

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



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: 9-25-14

Well information;

Operator WPX, Well Name and Number Chaco 2408 33D #119H

API# 30-045-35601, Section 33, Township 24 NS, 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
- Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

\_\_\_\_\_  
NMOCD Approved by Signature

10-23-14  
\_\_\_\_\_  
Date

RECEIVED

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SEP 25 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER *Albuquerque Field Office*

5. Lease Serial No.  
NMNM #23233

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.  
Chaco 2408-33D #119H

9. API Well No.  
30-045-3560Z 1

10. Field and Pool, or Exploratory  
Basin Mancos

11. Sec., T., R., M., or Blk. and Survey or Area  
Surface: Sec 33, T24N, R8W  
BHL: Sec 33, T24N, R8W

12. County or Parish  
San Juan County

13. State  
NM

1a. Type of Work:  DRILL  REENTER

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

2. Name of Operator  
WPX Energy Production, LLC

3a. Address  
P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)  
(505) 333-1808

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At surface 1290' FNL & 388' FWL, sec 33, T24N, R8W  
At proposed prod. zone 1201' FNL & 230' FEL, sec 33, T24N, R8W

14. Distance in miles and direction from nearest town or post office\*  
approximately 9 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) 388'

16. No. of Acres in lease  
800

17. Spacing Unit dedicated to this well  
320 acres

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft. 22'

19. Proposed Depth  
10,954' MD / 5,486' TVD

20. BLM/BIA Bond No. on file  
UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
7020' GR

22. Approximate date work will start\*  
November 1, 2014

23. Estimated duration  
1 month

OIL CONS. DIV DIST. 3

OCT 21 2014

24. Attachments

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 *Larry Higgins* Name (Printed/Typed) Larry Higgins Date 9/25/14

Title

Regulatory Specialist

Approved by (Signature) *[Signature]* Name (Printed/Typed) Office FFO Date 10/20/14

Title AFM

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 Basin Mancos 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. This location is shared with the Chaco 2408-33D #113H, 112H and 118H

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

1053' of new access road is needed for this well site

An approximate 867' pipeline has been applied for these wells as a separate ROW action

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

NMOCDA

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

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

Form C-102  
Revised August 1, 2011

Submit one copy to  
Appropriate District Office

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

AMENDED REPORT  
**RECEIVED**

**SEP 25 2014**

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35601</b>		*Pool Code 97232	*Pool Name BASIN, MANCOS Laramie Field Office
*Property Code <b>313755</b>	*Property Name CHACO 2408-33D		*Well Number 119H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 7020'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	33	24N	8W		1290	NORTH	388	WEST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

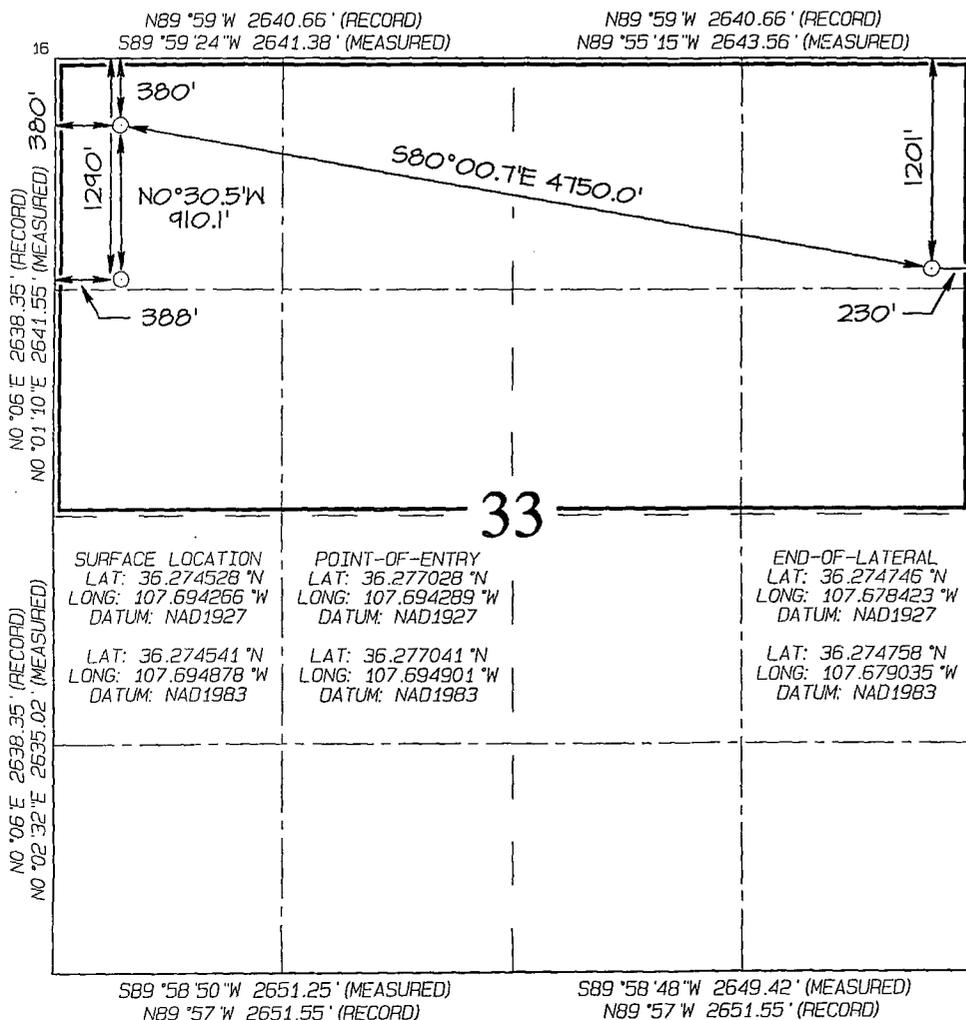
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	33	24N	8W		1201	NORTH	230	EAST	SAN JUAN

<sup>12</sup> Dedicated Acres 320.0 Acres N/2 - Section 33	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE OIL CONSERVATION DIVISION

OIL CONSERV. DIV DIST. 3

OCT 21 2014



**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: *Larry Higgins* Date: *9/25/14*  
Printed Name: Larry Higgins  
E-mail Address: larry.higgins@wpxenergy.com

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

Date Revised: SEPTEMBER 25, 2014  
Survey Date: DECEMBER 12, 2013  
Signature and Seal of Professional Surveyor

**JASON C. EDWARDS**  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
15269

**JASON C. EDWARDS**  
Certificate Number 15269

# WPXENERGY

## WPX ENERGY

### Operations Plan

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

**DATE:** 9/8/14 **FIELD:** Basin Mancos  
**WELL NAME:** Chaco 2408-33D #119H **SURFACE:** BLM  
**SH Location:** NWNW Sec 33 -24N -08W **ELEVATION:** 7020' GR  
**BH Location:** NENE Sec 33 -24N -08W San Juan Co., NM **MINERALS:** BLM  
**MEASURED DEPTH:** 10,954' **LEASE #:** NMNM 023233

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

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1303	1294	Point Lookout	4425	4230
Kirtland	1508	1490	Mancos	4658	4458
Picture Cliffs	1893	1851	<b>Kickoff Point</b>	<b>5129</b>	4927
Lewis	2038	1987	Top Target	5960	5412
Chacra	2333	2264	<b>Landing Point</b>	<b>6204</b>	5593
Cliff House	3467	3326	Base Target	6204	5593
Menefee	3512	3368			
			TD	10954	5486

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

C. **LOGGING PROGRAM:** LWD GR from surface casing to TD.

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

II. **DRILLING**

A. **MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

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

**NOTE:** Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 5,129' (MD) / 4,927' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,204' (MD) / 5,593' (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 +/- 10,954' (MD) / 5,486' (TVD). Will run 4-1/2 in. Production Liner from +/- 6,054 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'+	9.625"	36#	J-55
Intermediate	8.75"	6,204'	7"	23#	K-55
Prod. Liner	6.125"	6,054' - 10,954'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 6,054'	4-1/2"	11.6#	N-80

**B. FLOAT EQUIPMENT:**

- SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
- 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.
- PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + (2) RSI (Sliding Sleeves) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.
- TIE-BACK CASING: None

**C. CEMENTING:**

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

- SURFACE: 10 bbl Fr Water Spacer + 190 sx (222.3 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal (1.17 cu ft./sk, Vol 39.58 Bbls.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600psi. Total Volume: (222.3 cu-ft/190 sx/39.6 Bbls). TOC at Surface.
- 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.
- 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 +/- 5,754 ft.

#### IV. COMPLETION

##### A. CBL

1. Run CCL for perforating.

##### B. PRESSURE TEST

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

##### C. STIMULATION

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

##### D. RUNNING TUBING

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

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

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#### 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 6,204 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 6,054 ft. (MD) +/- 78 degree angle. TOC: +/- 5,754 ft. (MD).

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

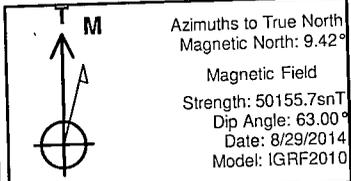
A 4-1/2" 11.6# N-80 tie-back string with seal assembly will be run and stung into the PBR of the liner hanger, tested to 1500 PSI and hung off at the surface.

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.



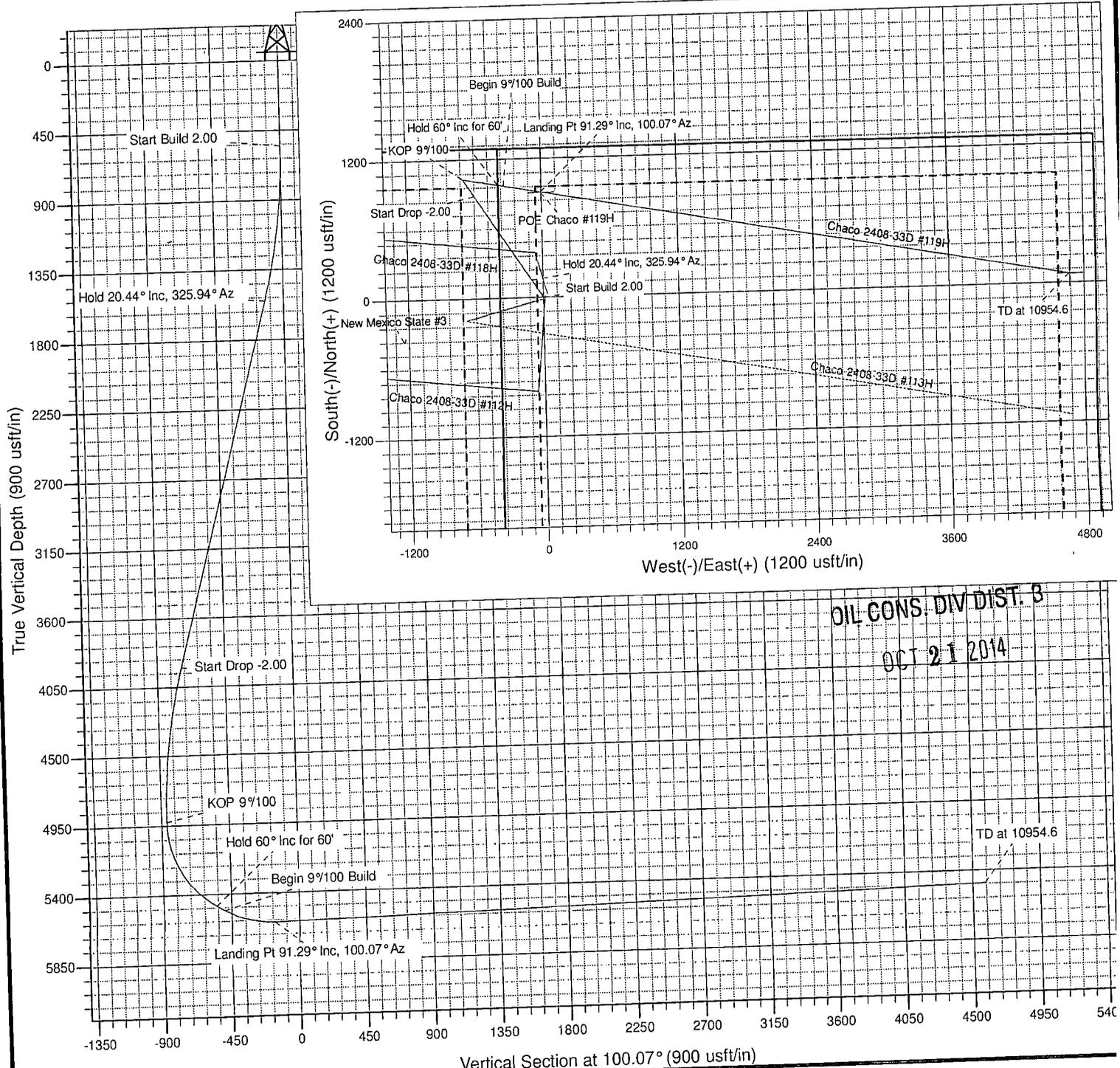
Well Name: Chaco 2408-33D #119H  
 Surface Location: Chaco 2408-33D  
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
 Ground Elevation: 7020.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1919200.62 540991.14 36.274530 -107.694270 119H  
 WELL @ 7034.0usft (Original Well Elev)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Departure	Annotation	
550.0	550.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00	
1550.4	1571.9	20.44	325.94	149.4	-101.0	-125.6	180.3	Hold 20.44° Inc, 325.94° Az	
3926.1	4107.3	20.44	325.94	882.9	-596.8	-742.0	1065.7	Start Drop -2.00	
4926.5	5129.2	0.00	0.00	1032.3	-697.8	-867.5	1246.0	KOP 9°100	
5477.8	5795.8	60.00	100.07	976.6	-384.4	-549.2	1564.3	Hold 60° Inc for 60'	
5507.8	5855.8	60.00	100.07	967.6	-333.2	-497.3	1616.3	Begin 9°100 Build	
5593.0	6203.5	91.29	100.07	909.4	-5.7	-164.6	1948.9	Landing Pt 91.29° Inc, 100.07° Az	
5486.0	10953.6	91.29	100.07	79.0	4670.0	4584.3	6697.8	TD at 10954.6	

Project: SJ 32-24N-08W  
 Site: Chaco 2408-33D  
 Well: Chaco 2408-33D #119H  
 Design #1 29Aug14 kjs

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TD / PBHL Chaco #119H	5486.0	78.8	4671.0	1919286.17	545662.05	36.274746	-107.678423
POE Chaco #119H	5593.0	909.4	-5.7	1920110.02	540984.12	36.277028	-107.694289



**WPXENERGY**<sup>SM</sup>



## **SAN JUAN BASIN**

**SJ 32-24N-08W**

**Chaco 2408-33D**

**Chaco 2408-33D #119H - Slot 119H**

**Wellbore #1**

**Plan: Design #1 29Aug14 kjs**

## **Standard Planning Report - Geographic**

**03 September, 2014**

<b>Database:</b>	COMPASS-SANJUAN	<b>Local Co-ordinate Reference:</b>	Well Chaco 2408-33D #119H - Slot 119H
<b>Company:</b>	SAN JUAN BASIN	<b>TVD Reference:</b>	WELL @ 7034.0usft (Original Well Elev)
<b>Project:</b>	SJ 32-24N-08W	<b>MD Reference:</b>	WELL @ 7034.0usft (Original Well Elev)
<b>Site:</b>	Chaco 2408-33D	<b>North Reference:</b>	True
<b>Well:</b>	Chaco 2408-33D #119H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 29Aug14 kjs		

<b>Project</b>	SJ 32-24N-08W, San Juan County, NM		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico West 3003		

<b>Site</b>	Chaco 2408-33D				
<b>Site Position:</b>		<b>Northing:</b>	1,919,215.20 usft	<b>Latitude:</b>	36.274570
<b>From:</b>	Map	<b>Easting:</b>	541,008.80 usft	<b>Longitude:</b>	-107.694210
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.08 °

<b>Well</b>	Chaco 2408-33D #119H - Slot 119H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	1,919,200.62 usft	<b>Latitude:</b>	36.274530
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	540,991.14 usft	<b>Longitude:</b>	-107.694270
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b>	7,020.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/29/2014	9.42	63.00	50,156

<b>Design</b>	Design #1 29Aug14 kjs			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	100.07

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
550.0	0.00	0.00	550.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,571.9	20.44	325.94	1,550.4	149.4	-101.0	2.00	2.00	0.00	325.94	
4,107.3	20.44	325.94	3,926.1	882.9	-596.8	0.00	0.00	0.00	0.00	
5,129.2	0.00	0.00	4,926.5	1,032.3	-697.8	2.00	-2.00	0.00	180.00	
5,795.8	60.00	100.07	5,477.8	976.6	-384.4	9.00	9.00	0.00	100.07	
5,855.8	60.00	100.07	5,507.8	967.6	-333.2	0.00	0.00	0.00	0.00	
6,203.5	91.29	100.07	5,593.0	909.4	-5.7	9.00	9.00	0.00	0.00	
10,954.6	91.29	100.07	5,486.0	78.8	4,671.0	0.00	0.00	0.00	0.00	TD / PBHL Chaco #11



**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-SANJUAN	<b>Local Co-ordinate Reference:</b>	Well Chaco 2408-33D #119H - Slot 119H
<b>Company:</b>	SAN JUAN BASIN	<b>TVD Reference:</b>	WELL @ 7034.0usft (Original Well Elev)
<b>Project:</b>	SJ 32-24N-08W	<b>MD Reference:</b>	WELL @ 7034.0usft (Original Well Elev)
<b>Site:</b>	Chaco 2408-33D	<b>North Reference:</b>	True
<b>Well:</b>	Chaco 2408-33D #119H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 29Aug14 kjs		

**Planned Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,919,200.62	540,991.14	36.274530	-107.694270
200.0	0.00	0.00	200.0	0.0	0.0	1,919,200.62	540,991.14	36.274530	-107.694270
400.0	0.00	0.00	400.0	0.0	0.0	1,919,200.62	540,991.14	36.274530	-107.694270
550.0	0.00	0.00	550.0	0.0	0.0	1,919,200.62	540,991.14	36.274530	-107.694270
<b>Start Build 2.00</b>									
600.0	1.00	325.94	600.0	0.4	-0.2	1,919,200.98	540,990.89	36.274531	-107.694271
800.0	5.00	325.94	799.7	9.0	-6.1	1,919,209.64	540,985.02	36.274555	-107.694291
1,000.0	9.00	325.94	998.2	29.2	-19.8	1,919,229.81	540,971.34	36.274610	-107.694337
1,200.0	13.00	325.94	1,194.4	60.8	-41.1	1,919,261.39	540,949.93	36.274697	-107.694410
1,400.0	17.00	325.94	1,387.6	103.7	-70.1	1,919,304.22	540,920.89	36.274815	-107.694508
1,571.9	20.44	325.94	1,550.4	149.4	-101.0	1,919,349.88	540,889.93	36.274941	-107.694613
<b>Hold 20.44° Inc, 325.94° Az</b>									
1,600.0	20.44	325.94	1,576.7	157.5	-106.5	1,919,358.00	540,884.42	36.274963	-107.694632
1,800.0	20.44	325.94	1,764.1	215.4	-145.6	1,919,415.80	540,845.23	36.275122	-107.694764
2,000.0	20.44	325.94	1,951.5	273.3	-184.7	1,919,473.61	540,806.03	36.275281	-107.694897
2,200.0	20.44	325.94	2,138.9	331.1	-223.8	1,919,531.41	540,766.84	36.275440	-107.695030
2,400.0	20.44	325.94	2,326.3	389.0	-262.9	1,919,589.22	540,727.64	36.275599	-107.695162
2,600.0	20.44	325.94	2,513.7	446.8	-302.0	1,919,647.02	540,688.45	36.275758	-107.695295
2,800.0	20.44	325.94	2,701.2	504.7	-341.2	1,919,704.83	540,649.25	36.275917	-107.695428
3,000.0	20.44	325.94	2,888.6	562.6	-380.3	1,919,762.63	540,610.06	36.276076	-107.695560
3,200.0	20.44	325.94	3,076.0	620.4	-419.4	1,919,820.43	540,570.86	36.276234	-107.695693
3,400.0	20.44	325.94	3,263.4	678.3	-458.5	1,919,878.24	540,531.67	36.276393	-107.695826
3,600.0	20.44	325.94	3,450.8	736.1	-497.6	1,919,936.04	540,492.47	36.276552	-107.695958
3,800.0	20.44	325.94	3,638.2	794.0	-536.7	1,919,993.85	540,453.28	36.276711	-107.696091
4,000.0	20.44	325.94	3,825.6	851.9	-575.8	1,920,051.65	540,414.09	36.276870	-107.696224
4,107.3	20.44	325.94	3,926.1	882.9	-596.8	1,920,082.65	540,393.07	36.276955	-107.696295
<b>Start Drop -2.00</b>									
4,200.0	18.58	325.94	4,013.5	908.6	-614.2	1,920,108.29	540,375.68	36.277026	-107.696354
4,400.0	14.58	325.94	4,205.2	955.8	-646.1	1,920,155.52	540,343.65	36.277156	-107.696462
4,600.0	10.58	325.94	4,400.3	991.9	-670.5	1,920,191.58	540,319.21	36.277255	-107.696545
4,800.0	6.58	325.94	4,598.1	1,016.6	-687.2	1,920,216.28	540,302.46	36.277323	-107.696602
5,000.0	2.58	325.94	4,797.4	1,029.9	-696.2	1,920,229.51	540,293.49	36.277359	-107.696632
5,129.2	0.00	0.00	4,926.5	1,032.3	-697.8	1,920,231.92	540,291.86	36.277366	-107.696638
<b>KOP 9°/100</b>									
5,200.0	6.37	100.07	4,997.2	1,031.6	-693.9	1,920,231.23	540,295.73	36.277364	-107.696625
5,400.0	24.37	100.07	5,189.2	1,022.4	-641.9	1,920,222.07	540,347.74	36.277339	-107.696448
5,600.0	42.37	100.07	5,355.6	1,003.2	-534.0	1,920,203.07	540,455.65	36.277286	-107.696082
5,795.8	60.00	100.07	5,477.8	976.6	-384.4	1,920,176.71	540,605.34	36.277213	-107.695574
<b>Hold 60° Inc for 60'</b>									
5,800.0	60.00	100.07	5,479.9	976.0	-380.8	1,920,176.08	540,608.89	36.277211	-107.695562
5,855.8	60.00	100.07	5,507.8	967.6	-333.2	1,920,167.70	540,656.52	36.277188	-107.695401
<b>Begin 9°/100 Build</b>									
6,000.0	72.97	100.07	5,565.2	944.5	-203.4	1,920,144.82	540,786.43	36.277125	-107.694960
6,200.0	90.97	100.07	5,593.0	910.0	-9.2	1,920,110.61	540,980.66	36.277030	-107.694301
6,203.5	91.29	100.07	5,593.0	909.4	-5.7	1,920,110.00	540,984.11	36.277028	-107.694290
<b>Landing Pt 91.29° Inc, 100.07° Az - POE Chaco #119H</b>									
6,400.0	91.29	100.07	5,588.5	875.0	187.7	1,920,075.93	541,177.58	36.276934	-107.693633
6,600.0	91.29	100.07	5,584.0	840.1	384.6	1,920,041.25	541,374.50	36.276838	-107.692966
6,800.0	91.29	100.07	5,579.5	805.1	581.4	1,920,006.57	541,571.42	36.276742	-107.692298
7,000.0	91.29	100.07	5,575.0	770.2	778.3	1,919,971.89	541,768.34	36.276646	-107.691630
7,200.0	91.29	100.07	5,570.5	735.2	975.2	1,919,937.21	541,965.26	36.276550	-107.690962
7,400.0	91.29	100.07	5,566.0	700.2	1,172.0	1,919,902.53	542,162.18	36.276454	-107.690294
7,600.0	91.29	100.07	5,561.5	665.3	1,368.9	1,919,867.85	542,359.10	36.276358	-107.689626
7,800.0	91.29	100.07	5,557.0	630.3	1,565.8	1,919,833.17	542,556.02	36.276262	-107.688958

<b>Database:</b>	COMPASS-SANJUAN	<b>Local Co-ordinate Reference:</b>	Well Chaco 2408-33D #119H - Slot 119H
<b>Company:</b>	SAN JUAN BASIN	<b>TVD Reference:</b>	WELL @ 7034.0usft (Original Well Elev)
<b>Project:</b>	SJ 32-24N-08W	<b>MD Reference:</b>	WELL @ 7034.0usft (Original Well Elev)
<b>Site:</b>	Chaco 2408-33D	<b>North Reference:</b>	True
<b>Well:</b>	Chaco 2408-33D #119H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 29Aug14 kjs		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,000.0	91.29	100.07	5,552.5	595.3	1,762.7	1,919,798.50	542,752.93	36.276165	-107.688290
8,200.0	91.29	100.07	5,548.0	560.4	1,959.5	1,919,763.82	542,949.85	36.276069	-107.687622
8,400.0	91.29	100.07	5,543.5	525.4	2,156.4	1,919,729.14	543,146.77	36.275973	-107.686955
8,600.0	91.29	100.07	5,539.0	490.5	2,353.3	1,919,694.46	543,343.69	36.275877	-107.686287
8,800.0	91.29	100.07	5,534.5	455.5	2,550.1	1,919,659.78	543,540.61	36.275781	-107.685619
9,000.0	91.29	100.07	5,530.0	420.5	2,747.0	1,919,625.10	543,737.53	36.275685	-107.684951
9,200.0	91.29	100.07	5,525.5	385.6	2,943.9	1,919,590.42	543,934.45	36.275589	-107.684283
9,400.0	91.29	100.07	5,521.0	350.6	3,140.7	1,919,555.74	544,131.37	36.275493	-107.683615
9,600.0	91.29	100.07	5,516.5	315.6	3,337.6	1,919,521.06	544,328.29	36.275397	-107.682947
9,800.0	91.29	100.07	5,512.0	280.7	3,534.5	1,919,486.38	544,525.20	36.275301	-107.682279
10,000.0	91.29	100.07	5,507.5	245.7	3,731.3	1,919,451.70	544,722.12	36.275204	-107.681612
10,200.0	91.29	100.07	5,503.0	210.8	3,928.2	1,919,417.02	544,919.04	36.275108	-107.680944
10,400.0	91.29	100.07	5,498.5	175.8	4,125.1	1,919,382.34	545,115.96	36.275012	-107.680276
10,600.0	91.29	100.07	5,494.0	140.8	4,321.9	1,919,347.66	545,312.88	36.274916	-107.679608
10,800.0	91.29	100.07	5,489.5	105.9	4,518.8	1,919,312.98	545,509.80	36.274820	-107.678940
10,954.6	91.29	100.07	5,486.0	78.8	4,671.0	1,919,286.17	545,662.05	36.274746	-107.678424

TD at 10954.6 - TD / PBHL Chaco #119H

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD / PBHL Chaco #119H - hit/miss target - Shape - Point	0.00	0.00	5,486.0	78.8	4,671.0	1,919,286.17	545,662.05	36.274746	-107.678424
POE Chaco #119H - plan hits target center - Point	0.00	0.00	5,593.0	909.4	-5.7	1,920,110.03	540,984.12	36.277028	-107.694290

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
550.0	550.0	0.0	0.0	Start Build 2.00
1,571.9	1,550.4	149.4	-101.0	Hold 20.44° Inc, 325.94° Az
4,107.3	3,926.1	882.9	-596.8	Start Drop -2.00
5,129.2	4,926.5	1,032.3	-697.8	KOP 9°/100
5,795.8	5,477.8	976.6	-384.4	Hold 60° Inc for 60'
5,855.8	5,507.8	967.6	-333.2	Begin 9°/100 Build
6,203.5	5,593.0	909.4	-5.7	Landing Pt 91.29° Inc, 100.07° Az
10,954.6	5,486.0	78.8	4,671.0	TD at 10954.6

irreparable harm to roads, soils, or streams. No frozen soils will be used for construction purposes or trench backfilling.

Soils will be excavated from the well-connect pipeline corridor trenches using a trencher or backhoe. Each trench will be 4 to 5 feet in depth. The trench will be 16 inches in width if a trencher is used or 24 inches in width if a backhoe is used. Soft plugs will be placed within the trench every quarter mile. When stringing pipe, one joint of pipe will be set back every quarter mile. Backfilling operations will be performed within a reasonable amount of time to ensure that the trench is not left open for more than 24 hours. If a trench is left open overnight, it will be fenced with a temporary fence or a night watchman will be utilized.

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

The soils excavated from the trench will be returned to the trench, atop the pipe, and compacted to prevent subsidence. The trench will be compacted after approximately 2 feet of fill is placed within the trench and after the ground surface has been leveled.

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

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

Construction plats are provided in the APD and ROW Grant permit packages.

## ✓ 9. METHODS FOR HANDLING WASTE DISPOSAL

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

If drilling has not been initiated on the well pad within 120 days of the well pad being constructed, 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

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Two TUAs will be used; the TUAs are described in Section 2.2 (Project Description). During staging, WPX will stay within the boundaries of the previously disturbed well pads associated with the TUAs. During interim reclamation, WPX will repair any damage to and reseed the TUAs (with the exception of portions of the TUAs that the well pad operator prefers to remain unseeded).

## 11. WELL SITE LAYOUT

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The approximate cuts, approximate fills, and orientation for the well pad are depicted on the construction plats in the APD and ROW Grant permit packages. 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).

**3000 PSI BOP Schematic**

