

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, 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 3160-4 or 3160-5 form.

Operator Signature Date:

Application Type:

☐ P&A ☒ Drilling/Casing Change ☐ Recomplete/DHC
☒ Location Change ☐ Other: _____

Well information:

API Well #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E	Feet	NS	Ft	EW
30-039-31192-00-00	CHACO 2307 13L	175H	WPX ENERGY PRODUCTION, LLC	O	N	Rio Arriba	F	L	13	23	N	7	W	1494	S	60	W

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations.
Hold C-104 for directional survey and "As Drilled" plat

SEP 13 2013

NMOCD Approved by Signature

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

AUG 30 2013

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELL
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

5. Lease Serial No.

NMSF-078360

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Chaco 2307-13L #175H

9. API Well No.

30-039-31192

10. Field and Pool or Exploratory Area

Lybrook Gallup

11. Country or Parish, State

Rio Arriba County, NM

1. Type of Well

☒ Oil Well

☐ Gas Well

☐ Other

2. Name of Operator

WPX Energy Production, LLC

3a. Address

PO Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

505-333-1808

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sur: 1494' FSL & 60' FWL, sec 13, T23N, R7W - BHL: 380' FSL & 230' FWL, Sec 14, T23N, R7W

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent

☐ Acidize

☐ Deepen

☐ Production
(Start/Resume)

☐ Water Shut-Off

☐ Alter Casing

☐ Fracture Treat

☐ Reclamation

☐ Well Integrity

☐ Casing Repair

☐ New Construction

☐ Recomplete

☒ Other Lateral Extension

☐ Subsequent Report

☐ Change Plans

☐ Plug and Abandon

☐ Temporarily
Abandon

☐ Final Abandonment Notice

☐ Convert to Injection

☐ Plug Back

☐ Water Disposal

RCVD SEP 5 '13
OIL CONS. DIV.
DIST. 2

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

WPX plans to plans to drill this well +/- 100ft. past the hardline as noted in Completion Section of the revised Operations Planl to maximize the producing interval as per attached directional plan. 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.

**PLAYS APPROVAL OR ACCEPTANCE OF THIS
ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS**

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations.

14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)

Larry Higgins

Title Permit Supervisor

Signature

Larry Higgins

Date 8/29/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Troy L. Salvors

Title PE

Date 9/4/2013

Office

FFO

Conditions of approval, if any, are attached. Approval of this notice 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.

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 page 2)

NMOCD

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

RECEIVED
AMENDED REPORT

AUG 30 2013

WELL LOCATION AND ACREAGE DEDICATION PLAT

Farmington Field Office
Bureau of Land Management

*API Number 30-039-31192		*Pool Code 42289	*Pool Name LYBROOK GALLUP	*Well Number 175H
*Property Code 120782		*Property Name CHACO 2307-13L		*Elevation 7046'
*Operator Name WPX ENERGY PRODUCTION, LLC				

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	13	23N	7W		1494	SOUTH	60	WEST	RIO ARRIBA

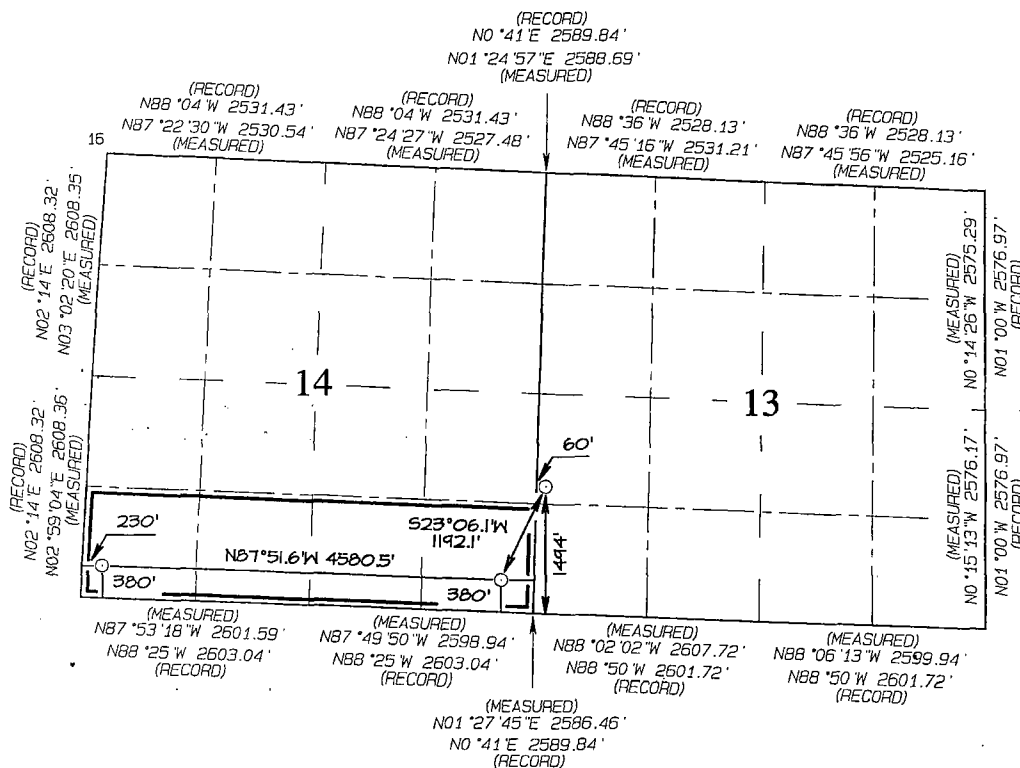
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	23N	7W		380	SOUTH	230	WEST	RIO ARriba

12 Dedicated Acres	160.0 Acres S/2 S/2 - Section 14	13 Joint or Infill	14 Consolidation Code	15 Order No.	ROVD SEP 5 '13 OIL CONS. DIV.
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RCVD SEP 5 '13
OIL CONS. DIV.
DIST. 3

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



END-OF-LATERAL
380' FSL 230' FWL
SECTION 14, T23N, R7W
LAT: 36.21986°N
LONG: 107.55231°W
DATUM: NAD1927

LAT: 36.21987 °N
LONG: 107.55292 °W
DATUM: NAD1983

POINT-OF-ENTRY
380' FSL 380' FEL
SECTION 14, T23N, R7W
LAT: 36.21955°N
LONG: 107.53679°W
DATUM: NAD1927

LAT: 36.21957°N
LONG: 107.53740°W
DATUM: NAD1983

SURFACE LOCATION
1494' FSL 60' FWL
SECTION 13, T23N, R7W
LAT: 36.22258 °N
LONG: 107.53526 °W
DATUM: NAD1927

LAT: 36.22259 °N
LONG: 107.53586 °W
DATUM: NAD1983

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 Aguiar Date 5/28/13

Larry Higgins
Printed Name
larry.higgins@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: AUGUST 29, 2013
Date of Survey: JULY 5, 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: 8/26/2013 **FIELD:** Lybrook Gallup

WELL NAME: Chaco 2307-13L #175H **SURFACE:** BLM

SH Location: NWSW of Sec 13 T23N R7W **ELEVATION:** 7,046' GR

County: Rio Arriba Co, NM

BH Location: SWSW Sec 14-23N-7W **MINERALS:** BLM

MEASURED DEPTH: 10,611ft. **LEASE #:** NMSF-078360

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,426	1,420	Point Lookout	4,462	4,289
Kirtland	1,775	1,758	Mancos	4,707	4,532
Pictured Cliffs	2,014	1,984	Kickoff Point	5,202	5,040
Lewis	2,281	2,234	Target Top	5,860	5,523
Chacra	2,444	2,386	Landing Point	6,030	5,561
Cliff House	3,634	3,497	Target Base	6,076	5,561
Menefee	3,972	3,772			
			TD	10,611	5,475

B. MUD LOGGING PROGRAM: Mudlogger on location from surface csg to TD.**C. LOGGING PROGRAM:** MWD GR for curve and 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 8 3/4" vertical Pilot Hole. Will use WBM to drill the curve portion of well, and OBM 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 +/- 5,202' MD. Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,030' (MD). 7 in. csg will be set at this point. A 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 10,611' (MD). Will run 4-1/2 in. Production Casing from surface to TD and cement.

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

<u>CASING TYPE</u>	<u>OH SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>
Surface	12.25"	400'	9.625"	36#	K-55
Intermediate	8.75"	6,030'	7"	23#	J-55
Longstring	6.125"	10,611'	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) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent 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 + 10' bottom joint of 4-1/2" csg + Float Collar + 10' joint of 4-1/2" csg + landing collar for Alpha Sleeve plug + 1jt 4-1/2" csg + Alpha Sleeve. 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: 248 sx 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 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 +/- 4,900 ft. Total Volume: (620.2 cu-ft/458 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 (~6,217' 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.
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WELL	Chaco 2307-13L #175H	FIELD	NM Rio Arriba County NAD27	STRUCTURE	WPX Chaco 2307-13L #175H
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Magnetic Parameters	Surface Location	NAD27 New Mexico State Plane, Central Zone, US Feet	Miscellaneous
Model: BGM 2012	Lat: N 35 13 21.288	North: 1502741.87 RUS	Slot: Chaco 2307-13L #175H
Dip: 62.994°	Lon: W 107 32 0.936	East: 120895.05 RUS	TVD Ref: RKB(7060ft above MSL)
Mag Dec: 9.564°		Scale Fact: 1.00006446	Plan: R2 mdy 26Aug13
Date: April 11, 2013			Srv Date: April 11, 2013

Proposal



True North
Tot Corr (M->T 9.5641°)
Mag Dec (9.564°)
Grid Conv (-0.760°)

<<< W Scale = 1:1500(ft) E >>>
-4500 -3000 -1500 0 1500

1500

0

-1500

<<< S Scale = 1:1500(ft) N >>>

1000

2000

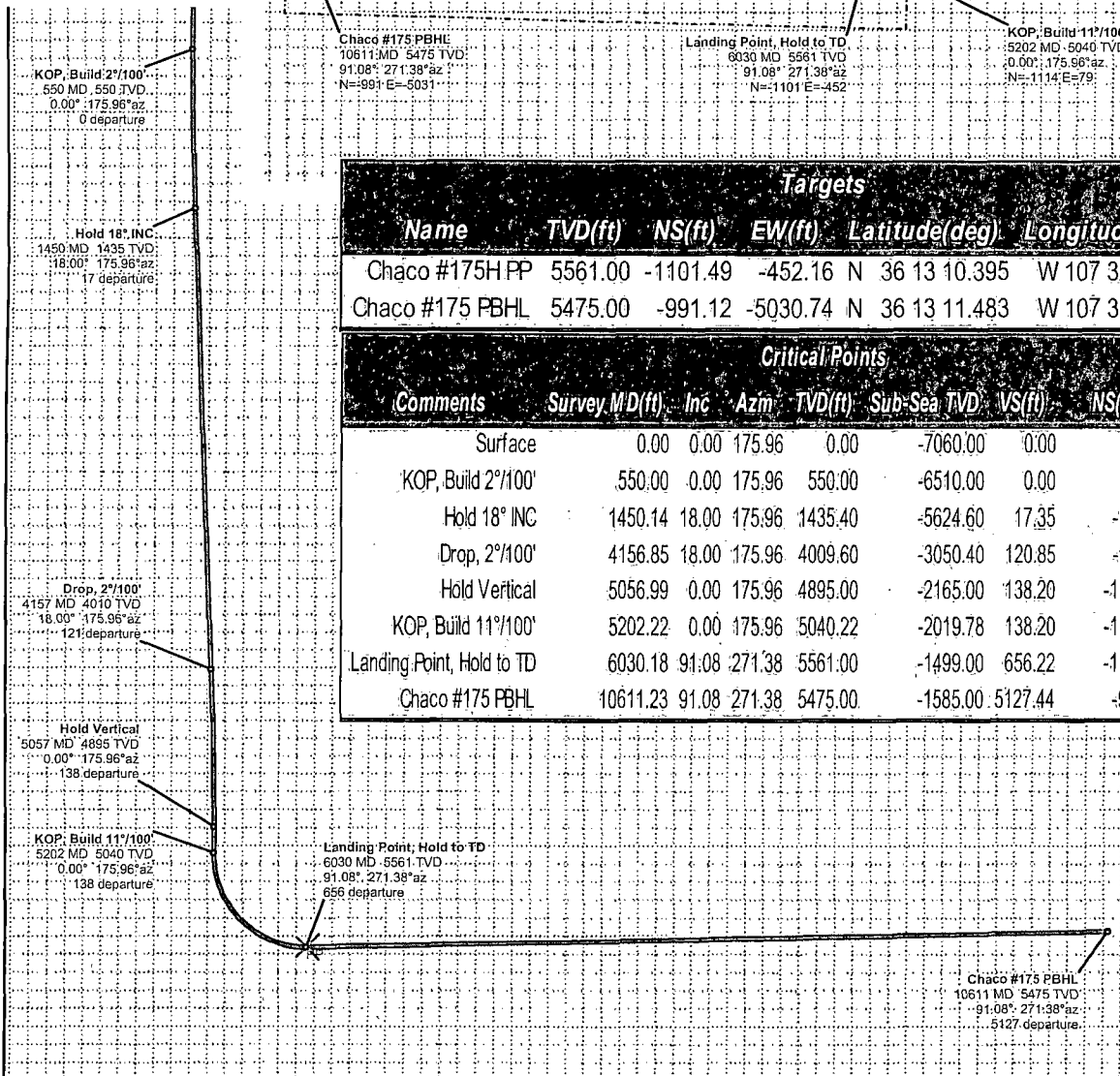
3000

4000

5000

6000

TVD Scale = 1:1000(ft)



Targets						
Name	TVD(ft)	NS(ft)	EW(ft)	Latitude(deg)	Longitude(deg)	Shape
Chaco #175H PP	5561.00	-1101.49	-452.16	N 36 13 10.395	W 107 32 12.454	POINT
Chaco #175 PBHL	5475.00	-991.12	-5030.74	N 36 13 11.483	W 107 33 8.329	POINT

Critical Points								
Comments	Survey M/D(ft)	Inc	Azim	TVD(ft)	Sub-Sea TVD	VS(ft)	NS(ft)	EW(ft)
Surface	0.00	0.00	175.96	0.00	-7060.00	0.00	0.00	0.00
KOP, Build 2°/100'	550.00	0.00	175.96	550.00	-6510.00	0.00	0.00	0.00
Hold 18° INC	1450.14	18.00	175.96	1435.40	-5624.60	17.35	-139.91	9.88
Drop, 2°/100'	4156.85	18.00	175.96	4009.60	-3050.40	120.85	-974.38	68.79
Hold Vertical	5056.99	0.00	175.96	4895.00	-2165.00	138.20	-1114.29	78.67
KOP, Build 11°/100'	5202.22	0.00	175.96	5040.22	-2019.78	138.20	-1114.29	78.67
Landing Point, Hold to TD	6030.18	91.08	271.38	5561.00	-1499.00	656.22	-1101.50	-451.83
Chaco #175 PBHL	10611.23	91.08	271.38	5475.00	-1585.00	5127.44	-991.12	-5030.74

Vertical Section (ft) Azim = 258.85° Scale = 1:1000(ft) Origin = 0 N/-S, 0 E/-W



WPX Chaco 2307-13L #175H R2 mdv 26Aug13 Proposal Geodetic Report



(Def Plan)

Report Date: August 26, 2013 - 10:39 AM
Client: WPX Energy
Field: NM Rio Arriba County NAD27
Structure / Slot: WPX Chaco 2307-13L #175H / Chaco 2307-13L #175H
Well: Chaco 2307-13L #175H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: WPX Chaco 2307-13L #175H R2 mdv 26Aug13
Survey Date: April 11, 2013
Tort / AHD / DDI / ERD Ratio: 127.081' / 6227.953 ft / 6.179 / 1.120
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 13' 21.28800", W 107° 32' 6.93600"
Location Grid N/E Y/X: N 1902741.874 ftUS, E 120895.046 ftUS
CRS Grid Convergence Angle: -0.7596°
Grid Scale Factor: 1.00006446

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 258.855° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7060.000 ft above MSL
Seabed / Ground Elevation: 7046.000 ft above MSL
Magnetic Declination: 9.564°
Total Gravity Field Strength: 998.4799mgn (9.80665 Based)
Total Magnetic Field Strength: 50218.265 nT
Magnetic Dip Angle: 62.994°
Declination Date: April 11, 2013
Magnetic Declination Model: BGGM 2012
North Reference: True North
Grid Convergence Used: 0.0000°
Total Corr Mag North->True North: 9.5641°
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 ° ' ")
Surface	0.00	0.00	175.96	0.00	0.00	0.00	0.00	N/A	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
	100.00	0.00	175.96	100.00	0.00	0.00	0.00	0.00	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
	200.00	0.00	175.96	200.00	0.00	0.00	0.00	0.00	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
	300.00	0.00	175.96	300.00	0.00	0.00	0.00	0.00	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
	400.00	0.00	175.96	400.00	0.00	0.00	0.00	0.00	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
	500.00	0.00	175.96	500.00	0.00	0.00	0.00	0.00	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
KOP, Build 2°/100'	550.00	0.00	175.96	550.00	0.00	0.00	0.00	0.00	1902741.87	120895.05	N 36 13 21.29	W 107 32 6.94
	600.00	1.00	175.96	600.00	0.05	-0.44	0.03	2.00	1902741.44	120895.07	N 36 13 21.28	W 107 32 6.94
	700.00	3.00	175.96	699.93	0.49	-3.92	0.28	2.00	1902737.95	120895.27	N 36 13 21.25	W 107 32 6.93
	800.00	5.00	175.96	799.68	1.35	-10.87	0.77	2.00	1902730.99	120895.67	N 36 13 21.18	W 107 32 6.93
	900.00	7.00	175.96	899.13	2.64	-21.30	1.50	2.00	1902720.55	120896.27	N 36 13 21.08	W 107 32 6.92
	1000.00	9.00	175.96	998.15	4.36	-35.18	2.48	2.00	1902706.66	120897.06	N 36 13 20.94	W 107 32 6.91
	1100.00	11.00	175.96	1096.63	6.51	-52.50	3.71	2.00	1902689.32	120898.06	N 36 13 20.77	W 107 32 6.89
	1200.00	13.00	175.96	1194.44	9.08	-73.24	5.17	2.00	1902668.57	120899.25	N 36 13 20.56	W 107 32 6.87
	1300.00	15.00	175.96	1291.46	12.08	-97.37	6.87	2.00	1902644.41	120900.63	N 36 13 20.33	W 107 32 6.85
Hold 18° INC	1400.00	17.00	175.96	1387.58	15.49	-124.87	8.82	2.00	1902616.89	120902.21	N 36 13 20.05	W 107 32 6.83
	1450.14	18.00	175.96	1435.40	17.35	-139.91	9.88	2.00	1902601.84	120903.07	N 36 13 19.90	W 107 32 6.82
	1500.00	18.00	175.96	1482.62	19.26	-155.28	10.96	0.00	1902586.45	120903.95	N 36 13 19.75	W 107 32 6.80
	1600.00	18.00	175.96	1577.92	23.08	-186.11	13.14	0.00	1902555.60	120905.72	N 36 13 19.45	W 107 32 6.78
	1700.00	18.00	175.96	1673.03	26.91	-216.94	15.32	0.00	1902524.74	120907.49	N 36 13 19.14	W 107 32 6.75
	1800.00	18.00	175.96	1768.13	30.73	-247.77	17.49	0.00	1902493.88	120909.25	N 36 13 18.84	W 107 32 6.72
	1900.00	18.00	175.96	1863.24	34.55	-278.60	19.67	0.00	1902463.02	120911.02	N 36 13 18.53	W 107 32 6.70
	2000.00	18.00	175.96	1958.34	38.38	-309.43	21.85	0.00	1902432.17	120912.79	N 36 13 18.23	W 107 32 6.67
	2100.00	18.00	175.96	2053.45	42.20	-340.26	24.02	0.00	1902401.31	120914.56	N 36 13 17.92	W 107 32 6.64
	2200.00	18.00	175.96	2148.55	46.02	-371.09	26.20	0.00	1902370.45	120916.33	N 36 13 17.62	W 107 32 6.62
	2300.00	18.00	175.96	2243.65	49.85	-401.92	28.38	0.00	1902339.59	120918.09	N 36 13 17.31	W 107 32 6.59
	2400.00	18.00	175.96	2338.76	53.67	-432.75	30.55	0.00	1902308.73	120919.86	N 36 13 17.01	W 107 32 6.56
	2500.00	18.00	175.96	2433.86	57.50	-463.58	32.73	0.00	1902277.88	120921.63	N 36 13 16.70	W 107 32 6.54
	2600.00	18.00	175.96	2528.97	61.32	-494.41	34.91	0.00	1902247.02	120923.40	N 36 13 16.40	W 107 32 6.51
	2700.00	18.00	175.96	2624.07	65.14	-525.23	37.08	0.00	1902216.16	120925.16	N 36 13 16.09	W 107 32 6.48
	2800.00	18.00	175.96	2719.17	68.97	-556.06	39.26	0.00	1902185.30	120926.93	N 36 13 15.79	W 107 32 6.46
	2900.00	18.00	175.96	2814.28	72.79	-586.89	41.44	0.00	1902154.45	120928.70	N 36 13 15.48	W 107 32 6.43
	3000.00	18.00	175.96	2909.38	76.61	-617.72	43.61	0.00	1902123.59	120930.47	N 36 13 15.18	W 107 32 6.40
	3100.00	18.00	175.96	3004.49	80.44	-648.55	45.79	0.00	1902092.73	120932.24	N 36 13 14.87	W 107 32 6.38
	3200.00	18.00	175.96	3099.59	84.26	-679.38	47.97	0.00	1902061.87	120934.00	N 36 13 14.57	W 107 32 6.35
	3300.00	18.00	175.96	3194.70	88.09	-710.21	50.14	0.00	1902031.02	120935.77	N 36 13 14.26	W 107 32 6.32
	3400.00	18.00	175.96	3289.80	91.91	-741.04	52.32	0.00	1902000.16	120937.54	N 36 13 13.96	W 107 32 6.30
	3500.00	18.00	175.96	3384.90	95.73	-771.87	54.50	0.00	1901969.30	120939.31	N 36 13 13.66	W 107 32 6.27
	3600.00	18.00	175.96	3480.01	99.56	-802.70	56.67	0.00	1901938.44	120941.07	N 36 13 13.35	W 107 32 6.24
	3700.00	18.00	175.96	3575.11	103.38	-833.53	58.85	0.00	1901907.58	120942.84	N 36 13 13.05	W 107 32 6.22
	3800.00	18.00	175.96	3670.22	107.20	-864.36	61.03	0.00	1901876.73	120944.61	N 36 13 12.74	W 107 32 6.19
	3900.00	18.00	175.96	3765.32	111.03	-895.19	63.20	0.00	1901845.87	120946.38	N 36 13 12.44	W 107 32 6.16
	4000.00	18.00	175.96	3860.42	114.85	-926.02	65.38	0.00	1901815.01	120948.15	N 36 13 12.13	W 107 32 6.14
Drop, 2°/100'	4100.00	18.00	175.96	3955.53	118.68	-956.85	67.55	0.00	1901784.15	120949.91	N 36 13 11.83	W 107 32 6.11
	4156.85	18.00	175.96	4009.60	120.85	-974.38	68.79	0.00	1901766.61	120950.92	N 36 13 11.65	W 107 32 6.10
	4200.00	17.14	175.96	4050.73	122.46	-987.37	69.71	2.00	1901753.61	120951.66	N 36 13 11.52	W 107 32 6.09
	4300.00	15.14	175.96	4146.78	125.90	-1015.10	71.67	2.00	1901725.85	120953.25	N 36 13 11.25	W 107 32 6.06
	4400.00	13.14	175.96	4243.75	128.92	-1039.47	73.39	2.00	1901701.46	120954.65	N 36 13 11.01	W 107 32 6.04
	4500.00	11.14	175.96	4341.51	131.52	-1060.44	74.87	2.00	1901680.47	120955.85	N 36 13 10.80	W 107 32 6.02
	4600.00	9.14	175.96	4439.94	133.70	-1078.00	76.11	2.00	1901662.89	120956.86	N 36 13 10.63	W 107 32 6.01
	4700.00	7.14	175.96	4538.93	135.45	-1092.13	77.11	2.00	1901648.75	120957.67	N 36 13 10.49	W 107 32 6.00
	4800.00	5.14	175.96	4638.35	136.78	-1102.79	77.86	2.00	1901638.08	120958.28	N 36 13 10.38	W 107 32 5.99
	4900.00	3.14	175.96	4738.08	137.67	-1110.00	78.37	2.00	1901630.87	120958.70	N 36 13 10.31	W 107 32 5.98
Hold Vertical	5000.00	1.14	175.96	4838.01	138.13	-1113.72	78.63	2.00	1901627.14	120958.91	N 36 13 10.27	W 107 32 5.98
	5056.99	0.00	175.96	4895.00	138.20	-1114.29	78.67	0.00	1901626.57	120958.94	N 36 13 10.27	W 107 32 5.98
	5100.00	0.00	175.96	4938.01	138.20	-1114.29	78.67	0.00	1901626.57	120958.94	N 36 13 10.27	W 107 32 5.98
	5200.00	0.00	175.96	5038.01	138.20	-1114.29	78.67	0.00	1901626.57	120958.94	N 36 13 10.27	W 107 32 5.98
KOP, Build 11°/100'	5202.22	0.00	175.96	5040.22	138.20	-1114.29	78.67	0.00	1901626.57	120958.94	N 36 13 10.27	W 107 32 5.98
	5300.00	10.76	271.38	5137.43	147.14	-1114.06	69.52	11.00	1901626.92	120949.80	N 36 13 10.27	W 107 32 6.09
	5400.00	21.76	271.38	5233.29	174.42	-1113.39	41.58	11.00	1901627.96	120921.86	N 36 13 10.28	W 107 32 6.43
	5500.00	32.76	271.38	5322.05	219.06	-1112.29	-4.13	11.00	1901629.67	120876.17	N 36 13 10.29	W 107 32 6.99
	5600.00	43.76	271.38	5400.45	279.41	-1110.80	-65.94	11.00	1901631.98	120814.38	N 36 13 10.30	W 107 32 7.74
	5700.00	54.76	271.38	5465.62	353.26	-1108.98	-141.56	11.00	1901634.80	120738.78	N 36 13 10.32	W 107 32 8.66
	5800.00	65.76	271.38	5515.16	437.88	-1106.89	-228.23	11.00	1901638.04	120652.15	N 36 13 10.34	W 107 32 9.72
	5900.00	76.76	271.38	5547.24	530.19	-1104.61	-322.75	11.00	1901641.57	120557.66	N 36 13 10.36	W 107 32 10.87
	6000.00	87.76	271.38	5560.69	626.77	-1102.22	-421.66	11.00	1901645.27	120458.78	N 36 13 10.39	W 107 32 12.08
Landing Point, Hold to TD	6030.18	91.08	271.38	5561.00	656.22	-1101.50	-451.83	11.00	1901646.40	120428.63	N 36 13 10.40	W 107 32 12.45
	6100.00	91.08	271.38	5559.69	724.37	-1099.81	-521.61	0.00	1901649.00	120358.86	N 36 13 10.41	W 107 32 13.30
	6200.00	91.08	271.38	5557.81	821.97	-1097.41	-621.57	0.00	1901652.74	120258.94	N 36 13 10.44	W 107 32 14.52
	6300.00	91.08	271.38	5555.94	919.57	-1095.00	-721.52	0.00	1901656.47	120159.03	N 36 13 10.46	W 107 32 15.74
	6400.00	91.08	271.38	5554.06	1017.18	-1092.59	-821.47	0.00	1901660.21	120059.11	N 36 13 10.48	W 107 32 16.96
	6500.00	91.08	271.38	5552.18	1114.78	-1090.18	-921.43	0.00	1901663.94	119959.19	N 36 13 10.51	W 107 32 18.18

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 ° ' ")
	7100.00	91.08	271.38	5540.92	1700.39	-1075.72	-1521.15	0.00	1901686.35	119359.68	N 36 13 10.65	W 107 32 25.50
	7200.00	91.08	271.38	5539.04	1798.00	-1073.31	-1621.10	0.00	1901690.08	119259.76	N 36 13 10.87	W 107 32 28.72
	7300.00	91.08	271.38	5537.16	1895.60	-1070.90	-1721.05	0.00	1901693.82	119159.84	N 36 13 10.70	W 107 32 27.94
	7400.00	91.08	271.38	5535.29	1993.20	-1068.49	-1821.01	0.00	1901697.55	119059.92	N 36 13 10.72	W 107 32 29.16
	7500.00	91.08	271.38	5533.41	2090.80	-1066.08	-1920.96	0.00	1901701.29	118960.00	N 36 13 10.74	W 107 32 30.38
	7600.00	91.08	271.38	5531.53	2188.41	-1063.67	-2020.92	0.00	1901705.02	118860.08	N 36 13 10.77	W 107 32 31.60
	7700.00	91.08	271.38	5529.65	2286.01	-1061.26	-2120.87	0.00	1901708.75	118760.16	N 36 13 10.79	W 107 32 32.82
	7800.00	91.08	271.38	5527.78	2383.61	-1058.85	-2220.82	0.00	1901712.49	118660.24	N 36 13 10.82	W 107 32 34.04
	7900.00	91.08	271.38	5525.90	2481.21	-1056.45	-2320.78	0.00	1901716.22	118560.32	N 36 13 10.84	W 107 32 35.26
	8000.00	91.08	271.38	5524.02	2578.82	-1054.04	-2420.73	0.00	1901719.96	118460.41	N 36 13 10.86	W 107 32 36.48
	8100.00	91.08	271.38	5522.14	2676.42	-1051.63	-2520.68	0.00	1901723.69	118360.49	N 36 13 10.89	W 107 32 37.70
	8200.00	91.08	271.38	5520.27	2774.02	-1049.22	-2620.64	0.00	1901727.43	118260.57	N 36 13 10.91	W 107 32 38.92
	8300.00	91.08	271.38	5518.39	2871.62	-1046.81	-2720.59	0.00	1901731.16	118160.65	N 36 13 10.93	W 107 32 40.14
	8400.00	91.08	271.38	5516.51	2969.23	-1044.40	-2820.54	0.00	1901734.90	118060.73	N 36 13 10.96	W 107 32 41.36
	8500.00	91.08	271.38	5514.63	3066.83	-1041.99	-2920.50	0.00	1901738.63	117960.81	N 36 13 10.98	W 107 32 42.58
	8600.00	91.08	271.38	5512.76	3164.43	-1039.58	-3020.45	0.00	1901742.37	117860.89	N 36 13 11.01	W 107 32 43.80
	8700.00	91.08	271.38	5510.88	3262.03	-1037.17	-3120.40	0.00	1901746.10	117760.97	N 36 13 11.03	W 107 32 45.02
	8800.00	91.08	271.38	5509.00	3359.64	-1034.76	-3220.36	0.00	1901749.83	117661.05	N 36 13 11.05	W 107 32 46.24
	8900.00	91.08	271.38	5507.13	3457.24	-1032.35	-3320.31	0.00	1901753.57	117561.14	N 36 13 11.08	W 107 32 47.46
	9000.00	91.08	271.38	5505.25	3554.84	-1029.94	-3420.26	0.00	1901757.30	117461.22	N 36 13 11.10	W 107 32 48.68
	9100.00	91.08	271.38	5503.37	3652.44	-1027.53	-3520.22	0.00	1901761.04	117361.30	N 36 13 11.12	W 107 32 49.89
	9200.00	91.08	271.38	5501.49	3750.05	-1025.12	-3620.17	0.00	1901764.77	117261.38	N 36 13 11.15	W 107 32 51.11
	9300.00	91.08	271.38	5499.62	3847.65	-1022.71	-3720.12	0.00	1901768.51	117161.46	N 36 13 11.17	W 107 32 52.33
	9400.00	91.08	271.38	5497.74	3945.25	-1020.30	-3820.08	0.00	1901772.24	117061.54	N 36 13 11.20	W 107 32 53.55
	9500.00	91.08	271.38	5495.86	4042.85	-1017.89	-3920.03	0.00	1901775.98	116961.62	N 36 13 11.22	W 107 32 54.77
	9600.00	91.08	271.38	5493.98	4140.46	-1015.48	-4019.98	0.00	1901779.71	116861.70	N 36 13 11.24	W 107 32 55.99
	9700.00	91.08	271.38	5492.11	4238.06	-1013.08	-4119.94	0.00	1901783.44	116761.78	N 36 13 11.27	W 107 32 57.21
	9800.00	91.08	271.38	5490.23	4335.66	-1010.67	-4219.89	0.00	1901787.18	116661.87	N 36 13 11.29	W 107 32 58.43
	9900.00	91.08	271.38	5488.35	4433.26	-1008.26	-4319.84	0.00	1901790.91	116561.95	N 36 13 11.31	W 107 32 59.65
	10000.00	91.08	271.38	5486.47	4530.87	-1005.85	-4419.80	0.00	1901794.65	116462.03	N 36 13 11.34	W 107 33 0.87
	10100.00	91.08	271.38	5484.60	4628.47	-1003.44	-4519.75	0.00	1901798.38	116362.11	N 36 13 11.36	W 107 33 2.09
	10200.00	91.08	271.38	5482.72	4726.07	-1001.03	-4619.70	0.00	1901802.12	116262.19	N 36 13 11.39	W 107 33 3.31
	10300.00	91.08	271.38	5480.84	4823.67	-998.62	-4719.66	0.00	1901805.85	116162.27	N 36 13 11.41	W 107 33 4.53
	10400.00	91.08	271.38	5478.97	4921.28	-996.21	-4819.61	0.00	1901809.59	116062.35	N 36 13 11.43	W 107 33 5.75
	10500.00	91.08	271.38	5477.09	5018.88	-993.80	-4919.58	0.00	1901813.32	115962.43	N 36 13 11.46	W 107 33 6.97
	10600.00	91.08	271.38	5475.21	5116.48	-991.39	-5019.52	0.00	1901817.06	115862.52	N 36 13 11.48	W 107 33 8.19
Chaco #175 PBHL	10611.23	91.08	271.38	5475.00	5127.44	-991.12	-5030.74	0.00	1901817.47	115851.29	N 36 13 11.48	W 107 33 8.33

Survey Type: 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 2307-13L #175H R2 mdv
	14.000	10611.230	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / WPX Chaco 2307-13L #175H R2 mdv