section 35, Township 24 N/S, Range 7 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
- o 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.

Charles Perrin
NMOCD Approved by Signature

7-20-2015
Date KC

OIL CONS. DIV DIST. 3

JUL 08 2015

RECEIVED

JUN 18 2015

Farmington Field Office
Bureau of Land Management

Form 3160-3
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMSF-0078534

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

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

8. Lease Name and Well No.
Chaco 2407-35I #901H

2. Name of Operator
WPX Energy Production, LLC

9. API Well No.
~~901H~~ 30-039-31334

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/ Lybrook Gallup

4. Location of Well *(Report location clearly and in accordance with any State requirements. *)*
At surface I 1732' FSL & 269' FEL, sec 35, T24N, R7W
At proposed prod. zone D 299' FNL & 280' FWL, sec 35, T24N, R7W

11. Sec., T., R., M., or Blk. and Survey or Area
SHL: Section 35, T24N, R7W
BHL: Section 35, T24N, R7W

KP

14. Distance in miles and direction from nearest town or post office*
Approximately 50 miles Southeast 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) 269'

16. No. of Acres in lease
~~640~~ 1202.88

17. Spacing Unit dedicated to this well
240.00 N2NW, SENW, S2NE, NESE

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
22'

19. Proposed Depth
11,057 MD / 5,335 TVD

20. BLM/BIA Bond No. on file
UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6806' GR

22. Approximate date work will start*
July 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: 06/18/2015

Title: Regulatory Specialist Senior

Approved by *(Signature)* — Name *(Printed/Typed)* — Date: 6/30/15

Title: AFM — 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 / Lybrook Gallup formations at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the BLM and will be twinned with the existing Chaco 2407-35I #159/160 wells.

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

The access road is existing, no new road access is needed.

The pipeline is approved, no new pipeline approval is needed.

DRILLING 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

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
JUN 18 2015
Farmington Field Office
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹API Number	²Pool Code	³Pool Name
30-039-31334	97232 / ~~42289~~	BASIN MANCOS / ~~LYBROOK GALLUP~~

⁴Property Code	⁵Property Name	⁶Well Number
314809	CHACO 2407-35I	901H

⁷OGRID No.	⁸Operator Name	⁹Elevation
120782	WPX ENERGY PRODUCTION, LLC	6806'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	35	24N	7W		1732	SOUTH	269	EAST	RIO ARRIBA

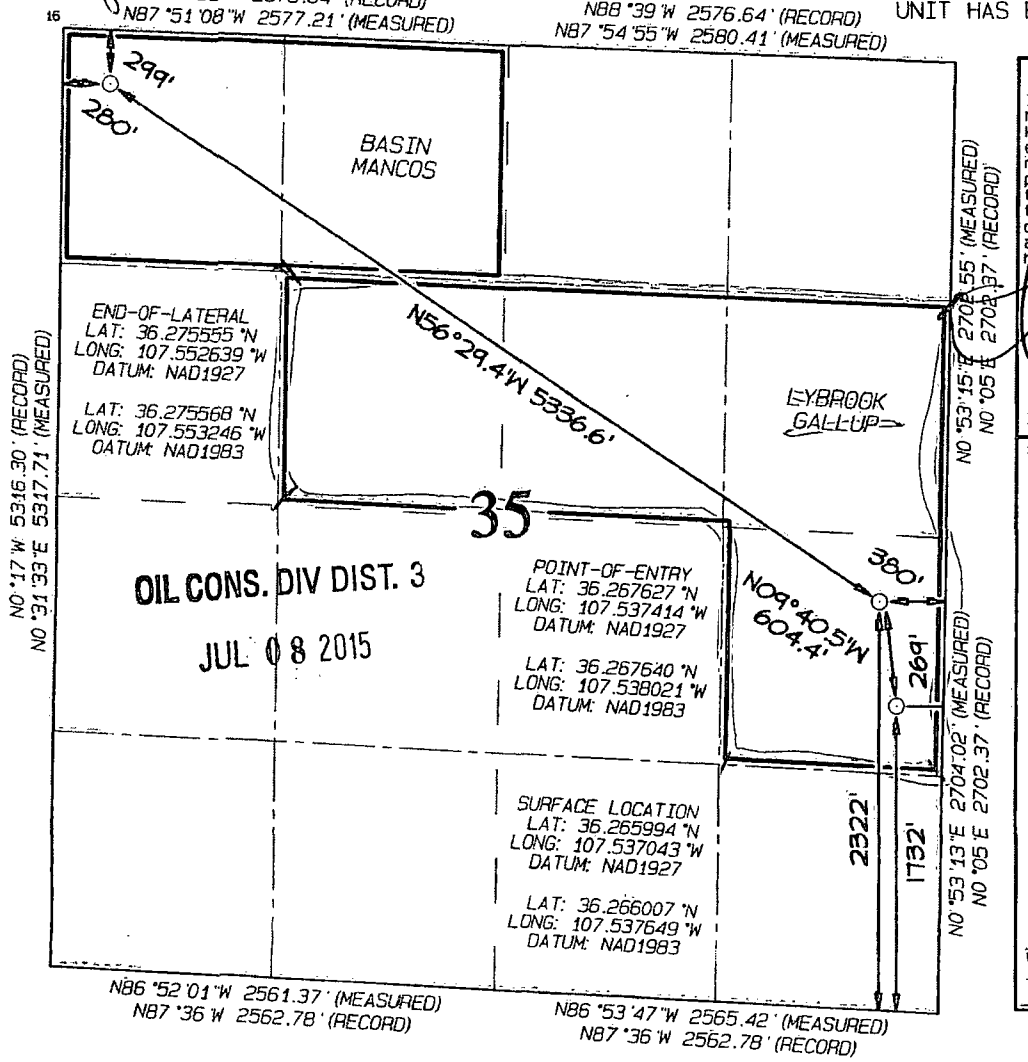
¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	35	24N	7W		299	NORTH	280	WEST	RIO ARRIBA

¹²Dedicated Acres		¹³Joint or Infill	¹⁴Consolidation Code	¹⁵Order No.
240.0	N/2 NW/4 & SE/4 NW/4 S/2 NE/4 & NE/4 SE/4 SECTION 35, T24N, R7W			

Basin Mancos = 80 acres
Lybrook Gallup = 160 acres

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



OIL CONS. DIV DIST. 3
JUL 08 2015

¹⁷OPERATOR 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.

Andrea Felix — 6-18-2015
Signature — Date

Andrea Felix
Printed Name

andrea.felix@wpxenergy.com
E-mail Address

¹⁸SURVEYOR 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: JUNE 17, 2015
Survey Date: SEPTEMBER 3, 2013

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: **6/18/2015**

FIELD: Basin Mancos/ Lybrook Gallup

WELL NAME: **Chaco 2407-35I #901H**

SURFACE: BLM

SH Location: **NESE Section 35 24N-07W**

ELEVATION: 6806' GR

BH Location: **NWNW Section 35 24N-07W**
Rio Arriba CO., NM

MINERALS: Federal

MEASURED DEPTH: **11,057'**

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

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1055	1053	Point Lookout	4197	4171
Kirtland	1364	**1360**	Mancos	4458	4430
Picture Cliffs	2044	2034	**Kickoff Point**	**4619**	4589
Lewis	2116	2106	Top Target	5601	5288
Chacra	2375	2363	**Landing Point**	**5721**	5300
Cliff House	3476	3455	Base Target	5721	5300
Menefee	3528	3507			
			TD	11057	5335

B. **MUD LOGGING PROGRAM:** Mudlogger on location from surface csg to TD.
C. **LOGGING PROGRAM:** LWD GR from surface casing to TD.
D. **NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. **DRILLING**

A. **MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 ¾" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi 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. 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:

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"	5720'	7"	23#	K-55
Prod. Liner	6.125"	5570'- 11057'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf-5570'	4-1/2"	11.6#	N-80

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: None

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, (405 sx / 519.68 cu ft. / 92.6 bbls). **Tail Spacer:** 20 BBL of MMCR. **Displacement**: Displace w/ +/- 140 bbl Fr Water. Total Cement (520 cu ft / 92.6 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 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N2 for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs and flowback lateral.

D. RUNNING TUBING

1. *Production Tubing:* Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner.

- 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# N-80 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).

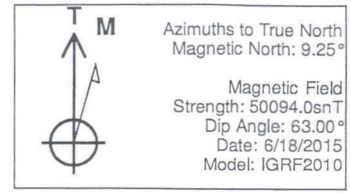
A 4-1/2" 11.6# N-80 tie-back string with seal assembly will be run and stung into the PBR of the liner hanger, tested to 1500 PSI and hung off at the surface. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

WPXENERGY

Well Name: Chaco 2407-35I #901H
Surface Location: Chaco 2407-35I
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6806.00

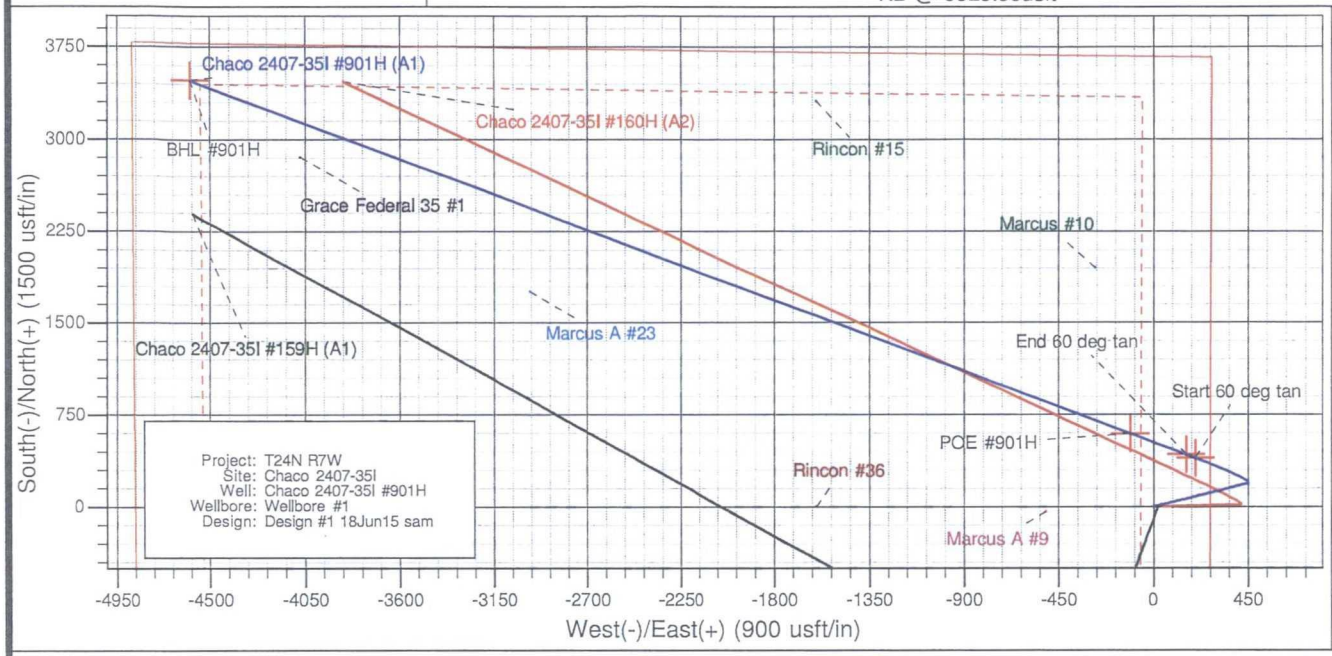
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1916197.70	587345.90	36.2659944	-107.5370430	A1

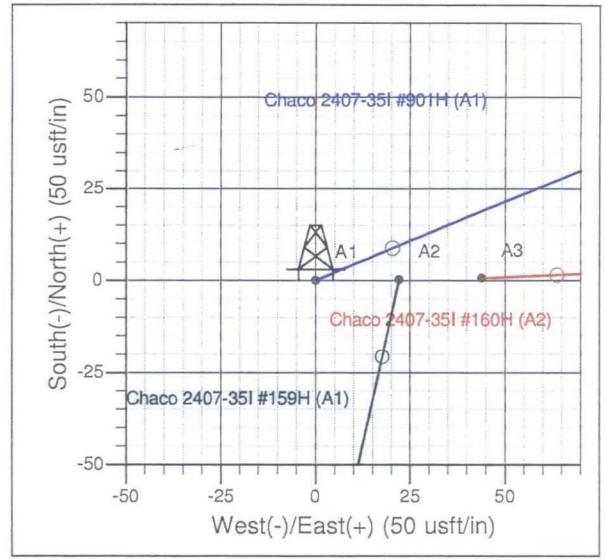
KB @ 6820.00usft

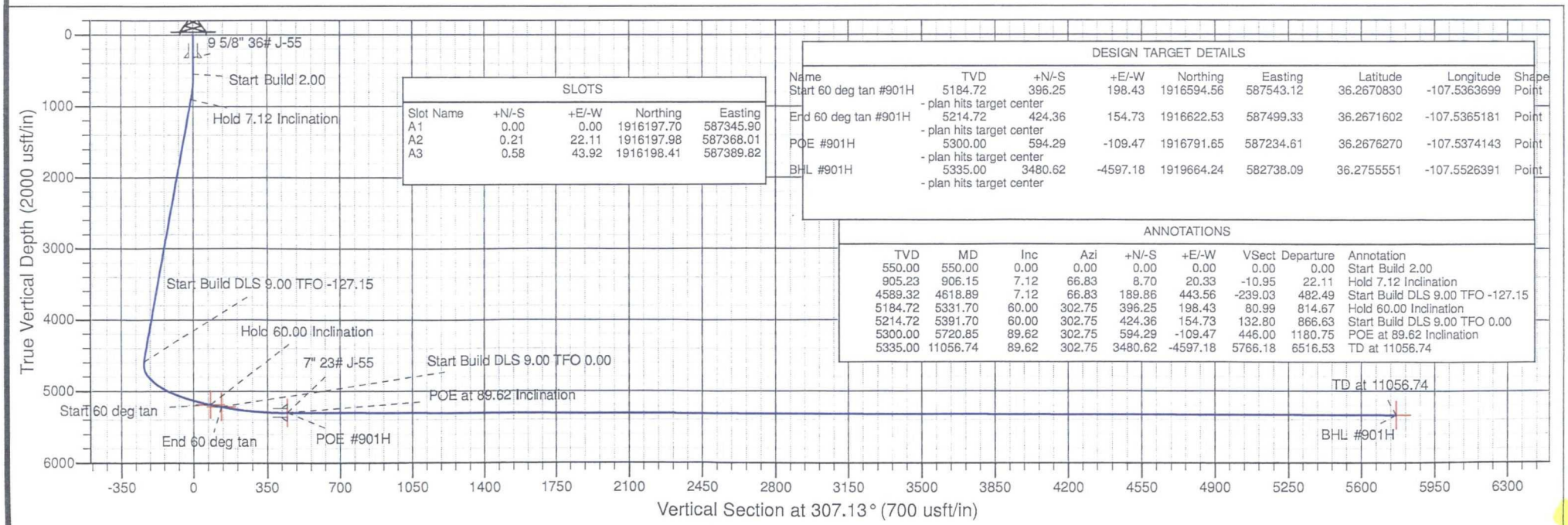


Azimuths to True North
Magnetic North: 9.25°

Magnetic Field
Strength: 50094.0snT
Dip Angle: 63.00°
Date: 6/18/2015
Model: IGRF2010







SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A1	0.00	0.00	1916197.70	587345.90
A2	0.21	22.11	1916197.98	587368.01
A3	0.58	43.92	1916198.41	587389.82

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 deg tan #901H	5184.72	396.25	198.43	1916594.56	587543.12	36.2670830	-107.5363699	Point
- plan hits target center								
End 60 deg tan #901H	5214.72	424.36	154.73	1916622.53	587499.33	36.2671602	-107.5365181	Point
- plan hits target center								
POE #901H	5300.00	594.29	-109.47	1916791.65	587234.61	36.2676270	-107.5374143	Point
- plan hits target center								
BHL #901H	5335.00	3480.62	-4597.18	1919664.24	582738.09	36.2755551	-107.5526391	Point
- plan hits target center								

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
550.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
905.23	906.15	7.12	66.83	8.70	20.33	-10.95	22.11	Hold 7.12 Inclination
4589.32	4618.89	7.12	66.83	189.86	443.56	-239.03	482.49	Start Build DLS 9.00 TFO -127.15
5184.72	5331.70	60.00	302.75	396.25	198.43	80.99	814.67	Hold 60.00 Inclination
5214.72	5391.70	60.00	302.75	424.36	154.73	132.80	866.63	Start Build DLS 9.00 TFO 0.00
5300.00	5720.85	89.62	302.75	594.29	-109.47	446.00	1180.75	POE at 89.62 Inclination
5335.00	11056.74	89.62	302.75	3480.62	-4597.18	5766.18	6516.53	TD at 11056.74

WPX Energy

T24N R7W
Chaco 2407-35I
Chaco 2407-35I #901H - Slot A1

Wellbore #1

Plan: Design #1 18Jun15 sam

Standard Planning Report

18 June, 2015

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2407-35I #901H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	KB @ 6820.00usft
Project:	T24N R7W	**MD Reference:**	KB @ 6820.00usft
Site:	Chaco 2407-35I	**North Reference:**	True
Well:	Chaco 2407-35I #901H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 18Jun15 sam		

Project	T24N R7W		
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	Chaco 2407-35I				
Site Position:		**Northing:**	1,916,198.41 usft	**Latitude:**	36.2659960
From:	Lat/Long	**Easting:**	587,389.82 usft	**Longitude:**	-107.5368940
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.18 °

Well	Chaco 2407-35I #901H - Slot A1					
Well Position	**+N/-S**	-0.57 usft	**Northing:**	1,916,197.70 usft	**Latitude:**	36.2659944
	+E/-W	-43.92 usft	**Easting:**	587,345.90 usft	**Longitude:**	-107.5370430
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,806.00 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	6/18/2015	9.25	63.00	50,094

Design	Design #1 18Jun15 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	307.13	

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	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	
906.15	7.12	66.83	905.23	8.70	20.33	2.00	2.00	0.00	66.83	
4,618.89	7.12	66.83	4,589.32	189.86	443.56	0.00	0.00	0.00	0.00	
5,331.70	60.00	302.75	5,184.72	396.25	198.43	9.00	7.42	-17.41	-127.15	Start 60 deg tan #901
5,391.70	60.00	302.75	5,214.72	424.36	154.73	0.00	0.00	0.00	0.00	End 60 deg tan #901H
5,552.93	74.51	302.75	5,276.89	504.58	30.00	9.00	9.00	0.00	0.00	
5,720.85	89.62	302.75	5,300.00	594.29	-109.47	9.00	9.00	0.00	0.00	POE #901H
11,056.74	89.62	302.75	5,335.00	3,480.62	-4,597.18	0.00	0.00	0.00	0.00	BHL #901H

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2407-35I #901H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	KB @ 6820.00usft
Project:	T24N R7W	**MD Reference:**	KB @ 6820.00usft
Site:	Chaco 2407-35I	**North Reference:**	True
Well:	Chaco 2407-35I #901H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 18Jun15 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
9 5/8" 36# J-55									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
906.15	7.12	66.83	905.23	8.70	20.33	-10.95	2.00	2.00	0.00
Hold 7.12 Inclination									
1,000.00	7.12	66.83	998.36	13.28	31.02	-16.72	0.00	0.00	0.00
1,500.00	7.12	66.83	1,494.50	37.68	88.02	-47.43	0.00	0.00	0.00
2,000.00	7.12	66.83	1,990.64	62.08	145.02	-78.15	0.00	0.00	0.00
2,500.00	7.12	66.83	2,486.78	86.47	202.02	-108.86	0.00	0.00	0.00
3,000.00	7.12	66.83	2,982.92	110.87	259.01	-139.58	0.00	0.00	0.00
3,500.00	7.12	66.83	3,479.06	135.27	316.01	-170.29	0.00	0.00	0.00
4,000.00	7.12	66.83	3,975.21	159.67	373.01	-201.01	0.00	0.00	0.00
4,500.00	7.12	66.83	4,471.35	184.06	430.01	-231.72	0.00	0.00	0.00
4,618.89	7.12	66.83	4,589.32	189.86	443.56	-239.03	0.00	0.00	0.00
Start Build DLS 9.00 TFO -127.15									
5,000.00	30.47	309.18	4,953.59	262.38	388.74	-151.55	9.00	6.13	-30.87
5,331.70	60.00	302.75	5,184.72	396.25	198.43	80.99	9.00	8.90	-1.94
Hold 60.00 Inclination									
5,391.70	60.00	302.75	5,214.72	424.36	154.73	132.80	0.00	0.00	0.00
Start Build DLS 9.00 TFO 0.00									
5,500.00	69.75	302.75	5,260.65	477.34	72.36	230.44	9.00	9.00	0.00
5,552.93	74.51	302.75	5,276.89	504.58	30.00	280.66	9.00	9.00	0.00
5,720.85	89.62	302.75	5,300.00	594.29	-109.47	446.00	9.00	9.00	0.00
POE at 89.62 Inclination									
5,721.00	89.62	302.75	5,300.00	594.37	-109.59	446.15	0.26	0.26	0.00
7" 23# J-55									
6,000.00	89.62	302.75	5,301.83	745.29	-344.25	724.33	0.00	0.00	0.00
6,500.00	89.62	302.75	5,305.11	1,015.75	-764.77	1,222.86	0.00	0.00	0.00
7,000.00	89.62	302.75	5,308.39	1,286.21	-1,185.29	1,721.39	0.00	0.00	0.00
7,500.00	89.62	302.75	5,311.67	1,556.68	-1,605.81	2,219.91	0.00	0.00	0.00
8,000.00	89.62	302.75	5,314.95	1,827.14	-2,026.33	2,718.44	0.00	0.00	0.00
8,500.00	89.62	302.75	5,318.23	2,097.61	-2,446.85	3,216.97	0.00	0.00	0.00
9,000.00	89.62	302.75	5,321.51	2,368.07	-2,867.38	3,715.49	0.00	0.00	0.00
9,500.00	89.62	302.75	5,324.79	2,638.53	-3,287.90	4,214.02	0.00	0.00	0.00
10,000.00	89.62	302.75	5,328.07	2,909.00	-3,708.42	4,712.55	0.00	0.00	0.00
10,500.00	89.62	302.75	5,331.35	3,179.46	-4,128.94	5,211.08	0.00	0.00	0.00
11,000.00	89.62	302.75	5,334.63	3,449.93	-4,549.46	5,709.60	0.00	0.00	0.00
11,056.74	89.62	302.75	5,335.00	3,480.62	-4,597.18	5,766.18	0.00	0.00	0.00
TD at 11056.74									

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2407-35I #901H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	KB @ 6820.00usft
Project:	T24N R7W	**MD Reference:**	KB @ 6820.00usft
Site:	Chaco 2407-35I	**North Reference:**	True
Well:	Chaco 2407-35I #901H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 18Jun15 sam		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Start 60 deg tan #901H - plan hits target center - Point	0.00	0.00	5,184.72	396.25	198.43	1,916,594.56	587,543.12	36.2670829	-107.5363699
End 60 deg tan #901H - plan hits target center - Point	0.00	0.00	5,214.72	424.36	154.73	1,916,622.53	587,499.33	36.2671602	-107.5365182
POE #901H - plan hits target center - Point	0.00	0.00	5,300.00	594.29	-109.47	1,916,791.65	587,234.61	36.2676270	-107.5374144
BHL #901H - plan hits target center - Point	0.00	0.00	5,335.00	3,480.62	-4,597.18	1,919,664.24	582,738.09	36.2755551	-107.5526392

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8" 36# J-55	9.62	12.25
5,721.00	5,300.00	7" 23# J-55	7.00	8.75

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
550.00	550.00	0.00	0.00	Start Build 2.00
906.15	905.23	8.70	20.33	Hold 7.12 Inclination
4,618.89	4,589.32	189.86	443.56	Start Build DLS 9.00 TFO -127.15
5,331.70	5,184.72	396.25	198.43	Hold 60.00 Inclination
5,391.70	5,214.72	424.36	154.73	Start Build DLS 9.00 TFO 0.00
5,720.85	5,300.00	594.29	-109.47	POE at 89.62 Inclination
11,056.74	5,335.00	3,480.62	-4,597.18	TD at 11056.74

3. 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.
4. 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.

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the well is 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 a commercial disposal facility or land farm. 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. 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 4 in Appendix B for the location of toilets).

E. Garbage and other water 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.

G. Produced Water:
   1. WPX Energy will dispose of produced water from this well at one of the following facilities:

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

in Bloomfield, NM to WPX Energy Production, LLC Chaco 2407-35I #901H

1732' FSL & 269' FEL, Section 35, T24N, R7W, N.M.P.M., Rio Arriba County, NM

Latitude: 36.266007°N Longitude: 107.537649°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 48.3 miles to Mile Marker 102.9;

Go Left (Northerly) on County Road #378 for 1.1 miles to fork in roadway:

Go Left (North-westerly) for 0.4 miles down Rocky Berry Hill to fork in roadway at bottom of hill;

Go Left (Westerly) for 1.1 miles to fork in roadway;

Go Right (Northerly) for 1.1 miles to 4-way intersection on edge of existing wellpad;

Go Straight (Easterly) for 0.1 miles through Elm Ridge Marcus A#9 location to fork in roadway;

Go Right (South-easterly) along WPX Chaco 2407-35I #159H existing access for 78.0' to staked Chaco 2407-35I #901H location.

3000 PSI BOP Schematic