

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

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: 11/05/2014

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
30-045-35499-00-00	CHACO 2408 25M	237H	WPX ENERGY PRODUCTION, LLC	O	N	San Juan	F	M	25	24	N	8	W	261	S	330	W

Application Type:

☐ P&A ☐ Drilling/Casing Change ☐ Location Change

☐ Recomplete/DHC (For hydraulic fracturing operations review EPA Underground injection control Guidance #84)

☒ Other: Lateral alignment.

Conditions of Approval:

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

Hold C-104 for directional survey & "As Drilled" Plat

Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84.

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Charlie T. Lerrin

NMOCD Approved by Signature

10/15/14
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

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. CNO-G-0110-1554
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) 505-333-1808	7. If Unit of CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sur: 261' FSL & 330' FWL, Sec 25, T24N, R8W – BHL: 898' FSL & 231' FWL, Sec 26, T24N, R8W		8. Well Name and No. Chaco 2408-25M #237H
		9. API Well No. 30-045-35499
		10. Field and Pool or Exploratory Area Lybrook Gallup
		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
	☐ 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.

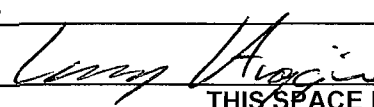
BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

CONDITIONS OF APPROVAL

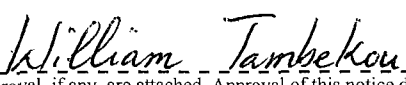
OIL CONS. DIV DIST. 3

Adhere to previously issued stipulations

NOV 12 2014

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Larry Higgins		Title Regulatory Specialist
Signature 		Date 11/5/14

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by 	Petroleum Title Engineer	Date 11/06/2014
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)

NMOCDAV

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
RESERVED

NOV 05 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35499		*Pool Code 42289	*Pool Name LYBROOK GALLUP
*Property Code 40446	*Property Name CHACO 2408-25M		*Well Number 237H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6846'

10 Surface Location

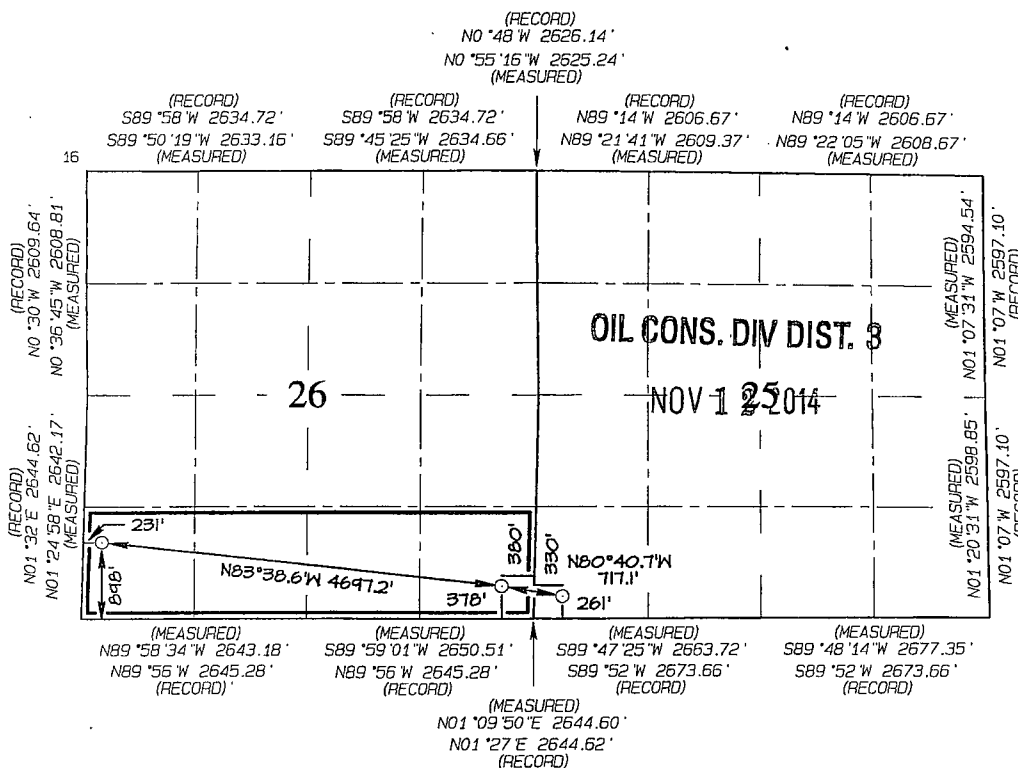
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	25	24N	8W		261	SOUTH	330	WEST	SAN JUAN

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
M	26	24N	8W		898	SOUTH	231	WEST	SAN JUAN

*Dedicated Acres 160.0 Acres S/2 S/2 - Section 26	*Joint or Infill	*Consolidation Code	*Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



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.

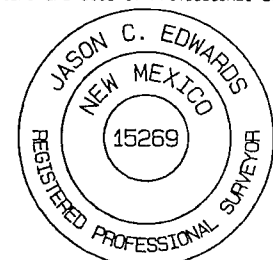
Signature: Larry Higgins Date: 11/13/14
Printed Name: Andrew Bank
E-mail Address: larry.higgins@wpenergy.com

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

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

END-OF-LATERAL
898' FSL 231' FWL
SECTION 26, T24N, R8W
LAT: 36.280513°N
LONG: 107.658865°W
DATUM: NAD1927

POINT-OF-ENTRY
378' FSL 380' FWL
SECTION 26, T24N, R8W
LAT: 36.279060°N
LONG: 107.643030°W
DATUM: NAD1927

SURFACE LOCATION
261' FSL 330' FWL
SECTION 25, T24N, R8W
LAT: 36.278737°N
LONG: 107.640630°W
DATUM: NAD1927

LAT: 36.280525°N
LONG: 107.659475°W
DATUM: NAD1983

LAT: 36.279073°N
LONG: 107.643640°W
DATUM: NAD1983

LAT: 36.278750°N
LONG: 107.641240°W
DATUM: NAD1983

WPX ENERGY**Operations Plan***(Note: This procedure will be adjusted on site based upon actual conditions)*

DATE: 10/20/2014 **FIELD:** Lybrook (Gallup)

WELL NAME: Chaco 2408-25M #237H Rev (1) **SURFACE:** BLM

SH Location: SWSW Sec 25- T24N R08W **ELEVATION:** 6,846' GR

BH Location: SWSW Sec 26- T24N R08W **MINERALS:** Indian Allotted
San Juan Co, NM

MEASURED DEPTH: 10,659' **LEASE #:** NO-G-0110-1554

I. GEOLOGY: Surface formation – Nacimiento

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,210	1,210	Point Lookout	4,180	4,180
Kirtland	1,339	1,339	Mancos	4,402	4,402
Pictured Cliffs	1,868	1,868	Gallup	4810	4810
Lewis	1,952	1,952	Kickoff Point	5,600	5,453
Chacra	2,276	2,276	Target Top	5,537	5,412
Cliff House	3,371	3,371	Landing Point	5,958	5,539
Menefee	3,475	3,427	Target Base	5,958	5,539
			TD	10,659	5,376

- 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. 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 +/- 5,600' (MD) / 5,453' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,958' (MD) / 5,539' (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 +/- 10,659 (MD) / 5,376' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,804 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"	5958'	7"	23#	K-55
Prod. Liner	6.125"	5,808'-10,659'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,808'	4-1/2"	11.6#	N-80

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. **INTERMEDIATE CASING:** 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.
3. **PRODUCTION 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.

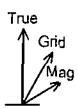
The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

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

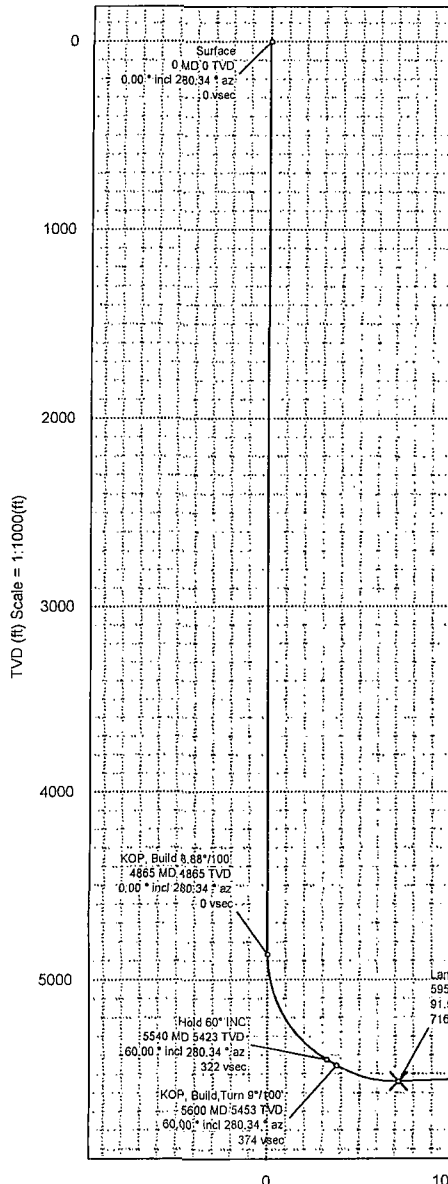
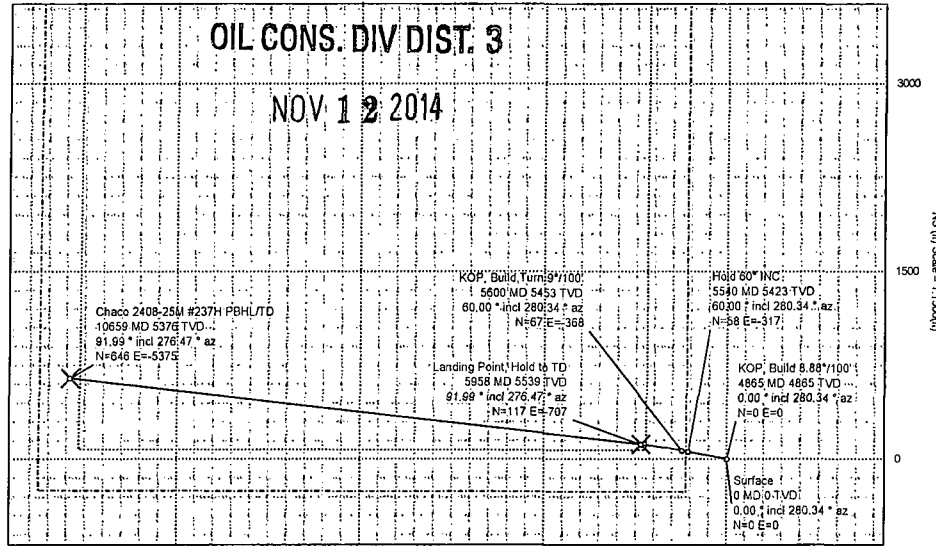
Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2408-25M #237H	NM San Juan County NAD27	Sec 25-24N-8W

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2013 Dip: 63.041° Date: 05-Nov-2013	NAD27 New Mexico State Plane, Western Zone, US Feet	Slot: Chaco 2408-25M #237H
MagDec: 9.536° FS: 50188.751nT Gravity FS: 998.926mgn (9.80665 Based)	Lat: N 36 16 43.46 Northing: 1920760.21ftU Grid Conv: 0.114°	TVD Ref: RKB(6862ft above MSL)
	Lon: W 107 38 26.27 Easting: 556799.35ftUS Scale Fact: 0.99992036	Plan: Chaco 2408-25M #237H R3 mdy 06Oct14

Proposal



True North
Tot Corr (M-T 9.536°)
Mag Dec (9.536°)
Grid Conv (0.114°)



Surface Location								
Northing: 1920760.207			Easting: 556799.346		Latitude: N 36 16 43.46		Longitude: W 107 38 26.27	
					VSec Azimuth: 276.853			
Target Description		Grid Coord					Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)S(-)	E(+)W(-)
Chaco 2408-25M #237H PBHL/TD	N 36 16 49.85	W 107 39 31.91	1921395.42	551423.41	5376.00	5413.78	945.96	-5375.10
Chaco 2408-25M #237H POE	N 36 16 44.62	W 107 38 34.91	1920875.29	556091.72	5539.00	716.31	116.50	-707.46
Chaco 2408-25M #237H 330' Setback	N 36 16 43.46	W 107 38 26.27	1920760.21	556799.35	6862.00	0.00	0.00	0.00
Chaco 2408-25M #237H Section Line	N 36 16 43.46	W 107 38 26.27	1920760.21	556799.35	6862.00	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	280.34	0.00	0.00	0.00	0.00	
KOP, Build 8.88°/100'	4864.72	0.00	280.34	4864.72	0.00	0.00	0.00	0.00
Hold 60° INC	5540.40	60.00	280.34	5423.50	322.01	57.92	-317.37	8.88
KOP, Build, Turn 9°/100'	5600.40	60.00	280.34	5453.50	373.88	67.24	-368.49	0.00
Landing Point, Hold to TD	5958.15	91.98	276.47	5539.00	716.33	116.52	-707.48	9.00
Chaco 2408-25M #237H PBHL/TD	10658.53	91.99	276.47	5376.00	5413.78	645.96	-5375.10	0.00



Chaco 2408-25M #237H R3 mdv 06Oct14 Proposal Geodetic Report

(Def Plan)

Report Date: October 07, 2014 - 11:19 AM
Client: WPX Energy
Field: NM San Juan County NAD27
Structure / Slot: WPX Sec 25-24N-8W (Chaco 2408-25M #237H) / Chaco 2408-25M #237H
Well: Chaco 2408-25M #237H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2408-25M #237H R3 mdv 06Oct14
Survey Date: November 05, 2013
Tort / AHD / DDI / ERD Ratio: 92.205 * / 5414.743 ft / 5.983 / 0.977
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 16' 43.46400", W 107° 38' 26.26800"
Location Grid N/E Y/X: N 1920760.207 ftUS, E 556799.346 ftUS
CRS Grid Convergence Angle: 0.1140 *
Grid Scale Factor: 0.99992036
Version / Patch: 2.8.551.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 276.853 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6862.000 ft above MSL
Seabed / Ground Elevation: 6848.000 ft above MSL
Magnetic Declination: 9.536 *
Total Gravity Field Strength: 998.9259mgn (9.80665 Based)
Gravity Model: DOX
Total Magnetic Field Strength: 50188.751 nT
Magnetic Dip Angle: 63.041 *
Declination Date: November 05, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North->True North: 9.5364 *
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 (°)	Longitude (°)
Surface	0.00	0.00	280.34	0.00	0.00	0.00	0.00	N/A	1920760.21	556799.35	36.278740	-107.640630
	100.00	0.00	280.34	100.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	200.00	0.00	280.34	200.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	300.00	0.00	280.34	300.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	400.00	0.00	280.34	400.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	500.00	0.00	280.34	500.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	600.00	0.00	280.34	600.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	700.00	0.00	280.34	700.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	800.00	0.00	280.34	800.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	900.00	0.00	280.34	900.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1000.00	0.00	280.34	1000.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1100.00	0.00	280.34	1100.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1200.00	0.00	280.34	1200.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1300.00	0.00	280.34	1300.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1400.00	0.00	280.34	1400.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1500.00	0.00	280.34	1500.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1600.00	0.00	280.34	1600.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1700.00	0.00	280.34	1700.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1800.00	0.00	280.34	1800.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	1900.00	0.00	280.34	1900.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2000.00	0.00	280.34	2000.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2100.00	0.00	280.34	2100.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2200.00	0.00	280.34	2200.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2300.00	0.00	280.34	2300.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2400.00	0.00	280.34	2400.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2500.00	0.00	280.34	2500.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2600.00	0.00	280.34	2600.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2700.00	0.00	280.34	2700.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2800.00	0.00	280.34	2800.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	2900.00	0.00	280.34	2900.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3000.00	0.00	280.34	3000.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3100.00	0.00	280.34	3100.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3200.00	0.00	280.34	3200.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3300.00	0.00	280.34	3300.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3400.00	0.00	280.34	3400.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3500.00	0.00	280.34	3500.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3600.00	0.00	280.34	3600.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3700.00	0.00	280.34	3700.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3800.00	0.00	280.34	3800.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	3900.00	0.00	280.34	3900.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4000.00	0.00	280.34	4000.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4100.00	0.00	280.34	4100.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4200.00	0.00	280.34	4200.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4300.00	0.00	280.34	4300.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4400.00	0.00	280.34	4400.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4500.00	0.00	280.34	4500.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4600.00	0.00	280.34	4600.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4700.00	0.00	280.34	4700.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4800.00	0.00	280.34	4800.00	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
KOP, Build 8.88°/100'	4864.72	0.00	280.34	4864.72	0.00	0.00	0.00	0.00	1920760.21	556799.35	36.278740	-107.640630
	4900.00	3.13	280.34	4899.98	0.96	0.17	-0.95	8.88	1920760.38	556798.40	36.278740	-107.640633
	5000.00	12.01	280.34	4999.01	14.10	2.54	-13.90	8.88	1920762.72	556785.44	36.278747	-107.640677
	5100.00	20.89	280.34	5094.82	42.35	7.62	-41.73	8.88	1920767.74	556757.60	36.278761	-107.640772
	5200.00	29.77	280.34	5185.11	85.01	15.29	-83.79	8.88	1920775.33	556715.54	36.278782	-107.640914
	5300.00	38.65	280.34	5267.73	141.08	25.37	-139.04	8.88	1920785.30	556680.26	36.278810	-107.641102
	5400.00	47.53	280.34	5340.68	209.20	37.63	-206.18	8.88	1920797.42	556593.10	36.278843	-107.641329
	5500.00	56.41	280.34	5402.22	287.75	51.75	-283.60	8.88	1920811.39	556515.67	36.278882	-107.641592
	5540.40	60.00	280.34	5423.50	322.01	57.92	-317.37	8.88	1920817.49	556481.89	36.278899	-107.641707
	5600.00	60.00	280.34	5453.30	373.54	67.18	-368.15	0.00	1920826.65	556431.09	36.278925	-107.641879
Hold 60° INC												
KOP, Build, Turn 9°/100'	5600.40	60.00	280.34	5453.50	373.88	67.24	-368.49	0.00	1920826.71	556430.76	36.278925	-107.641880
	5700.00	68.90	279.13	5496.42	463.54	82.39	-458.97	9.00	1920841.68	556342.25	36.278966	-107.642180
	5800.00	77.84	278.05	5525.01	559.21	96.67	-551.62	9.00	1920855.77	556247.58	36.279006	-107.642501
	5900.00	86.78	277.05	5538.38	658.20	109.67	-649.76	9.00	1920868.58	556149.42	36.279041	-107.642834
Landing Point, Hold to TD	5958.15	91.99	276.47	5539.00	716.33	116.52	-707.48	9.00	1920875.31	556091.70	36.279060	-107.643030
	6000.00	91.99	276.47	5537.55	758.15	121.23	-749.04	0.00	1920879.94	556050.13	36.279073	-107.643171
	6100.00	91.99	276.47	5534.09	858.09	132.50	-848.34	0.00	1920891.01	555950.81	36.279104	-107.643508

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	6200.00	91.99	276.47	5530.63	958.03	143.77	-947.64	0.00	1920902.08	555851.49	36.279135	-107.643845
	6300.00	91.99	276.47	5527.16	1057.97	155.04	-1046.95	0.00	1920913.15	555752.18	36.279166	-107.644182
	6400.00	91.99	276.47	5523.70	1157.90	166.31	-1146.25	0.00	1920924.22	555652.86	36.279197	-107.644519
	6500.00	91.99	276.47	5520.23	1257.84	177.58	-1245.55	0.00	1920935.29	555553.54	36.279228	-107.644855
	6600.00	91.99	276.47	5516.77	1357.78	188.84	-1344.86	0.00	1920946.36	555454.23	36.279259	-107.645192
	6700.00	91.99	276.47	5513.30	1457.72	200.11	-1444.16	0.00	1920957.43	555354.91	36.279290	-107.645529
	6800.00	91.99	276.47	5509.84	1557.66	211.38	-1543.46	0.00	1920968.50	555255.59	36.279321	-107.645866
	6900.00	91.99	276.47	5506.37	1657.59	222.65	-1642.76	0.00	1920979.57	555156.28	36.279351	-107.646203
	7000.00	91.99	276.47	5502.91	1757.53	233.91	-1742.07	0.00	1920990.63	555056.96	36.279382	-107.646540
	7100.00	91.99	276.47	5499.44	1857.47	245.18	-1841.37	0.00	1921001.70	554957.64	36.279413	-107.646877
	7200.00	91.99	276.47	5495.97	1957.41	256.45	-1940.67	0.00	1921012.77	554858.33	36.279444	-107.647214
	7300.00	91.99	276.47	5492.51	2057.34	267.71	-2039.97	0.00	1921023.84	554759.01	36.279475	-107.647551
	7400.00	91.99	276.47	5489.04	2157.28	278.98	-2139.28	0.00	1921034.91	554659.69	36.279506	-107.647887
	7500.00	91.99	276.47	5485.58	2257.22	290.24	-2238.58	0.00	1921045.97	554560.38	36.279537	-107.648224
	7600.00	91.99	276.47	5482.11	2357.16	301.51	-2337.88	0.00	1921057.04	554461.06	36.279568	-107.648561
	7700.00	91.99	276.47	5478.64	2457.09	312.77	-2437.19	0.00	1921068.11	554361.74	36.279599	-107.648898
	7800.00	91.99	276.47	5475.18	2557.03	324.04	-2536.49	0.00	1921079.17	554262.42	36.279630	-107.649235
	7900.00	91.99	276.47	5471.71	2656.97	335.30	-2635.79	0.00	1921090.24	554163.11	36.279661	-107.649572
	8000.00	91.99	276.47	5468.24	2756.91	346.57	-2735.10	0.00	1921101.31	554063.79	36.279692	-107.649909
	8100.00	91.99	276.47	5464.77	2856.85	357.83	-2834.40	0.00	1921112.37	553964.47	36.279723	-107.650246
	8200.00	91.99	276.47	5461.31	2956.78	369.10	-2933.70	0.00	1921123.44	553865.16	36.279753	-107.650582
	8300.00	91.99	276.47	5457.84	3056.72	380.36	-3033.00	0.00	1921134.50	553765.84	36.279784	-107.650919
	8400.00	91.99	276.47	5454.37	3156.66	391.63	-3132.31	0.00	1921145.57	553666.52	36.279815	-107.651256
	8500.00	91.99	276.47	5450.90	3256.60	402.89	-3231.61	0.00	1921156.63	553567.20	36.279846	-107.651593
	8600.00	91.99	276.47	5447.43	3356.53	414.15	-3330.91	0.00	1921167.70	553467.89	36.279877	-107.651930
	8700.00	91.99	276.47	5443.97	3456.47	425.42	-3430.22	0.00	1921178.76	553368.57	36.279908	-107.652267
	8800.00	91.99	276.47	5440.50	3556.41	436.68	-3529.52	0.00	1921189.83	553269.25	36.279939	-107.652604
	8900.00	91.99	276.47	5437.03	3656.35	447.94	-3628.82	0.00	1921200.89	553169.94	36.279970	-107.652941
	9000.00	91.99	276.47	5433.56	3756.28	459.20	-3728.13	0.00	1921211.95	553070.62	36.280001	-107.653278
	9100.00	91.99	276.47	5430.09	3856.22	470.47	-3827.43	0.00	1921223.02	552971.30	36.280032	-107.653614
	9200.00	91.99	276.47	5426.62	3956.16	481.73	-3926.73	0.00	1921234.08	552871.98	36.280063	-107.653951
	9300.00	91.99	276.47	5423.15	4056.10	492.99	-4026.04	0.00	1921245.14	552772.67	36.280093	-107.654288
	9400.00	91.99	276.47	5419.68	4156.03	504.25	-4125.34	0.00	1921256.21	552673.35	36.280124	-107.654625
	9500.00	91.99	276.47	5416.21	4255.97	515.51	-4224.64	0.00	1921267.27	552574.03	36.280155	-107.654962
	9600.00	91.99	276.47	5412.74	4355.91	526.77	-4323.95	0.00	1921278.33	552474.71	36.280186	-107.655299
	9700.00	91.99	276.47	5409.27	4455.85	538.03	-4423.25	0.00	1921289.39	552375.40	36.280217	-107.655636
	9800.00	91.99	276.47	5405.80	4555.78	549.29	-4522.55	0.00	1921300.46	552276.08	36.280248	-107.655973
	9900.00	91.99	276.47	5402.33	4655.72	560.56	-4621.86	0.00	1921311.52	552176.76	36.280279	-107.656310
	10000.00	91.99	276.47	5398.86	4755.66	571.82	-4721.16	0.00	1921322.58	552077.44	36.280310	-107.656646
	10100.00	91.99	276.47	5395.39	4855.60	583.07	-4820.46	0.00	1921333.64	551978.13	36.280341	-107.656983
	10200.00	91.99	276.47	5391.92	4955.53	594.33	-4919.77	0.00	1921344.70	551878.81	36.280371	-107.657320
	10300.00	91.99	276.47	5388.45	5055.47	605.59	-5019.07	0.00	1921355.76	551779.49	36.280402	-107.657657
	10400.00	91.99	276.47	5384.98	5155.41	616.85	-5118.37	0.00	1921366.82	551680.17	36.280433	-107.657994
	10500.00	91.99	276.47	5381.50	5255.35	628.11	-5217.68	0.00	1921377.88	551580.86	36.280464	-107.658331
	10600.00	91.99	276.47	5378.03	5355.28	639.37	-5316.98	0.00	1921388.94	551481.54	36.280495	-107.658668
Chaco 2408-25M #237H PBHL/TD	10658.53	91.99	276.47	5376.00	5413.78	645.96	-5375.10	0.00	1921395.42	551423.41	36.280513	-107.658865

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_NSG+MSHOT-Depth Only	Original Hole / Chaco 2408-25M #237H R3 mdv 06Oct14
	1	14.000	550.000	1/100.000	13.250	9.625	SLB_NSG+MSHOT	Original Hole / Chaco 2408-25M #237H R3 mdv 06Oct14
	1	550.000	5958.000	1/30.000	8.750	7.000	SLB_MWD-STD	Original Hole / Chaco 2408-25M #237H R3 mdv 06Oct14
	1	5958.000	10658.530	1/100.000	6.125	4.500	SLB_MWD-STD	Original Hole / Chaco 2408-25M #237H R3 mdv 06Oct14