

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: 11-17-14

Well information:

Operator WPX, Well Name and Number NW Lybrook Unit #132H

API# 45-35625, 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
- ☐ 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.

Charles L...
NMOCD Approved by Signature

2-5-2015
Date KC

OIL CONS. DIV DIST. 3

CONFIDENTIAL

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEC 10 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

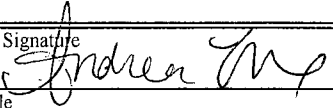
NOV 17 2014

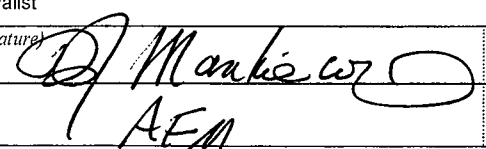
1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NO-G-0207-1610
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name Navajo Allotment
2. Name of Operator WPX Energy Production, LLC		7. If Unit or CA Agreement, Name and No. NW Lybrook Unit
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. NW Lybrook UT 132H
3b. Phone No. (include area code) (505) 333-1849		9. API Well No. 30-045-35625
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface F 1910' FNL & 1569' FWL, sec 36, T24N, R8W At proposed prod. zone E 2170' FNL & 230' FWL, sec 35, T24N, R8W		10. Field and Pool, or Exploratory Lybrook Unit NW HZ (Oil)
14. Distance in miles and direction from nearest town or post office* approximately 3 miles west of Lybrook, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area SHL: Section 36, T24N, R8W BHL: Section 35, T24N, R8W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1569'	16. No. of Acres in lease 2:002 160.00	12. County or Parish San Juan County
17. Spacing Unit dedicated to this well 160 acres	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 368'	19. Proposed Depth 11,174 MD / 5,444 TVD	20. BLM/BIA Bond No. on file UTB000478- B001576-BIA
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6871' GR	22. Approximate date work will start* February 1, 2015	23. Estimated duration 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) Andrea Felix	Date 11-17-2014
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Title Regulatory Specialist		
Approved by (Signature) 	Name (Printed/Typed) D. Markiewicz	Date 12/9/14
Title AFM	Office FFO	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

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

*(Instructions on reverse)

WPX Energy Production, LLC, proposes to develop the Lybrook Unit NW HZ (Oil) pool at the above described location in accordance with the attached drilling and surface use plans.

The well pad is an on lease surface location under jurisdiction of the State of New Mexico.

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

The new on lease proposed Access road is approximately 1589.7' all under surface jurisdiction of State of New Mexico and will be approved with the APD.

The new on lease proposed well connect corridor is approximately 1,743.3' all under surface jurisdiction of State of New Mexico and will be approved with the APD.

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

NMOCDA

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number 30.045-35625	'Pool Code 98101	'Pool Name LYBROOK UNIT NW HZ (OIL)
'Property Code 313874	'Property Name NW LYBROOK unit	'Well Number 132H
'OGRID No. 120782	'Operator Name WPX ENERGY PRODUCTION, LLC	'Elevation 6871'

¹⁰ Surface Location

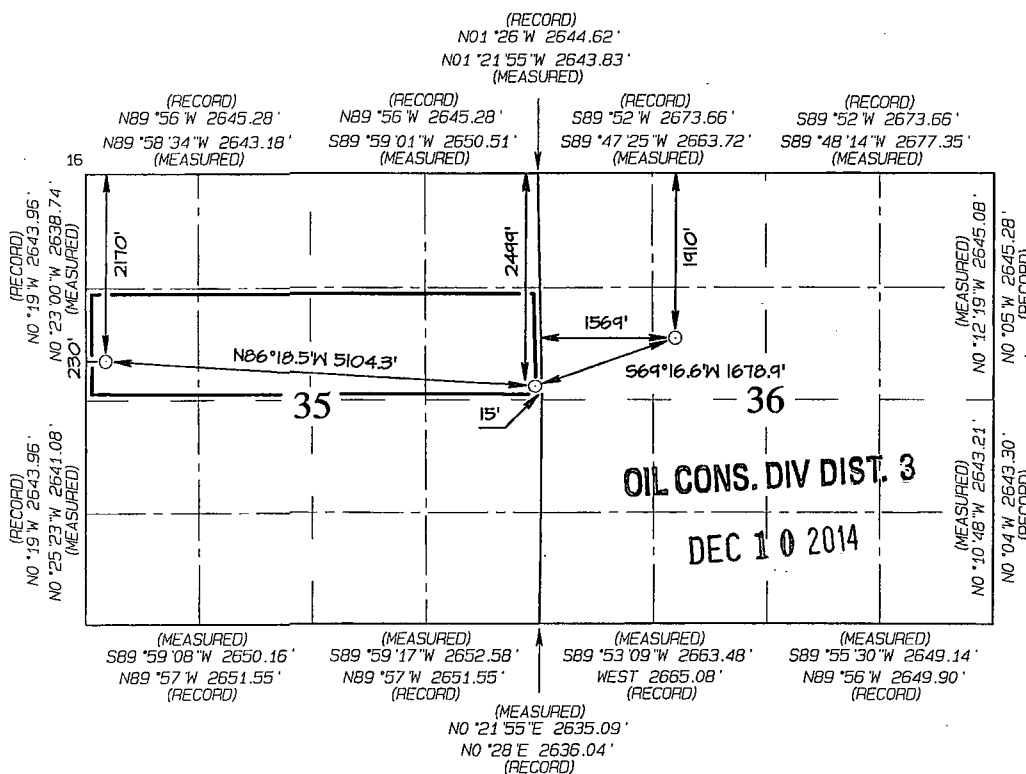
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	36	24N	8W		1910	NORTH	1569	WEST	SAN JUAN

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
E	35	24N	8W		2170	NORTH	230	WEST	SAN JUAN

¹² Dedicated Acres 160.0 Acres S/2 N/2 - Section 35	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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 DIVISION



END-OF-LATERAL
2170' FNL 230' FWL
SECTION 35, T24N, R8W
LAT: 36.272085°N
LONG: 107.658913°W
DATUM: NAD1927

LAT: 36.272097 *N
LONG: 107.659523 *W
DATUM: NAD1983

POINT-OF-ENTRY
2499' FNL 15' FEL
SECTION 35, T24N, R8W
LAT: 36.271155°N
LONG: 107.641635°W
DATUM: NAD1927

LAT: 36.271168 °N
LONG: 107.642245 °W
DATUM: NAD1983

SURFACE LOCATION
1910' FNL 1569' FWL
SECTION 36, T24N, R8W
LAT: 36.272779°N
LONG: 107.636304°W
DATUM: NAD1927

LAT: 36.272791 *N
LONG: 107.636914 *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 Andrea Felix Date 11-17-2014

Printed Name Andrea Felix


E-mail Address Andrea.Felix@wpenergy.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: NOVEMBER 14, 2014
Date of Survey: MARCH 29, 2013

Signature and Seal of 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: 10/23/2014 **FIELD:** Lybrook Unit NW HZ (Oil)

WELL NAME: NW Lybrook UT #132H **SURFACE:** State

SH Location: SENW Sec 36 -24N -08W **ELEVATION:** 6871' GR

BH Location: SWNW Sec 35 -24N -08W **MINERALS:** State/Indian Allotted
San Juan CO., NM

MEASURED DEPTH: 11,174 **LEASE #:** NO-G-0207-1610

I. GEOLOGY: Surface formation – Nacimiento

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1212	1206	Point Lookout	4342	4194
Kirtland	1326	1316	Mancos	4577	4424
Picture Cliffs	1874	1839	Kickoff Point	5001	4846
Lewis	2006	1965	Top Target	5640	5383
Chacra	2307	2252	Landing Point	6069	5513
Cliff House	3413	3306	Base Target	6069	5513
Menefee	3480	3370			
			TD	11174	5444

- 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 +/- 5,001' (MD) / 4,846' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,069' (MD) / 5,513' (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 +/- 11,174' (MD) / 5,440' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,919 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"	6,069'	7"	23#	K-55
Prod. Liner	6.125"	5,919 - 11,174'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,919'	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.

Well Name: Chaco 2408-36F #132H
 Surface Location: Chaco 2408-36F
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 6871.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1918593.24 558080.03 36.272780 -107.636300
 WELL @ 6885.0usft (Original Well Elev)



Azimuths to True North
 Magnetic North: 9.38°
 Magnetic Field
 Strength: 50148.9snT
 Dip Angle: 63.00°
 Date: 10/22/2014
 Model: IGRF2010

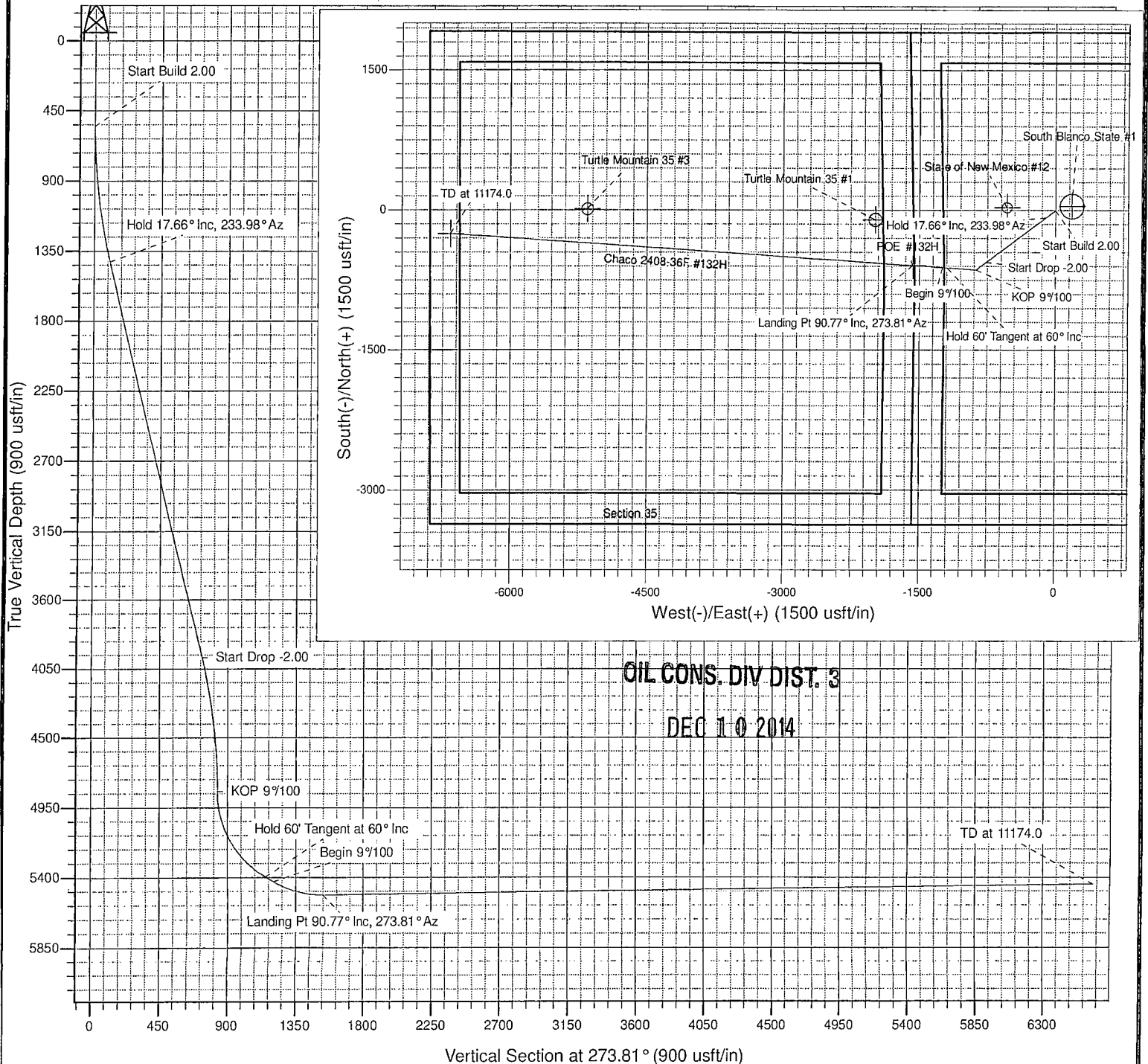
Project: SJ 36-24N-08W
 Site: Chaco 2408-36F
 Well: Chaco 2408-36F #132H
 Design #1 22Oct14 kjs

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
550.0	550.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
1419.0	1432.9	17.66	233.98	-79.4	-109.2	103.7	135.0	Hold 17.66° Inc, 233.98° Az
3977.4	4117.8	17.66	233.98	-558.3	-767.9	729.1	949.4	Start Drop -2.00
4846.4	5000.7	0.00	0.00	-637.7	-877.1	832.8	1084.4	KOP 9°/100
5397.7	5667.4	60.00	273.81	-616.5	-1194.7	1151.1	1402.7	Hold 60° Tangent at 60° Inc
5427.7	5727.4	60.00	273.81	-613.1	-1246.6	1203.1	1454.7	Begin 9°/100
5513.0	6069.3	90.77	273.81	-591.4	-1572.7	1530.0	1781.6	Landing Pt 90.77° Inc, 273.81° Az
5444.0	11174.0	90.77	273.81	-252.4	-6665.7	6634.2	6885.8	TD at 11174.0

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TD / PBHL #132	5444.0	-252.4	-6665.7	1918327.29	551414.90	36.272085	-107.658913
POE #132H	5513.0	-591.4	-1572.7	1917998.68	556508.58	36.271155	-107.641635



OIL CONS. DIV DIST. 3

DEC 10 2014



SAN JUAN BASIN

SJ 36-24N-08W

Chaco 2408-36F

Chaco 2408-36F #132H

Wellbore #1

Plan: Design #1 22Oct14 kjs

Standard Planning Report - Geographic

22 October, 2014

DEC 10 2014

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2408-36F #132H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 6885.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	MD Reference:	WELL @ 6885.0usft (Original Well Elev)
Site:	Chaco 2408-36F	North Reference:	True
Well:	Chaco 2408-36F #132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 22Oct14 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 2408-36F				
Site Position:		Northing:	1,918,593.24 usft	Latitude:	36.272780
From:	Map	Easting:	558,080.03 usft	Longitude:	-107.636300
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	0.12 °

Well	Chaco 2408-36F #132H					
Well Position	+N/-S	0.0 usft	Northing:	1,918,593.24 usft	Latitude:	36.272780
	+E/-W	0.0 usft	Easting:	558,080.03 usft	Longitude:	-107.636300
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	6,871.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/22/2014	9.38	63.00	50,149

Design	Design #1 22Oct14 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	273.81

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	
1,432.9	17.66	233.98	1,419.0	-79.4	-109.2	2.00	2.00	0.00	233.98	
4,117.8	17.66	233.98	3,977.4	-558.3	-767.9	0.00	0.00	0.00	0.00	
5,000.7	0.00	0.00	4,846.4	-637.7	-877.1	2.00	-2.00	0.00	180.00	
5,667.4	60.00	273.81	5,397.7	-616.5	-1,194.7	9.00	9.00	0.00	273.81	
5,727.4	60.00	273.81	5,427.7	-613.1	-1,246.6	0.00	0.00	0.00	0.00	
6,069.3	90.77	273.81	5,513.0	-591.4	-1,572.7	9.00	9.00	0.00	0.00	
11,174.0	90.77	273.81	5,444.0	-252.4	-6,665.7	0.00	0.00	0.00	0.00	TD / PBHL #132

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2408-36F #132H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 6885.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	MD Reference:	WELL @ 6885.0usft (Original Well Elev)
Site:	Chaco 2408-36F	North Reference:	True
Well:	Chaco 2408-36F #132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 22Oct14 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	1,918,593.24	558,080.03	36.272780	-107.636300
200.0	0.00	0.00	200.0	0.0	0.0	1,918,593.24	558,080.03	36.272780	-107.636300
400.0	0.00	0.00	400.0	0.0	0.0	1,918,593.24	558,080.03	36.272780	-107.636300
550.0	0.00	0.00	550.0	0.0	0.0	1,918,593.24	558,080.03	36.272780	-107.636300
Start Build 2.00									
600.0	1.00	233.98	600.0	-0.3	-0.4	1,918,592.99	558,079.68	36.272779	-107.636301
800.0	5.00	233.98	799.7	-6.4	-8.8	1,918,586.81	558,071.23	36.272762	-107.636330
1,000.0	9.00	233.98	998.2	-20.7	-28.5	1,918,572.44	558,051.55	36.272723	-107.636397
1,200.0	13.00	233.98	1,194.4	-43.2	-59.4	1,918,549.94	558,020.73	36.272661	-107.636502
1,400.0	17.00	233.98	1,387.6	-73.6	-101.2	1,918,519.43	557,978.94	36.272578	-107.636644
1,432.9	17.66	233.98	1,419.0	-79.4	-109.2	1,918,513.64	557,971.01	36.272562	-107.636671
Hold 17.66° Inc, 233.98° Az									
1,600.0	17.66	233.98	1,578.2	-109.2	-150.2	1,918,483.76	557,930.08	36.272480	-107.636810
1,800.0	17.66	233.98	1,768.8	-144.9	-199.2	1,918,447.98	557,881.09	36.272382	-107.636976
2,000.0	17.66	233.98	1,959.4	-180.5	-248.3	1,918,412.20	557,832.09	36.272284	-107.637143
2,200.0	17.66	233.98	2,149.9	-216.2	-297.4	1,918,376.43	557,783.09	36.272186	-107.637309
2,400.0	17.66	233.98	2,340.5	-251.9	-346.5	1,918,340.65	557,734.09	36.272088	-107.637476
2,600.0	17.66	233.98	2,531.1	-287.6	-395.5	1,918,304.87	557,685.10	36.271990	-107.637642
2,800.0	17.66	233.98	2,721.7	-323.2	-444.6	1,918,269.09	557,636.10	36.271892	-107.637809
3,000.0	17.66	233.98	2,912.2	-358.9	-493.7	1,918,233.32	557,587.10	36.271794	-107.637975
3,200.0	17.66	233.98	3,102.8	-394.6	-542.7	1,918,197.54	557,538.10	36.271696	-107.638141
3,400.0	17.66	233.98	3,293.4	-430.3	-591.8	1,918,161.76	557,489.10	36.271598	-107.638308
3,600.0	17.66	233.98	3,484.0	-466.0	-640.9	1,918,125.99	557,440.11	36.271500	-107.638474
3,800.0	17.66	233.98	3,674.6	-501.6	-689.9	1,918,090.21	557,391.11	36.271402	-107.638641
4,000.0	17.66	233.98	3,865.1	-537.3	-739.0	1,918,054.43	557,342.11	36.271304	-107.638807
4,117.8	17.66	233.98	3,977.4	-558.3	-767.9	1,918,033.36	557,313.25	36.271246	-107.638905
Start Drop -2.00									
4,200.0	16.01	233.98	4,056.1	-572.3	-787.2	1,918,019.32	557,294.02	36.271208	-107.638971
4,400.0	12.01	233.98	4,250.1	-600.8	-826.3	1,917,990.77	557,254.91	36.271130	-107.639104
4,600.0	8.01	233.98	4,447.0	-621.2	-854.5	1,917,970.26	557,226.83	36.271073	-107.639199
4,800.0	4.01	233.98	4,645.8	-633.6	-871.4	1,917,957.91	557,209.91	36.271040	-107.639256
5,000.0	0.01	233.98	4,845.7	-637.7	-877.1	1,917,953.76	557,204.23	36.271028	-107.639276
5,000.7	0.00	0.00	4,846.4	-637.7	-877.1	1,917,953.76	557,204.23	36.271028	-107.639276
KOP 9°/100									
5,200.0	17.93	273.81	5,042.4	-635.6	-908.0	1,917,955.75	557,173.36	36.271034	-107.639380
5,400.0	35.93	273.81	5,220.0	-629.6	-998.0	1,917,961.56	557,083.33	36.271050	-107.639686
5,600.0	53.93	273.81	5,361.0	-620.3	-1,138.4	1,917,970.63	556,942.94	36.271076	-107.640162
5,667.4	60.00	273.81	5,397.7	-616.5	-1,194.7	1,917,974.26	556,886.58	36.271086	-107.640353
Hold 60° Tangent at 60° Inc									
5,727.4	60.00	273.81	5,427.7	-613.1	-1,246.6	1,917,977.61	556,834.73	36.271096	-107.640529
Begin 9°/100									
5,800.0	66.53	273.81	5,460.4	-608.8	-1,311.2	1,917,981.79	556,770.06	36.271108	-107.640748
6,000.0	84.53	273.81	5,510.1	-596.0	-1,503.7	1,917,994.21	556,577.60	36.271143	-107.641401
6,069.3	90.77	273.81	5,513.0	-591.4	-1,572.7	1,917,998.66	556,508.58	36.271155	-107.641635
POE #132H									
6,069.3	90.77	273.81	5,513.0	-591.4	-1,572.7	1,917,998.66	556,508.50	36.271155	-107.641636
Landing Pt 90.77° Inc, 273.81° Az									
6,200.0	90.77	273.81	5,511.2	-582.7	-1,703.1	1,918,007.08	556,378.12	36.271179	-107.642078
6,400.0	90.77	273.81	5,508.5	-569.4	-1,902.6	1,918,019.95	556,178.55	36.271216	-107.642755
6,600.0	90.77	273.81	5,505.8	-556.1	-2,102.2	1,918,032.83	555,978.98	36.271252	-107.643432
6,800.0	90.77	273.81	5,503.1	-542.9	-2,301.7	1,918,045.70	555,779.41	36.271289	-107.644109
7,000.0	90.77	273.81	5,500.4	-529.6	-2,501.3	1,918,058.58	555,579.85	36.271325	-107.644786
7,200.0	90.77	273.81	5,497.7	-516.3	-2,700.8	1,918,071.45	555,380.28	36.271361	-107.645462
7,400.0	90.77	273.81	5,495.0	-503.0	-2,900.3	1,918,084.33	555,180.71	36.271398	-107.646139

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2408-36F #132H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 6885.0usft (Original Well Elev)
Project:	SJ 36-24N-08W	MD Reference:	WELL @ 6885.0usft (Original Well Elev)
Site:	Chaco 2408-36F	North Reference:	True
Well:	Chaco 2408-36F #132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 22Oct14 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
7,600.0	90.77	273.81	5,492.3	-489.7	-3,099.9	1,918,097.21	554,981.15	36.271434	-107.646816
7,800.0	90.77	273.81	5,489.6	-476.4	-3,299.4	1,918,110.08	554,781.58	36.271471	-107.647493
8,000.0	90.77	273.81	5,486.9	-463.2	-3,499.0	1,918,122.96	554,582.01	36.271507	-107.648170
8,200.0	90.77	273.81	5,484.2	-449.9	-3,698.5	1,918,135.83	554,382.45	36.271544	-107.648847
8,400.0	90.77	273.81	5,481.5	-436.6	-3,898.0	1,918,148.71	554,182.88	36.271580	-107.649524
8,600.0	90.77	273.81	5,478.8	-423.3	-4,097.6	1,918,161.58	553,983.31	36.271616	-107.650201
8,800.0	90.77	273.81	5,476.1	-410.0	-4,297.1	1,918,174.46	553,783.75	36.271653	-107.650878
9,000.0	90.77	273.81	5,473.4	-396.8	-4,496.7	1,918,187.34	553,584.18	36.271689	-107.651555
9,200.0	90.77	273.81	5,470.7	-383.5	-4,696.2	1,918,200.21	553,384.61	36.271726	-107.652232
9,400.0	90.77	273.81	5,468.0	-370.2	-4,895.7	1,918,213.09	553,185.05	36.271762	-107.652909
9,600.0	90.77	273.81	5,465.3	-356.9	-5,095.3	1,918,225.96	552,985.48	36.271798	-107.653585
9,800.0	90.77	273.81	5,462.6	-343.6	-5,294.8	1,918,238.84	552,785.91	36.271835	-107.654262
10,000.0	90.77	273.81	5,459.9	-330.4	-5,494.4	1,918,251.71	552,586.35	36.271871	-107.654939
10,200.0	90.77	273.81	5,457.2	-317.1	-5,693.9	1,918,264.59	552,386.78	36.271908	-107.655616
10,400.0	90.77	273.81	5,454.5	-303.8	-5,893.5	1,918,277.47	552,187.21	36.271944	-107.656293
10,600.0	90.77	273.81	5,451.8	-290.5	-6,093.0	1,918,290.34	551,987.64	36.271980	-107.656970
10,800.0	90.77	273.81	5,449.1	-277.2	-6,292.5	1,918,303.22	551,788.08	36.272017	-107.657647
11,000.0	90.77	273.81	5,446.4	-263.9	-6,492.1	1,918,316.09	551,588.51	36.272053	-107.658324
11,174.0	90.77	273.81	5,444.0	-252.4	-6,665.7	1,918,327.29	551,414.90	36.272085	-107.658913
TD at 11174.0 - TD / PBHL #132									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD / PBHL #132	0.00	0.00	5,444.0	-252.4	-6,665.7	1,918,327.29	551,414.90	36.272085	-107.658913
- hit/miss target									
- Shape									
- plan hits target center									
- Point									
POE #132H	0.00	0.00	5,513.0	-591.4	-1,572.7	1,917,998.68	556,508.58	36.271155	-107.641635
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
550.0	550.0	0.0	0.0	Start Build 2.00
1,432.9	1,419.0	-79.4	-109.2	Hold 17.66° Inc, 233.98° Az
4,117.8	3,977.4	-558.3	-767.9	Start Drop -2.00
5,000.7	4,846.4	-637.7	-877.1	KOP 9°/100
5,667.4	5,397.7	-616.5	-1,194.7	Hold 60° Tangent at 60° Inc
5,727.4	5,427.7	-613.1	-1,246.6	Begin 9°/100
6,069.3	5,513.0	-591.4	-1,572.7	Landing Pt 90.77° Inc, 273.81° Az
11,174.0	5,444.0	-252.4	-6,665.7	TD at 11174.0

3. The upper 6 inches of topsoil (if available) will be stripped following vegetation and site clearing. Topsoil will not be mixed with the underlying subsoil horizons and will stockpiled as a berm along the perimeter of the well pad within the construction zone, separate from subsoil or other excavated material. Topsoil and sub-surface soils will be replaced in the proper order, prior to final seedbed preparation. Spreading shall not be done when the ground or topsoil is wet. Vehicle/equipment traffic will not be allowed to cross topsoil stockpiles. If topsoil is stored for a length of time such that nutrients are depleted from the topsoil, amendments will be added to the topsoil as advised by the WPX environmental scientist or appropriate agent/contractor.
4. The well pad will be leveled to provide space and a level surface for vehicles and equipment. Excavated materials from cuts will be used on fill portions of the well pad to level the pad. The well pad would require a maximum fill of approximately 4 feet on the west edge, and a cut of 3 feet at the southeast corner. No additional surfacing materials will be required for construction.
5. As determined during the onsite on August 27, 2014, the following best management practices will be implemented:
 - a. Existing trash within the proposed project area will be cleaned up prior to construction.
6. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and a dozer.

D. Production Facilities

1. As practical, access will be a teardrop-shaped road through the production area so that the center may be revegetated.
2. Within 90 days of installation, production facilities would be painted Juniper Green to blend with the natural color of the landscape and would be located, to the extent practical, to reasonably minimize visual impact.
3. Berms will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks. Berm walls will be compacted with appropriate equipment to assure containment.

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the well is plugged, final reclamation will occur within the remainder of the project area.

7.0 Methods for Handling Waste

A. Cuttings

- ✓
1. Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals will be accomplished with water-based mud. All cuttings will be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX will follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit will be used.
 2. Closed-loop tanks will be adequately sized for containment of all fluids.

B. Drilling Fluids

1. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids will be hauled to a commercial disposal facility.

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

in Bloomfield, NM to WPX Energy Production, LLC NW Lybrook Ut #132H

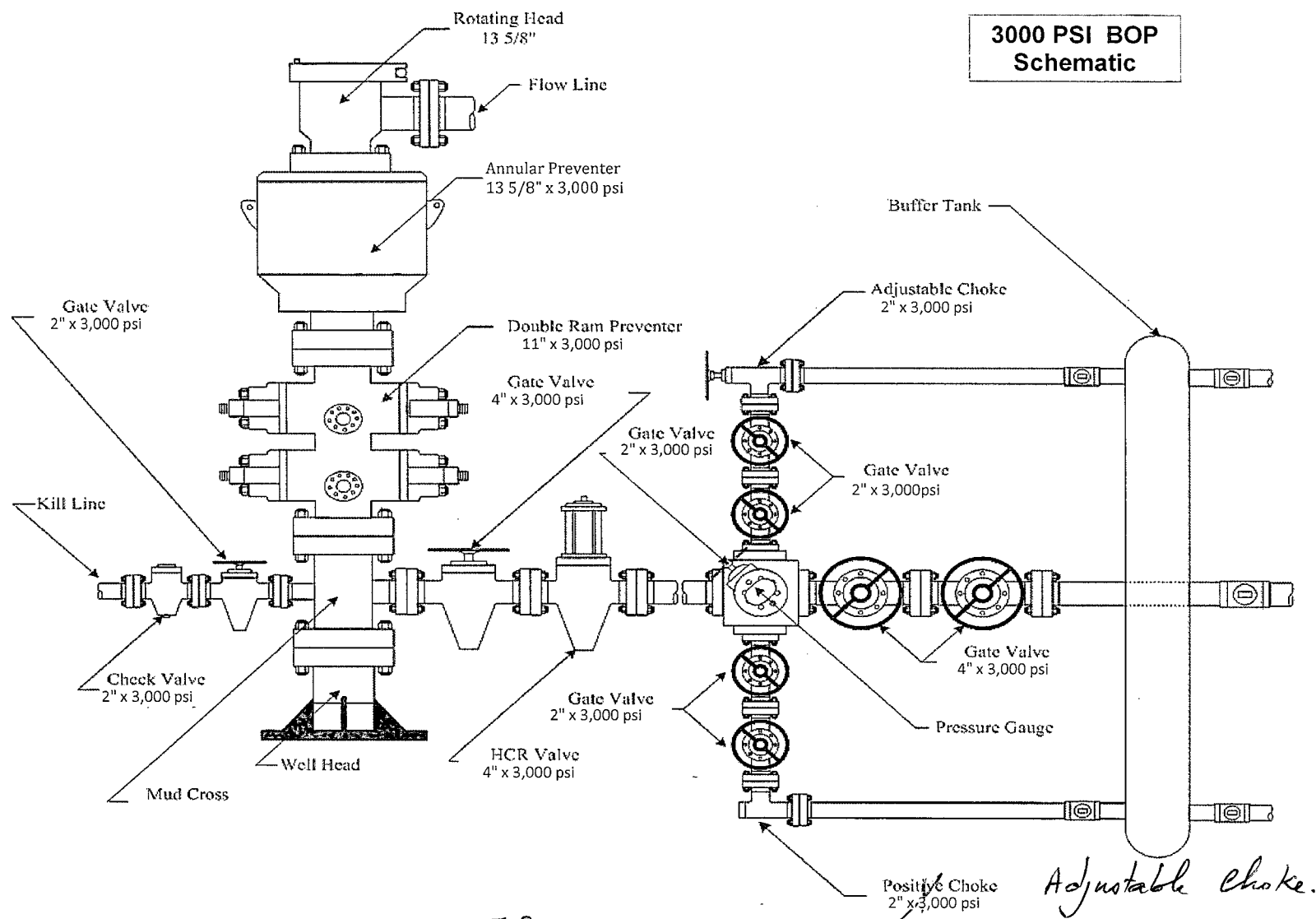
1910' FNL & 1569' FWL, Section 36, T24N, R8W, N.M.P.M., San Juan County, NM

Latitude: 36.27279°N Longitude: 107.63691°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 1.0 miles to fork in roadway:

Go Left (North-westerly) exiting County Road #7998 for 0.2 miles to new access on left-hand side of existing roadway which continues for 1589.7' to staked WPX NW Lybrook Ut #132H location.



OIL CONS. DIV DIST. 3

DEC 10 2014