

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: 2/5/14

Well information;

Operator WPX, Well Name and Number Chaco 2307-12L 171H

API# 30-039-31217, Section 12, Township 23 NS, 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 T. Lerner

NMOCD Approved by Signature

3-21-2014

Date ca

RECEIVED

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

Sign
3-10-14

FEB 05 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMSF-078359	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.	
2. Name of Operator WPX Energy Production, LLC		8. Lease Name and Well No. Chaco 2307-12L #171H	
3a. Address P.O. Box 640 Aztec, NM 87410		9. API Well No. 3003931217	
3b. Phone No. (include area code) (505) 333-1808		10. Field and Pool, or Exploratory Lybrook Gallup	
4. Location of Well (Report, clearly and in accordance with any State requirements. *) At surface 1987' FSL & 991' FWL, sec 12, T23N, R7W NWSW At proposed prod. zone 1044' FSL & 230' FWL, sec 11, T23N, R7W SWSW		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 11, T23N R7W	
14. Distance in miles and direction from nearest town or post office* approximately 2 miles southeast of Lybrook, New Mexico		12. County or Parish Rio Arriba County	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 331'		13. State NM	
16. No. of Acres in lease 2381.69 2461.69		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. 22'		20. BLM/BIA Bond No. on file UTB000178	
19. Proposed Depth 10,562' MD / 5,441' TVD		21. Estimated duration 1 month	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7002' GR		22. Approximate date work will start* April 1, 2014	
23. Attachments		DIST. 3	

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 02/05/2014
Title Regulatory Specialist		
Approved by (Signature) 	Name (Printed/Typed) J. Montenegro	Date 3/6/14
Title ATEM	Office FED	

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, it is on lease.

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

This well will share this location with the Chaco #1701H, no additional access road is needed.
DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"
OPERATOR
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.

RECEIVED

MAR 07 2014

WPX

* per Cindy M (BLM)

JHL is 331 FWL, sec 12
3/21/14, WPT

RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 05 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

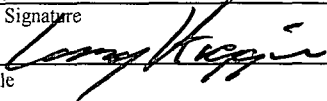
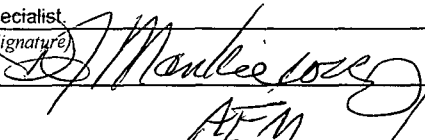
Farmington Field Office

Bureau of Land Management

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMSF-078359
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	3b. Phone No. (include area code) (505) 333-1808	8. Lease Name and Well No. Chaco 2307-12L #171H
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1987' FSL & 331' FWL, sec 12, T23N, R7W NWSW At proposed prod. zone 1044' FSL & 230' FWL, sec 11, T23N, R7W SWSW		9. API Well No. 3003931217
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15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 331'	16. No. of Acres in lease -2381.69- 2461.69	11. Sec., T., R., M., or Blk. and Survey or Area BHL Sec. 11 T23N R7W M SHL Section 12, T23N, R7W L
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 22'	19. Proposed Depth 10,562' MD / 5,441' TVD	12. County or Parish Rio Arriba County
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7002' GR	22. Approximate date work will start* April 1, 2014	13. State NM
24. Attachments		17. Spacing Unit dedicated to this well 160 acres
20. BLM/BIA Bond No. on file UTB000178		23. Estimated duration 1 month

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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) Larry Higgins	Date 02/05/2014
Regulatory Specialist Approved by (Signature) 	Name (Printed/Typed) J. Montee	Date 3/6/14
Title AEM	Office FFO	

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)

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

This well will share this location with the Chaco #1701H, no additional 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**

NMOC D

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 5th day of February, 2014.

Name Larry Higgins

Position Title Regulatory Specialist

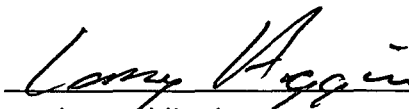
Address P.O. Box 640, Aztec, NM 87410

Telephone (505) 333-1808

Field representative (if not above signatory) _____

E-mail larry.higgins@wpxenergy.com

Date: 02/05/14



Larry Higgins
Regulatory Spec.
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

Submit one copy to
Appropriate District Office

RECEIVED
RECOMMENDED REPORT

FEB 05 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31217		*Pool Code 42289	*Pool Name LYBROOK GALLUP	*Bureau of Land Management
*Property Code 40467	*Property Name CHACO 2307-12L			*Well Number 171H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 7002'

¹⁰ Surface Location

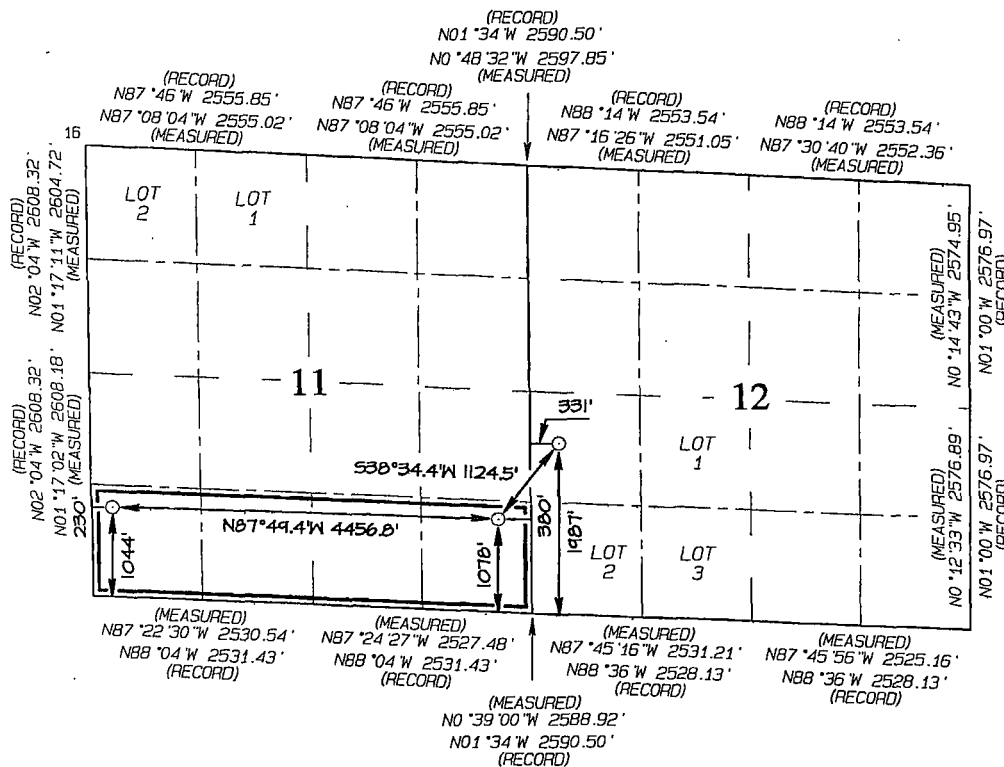
UL or Lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	12	23N	7W		1987	SOUTH	331	WEST	RIO ARRIBA

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
M	11	23N	7W		1044	SOUTH	230	WEST	RIO ARRIBA

¹² Dedicated Acres	160.0 Acres S/2 S/2 - Section 11	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
1044' FSL 230' FWL
SECTION 11, T23N, R7W
LAT: 36.23599°N
LONG: 107.55180°W
DATUM: NAD1927

LAT: 36.23601 °N
LONG: 107.55240 °W
DATUM: NAD1983

POINT-OF-ENTRY
1078' FSL 380' FEL
SECTION 11, T23N, R7W
LAT: 36.23569°N
LONG: 107.53669°W
DATUM: NAD1927

LAT: 36.23571°N
LONG: 107.53730°W
DATUM: NAD1983

SURFACE LOCATION
1987' FSL 331' FWL
SECTION 12, T23N, R7W
LAT: 36.23813°N
LONG: 107.53435°W
DATUM: NAD1927

LAT: 36.23815°N
LONG: 107.53496°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 interest. I am not aware of any pooling agreement or a compulsory pooling order heretofore entered by the Division.

Signature Cory Higgins Date 02/05/2014

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: FEBRUARY 4, 2014
Date of Survey: AUGUST 17, 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: 1/30/2014 **FIELD:** Lybrook (Gallup)

WELL NAME: Chaco 2307-12L #171H **SURFACE:** BLM

SH Location: NWSW Sec 12-23N-07W **ELEVATION:** 7002' GR

BH Location: SWSW Sec 11-23N-07W **MINERALS:** BLM
Rio Arriba Co, NM

MEASURED DEPTH: 10,562' **LEASE #:** NMSF-078359

I. GEOLOGY: Surface formation – San Jose**A. FORMATION TOPS:** (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,368	1,357	Point Lookout	4,409	4,300
Kirtland	1,510	1,494	Mancos	4,596	4,486
Pictured Cliffs	2,030	1,997	Kickoff Point	5,023	4,913
Lewis	2,122	2,085	Target Top	5,722	5,480
Chacra	2,476	2,427	Landing Point	6,103	5,579
Cliff House	3,607	3,520	Target Base	6,103	5,579
Menefee	3,688	3,598			
			TD	10,562	5,441

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. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.**B. BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 5,023' (MD) / 4,913' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,103' (MD) / 5,579' (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 +/- 10,562' (MD) / 5,441' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,953 ft. to TD and cemented. Liner will be tied back to surface w / 4-1/2" Casing for stimulation / testing, then removed from the well.

III. MATERIALS

A. CASING PROGRAM:

<u>CASING TYPE</u>	<u>OH SIZE (IN)</u>	<u>DEPTH (MD) (FT)</u>	<u>CASING SIZE (IN)</u>	<u>WEIGHT(LB)</u>	<u>GRADE</u>
Surface	12.25"	400'+	9.625"	36#	J-55
Intermediate	8.75"	6,103'	7"	23#	K-55
Prod. Liner	6.125"	5,953' - 10,562'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,953'	4-1/2"	11.6#	N-80

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,700 ft., 2,500 ft., 2,300ft., and 2,000ft. Additionally run 1 turbolizing centralizer on every other joint from 100' below the top of the Kirtland to 100' above the top of the Ojo Alamo, as referenced in Formation Tops in Section I-A.
3. PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + (2) RSI (Sliding Sleeves) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.
4. TIE-BACK CASING: None

C. CEMENTING:

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

1. SURFACE: 10 bbl Fr Water Spacer + 190 sx (222.3 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal (1.17 cu ft./sk, Vol 39.58 Bbls.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600psi. Total Volume: (222.3 cu-ft/190 sx/39.6 Bbls). TOC at Surface.
2. INTERMEDIATE: 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: 850 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1216 cu-ft / 216.5 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (1050 sx / 1461 cu-ft / 260 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
3. PRODUCTION LINER: **STAGE 1:** 10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2:** 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III + 0.5 gal/bbl Musol + 38.75 ppb Barite + 0.5 gal/bbl SEM-7. **STAGE 3:** 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement:** 50 / 50 Poz Premium + 0.2% Versaset + 0.2% Halad -766, Yield 1.43 cu ft/sk, 13.0 ppg, (10 sx / 14.3 cu ft. / 2.5 bbls). **STAGE 5:** 200 sx. Foamed Lead Cement: 50 / 50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.97 cu-ft/sk. 13.0 ppg (200 sx / 394 cu-ft. / 70.2 bbls.). **STAGE 6:** Tail Cement : 100 sx. 50/50 Poz Standard + 0.2% Versaset + 0.05% HALAD-766 + .05% SA-1015, Weight: 13.5 ppg (100 sx / Yield 1.28 cu ft/sk. / 128 cu ft. / 22.8 bbls) **STAGE 7:** Displace w/ +/- 137 bbl Fr Water. Total Cement (310 sx / 536.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,698 ft.

IV. COMPLETION

A. CBL

1. Run CCL for perforating.

B. PRESSURE TEST

1. Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

C. STIMULATION

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

D. RUNNING TUBING

1. Production Tubing: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner point of curve (~5,800' MD).

- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2) NMAC, and 19.15.16.15 B(4) NMAC.

NOTE:

Installation of RSI sleeves at Toe of Lateral.

Proposed Operations:

A 4-1/2" 11.6# N-80 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# K-55 Intermediate casing (set at 6,148 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,998 ft. (MD) +/- 78 degree angle. TOC: +/- 5,698 ft. (MD).

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

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

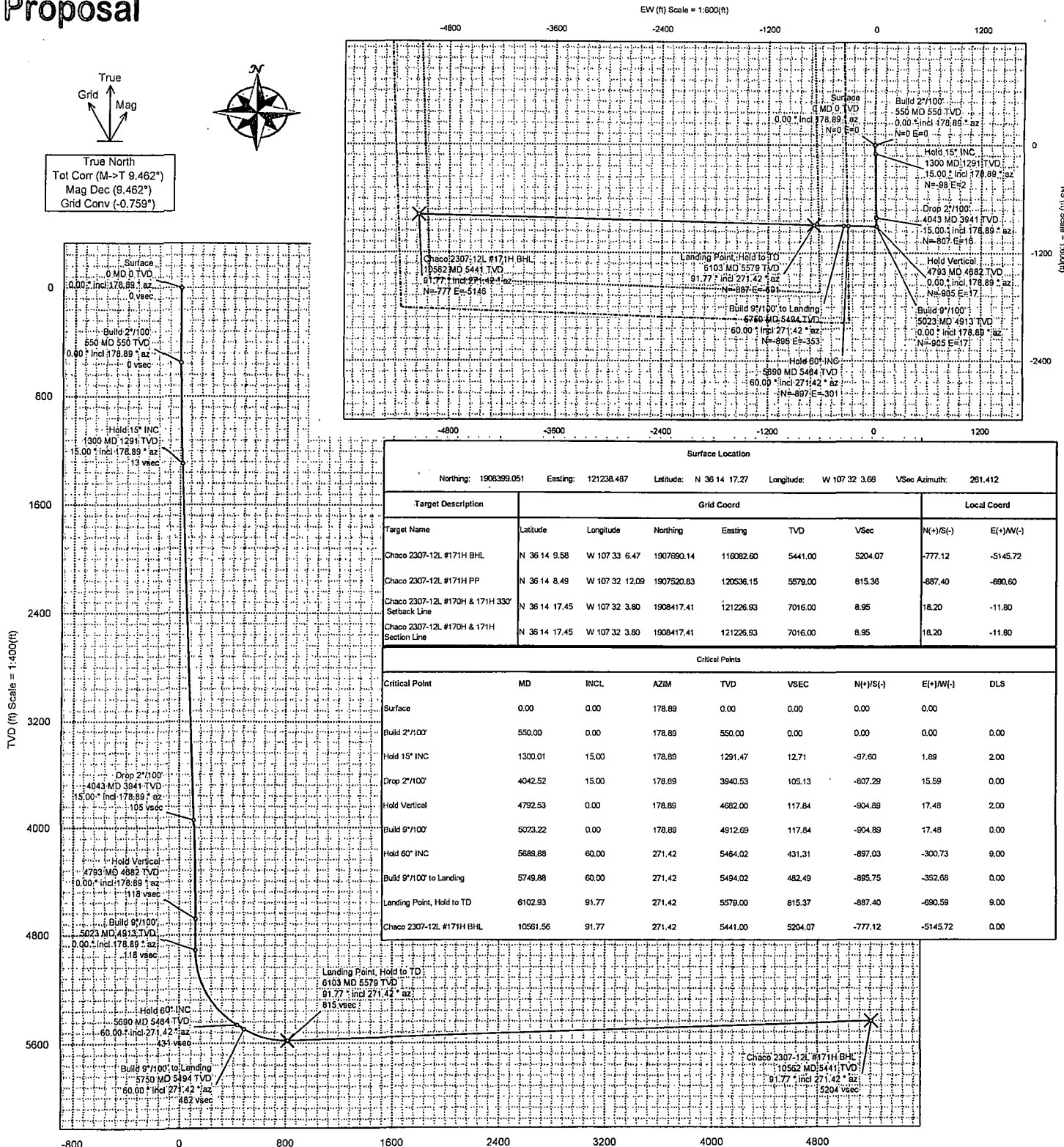
The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

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

Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2307-12L #171H	NM, Rio Arriba (NAD 27 CZ)	Sec 12-23N-7W

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2013 Dip: 63.018° Date: 29-Jan-2014	NAD27 New Mexico State Plane, Central Zone, US Feet	Chaco 2307-12L #171H
MagDec: 9.462° FS: 50150.648nT Gravity FS: 998.491mgm (9.80665 Based)	Lat: N 36 14 17.27 Northing: 1908399.051 Grid Conv: -0.7593°	Slot: Chaco 2307-12L #171H
	Lon: W 107 32 3.66 Easting: 121238.487 Scale Fact: 1.00006417	TVD Ref: RKB(7016ft above MSL)
		Plan: Chaco 2307-12L #171H R0 mdy 29Jan14

Proposal



Surface Location								
Northing: 1908399.051			Easting: 121238.487		Latitude: N 36 14 17.27		Longitude: W 107 32 3.66	
					VSec Azimuth: 261.412			
Target Description		Grid Coord					Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)S(-)	E(+)W(-)
Chaco 2307-12L #171H BHL	N 36 14 9.58	W 107 33 6.47	1907890.14	116082.60	5441.00	5204.07	-777.12	-5145.72
Chaco 2307-12L #171H PP	N 36 14 8.49	W 107 32 12.09	1907520.83	120536.15	5579.00	815.36	-887.40	-690.60
Chaco 2307-12L #170H & 171H 330' Setback Line	N 36 14 17.45	W 107 32 3.80	1908417.41	121226.93	7016.00	8.95	18.20	-11.80
Chaco 2307-12L #170H & 171H Section Line	N 36 14 17.45	W 107 32 3.80	1908417.41	121226.93	7016.00	8.95	18.20	-11.80
Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
Surface	0.00	0.00	178.89	0.00	0.00	0.00	0.00	
Build 2' / 100'	550.00	0.00	178.89	550.00	0.00	0.00	0.00	0.00
Hold 15' INC	1300.01	15.00	178.89	1291.47	12.71	-97.60	1.89	2.00
Drop 2' / 100'	4042.52	15.00	178.89	3940.53	105.13	-807.29	15.59	0.00
Hold Vertical	4792.53	0.00	178.89	4682.00	117.84	-904.89	17.48	2.00
Build 9' / 100'	5023.22	0.00	178.89	4912.69	117.84	-904.89	17.48	0.00
Hold 60' INC	5689.88	60.00	271.42	5484.02	431.31	-897.03	-300.73	9.00
Build 9' / 100' to Landing	5749.88	60.00	271.42	5494.02	482.49	-895.75	-352.68	0.00
Landing Point, Hold to TD	6102.93	91.77	271.42	5579.00	815.37	-887.40	-690.59	9.00
Chaco 2307-12L #171H BHL	10561.56	91.77	271.42	5441.00	5204.07	-777.12	-5145.72	0.00

Vertical Section (ft) Azim = 261.412° Scale = 1:400(ft) Origin = 0N-S, 0E-W



Chaco 2307-12L #171H R0 mdv 29Jan14 Proposal Geodetic Report



(Def Plan)

Report Date: January 29, 2014 - 10:45 AM
Client: WPX Energy
Field: NM, Rio Arriba (NAD 27 CZ)
Structure / Slot: WPX Sec 12-23N-7W (Chaco 2307-12L #170H & 171H) / Chaco 2307-12L #171H
Well: Chaco 2307-12L #171H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2307-12L #171H R0 mdv 29Jan14
Survey Date: January 29, 2014
Tort / AHD / DDI / ERD Ratio: 121.780 * / 6069.839 ft / 6.146 / 1.088
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 14' 17.26800", W 107° 32' 3.66000"
Location Grid N/E Y/X: N 1908399.051 RUS, E 121238.487 RUS
CRS Grid Convergence Angle: -0.7593 *
Grid Scale Factor: 1.00006417
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 261.412 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7016.000 ft above MSL
Seabed / Ground Elevation: 7002.000 ft above MSL
Magnetic Declination: 9.462 *
Total Gravity Field Strength: 998.4910mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 50150.648 nT
Magnetic Dip Angle: 63.018 *
Declination Date: January 29, 2014
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North->True North: 9.4625 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100m)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	178.89	0.00	0.00	0.00	0.00	N/A	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
Build 2"/100'	100.00	0.00	178.89	100.00	0.00	0.00	0.00	0.00	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
	200.00	0.00	178.89	200.00	0.00	0.00	0.00	0.00	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
	300.00	0.00	178.89	300.00	0.00	0.00	0.00	0.00	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
	400.00	0.00	178.89	400.00	0.00	0.00	0.00	0.00	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
	500.00	0.00	178.89	500.00	0.00	0.00	0.00	0.00	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
	550.00	0.00	178.89	550.00	0.00	0.00	0.00	0.00	1908399.05	121238.49	N 36 14 17.27	W 107 32 3.66
	600.00	1.00	178.89	600.00	0.06	-0.44	0.01	2.00	1908398.61	121238.49	N 36 14 17.26	W 107 32 3.66
	700.00	3.00	178.89	699.93	0.51	-3.93	0.08	2.00	1908395.13	121238.51	N 36 14 17.23	W 107 32 3.66
	800.00	5.00	178.89	799.68	1.42	-10.90	0.21	2.00	1908388.15	121238.55	N 36 14 17.16	W 107 32 3.66
	900.00	7.00	178.89	899.13	2.78	-21.35	0.41	2.00	1908377.70	121238.62	N 36 14 17.06	W 107 32 3.65
Hold 15° INC	1000.00	9.00	178.89	998.15	4.59	-35.26	0.68	2.00	1908363.78	121238.70	N 36 14 16.92	W 107 32 3.65
	1100.00	11.00	178.89	1096.63	8.85	-52.62	1.02	2.00	1908346.41	121238.81	N 36 14 16.75	W 107 32 3.65
	1200.00	13.00	178.89	1194.44	9.56	-73.41	1.42	2.00	1908325.62	121238.93	N 36 14 16.54	W 107 32 3.64
	1300.01	15.00	178.89	1291.47	12.71	-97.60	1.89	2.00	1908301.43	121239.08	N 36 14 16.30	W 107 32 3.64
	1400.00	15.00	178.89	1388.05	16.08	-123.47	2.39	0.00	1908275.55	121239.24	N 36 14 16.05	W 107 32 3.63
	1500.00	15.00	178.89	1484.65	19.45	-149.35	2.89	0.00	1908249.66	121239.39	N 36 14 15.79	W 107 32 3.62
	1600.00	15.00	178.89	1581.24	22.82	-175.23	3.38	0.00	1908223.78	121239.55	N 36 14 15.54	W 107 32 3.62
	1700.00	15.00	178.89	1677.83	26.19	-201.11	3.88	0.00	1908197.90	121239.71	N 36 14 15.28	W 107 32 3.61
	1800.00	15.00	178.89	1774.42	29.56	-226.98	4.38	0.00	1908172.01	121239.86	N 36 14 15.02	W 107 32 3.61
	1900.00	15.00	178.89	1871.02	32.93	-252.86	4.88	0.00	1908146.13	121240.02	N 36 14 14.77	W 107 32 3.60
	2000.00	15.00	178.89	1967.61	36.30	-278.74	5.38	0.00	1908120.25	121240.18	N 36 14 14.51	W 107 32 3.59
	2100.00	15.00	178.89	2064.20	39.67	-304.62	5.88	0.00	1908094.36	121240.33	N 36 14 14.26	W 107 32 3.59
	2200.00	15.00	178.89	2160.79	43.04	-330.49	6.38	0.00	1908068.48	121240.49	N 36 14 14.00	W 107 32 3.58
	2300.00	15.00	178.89	2257.39	46.41	-356.37	6.88	0.00	1908042.60	121240.65	N 36 14 13.74	W 107 32 3.58
	2400.00	15.00	178.89	2353.98	49.78	-382.25	7.38	0.00	1908016.71	121240.80	N 36 14 13.49	W 107 32 3.57
	2500.00	15.00	178.89	2450.57	53.15	-408.13	7.88	0.00	1907990.83	121240.96	N 36 14 13.23	W 107 32 3.56
	2600.00	15.00	178.89	2547.16	56.52	-434.00	8.38	0.00	1907964.95	121241.12	N 36 14 12.98	W 107 32 3.56
	2700.00	15.00	178.89	2643.76	59.89	-459.88	8.88	0.00	1907939.06	121241.28	N 36 14 12.72	W 107 32 3.55
	2800.00	15.00	178.89	2740.35	63.26	-485.76	9.38	0.00	1907913.18	121241.43	N 36 14 12.46	W 107 32 3.55
	2900.00	15.00	178.89	2836.94	66.63	-511.64	9.88	0.00	1907887.30	121241.59	N 36 14 12.21	W 107 32 3.54
	3000.00	15.00	178.89	2933.53	70.00	-537.51	10.38	0.00	1907861.41	121241.75	N 36 14 11.95	W 107 32 3.53
	3100.00	15.00	178.89	3030.13	73.37	-563.39	10.88	0.00	1907835.53	121241.90	N 36 14 11.70	W 107 32 3.53
	3200.00	15.00	178.89	3126.72	76.74	-589.27	11.38	0.00	1907809.65	121242.06	N 36 14 11.44	W 107 32 3.52
	3300.00	15.00	178.89	3223.31	80.11	-615.15	11.88	0.00	1907783.76	121242.22	N 36 14 11.18	W 107 32 3.51
	3400.00	15.00	178.89	3319.90	83.48	-641.02	12.38	0.00	1907757.88	121242.37	N 36 14 10.93	W 107 32 3.51
	3500.00	15.00	178.89	3416.50	86.85	-666.90	12.88	0.00	1907732.00	121242.53	N 36 14 10.67	W 107 32 3.50
	3600.00	15.00	178.89	3513.09	90.22	-692.78	13.38	0.00	1907706.11	121242.69	N 36 14 10.42	W 107 32 3.50
	3700.00	15.00	178.89	3609.68	93.59	-718.66	13.88	0.00	1907680.23	121242.84	N 36 14 10.16	W 107 32 3.49
	3800.00	15.00	178.89	3706.27	96.96	-744.53	14.38	0.00	1907654.35	121243.00	N 36 14 9.91	W 107 32 3.48
	3900.00	15.00	178.89	3802.87	100.33	-770.41	14.88	0.00	1907628.46	121243.16	N 36 14 9.65	W 107 32 3.48
4000.00	15.00	178.89	3899.46	103.70	-796.29	15.38	0.00	1907602.58	121243.32	N 36 14 9.39	W 107 32 3.47	
Drop 2"/100'	4042.52	15.00	178.89	3940.53	105.13	-807.29	15.59	0.00	1907591.58	121243.38	N 36 14 9.28	W 107 32 3.47
4100.00	13.85	178.89	3996.20	107.00	-821.61	15.87	2.00	1907577.25	121243.47	N 36 14 9.14	W 107 32 3.47	
4200.00	11.85	178.89	4093.69	109.89	-843.84	16.30	2.00	1907555.01	121243.60	N 36 14 8.92	W 107 32 3.46	
4300.00	9.85	178.89	4191.89	112.34	-862.66	16.66	2.00	1907538.19	121243.72	N 36 14 8.74	W 107 32 3.46	
4400.00	7.85	178.89	4290.70	114.35	-878.05	16.96	2.00	1907520.80	121243.81	N 36 14 8.59	W 107 32 3.45	
4500.00	5.85	178.89	4389.98	115.90	-889.97	17.19	2.00	1907508.88	121243.88	N 36 14 8.47	W 107 32 3.45	
4600.00	3.85	178.89	4489.62	117.00	-898.42	17.36	2.00	1907500.42	121243.93	N 36 14 8.38	W 107 32 3.45	
4700.00	1.85	178.89	4589.49	117.65	-903.40	17.45	2.00	1907495.45	121243.96	N 36 14 8.33	W 107 32 3.45	
Hold Vertical	4792.53	0.00	178.89	4682.00	117.84	-904.89	17.48	2.00	1907493.95	121243.97	N 36 14 8.32	W 107 32 3.45
4800.00	0.00	178.89	4689.47	117.84	-904.89	17.48	0.00	1907493.95	121243.97	N 36 14 8.32	W 107 32 3.45	
4900.00	0.00	178.89	4789.47	117.84	-904.89	17.48	0.00	1907493.95	121243.97	N 36 14 8.32	W 107 32 3.45	
5000.00	0.00	178.89	4889.47	117.84	-904.89	17.48	0.00	1907493.95	121243.97	N 36 14 8.32	W 107 32 3.45	
Build 9"/100'	5023.22	0.00	178.89	4912.69	117.84	-904.89	17.48	0.00	1907493.95	121243.97	N 36 14 8.32	W 107 32 3.45
5100.00	6.91	271.42	4989.29	122.40	-904.78	12.86	9.00	1907484.13	121239.35	N 36 14 8.32	W 107 32 3.50	
5200.00	15.91	271.42	5087.21	141.86	-904.29	-6.90	9.00	1907484.88	121219.60	N 36 14 8.33	W 107 32 3.74	
5300.00	24.91	271.42	5180.83	176.17	-903.43	-41.73	9.00	1907486.20	121184.79	N 36 14 8.33	W 107 32 4.17	
5400.00	33.91	271.42	5267.86	224.48	-902.22	-90.77	9.00	1907498.06	121135.76	N 36 14 8.35	W 107 32 4.77	
5500.00	42.91	271.42	5346.13	285.60	-900.88	-152.81	9.00	1907500.42	121073.74	N 36 14 8.36	W 107 32 5.53	
5600.00	51.91	271.42	5413.74	358.03	-898.87	-226.34	9.00	1907503.21	121000.24	N 36 14 8.38	W 107 32 6.42	
Hold 60° INC	5689.88	60.00	271.42	5464.02	431.31	-897.03	-300.73	9.00	1907506.03	120925.87	N 36 14 8.40	W 107 32 7.33
5700.00	60.00	271.42	5469.08	439.94	-896.81	-309.49	0.00	1907506.36	120917.12	N 36 14 8.40	W 107 32 7.44	
Build 9"/100' to Landing	5749.88	60.00	271.42	5494.02	482.49	-895.75	-352.68	0.00	1907508.00	120873.95	N 36 14 8.41	W 107 32 7.96
5800.00	64.51	271.42	5517.34	526.15	-894.65	-397.01	9.00	1907509.68	120829.83	N 36 14 8.42	W 107 32 8.51	
5900.00	73.51	271.42	5553.13	618.00	-892.35	-490.25	9.00	1907513.22	120736.43	N 36 14 8.44	W 107 32 9.64	
6000.00	82.51	271.42	5573.88	714.24	-889.94	-587.94	9.00	1907516.93	120638.77	N 36 14 8.47	W 107 32 10.84	
6100.00	91.51	271.42	5579.09	812.48	-887.47	-687.67	9.00	1907520.72	120539.08	N 36 14 8.49	W 107 32 12.05	
Landing Point, Hold to TD	6102.93	91.77	271.42	5579.00	815.37	-887.40	-690.59	9.00	1907520.83	120536.15	N 36 14 8.49	W 107 32 12.09
6200.00	91.77	271.42	5576.00	910.91	-885.00	-787.59	0.00	1907524.51	120439.19	N 36 14 8.52	W 107 32 13.27	
6300.00	91.77	271.42	5572.90	1009.35	-882.54	-887.51	0.00	1907528.30	120339.30	N 36 14 8.54	W 107 32 14.49	
6400.00	91.77	271.42	5569.81	1107.78	-880.07	-987.43	0.00	1907532.09	120239.42	N 36 14 8.56	W 107 32 15.71	
6500.00	91.77	271.42	5566.71	1206.21								

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (%/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6800.00	91.77	271.42	5557.43	1501.51	-870.19	-1387.12	0.00	1907547.27	119839.87	N 36 14 8.66	W 107 32 20.59
	6900.00	91.77	271.42	5554.33	1599.94	-867.72	-1487.04	0.00	1907551.06	119739.99	N 36 14 8.69	W 107 32 21.81
	7000.00	91.77	271.42	5551.23	1698.37	-865.25	-1586.96	0.00	1907554.86	119640.10	N 36 14 8.71	W 107 32 23.03
	7100.00	91.77	271.42	5548.14	1796.81	-862.78	-1686.88	0.00	1907558.65	119540.21	N 36 14 8.74	W 107 32 24.25
	7200.00	91.77	271.42	5545.04	1895.24	-860.31	-1786.80	0.00	1907562.45	119440.33	N 36 14 8.76	W 107 32 25.47
	7300.00	91.77	271.42	5541.95	1993.67	-857.84	-1886.73	0.00	1907566.24	119340.44	N 36 14 8.78	W 107 32 26.69
	7400.00	91.77	271.42	5538.85	2092.10	-855.37	-1986.65	0.00	1907570.04	119240.55	N 36 14 8.81	W 107 32 27.91
	7500.00	91.77	271.42	5535.76	2190.54	-852.89	-2086.57	0.00	1907573.83	119140.67	N 36 14 8.83	W 107 32 29.13
	7600.00	91.77	271.42	5532.66	2288.97	-850.42	-2186.49	0.00	1907577.63	119040.78	N 36 14 8.86	W 107 32 30.35
	7700.00	91.77	271.42	5529.57	2387.40	-847.95	-2286.41	0.00	1907581.42	118940.90	N 36 14 8.88	W 107 32 31.57
	7800.00	91.77	271.42	5526.47	2485.83	-845.48	-2386.33	0.00	1907585.22	118841.01	N 36 14 8.91	W 107 32 32.79
	7900.00	91.77	271.42	5523.38	2584.26	-843.01	-2486.25	0.00	1907589.02	118741.12	N 36 14 8.93	W 107 32 34.01
	8000.00	91.77	271.42	5520.28	2682.70	-840.53	-2586.18	0.00	1907592.81	118641.24	N 36 14 8.95	W 107 32 35.23
	8100.00	91.77	271.42	5517.19	2781.13	-838.06	-2686.10	0.00	1907596.61	118541.35	N 36 14 8.98	W 107 32 36.45
	8200.00	91.77	271.42	5514.09	2879.56	-835.59	-2786.02	0.00	1907600.41	118441.47	N 36 14 9.00	W 107 32 37.67
	8300.00	91.77	271.42	5510.99	2977.99	-833.12	-2885.94	0.00	1907604.20	118341.58	N 36 14 9.03	W 107 32 38.89
	8400.00	91.77	271.42	5507.90	3076.42	-830.64	-2985.86	0.00	1907608.00	118241.69	N 36 14 9.05	W 107 32 40.11
	8500.00	91.77	271.42	5504.80	3174.85	-828.17	-3085.78	0.00	1907611.80	118141.81	N 36 14 9.08	W 107 32 41.33
	8600.00	91.77	271.42	5501.71	3273.29	-825.70	-3185.70	0.00	1907615.60	118041.92	N 36 14 9.10	W 107 32 42.54
	8700.00	91.77	271.42	5498.61	3371.72	-823.22	-3285.63	0.00	1907619.40	117942.03	N 36 14 9.13	W 107 32 43.76
	8800.00	91.77	271.42	5495.52	3470.15	-820.75	-3385.55	0.00	1907623.19	117842.15	N 36 14 9.15	W 107 32 44.98
	8900.00	91.77	271.42	5492.42	3568.58	-818.27	-3485.47	0.00	1907626.99	117742.26	N 36 14 9.17	W 107 32 46.20
	9000.00	91.77	271.42	5489.33	3667.01	-815.80	-3585.39	0.00	1907630.79	117642.38	N 36 14 9.20	W 107 32 47.42
	9100.00	91.77	271.42	5486.23	3765.44	-813.32	-3685.31	0.00	1907634.59	117542.49	N 36 14 9.22	W 107 32 48.64
	9200.00	91.77	271.42	5483.14	3863.87	-810.85	-3785.23	0.00	1907638.39	117442.60	N 36 14 9.25	W 107 32 49.86
	9300.00	91.77	271.42	5480.04	3962.31	-808.37	-3885.15	0.00	1907642.19	117342.72	N 36 14 9.27	W 107 32 51.08
	9400.00	91.77	271.42	5476.95	4060.74	-805.90	-3985.08	0.00	1907645.99	117242.83	N 36 14 9.30	W 107 32 52.30
	9500.00	91.77	271.42	5473.85	4159.17	-803.42	-4085.00	0.00	1907649.79	117142.95	N 36 14 9.32	W 107 32 53.52
	9600.00	91.77	271.42	5470.76	4257.60	-800.94	-4184.92	0.00	1907653.59	117043.06	N 36 14 9.34	W 107 32 54.74
	9700.00	91.77	271.42	5467.66	4356.03	-798.47	-4284.84	0.00	1907657.39	116943.17	N 36 14 9.37	W 107 32 55.96
	9800.00	91.77	271.42	5464.57	4454.46	-795.99	-4384.76	0.00	1907661.19	116843.29	N 36 14 9.39	W 107 32 57.18
	9900.00	91.77	271.42	5461.47	4552.89	-793.51	-4484.68	0.00	1907664.99	116743.40	N 36 14 9.42	W 107 32 58.40
	10000.00	91.77	271.42	5458.38	4651.33	-791.04	-4584.60	0.00	1907668.79	116643.52	N 36 14 9.44	W 107 32 59.62
	10100.00	91.77	271.42	5455.28	4749.76	-788.56	-4684.53	0.00	1907672.60	116543.63	N 36 14 9.47	W 107 33 0.84
	10200.00	91.77	271.42	5452.19	4848.19	-786.08	-4784.45	0.00	1907676.40	116443.74	N 36 14 9.49	W 107 33 2.06
	10300.00	91.77	271.42	5449.09	4946.62	-783.61	-4884.37	0.00	1907680.20	116343.86	N 36 14 9.51	W 107 33 3.28
	10400.00	91.77	271.42	5446.00	5045.05	-781.13	-4984.29	0.00	1907684.00	116243.97	N 36 14 9.54	W 107 33 4.50
	10500.00	91.77	271.42	5442.91	5143.48	-778.65	-5084.21	0.00	1907687.80	116144.09	N 36 14 9.56	W 107 33 5.72
Chaco 2307-12L #171H BHL	10561.56	91.77	271.42	5441.00	5204.07	-777.12	-5145.72	0.00	1907690.14	116082.60	N 36 14 9.58	W 107 33 6.47

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 2307-12L #171H R0 mdy 29Jan14
	1	14.000	10561.557	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2307-12L #171H R0 mdy 29Jan14

1. INTRODUCTION

WPX Energy Production, LLC (WPX) is providing this Surface Use Plan of Operations (SUPO)/Plan of Development (POD) to the Bureau of Land Management – Farmington Field Office (BLM-FFO), per Onshore Oil and Gas Order No. 1, 43 Code of Federal Regulations (CFR) 2804.12, 43 CFR 2884.11, BLM Manual Section 2804 (Applying for Federal Land Policy and Management Act [FLPMA] Grants), and BLM FLPMA ROW Manual Section 2884 (Applying for a Mineral Leasing Act Grant or a Temporary Use Permit).

The Chaco 2307-12L No. 170H (170H)/Chaco 2307-12L No. 171H (171H) project involves two wells and one associated well pad and access road. If the project is approved by the BLM, the 170H well, 171H well, and 170H/171H twinned well pad will be permitted via Applications for Permits to Drill (APDs). The access road associated with the project will be permitted via a Right-of-Way (ROW) Grant. Therefore, this document will serve as a SUPO for the APD and as a POD for the ROW Grant application.

A pre-disturbance site visit for the 171H project was held with the BLM-FFO, WPX, and an environmental consultant (Nelson Consulting, Inc. [NCI]) on December 18, 2012. A pre-disturbance site visit for the 170H project was held with the same parties on August 14, 2013.

In addition to the best management practices (BMPs) provided below and in the 170H/171H Surface Reclamation Plan (Reclamation Plan; Appendix A), general Conditions of Approval will be followed, if any are attached to the APDs and/or ROW Grant.

2. PROJECT LOCATION AND EXISTING ROADS

The proposed 170H/171H well pad is located approximately 50.0 road miles south-southeast of the town of Bloomfield, New Mexico. To access the proposed well pad from the town of Bloomfield, head south from the United States (U.S.) Highway 550-U.S. Highway 64 intersection for approximately 49.0 miles, turn left onto County Road 378 for approximately 1.2 miles, and turn right to follow an unnamed, existing road for approximately 0.5 mile until reaching the proposed access road. The access route to the proposed project location from the U.S. Highway 550-County Road 378 intersection is depicted on Figure 1 (Appendix B) and on the construction plats provided in the APD permit packages.

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. WPX will upgrade an existing 745-foot-long existing road, as required by the BLM-FFO, unless this road has already been upgraded as part of WPX's Chaco 2307-12E Nos. 168H/169H project. WPX will upgrade existing non-County Roads leading to the project site, if required by the BLM-FFO. 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

An approximately 1,360-foot-long access road will be needed to access the proposed well pad. Approximately 970 feet of this road will follow an existing two-track road and pipeline right-of-way. The proposed access road is depicted on Figures 1 and 2 in Appendix B and on the construction plats provided in the APD and ROW Grant permit packages.

The proposed access road (a resource road) will travel southward from the southwestern edge of WPX's existing Chaco 2307-12E Nos. 168H/169H well pad. The proposed access road will enter the proposed well pad at the northwestern side of the pad (near Corner 3). The all-weather driving surface will be 14 feet wide with turnouts, as necessary, and will be crowned with a surface material (sandstone), if economically available. The road grade will be 0 to 8 percent. The proposed access road will be built up 18 to 24 inches and designed following the Basic Design Requirements for Constructed Roads from the

- Blanco Trading Post: WR711

The water hauler(s) will access the well pad via the roads described in Sections 2 (Project Location and Existing Roads) and 3 (New or Reconstructed Access Roads), above.

7. WELL PAD CONSTRUCTION MATERIAL

Excavated materials from the cuts will be used on the fill portion of the location to level the proposed well pad. Up to 5 feet of cut and 4 feet of fill will be needed to create a level well pad. Construction plans for the proposed project are provided in the APD permit packages.

No additional materials will be required for construction of the proposed location.

8. METHODS FOR HANDLING WASTE DISPOSAL

✓ Drilling operations will utilize a closed-loop system. Drilling of the horizontal lateral may be done with oil-based mud. All oil-based mud cuttings will be hauled to a commercial disposal facility or land farm.

A 30-mil reinforced liner will be placed under the drill rig mats and all drilling machinery, as shown on Figure 3 (Appendix B). This area will be enclosed by a containment berm and ditches, which will drain to sump areas for spill prevention and control. The containment berm will be ramped to allow access to the solids control area.

WPX will follow New Mexico Oil Division "Pit Rule" guidelines and Onshore Order No. 1 regarding the placement, operation, and closure of any reserve pits or closed-loop systems. No blow pit will be used.

As stated in the Reclamation Plan (Appendix A), if drilling has not been initiated on the well pad within 120 days of the well pad being constructed, WPX will submit a site-stabilization plan to the BLM-FFO.

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.

Portable toilets will be provided and maintained during drilling and completion operations.

9. ANCILLARY FACILITIES

A natural gas pipeline will be permitted and constructed at a later date.

During the pre-disturbance site visit, the following staging areas were identified for the project:

- WPX's active Chaco 2307-12E Nos. 168H/169H well pad, located at the northern extent of the proposed access road. The well pad and construction zone are 4.5 acres; of this, 1.0 acre makes up the working area.
- Range Production Company's reclaimed Federal 12 No. 1 well pad, located approximately 0.2 mile northeast of the northern extent of the proposed access road. The well pad footprint measures approximately 1.8 acres (estimated from an aerial photo).
- Elm Ridge Exploration Company LLC's Mancos Compressor Station, located approximately 0.3 mile northwest of the northern extent of the proposed access road. The disturbance associated with this compressor station encompasses approximately 3.3 acres; of this, approximately 1.5 acres appears to be unvegetated and active (estimated from an aerial photo).

