

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 11-26-12

Well information:

Operator WPX, Well Name and Number Lybrook 23-6-19 #101H

API# 30-043-211310, Section 19, Township 23 NS, Range 6 EW

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
- ☒ 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

Charles L...
NMOCD Approved by Signature

7-2-2013
Date

JUL 09 2013 ca

RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

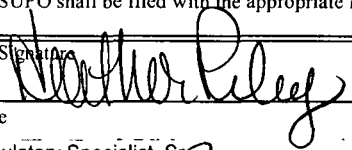
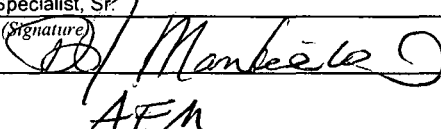
NOV 28 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER
Farrington Field Office
Bureau of Land Management

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMSF-078360	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ 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.	
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. Lybrook 23-6-19 #101H	
3b. Phone No. (include area code) (505) 333-1808		9. API Well No. 30-043-21136	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1779' FNL & 302' FWL, sec 19, T23N, R6W At proposed prod. zone 340' FNL & 340' FWL, sec 24, T23N, R7W		10. Field and Pool, or Exploratory Lybrook Gallup	
14. Distance in miles and direction from nearest town or post office* approximately 4 miles sotheast of Lybrook, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area Section 19, 23N, 6W	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 302'		12. County or Parish Sandoval County	
16. No. of Acres in lease 2565.24		13. State NM	
17. Spacing Unit dedicated to this well 160 acres N2N2		20. BLM/BIA Bond No. on file UTB000178	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1900'		RCVD JUN 26 '13	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6964' GR		22. Approximate date work will start* December 31, 2012	
23. Estimated duration 1 month		OIL CONS. DIV.	
24. Attachments DIST. 3			

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Heather Riley	Date 11/26/12
Title Regulatory Specialist, Sr.		
Approved by (Signature) 	Name (Printed/Typed) AEM	Date 6/25/13
Title Office PFO		

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 Gallup 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.

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

275 feet of new access road is needed.

NMCCD

N

This action is subject to technical and procedural review pursuant to 43 CFR 3160.3 and appeal pursuant to 43 CFR 3165.4

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

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

APD Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 26th day of November, 2012.

Name Heather Riley

Position Title Regulatory Specialist, Sr.

Address P.O. Box 640, Aztec, NM 87410

Telephone (505) 333-1808

Field representative (if not above signatory) _____

E-mail heather.riley@wpxenergy.com

Date: 11/26/2012



Heather Riley Regulatory Specialist Sr
WPX Energy Production, LLC

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
RECEIVED

NOV 28 2012

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30043-21136		*Pool Code 42289	*Pool Name LYBROOK GALLUP	Farmington Field Office Bureau of Land Management
*Property Code 39987	*Property Name LYBROOK 23-6-19			*Well Number 101H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 6964'

¹⁰ Surface Location

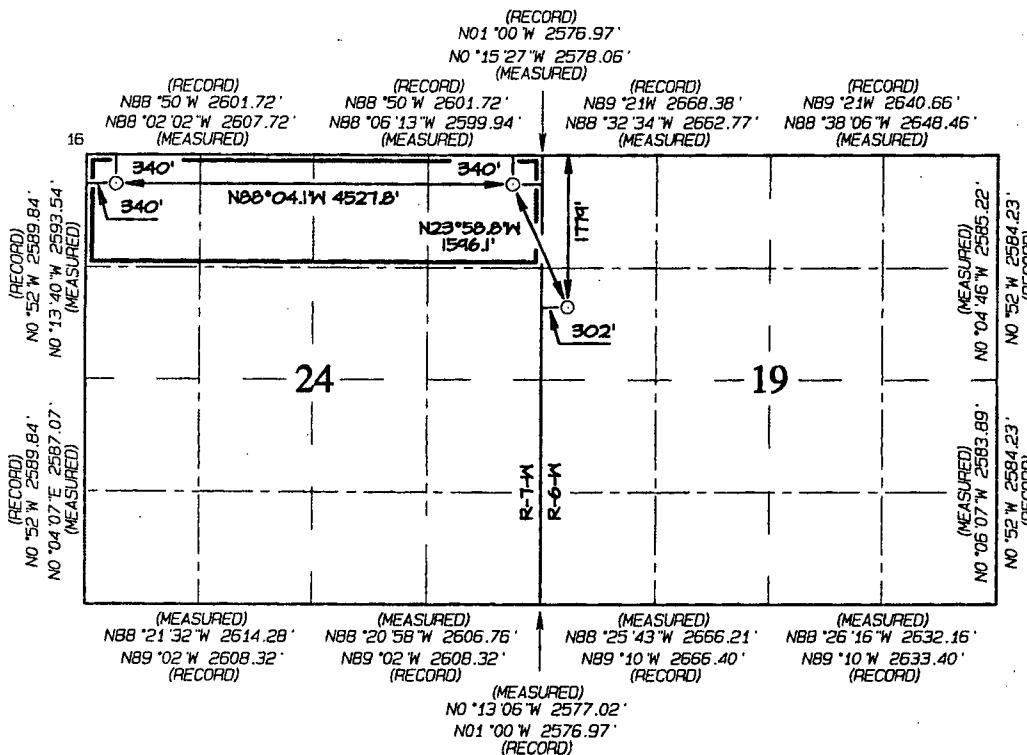
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	19	23N	6W	2	1779	NORTH	302	WEST	SANDOVAL

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
D	24	23N	7W		340	NORTH	340	WEST	SANDOVAL

¹² Dedicated Acres 160.0 Acres N/2 N/2 - Section 24	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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



END-OF-LATERAL
340' FNL 340' FWL
SECTION 24, T23N, R7W
LAT: 36.21753°N
LONG: 107.53435°W
DATUM: NAD1927

LAT: 36.21755°N
LONG: 107.53496°W
DATUM: NAD1983

POINT-OF-ENTRY
340' FNL 340' FEL
SECTION 24, T23N, R7W
LAT: 36.21727°N
LONG: 107.51900°W
DATUM: NAD1927

LAT: 36.21729°N
LONG: 107.51961°W
DATUM: NAD1983

SURFACE LOCATION
1779' FNL 302' FWL
SECTION 19, T23N, R6W
LAT: 36.21329°N
LONG: 107.51674°W
DATUM: NAD1927

LAT: 36.21331°N
LONG: 107.51735°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: *Larry Higgins* Date: **11/26/12**
Printed Name: **Larry Higgins**
E-mail Address: **larry.higgins@wpenergy.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 of Survey: **JULY 10, 2012**
Signature and Seal of Professional Surveyor:



JASON C. EDWARDS
Certificate Number 15269

WPXENERGY.

WPX ENERGY

Operations Plan

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

DATE: 12/05/2012 **FIELD:** Lybrook Gallup
WELL NAME: Lybrook 23-6-19 #101H **SURFACE:** BLM
S LOCATION: SWNW Sec 19-23N-6W **ELEVATION:** 6,964' GR
BH LOCATION: NWNW Sec 24-23N-7W **MINERALS:** Federal
Sandoval, NM
MEASURED DEPTH: 11,404' **LEASE #** NMSF-078360

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	1,326	1,326	Point Lookout	4,199	4,199
Kirtland	1,441	1,441	Mancos	4,395	4,395
Fruitland	1,672	1,672	Kickoff Point	4,634	4,634
Pictured Cliffs	1,918	1,918	Target Top	5,437	6,079
Lewis	2,011	2,011	Landing Point	5,538	6,874
Cliff House	3,409	3,409	Target Base	5,533	6,661
Menefee	3,479	3,479	Pilot Hole TD	6,050	6,050
			TD	5,438	11,404

- B. MUD LOGGING PROGRAM:** Mudlogger on location from surface csg to TD.
C. LOGGING PROGRAM: OH Wireline logs in pilot hole, TD to Surface Csg. LWD GR from KOP to TD.
D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.
E. CORE: Obtain 120' of conventional core in the pilot hole at approximately 5414'-5534' TVD.

II. DRILLING

- A. MUD PROGRAM:** LSND and Oil Base mud to intermediate casing point. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use synthetic or oil base invert emulsion fluid from intermediate casing point to TD.
- 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 3000 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes and 2000 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.**

NOTE: Pilot Hole will be directionally / vertically drilled as per attached Directional Plan to +/- 6,050' (MD), evaluated, and plugged back to allow KOP at selected depth, +/- 4,634 (MD) to build Curve portion of wellbore to +/- 90 deg. at +/- 6,874 ft. (MD). 7 in. csg will be set at this point. 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 11,404 ft. (MD). 4-1/2 in. Production Casing will then be set.

III. MATERIALS**A. CASING PROGRAM:**

Surface	12.25"	400'	9 5/8	36#	K-55
Intermediate	8.75"	6874'	7	23#	J-55
Longstring	6.125"	11404'	4 1/2	11.6#	N-80

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) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.
3. **PRODUCTION CASING:** 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Run one spiral type solid body centralizer on every 3rd joint in lateral and around curve.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. **SURFACE:** 10 bbl Fr Water Spacer + 190 sx (222.3 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal (1.17 cu ft./sk, Vol 39.58 bbls.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600 psi. Total Volume: (222.3 cu-ft /190 sx/39.6 bbls).
2. **PILOT HOLE PLUG BACK: 3 STAGE CEMENT JOB: STAGE 1:** 33 bbl Fr Water Spacer (Mud Flush III) + 162 Sx Premium Cem, 15.8 #/gal (Yield 1.15 cu ft/sk / Vol: 186.3 cu-ft), .3% HR-5 retarder + .1% CFR-3 Dispersant. displace w/ Fr Water Est. TOC +/- 5,342 ft. **STAGE 2:** 33 bbl Fr Water Spacer (Mud Flush III) + 200 sx Premium Cement. 15.8 #/gal (Yield 1.15 cu ft/sk / Vol: 230 cu-ft) + .2% HR-5 Retarder & .1% CFR-3 Dispersant displace w/ Fr Water Est. TOC +/- 4,634 ft. **STAGE 3:** 30 bbl Mud Flush III + 230 sx Premium Cement. 17 #/gal (Yield 1.0 cu-ft /sk / Vol: 230 cu-ft). +3% KCL Acc. + 0.2% HR-5 retarder. Est. TOC +/- 4,134 ft. Total Volume: (647 cu-ft /592 sx/115.2 bbls).
3. **INTERMEDIATE:** 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: 850 sx Foamed 50/50 Poz Cement. 13.0 ppg (Yield :1.43 cu-ft/ sk. / Vol: 1216 cu-ft) + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 / TOTETANK + TAIL: 100 sx 13.5 #/gal. (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft) + 0.2% Versaset + 0.15% HALAD-766. + F. Water Displacement (1,511 cu-ft) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk (Vol: 117 cu-ft): Est TOC: Surface. Test Casing to 1500 PSI for 30 minutes. Total Volume: (2021 cu-ft /1050 sx/260 bbls).
4. **PRODUCTION CASING: STAGE 1:** 10 bbl (56 cu-ft) Fr Water Spacer. **STAGE 2:** 20 bbl 10 ppg (112.3 cu-ft) Tuned Spacer III + 0.2 gal/bbl Musol + 59.8 ppb Barite. **STAGE 3:** 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement:** Standard Type V + .4% Halad-766 + .3% Halad R-344, Yield 1.19 cu ft/sk; 15.6 #/gal, (60 sx/71.4 cu ft.) **STAGE 5:** Foamed Lead Cement: 190 sx / 13.0 ppg (63.28 bbl / 355.3 cu-ft) 50/50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.43 cu-ft/sk. **STAGE 6:** Tail Cement : 150 sx 50/50 Poz Standard + 0.2% Versaset + 0.25% HALAD-766, Weight: 13.5 ppg (Yield 1.29 cu ft/sk. / 193.5 cu ft.) **STAGE 7:** Displace w/176.6 bbl Fr Water. Mix w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 4,400 ft. Total Volume: (662.2 cu-ft /400 sx/ 117.9 bbls).

IV. COMPLETION

A. CBL

1. Run Cement Bond Log and ensure top of cement is above 7" casing shoe.

B. PRESSURE TEST

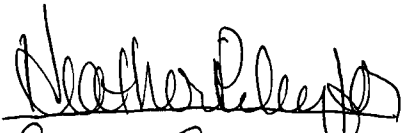
1. Pressure test 4-1/2" casing to 5000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

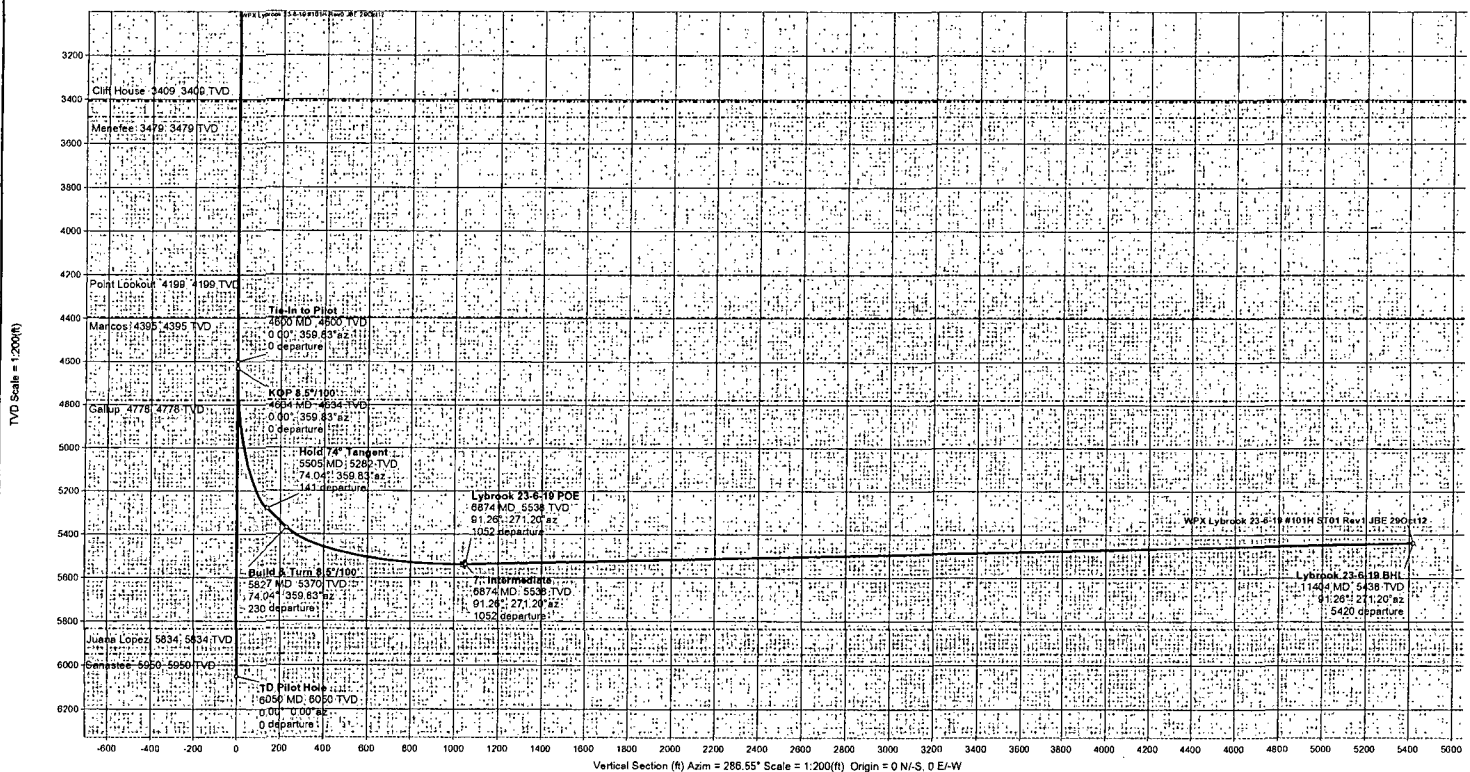
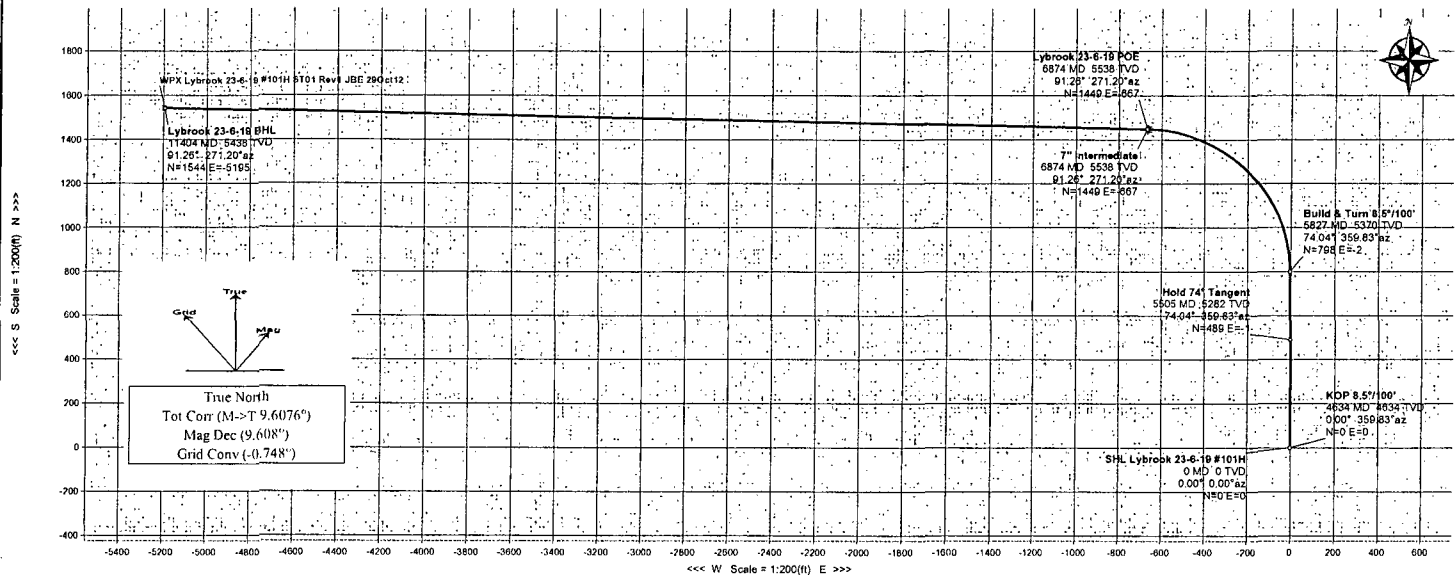
1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N₂ for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs with CTU and flowback lateral.

D. RUNNING TUBING

1. Production Tubing: Run 2-3/8", 4.7#, N-80, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing at landing point of curve (~6,780' MD).


Gary Sizemore

WELL: WPX Lybrook 23-6-19 #101H		FIELD: NM Sandoval County NAD27		STRUCTURE: WPX Lybrook 23-6-19 #101H	
Magnetic Parameters Model: IIGMM 2012 Dip: 63.003° Mag Dec: 9.608°		Surface Location Lat: N 36 12 47.844 Long: W 107 31 0.264 NAD27 New Mexico State Plane Central Zone, US Feet Northing: 1899288.10 #1US Easting: 126131.86 #1US Grid Cont: 0.748° Scale Fact: 1.00005080		Miscellaneous Slot: Lybrook 23-6-19 #101H 5101 Rec'd BHP 29Oct12 TVD Ref: RKR106798 above MSL Srv Date: Oct-08-20, 2012	



Critical Points															Legend	
Comments	Survey MD(ft)	Inclination(deg)	Azimuth(deg)	TVD(ft)	Sub-Sea TVD	VS(ft)	NS(ft)	EW(ft)	Easting(ftUS)	Northing(ftUS)	Closure(ft)	Tool Face (deg)				
												Closure Azimuth(deg)	DLS(ft/100ft)			
SHL Lybrook 23-6-19 #101H	0.00	0.00	0.00	0.00	-6979.00	0.00	0.00	0.00	126313.86	1899288.10	0.00	0.00	359.83			
Tie-In to Pilot	4600.00		359.83	4600.00	-2379.00	0.00	0.00	0.00	126313.86	1899288.10	0.00	0.00	359.83			
KOP 8.5"/100	4634.00	0.00	359.83	4634.00	-2345.00	0.00	0.00	0.00	126313.86	1899288.10	0.00	0.00	359.83			
Hold 74° Tangent	5505.11	74.04	359.83	5282.10	-1696.90	140.66	488.77	-1.47	126318.77	1899776.88	488.77	359.83	8.50			
Build & Turn 8.5"/100	5826.55	74.04	359.83	5370.46	-1608.54	229.60	797.82	-2.41	126321.88	1900085.94	797.83	359.83	0.00			
7" Intermediate	6873.90	91.26	271.20	5538.00	-1443.00	1051.86	1448.90	-666.71	125666.10	1900745.67	1594.93	335.29	8.50			
Lybrook 23-6-19 POE	6873.90	91.26	271.20	5538.00	-1441.00	1051.87	1448.90	-666.71	125666.09	1900745.67	1594.93	335.29	8.50			
Lybrook 23-6-19 BHL	11404.34	91.26	271.20	5438.00	-1541.00	5419.65	1544.02	-5195.05	121139.12	1900899.95	5419.65	285.50				
Work Location: 23-6-19 POE																
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WPX Lybrook 23-6-19 #101H ST01 Rev2 JBE 12Nov12 Proposal Geodetic
Report
(Non-Def Plan)



Report Date: November 12, 2012 - 09:39 AM
Client: WPX Energy
Field: NM Sandoval County NAD27
Structure / Slot: WPX Lybrook 23-6-19 #101H / Lybrook 23-6-19 #101H
Well: WPX Lybrook 23-6-19 #101H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: WPX Lybrook 23-6-19 #101H ST01 Rev2 JBE 12Nov12
Survey Date: November 12, 2012
Tort / AHD / DDI / ERD Ratio: 163.069' / 6356.558 ft / 6.329 / 1.148
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 12' 47.84400", W 107° 31' 0.26400"
Location Grid N/E Y/X: N 1899288.103 ftUS, E 126313.860 ftUS
CRS Grid Convergence Angle: -0.7485°
Grid Scale Factor: 1.0000598

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 286.552° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6979.000 ft above MSL
Seabed / Ground Elevation: 6964.000 ft above MSL
Magnetic Declination: 9.555°
Total Gravity Field Strength: 999.1645 mgn (9.8 based)
Total Magnetic Field Strength: 50321.564 nT
Magnetic Dip Angle: 63.020°
Declination Date: November 12, 2012
Magnetic Declination Model: IGRF2010/IGRF-11
North Reference: True North
Grid Convergence Used: 0.0000°
Total Corr Mag North->True North: 9.5550°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Lybrook 23-6-19 #101H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Nacimiento	565.00	0.00	359.83	565.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Ojo Alamo	1326.00	0.00	359.83	1326.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Kirtland	1441.00	0.00	359.83	1441.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Merker Mudline	1672.00	0.00	359.83	1672.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Picture Cliffs	1918.00	0.00	359.83	1918.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Lewis	2011.00	0.00	359.83	2011.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Cliff House	3409.00	0.00	359.83	3409.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Mesefee	3479.00	0.00	359.83	3479.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Point Lookout	4199.00	0.00	359.83	4199.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Mencos	4395.00	0.00	359.83	4395.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Tie-In to Pilot	4600.00	0.00	359.83	4600.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
KOP 8.5"/100"	4634.00	0.00	359.83	4634.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Hold 74" Tangent	5505.11	74.04	359.83	5282.10	140.66	498.77	-1.47	8.50	1899776.88	126318.77	N 36 12 52.68	W 107 31 0.28
Build & Turn 8.5"/100"	5826.55	74.04	359.83	5370.46	229.60	797.82	-2.41	0.00	1900085.94	126321.88	N 36 12 55.73	W 107 31 0.29
Lybrook 23-6-19 POE	6873.90	91.26	271.20	5538.00	1051.87	1448.90	-666.71	8.50	1900745.67	125666.09	N 36 13 2.17	W 107 31 8.40
Lybrook 23-6-19 BHL	11404.34	91.26	271.20	5436.00	5419.65	1544.02	-5195.05	0.00	1900899.95	121139.12	N 36 13 3.11	W 107 32 3.66

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	15.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Pilot / WPX Lybrook 23-6-19 #101H Rev0 JBE 29Oct12
	15.000	4600.000	1/100.000	30.000	30.000	SLB_MWD-STD	Pilot / WPX Lybrook 23-6-19 #101H Rev0 JBE 29Oct12
	4600.000	11404.343	1/100.000	8.500	8.500	SLB_MWD-STD	ST01 / WPX Lybrook 23-6-19 #101H ST01 Rev2 JBE 12Nov12



WPX Lybrook 23-6-19 #101H ST01 Rev2 JBE 12Nov12 Proposal Geodetic
Report
(Non-Def Plan)



Report Date: November 12, 2012 - 09:40 AM
Client: WPX Energy
Field: NM Sandoval County NAD27
Structure / Slot: WPX Lybrook 23-6-19 #101H / Lybrook 23-6-19 #101H
Well: WPX Lybrook 23-6-19 #101H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: WPX Lybrook 23-6-19 #101H ST01 Rev2 JBE 12Nov12
Survey Date: November 12, 2012
Tort / AHD / DDI / ERD Ratio: 163.069' / 6356.558 ft / 6.329 / 1.148
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 12' 47.84400", W 107° 31' 0.26400"
Location Grid N/E Y/X: N 1899288.103 ftUS, E 126313.860 ftUS
CRS Grid Convergence Angle: -0.7485°
Grid Scale Factor: 1.0000598

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 286.552° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6979.000 ft above MSL
Seabed / Ground Elevation: 6964.000 ft above MSL
Magnetic Declination: 9.555°
Total Gravity Field Strength: 999.1645 mgn (9.8 based)
Total Magnetic Field Strength: 50321.564 nT
Magnetic Dip Angle: 63.020°
Declination Date: November 12, 2012
Magnetic Declination Model: IGRF2010/IGRF-11
North Reference: True North
Grid Convergence Used: 0.0000°
Total Corr Mag North->True North: 9.5550°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
SHL Lybrook 23-6-19 #101H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	100.00	0.00	359.83	100.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	200.00	0.00	359.83	200.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	300.00	0.00	359.83	300.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	400.00	0.00	359.83	400.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	500.00	0.00	359.83	500.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Nacimiento	565.00	0.00	359.83	565.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	600.00	0.00	359.83	600.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	700.00	0.00	359.83	700.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	800.00	0.00	359.83	800.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	900.00	0.00	359.83	900.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1000.00	0.00	359.83	1000.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1100.00	0.00	359.83	1100.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1200.00	0.00	359.83	1200.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1300.00	0.00	359.83	1300.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Ojo Alamo	1326.00	0.00	359.83	1326.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1400.00	0.00	359.83	1400.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Kirtland	1441.00	0.00	359.83	1441.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1500.00	0.00	359.83	1500.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1600.00	0.00	359.83	1600.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Marker Mudline	1672.00	0.00	359.83	1672.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1700.00	0.00	359.83	1700.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1800.00	0.00	359.83	1800.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	1900.00	0.00	359.83	1900.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Picture Cliffs	1918.00	0.00	359.83	1918.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2000.00	0.00	359.83	2000.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Lewis	2011.00	0.00	359.83	2011.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2100.00	0.00	359.83	2100.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2200.00	0.00	359.83	2200.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2300.00	0.00	359.83	2300.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2400.00	0.00	359.83	2400.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2500.00	0.00	359.83	2500.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2600.00	0.00	359.83	2600.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2700.00	0.00	359.83	2700.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2800.00	0.00	359.83	2800.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	2900.00	0.00	359.83	2900.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3000.00	0.00	359.83	3000.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3100.00	0.00	359.83	3100.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3200.00	0.00	359.83	3200.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3300.00	0.00	359.83	3300.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3400.00	0.00	359.83	3400.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Cliff House	3409.00	0.00	359.83	3409.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Menefee	3479.00	0.00	359.83	3479.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3500.00	0.00	359.83	3500.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3600.00	0.00	359.83	3600.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3700.00	0.00	359.83	3700.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3800.00	0.00	359.83	3800.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	3900.00	0.00	359.83	3900.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4000.00	0.00	359.83	4000.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4100.00	0.00	359.83	4100.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Point Lookout	4199.00	0.00	359.83	4199.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4200.00	0.00	359.83	4200.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4300.00	0.00	359.83	4300.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Mancos	4395.00	0.00	359.83	4395.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4400.00	0.00	359.83	4400.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4500.00	0.00	359.83	4500.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
	4600.00	0.00	359.83	4600.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
Tie-In to Pilot	4634.00	0.00	359.83	4634.00	0.00	0.00	0.00	0.00	1899288.10	126313.86	N 36 12 47.84	W 107 31 0.26
KOP 8.5°/100'	4700.00	5.61	359.83	4699.89	0.93	3.23	-0.01	8.50	1899291.33	126313.89	N 36 12 47.88	W 107 31 0.26
	4800.00	14.11	359.83	4798.33	5.85	20.34	-0.06	8.50	1899308.44	126314.06	N 36 12 48.05	W 107 31 0.26
	4900.00	22.61	359.83	4893.15	14.91	51.81	-0.16	8.50	1899339.91	126314.38	N 36 12 48.36	W 107 31 0.27
	5000.00	31.11	359.83	4982.28	27.90	96.95	-0.29	8.50	1899385.05	126314.83	N 36 12 48.80	W 107 31 0.27
	5100.00	39.61	359.83	5063.76	44.54	154.76	-0.47	8.50	1899442.87	126315.42	N 36 12 49.37	W 107 31 0.27
	5200.00	48.11	359.83	5135.80	64.46	223.99	-0.68	8.50	1899512.10	126316.11	N 36 12 50.06	W 107 31 0.27
	5300.00	56.61	359.83	5196.81	87.23	303.10	-0.91	8.50	1899591.21	126316.91	N 36 12 50.84	W 107 31 0.28
	5400.00	65.11	359.83	5245.46	112.34	390.37	-1.18	8.50	1899678.47	126317.78	N 36 12 51.70	W 107 31 0.28
	5500.00	73.61	359.83	5280.68	139.25	483.86	-1.46	8.50	1899771.97	126318.72	N 36 12 52.63	W 107 31 0.28
Hold 74° Tangent	5505.11	74.04	359.83	5282.10	140.66	488.77	-1.47	8.50	1899776.88	126318.77	N 36 12 52.68	W 107 31 0.28
	5600.00	74.04	359.83	5308.18	166.92	580.00	-1.75	0.00	1899868.11	126319.69	N 36 12 53.58	W 107 31 0.29
	5700.00	74.04	359.83	5335.67	194.59	676.15	-2.04	0.00	1899964.26	126320.65	N 36 12 54.53	W 107 31 0.29
	5800.00	74.04	359.83	5363.16	222.26	772.30	-2.33	0.00	1900060.41	126321.62	N 36 12 55.48	W 107 31 0.29
Build & Turn	5826.55	74.04	359.83	5370.46	229.60	797.82	-2.41	0.00	1900085.94	126321.88	N 36 12 55.73	W 107 31 0.29
8.5°/100'	5900.00	74.31	353.34	5390.50	253.72	868.32	-6.62	8.50	1900158.59	126318.59	N 36 12 56.43	W 107 31 0.34
	6000.00	74.99	344.56	5417.02	298.36	962.86	-25.09	8.50	1900251.26	126301.35	N 36 12 57.37	W 107

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Nonthing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6400.00	80.73	310.24	5503.62	590.09	1288.10	-233.36	8.50	1900577.22	126097.31	N 36 13 0.56	W 107 31 3.11
	6500.00	82.75	301.89	5518.01	683.28	1344.29	-313.28	8.50	1900636.45	126018.15	N 36 13 1.14	W 107 31 4.09
	6600.00	84.92	293.63	5528.77	780.72	1390.54	-401.18	8.50	1900683.85	125930.85	N 36 13 1.59	W 107 31 5.16
	6700.00	87.20	285.42	5535.65	880.25	1423.84	-495.13	8.50	1900718.38	125837.35	N 36 13 1.92	W 107 31 6.31
	6800.00	89.53	277.24	5538.51	979.71	1443.46	-593.05	8.50	1900739.27	125739.68	N 36 13 2.12	W 107 31 7.50
Lybrook 23-6-19 POE	6873.90	91.26	271.20	5538.00	1051.87	1448.90	-666.71	8.50	1900745.67	125666.09	N 36 13 2.17	W 107 31 8.40
	6900.00	91.26	271.20	5537.42	1077.03	1449.45	-692.80	0.00	1900746.56	125640.02	N 36 13 2.18	W 107 31 8.72
	7000.00	91.26	271.20	5535.22	1173.44	1451.55	-792.75	0.00	1900749.97	125540.09	N 36 13 2.20	W 107 31 9.94
	7100.00	91.26	271.20	5533.01	1269.85	1453.65	-892.71	0.00	1900753.37	125440.17	N 36 13 2.22	W 107 31 11.16
	7200.00	91.26	271.20	5530.80	1366.26	1455.75	-992.66	0.00	1900756.78	125340.25	N 36 13 2.24	W 107 31 12.38
	7300.00	91.26	271.20	5528.59	1462.66	1457.85	-1092.61	0.00	1900760.18	125240.32	N 36 13 2.26	W 107 31 13.60
	7400.00	91.26	271.20	5526.39	1559.07	1459.94	-1192.57	0.00	1900763.59	125140.40	N 36 13 2.28	W 107 31 14.82
	7500.00	91.26	271.20	5524.18	1655.48	1462.04	-1292.52	0.00	1900766.99	125040.48	N 36 13 2.30	W 107 31 16.04
	7600.00	91.26	271.20	5521.97	1751.89	1464.14	-1392.47	0.00	1900770.40	124940.55	N 36 13 2.32	W 107 31 17.26
	7700.00	91.26	271.20	5519.77	1848.30	1466.24	-1492.43	0.00	1900773.80	124840.63	N 36 13 2.34	W 107 31 18.48
	7800.00	91.26	271.20	5517.56	1944.71	1468.34	-1592.38	0.00	1900777.21	124740.70	N 36 13 2.36	W 107 31 19.70
	7900.00	91.26	271.20	5515.35	2041.12	1470.44	-1692.33	0.00	1900780.61	124640.78	N 36 13 2.38	W 107 31 20.92
	8000.00	91.26	271.20	5513.14	2137.53	1472.54	-1792.29	0.00	1900784.02	124540.86	N 36 13 2.41	W 107 31 22.14
	8100.00	91.26	271.20	5510.94	2233.94	1474.64	-1892.24	0.00	1900787.42	124440.93	N 36 13 2.43	W 107 31 23.36
	8200.00	91.26	271.20	5508.73	2330.35	1476.74	-1992.20	0.00	1900790.83	124341.01	N 36 13 2.45	W 107 31 24.58
	8300.00	91.26	271.20	5506.52	2426.76	1478.84	-2092.15	0.00	1900794.23	124241.09	N 36 13 2.47	W 107 31 25.79
	8400.00	91.26	271.20	5504.31	2523.17	1480.94	-2192.10	0.00	1900797.64	124141.16	N 36 13 2.49	W 107 31 27.01
	8500.00	91.26	271.20	5502.11	2619.58	1483.04	-2292.06	0.00	1900801.05	124041.24	N 36 13 2.51	W 107 31 28.23
	8600.00	91.26	271.20	5499.90	2715.99	1485.14	-2392.01	0.00	1900804.45	123941.32	N 36 13 2.53	W 107 31 29.45
	8700.00	91.26	271.20	5497.69	2812.40	1487.24	-2491.96	0.00	1900807.86	123841.39	N 36 13 2.55	W 107 31 30.67
	8800.00	91.26	271.20	5495.49	2908.81	1489.34	-2591.92	0.00	1900811.26	123741.47	N 36 13 2.57	W 107 31 31.89
	8900.00	91.26	271.20	5493.28	3005.22	1491.44	-2691.87	0.00	1900814.67	123641.55	N 36 13 2.59	W 107 31 33.11
	9000.00	91.26	271.20	5491.07	3101.63	1493.54	-2791.82	0.00	1900818.07	123541.62	N 36 13 2.61	W 107 31 34.33
	9100.00	91.26	271.20	5488.86	3198.04	1495.64	-2891.78	0.00	1900821.48	123441.70	N 36 13 2.63	W 107 31 35.55
	9200.00	91.26	271.20	5486.66	3294.45	1497.74	-2991.73	0.00	1900824.88	123341.78	N 36 13 2.65	W 107 31 36.77
	9300.00	91.26	271.20	5484.45	3390.86	1499.84	-3091.68	0.00	1900828.29	123241.85	N 36 13 2.67	W 107 31 37.99
	9400.00	91.26	271.20	5482.24	3487.27	1501.94	-3191.64	0.00	1900831.69	123141.93	N 36 13 2.69	W 107 31 39.21
	9500.00	91.26	271.20	5480.03	3583.68	1504.04	-3291.59	0.00	1900835.10	123042.01	N 36 13 2.72	W 107 31 40.43
	9600.00	91.26	271.20	5477.83	3680.09	1506.14	-3391.55	0.00	1900838.50	122942.08	N 36 13 2.74	W 107 31 41.65
	9700.00	91.26	271.20	5475.62	3776.50	1508.24	-3491.50	0.00	1900841.91	122842.16	N 36 13 2.76	W 107 31 42.87
	9800.00	91.26	271.20	5473.41	3872.90	1510.34	-3591.45	0.00	1900845.31	122742.24	N 36 13 2.78	W 107 31 44.09
	9900.00	91.26	271.20	5471.21	3969.31	1512.43	-3691.41	0.00	1900848.72	122642.31	N 36 13 2.80	W 107 31 45.31
	10000.00	91.26	271.20	5469.00	4065.72	1514.53	-3791.36	0.00	1900852.12	122542.39	N 36 13 2.82	W 107 31 46.53
	10100.00	91.26	271.20	5466.79	4162.13	1516.63	-3891.31	0.00	1900855.53	122442.47	N 36 13 2.84	W 107 31 47.75
	10200.00	91.26	271.20	5464.58	4258.54	1518.73	-3991.27	0.00	1900858.94	122342.54	N 36 13 2.86	W 107 31 48.97
	10300.00	91.26	271.20	5462.38	4354.95	1520.83	-4091.22	0.00	1900862.34	122242.62	N 36 13 2.88	W 107 31 50.19
	10400.00	91.26	271.20	5460.17	4451.36	1522.93	-4191.17	0.00	1900865.75	122142.70	N 36 13 2.90	W 107 31 51.41
	10500.00	91.26	271.20	5457.96	4547.77	1525.03	-4291.13	0.00	1900869.15	122042.77	N 36 13 2.92	W 107 31 52.63
	10600.00	91.26	271.20	5455.75	4644.18	1527.13	-4391.08	0.00	1900872.56	121942.85	N 36 13 2.94	W 107 31 53.85
	10700.00	91.26	271.20	5453.55	4740.59	1529.23	-4491.04	0.00	1900875.96	121842.93	N 36 13 2.96	W 107 31 55.07
	10800.00	91.26	271.20	5451.34	4837.00	1531.33	-4590.99	0.00	1900879.37	121743.00	N 36 13 2.98	W 107 31 56.29
	10900.00	91.26	271.20	5449.13	4933.41	1533.43	-4690.94	0.00	1900882.77	121643.08	N 36 13 3.00	W 107 31 57.51
	11000.00	91.26	271.20	5446.93	5029.82	1535.53	-4790.90	0.00	1900886.18	121543.16	N 36 13 3.02	W 107 31 58.73
	11100.00	91.26	271.20	5444.72	5126.23	1537.63	-4890.85	0.00	1900889.58	121443.23	N 36 13 3.05	W 107 31 59.95
	11200.00	91.26	271.20	5442.51	5222.64	1539.73	-4990.80	0.00	1900892.99	121343.31	N 36 13 3.07	W 107 32 1.17
	11300.00	91.26	271.20	5440.30	5319.05	1541.83	-5090.76	0.00	1900896.39	121243.39	N 36 13 3.09	W 107 32 2.39
	11400.00	91.26	271.20	5438.10	5415.46	1543.93	-5190.71	0.00	1900899.80	121143.46	N 36 13 3.11	W 107 32 3.61
Lybrook 23-6-19 BHL	11404.34	91.26	271.20	5438.00	5419.65	1544.02	-5195.05	0.00	1900899.95	121139.12	N 36 13 3.11	W 107 32 3.66

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	15.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Pilot / WPX Lybrook 23-6-19 #101H Rev0 JBE 29Oct12
	15.000	4600.000	1/100.000	30.000	30.000	SLB_MWD-STD	Pilot / WPX Lybrook 23-6-19 #101H Rev0 JBE 29Oct12
	4600.000	11404.343	1/100.000	8.500	8.500	SLB_MWD-STD	ST01 / WPX Lybrook 23-6-19 #101H ST01 Rev2 JBE 12Nov12

**SURFACE USE PLAN OF OPERATIONS
WPX Energy Production, LLC
Lybrook 23-6-19 #101H**

**General Conditions of Approval and Cultural Resource Requirements
Will Apply to this Action**

1. Existing Roads:

The proposed WPX Energy Production, LLC (WPX) Lybrook 23-6-19 No. 101H well is located approximately 52 road miles south-southeast of the town of Bloomfield, New Mexico. To access the proposed well from the town of Bloomfield, head south from the United States (U.S.) Highway 550-U.S. Highway 64 intersection for approximately 51.0 miles and turn right to follow unnamed, dirt roads for approximately 1.0 mile until reaching the proposed well site. This access route is shown on the attached map (Figure 1).

For existing county roads or roads that are considered collector roads, under the jurisdiction of the Road Committee, WPX will defer to the county or Road Committee for maintenance determinations. Lease roads that are WPX's responsibility, as the operator, will be maintained in the same condition or better than before operations began. Specifically, WPX will conduct routine inspections of road conditions, blade the road(s) when necessary to reduce ruts and holes, maintain crowns and out slopes along the road(s), replace surfacing materials, clear sediment blocking ditches and culverts along the road(s), maintain interim reclamation, and control noxious weeds.

2. New or Reconstructed Access Roads:

Approximately 275 feet of new access road will be needed from an existing, dirt roadway to the proposed well site. The existing, dirt roadway adjacent to the proposed project area will be upgraded starting from 250 feet south of U.S. Highway 550 to the start of the proposed access road.

The proposed access road will travel westward from the existing road and will enter the proposed well pad at the north side of the pad. The road will be constructed with a 16-foot-wide driving surface and will be crowned with drainage on both sides. The proposed access road will be built up 18 to 24 inches following *The Gold Book: Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development* standards. The proposed access road will be recessed in, in order for equipment to safely maneuver when entering the proposed well pad. Although no drainage issues are anticipated, culverts will be installed beneath the proposed access road, where needed.

The proposed access road crosses one existing fence line. This fence will be cut, braced, and replaced with a 24-inch raised cattle guard and a 16-inch side gate.

