

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: 12-16-15

Well information;

Operator WPX, Well Name and Number NE Charco Com # 941 H

API# 30-039-31357, Section 8, Township 23 (N/S), Range 6 (E/W)

Conditions of Approval:

(See the below checked and handwritten conditions)

- Notify Aztec OCD 24hrs prior to casing & cement.
- Hold C-104 for directional survey & "As Drilled" Plat
- Hold C-104 for NSL, NSP, DHC
- 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.

Charles Hernandez
NMOCD Approved by Signature

1-24-2016
Date KC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 19 2016

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF 078359
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator WPX Energy Production, LLC		7. If Unit or CA Agreement, Name and No. NMNM 132829
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. NE Chaco Com #941H
3b. Phone No. (include area code) (505) 333-1816		9. API Well No. 30-039-01357
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1360' FSL & 273' FWL SEC 8 23N 6W At proposed prod. zone 331' FSL & 1063' FWL SEC 16 23N 6W		10. Field and Pool, or Exploratory Area Chaco Unit NE HZ (Oil)
14. Distance in miles and direction from nearest town or post office* From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield NM travel S. on Hwy 550 for 50.2 to MM 101.0		11. Sec., T., R., M., or Blk. and Survey or Area SHL: Sec 8, T23N, R6W BHL: Sec 16, T23N, R7W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 331'	16. No. of Acres in lease 2461.69 2462 Acres	12. County or Parish Rio Arriba County
17. Spacing Unit dedicated to this well 1587.67 Acres	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 22'	19. Proposed Depth 15115' MD / 5337' TVD	20. BLM/BIA Bond No. on file UTB000178
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6832' GR	22. Approximate date work will start* April 15, 2016	23. Estimated duration 1 month

RECEIVED
DEC 16 2015
Bureau of Land Management
Farmington Field Office

HP

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name (Printed/Typed) Lacey Granillo	Date 12/16/15
---------------	----------------------------------------	------------------

Permit Tech.III Approved by (Signature)	Name (Printed/Typed) AFD	Date 1/13/2016
Title	Office FFO	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

WPX Energy Production, LLC, proposes to develop the Chaco Unit NE HZ (Oil) formation 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 is on lease and will be twinned with the NE Chaco Com #910H/933H along with the NE Chaco Com #199H/200H/268H/269H that have previously been drilled.

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

No new access road is needed.

The existing pipeline from NE Chaco Com #199H will be utilized.

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

NMOCD AV

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31357		*Pool Code 98088	*Pool Name CHACO UNIT NE HZ (OIL)
*Property Code 313800	*Property Name NE CHACO COM		*Well Number 941H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6832'

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
L	8	23N	6W		1360	SOUTH	273	WEST	RIO ARRIBA

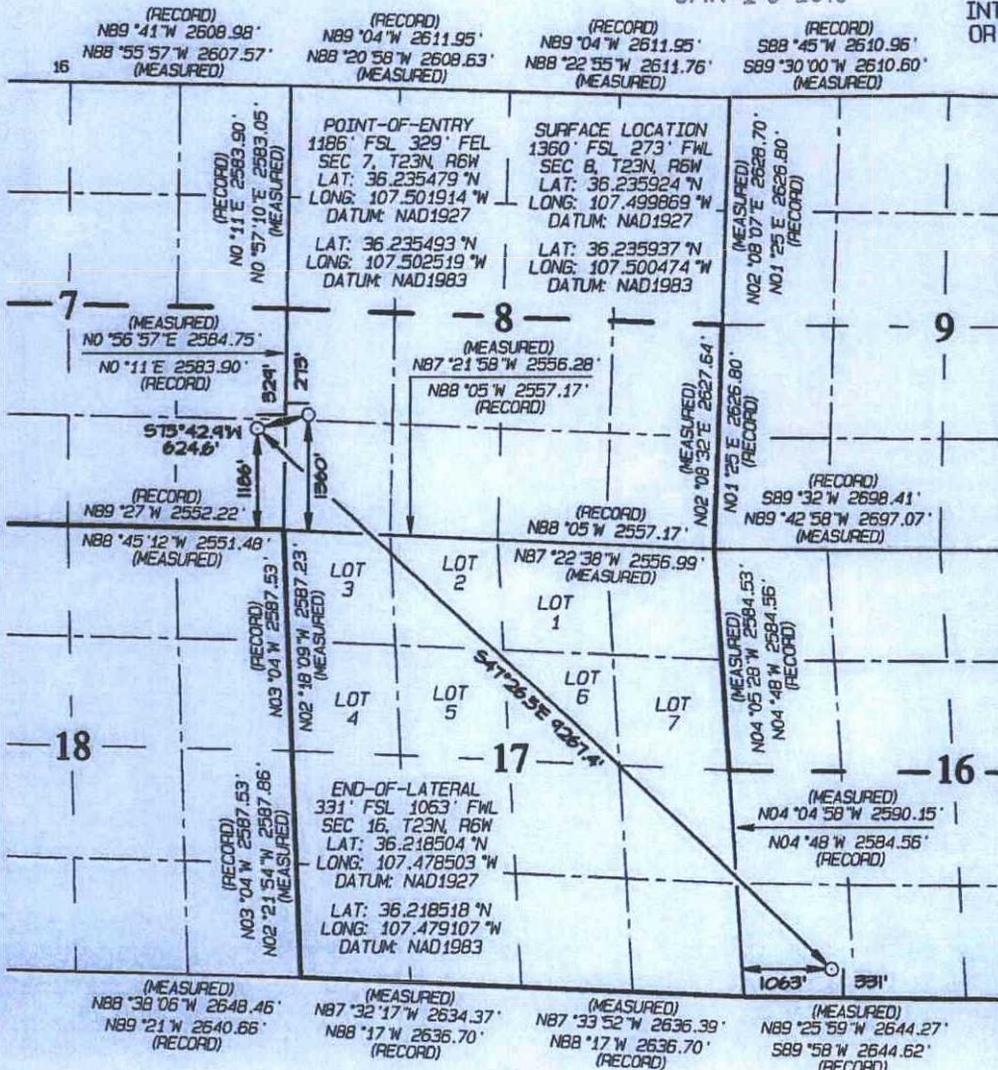
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	16	23N	6W		331	SOUTH	1063	WEST	RIO ARRIBA

12 Dedicated Acres 1587.67	S/2 - Section 7	13 Joint or Infill	14 Correlation Code	15 Order No. R-13817A	9,237.3 Total acres
	S/2 - Section 8				
	S/2 - Section 16	OIL CONS. DIV DIST. 3			
	Entire Section 17				

JAN 19 2016

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: *[Signature]* Date: 12/16/15

Printed Name: LACEY, GRANILLO
E-mail Address: LACEY.GRANILLO@WPXENERGY.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: DECEMBER 14, 2015
Survey Date: OCTOBER 9, 2015

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
15269

JASON C. EDWARDS
Certificate Number 15269

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320.00'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	5,848.96'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5698.96' - 15,115.32'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5698.96'	4.5"	11.6 LBS	P-110 or equiv	LTC

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 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. **Place DV tool @ the top of the Chacra formation. If cement is circulated back to surface on the first stage, a cancelation device will be dropped to shift the dv tool closed and the 2nd stage cement job will be aborted at that time.**
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.

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 STAGE 1: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 125 bbls, 357 sks, (704 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 78 bbls, 338 sks, (439 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 230 bbl Drilling mud or water.
Total Cement: 204 bbls, 695 sks, (1143 cuft)
STAGE 2: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 59 bbls, 169 sks, (330 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 16 bbls, 78 sks, (90 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 92 bbl Drilling mud or water.
Total Cement: 75 bbls, 248 sks, (420 cuft)

3. PROD. 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 1.36 cuft/sk 13.3 ppg (923 sx /1255 cuft /224 bbls). Tail Spacer: 20 BBL of MMCR.
Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (923 sx /1255bbls).

I.
COMPLETION

A. **CBL**

Run CCL for perforating

A. **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.

B. **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.

C. **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:

Proposed Operations:

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-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).



WPX Energy

T23N R6W

Chaco 2306-08L

NE Chaco COM #941H - Slot A8

Wellbore #1

Plan: Design #1 1Dec15 sam

Standard Planning Report

01 December, 2015

WPX
Planning Report

OIL CONS. DIV DIST. 3

JAN 19 2016

Database:	COMPASS	Local Co-ordinate Reference:	Well NE Chaco COM #941H (A8) - Slot A8
Company:	WPX Energy	TVD Reference:	KB @ 6857.00usft (Aztec 1000)
Project:	T23N R6W	MD Reference:	KB @ 6857.00usft (Aztec 1000)
Site:	Chaco 2306-08L	North Reference:	True
Well:	NE Chaco COM #941H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 1Dec15 sam		

Project	T23N R6W		
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 2306-08L				
Site Position:		Northing:	1,905,402.76 usft	Latitude:	36.236242
From:	Lat/Long	Easting:	598,278.64 usft	Longitude:	-107.500084
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.20 °

Well	NE Chaco COM #941H - Slot A8					
Well Position	+N/-S	-115.78 usft	Northing:	1,905,287.20 usft	Latitude:	36.235924
	+E/-W	63.53 usft	Easting:	598,342.56 usft	Longitude:	-107.499869
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level:	6,832.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/23/2015	9.18	62.97	50,039

Design	Design #1 1Dec15 sam			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	135.17

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	
425.00	0.00	0.00	425.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,285.38	17.21	287.27	1,272.51	38.07	-122.45	2.00	2.00	0.00	287.27	
4,609.62	17.21	287.27	4,447.95	330.06	-1,061.53	0.00	0.00	0.00	0.00	
5,452.32	60.00	131.82	5,169.72	87.21	-881.54	9.00	5.08	-18.45	-158.22	Start 60 tan #941H
5,512.32	60.00	131.82	5,199.72	52.56	-842.82	0.00	0.00	0.00	0.00	End 60 tan #941H
5,684.41	75.49	131.82	5,264.70	-53.31	-724.49	9.00	9.00	0.00	0.00	
5,848.96	90.30	131.82	5,285.00	-161.89	-603.14	9.00	9.00	0.00	-0.01	POE #941H
15,115.32	90.30	131.82	5,237.00	-6,340.45	6,302.54	0.00	0.00	0.00	0.00	BHL #941H

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well NE Chaco COM #941H (A8) - Slot A8
Company:	WPX Energy	TVD Reference:	KB @ 6857.00usft (Aztec 1000)
Project:	T23N R6W	MD Reference:	KB @ 6857.00usft (Aztec 1000)
Site:	Chaco 2306-08L	North Reference:	True
Well:	NE Chaco COM #941H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 1Dec15 sam		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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"									
425.00	0.00	0.00	425.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
500.00	1.50	287.27	499.99	0.29	-0.94	-0.87	2.00	2.00	0.00
1,000.00	11.50	287.27	996.15	17.08	-54.92	-50.83	2.00	2.00	0.00
1,285.38	17.21	287.27	1,272.51	38.07	-122.45	-113.33	2.00	2.00	0.00
Hold 17.21 Inclination									
1,500.00	17.21	287.27	1,477.52	56.92	-183.08	-169.44	0.00	0.00	0.00
2,000.00	17.21	287.27	1,955.14	100.84	-324.33	-300.16	0.00	0.00	0.00
2,500.00	17.21	287.27	2,432.76	144.76	-465.57	-430.89	0.00	0.00	0.00
3,000.00	17.21	287.27	2,910.38	188.68	-606.82	-561.61	0.00	0.00	0.00
3,500.00	17.21	287.27	3,388.00	232.59	-748.07	-692.34	0.00	0.00	0.00
4,000.00	17.21	287.27	3,865.61	276.51	-889.32	-823.06	0.00	0.00	0.00
4,500.00	17.21	287.27	4,343.23	320.43	-1,030.56	-953.79	0.00	0.00	0.00
4,609.62	17.21	287.27	4,447.95	330.06	-1,061.53	-982.45	0.00	0.00	0.00
Start Build DLS 9.00 TFO -158.22									
5,000.00	20.07	145.76	4,829.78	290.59	-1,079.56	-967.17	9.00	0.73	-36.25
5,452.32	60.00	131.82	5,169.72	87.21	-881.54	-683.32	9.00	8.83	-3.08
Hold 60.00 Inclination									
5,500.00	60.00	131.82	5,193.56	59.68	-850.77	-642.11	0.00	0.00	0.00
5,512.32	60.00	131.82	5,199.72	52.56	-842.82	-631.45	0.00	0.00	0.00
Start Build DLS 9.00 TFO 0.00									
5,684.41	75.49	131.82	5,264.70	-53.31	-724.49	-472.94	9.00	9.00	0.00
Start DLS 9.00 TFO -0.01									
5,848.96	90.30	131.82	5,285.00	-161.89	-603.14	-310.39	9.00	9.00	0.00
POE at 90.30 Inc 131.82 Deg									
5,849.00	90.30	131.82	5,285.00	-161.91	-603.11	-310.35	0.00	0.00	0.00
7"									
6,000.00	90.30	131.82	5,284.22	-262.60	-490.58	-159.61	0.00	0.00	0.00
6,500.00	90.30	131.82	5,281.63	-595.98	-117.96	339.53	0.00	0.00	0.00
7,000.00	90.30	131.82	5,279.04	-929.37	254.67	838.67	0.00	0.00	0.00
7,500.00	90.30	131.82	5,276.45	-1,262.76	627.29	1,337.80	0.00	0.00	0.00
8,000.00	90.30	131.82	5,273.86	-1,596.15	999.91	1,836.94	0.00	0.00	0.00
8,500.00	90.30	131.82	5,271.27	-1,929.53	1,372.53	2,336.08	0.00	0.00	0.00
9,000.00	90.30	131.82	5,268.68	-2,262.92	1,745.15	2,835.22	0.00	0.00	0.00
9,500.00	90.30	131.82	5,266.09	-2,596.31	2,117.77	3,334.36	0.00	0.00	0.00
10,000.00	90.30	131.82	5,263.50	-2,929.69	2,490.39	3,833.49	0.00	0.00	0.00
10,500.00	90.30	131.82	5,260.91	-3,263.08	2,863.01	4,332.63	0.00	0.00	0.00
11,000.00	90.30	131.82	5,258.32	-3,596.47	3,235.63	4,831.77	0.00	0.00	0.00
11,500.00	90.30	131.82	5,255.73	-3,929.85	3,608.26	5,330.91	0.00	0.00	0.00
12,000.00	90.30	131.82	5,253.14	-4,263.24	3,980.88	5,830.04	0.00	0.00	0.00
12,500.00	90.30	131.82	5,250.55	-4,596.63	4,353.50	6,329.18	0.00	0.00	0.00
13,000.00	90.30	131.82	5,247.96	-4,930.01	4,726.12	6,828.32	0.00	0.00	0.00
13,500.00	90.30	131.82	5,245.37	-5,263.40	5,098.74	7,327.46	0.00	0.00	0.00
14,000.00	90.30	131.82	5,242.78	-5,596.79	5,471.36	7,826.59	0.00	0.00	0.00
14,500.00	90.30	131.82	5,240.19	-5,930.17	5,843.98	8,325.73	0.00	0.00	0.00
15,000.00	90.30	131.82	5,237.60	-6,263.56	6,216.60	8,824.87	0.00	0.00	0.00
15,115.32	90.30	131.82	5,237.00	-6,340.45	6,302.54	8,939.99	0.00	0.00	0.00
TD at 15090.32									

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well NE Chaco COM #941H (A8) - Slot A8
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Project:	T23N R6W	MD Reference:	KB @ 6857.00usft (Aztec 1000)
Site:	Chaco 2306-08L	North Reference:	True
Well:	NE Chaco COM #941H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 1Dec15 sam		

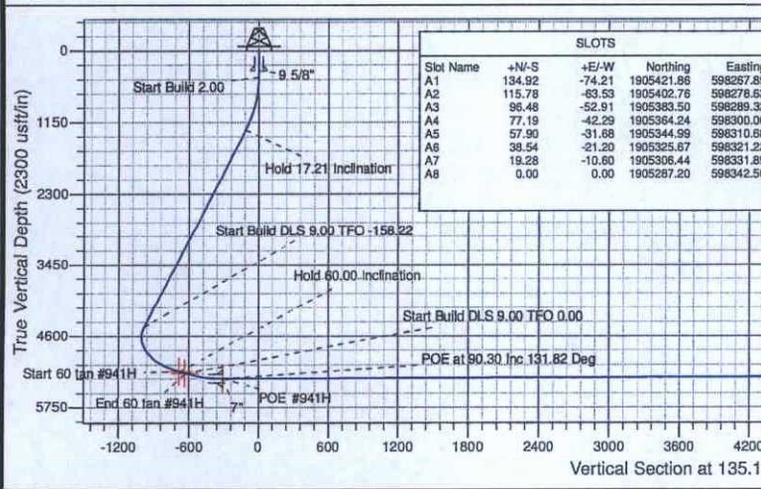
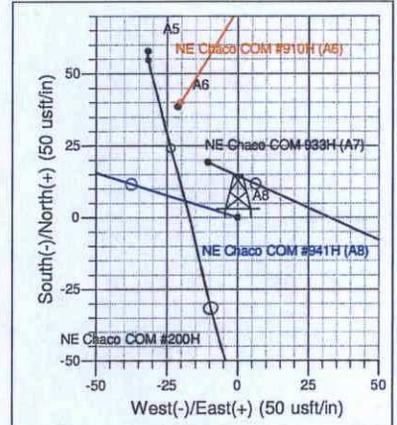
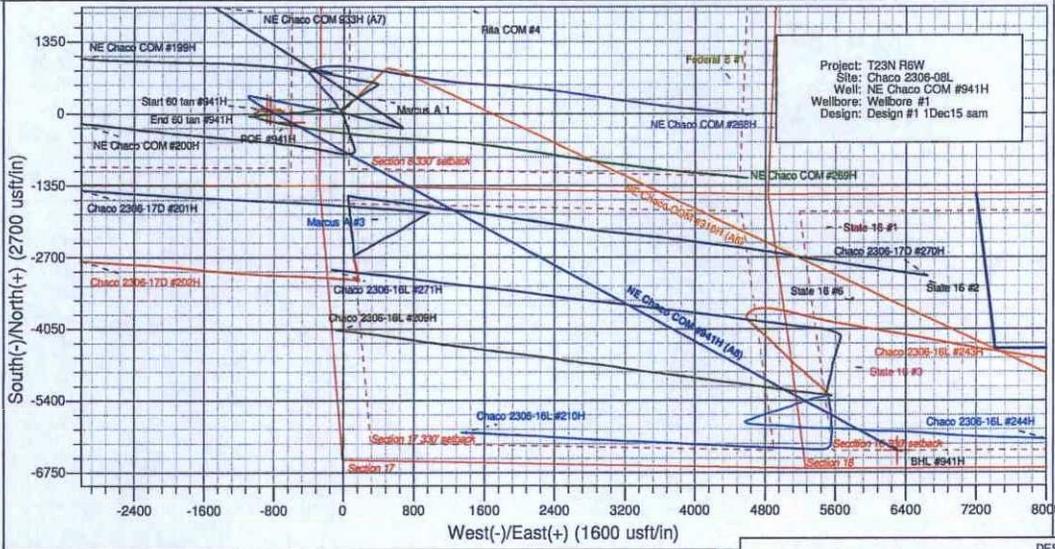
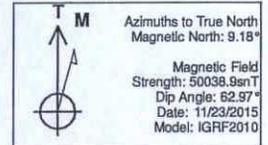
Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Start 60 tan #941H - plan hits target center - Point	0.00	0.00	5,169.72	87.21	-881.54	1,905,371.38	597,460.73	36.236164	-107.502858
End 60 tan #941H - plan hits target center - Point	0.00	0.00	5,199.72	52.56	-842.82	1,905,336.86	597,499.57	36.236068	-107.502727
BHL #941H - plan hits target center - Point	0.00	0.00	5,237.00	-6,340.45	6,302.54	1,898,968.47	604,666.88	36.218504	-107.478503
POE #941H - plan hits target center - Point	0.00	0.00	5,285.00	-161.89	-603.14	1,905,123.24	597,739.98	36.235479	-107.501914

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
320.00	320.00	9 5/8"	9.625	12.250	
5,849.00	5,285.00	7"	7.000	8.750	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
425.00	425.00	0.00	0.00	Start Build 2.00	
1,285.38	1,272.51	38.07	-122.45	Hold 17.21 Inclination	
4,609.62	4,447.95	330.06	-1,061.53	Start Build DLS 9.00 TFO -158.22	
5,452.32	5,169.72	87.21	-881.54	Hold 60.00 Inclination	
5,512.32	5,199.72	52.56	-842.82	Start Build DLS 9.00 TFO 0.00	
5,684.41	5,264.70	-53.31	-724.49	Start DLS 9.00 TFO -0.01	
5,848.96	5,285.00	-161.89	-603.14	POE at 90.30 Inc 131.82 Deg	
15,115.32	5,237.00	-6,340.45	6,302.54	TD at 15090.32	



Well Name: NE Chaco COM #941H
 Surface Location: Chaco 2306-08L
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 6832.00
 +N/-S 0.00 +E/-W 0.00 Northing 1905287.20 Easting 598342.56 Latitude 36.235924 Longitude -107.499869 Slot A8
 KB @ 6857.00usft (Aztec 1000)



DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Start 60 tan #941H	5169.72	87.21	-81.54	1905371.38	597460.73	36.236163	-107.502858
End 60 tan #941H	5199.72	52.58	-842.82	1905336.86	597499.56	36.236068	-107.502726
POE #941H	5285.00	-161.89	-603.14	1905123.24	597739.98	36.235479	-107.501914
BHL #941H	5237.00	-6340.45	6302.54	1898968.47	604666.88	36.218504	-107.478503

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	V/Sect	Departure	Annotation	
425.00	425.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
1272.51	1285.38	17.21	287.27	38.07	-122.45	-113.33	128.23	Hold 17.21 Inclination	
4447.95	4609.82	17.21	287.27	330.06	-1061.53	-982.45	1111.68	Start Build DLS 9.00 TFO -158.22	
5189.72	5452.32	60.00	131.82	87.21	-881.54	-683.32	1479.31	Hold 60.00 Inclination	
5199.72	5512.32	60.00	131.82	52.58	-842.82	-631.45	1525.27	Start Build DLS 9.00 TFO 0.00	
5264.70	5684.41	75.49	131.82	-53.31	-724.49	-472.94	1884.05	Start DLS 9.00 TFO -0.01	
5285.00	5848.96	90.30	131.82	-161.89	-603.14	-310.39	1846.68	POE at 90.30 Inc 131.82 Deg	
5237.00	15115.32	90.30	131.82	-6340.45	6302.54	8939.99	11113.12	TD at 15090.32	

SLOTS							
Slot Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
A1	134.92	-74.21	1905421.86	598267.69	36.236163	-107.502858	Point
A2	115.78	-83.33	1905402.76	598278.63	36.236163	-107.502858	Point
A3	98.48	-92.91	1905383.50	598289.32	36.236163	-107.502858	Point
A4	77.19	-102.29	1905364.24	598300.00	36.236163	-107.502858	Point
A5	57.90	-111.67	1905344.99	598310.68	36.236163	-107.502858	Point
A6	38.54	-121.20	1905325.67	598321.23	36.236163	-107.502858	Point
A7	19.28	-130.63	1905306.44	598331.89	36.236163	-107.502858	Point
A8	0.00	-140.00	1905287.20	598342.56	36.236163	-107.502858	Point

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. Existing and any additional berms around all storage facilities will be maintained to contain the storage capacity of tanks. Berm walls are compacted with appropriate equipment to assure containment.
- E. Cathodic Protection
1. To install an additional anode bed a vertical bore is drilled and casing of the specified size and amount is set. Casing is a minimum of 20 feet in length. Upon encountering ground water, drilling shall cease and depth to ground water (DTGW) recorded using a conductive tape technique (Wellsounder) before commencing to the desired bore depth. This information is recorded on the supplied groundwater depth log form. The bore will be completed to a desired vertical bore depth of approximately 300 feet. Given a 240 foot anode length and varying lengths of surface casing, the overall bore shall be allowed to vary by no more than ± 60 feet from the standard 300 feet. Once the bore is completed and cased, the anode is installed in accordance with the manufacturer's specifications. The bore is then backfilled with Conducrete using a tremie tube technique starting from TD of the bore. The casing will be cut and capped 12 inches below the surface. The specified flush grade valve box is then installed directly over the bed. The bed location (Lat/Long) is recorded and full drill log report is completed and filed with WPX. The bed will not be energized for a minimum of 45 days.

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the wells are plugged, final reclamation will occur within the remainder of the project area. Reclamation is described in detail in the Reclamation Plan (Appendix C).

7.0 Methods for Handling Waste

- ✓ A. Cuttings
1. Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals will be accomplished with water-based mud. All cuttings will be placed in roll-off bins and hauled to 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).

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

in Bloomfield, NM to WPX Energy Production, LLC NE Chaco Com #941H

1360' FSL & 273' FWL, Section 8, T23N, R6W, N.M.P.M., Rio Arriba County, NM

Latitude: 36.235937°N Longitude: 107.500474°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 50.2 miles to Mile Marker 101.0;

Go Left (Northerly) on existing roadway for 0.3 miles to fork in roadway;

Go Right (South-easterly) for 0.1 miles to fork in roadway;

Go Left (North-easterly) which is straight for 0.6 miles to existing NE Chaco Com #199H well approach on left-hand side, which continues to staked WPX NE Chaco Com #941H location which overlaps existing WPX NE Chaco Com #199H wellpad.

3000 PSI BOP Schematic

