

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., 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 Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101
Revised November 14, 2012

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

☐ AMENDED REPORT

RCVD DEC 13 '12
OIL CONS. DIV.
DIST. 3

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address WPX Energy Production, LLC P.O. Box 640 Aztec, NM 87410 CONFIDENTIAL		2. OGRID Number 120782
3. Property Code 39590		5. API Number 30-045-35441
4. Property Name Lybrook 24-8-32		6. Well No. 201H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
P	32	24N	8W		1203	South	382	East	San Juan

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
L	32	24N	8W		2254	South	380	West	San Juan

9. Pool Information

Hold C104 for Directional Survey and "As Drilled" plat	Pool Name Nageezi Gallup	Pool Code 47540
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Additional Well Information

11. Work Type N	12. Well Type O	13. Cable/Rotary R	14. Lease Type S	15. Ground Level Elevation 7017'
16. Multiple No	17. Proposed Depth 10,355' MD/5,442' TVD	18. Formation Gallup	19. Contractor AWS	20. Spud Date 01/01/13
Depth to Ground water >120'		Distance from nearest fresh water well >1000'		Distance to nearest surface water >1000

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
K-55	12-1/4"	9-5/8"	36#	400'	190	Surface
J-55	8-3/4"	7"	23#	5913'	1050	Surface
N-80	6-1/8"	4-1/2"	11.6#	10355'	400	5843'

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000#	2000#	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐ , if applicable. Signature: <i>Larry Higgins</i> Printed name: Larry Higgins Title: Permit Supervisor E-mail Address: larry.higgins@wpenergy.com Date: 12/12/12 Phone: 333-1808		OIL CONSERVATION DIVISION Approved By: <i>Charles Lewis</i> Title: SUPERVISOR DISTRICT # 3 Approved Date: 12-13-12 Expiration Date: DEC 13 2014 Conditions of Approval Attached	
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DEC 13 2012 ca

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NOTIFY AZTEC OCD 24 HRS
PRIOR TO CASING & CEMENT

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State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35441		*Pool Code 47540	*Pool Name NAGEEZI GALLUP
*Property Code 39590	*Property Name LYBROOK 24-8-32		*Well Number 201H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 7017'

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
P	32	24N	8W		1203	SOUTH	382	EAST	SAN JUAN

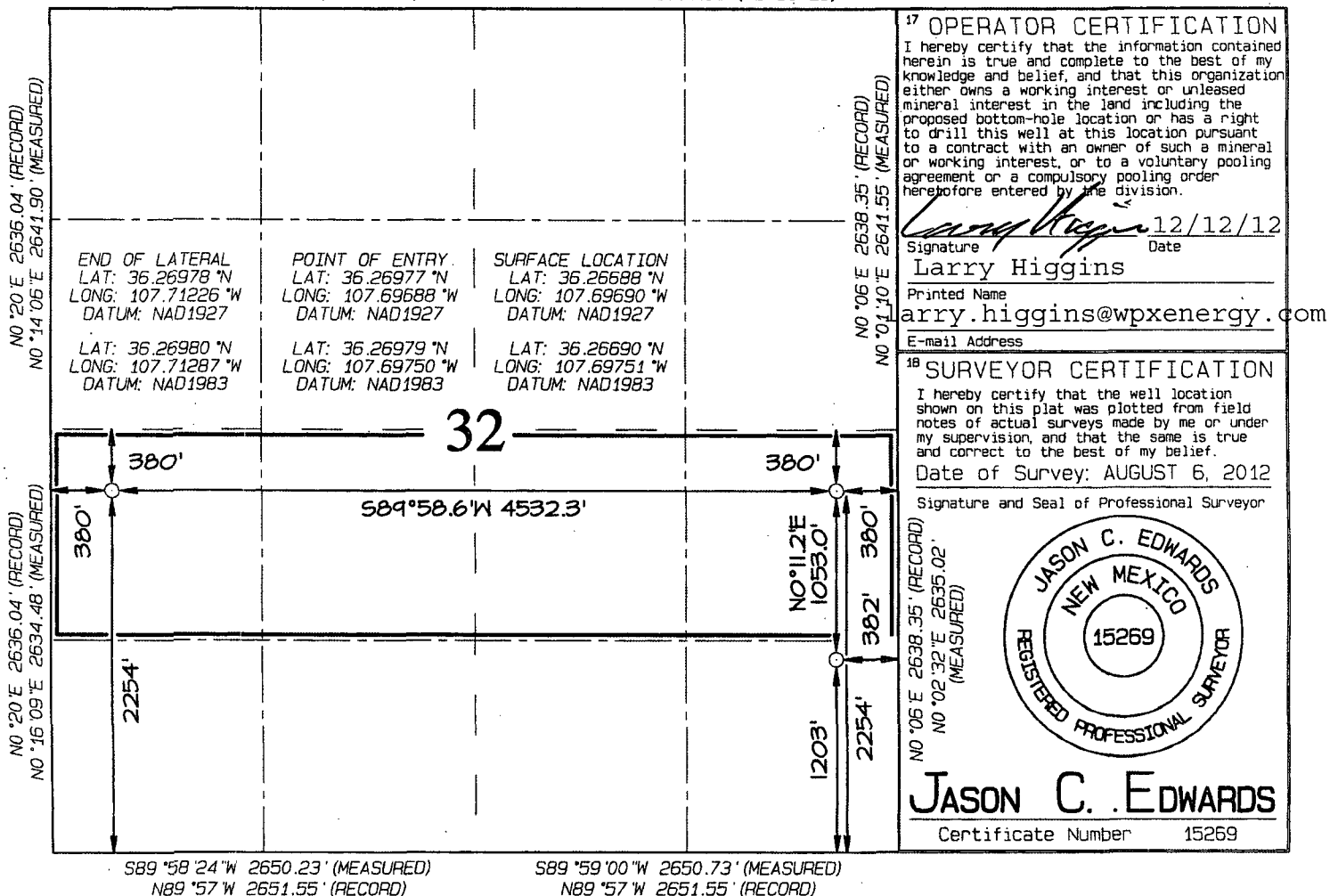
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	32	24N	8W		2254	SOUTH	380	WEST	SAN JUAN

12 Dedicated Acres 160.00 Acres - (N/2 S/2)	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

16 N89°59'W 2640.99' (RECORD) N89°59'W 2640.99' (RECORD)
S89°59'28"W 2640.71' (MEASURED) S89°57'36"W 2639.88' (MEASURED)



WPX ENERGY**Operations Plan**

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

DATE: 12/05/2012 **FIELD:** Nageezi Gallup

WELL NAME: Lybrook 24-8-32 #201H **SURFACE:** State

SH Location: SESE Sec 32-24N-8W **ELEVATION:** 7,017' GR

BH Location: NWSW Sec 32-24N-8W
San Juan Co, NM **MINERALS:** State

LEASE # L2986-1

MEASURED DEPTH: 10,355'

I. GEOLOGY: Surface formation - Nacimiento

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	1,112	1,112	Point Lookout	4,219	4,279
Kirtland	1,360	1,360	Mancos	4,430	4,490
Fruitland	1,641	1,642	Kickoff Point	4,973	5,000
Pictured Cliffs	1,886	1,890	Target Top	5,466	5,777
Lewis	1,926	1,931	Landing Point	5,546	5,913
Cliff House	3,288	3,339	Target Base	5,537	6,022
Menefee	3,339	3,390	TD Pilot	5,950	5,976
			TD	5,442	10,355

- 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.

II. DRILLING

- A. MUD PROGRAM:** LSND 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 5000 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 Vertically/Directionally drilled as per attached Directional Plan to +/- 5,976' MD/5,950' TVD, then E-Log, and plug back to above KOP of +/- 5,000' MD/4,973' TVD', then drill Curve portion of wellbore and land curve at +/- 90 deg. at +/- 5,913' MD/5,546' TVD, and run 7" csg and cement. A 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 10,355' MD, then run and cement 4-1/2" production casing to TD.

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

Surface	12.25" hole	400'	9.625"	36#	K-55
Intermediate	8.75" hole	5,913'	7"	23#	J-55
Longstring	6.125" hole	10,355'	4.5"	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 1500psi. 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 +/- 4,064 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 +/- 5,843 ft. Total Volume: (620.2 cu-ft/400 sx/110.4 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.

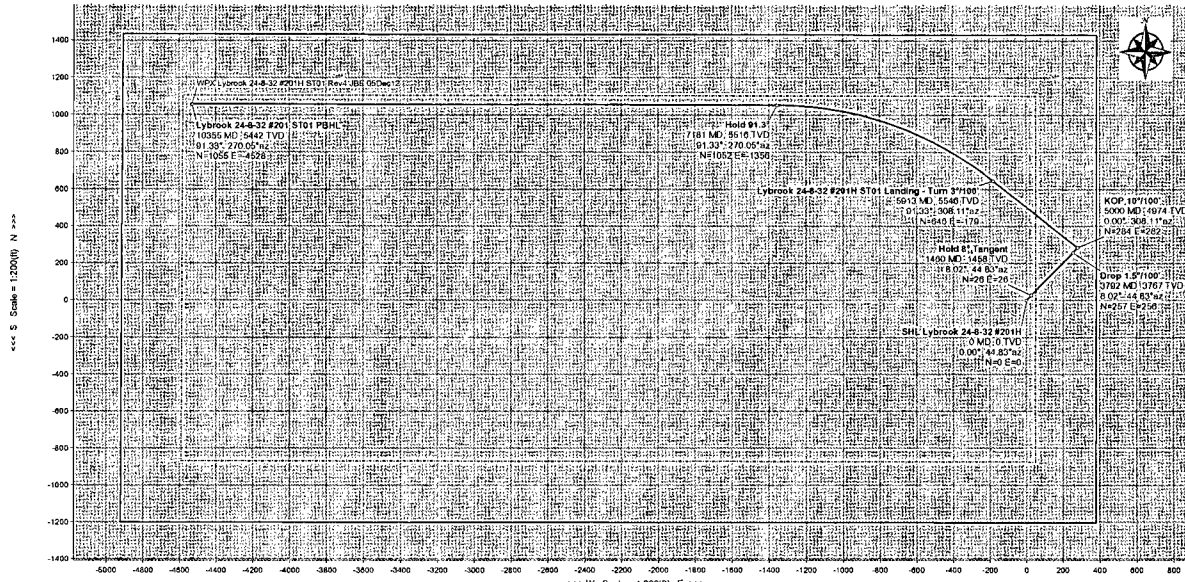
D. RUNNING TUBING

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 (~5,913' MD).

A handwritten signature in black ink, appearing to read "Larry Higgins", is written over a horizontal line.

WELL	Lybrook 24-8-32 #201H	FIELD	NM San Juan County NAD27	STRUCTURE	WPX - Lybrook 24-8-32 #201H
Map Date	05/01/2012	Drawn	December 01, 2012	Surface Location	Lat: N 16 16 0.795 Long: W 107 41 49.815
Map Date	05/01/2012	Drawn	December 01, 2012	Map Date	05/01/2012
Map Date	05/01/2012	Drawn	December 01, 2012	Map Date	05/01/2012

Name	TVD (ft)	NS (ft)	EW (ft)	Latitude (deg)	Longitude (deg)	Shape
Lybrook 24-8-32 #201H POE	5547.00	1050.96	4.16	N 36 16 11.186	W 107 41 48.782	POINT
Lybrook 24-8-32 #201 PBHL	5442.00	1055.06	-4528.20	N 36 16 11.223	W 107 42 44.128	POINT

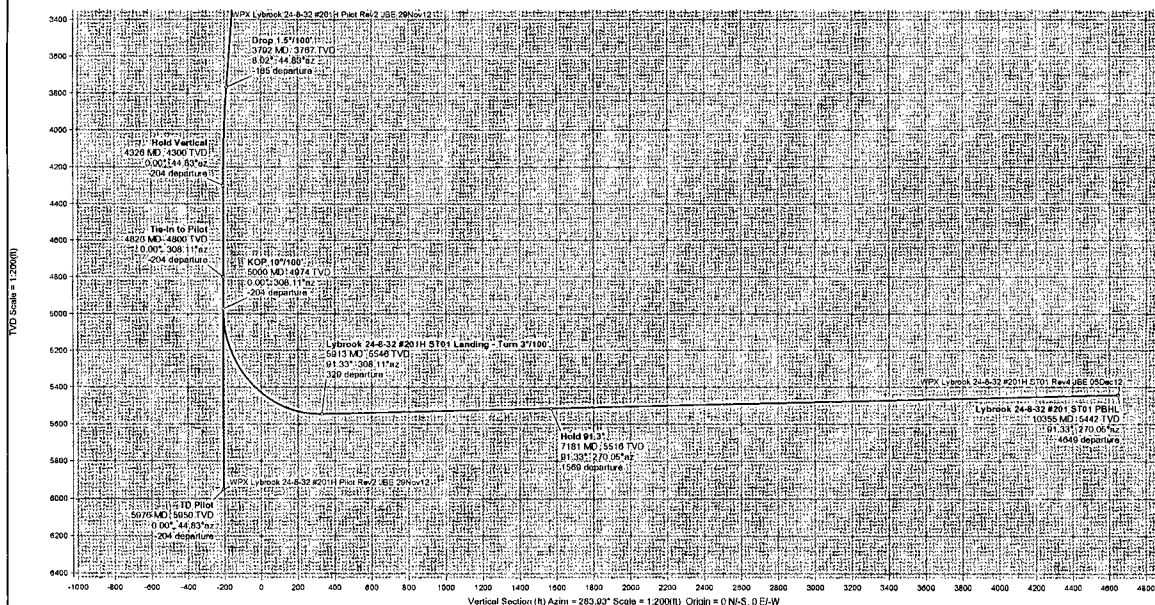


Legend

Lybrook 24-8-32 #201H POE
Sec 32 T24N R08W South Half
Lybrook 24-8-32 #201 PBHL
Sec 32 T24N R08W South Half 330° HL
WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12
WPX Lybrook 24-8-32 #201H Pilot Rev2 JBE 29Nov12



True North
To Cor (N21° 9.035' E)
Mag Dec (9.67°)
Grid Cor (0.081°)



Critical Points

Comments	Survey MD (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (°/100ft)
SHL Lybrook 24-8-32 #201H	0.00	0.00	44.83	0.00	0.00	0.00	0.00	0.00	0.00	
Nudge 1.5°/100° @ 22.78° Azi	925.00	0.00	44.83	925.00	0.00	0.00	0.00	0.00	0.00	0.00
Hold 8° Tangent	1459.55	8.02	44.83	1457.81	-19.18	26.48	26.33	37.34	44.83	1.50
Drop 1.5°/100°	3791.74	8.02	44.83	3767.19	-186.24	257.20	255.67	362.66	44.83	0.00
Hold Vertical	4326.29	0.00	44.83	4300.00	-205.41	283.68	282.00	400.00	44.83	1.50
Tie-In to Pilot	4826.29	0.00	308.11	4800.00	-205.41	283.68	282.00	400.00	44.83	0.00
KOP 10°/100°	4999.79	0.00	308.11	4973.50	-205.41	283.68	282.00	400.00	44.83	0.00
Lybrook 24-8-32 #201H ST01 Landing - Turn 3°/100°	5913.09	91.33	308.11	5546.30	329.41	645.50	-179.28	669.94	344.48	10.00
Hold 91.3°	7181.40	91.33	270.05	5515.73	1569.14	1052.40	-1355.66	1716.20	307.82	3.00
Lybrook 24-8-32 #201 ST01 PBHL	10354.80	91.33	270.05	5442.00	4649.02	1055.06	-4528.20	4649.49	283.12	0.00

Drawn By: Back Enrich
Data Created: December 05, 2012 09:12:08 PM
Checked By: [Signature]
Approved By: [Signature]
Approved Date: [Signature]



WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12 Proposal Geodetic
Report
(Non-Def Plan)



Report Date: December 05, 2012 - 09:09 PM
Client: WPX Energy
Field: NM San Juan County NAD27
Structure / Slot: WPX - Lybrook 24-8-32 #201H / Lybrook 24-8-32 #201H
Well: Lybrook 24-8-32 #201H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12
Survey Date: December 05, 2012
Tort / AHD / DDI / ERD Ratio: 145.421' / 5426.738 ft / 6.168' / 0.978
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 16' 0.79320", W 107° 41' 48.83280"
Location Grid N/E Y/X: N 1916417.344 ftUS, E 540220.409 ftUS
CRS Grid Convergence Angle: 0.0807°
Grid Scale Factor: 0.99991852

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 283.930° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7032.000 ft above MSL
Seabed / Ground Elevation: 7017.000 ft above MSL
Magnetic Declination: 9.676°
Total Gravity Field Strength: 999.1641 mgn (9.8 based)
Total Magnetic Field Strength: 50267.717 nT
Magnetic Dip Angle: 63.012°
Declination Date: December 05, 2012
Magnetic Declination Model: BGGM 2012
North Reference: True North
Grid Convergence Used: 0.0000°
Total Corr Mag North->True North: 9.6757°
Local Coord Referenced To: Well Head

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 24-8-32 #201H	0.00	0.00	44.83	0.00	0.00	0.00	0.00	N/A	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
Nudge 1.5"/100' @ 22.78° Azi	925.00	0.00	44.83	925.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
Hold 8" Tangent	1459.55	8.02	44.83	1457.81	-19.18	26.48	26.33	1.50	1916443.86	540246.70	N 36 16 1.06	W 107 41 48.51
Drop 1.5"/100'	3791.74	8.02	44.83	3767.19	-186.24	257.20	255.67	0.00	1916674.88	540475.70	N 36 16 3.34	W 107 41 45.71
Hold Vertical	4326.29	0.00	44.83	4300.00	-205.41	283.68	282.00	1.50	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
Tie-in to Pilot	4826.29	0.00	308.11	4800.00	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
KOP 10"/100'	4999.79	0.00	308.11	4973.50	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
Lybrook 24-8-32 #201H ST01												
Landing - Turn 3"/100'	5913.09	91.33	308.11	5548.30	329.41	645.50	-179.28	10.00	1917062.54	540040.23	N 36 16 7.18	W 107 41 51.02
Hold 91.3°	7181.40	91.33	270.05	5515.73	1569.14	1052.40	-1355.66	3.00	1917467.74	538863.38	N 36 16 11.20	W 107 42 5.39
Lybrook 24-8-32 #201 ST01 PBHL	10354.80	91.33	270.05	5442.00	4649.02	1055.06	-4528.20	0.00	1917465.94	535691.11	N 36 16 11.22	W 107 42 44.13

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 24-8-32 #201H Pilot Rev2 JBE 29Nov12
	15.000	4826.290	1/100.000	30.000	30.000	SLB_MWD-STD	Pilot / WPX Lybrook 24-8-32 #201H Pilot Rev2 JBE 29Nov12
	4826.290	10354.795	1/100.000	8.750	7.000	SLB_MWD-STD	ST01 / WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12



WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12 Proposal Geodetic
Report
(Non-Def Plan)



Report Date: December 05, 2012 - 09:10 PM
Client: WPX Energy
Field: NM San Juan County NAD27
Structure / Slot: WPX - Lybrook 24-8-32 #201H / Lybrook 24-8-32 #201H
Well: Lybrook 24-8-32 #201H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12
Survey Date: December 05, 2012
Tort / AHD / DDI / ERD Ratio: 145.421 * / 5426.738 ft / 6.168 / 0.978
Coordinate Reference System: NAD27 New Mexico State Plane, Western Zone, US Feet
Location Lat / Long: N 36° 16' 0.79320", W 107° 41' 48.83280"
Location Grid N/E Y/X: N 1916417.344 ftUS, E 540220.409 ftUS
CRS Grid Convergence Angle: 0.0807 °
Grid Scale Factor: 0.99991852

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 283.930 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 7032.000 ft above MSL
Seabed / Ground Elevation: 7017.000 ft above MSL
Magnetic Declination: 9.676 °
Total Gravity Field Strength: 999.1641 mgn (9.8 based)
Total Magnetic Field Strength: 50287.717 nT
Magnetic Dip Angle: 63.012 °
Declination Date: December 05, 2012
Magnetic Declination Model: BGGM 2012
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North-True North: 9.6757 °
Local Coord Referenced To: Well Head

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 24-8-32 #201H	0.00	0.00	44.83	0.00	0.00	0.00	0.00	N/A	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	100.00	0.00	44.83	100.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	200.00	0.00	44.83	200.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	300.00	0.00	44.83	300.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	400.00	0.00	44.83	400.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	500.00	0.00	44.83	500.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	600.00	0.00	44.83	600.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	700.00	0.00	44.83	700.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	800.00	0.00	44.83	800.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	900.00	0.00	44.83	900.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
Nudge 1.5°/100' @ 22.76° Azi	925.00	0.00	44.83	925.00	0.00	0.00	0.00	0.00	1916417.34	540220.41	N 36 16 0.79	W 107 41 48.83
	1000.00	1.13	44.83	1000.00	-0.38	0.52	0.52	1.50	1916417.87	540220.93	N 36 16 0.80	W 107 41 48.83
	1100.00	2.63	44.83	1099.94	-2.06	2.84	2.83	1.50	1916420.19	540223.23	N 36 16 0.82	W 107 41 48.80
	1200.00	4.13	44.83	1199.76	-5.08	7.02	6.98	1.50	1916424.37	540227.37	N 36 16 0.86	W 107 41 48.75
	1300.00	5.63	44.83	1299.40	-9.45	13.04	12.97	1.50	1916430.41	540233.36	N 36 16 0.92	W 107 41 48.67
	1400.00	7.13	44.83	1398.78	-15.15	20.92	20.79	1.50	1916438.29	540241.17	N 36 16 1.00	W 107 41 48.58
Hold 8° Tangent	1459.55	8.02	44.83	1457.81	-19.18	26.48	26.33	1.50	1916443.86	540246.70	N 36 16 1.06	W 107 41 48.51
	1500.00	8.02	44.83	1497.86	-22.07	30.49	30.30	0.00	1916447.87	540250.67	N 36 16 1.09	W 107 41 48.46
	1600.00	8.02	44.83	1596.88	-29.24	40.38	40.14	0.00	1916457.77	540260.49	N 36 16 1.19	W 107 41 48.34
	1700.00	8.02	44.83	1695.91	-36.40	50.27	49.97	0.00	1916467.68	540270.31	N 36 16 1.29	W 107 41 48.22
	1800.00	8.02	44.83	1794.93	-43.56	60.16	59.81	0.00	1916477.59	540280.13	N 36 16 1.39	W 107 41 48.10
	1900.00	8.02	44.83	1893.95	-50.73	70.06	69.64	0.00	1916487.49	540289.94	N 36 16 1.49	W 107 41 47.98
	2000.00	8.02	44.83	1992.97	-57.89	79.95	79.47	0.00	1916497.40	540299.76	N 36 16 1.58	W 107 41 47.86
	2100.00	8.02	44.83	2092.00	-65.05	89.84	89.31	0.00	1916507.30	540309.58	N 36 16 1.68	W 107 41 47.74
	2200.00	8.02	44.83	2191.02	-72.22	99.73	99.14	0.00	1916517.21	540319.40	N 36 16 1.78	W 107 41 47.62
	2300.00	8.02	44.83	2290.04	-79.38	109.63	108.98	0.00	1916527.11	540329.22	N 36 16 1.88	W 107 41 47.50
	2400.00	8.02	44.83	2389.06	-86.54	119.52	118.81	0.00	1916537.02	540339.04	N 36 16 1.98	W 107 41 47.38
	2500.00	8.02	44.83	2488.09	-93.71	129.41	128.64	0.00	1916546.92	540348.86	N 36 16 2.07	W 107 41 47.26
	2600.00	8.02	44.83	2587.11	-100.87	139.30	138.48	0.00	1916556.83	540358.68	N 36 16 2.17	W 107 41 47.14
	2700.00	8.02	44.83	2686.13	-108.03	149.20	148.31	0.00	1916566.74	540368.50	N 36 16 2.27	W 107 41 47.02
	2800.00	8.02	44.83	2785.15	-115.20	159.09	158.15	0.00	1916576.64	540378.32	N 36 16 2.37	W 107 41 46.90
	2900.00	8.02	44.83	2884.17	-122.36	168.98	167.98	0.00	1916586.55	540388.14	N 36 16 2.46	W 107 41 46.78
	3000.00	8.02	44.83	2983.20	-129.52	178.87	177.81	0.00	1916596.45	540397.96	N 36 16 2.56	W 107 41 46.66
	3100.00	8.02	44.83	3082.22	-136.69	188.77	187.65	0.00	1916606.36	540407.78	N 36 16 2.66	W 107 41 46.54
	3200.00	8.02	44.83	3181.24	-143.85	198.66	197.48	0.00	1916616.26	540417.59	N 36 16 2.76	W 107 41 46.42
	3300.00	8.02	44.83	3280.26	-151.01	208.55	207.32	0.00	1916626.17	540427.41	N 36 16 2.86	W 107 41 46.30
	3400.00	8.02	44.83	3379.29	-158.18	218.44	217.15	0.00	1916636.07	540437.23	N 36 16 2.95	W 107 41 46.18
	3500.00	8.02	44.83	3478.31	-165.34	228.34	226.98	0.00	1916645.98	540447.05	N 36 16 3.05	W 107 41 46.06
	3600.00	8.02	44.83	3577.33	-172.50	238.23	236.82	0.00	1916655.89	540456.87	N 36 16 3.15	W 107 41 45.94
Drop 1.5°/100'	3700.00	8.02	44.83	3676.35	-179.66	248.12	246.65	0.00	1916665.79	540466.69	N 36 16 3.25	W 107 41 45.82
	3791.74	8.02	44.83	3767.19	-186.24	257.20	255.67	0.00	1916674.88	540475.70	N 36 16 3.34	W 107 41 45.71
	3800.00	7.89	44.83	3775.38	-186.82	258.01	256.48	1.50	1916675.69	540476.50	N 36 16 3.34	W 107 41 45.70
	3900.00	6.39	44.83	3874.60	-193.21	266.83	265.25	1.50	1916684.52	540485.26	N 36 16 3.43	W 107 41 45.59
	4000.00	4.89	44.83	3974.11	-198.26	273.80	272.18	1.50	1916691.51	540492.18	N 36 16 3.50	W 107 41 45.51
	4100.00	3.39	44.83	4073.85	-201.97	278.93	277.28	1.50	1916696.64	540497.27	N 36 16 3.55	W 107 41 45.45
	4200.00	1.89	44.83	4173.74	-204.34	282.20	280.53	1.50	1916699.91	540500.52	N 36 16 3.58	W 107 41 45.41
Hold Vertical	4300.00	0.39	44.83	4273.71	-205.37	283.62	281.94	1.50	1916701.33	540501.92	N 36 16 3.60	W 107 41 45.39
	4326.29	0.00	44.83	4300.00	-205.41	283.68	282.00	1.50	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	4400.00	0.00	308.11	4373.71	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	4500.00	0.00	308.11	4473.71	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	4600.00	0.00	308.11	4573.71	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	4700.00	0.00	308.11	4673.71	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	4800.00	0.00	308.11	4773.71	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
Tie-In to Pilot	4826.29	0.00	308.11	4800.00	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	4900.00	0.00	308.11	4873.71	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
KOP 10°/100'	4999.79	0.00	308.11	4973.50	-205.41	283.68	282.00	0.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	5000.00	0.02	308.11	4973.71	-205.41	283.68	282.00	10.00	1916701.40	540501.99	N 36 16 3.60	W 107 41 45.39
	5100.00	10.02	308.11	5073.20	-197.44	289.08	275.12	10.00	1916706.78	540495.10	N 36 16 3.65	W 107 41 45.47
	5200.00	20.02	308.11	5169.66	-173.82	305.05	254.75	10.00	1916722.73	540474.71	N 36 16 3.81	W 107 41 45.72
	5300.00	30.02	308.11	5260.16	-135.29	331.12	221.52	10.00	1916748.75	540441.44	N 36 16 4.07	W 107 41 46.13
	5400.00	40.02	308.11	5341.95	-83.00	366.49	176.42	10.00	1916784.06	540396.30	N 36 16 4.42	W 107 41 46.68
	5500.00	50.02	308.11	5412.55	-18.55	410.10	120.83	10.00	1916827.58	540340.65	N 36 16 4.85	W 107 41 47.36
	5600.00	60.02	308.11	5469.80	56.10	460.60	56.44	10.00	1916877.99	540276.20	N 36 16 5.35	W 107 41 48.14
	5700.00	70.02	308.11	5511.98	138.69	516.47	-14.79	10.00	1916933.75	540204.90	N 36 16 5.90	W 107 41 49.01
	5800.00	80.02	308.11	5537.79	226.70	576.02	-90.70	10.00	1916993.19	540128.90	N 36 16 6.49	W 107 41 49.94
	5900.00	90.02	308.11	5546.46	317.47	637.43	-168.99	10.00	1917054.48	540050.54	N 36 16 7.10	W 107 41 50.90
Lybrook 24-8-32 #201H ST01 Landing - Turn 3°/100'	5913.09	91.33	308.11	5546.30	329.41	645.50	-179.28	10.00	1917062.54	540040.23	N 36 16 7.18	W 107 41 51.02
	6000.00	91.35	305.50	5544.27	409.46	697.55	-248.85	3.00	1917114.49	539970.60	N 36 16 7.69	W 107 41 51.87
	6100.00	91.37	302.50	5541.90	503.35	753.45	-331.72	3.00	1917170.27	539887.66	N 36 16 8.24	W 107 41 52.88
	6200.00	91.38	299.50	5539.50	598.90	804.94	-417.40	3.00	1917221.63	539801.91	N 36 16 8.75	W 107 41 53.93
	6300.00	91.40	296.50	5537.07	695.86							

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 ° ° °)
	6700.00	91.40	284.50	5527.27	1092.39	991.64	-879.53	3.00	1917407.66	538339.55	N 36 16 10.60	W 107 41 59.57
	6800.00	91.39	281.50	5524.83	1192.34	1014.11	-976.93	3.00	1917430.00	538242.13	N 36 16 10.82	W 107 42 0.76
	6900.00	91.38	278.49	5522.41	1292.06	1031.46	-1075.37	3.00	1917447.20	538143.67	N 36 16 10.99	W 107 42 1.96
	7000.00	91.37	275.49	5520.01	1391.20	1043.63	-1174.59	3.00	1917459.23	538044.45	N 36 16 11.11	W 107 42 3.18
	7100.00	91.36	272.49	5517.64	1489.75	1050.59	-1274.31	3.00	1917466.05	537944.73	N 36 16 11.18	W 107 42 4.39
Hold 91.3°	7181.40	91.33	270.05	5515.73	1569.14	1052.40	-1355.66	3.00	1917467.74	538863.38	N 36 16 11.20	W 107 42 5.39
	7200.00	91.33	270.05	5515.30	1587.20	1052.41	-1374.26	0.00	1917467.73	538844.79	N 36 16 11.20	W 107 42 5.61
	7300.00	91.33	270.05	5512.98	1684.25	1052.50	-1474.23	0.00	1917467.68	538744.82	N 36 16 11.20	W 107 42 6.84
	7400.00	91.33	270.05	5510.66	1781.30	1052.59	-1574.20	0.00	1917467.63	538644.86	N 36 16 11.20	W 107 42 8.06
	7500.00	91.33	270.05	5508.34	1878.36	1052.68	-1674.17	0.00	1917467.57	538544.89	N 36 16 11.20	W 107 42 9.28
	7600.00	91.33	270.05	5506.02	1975.41	1052.76	-1774.15	0.00	1917467.52	538444.93	N 36 16 11.20	W 107 42 10.50
	7700.00	91.33	270.05	5503.69	2072.46	1052.85	-1874.12	0.00	1917467.46	538344.96	N 36 16 11.20	W 107 42 11.72
	7800.00	91.33	270.05	5501.37	2169.52	1052.93	-1974.09	0.00	1917467.41	538245.00	N 36 16 11.20	W 107 42 12.94
	7900.00	91.33	270.05	5499.05	2266.57	1053.02	-2074.07	0.00	1917467.35	538145.03	N 36 16 11.21	W 107 42 14.16
	8000.00	91.33	270.05	5496.73	2363.62	1053.11	-2174.04	0.00	1917467.30	538045.07	N 36 16 11.21	W 107 42 15.38
	8100.00	91.33	270.05	5494.41	2460.68	1053.19	-2274.01	0.00	1917467.24	537945.11	N 36 16 11.21	W 107 42 16.60
	8200.00	91.33	270.05	5492.08	2557.73	1053.28	-2373.99	0.00	1917467.19	537845.14	N 36 16 11.21	W 107 42 17.82
	8300.00	91.33	270.05	5489.76	2654.78	1053.36	-2473.96	0.00	1917467.13	537745.18	N 36 16 11.21	W 107 42 19.04
	8400.00	91.33	270.05	5487.44	2751.84	1053.45	-2573.93	0.00	1917467.08	537645.21	N 36 16 11.21	W 107 42 20.26
	8500.00	91.33	270.05	5485.11	2848.89	1053.53	-2673.90	0.00	1917467.02	537545.25	N 36 16 11.21	W 107 42 21.48
	8600.00	91.33	270.05	5482.79	2945.94	1053.61	-2773.88	0.00	1917466.96	537445.28	N 36 16 11.21	W 107 42 22.71
	8700.00	91.33	270.05	5480.47	3043.00	1053.70	-2873.85	0.00	1917466.91	537345.32	N 36 16 11.21	W 107 42 23.93
	8800.00	91.33	270.05	5478.14	3140.05	1053.78	-2973.82	0.00	1917466.85	537245.35	N 36 16 11.21	W 107 42 25.15
	8900.00	91.33	270.05	5475.82	3237.10	1053.87	-3073.80	0.00	1917466.79	537145.39	N 36 16 11.21	W 107 42 26.37
	9000.00	91.33	270.05	5473.50	3334.16	1053.95	-3173.77	0.00	1917466.73	537045.42	N 36 16 11.21	W 107 42 27.59
	9100.00	91.33	270.05	5471.17	3431.21	1054.03	-3273.74	0.00	1917466.68	536945.46	N 36 16 11.21	W 107 42 28.81
	9200.00	91.33	270.05	5468.85	3528.26	1054.12	-3373.71	0.00	1917466.62	536845.49	N 36 16 11.22	W 107 42 30.03
	9300.00	91.33	270.05	5466.52	3625.31	1054.20	-3473.69	0.00	1917466.56	536745.53	N 36 16 11.22	W 107 42 31.25
	9400.00	91.33	270.05	5464.20	3722.37	1054.28	-3573.66	0.00	1917466.50	536645.57	N 36 16 11.22	W 107 42 32.47
	9500.00	91.33	270.05	5461.88	3819.42	1054.36	-3673.63	0.00	1917466.44	536545.60	N 36 16 11.22	W 107 42 33.69
	9600.00	91.33	270.05	5459.55	3916.47	1054.45	-3773.61	0.00	1917466.39	536445.64	N 36 16 11.22	W 107 42 34.91
	9700.00	91.33	270.05	5457.23	4013.52	1054.53	-3873.58	0.00	1917466.33	536345.67	N 36 16 11.22	W 107 42 36.13
	9800.00	91.33	270.05	5454.90	4110.58	1054.61	-3973.55	0.00	1917466.27	536245.71	N 36 16 11.22	W 107 42 37.36
	9900.00	91.33	270.05	5452.58	4207.63	1054.69	-4073.53	0.00	1917466.21	536145.74	N 36 16 11.22	W 107 42 38.58
	10000.00	91.33	270.05	5450.25	4304.68	1054.77	-4173.50	0.00	1917466.15	536045.78	N 36 16 11.22	W 107 42 39.80
	10100.00	91.33	270.05	5447.93	4401.73	1054.85	-4273.47	0.00	1917466.09	535945.81	N 36 16 11.22	W 107 42 41.02
	10200.00	91.33	270.05	5445.60	4498.78	1054.94	-4373.44	0.00	1917466.03	535845.85	N 36 16 11.22	W 107 42 42.24
	10300.00	91.33	270.05	5443.27	4595.84	1055.02	-4473.42	0.00	1917465.97	535745.88	N 36 16 11.22	W 107 42 43.46
Lybrook 24-8-32 #201 ST01 PBHL	10354.80	91.33	270.05	5442.00	4649.02	1055.06	-4528.20	0.00	1917465.94	535691.11	N 36 16 11.22	W 107 42 44.13

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 24-8-32 #201H Pilot Rev2 JBE 29Nov12
	15.000	4826.290	1/100.000	30.000	30.000	SLB_MWD-STD	Pilot / WPX Lybrook 24-8-32 #201H Pilot Rev2 JBE 29Nov12
	4826.290	10354.795	1/100.000	8.750	7.000	SLB_MWD-STD	ST01 / WPX Lybrook 24-8-32 #201H ST01 Rev4 JBE 05Dec12