

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: 11-25-15

Well information:

Operator WPX, Well Name and Number Kimbeto Wash Unit # 791 #

API# 30-045-35734, Section 30, Township 23 N/S, Range 09 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 R. Catanach
NMOCD Approved by Signature

4-29-2016
Date XO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 18 2016

RECEIVED

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

NOV 12 2015

| | | |
|--|---|--|
| 1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NMNM 117577 |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name |
| 2. Name of Operator WPX Energy Production, LLC | | 7. If Unit or CA Agreement, Name and No. Kimbeto Wash Unit |
| 3a. Address P.O. Box 640 Aztec, NM 87410 | | 8. Lease Name and Well No. KWU #791H |
| 3b. Phone No. (include area code) (505) 333-1808 | | 9. API Well No. 30-045-35734 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 664' FNL & 524' FWL, sec 30, T23N, R9W At proposed prod. zone 844' FNL & 1156' FEL, sec 31 T23N, R9W | | 10. Field and Pool, or Exploratory Basin Mancos |
| 14. Distance in miles and direction from nearest town or post office* From intersection US Hwy & 550 US Hwy 64 in Bloomfield NM, South 35.9 miles to Mile Marker 115.7 | | 11. Sec., T., R., M., or Blk. and Survey or Area SHL: Sec 30, T23N, R9W BHL: Sec 31, T23N, R9W |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 524' | 16. No. of Acres in lease 1279.75 Acres | 12. County or Parish San Juan |
| 17. Spacing Unit dedicated to this well 960.74-Acres | 13. State NM | |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 40' | 19. Proposed Depth 10452' MD / 4346' TVD | 20. BLM/BIA Bond No. on file UTB000178 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6596' GR | 22. Approximate date work will start* December 1, 2015 | 23. Estimated duration 1 month |

24. Attachments

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- 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 11/12/15 |
| Title Permit Technician III | | |
| Approved by (Signature) | Name (Printed/Typed) Manteo | Date 4/14/16 |
| Title AFM | Office TFO | |

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 the KWU #787H and KWU #789H.

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

The new access of 220.5' of BLM is Onlease access road will be built and permitted via the APD.

A new 11767.2' BLM on lease & 9677' IA on lease well connection will be built and permitted via the APD.

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

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

OPERATIONS SUBJECT TO GENERAL REQUIREMENTS WITH ATTACHED

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 30-045-35734 | | *Pool Code 97232 | *Pool Name BASIN MANCOS |
| *Property Code 3110144 | *Property Name <i>Kimberly Wash Unit</i> | | *Well Number 791H |
| *GRID No. 120782 | *Operator Name WPX ENERGY PRODUCTION, LLC | | *Elevation 6596' |

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 | 30 | 23N | 9W | 1 | 664 | NORTH | 524 | 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| A | 31 | 23N | 9W | | 844 | NORTH | 1156 | EAST | SAN JUAN |

| | | | | |
|---|---------------------------------------|-------------------------------|----------------------------------|-------------------------|
| ¹² Dedicated Acres 960.74 | Entire Section 30 N/2 - Section 31 | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ Order No. |
|---|---------------------------------------|-------------------------------|----------------------------------|-------------------------|

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

SURFACE LOCATION
664' FNL 524' FWL
SECTION 30, T23N, R9W
LAT: 36.203327°N
LONG: 107.836598°W
DATUM: NAD1927

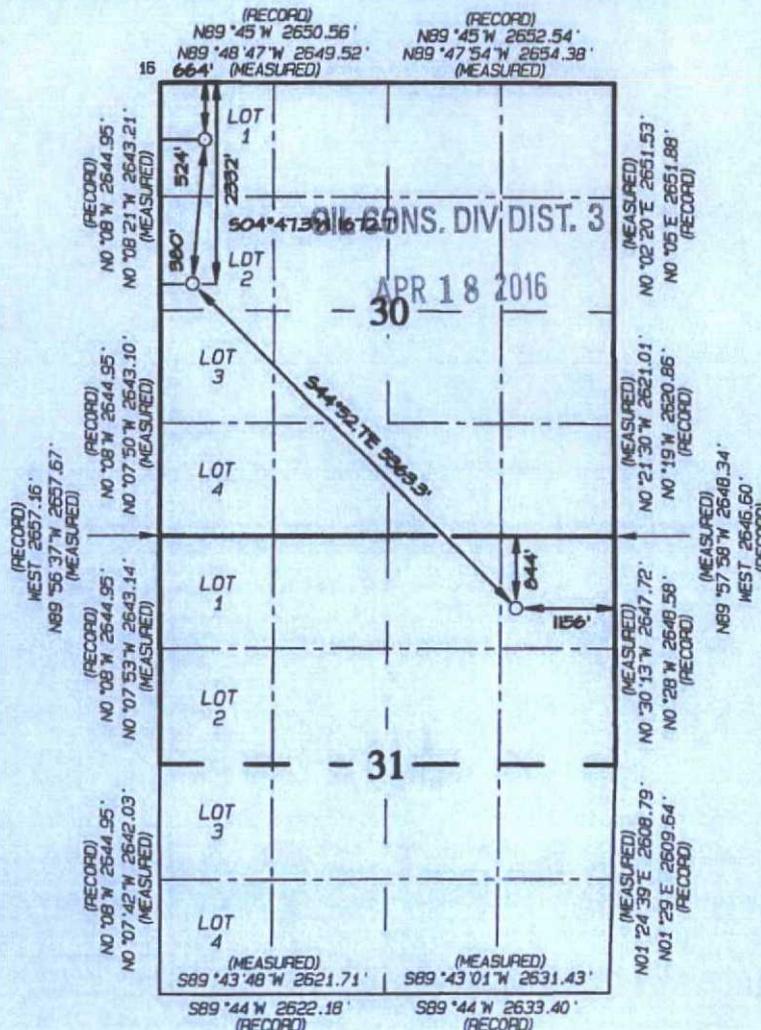
LAT: 36.203340°N
LONG: 107.837214°W
DATUM: NAD1983

POINT-OF-ENTRY
2332' FNL 380' FWL
SECTION 30, T23N, R9W
LAT: 36.198747°N
LONG: 107.837071°W
DATUM: NAD1927

LAT: 36.198760°N
LONG: 107.837687°W
DATUM: NAD1983

END-OF-LATERAL
844' FNL 1156' FWL
SECTION 31, T23N, R9W
LAT: 36.188306°N
LONG: 107.824246°W
DATUM: NAD1927

LAT: 36.188320°N
LONG: 107.824862°W
DATUM: NAD1983



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

Marie E. Jaramillo 11/12/15
Signature Date

Marie E. Jaramillo
Printed Name
marie.jaramillo@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: NOVEMBER 5, 2015
Date of Survey: JULY 15, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



WPX Energy

Operations Plan

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

| | | | |
|---------------------|----------------------------|-------------------|---------------------|
| Date: | November 12, 2015 | Field: | Basin Mancos |
| Well Name: | KWU# 791H | Surface: | BLM |
| SH Location: | NWNW Sec 30 23N-09W | Elevation: | 6596' GR |
| BH Location: | NENE Sec 31 23N-09W | Minerals: | BLM |

Measured Depth: 10,452.60'

I. GEOLOGY: SURFACE FORMATION - OJO ALAMO/ KIRKLAND

A. FORMATION TOPS (GL)

| NAME | MD | TVD | NAME | MD | TVD |
|-----------------|------|------|---------------|-----------|----------|
| OJO ALAMO | 131 | 131 | POINT LOOKOUT | 3288 | 3118 |
| KIRTLAND | 339 | 339 | MANCOS | 3493 | 3305 |
| PICTURED CLIFFS | 715 | 715 | GALLUP | 3874 | 3654 |
| LEWIS | 827 | 826 | KICKOFF POINT | 4,686.42 | 4,306.77 |
| CHACRA | 1089 | 1085 | TOP TARGET | 4850 | 4381 |
| CLIFF HOUSE | 2241 | 2160 | LANDING POINT | 5,088.79 | 4,422.00 |
| MENEFEE | 2294 | 2209 | BASE TARGET | 5,088.79 | 4,422.00 |
| | | | TD | 10,452.60 | 4,346.00 |

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' | 9.625" | 36 LBS | J-55 or equiv | STC |
| INTERMEDIATE | 8.75" | 5,088.79' | 7" | 23 LBS | J-55 or equiv | LTC |
| PRODUCTION | 6.125" | 4938.79' - 10,452.60' | 4.5" | 11.6 LBS | P-110 or equiv | LTC |
| TIE BACK | 6.125" | Surf. - 4938.79' | 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.
- 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** 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: +/- 700 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1001 cu-ft / 178.3 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). WOC 12 hrs. Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (900 sx / 1246 cu-ft / 222 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
- 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 (540 sx /734 cuft /131 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (540 sx /734bbls).

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.

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

NOTE:

Proposed Operations:

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# K-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

KWU 2309-30D

KWU 2309-30D #791H - Slot A3

Wellbore #1

Plan: Design #1 16Oct15 sam

Standard Planning Report

22 October, 2015

WPX
Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|--|
| Database: | COMPASS | Local Co-ordinate Reference: | Well KWU 2309-30D #791H (A3) - Slot A3 |
| Company: | WPX Energy | TVD Reference: | GL @ 6596.00usft (Original Well Elev) |
| Project: | T23N R9W | MD Reference: | GL @ 6596.00usft (Original Well Elev) |
| Site: | KWU 2309-30D | North Reference: | True |
| Well: | KWU 2309-30D #791H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 16Oct15 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 | KWU 2309-30D | | | | |
| Site Position: | | Northing: | 1,893,257.11 usft | Latitude: | 36.203340 |
| From: | Map | Easting: | 498,977.22 usft | Longitude: | -107.836800 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13.200 in | Grid Convergence: | 0.00 ° |

| | | | | | | |
|-----------------------------|------------------------------|------------|----------------------------|-------------------|----------------------|---------------|
| Well | KWU 2309-30D #791H - Slot A3 | | | | | |
| Well Position | +N/-S | -4.74 usft | Northing: | 1,893,252.37 usft | Latitude: | 36.203327 |
| | +E/-W | 59.59 usft | Easting: | 499,036.81 usft | Longitude: | -107.836598 |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 6,596.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 12/31/2009 | 10.02 | 63.03 | 50,589 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------------|--|
| Design | Design #1 16Oct15 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 | 146.31 | |

| 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 | |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,691.57 | 23.83 | 207.18 | 1,657.51 | -217.29 | -111.56 | 2.00 | 2.00 | 0.00 | 207.18 | |
| 4,068.80 | 23.83 | 207.18 | 3,832.05 | -1,071.77 | -550.26 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,686.42 | 60.00 | 135.12 | 4,306.77 | -1,398.29 | -407.13 | 9.00 | 5.86 | -11.67 | -87.08 | Start 60 tan #791H |
| 4,746.42 | 60.00 | 135.12 | 4,336.77 | -1,435.11 | -370.46 | 0.00 | 0.00 | 0.00 | 0.00 | End 60 tan #791H |
| 4,914.23 | 75.10 | 135.12 | 4,400.66 | -1,544.69 | -261.34 | 9.00 | 9.00 | 0.00 | 0.00 | |
| 5,088.79 | 90.81 | 135.12 | 4,422.00 | -1,667.05 | -139.48 | 9.00 | 9.00 | 0.00 | 0.00 | POE 791H |
| 10,452.60 | 90.81 | 135.12 | 4,346.00 | -5,467.41 | 3,644.96 | 0.00 | 0.00 | 0.00 | 0.00 | BHL 791H |

WPX
Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|--|
| Database: | COMPASS | Local Co-ordinate Reference: | Well KWU 2309-30D #791H (A3) - Slot A3 |
| Company: | WPX Energy | TVD Reference: | GL @ 6596.00usft (Original Well Elev) |
| Project: | T23N R9W | MD Reference: | GL @ 6596.00usft (Original Well Elev) |
| Site: | KWU 2309-30D | North Reference: | True |
| Well: | KWU 2309-30D #791H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 16Oct15 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 |
| Start Build 2.00 | | | | | | | | | |
| 1,000.00 | 10.00 | 207.18 | 997.47 | -38.72 | -19.88 | 21.19 | 2.00 | 2.00 | 0.00 |
| 1,500.00 | 20.00 | 207.18 | 1,479.82 | -153.69 | -78.91 | 84.11 | 2.00 | 2.00 | 0.00 |
| 1,691.57 | 23.83 | 207.18 | 1,657.51 | -217.29 | -111.56 | 118.91 | 2.00 | 2.00 | 0.00 |
| Hold 23.83 Inclination | | | | | | | | | |
| 2,000.00 | 23.83 | 207.18 | 1,939.64 | -328.15 | -168.48 | 179.58 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 23.83 | 207.18 | 2,397.01 | -507.87 | -260.75 | 277.94 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 23.83 | 207.18 | 2,854.38 | -687.60 | -353.02 | 376.29 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 23.83 | 207.18 | 3,311.75 | -867.32 | -445.29 | 474.64 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 23.83 | 207.18 | 3,769.12 | -1,047.04 | -537.56 | 573.00 | 0.00 | 0.00 | 0.00 |
| 4,068.80 | 23.83 | 207.18 | 3,832.05 | -1,071.77 | -550.26 | 586.53 | 0.00 | 0.00 | 0.00 |
| Start Build DLS 9.00 TFO -87.08 | | | | | | | | | |
| 4,500.00 | 45.58 | 145.97 | 4,194.12 | -1,285.11 | -502.02 | 790.80 | 9.00 | 5.04 | -14.19 |
| 4,686.42 | 60.00 | 135.12 | 4,306.77 | -1,398.29 | -407.13 | 937.61 | 9.00 | 7.74 | -5.82 |
| Hold 60.00 Inclination | | | | | | | | | |
| 4,746.42 | 60.00 | 135.12 | 4,336.77 | -1,435.11 | -370.46 | 988.58 | 0.00 | 0.00 | 0.00 |
| Start Build DLS 9.00 TFO 0.00 | | | | | | | | | |
| 4,914.23 | 75.10 | 135.12 | 4,400.66 | -1,544.69 | -261.34 | 1,140.29 | 9.00 | 9.00 | 0.00 |
| Start DLS 9.00 TFO 0.00 | | | | | | | | | |
| 5,000.00 | 82.82 | 135.12 | 4,417.07 | -1,604.29 | -201.99 | 1,222.80 | 9.00 | 9.00 | 0.00 |
| 5,088.79 | 90.81 | 135.12 | 4,422.00 | -1,667.05 | -139.48 | 1,309.70 | 9.00 | 9.00 | 0.00 |
| POE at 90.81 Inc 135.12 deg | | | | | | | | | |
| 5,089.00 | 90.81 | 135.12 | 4,422.00 | -1,667.21 | -139.33 | 1,309.91 | 0.00 | 0.00 | 0.00 |
| 7" | | | | | | | | | |
| 5,500.00 | 90.81 | 135.12 | 4,416.17 | -1,958.41 | 150.65 | 1,713.05 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 90.81 | 135.12 | 4,409.09 | -2,312.67 | 503.42 | 2,203.50 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 90.81 | 135.12 | 4,402.00 | -2,666.92 | 856.20 | 2,693.95 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 90.81 | 135.12 | 4,394.92 | -3,021.18 | 1,208.98 | 3,184.39 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 90.81 | 135.12 | 4,387.84 | -3,375.44 | 1,561.75 | 3,674.84 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.81 | 135.12 | 4,380.75 | -3,729.70 | 1,914.53 | 4,165.28 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.81 | 135.12 | 4,373.67 | -4,083.96 | 2,267.30 | 4,655.73 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.81 | 135.12 | 4,366.58 | -4,438.22 | 2,620.08 | 5,146.18 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.81 | 135.12 | 4,359.50 | -4,792.47 | 2,972.86 | 5,636.62 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.81 | 135.12 | 4,352.41 | -5,146.73 | 3,325.63 | 6,127.07 | 0.00 | 0.00 | 0.00 |
| 10,452.60 | 90.81 | 135.12 | 4,346.00 | -5,467.41 | 3,644.96 | 6,571.02 | 0.00 | 0.00 | 0.00 |
| TD at 10452.60 | | | | | | | | | |

WPX
Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|--|
| Database: | COMPASS | Local Co-ordinate Reference: | Well KWU 2309-30D #791H (A3) - Slot A3 |
| Company: | WPX Energy | TVD Reference: | GL @ 6596.00usft (Original Well Elev) |
| Project: | T23N R9W | MD Reference: | GL @ 6596.00usft (Original Well Elev) |
| Site: | KWU 2309-30D | North Reference: | True |
| Well: | KWU 2309-30D #791H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 16Oct15 sam | | |

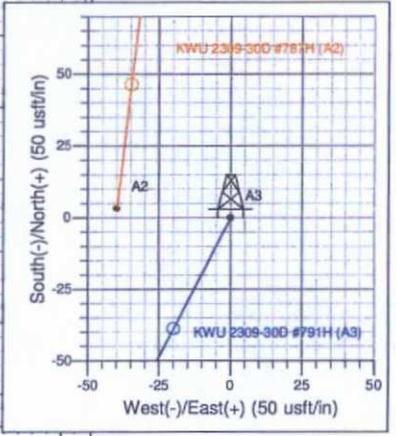
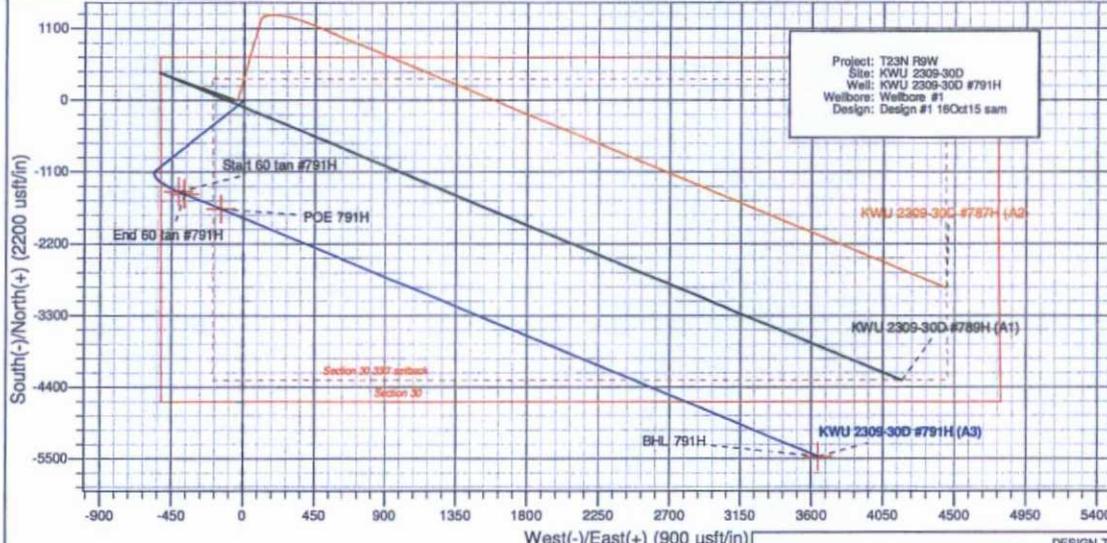
| Design Targets | | | | | | | | | |
|--|------------------|-----------------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------|-------------|
| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (bearing) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| Start 60 tan #791H - plan hits target center - Point | 0.00 | 0.00 | 4,306.77 | -1,398.29 | -407.13 | 1,891,854.10 | 498,629.63 | 36.199486 | -107.837978 |
| End 60 tan #791H - plan hits target center - Point | 0.00 | 0.00 | 4,336.77 | -1,435.11 | -370.46 | 1,891,817.27 | 498,666.30 | 36.199385 | -107.837854 |
| BHL 791H - plan hits target center - Point | 0.00 | 0.00 | 4,346.00 | -5,467.41 | 3,644.96 | 1,887,784.84 | 502,681.59 | 36.188307 | -107.824246 |
| POE 791H - plan hits target center - Point | 0.00 | 0.00 | 4,422.00 | -1,667.05 | -139.48 | 1,891,585.32 | 498,897.27 | 36.198747 | -107.837071 |

| 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 | |
| 5,089.00 | 4,422.00 | 7" | 7.000 | 8.750 | |

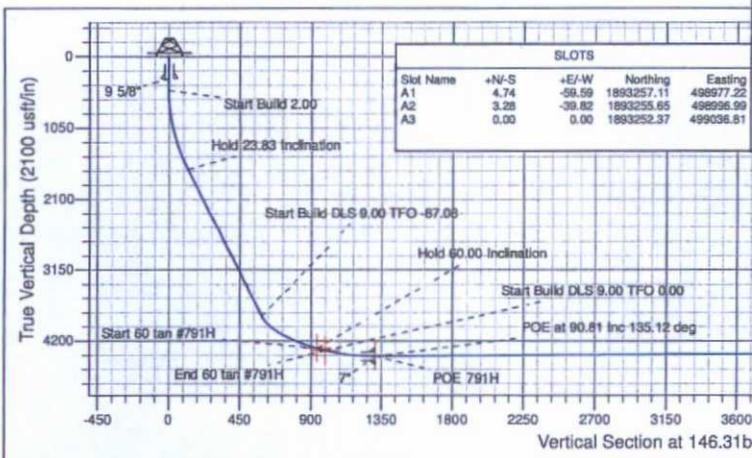
| Plan Annotations | | | | |
|--------------------------|--------------------------|-------------------|-----------------|---------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
| | | +N/-S (usft) | +E/-W (usft) | |
| 500.00 | 500.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1,691.57 | 1,657.51 | -217.29 | -111.56 | Hold 23.83 Inclination |
| 4,068.80 | 3,832.05 | -1,071.77 | -550.26 | Start Build DLS 9.00 TFO -87.08 |
| 4,686.42 | 4,306.77 | -1,398.29 | -407.13 | Hold 60.00 Inclination |
| 4,746.42 | 4,336.77 | -1,435.11 | -370.46 | Start Build DLS 9.00 TFO 0.00 |
| 4,914.23 | 4,400.66 | -1,544.69 | -261.34 | Start DLS 9.00 TFO 0.00 |
| 5,088.79 | 4,422.00 | -1,667.05 | -139.48 | POE at 90.81 Inc 135.12 deg |
| 10,452.60 | 4,346.00 | -5,467.41 | 3,644.96 | TD at 10452.60 |



Well Name: KWU 2309-30D #791H
 Surface Location: KWU 2309-30D
 NAD 1927 (NADCON CONUS), US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 6596.00
 +N/-S 0.00 +E/-W 0.00 Northing 1893252.37 Easting 499036.81 Latitude 36.203327 Longitude -107.836598 Slot A3
 GL @ 6596.00usft (Original Well Elev)



| DESIGN TARGET DETAILS | | | | | | | | |
|-----------------------|---------|----------|---------|------------|-----------|-----------|-------------|-------|
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
| Start 60 tan #791H | 4306.77 | -1398.29 | -407.13 | 1891854.08 | 498629.63 | 36.195486 | -107.837978 | Point |
| End 60 tan #791H | 4336.77 | -1435.11 | -370.48 | 1891817.27 | 498686.30 | 36.199384 | -107.837854 | Point |
| BHL 791H | 4346.00 | -5487.41 | 3644.96 | 1857784.84 | 502681.59 | 36.188306 | -107.824246 | Point |
| POE 791H | 4422.00 | -1167.05 | -139.48 | 1891585.32 | 498689.27 | 36.198747 | -107.837071 | Point |



| SLOTS | | | | |
|-----------|-------|--------|------------|-----------|
| Slot Name | +N/-S | +E/-W | Northing | Easting |
| A1 | 4.74 | -69.59 | 1893257.11 | 498977.22 |
| A2 | 3.28 | -39.82 | 1893255.65 | 498996.99 |
| A3 | 0.00 | 0.00 | 1893252.37 | 499036.81 |

| ANNOTATIONS | | | | | | | | | |
|-------------|----------|-------|--------|----------|---------|---------|-----------|---------------------------------|--|
| TVD | MD | Inc | Azi | +N/-S | +E/-W | V Sect | Departure | Annotation | |
| 500.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Start Build 2.00 | |
| 1857.51 | 1891.57 | 23.83 | 207.18 | -217.29 | -111.56 | 118.91 | 244.26 | Hold 23.83 Inclination | |
| 3832.05 | 4088.80 | 23.83 | 207.18 | -1071.77 | -550.26 | 586.53 | 1204.77 | Start Build DLS 9.00 TFO -87.08 | |
| 4306.77 | 4686.42 | 60.00 | 135.12 | -1398.29 | -407.13 | 937.61 | 1581.70 | Hold 60.00 Inclination | |
| 4336.77 | 4746.42 | 60.00 | 135.12 | -1435.11 | -370.48 | 988.58 | 1633.68 | Start Build DLS 9.00 TFO 0.00 | |
| 4400.88 | 4914.23 | 75.10 | 135.12 | -1544.69 | -261.34 | 1140.29 | 1788.31 | Start DLS 9.00 TFO 0.00 | |
| 4422.00 | 5068.79 | 90.81 | 135.12 | -1667.05 | -139.48 | 1308.70 | 1951.00 | POE at 90.81 Inc 135.12 deg | |
| 4346.00 | 10452.60 | 00.81 | 135.12 | -5467.41 | 3644.96 | 6571.02 | 7324.28 | TD at 10452.60 | |

- 10 feet at the southwest corner, and a cut of 5 feet at the southeast corner to create a level well pad. No additional surfacing materials will be required for construction.
4. As determined during the onsite on September 30, 2015, the following best management practices will be implemented:
 - a. Diversions will be installed upon reclamation.
 - b. No additional fill would be required to construct the pad.
 - c. A 24-inch culvert will be required at the beginning of the proposed access road.
 5. All project activities will be confined to permitted areas only.
 6. Construction equipment may include chain saws, a brush hog, scraper, maintainer, 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 wells are 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 closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids will be hauled to a commercial disposal facility.

C. Spills

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

D. Sewage

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

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

in Bloomfield, NM to WPX Energy Production, LLC KWU #791H

664' FNL & 524' FWL, Section 30, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.203340°N Longitude: 107.837214°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 Right (North-westerly) remaining on paved County Road #7800 for 3.6 miles to where pavement ends;

Go Straight (South-westerly) continuing on dirt portion of County Road #7800 for 1.2 miles to fork in roadway;

Go Left (Southerly) which is straight for 3.0 miles to begin proposed access on right-hand side of County Road #7800 which continues for 220.5' to staked WPX KWU #791H location.

3,000 PSI rated Choke system

