

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: Change project area

Well information:

APIWELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E
30-043-21204-00-00	CHACO 2306 19E	205H	WPX ENERGY PRODUCTION, LLC	O	N	Sandoval	F	E	19	23	N	6	W

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations

Hold C-104 for directional survey, As Drilled Plat & NSL

NMOCD Approved by Signature

4/21/14
Date

RECEIVED

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 14 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. NMSF078360
2. Name of Operator WPX Energy Production, LLC		6. If Indian, Allottee or Tribe Name
3a. Address PO Box 640 Aztec, NM 87410		7. If Unit of CA/Agreement, Name and/or No.
3b. Phone No. (include area code) 505-333-1808		8. Well Name and No. Chaco 2306-19E #205H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sur: 1757' FNL & 303' FWL, sec 19, T23N, R6W - BHL:1396' FNL & 230' FEL, Sec 19, T23N, R6W		9. API Well No. 30-043-21204
		10. Field and Pool or Exploratory Area Lybrook Gallup
		11. Country or Parish, State Sandoval, 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 <u>Realign lateral</u>
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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

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. No new surface disturbance is required. 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.

CONDITIONS OF APPROVAL

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	Title Regulatory Specialist
Signature <i>Larry Higgins</i>	Date 4/14/14

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by <i>William Tambekou</i>	Petroleum Title Engineer	Date 4/15/2014
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.	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)

NMOCDA

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

APR 14 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-043-21204		Pool Code 42289	Pool Name LYBROOK GALLUP
Property Code 39987	Property Name CHACO 2306-19E		Well Number 205H
GRID No. 120782	Operator Name WPX ENERGY PRODUCTION, LLC		Elevation 6965'

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
E	19	23N	6W	2	1757	NORTH	303	WEST	SANDOVAL

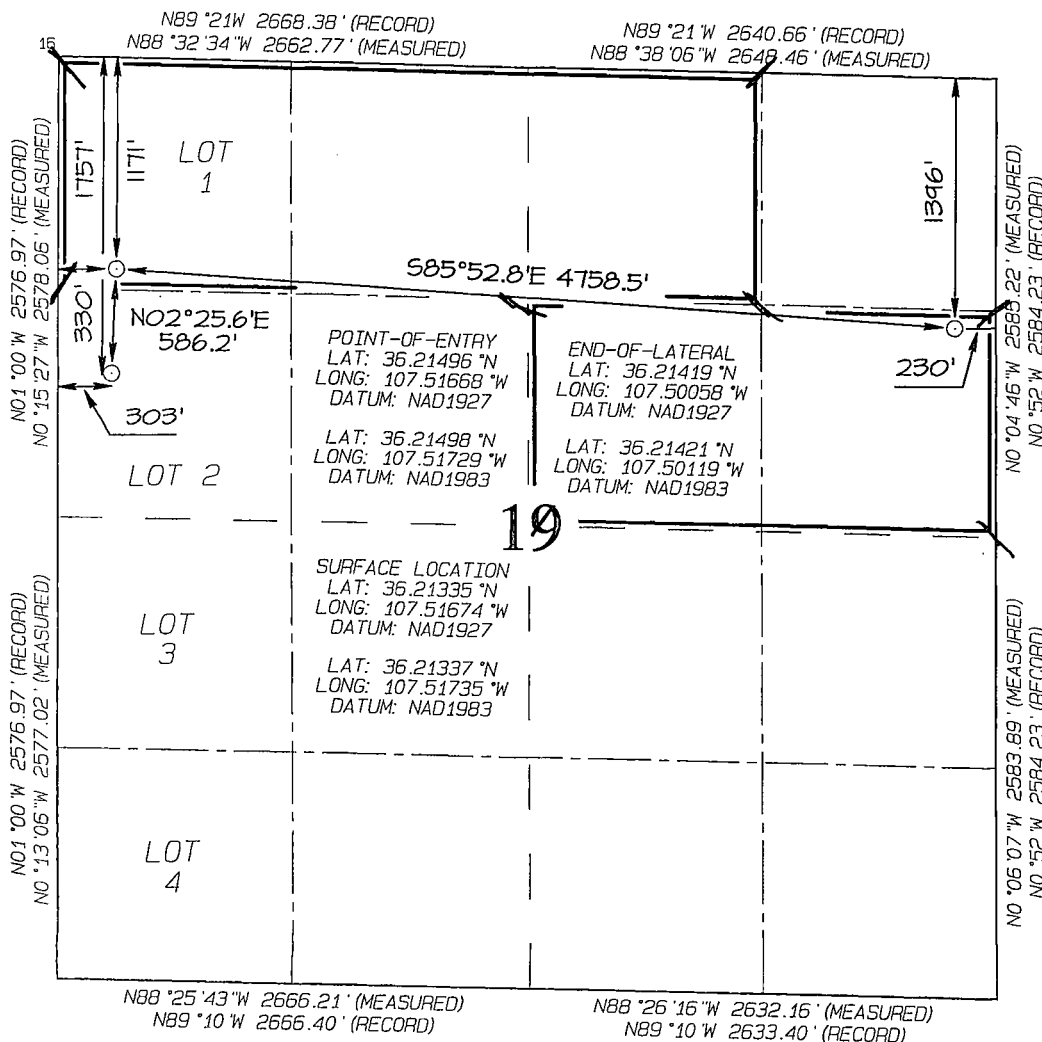
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	19	23N	6W		1396	NORTH	230	EAST	SANDOVAL

12 Dedicated Acres 200.86 Acres - Section 19 N/2 NW/4 - S/2 NE/4 - NW/4 NE/4	13 Joint or Infill	14 Consolidation Code	15 Order No. RCVD APR 17 '14 OIL CONS. DIV.
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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

DIST. 3



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: 4/14/14
Printed Name: Larry Higgins
E-mail Address: larry.higgins@wpxenergy.com

18 SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: APRIL 14, 2014
Date of Survey: JULY 10, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

WPXENERGY

WPX ENERGY

Operations Plan

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

DATE: 4/8/2014 **FIELD:** Lybrook (Gallup)
WELL NAME: Chaco 2306-19E #205H **SURFACE:** BLM
SH Location: SWNW Sec 19-23N-06W **ELEVATION:** 6965' GR
BH Location: NENE Sec 19-23N-06W **MINERALS:** BLM
Sandoval, NM
MEASURED DEPTH: 10,799' **LEASE #:** NMSF 078360

I. **GEOLOGY:** Surface formation – San Jose

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1337	1327	Point Lookout	4312	4200
Kirtland	1649	1628	Mancos	4510	4396
Picture Cliffs	1950	1919	Kickoff Point	4973	4858
Lewis	2040	2005	Top Target	5694	5437
Chacra	2384	2337	Landing Point	6041	5525
Cliff House	3496	3410	Base Target	6039	5525
Menefee	3518	3431			
			TD	10799	5467

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

C. **LOGGING PROGRAM:** LWD GR from surface casing to TD.

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. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 4,973' (MD) / 4,858' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,041' (MD) / 5,525' (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 +/- 10,799' (MD) / 5,467' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,891 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:

<u>CASING TYPE</u>	<u>OH SIZE (IN)</u>	<u>DEPTH (MD) (FT)</u>	<u>CASING SIZE (IN)</u>	<u>WEIGHT(LB)</u>	<u>GRADE</u>
Surface	12.25"	400'+	9.625"	36#	J-55
Intermediate	8.75"	6,041'	7"	23#	K-55
Prod. Liner	6.125"	5,891' - 10,799'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,891'	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 + (2) RSI (Sliding Sleeves) positioned inside the 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: 850 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1216 cu-ft / 216.5 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (1050 sx / 1461 cu-ft / 260 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
3. PRODUCTION LINER: **STAGE 1**:10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2**:40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III + 0.5 gal/bbl Musol + 38.75 ppb Barite + 0.5 gal/bbl SEM-7. **STAGE 3**: 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement**: 50 / 50 Poz Premium + 0.2% Versaset + 0.2% Halad -766, Yield 1.43 cu ft/sk, 13.0 ppg, (10 sx / 14.3 cu ft. / 2.5 bbls). **STAGE 5**: 200 sx. Foamed Lead Cement: 50 / 50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.97 cu-ft/sk. 13.0 ppg (200 sx / 394 cu-ft. / 70.2 bbls.). **STAGE 6**: Tail Cement : 100 sx. 50/50 Poz Standard + 0.2% Versaset + 0.05% HALAD-766 + .05% SA-1015, Weight: 13.5 ppg (100 sx / Yield 1.28 cu ft/sk. / 128 cu ft. / 22.8 bbls) **STAGE 7**: Displace w/ +/- 137 bbl Fr Water. Total Cement (536.3 cu ft / 95.5 bbls). Mix

Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,591 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 (~5,800' 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 6,041 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,891 ft. (MD) +/- 78 degree angle. TOC: +/- 5,591 ft. (MD).

After cementing and TOL clean up operations are complete, the TOL will be tested to 1500 psi (per BLM).

A 4-1/2" 11.6# N-80 tie-back string with seal assembly will be run and stung into the PBR of the liner hanger, tested to 1500 PSI and hung off at the surface.

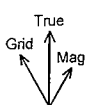
The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

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

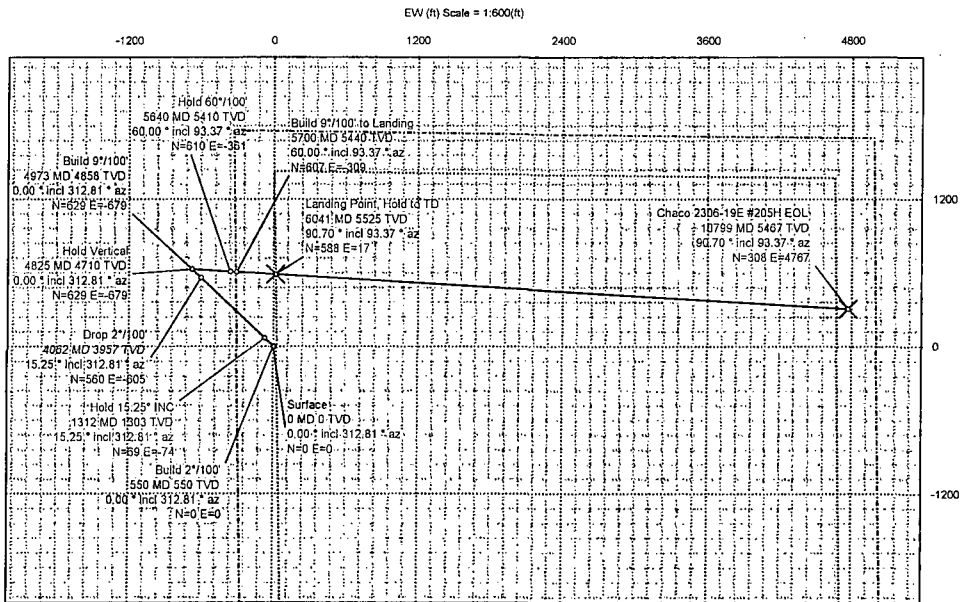
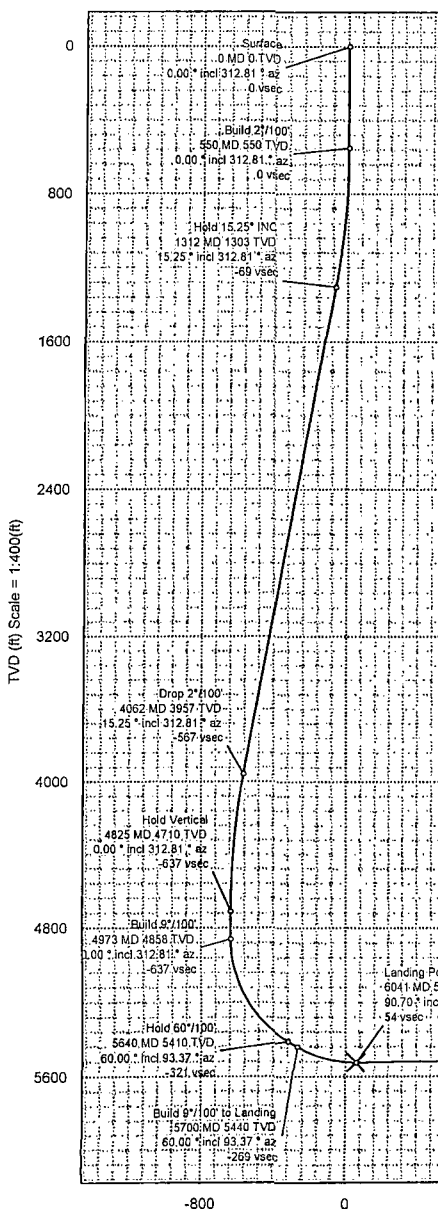
Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2306-19E #205H	NM Sandoval County NAD27	Sec 19-23N-6W

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2013 Dip: 62.995° Date: 04-Apr-2014	NAD27 New Mexico State Plane, Central Zone, US Feet	Slot: Chaco 2306-19E #205H TVD Ref: RKB(6979ft above MSL)
MagDec: 9.433° FS: 50118.052nT Gravity FS: 998.492mgn (9.80665 Based)	Lat: N 36 12 48.06 Northing: 1899309.945ft Grid Conv: -0.7485° Lon: W 107 31 0.26 Easting: 126314.146ft Scale Fact: 1.0000598	Plan: Chaco 2306-19E #205H R1 mdv 04Apr14

Proposal



True North
Tot Cor (M->T 9.433°)
Mag Dec (9.433°)
Grid Conv (-0.748°)



Surface Location								
Northing: 1899309.945			Easting: 126314.146		Latitude: N 36 12 48.06		Longitude: W 107 31 0.26	
					VSec Azimuth: 86.307			
Target Description		Grid Coord					Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)
Chaco 2306-19E #205H EOL	N 36 12 51.10	W 107 30 2.10	1899555.35	131084.55	5457.00	4776.44	307.68	4766.52
Chaco 2306-19E #205H POE	N 36 12 53.87	W 107 31 0.06	1899897.22	126338.41	5525.00	54.39	587.51	16.59
Chaco 2306-19E #205H Section Line	N 36 12 48.06	W 107 31 0.26	1899309.95	126314.15	6979.00	0.00	0.00	0.00
Chaco 2306-19E #205H 330' Setback	N 36 12 48.06	W 107 31 0.26	1899309.95	126314.15	6979.00	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	312.81	0.00	0.00	0.00	0.00	
Build 2"/100'	550.00	0.00	312.81	550.00	0.00	0.00	0.00	0.00
Hold 15.25' INC	1312.39	15.25	312.81	1303.43	-69.42	68.53	-73.99	2.00
Drop 2"/100'	4062.35	15.25	312.81	3956.57	-567.26	559.97	-604.59	0.00
Hold Vertical	4824.74	0.00	312.81	4710.00	-636.68	628.50	-678.58	2.00
Build 9"/100'	4973.17	0.00	312.81	4858.43	-636.68	628.50	-678.58	0.00
Hold 60"/100'	5639.84	60.00	93.37	5409.76	-320.79	609.77	-360.82	9.00
Build 9"/100' to Landing	5698.84	60.00	93.37	5439.76	-269.23	606.71	-308.95	0.00
Landing Point, Hold to TD	6040.95	90.70	93.37	5525.00	54.38	587.52	16.57	9.00
Chaco 2306-19E #205H EOL	10799.49	90.70	93.37	5457.00	4776.44	307.68	4766.52	0.00

Vertical Section (ft) Azim = 86.307° Scale = 1:400(ft) Origin = 0N/-S, 0E/-W



Chaco 2306-19E #205H R1 mdv 04Apr14 Proposal Geodetic Report



(Def Plan)

Report Date: April 04, 2014 - 02:59 PM
Client: WPX Energy
Field: NM Sandoval County NAD27
Structure / Slot: WPX Sec 19-23N-6W (Chaco 2306-19E #205H) / Chaco 2306-19E #205H
Well: Chaco 2306-19E #205H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2306-19E #205H R1 mdv 04Apr14
Survey Date: February 26, 2014
Tort / AHD / DDI / ERD Ratio: 121.202 * / 6379.466 ft / 6.179 / 1.155
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 12' 48.06000", W 107° 31' 0.26400"
Location Grid N/E Y/X: N 1899309.945 ftUS, E 126314.146 ftUS
CRS Grid Convergence Angle: -0.7485 *
Grid Scale Factor: 1.0000598
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 86.307 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6979.000 ft above MSL
Seabed / Ground Elevation: 6965.000 ft above MSL
Magnetic Declination: 9.433 *
Total Gravity Field Strength: 998.4918mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 50118.052 nT
Magnetic Dip Angle: 62.995 *
Declination Date: April 04, 2014
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North->True North: 9.4329 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	312.81	0.00	0.00	0.00	0.00	N/A	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	100.00	0.00	312.81	100.00	0.00	0.00	0.00	0.00	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	200.00	0.00	312.81	200.00	0.00	0.00	0.00	0.00	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	300.00	0.00	312.81	300.00	0.00	0.00	0.00	0.00	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	400.00	0.00	312.81	400.00	0.00	0.00	0.00	0.00	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	500.00	0.00	312.81	500.00	0.00	0.00	0.00	0.00	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	550.00	0.00	312.81	550.00	0.00	0.00	0.00	0.00	1899309.95	126314.15	N 36 12 48.06	W 107 31 0.26
	600.00	1.00	312.81	600.00	-0.30	0.30	-0.32	2.00	1899310.25	126313.83	N 36 12 48.06	W 107 31 0.27
	700.00	3.00	312.81	699.93	-2.70	2.67	-2.88	2.00	1899312.65	126311.30	N 36 12 48.09	W 107 31 0.30
	800.00	5.00	312.81	799.68	-7.50	7.41	-8.00	2.00	1899317.46	126306.24	N 36 12 48.13	W 107 31 0.36
	900.00	7.00	312.81	899.13	-14.70	14.51	-15.67	2.00	1899324.66	126298.67	N 36 12 48.20	W 107 31 0.46
	1000.00	9.00	312.81	998.15	-24.28	23.97	-25.88	2.00	1899334.25	126288.58	N 36 12 48.30	W 107 31 0.58
	1100.00	11.00	312.81	1096.63	-36.23	35.77	-38.62	2.00	1899346.21	126276.00	N 36 12 48.41	W 107 31 0.74
	1200.00	13.00	312.81	1194.44	-50.54	49.89	-53.87	2.00	1899360.54	126260.93	N 36 12 48.55	W 107 31 0.92
	1300.00	15.00	312.81	1291.46	-67.19	66.33	-71.62	2.00	1899377.21	126243.40	N 36 12 48.72	W 107 31 1.14
Hold 15.25" INC	1312.39	15.25	312.81	1303.43	-69.42	68.53	-73.99	2.00	1899379.44	126241.05	N 36 12 48.74	W 107 31 1.17
	1400.00	15.25	312.81	1387.95	-85.28	84.18	-90.89	0.00	1899395.31	126224.36	N 36 12 48.89	W 107 31 1.37
	1500.00	15.25	312.81	1484.43	-103.38	102.06	-110.19	0.00	1899413.44	126205.29	N 36 12 49.07	W 107 31 1.61
	1600.00	15.25	312.81	1580.91	-121.49	119.93	-129.48	0.00	1899431.56	126186.23	N 36 12 49.25	W 107 31 1.84
	1700.00	15.25	312.81	1677.39	-139.59	137.80	-148.78	0.00	1899449.68	126167.17	N 36 12 49.42	W 107 31 2.08
	1800.00	15.25	312.81	1773.87	-157.70	155.67	-168.07	0.00	1899467.80	126148.11	N 36 12 49.60	W 107 31 2.31
	1900.00	15.25	312.81	1870.35	-175.80	173.54	-187.37	0.00	1899485.93	126129.05	N 36 12 49.78	W 107 31 2.55
	2000.00	15.25	312.81	1966.83	-193.90	191.41	-206.66	0.00	1899504.05	126109.99	N 36 12 49.95	W 107 31 2.79
	2100.00	15.25	312.81	2063.31	-212.01	209.28	-225.96	0.00	1899522.17	126090.93	N 36 12 50.13	W 107 31 3.02
	2200.00	15.25	312.81	2159.79	-230.11	227.15	-245.25	0.00	1899540.30	126071.87	N 36 12 50.31	W 107 31 3.26
	2300.00	15.25	312.81	2256.27	-248.21	245.02	-264.55	0.00	1899558.42	126052.81	N 36 12 50.48	W 107 31 3.49
	2400.00	15.25	312.81	2352.75	-266.32	262.89	-283.84	0.00	1899576.54	126033.75	N 36 12 50.66	W 107 31 3.73
	2500.00	15.25	312.81	2449.23	-284.42	280.77	-303.14	0.00	1899594.66	126014.69	N 36 12 50.84	W 107 31 3.96
	2600.00	15.25	312.81	2545.71	-302.53	298.64	-322.43	0.00	1899612.79	125995.62	N 36 12 51.01	W 107 31 4.20
	2700.00	15.25	312.81	2642.18	-320.63	316.51	-341.73	0.00	1899630.91	125976.56	N 36 12 51.19	W 107 31 4.43
	2800.00	15.25	312.81	2738.66	-338.73	334.38	-361.02	0.00	1899649.03	125957.50	N 36 12 51.37	W 107 31 4.67
	2900.00	15.25	312.81	2835.14	-356.84	352.25	-380.32	0.00	1899667.15	125938.44	N 36 12 51.54	W 107 31 4.90
	3000.00	15.25	312.81	2931.62	-374.94	370.12	-399.61	0.00	1899685.28	125919.38	N 36 12 51.72	W 107 31 5.14
	3100.00	15.25	312.81	3028.10	-393.04	387.99	-418.91	0.00	1899703.40	125900.32	N 36 12 51.90	W 107 31 5.38
	3200.00	15.25	312.81	3124.58	-411.15	405.86	-438.20	0.00	1899721.52	125881.26	N 36 12 52.07	W 107 31 5.61
	3300.00	15.25	312.81	3221.06	-429.25	423.73	-457.50	0.00	1899739.64	125862.20	N 36 12 52.25	W 107 31 5.85
	3400.00	15.25	312.81	3317.54	-447.35	441.60	-476.79	0.00	1899757.77	125843.14	N 36 12 52.43	W 107 31 6.08
	3500.00	15.25	312.81	3414.02	-465.46	459.47	-496.09	0.00	1899775.89	125824.08	N 36 12 52.60	W 107 31 6.32
	3600.00	15.25	312.81	3510.50	-483.56	477.35	-515.38	0.00	1899794.01	125805.01	N 36 12 52.78	W 107 31 6.55
	3700.00	15.25	312.81	3606.98	-501.67	495.22	-534.68	0.00	1899812.13	125785.95	N 36 12 52.96	W 107 31 6.79
	3800.00	15.25	312.81	3703.46	-519.77	513.09	-553.97	0.00	1899830.26	125766.89	N 36 12 53.13	W 107 31 7.02
	3900.00	15.25	312.81	3799.94	-537.87	530.96	-573.27	0.00	1899848.38	125747.83	N 36 12 53.31	W 107 31 7.26
	4000.00	15.25	312.81	3896.42	-555.98	548.83	-592.56	0.00	1899866.50	125728.77	N 36 12 53.49	W 107 31 7.49
Drop 2"/100'	4062.35	15.25	312.81	3956.57	-567.26	559.97	-604.59	0.00	1899877.80	125716.89	N 36 12 53.60	W 107 31 7.64
	4100.00	14.49	312.81	3992.96	-573.92	566.54	-611.68	2.00	1899884.46	125709.88	N 36 12 53.66	W 107 31 7.73
	4200.00	12.49	312.81	4090.20	-589.98	582.39	-628.80	2.00	1899900.54	125692.97	N 36 12 53.82	W 107 31 7.94
	4300.00	10.49	312.81	4188.19	-603.70	595.93	-643.42	2.00	1899914.27	125678.53	N 36 12 53.95	W 107 31 8.12
	4400.00	8.49	312.81	4286.81	-615.05	607.14	-655.52	2.00	1899925.64	125666.57	N 36 12 54.06	W 107 31 8.26
	4500.00	6.49	312.81	4385.95	-624.03	616.01	-665.09	2.00	1899934.62	125657.12	N 36 12 54.15	W 107 31 8.38
	4600.00	4.49	312.81	4485.49	-630.62	622.51	-672.12	2.00	1899941.22	125650.18	N 36 12 54.22	W 107 31 8.47
	4700.00	2.49	312.81	4585.30	-634.82	626.65	-676.59	2.00	1899945.42	125645.76	N 36 12 54.26	W 107 31 8.52
	4800.00	0.49	312.81	4685.26	-636.61	628.43	-678.50	2.00	1899947.22	125643.87	N 36 12 54.27	W 107 31 8.54
Hold Vertical	4824.74	0.00	312.81	4710.00	-636.68	628.50	-678.58	2.00	1899947.29	125643.79	N 36 12 54.28	W 107 31 8.54
	4900.00	0.00	312.81	4785.26	-636.68	628.50	-678.58	0.00	1899947.29	125643.79	N 36 12 54.28	W 107 31 8.54
Build 9"/100'	4973.17	0.00	312.81	4858.43	-636.68	628.50	-678.58	0.00	1899947.29	125643.79	N 36 12 54.28	W 107 31 8.54
	5000.00	2.41	93.37	4885.25	-636.12	628.47	-678.02	9.00	1899947.25	125644.36	N 36 12 54.27	W 107 31 8.54
	5100.00	11.41	93.37	4984.42	-624.19	627.76	-666.01	9.00	1899946.39	125656.35	N 36 12 54.27	W 107 31 8.39
	5200.00	20.41	93.37	5080.49	-597.00	626.15	-638.67	9.00	1899944.42	125683.68	N 36 12 54.25	W 107 31 8.06
	5300.00	29.41	93.37	5171.09	-555.24	623.67	-596.65	9.00	1899941.39	125725.65	N 36 12 54.23	W 107 31 7.54
	5400.00	38.41	93.37	5253.99	-499.93	620.39	-541.01	9.00	1899937.39	125781.25	N 36 12 54.19	W 107 31 6.87
	5500.00	47.41	93.37	5327.15	-432.42	616.39	-473.11	9.00	1899932.50	125849.10	N 36 12 54.16	W 107 31 6.04
	5600.00	56.41	93.37	5388.77	-354.39	611.76	-394.82	9.00	1899926.84	125927.53	N 36 12 54.11	W 107 31 5.08
Hold 60"/100'	5639.84	60.00	93.37	5409.76	-320.79	609.77	-360.82	9.00	1899924.41	125961.30	N 36 12 54.09	W 107 31 4.67
Build 9"/100' to Landing	5699.84	60.00	93.37	5439.76	-269.23	606.71	-308.95	0.00	1899920.67	126013.13	N 36 12 54.06	W 107 31 4.03
	5700.00	60.01	93.37	5439.84	-269.09	606.70	-308.81	9.00	1899920.66	126013.27	N 36 12 54.06	W 107 31 4.03
	5800.00	69.01	93.37	5482.82	-179.60	601.39	-218.79	9.00	1899914.18	126103.22	N 36 12 54.01	W 107 31 2.93
	5900.00	78.01	93.37	5511.17	-84.53	595.76	-123.17	9.00	1899907.29	126198.77	N 36 12 53.95	W 107 31 1.77
	6000.00	87.01	93.37	5524.19	13.76	589.93	-24.29	9.00	1899900.17	126297.56	N 36 12 53.89	W 107 31 0.56
Landing Point, Hold to TD	6040.95	90.70	93.37	5525.00	54.38	587.52	16.57	9.00	1899897.23	126338.39	N 36 12 53.87	W 107 31 0.06
	6100.00	90.70	93.37	5524.28	112.98	584.04	75.52	0.00	1899892.98	126397.29	N 36 12 53.84	W 107 3

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (*/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6700.00	90.70	93.37	5518.95	708.38	548.74	674.43	0.00	1899849.86	126995.73	N 36 12 53.49	W 107 30 52.03
	6800.00	90.70	93.37	5515.73	807.61	542.85	774.25	0.00	1899842.67	127095.47	N 36 12 53.43	W 107 30 50.82
	6900.00	90.70	93.37	5514.51	906.84	536.97	874.07	0.00	1899835.48	127195.21	N 36 12 53.37	W 107 30 49.60
	7000.00	90.70	93.37	5513.29	1006.08	531.09	973.89	0.00	1899828.29	127294.95	N 36 12 53.31	W 107 30 48.38
	7100.00	90.70	93.37	5512.07	1105.31	525.20	1073.71	0.00	1899821.11	127394.69	N 36 12 53.25	W 107 30 47.16
	7200.00	90.70	93.37	5510.85	1204.54	519.32	1173.53	0.00	1899813.92	127494.43	N 36 12 53.20	W 107 30 45.94
	7300.00	90.70	93.37	5509.63	1303.78	513.44	1273.35	0.00	1899806.73	127594.17	N 36 12 53.14	W 107 30 44.73
	7400.00	90.70	93.37	5508.41	1403.01	507.55	1373.17	0.00	1899799.55	127693.91	N 36 12 53.08	W 107 30 43.51
	7500.00	90.70	93.37	5507.19	1502.24	501.67	1472.99	0.00	1899792.36	127793.65	N 36 12 53.02	W 107 30 42.29
	7600.00	90.70	93.37	5505.97	1601.48	495.79	1572.81	0.00	1899785.18	127893.39	N 36 12 52.96	W 107 30 41.07
	7700.00	90.70	93.37	5504.75	1700.71	489.91	1672.63	0.00	1899777.99	127993.12	N 36 12 52.90	W 107 30 39.85
	7800.00	90.70	93.37	5503.53	1799.94	484.03	1772.44	0.00	1899770.80	128092.86	N 36 12 52.85	W 107 30 38.64
	7900.00	90.70	93.37	5502.31	1899.18	478.14	1872.26	0.00	1899763.62	128192.60	N 36 12 52.79	W 107 30 37.42
	8000.00	90.70	93.37	5501.09	1998.41	472.26	1972.08	0.00	1899756.43	128292.34	N 36 12 52.73	W 107 30 36.20
	8100.00	90.70	93.37	5499.87	2097.64	466.38	2071.90	0.00	1899749.25	128392.08	N 36 12 52.67	W 107 30 34.98
	8200.00	90.70	93.37	5498.65	2196.88	460.50	2171.72	0.00	1899742.06	128491.82	N 36 12 52.61	W 107 30 33.76
	8300.00	90.70	93.37	5497.43	2296.11	454.62	2271.54	0.00	1899734.88	128591.56	N 36 12 52.55	W 107 30 32.54
	8400.00	90.70	93.37	5496.21	2395.34	448.74	2371.36	0.00	1899727.69	128691.30	N 36 12 52.50	W 107 30 31.33
	8500.00	90.70	93.37	5495.00	2494.58	442.86	2471.18	0.00	1899720.51	128791.04	N 36 12 52.44	W 107 30 30.11
	8600.00	90.70	93.37	5493.78	2593.81	436.98	2571.00	0.00	1899713.32	128890.78	N 36 12 52.38	W 107 30 28.89
	8700.00	90.70	93.37	5492.56	2693.04	431.10	2670.82	0.00	1899706.14	128990.52	N 36 12 52.32	W 107 30 27.67
	8800.00	90.70	93.37	5491.34	2792.28	425.22	2770.64	0.00	1899698.96	129090.26	N 36 12 52.26	W 107 30 26.45
	8900.00	90.70	93.37	5490.12	2891.51	419.34	2870.46	0.00	1899691.77	129190.00	N 36 12 52.21	W 107 30 25.24
	9000.00	90.70	93.37	5488.90	2990.74	413.46	2970.28	0.00	1899684.59	129289.74	N 36 12 52.15	W 107 30 24.02
	9100.00	90.70	93.37	5487.68	3089.98	407.58	3070.10	0.00	1899677.41	129389.48	N 36 12 52.09	W 107 30 22.80
	9200.00	90.70	93.37	5486.47	3189.21	401.70	3169.92	0.00	1899670.22	129489.22	N 36 12 52.03	W 107 30 21.58
	9300.00	90.70	93.37	5485.25	3288.44	395.82	3269.74	0.00	1899663.04	129588.96	N 36 12 51.97	W 107 30 20.36
	9400.00	90.70	93.37	5484.03	3387.68	389.94	3369.56	0.00	1899655.86	129688.70	N 36 12 51.91	W 107 30 19.15
	9500.00	90.70	93.37	5482.81	3486.91	384.06	3469.38	0.00	1899648.67	129788.44	N 36 12 51.86	W 107 30 17.93
	9600.00	90.70	93.37	5481.60	3586.14	378.18	3569.20	0.00	1899641.49	129888.18	N 36 12 51.80	W 107 30 16.71
	9700.00	90.70	93.37	5480.38	3685.38	372.30	3669.02	0.00	1899634.31	129987.92	N 36 12 51.74	W 107 30 15.49
	9800.00	90.70	93.37	5479.16	3784.61	366.43	3768.84	0.00	1899627.13	130087.66	N 36 12 51.68	W 107 30 14.27
	9900.00	90.70	93.37	5477.94	3883.85	360.55	3868.66	0.00	1899619.94	130187.40	N 36 12 51.62	W 107 30 13.06
	10000.00	90.70	93.37	5476.73	3983.08	354.67	3968.47	0.00	1899612.76	130287.14	N 36 12 51.56	W 107 30 11.84
	10100.00	90.70	93.37	5475.51	4082.31	348.79	4068.29	0.00	1899605.58	130386.88	N 36 12 51.51	W 107 30 10.62
	10200.00	90.70	93.37	5474.29	4181.55	342.91	4168.11	0.00	1899598.40	130486.62	N 36 12 51.45	W 107 30 9.40
	10300.00	90.70	93.37	5473.08	4280.78	337.04	4267.93	0.00	1899591.22	130586.37	N 36 12 51.39	W 107 30 8.18
	10400.00	90.70	93.37	5471.86	4380.01	331.16	4367.75	0.00	1899584.04	130686.11	N 36 12 51.33	W 107 30 6.97
	10500.00	90.70	93.37	5470.64	4479.25	325.28	4467.57	0.00	1899576.86	130785.85	N 36 12 51.27	W 107 30 5.75
	10600.00	90.70	93.37	5469.43	4578.48	319.41	4567.39	0.00	1899569.68	130885.59	N 36 12 51.21	W 107 30 4.53
	10700.00	90.70	93.37	5468.21	4677.72	313.53	4667.21	0.00	1899562.50	130985.33	N 36 12 51.16	W 107 30 3.31
Chaco 2306-19E #205H EOL	10799.49	90.70	93.37	5467.00	4776.44	307.68	4766.52	0.00	1899555.35	131084.55	N 36 12 51.10	W 107 30 2.10

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2306-19E #205H R1 mdv 04Apr14
	1	14.000	10799.486	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2306-19E #205H R1 mdv 04Apr14