

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

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 3160-3 APD form.

Operator Signature Date: 3-25-15

Well information:

Operator WIX, Well Name and Number Chaco 2408-33M # 121 #

API# 30045-38077, Section 33, Township 24 N S, Range 8 E W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☒ Hold C-104 for NSL, NSP, DHC
 - Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
 - Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
 - Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ 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 Herrin
NMOCD Approved by Signature

4-30-2015
Date HC

RECEIVED

MAR 26 2015

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington Field Office

Bureau of Land Management

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

WPX Energy Production, LLC

3a. Address

P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

(505) 333-1849

4. Location of Well (Report location clearly and in accordance with any State requirements. *)

At surface 1086' FSL & 450' FWL, sec 33, T24N, R8W

At proposed prod. zone 1573' FSL & 230' FEL, sec 33, T24N, R8W

14. Distance in miles and direction from nearest town or post office*

Approximately 35.9 miles South from Bloomfield NM

15. Distance from proposed*

location to nearest

property or lease line, ft.

(Also to nearest drig. unit line, if any) 450'

16. No. of Acres in lease

1125.94

17. Spacing Unit dedicated to this well

320 acres N/2S/2

18. Distance from proposed location*

to nearest well, drilling, completed,

applied for, on this lease, ft.

22'

19. Proposed Depth

11,064 MD / 5,446 TVD

20. BLM/BIA Bond No. on file

UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

7031' GR

22. Approximate date work will start*

May 1, 2015

23. Estimated duration

1 month

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Name (Printed/Typed)

Andrea Felix

Date

3-25-2015

Title

Regulatory Specialist Senior

Approved by (Signature)

Name (Printed/Typed)

Office

Date

4/16/15

Application approval 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.

Conditions of approval, if any, are attached.

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 reverse)

WPX Energy Production, LLC, proposes to develop the Basin Mancos Pool at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is on lease on BLM surface and is co-located with the Chaco 2408-33M #120H.

This location has been archaeologically surveyed by LaPlata Archeology. Copies of their report have been submitted directly to the BLM.

New access road is approximately 110.1' on lease on BLM surface.

New pipeline is approximately 341.4' on lease on BLM surface.

DRILLING OPERATIONS AUTHORIZED
ARE SUBJECT TO COMPLIANCE WITH
ATTACHED "GENERAL REQUIREMENTS"

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

NMOCDA

CONFIDENTIAL

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

*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

*API Number 30-045-35677	*Pool Code 97232	*Pool Name BASIN MANCOS
*Property Code 314795	*Property Name CHACO 2408-33M	*Well Number 121H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 7031'

¹⁰ Surface Location

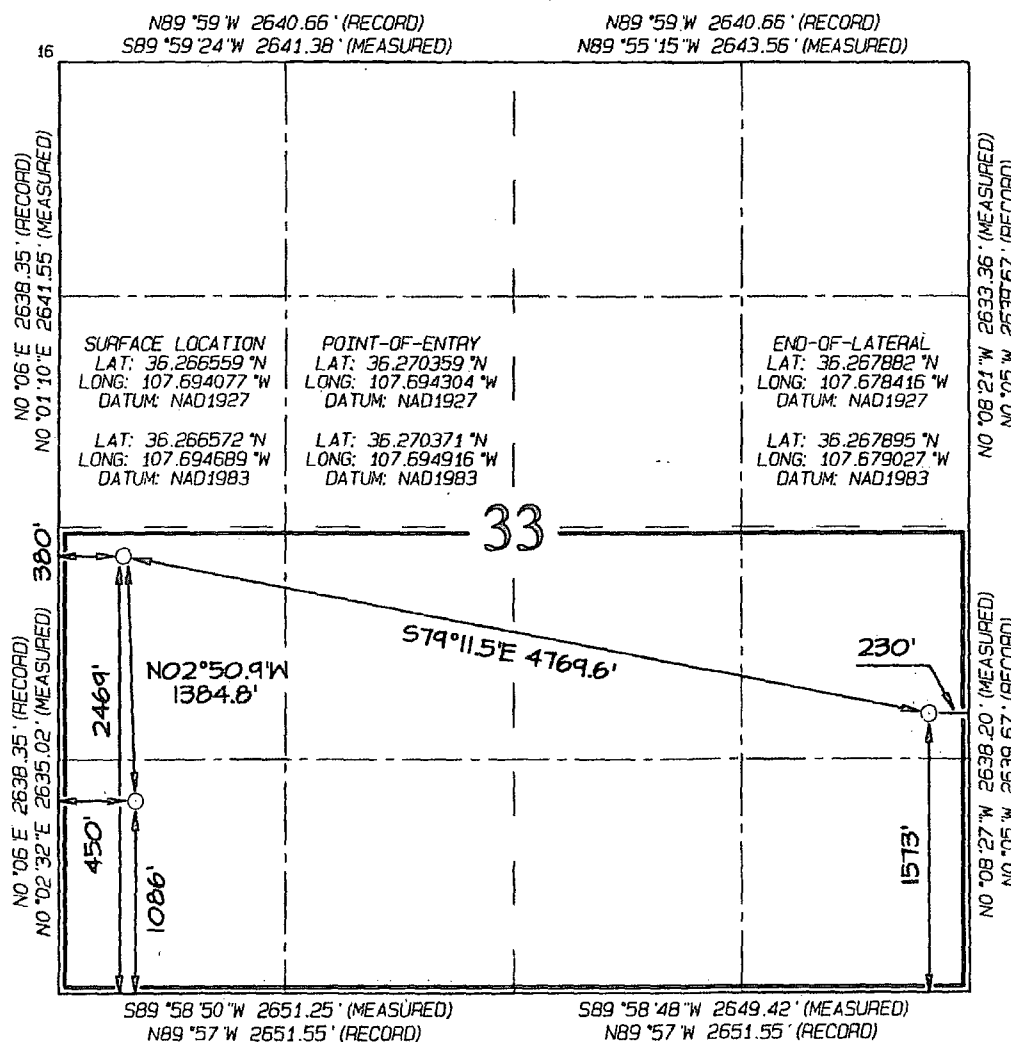
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	33	24N	8W		1086	SOUTH	450	WEST	SAN JUAN

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
I	33	24N	8W		1573	SOUTH	230	EAST	SAN JUAN

¹² Dedicated Acres 320.0 Acres - S/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



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
Date 3-25-2015

Printed Name
andrea.felix@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: FEBRUARY 25, 2015
Survey Date: NOVEMBER 1, 2013

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: 11/05/2014 **FIELD:** BASIN (Mancos)
WELL NAME: Chaco 2408-33M_#121H **SURFACE:** BLM
SH Location: SWSW Sec 33-24N-8W **ELEVATION:** 7,031' GR
BH Location: NESE Sec 33-23N-8W **MINERALS:** BLM
San Juan Co, NM
MEASURED DEPTH: 11,064'

I. GEOLOGY: Surface formation – Nacimiento

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,195	1,190	Point Lookout	4,428	4,245
Kirtland	1,391	1,379	Mancos	4,600	4,455
Pictured Cliffs	1,942	1,894	Kickoff Point	5,053	4,775
Lewis	1,993	1,993	Target Top	5,839	5,426
Chacra	2,337	2,259	Landing Point	6,293	5,568
Cliff House	3,509	3,345	Target Base	6,293	5,568
Menefee	3,549	3,382			
			TD	11,064	5,446

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, 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 +/- 5,053' (MD) / 4,774' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,293' (MD) / 5,568' (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 +/- 11,064' (MD) / 5,446' (TVD). Will run 4-1/2 in. Production Liner from +/- 6,143 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 (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	320'	9 5/8	36#	J-55
Intermediate	8.75"	6,293'	7	23#	K-55
Prod. Liner	6.125"	6,143' - 11,064'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 6,143'	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: 5 bbl Fresh Water Spacer, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ 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 +/- 5,724 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. 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 (~6,000' 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 6,174ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 6,024 ft. (MD) +/- 78 degree angle. TOC: +/- 5,724 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.

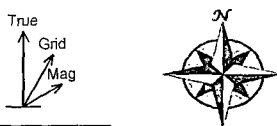
After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

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

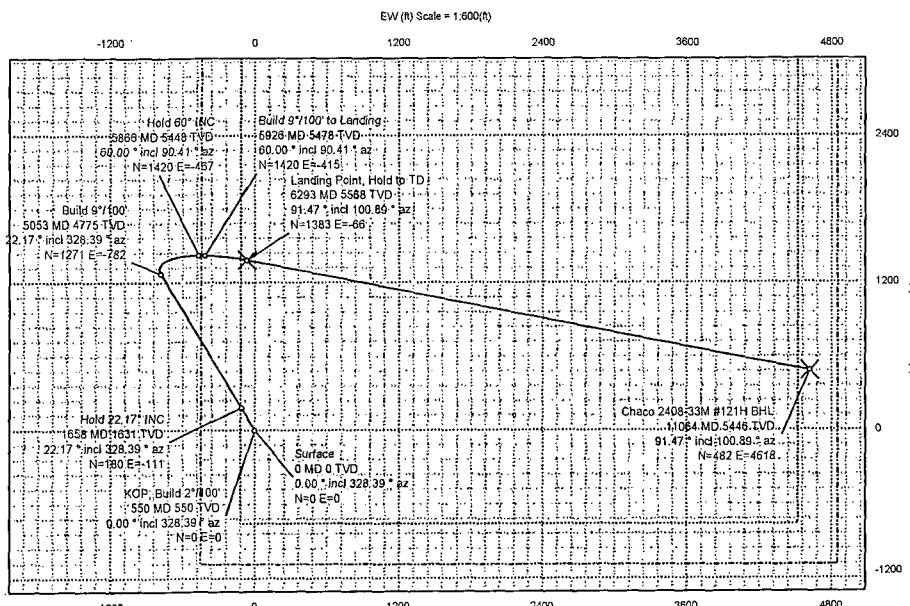
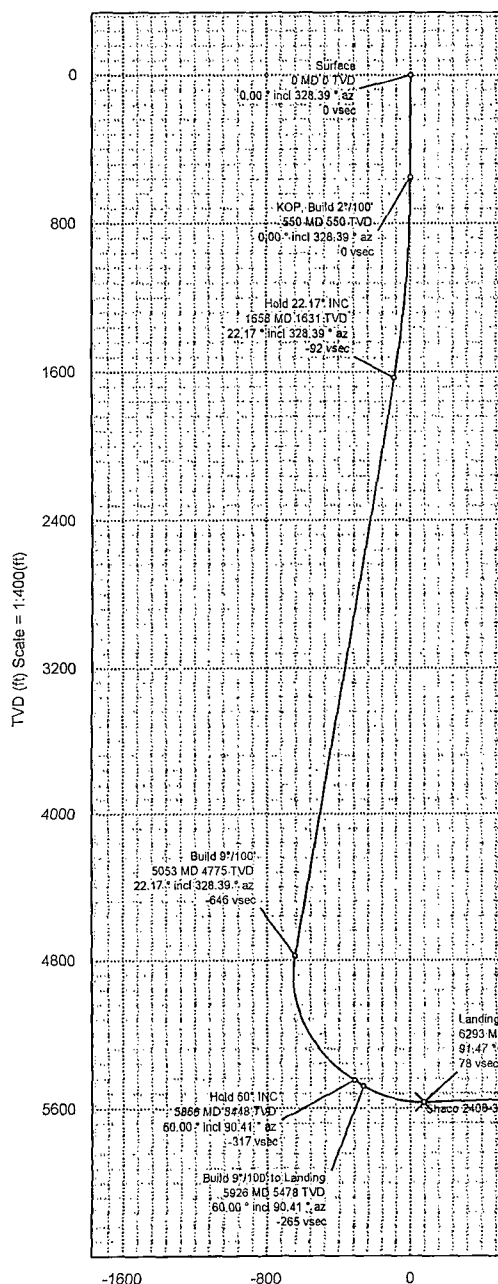
Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2408-33M #121H	NM San Juan County NAD27	Sec 24-33-8W

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2013 Dip: 63.008° Date: 07-Apr-2014	NAD27 New Mexico State Plane, Western Zone, US Feet	Slot: Chaco 2408-33M #121H
MagDec: 9.511° FS: 50123.931nT Gravity FS: 998.49mgn (9.80665 Based)	Lat: N 36 15 59.62 Northing: 1916299.493 Grid Conv: 0.0824°	TVD Ref: RKB(7047ft above MSL)
	Lon: W 107 41 38.69 Easting: 541051.312HU Scale Fact: 0.9999186	Plan: Chaco 2408-33M #121H R0 mdy 07Apr14

Proposal



True North
Tot Corr (M→T 9.511°)
Mag Dec (9.511°)
Grid Conv (0.082°)



Surface Location									
Northing: 1916299.493		Easting: 541051.312		Latitude: N 36 15 59.62		Longitude: W 107 41 38.69		VSec Azimuth: 84.044	
Target Description		Grid Coord						Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)	
Chaco 2408-33M #121H BHL	N 36 16 4.38	W 107 40 42.30	1916787.86	545668.17	5446.00	4643.01	481.77	4617.94	
Chaco 2408-33M #121H POE	N 36 16 13.29	W 107 41 39.49	1917682.06	540983.25	5568.00	77.76	1382.78	-66.08	
Chaco 2408-33M Section Line	N 36 15 59.62	W 107 41 38.94	1916299.46	541030.68	7047.00	-20.53	0.00	-20.64	
Chaco 2408-33M 330' Setback	N 36 15 59.62	W 107 41 38.94	1916299.46	541030.68	7047.00	-20.53	0.00	-20.64	
Critical Points									
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS	
Surface	0.00	0.00	328.39	0.00	0.00	0.00	0.00		
KOP, Build 2°/100°	550.00	0.00	328.39	550.00	0.00	0.00	0.00	0.00	
Hold 22.17° INC	1658.39	22.17	328.39	1630.94	-91.67	180.34	-110.99	2.00	
Build 9°/100°	5053.18	22.17	328.39	4774.80	-646.21	1271.23	-782.34	0.00	
Hold 60° INC	5866.01	60.00	90.41	5448.49	-316.79	1420.11	-466.66	9.00	
Build 9°/100° to Landing	5926.01	60.00	90.41	5478.49	-265.14	1419.73	-414.70	0.00	
Landing Point, Hold to TD	6292.85	91.46	100.89	5568.00	77.76	1382.93	-66.09	9.00	
Chaco 2408-33M #121H BHL	11064.35	91.47	100.89	5446.00	4643.00	481.77	4617.94	0.00	



Chaco 2408-33M #121H R0 mdv 07Apr14 Proposal Geodetic Report



(Def Plan)

Report Date: April 09, 2014 - 01:16 PM
Client: WPX Energy
Field: NM San Juan County NAD27
Structure / Slot: WPX Sec 24-33-BW (Chaco 2408-33M 120H & 121H) / Chaco 2408-33M #120H
Well: Chaco 2408-33M #121H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2408-33M #120H R0 mdv 07Apr14
Survey Date: April 07, 2014
Tort / AHD / DDI / ERD Ratio: 128.339 * / 7078.375 ft / 6.257 / 1.271
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 15' 59.61800", W 107° 41' 38.68800"
Location Grid N/E Y/X: N 1916299.493 ftUS, E 541051.312 ftUS
CRS Grid Convergence Angle: 0.0824 °
Grid Scale Factor: 0.9999186
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 84.044 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7047.000 ft above MSL
Seabed / Ground Elevation: 7033.000 ft above MSL
Magnetic Declination: 9.511 °
Total Gravity Field Strength: 998.4903mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 50123.931 nT
Magnetic Dip Angle: 63.008 °
Declination Date: April 07, 2014
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North->True North: 9.5114 °
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	328.39	0.00	0.00	0.00	0.00	N/A	1916298.49	541051.31	N 36 15 59.62	W 107 41 38.69
	100.00	0.00	328.39	100.00	0.00	0.00	0.00	0.00	1916298.49	541051.31	N 36 15 59.62	W 107 41 38.69
	200.00	0.00	328.39	200.00	0.00	0.00	0.00	0.00	1916298.49	541051.31	N 36 15 59.62	W 107 41 38.69
	300.00	0.00	328.39	300.00	0.00	0.00	0.00	0.00	1916299.49	541051.31	N 36 15 59.62	W 107 41 38.69
	400.00	0.00	328.39	400.00	0.00	0.00	0.00	0.00	1916299.49	541051.31	N 36 15 59.62	W 107 41 38.69
	500.00	0.00	328.39	500.00	0.00	0.00	0.00	0.00	1916299.49	541051.31	N 36 15 59.62	W 107 41 38.69
KOP, Build 2°/100'	550.00	0.00	328.39	550.00	0.00	0.00	0.00	0.00	1916299.49	541051.31	N 36 15 59.62	W 107 41 38.69
	600.00	1.00	328.39	600.00	-0.19	0.37	-0.23	2.00	1916299.86	541051.08	N 36 15 59.62	W 107 41 38.69
	700.00	3.00	328.39	699.93	-1.70	3.34	-2.06	2.00	1916302.83	541049.25	N 36 15 59.65	W 107 41 38.71
	800.00	5.00	328.39	799.68	-4.72	9.28	-5.71	2.00	1916308.77	541045.59	N 36 15 59.71	W 107 41 38.76
	900.00	7.00	328.39	899.13	-9.24	18.19	-11.19	2.00	1916317.66	541040.09	N 36 15 59.80	W 107 41 38.82
	1000.00	9.00	328.39	998.15	-15.27	30.04	-18.49	2.00	1916329.50	541032.78	N 36 15 59.91	W 107 41 38.91
	1100.00	11.00	328.39	1096.63	-22.79	44.83	-27.59	2.00	1916344.28	541023.66	N 36 16 0.06	W 107 41 39.02
	1200.00	13.00	328.39	1194.44	-31.79	62.53	-38.48	2.00	1916361.96	541012.74	N 36 16 0.23	W 107 41 39.16
	1300.00	15.00	328.39	1291.46	-42.26	83.13	-51.16	2.00	1916382.55	541000.03	N 36 16 0.44	W 107 41 39.31
	1400.00	17.00	328.39	1387.58	-54.19	106.61	-65.61	2.00	1916406.00	540985.56	N 36 16 0.67	W 107 41 39.49
	1500.00	19.00	328.39	1482.68	-67.57	132.92	-81.80	2.00	1916432.29	540969.32	N 36 16 0.93	W 107 41 39.69
	1600.00	21.00	328.39	1576.65	-82.38	162.05	-99.73	2.00	1916461.39	540951.36	N 36 16 1.22	W 107 41 39.91
Hold 22.17° INC	1658.39	22.17	328.39	1630.94	-91.67	180.34	-110.99	2.00	1916479.66	540940.08	N 36 16 1.40	W 107 41 40.04
	1700.00	22.17	328.39	1669.48	-98.47	193.71	-119.21	0.00	1916493.02	540931.83	N 36 16 1.53	W 107 41 40.14
	1800.00	22.17	328.39	1762.09	-114.81	225.85	-138.99	0.00	1916525.12	540912.01	N 36 16 1.85	W 107 41 40.39
	1900.00	22.17	328.39	1854.69	-131.14	257.98	-158.77	0.00	1916557.22	540892.19	N 36 16 2.17	W 107 41 40.63
	2000.00	22.17	328.39	1947.30	-147.48	290.12	-178.54	0.00	1916589.33	540872.37	N 36 16 2.48	W 107 41 40.87
	2100.00	22.17	328.39	2039.91	-163.81	322.25	-198.32	0.00	1916621.43	540852.55	N 36 16 2.80	W 107 41 41.11
	2200.00	22.17	328.39	2132.52	-180.15	354.38	-218.09	0.00	1916653.53	540832.73	N 36 16 3.12	W 107 41 41.35
	2300.00	22.17	328.39	2225.13	-196.48	386.52	-237.87	0.00	1916685.64	540812.91	N 36 16 3.44	W 107 41 41.59
	2400.00	22.17	328.39	2317.74	-212.82	418.65	-257.65	0.00	1916717.74	540793.09	N 36 16 3.76	W 107 41 41.83
	2500.00	22.17	328.39	2410.34	-229.15	450.79	-277.42	0.00	1916749.84	540773.26	N 36 16 4.07	W 107 41 42.08
	2600.00	22.17	328.39	2502.95	-245.49	482.92	-297.20	0.00	1916781.95	540753.44	N 36 16 4.39	W 107 41 42.32
	2700.00	22.17	328.39	2595.56	-261.82	515.06	-316.98	0.00	1916814.05	540733.62	N 36 16 4.71	W 107 41 42.56
	2800.00	22.17	328.39	2688.17	-278.16	547.19	-336.75	0.00	1916846.15	540713.80	N 36 16 5.03	W 107 41 42.80
	2900.00	22.17	328.39	2780.78	-294.49	579.32	-356.53	0.00	1916878.25	540693.98	N 36 16 5.34	W 107 41 43.04
	3000.00	22.17	328.39	2873.39	-310.83	611.46	-376.30	0.00	1916910.36	540674.16	N 36 16 5.66	W 107 41 43.28
	3100.00	22.17	328.39	2965.99	-327.16	643.59	-396.08	0.00	1916942.46	540654.34	N 36 16 5.98	W 107 41 43.52
	3200.00	22.17	328.39	3058.60	-343.49	675.73	-415.86	0.00	1916974.56	540634.52	N 36 16 6.30	W 107 41 43.77
	3300.00	22.17	328.39	3151.21	-359.83	707.86	-435.63	0.00	1917006.67	540614.70	N 36 16 6.62	W 107 41 44.01
	3400.00	22.17	328.39	3243.82	-376.16	739.99	-455.41	0.00	1917038.77	540594.88	N 36 16 6.93	W 107 41 44.25
	3500.00	22.17	328.39	3336.43	-392.50	772.13	-475.18	0.00	1917070.87	540575.06	N 36 16 7.25	W 107 41 44.49
	3600.00	22.17	328.39	3429.04	-408.83	804.26	-494.96	0.00	1917102.98	540555.24	N 36 16 7.57	W 107 41 44.73
	3700.00	22.17	328.39	3521.64	-425.17	836.40	-514.74	0.00	1917135.08	540535.42	N 36 16 7.89	W 107 41 44.97
	3800.00	22.17	328.39	3614.25	-441.50	868.53	-534.51	0.00	1917167.18	540515.60	N 36 16 8.20	W 107 41 45.22
	3900.00	22.17	328.39	3706.86	-457.84	900.67	-554.29	0.00	1917199.29	540495.78	N 36 16 8.52	W 107 41 45.46
	4000.00	22.17	328.39	3799.47	-474.17	932.80	-574.06	0.00	1917231.39	540475.96	N 36 16 8.84	W 107 41 45.70
	4100.00	22.17	328.39	3892.08	-490.51	964.93	-593.84	0.00	1917263.49	540456.14	N 36 16 9.16	W 107 41 45.94
	4200.00	22.17	328.39	3984.69	-506.84	997.07	-613.62	0.00	1917295.59	540436.32	N 36 16 9.48	W 107 41 46.18
	4300.00	22.17	328.39	4077.29	-523.18	1029.20	-633.39	0.00	1917327.70	540416.49	N 36 16 9.79	W 107 41 46.42
	4400.00	22.17	328.39	4169.90	-539.51	1061.34	-653.17	0.00	1917359.80	540396.67	N 36 16 10.11	W 107 41 46.66
	4500.00	22.17	328.39	4262.51	-555.85	1093.47	-672.94	0.00	1917391.90	540376.85	N 36 16 10.43	W 107 41 46.91
	4600.00	22.17	328.39	4355.12	-572.18	1125.60	-692.72	0.00	1917424.01	540357.03	N 36 16 10.75	W 107 41 47.15
	4700.00	22.17	328.39	4447.73	-588.52	1157.74	-712.50	0.00	1917456.11	540337.21	N 36 16 11.06	W 107 41 47.39
	4800.00	22.17	328.39	4540.34	-604.85	1189.87	-732.27	0.00	1917488.21	540317.39	N 36 16 11.38	W 107 41 47.63
	4900.00	22.17	328.39	4632.94	-621.19	1222.01	-752.05	0.00	1917520.32	540297.57	N 36 16 11.70	W 107 41 47.87
	5000.00	22.17	328.39	4725.55	-637.52	1254.14	-771.82	0.00	1917552.42	540277.75	N 36 16 12.02	W 107 41 48.11
Build 9°/100'	5053.18	22.17	328.39	4774.80	-646.21	1271.23	-782.34	0.00	1917569.49	540267.21	N 36 16 12.19	W 107 41 48.24
	5100.00	19.72	338.01	4818.54	-652.22	1286.08	-789.93	9.00	1917584.33	540259.60	N 36 16 12.33	W 107 41 48.33
	5200.00	16.89	5.53	4913.65	-653.99	1316.24	-794.86	9.00	1917614.48	540254.63	N 36 16 12.63	W 107 41 48.39
	5300.00	18.41	35.12	5009.13	-640.70	1343.67	-784.35	9.00	1917641.92	540265.09	N 36 16 12.90	W 107 41 48.27
	5400.00	23.44	56.25	5102.64	-612.67	1367.68	-758.68	9.00	1917665.97	540290.73	N 36 16 13.14	W 107 41 47.95
	5500.00	30.29	69.29	5191.86	-570.59	1387.70	-718.46	9.00	1917686.04	540330.91	N 36 16 13.34	W 107 41 47.46
	5600.00	37.98	77.68	5274.62	-515.51	1403.21	-664.70	9.00	1917701.63	540384.65	N 36 16 13.49	W 107 41 46.80
	5700.00	46.09	83.54	5348.88	-448.77	1413.86	-598.71	9.00	1917712.37	540450.62	N 36 16 13.60	W 107 41 46.00
	5800.00	54.42	87.97	5412.75	-372.02	1419.36	-522.12	9.00	1917717.98	540527.20	N 36 16 13.65	W 107 41 45.06
Hold 60° INC	5866.01	60.00	90.41	5448.49	-316.79	1420.11	-466.66	9.00	1917718.81	540582.65	N 36 16 13.66	W 107 41 44.39
	5900.00	60.00	90.41	5465.48	-287.53	1419.90	-437.22	0.00	1917718.64	540612.09	N 36 16 13.66	W 107 41 44.03
Build 9°/100' to Landing	5926.01	60.00	90.41	5478.49	-265.14	1419.73	-414.70	0.00	1917718.51	540634.61	N 36 16 13.66	W 107 41 43.75
	6000.00	66.30	92.83	5511.90	-199.75	1417.83	-348.75	9.00	1917716.70	540700.55	N 36 16 13.64	W 107 41 42.95
	6100.00	74.87	95.76	5545.12	-107.05	1410.70	-254.81	9.00	1917709.71	540794.50	N 36 16 13.57	W 107 41 41.80
	6200.00	83.47	98.47	5563.90	-11.49	1398.52	-157.45	9.00	1917697.67	540891.86	N 36 16 13.45	W 107 41 40.61
Landing Point, Hold to TD	6292.85	91.47	100.89	5568.00	77.76	1382.93	-66.09	9.00	1917682.21	540983.24	N 36 16 13.29	W 107 41 39.50
	6300.00	91.47	100.89	5567.82	84.60	1381.58	-59.08	0.00	1917680.87	540990.25		

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 ° ' ")
	6800.00	91.47	100.89	5555.03	562.99	1287.15	431.76	0.00	1917587.16	541481.18	N 36 16 12.34	W 107 41 33.42
	6900.00	91.47	100.89	5552.48	658.66	1268.26	529.92	0.00	1917568.41	541579.37	N 36 16 12.16	W 107 41 32.22
	7000.00	91.47	100.89	5549.92	754.34	1249.38	628.09	0.00	1917549.67	541677.55	N 36 16 11.97	W 107 41 31.02
	7100.00	91.47	100.89	5547.36	850.02	1230.49	726.26	0.00	1917530.92	541775.74	N 36 16 11.78	W 107 41 29.82
	7200.00	91.47	100.89	5544.81	945.70	1211.61	824.43	0.00	1917512.18	541873.93	N 36 16 11.60	W 107 41 28.62
	7300.00	91.47	100.89	5542.25	1041.37	1192.72	922.59	0.00	1917493.44	541972.11	N 36 16 11.41	W 107 41 27.42
	7400.00	91.47	100.89	5539.69	1137.05	1173.83	1020.76	0.00	1917474.69	542070.30	N 36 16 11.22	W 107 41 26.22
	7500.00	91.47	100.89	5537.14	1232.73	1154.95	1118.93	0.00	1917455.95	542168.48	N 36 16 11.04	W 107 41 25.02
	7600.00	91.47	100.89	5534.58	1328.41	1136.06	1217.09	0.00	1917437.21	542266.67	N 36 16 10.85	W 107 41 23.83
	7700.00	91.47	100.89	5532.02	1424.08	1117.17	1315.26	0.00	1917418.48	542364.86	N 36 16 10.66	W 107 41 22.63
	7800.00	91.47	100.89	5529.47	1519.76	1098.29	1413.43	0.00	1917399.72	542463.04	N 36 16 10.48	W 107 41 21.43
	7900.00	91.47	100.89	5526.91	1615.44	1079.40	1511.60	0.00	1917380.98	542561.23	N 36 16 10.29	W 107 41 20.23
	8000.00	91.47	100.89	5524.35	1711.12	1060.51	1609.78	0.00	1917362.23	542659.41	N 36 16 10.10	W 107 41 19.03
	8100.00	91.47	100.89	5521.79	1806.79	1041.63	1707.93	0.00	1917343.49	542757.60	N 36 16 9.92	W 107 41 17.83
	8200.00	91.47	100.89	5519.24	1902.47	1022.74	1806.10	0.00	1917324.75	542855.79	N 36 16 9.73	W 107 41 16.63
	8300.00	91.47	100.89	5516.68	1998.15	1003.86	1904.26	0.00	1917306.00	542953.97	N 36 16 9.54	W 107 41 15.43
	8400.00	91.47	100.89	5514.12	2093.82	984.97	2002.43	0.00	1917287.26	543052.16	N 36 16 9.36	W 107 41 14.24
	8500.00	91.47	100.89	5511.57	2189.50	966.08	2100.60	0.00	1917268.51	543150.34	N 36 16 9.17	W 107 41 13.04
	8600.00	91.47	100.89	5509.01	2285.18	947.20	2198.76	0.00	1917249.77	543248.53	N 36 16 8.98	W 107 41 11.84
	8700.00	91.47	100.89	5506.45	2380.86	928.31	2296.93	0.00	1917231.03	543346.72	N 36 16 8.80	W 107 41 10.64
	8800.00	91.47	100.89	5503.90	2476.53	909.42	2395.10	0.00	1917212.28	543444.90	N 36 16 8.61	W 107 41 9.44
	8900.00	91.47	100.89	5501.34	2572.21	890.54	2493.27	0.00	1917193.54	543543.09	N 36 16 8.42	W 107 41 8.24
	9000.00	91.47	100.89	5498.78	2667.89	871.65	2591.43	0.00	1917174.80	543641.27	N 36 16 8.23	W 107 41 7.04
	9100.00	91.47	100.89	5496.23	2763.57	852.77	2689.60	0.00	1917156.05	543739.46	N 36 16 8.05	W 107 41 5.84
	9200.00	91.47	100.89	5493.67	2859.24	833.88	2787.77	0.00	1917137.31	543837.64	N 36 16 7.86	W 107 41 4.65
	9300.00	91.47	100.89	5491.11	2954.92	814.99	2885.93	0.00	1917118.57	543935.83	N 36 16 7.67	W 107 41 3.45
	9400.00	91.47	100.89	5488.56	3050.60	796.11	2984.10	0.00	1917099.82	544034.02	N 36 16 7.49	W 107 41 2.25
	9500.00	91.47	100.89	5486.00	3146.28	777.22	3082.27	0.00	1917081.08	544132.20	N 36 16 7.30	W 107 41 1.05
	9600.00	91.47	100.89	5483.44	3241.95	758.33	3180.44	0.00	1917062.33	544230.39	N 36 16 7.11	W 107 40 59.85
	9700.00	91.47	100.89	5480.88	3337.63	739.45	3278.60	0.00	1917043.59	544328.57	N 36 16 6.93	W 107 40 58.65
	9800.00	91.47	100.89	5478.33	3433.31	720.56	3376.77	0.00	1917024.85	544426.76	N 36 16 6.74	W 107 40 57.45
	9900.00	91.47	100.89	5475.77	3528.99	701.67	3474.94	0.00	1917006.10	544524.95	N 36 16 6.55	W 107 40 56.26
	10000.00	91.47	100.89	5473.21	3624.66	682.79	3573.10	0.00	1916987.36	544623.13	N 36 16 6.37	W 107 40 55.06
	10100.00	91.47	100.89	5470.66	3720.34	663.90	3671.27	0.00	1916968.62	544721.32	N 36 16 6.18	W 107 40 53.86
	10200.00	91.47	100.89	5468.10	3816.02	645.02	3769.44	0.00	1916949.87	544819.50	N 36 16 5.99	W 107 40 52.66
	10300.00	91.47	100.89	5465.54	3911.70	626.13	3867.60	0.00	1916931.13	544917.69	N 36 16 5.81	W 107 40 51.46
	10400.00	91.47	100.89	5462.99	4007.37	607.24	3965.77	0.00	1916912.39	545015.88	N 36 16 5.62	W 107 40 50.26
	10500.00	91.47	100.89	5460.43	4103.05	588.36	4063.94	0.00	1916893.64	545114.06	N 36 16 5.43	W 107 40 49.06
	10600.00	91.47	100.89	5457.87	4198.73	569.47	4162.11	0.00	1916874.90	545212.25	N 36 16 5.24	W 107 40 47.86
	10700.00	91.47	100.89	5455.32	4294.41	550.58	4260.27	0.00	1916856.16	545310.43	N 36 16 5.06	W 107 40 46.67
	10800.00	91.47	100.89	5452.76	4390.08	531.70	4358.44	0.00	1916837.41	545408.62	N 36 16 4.87	W 107 40 45.47
	10900.00	91.47	100.89	5450.20	4485.76	512.81	4456.61	0.00	1916818.67	545506.81	N 36 16 4.68	W 107 40 44.27
	11000.00	91.47	100.89	5447.65	4581.44	493.93	4554.77	0.00	1916799.92	545604.99	N 36 16 4.50	W 107 40 43.07
Chaco 2408-33M #120H BHL	11064.35	91.47	100.89	5446.00	4643.00	481.77	4617.94	0.00	1916787.86	545668.17	N 36 16 4.38	W 107 40 42.30

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 2408-33M #121H R0 mdv 07Apr14
	1	14.000	11064.348	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2408-33M #121H R0 mdv 07Apr14

D. Production Facilities

1. As practical, access will be a teardrop-shaped road through the production area so that the center may be revegetated.
2. Within 90 days of installation, production facilities would be painted Juniper Green to blend with the natural color of the landscape and would be located, to the extent practical, to reasonably minimize visual impact.
3. Berms will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks. Berm walls will be compacted with appropriate equipment to assure containment.

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the well is plugged, final reclamation will occur within the remainder of the project area. Reclamation is described in detail in the Reclamation Plan (Appendix C).

7.0 Methods for Handling Waste

A. Cuttings

- ✓ 1. Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals will be accomplished with water-based mud. All cuttings will be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX will follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit will be used.
2. Closed-loop tanks will be adequately sized for containment of all fluids.

B. Drilling Fluids

1. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids will be hauled to a commercial disposal facility.

C. Spills

1. Any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site.

D. Sewage

1. Portable toilets will be provided and maintained during construction, as needed (see Figure 4 in Appendix B for the location of toilets).

E. Garbage and other water material

1. All garbage and trash will be placed in a metal trash basket. The trash and garbage will be hauled off site and dumped in an approved landfill, as needed.

F. Hazardous Waste

1. No chemicals subject to reporting under Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
2. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
3. All fluids (i.e., scrubber cleaners) used during washing of production equipment will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.

Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to WPX Energy Production, LLC Chaco 2408-33M #121H
1086' FSL & 450' FWL, Section 33, T24N, R8W, N.M.P.M., San Juan County, NM

Latitude: 36.266572°N Longitude: 107.694689°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 35.9 miles to Mile Marker 115.3:

Go Left (Easterly) on County Road #7800 for 2.3 miles to fork in roadway;

Go Right (Easterly) on existing Kenaj New Mexico St #1 wellpad for 0.2 mile to fork in roadway;

Go Right (Easterly) for 417' to fork in roadway;

Go Right (Southerly) for 0.1 mile to fork in roadway:

Go Left (Easterly) for 0.1 mile to new access on left-hand side of existing roadway which continues for 110.0' to staked WPX Chaco 2408-33M #121H location.

3000 PSI BOP
Schematic

