

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: 10/17/13

Well information;

Operator WPX, Well Name and Number Chaco 2308-04P 149H

API# 30-045-35495, Section 4, Township 23 N/S, Range 8 E/W

Conditions of Approval:

(See the below checked and handwritten conditions)

☒ Notify Aztec OCD 24hrs prior to casing & cement.

☒ Hold C-104 for directional survey & "As Drilled" Plat

Hold C-104 for NSI / 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



NMOCD Approved by Signature

12-6-2013 ca

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED
DEC 17 2013

5. Lease Serial No.
NMNM-18463

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

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

Farmington Field Office
Bureau of Land Management
☒ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

Chaco 2308-04P #149H

9. API Well No.

30-045-35495

10. Field and Pool, or Exploratory

Nageezi Gallup

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

Section 04, T23N, R8W

12. County or Parish

San Juan County

13. State

NM

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

Approximately 6 miles northwest of Lybrook, New Mexico

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) 264'

16. No. of Acres in lease

2243.16

17. Spacing Unit dedicated to this well

160 acres

RCVD DEC 3 '13

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 20'

19. Proposed Depth

10,439' MD / 5,250' TVD

20. BLM/BIA Bond No. on file

UTB000178

OIL CONS. DIV.

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

6870' GR

22. Approximate date work will start*

November 1, 2013

23. Estimated duration

1 month

DIST. 3

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
Larry Higgins

Name (Printed/Typed)

Larry Higgins

Date

10/17/13

Title
Permit Supervisor

Approved by (Signature)
[Signature]
Title
AFM

Name (Printed/Typed)

Office
FFO

Date

11/29/13

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 Nageezi 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. The road and location are off lease.

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

737' of new access road is needed.

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

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOCDA

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 17th day of October, 2013.

Name Larry Higgins

Position Title Permit Supervisor

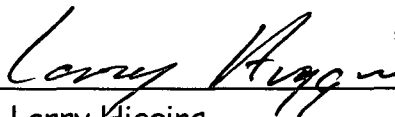
Address P.O. Box 640, Aztec, NM 87410

Telephone (505) 333-1808

Field representative (if not above signatory) _____

E-mail larry.higgins@wpxenergy.com

Date: 10/17/2013



Larry Higgins

Permit Suprv.

WPX Energy Production, LLC

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

Certificate Number 15269

LAT: 36.25511°N
LONG: 107.66105°W
DATUM: NAD1983

WPXENERGY.

WPX ENERGY

Operations Plan

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

DATE: 9/19/2013 **FIELD:** Nageezi Gallup
WELL NAME: Chaco 2308-04P #149H **SURFACE:** BLM
SH Location: SESE ¼ of Sec 4-T23N-R8W **ELEVATION:** 6,870' GR
County: San Juan Co, NM
BH Location: NESE ¼ of Sec3-T23N-R8W **MINERALS:** BLM
MEASURED DEPTH: 10,439 ft. **LEASE #:** NMNM18463

I. **GEOLOGY:** Surface formation – Nacimiento

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1,086	1,083	Point Lookout	4,117	4,001
Kirtland	1,273	1,265	Mancos	4,337	4,216
Pictured Cliffs	1,648	1,626	Kickoff Point	4,978	4,854
Lewis	1,789	1,762	Target Top	5,449	5,193
Chacra	2,065	2,027	Landing Point	5,810	5,375
Cliff House	3,189	3,108	Target Base	5,810	5,375
Menefee	3,239	3,156			
			TD	10,439	5,250

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

C. **LOGGING PROGRAM:** MWD GR for curve and GR / E-Sonic 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 8 ¾" Directional Intermediate hole. Will use WBM to drill the curve portion of well, and OBM 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 +/- 4,978' (MD) / 4,854' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg at +/- 5,810' (MD) / 5,375' (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 +/- 10,439' (MD) / 5,250' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,660 ft. to TD and cement. Liner will be tied back to surface w / 4-1/2" Casing for stimulation, then removed from the well.

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

<u>CASING TYPE</u>	<u>OH SIZE</u>	<u>DEPTH (MD)</u>	<u>CASING SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>
Surface	12.25"	+/-400'	9.625"	36#	J-55
Intermediate	8.75"	5,810	7"	23#	K-55
Prod. Liner	6.125"	5,660' - 10,439'	4.5"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,660'	4.5"	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', 2,500', 2,300', 2,000', 1,500', and 1,000'.
3. PRODUCTION CASING: Run 4-1/2" Liner with cement nose guide Float Shoe + 2 joint 4-1/2" csg. + Float Collar + Landing Collar. Centralizer program will be determined when Lateral is evaluated by Geoscientists and Reservoir Engineers.
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 (563.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,460 ft.

IV. COMPLETION**A. LOGS**

1. Run CCL for perforating.

B. PRESSURE TEST

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

C. STIMULATION

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N2 for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs with Tubing 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 at (~5,600' MD).

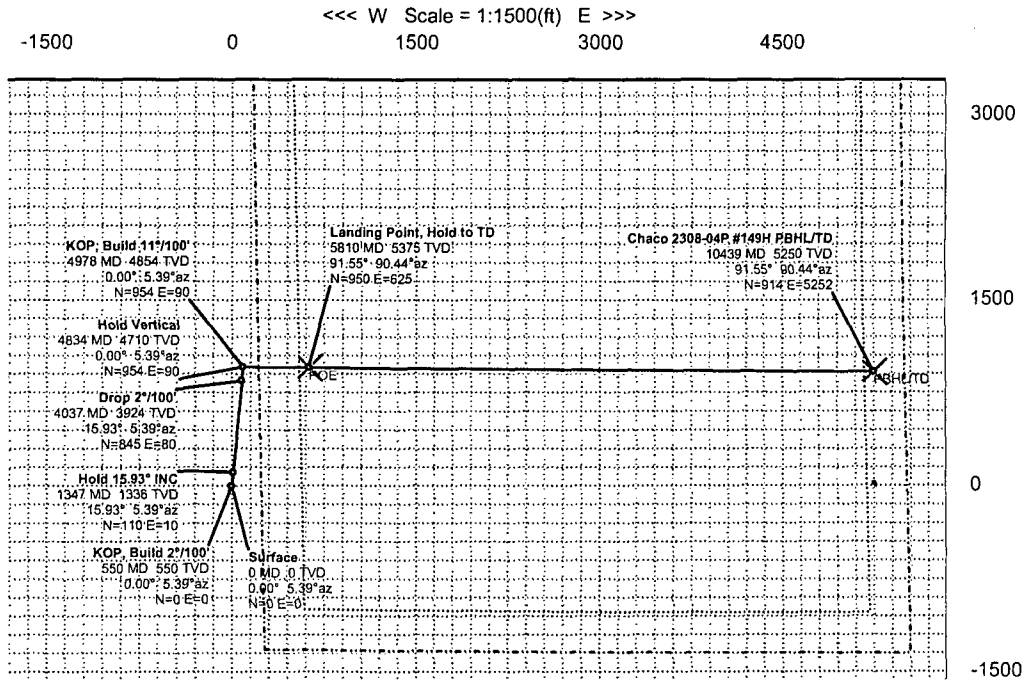
- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable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

WELL	Chaco 2308-04P #149H	FIELD	NM San Juan County NAD27	STRUCTURE	Sec 4-23N-8W
Magnetic Parameters	Model: BGM 2013	Dip: 63.015°	Date: September 10, 2013	Surface Location	NAD27 New Mexico State Plane, Western Zone, US Feet
		Mag Dec: 9.565°	FS: 50187.1nT	Lat: N 36 15 9.288	1911217.66 NUS
				Long: W 107 40 41.700	545726.08 WUS
				North: 1911217.66 NUS	Grid Conv: 0.092°
				East: 545726.08 WUS	Scale Fact: 0.99991906
				Mechanisms	Slot: Chaco 2308-04P #149H
					Plan: RD rev 10Sept13
					TVD Ref: RKB(884ft above MSL)
					Srv Date: September 10, 2013

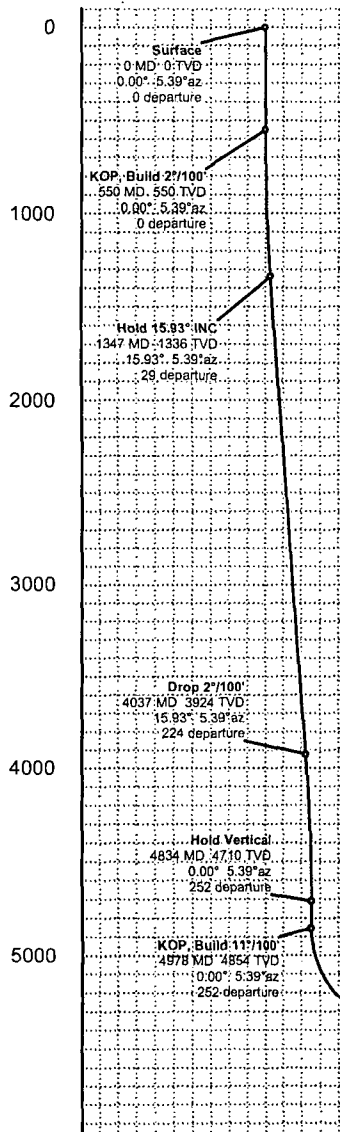
Proposal



True North
Tot Corr (M→T) 9.5652°
Mag Dec (9.565°)
Grid Conv (0.092°)



TVD Scale = 1:1000(ft)



Targets						
Name	TVD(ft)	NS(ft)	EW(ft)	Latitude(deg)	Longitude(deg)	Shape
Chaco 2308-04P #149H POE	5375.00	950.16	625.11	N 36 15 18.684	W 107 40 34.068	POINT
Chaco 2308-04P #149H PBHL/TD	5250.00	914.24	5251.53	N 36 15 18.324	W 107 39 37.584	POINT
Critical Points						
Comments	Survey MD(ft)	Inc	Azm	TVD(ft)	Sub-Sea TVD	VS(ft)
Surface	0.00	0.00	5.39	0.00	-6884.00	0.00
KOP, Build 2°/100'	550.00	0.00	5.39	550.00	-6334.00	0.00
Hold 15.93° INC	1346.52	15.93	5.39	1336.29	-5547.71	28.97
Drop 2°/100'	4037.26	15.93	5.39	3923.71	-2960.29	223.45
Hold Vertical	4833.78	0.00	5.39	4710.00	-2174.00	252.42
KOP, Build 11°/100'	4978.10	0.00	5.39	4854.32	-2029.68	252.42
Landing Point, Hold to TD	5810.35	91.55	90.44	5375.00	-1509.00	778.70
Chaco 2308-04P #149H PBHL/TD	10438.71	91.55	90.44	5250.00	-1634.00	5330.52

0 1000 2000 3000 4000 5000

Vertical Section (ft) Azim = 80.12° Scale = 1:1000(ft) Origin = 0 N/-S, 0 E/-W

<<< S Scale = 1:1500(ft) N >>>



Chaco 2308-04P #149H R0 mdv 10Sept13 Proposal Geodetic Report



(Def Plan)

Report Date: September 10, 2013 - 02:45 PM
Client: WPX Energy
Field: NM San Juan County NAD27
Structure / Slot: WPX Sec 4-23N-8W (Chaco 2308-04P #149H) / Chaco 2308-04P #149H
Well: Chaco 2308-04P #149H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2308-04P #149H R0 mdv 10Sept13
Survey Date: September 10, 2013
Tort / AHD / DDI / ERD Ratio: 123.408 * / 6120.168 ft / 6.166 / 1.139
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 15' 9.28800", W 107° 40' 41.70000"
Location Grid N/E Y/X: N 1911217.656 ftUS, E 545726.081 ftUS
CRS Grid Convergence Angle: 0.0917 *
Grid Scale Factor: 0.99991906
Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 80.124 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6884.000 ft above MSL
Seabed / Ground Elevation: 6870.000 ft above MSL
Magnetic Declination: 9.565 *
Total Gravity Field Strength: 998.4994mgN (9.80665 Based)
Total Magnetic Field Strength: 50187.102 nT
Magnetic Dip Angle: 63.015 *
Declination Date: September 10, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North->True North: 9.5652 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft/s)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	5.39	0.00	0.00	0.00	0.00	N/A	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
KOP, Build 2"/100'	100.00	0.00	5.39	100.00	0.00	0.00	0.00	0.00	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
	200.00	0.00	5.39	200.00	0.00	0.00	0.00	0.00	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
	300.00	0.00	5.39	300.00	0.00	0.00	0.00	0.00	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
	400.00	0.00	5.39	400.00	0.00	0.00	0.00	0.00	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
	500.00	0.00	5.39	500.00	0.00	0.00	0.00	0.00	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
	550.00	0.00	5.39	550.00	0.00	0.00	0.00	0.00	1911217.66	545726.08	N 36 15 9.29	W 107 40 41.70
	600.00	1.00	5.39	600.00	0.11	0.43	0.04	2.00	1911218.09	545726.12	N 36 15 9.29	W 107 40 41.70
	700.00	3.00	5.39	699.93	1.03	3.91	0.37	2.00	1911221.57	545726.44	N 36 15 9.33	W 107 40 41.70
	800.00	5.00	5.39	799.68	2.87	10.85	1.02	2.00	1911228.51	545727.09	N 36 15 9.40	W 107 40 41.69
	900.00	7.00	5.39	899.13	5.62	21.26	2.01	2.00	1911238.92	545728.05	N 36 15 9.50	W 107 40 41.68
Hold 15.93° INC	1000.00	9.00	5.39	998.15	9.29	35.11	3.31	2.00	1911252.77	545729.34	N 36 15 9.64	W 107 40 41.66
	1100.00	11.00	5.39	1096.63	13.86	52.40	4.95	2.00	1911270.06	545730.94	N 36 15 9.81	W 107 40 41.64
	1200.00	13.00	5.39	1194.44	19.34	73.10	6.90	2.00	1911290.76	545732.86	N 36 15 10.01	W 107 40 41.62
	1300.00	15.00	5.39	1291.46	25.71	97.18	9.17	2.00	1911314.85	545735.10	N 36 15 10.25	W 107 40 41.59
	1346.52	15.93	5.39	1336.29	28.97	109.53	10.34	2.00	1911327.20	545736.24	N 36 15 10.37	W 107 40 41.57
	1400.00	15.93	5.39	1387.72	32.84	124.15	11.72	0.00	1911341.81	545737.60	N 36 15 10.52	W 107 40 41.56
	1500.00	15.93	5.39	1483.88	40.06	151.47	14.30	0.00	1911369.14	545740.14	N 36 15 10.79	W 107 40 41.53
	1600.00	15.93	5.39	1580.04	47.29	178.80	16.88	0.00	1911396.47	545742.67	N 36 15 11.06	W 107 40 41.49
	1700.00	15.93	5.39	1676.20	54.52	206.12	19.46	0.00	1911423.79	545745.21	N 36 15 11.33	W 107 40 41.46
	1800.00	15.93	5.39	1772.36	61.75	233.45	22.04	0.00	1911451.12	545747.74	N 36 15 11.60	W 107 40 41.43
Droo 2"/100'	1900.00	15.93	5.39	1868.52	68.98	260.77	24.61	0.00	1911478.45	545750.28	N 36 15 11.87	W 107 40 41.40
	2000.00	15.93	5.39	1964.68	76.20	288.10	27.19	0.00	1911505.77	545752.81	N 36 15 12.14	W 107 40 41.37
	2100.00	15.93	5.39	2060.84	83.43	315.42	29.77	0.00	1911533.10	545755.35	N 36 15 12.41	W 107 40 41.34
	2200.00	15.93	5.39	2157.00	90.66	342.75	32.35	0.00	1911560.43	545757.88	N 36 15 12.68	W 107 40 41.31
	2300.00	15.93	5.39	2253.16	97.89	370.07	34.93	0.00	1911587.76	545760.42	N 36 15 12.95	W 107 40 41.27
	2400.00	15.93	5.39	2349.32	105.11	397.40	37.51	0.00	1911615.08	545762.95	N 36 15 13.22	W 107 40 41.24
	2500.00	15.93	5.39	2445.48	112.34	424.73	40.09	0.00	1911642.41	545765.49	N 36 15 13.49	W 107 40 41.21
	2600.00	15.93	5.39	2541.64	119.57	452.05	42.67	0.00	1911669.74	545768.02	N 36 15 13.76	W 107 40 41.18
	2700.00	15.93	5.39	2637.80	126.80	479.38	45.25	0.00	1911697.06	545770.56	N 36 15 14.03	W 107 40 41.15
	2800.00	15.93	5.39	2733.96	134.02	506.70	47.83	0.00	1911724.39	545773.09	N 36 15 14.30	W 107 40 41.12
KOP, Build 11"/100'	2900.00	15.93	5.39	2830.12	141.25	534.03	50.41	0.00	1911751.72	545775.63	N 36 15 14.57	W 107 40 41.08
	3000.00	15.93	5.39	2926.28	148.48	561.35	52.99	0.00	1911779.05	545778.17	N 36 15 14.84	W 107 40 41.05
	3100.00	15.93	5.39	3022.44	155.71	588.68	55.57	0.00	1911806.37	545780.70	N 36 15 15.11	W 107 40 41.02
	3200.00	15.93	5.39	3118.60	162.93	616.00	58.15	0.00	1911833.70	545783.24	N 36 15 15.38	W 107 40 40.99
	3300.00	15.93	5.39	3214.76	170.16	643.33	60.72	0.00	1911861.03	545785.77	N 36 15 15.65	W 107 40 40.96
	3400.00	15.93	5.39	3310.92	177.39	670.65	63.30	0.00	1911888.35	545788.31	N 36 15 15.92	W 107 40 40.93
	3500.00	15.93	5.39	3407.08	184.62	697.98	65.88	0.00	1911915.68	545790.84	N 36 15 16.19	W 107 40 40.90
	3600.00	15.93	5.39	3503.23	191.85	725.30	68.46	0.00	1911943.01	545793.38	N 36 15 16.46	W 107 40 40.86
	3700.00	15.93	5.39	3599.39	199.07	752.63	71.04	0.00	1911970.34	545795.91	N 36 15 16.73	W 107 40 40.83
	3800.00	15.93	5.39	3695.55	206.30	779.95	73.62	0.00	1911997.66	545798.45	N 36 15 17.00	W 107 40 40.80
Hold Vertical	3900.00	15.93	5.39	3791.71	213.53	807.28	76.20	0.00	1912024.99	545800.98	N 36 15 17.27	W 107 40 40.77
	4000.00	15.93	5.39	3887.87	220.76	834.61	78.78	0.00	1912052.32	545803.52	N 36 15 17.54	W 107 40 40.74
	4037.26	15.93	5.39	3923.71	223.45	844.79	79.74	0.00	1912062.50	545804.46	N 36 15 17.64	W 107 40 40.73
	4100.00	14.68	5.39	3984.22	227.81	861.27	81.30	2.00	1912078.99	545805.99	N 36 15 17.81	W 107 40 40.71
	4200.00	12.68	5.39	4081.38	234.03	884.81	83.52	2.00	1912102.52	545808.18	N 36 15 18.04	W 107 40 40.68
	4300.00	10.68	5.39	4179.30	239.36	904.95	85.42	2.00	1912122.67	545810.05	N 36 15 18.24	W 107 40 40.66
	4400.00	8.68	5.39	4277.88	243.79	921.69	87.00	2.00	1912139.40	545811.60	N 36 15 18.40	W 107 40 40.64
	4500.00	6.68	5.39	4376.97	247.31	934.98	88.25	2.00	1912152.70	545812.83	N 36 15 18.53	W 107 40 40.62
	4600.00	4.68	5.39	4476.48	249.91	944.83	89.18	2.00	1912162.55	545813.75	N 36 15 18.63	W 107 40 40.61
	4700.00	2.68	5.39	4576.27	251.60	951.21	89.79	2.00	1912168.93	545814.34	N 36 15 18.69	W 107 40 40.60
Landing Point, Hold to TD	4800.00	0.68	5.39	4676.22	252.37	954.12	90.06	2.00	1912171.84	545814.61	N 36 15 18.72	W 107 40 40.60
	4833.78	0.00	5.39	4710.00	252.42	954.32	90.08	2.00	1912172.04	545814.63	N 36 15 18.73	W 107 40 40.60
	4900.00	0.00	5.39	4776.22	252.42	954.32	90.08	0.00	1912172.04	545814.63	N 36 15 18.73	W 107 40 40.60
	4978.10	0.00	5.39	4854.32	252.42	954.32	90.08	0.00	1912172.04	545814.63	N 36 15 18.73	W 107 40 40.60
	5000.00	2.41	90.44	4876.21	252.87	954.32	90.54	11.00	1912172.04	545815.09	N 36 15 18.73	W 107 40 40.59
	5100.00	13.41	90.44	4975.11	268.39	954.21	104.28	11.00	1912171.95	545828.82	N 36 15 18.72	W 107 40 40.43
	5200.00	24.41	90.44	5069.57	298.22	953.96	138.63	11.00	1912171.75	545861.18	N 36 15 18.72	W 107 40 40.03
	5300.00	35.41	90.44	5156.12	347.20	953.57	186.42	11.00	1912171.45	545910.96	N 36 15 18.72	W 107 40 39.42
	5400.00	46.41	90.44	5231.58	411.53	953.08	251.80	11.00	1912171.04	545976.34	N 36 15 18.71	W 107 40 38.63
	5500.00	57.41	90.44	5293.17	488.84	952.45	330.38	11.00	1912170.56	546054.91	N 36 15 18.71	W 107 40 37.67
5600.00	68.41	90.44	5338.64	576.30	951.76	419.27	11.00	1912170.01	546143.79	N 36 15 18.70	W 107 40 36.58	
5700.00	79.41	90.44	5366.32	670.68	951.02	515.20	11.00	1912169.42	546239.72	N 36 15 18.69	W 107 40 35.41	
5800.00	90.41	90.44	5375.18	768.52	950.25	614.65	11.00	1912168.81	546339.16	N 36 15 18.68	W 107 40 34.20	
5810.35	91.55	90.44	5375.00	778.70	950.17	625.00	11.00	1912168.74	546349.51	N 36 15 18.68	W 107 40 34.07	
5900.00	91.55	90.44	5372.58	866.87	949.47	714.62	0.00	1912168.19	546439.12	N 36 15 18.68	W 107 40 32.98	
6000.00	91.55	90.44	5369.88	965.22	948.60	814.58	0.00	1912167.57	546539.07	N 36 15 18.67	W 107 40 31.75	
6100.00	91.55	90.44	5367.18	1063.56	947.92	914.54	0.00	1912166.96	546639.02	N 36 15 18.66	W 107 40 30.53	
6200.00	91.55	90.44	5364.48	1161.91	947.14	1014.50	0.00	1912166.34	546738.96	N 36 15 18.65	W 107 40 29.31	
6300.00	91.55	90.44	5361.78	1260.26	946.36	1114.46	0.00	1912165.73	546838.93	N 36 15 18.65	W 107 40 28.09	
6400.00	91.55	90.44	5359.08	1358.60	945.59	1214.42	0.00	1912165.11	546938.88	N 36 15 18.64	W 107 40 26.87	
6500.00	91.55	90.44	5356.37	1456.95	944.81	1314.38	0.00					

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 ° ' ")
	7100.00	91.55	90.44	5340.17	2047.02	940.15	1914.14	0.00	1912160.80	547638.56	N 36 15 18.58	W 107 40 18.33
	7200.00	91.55	90.44	5337.47	2145.37	939.38	2014.10	0.00	1912160.18	547738.51	N 36 15 18.58	W 107 40 17.11
	7300.00	91.55	90.44	5334.77	2243.72	938.60	2114.06	0.00	1912159.56	547838.46	N 36 15 18.57	W 107 40 15.89
	7400.00	91.55	90.44	5332.07	2342.06	937.83	2214.02	0.00	1912158.95	547938.42	N 36 15 18.56	W 107 40 14.67
	7500.00	91.55	90.44	5329.37	2440.41	937.05	2313.98	0.00	1912158.33	548038.37	N 36 15 18.55	W 107 40 13.45
	7600.00	91.55	90.44	5326.67	2538.76	936.27	2413.94	0.00	1912157.71	548138.32	N 36 15 18.55	W 107 40 12.23
	7700.00	91.55	90.44	5323.97	2637.10	935.50	2513.91	0.00	1912157.10	548238.28	N 36 15 18.54	W 107 40 11.01
	7800.00	91.55	90.44	5321.26	2735.45	934.72	2613.87	0.00	1912156.48	548338.23	N 36 15 18.53	W 107 40 9.79
	7900.00	91.55	90.44	5318.56	2833.79	933.94	2713.83	0.00	1912155.87	548438.18	N 36 15 18.52	W 107 40 8.57
	8000.00	91.55	90.44	5315.86	2932.14	933.17	2813.79	0.00	1912155.25	548538.14	N 36 15 18.51	W 107 40 7.35
	8100.00	91.55	90.44	5313.16	3030.49	932.39	2913.75	0.00	1912154.63	548638.09	N 36 15 18.51	W 107 40 6.13
	8200.00	91.55	90.44	5310.46	3128.83	931.62	3013.71	0.00	1912154.02	548738.04	N 36 15 18.50	W 107 40 4.91
	8300.00	91.55	90.44	5307.76	3227.18	930.84	3113.67	0.00	1912153.40	548838.00	N 36 15 18.49	W 107 40 3.69
	8400.00	91.55	90.44	5305.06	3325.53	930.06	3213.63	0.00	1912152.78	548937.95	N 36 15 18.48	W 107 40 2.46
	8500.00	91.55	90.44	5302.36	3423.87	929.29	3313.59	0.00	1912152.17	549037.90	N 36 15 18.48	W 107 40 1.24
	8600.00	91.55	90.44	5299.66	3522.22	928.51	3413.55	0.00	1912151.55	549137.86	N 36 15 18.47	W 107 40 0.02
	8700.00	91.55	90.44	5296.96	3620.56	927.73	3513.51	0.00	1912150.94	549237.81	N 36 15 18.46	W 107 39 58.80
	8800.00	91.55	90.44	5294.26	3718.91	926.96	3613.47	0.00	1912150.32	549337.76	N 36 15 18.45	W 107 39 57.58
	8900.00	91.55	90.44	5291.56	3817.26	926.18	3713.43	0.00	1912149.70	549437.72	N 36 15 18.44	W 107 39 56.36
	9000.00	91.55	90.44	5288.86	3915.60	925.40	3813.39	0.00	1912149.09	549537.67	N 36 15 18.44	W 107 39 55.14
	9100.00	91.55	90.44	5286.16	4013.95	924.63	3913.35	0.00	1912148.47	549637.62	N 36 15 18.43	W 107 39 53.92
	9200.00	91.55	90.44	5283.45	4112.29	923.85	4013.31	0.00	1912147.85	549737.58	N 36 15 18.42	W 107 39 52.70
	9300.00	91.55	90.44	5280.75	4210.64	923.08	4113.27	0.00	1912147.24	549837.53	N 36 15 18.41	W 107 39 51.48
	9400.00	91.55	90.44	5278.05	4308.99	922.30	4213.23	0.00	1912146.62	549937.48	N 36 15 18.41	W 107 39 50.26
	9500.00	91.55	90.44	5275.35	4407.33	921.52	4313.19	0.00	1912146.01	550037.44	N 36 15 18.40	W 107 39 49.04
	9600.00	91.55	90.44	5272.65	4505.68	920.75	4413.15	0.00	1912145.39	550137.39	N 36 15 18.39	W 107 39 47.82
	9700.00	91.55	90.44	5269.95	4604.03	919.97	4513.12	0.00	1912144.77	550237.34	N 36 15 18.38	W 107 39 46.60
	9800.00	91.55	90.44	5267.25	4702.37	919.19	4613.08	0.00	1912144.16	550337.30	N 36 15 18.37	W 107 39 45.38
	9900.00	91.55	90.44	5264.55	4800.72	918.42	4713.04	0.00	1912143.54	550437.25	N 36 15 18.37	W 107 39 44.16
	10000.00	91.55	90.44	5261.85	4899.06	917.64	4813.00	0.00	1912142.92	550537.20	N 36 15 18.36	W 107 39 42.94
	10100.00	91.55	90.44	5259.15	4997.41	916.87	4912.96	0.00	1912142.31	550637.16	N 36 15 18.35	W 107 39 41.72
	10200.00	91.55	90.44	5256.45	5095.76	916.09	5012.92	0.00	1912141.69	550737.11	N 36 15 18.34	W 107 39 40.50
	10300.00	91.55	90.44	5253.75	5194.10	915.31	5112.88	0.00	1912141.08	550837.06	N 36 15 18.33	W 107 39 39.28
	10400.00	91.55	90.44	5251.05	5292.45	914.54	5212.84	0.00	1912140.46	550937.02	N 36 15 18.33	W 107 39 38.06
Chaco 2308-04P #149H PBHLTD	10438.71	91.55	90.44	5250.00	5330.52	914.24	5251.53	0.00	1912140.22	550975.71	N 36 15 18.32	W 107 39 37.58

Survey Type: Def Plan

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

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2308-04P #149H R0 mdv 10Sept13
	14.000	10438.707	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2308-04P #149H R0 mdv 10Sept13

1. INTRODUCTION

WPX Energy Production, LLC (WPX), is providing this Chaco 2308-04P Nos. 149H and 150H 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 Right-of-Way (ROW) Manual Section 2884 (Applying for a Mineral Leasing Act Grant or a Temporary Use Permit).

The Chaco 2308-04P No. 149H (149H) and Chaco 2308-04P No. 150H (150H) wells will be twinned with one another. Each well will be permitted by an approved Application for Permit to Drill (APD). Because the associated well pad and access road are located off-lease, these features will each be permitted by a ROW Grant. Therefore, this document serves as a SUPO for the APDs and as a POD for the ROW Grant applications.

A pre-disturbance onsite meeting for the project was held with the BLM-FFO, WPX, and an environmental consultant (Nelson Consulting, Inc.) on August 29, 2013.

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 or ROW Grants.

2. PROJECT LOCATION AND EXISTING ROADS

The well pad is located approximately 36 miles south-southeast of the town of Bloomfield, New Mexico. To access the location, head south from the U.S. Highway 550-U.S. Highway 64 intersection for approximately 42 miles, and then turn left onto an existing road for approximately 130 feet before reaching the start of the 149H/150H road. The access route 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. During the onsite meeting, WPX was not allocated existing roads for upgrading or maintenance. 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

A 737-foot-long resource road will be constructed to access the 149H/150H well pad. From an existing access road, the access road will travel northward and northeastward to reach the southwestern side of the 149H/150H well pad. The 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 maximum grade of the road will be 4 percent. The all-weather driving surface will be 14 feet wide with turnouts, as necessary. The driving surface will be crowned with a surface material (sandstone), if economically available. 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. Topsoil removed from the road will be used on cut slopes and bar ditches. The placement of water diversions, such as culverts, along the road will be determined at interim reclamation.

WPX will maintain the road as outlined in their Road Maintenance Plan (Appendix C).

