

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary

Brett F. Woods, Ph.D.  
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: 12-28-15

Well information;

Operator WPX, Well Name and Number W Lybrook Unit # 746 H

API# 30-045-35751, Section 7, Township 23 N/S, Range 08 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
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

  
NMOCD Approved by Signature

2-28-2016  
Date KC



DEC 28 2015

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFarmington Field Office  
Bureau of Land Management

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. N0-G-1401-1865
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. WEST LYBROOK UNIT - NMNM135216X
3a. Address P.O. Box 640 Aztec, NM 87410	3b. Phone No. (include area code) (505) 333-1808	8. Lease Name and Well No. W LYBROOK UNIT #746H
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1311' FSL & 2284' FEL SEC 7 23N 8W At proposed prod. zone 330' FSL & 1857' FEL SEC 17 23N 8W		9. API Well No. 30-045-35751
14. Distance in miles and direction from nearest town or post office* Approximately 38 miles southeast of Bloomfield, NM		10. Field and Pool, or Exploratory LYBROOK MANCOS W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1311'	16. No. of Acres in lease 160 acres	11. Sec., T., R., M., or Blk. and Survey or Area SHL: SEC 7 23N 8W BHL: SEC 17 23N 8W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20'	19. Proposed Depth 13861' MD / 4943' TVD	12. County or Parish San Juan County
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6778' GR	22. Approximate date work will start* April 1, 2016	13. State NM
20. BLM/BIA Bond No. on file B001576		17. Spacing Unit dedicated to this well 360' ACRES
23. Estimated duration 1 month		

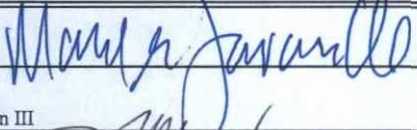
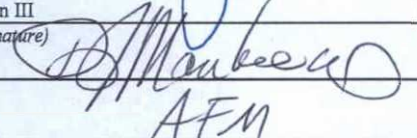
OIL CONS. DIV DIST. 3

FEB 22 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:

- 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 Jaramillo	Date 12/28/15
Title Permit Technician III		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 2/19/16
Title AFM	Office FFO	

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

The well pad surface is under jurisdiction of the BLM and FIMO and is on lease on IA lands and will be twinned with the W LYBROOK UT #705H/706H/745H.

This location has been archaeologically surveyed by La Plata Archeology. Copies of their report have been submitted directly to the BLM, FIMO, BIA &amp; NNHPD.

A new 357.9' on lease access road will be built on IA lands.

A new 3835.4' on lease pipeline will be built on BLM and IA lands.

Facilities will be remotely located at the 23-8-18D Remote Facilities Pad.

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 LANDSDRILLING 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 3165.4NMOCD  
FY



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 30-045-35751		*Pool Code 98157	*Pool Name LYBROOK MANCOS W
*Property Code 315250	*Property Name W LYBROOK UNIT		*Well Number 746H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6778

<sup>10</sup> Surface Location

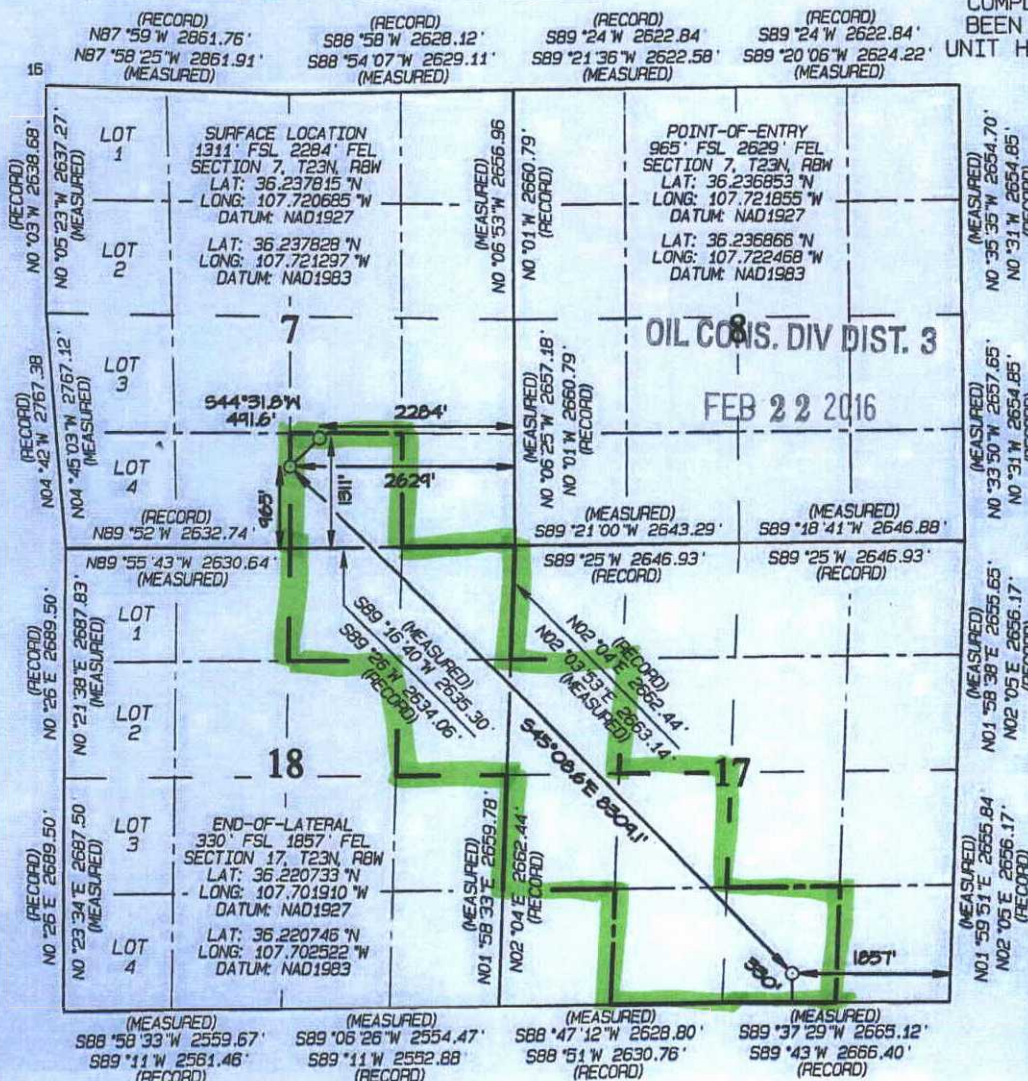
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	7	23N	8W		1311	SOUTH	2284	EAST	SAN JUAN

<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
0	17	23N	8W		330	SOUTH	1857	EAST	SAN JUAN

*Dedicated Acres 360.00	SW/4 SE/4 - Section 7 SW/4 NW/4, N/2 SW/4 SE/4 SW/4, SW/4 SE/4 - Section 17 N/2 NE/4, SE/4 NE/4 - Section 18	*Joint or Infill	*Consolidation Code	*Order No. R-14051 - 12,807.24 Acres
----------------------------	---	------------------	---------------------	---

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: 12/28/2015

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: DECEMBER 15, 2015  
Date of Survey: MAY 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:** December 28, 2015  
**Well Name:** W Lybrook Unit #746  
**SH Location:** SWSE Sec 7-23N-08W  
**BH Location:** SWSE Sec 17-23N-08W

**Field:** Lybrook Mancos W  
**Surface:** IA  
**Elevation:** 6778' GR  
**Minerals:** IA

**Measured Depth:** 13,861.37'

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

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

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	763	763	POINT LOOKOUT	3,827	3,750
KIRTLAND	973	971	MANCOS	4,019	3,937
PICTURED CLIFFS	1,357	1,347	GALLUP	2,560	4,286
LEWIS	1,472	1,458	KICKOFF POINT	4,355.69	4,264.13
CHACRA	1,738	1,717	TOP TARGET	5,313	5,013
CLIFF HOUSE	2,843	2,792	LANDING POINT	5,551.64	5,054.00
MENEFEE	2,893	2,841	BASE TARGET	5,551.64	5,054.00
			TD	13,861.37	4,943.00

**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"	5,551.64'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5401.64' - 13,861.37'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5401.64'	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: 107 bbls, 306 sks, (603 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 89 bbls, 383 sks, (498 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 219 bbl Drilling mud or water.  
Total Cement: 196 bbls, 689 sks, (1101 cuft)  
STAGE 2: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 37 bbls, 105 sks, (205 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/ +/- 64 bbl Drilling mud or water.  
Total Cement: 53 bbls, 184 sks, (296 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 (829 sx /1127 cuft /201 bbls). Tail Spacer: 20 BBL of MMCR.  
Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (829 sx /1127bbls).

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# 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 R8W**

**W Lybrook 2308-07O**

**W Lybrook 2308-07O #746H**

**Wellbore #1**

**Plan: Design #1 2Dec15 sam**

## **Standard Planning Report**

**04 December, 2015**

# WPX

## Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook 2308-07O #746H
Company:	WPX Energy	TVD Reference:	KB @ 6803.00usft (Aztec 1000)
Project:	T23N R8W	MD Reference:	KB @ 6803.00usft (Aztec 1000)
Site:	W Lybrook 2308-07O	North Reference:	True
Well:	W Lybrook 2308-07O #746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2Dec15 sam		

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	W Lybrook 2308-07O		
Site Position:	Map	Northing:	1,905,858.53 usft
From:		Easting:	533,270.52 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	36.237905
		Longitude:	-107.720515
		Grid Convergence:	0.07 °

Well	W Lybrook 2308-07O #746H		
Well Position	+N/-S	-32.76 usft	Northing:
	+E/-W	-50.13 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	36.237815
		Longitude:	-107.720685
		Ground Level:	6,778.00 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	11/1/2015	9.28
			Dip Angle (°)
			62.94
			Field Strength (nT)
			50,017

Design	Design #1 2Dec15 sam		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (bearing)
			138.31

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	
525.00	0.00	0.00	525.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,192.72	13.35	282.64	1,186.69	16.95	-75.59	2.00	2.00	0.00	282.64	
4,355.69	13.35	282.64	4,264.13	176.82	-788.44	0.00	0.00	0.00	0.00	
5,149.76	60.00	135.19	4,938.77	-81.41	-612.10	9.00	5.87	-18.57	-150.57	Start 60 Tan #746H
5,209.76	60.00	135.19	4,968.77	-118.27	-575.48	0.00	0.00	0.00	0.00	End 60 Tan #746H
5,410.35	78.06	135.30	5,040.26	-250.73	-444.14	9.01	9.01	0.05	0.35	
5,551.64	90.77	134.92	5,054.00	-350.15	-345.10	8.99	8.99	-0.26	-1.69	POE #746H
13,861.37	90.77	134.92	4,943.00	-6,217.68	5,538.04	0.00	0.00	0.00	0.00	BHL #746H



**WPX**  
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook 2308-07O #746H
Company:	WPX Energy	TVD Reference:	KB @ 6803.00usft (Aztec 1000)
Project:	T23N R8W	MD Reference:	KB @ 6803.00usft (Aztec 1000)
Site:	W Lybrook 2308-07O	North Reference:	True
Well:	W Lybrook 2308-07O #746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2Dec15 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	
345.00	0.00	0.00	345.00	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	
525.00	0.00	0.00	525.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
1,000.00	9.50	282.64	997.83	8.60	-38.34	-31.92	2.00	2.00	0.00	
1,192.72	13.35	282.64	1,186.69	16.95	-75.59	-62.93	2.00	2.00	0.00	
Hold 13.35 Inclination										
1,500.00	13.35	282.64	1,485.66	32.48	-144.84	-120.59	0.00	0.00	0.00	
2,000.00	13.35	282.64	1,972.14	57.76	-257.53	-214.41	0.00	0.00	0.00	
2,500.00	13.35	282.64	2,458.62	83.03	-370.21	-308.24	0.00	0.00	0.00	
3,000.00	13.35	282.64	2,945.10	108.30	-482.90	-402.06	0.00	0.00	0.00	
3,500.00	13.35	282.64	3,431.58	133.57	-595.59	-495.88	0.00	0.00	0.00	
4,000.00	13.35	282.64	3,918.06	158.85	-708.28	-589.70	0.00	0.00	0.00	
4,355.69	13.35	282.64	4,264.13	176.82	-788.44	-656.45	0.00	0.00	0.00	
Start Build DLS 9.00 TFO -150.57										
4,500.00	6.65	210.04	4,406.62	173.23	-808.97	-667.41	9.00	-4.65	-50.31	
5,000.00	46.66	137.59	4,849.53	5.20	-694.91	-466.08	9.00	8.00	-14.49	
5,149.76	60.00	135.19	4,938.77	-81.41	-612.10	-346.33	9.00	8.91	-1.61	
Hold 60.00 Inclination										
5,209.76	60.00	135.19	4,968.77	-118.27	-575.48	-294.44	0.00	0.00	0.00	
Start Build DLS 9.01 TFO 0.35										
5,410.35	78.06	135.30	5,040.26	-250.73	-444.14	-108.17	9.01	9.01	0.05	
Start DLS 8.99 TFO -1.69										
5,500.00	86.12	135.06	5,052.58	-313.66	-381.59	-19.58	8.99	8.99	-0.27	
5,551.00	90.71	134.93	5,053.99	-349.70	-345.55	31.30	8.99	8.99	-0.26	
7"										
5,551.64	90.77	134.92	5,054.00	-350.15	-345.10	31.94	8.99	8.99	-0.26	
POE at 90.77 Inc 134.92 Deg										
6,000.00	90.77	134.92	5,048.01	-666.74	-27.67	479.48	0.00	0.00	0.00	
6,500.00	90.77	134.92	5,041.33	-1,019.79	326.32	978.56	0.00	0.00	0.00	
7,000.00	90.77	134.92	5,034.65	-1,372.84	680.31	1,477.64	0.00	0.00	0.00	
7,500.00	90.77	134.92	5,027.97	-1,725.89	1,034.30	1,976.73	0.00	0.00	0.00	
8,000.00	90.77	134.92	5,021.30	-2,078.94	1,388.29	2,475.81	0.00	0.00	0.00	
8,500.00	90.77	134.92	5,014.62	-2,432.00	1,742.29	2,974.89	0.00	0.00	0.00	
9,000.00	90.77	134.92	5,007.94	-2,785.05	2,096.28	3,473.97	0.00	0.00	0.00	
9,500.00	90.77	134.92	5,001.26	-3,138.10	2,450.27	3,973.06	0.00	0.00	0.00	
10,000.00	90.77	134.92	4,994.58	-3,491.15	2,804.26	4,472.14	0.00	0.00	0.00	
10,500.00	90.77	134.92	4,987.90	-3,844.21	3,158.25	4,971.22	0.00	0.00	0.00	
11,000.00	90.77	134.92	4,981.22	-4,197.26	3,512.24	5,470.31	0.00	0.00	0.00	
11,500.00	90.77	134.92	4,974.54	-4,550.31	3,866.23	5,969.39	0.00	0.00	0.00	
12,000.00	90.77	134.92	4,967.86	-4,903.36	4,220.22	6,468.47	0.00	0.00	0.00	
12,500.00	90.77	134.92	4,961.19	-5,256.41	4,574.21	6,967.56	0.00	0.00	0.00	
13,000.00	90.77	134.92	4,954.51	-5,609.47	4,928.20	7,466.64	0.00	0.00	0.00	
13,500.00	90.77	134.92	4,947.83	-5,962.52	5,282.20	7,965.72	0.00	0.00	0.00	
13,861.37	90.77	134.92	4,943.00	-6,217.68	5,538.04	8,326.43	0.00	0.00	0.00	
TD at 13836.37										



# WPX

## Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well W Lybrook 2308-070 #746H
Company:	WPX Energy	TVD Reference:	KB @ 6803.00usft (Aztec 1000)
Project:	T23N R8W	MD Reference:	KB @ 6803.00usft (Aztec 1000)
Site:	W Lybrook 2308-070	North Reference:	True
Well:	W Lybrook 2308-070 #746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 2Dec15 sam		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Start 60 Tan #746H	0.00	0.00	4,938.77	-81.41	-612.10	1,905,743.59	532,608.43	36.237591	-107.722761
- plan hits target center									
- Point									
BHL #746H	0.00	0.00	4,943.00	-6,217.68	5,538.04	1,899,614.47	538,765.69	36.220733	-107.701910
- plan hits target center									
- Point									
End 60 Tan #746H	0.00	0.00	4,968.77	-118.27	-575.48	1,905,706.77	532,645.09	36.237490	-107.722637
- plan hits target center									
- Point									
POE #746H	0.00	0.00	5,054.00	-350.15	-345.10	1,905,475.16	532,875.74	36.236853	-107.721855
- plan misses target center by 0.02usft at 5551.64usft MD (5053.98 TVD, -350.15 N, -345.09 E)									
- Point									

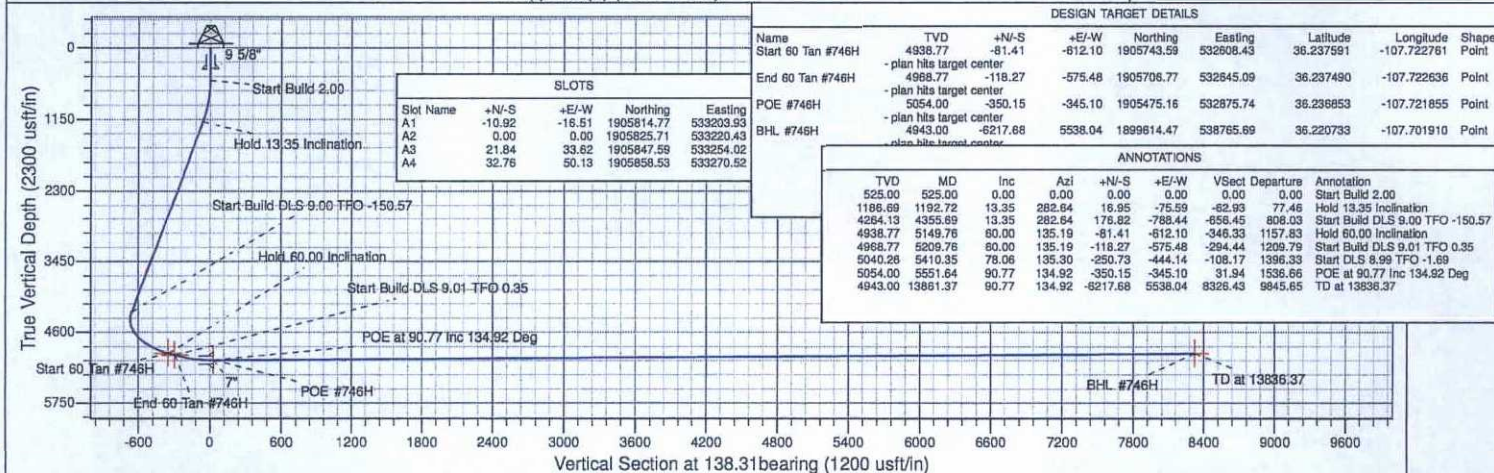
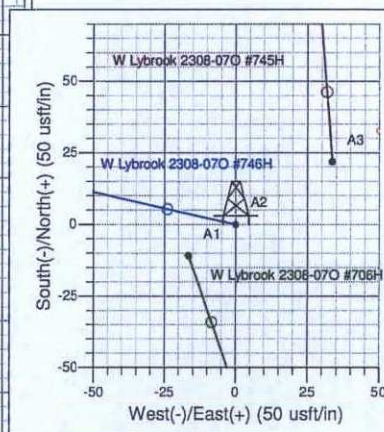
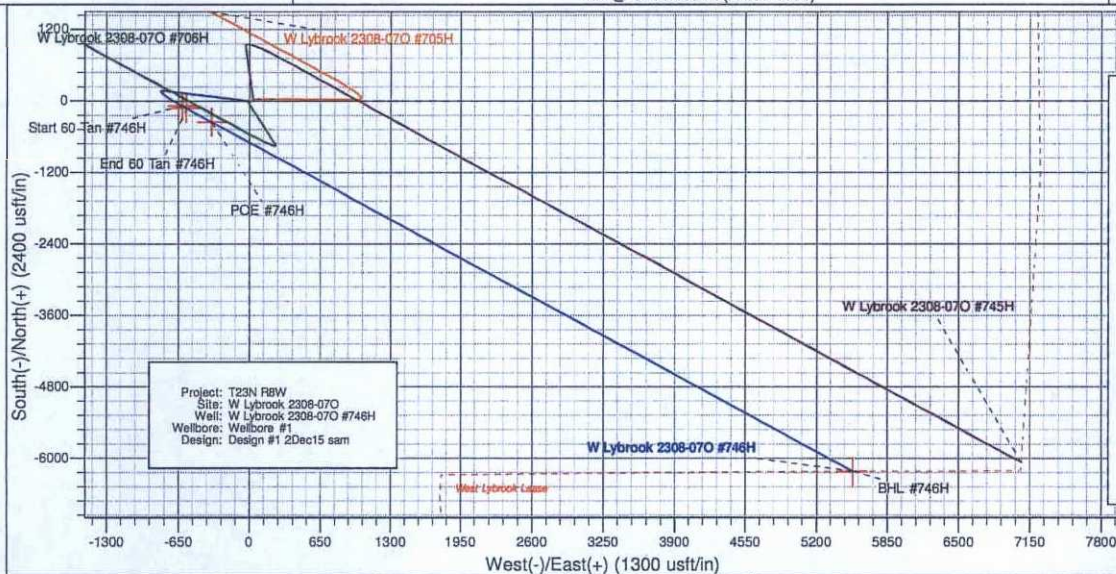
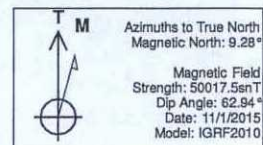
Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(usft)	(usft)			(in)	(in)
345.00	345.00	9 5/8"		9.625	12.250
5,551.00	5,053.99	7"		7.000	8.750

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
525.00	525.00	0.00	0.00	Start Build 2.00	
1,192.72	1,186.69	16.95	-75.59	Hold 13.35 Inclination	
4,355.69	4,264.13	176.82	-788.44	Start Build DLS 9.00 TFO -150.57	
5,149.76	4,938.77	-81.41	-612.10	Hold 60.00 Inclination	
5,209.76	4,968.77	-118.27	-575.48	Start Build DLS 9.01 TFO 0.35	
5,410.35	5,040.26	-250.73	-444.14	Start DLS 8.99 TFO -1.69	
5,551.64	5,054.00	-350.15	-345.10	POE at 90.77 Inc 134.92 Deg	
13,861.37	4,943.00	-6,217.68	5,538.04	TD at 13836.37	





Well Name: W Lybrook 2308-07O #746H  
 Surface Location: W Lybrook 2308-07O  
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003  
 Ground Elevation: 6778.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1905825.71 533220.43 36.237815 -107.720685  
 KB @ 6803.00usft (Aztec 1000)





## 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 Figures 4a and 4b in Appendix B for the location of toilets).
- E. Garbage and other water material
  - 1. All garbage and trash will be placed in a metal trash basket. The trash and garbage will be hauled off site and dumped in an approved landfill, as needed.
- F. Hazardous Waste
  - 1. No chemicals subject to reporting under Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
  - 2. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
  - 3. All fluids (i.e., scrubber cleaners) used during washing of production equipment will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.
- G. Produced Water:
  - 1. WPX Energy will dispose of produced water from this well at one of the following facilities:
    - a. Lybrook Yard WDW #1, API #30-039-27533, NMOCD permit #SWD-907, operated by Elm Ridge Resources, located in NE ¼, Section 14, Township 23 North, Range 7 West
    - b. Jillson Federal #1, NMOCD order #R-10168, operated by ConocoPhillips, located in NW ¼, Section 8, Township 24 North, Range 3 West
    - c. Basin Disposal, permit #NM-01-005, located in the NW ¼, Section 3, Township 29 North, Range 11 West
    - d. Sunco SWD #001, API #30-045-28653, NMOCD permit SWD-457, operated by Key Energy, located in NW ¼, Section 2, Township 29 North, Range 12 West



**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to WPX Energy Production, LLC Remote Facilities Pad 23-8-18D**

**451' FNL & 896' FWL, Section 18, T23N, R8W, N.M.P.M., San Juan County, NM**

**Latitude: 36.232985°N Longitude: 107.728379°W Datum: NAD1983**

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

Go Right (South-westerly) on County Road #7890 for 0.8 miles to new access on left-hand side of existing roadway which continues for 110.8' to staked WPX Remote Facilities Pad 23-8-18D location.



3,000 PSI rated Choke system

