

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;

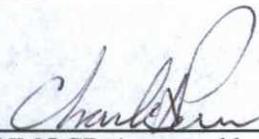
Operator WPX, Well Name and Number W Lybrook Unit # 746 H

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 3160-3
(September 2001)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Farmington 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		8. Lease Name and Well No. W LYBROOK UNIT #746H
3b. Phone No. (include area code) (505) 333-1808		9. API Well No. 30-045-35751
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		10. Field and Pool, or Exploratory LYBROOK MANCOS W
14. Distance in miles and direction from nearest town or post office* Approximately 38 miles southeast of Bloomfield, NM		11. Sec., T., R., M., or Blk. and Survey or Area SHL: SEC 7 23N 8W BHL: SEC 17 23N 8W
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	12. County or Parish San Juan County
17. Spacing Unit dedicated to this well 360' ACRES	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20'	19. Proposed Depth 13861' MD / 4943' TVD	20. BLM/BIA Bond No. on file B001576
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6778' GR	22. Approximate date work will start* April 1, 2016	23. Estimated duration 1 month

OIL CONS. DIV DIST. 3

FEB 22 2016

HP

24. Attachments

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

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- 5. Operator certification.
- 6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) Marie 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 & 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 LANDS

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

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

NMOCD
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
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6778

¹⁰ Surface Location

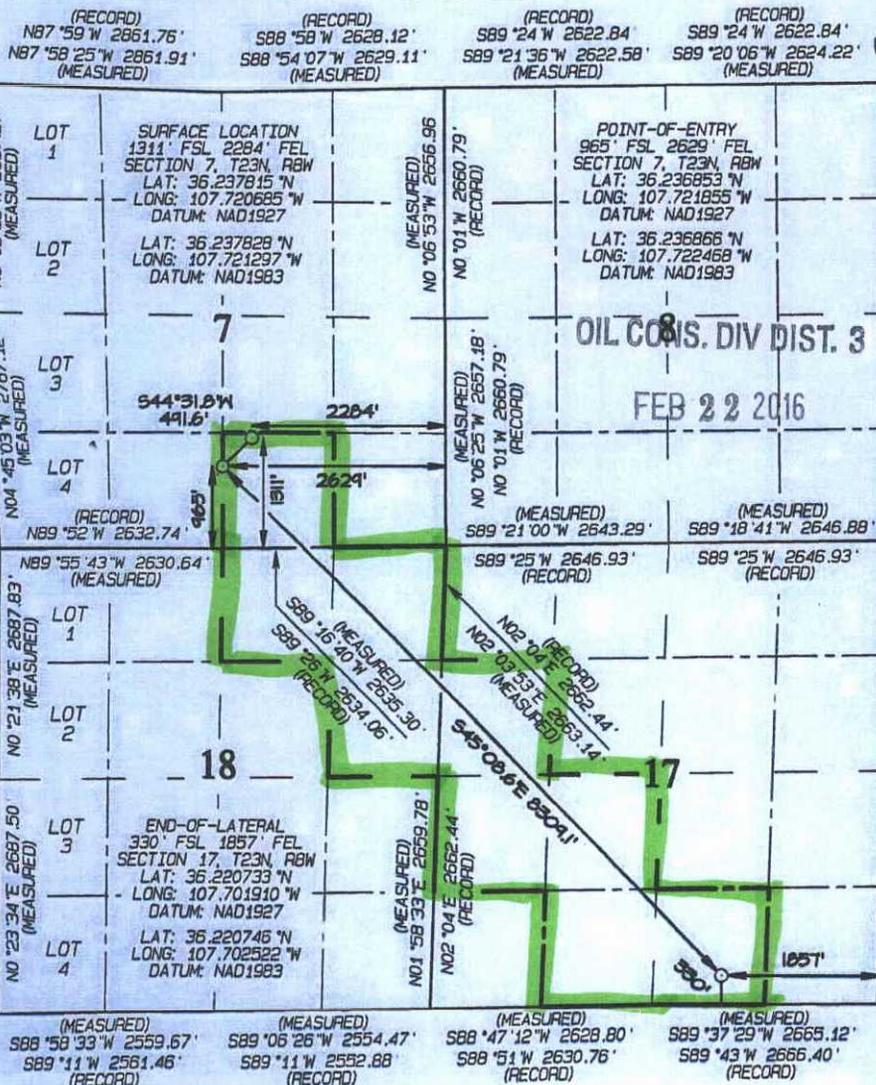
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	7	23N	8W		1311	SOUTH	2284	EAST	SAN JUAN

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

¹² 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	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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



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.

Signature: *Marie E. Jaramillo* Date: 12/28/2015
Printed Name: Marie E. Jaramillo
E-mail Address: marie.jaramillo@wpxenergy.com

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: 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	Field:	Lybrook Mancos W
Well Name:	W Lybrook Unit #746	Surface:	IA
SH Location:	SWSE Sec 7-23N-08W	Elevation:	6778' GR
BH Location:	SWSE Sec 17-23N-08W	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:	Northing:	1,905,858.53 usft	Latitude: 36.237905
From: Map	Easting:	533,270.52 usft	Longitude: -107.720515
Position Uncertainty:	0.00 usft	Slot Radius: 13.200 in	Grid Convergence: 0.07 °

Well	W Lybrook 2308-07O #746H		
Well Position	+N/-S	-32.76 usft	Northing: 1,905,825.71 usft
	+E/-W	-50.13 usft	Easting: 533,220.43 usft
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) (usft)	+N/-S (usft)	+E/-W (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 2308-070 #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		

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	0.00
345.00	0.00	0.00	345.00	0.00	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	0.00
525.00	0.00	0.00	525.00	0.00	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	0.00
1,192.72	13.35	282.64	1,186.69	16.95	-75.59	-62.93	2.00	2.00	0.00	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	0.00
2,000.00	13.35	282.64	1,972.14	57.76	-257.53	-214.41	0.00	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	0.00
3,000.00	13.35	282.64	2,945.10	108.30	-482.90	-402.06	0.00	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	0.00
4,000.00	13.35	282.64	3,918.06	158.85	-708.28	-589.70	0.00	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	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	0.00
5,000.00	46.66	137.59	4,849.53	5.20	-694.91	-466.08	9.00	8.00	-14.49	0.00
5,149.76	60.00	135.19	4,938.77	-81.41	-612.10	-346.33	9.00	8.91	-1.61	0.00
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	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	0.00
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	0.00
5,551.00	90.71	134.93	5,053.99	-349.70	-345.55	31.30	8.99	8.99	-0.26	0.00
7"										
5,551.64	90.77	134.92	5,054.00	-350.15	-345.10	31.94	8.99	8.99	-0.26	0.00
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.00
TD at 13836.37										

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		

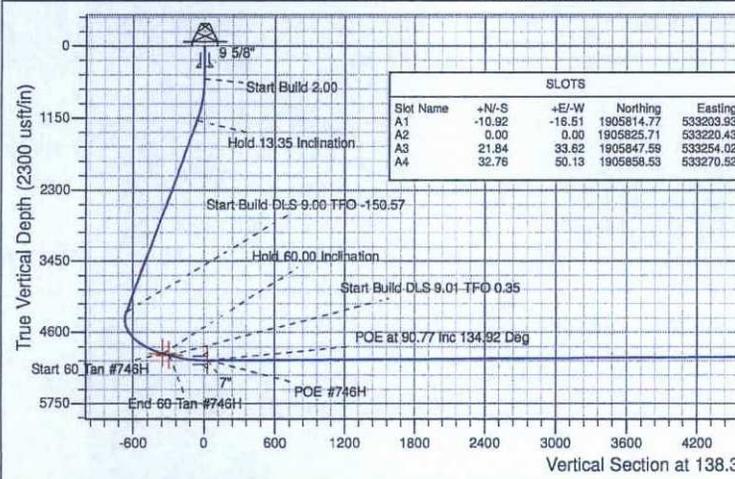
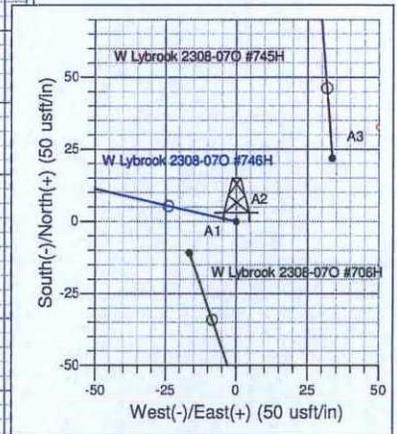
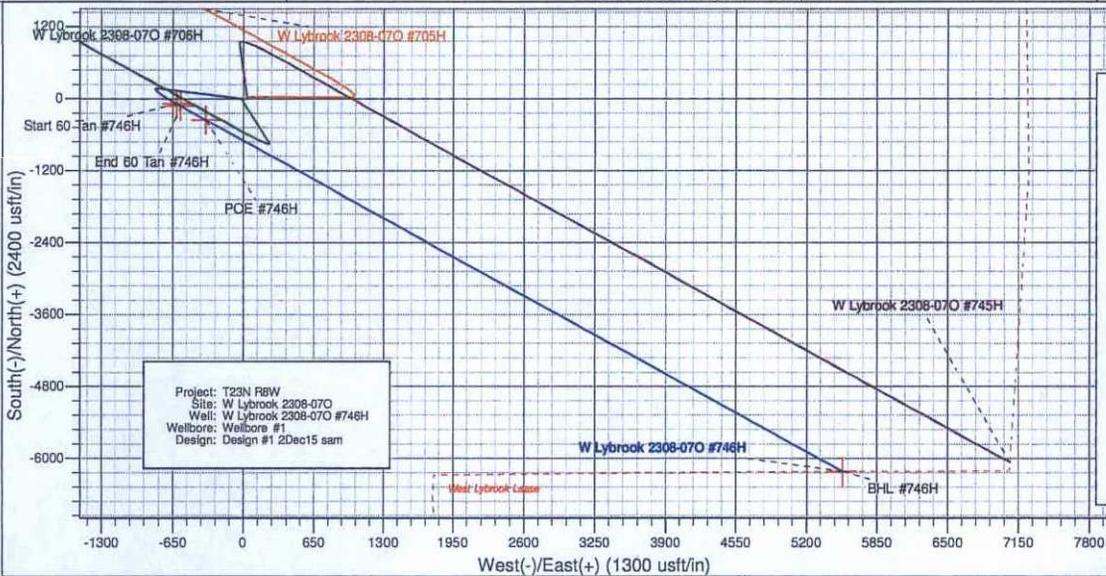
Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape)							
Start 60 Tan #746H - plan hits target center - Point	0.00	0.00	4,938.77	-81.41	-612.10	1,905,743.59	532,608.43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

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

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
525.00	525.00	0.00	0.00	Start Build 2.00	
1,192.72	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 2308-070 #746H
 Surface Location: W Lybrook 2308-070
 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)



Slot Name	+N/-S	+E/-W	Northing	Easting
A1	-10.92	-16.51	1905814.77	533203.93
A2	0.00	0.00	1905825.71	533220.43
A3	21.84	33.62	1905847.59	533254.02
A4	32.76	50.13	1905858.53	533270.52

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 Tan #746H	4936.77	-81.41	-612.10	1905743.59	532608.43	36.237591	-107.722761	Point
End 60 Tan #746H	4988.77	-118.27	-575.48	1905706.77	532645.09	36.237490	-107.722636	Point
POE #746H	5054.00	-350.15	-345.10	1905475.16	532875.74	36.238953	-107.721855	Point
BHL #746H	4943.00	-6217.68	5538.04	1899614.47	538765.69	36.220733	-107.701910	Point

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
525.00	525.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
1196.69	1192.72	13.35	282.64	16.95	-75.59	-62.93	77.46	Hold 13.35 Inclination	
4264.13	4355.69	13.35	282.64	178.82	-788.44	-856.45	806.03	Start Build DLS 9.00 TFO -150.57	
4988.77	5149.76	60.00	135.19	-81.41	-612.10	-346.33	1157.83	Hold 60.00 Inclination	
4988.77	5209.76	80.00	135.19	-118.27	-575.48	-294.44	1209.79	Start Build DLS 9.01 TFO 0.35	
5040.28	5410.85	78.06	135.30	-250.73	-444.14	-108.17	1396.33	Start DLS 8.99 TFO -1.69	
5054.00	5551.64	90.77	134.92	-350.15	-345.10	31.94	1536.66	POE at 90.77 Inc 134.92 Deg	
4943.00	13661.37	90.77	134.92	-6217.68	5538.04	8326.43	9845.65	TD at 13836.37	

BHL #746H TD at 13836.37

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

