

NOS: 12-10-12
Form 3160-3 APDP: N/A
(September 2001)MP: N/A
SMA: BLM
BOND: UTB000178
CA/PA: N/A

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 09 2013

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

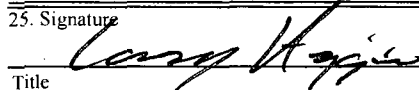
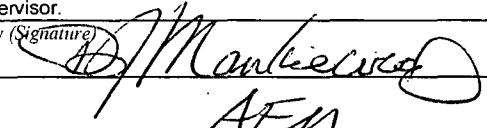
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMSF-078362
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	3b. Phone No. (include area code) (505) 333-1808	8. Lease Name and Well No. Lybrook 23-7-12 #101H
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1492' FNL & 303' FWL, sec 12, T23N, R7W At proposed prod. zone 340' FNL & 340' FWL, sec 11, T23N, R7W		9. API Well No. 30-039-31173
14. Distance in miles and direction from nearest town or post office* approximately 2 miles northeast of Lybrook, New Mexico		10. Field and Pool, or Exploratory Lybrook Gallup
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 303'	16. No. of Acres in lease 2565.24	11. Sec., T., R., M., or Blk. and Survey or Area Section 12, 23N, 7W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1700'	19. Proposed Depth 5566' TVD / 10648' MD	12. County or Parish Rio Arriba County
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7036' GR	22. Approximate date work will start* February 1, 2013	13. State NM
20. BLM/BIA Bond No. on file UTB000178		17. Spacing Unit dedicated to this well 160 acres - N2 N2
23. Estimated duration 1 month		20. BLM/BIA Bond No. on file UTB000178

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) Larry Higgins	Date 01/08/13
Title		
Permit Supervisor. Approved by (Signature) 	Name (Printed/Typed) AFM	Date 1/30/13
Title	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 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 the report have been submitted directly to the BLM.

1215 feet of new access road is needed.

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

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".

Hold C104

for Directional Survey
and "As Drilled" plat

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

NMOCDD
AV

FEB 08 2013 ca

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

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 8th day of January, 2013.

Name Larry Higgins

Position Title Permit Supervisor

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

Telephone (505) 333-1808

Field representative (if not above signatory) _____

E-mail larry.higgins@wpxenergy.com

Date: 01/08/2013



Larry Higgins
Permit Suprv.
WPX Energy Production, LLC

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL-LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31173	*Pool Code 42289	*Pool Name LYBROOK GALLUP
*Property Code 391088	*Property Name LYBROOK 23-7-12	*Well Number 101H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 7036'

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	12	23N	7W		1492	NORTH	303	WEST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
D	11	23N	7W	2	340	NORTH	340	WEST	RIO ARRIBA

12 Dedicated Acres	156.09 Acres N/2 N/2 - Section 11	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 11, T23N, R7W
LAT: 36.24649 'N
LONG: 107.55189 'W
DATUM: NAD1927

LAT: 36.24650 'N
LONG: 107.55250 'W
DATUM: NAD1983

POINT-OF-ENTRY
340' FNL 340' FEL
SECTION 11, T23N, R7W
LAT: 36.24604 'N
LONG: 107.53689 'W
DATUM: NAD1927

LAT: 36.24605 'N
LONG: 107.53750 'W
DATUM: NAD1983

SURFACE LOCATION
1492' FNL 303' FWL
SECTION 12, T23N, R7W
LAT: 36.24281°N
LONG: 107.53460°W
DATUM: NAD1927

LAT: 36.24283°N
LONG: 107.53521°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 another owner of a mineral working interest, or a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Larry K. Higgins Date 01/08/13

Larry Higgins
Printed Name
larry.higgins@wpxenergy.com

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.

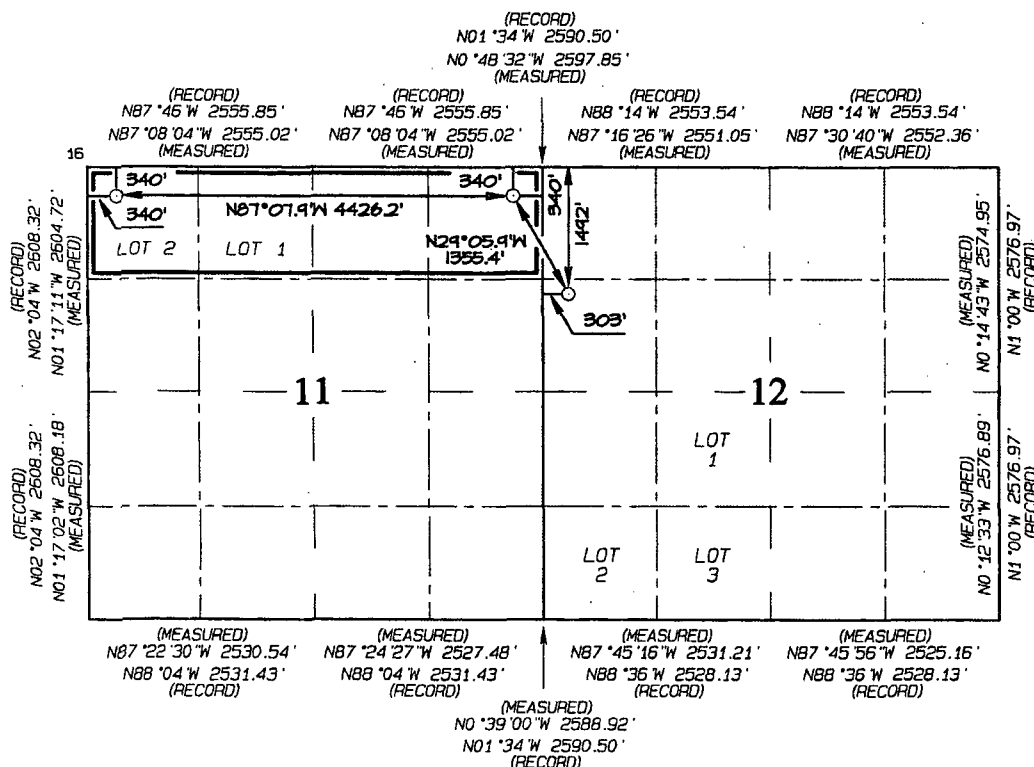
Survey Date: AUGUST 20, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269



WPX ENERGY**Operations Plan**

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

DATE: 12/21/2012 **FIELD:** Lybrook Gallup

WELL NAME: Lybrook 23-7-12 #101H **SURFACE:** BLM

SH Location: NWNW Sec 12-23N-7W **ELEVATION:** 7,036' GR

BH Location: SWNW Sec 11-23N-7W
Rio Arriba Co, NM **MINERALS:** BLM

MEASURED DEPTH: 10,648' **LEASE #:** USA NMSF 078362

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	1,472	1,472	Point Lookout	4,338	4,338
Kirtland	1,553	1,553	Mancos	4,640	4,640
Fruitland	1,879	1,879	Kickoff Point	4,866	4,866
Pictured Cliffs	2,066	2,066	Target Top	5,602	5,783
Lewis	2,179	2,179	Landing Point	5,684	6,173
Cliff House	3,614	3,614	Target Base	5,682	6,095
Menefee	3,672	3,672	Pilot Hole TD	6,060	6,060
			TD	5,566	10,648

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. Sonic will be run in Lateral. Conventional Cores +/- 120 ft. will be cut in the Pilot Hole at +/- 5,600 ft. in Mancos Formation. Exact interval to be selected.

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 8 3/4" vertical Pilot Hole. Will use WBM or Oil Base mud (OBM) to drill the curve portion of well, and OBM 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 2000 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 (8-3/4 in.) will be vertically/directionally drilled as per attached Directional Plan to +/- 6,060' MD, evaluated, and plugged back to above KOP at +/- 4,866' (MD) to build Curve portion of wellbore and land curve at +/- 90 deg. at +/- 6,173' (MD). 7 in. csg will be set at this point. A 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 10,648' (MD). Will run 4-1/2 in. Production Casing to TD and Cement.

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

Surface	12.25"	400'	9 5/8	36#	K-55
Intermediate	8.75"	6,173	7	23#	J-55
Longstring	6.125"	10,648	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. (**Need and setting depth of a DV Tool will be determined from Pilot Hole information.**)
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 600psi. 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: 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. Total Cement (620.2 cu ft / 110.4 bbls). Mix w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,894 ft. Total Volume: (620.2 cu-ft/380 sx/110.4 bbls).

A. CBL

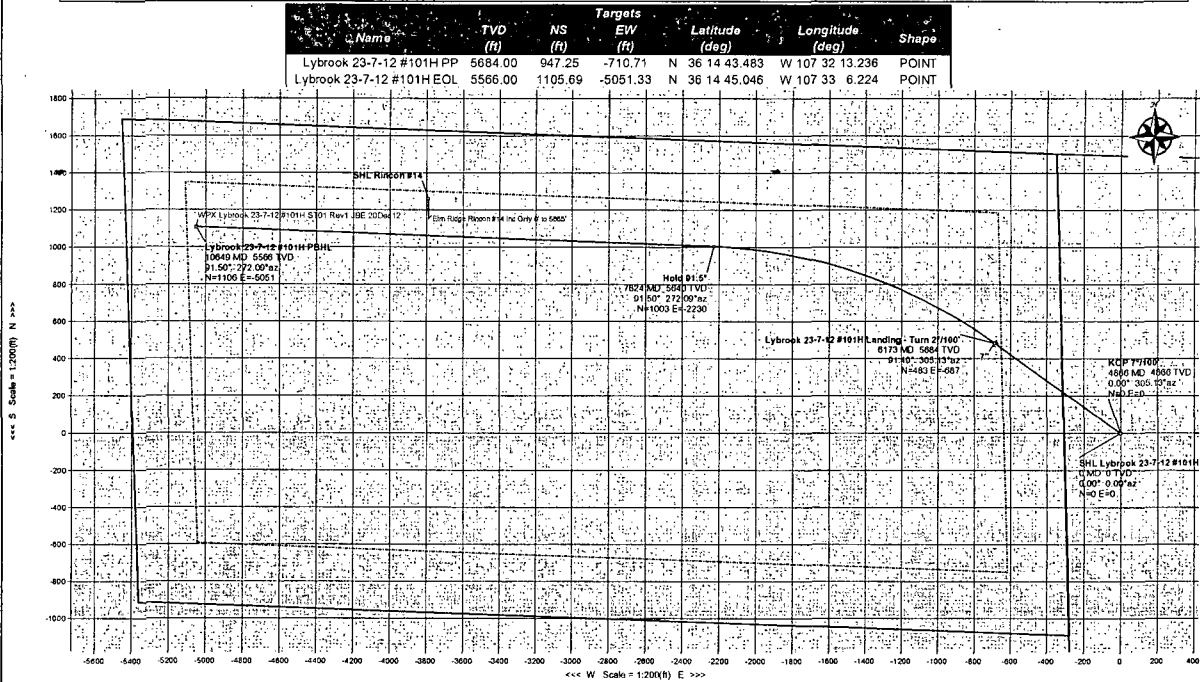
- ### B. PRESSURE TEST

- ### C. STIMULATION

- #### D. RUNNING TUBING

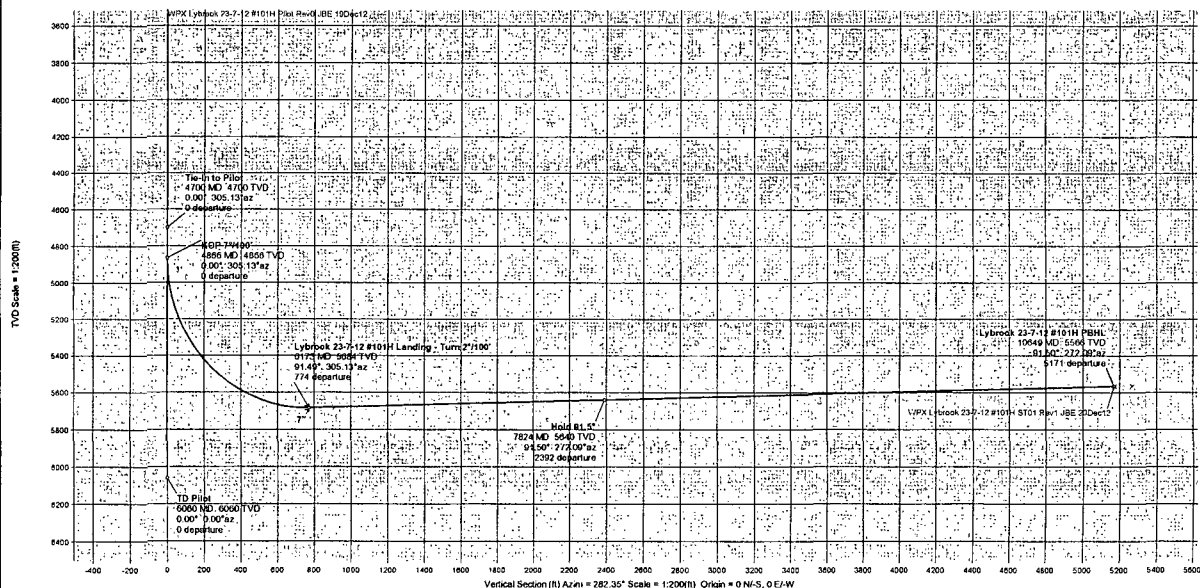
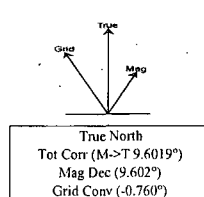
- Leopoldo Higgins

WELL	WPX Lybrook 23-7-12 #101H	FIELD	NM Rio Arriba County NAD27	SHEET/LINE	WPX Lybrook 23-7-12 #101H
Magentic Parameters	Unit	Date	Surface Location	NAD27 New Mexico State Plane, Central Zone, US Feet	Measured
Model: RUDM 2012	Unit: 63.021"	Date: December 20, 2012	Lat: N 30 14 34.136	Longitude: 107 32 13.236	Unit: Lybrook 23-7-12 #101H
May Dec: 9.602"	Unit: 9.602"	Date: 10/20/12	Lat: N 30 14 34.136	Longitude: 107 32 13.236	Unit: 101H Rev1 JBE 20Dec12



Legend

Sec 11 T23N R07W North Half
Lybrook 23-7-12 #101H PP
Lybrook 23-7-12 #101H BHL
Sec 12 T23N R07W
Lybrook 23-7-12 #101H EOL
Sec 11 T23N R07W North Half - 330' HL
Lybrook 23-7-12 #101H POC
WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12
WPX Lybrook 23-7-12 #101H Pilot Rev0 JBE 19Dec12
Elm Ridge Rincon #14 Inc Only 0' to 5665'



Comments	Survey MD (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (ft/100ft)
SHL Lybrook 23-7-12 #101H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tie-In to Pilot	4700.00	0.00	305.13	4700.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP 7°/100'	4865.77	0.00	305.13	4865.77	0.00	0.00	0.00	0.00	0.00	0.00
Lybrook 23-7-12 #101H Landing - Turn 2°/100'	6172.77	91.49	305.13	5684.00	774.30	483.19	-686.87	839.79	305.13	7.00
Hold 91.5°	7823.94	91.50	272.09	5639.77	2392.40	1002.59	-2229.59	2444.64	294.21	2.00
Lybrook 23-7-12 #101H BHL	10648.53	91.50	272.09	5566.00	5170.93	1105.69	-5051.33	5170.93	282.35	0.00

Drawn By: Erick French
Date Created: December 20, 2012 12:01:13 PM
Checked By:
Checked Date:
Approved By:
Approved Date:



WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12 Proposal Geodetic Report (Non-Def Plan)



Report Date: December 20, 2012 - 12:19 PM
Client: WPX Energy
Field: NM Rio Arriba County NAD27
Structure / Slot: WPX Lybrook 23-7-12 #101H / Lybrook 23-7-12 #101H
Well: WPX Lybrook 23-7-12 #101H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12
Survey Date: December 20, 2012
Tort / AHD / DDI / ERD Ratio: 124.519° / 5314.002 ft / 6.093 / 0.935
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 14' 34.11600", W 107° 32' 4.56000"
Location Grid N/E Y/X: N 1910103.712 ftUS, E 121187.342 ftUS
CRS Grid Convergence Angle: -0.7596°
Grid Scale Factor: 1.00006421

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 282.347° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7057.000 ft above MSL
Seabed / Ground Elevation: 7036.000 ft above MSL
Magnetic Declination: 9.602°
Total Gravity Field Strength: 999.1602 mgn (9.8 based)
Total Magnetic Field Strength: 50269.943 nT
Magnetic Dip Angle: 63.021°
Declination Date: December 20, 2012
Magnetic Declination Model: IGGM 2012
North Reference: True North
Grid Convergence Used: 0.0000°
Total Corr Mag North→True North: 9.6019°
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 23-7-12 #101H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1910103.71	121187.34	N 36 14 34.12	W 107 32 4.56
Surface	325.00	0.00	305.13	325.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12	W 107 32 4.56
Tie-In to Pilot	4700.00	0.00	305.13	4700.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12	W 107 32 4.56
KOP 7°/100' 7"	4865.77	0.00	305.13	4865.77	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12	W 107 32 4.56
Lybrook 23-7-12 #101H Landing - Turn 2°/100'	6172.77	91.49	305.13	5684.00	774.30	483.19	-686.87	7.00	1910595.99	120506.90	N 36 14 38.89	W 107 32 12.94
Hold 91.5°	7823.94	91.50	272.09	5639.77	2392.40	1002.59	-2229.59	2.00	1911135.84	118971.10	N 36 14 44.03	W 107 32 31.78
Lybrook 23-7-12 #101H PBHL	10648.53	91.50	272.09	5566.00	5170.93	1105.69	-5051.33	0.00	1911276.34	116150.80	N 36 14 45.05	W 107 33 6.22

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	8.750	30.000	SLB_MWD-STD-Depth Only	Pilot / WPX Lybrook 23-7-12 #101H Pilot Rev0 JBE 19Dec12
	15.000	4700.000	1/100.000	8.750	30.000	SLB_MWD-STD	Pilot / WPX Lybrook 23-7-12 #101H Pilot Rev0 JBE 19Dec12
	4700.000	6172.770	1/100.000	8.750	7.000	SLB_MWD-STD	ST01 / WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12
	6172.770	10648.534	1/100.000	6.125	4.500	SLB_MWD-STD	ST01 / WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12



WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12 Proposal Geodetic Report
(Non-Def Plan)



Report Date: December 20, 2012 - 12:20 PM
Client: WPX Energy
Field: NM Rio Arriba County NAD27
Structure / Slot: WPX Lybrook 23-7-12 #101H / Lybrook 23-7-12 #101H
Well: WPX Lybrook 23-7-12 #101H
Borehole: ST01
UWI / API#: Unknown / Unknown
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Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 14' 34.11600", W 107° 32' 4.56000"
Location Grid N/E Y/X: N 1910103.712 ftUS, E 121187.342 ftUS
CRS Grid Convergence Angle: -0.7596°
Grid Scale Factor: 1.00006421

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 282.347° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7051.000 ft above MSL
Seabed / Ground Elevation: 7036.000 ft above MSL
Magnetic Declination: 9.602°
Total Gravity Field Strength: 999.1602 mgn (9.8 based)
Total Magnetic Field Strength: 50269.943 nT
Magnetic Dip Angle: 63.021°
Declination Date: December 20, 2012
Magnetic Declination Model: BGGM 2012
North Reference: True North
Grid Convergence Used: 0.0000°
Total Corr Mag North->True North: 9.6019°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Eastings (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Lybrook 23-7-12 #101H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
Surface	100.00	0.00	305.13	100.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	200.00	0.00	305.13	200.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	300.00	0.00	305.13	300.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	325.00	0.00	305.13	325.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	400.00	0.00	305.13	400.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	500.00	0.00	305.13	500.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	600.00	0.00	305.13	600.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	700.00	0.00	305.13	700.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	800.00	0.00	305.13	800.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	900.00	0.00	305.13	900.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1000.00	0.00	305.13	1000.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1100.00	0.00	305.13	1100.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1200.00	0.00	305.13	1200.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1300.00	0.00	305.13	1300.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1400.00	0.00	305.13	1400.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1500.00	0.00	305.13	1500.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1600.00	0.00	305.13	1600.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1700.00	0.00	305.13	1700.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1800.00	0.00	305.13	1800.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	1900.00	0.00	305.13	1900.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2000.00	0.00	305.13	2000.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2100.00	0.00	305.13	2100.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2200.00	0.00	305.13	2200.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2300.00	0.00	305.13	2300.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2400.00	0.00	305.13	2400.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2500.00	0.00	305.13	2500.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2600.00	0.00	305.13	2600.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2700.00	0.00	305.13	2700.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2800.00	0.00	305.13	2800.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	2900.00	0.00	305.13	2900.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3000.00	0.00	305.13	3000.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3100.00	0.00	305.13	3100.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3200.00	0.00	305.13	3200.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3300.00	0.00	305.13	3300.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3400.00	0.00	305.13	3400.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3500.00	0.00	305.13	3500.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3600.00	0.00	305.13	3600.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3700.00	0.00	305.13	3700.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3800.00	0.00	305.13	3800.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	3900.00	0.00	305.13	3900.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4000.00	0.00	305.13	4000.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4100.00	0.00	305.13	4100.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4200.00	0.00	305.13	4200.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4300.00	0.00	305.13	4300.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4400.00	0.00	305.13	4400.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4500.00	0.00	305.13	4500.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4600.00	0.00	305.13	4600.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
	4700.00	0.00	305.13	4700.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
4800.00	0.00	305.13	4800.00	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56		
Tie-in to Pilot	4865.77	0.00	305.13	4865.77	0.00	0.00	0.00	0.00	1910103.71	121187.34	N 36 14 34.12 W 107 32 4.56	
KOP 7°/100'	4900.00	2.40	305.13	4899.99	0.66	0.41	-0.59	7.00	1910104.13	121186.76	N 36 14 34.12 W 107 32 4.57	
	5000.00	9.40	305.13	4999.40	10.13	6.32	-8.98	7.00	1910110.15	121178.44	N 36 14 34.18 W 107 32 4.67	
	5100.00	16.40	305.13	5096.82	30.69	19.15	-27.22	7.00	1910123.22	121160.37	N 36 14 34.31 W 107 32 4.89	
	5200.00	23.40	305.13	5190.79	62.05	38.72	-55.04	7.00	1910143.16	121132.81	N 36 14 34.50 W 107 32 5.23	
	5300.00	30.40	305.13	5279.92	103.73	64.73	-92.02	7.00	1910169.66	121096.18	N 36 14 34.76 W 107 32 5.68	
	5400.00	37.40	305.13	5362.87	155.12	96.80	-137.60	7.00	1910202.33	121051.03	N 36 14 35.07 W 107 32 6.24	
	5500.00	44.40	305.13	5438.41	215.44	134.44	-191.12	7.00	1910240.69	120998.01	N 36 14 35.45 W 107 32 6.89	
	5600.00	51.40	305.13	5505.42	283.81	177.11	-251.76	7.00	1910284.15	120937.93	N 36 14 35.87 W 107 32 7.63	
	5700.00	58.40	305.13	5562.89	359.19	224.15	-318.63	7.00	1910332.08	120871.69	N 36 14 36.33 W 107 32 8.45	
	5800.00	65.40	305.13	5609.97	440.47	274.87	-390.73	7.00	1910383.75	120800.26	N 36 14 36.83 W 107 32 9.33	
	5900.00	72.40	305.13	5645.95	526.44	328.51	-466.99	7.00	1910438.41	120724.72	N 36 14 37.36 W 107 32 10.26	
	6000.00	79.40	305.13	5670.30	615.80	384.28	-546.27	7.00	1910495.22	120646.18	N 36 14 37.92 W 107 32 11.23	
	6100.00	86.40	305.13	5682.66	707.24	441.34	-627.38	7.00	1910553.36	120565.83	N 36 14 38.48 W 107 32 12.22	
7" Lybrook 23-7-12 #101H Landing - Turn 2°/100'	6172.77	91.49	305.13	5684.00	774.30	483.19	-686.87	7.00	1910595.99	120506.90	N 36 14 38.89 W 107 32 12.94	
	6200.00	91.49	304.58	5683.30	799.45	498.74	-709.20	2.00	1910611.84	120484.77	N 36 14 39.05 W 107 32 13.22	
	6300.00	91.51	302.58	5680.67	892.62	554.03	-792.48	2.00	1910668.23	120402.22	N 36 14 39.59 W 107 32 14.23	
	6400.00	91.52	300.58	5678.03	987.00	606.38	-877.64	2.00	1910721.71	120317.76	N 36 14 40.11 W 107 32 15.27	
	6500.00	91.53	298.58	5675.37	1082.48	655.72	-964.57	2.00	1910772.20	120231.49	N 36 14 40.60 W 107 32 16.33	
	6600.00	91.54	296.58	5672.69	1178.92	701.99	-1053.18	2.00	1910819.65	120143.50	N 36 14 41.06 W 107 32 17.42	
	6700.00	91.55	294.58	5669.99	1276.23	745.15	-1143.34	2.00	1910864.00	120053.91	N 36 14 41.48 W 107 32 18.52	
	6800.00	91.55	292.58	5667.29	1374.27	785.13	-1234.95	2.00	1910905.19	119962.83	N 36 14 41.88 W 107 32 19.64	
	6900.00	91.56	290.58	5664.57	1472.94	821.89	-1327.91	2.00	1910943.18	119870.36	N 36 14 42.24 W 107 32 20.77	
	7000.00	91.56	288.57	5661.86	1572.10	855.38	-1422.09	2.00	1910977.92	119776.63	N 36 14 42.57 W 107 32 21.92	
	7100.00	91.56	286.57	5659.14	1671.64	885.56	-1517.38	2.00	1911009.36	119681.74	N 36 14 42.87 W 107 32 23.08	

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 ° ' '')
Hold 91.5°	7200.00	91.55	284.57	5656.43	1771.44	912.40	-1613.67	2.00	1911037.48	119585.81	N 36 14 43.14	W 107 32 24.26
	7300.00	91.55	282.57	5653.72	1871.38	935.85	-1710.84	2.00	1911062.22	119488.96	N 36 14 43.37	W 107 32 25.45
	7400.00	91.54	280.57	5651.02	1971.33	955.91	-1808.76	2.00	1911083.57	119391.30	N 36 14 43.57	W 107 32 26.64
	7500.00	91.53	278.57	5648.34	2071.17	972.53	-1907.33	2.00	1911101.50	119292.95	N 36 14 43.73	W 107 32 27.84
	7600.00	91.52	276.57	5645.67	2170.78	985.70	-2006.42	2.00	1911115.98	119194.04	N 36 14 43.86	W 107 32 29.05
	7700.00	91.51	274.57	5643.02	2270.04	995.40	-2105.91	2.00	1911127.00	119094.69	N 36 14 43.96	W 107 32 30.27
	7800.00	91.50	272.57	5640.39	2368.83	1001.62	-2205.67	2.00	1911134.55	118995.00	N 36 14 44.02	W 107 32 31.49
	7823.94	91.50	272.09	5639.77	2392.40	1002.59	-2229.59	2.00	1911135.84	118971.10	N 36 14 44.03	W 107 32 31.78
	7900.00	91.50	272.09	5637.78	2467.22	1005.37	-2305.57	0.00	1911139.62	118895.16	N 36 14 44.06	W 107 32 32.71
	8000.00	91.50	272.09	5635.17	2565.59	1009.01	-2405.47	0.00	1911144.59	118795.31	N 36 14 44.09	W 107 32 33.92
	8100.00	91.50	272.09	5632.56	2663.96	1012.66	-2505.37	0.00	1911149.56	118695.46	N 36 14 44.13	W 107 32 35.14
	8200.00	91.50	272.09	5629.95	2762.32	1016.31	-2605.27	0.00	1911154.53	118595.62	N 36 14 44.16	W 107 32 36.36
	8300.00	91.50	272.09	5627.34	2860.69	1019.95	-2705.17	0.00	1911159.50	118495.77	N 36 14 44.20	W 107 32 37.58
	8400.00	91.50	272.09	5624.73	2959.06	1023.60	-2805.06	0.00	1911164.47	118395.92	N 36 14 44.24	W 107 32 38.80
	8500.00	91.50	272.09	5622.12	3057.43	1027.25	-2904.96	0.00	1911169.45	118296.07	N 36 14 44.27	W 107 32 40.02
	8600.00	91.50	272.09	5619.51	3155.80	1030.90	-3004.86	0.00	1911174.42	118196.22	N 36 14 44.31	W 107 32 41.24
	8700.00	91.50	272.09	5616.90	3254.17	1034.54	-3104.76	0.00	1911179.39	118096.37	N 36 14 44.34	W 107 32 42.46
	8800.00	91.50	272.09	5614.29	3352.54	1038.19	-3204.66	0.00	1911184.36	117996.53	N 36 14 44.38	W 107 32 43.68
	8900.00	91.50	272.09	5611.68	3450.91	1041.84	-3304.56	0.00	1911189.34	117896.68	N 36 14 44.42	W 107 32 44.90
	9000.00	91.50	272.09	5609.07	3549.28	1045.49	-3404.46	0.00	1911194.31	117796.83	N 36 14 44.45	W 107 32 46.12
	9100.00	91.50	272.09	5606.46	3647.64	1049.14	-3504.36	0.00	1911199.28	117696.98	N 36 14 44.49	W 107 32 47.34
	9200.00	91.50	272.09	5603.85	3746.01	1052.79	-3604.26	0.00	1911204.26	117597.13	N 36 14 44.52	W 107 32 48.56
	9300.00	91.50	272.09	5601.24	3844.38	1056.44	-3704.16	0.00	1911209.23	117497.28	N 36 14 44.56	W 107 32 49.78
	9400.00	91.50	272.09	5598.62	3942.75	1060.09	-3804.06	0.00	1911214.21	117397.44	N 36 14 44.60	W 107 32 51.00
	9500.00	91.50	272.09	5596.01	4041.12	1063.74	-3903.96	0.00	1911219.18	117297.59	N 36 14 44.63	W 107 32 52.22
	9600.00	91.50	272.09	5593.40	4139.49	1067.39	-4003.86	0.00	1911224.16	117197.74	N 36 14 44.67	W 107 32 53.44
	9700.00	91.50	272.09	5590.79	4237.86	1071.04	-4103.76	0.00	1911229.13	117097.89	N 36 14 44.70	W 107 32 54.66
	9800.00	91.50	272.09	5588.18	4336.23	1074.69	-4203.65	0.00	1911234.11	116998.04	N 36 14 44.74	W 107 32 55.88
	9900.00	91.50	272.09	5585.56	4434.60	1078.35	-4303.55	0.00	1911239.08	116898.19	N 36 14 44.78	W 107 32 57.10
	10000.00	91.50	272.09	5582.95	4532.97	1082.00	-4403.45	0.00	1911244.06	116798.35	N 36 14 44.81	W 107 32 58.32
	10100.00	91.50	272.09	5580.34	4631.34	1085.65	-4503.35	0.00	1911249.04	116698.50	N 36 14 44.85	W 107 32 59.53
	10200.00	91.50	272.09	5577.72	4729.71	1089.30	-4603.25	0.00	1911254.01	116598.65	N 36 14 44.88	W 107 33 0.75
	10300.00	91.50	272.09	5575.11	4828.08	1092.96	-4703.15	0.00	1911259.99	116498.80	N 36 14 44.92	W 107 33 1.97
	10400.00	91.50	272.09	5572.50	4926.45	1096.61	-4803.05	0.00	1911263.97	116398.95	N 36 14 44.96	W 107 33 3.19
	10500.00	91.50	272.09	5569.88	5024.82	1100.26	-4902.95	0.00	1911268.95	116299.11	N 36 14 44.99	W 107 33 4.41
	10600.00	91.50	272.09	5567.27	5123.19	1103.92	-5002.85	0.00	1911273.92	116199.26	N 36 14 45.03	W 107 33 5.63
Lybrook 23-7-12 #101H PBHL	10648.53	91.50	272.09	5566.00	5170.93	1105.69	-5051.33	0.00	1911276.34	116150.80	N 36 14 45.05	W 107 33 6.22

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	8.750	30.000	SLB_MWD-STD-Depth Only	Pilot / WPX Lybrook 23-7-12 #101H Pilot Rev0 JBE 19Dec12
	15.000	4700.000	1/100.000	8.750	30.000	SLB_MWD-STD	Pilot / WPX Lybrook 23-7-12 #101H Pilot Rev0 JBE 19Dec12
	4700.000	6172.770	1/100.000	8.750	7.000	SLB_MWD-STD	ST01 / WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12
	6172.770	10648.534	1/100.000	6.125	4.500	SLB_MWD-STD	ST01 / WPX Lybrook 23-7-12 #101H ST01 Rev1 JBE 20Dec12

SURFACE USE PLAN OF OPERATIONS
WPX Energy Production, LLC
Lybrook 23-7-12 No. 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 23-7-12 No. 101H well is located approximately 50 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 49.0 miles, turn left onto County Road 0378 for approximately 0.5 miles, and turn right to follow unnamed, dirt roads for approximately 0.9 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 in a better condition 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:

An approximately 1,215-foot-long access road will be needed to access the proposed well site, of which approximately 265 feet will be new access and approximately 950 feet will follow an existing two-track road and an Elm Ridge Resources pipeline right-of-way.

The proposed access road will travel southward from an existing, oil and gas lease road and will enter the proposed well pad at the southern 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. Dust abatement will also be utilized along the access road. Although no drainage issues are anticipated, 24-inch-diameter culverts will be installed beneath the proposed access road, where needed.

3. Location of Existing Wells:

The existing plugged and abandoned and active oil and gas wells within a 1-mile radius of the proposed well pad are depicted on Figure 2. No recorded water wells are located within a 1-mile radius of the proposed well pad.

