

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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

David R. Catanach, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions
listed below are made in accordance with OCD Rule 19.15.7.11
and are in addition to the actions approved by BLM on the
following 3160-4 or 3160-5 form.

Operator Signature Date: 11/5/14

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
30-045- 35507-00- 00	NW LYBROOK UNIT	131H	WPX ENERGY PRODUCTION, LLC	O	N	San Juan	N	M	25	24	N	8	W	258	S	352	W

Application Type:

- ☐ P&A ☐ Drilling/Casing Change ☐ Location Change
☐ Recomplete/DHC (For hydraulic fracturing operations review EPA
Underground injection control Guidance #84)
☒ Other: Realign Lateral/Name Change

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations, casing & cement

See APD Conditions of approval regarding Hydraulic Fracturing, Oil base muds and Well-bore communication.

Hold C104 for As Drilled Plat/NSL

Charlie T. Lerrin

NMOCD Approved by Signature

11/18/15

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NOV 05 2014

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS**
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.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. N0-G-0207-1610
2. Name of Operator WPX Energy Production, LLC		6. If Indian, Allottee or Tribe Name Navajo
3a. Address PO Box 640 Aztec, NM 87410	3b. Phone No. (include area code) 505-333-1806	7. If Unit of CA/Agreement, Name and/or No. Northwest Lybrook Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sur: 258' FSL & 352' FWL, Sec 25, T24N, R8W - BHL: 670' FNL & 230' FWL, Sec 35, T24N, R8W		8. Well Name and No. NW Lybrook UT #131H
		9. API Well No. 30-045-35507
		10. Field and Pool or Exploratory Area Lybrook Unit NW HZ (OIL)
		11. Country or Parish, State San Juan, NM

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
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Realign lateral/name change
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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.)

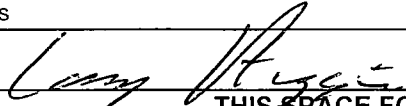
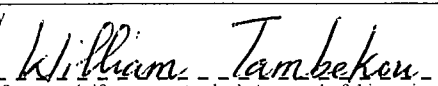
WPX plans to plans to realign the lateral on this well as per attached C-102, operations plan and directional plan. Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 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. WPX would also like to change the well name from the Chaco 2408-25M #131H to the NW Lybrook UT #131H. This well will be in the newly formed NW Lybrook Unit.

CONDITIONS OF APPROVAL

OIL CONS. DIV DIST. 3

Adhere to previously issued stipulations

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Larry Higgins		NOV 12 2014	
Signature 		Title Regulatory Specialist	
Date 11/5/14			
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved by 		Petrolium Title Engineer	
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.		Date 11/06/2014	
		Office FFO	

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)

NMOC
Sundry held for unit approval - approved on 1-29-15
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by all agencies

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

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35507		*Pool Code 98101		*Pool Name Lybrook Unit NW HZ (OIL)	
*Property Code 313874		*Property Name NW Lybrook UT			*Well Number 131H
*GGRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 6846'

¹⁰ Surface Location

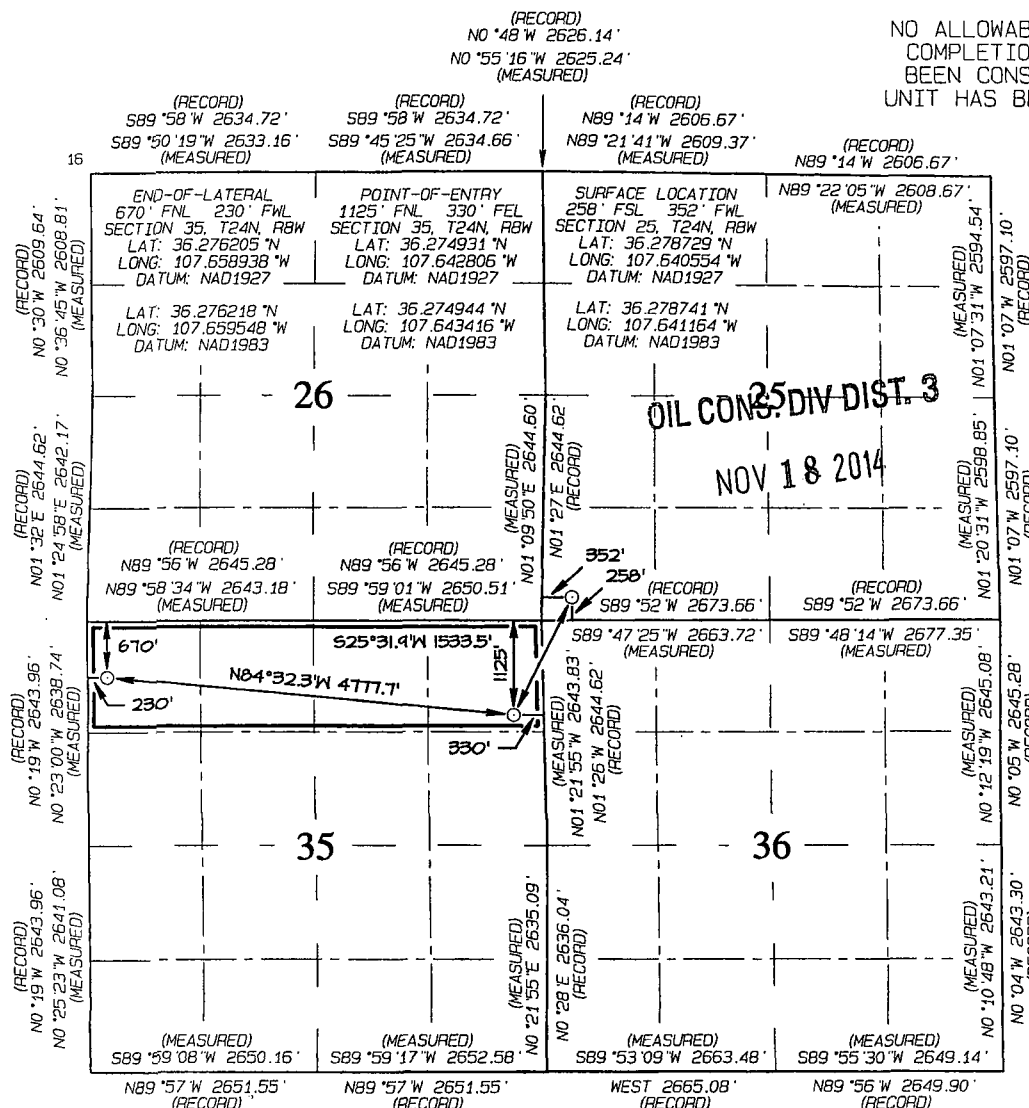
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	25	24N	8W		258	SOUTH	352	WEST	SAN JUAN

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
D	35	24N	8W		670	NORTH	230	WEST	SAN JUAN

¹² Dedicated Acres 160.0 Acres N/2 N/2 - Section 35	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13921
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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



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 a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

Signature Raele Date 11-18-14

Lacey Granillo

Printed Name
lacey.granillo@wpxenergy.com

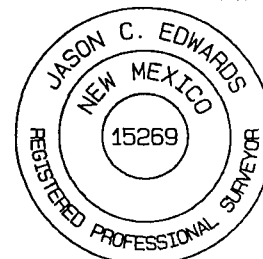
E-mail Address

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: OCTOBER 11, 2014
Date of Survey: AUGUST 30, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

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

NOV 05 2014

*API Number 30-045-35507	*Pool Code	*Pool Name Lybrook Unit NW HZ (OIL)
*Property Code	*Property Name NW Lybrook UT	*Well Number 131H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6846'

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
M	25	24N	8W		258	SOUTH	352	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

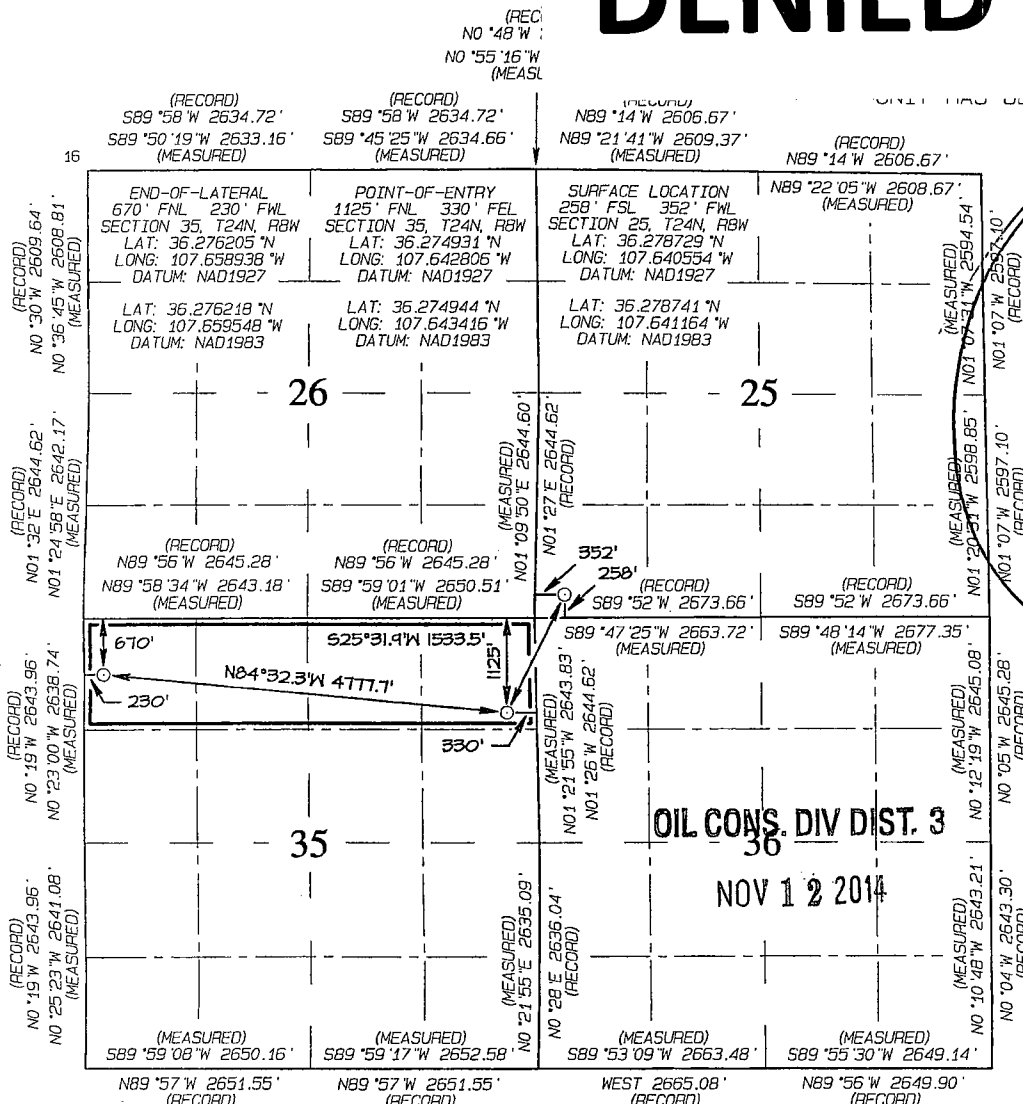
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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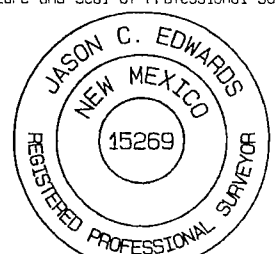
¹² Dedicated Acres
160.0 Acres
N/2 N/2 - Section 35

.3921

DENIED

WILL BE ASSIGNED TO THIS
UNTIL ALL INTERESTS HAVE
BEEN IDENTIFIED OR A NON-STANDARD
APPROVAL HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
Signature Larry Higgins	Date
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: OCTOBER 11, 2014	
Date of Survey: AUGUST 30, 2013	
Signature and Seal of Professional Surveyor	
	
JASON C. EDWARDS Certificate Number 15269	

Requires OPERATOR certification

WPXENERGY.

WPX ENERGY

Operations Plan

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

DATE: 10/20/2014 **FIELD:** Lybrook Unit NW HZ (oil)
WELL NAME: NW Lybrook UT #131H **SURFACE:** BLM
SH Location: SWSW Sec 25-24N-8W **ELEVATION:** 6,846' GR
BH Location: NWNW Sec 35-24N-8W **MINERALS:** Indian Allotted
San Juan Co, NM
MEASURED DEPTH: 10,909' **LEASE #:** NO-G-0207-1610

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

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1181	1176	Point Lookout	4,308	4,156
Kirtland	1304	1295	Mancos	4,542	4,378
Pictured Cliffs	1857	1823	Gallup	4,965	4,781
Lewis	1963	1924	Kickoff Point	5,026	4,839
Chacra	2311	2255	Target Top	5,717	5,388
Cliff House	3424	3314	Landing Point	6,129	5,500
Menefee	3456	3345	Target Base	6,129	5,500
			TD	10,909	5,379

- 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, and 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. **BOPE 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 +/- 5,026' (MD) / 4,839' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,129' (MD) / 5,500' (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 +/- 10,909 (MD) / 5,379' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,888 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 (I)	DEPTH (MD) (F)	CASING SIZE (I)	WEIGHT(L)	GRADE
Surface	12.25"	400'+	9-5/8"	36#	J-55
Intermediate	8.75"	6,129'	7"	23#	K-55
Prod. Liner	6.125"	5,979'-10,909'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,979'	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., and 2,000ft. Additionally run 1 turbolizing centralizer on every other joint from 100' below the top of the Kirtland to 100' above the top of the Ojo Alamo, as referenced in Formation Tops in Section I-A.
3. **PRODUCTION LINER:** Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + (1) RSI (Sliding Sleeve) positioned inside 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). TOC at Surface.
2. **INTERMEDIATE:** 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: ~700 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 (536.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,504 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. Increase pressure to 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 (set at 5,904 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,804 ft. (MD) +/- 78 degree angle. TOC: +/- 5,504ft. (MD). Set Pack-off at TOL

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 and hung off at the surface.

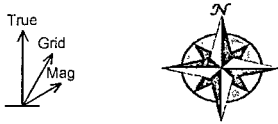
The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

Note: Changes to formation tops, casing landing points, well TD, Directional Plan and GL-elevation.

Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2408-25M #131H	NM San Juan County NAD27	WPX Sec 25-24N-8W (Chaco 2408-25M #131H)

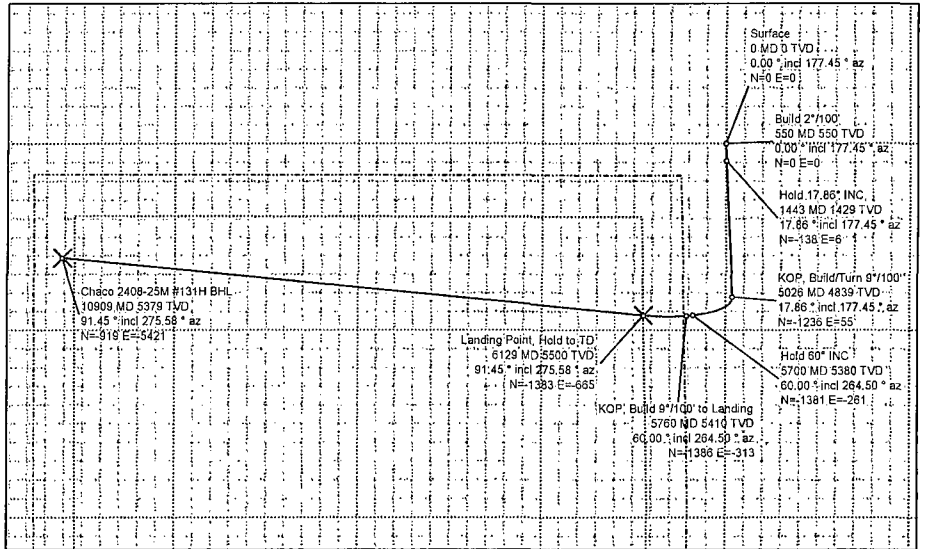
Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2013 Dip: 63.034° Date: 28-Jan-2014	NAD27 New Mexico State Plane, Western Zone, US Feet	Chaco 2408-25M #131H
MagDec: 9.511° FS: 50161.52nT Gravity FS: 998.514mg (9.80665 Based)	Lat: N 36 16 43.43 Northing: 1920756.61ftU Grid Conv: 0.1141°	TVD Ref: RKB(6860ft above MSL)
	Lon: W 107 38 25.98 Easting: 556822.93ftUS Scale Fact: 0.99992036	Plan: Chaco 2408-25M #131H R1 mdiv 06Oct14

Proposal

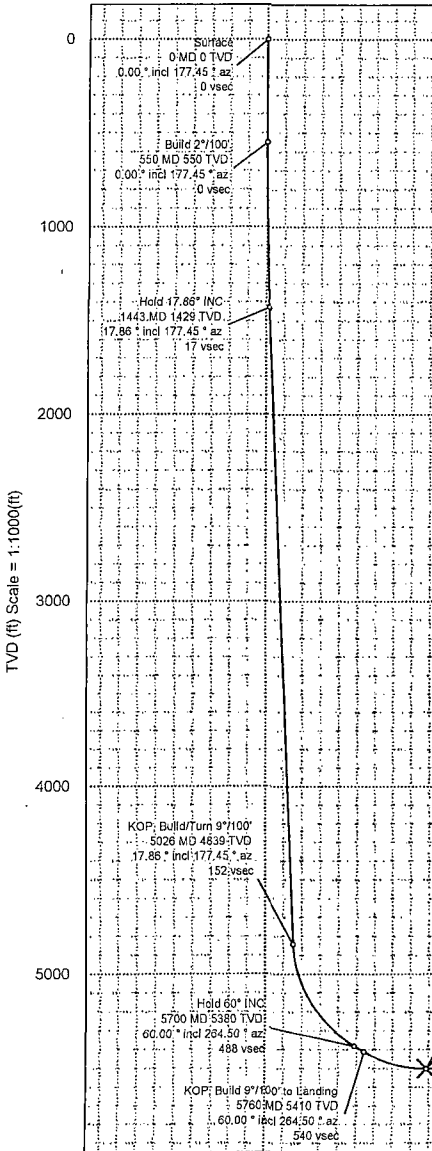


True North
Tot Corr (M->T 9.511°)
Mag Dec (9.511°)
Grid Conv (0.114°)

EW (ft) Scale = 1:1500(ft)



NS (ft) Scale = 1:1500(ft)



Surface Location								
Northing: 1520756.614			Easting: 556822.933		Latitude: N 36 16 43.43		Longitude: W 107 38 25.98	
					VSec Azimuth: 260.381			
Target Description		Grid Coord					Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)
Chaco 2408-25M #131H BHL	N 36 16 34.34	W 107 39 32.18	1919827.20	551404.72	5379.00	5497.80	-918.70	-5420.50
Chaco 2408-25M #131H POE	N 36 16 29.75	W 107 38 34.10	1919372.40	556160.70	5500.00	886.79	-1383.01	-865.05
Chaco 2408-25M #131H 330' Setback	N 36 16 43.43	W 107 38 25.98	1920756.61	556822.93	6860.00	0.00	0.00	0.00
Chaco 2408-25M #131H Section Line	N 36 16 43.43	W 107 38 25.98	1920756.61	556822.93	6860.00	0.00	0.00	0.00
Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Surface	0.00	0.00	177.45	0.00	0.00	0.00	0.00	
Build 2' 100'	550.00	0.00	177.45	550.00	0.00	0.00	0.00	0.00
Hold 17.86° INC	1442.91	17.86	177.45	1428.52	16.99	-137.89	6.14	2.00
KOP, Build/Turn 9° 100'	5025.96	17.86	177.45	4838.94	152.22	-1235.59	55.02	0.00
Hold 60° INC	5700.27	60.00	264.50	5379.98	488.18	-1380.69	-261.14	9.00
KOP, Build 9° 100' to Landing	5760.27	60.00	264.50	5409.98	540.01	-1385.67	-312.86	0.00
Landing Point, Hold to TD	6128.92	91.45	275.58	5500.00	886.80	-1382.99	-865.05	9.00
Chaco 2408-25M #131H BHL	10908.51	91.45	275.58	5379.00	5497.80	-918.70	-5420.50	0.00

Vertical Section (ft) Azim = 260.38° Scale = 1:1000(ft) Origin = 0N/-S, 0E/-W



Chaco 2408-25M #131H R1 mdv 06Oct14 Proposal Geodetic Report

(Def Plan)

Report Date: October 07, 2014 - 10:58 AM
Client: WPX Energy
Field: NM San Juan County NAD27
Structure / Slot: WPX Sec 25-24N-8W (Chaco 2408-25M #131H) / Chaco 2408-25M #131H
Well: Chaco 2408-25M #131H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2408-25M #131H R1 mdv 06Oct14
Survey Date: January 28, 2014
Tort / AHD / DDI / ERD Ratio: 111.727 * / 6791.055 ft / 6.177 / 1.235
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 16' 43.42800", W 107° 38' 25.98000"
Location Grid N/E Y/X: N 1920756.614 ftUS, E 556822.933 ftUS
CRS Grid Convergence Angle: 0.1141 *
Grid Scale Factor: 0.99992036
Version / Patch: 2.8.551.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 260.381 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6860.000 ft above MSL
Seabed / Ground Elevation: 6846.000 ft above MSL
Magnetic Declination: 9.511 *
Total Gravity Field Strength: 998.5141mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 50161.520 nT
Magnetic Dip Angle: 63.034 *
Declination Date: January 28, 2014
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North->True North: 9.5115 *
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 (°)	Longitude (°)
Surface	0.00	0.00	177.45	0.00	0.00	0.00	0.00	N/A	1920756.61	556822.93	36.278730	-107.640550
	100.00	0.00	177.45	100.00	0.00	0.00	0.00	0.00	1920756.61	556822.93	36.278730	-107.640550
	200.00	0.00	177.45	200.00	0.00	0.00	0.00	0.00	1920756.61	556822.93	36.278730	-107.640550
	300.00	0.00	177.45	300.00	0.00	0.00	0.00	0.00	1920756.61	556822.93	36.278730	-107.640550
	400.00	0.00	177.45	400.00	0.00	0.00	0.00	0.00	1920756.61	556822.93	36.278730	-107.640550
	500.00	0.00	177.45	500.00	0.00	0.00	0.00	0.00	1920756.61	556822.93	36.278730	-107.640550
Build 2°/100'	550.00	0.00	177.45	550.00	0.00	0.00	0.00	0.00	1920756.61	556822.93	36.278730	-107.640550
	600.00	1.00	177.45	600.00	0.05	-0.44	0.02	2.00	1920756.18	556822.95	36.278729	-107.640550
	700.00	3.00	177.45	699.93	0.48	-3.92	0.17	2.00	1920752.69	556823.12	36.278719	-107.640549
	800.00	5.00	177.45	799.68	1.34	-10.89	0.48	2.00	1920745.73	556823.44	36.278700	-107.640548
	900.00	7.00	177.45	899.13	2.63	-21.33	0.95	2.00	1920735.29	556823.93	36.278671	-107.640547
	1000.00	9.00	177.45	998.15	4.34	-35.24	1.57	2.00	1920721.38	556824.57	36.278633	-107.640545
	1100.00	11.00	177.45	1096.63	6.48	-52.58	2.34	2.00	1920704.04	556825.38	36.278588	-107.640542
	1200.00	13.00	177.45	1194.44	9.04	-73.35	3.27	2.00	1920683.28	556826.35	36.278529	-107.640539
	1300.00	15.00	177.45	1291.46	12.01	-97.52	4.34	2.00	1920659.11	556827.47	36.278462	-107.640535
	1400.00	17.00	177.45	1387.58	15.41	-125.05	5.57	2.00	1920631.58	556828.75	36.278388	-107.640531
Hold 17.86° INC	1442.91	17.86	177.45	1428.52	16.99	-137.89	6.14	2.00	1920618.75	556829.35	36.278351	-107.640529
	1500.00	17.86	177.45	1482.86	19.14	-155.38	6.82	0.00	1920601.26	556830.16	36.278303	-107.640527
	1600.00	17.86	177.45	1578.04	22.92	-186.02	8.28	0.00	1920570.63	556831.59	36.278219	-107.640522
	1700.00	17.86	177.45	1673.23	26.69	-216.66	9.65	0.00	1920540.00	556833.01	36.278135	-107.640517
	1800.00	17.86	177.45	1768.41	30.47	-247.29	11.01	0.00	1920509.37	556834.44	36.278051	-107.640513
	1900.00	17.86	177.45	1863.59	34.24	-277.93	12.38	0.00	1920478.74	556835.86	36.277967	-107.640508
	2000.00	17.86	177.45	1958.77	38.01	-308.56	13.74	0.00	1920448.11	556837.29	36.277882	-107.640503
	2100.00	17.86	177.45	2053.95	41.79	-339.20	15.11	0.00	1920417.47	556838.71	36.277798	-107.640499
	2200.00	17.86	177.45	2149.14	45.56	-369.83	16.47	0.00	1920386.84	556840.14	36.277714	-107.640494
	2300.00	17.86	177.45	2244.32	49.34	-400.47	17.83	0.00	1920356.21	556841.56	36.277630	-107.640489
	2400.00	17.86	177.45	2339.50	53.11	-431.11	19.20	0.00	1920325.58	556842.99	36.277546	-107.640485
	2500.00	17.86	177.45	2434.68	56.88	-461.74	20.56	0.00	1920294.95	556844.41	36.277462	-107.640480
	2600.00	17.86	177.45	2529.86	60.66	-492.38	21.93	0.00	1920264.32	556845.84	36.277377	-107.640476
	2700.00	17.86	177.45	2625.04	64.43	-523.01	23.29	0.00	1920233.69	556847.26	36.277293	-107.640471
	2800.00	17.86	177.45	2720.23	68.21	-553.65	24.66	0.00	1920203.06	556848.69	36.277209	-107.640466
	2900.00	17.86	177.45	2815.41	71.98	-584.28	26.02	0.00	1920172.43	556850.11	36.277125	-107.640462
	3000.00	17.86	177.45	2910.59	75.76	-614.92	27.38	0.00	1920141.80	556851.54	36.277041	-107.640457
	3100.00	17.86	177.45	3005.77	79.53	-645.55	28.75	0.00	1920111.17	556852.97	36.276957	-107.640452
	3200.00	17.86	177.45	3100.95	83.30	-676.19	30.11	0.00	1920080.54	556854.39	36.276873	-107.640448
	3300.00	17.86	177.45	3196.14	87.08	-706.83	31.48	0.00	1920049.91	556855.82	36.276788	-107.640443
	3400.00	17.86	177.45	3291.32	90.85	-737.46	32.84	0.00	1920019.28	556857.24	36.276704	-107.640439
	3500.00	17.86	177.45	3386.50	94.63	-768.10	34.21	0.00	1919988.65	556858.67	36.276620	-107.640434
	3600.00	17.86	177.45	3481.68	98.40	-798.73	35.57	0.00	1919958.02	556860.09	36.276536	-107.640429
	3700.00	17.86	177.45	3576.86	102.18	-829.37	36.93	0.00	1919927.39	556861.52	36.276452	-107.640425
	3800.00	17.86	177.45	3672.05	105.95	-860.01	38.30	0.00	1919896.76	556862.94	36.276368	-107.640420
	3900.00	17.86	177.45	3767.23	109.72	-890.64	39.66	0.00	1919866.13	556864.37	36.276283	-107.640415
	4000.00	17.86	177.45	3862.41	113.50	-921.28	41.03	0.00	1919835.49	556865.79	36.276199	-107.640411
	4100.00	17.86	177.45	3957.59	117.27	-951.91	42.39	0.00	1919804.86	556867.22	36.276115	-107.640406
	4200.00	17.86	177.45	4052.77	121.05	-982.55	43.76	0.00	1919774.23	556868.64	36.276031	-107.640402
	4300.00	17.86	177.45	4147.95	124.82	-1013.19	45.12	0.00	1919743.60	556870.07	36.275947	-107.640397
	4400.00	17.86	177.45	4243.14	128.59	-1043.82	46.48	0.00	1919712.97	556871.49	36.275863	-107.640392
	4500.00	17.86	177.45	4338.32	132.37	-1074.46	47.85	0.00	1919682.34	556872.92	36.275779	-107.640388
	4600.00	17.86	177.45	4433.50	136.14	-1105.09	49.21	0.00	1919651.71	556874.34	36.275694	-107.640383
	4700.00	17.86	177.45	4528.68	139.92	-1135.73	50.58	0.00	1919621.08	556875.77	36.275610	-107.640378
	4800.00	17.86	177.45	4623.86	143.69	-1166.36	51.94	0.00	1919590.45	556877.19	36.275526	-107.640374
	4900.00	17.86	177.45	4719.05	147.47	-1197.00	53.31	0.00	1919559.82	556878.62	36.275442	-107.640369
	5000.00	17.86	177.45	4814.23	151.24	-1227.64	54.67	0.00	1919529.19	556880.04	36.275358	-107.640365
KOP, Build/Turn 9°/100'	5025.96	17.86	177.45	4838.94	152.22	-1235.59	55.03	0.00	1919521.24	556880.41	36.275336	-107.640363
	5100.00	18.21	199.06	4909.42	159.18	-1257.89	51.75	9.00	1919498.93	556877.18	36.275275	-107.640374
	5200.00	22.03	5003.46	181.63	181.63	-1286.43	33.82	9.00	1919470.36	556859.31	36.275196	-107.640435
	5300.00	28.20	238.58	5094.06	218.55	-1312.51	0.79	9.00	1919444.21	556826.34	36.275125	-107.640547
	5400.00	35.53	248.56	5178.99	269.03	-1335.50	-46.52	9.00	1919421.13	556779.08	36.275062	-107.640708
	5500.00	43.42	255.40	5256.15	331.84	-1354.82	-108.94	9.00	1919401.69	556718.70	36.275008	-107.640913
	5600.00	51.61	260.47	5323.68	405.41	-1370.00	-179.00	9.00	1919386.37	556646.68	36.274967	-107.641157
	5700.00	59.98	264.49	5379.84	487.96	-1380.67	-280.91	9.00	1919375.54	556564.79	36.274937	-107.641435
	5700.27	60.00	264.50	5379.98	488.18	-1380.69	-281.14	9.00	1919375.52	556564.57	36.274937	-107.641436
Hold 60° INC 60 KOP, Build 9°/100' to Landing	5760.27	60.00	264.50	5409.98	540.01	-1385.67	-312.86	0.00	1919370.44	556512.86	36.274924	-107.641611
	5800.00	63.36	265.90	5428.82	574.86	-1388.59	-347.71	9.00	1919367.45	556478.02	36.274916	-107.641730
	5900.00	71.85	269.11	5466.90	666.49	-1392.53	-439.98	9.00	1919363.33	556385.76	36.274905	-107.642043

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Landing Point, Hold to TD	6000.00	80.40	272.02	5490.85	761.94	-1391.52	-536.96	9.00	1919364.14	556288.79	36.274908	-107.642372
	6100.00	88.97	274.78	5500.11	858.85	-1385.60	-636.25	9.00	1919369.86	556189.49	36.274924	-107.642708
	6128.92	91.45	275.58	5500.00	866.80	-1382.99	-665.05	9.00	1919372.41	556160.69	36.274931	-107.642806
	6200.00	91.45	275.58	5498.20	955.38	-1376.09	-735.77	0.00	1919379.17	556089.96	36.274950	-107.643046
	6300.00	91.45	275.58	5495.67	1051.85	-1366.38	-835.27	0.00	1919388.69	555990.46	36.274977	-107.643383
	6400.00	91.45	275.58	5493.14	1148.32	-1356.67	-934.76	0.00	1919398.20	555890.95	36.275003	-107.643721
	6500.00	91.45	275.58	5490.61	1244.80	-1346.95	-1034.26	0.00	1919407.71	555791.44	36.275030	-107.644058
	6600.00	91.45	275.58	5488.08	1341.27	-1337.24	-1133.75	0.00	1919417.23	555691.94	36.275057	-107.644396
	6700.00	91.45	275.58	5485.54	1437.74	-1327.53	-1233.25	0.00	1919426.74	555592.43	36.275083	-107.644733
	6800.00	91.45	275.58	5483.01	1534.22	-1317.82	-1332.74	0.00	1919436.26	555492.93	36.275110	-107.645071
	6900.00	91.45	275.58	5480.48	1630.69	-1308.10	-1432.24	0.00	1919445.77	555393.42	36.275137	-107.645409
	7000.00	91.45	275.58	5477.95	1727.16	-1298.39	-1531.73	0.00	1919455.28	555293.91	36.275163	-107.645746
	7100.00	91.45	275.58	5475.42	1823.63	-1288.68	-1631.23	0.00	1919464.80	555194.41	36.275190	-107.646084
	7200.00	91.45	275.58	5472.89	1920.11	-1278.97	-1730.72	0.00	1919474.31	555094.90	36.275217	-107.646421
	7300.00	91.45	275.58	5470.35	2016.58	-1269.25	-1830.22	0.00	1919483.82	554995.40	36.275243	-107.646759
	7400.00	91.45	275.58	5467.82	2113.05	-1259.54	-1929.71	0.00	1919493.34	554895.89	36.275270	-107.647096
	7500.00	91.45	275.58	5465.29	2209.53	-1249.83	-2029.21	0.00	1919502.85	554796.38	36.275297	-107.647434
	7600.00	91.45	275.58	5462.76	2306.00	-1240.11	-2128.70	0.00	1919512.37	554696.88	36.275323	-107.647771
	7700.00	91.45	275.58	5460.23	2402.47	-1230.40	-2228.20	0.00	1919521.88	554597.37	36.275350	-107.648109
	7800.00	91.45	275.58	5457.70	2498.94	-1220.69	-2327.69	0.00	1919531.40	554497.87	36.275377	-107.648446
	7900.00	91.45	275.58	5455.16	2595.42	-1210.97	-2427.19	0.00	1919540.91	554398.36	36.275403	-107.648784
	8000.00	91.45	275.58	5452.63	2691.89	-1201.26	-2526.68	0.00	1919550.43	554298.85	36.275430	-107.649121
	8100.00	91.45	275.58	5450.10	2788.36	-1191.55	-2626.18	0.00	1919559.94	554199.35	36.275457	-107.649459
	8200.00	91.45	275.58	5447.57	2884.84	-1181.83	-2725.67	0.00	1919569.45	554099.84	36.275483	-107.649796
	8300.00	91.45	275.58	5445.04	2981.31	-1172.12	-2825.17	0.00	1919578.97	554000.34	36.275510	-107.650134
	8400.00	91.45	275.58	5442.51	3077.78	-1162.40	-2924.66	0.00	1919588.48	553900.83	36.275537	-107.650471
	8500.00	91.45	275.58	5439.98	3174.25	-1152.69	-3024.16	0.00	1919598.00	553801.32	36.275563	-107.650809
	8600.00	91.45	275.58	5437.44	3270.73	-1142.98	-3123.65	0.00	1919607.52	553701.82	36.275590	-107.651146
	8700.00	91.45	275.58	5434.91	3367.20	-1133.26	-3223.15	0.00	1919617.03	553602.31	36.275617	-107.651484
	8800.00	91.45	275.58	5432.38	3463.67	-1123.55	-3322.64	0.00	1919626.55	553502.81	36.275643	-107.651821
	8900.00	91.45	275.58	5429.85	3560.14	-1113.83	-3422.14	0.00	1919636.06	553403.30	36.275670	-107.652159
	9000.00	91.45	275.58	5427.32	3656.62	-1104.12	-3521.63	0.00	1919645.58	553303.79	36.275696	-107.652496
	9100.00	91.45	275.58	5424.79	3753.09	-1094.40	-3621.13	0.00	1919655.09	553204.29	36.275723	-107.652834
	9200.00	91.45	275.58	5422.25	3849.56	-1084.69	-3720.62	0.00	1919664.61	553104.78	36.275750	-107.653171
	9300.00	91.45	275.58	5419.72	3946.03	-1074.98	-3820.12	0.00	1919674.12	553005.28	36.275776	-107.653509
	9400.00	91.45	275.58	5417.19	4042.51	-1065.26	-3919.61	0.00	1919683.64	552905.77	36.275803	-107.653846
	9500.00	91.45	275.58	5414.66	4138.98	-1055.55	-4019.11	0.00	1919693.16	552806.27	36.275830	-107.654184
	9600.00	91.45	275.58	5412.13	4235.45	-1045.83	-4118.60	0.00	1919702.67	552706.76	36.275856	-107.654521
	9700.00	91.45	275.58	5409.60	4331.92	-1036.12	-4218.09	0.00	1919712.19	552607.25	36.275883	-107.654859
	9800.00	91.45	275.58	5407.06	4428.40	-1026.40	-4317.59	0.00	1919721.70	552507.75	36.275910	-107.655197
	9900.00	91.45	275.58	5404.53	4524.87	-1016.69	-4417.08	0.00	1919731.22	552408.24	36.275936	-107.655534
	10000.00	91.45	275.58	5402.00	4621.34	-1006.97	-4516.58	0.00	1919740.74	552308.74	36.275963	-107.655872
	10100.00	91.45	275.58	5399.47	4717.81	-997.26	-4616.07	0.00	1919750.25	552209.23	36.275990	-107.656209
	10200.00	91.45	275.58	5396.94	4814.29	-987.54	-4715.57	0.00	1919759.77	552109.73	36.276016	-107.656547
	10300.00	91.45	275.58	5394.41	4910.76	-977.82	-4815.06	0.00	1919769.29	552010.22	36.276043	-107.656884
	10400.00	91.45	275.58	5391.87	5007.23	-968.11	-4914.56	0.00	1919778.80	551910.71	36.276070	-107.657222
	10500.00	91.45	275.58	5389.34	5103.70	-958.39	-5014.05	0.00	1919788.32	551811.21	36.276096	-107.657559
	10600.00	91.45	275.58	5386.81	5200.17	-948.68	-5113.55	0.00	1919797.84	551711.70	36.276123	-107.657897
	10700.00	91.45	275.58	5384.28	5296.65	-938.96	-5213.04	0.00	1919807.35	551612.20	36.276149	-107.658234
	10800.00	91.45	275.58	5381.75	5393.12	-929.25	-5312.54	0.00	1919816.87	551512.69	36.276176	-107.658572
	10900.00	91.45	275.58	5379.22	5489.59	-919.53	-5412.03	0.00	1919826.39	551413.19	36.276203	-107.658909
Chaco 2408-25M #131H BHL	10908.51	91.45	275.58	5379.00	5497.80	-918.70	-5420.50	0.00	1919827.20	551404.72	36.276205	-107.658938

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	13.250	9.625	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2408-25M #131H R1 mdv 06Oct14
	1	14.000	550.000	1/100.000	13.250	9.625	SLB_MWD-STD	Original Hole / Chaco 2408-25M #131H R1 mdv 06Oct14
	1	550.000	6128.000	1/30.000	8.750	7.000	SLB_MWD-STD	Original Hole / Chaco 2408-25M #131H R1 mdv 06Oct14
	1	6128.000	10908.511	1/100.000	6.125	4.500	SLB_MWD-STD	Original Hole / Chaco 2408-25M #131H R1 mdv 06Oct14