

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

Form C-103
Revised August 1, 2011

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

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. 30-043-21148
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. V09210
3. Address of Operator P. O. Box 640, Aztec, NM 87410 (505) 333-1808		7. Lease Name or Unit Agreement Name Chaco 2206-16A
4. Well Location Unit Letter <u>A</u> : 738' feet from the <u>N</u> line and 270' feet from the <u>E</u> line Section <u>16</u> Township <u>22N</u> Range <u>6W</u> NMPM County <u>Sandoval</u>		8. Well Number <u>#221H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7148' GR		9. OGRID Number 120782
		10. Pool name or Wildcat Lybrook Gallup

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: SPUD/SURFACE CASING ☐

RCVD JUL 16 '13
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.

WPX plans to change this well as follows: No pilot Hole will be drilled, no OH Whipstock will be run and cemented and total depth of lateral section will be drilled +/- 50ft. past the hardline as noted in Completion Section of the revised Operations Plan to maximize the producing interval as per attached directional plan. The plug back TD of this well will be the float collar which will be one joint up from landing depth. 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.

Spud Date:

Rig Release Date:

Hold C104
for Directional Survey
and "As Drilled" plat

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

SIGNATURE Larry Higgins TITLE Permit Suprv DATE 7/16/13

Type or print name Larry Higgins E-mail address: larry.higgins@wpxenergy.com PHONE: (505) 333-1808
For State Use Only

APPROVED BY: Charles TITLE SUPERVISOR DISTRICT # 3 DATE JUL 23 2013
Conditions of Approval (if any): Py

Hold C104
for Directional Survey
and "As Drilled" plat

District I
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District IV
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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

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

☐ AMENDED REPORT

RCVD JUL 16 '13

OIL CONS. DIV.

DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21148	² Pool Code 42289	³ Pool Name Lybrook Gallup
⁴ Property Code 39909	⁵ Property Name CHACO 2206-16A	⁶ Well Number 221H
⁷ OGRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC	⁹ Elevation 7148'

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
A	16	22N	6W		738	NORTH	270	EAST	SANDOVAL

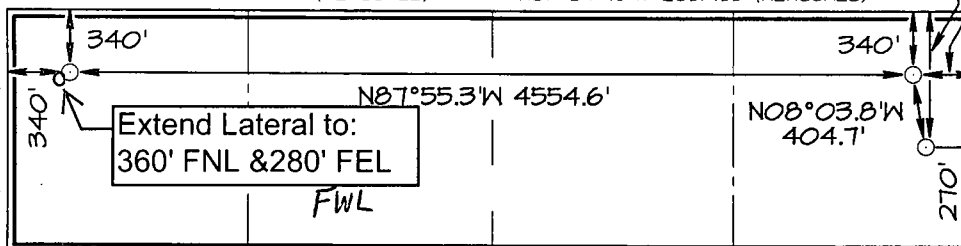
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	16	22N	6W		340	NORTH	340	WEST	SANDOVAL

¹² Dedicated Acres 160.0 Acres - (N/2 N/2)	¹³ Joint or Infill 360	¹⁴ Consolidation Code	¹⁵ Order No. 280
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

N88°35'W 2616.57' (RECORD) N88°35'W 2616.57' (RECORD) 738' 340'
¹⁶ N87°55'52"W 2616.74' (MEASURED) N87°54'40"W 2617.11' (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: *Larry Higgins* Date: 7/16/13

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: FEBRUARY 14, 2013

Date of Survey: JUNE 15, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

N01°15'E 2670.36' (RECORD)
N01°58'58"E 2669.78' (MEASURED)

N01°15'E 2670.36' (RECORD)
N01°58'57"E 2667.56' (MEASURED)

(RECORD)
N01°08'E 2673.66'
N1°51'15"E 2674.51' (MEASURED)

(RECORD)
N01°08'E 2673.66' (RECORD)
N01°51'26"E 2674.47' (MEASURED)

N88°29'W 2624.49' (RECORD)
N87°46'46"W 2621.31' (MEASURED)

N88°29'W 2624.49' (RECORD)
N87°48'33"W 2624.43' (MEASURED)



WPX ENERGY

Operations Plan

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

DATE: 7/15/13 **FIELD:** Lybrook Gallup
WELL NAME: Chaco 2206-16A #221H **SURFACE:** State
SH Location: NENE Sec 16-22N-6W **ELEVATION:** 7,148' GR
BH Location: NWNW Sec 16-22N-6W **MINERALS:** State
Sandoval Co, NM
MEASURED DEPTH: 10,090' **LEASE #:** V09210

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,269	1,269	Point Lookout	4,161	4,118
Kirtland	1,416	1,416	Mancos	4,292	4,249
Pictured Cliffs	1,854	1,853	Kickoff Point	4,866	4,822
Lewis	1,965	1,964	Target Top	5,506	5,337
Chacra	2,240	2,236	Landing Point	5,777	5,395
Cliff House	3,352	3,314	Target Base	5,777	5,395
Menefee	3,395	3,356			
			TD	10,090	5,306

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

C. LOGGING PROGRAM: LWD GR from KOP to TD. LWD GR / 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 and the 8 3/4" Directional Vertical hole and drill the curve portion of the wellbore. (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 1800 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 vertically/directionally drilled as per attached Directional Plan to +/- 4,866' MD. The 8-3/4 in. Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,777' (MD). 7 in. csg will be set at this point. Will drill the lateral (6-1/8 in. hole) as per the attached Directional Plan to +/- 10,090 (MD). Will run 4-1/2 in. Production Casing to TD and Cement.

III. MATERIALS

A. CASING PROGRAM:

Surface	12.25"	400'	9 5/8	36#	J-55
Intermediate	8.75"	5,777'	7	23#	K-55
Longstring	6.125"	10,090	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 CASING: Run 4-1/2" casing with cement nose guide Float Shoe + 1 joint 4-1/2" csg.+ Float Collar. Centralizer program will be determined when Lateral is evaluated by Geoscientists and Reservoir Engineers.

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 (Yield :1.43 cu-ft/ sk. / Vol: 1216 cu-ft) + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 / TOTETANK + TAIL: 100 sx 13.5 #/gal. (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft) + 0.2% Versaset + 0.15% HALAD-766. + F. Water Displacement (1,511 cu-ft) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk (Vol: 117 cu-ft). Est TOC: Surface. Test Casing to 1500 PSI for 30 minutes. Total Volume: (2021 cu-ft/1050 sx/260 bbls).
3. PRODUCTION CASING: **STAGE 1:**10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2:**20 bbl 10 ppg (112.3 cu-ft) Tuned Spacer III + 0.2 gal/bbl Musol + 59.8 ppb Barite. **STAGE 3:** 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement:** Standard Type V + .4% Halad-766 + .3% Halad R-344, Yield 1.19 cu ft/sk, 15.6 #/gal, (60 sx/71.4 cu ft.) **STAGE 5:** Foamed Lead Cement: 13.0 ppg (63.28 bbl / 355.3 cu-ft) 50/50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.43 cu-ft/sk. **STAGE 6:** Tail Cement : 150 sx 50/50 Poz Standard + 0.2% Versaset + 0.25% HALAD-766, Weight: 13.5 ppg (Yield 1.29 cu ft/sk. / 193.5 cu ft.) **STAGE 7:** Displace w/176.6 bbl Fr Water. Total Cement (620.2 cu ft / 110.4 bbls). Mix w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,894 ft. Total Volume: (620.2 cu-ft/380 sx/110.4 bbls).

IV. COMPLETION**A. CBL**

1. Run Cement Bond Log and ensure top of cement is above 7" casing shoe.

B. PRESSURE TEST

1. Pressure test 4-1/2" casing to 5000 psi max, hold at 1500 psi for 30 minutes.

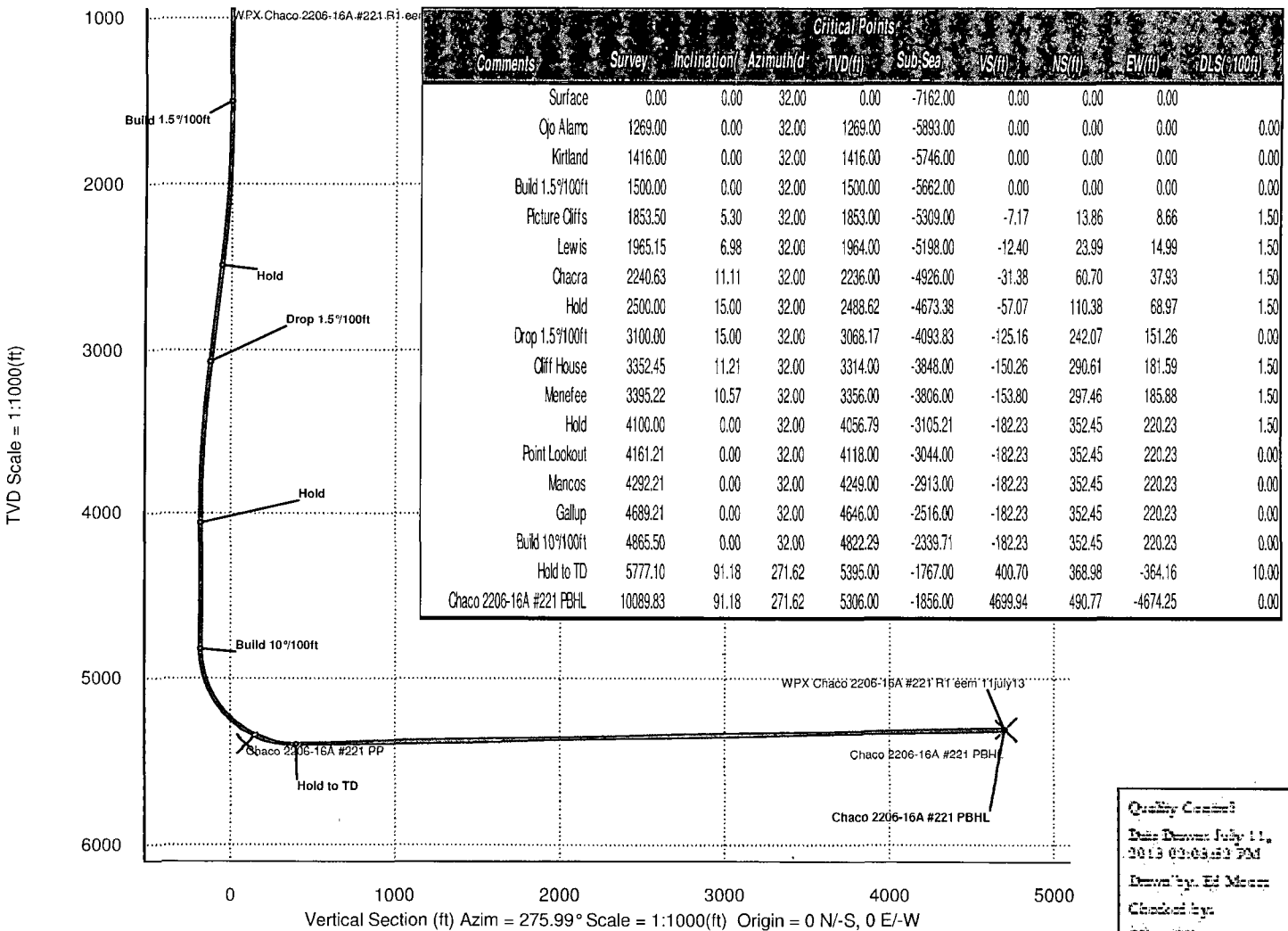
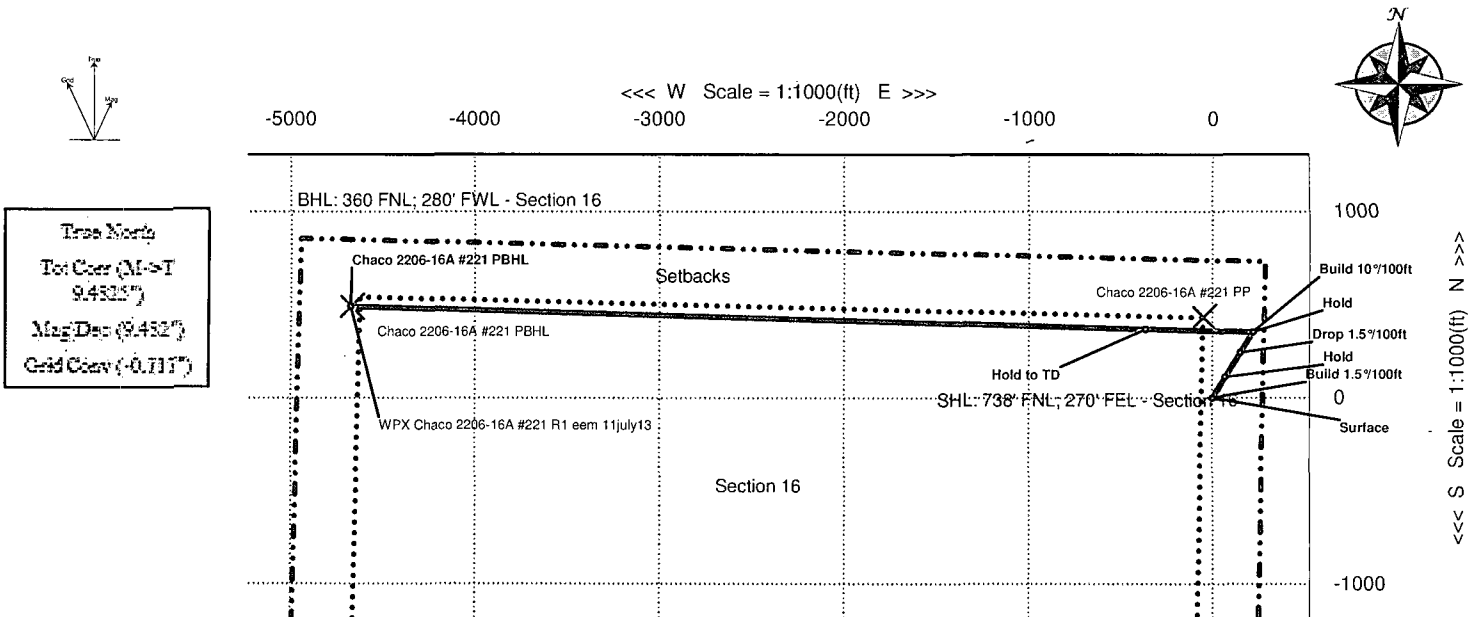
C. STIMULATION

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 with CTU and flowback lateral.

D. RUNNING TUBING

1. Production Tubing: Run 2-3/8", 4.7#, N-80, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing at landing point of curve (~5,500' 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.
-

WELL	WPX Chaco 2206-16A #221	FIELD	NM Sandoval County	STRUCTURE	WPX Chaco 2206-16A #221
Magnetic Parameters Model: BGGM 2013 Dip: 62.964° Mag Dec: 9.462°		Surface Location Lat: N 36 8 36.024 Lon: W 107 27 54.756		Miscellaneous Shot: Chaco 2206-16A #221 Plan: WPX Chaco 2206-16A #221 Revy Date: July 11, 2013	
Date: July 11, 2013 FS: 50170 2nT		NAD27 New Mexico State Plane, Central Zone, US Feet Northing: 1873629.76 NUS Easting: 141196.96 EUS Grid Conv: -0.7174 Scale Fact: 1.00004732		TVD Ref: RKB(7162ft above MSL)	



Quality Control
Date Drawn: July 11, 2013 03:03:53 PM
Drawn by: EJ Mearns
Checked by:
CEN: GEL

WPX Chaco 2206-16A #221 R1 eem 11july13 Proposal Geodetic Report

(Non-Def Plan)

Report Date: July 11, 2013 - 02:03 PM
Client: WPX Energy
Field: NM Sandoval County NAD27
Structure / Slot: WPX Chaco 2206-16A #221 / Chaco 2206-16A #221
Well: WPX Chaco 2206-16A #221
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: WPX Chaco 2206-16A #221 R1 eem 11july13
Survey Date: July 11, 2013
Tort / AHD / DDI / ERD Ratio: 121.186 ° / 5312.036 ft / 6.081 / 0.985
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 8' 36.02400", W 107° 27' 54.75600"
Location Grid N/E Y/X: N 1873629.762 ftUS, E 141196.979 ftUS
CRS Grid Convergence Angle: -0.7168 °
Grid Scale Factor: 1.00004732

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 275.994 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7162.000 ft above MSL
Seabed / Ground Elevation: 7148.000 ft above MSL
Magnetic Declination: 9.482 °
Total Gravity Field Strength: 998.4632mgn (9.80665 Based)
Total Magnetic Field Strength: 50170.207 nT
Magnetic Dip Angle: 62.964 °
Declination Date: July 11, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North->True North: 9.4825 °
Local Coord Referenced To: Well Head

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 ° ' ")
Surface	0.00	0.00	32.00	0.00	0.00	0.00	0.00	N/A	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	100.00	0.00	32.00	100.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	200.00	0.00	32.00	200.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	300.00	0.00	32.00	300.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	400.00	0.00	32.00	400.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	500.00	0.00	32.00	500.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	600.00	0.00	32.00	600.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	700.00	0.00	32.00	700.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	800.00	0.00	32.00	800.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	900.00	0.00	32.00	900.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	1000.00	0.00	32.00	1000.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	1100.00	0.00	32.00	1100.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	1200.00	0.00	32.00	1200.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
Ojo Alamo	1269.00	0.00	32.00	1269.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	1300.00	0.00	32.00	1300.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	1400.00	0.00	32.00	1400.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
Kirtland	1416.00	0.00	32.00	1416.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
Build 1.5°/100ft	1500.00	0.00	32.00	1500.00	0.00	0.00	0.00	0.00	1873629.76	141196.98	N 36 8 36.02	W 107 27 54.76
	1600.00	1.50	32.00	1599.99	-0.57	1.11	0.69	1.50	1873630.86	141197.69	N 36 8 36.03	W 107 27 54.75
	1700.00	3.00	32.00	1699.91	-2.30	4.44	2.77	1.50	1873634.17	141199.81	N 36 8 36.02	W 107 27 54.72
	1800.00	4.50	32.00	1799.69	-5.16	9.99	6.24	1.50	1873639.67	141203.34	N 36 8 36.12	W 107 27 54.68
Picture Cliffs	1853.50	5.30	32.00	1853.00	-7.17	13.86	8.66	1.50	1873643.52	141205.81	N 36 8 36.16	W 107 27 54.65
	1900.00	6.00	32.00	1899.27	-9.17	17.75	11.09	1.50	1873647.37	141208.29	N 36 8 36.20	W 107 27 54.62
Lewis	1965.15	6.98	32.00	1964.00	-12.40	23.99	14.99	1.50	1873653.56	141212.27	N 36 8 36.26	W 107 27 54.57
	2000.00	7.50	32.00	1998.57	-14.33	27.71	17.32	1.50	1873657.26	141214.64	N 36 8 36.30	W 107 27 54.54
	2100.00	9.00	32.00	2097.54	-20.62	39.88	24.92	1.50	1873669.33	141222.40	N 36 8 36.42	W 107 27 54.45
Chacara	2200.00	10.50	32.00	2196.09	-28.05	54.24	33.89	1.50	1873683.58	141231.55	N 36 8 36.56	W 107 27 54.34
	2240.63	11.11	32.00	2236.00	-31.38	60.70	37.93	1.50	1873689.99	141235.67	N 36 8 36.62	W 107 27 54.29
	2300.00	12.00	32.00	2294.16	-36.60	70.79	44.23	1.50	1873699.99	141242.10	N 36 8 36.72	W 107 27 54.22
	2400.00	13.50	32.00	2391.70	-46.28	89.50	55.93	1.50	1873718.56	141254.02	N 36 8 36.91	W 107 27 54.07
Hold	2500.00	15.00	32.00	2488.62	-57.07	110.38	68.97	1.50	1873739.27	141267.33	N 36 8 37.12	W 107 27 53.92
	2600.00	15.00	32.00	2585.21	-68.42	132.33	82.69	0.00	1873761.05	141281.32	N 36 8 37.33	W 107 27 53.75
	2700.00	15.00	32.00	2681.80	-79.77	154.27	96.40	0.00	1873782.83	141295.31	N 36 8 37.55	W 107 27 53.58
	2800.00	15.00	32.00	2778.39	-91.11	176.22	110.12	0.00	1873804.60	141309.30	N 36 8 37.77	W 107 27 53.41
	2900.00	15.00	32.00	2874.99	-102.46	198.17	123.83	0.00	1873826.38	141323.29	N 36 8 37.98	W 107 27 53.25
	3000.00	15.00	32.00	2971.58	-113.81	220.12	137.55	0.00	1873848.16	141337.28	N 36 8 38.20	W 107 27 53.08
Drop 1.5°/100ft	3100.00	15.00	32.00	3068.17	-125.16	242.07	161.26	0.00	1873869.93	141351.27	N 36 8 38.42	W 107 27 52.91
	3200.00	13.50	32.00	3165.09	-135.95	262.95	164.31	1.50	1873890.64	141364.57	N 36 8 38.62	W 107 27 52.75
	3300.00	12.00	32.00	3262.62	-145.63	281.66	176.00	1.50	1873909.21	141376.50	N 36 8 38.81	W 107 27 52.61
Cliff House	3352.45	11.21	32.00	3314.00	-150.26	290.61	181.59	1.50	1873918.09	141382.20	N 36 8 38.90	W 107 27 52.54
Menefee	3395.22	10.57	32.00	3356.00	-153.80	297.46	185.88	1.50	1873924.89	141386.57	N 36 8 38.97	W 107 27 52.49
	3400.00	10.50	32.00	3360.70	-154.18	298.21	186.34	1.50	1873925.63	141387.04	N 36 8 38.97	W 107 27 52.48
	3500.00	9.00	32.00	3459.25	-161.61	312.57	195.31	1.50	1873939.87	141396.20	N 36 8 39.11	W 107 27 52.37
	3600.00	7.50	32.00	3558.21	-167.90	324.74	202.92	1.50	1873951.95	141403.95	N 36 8 39.24	W 107 27 52.28
	3700.00	6.00	32.00	3657.52	-173.05	334.70	209.15	1.50	1873961.84	141410.31	N 36 8 39.33	W 107 27 52.21
	3800.00	4.50	32.00	3757.10	-177.06	342.46	213.99	1.50	1873969.54	141415.25	N 36 8 39.41	W 107 27 52.15
	3900.00	3.00	32.00	3858.88	-179.93	348.01	217.46	1.50	1873975.04	141418.79	N 36 8 39.47	W 107 27 52.10
	4000.00	1.50	32.00	3958.80	-181.65	351.34	219.54	1.50	1873978.34	141420.91	N 36 8 39.50	W 107 27 52.08
Hold	4100.00	0.00	32.00	4056.79	-182.23	352.45	220.23	1.50	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
Point Lookout	4161.21	0.00	32.00	4118.00	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4200.00	0.00	32.00	4156.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
Mancos	4292.21	0.00	32.00	4249.00	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4300.00	0.00	32.00	4256.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4400.00	0.00	32.00	4356.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4500.00	0.00	32.00	4456.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4600.00	0.00	32.00	4556.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
Gallup	4689.21	0.00	32.00	4646.00	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4700.00	0.00	32.00	4656.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4800.00	0.00	32.00	4756.79	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
Build 10°/100ft	4865.50	0.00	32.00	4822.29	-182.23	352.45	220.23	0.00	1873979.44	141421.62	N 36 8 39.51	W 107 27 52.07
	4900.00	3.45	271.62	4856.77	-181.19	352.48	219.20	10.00	1873979.48	141420.58	N 36 8 39.51	W 107 27 52.08
	5000.00	13.45	271.62	4955.55	-166.56	352.89	204.52	10.00	1873980.08	141405.91	N 36 8 39.51	W 107 27 52.26
	5100.00	23.46	271.62	5050.29	-135.03	353.79	172.92	10.00	1873981.37	141374.32	N 36 8 39.52	W 107 27 52.65
	5200.00	33.46	271.62	5138.10	-87.58	355.13	125.35	10.00	1873983.31	141326.77	N 36 8 39.54	W 107 27 53.23
	5300.00	43.46	271.62	5216.31	-25.65	356.89	63.26	10.00	1873985.85	141284.70	N 36 8 39.55	W 107 27 53.98

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 ° ' ")
Hold to TD	5400.00	53.46	271.62	5282.54	48.89	359.00	-11.46	10.00	1873988.89	141190.01	N 36 8 39.57	W 107 27 54.90
	5500.00	63.46	271.62	5334.77	133.76	361.41	-96.55	10.00	1873992.36	141104.95	N 36 8 39.60	W 107 27 55.93
	5600.00	73.47	271.62	5371.43	226.39	364.03	-189.42	10.00	1873996.15	141012.12	N 36 8 39.62	W 107 27 57.07
	5700.00	83.47	271.62	5391.40	323.96	366.80	-287.23	10.00	1874000.14	140914.34	N 36 8 39.65	W 107 27 58.26
	5777.10	91.18	271.62	5395.00	400.70	368.98	-364.16	10.00	1874003.28	140837.44	N 36 8 39.67	W 107 27 59.20
	5800.00	91.18	271.62	5394.53	423.53	369.62	-387.05	0.00	1874004.21	140814.57	N 36 8 39.68	W 107 27 59.47
	5900.00	91.18	271.62	5392.47	523.21	372.45	-486.98	0.00	1874008.29	140714.67	N 36 8 39.71	W 107 28 0.69
	6000.00	91.18	271.62	5390.41	622.90	375.28	-586.92	0.00	1874012.37	140614.77	N 36 8 39.74	W 107 28 1.91
	6100.00	91.18	271.62	5388.35	722.59	378.10	-686.86	0.00	1874016.44	140514.87	N 36 8 39.76	W 107 28 3.13
	6200.00	91.18	271.62	5386.29	822.28	380.93	-786.80	0.00	1874020.52	140414.97	N 36 8 39.79	W 107 28 4.35
	6300.00	91.18	271.62	5384.23	921.96	383.75	-886.74	0.00	1874024.60	140315.07	N 36 8 39.82	W 107 28 5.57
	6400.00	91.18	271.62	5382.17	1021.65	386.58	-986.68	0.00	1874028.67	140215.17	N 36 8 39.85	W 107 28 6.79
	6500.00	91.18	271.62	5380.11	1121.34	389.41	-1086.62	0.00	1874032.75	140115.27	N 36 8 39.87	W 107 28 8.00
	6600.00	91.18	271.62	5378.05	1221.03	392.23	-1186.56	0.00	1874036.82	140015.37	N 36 8 39.90	W 107 28 9.22
	6700.00	91.18	271.62	5375.99	1320.71	395.06	-1286.50	0.00	1874040.90	139915.47	N 36 8 39.93	W 107 28 10.44
	6800.00	91.18	271.62	5373.92	1420.40	397.88	-1386.43	0.00	1874044.98	139815.57	N 36 8 39.96	W 107 28 11.66
	6900.00	91.18	271.62	5371.86	1520.09	400.71	-1486.37	0.00	1874049.05	139715.67	N 36 8 39.99	W 107 28 12.88
	7000.00	91.18	271.62	5369.80	1619.78	403.53	-1586.31	0.00	1874053.13	139615.77	N 36 8 40.01	W 107 28 14.10
	7100.00	91.18	271.62	5367.74	1719.46	406.36	-1686.25	0.00	1874057.20	139515.87	N 36 8 40.04	W 107 28 15.31
	7200.00	91.18	271.62	5365.68	1819.15	409.18	-1786.19	0.00	1874061.28	139415.97	N 36 8 40.07	W 107 28 16.53
	7300.00	91.18	271.62	5363.62	1918.84	412.01	-1886.13	0.00	1874065.35	139316.07	N 36 8 40.10	W 107 28 17.75
	7400.00	91.18	271.62	5361.55	2018.53	414.83	-1986.07	0.00	1874069.43	139216.17	N 36 8 40.13	W 107 28 18.97
	7500.00	91.18	271.62	5359.49	2118.21	417.66	-2086.01	0.00	1874073.50	139116.27	N 36 8 40.15	W 107 28 20.19
	7600.00	91.18	271.62	5357.43	2217.90	420.48	-2185.94	0.00	1874077.58	139016.37	N 36 8 40.18	W 107 28 21.41
	7700.00	91.18	271.62	5355.36	2317.59	423.30	-2285.88	0.00	1874081.65	138916.47	N 36 8 40.21	W 107 28 22.63
	7800.00	91.18	271.62	5353.30	2417.28	426.13	-2385.82	0.00	1874085.73	138816.57	N 36 8 40.24	W 107 28 23.84
	7900.00	91.18	271.62	5351.24	2516.96	428.95	-2485.76	0.00	1874089.80	138716.67	N 36 8 40.26	W 107 28 25.06
	8000.00	91.18	271.62	5349.17	2616.65	431.78	-2585.70	0.00	1874093.87	138616.77	N 36 8 40.29	W 107 28 26.28
	8100.00	91.18	271.62	5347.11	2716.34	434.60	-2685.64	0.00	1874097.95	138516.87	N 36 8 40.32	W 107 28 27.50
	8200.00	91.18	271.62	5345.05	2816.03	437.42	-2785.58	0.00	1874102.02	138416.97	N 36 8 40.35	W 107 28 28.72
	8300.00	91.18	271.62	5342.98	2915.71	440.25	-2885.52	0.00	1874106.10	138317.07	N 36 8 40.38	W 107 28 29.94
	8400.00	91.18	271.62	5340.92	3015.40	443.07	-2985.46	0.00	1874110.17	138217.17	N 36 8 40.40	W 107 28 31.15
	8500.00	91.18	271.62	5338.85	3115.09	445.89	-3085.39	0.00	1874114.24	138117.27	N 36 8 40.43	W 107 28 32.37
	8600.00	91.18	271.62	5336.79	3214.77	448.72	-3185.33	0.00	1874118.32	138017.36	N 36 8 40.46	W 107 28 33.59
	8700.00	91.18	271.62	5334.72	3314.46	451.54	-3285.27	0.00	1874122.39	137917.46	N 36 8 40.49	W 107 28 34.81
	8800.00	91.18	271.62	5332.66	3414.15	454.36	-3385.21	0.00	1874126.46	137817.56	N 36 8 40.52	W 107 28 36.03
	8900.00	91.18	271.62	5330.59	3513.84	457.19	-3485.15	0.00	1874130.54	137717.66	N 36 8 40.54	W 107 28 37.25
	9000.00	91.18	271.62	5328.53	3613.52	460.01	-3585.09	0.00	1874134.61	137617.76	N 36 8 40.57	W 107 28 38.46
	9100.00	91.18	271.62	5326.46	3713.21	462.83	-3685.03	0.00	1874138.68	137517.86	N 36 8 40.60	W 107 28 39.68
	9200.00	91.18	271.62	5324.39	3812.90	465.66	-3784.97	0.00	1874142.75	137417.96	N 36 8 40.63	W 107 28 40.90
	9300.00	91.18	271.62	5322.33	3912.59	468.48	-3884.90	0.00	1874146.83	137318.06	N 36 8 40.65	W 107 28 42.12
	9400.00	91.18	271.62	5320.26	4012.27	471.30	-3984.84	0.00	1874150.90	137218.16	N 36 8 40.68	W 107 28 43.34
	9500.00	91.18	271.62	5318.19	4111.96	474.12	-4084.78	0.00	1874154.97	137118.26	N 36 8 40.71	W 107 28 44.56
	9600.00	91.18	271.62	5316.13	4211.65	476.94	-4184.72	0.00	1874159.04	137018.36	N 36 8 40.74	W 107 28 45.78
	9700.00	91.18	271.62	5314.06	4311.33	479.77	-4284.66	0.00	1874163.12	136918.46	N 36 8 40.77	W 107 28 46.99
	9800.00	91.18	271.62	5311.99	4411.02	482.59	-4384.60	0.00	1874167.19	136818.56	N 36 8 40.79	W 107 28 48.21
	9900.00	91.18	271.62	5309.93	4510.71	485.41	-4484.54	0.00	1874171.26	136718.66	N 36 8 40.82	W 107 28 49.43
	10000.00	91.18	271.62	5307.86	4610.40	488.23	-4584.48	0.00	1874175.33	136618.76	N 36 8 40.85	W 107 28 50.65
Chaco 2206-16A #221 PBHL	10089.83	91.18	271.62	5306.00	4699.94	490.77	-4674.25	0.00	1874178.99	136529.02	N 36 8 40.87	W 107 28 51.74

Survey Type: Non-Def Plan

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

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / WPX Chaco 2206-16A #221 R1 eem 11july13
	14.000	10089.828	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / WPX Chaco 2206-16A #221 R1 eem 11july13