State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
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: 2-1-17
Well information;
Operator WPX, Well Name and Number Kimbeto Wash Unit # 773H

API# 30-045-35832, Section 20, Township 23 N/S, Range 9 E/W

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

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- ✓ Hold C-104 for directional survey & "As Drilled" Plat
- ✓ Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ✓ 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.

Charles Perrin
NMOCD Approved by Signature

4-24-2017
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3441 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

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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

5. Lease Serial No.: N0G14031946

6. If Indian, Allotee or Tribe Name: EASTERN NAVAJO

1a. Type of work: ☑ DRILL ☐ REENTER

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 773H

2. Name of Operator: WPX ENERGY LLC

9. API Well No.: 30-045-35832

3a. Address: 720 S Main Aztec NM 87410

3b. Phone No. *(include area code)*: (505)333-1822

10. Field and Pool, or Exploratory: BASIN MANCOS / BASIN MANCOS GAS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NWNW / 777 FNL / 687 FWL / LAT 36.21751 / LONG -107.818826

At proposed prod. zone: NENW / 299 FNL / 1412 FWL / LAT 36.233372 / LONG -107.834291

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 20 / T23N / R9W / NMP

14. Distance in miles and direction from nearest town or post office*: 35.9 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: 1279.45

OIL CONS. DIV DIST. 3

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 687 feet

19. Proposed Depth: 4455 feet / 12415 feet

20. BLM/BIA Bond No. on file: IND: B001576

APR 17 2017

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 6538 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: 02/01/2017

Title: Permitting Tech III

Approved by *(Signature)*: Anthony A. Gallegos

Name *(Printed/Typed)*: ANTHONY A. GALLEGOS

Date: 4/10/2017

Title: for AFM - MINERALS

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)

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

NMOCD

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 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
30-045-35832	97232	BASIN MANCOS GAS POOL

4 Property Code	5 Property Name	6 Well Number
316144	KWU	773H

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6538'

10 Surface Location

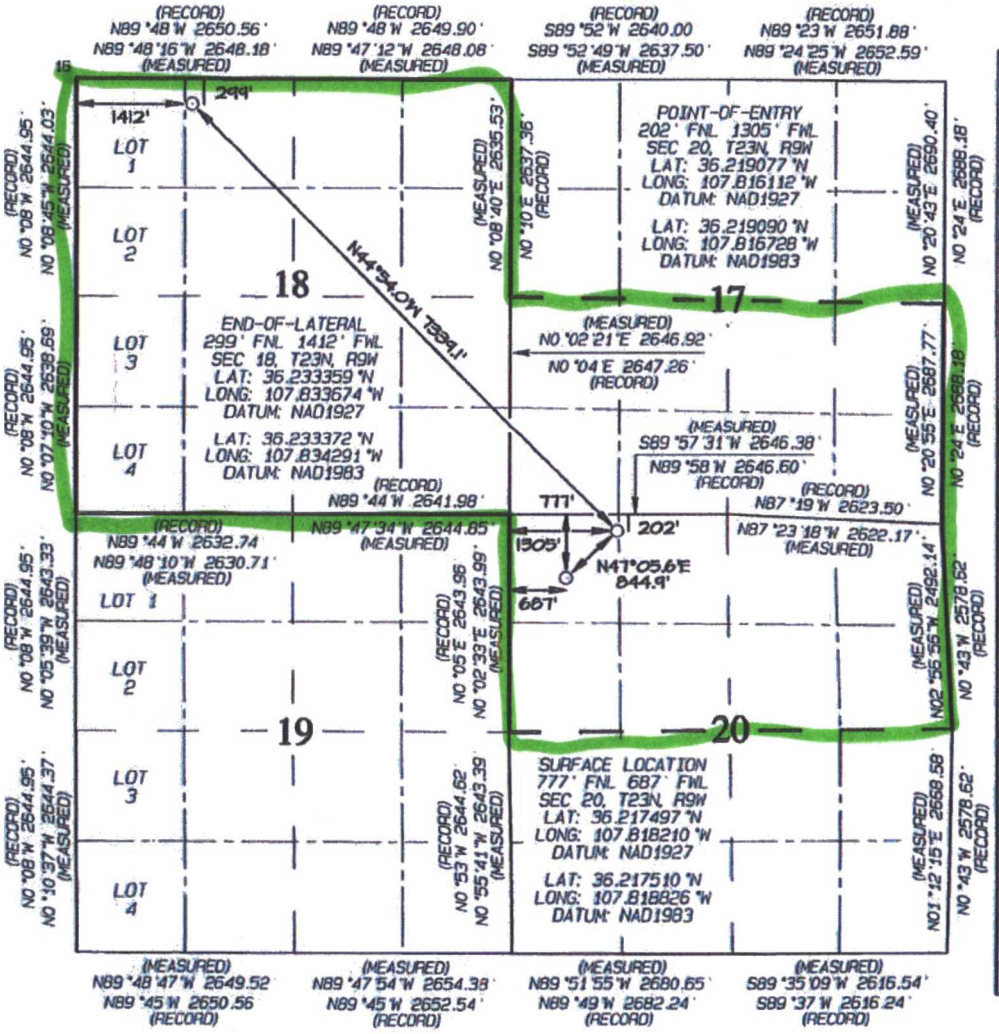
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	20	23N	9W		777	NORTH	687	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	18	23N	9W		299	NORTH	1412	WEST	SAN JUAN

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
1279.45	S/2 - Section 17 Entire Section 18 N/2 - Section 20			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.

1-27-17
Signature Date

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 24, 2017
Date of Survey: JULY 16, 2015

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPX Energy

Operations Plan

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

Date:	January 26, 2017	**Field:**	Basin Mancos
Well Name:	KWU #773H	**Surface:**	
SH Location:	NWNW Sec 20-23N-09W	**Elevation:**	6538' GR
BH Location:	NENW Sec 18-23N-09W	**Minerals:**	

Measured Depth: 12,416.91'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (GR)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	122.00	122.00	POINT LOOKOUT	3,351.00	3,189.00
KIRTLAND	284.00	284.00	MANCOS	3,544.00	3,364.00
PICTURED CLIFFS	852.00	852.00	GALLUP	3,912.00	3,703.00
LEWIS	936.00	936.00	KICKOFF POINT	3,769.35	3,569.01
CHACRA	1,154.00	1,153.00	TOP TARGET	4,972.00	4,433.00
CLIFF HOUSE	2,329.00	2,260.00	LANDING POINT	5,077.88	4,442.00
MENEFEE	2,348.00	2,277.00	BASE TARGET	5,077.88	4,442.00
			TD	12,416.91	4,455.00

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"	5,077.88'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	4927.88' - 12,416.91'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 4927.88'	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: 91 bbls, 258 sks, (509 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/ +/- 200 bbl Drilling mud or water. Total Cement: 150 bbls, 513 sks, (840 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 (734 sx /998 cuft /178 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-167bbl Fr Water.
Total Cement (734 sx /998bbls).

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.

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
2309-20D KWU
KWU #773H - Slot A1

Wellbore #1

Plan: Design #1 23Sept16 sam

Standard Planning Report

27 September, 2016

WPX

Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well KWU #773H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	GL @ 6538.00usft (Original Well Elev)
Project:	T23N R9W	**MD Reference:**	GL @ 6538.00usft (Original Well Elev)
Site:	2309-20D KWU	**North Reference:**	True
Well:	KWU #773H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23Sept16 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	2309-20D KWU				
Site Position:		**Northing:**	1,898,410.74 usft	**Latitude:**	36.217497
From:	Map	**Easting:**	504,461.08 usft	**Longitude:**	-107.818210
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.01 °

Well	KWU #773H - Slot A1					
Well Position	**+N/-S**	0.00 usft	**Northing:**	1,898,410.74 usft	**Latitude:**	36.217497
	+E/-W	0.00 usft	**Easting:**	504,461.08 usft	**Longitude:**	-107.818210
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,538.00 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	10.01	63.05	50,600

Design	Design #1 23Sept16 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	321.70

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	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,981.87	24.64	91.51	1,944.26	-6.86	260.71	2.00	2.00	0.00	91.51	
3,769.35	24.64	91.51	3,569.01	-26.48	1,005.60	0.00	0.00	0.00	0.00	
4,645.68	60.00	315.11	4,306.71	289.01	903.78	9.00	4.04	-15.56	-142.51	Start 60 Tan #773H
4,745.68	60.00	315.11	4,356.71	350.36	842.66	0.00	0.00	0.00	0.00	End 60 Tan #773H
4,908.71	74.67	315.11	4,419.36	456.65	736.77	9.00	9.00	0.00	0.00	
5,077.88	89.90	315.11	4,442.00	575.06	618.81	9.00	9.00	0.00	0.00	POE #773H
12,416.91	89.90	315.11	4,455.00	5,774.38	-4,560.79	0.00	0.00	0.00	0.00	BHL #773H

Database:	COMPASS	**Local Co-ordinate Reference:**	Well KWU #773H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	GL @ 6538.00usft (Original Well Elev)
Project:	T23N R9W	**MD Reference:**	GL @ 6538.00usft (Original Well Elev)
Site:	2309-20D KWU	**North Reference:**	True
Well:	KWU #773H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23Sept16 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
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	5.00	91.51	999.68	-0.29	10.90	-6.98	2.00	2.00	0.00
1,500.00	15.00	91.51	1,491.46	-2.57	97.58	-62.50	2.00	2.00	0.00
1,981.87	24.64	91.51	1,944.26	-6.86	260.71	-166.98	2.00	2.00	0.00
Hold 24.64 Inclination									
2,000.00	24.64	91.51	1,960.74	-7.06	268.26	-171.82	0.00	0.00	0.00
2,500.00	24.64	91.51	2,415.22	-12.55	476.63	-305.27	0.00	0.00	0.00
3,000.00	24.64	91.51	2,869.70	-18.03	684.99	-438.72	0.00	0.00	0.00
3,500.00	24.64	91.51	3,324.18	-23.52	893.36	-572.18	0.00	0.00	0.00
3,769.35	24.64	91.51	3,569.01	-26.48	1,005.60	-644.07	0.00	0.00	0.00
Start Build DLS 9.00 TFO -142.51									
4,000.00	14.72	33.39	3,787.78	-3.02	1,070.50	-665.89	9.00	-4.30	-25.20
4,500.00	47.56	320.28	4,220.76	202.60	983.00	-450.29	9.00	6.57	-14.62
4,645.68	60.00	315.11	4,306.71	289.01	903.78	-333.38	9.00	8.54	-3.55
Hold 60.00 Inclination									
4,745.68	60.00	315.11	4,356.71	350.36	842.66	-247.35	0.00	0.00	0.00
Start Build DLS 9.00 TFO 0.00									
4,908.71	74.67	315.11	4,419.36	456.65	736.77	-98.31	9.00	9.00	0.00
Start DLS 9.00 TFO 0.00									
5,000.00	82.89	315.11	4,437.10	520.03	673.63	-9.43	9.00	9.00	0.00
5,077.88	89.90	315.11	4,442.00	575.06	618.81	67.73	9.00	9.00	0.00
POE at 89.90 Inc 315.11 Deg									
5,078.00	89.90	315.11	4,442.00	575.15	618.72	67.85	0.00	0.00	0.00
7"									
5,500.00	89.90	315.11	4,442.75	874.12	320.89	487.06	0.00	0.00	0.00
6,000.00	89.90	315.11	4,443.63	1,228.34	-31.99	983.76	0.00	0.00	0.00
6,500.00	89.90	315.11	4,444.52	1,582.56	-384.87	1,480.46	0.00	0.00	0.00
7,000.00	89.90	315.11	4,445.40	1,936.79	-737.75	1,977.16	0.00	0.00	0.00
7,500.00	89.90	315.11	4,446.29	2,291.01	-1,090.63	2,473.85	0.00	0.00	0.00
8,000.00	89.90	315.11	4,447.18	2,645.23	-1,443.51	2,970.55	0.00	0.00	0.00
8,500.00	89.90	315.11	4,448.06	2,999.46	-1,796.39	3,467.25	0.00	0.00	0.00
9,000.00	89.90	315.11	4,448.95	3,353.68	-2,149.27	3,963.94	0.00	0.00	0.00
9,500.00	89.90	315.11	4,449.83	3,707.91	-2,502.15	4,460.64	0.00	0.00	0.00
10,000.00	89.90	315.11	4,450.72	4,062.13	-2,855.03	4,957.34	0.00	0.00	0.00
10,500.00	89.90	315.11	4,451.60	4,416.35	-3,207.91	5,454.04	0.00	0.00	0.00
11,000.00	89.90	315.11	4,452.49	4,770.58	-3,560.79	5,950.73	0.00	0.00	0.00
11,500.00	89.90	315.11	4,453.38	5,124.80	-3,913.67	6,447.43	0.00	0.00	0.00
12,000.00	89.90	315.11	4,454.26	5,479.03	-4,266.55	6,944.13	0.00	0.00	0.00
12,416.91	89.90	315.11	4,455.00	5,774.38	-4,560.79	7,358.28	0.00	0.00	0.00
TD at 12416.91									

Database:	COMPASS	**Local Co-ordinate Reference:**	Well KWU #773H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	GL @ 6538.00usft (Original Well Elev)
Project:	T23N R9W	**MD Reference:**	GL @ 6538.00usft (Original Well Elev)
Site:	2309-20D KWU	**North Reference:**	True
Well:	KWU #773H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23Sept16 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 #773H - plan hits target center - Point	0.00	0.00	4,306.71	289.01	903.78	1,898,699.89	505,364.82	36.218291	-107.815146
End 60 Tan #773H - plan hits target center - Point	0.00	0.00	4,356.71	350.36	842.66	1,898,761.23	505,303.69	36.218460	-107.815354
POE #773H - plan hits target center - Point	0.00	0.00	4,442.00	575.06	618.81	1,898,985.90	505,079.80	36.219077	-107.816112
BHL #773H - plan hits target center - Point	0.00	0.00	4,455.00	5,774.38	-4,560.79	1,904,184.41	499,899.39	36.233359	-107.833675

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
5,078.00	4,442.00	7"	7.000	8.750

Plan Annotations

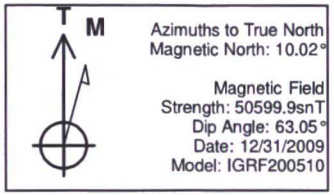
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
750.00	750.00	0.00	0.00	Start Build 2.00
1,981.87	1,944.26	-6.86	260.71	Hold 24.64 Inclination
3,769.35	3,569.01	-26.48	1,005.60	Start Build DLS 9.00 TFO -142.51
4,645.68	4,306.71	289.01	903.78	Hold 60.00 Inclination
4,745.68	4,356.71	350.36	842.66	Start Build DLS 9.00 TFO 0.00
4,908.71	4,419.36	456.65	736.77	Start DLS 9.00 TFO 0.00
5,077.88	4,442.00	575.06	618.81	POE at 89.90 Inc 315.11 Deg
12,416.91	4,455.00	5,774.38	-4,560.79	TD at 12416.91

WPXENERGY

Well Name: KWU #773H
Surface Location: 2309-20D KWU
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6538.00

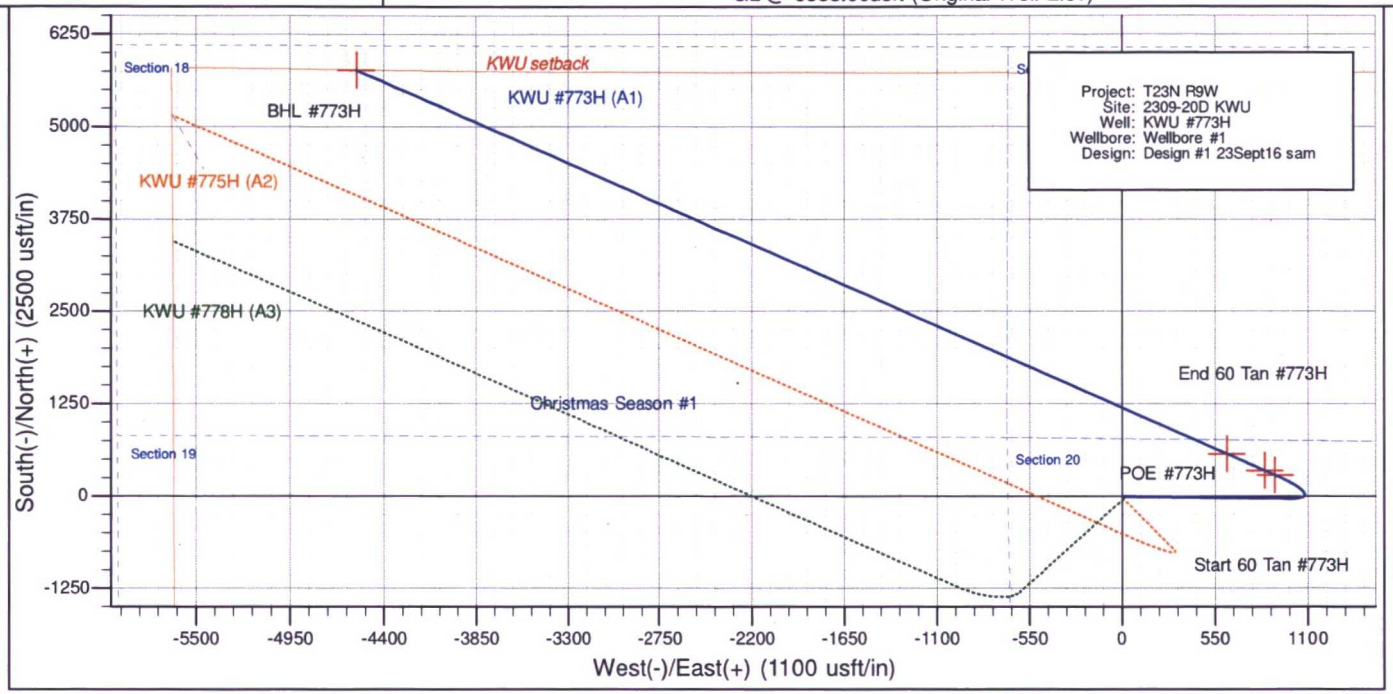
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	1898410.74	504461.08	36.217497	-107.818210	A1

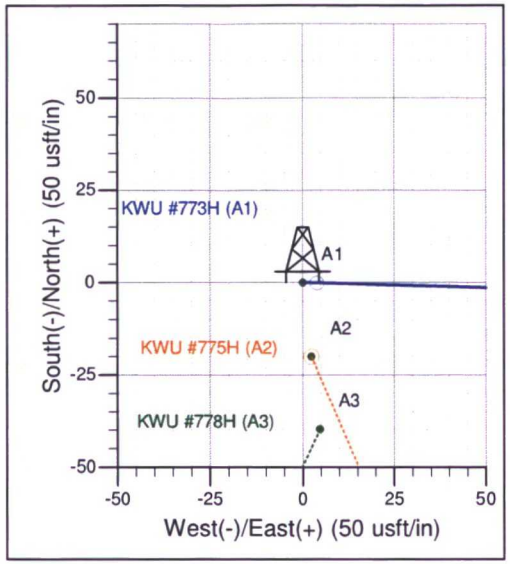
GL @ 6538.00usft (Original Well Elev)

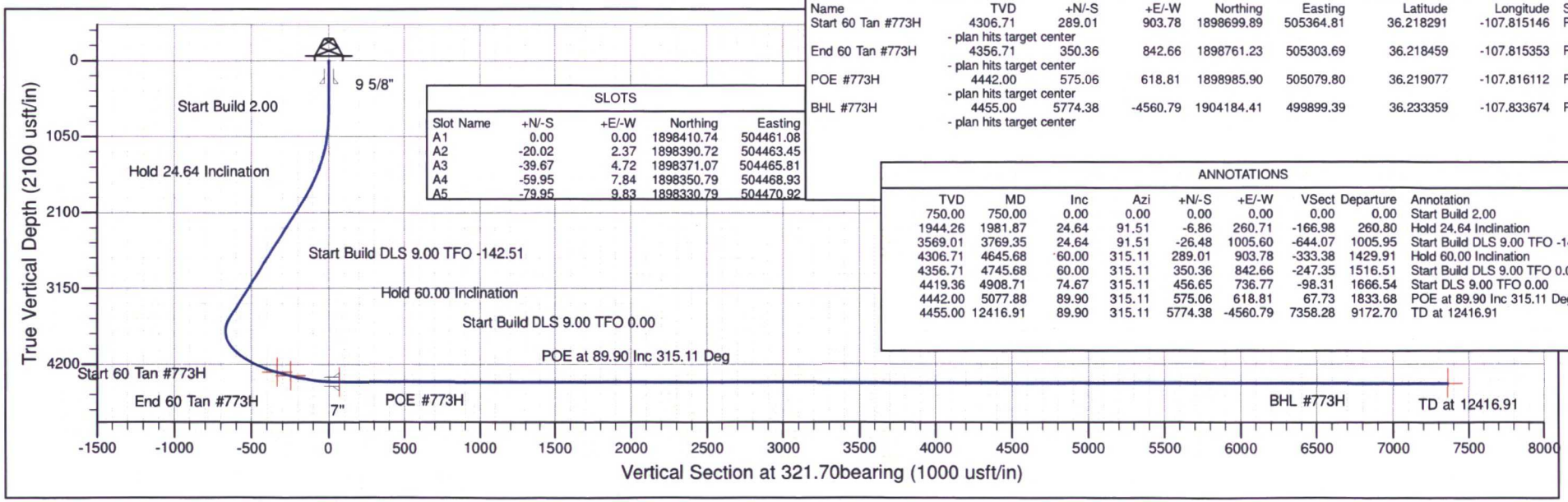


Azimuths to True North
Magnetic North: 10.02°

Magnetic Field
Strength: 50599.9snT
Dip Angle: 63.05°
Date: 12/31/2009
Model: IGRF200510







SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A1	0.00	0.00	1898410.74	504461.08
A2	-20.02	2.37	1898390.72	504463.45
A3	-39.67	4.72	1898371.07	504465.81
A4	-59.95	7.84	1898350.79	504468.93
A5	-79.95	9.83	1898330.79	504470.92

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #773H	4306.71	289.01	903.78	1898699.89	505364.81	36.218291	-107.815146	Point
	- plan hits target center							
End 60 Tan #773H	4356.71	350.36	842.66	1898761.23	505303.69	36.218459	-107.815353	Point
	- plan hits target center							
POE #773H	4442.00	575.06	618.81	1898985.90	505079.80	36.219077	-107.816112	Point
	- plan hits target center							
BHL #773H	4455.00	5774.38	-4560.79	1904184.41	499899.39	36.233359	-107.833674	Point
	- plan hits target center							

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
750.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1944.26	1981.87	24.64	91.51	-6.86	260.71	-166.98	260.80	Hold 24.64 Inclination
3569.01	3769.35	24.64	91.51	-26.48	1005.60	-644.07	1005.95	Start Build DLS 9.00 TFO -142.51
4306.71	4645.68	60.00	315.11	289.01	903.78	-333.38	1429.91	Hold 60.00 Inclination
4356.71	4745.68	60.00	315.11	350.36	842.66	-247.35	1516.51	Start Build DLS 9.00 TFO 0.00
4419.36	4908.71	74.67	315.11	456.65	736.77	-98.31	1666.54	Start DLS 9.00 TFO 0.00
4442.00	5077.88	89.90	315.11	575.06	618.81	67.73	1833.68	POE at 89.90 Inc 315.11 Deg
4455.00	12416.91	89.90	315.11	5774.38	-4560.79	7358.28	9172.70	TD at 12416.91

Construction of all project features associated with KWU Remote #1 will 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: (I) 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, 7, and 8 in Appendix B for the location of toilets per project).

E. Garbage and other waste material

1 All garbage and trash will be placed in an enclosed metal trash containment. 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.

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

in Bloomfield, NM to WPX Energy Production, LLC KWU #773H

777' FNL & 687' FWL, Section 20, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.217510°N Longitude: 107.818826°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 35.9 miles to Mile Marker 115.7;

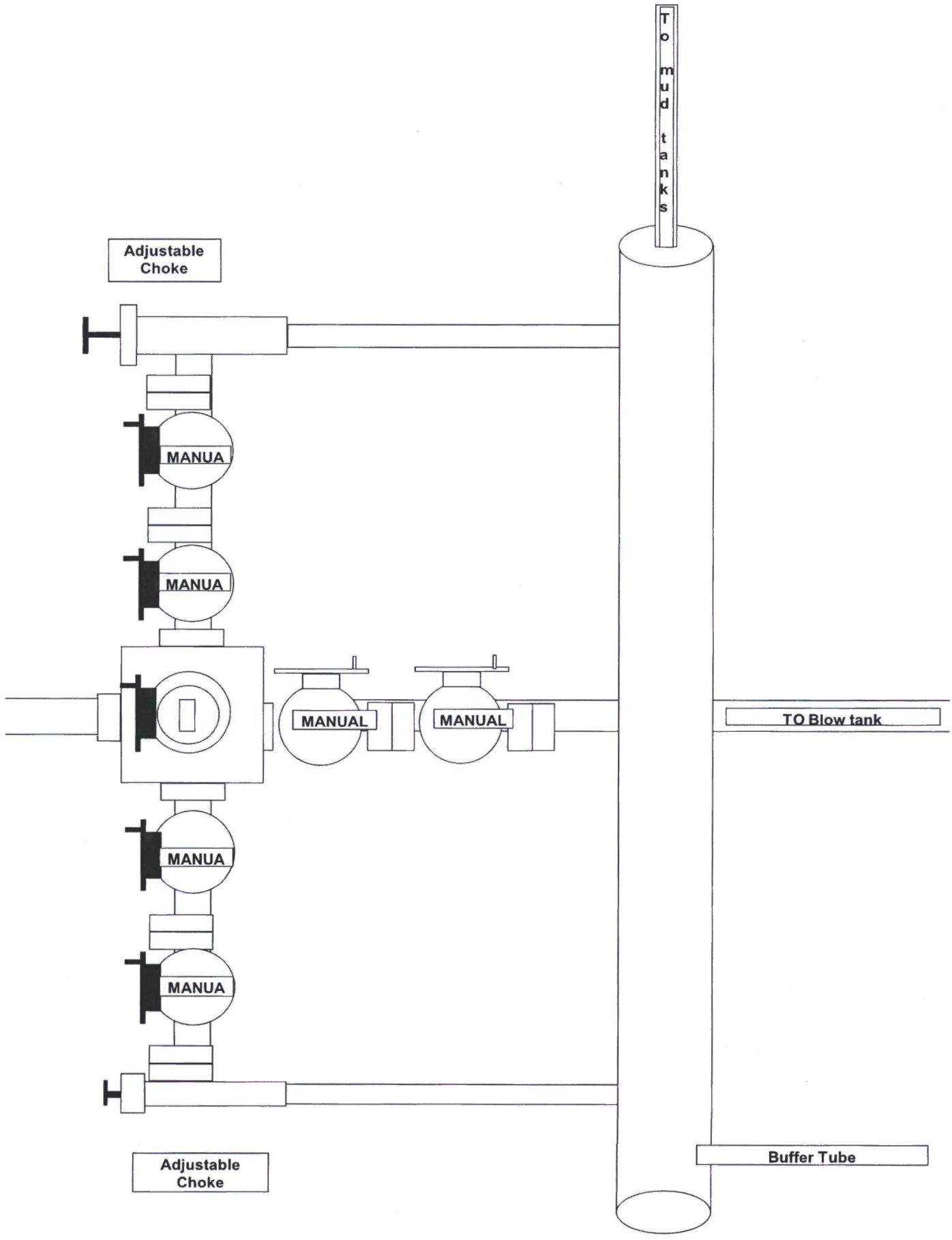
Go Right (South-westerly) @ Nageezi Post Office on County Road #7800 for 0.4 miles to 4-way intersection;

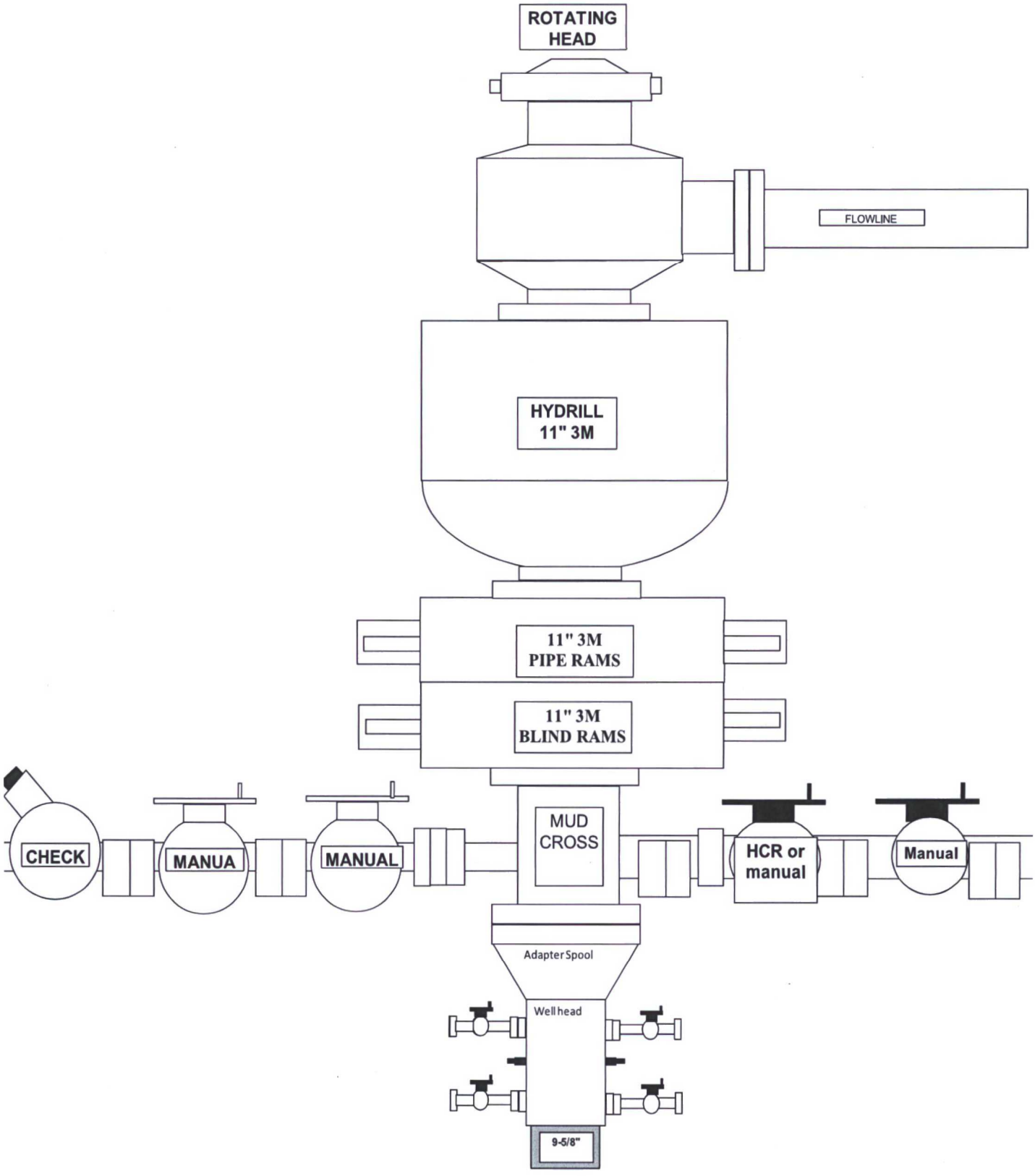
Go Straight (South-westerly) exiting paved County Road #7800, continuing on County Road #7820 for 0.6 miles to fork in roadway;

Go Right (South-westerly) which is straight remaining on County Road #7820 for 1.1 miles to a 4-way intersection;

Go Straight (South-westerly) remaining on County Road #7820 for 3.2 miles to fork in road;

Go Right (Northerly) for 0.2 miles to begin proposed access on left-hand side of existing roadway which continues for 1534.7' to staked WPX KWU #773H 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
Well head
9-5/8"