State of New Mexico
Energy, Minerals and Natural Resources Department

**Susana Martinez**
Governor

**Ken McQueen**
Cabinet Secretary

**Matthias Sayer**
Deputy Cabinet Secretary

**Heather Riley,** 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: 2/13/17
Well information:
Operator WPX Well Name and Number Kimbeto Wash Unit #790H
API# 30-045-35855 Section 32 Township 23 (N)/S, Range 9 E/(W)

Conditions of Approval: (See the below checked and handwritten conditions)

- X Notify Aztec OCD 24hrs prior to casing & cement.
- X Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- o Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ✓ 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

12-19-18
Date

*See Sundry for Operator Change.

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

APD Held for HZ Rule change & correct C-102

OIL CONS. DIV DIST. 3

AUG 09 2017

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

| | |
|---|---|
| 1a. Type of work: ☑ DRILL ☐ REENTER | 5. Lease Serial No. N0G14031935 |
| | 6. If Indian, Allotee or Tribe Name EASTERN NAVAJO |
| | 7. If Unit or CA Agreement, Name and No. KIMBETO WASH UNIT / NMNM135255A |
| 1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone | 8. Lease Name and Well No. KWU 790H |
| 2. Name of Operator WPX ENERGY LLC | 9. API Well No. 30-045-35835 |
| 3a. Address 720 S Main Aztec NM 87410 / 3b. Phone No. (include area code) (505)333-1822 | 10. Field and Pool, or Exploratory KWU / BASIN MANCOS GAS POOL |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface SESE / 259 FSL / 247 FEL / LAT 36.176974 / LONG -107.804088 At proposed prod. zone SESE / 150 FSL / 449 FEL / LAT 36.191048 / LONG -107.822494 | 11. Sec., T. R. M. or Blk. and Survey or Area SEC 32 / T23N / R9W / NMP |
| 14. Distance in miles and direction from nearest town or post office* 37.8 miles | 12. County or Parish SAN JUAN / 13. State NM |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 20 feet | 16. No. of acres in lease 160 / 17. Spacing Unit dedicated to this well 1120.41 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 247 feet | 19. Proposed Depth 4403 feet / 11945 feet / 20. BLM/BIA Bond No. on file FED: UTB000178 / IND: B001576 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6636 feet | 22. Approximate date work will start* 04/01/2017 / 23. Estimated duration 30 days |

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must 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 BLM.

| | | |
|---|---|---|
| 25. Signature (Electronic Submission) | Name (Printed/Typed) Lacey Granillo / Ph: (505)333-1816 | Date 02/13/2017 |
| Title Permitting Tech III | | |
| Approved by (Signature) [signature] | Name (Printed/Typed) | Date 8/3/17 |
| Title AFM | Office FARMINGTON | |

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.

(Continued on page 2)

*(Instructions on page 2)

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

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

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

NMOCD

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

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| 1 API Number | 2 Pool Code | 3 Pool Name |
|---|---|---|
| 30-045-35835 | 97232 | BASIN MANCOS GAS POOL |

| 4 Property Code | 5 Property Name | 6 Well Number |
|---|---|---|
| 316144 | KWU | 790H |

| 7 OGRID No. | 8 Operator Name | 9 Elevation |
|---|---|---|
| 120782 | WPX ENERGY PRODUCTION, LLC | 6636' |

## 10 Surface Location

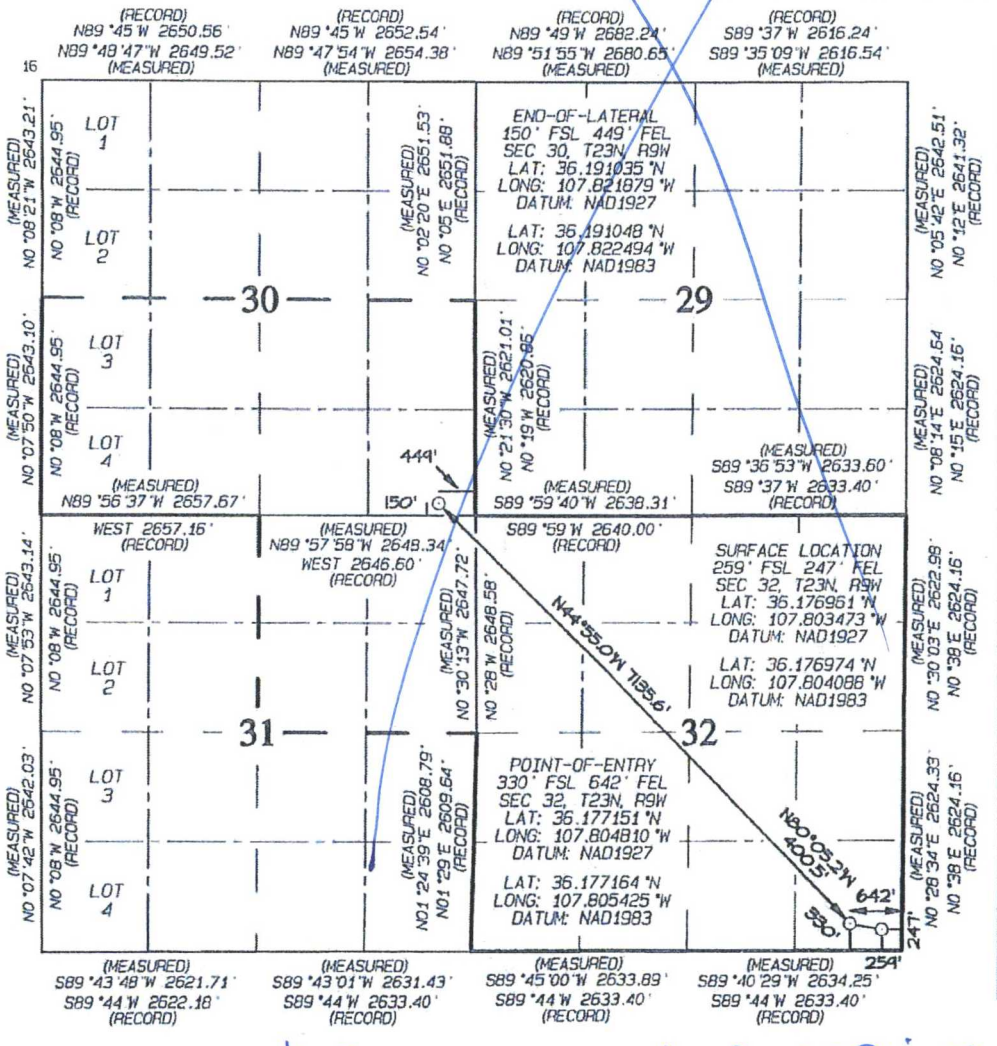
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 32 | 23N | 9W | | 259 | SOUTH | 247 | EAST | SAN JUAN |

## 11 Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 30 | 23N | 9W | | 150 | SOUTH | 449 | EAST | SAN JUAN |

| 12 Dedicated Acres | | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|---|---|---|---|---|
| 1120.41 | S/2 - Section 30<br>NE/4 - Section 31<br>Entire Section 32 | | | R-14084 |

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




## 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 — Date: 2-9-17

Lacey Granillo
Printed Name

lacey.granillo@wpxenergy.com
E-mail Address

## 18 SURVEYOR CERTIFICATION

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

Date Revised: JANUARY 25, 2017
Survey Date: JANUARY 15, 2016

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

* See correct C-102 in Sundry.

# WPX Energy

## Operations Plan

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

| | | | |
|---|---|---|---|
| **Date:** | February 8, 2017 | **Field:** | Basin Mancos |
| **Well Name:** | KWU #790H | **Surface:** | |
| **SH Location:** | SESE SEC 32 23N-09W | **Elevation:** | 6636' GR |
| **BH Location:** | SESE SEC 30 23N-09W | **Minerals:** | |

**Measured Depth:** 11,945.47'

## I. GEOLOGY

Surface formation - NACIMIENTO/ OJO ALAMO/ KIRKLAND

### A. FORMATION TOPS: (KB)

| NAME | MD | TVD | NAME | MD | TVD |
|---|---|---|---|---|---|
| OJO ALAMO | 40.00 | 40.00 | POINT LOOKOUT | 3137.00 | 3107.00 |
| KIRTLAND | 202.00 | 202.00 | MANCOS | 3315.00 | 3282.00 |
| PICTURED CLIFFS | 770.00 | 770.00 | GALLUP | 3660.00 | 3621.00 |
| LEWIS | 854.00 | 854.00 | KICKOFF POINT | 3,607.65 | 3,569.31 |
| CHACRA | 1071.00 | 1071.00 | TOP TARGET | 4706.00 | 4351.00 |
| CLIFF HOUSE | 2192.00 | 2178.00 | LANDING POINT | 4,809.78 | 4,360.00 |
| MENEFEE | 2210.00 | 2195.00 | BASE TARGET | 4,809.78 | 4,360.00 |
| | | | TD | 11,945.47 | 4,403.00 |

### B. MUD LOGGING PROGRAM:

Mudlogger on location from surface csg to TD.

### C. LOGGING PROGRAM:

LWD GR from surface casing to TD.

### D. NATURAL GAUGES:

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

## II. DRILLING

### A. MUD PROGRAM:

LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 ¾" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

### B. BOP TESTING:

While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The BOPE will be tested to 2,000 psi (High) for 10 minutes and the annular tested to 1,500 psi for 10 minutes. Pressure test surface casing to 1,500 psi for 30 minutes and intermediate casing to 1,500 psi for 30 minutes. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. All tests and inspections will be recorded in the tour book as to time and results.

## III. MATERIALS

### A. CASING PROGRAM:

| CASING TYPE | OH SIZE (IN) | DEPTH (MD) | CSG SIZE | WEIGHT | GRADE | CONN |
|---|---|---|---|---|---|---|
| SURFACE | 12.25" | 320.00' | 9.625" | 36 LBS | J-55 or equiv | STC |
| INTERMEDIATE | 8.75" | 4,809.78' | 7" | 23 LBS | J-55 or equiv | LTC |
| PRODUCTION | 6.125" | 4659.78' - 11,945.47' | 4.5" | 11.6 LBS | P-110 or equiv | LTC |
| TIE BACK | 6.125" | Surf. - 4659.78' | 4.5" | 11.6 LBS | P-110 or equiv | LTC |

### 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 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. If losses are encountered during the drilling of the intermediate section a DV tool will be utalized and a 2 stage cement job may be planned to ensure cement circ back to surface. The DV tool will be placed 100' above the top of the Chacra formation. If cement is circulated back to surface on the first stage, a cancelation device will be dropped to shift the dv tool closed and the 2nd stage cement job will be aborted at that time, if no cement is seen at surface on the 1st stage the stage tool will be opend and a 2nd stage cement job will be pumped.

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.

### C. CEMENT:

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

1. Surface:

   5 bbl Fresh Water Spacer, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ Bbls).TOC at Surface.

2. Intermediate:

   Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 83 bbls, 236 sks, (465 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 59 bbls, 254 sks, (331 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 189 bbl Drilling mud or water. Total Cement: 142 bbls, 490 sks, (795 cuft)

3. Prod Liner:

Spacer #1:10 bbl (56.cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem ™ System. Yield 1.36 cuft/sk 13.3 ppg (714 sx /971 cuft /173 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-161bbl Fr Water. Total Cement (714 sx /971bbls).

**D. COMPLETION:**

Run CCL for perforating

A. 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.

B. 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.

C. 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.

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

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**NOTES:**

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-55 Intermediate casing with a Liner Hanger and pack-off assembly then cemented to top of liner hanger.

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

# WPX Energy

**T23N R9W**
**2309-32P KWU**
**Kimbeto Wash UT #790H**

**Wellbore #1**

**Plan: Design #1 23May16 sam**

# Standard Planning Report

**23 May, 2016**

# WPX

## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | COMPASS | **Local Co-ordinate Reference:** | Well Kimbeto Wash UT #790H |
| **Company:** | WPX Energy | **TVD Reference:** | GL @ 6636.00usft (Original Well Elev) |
| **Project:** | T23N R9W | **MD Reference:** | GL @ 6636.00usft (Original Well Elev) |
| **Site:** | 2309-32P KWU | **North Reference:** | True |
| **Well:** | Kimbeto Wash UT #790H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Design #1 23May16 sam | | |

| **Project** | T23N R9W | | |
|---|---|---|---|
| **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** | 2309-32P KWU | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 1,883,657.32 usft | **Latitude:** | 36.176964 |
| **From:** | Map | **Easting:** | 508,832.81 usft | **Longitude:** | -107.803405 |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13.200 in | **Grid Convergence:** | 0.02 ° |

| **Well** | Kimbeto Wash UT #790H | | | | |
|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | -1.09 usft | **Northing:** | 1,883,656.22 usft | **Latitude:** | 36.176961 |
| | **+E/-W** | -20.06 usft | **Easting:** | 508,812.75 usft | **Longitude:** | -107.803473 |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | 0.00 usft | **Ground Level:** | 6,636.00 usft |

| **Wellbore** | Wellbore #1 | | | | |
|---|---|---|---|---|---|
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | IGRF2015 | 5/2/2016 | 9.33 | 62.86 | 49,828 |

| **Design** | Design #1 23May16 sam | | | |
|---|---|---|---|---|
| **Audit Notes:** | | | | |
| **Version:** | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |

| **Vertical Section:** | **Depth From (TVD) (usft)** | **+N/-S (usft)** | **+E/-W (usft)** | **Direction (bearing)** |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 313.33 |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,528.99 | 10.58 | 161.92 | 1,525.99 | -46.30 | 15.12 | 2.00 | 2.00 | 0.00 | 161.92 | |
| 3,607.65 | 10.58 | 161.92 | 3,569.31 | -409.10 | 133.57 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,380.29 | 60.00 | 315.10 | 4,224.72 | -215.12 | -111.40 | 9.00 | 6.40 | 19.83 | 155.35 | Start 60 Tan #790H |
| 4,480.29 | 60.00 | 315.10 | 4,274.72 | -153.77 | -172.53 | 0.00 | 0.00 | 0.00 | 0.00 | End 60 Tan #790H |
| 4,641.72 | 74.53 | 315.10 | 4,336.94 | -48.59 | -277.34 | 9.00 | 9.00 | 0.00 | 0.00 | |
| 4,809.78 | 89.65 | 315.10 | 4,360.00 | 68.98 | -394.50 | 9.00 | 9.00 | 0.00 | 0.00 | POE #790H |
| 11,945.47 | 89.65 | 315.10 | 4,403.00 | 5,123.52 | -5,431.14 | 0.00 | 0.00 | 0.00 | 0.00 | BHL #790H |

| | | | |
|---|---|---|---|
| **Database:** | COMPASS | **Local Co-ordinate Reference:** | Well Kimbeto Wash UT #790H |
| **Company:** | WPX Energy | **TVD Reference:** | GL @ 6636.00usft (Original Well Elev) |
| **Project:** | T23N R9W | **MD Reference:** | GL @ 6636.00usft (Original Well Elev) |
| **Site:** | 2309-32P KWU | **North Reference:** | True |
| **Well:** | Kimbeto Wash UT #790H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Design #1 23May16 sam | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 320.00 | 0.00 | 0.00 | 320.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **9 5/8"** | | | | | | | | | |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Start Build 2.00** | | | | | | | | | |
| 1,500.00 | 10.00 | 161.92 | 1,497.47 | -41.37 | 13.51 | -38.22 | 2.00 | 2.00 | 0.00 |
| 1,528.99 | 10.58 | 161.92 | 1,525.99 | -46.30 | 15.12 | -42.76 | 2.00 | 2.00 | 0.00 |
| **Hold 10.58 Inclination** | | | | | | | | | |
| 2,000.00 | 10.58 | 161.92 | 1,988.99 | -128.50 | 41.96 | -118.70 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 10.58 | 161.92 | 2,480.49 | -215.77 | 70.45 | -199.31 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 10.58 | 161.92 | 2,971.99 | -303.04 | 98.94 | -279.92 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 10.58 | 161.92 | 3,463.49 | -390.31 | 127.44 | -360.53 | 0.00 | 0.00 | 0.00 |
| 3,607.65 | 10.58 | 161.92 | 3,569.31 | -409.10 | 133.57 | -377.89 | 0.00 | 0.00 | 0.00 |
| **Start Build DLS 9.00 TFO 155.35** | | | | | | | | | |
| 4,000.00 | 26.02 | 308.59 | 3,950.58 | -389.01 | 75.63 | -321.96 | 9.00 | 3.94 | 37.38 |
| 4,380.29 | 60.00 | 315.10 | 4,224.72 | -215.12 | -111.40 | -66.58 | 9.00 | 8.93 | 1.71 |
| **Hold 60.00 Inclination** | | | | | | | | | |
| 4,480.29 | 60.00 | 315.10 | 4,274.72 | -153.77 | -172.53 | 19.98 | 0.00 | 0.00 | 0.00 |
| **Start Build DLS 9.00 TFO 0.00** | | | | | | | | | |
| 4,500.00 | 61.77 | 315.10 | 4,284.31 | -141.58 | -184.68 | 37.19 | 9.00 | 9.00 | 0.00 |
| 4,641.72 | 74.53 | 315.10 | 4,336.94 | -48.59 | -277.34 | 168.39 | 9.00 | 9.00 | 0.00 |
| **Start DLS 9.00 TFO 0.00** | | | | | | | | | |
| 4,809.78 | 89.65 | 315.10 | 4,360.00 | 68.98 | -394.50 | 334.30 | 9.00 | 9.00 | 0.00 |
| **POE at 89.65 Inc 315.10 Deg - 7"** | | | | | | | | | |
| 5,000.00 | 89.65 | 315.10 | 4,361.15 | 203.72 | -528.76 | 524.42 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 89.65 | 315.10 | 4,364.16 | 557.90 | -881.68 | 1,024.17 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 89.65 | 315.10 | 4,367.17 | 912.07 | -1,234.60 | 1,523.93 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 89.65 | 315.10 | 4,370.19 | 1,266.24 | -1,587.52 | 2,023.68 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 89.65 | 315.10 | 4,373.20 | 1,620.42 | -1,940.44 | 2,523.43 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 89.65 | 315.10 | 4,376.21 | 1,974.59 | -2,293.36 | 3,023.18 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 89.65 | 315.10 | 4,379.22 | 2,328.76 | -2,646.28 | 3,522.93 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 89.65 | 315.10 | 4,382.24 | 2,682.94 | -2,999.20 | 4,022.69 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 89.65 | 315.10 | 4,385.25 | 3,037.11 | -3,352.12 | 4,522.44 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 89.65 | 315.10 | 4,388.26 | 3,391.28 | -3,705.04 | 5,022.19 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 89.65 | 315.10 | 4,391.28 | 3,745.46 | -4,057.96 | 5,521.94 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 89.65 | 315.10 | 4,394.29 | 4,099.63 | -4,410.88 | 6,021.69 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 89.65 | 315.10 | 4,397.30 | 4,453.80 | -4,763.80 | 6,521.45 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 89.65 | 315.10 | 4,400.32 | 4,807.98 | -5,116.72 | 7,021.20 | 0.00 | 0.00 | 0.00 |
| 11,945.47 | 89.65 | 315.10 | 4,403.00 | 5,123.52 | -5,431.14 | 7,466.44 | 0.00 | 0.00 | 0.00 |
| **TD at 11945.47** | | | | | | | | | |

| | | | |
|---|---|---|---|
| **Database:** | COMPASS | **Local Co-ordinate Reference:** | Well Kimbeto Wash UT #790H |
| **Company:** | WPX Energy | **TVD Reference:** | GL @ 6636.00usft (Original Well Elev) |
| **Project:** | T23N R9W | **MD Reference:** | GL @ 6636.00usft (Original Well Elev) |
| **Site:** | 2309-32P KWU | **North Reference:** | True |
| **Well:** | Kimbeto Wash UT #790H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Design #1 23May16 sam | | |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (bearing | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| Start 60 Tan #790H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 4,224.72 | -215.12 | -111.40 | 1,883,441.07 | 508,701.42 | 36.176370 | -107.803851 |
| End 60 Tan #790H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 4,274.72 | -153.78 | -172.53 | 1,883,502.39 | 508,640.27 | 36.176539 | -107.804058 |
| POE #790H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 4,360.00 | 68.98 | -394.50 | 1,883,725.08 | 508,418.23 | 36.177151 | -107.804810 |
| BHL #790H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 4,403.00 | 5,123.52 | -5,431.14 | 1,888,778.07 | 503,380.03 | 36.191035 | -107.821879 |

**Casing Points**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (in) | Hole Diameter (in) |
|---|---|---|---|---|
| 320.00 | 320.00 | 9 5/8" | 9.625 | 12.250 |
| 4,809.78 | 4,360.00 | 7" | 7.000 | 8.750 |

**Plan Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 1,000.00 | 1,000.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1,528.99 | 1,525.99 | -46.30 | 15.12 | Hold 10.58 Inclination |
| 3,607.65 | 3,569.31 | -409.10 | 133.57 | Start Build DLS 9.00 TFO 155.35 |
| 4,380.29 | 4,224.72 | -215.12 | -111.40 | Hold 60.00 Inclination |
| 4,480.29 | 4,274.72 | -153.77 | -172.53 | Start Build DLS 9.00 TFO 0.00 |
| 4,641.72 | 4,336.94 | -48.59 | -277.34 | Start DLS 9.00 TFO 0.00 |
| 4,809.78 | 4,360.00 | 68.98 | -394.50 | POE at 89.65 Inc 315.10 Deg |
| 11,945.47 | 4,403.00 | 5,123.52 | -5,431.14 | TD at 11945.47 |

WPXENERGY

Well Name: Kimbeto Wash UT #790H
Surface Location: 2309-32P KWU
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6636.00

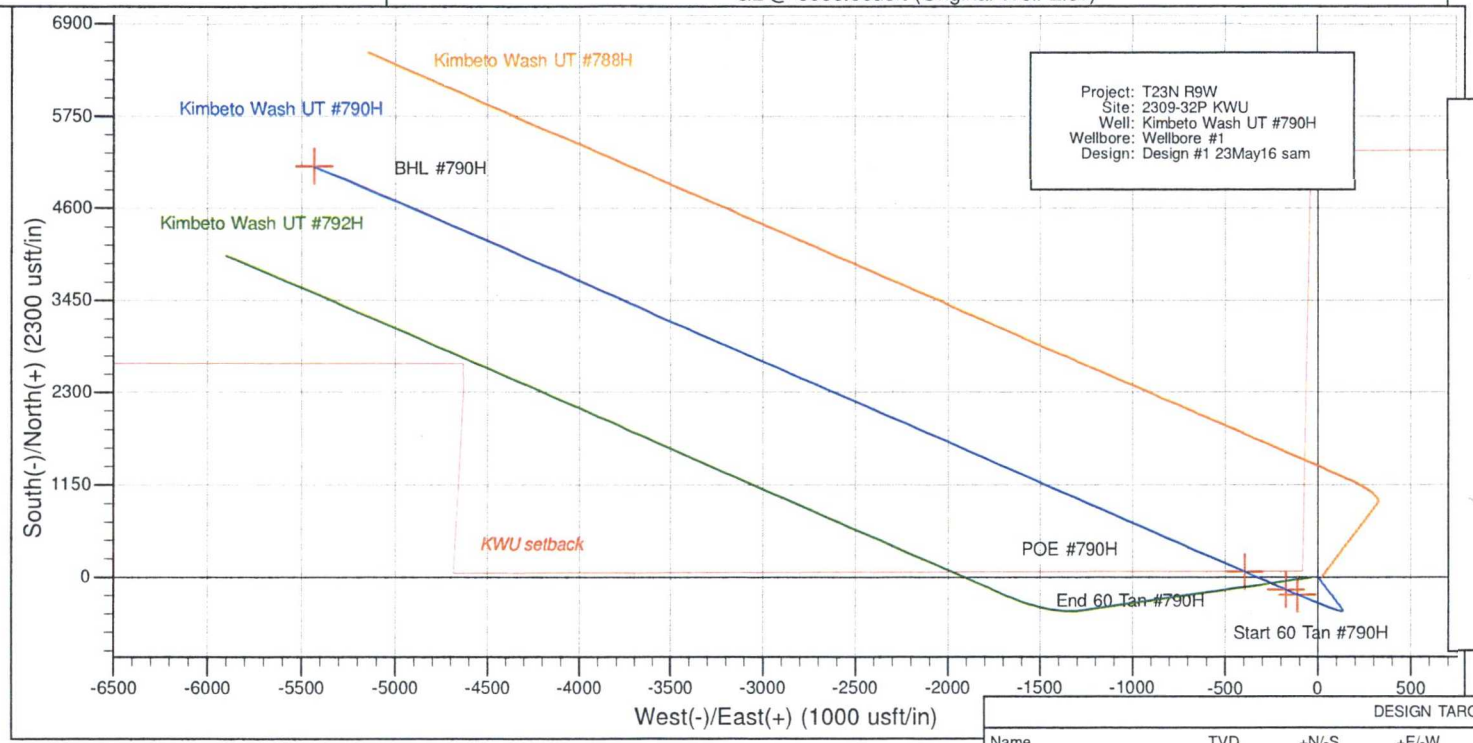
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 1883656.22 | 508812.75 | 36.176961 | -107.803473 | |

GL @ 6636.00usft (Original Well Elev)

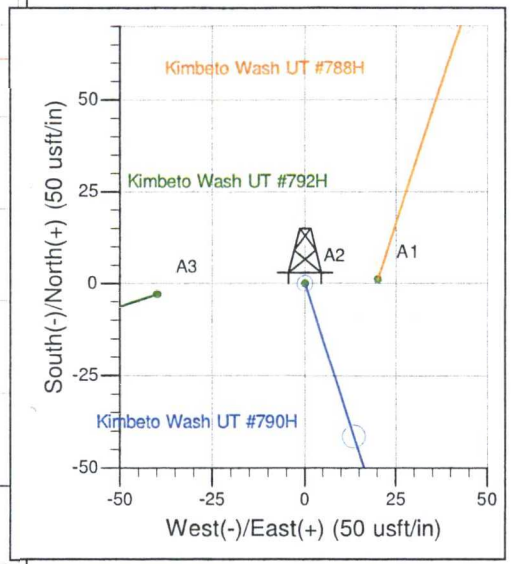
T M

Azimuths to True North
Magnetic North: 9.33°

Magnetic Field
Strength: 49827.8snT
Dip Angle: 62.86°
Date: 5/2/2016
Model: IGRF2015

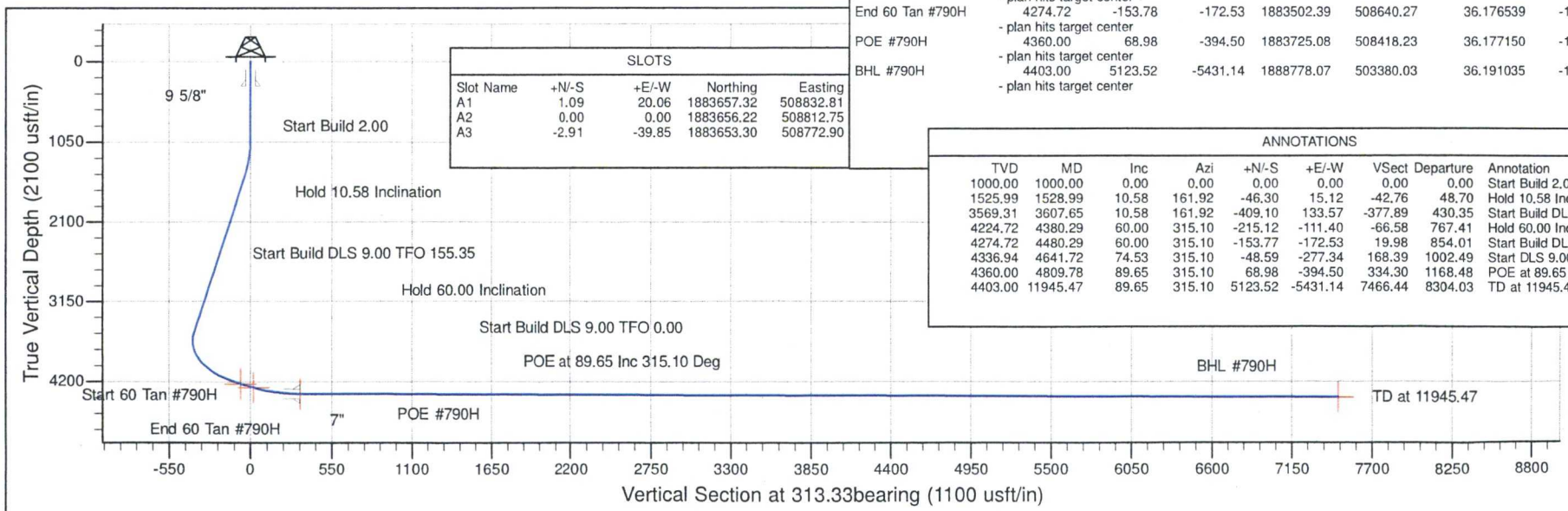



Project: T23N R9W
Site: 2309-32P KWU
Well: Kimbeto Wash UT #790H
Wellbore: Wellbore #1
Design: Design #1 23May16 sam




DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|
| Start 60 Tan #790H | 4224.72 | -215.12 | -111.40 | 1883441.07 | 508701.42 | 36.176370 | -107.803850 | Point |
| | - plan hits target center | | | | | | | |
| End 60 Tan #790H | 4274.72 | -153.78 | -172.53 | 1883502.39 | 508640.27 | 36.176539 | -107.804058 | Point |
| | - plan hits target center | | | | | | | |
| POE #790H | 4360.00 | 68.98 | -394.50 | 1883725.08 | 508418.23 | 36.177150 | -107.804810 | Point |
| | - plan hits target center | | | | | | | |
| BHL #790H | 4403.00 | 5123.52 | -5431.14 | 1888778.07 | 503380.03 | 36.191035 | -107.821879 | Point |
| | - plan hits target center | | | | | | | |




SLOTS

| Slot Name | +N/-S | +E/-W | Northing | Easting |
|---|---|---|---|---|
| A1 | 1.09 | 20.06 | 1883657.32 | 508832.81 |
| A2 | 0.00 | 0.00 | 1883656.22 | 508812.75 |
| A3 | -2.91 | -39.85 | 1883653.30 | 508772.90 |

ANNOTATIONS

| TVD | MD | Inc | Azi | +N/-S | +E/-W | VSect | Departure | Annotation |
|---|---|---|---|---|---|---|---|---|
| 1000.00 | 1000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1525.99 | 1528.99 | 10.58 | 161.92 | -46.30 | 15.12 | -42.76 | 48.70 | Hold 10.58 Inclination |
| 3569.31 | 3607.65 | 10.58 | 161.92 | -409.10 | 133.57 | -377.89 | 430.35 | Start Build DLS 9.00 TFO 155.35 |
| 4224.72 | 4380.29 | 60.00 | 315.10 | -215.12 | -111.40 | -66.58 | 767.41 | Hold 60.00 Inclination |
| 4274.72 | 4480.29 | 60.00 | 315.10 | -153.77 | -172.53 | 19.98 | 854.01 | Start Build DLS 9.00 TFO 0.00 |
| 4336.94 | 4641.72 | 74.53 | 315.10 | -48.59 | -277.34 | 168.39 | 1002.49 | Start DLS 9.00 TFO 0.00 |
| 4360.00 | 4809.78 | 89.65 | 315.10 | 68.98 | -394.50 | 334.30 | 1168.48 | POE at 89.65 Inc 315.10 Deg |
| 4403.00 | 11945.47 | 89.65 | 315.10 | 5123.52 | -5431.14 | 7466.44 | 8304.03 | TD at 11945.47 |

# 6. CONSTRUCTION MATERIALS

The construction phase of the project would commence upon receipt of the approved APDs. The BLM-FFO will be notified (505-564-7600) at least 48 hours prior to the start of construction activities associated with the project. The construction phase of the project is anticipated to last approximately 3 to 4 weeks.

Construction and maintenance activities would cease if soil or road surfaces become saturated to the extent that construction equipment is unable to stay within the project area and/or when activities cause irreparable harm to roads, soils, or streams. Surfacing material, such as sandstone, would be used if economically viable and would be obtained from a permitted location.

The Natural Resources Conservation Service (NRCS) has mapped the soils in the proposed KWU 788H/790H/792H Project area. Complete soil information is available in the NRCS's *Soil Survey of Sandoval County Area, New Mexico, Parts of Los Alamos, Sandoval, and Rio Arriba Counties* (USDA/NRCS 2015). The soil map unit within the proposed project area footprint is described below.

A. Doak-Sheppard-Shiprock association, rolling

Within the project area, this soil map unit is found throughout the entirety of the project. As such, excavated soils during construction of the well pad, remote facilities pad, access road, and well-connect pipelines would consist of native borrow and subsoils from the Doak-Sheppard-Shiprock association, rolling soil map unit. A brief description of this soil can be found below.

Doak-Sheppard-Shiprock association, rolling soils are found on mesas, fan remnants, stream terraces, and dunes at 5,600 to 6,400 feet in elevation. The unit is composed of 40 percent Doak soils, 30 percent Sheppard soils, and 20 percent Shiprock soils. Doak soils occur on slopes from 0 to 5 percent and are well drained. Doak soils are deep and have a moderately slow permeability. Sheppard soils occur on slopes from 0 to 15 percent and are deep, somewhat excessively drained, and rapidly permeable. Shiprock soils occur on 0 to 5 percent slopes and are deep, well drained, and have a moderately rapid permeability. They formed in eolian material and slope alluvium. Effective rooting depth for this unit is 60 inches or greater. This unit is mainly used for livestock grazing and wildlife habitat. The major limitations of this mapping unit are: (l) the hazard of soil blowing and (2) the hazard of water erosion. (USDA/NRCS 2015).

# 7. 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 Figures 3 & 4 in Appendix B for the location of toilets).

E. Garbage and other waste material

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

**in Bloomfield, NM to WPX Energy Production, LLC KWU #790H**

**259' FSL & 247' FEL, Section 32, T23N, R9W, N.M.P.M., San Juan County, NM**

**Latitude: 36.176974°N Longitude: 107.804088°W Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 37.8 miles to Mile Marker 113.4;

Go Right (South-westerly) on County Road #7890 for 0.8 miles to fork in roadway;

Go Left (Southerly) remaining on County Road #7890 for 1.3 miles to four-way intersection;

Go Left (South-easterly) remaining on County Road #7890 for 0.6 miles to fork in roadway;

Go Right (South-westerly) remaining on County Road #7890 for 0.5 miles to begin WPX W Lybrook Unit #720H proposed access on right-hand side of County Road;

Go Right (Westerly) exiting County Road #7890 following along WPX W Lybrook Unit #720H proposed access for 3123.1' to fork in proposed access;

Go Left (Westerly) which is straight, following along WPX W Lybrook Unit #726H proposed access for 3937.3' to fork in proposed access;

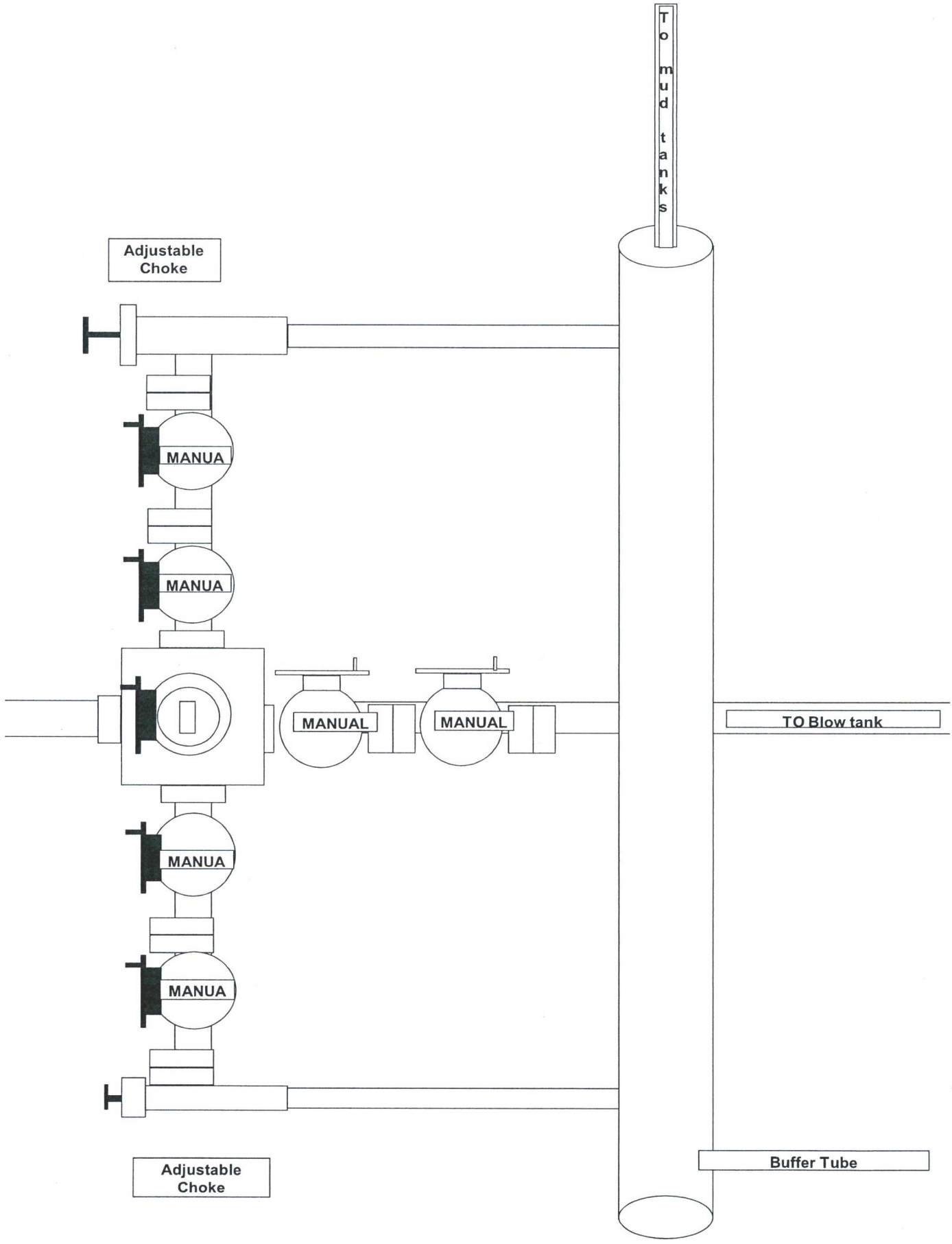
Go Left (Westerly) which is straight, following along WPX W Lybrook Unit #730H proposed access for 10,164.2' to fork in proposed access;

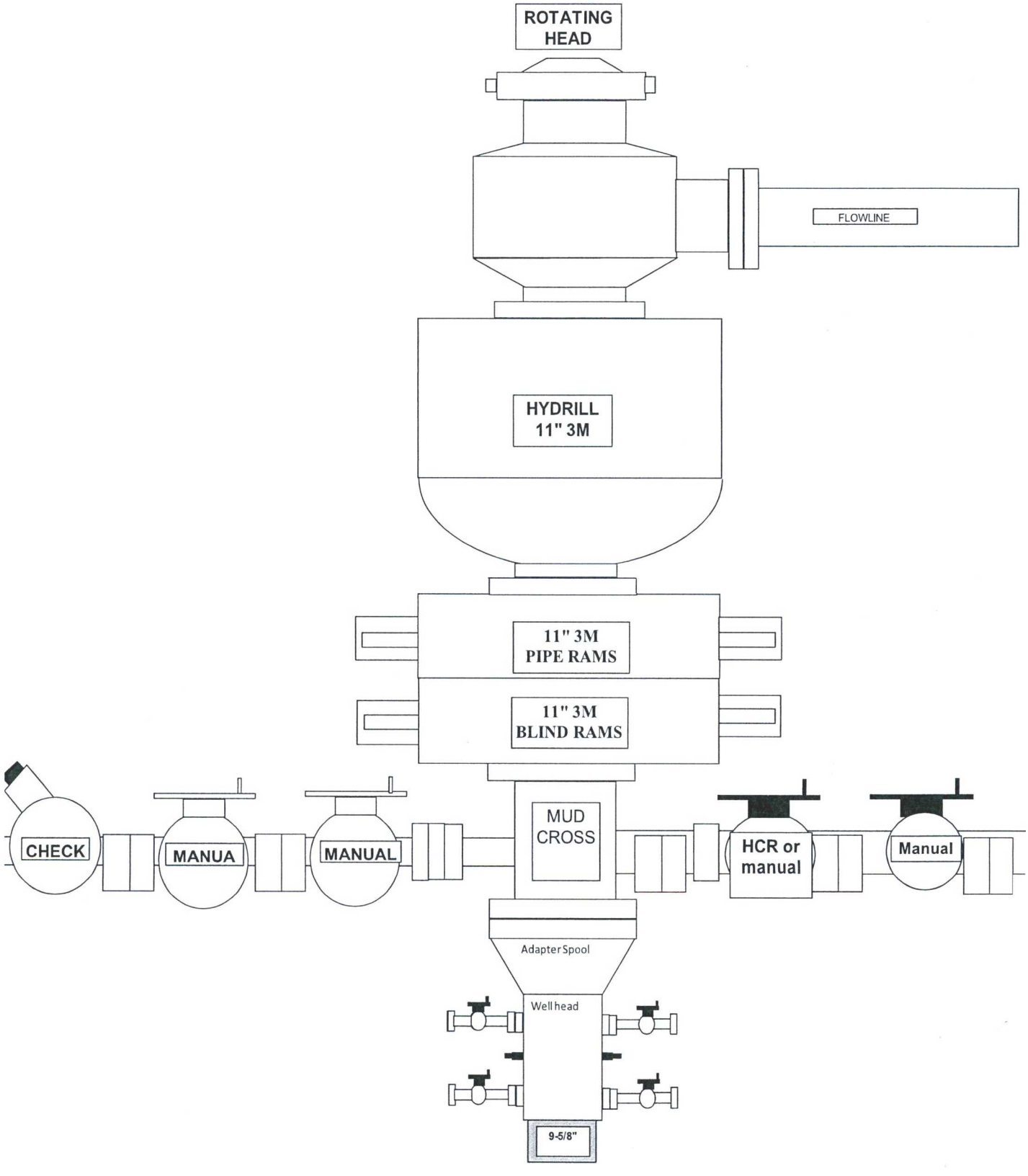
Go Left (South-westerly) which is straight, following along WPX W Lybrook Unit #738H proposed access for 1267.1' to fork in proposed access;

Go Right (South-westerly) which is straight for 2491.4' along WPX W Lybrook Unit #740H proposed access to staked #740H location;

Go Straight (Westerly) proceeding through staked #740H location for 283.3' to proposed access on west edge of staked location;

Go Straight (Southerly) following along WPX W Lybrook Unit #740H proposed access for an additional 3688.2' to edge of staked WPX KWU Remote #2 Facilities Pad, from which go Straight (Southerly) continuing for an additional 2058.2' to staked WPX KWU #790H location.


To mud tanks
Adjustable Choke
MANUA
MANUA
MANUAL
MANUAL
TO Blow tank
MANUA
MANUA
Adjustable Choke
Buffer Tube


ROTATING HEAD
FLOWLINE
HYDRILL 11" 3M
11" 3M PIPE RAMS
11" 3M BLIND RAMS
CHECK
MANUA
MANUAL
MUD CROSS
HCR or manual
Manual
Adapter Spool
Wellhead
9-5/8"