

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 2308-09A 145H

API# 30-045-35496, Section 9, 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 NSL, NSP, DHC
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☐ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils


NMOCD Approved by Signature

12-12-2013 ca
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

OCT 17 2013

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

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM-018463	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator WPX Energy Production, LLC		7. If Unit or CA Agreement, Name and No.	
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. Chaco 2308-09A #145H	
3b. Phone No. (include area code) (505) 333-1808		9. ARI Well No. 30-045-35496	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 917' FNL & 240' FEL, sec 09, T23N, R8W At proposed prod. zone 380' FNL & 380' FWL, sec 09, T23N, R8W		10. Field and Pool, or Exploratory Nageezi Gallup	
14. Distance in miles and direction from nearest town or post office* approximately 6 miles northwest of Lybrook, New Mexico		12. County or Parish San Juan County	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 240'	16. No. of Acres in lease 640 2243.16	17. Spacing Unit dedicated to this well 160 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20'	19. Proposed Depth 10,144' MD / 5,224' TVD	20. BLM/BIA Bond No. on file UTB000178 RCVD NOV 22 '13	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6883' GR	22. Approximate date work will start* November 1, 2013	23. Estimated duration 1 month OIL CONS. DIV.	
24. Attachments		DIST. 3	

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

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

25. Signature 	Name (Printed/Typed) Larry Higgins	Date 10/17/13
Title Permit Supervisor		
Approved by (Signature) 	Name (Printed/Typed)	Date 11/21/13
Title AFM	Office FFU	

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 on lease.

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

Approximately 2133' of pipeline will be needed to tie into WPX gathering system.

1769' of new access road is needed.

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

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

NMOC
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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

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

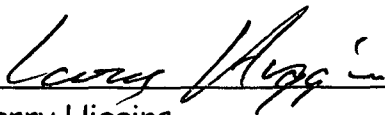
Address P.O. Box 640, Aztec, NM 87410

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

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

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-35496	2 Pool Code 47540	3 Pool Name NAGEEZI GALLUP
4 Property Code 40266	5 Property Name CHACO 2308-09A	6 Well Number 145H
7 OGRID No. 120782	8 Operator Name WPX ENERGY PRODUCTION, LLC	9 Elevation 6883'

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
A	9	23N	8W		917	NORTH	240	EAST	SAN JUAN

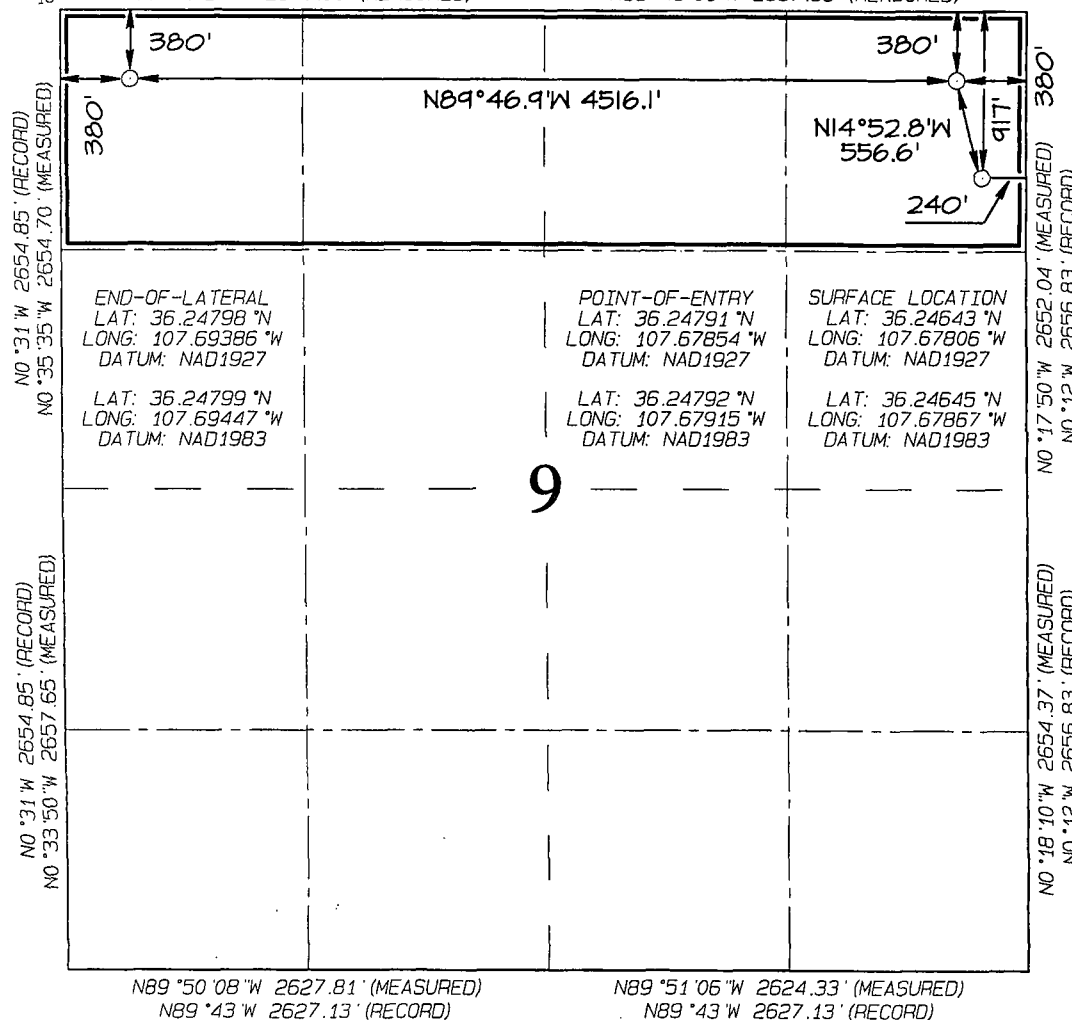
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	9	23N	8W		380	NORTH	380	WEST	SAN JUAN

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
150.0 Acres - (N/2 N/2)			

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

16 N89°44'W 2639.34' (RECORD) N89°44'W 2639.34' (RECORD)
N89°45'50"W 2640.09' (MEASURED) N89°48'01"W 2637.93' (MEASURED)



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 Cory Vagg Date 10/17/13

Printed Name _____

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: SEPT 17, 2013
Date of Survey: APRIL 19, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

WPX ENERGY

Operations Plan

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

DATE: 10/15/13 **FIELD:** Nageezi Gallup
WELL NAME: Chaco 2308-09A #145H Rev(1) **SURFACE:** BLM
SH Location: NENE Sec 9 23N 8W **ELEVATION:** 6,883' GR
BH Location: NWNW Sec 9 23N 8W **MINERALS:** BLM
San Juan County, NM
MEASURED DEPTH: 10,144' **LEASE #:** USA NMNM 18463

I. GEOLOGY: Surface formation – Nacimiento

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	937	936	Point Lookout	4,031	3,992
Kirtland	1,069	1,066	Mancos	4,256	4,214
Pictured Cliffs	1,583	1,574	Kickoff Point	4,850	4,807
Lewis	1,760	1,749	Target Top	5,392	5,256
Chacra	2,017	2,003	Landing Point	5,680	5,328
Cliff House	3,104	3,076	Target Base	5,680	5,328
Menefee	3,172	3,143			
			TD	10,144	5,224

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

C. LOGGING PROGRAM: LWD GR from KOP to TD. LWD GR / Sonic will be run in Lateral.

D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, the curve portion of the wellbore and the lateral. (OBM) may 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 +/-4,850' MD. Curve portion of wellbore will be drilled and landed at +/- 90 deg at +/- 5,680' (MD). 7 in. csg will be set at this point. A 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 10,144' (MD). A 4-1/2 in. Production Liner will be run from +/- 5,530 ft. to TD and cemented. Liner will be tied back to surface w / 4-1/2" Casing w/ seal assembly 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'+	9.625"	36#	J-55
Intermediate	8.75"	5,680'	7"	23#	K-55
Prod. Liner	6.125"	5,530 - 10,144'	4.5"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,530'	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 +/- 3,500 ft. Run (1) centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.
3. **PRODUCTION LINER:** Run 4-1/2" casing with cement nose guide Float Shoe + 2 joints 4-1/2" csg.+ Float Collar + Landing Collar. Centralizer program will be determined when Lateral is evaluated by Geoscientists and Reservoir Engineers.

C. CEMENTING:

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

1. **SURFACE:** 10 bbl Fr Water Spacer + 230 sx (270 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal. The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600 psi for 30 minutes. Total Volume: (230 sx / 270 cu-ft / 48 Bbls).
2. **INTERMEDIATE:** 10 bbl FW spacer + 40 bbl (112 cu-ft) Chemical Wash + 10 bbl FW spacer + Lead: 590 sx Foamed 50/50 Poz Cement. 13.0 ppg / 9.5 ppg (Foamed wt.) Yield :2.01 cu-ft/ sk. (Vol: 1186 cu-ft / 211 bbls) + 0.15% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760. TAIL: 100 sx 50-50 Poz Premium 13.5 #/gal. Yield: 1.29 cu-ft / sk (Vol: 129 cu-ft / 23 bbls) + 0.2% Versaset + 0.15% HALAD -766. + Displacement (+/-230 bbls / 1,292 cu-ft) + 100 sx Top-Out Cement: Premium: Yield: (1.17 cu-ft/ sk (Vol: 117 cu-ft / 20.8 bbls). Est TOC: Surface. Test Casing to 1500 PSI for 30 minutes. Total Volume: (790 sx / 1432 cu-ft / 255 bbls). Mix W / +/- 70,000 SCF Nitrogen.
3. **PRODUCTION 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 +/- 5,330 ft

IV. COMPLETION**A. CBL**

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

B. PRESSURE TEST

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

C. STIMULATION

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N₂ for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs 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 landing point of curve (~5,680' MD).
- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2) NMAC, and 19.15.16.15 B(4) NMAC.
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The CHACO 2308 – 09A #145H was originally planned to run a full string of 4-1/2" 11.6# N-80 Production Casing from surface to TD:

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 +/- 5,680 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 200 ft above the liner hanger TOC @ +/- 5,330 ft. (MD). TOL will be +/- 5,530 ft. (MD) +/- 75 degree angle.

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 / Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

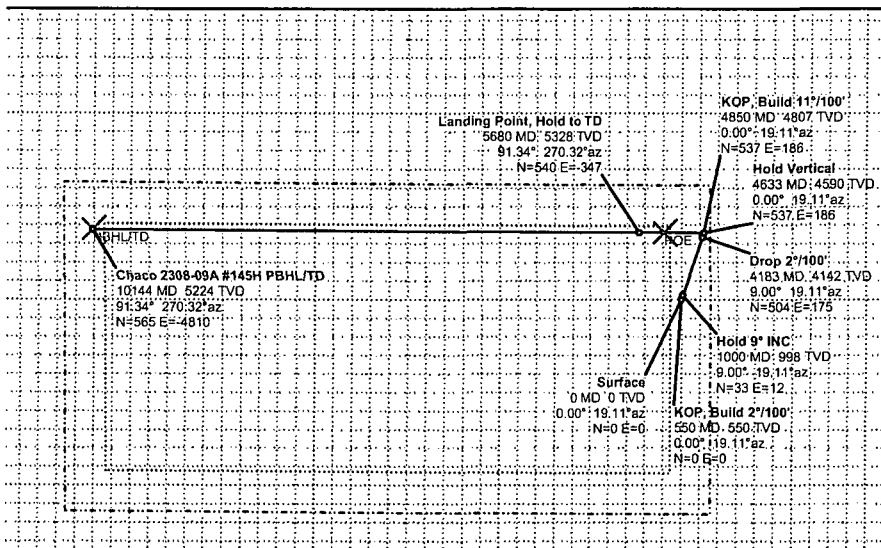
WELL	Chaco 2308-09A #145H	FIELD	NM San Juan County NAD27	STRUCTURE	Sec 9-23N-8W
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Magnetic Parameters Model: BGSW 2013 Dip: 83.011° Mag Dec: 9.571° Date: August 20, 2013 FS: 50190.4mT	Surface Location Lat: N 36 14 47.148 Lon: W 107 40 41.016 Northing: 1926979.06 RUS Easting: 545785.69 RUS NAD27 New Mexico State Plane, Western Zone, US Feet Grid Conv: 0.092° Scale Fact: 0.99991907	Miscellaneous Site: Chaco 2308-09A #145H Plan: RD mcr 20Aug13 TVD Ref: RXB(6897ft above MSL) Srv Date: August 20, 2013
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True North
Tot Corr (M-T 9.5706°)
Mag Dec (9.571°)
Grid Conv (0.092°)

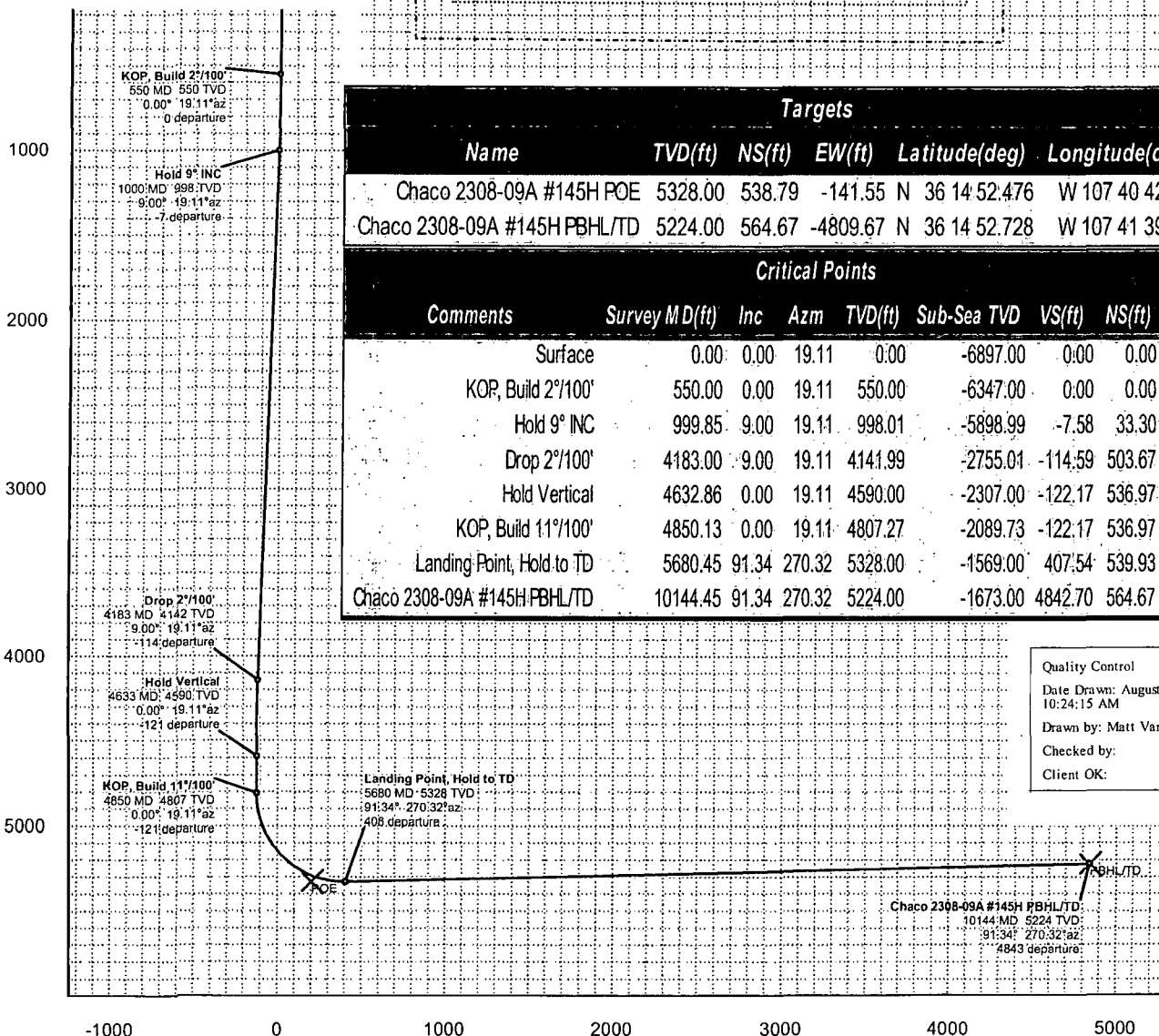
<<< W Scale = 1:1500(ft) E >>>
-4500 -3000 -1500 0 1500



1500
0
-1500

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

TVD Scale = 1:1000(ft)



Targets						
Name	TVD(ft)	NS(ft)	EW(ft)	Latitude(deg)	Longitude(deg)	Shape
Chaco 2308-09A #145H POE	5328.00	538.79	-141.55	N 36 14 52.476	W 107 40 42.744	POINT
Chaco 2308-09A #145H PBHL/TD	5224.00	564.67	-4809.67	N 36 14 52.728	W 107 41 39.732	POINT

Critical Points									
Comments	Survey MD(ft)	Inc	Azm	TVD(ft)	Sub-Sea TVD	VS(ft)	NS(ft)	EW(ft)	DLS
Surface	0.00	0.00	19.11	0.00	-6897.00	0.00	0.00	0.00	0.00
KOP, Build 2°/100'	550.00	0.00	19.11	550.00	-6347.00	0.00	0.00	0.00	0.00
Hold 9° INC	999.85	9.00	19.11	998.01	-5898.99	-7.58	33.30	11.54	2.00
Drop 2°/100'	4183.00	9.00	19.11	4141.99	-2755.01	-114.59	503.67	174.51	0.00
Hold Vertical	4632.86	0.00	19.11	4590.00	-2307.00	-122.17	536.97	186.05	2.00
KOP, Build 11°/100'	4850.13	0.00	19.11	4807.27	-2089.73	-122.17	536.97	186.05	0.00
Landing Point, Hold to TD	5680.45	91.34	270.32	5328.00	-1569.00	407.54	539.93	-346.95	11.00
Chaco 2308-09A #145H PBHL/TD	10144.45	91.34	270.32	5224.00	-1673.00	4842.70	564.67	-4809.67	0.00

Quality Control
Date Drawn: August 21, 2013
10:24:15 AM
Drawn by: Matt VanderSchaaf
Checked by:
Client OK:

Vertical Section (ft) Azim = 276.7° Scale = 1:1000(ft) Origin = 0 N-S, 0 E-W



Chaco 2308-09A #145H R0 mdv 20Aug13 Proposal Geodetic Report



(Def Plan)

Report Date: August 21, 2013 - 10:23 AM
Client: WPX Energy
Field: NM San Juan County NAD27

Structure / Slot: WPX Sec 9-23N-8W (Chaco 2308-09A #145H) / Chaco 2308-09A #145H

Well: Chaco 2308-09A #145H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2308-09A #145H R0 mdv 20Aug13
Survey Date: August 20, 2013
Tort / AHD / DDI / ERD Ratio: 109.329 ° / 5564.083 ft / 6.064 / 1.044
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 14' 47.14800", W 107° 40' 41.01600"
Location Grid N/E Y/X: N 1908979.059 RUS, E 545785.690 RUS
CRS Grid Convergence Angle: 0.0918 °
Grid Scale Factor: 0.99991907

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 276.696 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6897.000 ft above MSL
Seabed / Ground Elevation: 6883.000 ft above MSL
Magnetic Declination: 9.571 °
Total Gravity Field Strength: 998.4977mgN (9.80665 Based)
Total Magnetic Field Strength: 50190.350 nT
Magnetic Dip Angle: 63.011 °
Declination Date: August 20, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North->True North: 9.5706 °
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	19.11	0.00	0.00	0.00	0.00	N/A	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
	100.00	0.00	19.11	100.00	0.00	0.00	0.00	0.00	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
	200.00	0.00	19.11	200.00	0.00	0.00	0.00	0.00	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
	300.00	0.00	19.11	300.00	0.00	0.00	0.00	0.00	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
	400.00	0.00	19.11	400.00	0.00	0.00	0.00	0.00	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
	500.00	0.00	19.11	500.00	0.00	0.00	0.00	0.00	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
KOP, Build 2"/100'	550.00	0.00	19.11	550.00	0.00	0.00	0.00	0.00	1908979.06	545785.69	N 36 14 47.15	W 107 40 41.02
	600.00	1.00	19.11	600.00	-0.09	0.41	0.14	2.00	1908979.47	545785.83	N 36 14 47.15	W 107 40 41.01
	700.00	3.00	19.11	699.93	-0.84	3.71	1.29	2.00	1908982.77	545786.97	N 36 14 47.18	W 107 40 41.00
	800.00	5.00	19.11	799.68	-2.34	10.30	3.57	2.00	1908989.36	545789.24	N 36 14 47.25	W 107 40 40.97
	900.00	7.00	19.11	899.13	-4.59	20.18	6.99	2.00	1908999.25	545792.65	N 36 14 47.35	W 107 40 40.93
Hold 9" INC	999.85	9.00	19.11	998.01	-7.58	33.30	11.54	2.00	1909012.38	545797.18	N 36 14 47.48	W 107 40 40.88
	1000.00	9.00	19.11	998.15	-7.58	33.33	11.55	0.00	1909012.40	545797.18	N 36 14 47.48	W 107 40 40.88
	1100.00	9.00	19.11	1096.92	-10.94	48.10	16.67	0.00	1909027.18	545802.28	N 36 14 47.62	W 107 40 40.81
	1200.00	9.00	19.11	1195.69	-14.31	62.88	21.79	0.00	1909041.97	545807.37	N 36 14 47.77	W 107 40 40.75
	1300.00	9.00	19.11	1294.46	-17.67	77.66	26.91	0.00	1909056.75	545812.47	N 36 14 47.92	W 107 40 40.69
	1400.00	9.00	19.11	1393.23	-21.03	92.43	32.03	0.00	1909071.54	545817.57	N 36 14 48.06	W 107 40 40.63
	1500.00	9.00	19.11	1492.00	-24.39	107.21	37.15	0.00	1909086.32	545822.66	N 36 14 48.21	W 107 40 40.56
	1600.00	9.00	19.11	1590.77	-27.75	121.99	42.27	0.00	1909101.10	545827.76	N 36 14 48.35	W 107 40 40.50
	1700.00	9.00	19.11	1689.54	-31.12	136.76	47.39	0.00	1909115.89	545832.85	N 36 14 48.50	W 107 40 40.44
	1800.00	9.00	19.11	1788.31	-34.48	151.54	52.51	0.00	1909130.67	545837.95	N 36 14 48.65	W 107 40 40.38
	1900.00	9.00	19.11	1887.08	-37.84	166.32	57.63	0.00	1909145.45	545843.04	N 36 14 48.79	W 107 40 40.31
	2000.00	9.00	19.11	1985.85	-41.20	181.09	62.75	0.00	1909160.24	545848.14	N 36 14 48.94	W 107 40 40.25
	2100.00	9.00	19.11	2084.62	-44.56	195.87	67.86	0.00	1909175.02	545853.24	N 36 14 49.08	W 107 40 40.19
	2200.00	9.00	19.11	2183.39	-47.92	210.65	72.98	0.00	1909189.80	545858.33	N 36 14 49.23	W 107 40 40.13
	2300.00	9.00	19.11	2282.16	-51.29	225.42	78.10	0.00	1909204.59	545863.43	N 36 14 49.38	W 107 40 40.06
	2400.00	9.00	19.11	2380.93	-54.65	240.20	83.22	0.00	1909219.37	545868.52	N 36 14 49.52	W 107 40 40.00
	2500.00	9.00	19.11	2479.70	-58.01	254.97	88.34	0.00	1909234.15	545873.62	N 36 14 49.67	W 107 40 39.94
	2600.00	9.00	19.11	2578.47	-61.37	269.75	93.46	0.00	1909248.94	545878.71	N 36 14 49.82	W 107 40 39.88
	2700.00	9.00	19.11	2677.24	-64.73	284.53	98.58	0.00	1909263.72	545883.81	N 36 14 49.96	W 107 40 39.81
	2800.00	9.00	19.11	2776.01	-68.10	299.30	103.70	0.00	1909278.50	545888.91	N 36 14 50.11	W 107 40 39.75
	2900.00	9.00	19.11	2874.77	-71.46	314.08	108.82	0.00	1909293.29	545894.00	N 36 14 50.25	W 107 40 39.69
	3000.00	9.00	19.11	2973.54	-74.82	328.86	113.94	0.00	1909308.07	545899.10	N 36 14 50.40	W 107 40 39.63
	3100.00	9.00	19.11	3072.31	-78.18	343.63	119.06	0.00	1909322.85	545904.19	N 36 14 50.55	W 107 40 39.56
	3200.00	9.00	19.11	3171.08	-81.54	358.41	124.18	0.00	1909337.64	545909.29	N 36 14 50.69	W 107 40 39.50
	3300.00	9.00	19.11	3269.85	-84.91	373.19	129.30	0.00	1909352.42	545914.38	N 36 14 50.84	W 107 40 39.44
	3400.00	9.00	19.11	3368.62	-88.27	387.96	134.42	0.00	1909367.21	545919.48	N 36 14 50.98	W 107 40 39.37
	3500.00	9.00	19.11	3467.39	-91.63	402.74	139.54	0.00	1909381.99	545924.57	N 36 14 51.13	W 107 40 39.31
	3600.00	9.00	19.11	3566.16	-94.99	417.52	144.66	0.00	1909396.77	545929.67	N 36 14 51.28	W 107 40 39.25
	3700.00	9.00	19.11	3664.93	-98.35	432.29	149.78	0.00	1909411.56	545934.77	N 36 14 51.42	W 107 40 39.19
	3800.00	9.00	19.11	3763.70	-101.72	447.07	154.90	0.00	1909426.34	545939.86	N 36 14 51.57	W 107 40 39.12
	3900.00	9.00	19.11	3862.47	-105.08	461.85	160.02	0.00	1909441.12	545944.96	N 36 14 51.72	W 107 40 39.06
	4000.00	9.00	19.11	3961.24	-108.44	476.62	165.14	0.00	1909455.91	545950.05	N 36 14 51.86	W 107 40 39.00
Drop 2"/100'	4100.00	9.00	19.11	4060.01	-111.80	491.40	170.26	0.00	1909470.69	545955.15	N 36 14 52.01	W 107 40 38.94
	4183.00	9.00	19.11	4141.99	-114.59	503.67	174.51	0.00	1909482.96	545959.38	N 36 14 52.13	W 107 40 38.89
	4200.00	8.66	19.11	4158.79	-115.15	506.13	175.36	2.00	1909485.43	545960.23	N 36 14 52.15	W 107 40 38.88
	4300.00	6.66	19.11	4257.89	-118.02	518.72	179.73	2.00	1909498.02	545964.57	N 36 14 52.28	W 107 40 38.82
	4400.00	4.66	19.11	4357.40	-120.14	528.03	182.95	2.00	1909507.34	545967.78	N 36 14 52.37	W 107 40 38.78
	4500.00	2.66	19.11	4457.19	-121.51	534.06	185.04	2.00	1909513.37	545969.86	N 36 14 52.43	W 107 40 38.76
	4600.00	0.66	19.11	4557.14	-122.13	536.79	185.99	2.00	1909516.10	545970.80	N 36 14 52.46	W 107 40 38.75
Hold Vertical	4632.86	0.00	19.11	4590.00	-122.17	536.97	186.05	2.00	1909516.28	545970.86	N 36 14 52.46	W 107 40 38.74
	4700.00	0.00	19.11	4657.14	-122.17	536.97	186.05	0.00	1909516.28	545970.86	N 36 14 52.46	W 107 40 38.74
	4800.00	0.00	19.11	4757.14	-122.17	536.97	186.05	0.00	1909516.28	545970.86	N 36 14 52.46	W 107 40 38.74
KOP, Build 11"/100'	4850.13	0.00	19.11	4807.27	-122.17	536.97	186.05	0.00	1909516.28	545970.86	N 36 14 52.46	W 107 40 38.74
	4900.00	5.49	270.32	4857.07	-119.80	536.98	183.66	11.00	1909516.29	545968.48	N 36 14 52.46	W 107 40 38.77
	5000.00	16.49	270.32	4955.08	-100.89	537.09	164.64	11.00	1909516.37	545949.45	N 36 14 52.46	W 107 40 39.01
	5100.00	27.49	270.32	5047.67	-63.74	537.30	127.26	11.00	1909516.51	545912.08	N 36 14 52.46	W 107 40 39.46
	5200.00	38.49	270.32	5131.42	-9.72	537.60	72.90	11.00	1909516.73	545857.72	N 36 14 52.46	W 107 40 40.13
	5300.00	49.49	270.32	5203.26	59.19	537.98	3.56	11.00	1909517.00	545788.39	N 36 14 52.47	W 107 40 40.97
	5400.00	60.49	270.32	5280.55	140.46	538.44	-78.21	11.00	1909517.32	545706.62	N 36 14 52.47	W 107 40 41.97
	5500.00	71.49	270.32	5301.19	231.10	538.94	-169.42	11.00	1909517.68	545615.42	N 36 14 52.48	W 107 40 43.08
	5600.00	82.49	270.32	5323.67	327.78	539.48	-266.70	11.00	1909518.07	545518.15	N 36 14 52.48	W 107 40 44.27
Landing Point, Hold to TD	5680.45	91.34	270.32	5328.00	407.54	539.93	-346.95	11.00	1909518.38	545437.91	N 36 14 52.49	W 107 40 45.25
	5700.00	91.34	270.32	5327.55	426.96	540.03	-366.49	0.00	1909518.46	545418.36	N 36 14 52.49	W 107 40 45.49
	5800.00	91.34	270.32	5325.22	526.32	540.59	-466.46	0.00	1909518.85	545318.40	N 36 14 52.49	W 107 40 46.71
	5900.00	91.34	270.32	5322.89	625.67	541.14	-566.44	0.00	1909519.25	545218.43	N 36 14 52.50	W 107 40 47.93
	6000.00	91.34	270.32	5320.56	725.03	541.70	-666.41	0.00	1909519.64	545118.47	N 36 14 52.50	W 107 40 49.15
	6100.00	91.34	270.32	5318.23	824.38	542.25	-766.38	0.00	1909520.04	545018.51	N 36 14 52.51	W 107 40 50.37
	6200.00	91.34	270.32	5315.90	923.73	542.81	-866.35	0.00	1909520.43	544918.54	N 36 14 52.52	W 107 40 51.59
	6300.00	91.34	270.32	5313.57	1023.09	543.36	-966.32	0.00	1909520.83	544818.58	N 36 14 52.52	W 107 40 52.81
	6400.00	91.34										

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	91.34	270.32	5294.93	1817.92	547.80	-1766.09	0.00	1909523.98	544018.87	N 36 14 52.56	W 107 41 2.58
	7200.00	91.34	270.32	5292.60	1917.27	548.35	-1866.06	0.00	1909524.37	543918.91	N 36 14 52.57	W 107 41 3.80
	7300.00	91.34	270.32	5290.27	2016.63	548.90	-1966.03	0.00	1909524.77	543818.94	N 36 14 52.58	W 107 41 5.02
	7400.00	91.34	270.32	5287.94	2115.98	549.46	-2066.01	0.00	1909525.16	543718.98	N 36 14 52.58	W 107 41 6.24
	7500.00	91.34	270.32	5285.61	2215.34	550.01	-2165.98	0.00	1909525.56	543619.01	N 36 14 52.59	W 107 41 7.46
	7600.00	91.34	270.32	5283.28	2314.69	550.57	-2265.95	0.00	1909525.95	543519.05	N 36 14 52.59	W 107 41 8.68
	7700.00	91.34	270.32	5280.95	2414.04	551.12	-2365.92	0.00	1909526.34	543419.09	N 36 14 52.60	W 107 41 9.90
	7800.00	91.34	270.32	5278.62	2513.40	551.68	-2465.89	0.00	1909526.74	543319.12	N 36 14 52.60	W 107 41 11.12
	7900.00	91.34	270.32	5276.29	2612.75	552.23	-2565.86	0.00	1909527.13	543219.16	N 36 14 52.61	W 107 41 12.34
	8000.00	91.34	270.32	5273.96	2712.11	552.79	-2665.83	0.00	1909527.53	543119.19	N 36 14 52.61	W 107 41 13.56
	8100.00	91.34	270.32	5271.63	2811.46	553.34	-2765.81	0.00	1909527.92	543019.23	N 36 14 52.62	W 107 41 14.78
	8200.00	91.34	270.32	5269.30	2910.81	553.89	-2865.78	0.00	1909528.31	542919.27	N 36 14 52.62	W 107 41 16.00
	8300.00	91.34	270.32	5266.97	3010.17	554.45	-2965.75	0.00	1909528.71	542819.30	N 36 14 52.63	W 107 41 17.22
	8400.00	91.34	270.32	5264.64	3109.52	555.00	-3065.72	0.00	1909529.10	542719.34	N 36 14 52.63	W 107 41 18.44
	8500.00	91.34	270.32	5262.31	3208.88	555.56	-3165.69	0.00	1909529.50	542619.38	N 36 14 52.64	W 107 41 19.66
	8600.00	91.34	270.32	5259.98	3308.23	556.11	-3265.66	0.00	1909529.89	542519.41	N 36 14 52.65	W 107 41 20.88
	8700.00	91.34	270.32	5257.65	3407.58	556.67	-3365.63	0.00	1909530.29	542419.45	N 36 14 52.65	W 107 41 22.10
	8800.00	91.34	270.32	5255.32	3506.94	557.22	-3465.60	0.00	1909530.68	542319.48	N 36 14 52.66	W 107 41 23.32
	8900.00	91.34	270.32	5252.99	3606.29	557.77	-3565.58	0.00	1909531.07	542219.52	N 36 14 52.66	W 107 41 24.54
	9000.00	91.34	270.32	5250.66	3705.65	558.33	-3665.55	0.00	1909531.47	542119.56	N 36 14 52.67	W 107 41 25.76
	9100.00	91.34	270.32	5248.33	3805.00	558.88	-3765.52	0.00	1909531.86	542019.59	N 36 14 52.67	W 107 41 26.99
	9200.00	91.34	270.32	5246.00	3904.35	559.44	-3865.49	0.00	1909532.26	541919.63	N 36 14 52.68	W 107 41 28.21
	9300.00	91.34	270.32	5243.67	4003.71	559.99	-3965.46	0.00	1909532.65	541819.67	N 36 14 52.68	W 107 41 29.43
	9400.00	91.34	270.32	5241.34	4103.06	560.55	-4065.43	0.00	1909533.04	541719.70	N 36 14 52.69	W 107 41 30.65
	9500.00	91.34	270.32	5239.01	4202.42	561.10	-4165.40	0.00	1909533.44	541619.74	N 36 14 52.69	W 107 41 31.87
	9600.00	91.34	270.32	5236.68	4301.77	561.66	-4265.38	0.00	1909533.83	541519.77	N 36 14 52.70	W 107 41 33.09
	9700.00	91.34	270.32	5234.35	4401.12	562.21	-4365.35	0.00	1909534.23	541419.81	N 36 14 52.70	W 107 41 34.31
	9800.00	91.34	270.32	5232.02	4500.48	562.76	-4465.32	0.00	1909534.62	541319.85	N 36 14 52.71	W 107 41 35.53
	9900.00	91.34	270.32	5229.70	4599.83	563.32	-4565.29	0.00	1909535.02	541219.88	N 36 14 52.71	W 107 41 36.75
	10000.00	91.34	270.32	5227.37	4699.19	563.87	-4665.26	0.00	1909535.41	541119.92	N 36 14 52.72	W 107 41 37.97
	10100.00	91.34	270.32	5225.04	4798.54	564.43	-4765.23	0.00	1909535.80	541019.96	N 36 14 52.73	W 107 41 39.19
Chaco 2308-09A #145H PBHL/TD	10144.45	91.34	270.32	5224.00	4842.70	564.67	-4809.67	0.00	1909535.98	540975.52	N 36 14 52.73	W 107 41 39.73

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_UNKNOWN-Depth Only	Original Hole / Chaco 2308-09A #145H R0 mdv 20Aug13
	14.000	10144.449	1/100.000	30.000	30.000	SLB_UNKNOWN	Original Hole / Chaco 2308-09A #145H R0 mdv 20Aug13

1. INTRODUCTION

Per Onshore Oil and Gas Order No. 1, 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 the Chaco 2308-09A No. 145H (145H) and Chaco 2308-09A No. 146H (146H) Applications for Permit to Drill (APDs).

The 145H and 146H oil and natural gas wells will be twinned with one another. Each well will be permitted via an APD. The surface facilities associated with the project, which will include a well pad, access road, and pipeline tie, are located on-lease and will be permitted under the APDs. Up to three potential staging areas will also be used for the project.

A pre-disturbance site visit 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, the general Conditions of Approval will be followed, if any are attached to the approved APDs.

2. PROJECT LOCATION AND EXISTING ROADS

The 145H/146H well pad is located approximately 36 miles south-southeast of the town of Bloomfield, New Mexico. The project area is located less than 0.3 mile south of U.S. Highway 550.

To access the location, head south from the U.S. Highway 550-U.S. Highway 64 intersection for approximately 40 miles, then turn right (south) onto an existing BLM-FFO resource road for approximately 0.1 mile. The 145H/146H access road starts on the eastern side of this existing road. The access route from U.S. Highway 550 is depicted on Figure 1 (Appendix B) and on the construction plats provided in the APD permit 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 pre-disturbance site visit, WPX was not allocated existing roads for upgrading or maintenance. If required by the BLM-FFO, WPX will upgrade existing non-County Roads leading to the project site. The road(s) will be upgraded following *The Gold Book: Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (Gold Book)* and BLM Handbook 9113.

3. NEW OR RECONSTRUCTED ACCESS ROADS

A 1769-foot-long resource road will be constructed as part of the project. The road will travel south-southeastward from the aforementioned, existing road and will enter the 145H/146H well pad near the pad's western corner (Corner 6). Approximately 1449 feet of the road will parallel a newly reclaimed Encana Oil & Gas (USA) Inc. (Encana) pipeline corridor and the 145H/146H pipeline corridor (the 145H/146H pipeline corridor is discussed in Section 9, Ancillary Facilities). The road will not cross an existing fence line or cattle guard.

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

The access road corridor will be 30 feet wide. The all-weather driving surface of the road will be 14 feet wide, with turnouts installed as necessary. The maximum grade of the road will be 3 percent. The road will be built up 18 to 24 inches and will be designed following the Basic Design Requirements for Constructed Roads from the *Gold Book* and BLM Handbook 9113. Topsoil removed from the access road will be used on cut slopes and bar ditches. The road will be crowned with a surface material (sandstone), if economically available. A 36-inch-diameter culvert will be placed beneath the access road where the

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