

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary

**Tony Delfin**  
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: 1-26-16

Well information:

Operator WPH, Well Name and Number Kimberly Cbs h/land #770H

API# 30-045-35755, Section 17, 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
- ☐ 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
- ☒ 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 H. H.  
NMOCD Approved by Signature

5-13-2016  
Date KC



RECEIVED

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

JAN 26 2016

## APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington Field Office  
Bureau of Land Management5. Lease Serial No.  
NMNM 04958  
6. If Indian, Allottee or Tribe Name1a. Type of Work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

WPX Energy Production, LLC

3a. Address

P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

(505) 333-1808

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

At surface 409' FSL &amp; 1115' FEL SEC 17, 23N 9W

At proposed prod. zone 1989' FSL &amp; 2307' FWL SEC 21 23N 9W

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

Kimbeto Wash Unit NMNM 135255X

8. Lease Name and Well No.

KWU #770H

9. API Well No.

30-045-35755

10. Field and Pool, or Exploratory

Basin Mancos

11. Sec., T., R., M., or Blk. and Survey or Area

SHL: 17, 23N 9W

BHL: 21, 23N 9W

12. County or Parish

San Juan

13. State

NM

14. Distance in miles and direction from nearest town or post office\*

From intersection US Hwy &amp; 550 US Hwy 64 in Bloomfield NM, South 35.9 miles to Mile Marker 115.7

15. Distance from proposed\*

location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any) 409'

16. No. of Acres in lease

1721.0 Acres

17. Spacing Unit dedicated to this well

1280.0-Acres

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

20'

19. Proposed Depth

10071' MD / 4473' TVD

20. BLM/BIA Bond No. on file OIL CONS. DIV DIST. 3

UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

6561' GR

22. Approximate date work will start\*

April 1, 2016

23. Estimated duration

1 month

APR 28 2016

## 24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Name (Printed/Typed)

Marie E. Jaramillo

Date

1/26/16

Title

Permit Technician III  
Approved by (Signature)

Name (Printed/Typed)

Office

FFO

Date

4/27/16

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 Basin Mancos formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of BLM and is on lease and will be twinned with KWU #768H/769H/771H

This location has been archaeologically surveyed by Western Cultural Resources. Copies of their report have been submitted directly to the BLM.

The new access of 53.9' of BLM is Onlease access road will be built and permitted via the APD.

A new 319.8' BLM on lease well connect pipeline will be built and permitted via the APD.

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 3165.4BLM'S APPROVAL OR ACCEPTANCE OF THIS  
ACTION DOES NOT RELIEVE THE LESSEE AND  
OPERATOR FROM OBTAINING ANY OTHER  
AUTHORIZATION REQUIRED FOR OPERATIONS  
ON FEDERAL AND INDIAN LANDS

NMOCD PV



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

Form C-102  
Revised August 1, 2011

Submit one copy to  
Appropriate District Office

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35755</b>		*Pool Code 97232	*Pool Name BASIN MANCOS
*Property Code <b>316144</b>	*Property Name <b>Kimble Wash Unit</b>		*Well Number 770H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6561'

<sup>10</sup> Surface Location

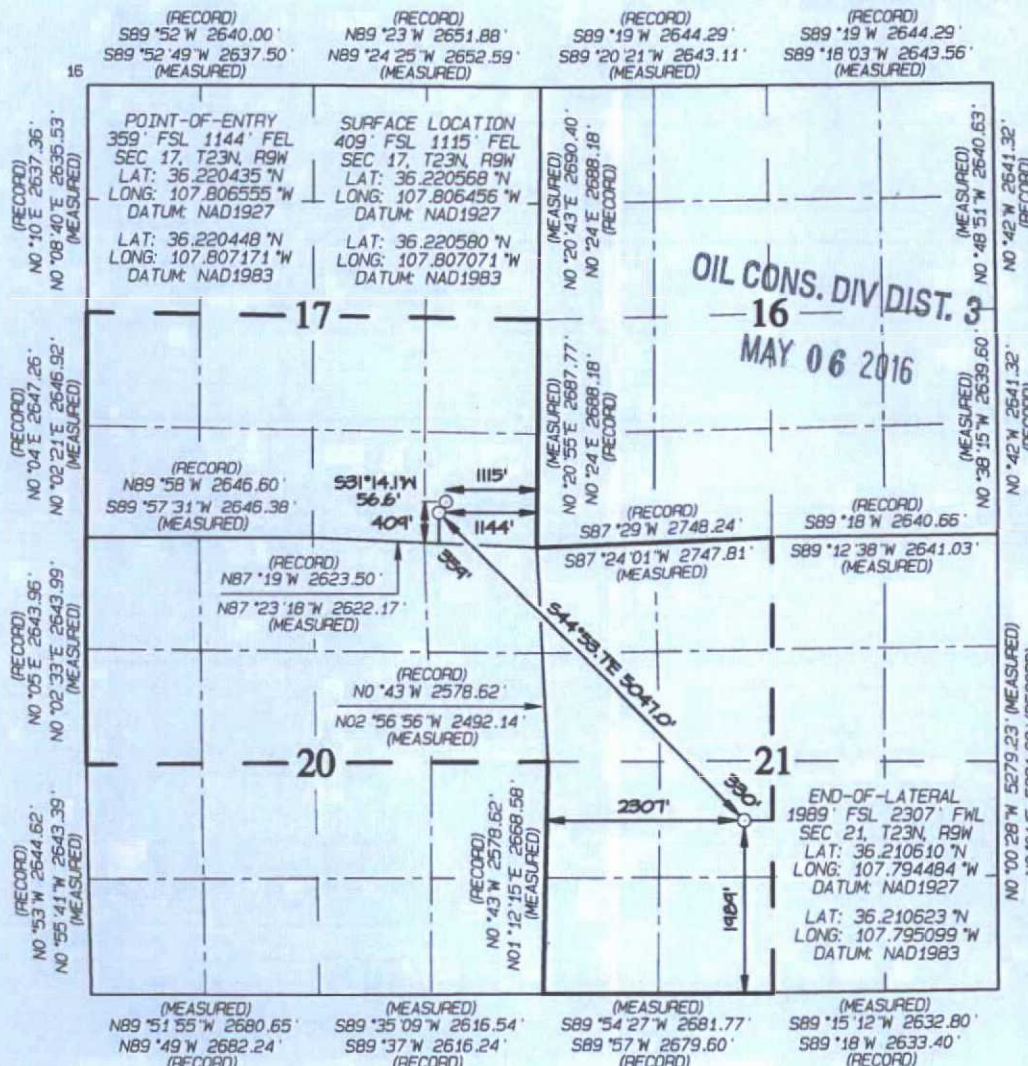
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	23N	9W		409	SOUTH	1115	EAST	SAN JUAN

<sup>11</sup> 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
K	21	23N	9W		1989	SOUTH	2307	WEST	SAN JUAN

<sup>12</sup> Dedicated Acres 960.0	S/2 - Section 17 N/2 - Section 20 W/2 - Section 21	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION  
UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A  
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



<sup>17</sup> 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 *Marie E. Jaramillo* Date 5/6/16  
Printed Name Marie E. Jaramillo  
E-mail Address marie.jaramillo@wpxenergy.com

<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: MAY 3, 2016  
Survey Date: DECEMBER 3, 2015

Signature and Seal of Professional Surveyor



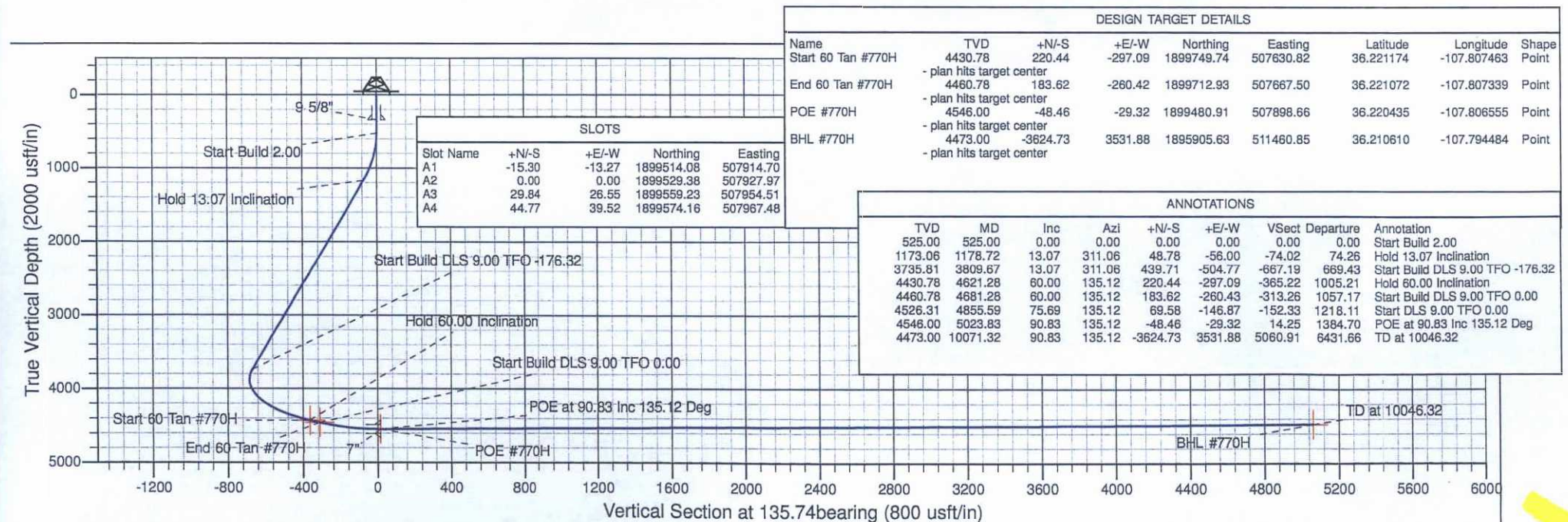
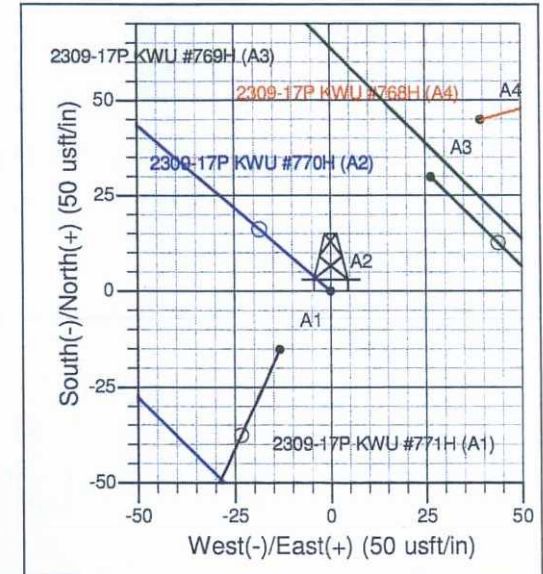
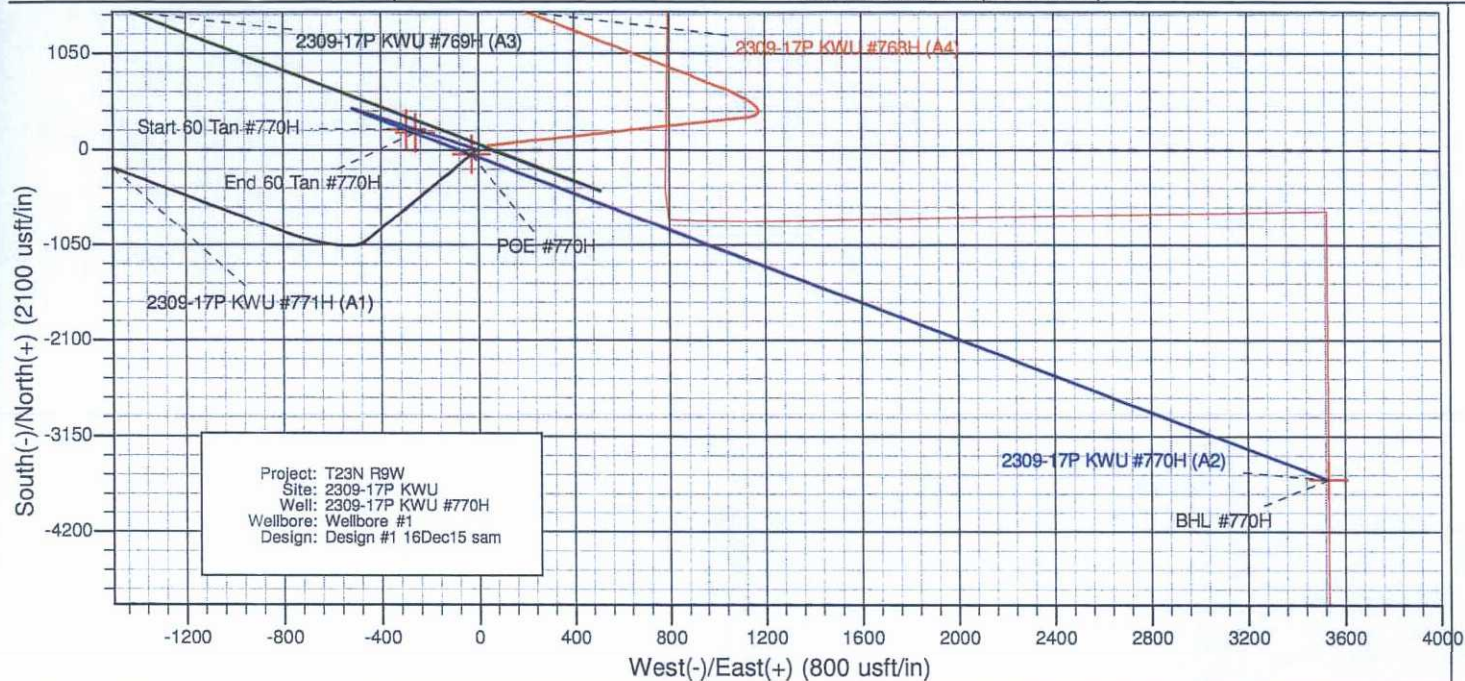
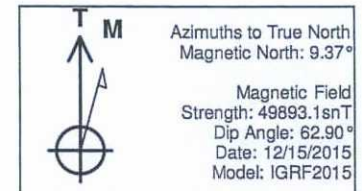
JASON C. EDWARDS  
Certificate Number 15269





Surface Location: 2309-17P KWU  
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
Ground Elevation: 6561.00  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.00 0.00 1899529.38 507927.97 36.220568 -107.806456  
KB @ 6586.00usft (Aztec 1000)

Slot  
A2







## **WPX Energy**

### **Operations Plan**

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

**Date:** January 20, 2016

**Field:** Basin Mancos

**Well Name:** KWU #770H

**Surface:** Federal

**SH Location:** SESE Sec 17 23N-09W

**Elevation:** 6561' GR

**BH Location:** NESW Sec 21 23N-09W

**Minerals:** Federal

**Measured Depth:** 10,071.32'

**I. GEOLOGY:** SURFACE FORMATION - NACIMIENTO

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

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	151	151	POINT LOOKOUT	3377	3314
KIRTLAND	271	271	MANCOS	3500	3434
PICTURED CLIFFS	852	851	GALLUP	3854	3779
LEWIS	980	978	KICKOFF POINT	3,809.67	3,735.81
CHACRA	1248	1241	TOP TARGET	4707	4473
CLIFF HOUSE	2327	2292	LANDING POINT	5,023.83	4,546.00
MENEFEE	2341	2305	BASE TARGET	5,023.83	4,546.00
			TD	10,071.32	4,473.00

**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 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

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

### 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"	5,023.83'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	4873.83' - 10,071.32'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 4873.83'	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. **A 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.**
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. CEMENTING:

*(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** STAGE 1: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 91 bbls, 260 sks, (512 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 88 bbls, 379 sks, (492 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 198 bbl Drilling mud or water. Total Cement: 179 bbls, 639 sks, (1005 cuft)  
STAGE 2: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 21 bbls, 60 sks, (117 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 16 bbls, 78 sks, (90 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 45 bbl Drilling mud or water. Total Cement: 37 bbls, 138 sks, (207 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 (509 sx /692 cuft /123 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (509 sx /692bbls).



I.  
**COMPLETION**

A. **CBL**

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 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.

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**NOTE:**

**Proposed Operations:**

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**

**2309-17P KWU**

**2309-17P KWU #770H - Slot A2**

**Wellbore #1**

**Plan: Design #1 16Dec15 sam**

## **Standard Planning Report**

**16 December, 2015**



# WPX

## Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well 2309-17P KWU #770H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 6586.00usft (Aztec 1000)
Project:	T23N R9W	MD Reference:	KB @ 6586.00usft (Aztec 1000)
Site:	2309-17P KWU	North Reference:	True
Well:	2309-17P KWU #770H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 16Dec15 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		2309-17P KWU			
Site Position:		Northing:	1,899,574.16 usft	Latitude:	36.220691
From:	Map	Easting:	507,967.48 usft	Longitude:	-107.806322
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.02

Well	2309-17P KWU #770H - Slot A2					
Well Position	+N/-S	-44.77 usft	Northing:	1,899,529.38 usft	Latitude:	36.220568
	+E/-W	-39.52 usft	Easting:	507,927.97 usft	Longitude:	-107.806456
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,561.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/15/2015	9.37	62.90	49,893

Design	Design #1 16Dec15 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	135.74

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	
525.00	0.00	0.00	525.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,178.72	13.07	311.06	1,173.06	48.78	-56.00	2.00	2.00	0.00	311.06	
3,809.67	13.07	311.06	3,735.81	439.71	-504.77	0.00	0.00	0.00	0.00	
4,621.28	60.00	135.12	4,430.78	220.44	-297.09	9.00	5.78	-21.68	-176.32	Start 60 Tan #770H
4,681.28	60.00	135.12	4,460.78	183.62	-260.43	0.00	0.00	0.00	0.00	End 60 Tan #770H
4,855.59	75.69	135.12	4,526.31	69.58	-146.87	9.00	9.00	0.00	0.00	
5,023.83	90.83	135.12	4,546.00	-48.46	-29.32	9.00	9.00	0.00	0.00	POE #770H
10,071.32	90.83	135.12	4,473.00	-3,624.73	3,531.88	0.00	0.00	0.00	0.00	BHL #770H



# WPX

## Planning Report

Database: COMPASS  
 Company: WPX Energy  
 Project: T23N R9W  
 Site: 2309-17P KWU  
 Well: 2309-17P KWU #770H  
 Wellbore: Wellbore #1  
 Design: Design #1 16Dec15 sam

Local Co-ordinate Reference: Well 2309-17P KWU #770H (A2) - Slot A2  
 TVD Reference: KB @ 6586.00usft (Aztec 1000)  
 MD Reference: KB @ 6586.00usft (Aztec 1000)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

### 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
345.00	0.00	0.00	345.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
525.00	0.00	0.00	525.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,000.00	9.50	311.06	997.83	25.81	-29.63	-39.16	2.00	2.00	0.00
1,178.72	13.07	311.06	1,173.06	48.78	-56.00	-74.02	2.00	2.00	0.00
<b>Hold 13.07 Inclination</b>									
1,500.00	13.07	311.06	1,486.01	96.52	-110.80	-146.45	0.00	0.00	0.00
2,000.00	13.07	311.06	1,973.05	170.81	-196.09	-259.18	0.00	0.00	0.00
2,500.00	13.07	311.06	2,460.09	245.11	-281.37	-371.91	0.00	0.00	0.00
3,000.00	13.07	311.06	2,947.13	319.40	-366.66	-484.64	0.00	0.00	0.00
3,500.00	13.07	311.06	3,434.17	393.69	-451.95	-597.37	0.00	0.00	0.00
3,809.67	13.07	311.06	3,735.81	439.71	-504.77	-667.19	0.00	0.00	0.00
<b>Start Build DLS 9.00 TFO -176.32</b>									
4,000.00	4.16	146.13	3,924.83	448.17	-517.24	-681.96	9.00	-4.68	-86.65
4,500.00	49.09	135.36	4,360.53	290.47	-366.56	-463.85	9.00	8.98	-2.15
4,621.28	60.00	135.12	4,430.78	220.44	-297.09	-365.22	9.00	9.00	-0.20
<b>Hold 60.00 Inclination</b>									
4,681.28	60.00	135.12	4,460.78	183.62	-260.43	-313.26	0.00	0.00	0.00
<b>Start Build DLS 9.00 TFO 0.00</b>									
4,855.59	75.69	135.12	4,526.31	69.58	-146.87	-152.33	9.00	9.00	0.00
<b>Start DLS 9.00 TFO 0.00</b>									
5,000.00	88.68	135.12	4,545.90	-31.58	-46.13	-9.58	9.00	9.00	0.00
5,023.83	90.83	135.12	4,546.00	-48.46	-29.32	14.25	9.00	9.00	0.00
<b>POE at 90.83 Inc 135.12 Deg</b>									
5,024.00	90.83	135.12	4,546.00	-48.59	-29.20	14.42	0.00	0.00	0.00
<b>7"</b>									
5,500.00	90.83	135.12	4,539.11	-385.84	306.64	490.34	0.00	0.00	0.00
6,000.00	90.83	135.12	4,531.88	-740.10	659.41	990.26	0.00	0.00	0.00
6,500.00	90.83	135.12	4,524.65	-1,094.37	1,012.17	1,490.18	0.00	0.00	0.00
7,000.00	90.83	135.12	4,517.42	-1,448.63	1,364.94	1,990.10	0.00	0.00	0.00
7,500.00	90.83	135.12	4,510.19	-1,802.89	1,717.71	2,490.01	0.00	0.00	0.00
8,000.00	90.83	135.12	4,502.96	-2,157.15	2,070.48	2,989.93	0.00	0.00	0.00
8,500.00	90.83	135.12	4,495.73	-2,511.41	2,423.25	3,489.85	0.00	0.00	0.00
9,000.00	90.83	135.12	4,488.49	-2,865.68	2,776.02	3,989.77	0.00	0.00	0.00
9,500.00	90.83	135.12	4,481.26	-3,219.94	3,128.79	4,489.69	0.00	0.00	0.00
10,000.00	90.83	135.12	4,474.03	-3,574.20	3,481.56	4,989.61	0.00	0.00	0.00
10,071.32	90.83	135.12	4,473.00	-3,624.73	3,531.88	5,060.91	0.00	0.00	0.00
<b>TD at 10046.32</b>									



# WPX

## Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well 2309-17P KWU #770H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 6586.00usft (Aztec 1000)
Project:	T23N R9W	MD Reference:	KB @ 6586.00usft (Aztec 1000)
Site:	2309-17P KWU	North Reference:	True
Well:	2309-17P KWU #770H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 16Dec15 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 #770H - plan hits target center - Point	0.00	0.00	4,430.78	220.44	-297.09	1,899,749.74	507,630.82	36.221174	-107.807463
End 60 Tan #770H - plan hits target center - Point	0.00	0.00	4,460.78	183.62	-260.42	1,899,712.93	507,667.50	36.221073	-107.807339
BHL #770H - plan hits target center - Point	0.00	0.00	4,473.00	-3,624.73	3,531.88	1,895,905.63	511,460.85	36.210610	-107.794484
POE #770H - plan hits target center - Point	0.00	0.00	4,546.00	-48.46	-29.32	1,899,480.91	507,898.66	36.220435	-107.806556

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)
345.00	345.00	9 5/8"		9.625	12.250
5,024.00	4,546.00	7"		7.000	8.750

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
525.00	525.00	0.00	0.00	Start Build 2.00
1,178.72	1,173.06	48.78	-56.00	Hold 13.07 Inclination
3,809.67	3,735.81	439.71	-504.77	Start Build DLS 9.00 TFO -176.32
4,621.28	4,430.78	220.44	-297.09	Hold 60.00 Inclination
4,681.28	4,460.78	183.62	-260.43	Start Build DLS 9.00 TFO 0.00
4,855.59	4,526.31	69.58	-146.87	Start DLS 9.00 TFO 0.00
5,023.83	4,546.00	-48.46	-29.32	POE at 90.83 Inc 135.12 Deg
10,071.32	4,473.00	-3,624.73	3,531.88	TD at 10046.32

fill of approximately 7-feet on the south corner (corner 2), and a cut of 7-feet on the north-eastern side (between corner 5 & corner 6) to create a level well pad. No additional surfacing materials will be required for construction.

4. As determined during the onsite on December 9, 2015, the following best management practices will be implemented:
  - a. Diversions will be installed upon reclamation.
  - b. A culvert will be installed in the bar ditch of County Road #7820 at the access road take-off.
  - c. Upon interim reclamation, the area would be reseeded with a BLM approved sagebrush seed mix.
  - d. Facilities would be painted Juniper Green.
  - e. Surface vegetation would be mowed and incorporated into topsoil as additional organic matter.
  - f. No additional fill would be required to construct the pad.
5. All project activities will be confined to permitted areas only.
6. Construction equipment may include chain saws, a brush hog, scraper, maintainer, trencher, backhoe, excavator, and a dozer.
7. If drilling has not been initiated on the well pad within 120 days of the well pad being constructed, the operator will consult with the BLM to address a site-stabilization plan.

#### D. Production Facilities

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

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the well is plugged, final reclamation will occur within the remainder of the project area. Reclamation is described in detail in the Reclamation Plan (Appendix C).

## ✓ 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



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

in Bloomfield, NM to WPX Energy Production, LLC KWU #770H

409' FSL & 1115' FEL, Section 17, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.220580°N Longitude: 107.807071°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) for 2.7 miles to begin proposed access on left-hand side of County Road #7820 which continues for 53.9' to staked WPX KWU #770H location.

3,000 PSI rated Choke system

