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: 7/9/14
Well information;
Operator WPX, Well Name and Number Chaco 2306-07L #181H
API# 30-039-31250, Section 7, Township 23 (N)/S, Range 6 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
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o 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
- o 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. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

Project Area may be altered depending on perforation location

NMOCD Approved by Signature

8-5-14
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

Form 3160-3
(September 2001)

RECEIVED
JUL 09 2014
Farmington Field Office
Bureau of Land Management

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMSF-078362

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

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

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

8. Lease Name and Well No.
Chaco 2306-07L #181H

2. Name of Operator
WPX Energy Production, LLC

9. API Well No.
30-039-31250

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
P.O. Box 640 Aztec, NM 87410	(505) 333-1808	Lybrook Gallup

4. Location of Well *(Report location clearly and in accordance with any State requirements. *)*
At surface L 1979' FSL & 302' FWL, sec 7, T23N, R6W
At proposed prod. zone C 636' FNL & 1745' FWL, sec 12, T23N, R7W

11. Sec., T., R., M., or Blk. and Survey or Area
Section 7, T23N, R6W

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
approximately 2 miles northeast of Lybrook, New Mexico	Rio Arriba County	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 302'	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
	2530.37	200.50 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 22'	19. Proposed Depth	20. BLM/BIA Bond No. on file
	9,742' MD / 5,503' TVD	UTB000178
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
6950' GR	September 1, 2014	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
Larry Higgins	Larry Higgins	7/9/14

Title
Regulatory Specialist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Jy Salyer	Troy Salyers	7/29/2014
Title Petroleum Engineer (Acting AFM)	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)*

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 on lease 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.

This well shares this location with the Chaco 2307-07L #182H (API #30-039-31212) and the Chaco 2306-07L #183H (API #30-039-31191). No additional access road is needed.

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

NMOCD AV

OIL CONS. DIV DIST. 3
JUL 30 2014

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

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

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 9th day of July, 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: 07/09/14

Larry Higgins
Regulatory Spec.
WPX Energy Production, LLC

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

RECEIVED

JUL 09 2014

Farmington Field Office
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-31250	42289	LYBROOK GALLUP

[4] Property Code	[5] Property Name	[6] Well Number
400860	CHACO 2306-07L	181H

[7] OGRID NO.	[8] Operator Name	[9] Elevation
120782	WPX ENERGY PRODUCTION, LLC	6950'

[10] Surface Location

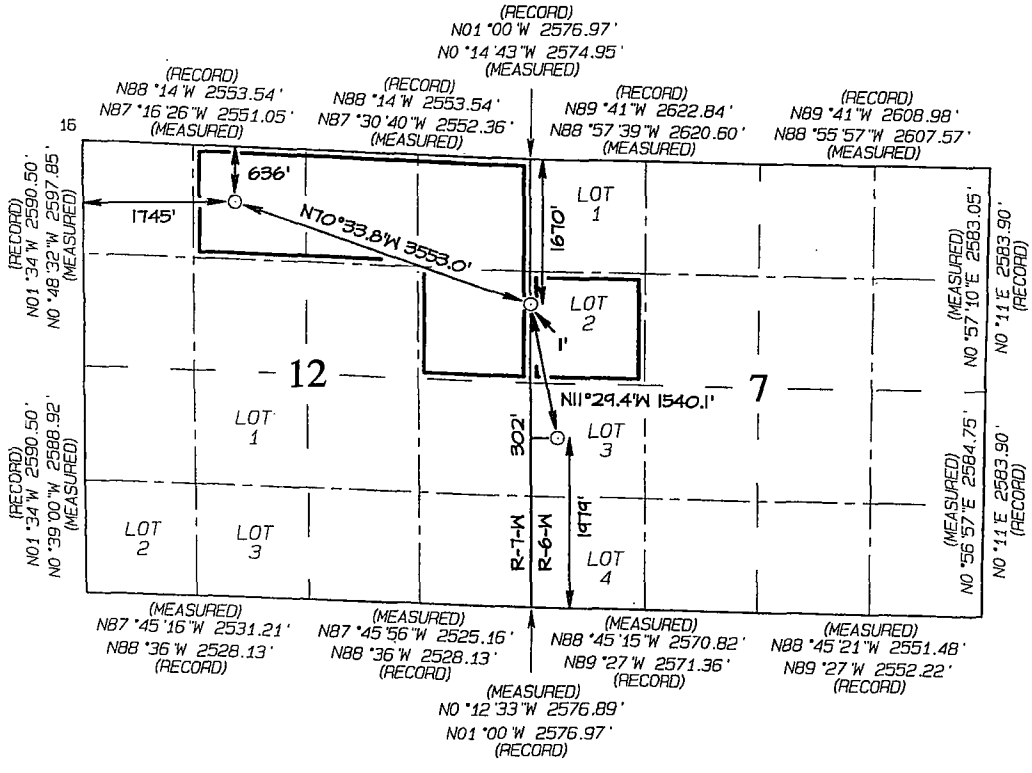
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	7	23N	6W	3	1979	SOUTH	302	WEST	RIO ARRIBA

[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
C	12	23N	7W		636	NORTH	1745	WEST	RIO ARRIBA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
200.50 Acres SW/4 NW/4 (7) N/2 NE/4, SE/4 NE/4, NE/4 NW/4 (12)			

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
636' FNL 1745' FWL
SECTION 12, T23N, R7W
LAT: 36.24503 °N
LONG: 107.52979 °W
DATUM: NAD1927

LAT: 36.24504 °N
LONG: 107.53039 °W
DATUM: NAD1983

POINT-OF-ENTRY
1670' FNL 1' FWL
SECTION 7, T23N, R6W
LAT: 36.24190 °N
LONG: 107.51837 °W
DATUM: NAD1927

LAT: 36.24191 °N
LONG: 107.51898 °W
DATUM: NAD1983

SURFACE LOCATION
1979' FSL 302' FWL
SECTION 7, T23N, R6W
LAT: 36.23777 °N
LONG: 107.51727 °W
DATUM: NAD1927

LAT: 36.23778 °N
LONG: 107.51787 °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 Date 7/8/14

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: JULY 8, 2014
Survey Date: OCTOBER 1, 2012

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPXENERGY.

WPX ENERGY

Operations Plan

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

DATE:	6/27/2014	**FIELD:**	Lybrook (Gallup)
WELL NAME:	**Chaco 2306-07L #181H**	**SURFACE:**	BLM
SH Location:	NWSW Sec 7-23N-6W	**ELEVATION:**	6,950' GR
BH Location:	NENW Sec 12-23N-7W Rio Arriba Co, NM	**MINERALS:**	BLM
MEASURED DEPTH:	**9,742**	**LEASE #:**	NMSF 078362

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name		MD	TVD		Name		MD	TVD
Ojo Alamo		1,578	1,560		Point Lookout		4,409	4,294
Kirtland		1,756	1,732		Mancos		4,632	4,509
Pictured Cliffs		2,047	2,013		**Kickoff Point**		**5,117**	**4,978**
Lewis		2,158	2,120		Target Top		5,832	5,515
Chacra		2,499	2,449		**Landing Point**		**6,188**	**5,597**
Cliff House		3,625	3,537		Target Base		6,188	5,597
Menefee		3,666	3,577					
					TD		**9,742**	**5,503**

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 ¾" Directional Vertical hole, the curve portion of the wellbore. LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes.** Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 5,117' (MD) / 4,978' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,188' (MD) / 5,597' (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 +/- 9,742' (MD) / 5,503' (TVD). Will run 4-1/2 in. Production Liner from +/- 6,038 ft. to TD and cemented. Liner will be tied back to surface w / 4-1/2" Casing for stimulation / testing, then removed from the well.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	400'+	9 5/8	36#	J-55
Intermediate	8.75"	6,188	7	23#	K-55
Prod. Liner	6.125"	6,038' - 9,742'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,846'	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 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).

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 +/- 5,738 ft.

IV. COMPLETION

A. CBL

1. Run CCL for perforating.

B. PRESSURE TEST

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

C. STIMULATION

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

D. RUNNING TUBING

1. *Production Tubing:* Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner point of curve (~5,900' 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 6,188 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 6,038 ft. (MD) +/- 78 degree angle. TOC: +/- 5,738 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

WPXENERGY

Well Name: Chaco 2306-07L #181H
Surface Location: Chaco 2307-07L
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico Central 3002
Ground Elevation: 6950.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	1908201.68262	126274.00538	36.23777	-107.51727	

WELL @ 6964.00usft (Original Well Elev)

T M

Azimuths to True North
Magnetic North: 9.36°

Magnetic Field
Strength: 50176.2snT
Dip Angle: 63.00°
Date: 6/24/2014
Model: IGRF2010

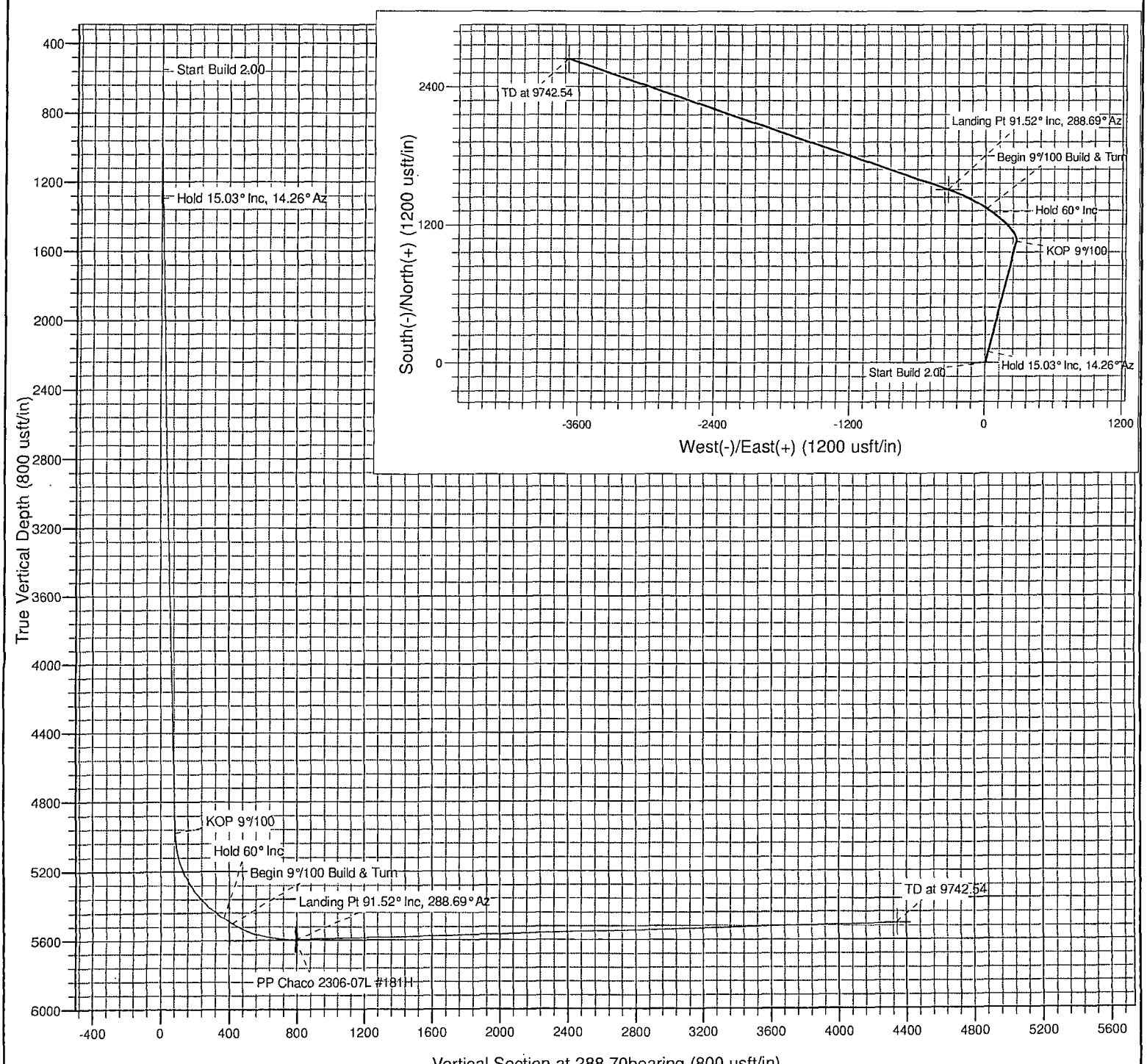
Project: SJ 07-23N-06W
Site: Chaco 2307-07L
Well: Chaco 2306-07L #181H
Design #1 24Jun14 kjs

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
550.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1292.91	1301.50	15.03	14.26	94.98	24.14	7.59	98.00	Hold 15.03° Inc, 14.26° Az
4978.22	5117.35	15.03	14.26	1054.04	267.89	84.21	1087.55	KOP 9°/100
5471.04	5736.01	60.00	305.38	1307.13	51.97	369.88	1432.19	Hold 60° Inc
5501.04	5796.01	60.00	305.38	1337.21	9.60	419.65	1484.15	Begin 9°/100 Build & Turn
5597.00	6188.37	91.52	288.69	1503.73	-325.36	790.32	1859.50	Landing Pt 91.52° Inc, 288.69° Az
5503.03	9741.54	91.52	288.69	2641.80	-3690.03	4342.25	5411.43	TD at 9742.54

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
TD / PBHL Chaco 2306-07L #181H	5503.00	2642.12	-3690.97	1910891.84521	122617.89638	36.24503	-107.52979	Point
- plan hits target center								
PP Chaco 2306-07L #181H	5597.00	1503.08	-325.19	1909708.89000	125968.50291	36.24190	-107.51837	Point
- plan misses target center by 0.55usft at 6187.99usft MD (5597.01 TVD, 1503.60 N, -325.00 E)								



WPXENERGY SM

SAN JUAN BASIN

SJ 07-23N-06W
Chaco 2307-07L
Chaco 2306-07L #181H

Wellbore #1

Plan: Design #1 24Jun14 kjs

Standard Planning Report - Geographic

27 June, 2014

Database:	COMPASS-PICEANCE	**Local Co-ordinate Reference:**	Well Chaco 2306-07L #181H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6964.00usft (Original Well Elev)
Project:	SJ 07-23N-06W	**MD Reference:**	WELL @ 6964.00usft (Original Well Elev)
Site:	Chaco 2307-07L	**North Reference:**	True
Well:	Chaco 2306-07L #181H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jun14 kjs		

Project	SJ 07-23N-06W, Rio Arriba County, NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site	Chaco 2307-07L				
Site Position:		**Northing:**	1,908,201.68261 usft	**Latitude:**	36.23777
From:	Lat/Long	**Easting:**	126,274.00538 usft	**Longitude:**	-107.51727
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	-0.75 °

Well	Chaco 2306-07L #181H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	1,908,201.68261 usft	**Latitude:**	36.23777
	+E/-W	0.00 usft	**Easting:**	126,274.00538 usft	**Longitude:**	-107.51727
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,950.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/24/2014	9.36	63.00	50,176

Design Design #1 24Jun14 kjs

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	288.70

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,301.50	15.03	14.26	1,292.91	94.98	24.14	2.00	2.00	0.00	14.26	
5,117.35	15.03	14.26	4,978.22	1,054.04	267.89	0.00	0.00	0.00	0.00	
5,736.01	60.00	305.38	5,471.05	1,307.13	51.96	9.00	7.27	-11.13	-78.00	
5,796.01	60.00	305.38	5,501.05	1,337.22	9.60	0.00	0.00	0.00	0.00	
6,188.37	91.52	288.69	5,597.00	1,503.73	-325.36	9.00	8.03	-4.25	-29.79	
9,742.54	91.52	288.69	5,503.00	2,642.12	-3,690.97	0.00	0.00	0.00	0.00	TD / PBHL Chaco 23(

Database:	COMPASS-PICEANCE	**Local Co-ordinate Reference:**	Well Chaco 2306-07L #181H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6964.00usft (Original Well Elev)
Project:	SJ 07-23N-06W	**MD Reference:**	WELL @ 6964.00usft (Original Well Elev)
Site:	Chaco 2307-07L	**North Reference:**	True
Well:	Chaco 2306-07L #181H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jun14 kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,908,201.68261	126,274.00538	36.23777	-107.51727
200.00	0.00	0.00	200.00	0.00	0.00	1,908,201.68261	126,274.00538	36.23777	-107.51727
400.00	0.00	0.00	400.00	0.00	0.00	1,908,201.68261	126,274.00538	36.23777	-107.51727
550.00	0.00	0.00	550.00	0.00	0.00	1,908,201.68261	126,274.00538	36.23777	-107.51727
Start Build 2.00									
600.00	1.00	14.26	600.00	0.42	0.11	1,908,202.10405	126,274.11838	36.23777	-107.51727
800.00	5.00	14.26	799.68	10.57	2.69	1,908,212.21209	126,276.82857	36.23780	-107.51726
1,000.00	9.00	14.26	998.15	34.18	8.69	1,908,235.74964	126,283.13952	36.23786	-107.51724
1,200.00	13.00	14.26	1,194.44	71.16	18.09	1,908,272.60202	126,293.02047	36.23797	-107.51721
1,301.50	15.03	14.26	1,292.91	94.98	24.14	1,908,296.34303	126,299.38597	36.23803	-107.51719
Hold 15.03° Inc, 14.26° Az									
1,400.00	15.03	14.26	1,388.04	119.74	30.43	1,908,321.01508	126,306.00110	36.23810	-107.51717
1,600.00	15.03	14.26	1,581.20	170.01	43.21	1,908,371.11061	126,319.43284	36.23824	-107.51713
1,800.00	15.03	14.26	1,774.36	220.27	55.98	1,908,421.20614	126,332.86457	36.23838	-107.51708
2,000.00	15.03	14.26	1,967.52	270.54	68.76	1,908,471.30167	126,346.29631	36.23851	-107.51704
2,200.00	15.03	14.26	2,160.67	320.81	81.53	1,908,521.39719	126,359.72805	36.23865	-107.51700
2,400.00	15.03	14.26	2,353.83	371.08	94.31	1,908,571.49272	126,373.15978	36.23879	-107.51695
2,600.00	15.03	14.26	2,546.99	421.34	107.09	1,908,621.58824	126,386.59152	36.23893	-107.51691
2,800.00	15.03	14.26	2,740.15	471.61	119.86	1,908,671.68377	126,400.02326	36.23907	-107.51687
3,000.00	15.03	14.26	2,933.31	521.88	132.64	1,908,721.77930	126,413.45499	36.23920	-107.51682
3,200.00	15.03	14.26	3,126.46	572.14	145.41	1,908,771.87483	126,426.88673	36.23934	-107.51678
3,400.00	15.03	14.26	3,319.62	622.41	158.19	1,908,821.97036	126,440.31847	36.23948	-107.51674
3,600.00	15.03	14.26	3,512.78	672.68	170.96	1,908,872.06588	126,453.75020	36.23962	-107.51669
3,800.00	15.03	14.26	3,705.94	722.94	183.74	1,908,922.16141	126,467.18194	36.23976	-107.51665
4,000.00	15.03	14.26	3,899.10	773.21	196.51	1,908,972.25694	126,480.61367	36.23989	-107.51661
4,200.00	15.03	14.26	4,092.25	823.48	209.29	1,909,022.35246	126,494.04540	36.24003	-107.51656
4,400.00	15.03	14.26	4,285.41	873.74	222.07	1,909,072.44799	126,507.47714	36.24017	-107.51652
4,600.00	15.03	14.26	4,478.57	924.01	234.84	1,909,122.54352	126,520.90888	36.24031	-107.51648
4,800.00	15.03	14.26	4,671.73	974.28	247.62	1,909,172.63905	126,534.34061	36.24045	-107.51643
5,000.00	15.03	14.26	4,864.89	1,024.54	260.39	1,909,222.73457	126,547.77235	36.24059	-107.51639
5,117.35	15.03	14.26	4,978.22	1,054.04	267.89	1,909,252.12813	126,555.65342	36.24067	-107.51636
KOP 9°/100									
5,200.00	18.07	350.16	5,057.53	1,077.09	268.34	1,909,275.16823	126,556.40543	36.24073	-107.51636
5,400.00	31.90	321.59	5,238.99	1,149.65	229.89	1,909,348.22866	126,518.91419	36.24093	-107.51649
5,600.00	48.38	310.15	5,391.57	1,240.00	139.18	1,909,439.75418	126,429.38437	36.24118	-107.51680
5,736.01	60.00	305.38	5,471.04	1,307.13	51.97	1,909,508.02055	126,343.05944	36.24136	-107.51710
Hold 60° Inc									
5,796.01	60.00	305.38	5,501.04	1,337.21	9.60	1,909,538.65770	126,301.09082	36.24144	-107.51724
Begin 9°/100 Build & Turn									
5,800.00	60.31	305.18	5,503.03	1,339.21	6.77	1,909,540.69324	126,298.29189	36.24145	-107.51725
6,000.00	76.24	296.11	5,576.95	1,432.78	-152.77	1,909,636.33592	126,139.98669	36.24171	-107.51779
6,187.96	91.48	288.70	5,597.01	1,503.60	-324.98	1,909,709.39884	125,968.71829	36.24190	-107.51837
PP Chaco 2306-07L #181H									
6,188.37	91.52	288.69	5,597.00	1,503.73	-325.36	1,909,709.53472	125,968.33329	36.24190	-107.51838
Landing Pt 91.52° Inc, 288.69° Az									
6,200.00	91.52	288.69	5,596.70	1,507.45	-336.38	1,909,713.40349	125,957.36994	36.24191	-107.51841
6,400.00	91.52	288.69	5,591.41	1,571.51	-525.77	1,909,779.93438	125,768.83438	36.24209	-107.51906
6,600.00	91.52	288.69	5,586.12	1,635.57	-715.16	1,909,846.46528	125,580.29882	36.24226	-107.51970
6,800.00	91.52	288.69	5,580.83	1,699.63	-904.55	1,909,912.99618	125,391.76325	36.24244	-107.52034
7,000.00	91.52	288.69	5,575.54	1,763.69	-1,093.93	1,909,979.52707	125,203.22770	36.24262	-107.52098
7,200.00	91.52	288.69	5,570.25	1,827.75	-1,283.32	1,910,046.05797	125,014.69213	36.24279	-107.52162
7,400.00	91.52	288.69	5,564.96	1,891.81	-1,472.71	1,910,112.58887	124,826.15657	36.24297	-107.52227
7,600.00	91.52	288.69	5,559.67	1,955.87	-1,662.10	1,910,179.11976	124,637.62100	36.24314	-107.52291
7,800.00	91.52	288.69	5,554.38	2,019.93	-1,851.49	1,910,245.65066	124,449.08545	36.24332	-107.52355

Database:	COMPASS-PICEANCE	**Local Co-ordinate Reference:**	Well Chaco 2306-07L #181H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6964.00usft (Original Well Elev)
Project:	SJ 07-23N-06W	**MD Reference:**	WELL @ 6964.00usft (Original Well Elev)
Site:	Chaco 2307-07L	**North Reference:**	True
Well:	Chaco 2306-07L #181H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Jun14 kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,000.00	91.52	288.69	5,549.09	2,083.99	-2,040.88	1,910,312.18156	124,260.54988	36.24349	-107.52419
8,200.00	91.52	288.69	5,543.80	2,148.05	-2,230.27	1,910,378.71246	124,072.01432	36.24367	-107.52483
8,400.00	91.52	288.69	5,538.51	2,212.11	-2,419.66	1,910,445.24336	123,883.47876	36.24385	-107.52548
8,600.00	91.52	288.69	5,533.22	2,276.17	-2,609.05	1,910,511.77426	123,694.94320	36.24402	-107.52612
8,800.00	91.52	288.69	5,527.93	2,340.23	-2,798.44	1,910,578.30515	123,506.40763	36.24420	-107.52676
9,000.00	91.52	288.69	5,522.64	2,404.29	-2,987.83	1,910,644.83605	123,317.87206	36.24437	-107.52740
9,200.00	91.52	288.69	5,517.35	2,468.35	-3,177.22	1,910,711.36694	123,129.33651	36.24455	-107.52805
9,400.00	91.52	288.69	5,512.06	2,532.41	-3,366.61	1,910,777.89784	122,940.80094	36.24473	-107.52869
9,600.00	91.52	288.69	5,506.77	2,596.47	-3,556.00	1,910,844.42874	122,752.26538	36.24490	-107.52933
9,741.54	91.52	288.69	5,503.03	2,641.80	-3,690.03	1,910,891.51266	122,618.83876	36.24503	-107.52978
TD at 9742.54									
9,742.54	91.52	288.69	5,503.00	2,642.12	-3,690.97	1,910,891.84521	122,617.89638	36.24503	-107.52979
TD / PBHL Chaco 2306-07L #181H									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD / PBHL Chaco 2306-	0.00	0.00	5,503.00	2,642.12	-3,690.97	1,910,891.84521	122,617.89638	36.24503	-107.52979
- plan hits target center									
- Point									
PP Chaco 2306-07L #18	0.00	0.00	5,597.00	1,503.08	-325.19	1,909,708.89001	125,968.50291	36.24190	-107.51838
- plan misses target center by 0.55usft at 6188.00usft MD (5597.01 TVD, 1503.61 N, -325.01 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
550.00	550.00	0.00	0.00	Start Build 2.00
1,301.50	1,292.91	94.98	24.14	Hold 15.03° Inc, 14.26° Az
5,117.35	4,978.22	1,054.04	267.89	KOP 9°/100
5,736.01	5,471.04	1,307.13	51.97	Hold 60° Inc
5,796.01	5,501.04	1,337.21	9.60	Begin 9°/100 Build & Turn
6,188.37	5,597.00	1,503.73	-325.36	Landing Pt 91.52° Inc, 288.69° Az
9,741.54	5,503.03	2,641.80	-3,690.03	TD at 9742.54

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 2306-07L No. 181H (181H) Application for Permit to Drill (APD). This SUPO is provided per Onshore Oil and Gas Order No. 1.

The 181H oil and natural gas well will be twinned with the Chaco 2306-07L Nos. 182H and 183H (182H/183H) wells. The 183H SUPO was submitted to the BLM-FFO in June 2013. The 182H and 183H SUPO was submitted to the BLM-FFO in January 2014. The 182H and 183H wells and project area have been permitted by BLM-FFO-approved APDs (182H American Petroleum Institute [API] No. 30-039-31212 and 183H API No. 30-039-31191). Therefore, this revised SUPO is being submitted for the addition of the 181H well to the project.

The 182H and 183H wells have not been drilled; however, the previously permitted access road and well pad have been constructed (Post Construction Photos; Appendix A. The constructed access road and well pad will not change with the addition of the 181H well. According to the BLM-FFO, the addition of the 181H well to the project will be approved under a Determination of NEPA [National Environmental Policy Act] Adequacy, and the 181H well will be permitted by a BLM-FFO-approved APD.

A pre-disturbance onsite meeting was held for the permitted 183H project on December 18, 2012. A pre-disturbance onsite meeting was held for the permitted 182H project on September 19, 2013. The BLM, WPX, and an environmental consultant (Nelson Consulting, Inc.) attended both of these pre-disturbance onsite meetings. An onsite meeting was deemed unnecessary by the BLM-FFO for the addition of the 181H well to the previously permitted project area.

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 181H APD.

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 49 miles south-southeast of the town of Bloomfield, New Mexico. To access the project area, head south from the U.S. Highway 550-U.S. Highway 64 intersection for approximately 49 miles, turn left onto County Road 378 for less than 1 mile, turn right to follow an unnamed, existing road for approximately 2 miles, and turn right to follow an unnamed, existing road for approximately 1 mile until reaching the previously permitted 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 181H APD permit package.

The project area is located in the northwestern quarter of the southwestern quarter of Section 7, Township 23 North, Range 6 West (New Mexico Principal Meridian [NMPM]).

The latitude and longitude of the 181H, 182H, and 183H bottom holes and surface holes (wellheads) are provided in the table below.

depicted on Figures B.1 and B.2 in Appendix B and on the construction plats in the 181H APD permit package.

The access road is 188 feet long. The construction corridor was 30 feet wide; the running surface will be 14 feet wide. The driving surface will be crowned with a surfacing material (sandstone), if economically viable. The road will be built up 18 to 24 inches and designed following the Basic Design Requirements for Constructed Roads from *The Gold Book* and BLM Handbook 9113. The maximum road grade will be 6 percent. Topsoil removed from the road will be used on cut slopes and bar ditches.

The need for water-control features, such as diversions, culverts, and/or silt traps, will be determined at interim reclamation.

No routine maintenance activities 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 will be deemed too wet for maintenance.

BMPs for dust abatement and erosion control will be utilized along the road to reduce fugitive dust for the life of the project. Water application, using a rear-spraying truck or other suitable means, will be the primary method of dust suppression along the road. Any additional erosion-control practices, such as the application of magnesium chloride, organic-based compounds, or polymer compounds to the road, will include the BLM-standard BMPs found in *The Gold Book* and the BMPs outlined in the mitigation attached to the approved 181H.

The access road will be maintained as outlined in the Road Maintenance Plan (Appendix C). The access road will be reclaimed as described in the Reclamation Plan (Appendix A).

4. SAFETY

Safety measures have been considered in the design, construction, operation, and maintenance plans for the project. The operator shall comply with applicable federal, state, and local laws and regulations related to public health, safety, and the environment during all phases of the project.

Any accidents involving persons or property will immediately be reported to the BLM-FFO.

5. LOCATION OF EXISTING WELLS

There are two recorded water wells (SJ-00681-26 and SJ-01156) within a 1-mile radius of the project.

Water wells, plugged and abandoned oil and gas wells, active oil and gas wells, and proposed oil and gas wells within a 1-mile radius of the project are depicted on Figure B.2 (Appendix B).

6. LOCATION OF PRODUCTION FACILITIES

After the drilling and completion phases of the wells, production facilities will be located within a 300-by-100-foot facility area at the northern end of the well pad (see Figure B.4, Appendix B).

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 to blend with vegetation and reduce visual resource impacts.

7. 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, who will obtain water from the permitted Blanco Trading Post well (SJ-2105).

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

8. CONSTRUCTION

The previously permitted access road and well pad have already been constructed.

Approximately 12 feet of cut and 16 feet of fill were needed to create a level well pad.

Maintenance activities will cease when soil or road surfaces become saturated to the extent that equipment is unable to stay within the project area and/or when activities cause irreparable harm to roads, soils, or streams. WPX will use the six-step frozen ground procedure during frozen ground conditions.

Construction plats are provided in the 181H APD permit package.

9. METHODS FOR HANDLING WASTE DISPOSAL

Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals 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, the operator 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 construction, as needed (see Figures B.3 and B.4 [Appendix B] for the location of toilets and trash receptacles).

10. ANCILLARY FACILITIES

Pipelines will be permitted and constructed at a later date.

11. WELL SITE LAYOUT

The approximate cuts, approximate fills, and orientation for the well pad are depicted on the construction plats in the 181H APD permit package. Rig orientation and the location of drilling equipment and topsoil or spoil material stockpiles are depicted on Figure B.3 (Appendix B). The layout of the completions rigs is depicted on Figure B.4 (Appendix B). The interim reclamation/long-term disturbance layout is depicted on 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. These areas will be regularly used for equipment or for vehicular access.

3000 PSI BOP Schematic