

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised August 1, 2011

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-35500
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator WPX Energy Production LLC		6. State Oil & Gas Lease No. VO9208
3. Address of Operator P.O. Box 640 - Aztec, NM 87410 - Phone 333-1808		7. Lease Name or Unit Agreement Name
4. Well Location Unit Letter <u>I</u> : <u>1531</u> feet from the <u>SOUTH</u> line and <u>281</u> feet from the <u>EAST</u> line Section <u>16</u> Township <u>23N</u> Range <u>8W</u> NMPM County <u>SAN JUAN</u>		8. Well Number CHACO 2308-161 #148H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6866'		9. OGRID Number 120782
		10. Pool name or Wildcat Nageezi Gallup/ Basin MC

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☐		OTHER: ☐	

RCVD JAN 17 '14
OIL CONS. DIV.
DIST. 3

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Hold C104 for NSP, DNL

WPX plans to move surface location slightly on this well to maximize the producing interval as per attached C-102, operation plan and directional plan. The entire well bore will now be drilled with WBM. The plug back TD of this well will be the RSI tool which will be two joints up from landing depth.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Hold C104

for Directional Survey
and "As Drilled" plat

SIGNATURE Larry Higgins TITLE Regulatory Spec DATE 01/17/14

Type or print name Larry Higgins E-mail address: larry.higgins@wpxenergy.com PHONE: 333-1808

For State Use Only

APPROVED BY: Will H TITLE Deputy Oil & Gas Inspector, District #3 DATE JAN 29 2014

Conditions of Approval (if any): AV

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

1 API Number 30-045-35500		2 Pool Code 97232 / 47540		3 Pool Name BASIN MANCOS (M&N) / NAGEEZI GALLUP (O&P)		
4 Property Code		5 Property Name CHACO 2308-16I			6 Well Number 148H	
7 OGRID No. 120782		8 Operator Name WPX ENERGY PRODUCTION, LLC			9 Elevation 6866'	

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	16	23N	8W		1531	SOUTH	281	EAST	SAN JUAN

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	8W		380	SOUTH	230	WEST	SAN JUAN

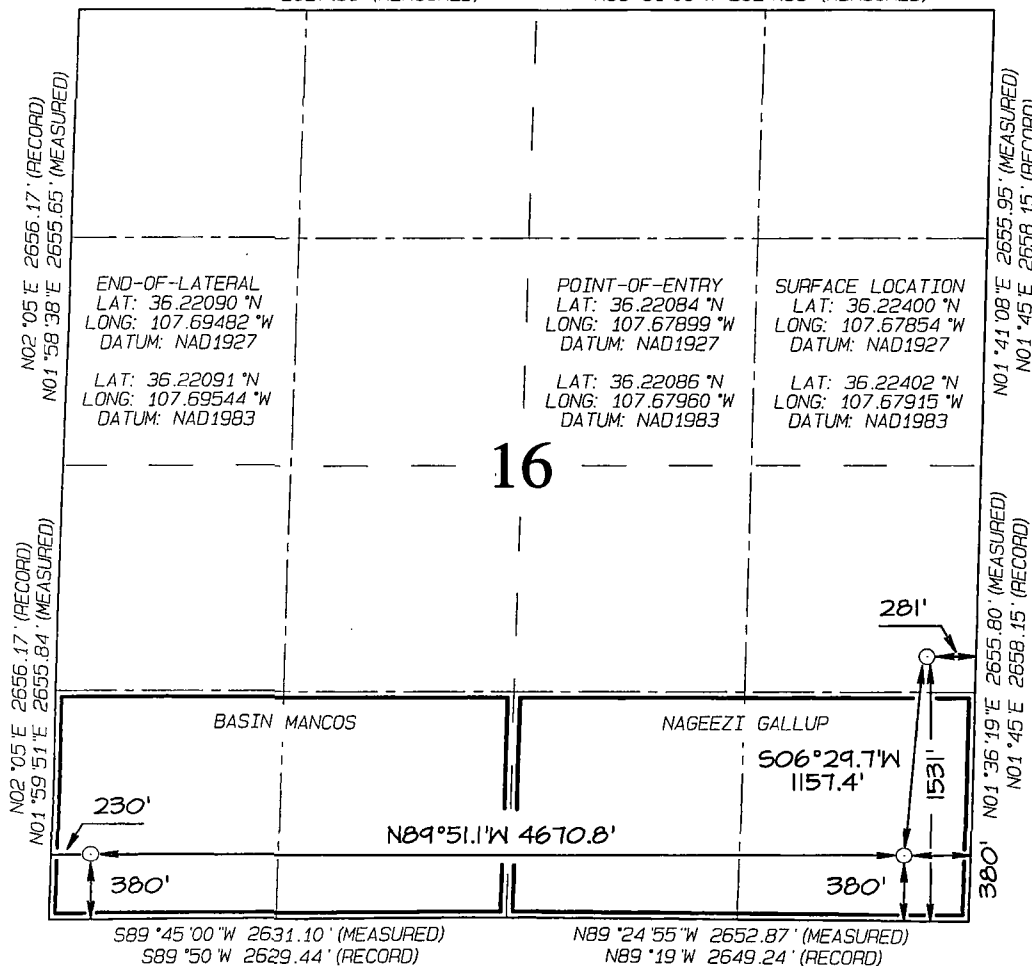
12 Dedicated Acres 160.0 Acres - (S/2 S/2)					13 Joint or Infill		14 Consolidation Code		15 Order No. RCVD JAN 17 '14 OIL CONS. DIV.	
--	--	--	--	--	--------------------	--	-----------------------	--	---	--

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

DIST. 3

N89°43'W 2627.13' (RECORD)
N89°50'08"W 2627.81' (MEASURED)

N89°43'W 2627.13' (RECORD)
N89°51'06"W 2624.33' (MEASURED)



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: <i>Larry Higgins</i> Date: 1/17/14 Printed Name: Larry Higgins E-mail Address: larry.higgins@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: JANUARY 10, 2014 Survey Date: FEBRUARY 1, 2013 Signature and Seal of Professional Surveyor:  JASON C. EDWARDS Certificate Number 15269	

WPX ENERGY**Operations Plan**

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

DATE: 1/15/2013 **FIELD:** Basin Mancos/Nageezi Gallup

WELL NAME: Chaco 2308-161 #148H **SURFACE:** BLM

SH Location: NESE Sec 16-23N-8W **ELEVATION:** 6,866' GR

BH Location: SWSW Sec 16-23N-8W
San Juan Co, NM **MINERALS:** State

MEASURED DEPTH: 10,376' **LEASE #:** V09208

I. **GEOLOGY:** Surface formation – Nacimiento

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	791	791	Point Lookout	3,930	3,791
Kirtland	940	939	Mancos	4,107	3,959
Pictured Cliffs	1,405	1,392	Kickoff Point	4,517	4,349
Lewis	1,606	1,583	Target Top	5,172	4,914
Chacra	1,796	1,764	Landing Point	5,702	5,090
Cliff House	2,938	2,849	Target Base	5,702	5,090
Menefee	3,003	2,911			
			TD	10,376	4,930

B. **MUD LOGGING PROGRAM:** Mudlogger on location from surface csg to TD.

C. **LOGGING PROGRAM:** LWD GR from surface casing to TD. LWD GR / E- Sonic will be run in Lateral.

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 3/4" Directional Vertical hole, the curve portion of the wellbore. 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.**

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 4,517' (MD) / 4,349' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,702' (MD) / 5,090' (TVD). 7 in. csg will be set at this point. A 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 10,376' (MD) / 4,930' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,552 ft. to TD and cemented. Liner will be tied back to surface w / 4-1/2" Casing for stimulation / testing, then removed from the well.

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

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	400'+	9 5/8	36#	J-55
Intermediate	8.75"	5,702'	7	23#	K-55
Prod. Liner	6.125"	5,552' - 10,376'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,552'	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 + (2) RSI (Sliding Sleeves) positioned inside 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: 10 bbl Fr Water Spacer + 190 sx (222.3 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal (1.17 cu ft./sk, Vol 39.58 Bbls.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600psi. Total Volume: (222.3 cu-ft/190 sx/39.6 Bbls).
2. INTERMEDIATE: 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: 850 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: 1216 cu-ft / 216.5 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). Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (1050 sx / 1461 cu-ft / 260 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
3. PRODUCTION LINER: **STAGE 1**:10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2**:40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III + 0.5 gal/bbl Musol + 38.75 ppb Barite + 0.5 gal/bbl SEM-7. **STAGE 3**: 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement**: 50 / 50 Poz Premium + 0.2% Versaset + 0.2% Halad -766, Yield 1.43 cu ft/sk, 13.0 ppg, (10 sx / 14.3 cu ft. / 2.5 bbls). **STAGE 5**: 200 sx. Foamed Lead Cement: 50 / 50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.97 cu-ft/sk. 13.0 ppg (200 sx / 394 cu-ft. / 70.2 bbls.). **STAGE 6**: Tail Cement : 100 sx. 50/50 Poz Standard + 0.2% Versaset + 0.05% HALAD-766 + .05% SA-1015, Weight: 13.5 ppg (100 sx / Yield 1.28 cu ft/sk. / 128 cu ft. / 22.8 bbls) **STAGE 7**: Displace w/ +/- 137 bbl Fr Water. Total Cement (563.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,250 ft.

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. 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 point of curve (~5,600' MD).
- 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 (TOL set at +/- 5,702 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,552 ft. (MD) +/- 77 degree angle. TOC: +/- 5,252 ft. (MD).

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 for 15 minutes and hung off at the surface.

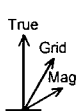
The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

Note: Changes to formation tops, casing landing points, well TD and Directional Plan

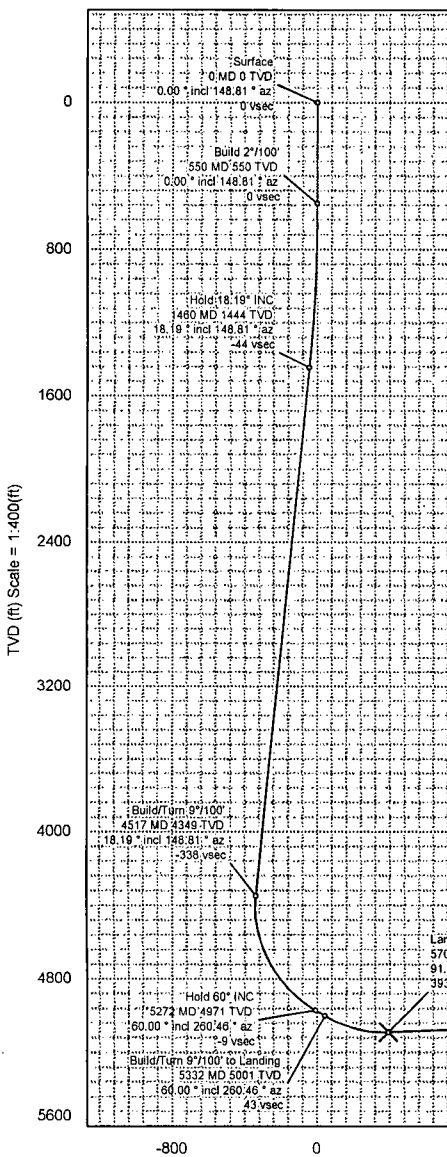
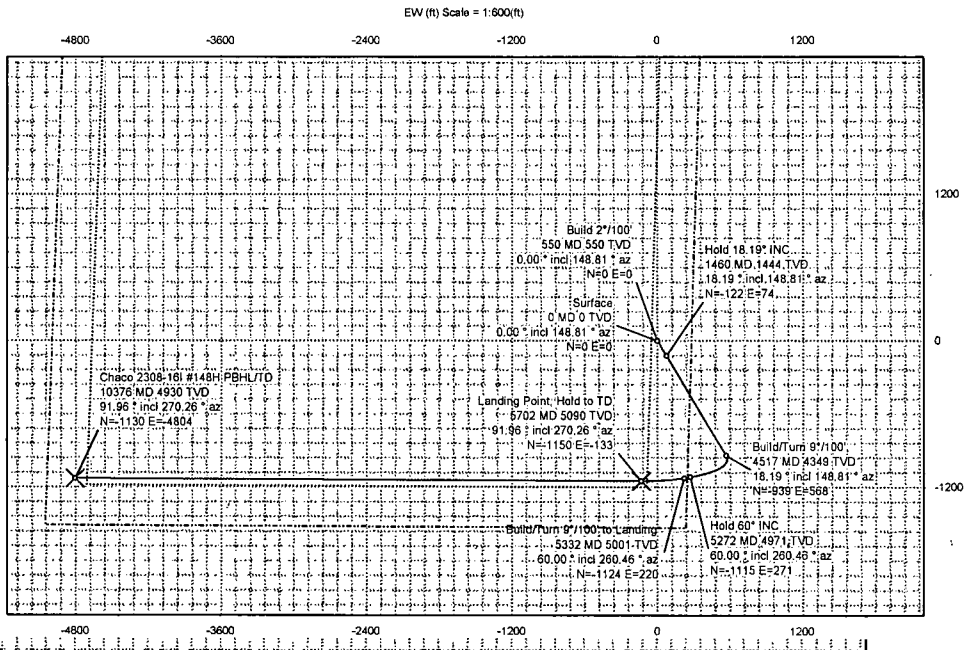
Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2308-16I #148H	NM San Juan County NAD27	Sec 16-23N-8W

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2013 Dip: 62.988° Date: 08-Oct-2013	NAD27 New Mexico State Plane, Western Zone, US Feet	Chaco 2308-16I #148H TVD Ref: RKB(6880ft above MSL)
MagDec: 9.554° FS: 50161.852nT Gravity FS: 998.92mgm (9.80665 Based)	Lat: N 36 13 25.40 Northing: 1900814.013 US Grid Conv: 0.0915°	Plan: Chaco 2308-16I #148H R1 mdv 14Jan14
	Lon: W 107 40 42.74 Easting: 545657.19ftUS Scale Fact: 0.99991905	

Proposal



True North
Tot Corr (M->T 9.554°)
Mag Dec (9.554°)
Grid Conv (0.091°)



Surface Location								
Northing: 1900814.013		Easting: 545657.19		Latitude: N 36 13 26.40		Longitude: W 107 40 42.74		VSec Azimuth: 256.767
Target Description		Grid Coord					Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)S(-)	E(+)W(-)
Chaco 2308-16I #148H PBHLTD	N 36 13 15.23	W 107 41 41.37	1899676.85	540855.74	4930.00	4934.68	-1129.59	-4803.66
Chaco 2308-16I #148H POE	N 36 13 15.02	W 107 40 44.36	1899663.52	545626.29	5090.00	392.56	-1150.38	-132.75
Chaco 2308-16I #148H Section Line	N 36 13 26.08	W 107 40 42.10	1900781.34	545710.34	6880.00	-44.19	-32.76	53.10
Chaco 2308-16I #148H 330' Setback	N 36 13 26.08	W 107 40 42.10	1900781.34	545710.34	6880.00	-44.19	-32.76	53.10
Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
Surface	0.00	0.00	148.81	0.00	0.00	0.00	0.00	
Build 2°/100'	550.00	0.00	148.81	550.00	0.00	0.00	0.00	0.00
Hold 18.19° INC	1459.58	18.19	148.81	1444.37	-44.14	-122.49	74.15	2.00
Build/Turn 9°/100'	4517.18	18.19	148.81	4349.15	-338.41	-939.10	568.47	0.00
Hold 60° INC	5272.28	60.00	260.46	4971.32	-8.89	-1115.28	271.39	9.00
Build/Turn 9°/100' to Landing	5332.28	60.00	260.46	5001.32	42.97	-1123.89	220.14	0.00
Landing Point, Hold to TD	5702.29	91.96	270.25	5090.00	392.55	-1150.37	-132.74	8.00
Chaco 2308-16I #148H PBHLTD	10375.99	91.96	270.25	4930.00	4934.68	-1129.59	-4803.66	0.00



Chaco 2308-16I #148H R1 mdv 14Jan14 Proposal Geodetic Report

(Def Plan)

Report Date:	January 15, 2014 - 08:26 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	WPX Energy	Vertical Section Azimuth:	256.767 ° (True North)
Field:	NM San Juan County NAD27	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	WPX Sec 16-23N-8W (Chaco 2308-16I #148H) / Chaco 2308-16I #148H	TVD Reference Datum:	RKB
Well:	Chaco 2308-16I #148H	TVD Reference Elevation:	6880.000 ft above MSL
Borehole:	Original Hole	Seabed / Ground Elevation:	6866.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	9.554 °
Survey Name:	Chaco 2308-16I #148H R1 mdv 14Jan14	Total Gravity Field Strength:	998.9204mgn (9.80665 Based)
Survey Date:	October 08, 2013	Gravity Model:	DOX
Tort / AHD / DDI / ERD Ratio:	119.455 ° / 6561.277 ft / 6.203 / 1.289	Total Magnetic Field Strength:	50161.852 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Western Zone, US Feet	Magnetic Dip Angle:	62.988 °
Location Lat / Long:	N 36° 13' 26.40000", W 107° 40' 42.74400"	Declination Date:	October 08, 2013
Location Grid N/E Y/X:	N 1900814.013 RUS, E 545657.190 RUS	Magnetic Declination Model:	BGGM 2013
CRS Grid Convergence Angle:	0.0915 °	North Reference:	True North
Grid Scale Factor:	0.99991905	Grid Convergence Used:	0.0000 °
Version / Patch:	2.7.1043.0	Total Corr Mag North->True North:	9.5535 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	148.81	0.00	0.00	0.00	0.00	N/A	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
Build 2°/100'	100.00	0.00	148.81	100.00	0.00	0.00	0.00	0.00	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
	200.00	0.00	148.81	200.00	0.00	0.00	0.00	0.00	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
	300.00	0.00	148.81	300.00	0.00	0.00	0.00	0.00	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
	400.00	0.00	148.81	400.00	0.00	0.00	0.00	0.00	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
	500.00	0.00	148.81	500.00	0.00	0.00	0.00	0.00	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
	550.00	0.00	148.81	550.00	0.00	0.00	0.00	0.00	1900814.01	545657.19	N 36 13 26.40	W 107 40 42.74
	600.00	1.00	148.81	600.00	-0.13	-0.37	0.23	2.00	1900813.64	545657.42	N 36 13 26.40	W 107 40 42.74
	700.00	3.00	148.81	699.93	-1.21	-3.36	2.03	2.00	1900810.66	545659.23	N 36 13 26.37	W 107 40 42.72
	800.00	5.00	148.81	799.68	-3.36	-9.33	5.65	2.00	1900804.70	545662.85	N 36 13 26.31	W 107 40 42.68
	900.00	7.00	148.81	899.13	-6.58	-18.27	11.06	2.00	1900795.77	545668.28	N 36 13 26.22	W 107 40 42.61
Hold 18.19° INC	1000.00	9.00	148.81	998.15	-10.87	-30.17	18.26	2.00	1900783.87	545675.50	N 36 13 26.10	W 107 40 42.52
	1100.00	11.00	148.81	1096.63	-16.23	-45.03	27.26	2.00	1900769.03	545684.52	N 36 13 25.95	W 107 40 42.41
	1200.00	13.00	148.81	1194.44	-22.63	-62.81	38.02	2.00	1900751.27	545695.31	N 36 13 25.78	W 107 40 42.28
	1300.00	15.00	148.81	1291.46	-30.09	-83.51	50.55	2.00	1900730.59	545707.87	N 36 13 25.57	W 107 40 42.13
	1400.00	17.00	148.81	1387.58	-38.59	-107.09	64.82	2.00	1900707.04	545722.18	N 36 13 25.34	W 107 40 41.95
	1459.58	18.19	148.81	1444.37	-44.14	-122.49	74.15	2.00	1900691.65	545731.53	N 36 13 25.19	W 107 40 41.84
	1500.00	18.19	148.81	1482.77	-48.03	-133.29	80.68	0.00	1900680.86	545738.08	N 36 13 25.08	W 107 40 41.76
	1600.00	18.19	148.81	1577.78	-57.66	-160.00	96.85	0.00	1900654.19	545754.29	N 36 13 24.82	W 107 40 41.56
	1700.00	18.19	148.81	1672.78	-67.28	-186.70	113.02	0.00	1900627.51	545770.50	N 36 13 24.55	W 107 40 41.36
	1800.00	18.19	148.81	1767.78	-76.90	-213.41	129.19	0.00	1900600.83	545786.71	N 36 13 24.29	W 107 40 41.17
	1900.00	18.19	148.81	1862.78	-86.53	-240.12	145.35	0.00	1900574.15	545802.91	N 36 13 24.03	W 107 40 40.97
	2000.00	18.19	148.81	1957.78	-96.15	-266.83	161.52	0.00	1900547.47	545819.12	N 36 13 23.76	W 107 40 40.77
	2100.00	18.19	148.81	2052.79	-105.78	-293.53	177.69	0.00	1900520.79	545835.33	N 36 13 23.50	W 107 40 40.58
	2200.00	18.19	148.81	2147.79	-115.40	-320.24	193.85	0.00	1900494.11	545851.54	N 36 13 23.23	W 107 40 40.38
	2300.00	18.19	148.81	2242.79	-125.02	-346.95	210.02	0.00	1900467.43	545867.75	N 36 13 22.97	W 107 40 40.18
	2400.00	18.19	148.81	2337.79	-134.65	-373.66	226.19	0.00	1900440.75	545883.95	N 36 13 22.70	W 107 40 39.98
	2500.00	18.19	148.81	2432.79	-144.27	-400.36	242.35	0.00	1900414.07	545900.16	N 36 13 22.44	W 107 40 39.79
	2600.00	18.19	148.81	2527.79	-153.90	-427.07	258.52	0.00	1900387.39	545916.37	N 36 13 22.18	W 107 40 39.59
	2700.00	18.19	148.81	2622.80	-163.52	-453.78	274.69	0.00	1900360.71	545932.58	N 36 13 21.91	W 107 40 39.39
	2800.00	18.19	148.81	2717.80	-173.15	-480.49	290.85	0.00	1900334.03	545948.79	N 36 13 21.65	W 107 40 39.19
	2900.00	18.19	148.81	2812.80	-182.77	-507.19	307.02	0.00	1900307.35	545965.00	N 36 13 21.38	W 107 40 39.00
	3000.00	18.19	148.81	2907.80	-192.39	-533.90	323.19	0.00	1900280.67	545981.20	N 36 13 21.12	W 107 40 38.80
	3100.00	18.19	148.81	3002.80	-202.02	-560.61	339.36	0.00	1900253.99	545997.41	N 36 13 20.86	W 107 40 38.60
	3200.00	18.19	148.81	3097.81	-211.64	-587.32	355.52	0.00	1900227.32	546013.62	N 36 13 20.59	W 107 40 38.41
	3300.00	18.19	148.81	3192.81	-221.27	-614.02	371.69	0.00	1900200.64	546029.83	N 36 13 20.33	W 107 40 38.21
	3400.00	18.19	148.81	3287.81	-230.89	-640.73	387.86	0.00	1900173.96	546046.04	N 36 13 20.06	W 107 40 38.01
	3500.00	18.19	148.81	3382.81	-240.51	-667.44	404.02	0.00	1900147.28	546062.24	N 36 13 19.80	W 107 40 37.81
	3600.00	18.19	148.81	3477.81	-250.14	-694.14	420.19	0.00	1900120.60	546078.45	N 36 13 19.54	W 107 40 37.62
	3700.00	18.19	148.81	3572.81	-259.76	-720.85	436.36	0.00	1900093.92	546094.66	N 36 13 19.27	W 107 40 37.42
	3800.00	18.19	148.81	3667.82	-269.39	-747.56	452.52	0.00	1900067.24	546110.87	N 36 13 19.01	W 107 40 37.22
3900.00	18.19	148.81	3762.82	-279.01	-774.27	468.69	0.00	1900040.56	546127.08	N 36 13 18.74	W 107 40 37.02	
4000.00	18.19	148.81	3857.82	-288.63	-800.97	484.86	0.00	1900013.88	546143.29	N 36 13 18.48	W 107 40 36.83	
4100.00	18.19	148.81	3952.82	-298.26	-827.68	501.02	0.00	1899987.20	546159.49	N 36 13 18.22	W 107 40 36.63	
4200.00	18.19	148.81	4047.82	-307.88	-854.39	517.19	0.00	1899960.52	546175.70	N 36 13 17.95	W 107 40 36.43	
4300.00	18.19	148.81	4142.83	-317.51	-881.10	533.36	0.00	1899933.84	546191.91	N 36 13 17.69	W 107 40 36.23	
4400.00	18.19	148.81	4237.83	-327.13	-907.80	549.53	0.00	1899907.16	546208.12	N 36 13 17.42	W 107 40 36.04	
4500.00	18.19	148.81	4332.83	-336.76	-934.51	565.69	0.00	1899880.48	546224.33	N 36 13 17.16	W 107 40 35.84	
Build/Turn 9°/100'	4517.18	18.19	148.81	4349.15	-338.41	-939.10	568.47	0.00	1899875.90	546227.11	N 36 13 17.11	W 107 40 35.81
Build/Turn 9°/100' to Landing	4600.00	15.83	173.20	4428.44	-341.13	-961.41	576.51	9.00	1899853.61	546235.19	N 36 13 16.89	W 107 40 35.71
	4700.00	17.26	204.80	4524.49	-330.44	-988.48	571.89	9.00	1899826.53	546230.61	N 36 13 16.62	W 107 40 35.76
	4800.00	22.43	226.80	4618.65	-304.72	-1015.06	551.72	9.00	1899799.92	546210.49	N 36 13 16.36	W 107 40 36.01
	4900.00	29.43	239.87	4708.60	-264.60	-1040.51	516.49	9.00	1899774.42	546175.30	N 36 13 16.11	W 107 40 36.44
	5000.00	37.24	248.07	4792.12	-211.07	-1064.19	467.07	9.00	1899750.66	546125.92	N 36 13 15.88	W 107 40 37.04
	5100.00	45.44	253.71	4867.17	-145.45	-1085.52	404.68	9.00	1899729.23	546063.57	N 36 13 15.67	W 107 40 37.81
	5200.00	53.85	257.94	4931.88	-69.36	-1103.99	330.85	9.00	1899710.65	545989.78	N 36 13 15.48	W 107 40 38.71
Hold 60° INC	5272.28	60.00	260.46	4971.32	-8.89	-1115.28	271.39	9.00	1899699.26	545930.34	N 36 13 15.37	W 107 40 39.43
	5300.00	60.00	260.46	4985.18	15.07	-1119.26	247.71	0.00	1899695.24	545906.67	N 36 13 15.33	W 107 40 39.72
	5332.28	60.00	260.46	5001.32	42.97	-1123.89	220.14	0.00	1899690.57	545879.11	N 36 13 15.29	W 107 40 40.06
	5400.00	65.81	262.53	5032.15	103.02	-1132.78	160.55	9.00	1899681.59	545819.53	N 36 13 15.20	W 107 40 40.78
	5500.00	74.44	265.26	5066.12	196.23	-1142.71	67.13	9.00	1899671.51	545726.14	N 36 13 15.10	W 107 40 41.92
Landing Point, Hold to TD	5600.00	83.09	267.78	5085.59	292.79	-1148.63	-30.67	9.00	1899665.43	545628.35	N 36 13 15.04	W 107 40 43.12
	5700.00	91.76	270.20	5090.08	390.32	-1150.38	-130.45	9.00	1899663.52	545528.58	N 36 13 15.02	W 107 40 44.34
	5702.29	91.96	270.25	5090.00	392.55	-1150.37	-132.74	9.00	1899663.53	545528.30	N 36 13 15.02	W 107 40 44.36
	5800.00	91.96	270.25	5088.66	487.51	-1149.94	-230.39	0.00	1899663.80	545428.65	N 36 13 15.03	W 107 40 45.56
	5900.00	91.96	270.25	5083.24	584.69	-1149.49	-330.34	0.00	1899664.09	545328.72	N 36 13 15.03	W 107 40 46.78
	6000.00	91.96	270.25	5079.82	681.88	-1149.05	-430.28	0.00	1899664.37	545228.78	N 36 13 15.04	W 107 40 47.99
	6100.00	91.96	270.25	5076.40	779.06	-1148.60	-530.22	0.00	1899664.66	545128.85	N 36 13 15.04	W 107 40 49.21
	6200.00	91.96	270.25	5072.98	876.25	-1148.16	-630.16	0.00	1899664.94	545028.92	N 36 13 15.05	W 107 40 50.43
	6300.00	91.96	270.25	5069.56	973.43	-1147.71	-730.10	0.00	1899665.23	544928.99	N 36 13 15.05	W 107 40 51.65
	6400.00	91.96	270.25	5066.13	1070.62	-1147.27	-830.04	0.00	1899665.52	544829.05	N 36 13 15.05	W 107 40 52.87
6500.00	91.96	270.25	5062.71	1167.80	-1146.82	-929.98	0.00	1899665.80	544729.12	N 36 13 15.06	W 107 40 54.09	
	6600.00	91.96	270.25	5059.29	1264.99	-1146.38	-1029.92</					

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6700.00	91.96	270.25	5055.87	1362.17	-1145.94	-1129.86	0.00	1899666.37	544528.26	N 36 13 15.07	W 107 40 56.53
	6800.00	91.96	270.25	5052.45	1459.36	-1145.49	-1229.80	0.00	1899666.66	544428.32	N 36 13 15.07	W 107 40 57.75
	6900.00	91.96	270.25	5049.03	1556.54	-1145.05	-1329.74	0.00	1899666.94	544328.39	N 36 13 15.08	W 107 40 58.97
	7000.00	91.96	270.25	5045.61	1653.73	-1144.60	-1429.68	0.00	1899667.23	544228.46	N 36 13 15.08	W 107 41 0.19
	7100.00	91.96	270.25	5042.18	1750.91	-1144.16	-1529.62	0.00	1899667.51	544128.52	N 36 13 15.09	W 107 41 1.41
	7200.00	91.96	270.25	5038.76	1848.10	-1143.71	-1629.56	0.00	1899667.80	544029.59	N 36 13 15.09	W 107 41 2.63
	7300.00	91.96	270.25	5035.34	1945.28	-1143.27	-1729.50	0.00	1899668.08	543929.66	N 36 13 15.09	W 107 41 3.85
	7400.00	91.96	270.25	5031.92	2042.47	-1142.82	-1829.44	0.00	1899668.37	543829.73	N 36 13 15.10	W 107 41 5.07
	7500.00	91.96	270.25	5028.49	2139.65	-1142.38	-1929.38	0.00	1899668.65	543729.79	N 36 13 15.10	W 107 41 6.29
	7600.00	91.96	270.25	5025.07	2236.84	-1141.93	-2029.32	0.00	1899668.94	543629.86	N 36 13 15.11	W 107 41 7.51
	7700.00	91.96	270.25	5021.65	2334.02	-1141.49	-2129.26	0.00	1899669.22	543529.93	N 36 13 15.11	W 107 41 8.73
	7800.00	91.96	270.25	5018.22	2431.21	-1141.04	-2229.20	0.00	1899669.51	543430.00	N 36 13 15.12	W 107 41 9.95
	7900.00	91.96	270.25	5014.80	2528.39	-1140.60	-2329.14	0.00	1899669.79	543330.06	N 36 13 15.12	W 107 41 11.17
	8000.00	91.96	270.25	5011.38	2625.58	-1140.15	-2429.08	0.00	1899670.08	543230.13	N 36 13 15.12	W 107 41 12.39
	8100.00	91.96	270.25	5007.95	2722.76	-1139.71	-2529.03	0.00	1899670.36	543130.20	N 36 13 15.13	W 107 41 13.61
	8200.00	91.96	270.25	5004.53	2819.95	-1139.26	-2628.97	0.00	1899670.65	543030.26	N 36 13 15.13	W 107 41 14.83
	8300.00	91.96	270.25	5001.11	2917.13	-1138.82	-2728.91	0.00	1899670.93	542930.33	N 36 13 15.14	W 107 41 16.05
	8400.00	91.96	270.25	4997.68	3014.32	-1138.37	-2828.85	0.00	1899671.22	542830.40	N 36 13 15.14	W 107 41 17.27
	8500.00	91.96	270.25	4994.26	3111.50	-1137.93	-2928.79	0.00	1899671.50	542730.47	N 36 13 15.15	W 107 41 18.49
	8600.00	91.96	270.25	4990.84	3208.69	-1137.48	-3028.73	0.00	1899671.79	542630.53	N 36 13 15.15	W 107 41 19.71
	8700.00	91.96	270.25	4987.41	3305.87	-1137.04	-3128.67	0.00	1899672.07	542530.60	N 36 13 15.15	W 107 41 20.93
	8800.00	91.96	270.25	4983.99	3403.06	-1136.60	-3228.61	0.00	1899672.36	542430.67	N 36 13 15.16	W 107 41 22.14
	8900.00	91.96	270.25	4980.56	3500.24	-1136.15	-3328.55	0.00	1899672.64	542330.74	N 36 13 15.16	W 107 41 23.36
	9000.00	91.96	270.25	4977.14	3597.43	-1135.71	-3428.49	0.00	1899672.93	542230.80	N 36 13 15.17	W 107 41 24.58
	9100.00	91.96	270.25	4973.71	3694.61	-1135.26	-3528.43	0.00	1899673.22	542130.87	N 36 13 15.17	W 107 41 25.80
	9200.00	91.96	270.25	4970.29	3791.80	-1134.82	-3628.37	0.00	1899673.50	542030.94	N 36 13 15.18	W 107 41 27.02
	9300.00	91.96	270.25	4966.86	3888.98	-1134.37	-3728.31	0.00	1899673.79	541931.01	N 36 13 15.18	W 107 41 28.24
	9400.00	91.96	270.25	4963.44	3986.17	-1133.93	-3828.25	0.00	1899674.07	541831.07	N 36 13 15.18	W 107 41 29.46
	9500.00	91.96	270.25	4960.01	4083.35	-1133.48	-3928.19	0.00	1899674.36	541731.14	N 36 13 15.19	W 107 41 30.68
	9600.00	91.96	270.25	4956.59	4180.54	-1133.04	-4028.13	0.00	1899674.64	541631.21	N 36 13 15.19	W 107 41 31.90
	9700.00	91.96	270.25	4953.16	4277.72	-1132.59	-4128.07	0.00	1899674.93	541531.28	N 36 13 15.20	W 107 41 33.12
	9800.00	91.96	270.25	4949.74	4374.91	-1132.15	-4228.01	0.00	1899675.21	541431.34	N 36 13 15.20	W 107 41 34.34
	9900.00	91.96	270.25	4946.31	4472.09	-1131.70	-4327.95	0.00	1899675.50	541331.41	N 36 13 15.21	W 107 41 35.56
	10000.00	91.96	270.25	4942.88	4569.28	-1131.26	-4427.89	0.00	1899675.78	541231.48	N 36 13 15.21	W 107 41 36.78
	10100.00	91.96	270.25	4939.46	4666.46	-1130.81	-4527.83	0.00	1899676.07	541131.54	N 36 13 15.21	W 107 41 38.00
	10200.00	91.96	270.25	4936.03	4763.65	-1130.37	-4627.77	0.00	1899676.35	541031.61	N 36 13 15.22	W 107 41 39.22
	10300.00	91.96	270.25	4932.60	4860.83	-1129.92	-4727.71	0.00	1899676.64	540931.68	N 36 13 15.22	W 107 41 40.44
Chaco 2308-16I #148H PBHL/TD	10375.99	91.96	270.25	4930.00	4934.68	-1129.59	-4803.66	0.00	1899676.85	540855.74	N 36 13 15.23	W 107 41 41.37

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2308-16I #148H R1 mdv 14Jan14
	1	14.000	10375.990	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2308-16I #148H R1 mdv 14Jan14