

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: 8/19/14

Well information;

Operator WPX, Well Name and Number Chaco 2306-08L #269H

API# 30-039-31277, Section 8, Township 23 NS, Range 6 EW

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.

Charles Hernandez
NMOCD Approved by Signature

9-5-2014
Date JB

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

NMSF-078359

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

NMNM132829

8. Lease Name and Well No.

Chaco 2306-08L #269H

9. API Well No.

38-039-31277

10. Field and Pool, or Exploratory

Counselors Gallup-Dakota

11. Sec., T., R., M., or Blk. and Survey or Area

Sur: Section 8, T23N, R6W

BHL: Section 8, T23N, R6W

12. County or Parish

Rio Arriba

13. State

NM

1a. Type of Work: ☒ DRILL ☐ REENTER

AUG 19 2014

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) 333-1822

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

At surface 1455' FSL & 220' FWL, sec 8, T23N, R6W

At proposed prod. zone 220' FSL & 230' FEL, sec 8 T23N, R6W

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

approximately 4 miles east of Lybrook, New Mexico

15. Distance from proposed*

location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 220'

16. No. of Acres in lease

200.246169

17. Spacing Unit dedicated to this well

2381.69 acres 200.00 acres

18. Distance from proposed location*

to nearest well, drilling, completed, applied for, on this lease, ft. 22'

19. Proposed Depth

11,183' MD / 5,425' TVD

20. BLM/BIA Bond No. on file

UTB000178

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

6832' GR

22. Approximate date work will start*

October 1, 2014

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)

Date

Heather Riley

8/19/14

Title

Regulatory Team Lead

Approved by (Signature)

Name (Printed/Typed)

Date

Title

Office

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 Counselors Gallup-Dakota 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. The road and location are on lease.

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

The well pad surface is under jurisdiction of the BLM and is co-located with the Chaco 2306-08L #199H, 200H and 268H. BLM'S APPROVAL OR ACCEPTANCE OF THIS DRILLING OPERATIONS ACTION DOES NOT RELIEVE THE LESSEE AND AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED OPERATOR FROM OBTAINING ANY OTHER GENERAL REQUIREMENTS AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

A 124' of new access road will be required for this well site.

An approximate 375' pipeline access is included in this application

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

NMOCDA

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-5161 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
RECEIVED

AUG 19 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31277	*Pool Code 13379	*Pool Name COUNSELORS GALLUP-DAKOTA
*Property Code 313513	*Property Name CHACO 2306-08L	*Well Number 269H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6832'

10 Surface Location

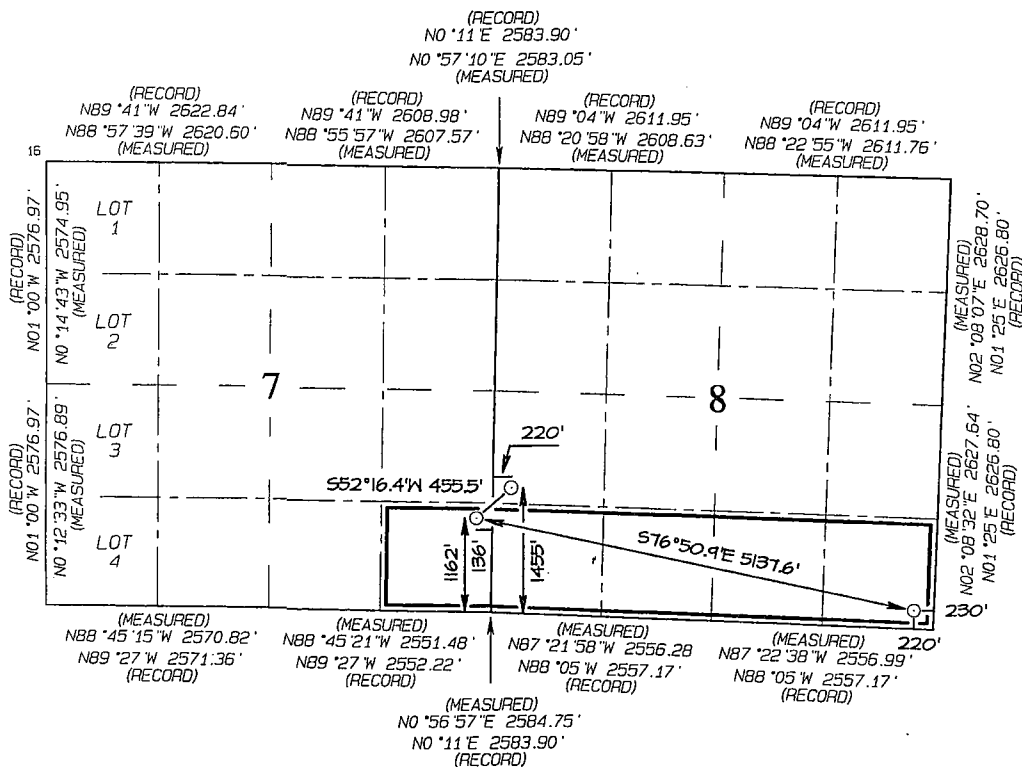
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	23N	6W		1455	SOUTH	220	WEST	RIO ARriba

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
P	8	23N	6W		220	SOUTH	230	EAST	RIO ARriba

12 Dedicated Acres 200.0	SE/4 SE/4 - Section 7 S/2 S/2 - Section 8	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



SURFACE LOCATION
1455' FSL 220' FWL
SECTION 8, T23N, R6W
LAT: 36.236189°N
LONG: 107.500048°W
DATUM: NAD1927

LAT: 36.236202°N
LONG: 107.500653°W
DATUM: NAD1983

POINT-OF-ENTRY
1162' FSL 136' FEL
SECTION 7, T23N, R6W
LAT: 36.235410°N
LONG: 107.501257°W
DATUM: NAD1927

LAT: 36.235424°N
LONG: 107.501863°W
DATUM: NAD1983

END-OF-LATERAL
220' FSL 230' FEL
SECTION 8, T23N, R6W
LAT: 36.232376°N
LONG: 107.484247°W
DATUM: NAD1927

LAT: 36.232389°N
LONG: 107.484852°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: *Heather Riley* Date: *8/19/14*
Printed Name: *Heather Riley*
E-mail Address: *heather.riley@wpenergy.com*

18 SURVEYOR CERTIFICATION

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

Date Revised: AUGUST 15, 2014
Date of Survey: MARCH 27, 2014

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

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 19th day of Aug, 2014.

Name Heather Riley

Position Title Regulatory Team Lead

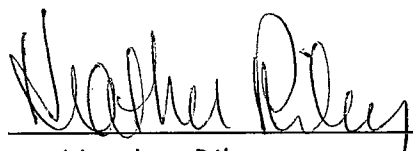
Address P.O. Box 640, Aztec, NM 87410

Telephone (505) 333-1822

Field representative (if not above signatory) _____

E-mail heather.riley@wpxenergy.com

Date: 8/19/14

A handwritten signature in cursive script, appearing to read "Heather Riley", is written over a horizontal line.

Heather Riley
Regulatory Team Lead
WPX Energy Production, LLC

WPXENERGY.

WPX ENERGY

Operations Plan

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

DATE: 8/1/2014 **FIELD:** Lybrook (Gallup)
WELL NAME: Chaco 2306-08L #269H **SURFACE:** BLM
SH Location: NWSW Sec 8 -23N -06W **ELEVATION:** 6832' GR
BH Location: SESE Sec 8 -23N -06W **MINERALS:** BLM
Rio Arriba Co, NM
MEASURED DEPTH: 11,183' **LEASE #:** NMNM 078359

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

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1324	1315	Point Lookout	4335	4187
Kirtland	1651	1626	Mancos	4556	4406
Picture Cliffs	1955	1916	Kickoff Point	4976	4825
Lewis	2074	2029	Top Target	5706	5408
Chacra	2416	2354	Landing Point	6045	5492
Cliff House	3551	3433	Base Target	6045	5492
Menefee	3596	3476			
			TD	11183	5425

- B. **MUD LOGGING PROGRAM:** Mudlogger on location from surface csg to TD.
C. **LOGGING PROGRAM:** LWD GR from surface casing to TD.
D. **NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. **DRILLING**

- A. **MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.
- B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 4,976' (MD) / 4,825' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,045' (MD) / 5,492' (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 +/- 10,183' (MD) / 5,425' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,895 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.

OIL CONS. DIV DIST. 3
AUG 28 2014

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

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	400'+	9.625"	36#	J-55
Intermediate	8.75"	6,045'	7"	23#	K-55
Prod. Liner	6.125"	5,895' - 10,183'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5823'	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 + (2) RSI (Sliding Sleeves) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.
4. TIE-BACK CASING: None

C. CEMENTING:

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

1. SURFACE: 10 bbl Fr Water Spacer + 190 sx (222.3 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal (1.17 cu ft./sk, Vol 39.58 Bbls.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600psi. Total Volume: (222.3 cu-ft/190 sx/39.6 Bbls). TOC at Surface.
2. INTERMEDIATE: 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: 850 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1216 cu-ft / 216.5 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (1050 sx / 1461 cu-ft / 260 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
3. PRODUCTION LINER: **STAGE 1**:10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2**:40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III + 0.5 gal/bbl Musol + 38.75 ppb Barite + 0.5 gal/bbl SEM-7. **STAGE 3**: 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement**: 50 / 50 Poz Premium + 0.2% Versaset + 0.2% Halad -766, Yield 1.43 cu ft/sk, 13.0 ppg, (10 sx / 14.3 cu ft. / 2.5 bbls). **STAGE 5**: 200 sx. Foamed Lead Cement: 50 / 50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.97 cu-ft/sk. 13.0 ppg (200 sx / 394 cu-ft. / 70.2 bbls.). **STAGE 6**: Tail Cement : 100 sx. 50/50 Poz Standard + 0.2% Versaset + 0.05% HALAD-766 + .05% SA-1015, Weight: 13.5 ppg (100 sx / Yield 1.28 cu ft/sk. / 128 cu ft. / 22.8 bbls) **STAGE 7**: Displace w/ +/- 137 bbl Fr Water. Total Cement (536.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,595 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 6,045 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,895 ft. (MD) +/- 78 degree angle. TOC: +/- 5,595 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.

WPX ENERGY

WPX Energy

AUG 28 2014

Rev 0

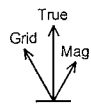
PATHFINDER

A Schlumberger Company

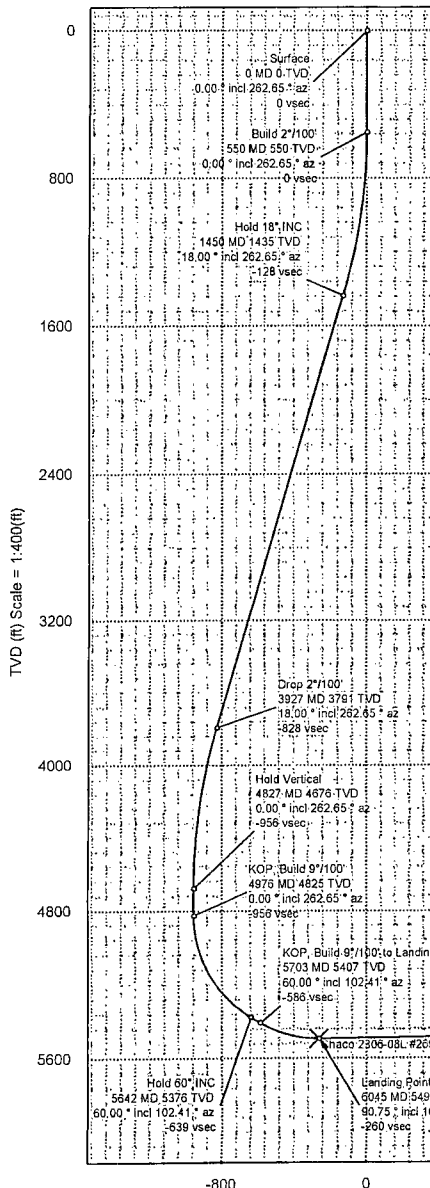
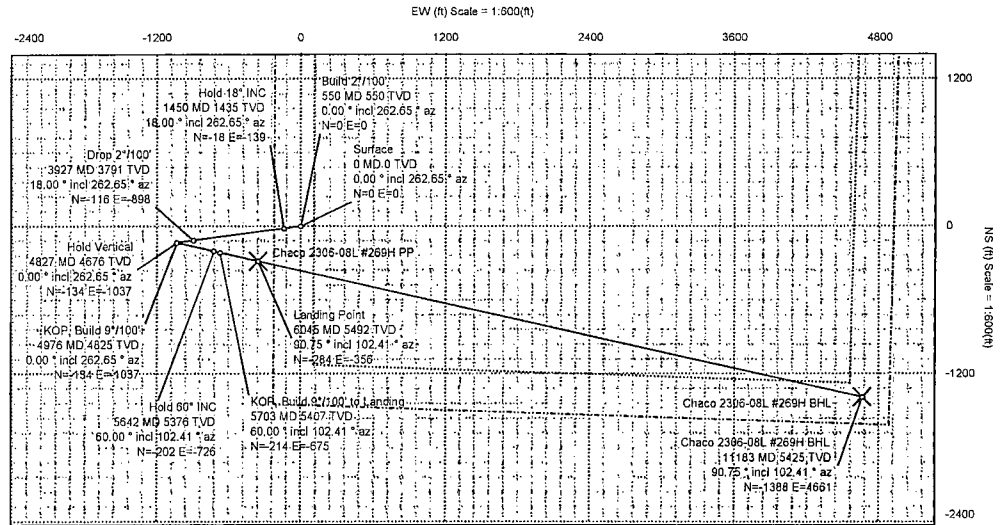
Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2306-08L #269H	NM, Rio Arriba (NAD 27 CZ)	8-23N-6W (Chaco 2306-08L Pad)

Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: BGGM 2014 Dip: 63.021° Date: 18-Jun-2014	NAD27 New Mexico State Plane, Central Zone, US Feet	Slot: Chaco 2306-08L #269H TVD Ref: KB(6846ft above MSL)
MagDec: 9.435° FS: 50101.334m Gravity FS: 998.506mgm (9.80665 Based)	Lat: N 36 14 10.28 Northing: 1907560.55ft Grid Conv: -0.739°	Plan: Chaco 2306-08L #269H R0 mdv 17Jul14
	Lon: W 107 30 0.18 Easting: 131345.12ftUS Scale Fact: 1.00005552	

Proposal



True North
Tot Corr (M->T 9.435°)
Mag Dec (9.435°)
Grid Conv (-0.739°)



Surface Location								
Northing: 1907560.55		Easting: 131345.12		Latitude: N 36 14 10.28		Longitude: W 107 30 0.18		VSec Azimuth: 106.584
Target Description		Grid Coord					Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)S(-)	E(+)W(-)
Chaco 2306-08L #269H BHL	N 36 13 56.55	W 107 29 3.29	1906112.39	135988.20	5425.00	4863.41	-1388.09	4661.12
Chaco 2306-08L #269H PP	N 36 14 7.48	W 107 30 4.53	1907281.37	130985.37	5492.00	-260.29	-283.78	-356.10
Chaco 2306-08L Pad Sec 8	N 36 14 10.10	W 107 30 0.04	1907542.20	131356.68	6846.00	16.50	-18.20	11.80
Chaco 2306-08L Pad Sec 8 330' Setback	N 36 14 10.10	W 107 30 0.04	1907542.20	131356.68	6846.00	16.50	-18.20	11.80
Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
Surface	0.00	0.00	262.65	0.00	0.00	0.00	0.00	
Build 2'100'	550.00	0.00	262.65	550.00	0.00	0.00	0.00	0.00
Hold 18' INC	1450.21	18.00	262.65	1435.47	-128.21	-17.95	-139.12	2.00
Drop 2'100'	3926.53	18.00	262.65	3790.53	-827.79	-115.89	-898.23	0.00
Hold Vertical	4826.74	0.00	262.65	4676.00	-956.00	-133.84	-1037.35	2.00
KOP, Build 9'100'	4975.77	0.00	262.65	4825.03	-956.00	-133.84	-1037.35	0.00
Hold 60' INC	5642.43	60.00	102.41	5376.36	-636.54	-202.28	-726.49	9.00
KOP, Build 9'100' to Landing	5703.24	60.00	102.41	5406.76	-586.02	-213.58	-675.05	0.00
Landing Point	6044.86	90.74	102.41	5492.00	-260.29	-283.78	-356.10	9.00
Chaco 2306-08L #269H BHL	11182.60	90.75	102.41	5425.00	4863.41	-1388.09	4661.12	0.00

Vertical Section (ft) Azim = 106.584° Scale = 1:400(ft) Origin = 0N-S, 0E-W



Chaco 2306-08L #269H R0 mdv 17Jul14 Proposal Geodetic Report

(Def Plan)

Report Date: July 21, 2014 - 02:23 PM
Client: WPX Energy
Field: NM, Rio Arriba (NAD 27 CZ)
Structure / Slot: WPX 8-23N-6W (Chaco 2306-08L Pad) / Chaco 2306-08L #269H
Well: Chaco 2306-08L #269H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2306-08L #269H R0 mdv 17Jul14
Survey Date: June 18, 2014
Tort / AHD / DDI / ERD Ratio: 126.758 ° / 6880.822 ft / 6.249 / 1.253
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 14' 10.28400", W 107° 30' 0.18000"
Location Grid N/E Y/X: N 1907560.550 ftUS, E 131345.120 ftUS
CRS Grid Convergence Angle: -0.7390 °
Grid Scale Factor: 1.00005552
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 106.584 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB
TVD Reference Elevation: 6846.000 ft above MSL
Seabed / Ground Elevation: 6832.000 ft above MSL
Magnetic Declination: 9.435 °
Total Gravity Field Strength: 998.5056mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 50101.334 nT
Magnetic Dip Angle: 63.021 °
Declination Date: June 18, 2014
Magnetic Declination Model: BGGM 2014
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North->True North: 9.4353 °
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	262.65	0.00	0.00	0.00	0.00	N/A	1907560.55	131345.12	N 36 14 10.28	W 107 30 0.18
Build 2"/100'	550.00	0.00	262.65	550.00	0.00	0.00	0.00	0.00	1907560.55	131345.12	N 36 14 10.28	W 107 30 0.18
	600.00	1.00	262.65	600.00	-0.40	-0.06	-0.43	2.00	1907560.50	131344.69	N 36 14 10.28	W 107 30 0.19
	700.00	3.00	262.65	699.93	-3.59	-0.50	-3.89	2.00	1907560.10	131341.22	N 36 14 10.28	W 107 30 0.23
	800.00	5.00	262.65	799.68	-9.96	-1.39	-10.81	2.00	1907559.29	131334.29	N 36 14 10.27	W 107 30 0.31
	900.00	7.00	262.65	899.13	-19.52	-2.73	-21.18	2.00	1907558.09	131323.91	N 36 14 10.26	W 107 30 0.44
	1000.00	9.00	262.65	998.15	-32.24	-4.51	-34.98	2.00	1907556.49	131310.08	N 36 14 10.24	W 107 30 0.61
	1100.00	11.00	262.65	1096.63	-48.11	-6.74	-52.20	2.00	1907554.49	131292.83	N 36 14 10.22	W 107 30 0.82
	1200.00	13.00	262.65	1194.44	-67.11	-9.40	-72.82	2.00	1907552.09	131272.18	N 36 14 10.19	W 107 30 1.07
	1300.00	15.00	262.65	1291.46	-89.22	-12.49	-96.81	2.00	1907549.31	131248.15	N 36 14 10.16	W 107 30 1.36
	1400.00	17.00	262.65	1387.58	-114.41	-16.02	-124.15	2.00	1907546.13	131220.77	N 36 14 10.13	W 107 30 1.70
Hold 18" INC Drop 2"/100'	1450.21	18.00	262.65	1438.47	-128.21	-17.95	-139.12	2.00	1907544.39	131205.77	N 36 14 10.11	W 107 30 1.88
	3926.53	18.00	262.65	3790.53	-827.79	-115.89	-898.23	0.00	1907456.24	130445.42	N 36 14 9.14	W 107 30 11.14
	4000.00	16.53	262.65	3860.69	-847.72	-118.89	-919.86	2.00	1907453.73	130423.76	N 36 14 9.11	W 107 30 11.41
	4100.00	14.53	262.65	3957.03	-872.20	-122.11	-946.42	2.00	1907450.65	130397.15	N 36 14 9.08	W 107 30 11.73
	4200.00	12.53	262.65	4054.25	-893.59	-125.11	-969.63	2.00	1907447.95	130373.90	N 36 14 9.05	W 107 30 12.02
	4300.00	10.53	262.65	4152.22	-911.87	-127.67	-989.46	2.00	1907445.65	130354.04	N 36 14 9.02	W 107 30 12.26
	4400.00	8.53	262.65	4250.84	-927.01	-129.79	-1005.89	2.00	1907443.74	130337.59	N 36 14 9.00	W 107 30 12.46
	4500.00	6.53	262.65	4349.97	-938.99	-131.46	-1018.89	2.00	1907442.23	130324.56	N 36 14 8.98	W 107 30 12.62
	4600.00	4.53	262.65	4449.50	-947.81	-132.70	-1028.46	2.00	1907441.12	130314.98	N 36 14 8.97	W 107 30 12.73
	4700.00	2.53	262.65	4549.30	-953.44	-133.49	-1034.57	2.00	1907440.41	130308.85	N 36 14 8.96	W 107 30 12.81
Hold Vertical KOP, Build 9"/100'	4800.00	0.53	262.65	4649.26	-955.89	-133.83	-1037.23	2.00	1907440.10	130306.19	N 36 14 8.96	W 107 30 12.84
	4826.74	0.00	262.65	4676.00	-956.00	-133.84	-1037.35	2.00	1907440.09	130306.07	N 36 14 8.96	W 107 30 12.84
	4975.77	0.00	262.65	4825.03	-956.00	-133.84	-1037.35	0.00	1907440.09	130306.07	N 36 14 8.96	W 107 30 12.84
	5000.00	2.18	102.41	4849.25	-955.54	-133.94	-1036.90	9.00	1907439.98	130306.52	N 36 14 8.96	W 107 30 12.84
	5100.00	11.18	102.41	4948.47	-943.95	-136.44	-1025.55	9.00	1907437.34	130317.84	N 36 14 8.93	W 107 30 12.70
	5200.00	20.18	102.41	5044.65	-917.02	-142.24	-999.19	9.00	1907431.20	130344.13	N 36 14 8.88	W 107 30 12.38
	5300.00	29.18	102.41	5135.42	-875.42	-151.21	-958.45	9.00	1907421.71	130384.75	N 36 14 8.79	W 107 30 11.88
	5400.00	38.18	102.41	5218.55	-820.17	-163.12	-904.34	9.00	1907409.10	130438.70	N 36 14 8.67	W 107 30 11.22
	5500.00	47.18	102.41	5291.99	-752.63	-177.67	-838.20	9.00	1907393.69	130504.65	N 36 14 8.53	W 107 30 10.41
	5600.00	56.18	102.41	5353.93	-674.46	-194.52	-761.66	9.00	1907375.86	130580.98	N 36 14 8.36	W 107 30 9.48
Hold 60" INC KOP, Build 9"/100' to Landing	5642.43	60.00	102.41	5376.36	-638.54	-202.26	-726.49	9.00	1907367.67	130616.05	N 36 14 8.28	W 107 30 9.05
	5703.24	60.00	102.41	5406.76	-586.02	-213.58	-675.05	0.00	1907355.69	130667.33	N 36 14 8.17	W 107 30 8.42
	5800.00	68.71	102.41	5448.60	-499.11	-232.31	-589.95	9.00	1907335.86	130752.19	N 36 14 7.99	W 107 30 7.38
	5900.00	77.71	102.41	5477.46	-403.72	-252.86	-496.55	9.00	1907314.10	130845.33	N 36 14 7.78	W 107 30 6.24
	6000.00	86.71	102.41	5491.00	-305.01	-274.14	-399.89	9.00	1907291.58	130941.71	N 36 14 7.57	W 107 30 5.06
	6044.86	90.75	102.41	5492.00	-260.29	-283.78	-356.10	9.00	1907281.37	130985.37	N 36 14 7.48	W 107 30 4.53
	6100.00	90.75	102.41	5491.28	-205.30	-295.63	-302.25	0.00	1907268.83	131039.07	N 36 14 7.36	W 107 30 3.87
	6200.00	90.75	102.41	5489.98	-105.57	-317.13	-204.60	0.00	1907246.07	131136.44	N 36 14 7.15	W 107 30 2.68
	6300.00	90.75	102.41	5488.68	-5.85	-338.62	-106.94	0.00	1907223.32	131233.81	N 36 14 6.94	W 107 30 1.49
	6400.00	90.75	102.41	5487.38	93.88	-360.12	-9.29	0.00	1907200.56	131331.19	N 36 14 6.72	W 107 30 0.29
Landing Point	6400.00	90.75	102.41	5486.08	193.61	-381.61	88.37	0.00	1907177.81	131428.56	N 36 14 6.51	W 107 29 59.10
	6500.00	90.75	102.41	5484.78	293.34	-403.11	186.02	0.00	1907155.05	131525.94	N 36 14 6.30	W 107 29 57.91
	6600.00	90.75	102.41	5483.48	393.06	-424.60	283.67	0.00	1907132.30	131623.31	N 36 14 6.09	W 107 29 56.72
	6700.00	90.75	102.41	5482.18	492.79	-446.10	381.33	0.00	1907109.55	131720.88	N 36 14 5.87	W 107 29 55.53
	6800.00	90.75	102.41	5480.88	592.52	-467.59	478.98	0.00	1907086.79	131818.06	N 36 14 5.66	W 107 29 54.33
	6900.00	90.75	102.41	5480.88	692.24	-489.09	576.63	0.00	1907064.04	131915.43	N 36 14 5.45	W 107 29 53.14
	7000.00	90.75	102.41	5479.57	791.97	-510.58	674.29	0.00	1907041.28	132012.80	N 36 14 5.23	W 107 29 51.95
	7100.00	90.75	102.41	5478.27	891.70	-532.08	771.94	0.00	1907018.53	132110.18	N 36 14 5.02	W 107 29 50.76
	7200.00	90.75	102.41	5476.97	991.42	-553.57	869.60	0.00	1906995.78	132207.55	N 36 14 4.81	W 107 29 49.57
	7300.00	90.75	102.41	5475.67	1091.15	-575.07	967.25	0.00	1906973.02	132304.92	N 36 14 4.60	W 107 29 48.37
	7400.00	90.75	102.41	5474.37	1190.88	-596.56	1064.90	0.00	1906950.27	132402.30	N 36 14 4.38	W 107 29 47.18
	7500.00	90.75	102.41	5473.06	1290.60	-618.06	1162.56	0.00	1906927.51	132499.67	N 36 14 4.17	W 107 29 45.99
	7600.00	90.75	102.41	5471.76	1390.33	-639.55	1260.21	0.00	1906904.76	132597.05	N 36 14 3.96	W 107 29 44.80
	7700.00	90.75	102.41	5470.46	1490.06	-661.05	1357.87	0.00	1906882.01	132694.42	N 36 14 3.75	W 107 29 43.61
	7800.00	90.75	102.41	5469.16	1589.78	-682.54	1455.52	0.00	1906859.25	132791.79	N 36 14 3.53	W 107 29 42.41
	7900.00	90.75	102.41	5467.85	1689.51	-704.04	1553.17	0.00	1906836.50	132889.17	N 36 14 3.32	W 107 29 41.22
	8000.00	90.75	102.41	5466.55	1789.24	-725.53	1650.83	0.00	1906813.75	132986.54	N 36 14 3.11	W 107 29 40.03
	8100.00	90.75	102.41	5465.25	1888.96	-747.03	1748.48	0.00	1906790.99	133083.91	N 36 14 2.90	W 107 29 38.84
	8200.00	90.75	102.41	5463.94	1988.69	-768.52	1846.14	0.00	1906768.24	133181.29	N 36 14 2.68	W 107 29 37.65
	8300.00	90.75	102.41	5462.64	2088.42	-790.01	1943.79	0.00	1906745.49	133278.66	N 36 14 2.47	W 107 29 36.45
	8400.00	90.75	102.41	5461.34	2188.14	-811.51	2041.44	0.00	1906722.73	133376.04	N 36 14 2.26	W 107 29 35.26
	8500.00	90.75	102.41	5460.03	2287.87	-833.00	2139.10	0.00	1906699.98	133473.41	N 36 14 2.05	W 107 29 34.07
	8600.00	90.75	102.41	5458.73	2387.60	-854.50	2236.75	0.00	1906677.23	133570.78	N 36 14 1.83	W 107 29 32.88
	8700.00	90.75	102.41	5457.42	2487.32	-875.99	2334.41	0.00	1906654.48	133668.16	N 36 14 1.62	W 107 29 31.69
	8800.00	90.75	102.41	5456.12	2587.05	-897.48	2432.06	0.00	1906631.72	133765.53	N 36 14 1.41	W 107 29 30.50
	8900.00	90.75	102.41	5454.82	2686.78	-918.98	2529.71	0.00	1906608.97	133862.91	N 36 14 1.20	W 107 29 29.30
	9000.00	90.75	102.41	5453.51	2786.50	-940.47	2627.37	0.00	1906586.22	133960.28	N 36 14 0.98	W 107 29 28.11
	9100.00	90.75	102.41	5452.21	2886.23	-961.97	2725.02	0.00	1906563.46	134057.65	N 36 14 0.77	W 107 29 26.92
	9200.00	90.75	102.41	5450.90	2985.96	-983.46	2822.68	0.00	1906540.71	134155.03	N 36 14 0.56	W 107 29 25.73
	9300.00	90.75	102.41	5449.60	3085.68	-1004.95	2920.33	0.00	1906517.96	134252.40	N 36 14 0.34	W 107 29 24.54

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 ° ' ")
	9900.00	90.75	102.41	5441.78	3584.32	-1112.42	3408.60	0.00	1906404.20	134739.27	N 36 13 59.28	W 107 29 18.58
	10000.00	90.75	102.41	5440.46	3684.04	-1133.91	3506.25	0.00	1906381.45	134836.65	N 36 13 59.07	W 107 29 17.38
	10100.00	90.75	102.41	5439.15	3783.77	-1155.41	3603.91	0.00	1906358.69	134934.02	N 36 13 58.86	W 107 29 16.19
	10200.00	90.75	102.41	5437.84	3883.50	-1176.90	3701.56	0.00	1906335.94	135031.39	N 36 13 58.64	W 107 29 15.00
	10300.00	90.75	102.41	5436.54	3983.22	-1198.39	3799.22	0.00	1906313.19	135128.77	N 36 13 58.43	W 107 29 13.81
	10400.00	90.75	102.41	5435.23	4082.95	-1219.89	3896.87	0.00	1906290.44	135226.14	N 36 13 58.22	W 107 29 12.62
	10500.00	90.75	102.41	5433.92	4182.68	-1241.38	3994.53	0.00	1906267.69	135323.52	N 36 13 58.01	W 107 29 11.42
	10600.00	90.75	102.41	5432.62	4282.40	-1262.87	4092.18	0.00	1906244.93	135420.89	N 36 13 57.79	W 107 29 10.23
	10700.00	90.75	102.41	5431.31	4382.13	-1284.36	4189.83	0.00	1906222.18	135518.26	N 36 13 57.58	W 107 29 9.04
	10800.00	90.75	102.41	5430.00	4481.86	-1305.86	4287.49	0.00	1906199.43	135615.64	N 36 13 57.37	W 107 29 7.85
	10900.00	90.75	102.41	5428.70	4581.58	-1327.35	4385.14	0.00	1906176.68	135713.01	N 36 13 57.15	W 107 29 6.66
	11000.00	90.75	102.41	5427.39	4681.31	-1348.84	4482.80	0.00	1906153.93	135810.39	N 36 13 56.94	W 107 29 5.47
	11100.00	90.75	102.41	5426.08	4781.04	-1370.33	4580.45	0.00	1906131.18	135907.76	N 36 13 56.73	W 107 29 4.27
Chaco 2306-08L #269H BHL	11182.60	90.75	102.41	5425.00	4863.41	-1388.09	4661.12	0.00	1906112.38	135988.19	N 36 13 56.55	W 107 29 3.29

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2306-08L #269H R0 mdv 17Jul14
	1	14.000	11182.602	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2306-08L #269H R0 mdv 17Jul14

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 2306-08L Nos. 199H, 200H, 268H and 269H (199H/200H/268H/269H) Applications for Permit to Drill (APDs). This SUPO is provided per Onshore Oil and Gas Order No. 1.

The 199H/200H/268H/269H wells will drill to BLM-managed minerals. All surface features associated with the project will be on surface managed by the BLM-FFO.

The 199H/200H SUPO was submitted to the BLM-FFO in March 2014. The 199H and 200H wells were permitted under BLM-FFO approved APDs (American Petroleum Institute [API] No. 30-039-31247 and API No. 30-039-31246). The associated well-pad, construction zone, access road, and well-connect pipeline corridor were permitted under the approved 199H/200H APDs. As of August 2014, these project features have been constructed. The 268H and 269H wells have been recently added to the project. Therefore, this revised SUPO is being submitted for the project.

The 268H/269H wells will each be permitted under approved APDs.

One staging area, which is located on an inactive well pad, was authorized by an agreement between WPX and Elm Ridge Exploration Company, LLC (Elm Ridge).

A pre-disturbance onsite meeting was held for the project on January 29, 2014. The BLM, WPX, and an environmental consultant (Nelson Consulting, Inc.) attended the meeting.

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

2. PROJECT LOCATION AND DESCRIPTION

2.1. Project Location

The project area is located in Rio Arriba County, New Mexico. The project area is located approximately 43.0 miles south-southeast of the town of Bloomfield, New Mexico. To access the project area from Bloomfield, head south on U.S. Highway 550 from the U.S. Highway 550-U.S. Highway 64 intersection for approximately 51.0 miles, turn left onto an access road for approximately 0.3 mile, turn right onto another access road for 0.1 mile, turn right onto another access road for 0.1 mile, and then turn left onto another access road for 0.3 mile. The 199H/200H/268H/269H access road begins on the left (northern) side of the existing access road. The access route from U.S. Highway 550 is depicted on Figure B.1 (Appendix B) and on the construction plats provided in the APD permit packages.

The legal location of the project area is described in the table below (New Mexico Principal Meridian).

Table 1. Legal Land Description for the Project Area

Facility	Legal Location		
	Quarter-Quarter	Section	Township & Range
Staging Area: Marcus A No. 1 Well Pad	NW ¼ SW ¼	8	Township 23 North, Range 6 West
Access Road/Pipeline Corridor	W ½ SW ¼		
Well Pad			
Construction Zone	NE ¼ SE ¼	7	

After a pipe was welded and coated, a side-boom tractor was used to place the pipe into the trench. Prior to construction commencement, WPX notified the BLM-FFO of additional types of construction equipment to be used.

The soils excavated from the trench were returned to the trench, atop the pipe, and compacted to prevent subsidence. The trench was compacted after approximately 2 feet of fill was placed within the trench and after the ground surface was leveled.

Prior to the well-connect pipelines being placed in service, the pipes were pressure tested.

Pipeline markers were installed along the well-connect pipeline corridor within the line of sight. These markers will not create safety hazards.

Construction plats are provided in the APD permit packages.

9. METHODS FOR HANDLING WASTE DISPOSAL

- ✓ Drilling operations will utilize a closed-loop system. Drilling of the horizontal lateral will be accomplished with water-based mud. All cuttings will be hauled to a commercial disposal facility or land farm. WPX will follow New Mexico Oil Conservation Division "Pit Rule" guidelines and Onshore Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit will be used.

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 has been/will be placed in a metal trash basket. The trash and garbage has been/will be hauled off site and dumped in an approved landfill, as needed. Portable toilets have been/will be provided and maintained during construction, as needed (see Figures B.3 and B.4, Appendix B, for the location of toilets and trash receptacles).

10. ANCILLARY FACILITIES

One previously disturbed staging area is being/will be used; the staging area is described in Section 2.2 (Project Description). During staging, WPX has stayed/will stay within the boundaries of the previously disturbed well pad. During post-construction reclamation, WPX will repair any damage to and reseed the staging area (with the exception of portions of the staging area that the well pad operator prefers to remain unseeded).

11. WELL SITE LAYOUT

The approximate cuts, approximate fills, and orientation for the well pad are depicted on the construction plats in the APD permit packages. The location of drilling equipment, rig orientation, and the location of topsoil or spoil material stockpiles are provided on Figure B.3 (Appendix B). The layout of the completions rigs is indicated on Figure B.4 (Appendix B).

The interim reclamation/long-term disturbance layout is depicted in Figure B.5 (Appendix B) and is described below.

- The following areas (known as the "non-reseed working areas") will remain unreclaimed throughout the lifetime of the project:
 - Production facilities will be located within a 300-by-100-foot (0.7-acre) facility area at the southern end of the well pad.

