

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary

Brett F. Woods, Ph.D.  
Deputy Cabinet Secretary

David R. Catanach  
Division Director  
Oil Conservation Division



**New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.**

Operator Signature Date: 12-1-14

Well information;

Operator WPX, Well Name and Number NE Chaco Com #2094

API# 30-039-31292, Section 16, Township 23 NS, Range 6 EW

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

1-5-2015  
Date XC

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

DEC 05 2014

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

|                                                                                                                                                                                                                        |                                                           |                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER                                                                                                                           |                                                           | 5. Lease Serial No.<br>NMSF078359                                                                                          |
| 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                                                                                       |
| 2. Name of Operator<br>WPX Energy Production, LLC                                                                                                                                                                      |                                                           | 7. If Unit or CA Agreement, Name and No.<br>CA 132829                                                                      |
| 3a. Address<br>P.O. Box 640 Aztec, NM 87410                                                                                                                                                                            |                                                           | 8. Lease Name and Well No.<br>NE Chaco COM #209H                                                                           |
| 3b. Phone No. (include area code)<br>(505) 333-1849                                                                                                                                                                    |                                                           | 9. API Well No.<br>30-039-31292                                                                                            |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At surface 1410' FSL & 361' FWL, sec 16, T23N, R6W<br>At proposed prod. zone 2482' FSL & 397' FWL, sec 17, T23N, R6W |                                                           | 10. Field and Pool, or Exploratory<br>Chaco Unit NE HZ (OIL)                                                               |
| 11. Sec., T., R., M., or Blk. and Survey or Area<br>SHL: Section 16, T23N, R6W<br>BHL: Section 17, T23N, R6W                                                                                                           |                                                           | 12. County or Parish<br>Rio Arriba County                                                                                  |
| 13. State<br>NM                                                                                                                                                                                                        |                                                           | 14. Distance in miles and direction from nearest town or post office*<br>approximately 4 miles east of Lybrook, New Mexico |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 361'                                                                                             | 16. No. of Acres in lease<br>2461.69<br>9.237-3           | 17. Spacing Unit dedicated to this well<br>320 acres<br>OIL CONS. DIV DIST. 3                                              |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 22'                                                                                                         | 19. Proposed Depth<br>10,661 MD / 5,380' TVD              | 20. BLM/BIA Bond No. on file<br>UTB000178<br>DEC 19 2014                                                                   |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>6858' GR                                                                                                                                                        | 22. Approximate date work will start*<br>February 1, 2015 | 23. Estimated duration<br>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<br>              | Name (Printed/Typed)<br>Andrea Felix | Date<br>12-1-14  |
| Title<br>Regulatory Specialist |                                      |                  |
| Approved by (Signature)<br>    | Name (Printed/Typed)<br>AFM          | Date<br>12/16/14 |
| Title<br>AFM                   | Office<br>FEO                        |                  |

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 Chaco Unit NE HZ (OIL) pool at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the State of New Mexico and is co-located with the NE Chaco COM #210H, 271H, 243H, and the 244H which has been built.

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

No new access road is needed.

There will be no new pipeline. The pipeline for the NE Chaco COM #244H is on NMSLO surface and will be built as a lease action.

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

FN  
NMSLO

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

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

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

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

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

Submit one copy to  
Appropriate District Office

☐ AMENDED REPORT

LEC 05 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT 

|                              |                                               |                                       |
|------------------------------|-----------------------------------------------|---------------------------------------|
| 'API Number'<br>30-039-31292 | 'Pool Code'<br>98088                          | 'Pool Name'<br>CHACO UNIT NE HZ (OIL) |
| 'Property Code'<br>313800    | 'Property Name'<br>NE CHACO COM               | 'Well Number'<br>209H                 |
| 'GRID No.'<br>120782         | 'Operator Name'<br>WPX ENERGY PRODUCTION, LLC | 'Elevation'<br>6858'                  |

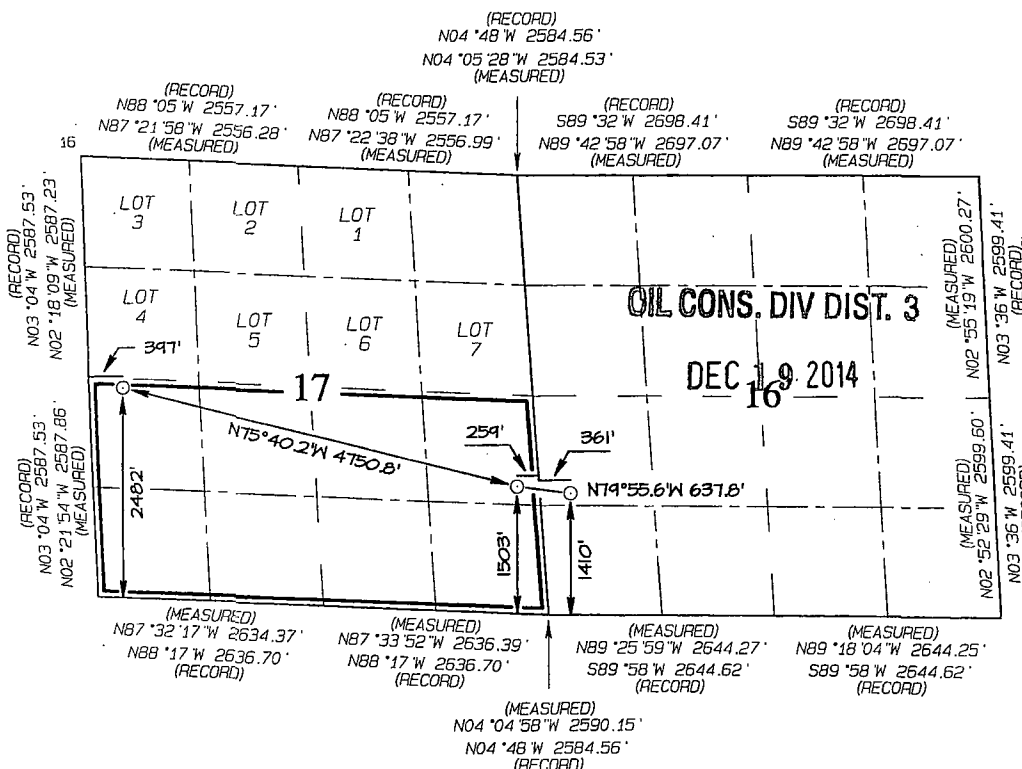
<sup>10</sup> Surface Location

|               |         |          |       |         |               |                  |               |                |               |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|---------------|
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County        |
| L             | 16      | 23N      | 6W    |         | 1410          | SOUTH            | 361           | WEST           | RIO<br>ARRIBA |

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

|                                                                  |               |                 |             |         |                               |                                  |                                             |                        |                         |
|------------------------------------------------------------------|---------------|-----------------|-------------|---------|-------------------------------|----------------------------------|---------------------------------------------|------------------------|-------------------------|
| UL or lot no.<br>L                                               | Section<br>17 | Township<br>23N | Range<br>6W | Lot Idn | Feet from the<br>2482         | North/South line<br>SOUTH        | Feet from the<br>397                        | East/West line<br>WEST | County<br>RIO<br>ARriba |
| <sup>12</sup> Dedicated Acres<br>320.0 Acres<br>S/2 - Section 17 |               |                 |             |         | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No.<br>R-13817A 9,237.3 |                        |                         |

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  
2482' FSL 397' FWL  
SECTION 17, T23N, R6W  
LAT: 36.224815°N  
LONG: 107.498978°W  
DATUM: NAD1927

LAT: 36.224828°N  
LONG: 107.499583W  
DATUM: NAD1983

POINT-OF-ENTRY  
1503' FSL 259' FEL  
SECTION 17, T23N, R6W  
LAT: 36.221747° N  
LONG: 107.483325° W  
DATUM: NAD1927

LAT: 36.221761 °N  
LONG: 107.483930 °W  
DATUM: NAD1983

SURFACE LOCATION  
1410' FSL 361' FWL  
SECTION 16, T23N, R6W  
LAT: 36.221463°N  
LONG: 107.481192°W  
DATUM: NAD1927

LAT: 36.221476°N  
LONG: 107.481797°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 interest or has entered into a joint venture, pooling agreement or a compulsory pooling order heretofore entered by the Division.

Signature Andrea Felix Date 12-1-14

Printed Name  
andrea.felix@wpxenergy.com  
E-mail Address

<sup>18</sup> 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 6, 2014  
Survey Date: SEPTEMBER 4, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269

**WPX ENERGY**

**Operations Plan**

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

**DATE:** 10/20/2014 **FIELD:** Chaco Unit NE HZ (oil)

**WELL NAME:** NE Chaco COM #209H **SURFACE:** STATE

**SH Location:** NWSW Sec 16-23N-6W **ELEVATION:** 6,858' GR

**BH Location:** NESE Sec 17-23N-6W **MINERALS:** BLM  
Rio Arriba Co, NM

**MEASURED DEPTH:** 10,661' **LEASE #:** NMSF 078359

**I. GEOLOGY:** Surface formation – San Jose

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

|                |      |      |               |        |       |
|----------------|------|------|---------------|--------|-------|
| Ojo Alamo      | 1339 | 1336 | Point Lookout | 4180   | 4177  |
| Kirtland       | 1462 | 1459 | Gallup        | 4379   | 4376  |
| Picture Cliffs | 1906 | 1903 | Kickoff Point | 5560   | 5411  |
| Lewis          | 1942 | 1939 | Top Target    | 5510   | 5386  |
| Chacra         | 2230 | 2227 | Landing Point | 5909   | 5496  |
| Cliff House    | 3432 | 3429 | Base Target   | 5909   | 5496  |
| Menefee        | 3455 | 3452 |               |        |       |
|                |      |      | TD            | 10,661 | 5,380 |
|                |      |      |               |        |       |

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

**C. LOGGING PROGRAM:** LWD GR from surface casing to TD. LWD GR / E- Sonic will be run in Lateral.

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

**II. DRILLING**

**A. MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, the curve portion of the wellbore. 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 +/- 5,560' (MD) / 5,411' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,909 (MD) / 5,496' (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 +/- 10,661' (MD) / 5,380' (TVD). Will run 4-1/2 in. Production Liner from

**+/- 5,759 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 5/8            | 36#         | J-55  |
| Intermediate    | 8.75"        | 5,909'           | 7                | 23#         | K-55  |
| Prod. Liner     | 6.125"       | 5,759' - 10,661' | 4-1/2"           | 11.6#       | N-80  |
| Tie-Back String | N/A          | Surf. - 6,024'   | 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 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).
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: (900 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 +/- 5,724 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. 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 N<sub>2</sub> 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 (~6,000' 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 5,909ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,759' ft. (MD) +/- 78 degree angle. TOC: +/- 5,459 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.

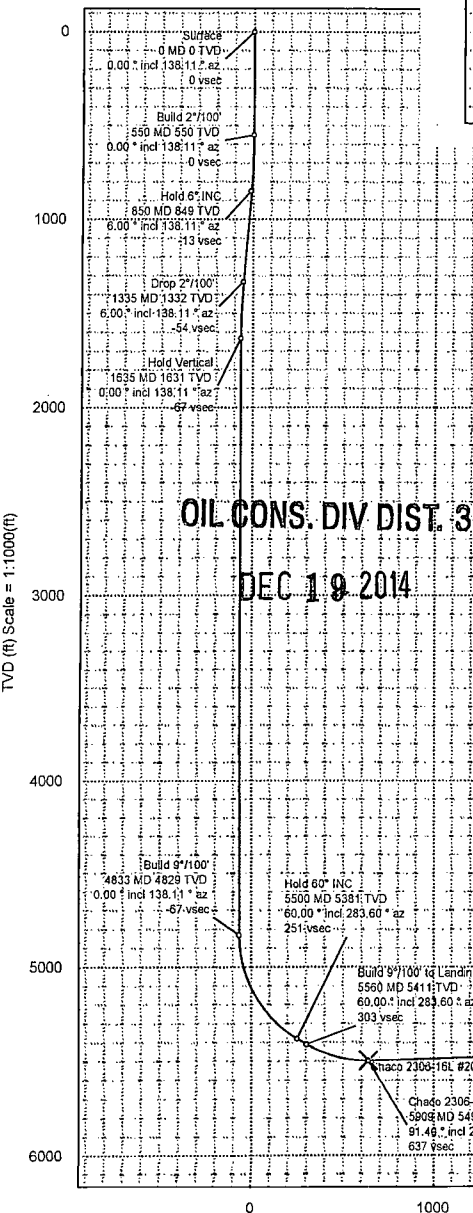
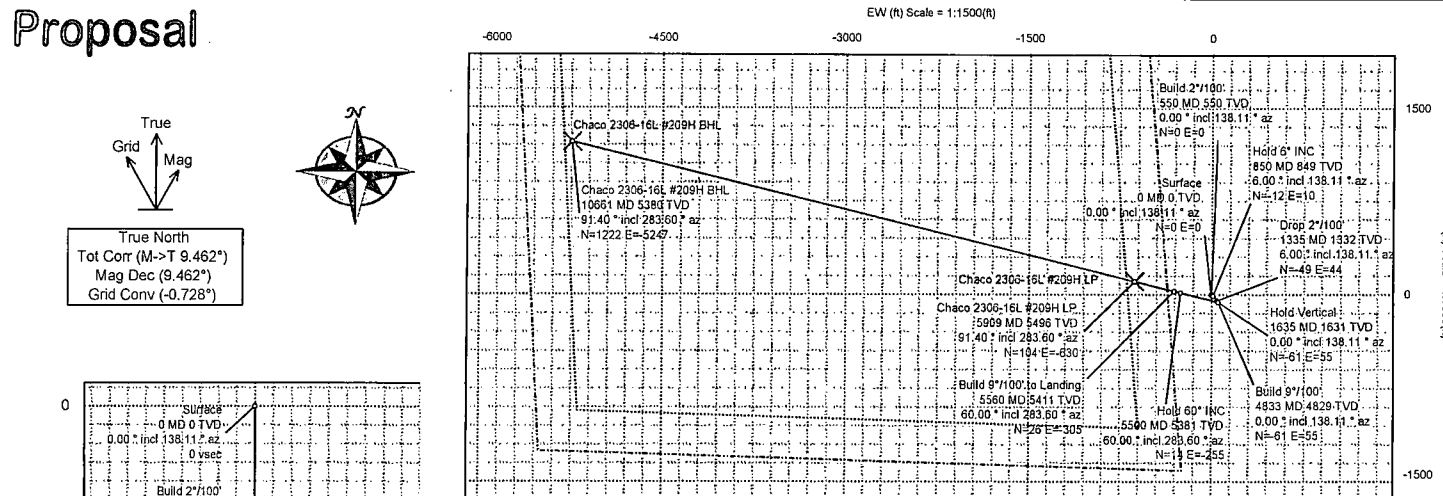
The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

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

|               |                      |                            |                                |
|---------------|----------------------|----------------------------|--------------------------------|
| Borehole:     | Well:                | Field:                     | Structure:                     |
| Original Hole | Chaco 2306-16L #209H | NM, Rio Arriba (NAD 27 CZ) | 16-23N-6W (Chaco 2306-16L Pad) |

|                                                                      |                                                                  |                                           |
|----------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------|
| Gravity & Magnetic Parameters                                        | Surface Location                                                 | Miscellaneous                             |
| Model: BGGM 2013 Dip: 63.019° Date: 12-Nov-2013                      | NAD27 New Mexico State Plane, Central Zone, US Feet              | Slot: Chaco 2306-16L #209H                |
| MagDec: 9.462° FS: 50174.404nT Gravity FS: 998.92mgn (9.80665 Based) | Lat: N 36 13 17.26 Northing: 1902127.15N S Grid Conv: -0.7276°   | TVD Ref: KB 14ft(6875ft above MSL)        |
|                                                                      | Lon: W 107 28 52.28 Easting: 136839.32RUS Scale Fact: 1.00005092 | Plan: Chaco 2306-16L #209H R2 mdr 14Aug14 |

## Proposal



| Surface Location                     |               |                     |            |                         |         |                           |             |                       |
|--------------------------------------|---------------|---------------------|------------|-------------------------|---------|---------------------------|-------------|-----------------------|
| Northing: 1902127.153                |               | Easting: 136839.315 |            | Latitude: N 36 13 17.26 |         | Longitude: W 107 28 52.28 |             | VSec Azimuth: 283.107 |
| Target Description                   |               | Grid Coord          |            |                         |         |                           | Local Coord |                       |
| Target Name                          | Latitude      | Longitude           | Northing   | Easting                 | TVD     | VSec                      | N(+)S(-)    | E(+)W(-)              |
| Chaco 2306-16L #209H BHL             | N 36 13 29.33 | W 107 29 56.32      | 1903415.49 | 131607.90               | 5380.00 | 5387.45                   | 1221.74     | -5247.09              |
| Chaco 2306-16L #209H LP              | N 36 13 18.29 | W 107 28 59.97      | 1902239.64 | 136210.86               | 5496.00 | 637.09                    | 104.49      | -629.80               |
| Chaco 2306-16L Sec 17                | N 36 13 17.47 | W 107 28 52.39      | 1902149.11 | 136830.74               | 6875.00 | 13.57                     | 21.84       | -8.85                 |
| Chaco 2306-16L Sec 17 - 330' Setback | N 36 13 17.47 | W 107 28 52.39      | 1902149.11 | 136830.74               | 6875.00 | 13.57                     | 21.84       | -8.85                 |
| Critical Points                      |               |                     |            |                         |         |                           |             |                       |
| Critical Point                       | MD            | INCL                | AZIM       | TVD                     | VSEC    | N(+)S(-)                  | E(+)W(-)    | DLS                   |
| Surface                              | 0.00          | 0.00                | 138.11     | 0.00                    | 0.00    | 0.00                      | 0.00        |                       |
| Build 2°/100'                        | 550.00        | 0.00                | 138.11     | 550.00                  | 0.00    | 0.00                      | 0.00        | 0.00                  |
| Hold 6° INC                          | 849.83        | 6.00                | 138.11     | 849.28                  | -12.84  | -11.67                    | 10.47       | 2.00                  |
| Drop 2°/100'                         | 1335.36       | 6.00                | 138.11     | 1332.16                 | -54.39  | -49.43                    | 44.33       | 0.00                  |
| Hold Vertical                        | 1635.19       | 0.00                | 138.11     | 1631.44                 | -67.23  | -61.10                    | 54.80       | 2.00                  |
| Build 9°/100'                        | 4833.19       | 0.00                | 138.11     | 4829.44                 | -67.23  | -61.10                    | 54.80       | 0.00                  |
| Hold 60° INC                         | 5499.84       | 60.00               | 283.60     | 5380.76                 | 251.05  | 13.72                     | -254.58     | 9.00                  |
| Build 9°/100' to Landing             | 5560.10       | 60.00               | 283.60     | 5410.89                 | 303.23  | 25.99                     | -305.30     | 0.00                  |
| Chaco 2306-16L #209H LP              | 5908.99       | 91.40               | 283.60     | 5496.00                 | 637.09  | 104.49                    | -629.80     | 9.00                  |
| Chaco 2306-16L #209H BHL             | 10660.95      | 91.40               | 283.60     | 5380.00                 | 5387.45 | 1221.74                   | -5247.09    | 0.00                  |

Vertical Section (ft) Azim = 283.11° Scale = 1:1000(ft) Origin = 0N-S, 0E-W



## Chaco 2306-16L #209H R2 mdv 14Aug14 Proposal Geodetic Report

(Def Plan)

Report Date: August 15, 2014 - 10:23 AM  
Client: WPX Energy  
Field: NM, Rio Arriba (NAD 27 CZ)  
Structure / Slot: WPX 16-23N-6W (Chaco 2306-16L Pad) / Chaco 2306-16L #209H  
Well: Chaco 2306-16L #209H  
Borehole: Original Hole  
UWI / API#: Unknown / Unknown  
Survey Name: Chaco 2306-16L #209H R2 mdv 14Aug14  
Survey Date: November 12, 2013  
Tort / AHD / DDI / ERD Ratio: 103.392 \* / 5536.959 ft / 6.045 / 1.007  
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet  
Location Lat / Long: N 36° 13' 17.25600", W 107° 28' 52.28400"  
Location Grid N/E Y/X: N 1902127.153 RUS, E 136839.315 RUS  
CRS Grid Convergence Angle: -0.7276 \*  
Grid Scale Factor: 1.00005092  
Version / Patch: 2.8.551.0

Survey / DLS Computation: Minimum Curvature / Lubinski  
Vertical Section Azimuth: 283.107 \* (True North)  
Vertical Section Origin: 0.000 ft, 0.000 ft  
TVD Reference Datum: KB 14ft  
TVD Reference Elevation: 6875.000 ft above MSL  
Seabed / Ground Elevation: 6861.000 ft above MSL  
Magnetic Declination: 9.462 \*  
Total Gravity Field Strength: 998.9204mgn (9.80665 Based)  
Gravity Model: DOX  
Total Magnetic Field Strength: 50174.404 nT  
Magnetic Dip Angle: 63.019 \*  
Declination Date: November 12, 2013  
Magnetic Declination Model: BGGM 2013  
North Reference: True North  
Grid Convergence Used: 0.0000 \*  
Total Corr Mag North->True North: 9.4618 \*  
Local Coord Referenced To: Well Head

| Comments                    | MD<br>(ft) | Incl<br>(°) | Azim True<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(°) | Longitude<br>(°) |
|-----------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-----------------|------------------|
| Surface                     | 0.00       | 0.00        | 138.11           | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
|                             | 100.00     | 0.00        | 138.11           | 100.00      | 0.00         | 0.00       | 0.00       | 0.00             | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
|                             | 200.00     | 0.00        | 138.11           | 200.00      | 0.00         | 0.00       | 0.00       | 0.00             | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
|                             | 300.00     | 0.00        | 138.11           | 300.00      | 0.00         | 0.00       | 0.00       | 0.00             | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
|                             | 400.00     | 0.00        | 138.11           | 400.00      | 0.00         | 0.00       | 0.00       | 0.00             | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
|                             | 500.00     | 0.00        | 138.11           | 500.00      | 0.00         | 0.00       | 0.00       | 0.00             | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
| Build 2"/100'               | 550.00     | 0.00        | 138.11           | 550.00      | 0.00         | 0.00       | 0.00       | 0.00             | 1902127.15         | 136839.32         | 36.2214600000   | -107.481190      |
|                             | 600.00     | 1.00        | 138.11           | 600.00      | -0.36        | -0.32      | 0.29       | 2.00             | 1902126.82         | 136839.60         | 36.2214591077   | -107.481189      |
|                             | 700.00     | 3.00        | 138.11           | 699.93      | -3.22        | -2.92      | 2.62       | 2.00             | 1902124.20         | 136841.90         | 36.2214519714   | -107.481181      |
|                             | 800.00     | 5.00        | 138.11           | 799.68      | -8.93        | -8.12      | 7.28       | 2.00             | 1902118.95         | 136846.49         | 36.2214377073   | -107.481165      |
| Hold 6" INC                 | 849.83     | 6.00        | 138.11           | 849.28      | -12.84       | -11.67     | 10.47      | 2.00             | 1902115.35         | 136849.63         | 36.2214279441   | -107.481155      |
|                             | 900.00     | 6.00        | 138.11           | 899.18      | -17.13       | -15.57     | 13.97      | 0.00             | 1902111.40         | 136853.08         | 36.2214172259   | -107.481143      |
|                             | 1000.00    | 6.00        | 138.11           | 898.63      | -25.69       | -23.35     | 20.94      | 0.00             | 1902103.54         | 136859.96         | 36.2213958627   | -107.481119      |
|                             | 1100.00    | 6.00        | 138.11           | 1098.08     | -34.25       | -31.13     | 27.92      | 0.00             | 1902095.67         | 136866.84         | 36.2213744994   | -107.481095      |
|                             | 1200.00    | 6.00        | 138.11           | 1197.54     | -42.80       | -38.90     | 34.89      | 0.00             | 1902087.81         | 136873.71         | 36.2213531362   | -107.481072      |
|                             | 1300.00    | 6.00        | 138.11           | 1296.99     | -51.36       | -46.68     | 41.87      | 0.00             | 1902079.94         | 136880.59         | 36.2213317729   | -107.481048      |
| Drop 2"/100'                | 1335.36    | 6.00        | 138.11           | 1332.16     | -54.39       | -49.43     | 44.33      | 0.00             | 1902077.16         | 136883.02         | 36.2213242184   | -107.481040      |
|                             | 1400.00    | 4.70        | 138.11           | 1396.51     | -59.32       | -53.92     | 48.36      | 2.00             | 1902072.62         | 136886.99         | 36.2213118938   | -107.481026      |
|                             | 1500.00    | 2.70        | 138.11           | 1496.30     | -64.62       | -58.73     | 52.67      | 2.00             | 1902067.78         | 136891.24         | 36.2212986844   | -107.481011      |
| Hold Vertical               | 1600.00    | 0.70        | 138.11           | 1596.25     | -67.05       | -60.94     | 54.66      | 2.00             | 1902065.52         | 136893.20         | 36.2212926045   | -107.481005      |
|                             | 1635.19    | 0.00        | 138.11           | 1631.44     | -67.23       | -61.10     | 54.80      | 2.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 1700.00    | 0.00        | 138.11           | 1696.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 1800.00    | 0.00        | 138.11           | 1796.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 1900.00    | 0.00        | 138.11           | 1896.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2000.00    | 0.00        | 138.11           | 1996.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2100.00    | 0.00        | 138.11           | 2096.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2200.00    | 0.00        | 138.11           | 2196.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2300.00    | 0.00        | 138.11           | 2296.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2400.00    | 0.00        | 138.11           | 2396.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2500.00    | 0.00        | 138.11           | 2496.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2600.00    | 0.00        | 138.11           | 2596.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2700.00    | 0.00        | 138.11           | 2696.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2800.00    | 0.00        | 138.11           | 2796.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 2900.00    | 0.00        | 138.11           | 2896.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3000.00    | 0.00        | 138.11           | 2996.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3100.00    | 0.00        | 138.11           | 3096.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3200.00    | 0.00        | 138.11           | 3196.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3300.00    | 0.00        | 138.11           | 3296.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3400.00    | 0.00        | 138.11           | 3396.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3500.00    | 0.00        | 138.11           | 3496.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3600.00    | 0.00        | 138.11           | 3596.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3700.00    | 0.00        | 138.11           | 3696.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3800.00    | 0.00        | 138.11           | 3796.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 3900.00    | 0.00        | 138.11           | 3896.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4000.00    | 0.00        | 138.11           | 3996.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4100.00    | 0.00        | 138.11           | 4096.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4200.00    | 0.00        | 138.11           | 4196.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4300.00    | 0.00        | 138.11           | 4296.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4400.00    | 0.00        | 138.11           | 4396.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4500.00    | 0.00        | 138.11           | 4496.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4600.00    | 0.00        | 138.11           | 4596.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4700.00    | 0.00        | 138.11           | 4696.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4800.00    | 0.00        | 138.11           | 4796.25     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
| Build 9"/100'               | 4833.19    | 0.00        | 138.11           | 4829.44     | -67.23       | -61.10     | 54.80      | 0.00             | 1902065.36         | 136893.34         | 36.2212921625   | -107.481004      |
|                             | 4900.00    | 8.01        | 283.60           | 4896.13     | -63.73       | -60.28     | 51.40      | 9.00             | 1902066.23         | 136889.94         | 36.2212944241   | -107.481016      |
|                             | 5000.00    | 15.01       | 283.60           | 4994.35     | -45.50       | -55.99     | 33.68      | 9.00             | 1902070.73         | 136872.28         | 36.2213061932   | -107.481076      |
|                             | 5100.00    | 24.01       | 283.60           | 5088.51     | -12.13       | -48.15     | 1.25       | 9.00             | 1902078.99         | 136839.95         | 36.2213277388   | -107.481186      |
|                             | 5200.00    | 33.01       | 283.60           | 5176.29     | 35.55        | -36.94     | -45.10     | 9.00             | 1902090.79         | 136793.74         | 36.2213585300   | -107.481343      |
|                             | 5300.00    | 42.01       | 283.60           | 5255.53     | 96.38        | -22.64     | -104.23    | 9.00             | 1902105.84         | 136734.80         | 36.2213978085   | -107.481543      |
|                             | 5400.00    | 51.01       | 283.60           | 5324.28     | 168.86       | -5.60      | -174.68    | 9.00             | 1902123.77         | 136664.57         | 36.2214446070   | -107.481782      |
| Hold 60" INC                | 5499.84    | 60.00       | 283.60           | 5380.76     | 251.05       | 13.72      | -254.58    | 9.00             | 1902144.10         | 136584.92         | 36.2214976828   | -107.482053      |
|                             | 5500.00    | 60.00       | 283.60           | 5380.84     | 251.19       | 13.75      | -254.71    | 9.00             | 1902144.14         | 136584.79         | 36.2214977729   | -107.482053      |
| Build 9"/100' to<br>Landing | 5560.10    | 60.00       | 283.60           | 5410.89     | 303.23       | 25.99      | -305.30    | 0.00             | 1902157.01         | 136534.36         | 36.2215313761   | -107.482225      |
|                             | 5600.00    | 63.59       | 283.60           | 5429.75     | 338.39       | 34.25      | -339.47    | 9.00             | 1902165.71         | 136500.29         | 36.2215540789   | -107.482341      |
|                             | 5700.00    | 72.59       | 283.60           | 5467.02     | 431.07       | 56.04      | -429.55    | 9.00             | 1902188.65         | 136410.49         | 36.2216139292   | -107.482646      |
|                             | 5800.00    | 81.59       | 283.60           | 5489.34     | 528.44       | 78.94      | -524.20    | 9.00             | 1902212.74         | 136316.14         | 36.2216768169   | -107.482987      |
|                             | 5900.00    | 90.59       | 283.60           | 5496.16     | 628.10       | 102.37     | -621.07    | 9.00             | 1902237.41         | 136219.57         | 36.2217411932   | -107.483295      |
| Chaco 2306-16L<br>#209H LP  | 5908.99    | 91.40       | 283.60           | 5496.00     | 637.09       | 104.49     | -629.80    | 9.00             | 1902239.63         | 136210.86         | 36.2217469994   | -107.483325      |
|                             | 6000.00    | 91.40       | 283.60           | 5493.78     | 728.07       | 125.88     | -718.23    | 0.00             | 1902262.15         | 136122.70         | 36.2218057718   | -107.483625      |
|                             | 6100.00    | 91.40       | 283.60           | 5491.34     | 828.04       | 149.40     | -815.40    | 0.00             | 1902286.90         | 136025.84         | 36.2218703487   | -107.483954      |
|                             | 6200.00    | 91.40       | 283.60           | 5488.90     | 928.00       | 172.91     | -912.57    | 0.00             | 1902311.64         | 135928.97         | 36.2219349248   | -107.484284      |
|                             | 6300.00    | 91.40       | 283.60           | 5486.46     | 1027.97      | 196.42     | -1009.73   | 0.00             | 1902336.39         | 135813            |                 |                  |

| Comments                    | MD<br>(ft) | Incl<br>(°) | Azim True<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(*/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(°) | Longitude<br>(°) |
|-----------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-----------------|------------------|
|                             | 6800.00    | 91.40       | 283.60           | 5474.25     | 1527.80      | 313.98     | -1495.56   | 0.00             | 1902460.11         | 135347.79         | 36.2223223616   | -107.486260      |
|                             | 6900.00    | 91.40       | 283.60           | 5471.81     | 1627.77      | 337.49     | -1592.73   | 0.00             | 1902484.86         | 135250.92         | 36.2223869312   | -107.486589      |
|                             | 7000.00    | 91.40       | 283.60           | 5469.37     | 1727.73      | 361.00     | -1689.89   | 0.00             | 1902509.60         | 135154.06         | 36.2224514999   | -107.486919      |
|                             | 7100.00    | 91.40       | 283.60           | 5466.93     | 1827.70      | 384.51     | -1787.06   | 0.00             | 1902534.35         | 135057.19         | 36.2225160676   | -107.487248      |
|                             | 7200.00    | 91.40       | 283.60           | 5464.49     | 1927.67      | 408.02     | -1884.23   | 0.00             | 1902559.09         | 134960.33         | 36.2225806345   | -107.487578      |
|                             | 7300.00    | 91.40       | 283.60           | 5462.04     | 2027.63      | 431.53     | -1981.39   | 0.00             | 1902583.83         | 134863.47         | 36.2226452004   | -107.487907      |
|                             | 7400.00    | 91.40       | 283.60           | 5459.60     | 2127.60      | 455.04     | -2078.56   | 0.00             | 1902608.58         | 134766.60         | 36.2227097654   | -107.488236      |
|                             | 7500.00    | 91.40       | 283.60           | 5457.16     | 2227.57      | 478.56     | -2175.73   | 0.00             | 1902633.32         | 134669.74         | 36.2227743295   | -107.488566      |
|                             | 7600.00    | 91.40       | 283.60           | 5454.72     | 2327.53      | 502.07     | -2272.89   | 0.00             | 1902658.07         | 134572.87         | 36.2228388926   | -107.488895      |
|                             | 7700.00    | 91.40       | 283.60           | 5452.28     | 2427.50      | 525.58     | -2370.06   | 0.00             | 1902682.81         | 134476.01         | 36.2229034549   | -107.489224      |
|                             | 7800.00    | 91.40       | 283.60           | 5449.84     | 2527.47      | 549.09     | -2467.22   | 0.00             | 1902707.56         | 134379.14         | 36.2229680162   | -107.489554      |
|                             | 7900.00    | 91.40       | 283.60           | 5447.40     | 2627.43      | 572.60     | -2564.39   | 0.00             | 1902732.30         | 134282.28         | 36.2230325766   | -107.489883      |
|                             | 8000.00    | 91.40       | 283.60           | 5444.96     | 2727.40      | 596.11     | -2661.56   | 0.00             | 1902757.05         | 134185.41         | 36.2230971361   | -107.490213      |
|                             | 8100.00    | 91.40       | 283.60           | 5442.52     | 2827.36      | 619.62     | -2758.72   | 0.00             | 1902781.79         | 134088.55         | 36.2231616947   | -107.490542      |
|                             | 8200.00    | 91.40       | 283.60           | 5440.07     | 2927.33      | 643.14     | -2855.89   | 0.00             | 1902806.54         | 133991.69         | 36.2232262524   | -107.490871      |
|                             | 8300.00    | 91.40       | 283.60           | 5437.63     | 3027.30      | 666.65     | -2953.05   | 0.00             | 1902831.28         | 133894.82         | 36.2232908091   | -107.491201      |
|                             | 8400.00    | 91.40       | 283.60           | 5435.19     | 3127.26      | 690.16     | -3050.22   | 0.00             | 1902856.03         | 133797.96         | 36.2233553649   | -107.491530      |
|                             | 8500.00    | 91.40       | 283.60           | 5432.75     | 3227.23      | 713.67     | -3147.39   | 0.00             | 1902880.77         | 133701.09         | 36.2234199198   | -107.491860      |
|                             | 8600.00    | 91.40       | 283.60           | 5430.31     | 3327.20      | 737.18     | -3244.55   | 0.00             | 1902905.51         | 133604.23         | 36.2234844738   | -107.492189      |
|                             | 8700.00    | 91.40       | 283.60           | 5427.87     | 3427.16      | 760.69     | -3341.72   | 0.00             | 1902930.26         | 133507.36         | 36.2235490269   | -107.492519      |
|                             | 8800.00    | 91.40       | 283.60           | 5425.43     | 3527.13      | 784.20     | -3438.88   | 0.00             | 1902955.00         | 133410.50         | 36.2236135790   | -107.492848      |
|                             | 8900.00    | 91.40       | 283.60           | 5422.99     | 3627.10      | 807.72     | -3536.05   | 0.00             | 1902979.75         | 133313.63         | 36.2236781302   | -107.493177      |
|                             | 9000.00    | 91.40       | 283.60           | 5420.55     | 3727.06      | 831.23     | -3633.22   | 0.00             | 1903004.49         | 133216.77         | 36.2237426805   | -107.493507      |
|                             | 9100.00    | 91.40       | 283.60           | 5418.10     | 3827.03      | 854.74     | -3730.38   | 0.00             | 1903029.24         | 133119.91         | 36.2238072299   | -107.493836      |
|                             | 9200.00    | 91.40       | 283.60           | 5415.66     | 3927.00      | 878.25     | -3827.55   | 0.00             | 1903053.98         | 133023.04         | 36.2238717784   | -107.494166      |
|                             | 9300.00    | 91.40       | 283.60           | 5413.22     | 4026.96      | 901.76     | -3924.72   | 0.00             | 1903078.73         | 132926.18         | 36.2239363260   | -107.494495      |
|                             | 9400.00    | 91.40       | 283.60           | 5410.78     | 4126.93      | 925.27     | -4021.88   | 0.00             | 1903103.47         | 132829.31         | 36.2240008726   | -107.494824      |
|                             | 9500.00    | 91.40       | 283.60           | 5408.34     | 4226.90      | 948.78     | -4119.05   | 0.00             | 1903128.22         | 132732.45         | 36.2240654183   | -107.495154      |
|                             | 9600.00    | 91.40       | 283.60           | 5405.90     | 4326.86      | 972.30     | -4216.21   | 0.00             | 1903152.96         | 132635.58         | 36.2241299631   | -107.495483      |
|                             | 9700.00    | 91.40       | 283.60           | 5403.46     | 4426.83      | 995.81     | -4313.38   | 0.00             | 1903177.71         | 132538.72         | 36.2241945070   | -107.495813      |
|                             | 9800.00    | 91.40       | 283.60           | 5401.02     | 4526.79      | 1019.32    | -4410.55   | 0.00             | 1903202.45         | 132441.85         | 36.2242590500   | -107.496142      |
|                             | 9900.00    | 91.40       | 283.60           | 5398.58     | 4626.76      | 1042.83    | -4507.71   | 0.00             | 1903227.19         | 132344.99         | 36.2243235920   | -107.496471      |
|                             | 10000.00   | 91.40       | 283.60           | 5396.13     | 4726.73      | 1066.34    | -4604.88   | 0.00             | 1903251.94         | 132248.13         | 36.2243881331   | -107.496801      |
|                             | 10100.00   | 91.40       | 283.60           | 5393.69     | 4826.69      | 1089.85    | -4702.04   | 0.00             | 1903276.68         | 132151.26         | 36.2244526733   | -107.497130      |
|                             | 10200.00   | 91.40       | 283.60           | 5391.25     | 4926.66      | 1113.36    | -4799.21   | 0.00             | 1903301.43         | 132054.40         | 36.2245172126   | -107.497460      |
|                             | 10300.00   | 91.40       | 283.60           | 5388.81     | 5026.63      | 1136.88    | -4896.38   | 0.00             | 1903326.17         | 131957.53         | 36.2245817510   | -107.497789      |
|                             | 10400.00   | 91.40       | 283.60           | 5386.37     | 5126.59      | 1160.39    | -4993.54   | 0.00             | 1903350.92         | 131860.67         | 36.2246462884   | -107.498118      |
|                             | 10500.00   | 91.40       | 283.60           | 5383.93     | 5226.56      | 1183.90    | -5090.71   | 0.00             | 1903375.66         | 131763.80         | 36.2247108250   | -107.498448      |
|                             | 10600.00   | 91.40       | 283.60           | 5381.49     | 5326.53      | 1207.41    | -5187.87   | 0.00             | 1903400.41         | 131666.94         | 36.2247753606   | -107.498777      |
| Chaco 2306-16L<br>#209H BHL | 10660.95   | 91.40       | 283.60           | 5380.00     | 5387.45      | 1221.74    | -5247.09   | 0.00             | 1903415.49         | 131607.90         | 36.2248146927   | -107.498978      |

Survey Type: Def Plan

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

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Survey Tool Type         | Borehole / Survey                                      |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|--------------------------|--------------------------------------------------------|
|             | 1    | 0.000           | 14.000        | 1/100.000        | 12.250            | 9.625                   | SLB_NSG+MSHOT-Depth Only | Original Hole / Chaco 2306-16L<br>#209H R2 mdv 14Aug14 |
|             | 1    | 14.000          | 550.000       | 1/100.000        | 12.250            | 9.625                   | SLB_NSG+MSHOT            | Original Hole / Chaco 2306-16L<br>#209H R2 mdv 14Aug14 |
|             | 1    | 550.000         | 5908.000      | 1/30.000         | 8.750             | 7.000                   | SLB_MWD-STD              | Original Hole / Chaco 2306-16L<br>#209H R2 mdv 14Aug14 |
|             | 1    | 5908.000        | 10660.947     | 1/100.000        | 6.125             | 4.500                   | SLB_MWD-STD              | Original Hole / Chaco 2306-16L<br>#209H R2 mdv 14Aug14 |

## 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.

### C. Spills

1. Any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site.

### D. Sewage

1. Portable toilets will be provided and maintained during construction, as needed (see Figure 4 for the location of toilets).

### E. Garbage and other water material

1. 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.

### F. Hazardous Waste

1. No chemicals subject to reporting under Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
2. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
3. All fluids (i.e., scrubber cleaners) used during washing of production equipment will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.

### G. Produced Water:

1. WPX Energy will dispose of produced water from this well at one of the following facilities:
  - a. Lybrook Yard WDW #1, API #30-039-27533, NMOCD permit #SWD-907, operated by Elm Ridge Resources, located in NE ¼, Section 14, Township 23 North, Range 7 West
  - b. Jillson Federal #1, NMOCD order #R-10168, operated by ConocoPhillips, located in NW ¼, Section 8, Township 24 North, Range 3 West
  - c. Rosa Unit SWD #001, API #30-039-27055, NMOCD permit SWD-916, operated by WPX Energy, located in SE ¼, Section 23, Township 31 North, Range 6 West
  - d. Rosa Unit SWD #002, API #30-039-30182, NMOCD permit SWD-1236, operated by WPX Energy, located in NW ¼, Section 25, Township 31 North, Range 5 West
  - e. Basin Disposal, permit #NM-01-005, located in the NW ¼, Section 3, Township 29 North, Range 11 West

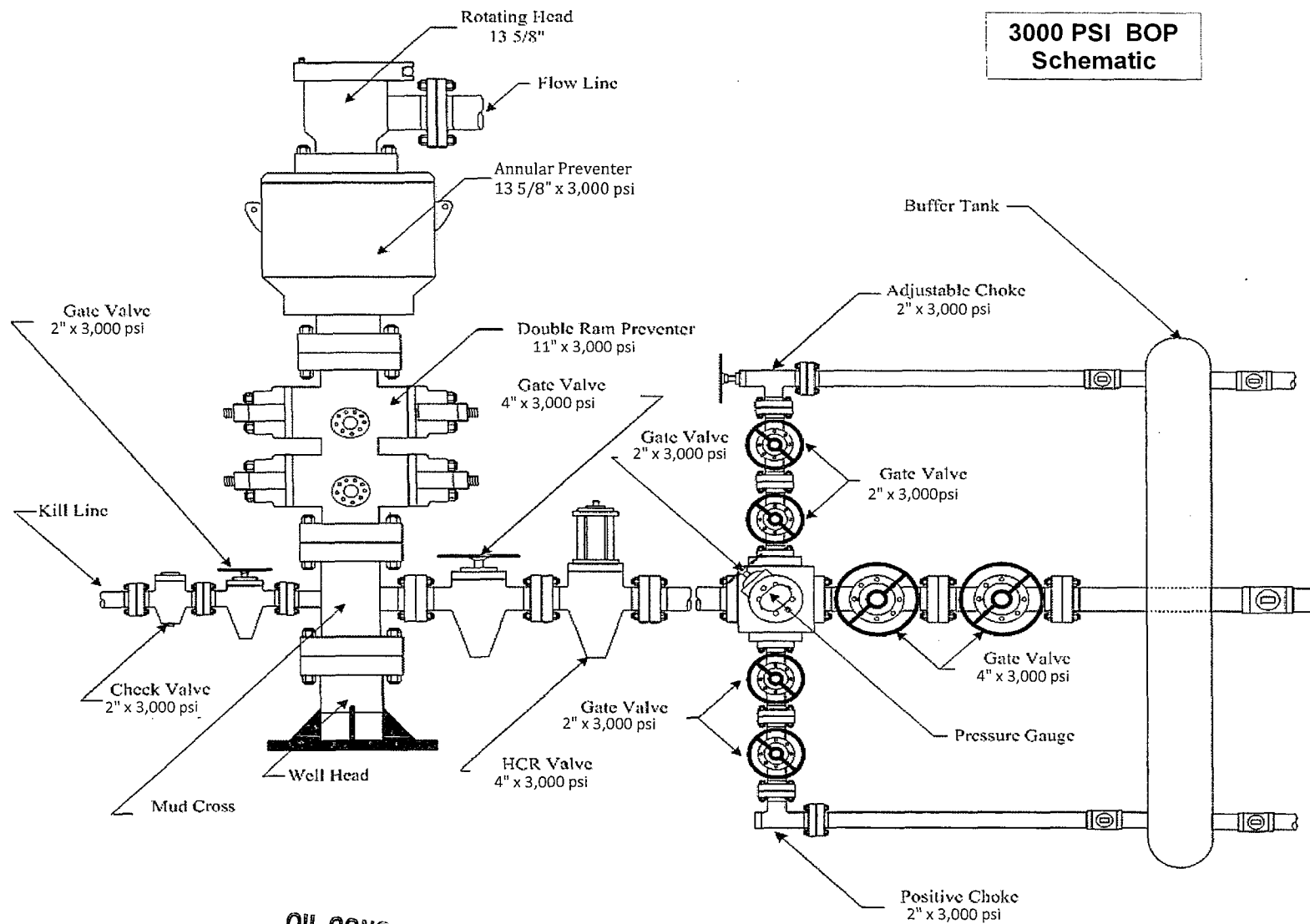
**Directions from the Intersection of US Hwy 550 & US Hwy 64**

**in Bloomfield, NM to WPX Energy Production, LLC NE Chaco COM #209H**

**1410' FSL & 361' FWL, Section 16, T23N, R6W, N.M.P.M., Rio Arriba County, NM**

**Latitude: 36.221476°N Longitude: 107.481797°W Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 52.1 miles to Mile Marker 99.1 to new access on left-hand side of highway which continues for 968' to staked WPX NE Chaco COM #209H location.



**3000 PSI BOP  
Schematic**

OIL CONS. DIV DIST. 3

DEC 19 2014