

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., 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 Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101
Revised November 14, 2012

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

☐ AMENDED REPORT

RCVD JUN 18 '13
OIL CONS. DIV.
DIST. 3

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address WPX Energy Production, LLC P.O. Box 640 Aztec, NM 87410		OGRID Number 120782
Property Code 39969		Property Name Chaco 2206-161
API Number 30-043-21161		Well No. 224H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	16	22N	6W		1458	South	290	East	Sandoval

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
L	16	22N	6W		380	South	380	West	Sandoval

9. Pool Information

Pool Name LYBROOK GALLUP	Pool Code 42289
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Additional Well Information

Work Type N	Well Type O	Cable/Rotary R	Lease Type S	Ground Level Elevation 7194'
Multiple No	Proposed Depth 10,089' MD / 5,287' TVD	Formation Gallup	Contractor AWS	Spud Date 08/01/13
Depth to Ground water +/- 136'	Distance from nearest fresh water well >1000'	Distance to nearest surface water >1000'	Hold C104 for Directional Survey and "As Drilled" plat	

21. Proposed Casing and Cement Program

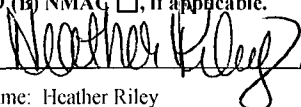
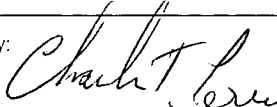
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
J-55	12-1/4"	9-5/8"	36#	400'	190	Surface
K-55	8-3/4"	7"	23#	5,876'	1050	Surface
N-80	6-1/8"	4-1/2"	11.6#	10,089'	380	4,500'

Casing/Cement Program: Additional Comments

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOC D FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOC D PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000#	2000#	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAG ☐ , if applicable. Signature:  Printed name: Heather Riley Title: Regulatory Specialist, Sr. E-mail Address: heather.riley@wpenergy.com Date: 06/17/13 Phone: 333-1822		OIL CONSERVATION DIVISION Approved By:  6-20-2013 Title: SUPERVISOR DISTRICT # 3 Approved Date: JUN 20 2013 Expiration Date: JUN 20 2015 Conditions of Approval Attached	
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NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

AV

JUN 21 2013 ca

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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 30-043-21161	² Pool Code 42289	³ Pool Name Lybrook Gallup
⁴ Property Code 39969	⁵ Property Name CHACO 2206-16I	⁶ Well Number 224H
⁷ GRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC	⁹ Elevation 7194'

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	22N	6W		1458	SOUTH	290	EAST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

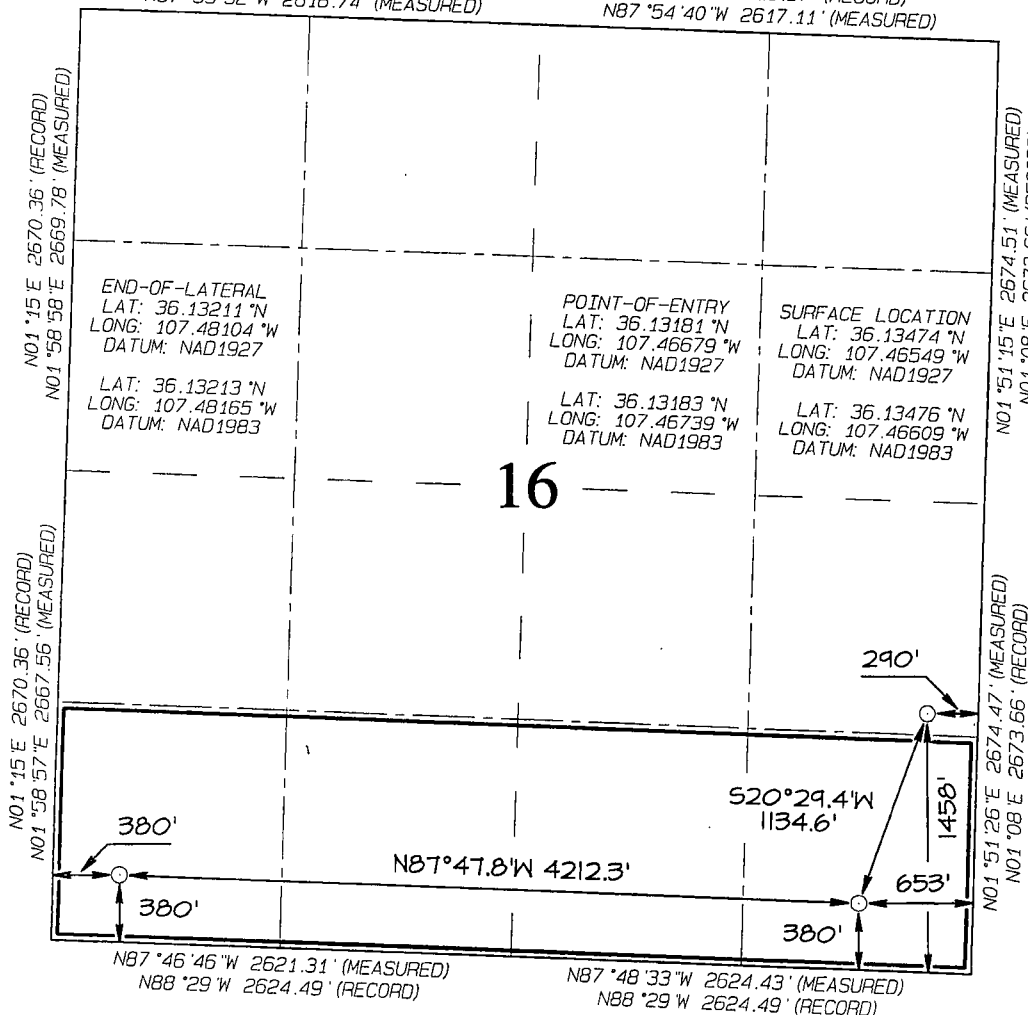
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	16	22N	6W		380	SOUTH	380	WEST	SANDOVAL

¹² Dedicated Acres 160.0 Acres - (S/2 S/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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)
N87°55'52"W 2616.74' (MEASURED)

N88°35'W 2616.57' (RECORD)
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.

Heather Riley **6/17/13**
Signature Date
Heather Riley
Printed Name
heather.riley@wpxenergy.com
E-mail Address

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: JUNE 3, 2013
Date of Survey: JUNE 21, 2012

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: 5/22/2013 **FIELD:** Lybrook Gallup

WELL NAME: Chaco 2206-16I #224H **SURFACE:** State

SHL: 1458' FSL & 290' FEL Sec 16 T22N, R6W **ELEVATION:** 7,194' GR

BHL: 380' FSL & 380' FWL Sec 16 T22N, R6W

County: Sandoval **MINERALS:** State

MEASURED DEPTH: **LEASE #:** State

I. GEOLOGY: Surface formation – San Jose**A. FORMATION TOPS:** (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,277	1,269	Point Lookout	4,322	4,158
Kirtland	1,452	1,437	Mancos	4,494	4,328
Pictured Cliffs	1,872	1,833	Kickoff Point	4,965	4,798
Lewis	2,021	1,977	Target Top	5,693	5,340
Chacra	2,295	2,234	Landing Point	5,876	5,371
Cliff House	3,447	3,320	Target Base	5,876	5,371
Menefee	3,487	3,360			
			TD	10,089	5,287

B. MUD LOGGING PROGRAM: Mudlogger on location from surface csg to TD.**C. LOGGING PROGRAM:** MWD: GR for curve and MWD: GR / SONIC 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 water based mud (WBM) will be used to drill the 8 3/4" Vertical/Directional, and Curve portion of the well. Oil based mud (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:** Will drill vertical/directional 8-3/4" hole to KOP of about 4,965' MD/4,798' TVD. Will drill 8 3/4" curve portion of well to landing point of about 90 deg. at +/- 5,876' MD/5,371' TVD and will run/cement 7" csg. Will then drill a 6-1/8" Lateral as per the attached Directional Plan to total depth of about 10,089' MD. Will run 4-1/2" Production Casing from surface to TD and cement.

III. MATERIALS

A. CASING PROGRAM:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>
Surface	12.25"	+/- 400'	9.625"	36#	J-55
Intermediate	8.75"	5,876'	7"	23#	K-55
Longstring	6.125"	10,089'	4.5"	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. Then run (1) centralizer at 2,700', 2,500', 2,300', 2,000', 1,500', and 1,000'.
3. PRODUCTION CASING: Run 4-1/2" casing with cement nose guide Float Shoe + 1jt. of 4-1/2" casing + Float Collar. Number of centralizers to run will be determined by wellbore condition and 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: (1461 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, (71.4 cu ft/60 sks) **STAGE 5:** Foamed Lead Cement: 13.0 ppg (355.3 cu-ft/170 sks/63.28 Bbls) 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 +/- 4,500'. 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

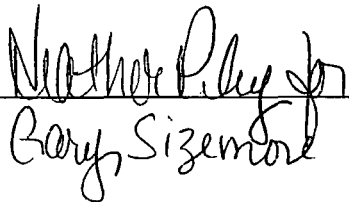
1. Pressure test 4-1/2" casing to 5000 psi max, hold at 1500 psi for 30 minutes.

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 near landing point of curve (~5,870' MD).



Gary Sizemore



WPX Chaco 2206-16I #224H Rev0 JBE 21May13 Proposal Geodetic Report

(Non-Def Plan)

Report Date: May 21, 2013 - 04:23 PM
Client: WPX Energy
Field: NM Sandoval County NAD27
Structure / Slot: WPX Chaco 2206-16I #224H / Chaco 2206-16I #224H
Well: Chaco 2306-16I #224H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: WPX Chaco 2206-16I #224H Rev0 JBE 21May13
Survey Date: May 21, 2013
Tort / AHD / DDI / ERD Ratio: 129.252 ° / 5897.742 ft / 6.156 / 1.098
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 8' 5.08200", W 107° 27' 55.74800"
Location Grid N/E Y/X: N 1870501.976 ftUS, E 141076.464 ftUS
CRS Grid Convergence Angle: -0.7168 °
Grid Scale Factor: 1.00004742

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 258.217 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7208.000 ft above MSL
Seabed / Ground Elevation: 7194.000 ft above MSL
Magnetic Declination: 9.497 °
Total Gravity Field Strength: 999.1355 mgn (9.8 based)
Total Magnetic Field Strength: 50181.470 nT
Magnetic Dip Angle: 62.960 °
Declination Date: May 21, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North->True North: 9.4966 °
Local Coord Referenced To: Structure Reference Point

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 ° ' ")
SHL Chaco 2206-16I #224H	0.00	0.00	169.54	0.00	0.00	0.00	0.00	N/A	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
	100.00	0.00	169.54	100.00	0.00	0.00	0.00	0.00	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
	200.00	0.00	169.54	200.00	0.00	0.00	0.00	0.00	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
	300.00	0.00	169.54	300.00	0.00	0.00	0.00	0.00	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
	400.00	0.00	169.54	400.00	0.00	0.00	0.00	0.00	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
	500.00	0.00	169.54	500.00	0.00	0.00	0.00	0.00	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
Nudge 2°/100'	550.00	0.00	169.54	550.00	0.00	0.00	0.00	0.00	1870501.98	141076.46	N 36 8 5.08	W 107 27 55.75
	600.00	1.00	169.54	600.00	0.01	-0.43	0.08	2.00	1870501.55	141076.54	N 36 8 5.08	W 107 27 55.75
	700.00	3.00	169.54	699.93	0.09	-3.86	0.71	2.00	1870498.11	141077.13	N 36 8 5.04	W 107 27 55.74
	800.00	5.00	169.54	799.68	0.25	-10.72	1.98	2.00	1870491.23	141078.31	N 36 8 4.98	W 107 27 55.72
	900.00	7.00	169.54	899.13	0.49	-21.00	3.88	2.00	1870480.93	141080.08	N 36 8 4.87	W 107 27 55.70
	1000.00	9.00	169.54	998.15	0.81	-34.68	6.41	2.00	1870467.21	141082.44	N 36 8 4.74	W 107 27 55.67
	1100.00	11.00	169.54	1096.63	1.21	-51.76	9.56	2.00	1870450.10	141085.37	N 36 8 4.57	W 107 27 55.63
	1200.00	13.00	169.54	1194.44	1.69	-72.20	13.33	2.00	1870429.61	141088.89	N 36 8 4.37	W 107 27 55.59
	1300.00	15.00	169.54	1291.46	2.25	-95.99	17.73	2.00	1870405.76	141092.99	N 36 8 4.13	W 107 27 55.53
	1400.00	17.00	169.54	1387.58	2.88	-123.10	22.73	2.00	1870378.60	141097.66	N 36 8 3.86	W 107 27 55.47
	1500.00	19.00	169.54	1482.68	3.60	-153.48	28.34	2.00	1870348.14	141102.89	N 36 8 3.56	W 107 27 55.40
Hold 19° Tangent	1502.80	19.06	169.54	1485.33	3.62	-154.38	28.51	2.00	1870347.24	141103.04	N 36 8 3.56	W 107 27 55.40
	1600.00	19.06	169.54	1577.20	4.35	-185.59	34.27	0.00	1870315.97	141108.41	N 36 8 3.25	W 107 27 55.33
	1700.00	19.06	169.54	1671.72	5.10	-217.69	40.20	0.00	1870283.79	141113.94	N 36 8 2.93	W 107 27 55.26
	1800.00	19.06	169.54	1766.24	5.85	-249.80	46.13	0.00	1870251.61	141119.47	N 36 8 2.61	W 107 27 55.19
	1900.00	19.06	169.54	1860.76	6.61	-281.91	52.06	0.00	1870219.43	141125.00	N 36 8 2.29	W 107 27 55.11
	2000.00	19.06	169.54	1955.28	7.36	-314.01	57.99	0.00	1870187.25	141130.52	N 36 8 1.98	W 107 27 55.04
	2100.00	19.06	169.54	2049.80	8.11	-346.12	63.92	0.00	1870155.07	141136.05	N 36 8 1.66	W 107 27 54.97
	2200.00	19.06	169.54	2144.32	8.86	-378.23	69.85	0.00	1870122.89	141141.58	N 36 8 1.34	W 107 27 54.90
	2300.00	19.06	169.54	2238.84	9.61	-410.33	75.78	0.00	1870090.71	141147.10	N 36 8 1.02	W 107 27 54.82
	2400.00	19.06	169.54	2333.36	10.37	-442.44	81.71	0.00	1870058.53	141152.63	N 36 8 0.71	W 107 27 54.75
	2500.00	19.06	169.54	2427.88	11.12	-474.54	87.64	0.00	1870026.35	141158.16	N 36 8 0.39	W 107 27 54.68

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 ° ' '')
	2600.00	19.06	169.54	2522.40	11.87	-506.65	93.56	0.00	1869994.17	141163.69	N 36 8 0.07	W 107 27 54.61
	2700.00	19.06	169.54	2616.92	12.62	-538.76	99.49	0.00	1869961.99	141169.21	N 36 7 59.75	W 107 27 54.54
	2800.00	19.06	169.54	2711.44	13.38	-570.86	105.42	0.00	1869929.81	141174.74	N 36 7 59.44	W 107 27 54.46
	2900.00	19.06	169.54	2805.96	14.13	-602.97	111.35	0.00	1869897.63	141180.27	N 36 7 59.12	W 107 27 54.39
	3000.00	19.06	169.54	2900.48	14.88	-635.08	117.28	0.00	1869865.45	141185.80	N 36 7 58.80	W 107 27 54.32
	3100.00	19.06	169.54	2995.00	15.63	-667.18	123.21	0.00	1869833.27	141191.32	N 36 7 58.48	W 107 27 54.25
	3200.00	19.06	169.54	3089.52	16.38	-699.29	129.14	0.00	1869801.09	141196.85	N 36 7 58.17	W 107 27 54.17
	3300.00	19.06	169.54	3184.04	17.14	-731.39	135.07	0.00	1869768.91	141202.38	N 36 7 57.85	W 107 27 54.10
	3400.00	19.06	169.54	3278.56	17.89	-763.50	141.00	0.00	1869736.74	141207.90	N 36 7 57.53	W 107 27 54.03
	3500.00	19.06	169.54	3373.08	18.64	-795.61	146.93	0.00	1869704.56	141213.43	N 36 7 57.21	W 107 27 53.96
	3600.00	19.06	169.54	3467.60	19.39	-827.71	152.86	0.00	1869672.38	141218.96	N 36 7 56.90	W 107 27 53.88
	3700.00	19.06	169.54	3562.12	20.15	-859.82	158.78	0.00	1869640.20	141224.49	N 36 7 56.58	W 107 27 53.81
	3800.00	19.06	169.54	3656.64	20.90	-891.93	164.71	0.00	1869608.02	141230.01	N 36 7 56.26	W 107 27 53.74
	3900.00	19.06	169.54	3751.16	21.65	-924.03	170.64	0.00	1869575.84	141235.54	N 36 7 55.94	W 107 27 53.67
Drop 2°/100'	3914.29	19.06	169.54	3764.67	21.76	-928.62	171.49	0.00	1869571.24	141236.33	N 36 7 55.90	W 107 27 53.66
	4000.00	17.34	169.54	3846.09	22.37	-954.94	176.35	2.00	1869544.86	141240.86	N 36 7 55.64	W 107 27 53.60
	4100.00	15.34	169.54	3942.05	23.02	-982.61	181.46	2.00	1869517.13	141245.63	N 36 7 55.36	W 107 27 53.54
	4200.00	13.34	169.54	4038.97	23.59	-1006.97	185.96	2.00	1869492.71	141249.82	N 36 7 55.12	W 107 27 53.48
	4300.00	11.34	169.54	4136.61	24.09	-1027.99	189.84	2.00	1869471.65	141253.44	N 36 7 54.92	W 107 27 53.43
	4400.00	9.34	169.54	4234.98	24.50	-1045.64	193.10	2.00	1869453.96	141256.48	N 36 7 54.74	W 107 27 53.39
	4500.00	7.34	169.54	4333.92	24.83	-1059.90	195.73	2.00	1869439.66	141258.93	N 36 7 54.60	W 107 27 53.36
	4600.00	5.34	169.54	4433.30	25.09	-1070.77	197.74	2.00	1869428.77	141260.80	N 36 7 54.49	W 107 27 53.34
	4700.00	3.34	169.54	4533.01	25.26	-1078.21	199.12	2.00	1869421.31	141262.08	N 36 7 54.42	W 107 27 53.32
	4800.00	1.34	169.54	4632.92	25.36	-1082.23	199.86	2.00	1869417.28	141262.78	N 36 7 54.38	W 107 27 53.31
Vertical	4867.09	0.00	169.54	4700.00	25.38	-1083.00	200.00	2.00	1869416.51	141262.91	N 36 7 54.37	W 107 27 53.31
	4900.00	0.00	169.54	4732.91	25.38	-1083.00	200.00	0.00	1869416.51	141262.91	N 36 7 54.37	W 107 27 53.31
KOP 10°/100'	4965.06	0.00	169.54	4797.97	25.38	-1083.00	200.00	0.00	1869416.51	141262.91	N 36 7 54.37	W 107 27 53.31
	5000.00	3.49	271.49	4832.89	26.41	-1082.97	198.94	10.00	1869416.55	141261.84	N 36 7 54.37	W 107 27 53.32
	5100.00	13.49	271.49	4931.67	40.77	-1082.59	184.19	10.00	1869417.12	141247.10	N 36 7 54.38	W 107 27 53.50
	5200.00	23.49	271.49	5026.38	71.60	-1081.77	152.52	10.00	1869418.34	141215.44	N 36 7 54.38	W 107 27 53.89
	5300.00	33.49	271.49	5114.16	117.98	-1080.53	104.89	10.00	1869420.17	141167.83	N 36 7 54.40	W 107 27 54.47
	5400.00	43.49	271.49	5192.33	178.48	-1078.92	42.75	10.00	1869422.56	141105.71	N 36 7 54.41	W 107 27 55.23
	5500.00	53.49	271.49	5258.51	251.28	-1076.98	-32.02	10.00	1869425.44	141030.97	N 36 7 54.43	W 107 27 56.14
	5600.00	63.49	271.49	5310.71	334.15	-1074.77	-117.14	10.00	1869428.71	140945.88	N 36 7 54.45	W 107 27 57.18
	5700.00	73.49	271.49	5347.32	424.59	-1072.35	-210.03	10.00	1869432.28	140853.02	N 36 7 54.48	W 107 27 58.31
	5800.00	83.49	271.49	5367.24	519.85	-1069.81	-307.87	10.00	1869436.05	140755.22	N 36 7 54.50	W 107 27 59.50
Chaco 2206-161 #224H Landing	5876.46	91.14	271.49	5370.82	594.13	-1067.83	-384.16	10.00	1869438.98	140678.96	N 36 7 54.52	W 107 28 0.43
	5900.00	91.14	271.49	5370.35	617.03	-1067.22	-407.69	0.00	1869439.89	140655.44	N 36 7 54.53	W 107 28 0.72
	6000.00	91.14	271.49	5368.36	714.34	-1064.63	-507.63	0.00	1869443.73	140555.53	N 36 7 54.55	W 107 28 1.94
	6100.00	91.14	271.49	5366.37	811.66	-1062.03	-607.58	0.00	1869447.58	140455.62	N 36 7 54.58	W 107 28 3.15
	6200.00	91.14	271.49	5364.38	908.97	-1059.44	-707.53	0.00	1869451.42	140355.71	N 36 7 54.61	W 107 28 4.37
	6300.00	91.14	271.49	5362.39	1006.28	-1056.84	-807.47	0.00	1869455.27	140255.80	N 36 7 54.63	W 107 28 5.59
	6400.00	91.14	271.49	5360.40	1103.59	-1054.25	-907.42	0.00	1869459.12	140155.88	N 36 7 54.66	W 107 28 6.81
	6500.00	91.14	271.49	5358.41	1200.90	-1051.65	-1007.37	0.00	1869462.96	140055.97	N 36 7 54.68	W 107 28 8.03
	6600.00	91.14	271.49	5356.42	1298.21	-1049.06	-1107.31	0.00	1869466.81	139956.06	N 36 7 54.71	W 107 28 9.25
	6700.00	91.14	271.49	5354.43	1395.52	-1046.46	-1207.26	0.00	1869470.65	139856.15	N 36 7 54.73	W 107 28 10.46
	6800.00	91.14	271.49	5352.44	1492.83	-1043.87	-1307.21	0.00	1869474.50	139756.24	N 36 7 54.76	W 107 28 11.68
	6900.00	91.14	271.49	5350.45	1590.14	-1041.27	-1407.15	0.00	1869478.34	139656.33	N 36 7 54.78	W 107 28 12.90
	7000.00	91.14	271.49	5348.46	1687.45	-1038.68	-1507.10	0.00	1869482.19	139556.42	N 36 7 54.81	W 107 28 14.12
	7100.00	91.14	271.49	5346.47	1784.76	-1036.08	-1607.05	0.00	1869486.03	139456.51	N 36 7 54.84	W 107 28 15.34
	7200.00	91.14	271.49	5344.49	1882.07	-1033.49	-1706.99	0.00	1869489.88	139356.60	N 36 7 54.86	W 107 28 16.56
	7300.00	91.14	271.49	5342.50	1979.38	-1030.89	-1806.94	0.00	1869493.72	139256.69	N 36 7 54.89	W 107 28 17.77
	7400.00	91.14	271.49	5340.51	2076.69	-1028.30	-1906.88	0.00	1869497.57	139156.78	N 36 7 54.91	W 107 28 18.99
	7500.00	91.14	271.49	5338.52	2174.00	-1025.70	-2006.83	0.00	1869501.41	139056.87	N 36 7 54.94	W 107 28 20.21
	7600.00	91.14	271.49	5336.53	2271.31	-1023.11	-2106.78	0.00	1869505.26	138956.96	N 36 7 54.96	W 107 28 21.43
	7700.00	91.14	271.49	5334.54	2368.62	-1020.51	-2206.72	0.00	1869509.10	138857.04	N 36 7 54.99	W 107 28 22.65
	7800.00	91.14	271.49	5332.55	2465.93	-1017.92	-2306.67	0.00	1869512.95	138757.13	N 36 7 55.01	W 107 28 23.87
	7900.00	91.14	271.49	5330.56	2563.24	-1015.32	-2406.62	0.00	1869516.79	138657.22	N 36 7 55.04	W 107 28 25.08

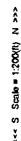
Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8000.00	91.14	271.49	5328.57	2660.55	-1012.73	-2506.56	0.00	1869520.64	138557.31	N 36 7 55.07	W 107 28 26.30
	8100.00	91.14	271.49	5326.58	2757.86	-1010.13	-2606.51	0.00	1869524.49	138457.40	N 36 7 55.09	W 107 28 27.52
	8200.00	91.14	271.49	5324.59	2855.17	-1007.54	-2706.46	0.00	1869528.33	138357.49	N 36 7 55.12	W 107 28 28.74
	8300.00	91.14	271.49	5322.60	2952.48	-1004.94	-2806.40	0.00	1869532.18	138257.58	N 36 7 55.14	W 107 28 29.96
	8400.00	91.14	271.49	5320.61	3049.80	-1002.35	-2906.35	0.00	1869536.02	138157.67	N 36 7 55.17	W 107 28 31.18
	8500.00	91.14	271.49	5318.62	3147.11	-999.75	-3006.30	0.00	1869539.87	138057.76	N 36 7 55.19	W 107 28 32.39
	8600.00	91.14	271.49	5316.63	3244.42	-997.16	-3106.24	0.00	1869543.71	137957.85	N 36 7 55.22	W 107 28 33.61
	8700.00	91.14	271.49	5314.64	3341.73	-994.56	-3206.19	0.00	1869547.56	137857.94	N 36 7 55.24	W 107 28 34.83
	8800.00	91.14	271.49	5312.65	3439.04	-991.97	-3306.14	0.00	1869551.40	137758.03	N 36 7 55.27	W 107 28 36.05
	8900.00	91.14	271.49	5310.66	3536.35	-989.37	-3406.08	0.00	1869555.25	137658.12	N 36 7 55.30	W 107 28 37.27
	9000.00	91.14	271.49	5308.67	3633.66	-986.78	-3506.03	0.00	1869559.09	137558.20	N 36 7 55.32	W 107 28 38.49
	9100.00	91.14	271.49	5306.68	3730.97	-984.18	-3605.98	0.00	1869562.94	137458.29	N 36 7 55.35	W 107 28 39.70
	9200.00	91.14	271.49	5304.69	3828.28	-981.59	-3705.92	0.00	1869566.78	137358.38	N 36 7 55.37	W 107 28 40.92
	9300.00	91.14	271.49	5302.70	3925.59	-978.99	-3805.87	0.00	1869570.63	137258.47	N 36 7 55.40	W 107 28 42.14
	9400.00	91.14	271.49	5300.72	4022.90	-976.40	-3905.82	0.00	1869574.47	137158.56	N 36 7 55.42	W 107 28 43.36
	9500.00	91.14	271.49	5298.73	4120.21	-973.80	-4005.76	0.00	1869578.32	137058.65	N 36 7 55.45	W 107 28 44.58
	9600.00	91.14	271.49	5296.74	4217.52	-971.21	-4105.71	0.00	1869582.17	136958.74	N 36 7 55.47	W 107 28 45.80
	9700.00	91.14	271.49	5294.75	4314.83	-968.61	-4205.65	0.00	1869586.01	136858.83	N 36 7 55.50	W 107 28 47.01
	9800.00	91.14	271.49	5292.76	4412.14	-966.02	-4305.60	0.00	1869589.86	136758.92	N 36 7 55.53	W 107 28 48.23
	9900.00	91.14	271.49	5290.77	4509.45	-963.42	-4405.55	0.00	1869593.70	136659.01	N 36 7 55.55	W 107 28 49.45
	10000.00	91.14	271.49	5288.78	4606.76	-960.83	-4505.49	0.00	1869597.55	136559.10	N 36 7 55.58	W 107 28 50.67
Chaco 2206-161 #224H PBHL	10089.37	91.14	271.49	5287.00	4693.73	-958.51	-4594.81	0.00	1869600.98	136469.81	N 36 7 55.60	W 107 28 51.76

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 Borehole / WPX Chaco 2206-161 #224H Rev0 JBE
	14.000	10089.367	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / WPX Chaco 2206-161 #224H Rev0 JBE

Name	Targets					Shape
	TVD (ft)	NS (ft)	EW (ft)	Latitude (deg)	Longitude (deg)	
Chaco 2206-161 #224H PP	5376.00	-1075.00	-111.76	N 36 7 54.451	W 107 27 57.110	POINT
Chaco 2206-161 #224H PBHL	5287.00	-958.51	-4594.81	N 36 7 55.600	W 107 28 51.758	POINT



Critical Points



Vertical Section (ft) Azim = 258.22° Scale = 1:200(ft) Origin = 0 N-S, 0 E-W

Drawn By: _____
 Date Created: _____
 Checked By: _____
 Checked Date: _____
 Approved By: _____
 Approved Date: _____

Current User: _____
 May 21, 2013 03:48:56 PM