

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 3160-3 APD form.

Operator Signature Date: 8/28/13

Well information;

Operator WPX, Well Name and Number Chaco 2307-13L 174H

API# 30-039-31197, Section 13, Township 23 N/S, Range 7 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
- ☐ 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

Charles Perri

NMOCD Approved by Signature

10-4-2013 ca

Date

RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AUG 28 2013

APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington Field Office

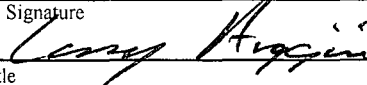
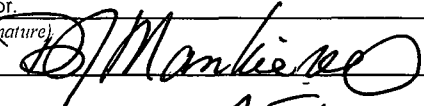
1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMSF-078360	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator WPX Energy Production, LLC		7. If Unit or CA Agreement, Name and No.	
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. Chaco 2307-13L #174H	
3b. Phone No. (include area code) (505) 333-1808		9. API Well No. 3003931197	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1504' FSL & 80' FWL, sec 13, T23N, R7W At proposed prod. zone 1506' FSL & 280' FWL, sec 14, T23N, R7W		10. Field and Pool, or Exploratory Lybrook Gallup	
11. Sec., T., R., M., or Blk. and Survey or Area Section 13, T23N, R7W		12. County or Parish Rio Arriba County	
13. State NM		14. Distance in miles and direction from nearest town or post office* approximately 2 miles southeast of Lybrook, New Mexico	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 80'		16. No. of Acres in lease 2565.24	
17. Spacing Unit dedicated to this well 160 acres		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 25'	
19. Proposed Depth 10,398' MD / 5,504' TVD		20. BLM/BIA Bond No. on file UTB000178	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7045' GR		22. Approximate date work will start* October 1, 2013	
23. Estimated duration 1 month		24. Attachments	

OIL CONS. DIV DIST. 3

OCT 02 2013

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) Larry Higgins	Date 08/28/13
Title		
Permit Supervisor Approved by (Signature) 	Name (Printed/Typed) J. Mankie	Date 10/1/13
Title AFM	Office FEO	

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 Lybrook Gallup formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the BLM.

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

No new access road is needed.

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

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

NMOCDA

APD Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 28th day of August, 2013.

Name Larry Higgins

Position Title Permit Supervisor

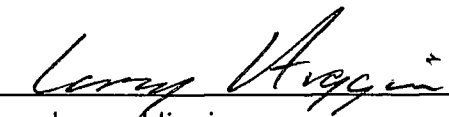
Address P.O. Box 640, Aztec, NM 87410

Telephone (505) 333-1808

Field representative (if not above signatory) _____

E-mail larry.higgins@wpxenergy.com

Date: 08/28/2013



Larry Higgins
Permit Suprv.
WPX Energy Production, LLC

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

15 AUG 28 2013

Submit one copy to
Appropriate District Office

AMENDED REPORT

**Farmington Field Office
Bureau of Land Management**

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31197		² Pool Code 42289	³ Pool Name LYBROOK GALLUP
⁴ Property Code 40069	⁵ Property Name CHACO 2307-13L		⁶ Well Number 174H
⁷ OGRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC		⁹ Elevation 7046 '

¹⁰ Surface Location

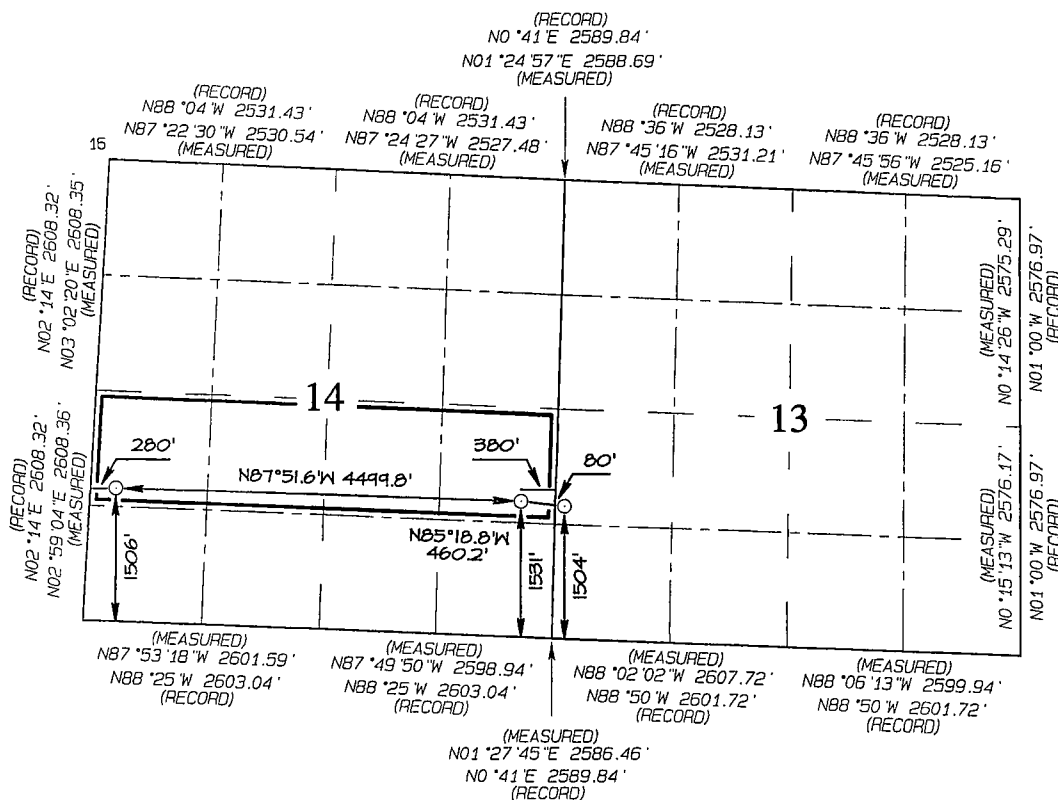
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	23N	7W		1504	SOUTH	80	WEST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	14	23N	7W		1506	SOUTH	280	WEST	RIO ARRIBA

12 Dedicated Acres	160.0 Acres N/2 S/2 - Section 14	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



END-OF-LATERAL
1506' FSL 280' FWL
SECTION 14, T23N, R7W
LAT: 36.22301°N
LONG: 107.55199°W
DATUM: NAD1927

LAT: 36.22302 *N
LONG: 107.55260 *W
DATUM: NAD1983

POINT-OF-ENTRY
1531' FSL 380' FEL
SECTION 14, T23N, R7W
LAT: 36.22271°N
LONG: 107.53675°W
DATUM: NAD1927

LAT: 36.22273 °N
LONG: 107.53735 °W
DATUM: NAD1983

SURFACE LOCATION
1504' FSL 80' FWL
SECTION 13, T23N, R7W
LAT: 36.22261°N
LONG: 107.53519°W
DATUM: NAD1927

LAT: 36.22262 °N
LONG: 107.53579 °W
DATUM: NAD1983

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Larry Higgins Date 8/28/13

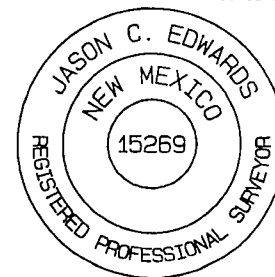
Larry Higgins
Printed Name
larry.higgins@wpxenergy.com
E-mail Address

18 SURVEYOR CERTIFICATION

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

Date Revised: AUGUST 27, 2013
Date of Survey: JULY 5, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

WPX ENERGY

Operations Plan

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

DATE: 8/15/13 **FIELD:** Lybrook Gallup

WELL NAME: Chaco 2307-13L #174H **SURFACE:** State

SH Location: NWSW Sec 13-23N-7W **ELEVATION:** 7,046' GR

BH Location: NWSW Sec 14-23N-7W **MINERALS:** State
Rio Arriba Co, NM

MEASURED DEPTH: 10,388' **LEASE #:** NMNM-078360

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,420	1,420	Point Lookout	4,290	4,289
Kirtland	1,759	1,758	Mancos	4,533	4,532
Pictured Cliffs	1,985	1,984	Kickoff Point	5,060	5,059
Lewis	2,235	2,234	Target Top	5,665	5,535
Chacra	2,387	2,386	Landing Point	5,888	5,580
Cliff House	3,498	3,497	Target Base	5,888	5,580
Menefee	3,555	3,554			
			TD	10,388	5,504

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

C. LOGGING PROGRAM: LWD GR from KOP to TD. LWD GR / 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 and the 8 3/4" Directional Vertical hole and drill the curve portion of the wellbore. (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 1500 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes and 1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

NOTE: Vertical portion of the well (8-3/4 in.) will be vertically/directionally drilled as per attached Directional Plan to +/- 5,060' (MD) +/- 5,059' (TVD). The 8-3/4 in. Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,888' (MD) +/-5,580' (TVD). 7 in. csg will be set at this point. Will drill the lateral (6-1/8 in. hole) as per the attached Directional Plan to +/- 10,388'(MD) +/- 5,504' (TVD). Will run 4-1/2 in. Production Casing to TD and Cement.

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

Surface		12.25"		400'+		9 5/8		36#	J-55
Intermediate		8.75"		5,888'		7		23#	K-55
Longstring		6.125"		10,388		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 +/-3,500 ft. Run (1) centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.
3. PRODUCTION CASING: Run 4-1/2" casing with cement nose guide Float Shoe + 1 joint 4-1/2" csg.+ Float Collar. Centralizer program will be determined when Lateral is evaluated by Geoscientists and Reservoir Engineers.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. SURFACE: 10 bbl Fr Water Spacer + 230 sx (270 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal. The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600 psi for 30 minutes. Total Volume: (230 sx / 270 cu-ft / 48 Bbls).
2. INTERMEDIATE: 10 bbl FW spacer + 40 bbl (112 cu-ft) Chemical Wash + 10 bbl FW spacer + Lead: 590 sx Foamed 50/50 Poz Cement. 13.0 ppg / 9.5 ppg (Foamed wt.) Yield :2.01 cu-ft/ sk. (Vol: 1186 cu-ft / 211 bbls) + 0.15% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760. TAIL: 100 sx 50-50 Poz Premium 13.5 #/gal. Yield: 1.29 cu-ft / sk (Vol: 129 cu-ft / 23 bbls) + 0.2% Versaset + 0.15% HALAD -766. + Displacement (+/-230 bbls / 1,292 cu-ft) + 100 sx Top-Out Cement: Premium: Yield: (1.17 cu-ft/ sk (Vol: 117 cu-ft / 20.8 bbls). Est TOC: Surface. Test Casing to 1500 PSI for 30 minutes. Total Volume: (790 sx / 1432 cu-ft / 255 bbls). Mix w/ +/- 70,000 SCF Nitrogen.
3. PRODUCTION CASING: **STAGE 1**: 40 bbl (224.6 cu-ft) KCL water Spacer + **STAGE 2**:10 bbl (56.cu-ft) Fr Water Spacer.+ **STAGE 3**:40 bbl 10 ppg (224.6 cu-ft) Tuned Spacer III + 0.2 gal/bbl Musol + 38.7 ppb Barite + 0.5 gal/bbl SEM-7. + **STAGE 4**: 10 bbl Fr Water Spacer.+ **STAGE 5**: Lead Cement, 70 sx Premium cmt + 0.1% Halad-766, Yield 1.16 cu ft/sk, 15.8 #/gal, (70 sx / 81.2 cu ft. / 14.46 bbls) **STAGE 6**: Foamed Lead Cement: 240 sx. 50/50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.43 cu-ft/sk ,13.0 ppg. (240sx / 343.2 cu-ft / 61.1bbls) + **STAGE 7**: Tail Cement : 110 sx 50/50 Poz Premium + 0.2% Versaset + .05% HALAD-766 + .05% SA-1015,Yield 1.3 cu-ft/sk,13.5 ppg. (110 sx / 143 cu ft. / 25.46 bbls) **STAGE 8**: Displace w/+/-162 bbl KCL Water. Total Cement (420 sx / 568.5 cu ft / 101.2 bbls). Mix w/ +/- 98,000 SCF Nitrogen. Est. TOC +/- 5,000 ft. Total Volume: (567.4 cu-ft / 420 sx / 101.1 bbls).

IV. COMPLETION

A. CBL

1. Run Cement Bond Log and ensure top of cement is above 7" casing shoe.

B. PRESSURE TEST

1. Pressure test 4-1/2" casing to 5000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N₂ for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs with CTU and flowback lateral.

D. RUNNING TUBING

1. Production Tubing: Run 2-3/8", 4.7#, N-80, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing at landing point of curve (~5,888' MD).

- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2) NMAC, and 19.15.16.15 B(4) NMAC.
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WELL	Chaco 2307-13L #174H	FIELD	NM, Rio Arriba (NAD 27 CZ)	STRUCTURE	13-23N-7W
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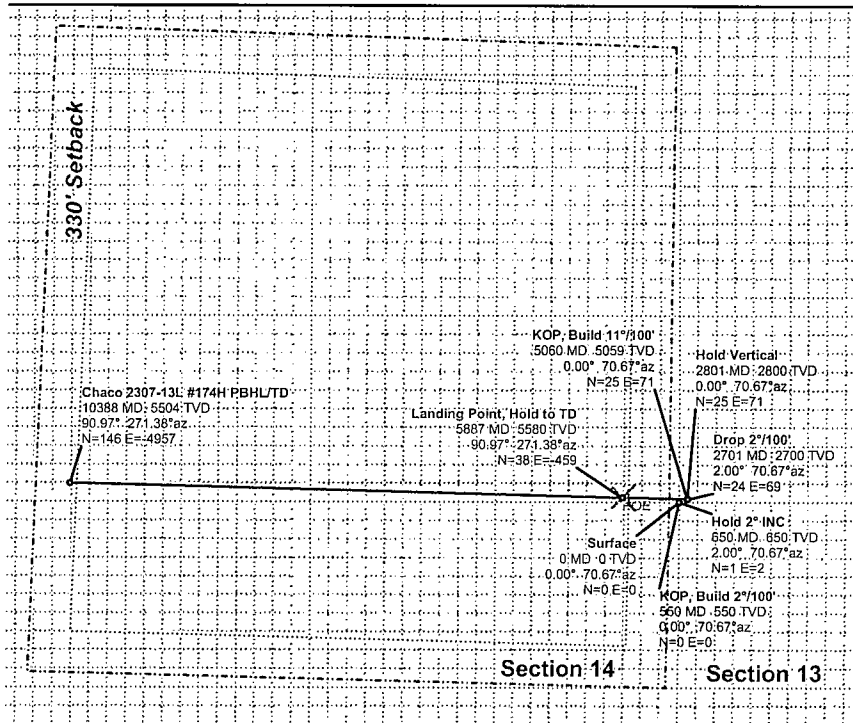
Magnetic Parameters	Dip: 63.017°	Date: August 14, 2013	Surface Location	NAD27 New Mexico State Plane, Central Zone, US Feet	Miscellaneous	TVD Ref: R13(70508 above Unknown)
Model: BGM 2013	Mag Dec: 9.511°	FS: 50195.9mT	Lat: N 36 13 21.398	Nothing: 1902752.52 RUS	Sit: Chaco 2307-13L #174H	Srv Date: August 14, 2013
			Lon: W 107 32 6.684	Grid Conv: -0.760°	Plant: R1 mdr 14Aug13	
				Scale Fact: 1.00006445		

Proposal

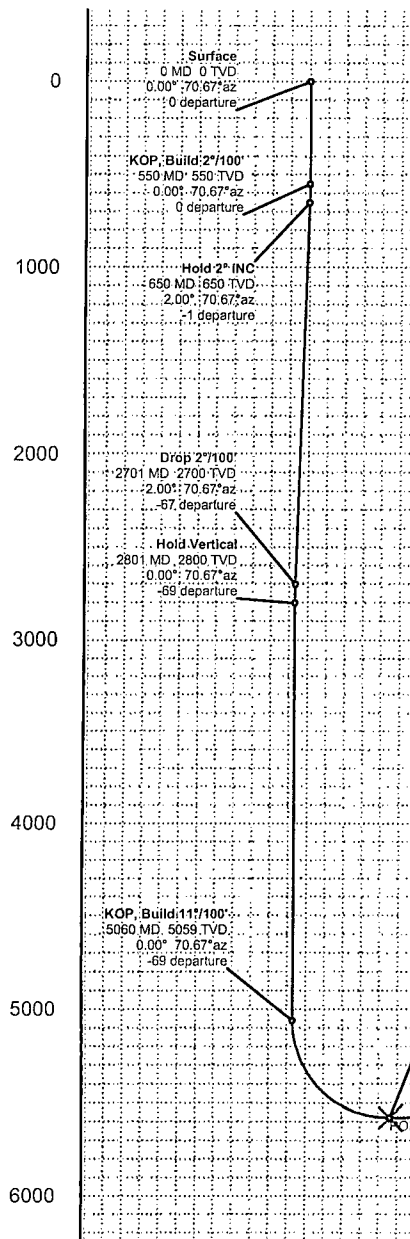
Scale = 1:1500(ft) E >>> W <<< -4500 -3000 -1500 0



True North
Tot Corr (M->T) 9.5107°
Mag Dec (9.511°)
Grid Conv (-0.760°)



TVD Scale = 1:1000(ft)



Targets							
Name	TVD(ft)	NS(ft)	EW(ft)	Latitude(deg)	Longitude(deg)	Shape	
Chaco 2307-13L #174H POE	5580.00	37.61	-458.70	N 36 13 21.768	W 107 32 12.282	POINT	
Chaco 2307-13L #174H PBHL/TD	5504.00	146.05	-4956.93	N 36 13 22.836	W 107 33 7.178	POINT	

Critical Points								
Comments	Survey MD(ft)	Inclination(deg)	Azimuth(deg)	TVD(ft)	Sub-Sea TVD	VS(ft)	NS(ft)	EW(ft)
Surface	0.00	0.00	70.67	0.00	-7060.00	0.00	0.00	0.00
KOP, Build 2°/100'	550.00	0.00	70.67	550.00	-6510.00	0.00	0.00	0.00
Hold 2° INC	649.95	2.00	70.67	649.93	-6410.07	-1.63	0.58	1.64
Drop 2°/100'	2701.34	2.00	70.67	2700.07	-4359.93	-68.42	24.26	69.17
Hold Vertical	2801.29	0.00	70.67	2800.00	-4260.00	-70.05	24.84	70.81
KOP, Build 11°/100'	5060.49	0.00	70.67	5059.21	-2000.79	-70.05	24.84	70.81
Landing Point, Hold to TD	5887.47	90.97	271.38	5580.00	-1480.00	459.61	37.61	-458.70
Chaco 2307-13L #174H PBHL/TD	10387.65	90.97	271.38	5504.00	-1556.00	4959.08	146.05	-4956.93

Vertical Section (ft) Azim = 271.688° Scale = 1:1000(ft) Origin = 0 N-S, 0 E-W



Chaco 2307-13L #174H R1 mdv 14Aug13 Proposal Geodetic Report

(Def Plan)



Report Date: August 14, 2013 - 02:04 PM
Client: WPX Energy
Field: NM, Rio Arriba (NAD 27 CZ)
Structure / Slot: WPX Energy 13-23N-7W (Chaco 2307-13L #174H) / Chaco 2307-13L #174H
Well: Chaco 2307-13L #174H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2307-13L #174H R1 mdv 14Aug13
Survey Date: August 14, 2013
Tort / AHD / DDI / ERD Ratio: 94.986 * / 5104.243 ft / 5.955 / 0.915
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 13' 21.39600", W 107° 32' 6.68400"
Location Grid N/E Y/X: N 1902752.522 RUS, E 120915.840 RUS
CRS Grid Convergence Angle: -0.7595 *
Grid Scale Factor: 1.00008445

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 271.688 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7060.000 ft above Unknown
Seabed / Ground Elevation: 7046.000 ft above Unknown
Magnetic Declination: 9.511 *
Total Gravity Field Strength: 998.4799mgn (9.80655 Based)
Total Magnetic Field Strength: 50195.911 nT
Magnetic Dip Angle: 63.017 *
Declination Date: August 14, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North->True North: 9.5107 *
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	70.67	0.00	0.00	0.00	0.00	N/A	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
	100.00	0.00	70.67	100.00	0.00	0.00	0.00	0.00	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
	200.00	0.00	70.67	200.00	0.00	0.00	0.00	0.00	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
	300.00	0.00	70.67	300.00	0.00	0.00	0.00	0.00	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
	400.00	0.00	70.67	400.00	0.00	0.00	0.00	0.00	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
KOP, Build 2°/100'	500.00	0.00	70.67	500.00	0.00	0.00	0.00	0.00	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
	550.00	0.00	70.67	550.00	0.00	0.00	0.00	0.00	1902752.52	120915.84	N 36 13 21.40	W 107 32 6.68
	600.00	1.00	70.67	600.00	-0.41	0.14	0.41	2.00	1902752.66	120916.25	N 36 13 21.40	W 107 32 6.68
Hold 2° INC	649.95	2.00	70.67	649.93	-1.63	0.58	1.64	2.00	1902753.08	120917.49	N 36 13 21.40	W 107 32 6.66
	700.00	2.00	70.67	699.95	-3.26	1.15	3.29	0.00	1902753.63	120919.15	N 36 13 21.41	W 107 32 6.64
	800.00	2.00	70.67	799.89	-6.51	2.31	6.58	0.00	1902754.74	120922.45	N 36 13 21.42	W 107 32 6.60
	900.00	2.00	70.67	899.83	-9.77	3.46	9.88	0.00	1902755.85	120925.76	N 36 13 21.43	W 107 32 6.58
	1000.00	2.00	70.67	999.77	-13.02	4.62	13.17	0.00	1902756.97	120929.07	N 36 13 21.44	W 107 32 6.52
	1100.00	2.00	70.67	1099.71	-16.28	5.77	16.46	0.00	1902758.08	120932.37	N 36 13 21.45	W 107 32 6.48
	1200.00	2.00	70.67	1199.65	-19.54	6.93	19.75	0.00	1902759.19	120935.68	N 36 13 21.46	W 107 32 6.44
	1300.00	2.00	70.67	1299.58	-22.79	8.08	23.04	0.00	1902760.30	120938.99	N 36 13 21.48	W 107 32 6.40
	1400.00	2.00	70.67	1399.52	-26.05	9.24	26.33	0.00	1902761.41	120942.29	N 36 13 21.49	W 107 32 6.36
	1500.00	2.00	70.67	1499.46	-29.30	10.39	29.62	0.00	1902762.52	120945.60	N 36 13 21.50	W 107 32 6.32
	1600.00	2.00	70.67	1599.40	-32.56	11.55	32.92	0.00	1902763.63	120948.91	N 36 13 21.51	W 107 32 6.28
	1700.00	2.00	70.67	1699.34	-35.82	12.70	36.21	0.00	1902764.74	120952.21	N 36 13 21.52	W 107 32 6.24
	1800.00	2.00	70.67	1799.28	-39.07	13.86	39.50	0.00	1902765.85	120955.52	N 36 13 21.53	W 107 32 6.20
	1900.00	2.00	70.67	1899.22	-42.33	15.01	42.79	0.00	1902766.96	120958.83	N 36 13 21.54	W 107 32 6.16
	2000.00	2.00	70.67	1999.16	-45.58	16.17	46.08	0.00	1902768.08	120962.13	N 36 13 21.56	W 107 32 6.12
	2100.00	2.00	70.67	2099.10	-48.84	17.32	49.37	0.00	1902769.19	120965.44	N 36 13 21.57	W 107 32 6.08
	2200.00	2.00	70.67	2199.04	-52.10	18.47	52.66	0.00	1902770.30	120968.75	N 36 13 21.58	W 107 32 6.04
	2300.00	2.00	70.67	2298.98	-55.35	19.63	55.96	0.00	1902771.41	120972.05	N 36 13 21.59	W 107 32 6.00
	2400.00	2.00	70.67	2398.91	-58.61	20.78	59.25	0.00	1902772.52	120975.36	N 36 13 21.60	W 107 32 5.96
	2500.00	2.00	70.67	2498.85	-61.86	21.94	62.54	0.00	1902773.63	120978.67	N 36 13 21.61	W 107 32 5.92
	2600.00	2.00	70.67	2598.79	-65.12	23.09	65.83	0.00	1902774.74	120981.97	N 36 13 21.62	W 107 32 5.88
	2700.00	2.00	70.67	2698.73	-68.38	24.25	69.12	0.00	1902775.85	120985.28	N 36 13 21.64	W 107 32 5.84
Drop 2°/100'	2701.34	2.00	70.67	2700.07	-68.42	24.26	69.17	0.00	1902775.87	120985.32	N 36 13 21.64	W 107 32 5.84
	2800.00	0.03	70.67	2798.71	-70.05	24.84	70.81	2.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
Hold Vertical	2801.29	0.00	70.67	2800.00	-70.05	24.84	70.81	2.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	2900.00	0.00	70.67	2898.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3000.00	0.00	70.67	2998.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3100.00	0.00	70.67	3098.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3200.00	0.00	70.67	3198.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3300.00	0.00	70.67	3298.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3400.00	0.00	70.67	3398.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3500.00	0.00	70.67	3498.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3600.00	0.00	70.67	3598.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3700.00	0.00	70.67	3698.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3800.00	0.00	70.67	3798.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	3900.00	0.00	70.67	3898.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4000.00	0.00	70.67	3998.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4100.00	0.00	70.67	4098.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4200.00	0.00	70.67	4198.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4300.00	0.00	70.67	4298.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4400.00	0.00	70.67	4398.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4500.00	0.00	70.67	4498.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4600.00	0.00	70.67	4598.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4700.00	0.00	70.67	4698.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4800.00	0.00	70.67	4798.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	4900.00	0.00	70.67	4898.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	5000.00	0.00	70.67	4998.71	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
KOP, Build 11°/100'	5060.49	0.00	70.67	5059.21	-70.05	24.84	70.81	0.00	1902776.42	120986.98	N 36 13 21.64	W 107 32 5.82
	5100.00	4.35	271.38	5098.67	-68.55	24.88	69.31	11.00	1902776.48	120985.48	N 36 13 21.64	W 107 32 5.84
	5200.00	15.35	271.38	5197.05	-51.48	25.29	52.24	11.00	1902777.12	120986.42	N 36 13 21.65	W 107 32 6.05
	5300.00	26.35	271.38	5290.36	-15.95	26.14	16.72	11.00	1902778.44	120932.91	N 36 13 21.65	W 107 32 6.48
	5400.00	37.35	271.38	5375.18	36.73	27.41	-35.94	11.00	1902780.41	120880.26	N 36 13 21.67	W 107 32 7.12
	5500.00	48.35	271.38	5448.38	104.63	29.05	-103.82	11.00	1902782.95	120812.41	N 36 13 21.68	W 107 32 7.95
	5600.00	59.35	271.38	5507.29	185.25	30.99	-184.42	11.00	1902785.96	120731.84	N 36 13 21.70	W 107 32 8.93
	5700.00	70.35	271.38	5549.73	275.63	33.17	-274.77	11.00	1902789.33	120641.52	N 36 13 21.72	W 107 32 10.04
	5800.00	81.35	271.38	5574.15	372.44	35.50	-371.55	11.00	1902792.95	120544.77	N 36 13 21.75	W 107 32 11.22

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 ° ' ")
Landing Point, Hold to TD	5887.47	90.97	271.38	5580.00	459.61	37.81	-458.70	11.00	1902796.21	120457.65	N 36 13 21.77	W 107 32 12.28
	5900.00	90.97	271.38	5579.79	472.14	37.91	-471.22	0.00	1902796.67	120445.13	N 36 13 21.77	W 107 32 12.43
	6000.00	90.97	271.38	5578.10	572.12	40.32	-571.18	0.00	1902800.41	120345.21	N 36 13 21.79	W 107 32 13.65
	6100.00	90.97	271.38	5576.41	672.11	42.73	-671.14	0.00	1902804.14	120245.29	N 36 13 21.82	W 107 32 14.87
	6200.00	90.97	271.38	5574.72	772.09	45.14	-771.09	0.00	1902807.88	120145.36	N 36 13 21.84	W 107 32 16.09
	6300.00	90.97	271.38	5573.04	872.07	47.55	-871.05	0.00	1902811.61	120045.44	N 36 13 21.87	W 107 32 17.31
	6400.00	90.97	271.38	5571.35	972.06	49.96	-971.01	0.00	1902815.35	119945.52	N 36 13 21.89	W 107 32 18.53
	6500.00	90.97	271.38	5569.66	1072.04	52.37	-1070.96	0.00	1902819.08	119845.60	N 36 13 21.91	W 107 32 19.75
	6600.00	90.97	271.38	5567.97	1172.03	54.78	-1170.92	0.00	1902822.82	119745.67	N 36 13 21.94	W 107 32 20.97
	6700.00	90.97	271.38	5566.28	1272.01	57.19	-1270.88	0.00	1902826.55	119645.75	N 36 13 21.96	W 107 32 22.19
	6800.00	90.97	271.38	5564.59	1372.00	59.59	-1370.83	0.00	1902830.29	119545.83	N 36 13 21.99	W 107 32 23.41
	6900.00	90.97	271.38	5562.90	1471.98	62.00	-1470.79	0.00	1902834.02	119445.91	N 36 13 22.01	W 107 32 24.63
	7000.00	90.97	271.38	5561.21	1571.96	64.41	-1570.75	0.00	1902837.76	119345.99	N 36 13 22.03	W 107 32 25.85
	7100.00	90.97	271.38	5559.52	1671.95	66.82	-1670.70	0.00	1902841.49	119246.06	N 36 13 22.06	W 107 32 27.07
	7200.00	90.97	271.38	5557.84	1771.93	69.23	-1770.66	0.00	1902845.23	119146.14	N 36 13 22.08	W 107 32 28.29
	7300.00	90.97	271.38	5556.15	1871.92	71.64	-1870.62	0.00	1902848.96	119046.22	N 36 13 22.10	W 107 32 29.51
	7400.00	90.97	271.38	5554.46	1971.90	74.05	-1970.57	0.00	1902852.70	118946.30	N 36 13 22.13	W 107 32 30.73
	7500.00	90.97	271.38	5552.77	2071.89	76.46	-2070.53	0.00	1902856.43	118846.37	N 36 13 22.15	W 107 32 31.95
	7600.00	90.97	271.38	5551.08	2171.87	78.87	-2170.49	0.00	1902860.17	118746.45	N 36 13 22.18	W 107 32 33.17
	7700.00	90.97	271.38	5549.39	2271.85	81.28	-2270.44	0.00	1902863.90	118646.53	N 36 13 22.20	W 107 32 34.39
	7800.00	90.97	271.38	5547.70	2371.84	83.69	-2370.40	0.00	1902867.64	118546.61	N 36 13 22.22	W 107 32 35.61
	7900.00	90.97	271.38	5546.01	2471.82	86.10	-2470.36	0.00	1902871.37	118446.69	N 36 13 22.25	W 107 32 36.83
	8000.00	90.97	271.38	5544.32	2571.81	88.51	-2570.32	0.00	1902875.11	118346.76	N 36 13 22.27	W 107 32 38.05
	8100.00	90.97	271.38	5542.64	2671.79	90.92	-2670.27	0.00	1902878.84	118246.84	N 36 13 22.29	W 107 32 39.27
	8200.00	90.97	271.38	5540.95	2771.78	93.33	-2770.23	0.00	1902882.57	118146.92	N 36 13 22.32	W 107 32 40.49
	8300.00	90.97	271.38	5539.26	2871.76	95.74	-2870.19	0.00	1902886.31	118047.00	N 36 13 22.34	W 107 32 41.71
	8400.00	90.97	271.38	5537.57	2971.74	98.15	-2970.14	0.00	1902890.04	117947.07	N 36 13 22.37	W 107 32 42.93
	8500.00	90.97	271.38	5535.88	3071.73	100.56	-3070.10	0.00	1902893.78	117847.15	N 36 13 22.39	W 107 32 44.15
	8600.00	90.97	271.38	5534.19	3171.71	102.97	-3170.06	0.00	1902897.51	117747.23	N 36 13 22.41	W 107 32 45.37
	8700.00	90.97	271.38	5532.50	3271.70	105.38	-3270.01	0.00	1902901.25	117647.31	N 36 13 22.44	W 107 32 46.59
	8800.00	90.97	271.38	5530.81	3371.68	107.79	-3369.97	0.00	1902904.98	117547.39	N 36 13 22.46	W 107 32 47.81
	8900.00	90.97	271.38	5529.12	3471.67	110.20	-3469.93	0.00	1902908.72	117447.46	N 36 13 22.48	W 107 32 49.03
	9000.00	90.97	271.38	5527.44	3571.65	112.61	-3569.88	0.00	1902912.45	117347.54	N 36 13 22.51	W 107 32 50.25
	9100.00	90.97	271.38	5525.75	3671.63	115.02	-3669.84	0.00	1902916.19	117247.62	N 36 13 22.53	W 107 32 51.47
	9200.00	90.97	271.38	5524.06	3771.62	117.43	-3769.80	0.00	1902919.92	117147.70	N 36 13 22.55	W 107 32 52.69
	9300.00	90.97	271.38	5522.37	3871.60	119.84	-3869.75	0.00	1902923.66	117047.77	N 36 13 22.58	W 107 32 53.91
	9400.00	90.97	271.38	5520.68	3971.59	122.25	-3969.71	0.00	1902927.39	116947.85	N 36 13 22.60	W 107 32 55.13
	9500.00	90.97	271.38	5518.99	4071.57	124.66	-4069.67	0.00	1902931.13	116847.93	N 36 13 22.63	W 107 32 56.35
	9600.00	90.97	271.38	5517.30	4171.56	127.07	-4169.62	0.00	1902934.86	116748.01	N 36 13 22.65	W 107 32 57.57
	9700.00	90.97	271.38	5515.61	4271.54	129.48	-4269.58	0.00	1902938.60	116648.09	N 36 13 22.67	W 107 32 58.79
	9800.00	90.97	271.38	5513.92	4371.52	131.89	-4369.54	0.00	1902942.33	116548.16	N 36 13 22.70	W 107 33 0.01
	9900.00	90.97	271.38	5512.24	4471.51	134.30	-4469.49	0.00	1902946.07	116448.24	N 36 13 22.72	W 107 33 1.23
	10000.00	90.97	271.38	5510.55	4571.49	136.71	-4569.45	0.00	1902949.80	116348.32	N 36 13 22.74	W 107 33 2.45
	10100.00	90.97	271.38	5508.86	4671.48	139.12	-4669.41	0.00	1902953.54	116248.40	N 36 13 22.77	W 107 33 3.67
	10200.00	90.97	271.38	5507.17	4771.46	141.53	-4769.36	0.00	1902957.27	116148.47	N 36 13 22.79	W 107 33 4.89
	10300.00	90.97	271.38	5505.48	4871.45	143.94	-4869.32	0.00	1902961.01	116048.55	N 36 13 22.82	W 107 33 6.11
Chaco 2307-13L #174H PBH/UD	10387.65	90.97	271.38	5504.00	4959.08	146.05	-4956.93	0.00	1902964.28	115960.97	N 36 13 22.84	W 107 33 7.18

Survey Type: Def Plan

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

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2307-13L #174H R1 mdv 14Aug13
	14.000	10387.650	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2307-13L #174H R1 mdv 14Aug13

1. INTRODUCTION

WPX Energy Production, LLC (WPX) is providing this Surface Use Plan of Operations (SUPO) to the Bureau of Land Management – Farmington Field Office (BLM-FFO) as part of their Chaco 2307-13L Number (No.) 174H (174H) Application for Permit to Drill (APD), related to Onshore Oil and Gas Order No. 1. The proposed 174H well will be twinned with the Chaco 2307-13L No. 175H (175H) well.

This SUPO also serves as a revision to the original 175H SUPO, which was submitted as part of the 175H APD package. An APD has been issued for the 175H (APD No. 30-039-31192), and construction had begun on the 175H well pad prior to the development of this SUPO. Because of the changes necessary to the 175H project as a result of the 174H/175H twin, a revised 175H SUPO was required by the BLM-FFO.

A pre-disturbance site visit for the 175H project was held on December 18, 2012. A pre-disturbance site visit for the 174H/175H twin project was held on July 31, 2013.

In addition to the best management practices (BMPs) provided below and in the 174H/175H Surface Reclamation Plan (Reclamation Plan; Appendix A), the general Conditions of Approval will be followed, if any were attached to the 175H APD or are attached to the 174H APD.

2. PROJECT LOCATION AND EXISTING ROADS

The 174H/175H well pad is located approximately 50 road miles south-southeast of the town of Bloomfield, New Mexico. To access the location, head south from the United States (U.S.) Highway 550-U.S. Highway 64 intersection for approximately 48.8 miles, turn right onto an unnamed road for approximately 0.7 mile, and turn left to follow an unnamed, existing road for approximately 0.3 mile to Elm Ridge Exploration Company, LLC's (Elm Ridge's) existing Lybrook South No. 3 oil and gas well pad, which is a staging area for the 174H/175H project. The recently constructed 175H access road begins at this well pad. The 174H/175H well pad is at the eastern end of the 175H access road.

The access route from U.S. Highway 550 is depicted on Figure 1 (Appendix B) and on the construction plats provided in the APD permit package.

For existing County Roads or roads that are considered collector roads, WPX will defer to the county or Roads Committee, when formed, for maintenance determinations. During the pre-disturbance site visits, WPX was not allocated existing roads for upgrading or maintenance. If required by the BLM-FFO, WPX will upgrade existing non-County Roads leading to the project site. The road(s) will be upgraded following *The Gold Book: Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (Gold Book)* and BLM Handbook 9113.

3. NEW OR RECONSTRUCTED ACCESS ROADS

A 572-foot-long access road (a resource road) was permitted for the 175H project. This road has recently been constructed. The access road travels east-southeastward from be Elm Ridge's existing Lybrook South No. 3 oil and gas well pad and currently enters the western side of the 175H well pad. There was no pre-existing disturbance within the access road corridor prior to construction. The maximum grade of the access road is 8 percent. The all-weather driving surface of the access road is 14 feet wide with turnouts, placed as necessary. The access road was built up 18 to 24 inches and designed following the Basic Design Requirements for Constructed Roads from the *Gold Book* and BLM Handbook 9113.

Topsoil removed from the access road was used on cut slopes and bar ditches. The road was crowned with a surface material (sandstone), if it was economically available. The placement of water diversions, such as culverts and silt traps, along the access road was not determined during the 2012 pre-disturbance site visit. Although no drainage issues were anticipated along the access road prior to it being

constructed, 24-inch-diameter culverts have been or will be installed beneath the access road where needed.

The proposed well pad "expansion area" associated with the 174H/175H twin will overlap approximately 150 feet of the 175H access road, shortening the total length of the road to approximately 322 feet.

The access road is depicted on Figures 1 and 2 in Appendix B and on the construction plats provided in the APD permit package.

WPX will maintain the 175H access road, as outlined in their Road Maintenance Plan (Appendix C). No construction or routine maintenance activities have been or will be performed during periods when the soil is too wet to adequately support construction equipment. If equipment creates ruts deeper than 6 inches, the soil is deemed too wet for construction or maintenance.

BMPs for dust abatement and erosion control have been and will continue to be utilized along the 175H access road to reduce fugitive dust throughout the life of the project. Water application, using a rear-spraying truck or other suitable means, is the primary method of dust suppression along the access road. Any additional erosion-control practices will include the BLM-standard BMPs found in the *Gold Book* and the BMPs outlined in the Conditions of Approval, such as the application of magnesium chloride, organic-based compounds, or polymer compounds to the access road.

The 175H access road does not cross an existing fence line or cattle guard.

The 175H access road will be reclaimed following the Reclamation Plan (Appendix A).

4. LOCATION OF EXISTING WELLS

Three recorded water wells (San Juan 2235, San Juan 2988, and San Juan 681-27) are located within a 1-mile radius of the 174H/175H well pad.

The water wells, plugged and abandoned oil and gas wells, and active oil and gas wells within a 1-mile radius of the 174H/175H well pad are depicted on Figure 2 (Appendix B).

5. LOCATION OF PRODUCTION FACILITIES

After the drilling and completion phases of the 208H well, the long-term production facilities will be placed within a 100-foot-by-300-foot (0.69-acre) working area at the western end of the proposed well pad (see Figure 5, Appendix B). This well pad "expansion area" was not included in the original 175H SUPO.

A depiction of the production facility layout will be deferred until the facility on-site meeting is held with the BLM-FFO. All production equipment will comply with Visual Resource Management requirements. Within 90 days of installation, above-ground structures not subject to safety requirements will be painted Juniper Green (Federal 595a-34127) to blend with vegetation and reduce visual resource impacts.

6. WATER SUPPLY

The wells will be horizontally drilled, and completion will include well stimulation (hydraulic fracturing). Water for drilling and completion operations will be purchased from San Juan Basin Water Haulers Association. San Juan Basin Water Haulers Association will obtain water from the following two permitted water wells:

- Turtle Mountain: SJ-960-S-3
- Blanco Trading Post: WR711

