RECEIVED

MAR 29 2017

Farmington Field Office
Bureau of Land Management

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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 ☒ Oil Well ☐ Gas Well ☐ Other OIL CONS. DIV DIST. 3	5. Lease Serial No. **N0-G-1403-1908**
	6. If Indian, Allottee or Tribe Name
	7. If Unit of CA/Agreement, Name and/or No. **NMNM 135216A**
	8. Well Name and No. **W Lybrook Unit 743H**
2. Name of Operator **WPX Energy Production, LLC** APR 07 2017	9. API Well No. **30-045-35729**
3a. Address **PO Box 640 Aztec, NM 87410** 3b. Phone No. *(include area code)* **505-333-1808**	10. Field and Pool or Exploratory Area **Lybrook Mancos W**
4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* **SHL: 1209' FSL & 1346' FWL, Sec 8, T23N, R8W** **BHL: 940'FNL & 335' FEL, Sec 17 T23N, R8W**	11. Country or Parish, State **San Juan, NM**

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☒ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other **Lateral Change**
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ 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 recomplete 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 inadvertently moved the drilling direction of the W Lybrook Unit #743H lateral from the original permitted plan previously approved in the APD and failed to submit an NOI stating the change of plans.
Attached are the accurate plans in accordance with what was drilled.
C102, Ops plan, directional plan and the planning process.

ACCEPTED FOR RECORD

APR 04 2017

FARMINGTON FIELD OFFICE
BY:

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/Typed)* Lacey Granillo — Title Permit Tech III

Signature — Date 3/28/17

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
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	

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.

NMOCD

W Lybrook #743H

The WLU 703 pad was originally planned and permitted as a 4 well pad, with 2 wells drilling to the NW (#703H & #704H) and 2 drilling to the SE (#743H & #744H). In October 2016, we decided that we wanted to do a spacing test on this pad and so 1 well was added to the NW (#711H) and 1 well to the SE (#713H). Our GIS Specialist laid out all 6 laterals point of entry and bottom hole locations and tied these to the surface locations on the pad. These data were sent to the directional planner to create new plans. To help with the anti-collision, surface locations were swapped for all but the #743H. Then the well names were swapped on the plans so that the permitted wells would keep the same surface locations and only have bottom hole sundries. The #743H plan remained unchanged as the surface and lateral location had not moved from what we provided the directional planner. Therefore, when I reviewed the wells prior to resubmittal, I only requested sundries on the #703H, #704H & #744H and new permits for the #711H & #713H.

In January 2017, we began drilling operations on this pad and drilled all 6 laterals as we had planned. It was not until we submitted our as drilled plats that the NMOCD questioned us on the location of the #743H lateral. The failure to sundry the #743H bottom hole was a simple oversight that should not have happened, and we have since been reviewing our internal processes to look for potential pitfalls. Going forward, we have added more checks to our planning process and additional sign-offs for the directional plans going to the rig, to be sure they match the APDs. In addition, we will continue to look for opportunities to improve our planning process and operations in the San Juan Basin.

		Internal Intermediate Planning		
Well #	**Original Permit OCD**	**New POE & BHL**	**Final Plans**	**Final permit/Sundry OCD**
703	5/13/2016	Change	Change	12/12/16 (Sundry)
704	5/13/2016	Change	Change	12/12/16 (Sundry)
743	5/13/2016	Change	No Change	5/13/2016 (Original permit)
744	5/13/2016	Change	Change	12/12/16 (Sundry)
711	NA	Add	Change	12/13/2016
713	NA	Add	Change	12/13/2016
		Moved to new locations for spacing test	BHL names corrected to keep SHL's consistent with existing permits	

Trevor Gates

WPX Geoscientist SJB

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

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045-35729	98157	LYBROOK MANCOS W

4 Property Code	5 Property Name	6 Well Number
315250	W LYBROOK UNIT	743H

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6823

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
N	8	23N	8W		1209	SOUTH	1346	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	17	23N	8W		940	NORTH	335	EAST	SAN JUAN

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
200.00	NE/4 SW/4, W/2 SE/4 SE/4 SE/4 - Section 8 NE/4 NE/4 - Section 17			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

POINT-OF-ENTRY
1940 FSL 2069 FWL
SECTION 8, T23N, R8W
LAT: 36.239672 °N
LONG: 107.705926 °W
DATUM: NAD1927

LAT: 36.239684 °N
LONG: 107.706538 °W
DATUM: NAD1983

SURFACE LOCATION
1209 FSL 1346' FWL
SECTION 8, T23N, R8W
LAT: 36.237641 °N
LONG: 107.708376 °W
DATUM: NAD1927

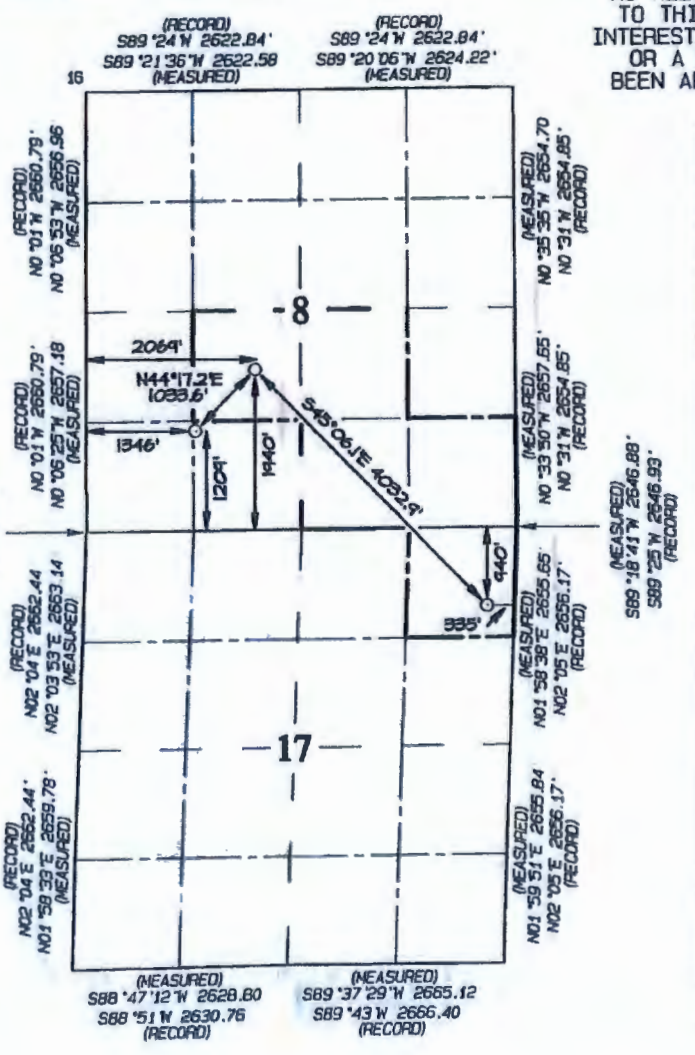
LAT: 36.237654 °N
LONG: 107.708988 °W
DATUM: NAD1983

MAX PERFORATION
897' FNL 384' FEL
SECTION 17, T23N, R8W
LAT: 36.231957 °N
LONG: 107.696415 °W
DATUM: NAD1927

LAT: 36.231970 °N
LONG: 107.697027 °W
DATUM: NAD1983

END-OF-LATERAL
940' FNL 335' FEL
SECTION 17, T23N, R8W
LAT: 36.231841 °N
LONG: 107.696252 °W
DATUM: NAD1927

LAT: 36.231854 °N
LONG: 107.696864 °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.

Signature 3-28-17 Date

Printed Name

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: MARCH 20, 2017
Date of Survey: MAY 20, 2015

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPX Energy

Operations Plan

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

Date:	March 28, 2017	**Field:**	Lybrook Mancos W
Well Name:	W Lybrook UT 743H	**Surface:**	
SH Location:	SESW Sec 8 23N-08W	**Elevation:**	6823' GR
BH Location:	NENE Sec 17 23N-08W	**Minerals:**	

Measured Depth: 9,827.02'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (GR)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	858.00	858.00	POINT LOOKOUT	4,022.00	3,845.00
KIRTLAND	1,066.00	1,066.00	MANCOS	4,225.00	4,032.00
PICTURED CLIFFS	1,443.00	1,442.00	GALLUP	4,605.00	4,381.00
LEWIS	1,555.00	1,553.00	KICKOFF POINT	4,552.62	4,332.35
CHACRA	1,820.00	1,812.00	TOP TARGET	5,452.00	5,063.00
CLIFF HOUSE	2,978.00	2,887.00	LANDING POINT	5,800.83	5,149.00
MENEFEE	3,031.00	2,936.00	BASE TARGET	5,800.83	5,149.00
			TD	9,827.02	5,063.00

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 ¾" 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"	5,800.83'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5650.83' - 9,827.02'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5650.83'	4.5"	11.6 LBS	P-110 or equiv	LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING:

9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.

2. INTERMEDIATE CASING:

7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. 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: 112 bbls, 319 sks, (629 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/ +/- 228 bbl Drilling mud or water. Total Cement: 171 bbls, 573 sks, (959 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 (409 sx /556 cuft /99 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-124bbl Fr Water. Total Cement (409 sx /556bbls).

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.

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 SM

WPX Energy

T23N R8W
2308-08N WLU
W Lybrook UT #743H - Slot 743H

Wellbore #1

Plan: Plan #2 26Oct16 kjs

Standard Planning Report - Geographic

28 October, 2016

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #743H - Slot 743H
Company:	WPX Energy	**TVD Reference:**	GL @ 6823.00usft (Original Well Elev)
Project:	T23N R8W	**MD Reference:**	GL @ 6823.00usft (Original Well Elev)
Site:	2308-08N WLU	**North Reference:**	True
Well:	W Lybrook UT #743H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 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:**	1,908,343.71 usft	**Latitude:**	36.239225
From:	Map	**Easting:**	537,196.07 usft	**Longitude:**	-107.707202
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.07 °

Well	W Lybrook UT #743H - Slot 743H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	1,905,766.82 usft	**Latitude:**	36.237641
	+E/-W	0.00 usft	**Easting:**	536,850.48 usft	**Longitude:**	-107.708376
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	9/23/2015	9.29	62.94	50,029

Design	Plan #2 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	120.33

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	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,270.88	23.42	7.03	2,238.55	234.19	28.87	2.00	2.00	0.00	7.03	
4,552.62	23.42	7.03	4,332.35	1,134.21	139.83	0.00	0.00	0.00	0.00	
5,393.90	60.00	135.06	5,033.85	1,026.03	466.58	9.00	4.35	15.22	135.26	Start 60 tan 743H
5,453.90	60.00	135.06	5,063.85	989.25	503.28	0.00	0.00	0.00	0.00	
5,800.83	91.22	135.06	5,149.00	754.29	737.71	9.00	9.00	0.00	0.00	
9,827.02	91.22	135.06	5,063.00	-2,095.23	3,580.78	0.00	0.00	0.00	0.00	BHL 743H

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #743H - Slot 743H
Company:	WPX Energy	**TVD Reference:**	GL @ 6823.00usft (Original Well Elev)
Project:	T23N R8W	**MD Reference:**	GL @ 6823.00usft (Original Well Elev)
Site:	2308-08N WLU	**North Reference:**	True
Well:	W Lybrook UT #743H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 26Oct16 kjs		

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	1,905,766.82	536,850.48	36.237641	-107.708376
200.00	0.00	0.00	200.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
351.00	0.00	0.00	351.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
9 5/8"									
400.00	0.00	0.00	400.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
600.00	0.00	0.00	600.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
800.00	0.00	0.00	800.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,905,766.82	536,850.48	36.237641	-107.708376
Start Build 2.00									
1,200.00	2.00	7.03	1,199.98	1.73	0.21	1,905,768.55	536,850.69	36.237646	-107.708376
1,400.00	6.00	7.03	1,399.45	15.58	1.92	1,905,782.40	536,852.38	36.237684	-107.708370
1,600.00	10.00	7.03	1,597.47	43.20	5.33	1,905,810.03	536,855.75	36.237760	-107.708358
1,800.00	14.00	7.03	1,793.06	84.46	10.41	1,905,851.29	536,860.79	36.237873	-107.708341
2,000.00	18.00	7.03	1,985.27	139.16	17.16	1,905,906.00	536,867.46	36.238023	-107.708318
2,200.00	22.00	7.03	2,173.17	207.04	25.52	1,905,973.89	536,875.74	36.238210	-107.708290
2,270.88	23.42	7.03	2,238.55	234.19	28.87	1,906,001.05	536,879.05	36.238284	-107.708278
Hold 23.42° Inc, 7.03° Az									
2,400.00	23.42	7.03	2,357.04	285.12	35.15	1,908,051.99	536,885.27	36.238424	-107.708257
2,600.00	23.42	7.03	2,540.56	364.01	44.88	1,906,130.89	536,894.89	36.238641	-107.708224
2,800.00	23.42	7.03	2,724.09	442.90	54.60	1,906,209.79	536,904.52	36.238858	-107.708191
3,000.00	23.42	7.03	2,907.62	521.79	64.33	1,906,288.69	536,914.14	36.239075	-107.708158
3,200.00	23.42	7.03	3,091.14	600.68	74.06	1,906,367.60	536,923.76	36.239291	-107.708125
3,400.00	23.42	7.03	3,274.67	679.57	83.78	1,906,446.50	536,933.39	36.239508	-107.708092
3,600.00	23.42	7.03	3,458.20	758.46	93.51	1,906,525.40	536,943.01	36.239725	-107.708059
3,800.00	23.42	7.03	3,641.72	837.34	103.23	1,906,604.30	536,952.64	36.239941	-107.708026
4,000.00	23.42	7.03	3,825.25	916.23	112.96	1,906,683.20	536,962.26	36.240158	-107.707993
4,200.00	23.42	7.03	4,008.78	995.12	122.69	1,906,762.10	536,971.89	36.240375	-107.707960
4,400.00	23.42	7.03	4,192.30	1,074.01	132.41	1,906,841.00	536,981.51	36.240592	-107.707927
4,552.62	23.42	7.03	4,332.35	1,134.21	139.83	1,906,901.21	536,988.85	36.240757	-107.707902
KOP 9°/100									
4,600.00	20.60	15.58	4,376.29	1,151.59	143.23	1,906,918.60	536,992.22	36.240805	-107.707891
4,800.00	17.02	72.65	4,567.08	1,194.56	180.93	1,906,961.61	537,029.88	36.240923	-107.707763
5,000.00	28.03	111.57	4,752.50	1,185.94	253.18	1,906,953.09	537,102.13	36.240899	-107.707518
5,200.00	43.72	127.01	4,914.38	1,126.57	352.89	1,906,893.85	537,201.92	36.240736	-107.707180
5,393.90	60.00	135.06	5,033.85	1,026.03	466.58	1,906,793.45	537,315.74	36.240460	-107.706794
Hold 60° Tangent									
5,400.00	60.00	135.06	5,036.90	1,022.29	470.31	1,906,789.72	537,319.47	36.240449	-107.706781
5,453.90	60.00	135.06	5,063.85	989.25	503.28	1,906,756.72	537,352.49	36.240359	-107.706670
Begin 9°/100 Build									
5,600.00	73.15	135.06	5,121.81	894.55	597.76	1,906,662.15	537,447.09	36.240099	-107.706349
5,800.00	91.15	135.06	5,149.01	754.88	737.12	1,906,522.65	537,586.63	36.239715	-107.705877
5,800.83	91.22	135.06	5,149.00	754.29	737.71	1,906,522.06	537,587.22	36.239713	-107.705875
POE 91.22° Inc, 135.06° Az									
5,801.00	91.22	135.06	5,148.99	754.17	737.83	1,906,521.94	537,587.34	36.239713	-107.705874
7"									
6,000.00	91.22	135.06	5,144.74	613.33	878.35	1,906,381.28	537,728.04	36.239326	-107.705398
6,200.00	91.22	135.06	5,140.47	471.78	1,019.58	1,906,239.91	537,869.45	36.238937	-107.704919
6,400.00	91.22	135.06	5,136.20	330.23	1,160.81	1,906,098.55	538,010.86	36.238548	-107.704440
6,600.00	91.22	135.06	5,131.93	188.68	1,302.04	1,905,957.18	538,152.28	36.238159	-107.703961
6,800.00	91.22	135.06	5,127.65	47.13	1,443.27	1,905,815.81	538,293.69	36.237770	-107.703482
7,000.00	91.22	135.06	5,123.38	-94.42	1,584.50	1,905,674.45	538,435.10	36.237382	-107.703003
7,200.00	91.22	135.06	5,119.11	-235.97	1,725.72	1,905,533.08	538,576.51	36.236993	-107.702525

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #743H - Slot 743H
Company:	WPX Energy	**TVD Reference:**	GL @ 6823.00usft (Original Well Elev)
Project:	T23N R8W	**MD Reference:**	GL @ 6823.00usft (Original Well Elev)
Site:	2308-08N WLU	**North Reference:**	True
Well:	W Lybrook UT #743H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 26Oct16 kjs		

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
7,400.00	91.22	135.06	5,114.84	-377.52	1,866.95	1,905,391.71	538,717.92	36.236604	-107.702046
7,600.00	91.22	135.06	5,110.57	-519.07	2,008.18	1,905,250.35	538,859.33	36.236215	-107.701567
7,800.00	91.22	135.06	5,106.30	-660.61	2,149.41	1,905,108.98	539,000.74	36.235826	-107.701088
8,000.00	91.22	135.06	5,102.02	-802.16	2,290.64	1,904,967.61	539,142.16	36.235437	-107.700609
8,200.00	91.22	135.06	5,097.75	-943.71	2,431.87	1,904,826.25	539,283.57	36.235048	-107.700130
8,400.00	91.22	135.06	5,093.48	-1,085.26	2,573.10	1,904,684.88	539,424.98	36.234659	-107.699651
8,600.00	91.22	135.06	5,089.21	-1,226.81	2,714.33	1,904,543.51	539,566.39	36.234271	-107.699173
8,800.00	91.22	135.06	5,084.94	-1,368.36	2,855.56	1,904,402.15	539,707.80	36.233882	-107.698694
9,000.00	91.22	135.06	5,080.66	-1,509.91	2,996.79	1,904,260.78	539,849.21	36.233493	-107.698215
9,200.00	91.22	135.06	5,076.39	-1,651.46	3,138.01	1,904,119.41	539,990.62	36.233104	-107.697736
9,400.00	91.22	135.06	5,072.12	-1,793.01	3,279.24	1,903,978.04	540,132.03	36.232715	-107.697257
9,600.00	91.22	135.06	5,067.85	-1,934.56	3,420.47	1,903,836.68	540,273.45	36.232326	-107.696779
9,800.00	91.22	135.06	5,063.58	-2,076.11	3,561.70	1,903,695.31	540,414.86	36.231937	-107.696300
9,827.02	91.22	135.06	5,063.00	-2,095.23	3,580.78	1,903,676.21	540,433.96	36.231885	-107.696235
TD at 9827.02									

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 743H - plan hits target center - Point	0.00	0.00	5,033.85	1,026.03	466.58	1,906,793.45	537,315.74	36.240460	-107.706794
BHL 743H - plan hits target center - Point	0.00	0.00	5,063.00	-2,095.23	3,580.78	1,903,676.21	540,433.96	36.231885	-107.696235
POE 743H - plan misses target center by 0.01usft at 5800.83usft MD (5149.00 TVD, 754.29 N, 737.71 E) - Point	0.00	0.00	5,149.00	754.29	737.71	1,906,522.06	537,587.22	36.239713	-107.705875

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
351.00	351.00	9 5/8"	9.625	12.250
5,801.00	5,148.99	7"	7.000	8.750

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,100.00	1,100.00	0.00	0.00	Start Build 2.00
2,270.88	2,238.55	234.19	28.87	Hold 23.42° Inc, 7.03° Az
4,552.62	4,332.35	1,134.21	139.83	KOP 9°/100
5,393.90	5,033.85	1,026.03	466.58	Hold 60' Tangent
5,453.90	5,063.85	989.25	503.28	Begin 9°/100 Build
5,800.83	5,149.00	754.29	737.71	POE 91.22° Inc, 135.06° Az
9,827.02	5,063.00	-2,095.23	3,580.78	TD at 9827.02