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: 11-5-14
Well information;
Operator WPX, Well Name and Number NW Lybrook Unit #134H
API# 30-045-35622, Section 36, Township 24 (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
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ 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

2-5-2015
Date

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

OIL CONS. DIV DIST. 3

NOV 19 2014

RECEIVED

NOV 05 2014

Form 3160-3
(September 2001)

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

5. Lease Serial No.
NO-G-0207-1609

6. If Indian, Allottee or Tribe Name
Navajo allottment

1a. Type of Work: ☒ DRILL ☐ REENTER

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

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

8. Lease Name and Well No.
NW Lybrook UT #134H

2. Name of Operator
WPX Energy Production, LLC

9. API Well No.
30-045-35622

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

KP

4. Location of Well *(Report location clearly and in accordance with any State requirements. *)*
At surface 724' FSL & 2513' FEL, sec 36, T24N, R8W
At proposed prod. zone 380' FSL & 230' FWL, sec 35, T24N, R8W

11. Sec., T., R., M., or Blk. and Survey or Area
Surface: Sec 36, T24N, R8W
BHL: Sec 35, T24N, R8W

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
approximately 5 miles northwest of Lybrook, New Mexico	San Juan County	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
724'	160	240 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
22'	13,441' MD / 5,441' TVD	UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
6893' GR	December 15, 2014	1 month

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
Title: Regulatory Specialist	Andrea Felix	11/5/14

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title AFM	Office FFO	11/18/14

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on reverse)*

WPX Energy Production, LLC, proposes to develop the Lybrook Unit NW HZ (OIL) 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 NMSLO. This location is shared with the NW Lybrook UT #133H.

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

235" of new access road is needed for this well site

An approximate 706" pipeline has been applied for these wells as a separate ROW action

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

NMOCD

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

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

NOV 05 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045-35622981O1		Lybrook Unit NW HZ (OIL)

4 Property Code	5 Property Name	6 Well Number
313874	NW Lybrook UT	134H

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6893'

10 Surface Location

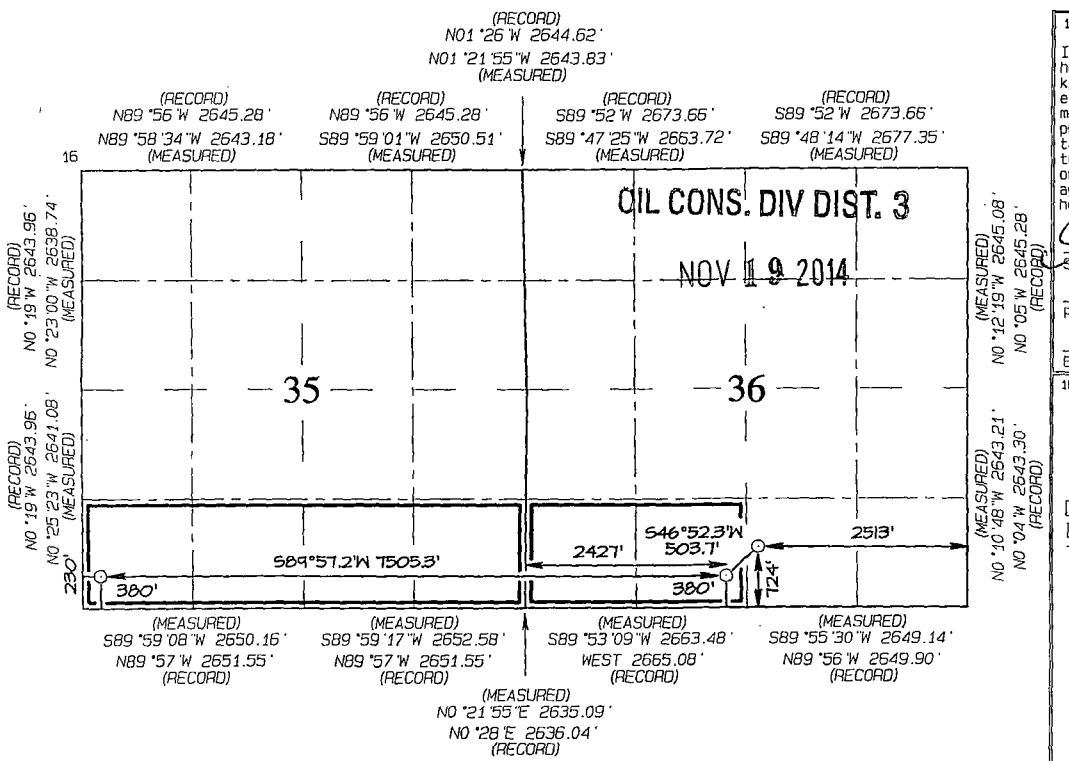
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	36	24N	8W		724	SOUTH	2513	EAST	SAN JUAN

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
M	35	24N	8W		380	SOUTH	230	WEST	SAN JUAN

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
240.0 Acres	S/2 S/2 - Section 35 S/2 SW/4 - Section 36			R-13921

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



END-OF-LATERAL
380' FSL 230' FWL
SECTION 35, T24N, R8W
LAT: 36.264586 °N
LONG: 107.658862 °W
DATUM: NAD1927

LAT: 36.264599 °N
LONG: 107.659472 °W
DATUM: NAD1983

POINT-OF-ENTRY
380' FSL 2427' FWL
SECTION 36, T24N, R8W
LAT: 36.264563 °N
LONG: 107.633404 °W
DATUM: NAD1927

LAT: 36.264576 °N
LONG: 107.634013 °W
DATUM: NAD1983

SURFACE LOCATION
724' FSL 2513' FEL
SECTION 36, T24N, R8W
LAT: 36.265507 °N
LONG: 107.632155 °W
DATUM: NAD1927

LAT: 36.265519 °N
LONG: 107.632764 °W
DATUM: NAD1983

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 11-5-2014 Date

Andrea Felix
Printed Name

andrea.felix@wpxenergy.com
E-mail Address

18 SURVEYOR CERTIFICATION

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

Date Revised: OCTOBER 27, 2014
Date of Survey: APRIL 11, 2014

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPXENERGY

WPX ENERGY

Operations Plan

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

DATE:	10/20/2014	**FIELD:**	Lybrook Unit NW HZ (OIL)
WELL NAME:	**NW Lybrook UT #134H**	**SURFACE:**	State
SH Location:	SWSE Sec 36 -24N -08W	**ELEVATION:**	6893' GR
BH Location:	SWSW Sec 35 -24N -08W San Juan CO., NM	**MINERALS:**	Indian Allotted
MEASURED DEPTH:	**13,441'**	**LEASE #:**	NO-G-0207-1609

I. GEOLOGY: Surface formation – Nacimeinto

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

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1283	1279	Point Lookout	4201	4177
Kirtland	1322	1318	Mancos	4437	4411
Picture Cliffs	1823	1816	**Kickoff Point**	**4869**	4842
Lewis	2013	2047	Top Target	5545	5398
Chacra	2250	2240	**Landing Point**	**5939**	5508
Cliff House	3342	3224	Base Target	5939	5508
Menefee	3391	3372			
			TD	13441	5441

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

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

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 4,869' (MD) / 4,842' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,939' (MD) / 5,508' (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 +/- 13,441' (MD) / 5,441' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,789 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"	5,939'	7"	23#	K-55
Prod. Liner	6.125"	5,789 - 13,441'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,789'	4-1/2"	11.6#	N-80

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.

2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.

3. PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + 1 RSI (Sliding Sleeve) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.

4. TIE-BACK CASING: None

C. CEMENTING:

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

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

2. INTERMEDIATE: 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: +/- 700 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1216 cu-ft / 216.5 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (1050 sx / 1461 cu-ft / 260 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.

3. PRODUCTION LINER: **STAGE 1**:10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2**:40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III + 0.5 gal/bbl Musol + 38.75 ppb Barite + 0.5 gal/bbl SEM-7. **STAGE 3**: 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement:** 50 / 50 Poz Premium + 0.2% Versaset + 0.2% Halad -766, Yield 1.43 cu ft/sk, 13.0 ppg, (10 sx / 14.3 cu ft. / 2.5 bbls). **STAGE 5:** 200 sx. Foamed Lead Cement: 50 / 50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.97 cu-ft/sk. 13.0 ppg (200 sx / 394 cu-ft. / 70.2 bbls.). **STAGE 6**: Tail Cement : 100 sx. 50/50 Poz Standard + 0.2% Versaset + 0.05% HALAD-766 + .05% SA-1015, Weight: 13.5 ppg (100 sx / Yield 1.28 cu ft/sk. / 128 cu ft. / 22.8 bbls) **STAGE 7**: Displace w/ +/- 137 bbl Fr Water. Total Cement (536.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,644 ft.

IV. COMPLETION

A. CBL

1. Run CCL for perforating.

B. PRESSURE TEST

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

C. STIMULATION

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

D. RUNNING TUBING

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

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

NOTE:

Installation of RSI sleeves at Toe of Lateral.

Proposed Operations:

A 4-1/2" 11.6# N-80 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# K-55 Intermediate casing (set at 6,094 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,944 ft. (MD) +/- 78 degree angle. TOC: +/- 5,644 ft. (MD).

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

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

The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

Note: Changes to formation tops, casing landing points, well TD and Directional Plan.

WPXENERGY

Well Name: Chaco 2408-36O #134H
Surface Location: Chaco 2408-36O
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6893.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1915949.36	559308.84	36.265510	-107.632150	

WELL @ 6907.0usft (Original Well Elev)

T M

Azimuths to True North
Magnetic North: 9.38°

Magnetic Field
Strength: 50147.0snT
Dip Angle: 63.00°
Date: 10/15/2014
Model: IGRF2010

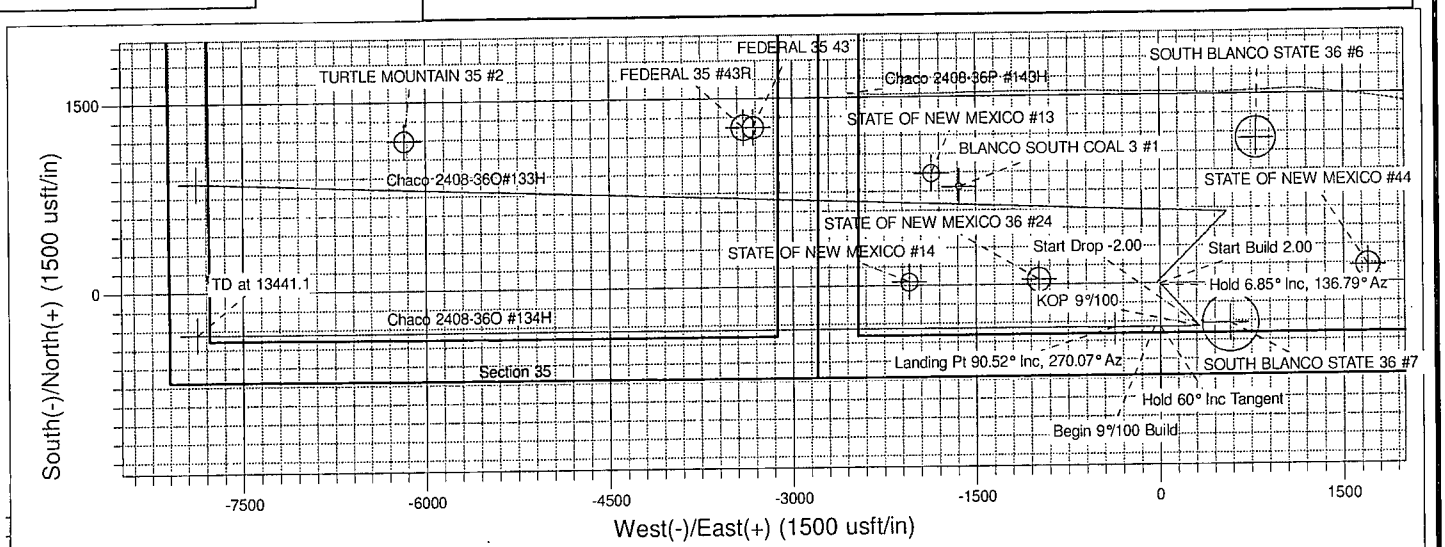
Project: SJ 36-24N-08W
Site: Chaco 2408-36O
Well: Chaco 2408-36O #134H
Design #1 15Oct14 kjs

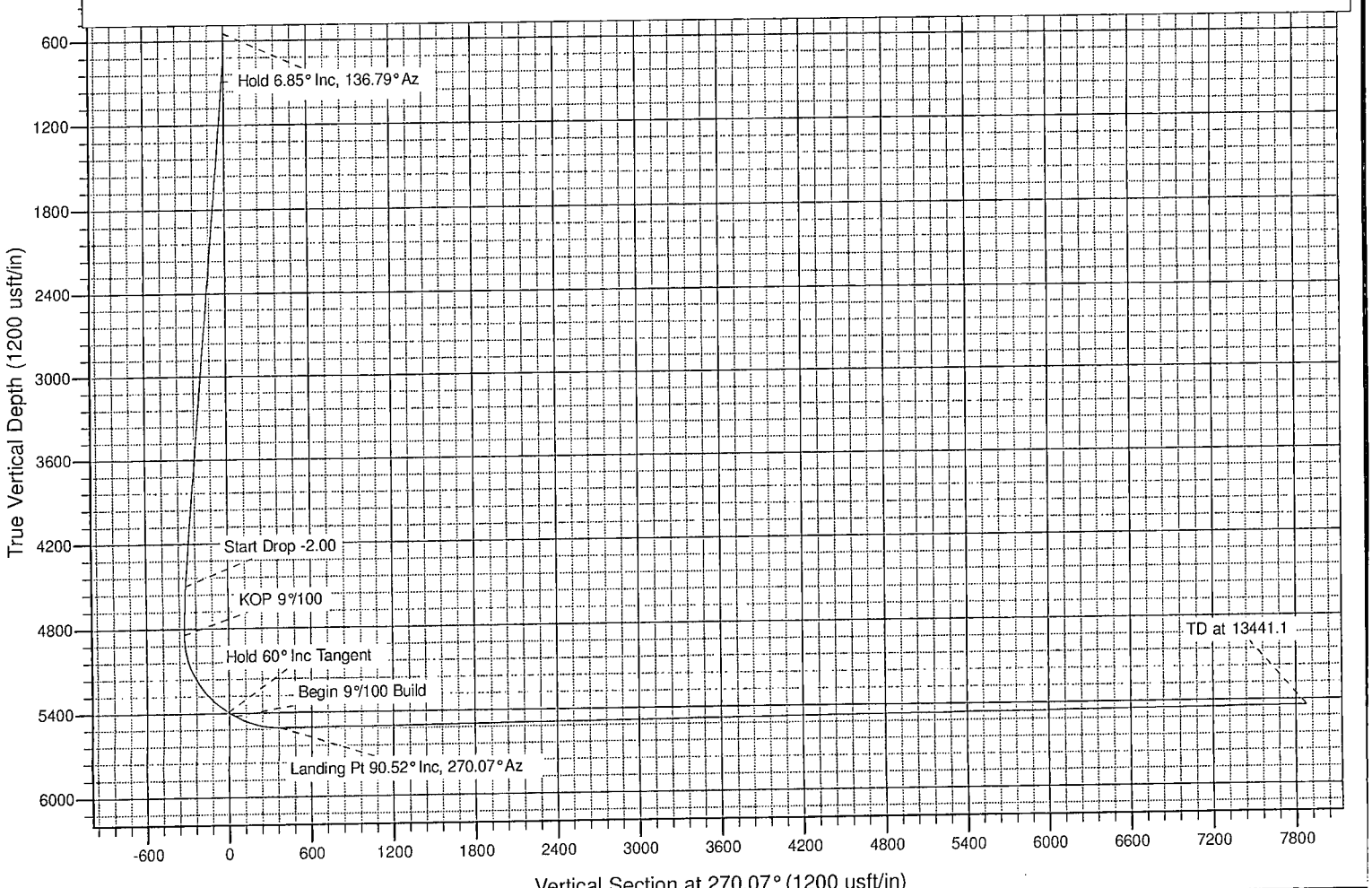
ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
550.0	550.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
891.5	892.3	6.85	136.79	-14.9	14.0	-14.0	20.4	Hold 6.85° Inc, 136.79° Az
4500.8	4527.5	6.85	136.79	-330.7	310.7	-311.1	453.8	Start Drop -2.00
4842.3	4869.8	0.00	0.00	-345.6	324.7	-325.1	474.2	KOP 9°/100
5393.6	5536.5	60.00	270.07	-345.2	6.4	-6.8	792.5	Hold 60° Inc Tangent
5423.6	5596.5	60.00	270.07	-345.1	-45.6	45.1	844.5	Begin 9°/100 Build
5508.9	5935.6	90.52	270.07	-344.7	-369.6	369.2	1168.5	Landing Pt 90.52° Inc, 270.07° Az
5441.0	13441.1	90.52	270.07	-335.2	-7874.8	7874.4	8673.7	TD at 13441.1

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TD / PBHL #134H	5441.0	-335.2	-7874.8	1915597.78	551434.75	36.264586	-107.658862
POE #134H	5508.9	-344.7	-369.6	1915603.89	558939.96	36.264563	-107.633404





WPXENERGY SM

SAN JUAN BASIN

SJ 36-24N-08W
Chaco 2408-36O
Chaco 2408-36O #134H

Wellbore #1

Plan: Design #1 15Oct14 kjs

Standard Planning Report - Geographic

16 October, 2014

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2408-36O #134H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	**MD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Site:	Chaco 2408-36O	**North Reference:**	True
Well:	Chaco 2408-36O #134H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 15Oct14 kjs		

Project	SJ 36-24N-08W, San Juan County		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	Chaco 2408-36O				
Site Position:		**Northing:**	1,915,960.24 usft	**Latitude:**	36.265540
From:	Map	**Easting:**	559,288.18 usft	**Longitude:**	-107.632220
Position Uncertainty:	0.0 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.12 °

Well	Chaco 2408-36O #134H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	1,915,949.36 usft	**Latitude:**	36.265510
	+E/-W	0.0 usft	**Easting:**	559,308.84 usft	**Longitude:**	-107.632150
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	6,893.0 usft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	10/15/2014	9.38	63.00	50,147

Design	Design #1 15Oct14 kjs				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	270.07	

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	
892.3	6.85	136.79	891.5	-14.9	14.0	2.00	2.00	0.00	136.79	
4,527.5	6.85	136.79	4,500.8	-330.7	310.7	0.00	0.00	0.00	0.00	
4,869.8	0.00	0.00	4,842.3	-345.6	324.7	2.00	-2.00	0.00	180.00	
5,536.5	60.00	270.07	5,393.6	-345.2	6.4	9.00	9.00	0.00	270.07	
5,596.5	60.00	270.07	5,423.6	-345.1	-45.6	0.00	0.00	0.00	0.00	
5,935.6	90.52	270.07	5,508.9	-344.7	-369.6	9.00	9.00	0.00	0.01	
13,441.1	90.52	270.07	5,441.0	-335.2	-7,874.8	0.00	0.00	0.00	0.00	TD / PBHL #134H

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2408-36O #134H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	**MD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Site:	Chaco 2408-36O	**North Reference:**	True
Well:	Chaco 2408-36O #134H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 15Oct14 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	1,915,949.36	559,308.84	36.265510	-107.632150
200.0	0.00	0.00	200.0	0.0	0.0	1,915,949.36	559,308.84	36.265510	-107.632150
400.0	0.00	0.00	400.0	0.0	0.0	1,915,949.36	559,308.84	36.265510	-107.632150
550.0	0.00	0.00	550.0	0.0	0.0	1,915,949.36	559,308.84	36.265510	-107.632150
Start Build 2.00									
600.0	1.00	136.79	600.0	-0.3	0.3	1,915,949.05	559,309.14	36.265509	-107.632149
800.0	5.00	136.79	799.7	-7.9	7.5	1,915,941.43	559,316.32	36.265488	-107.632125
892.3	6.85	136.79	891.5	-14.9	14.0	1,915,934.50	559,322.86	36.265469	-107.632103
Hold 6.85° Inc, 136.79° Az									
1,000.0	6.85	136.79	998.4	-24.2	22.8	1,915,925.17	559,331.67	36.265443	-107.632073
1,200.0	6.85	136.79	1,197.0	-41.6	39.1	1,915,907.83	559,348.03	36.265396	-107.632018
1,400.0	6.85	136.79	1,395.6	-59.0	55.4	1,915,890.48	559,364.39	36.265348	-107.631962
1,600.0	6.85	136.79	1,594.1	-76.4	71.8	1,915,873.14	559,380.75	36.265300	-107.631907
1,800.0	6.85	136.79	1,792.7	-93.7	88.1	1,915,855.80	559,397.11	36.265253	-107.631851
2,000.0	6.85	136.79	1,991.3	-111.1	104.4	1,915,838.46	559,413.48	36.265205	-107.631796
2,200.0	6.85	136.79	2,189.9	-128.5	120.7	1,915,821.12	559,429.84	36.265157	-107.631741
2,400.0	6.85	136.79	2,388.4	-145.9	137.1	1,915,803.77	559,446.20	36.265109	-107.631685
2,600.0	6.85	136.79	2,587.0	-163.2	153.4	1,915,786.43	559,462.56	36.265062	-107.631630
2,800.0	6.85	136.79	2,785.6	-180.6	169.7	1,915,769.09	559,478.92	36.265014	-107.631575
3,000.0	6.85	136.79	2,984.2	-198.0	186.0	1,915,751.75	559,495.28	36.264966	-107.631519
3,200.0	6.85	136.79	3,182.7	-215.4	202.4	1,915,734.41	559,511.64	36.264918	-107.631464
3,400.0	6.85	136.79	3,381.3	-232.8	218.7	1,915,717.06	559,528.00	36.264871	-107.631408
3,600.0	6.85	136.79	3,579.9	-250.1	235.0	1,915,699.72	559,544.36	36.264823	-107.631353
3,800.0	6.85	136.79	3,778.5	-267.5	251.3	1,915,682.38	559,560.73	36.264775	-107.631298
4,000.0	6.85	136.79	3,977.0	-284.9	267.7	1,915,665.04	559,577.09	36.264727	-107.631242
4,200.0	6.85	136.79	4,175.6	-302.3	284.0	1,915,647.70	559,593.45	36.264680	-107.631187
4,400.0	6.85	136.79	4,374.2	-319.6	300.3	1,915,630.35	559,609.81	36.264632	-107.631132
4,527.5	6.85	136.79	4,500.8	-330.7	310.7	1,915,619.30	559,620.24	36.264602	-107.631096
Start Drop -2.00									
4,600.0	5.40	136.79	4,572.8	-336.3	316.0	1,915,613.68	559,625.54	36.264586	-107.631078
4,800.0	1.40	136.79	4,772.5	-345.0	324.1	1,915,605.06	559,633.68	36.264562	-107.631051
4,869.8	0.00	0.00	4,842.3	-345.6	324.7	1,915,604.44	559,634.26	36.264561	-107.631049
KOP 9°/100									
5,000.0	11.71	270.07	4,971.5	-345.6	311.4	1,915,604.43	559,621.00	36.264561	-107.631094
5,200.0	29.71	270.07	5,157.8	-345.5	241.0	1,915,604.37	559,550.55	36.264561	-107.631333
5,400.0	47.71	270.07	5,313.3	-345.3	116.4	1,915,604.26	559,425.98	36.264561	-107.631755
5,536.5	60.00	270.07	5,393.6	-345.2	6.4	1,915,604.17	559,315.95	36.264562	-107.632129
Hold 60° Inc Tangent									
5,596.5	60.00	270.07	5,423.6	-345.1	-45.6	1,915,604.12	559,263.99	36.264562	-107.632305
Begin 9°/100 Build									
5,600.0	60.31	270.07	5,425.4	-345.1	-48.6	1,915,604.12	559,260.97	36.264562	-107.632315
5,800.0	78.31	270.07	5,495.7	-344.9	-234.9	1,915,603.96	559,074.63	36.264563	-107.632947
5,935.6	90.52	270.07	5,508.9	-344.7	-369.6	1,915,603.85	558,939.92	36.264563	-107.633404
Landing Pt 90.52° Inc, 270.07° Az									
6,000.0	90.52	270.07	5,508.3	-344.7	-434.0	1,915,603.80	558,875.53	36.264563	-107.633623
6,200.0	90.52	270.07	5,506.5	-344.4	-634.0	1,915,603.64	558,675.54	36.264564	-107.634301
6,400.0	90.52	270.07	5,504.7	-344.2	-834.0	1,915,603.48	558,475.55	36.264565	-107.634979
6,600.0	90.52	270.07	5,502.9	-343.9	-1,034.0	1,915,603.31	558,275.56	36.264565	-107.635658
6,800.0	90.52	270.07	5,501.1	-343.6	-1,234.0	1,915,603.15	558,075.56	36.264566	-107.636336
7,000.0	90.52	270.07	5,499.3	-343.4	-1,434.0	1,915,602.99	557,875.57	36.264567	-107.637014
7,200.0	90.52	270.07	5,497.5	-343.1	-1,634.0	1,915,602.83	557,675.58	36.264567	-107.637693
7,400.0	90.52	270.07	5,495.6	-342.9	-1,834.0	1,915,602.67	557,475.59	36.264568	-107.638371
7,600.0	90.52	270.07	5,493.8	-342.6	-2,034.0	1,915,602.51	557,275.60	36.264569	-107.639050
7,800.0	90.52	270.07	5,492.0	-342.4	-2,234.0	1,915,602.34	557,075.61	36.264569	-107.639728

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2408-36O #134H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	**MD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Site:	Chaco 2408-36O	**North Reference:**	True
Well:	Chaco 2408-36O #134H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 15Oct14 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	90.52	270.07	5,490.2	-342.1	-2,433.9	1,915,602.18	556,875.61	36.264570	-107.640406
8,200.0	90.52	270.07	5,488.4	-341.9	-2,633.9	1,915,602.02	556,675.62	36.264571	-107.641085
8,400.0	90.52	270.07	5,486.6	-341.6	-2,833.9	1,915,601.86	556,475.63	36.264571	-107.641763
8,600.0	90.52	270.07	5,484.8	-341.4	-3,033.9	1,915,601.70	556,275.64	36.264572	-107.642442
8,800.0	90.52	270.07	5,483.0	-341.1	-3,233.9	1,915,601.54	556,075.65	36.264573	-107.643120
9,000.0	90.52	270.07	5,481.2	-340.9	-3,433.9	1,915,601.37	555,875.65	36.264573	-107.643798
9,200.0	90.52	270.07	5,479.4	-340.6	-3,633.9	1,915,601.21	555,675.66	36.264574	-107.644477
9,400.0	90.52	270.07	5,477.6	-340.3	-3,833.9	1,915,601.05	555,475.67	36.264574	-107.645155
9,600.0	90.52	270.07	5,475.7	-340.1	-4,033.9	1,915,600.89	555,275.68	36.264575	-107.645833
9,800.0	90.52	270.07	5,473.9	-339.8	-4,233.9	1,915,600.73	555,075.69	36.264576	-107.646512
10,000.0	90.52	270.07	5,472.1	-339.6	-4,433.9	1,915,600.57	554,875.70	36.264576	-107.647190
10,200.0	90.52	270.07	5,470.3	-339.3	-4,633.9	1,915,600.40	554,675.70	36.264577	-107.647869
10,400.0	90.52	270.07	5,468.5	-339.1	-4,833.8	1,915,600.24	554,475.71	36.264577	-107.648547
10,600.0	90.52	270.07	5,466.7	-338.8	-5,033.8	1,915,600.08	554,275.72	36.264578	-107.649225
10,800.0	90.52	270.07	5,464.9	-338.6	-5,233.8	1,915,599.92	554,075.73	36.264579	-107.649904
11,000.0	90.52	270.07	5,463.1	-338.3	-5,433.8	1,915,599.76	553,875.74	36.264579	-107.650582
11,200.0	90.52	270.07	5,461.3	-338.1	-5,633.8	1,915,599.60	553,675.75	36.264580	-107.651261
11,400.0	90.52	270.07	5,459.5	-337.8	-5,833.8	1,915,599.43	553,475.75	36.264580	-107.651939
11,600.0	90.52	270.07	5,457.7	-337.6	-6,033.8	1,915,599.27	553,275.76	36.264581	-107.652617
11,800.0	90.52	270.07	5,455.8	-337.3	-6,233.8	1,915,599.11	553,075.77	36.264582	-107.653296
12,000.0	90.52	270.07	5,454.0	-337.1	-6,433.8	1,915,598.95	552,875.78	36.264582	-107.653974
12,200.0	90.52	270.07	5,452.2	-336.8	-6,633.8	1,915,598.79	552,675.79	36.264583	-107.654653
12,400.0	90.52	270.07	5,450.4	-336.5	-6,833.8	1,915,598.62	552,475.80	36.264583	-107.655331
12,600.0	90.52	270.07	5,448.6	-336.3	-7,033.8	1,915,598.46	552,275.80	36.264584	-107.656009
12,800.0	90.52	270.07	5,446.8	-336.0	-7,233.7	1,915,598.30	552,075.81	36.264584	-107.656688
13,000.0	90.52	270.07	5,445.0	-335.8	-7,433.7	1,915,598.14	551,875.82	36.264585	-107.657366
13,200.0	90.52	270.07	5,443.2	-335.5	-7,633.7	1,915,597.98	551,675.83	36.264586	-107.658044
13,400.0	90.52	270.07	5,441.4	-335.3	-7,833.7	1,915,597.82	551,475.84	36.264586	-107.658723
13,441.1	90.52	270.07	5,441.0	-335.2	-7,874.8	1,915,597.78	551,434.75	36.264586	-107.658862
TD at 13441.1									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD / PBHL #134H - plan hits target center - Point	0.00	0.00	5,441.0	-335.2	-7,874.8	1,915,597.78	551,434.75	36.264586	-107.658862
POE #134H - plan hits target center - Point	0.00	0.00	5,508.9	-344.7	-369.6	1,915,603.90	558,939.96	36.264563	-107.633404

Database:	COMPASS-SANJUAN	**Local Co-ordinate Reference:**	Well Chaco 2408-36O #134H
Company:	SAN JUAN BASIN	**TVD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	**MD Reference:**	WELL @ 6907.0usft (Original Well Elev)
Site:	Chaco 2408-36O	**North Reference:**	True
Well:	Chaco 2408-36O #134H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 15Oct14 kjs		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
550.0	550.0	0.0	0.0	Start Build 2.00
892.3	891.5	-14.9	14.0	Hold 6.85° Inc, 136.79° Az
4,527.5	4,500.8	-330.7	310.7	Start Drop -2.00
4,869.8	4,842.3	-345.6	324.7	KOP 9°/100
5,536.5	5,393.6	-345.2	6.4	Hold 60° Inc Tangent
5,596.5	5,423.6	-345.1	-45.6	Begin 9°/100 Build
5,935.6	5,508.9	-344.7	-369.6	Landing Pt 90.52° Inc, 270.07° Az
13,441.1	5,441.0	-335.2	-7,874.8	TD at 13441.1

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. The trenches will be 4 to 5 feet in depth. The trenches 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 trenches 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 trenches are 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 one of the trenches. Prior to construction commencement, WPX will notify the BLM-FFO of additional types of construction equipment to be used.

The soils excavated from the trenches will be returned to the trenches, atop the pipe, and compacted to prevent subsidence. The trenches will be compacted after approximately 2 feet of fill is placed within the trenches 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 APDs.

9. METHODS FOR HANDLING WASTE DISPOSAL

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

If drilling has not been initiated on the well pad within 120 days of the well pad being constructed, 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 A.3 and A.4 [Appendix A] for the location of toilets and trash receptacles).

10. ANCILLARY FACILITIES

Three staging areas will be used; they are described in Section 2.2 (Project Description). During staging, WPX will stay within the boundaries of the previously disturbed areas associated with the staging areas. During post-construction reclamation, WPX will repair any damage to and reseed the staging areas (with the exception of areas that the operators associated with the original disturbance prefer to remain unseeded).

11. WELL SITE LAYOUT

The approximate cuts, approximate fills, and orientation for the well pad are depicted on the construction plats in the APDs. Rig orientation and the location of drilling equipment and topsoil or spoil material stockpiles are depicted on Figure A.3 (Appendix A). The layout of the completions rigs is depicted on

Directions from the Intersection of US Hwy 550 & US Hwy 64

in Bloomfield, NM to WPX Energy Production, LLC Chaco 2408-36O #134H

724' FSL & 2513' FEL, Section 36, T24N, R8W, N.M.P.M., San Juan County, NM

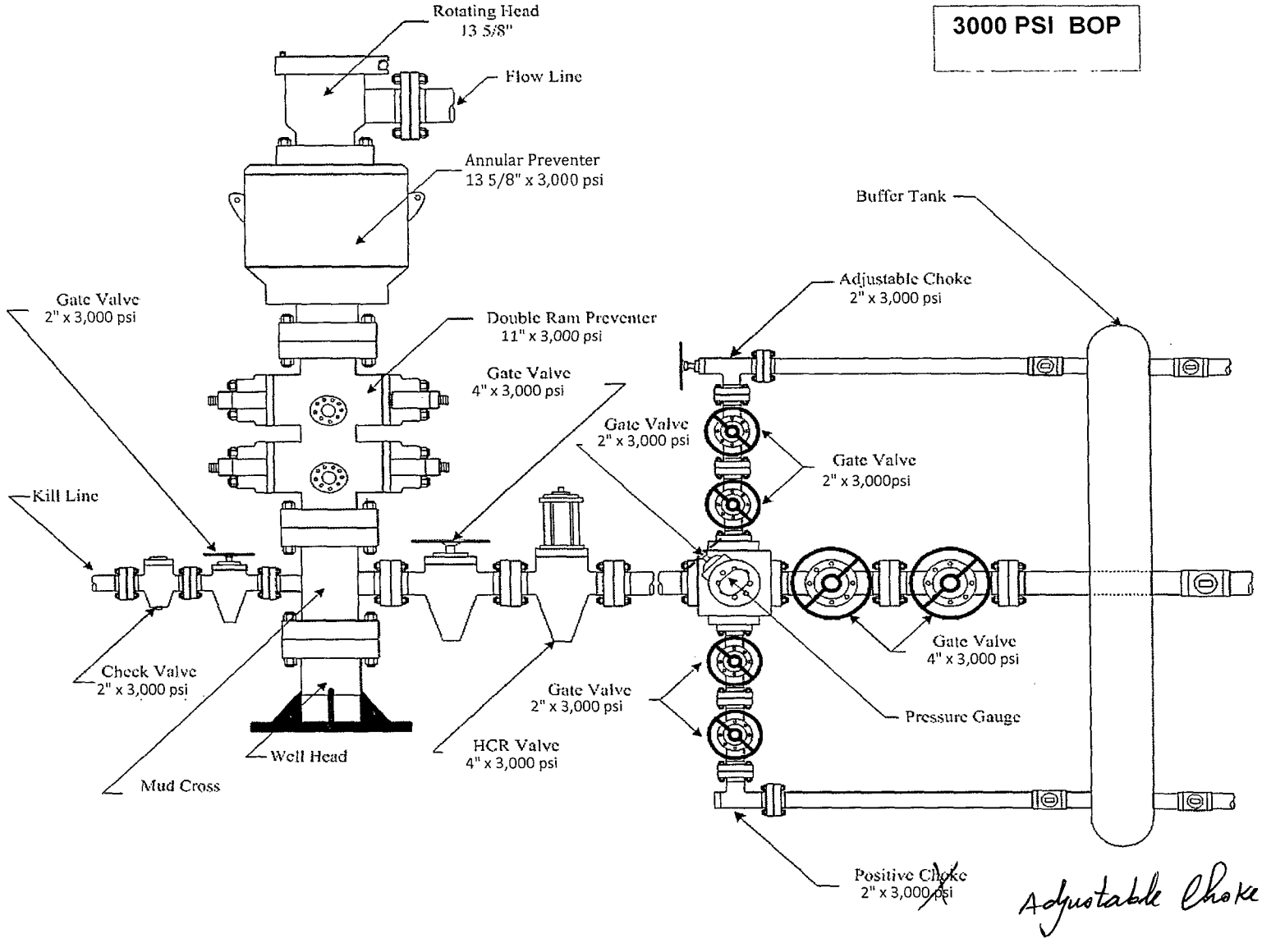
Latitude: 36.26552°N Longitude: 107.63276°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 43.0 miles to Mile Marker 108.2;

Go Left (Northerly) on County Road #7998 for 0.2 miles to fork in roadway:

Go Right (Easterly) exiting County Road #7998 for 300' to new access on left-hand side of existing roadway which continues for 235' to staked WPX Chaco 2408-36O #134H location.

3000 PSI BOP


Rotating Head
13 5/8"
Flow Line
Annular Preventer
13 5/8" x 3,000 psi
Buffer Tank
Adjustable Choke
2" x 3,000 psi
Gate Valve
2" x 3,000 psi
Double Ram Preventer
11" x 3,000 psi
Gate Valve
4" x 3,000 psi
Gate Valve
2" x 3,000 psi
Gate Valve
2" x 3,000psi
Kill Line
Check Valve
2" x 3,000 psi
Gate Valve
4" x 3,000 psi
Gate Valve
2" x 3,000 psi
Pressure Gauge
Well Head
HCR Valve
4" x 3,000 psi
Mud Cross
Positive Choke
2" x 3,000 psi
Adjustable Choke