

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

Tony Delfin  
Acting 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 3160-4 or 3160-5 form.

Operator Signature Date: 11/29/16

Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E
30-045-35727-00-00	W LYBROOK UNIT	703H	WPX ENERGY PRODUCTION, LLC	O	N	San Juan	F	N	8	23	N	8	W

## Drilling/Casing Change

### Conditions of Approval:

(See the below checked and additional 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
- ☐ Ensure compliance with 19.15.17
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

### Additional requirements

If cement fails to circulate on any of the stages, notify OCD.

A handwritten signature in black ink, appearing to read "David R. Catanach".

NMOCD Approved by Signature

Date

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

NOV 21 2016

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE** – Other instructions on page 2.

1. Type of Well		5. Lease Serial No. <b>NO-G-1403-1908</b>
<input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name <b>NMNM-135216A</b>
2. Name of Operator <b>WPX Energy Production, LLC</b>		7. If Unit of CA/Agreement, Name and/or No. <b>W LYBROOK UNIT</b>
3a. Address <b>PO Box 640    Aztec, NM 87410</b>	3b. Phone No. (include area code) <b>505-333-1816</b>	8. Well Name and No. <b>W LYBROOK UT #703H</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>SHL: 1212' FSL &amp; 1366' FWL Sec 8, T23N 8W</b> <b>BHL: 1044' FSL &amp; 1970' FWL Sec 6, T23N 8W</b>		9. API Well No. <b>30-045-35727</b>
		10. Field and Pool or Exploratory Area <b>Basin Mancos</b>
		11. Country or Parish, State <b>San Juan, NM</b>

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>LATERAL CHANGE</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

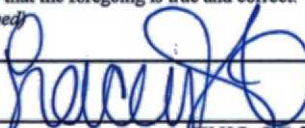
**WPX requests to change the lateral per the attached Directional, Ops plan and C102.**

OIL CONS. DIV DIST. 3

DEC 01 2016

**CONDITIONS OF APPROVAL**

Adhere to previously issued stipulations

14. I hereby certify that the foregoing is true and correct.	
Name (Printed/Typed) <b>Lacey Granillo</b>	Title <b>Permit Tech III</b>
Signature 	Date <b>11/21/16</b>
<b>THIS SPACE FOR FEDERAL OR STATE OFFICE USE</b>	
Approved by <b>Abdelgadir Elmadani</b>	Title <b>PE</b>
Conditions of approval, if any, are attached. Approval of this notice 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.	Office <b>FFO</b>
Date <b>11/29/16</b>	

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 page 2)

**NMOCDA**

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

*Lateral Change*

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35727</b>		*Pool Code	*Pool Name LYBROOK MANCOS W
*Property Code <b>315250</b>	*Property Name W LYBROOK UNIT		*Well Number 703H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6823'

<sup>10</sup> Surface Location

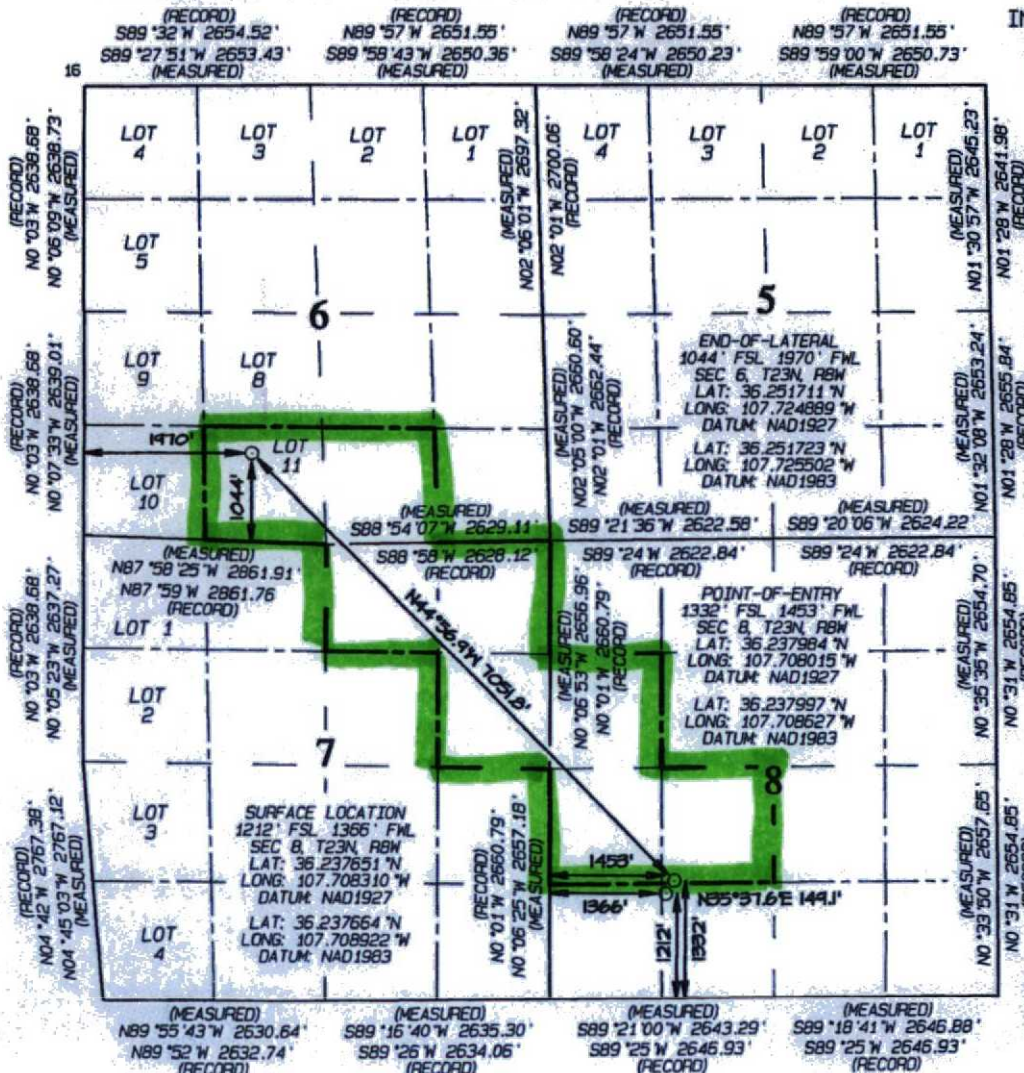
UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
N	8	23N	8W		1212	SOUTH	1366	WEST	SAN JUAN

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

UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
N	6	23N	8W	11	1044	SOUTH	1970	WEST	SAN JUAN

*Dedicated Acres 323.68 SE/4 SW/4, SW/4 SE/4 (Section 6) N/2 NE/4, SE/4 NE/4 (Section 7) N/2 SW/4, SW/4 NW/4 (Section 8)	*Joint or Infill	*Consolidation Code	*Order No. R-14051 - 12,807.24 Acres
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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: *[Signature]* Date: *11/21/16*  
Printed Name: *Jason C. Edwards*  
E-mail Address: *jason.edwards@wpenergy.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: NOVEMBER 17, 2016  
Survey Date: DECEMBER 19, 2014

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 21, 2016  
**Well Name:** W Lybrook # 703H  
**SH Location:** SESW Sec 8 23N-08W  
**BH Location:** SESW Sec 6 23N-08W

**Field:** Lybrook Mancos W  
**Surface:**  
**Elevation:** 6823' GR  
**Minerals:**

**Measured Depth:** 12,697.15'

## **I. GEOLOGY**

Surface formation - NACIMIENTO

### **A. FORMATION TOPS: (GR)**

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	838.00	838.00	POINT LOOKOUT	3,903.00	3,825.00
KIRTLAND	1,046.00	1,046.00	MANCOS	4,107.00	4,012.00
PICTURED CLIFFS	1,422.00	1,422.00	GALLUP	4,481.00	4,361.00
LEWIS	1,533.00	1,533.00	KICKOFF POINT	4,322.65	4,208.74
CHACRA	1,792.00	1,792.00	TOP TARGET	5,425.00	5,088.00
CLIFF HOUSE	2,874.00	2,867.00	LANDING POINT	5,645.40	5,129.00
MENEFEE	2,924.00	2,916.00	BASE TARGET	5,645.40	5,129.00
			TD	12,697.15	5,123.00

### **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 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"	5,645.40'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5495.4' - 12,697.15'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5495.4'	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 utilized 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 opened 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: 107 bbls, 306 sks, (603 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/ +/- 222 bbl Drilling mud or water. Total Cement: 166 bbls, 560 sks, (934 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 (706 sx /960 cuft /171 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-169bbl Fr Water. Total Cement (706 sx /960bbls).

#### **D. COMPLETION:**

Run CCL for perforating

##### **A. PRESSURE TEST:**

1. Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

##### **B. STIMULATION:**

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N2 for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs and flowback lateral.

##### **C. RUNNING TUBING:**

1. Production Tubing: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner.

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

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#### **NOTES:**

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

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

# WPXENERGY.

WPX Energy Williston, LLC

Well Name: W Lybrook UT #703H

Surface Location: 2308-08N WLU

NAD 1927 (NADCON CONIUS) , US State Plane 1927 (Exact solution) New Mexico West 3003

Ground Elevation: 6823.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1905770.57	536870.07	36.237651	-107.708310	703H

WELL @ 6823.00usft (Original Well Elev)

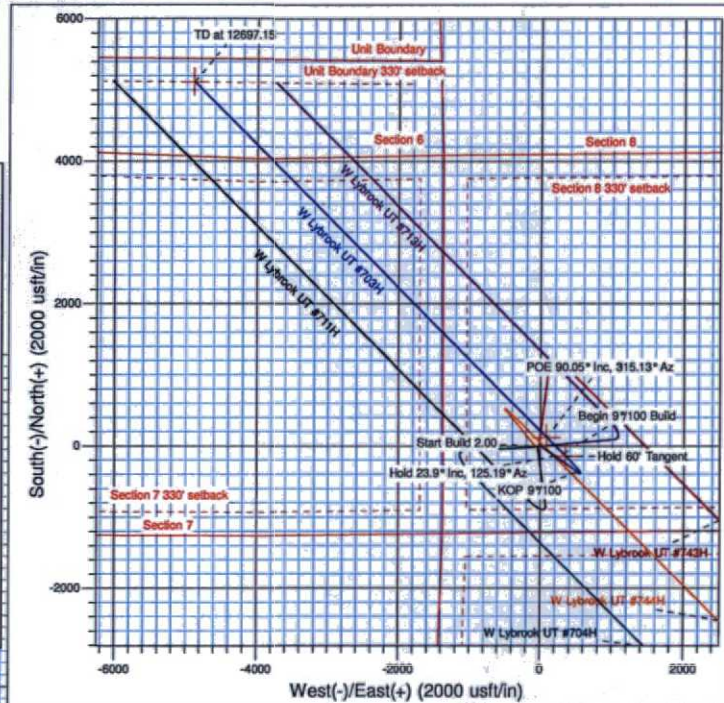
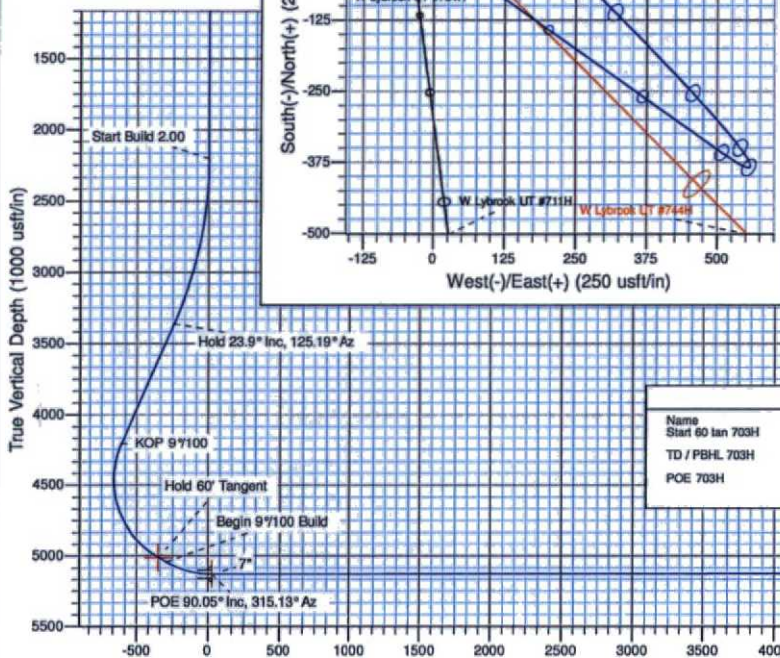
Project: T23N R8W  
Site: 2308-08N WLU  
Well: W Lybrook UT #703H  
Plan: Design #1 26Oct16 kjs

## ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
2200.00	2200.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
3360.74	3395.10	23.90	125.19	-141.57	200.80	-241.06	245.68	Hold 23.9° Inc, 125.19° Az
4208.74	4322.65	23.90	125.19	-358.13	507.95	-609.81	621.50	KOP 9°100
5013.71	5251.52	60.00	315.13	-141.70	348.64	-343.27	1001.28	Hold 60° Tangent
5043.71	5311.52	60.00	315.13	-104.88	311.38	-291.32	1053.24	Begin 9°100 Build
5129.00	5645.40	90.05	315.13	121.08	87.01	27.46	1372.09	POE 90.05° Inc, 315.13° Az
5123.00	12697.15	90.05	315.13	5118.31	-4888.41	7077.89	6423.84	TD at 12697.15



Azimuths to True North  
Magnetic North: 9.16°  
Magnetic Field  
Strength: 49922.38nT  
Dip Angle: 62.91°  
Date: 10/26/2016  
Model: IGRF2010



## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 tan 703H	5013.71	-141.70	348.64	1905629.32	537218.89	36.237282	-107.707127	Point
TD / PBHL 703H	5123.00	5118.31	-4888.41	1910882.57	531975.06	36.251711	-107.724889	Point
POE 703H	5129.00	121.08	87.01	1905891.76	536956.92	36.237984	-107.708015	Point

Vertical Section at 316.32bearing (1000 usft/in)



## **WPX Energy**

**T23N R8W**

**2308-08N WLU**

**W Lybrook UT #703H - Slot 703H**

**Wellbore #1**

**Plan: Design #1 26Oct16 kjs**

## **Standard Planning Report - Geographic**

**28 October, 2016**



**WPX**  
Planning Report - Geographic

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook UT #703H - Slot 703H
Company:	WPX Energy	TVD Reference:	WELL @ 6823.00usft (Original Well Elev)
Project:	T23N R8W	MD Reference:	WELL @ 6823.00usft (Original Well Elev)
Site:	2308-08N WLU	North Reference:	True
Well:	W Lybrook UT #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 26Oct16 kjs		

Project	T23N R8W		
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	2308-08N WLU		
Site Position:		Northing:	1,906,343.71 usft
From:	Map	Easting:	537,196.07 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	36.239225
		Longitude:	-107.707202
		Grid Convergence:	0.07 °

Well	W Lybrook UT #703H - Slot 703H					
Well Position	+N-S	0.00 usft	Northing:	1,905,770.57 usft	Latitude:	36.237651
	+E-W	0.00 usft	Easting:	536,870.07 usft	Longitude:	-107.708310
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,823.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/26/2016	9.16	62.91	49,922

Design	Design #1 26Oct16 kjs			
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	316.32

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	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,395.10	23.90	125.19	3,360.74	-141.57	200.80	2.00	2.00	0.00	125.19	
4,322.65	23.90	125.19	4,208.74	-358.13	507.95	0.00	0.00	0.00	0.00	
5,251.52	60.00	315.13	5,013.71	-141.70	348.64	9.00	3.89	-18.31	-171.35	Start 60 tan 703H
5,311.52	60.00	315.13	5,043.71	-104.88	311.98	0.00	0.00	0.00	0.00	
5,645.40	90.05	315.13	5,129.00	121.08	87.01	9.00	9.00	0.00	0.00	
12,697.15	90.05	315.13	5,123.00	5,118.31	-4,888.41	0.00	0.00	0.00	0.00	TD / PBHL 703H



**WPX**  
Planning Report - Geographic

Database: COMPASS  
Company: WPX Energy  
Project: T23N R8W  
Site: 2308-08N WLU  
Well: W Lybrook UT #703H  
Wellbore: Wellbore #1  
Design: Design #1 26Oct16 kjs

Local Co-ordinate Reference: Well W Lybrook UT #703H - Slot 703H  
TVD Reference: WELL @ 6823.00usft (Original Well Elev)  
MD Reference: WELL @ 6823.00usft (Original Well Elev)  
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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
200.00	0.00	0.00	200.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
351.00	0.00	0.00	351.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
<b>9 5/8"</b>									
400.00	0.00	0.00	400.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
600.00	0.00	0.00	600.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
800.00	0.00	0.00	800.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,905,770.57	536,870.07	36.237651	-107.708310
<b>Start Build 2.00</b>									
2,400.00	4.00	125.19	2,399.84	-4.02	5.70	1,905,766.56	536,875.78	36.237640	-107.708291
2,600.00	8.00	125.19	2,598.70	-16.07	22.79	1,905,754.54	536,892.88	36.237607	-107.708233
2,800.00	12.00	125.19	2,795.62	-36.07	51.16	1,905,734.57	536,921.28	36.237552	-107.708136
3,000.00	16.00	125.19	2,989.64	-63.95	90.70	1,905,706.74	536,960.85	36.237476	-107.708002
3,200.00	20.00	125.19	3,179.82	-99.55	141.20	1,905,671.20	537,011.40	36.237378	-107.707831
3,395.10	23.90	125.19	3,360.74	-141.57	200.80	1,905,629.26	537,071.05	36.237262	-107.707629
<b>Hold 23.9° Inc, 125.19° Az</b>									
3,400.00	23.90	125.19	3,365.22	-142.71	202.42	1,905,628.12	537,072.67	36.237259	-107.707623
3,600.00	23.90	125.19	3,548.06	-189.41	268.65	1,905,581.51	537,138.96	36.237131	-107.707399
3,800.00	23.90	125.19	3,730.91	-236.10	334.88	1,905,534.90	537,205.25	36.237003	-107.707174
4,000.00	23.90	125.19	3,913.76	-282.80	401.11	1,905,488.29	537,271.54	36.236874	-107.706950
4,200.00	23.90	125.19	4,096.61	-329.49	467.33	1,905,441.68	537,337.83	36.236746	-107.706725
4,322.65	23.90	125.19	4,208.74	-358.13	507.95	1,905,413.10	537,378.48	36.236667	-107.706587
<b>KOP 9°/100</b>									
4,400.00	17.05	121.62	4,281.16	-373.12	530.44	1,905,398.14	537,400.99	36.236626	-107.706511
4,600.00	3.73	22.66	4,478.18	-382.57	558.14	1,905,388.72	537,428.71	36.236600	-107.706417
4,800.00	19.60	322.98	4,673.78	-349.51	540.30	1,905,421.76	537,410.82	36.236691	-107.706478
5,000.00	37.44	317.68	4,848.83	-277.18	478.66	1,905,494.01	537,349.09	36.236890	-107.706687
5,200.00	55.37	315.52	4,986.18	-172.65	379.25	1,905,598.41	537,249.55	36.237177	-107.707024
5,251.52	60.00	315.13	5,013.71	-141.70	348.64	1,905,629.32	537,218.90	36.237262	-107.707128
<b>Hold 60° Tangent</b>									
5,311.52	60.00	315.13	5,043.71	-104.88	311.98	1,905,666.10	537,182.19	36.237363	-107.707252
<b>Begin 9°/100 Build</b>									
5,400.00	67.96	315.13	5,082.49	-48.58	255.93	1,905,722.32	537,126.06	36.237518	-107.707442
5,600.00	85.96	315.13	5,127.42	88.93	119.02	1,905,859.66	536,988.97	36.237896	-107.707906
5,645.40	90.05	315.13	5,129.00	121.08	87.01	1,905,891.76	536,956.93	36.237984	-107.708015
<b>POE 90.05° Inc, 315.13° Az</b>									
5,646.00	90.05	315.13	5,129.00	121.50	86.59	1,905,892.19	536,956.50	36.237985	-107.708016
<b>7"</b>									
5,800.00	90.05	315.13	5,128.87	230.64	-22.07	1,906,001.18	536,847.70	36.238285	-107.708385
6,000.00	90.05	315.13	5,128.70	372.37	-163.18	1,906,142.73	536,706.41	36.238674	-107.708863
6,200.00	90.05	315.13	5,128.53	514.10	-304.29	1,906,284.28	536,565.12	36.239064	-107.709342
6,400.00	90.05	315.13	5,128.36	655.83	-445.41	1,906,425.82	536,423.82	36.239453	-107.709820
6,600.00	90.05	315.13	5,128.19	797.56	-586.52	1,906,567.37	536,282.53	36.239842	-107.710299
6,800.00	90.05	315.13	5,128.02	939.29	-727.63	1,906,708.92	536,141.23	36.240232	-107.710777
7,000.00	90.05	315.13	5,127.85	1,081.02	-868.74	1,906,850.47	535,999.94	36.240621	-107.711256
7,200.00	90.05	315.13	5,127.68	1,222.75	-1,009.85	1,906,992.02	535,858.64	36.241010	-107.711734
7,400.00	90.05	315.13	5,127.51	1,364.48	-1,150.96	1,907,133.56	535,717.35	36.241400	-107.712213



**WPX**  
Planning Report - Geographic

Database: COMPASS  
Company: WPX Energy  
Project: T23N R8W  
Site: 2308-08N WLU  
Well: W Lybrook UT #703H  
Wellbore: Wellbore #1  
Design: Design #1 26Oct16 kjs

Local Co-ordinate Reference: Well W Lybrook UT #703H - Slot 703H  
TVD Reference: WELL @ 6823.00usft (Original Well Elev)  
MD Reference: WELL @ 6823.00usft (Original Well Elev)  
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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,600.00	90.05	315.13	5,127.34	1,506.21	-1,292.08	1,907,275.11	535,576.05	36.241789	-107.712691
7,800.00	90.05	315.13	5,127.17	1,647.94	-1,433.19	1,907,416.66	535,434.76	36.242178	-107.713170
8,000.00	90.05	315.13	5,127.00	1,789.67	-1,574.30	1,907,558.21	535,293.47	36.242568	-107.713649
8,200.00	90.05	315.13	5,126.83	1,931.40	-1,715.41	1,907,699.76	535,152.17	36.242957	-107.714127
8,400.00	90.05	315.13	5,126.66	2,073.13	-1,856.52	1,907,841.31	535,010.88	36.243346	-107.714606
8,600.00	90.05	315.13	5,126.49	2,214.86	-1,997.63	1,907,982.85	534,869.58	36.243736	-107.715084
8,800.00	90.05	315.13	5,126.32	2,356.59	-2,138.75	1,908,124.40	534,728.29	36.244125	-107.715563
9,000.00	90.05	315.13	5,126.15	2,498.32	-2,279.86	1,908,265.95	534,586.99	36.244514	-107.716041
9,200.00	90.05	315.13	5,125.98	2,640.05	-2,420.97	1,908,407.50	534,445.70	36.244904	-107.716520
9,400.00	90.05	315.13	5,125.81	2,781.78	-2,562.08	1,908,549.05	534,304.41	36.245293	-107.716999
9,600.00	90.05	315.13	5,125.64	2,923.51	-2,703.19	1,908,690.59	534,163.11	36.245682	-107.717477
9,800.00	90.05	315.13	5,125.47	3,065.24	-2,844.30	1,908,832.14	534,021.82	36.246072	-107.717956
10,000.00	90.05	315.13	5,125.30	3,206.97	-2,985.42	1,908,973.69	533,880.52	36.246461	-107.718434
10,200.00	90.05	315.13	5,125.13	3,348.70	-3,126.53	1,909,115.24	533,739.23	36.246850	-107.718913
10,400.00	90.05	315.13	5,124.95	3,490.43	-3,267.64	1,909,256.79	533,597.93	36.247240	-107.719392
10,600.00	90.05	315.13	5,124.78	3,632.16	-3,408.75	1,909,398.33	533,456.64	36.247629	-107.719870
10,800.00	90.05	315.13	5,124.61	3,773.89	-3,549.86	1,909,539.88	533,315.34	36.248018	-107.720349
11,000.00	90.05	315.13	5,124.44	3,915.62	-3,690.97	1,909,681.43	533,174.05	36.248407	-107.720827
11,200.00	90.05	315.13	5,124.27	4,057.35	-3,832.09	1,909,822.98	533,032.76	36.248797	-107.721306
11,400.00	90.05	315.13	5,124.10	4,199.08	-3,973.20	1,909,964.53	532,891.46	36.249186	-107.721785
11,600.00	90.05	315.13	5,123.93	4,340.81	-4,114.31	1,910,106.08	532,750.17	36.249575	-107.722263
11,800.00	90.05	315.13	5,123.76	4,482.54	-4,255.42	1,910,247.62	532,608.87	36.249965	-107.722742
12,000.00	90.05	315.13	5,123.59	4,624.27	-4,396.53	1,910,389.17	532,467.58	36.250354	-107.723221
12,200.00	90.05	315.13	5,123.42	4,766.00	-4,537.64	1,910,530.72	532,326.28	36.250743	-107.723699
12,400.00	90.05	315.13	5,123.25	4,907.73	-4,678.76	1,910,672.27	532,184.99	36.251133	-107.724178
12,600.00	90.05	315.13	5,123.08	5,049.47	-4,819.87	1,910,813.82	532,043.70	36.251522	-107.724657
12,897.15	90.05	315.13	5,123.00	5,118.31	-4,888.41	1,910,882.57	531,975.06	36.251711	-107.724889

TD at 12697.15

**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 703H - plan hits target center - Point	0.00	0.00	5,013.71	-141.70	348.64	1,905,629.32	537,218.90	36.237262	-107.707128
TD / PBHL 703H - plan hits target center - Point	0.00	0.00	5,123.00	5,118.31	-4,888.41	1,910,882.57	531,975.06	36.251711	-107.724889
POE 703H - plan hits target center - Point	0.00	0.00	5,129.00	121.08	87.01	1,905,891.76	536,956.92	36.237984	-107.708015

**Casing Points**

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
351.00	351.00	9 5/8"	9.625	13.500
5,646.00	5,129.00	7"	7.000	7.500



**WPX**  
Planning Report - Geographic

Database: COMPASS  
Company: WPX Energy  
Project: T23N R8W  
Site: 2308-08N WLU  
Well: W Lybrook UT #703H  
Wellbore: Wellbore #1  
Design: Design #1 26Oct16 kjs

Local Co-ordinate Reference: Well W Lybrook UT #703H - Slot 703H  
TVD Reference: WELL @ 6823.00usft (Original Well Elev)  
MD Reference: WELL @ 6823.00usft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,200.00	2,200.00	0.00	0.00	Start Build 2.00
3,395.10	3,360.74	-141.57	200.80	Hold 23.9° Inc, 125.19° Az
4,322.65	4,208.74	-358.13	507.95	KOP 9°/100
5,251.52	5,013.71	-141.70	348.64	Hold 60° Tangent
5,311.52	5,043.71	-104.88	311.98	Begin 9°/100 Build
5,645.40	5,129.00	121.08	87.01	POE 90.05° Inc, 315.13° Az
12,697.15	5,123.00	5,118.31	-4,888.41	TD at 12697.15

**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to WPX Energy Production, LLC W Lybrook Unit #703H**  
**1212' FSL & 1366' FWL, Section 8, T23N, R8W, N.M.P.M., San Juan County, NM**

**Latitude: 36.237664°N   Longitude: 107.708922°W   Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 38.7 miles to Mile Marker 112.7;

Go Right (Southerly) on County Road #7900 for 0.2 miles to begin proposed access on right-hand side of County Road #7900 which continues for 764.1' to staked WPX W Lybrook Unit #703H location.