State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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

David R. Catanach Division Director
Oil Conservation Division

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

Operator Signature Date: 11-12-15
Well information;
Operator WPX, Well Name and Number W. Lybrook Unit # 765H
API# 30-045-35731, Section 34, Township 23 (N)/S, Range 09 E/(W)

Conditions of Approval:
(See the below checked and handwritten conditions)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- ✓ Hold C-104 for directional survey & "As Drilled" Plat
- ✓ Hold C-104 for (NSL), NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o 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
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.
- ✓ Pilot hole plug requires the isolation of the Dakota formation top with 100' plug plus 100% excess

Charlie Perrin
NMOCD Approved by Signature

2-11-16
Date KC

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

Form 3160-3
(September 2001)

OIL CONS. DIV DIST. 3

FEB 02 2016

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
NOV 12 2015
Farmington Field Office
Bureau of Land Management

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 057164

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
West Lybrook Unit

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
W. Lybrook Unit #765H

2. Name of Operator
WPX Energy Production, LLC

9. API Well No.
30-045-35731

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
P.O. Box 640 Aztec, NM 87410	(505) 333-1808	Lybrook Mancos W

4. Location of Well *(Report location clearly and in accordance with any State requirements. *)*
At surface B 550' FNL & 1508' FEL, sec 34, T23N, R9W NWNE
At proposed prod. zone O 330' FSL & 2465' FEL, sec 35 T23N, R9W SWSE

11. Sec., T., R., M., or Blk. and Survey or Area
SHL: Sec 34, T23N, R9W
BHL: Sec 35, T23N, R9W

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
From intersection US Hwy & 550 US Hwy 64 in Bloomfield NM, South 37.8 miles to Mile Marker 113.4	San Juan	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
550'	2240 Acres	320-Acres / 12807.24 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
20'	10961' MD / 4460' TVD	UTB000178
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
6696' GR	December 1, 2015	1 month

KP

24. Attachments

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

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)*	Date
	Marie E. Jaramillo	11/12/15
Title: Permit Technician III		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date 1/29/16
Title AFM	Office FFO	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on reverse)*

WPX Energy Production, LLC, proposes to develop the Lybrook Mancos W formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of BLM and is on lease and will be twinned with the W. Lybrook Unit #764H and W. Lybrook Unit #766H.

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

The new access of 3910.5' of BLM is Onlease access road will be built and permitted via the APD.

A new 4055.4' BLM on lease well connect pipeline will be built and permitted via the APD.

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

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

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

NMOCD

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045-35731	98157	LYBROOK MANCOS W

4 Property Code	5 Property Name	6 Well Number
315250	W LYBROOK UNIT	765H

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6696'

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
B	34	23N	9W		550	NORTH	1508	EAST	SAN JUAN

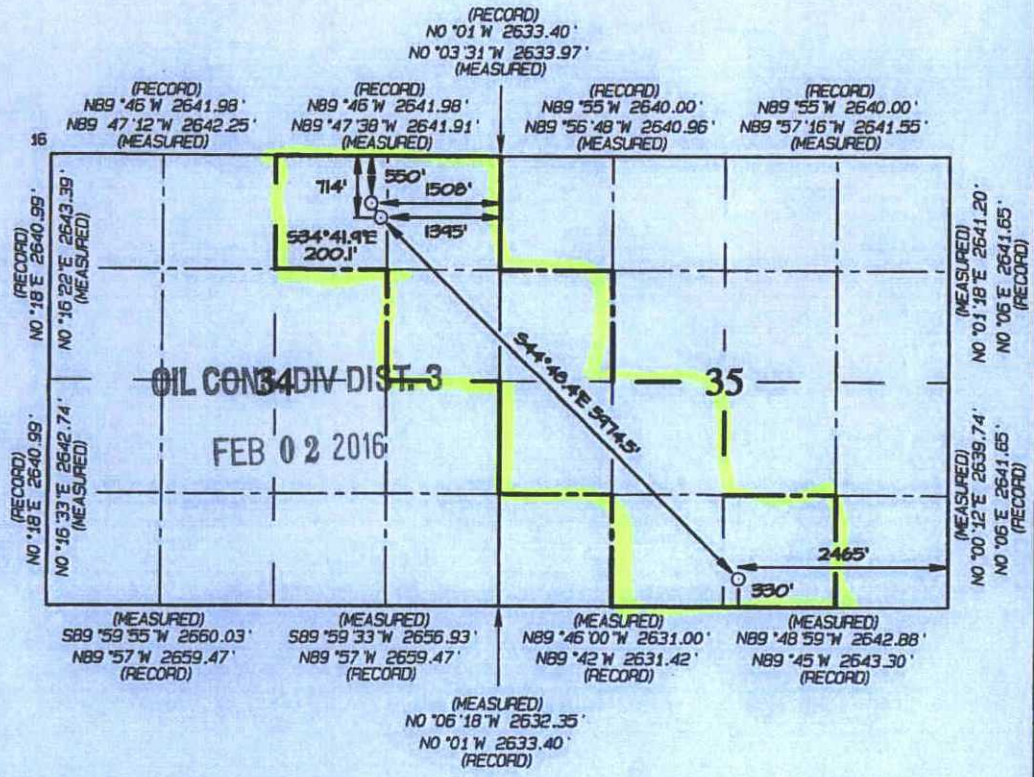
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	35	23N	9W		330	SOUTH	2465	EAST	SAN JUAN

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320.0			R-14051 - 12,807.24 Acres

N/2 NE/4, SE/4 NE/4 - Section 34
SW/4 NW/4, N/2 SW/4, SE/4 SW/4
SW/4 SE/4 - Section 35

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



SURFACE LOCATION
550' FNL 1508' FEL
SEC 34, T23N, R9W
LAT: 36.189179 °N
LONG: 107.771830 °W
DATUM: NAD1927

LAT: 36.189193 °N
LONG: 107.772444 °W
DATUM: NAD1983

POINT-OF-ENTRY
714' FNL 1395' FEL
SEC 34, T23N, R9W
LAT: 36.188727 °N
LONG: 107.771445 °W
DATUM: NAD1927

LAT: 36.188741 °N
LONG: 107.772059 °W
DATUM: NAD1983

END-OF-LATERAL
330' FSL 2465' FEL
SEC 35, T23N, R9W
LAT: 36.177074 °N
LONG: 107.757188 °W
DATUM: NAD1927

LAT: 36.177088 °N
LONG: 107.757802 °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 11/12/15 Date

Marie E. Jaramillo
Printed Name

marie.jaramillo@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.

Date Revised: OCTOBER 29, 2015
Date of Survey: JUNE 5, 2015

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPX Energy

Operations Plan

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

Date:	**November 12, 2015**	**Field:**	**Lybrook Mancos W**
Well Name:	**W LYBROOK #765H**	**Surface:**	**BLM**
SH Location:	**NWNE Sec 34 23-09W**	**Elevation:**	**6696' GR**
BH Location:	**SWSE Sec 35 23N-09W**	**Minerals:**	**BLM**

Measured Depth: **10,961.18'**

I. **GEOLOGY:** SURFACE FORMATION - NACIMIENTO/ OJO ALAMO

A. FORMATION TOPS (KB)

NAME	MD	TVD	NAME	MD	TVD
			POINT LOOKOUT	3343	3295
OJO ALAMO	326	326	MANCOS	3486	3436
KIRTLAND	475	475	GALLUP	3663	3613
PICTURED CLIFFS	957	955	* TD (Pilot)	5,350.14	5,300.00
LEWIS	1061	1057	KICKOFF POINT	4,586.14	4,409.75
CHACRA	1316	1307	TOP TARGET	4828	4505
CLIFF HOUSE	2259	2230	LANDING POINT	4,986.40	4,525.00
MENEFEE	2331	2300	BASE TARGET	4,986.40	4,525.00
			TD	10,961.18	4,460.00

* Indicates special instructions see notes section of OPS plan.

B. MUD LOGGING PROGRAM: Mudlogger on location from surface csg to TD.

C. LOGGING PROGRAM: LWD GR from surface casing to TD.

D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. **MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 ¾" Directional Vertical hole, the pilot hole section of the well and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes.** Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	4,986.40'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	4836.4' - 10,961.18'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 4836.4'	4.5"	11.6 LBS	P-110 or equiv	LTC

B. FLOAT EQUIPMENT:

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

2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft.

3. PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + 1 RSI (Sliding Sleeve) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.

C. CEMENTING:

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

1. Surface 5 bbl Fresh Water Spacer, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ Bbls).TOC at Surface.

2.Pilot hole Plug back *Actual volumes and cement Slurry will be adjusted prior to plug back. 30 sx 15.8# Neat G Premium: Yield:1.17 cu-ft/sk (Vol: 432 cu-ft / 77 Bbls).

3.Intermediate 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: +/- 700 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1001 cu-ft / 178.3 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). WOC 12 hrs. Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (900 sx / 1246 cu-ft / 222 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.

4. PROD. LINER: Spacer #1:10 bbl (56.cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem ™ System. Yield 1.36 cuft/sk 13.3 ppg (600 sx /816 cuft /145 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (600 sx /816bbls).

I.
COMPLETION

A. **CBL**

Run CCL for perforating

A. **PRESSURE TEST**

1. Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

B. **STIMULATION**

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

C. **RUNNING TUBING**

1. *Production Tubing:* Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner.

- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC,will be entirely within the applicable setbacks . This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2)NMAC, and 19.15.16.15. B(4) NMAC.

NOTE:

Proposed Operations:

* This well will have a vertical pilot section drilled below the planned horizon of interest for the lateral. Coring will be performed in the vertical pilot section of the wellbore. Once TD has been reached and all coring and or logging operations are comepleted this section of the well will be cemented back to approx 100' above the planned Kickoff point, a sidetrack will be performed and the curve section will be drilled to the landing point. 7" casing will be set through the curve and cemented back to surface.

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-55 Intermediate casing with a Liner Hanger and pack-off assembly then cemented to top of liner hanger.

After cementing and TOL clean up operations are complete, the TOL will be tested to 1500 psi (per BLM).

WPX Energy

T23N R9W
W Lybrook 2309-34B
W Lybrook UT #765H - Slot A2

Wellbore #1 Pilot Hole

Plan: Design #1 21Oct15 sam

Standard Planning Report

21 October, 2015

WPX
Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #765H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	KB @ 6710.00usft (Aztec 920)
Project:	T23N R9W	**MD Reference:**	KB @ 6710.00usft (Aztec 920)
Site:	W Lybrook 2309-34B	**North Reference:**	True
Well:	W Lybrook UT #765H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1 Pilot Hole		
Design:	Design #1 21Oct15 sam		

Project	T23N R9W		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	W Lybrook 2309-34B				
Site Position:		**Northing:**	1,888,108.09 usft	**Latitude:**	36.189179
From:	Lat/Long	**Easting:**	518,148.80 usft	**Longitude:**	-107.771830
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.04 °

Well	W Lybrook UT #765H - Slot A2					
Well Position	**+N/-S**	0.00 usft	**Northing:**	1,888,108.09 usft	**Latitude:**	36.189179
	+E/-W	0.00 usft	**Easting:**	518,148.80 usft	**Longitude:**	-107.771830
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,696.00 usft

Wellbore	Wellbore #1 Pilot Hole			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	9.99	63.03	50,589

Design	Design #1 21Oct15 sam				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (bearing)**	
	0.00	0.00	0.00	311.65	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,096.25	11.92	311.65	1,091.95	41.09	-46.20	2.00	2.00	0.00	311.65	
2,955.14	11.92	311.65	2,910.73	296.35	-333.21	0.00	0.00	0.00	0.00	
3,750.14	0.00	0.00	3,700.00	351.13	-394.81	1.50	-1.50	0.00	180.00	Vertical
5,350.14	0.00	0.00	5,300.00	351.13	-394.81	0.00	0.00	0.00	0.00	

WPX

Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #765H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	KB @ 6710.00usft (Aztec 920)
Project:	T23N R9W	**MD Reference:**	KB @ 6710.00usft (Aztec 920)
Site:	W Lybrook 2309-34B	**North Reference:**	True
Well:	W Lybrook UT #765H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1 Pilot Hole		
Design:	Design #1 21Oct15 sam		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	10.00	311.65	997.47	28.92	-32.52	43.52	2.00	2.00	0.00
1,096.25	11.92	311.65	1,091.95	41.09	-46.20	61.83	2.00	2.00	0.00
Hold 11.92 Inclination									
1,500.00	11.92	311.65	1,486.99	96.53	-108.54	145.25	0.00	0.00	0.00
2,000.00	11.92	311.65	1,976.20	165.19	-185.74	248.57	0.00	0.00	0.00
2,500.00	11.92	311.65	2,465.41	233.85	-262.94	351.88	0.00	0.00	0.00
2,955.14	11.92	311.65	2,910.73	296.35	-333.21	445.93	0.00	0.00	0.00
Start Drop -1.50									
3,000.00	11.25	311.65	2,954.67	302.34	-339.95	454.94	1.50	-1.50	0.00
3,500.00	3.75	311.65	3,450.04	345.69	-388.69	520.18	1.50	-1.50	0.00
3,750.14	0.00	0.00	3,700.00	351.13	-394.81	528.36	1.50	-1.50	0.00
Vertical									
4,000.00	0.00	0.00	3,949.86	351.13	-394.81	528.36	0.00	0.00	0.00
4,334.14	0.00	0.00	4,284.00	351.13	-394.81	528.36	0.00	0.00	0.00
Mancos Lower									
4,439.14	0.00	0.00	4,389.00	351.13	-394.81	528.36	0.00	0.00	0.00
El Vado									
4,478.14	0.00	0.00	4,428.00	351.13	-394.81	528.36	0.00	0.00	0.00
Mancos Unc									
4,500.00	0.00	0.00	4,449.86	351.13	-394.81	528.36	0.00	0.00	0.00
4,512.14	0.00	0.00	4,462.00	351.13	-394.81	528.36	0.00	0.00	0.00
PS3									
4,545.14	0.00	0.00	4,495.00	351.13	-394.81	528.36	0.00	0.00	0.00
PS2									
4,566.14	0.00	0.00	4,516.00	351.13	-394.81	528.36	0.00	0.00	0.00
PS1									
5,000.00	0.00	0.00	4,949.86	351.13	-394.81	528.36	0.00	0.00	0.00
5,025.14	0.00	0.00	4,975.00	351.13	-394.81	528.36	0.00	0.00	0.00
Sanastee									
5,254.14	0.00	0.00	5,204.00	351.13	-394.81	528.36	0.00	0.00	0.00
Greenhorn									
5,339.14	0.00	0.00	5,289.00	351.13	-394.81	528.36	0.00	0.00	0.00
Dakota									
5,350.14	0.00	0.00	5,300.00	351.13	-394.81	528.36	0.00	0.00	0.00
TD at 5350.14									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Vertical - plan hits target center - Circle (radius 25.00)	0.00	0.00	3,700.00	351.13	-394.81	1,888,458.97	517,753.76	36.190144	-107.773168

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #765H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	KB @ 6710.00usft (Aztec 920)
Project:	T23N R9W	**MD Reference:**	KB @ 6710.00usft (Aztec 920)
Site:	W Lybrook 2309-34B	**North Reference:**	True
Well:	W Lybrook UT #765H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1 Pilot Hole		
Design:	Design #1 21Oct15 sam		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8"	9.620	12.250

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)
4,334.14	4,284.00	Mancos Lower		0.00	
4,439.14	4,389.00	El Vado		0.00	
4,478.14	4,428.00	Mancos Unc		0.00	
4,512.14	4,462.00	PS3		0.00	
4,545.14	4,495.00	PS2		0.00	
4,566.14	4,516.00	PS1		0.00	
5,025.14	4,975.00	Sanastee		0.00	
5,254.14	5,204.00	Greenhorn		0.00	
5,339.14	5,289.00	Dakota		0.00	

Plan Annotations

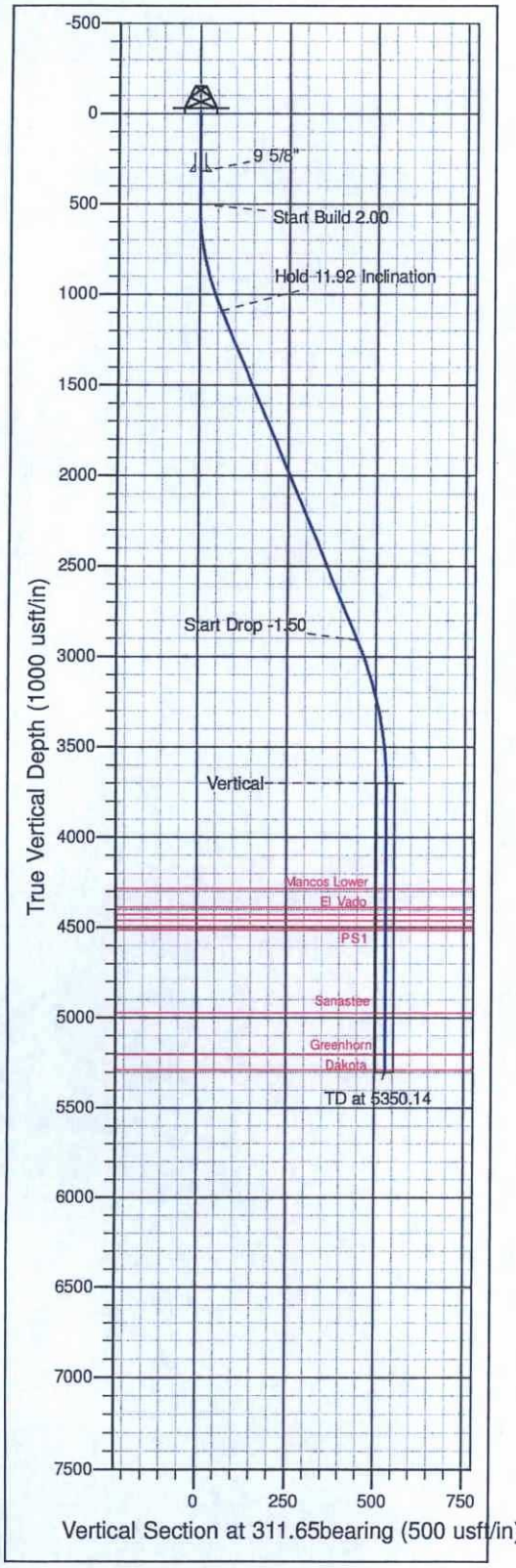
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
500.00	500.00	0.00	0.00	Start Build 2.00
1,096.25	1,091.95	41.09	-46.20	Hold 11.92 Inclination
2,955.14	2,910.73	296.35	-333.21	Start Drop -1.50
3,750.14	3,700.00	351.13	-394.81	Vertical
5,350.14	5,300.00	351.13	-394.81	TD at 5350.14

WPXENERGY

Well Name: W Lybrook UT #765H
Surface Location: W Lybrook 2309-34B
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6696.00

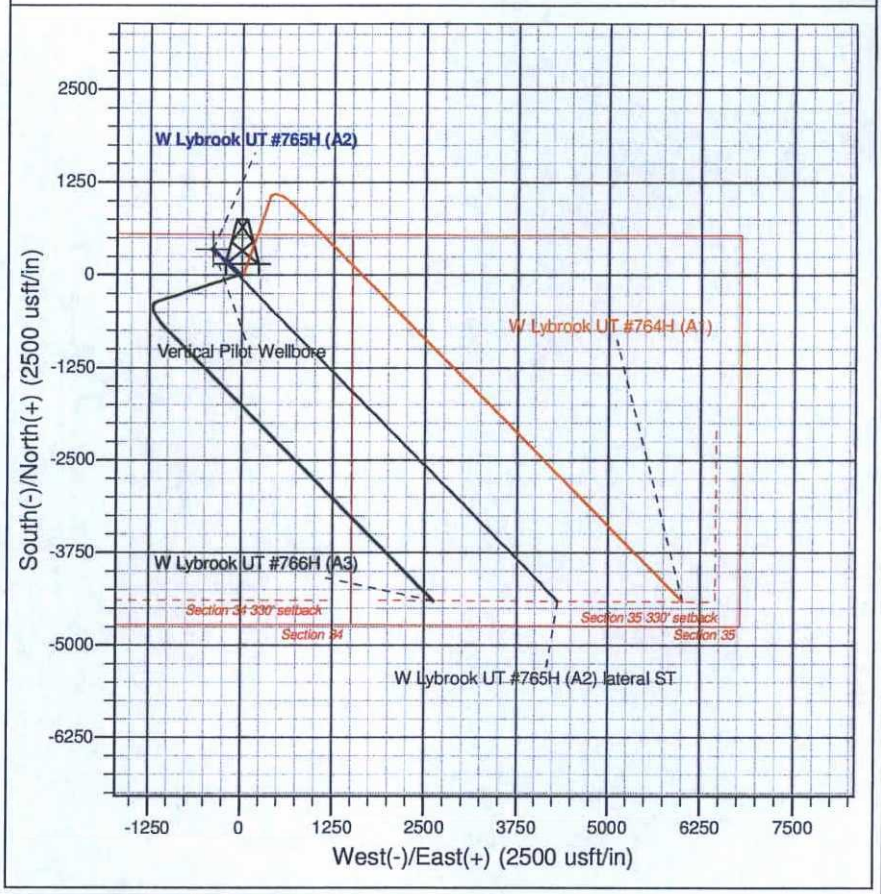
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1888108.09	518148.80	36.189179	-107.771830	A2

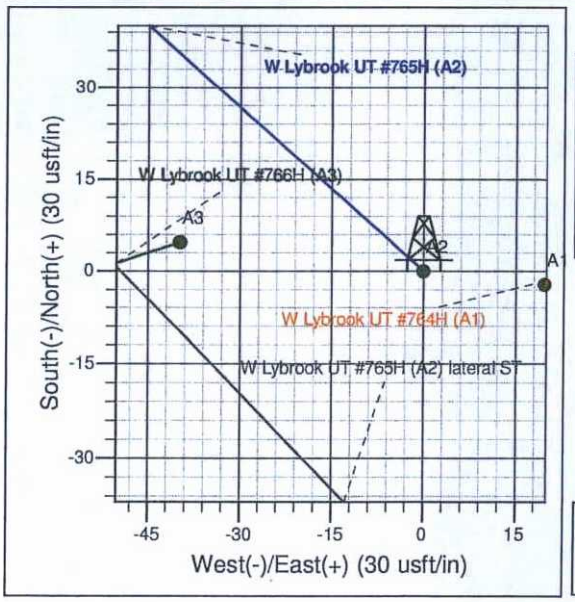
KB @ 6710.00usft (Aztec 920)



ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1091.95	1096.25	11.92	311.65	41.09	-46.20	61.83	61.83	Hold 11.92 Inclination
2910.73	2955.14	11.92	311.65	296.35	-333.21	445.93	445.93	Start Drop -1.50
3700.00	3750.14	0.00	0.00	351.13	-394.81	528.36	528.36	Vertical
5300.00	5350.14	0.00	0.00	351.13	-394.81	528.36	528.36	TD at 5350.14





Azimuths to True North
Magnetic North: 9.99°

Magnetic Field
Strength: 50588.6snT
Dip Angle: 63.03°
Date: 12/31/2009
Model: IGRF200510

Project: T23N R9W
Site: W Lybrook 2309-34B
Well: W Lybrook UT #765H
Design #1 21Oct15 sam

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Vertical	3700.00	351.13	-394.81	1888458.97	517753.76	36.190144	-107.773168	Circle (Radius: 25.00)
	- plan hits target center							

WPX Energy

T23N R9W
W Lybrook 2309-34B
W Lybrook UT #765H - Slot A2

Wellbore #2 Lateral ST

Plan: Design #1 21Oct15 sam

Standard Planning Report

21 October, 2015

WPX
Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #765H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	KB @ 6710.00usft (Aztec 920)
Project:	T23N R9W	**MD Reference:**	KB @ 6710.00usft (Aztec 920)
Site:	W Lybrook 2309-34B	**North Reference:**	True
Well:	W Lybrook UT #765H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #2 Lateral ST		
Design:	Design #1 21Oct15 sam		

Project	T23N R9W		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	W Lybrook 2309-34B				
Site Position:		**Northing:**	1,888,108.09 usft	**Latitude:**	36.189179
From:	Lat/Long	**Easting:**	518,148.80 usft	**Longitude:**	-107.771830
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.04 °

Well	W Lybrook UT #765H - Slot A2					
Well Position	**+N/-S**	0.00 usft	**Northing:**	1,888,108.09 usft	**Latitude:**	36.189179
	+E/-W	0.00 usft	**Easting:**	518,148.80 usft	**Longitude:**	-107.771830
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,696.00 usft

Wellbore	Wellbore #2 Lateral ST			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	9.99	63.03	50,589

Design	Design #1 21Oct15 sam			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	3,795.21

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (bearing)**
	0.00	0.00	0.00	135.56

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
3,795.21	0.00	0.00	3,745.07	351.13	-394.81	0.00	0.00	0.00	0.00	
3,825.96	2.53	308.82	3,775.81	351.56	-395.34	8.22	8.22	0.00	308.82	
4,586.14	60.00	135.23	4,409.75	103.24	-151.95	8.22	7.56	-22.84	-173.74	Start 60 tan #765H
4,646.14	60.00	135.23	4,439.75	66.35	-115.36	0.00	0.00	0.00	0.00	End 60 tan #765H
4,811.12	74.86	135.23	4,502.90	-41.50	-8.37	9.01	9.01	0.00	0.00	
4,986.40	90.62	135.23	4,525.00	-164.55	113.69	8.99	8.99	0.00	0.00	POE #765H
10,961.18	90.62	135.23	4,460.00	-4,406.06	4,321.23	0.00	0.00	0.00	0.00	BHL #765H

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #765H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	KB @ 6710.00usft (Aztec 920)
Project:	T23N R9W	**MD Reference:**	KB @ 6710.00usft (Aztec 920)
Site:	W Lybrook 2309-34B	**North Reference:**	True
Well:	W Lybrook UT #765H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #2 Lateral ST		
Design:	Design #1 21Oct15 sam		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,795.21	0.00	0.00	3,745.07	351.13	-394.81	-527.13	0.00	0.00	0.00
Start Build 8.22									
3,825.96	2.53	308.82	3,775.81	351.56	-395.34	-527.81	8.22	8.22	0.00
Start DLS 8.22 TFO -173.74									
4,000.00	11.80	136.39	3,948.83	341.02	-386.01	-513.75	8.22	5.33	-99.08
4,500.00	52.92	135.28	4,362.18	154.20	-202.46	-251.85	8.22	8.22	-0.22
4,586.14	60.00	135.23	4,409.75	103.24	-151.95	-180.10	8.22	8.22	-0.06
Hold 60.00 Inclination									
4,646.14	60.00	135.23	4,439.75	66.35	-115.36	-128.14	0.00	0.00	0.00
Start Build DLS 9.01 TFO 0.00									
4,811.12	74.86	135.23	4,502.90	-41.50	-8.37	23.77	9.01	9.01	0.00
Start DLS 8.99 TFO 0.00									
4,986.00	90.59	135.23	4,524.98	-164.27	113.41	196.69	8.99	8.99	0.00
7"									
4,986.40	90.62	135.23	4,525.00	-164.55	113.69	197.08	8.99	8.99	0.00
POE at 90.62 Inc 135.23 deg									
5,000.00	90.62	135.23	4,524.85	-174.21	123.27	210.69	0.00	0.00	0.00
5,500.00	90.62	135.23	4,519.41	-529.16	475.38	710.65	0.00	0.00	0.00
6,000.00	90.62	135.23	4,513.97	-884.11	827.49	1,210.61	0.00	0.00	0.00
6,500.00	90.62	135.23	4,508.53	-1,239.06	1,179.60	1,710.57	0.00	0.00	0.00
7,000.00	90.62	135.23	4,503.09	-1,594.01	1,531.70	2,210.54	0.00	0.00	0.00
7,500.00	90.62	135.23	4,497.65	-1,948.96	1,883.81	2,710.50	0.00	0.00	0.00
8,000.00	90.62	135.23	4,492.21	-2,303.91	2,235.92	3,210.46	0.00	0.00	0.00
8,500.00	90.62	135.23	4,486.78	-2,658.86	2,588.03	3,710.42	0.00	0.00	0.00
9,000.00	90.62	135.23	4,481.34	-3,013.81	2,940.14	4,210.39	0.00	0.00	0.00
9,500.00	90.62	135.23	4,475.90	-3,368.76	3,292.25	4,710.35	0.00	0.00	0.00
10,000.00	90.62	135.23	4,470.46	-3,723.71	3,644.35	5,210.31	0.00	0.00	0.00
10,500.00	90.62	135.23	4,465.02	-4,078.67	3,996.46	5,710.27	0.00	0.00	0.00
10,961.18	90.62	135.23	4,460.00	-4,406.06	4,321.23	6,171.42	0.00	0.00	0.00
TD at 10961.18									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Start 60 tan #765H - plan hits target center - Point	0.00	0.00	4,409.75	103.24	-151.95	1,888,211.23	517,996.78	36.189463	-107.772345
End 60 tan #765H - plan hits target center - Point	0.00	0.00	4,439.75	66.35	-115.36	1,888,174.37	518,033.40	36.189361	-107.772221
BHL #765H - plan hits target center - Point	0.00	0.00	4,460.00	-4,406.06	4,321.23	1,883,704.77	522,472.82	36.177074	-107.757189
POE #765H - plan hits target center - Point	0.00	0.00	4,525.00	-164.55	113.69	1,887,943.61	518,262.59	36.188727	-107.771445

Database:	COMPASS	**Local Co-ordinate Reference:**	Well W Lybrook UT #765H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	KB @ 6710.00usft (Aztec 920)
Project:	T23N R9W	**MD Reference:**	KB @ 6710.00usft (Aztec 920)
Site:	W Lybrook 2309-34B	**North Reference:**	True
Well:	W Lybrook UT #765H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #2 Lateral ST		
Design:	Design #1 21Oct15 sam		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8"	9.620	12.250
4,986.00	4,524.98	7"	7.000	8.750

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
3,795.21	3,745.07	351.13	-394.81	Start Build 8.22
3,825.96	3,775.81	351.56	-395.34	Start DLS 8.22 TFO -173.74
4,586.14	4,409.75	103.24	-151.95	Hold 60.00 Inclination
4,646.14	4,439.75	66.35	-115.36	Start Build DLS 9.01 TFO 0.00
4,811.12	4,502.90	-41.50	-8.37	Start DLS 8.99 TFO 0.00
4,986.40	4,525.00	-164.55	113.69	POE at 90.62 Inc 135.23 deg
10,961.18	4,460.00	-4,406.06	4,321.23	TD at 10961.18

WPXENERGY

Well Name: W Lybrook UT #765H
Surface Location: W Lybrook 2309-34B
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6696.00

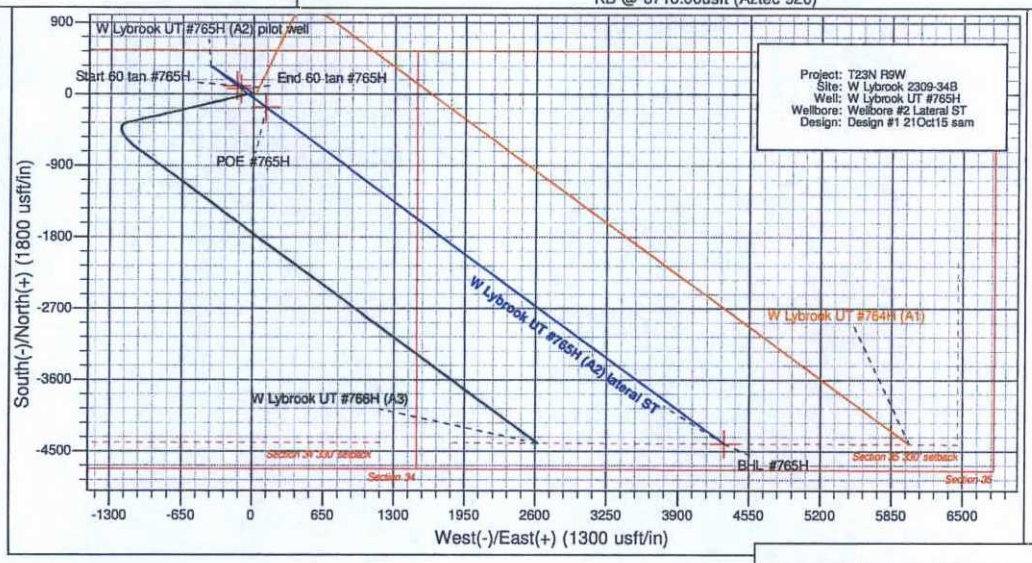
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	1888108.09	518148.80	36.189179	-107.771830	A2

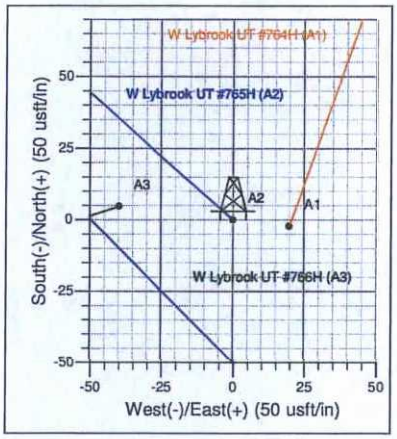
KB @ 6710.00usft (Aztec 920)

T M

Azimuths to True North
Magnetic North: 9.99°

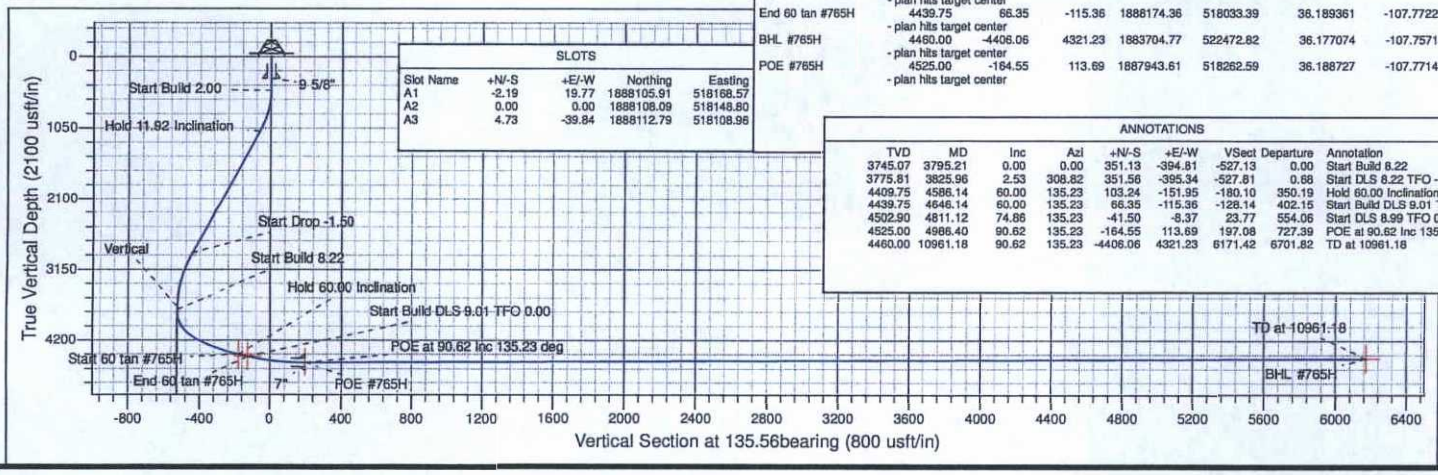
Magnetic Field
Strength: 50588.6snT
Dip Angle: 63.03°
Date: 12/31/2009
Model: IGRF200510





DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 tan #765H	4409.75	103.24	-151.95	1888211.23	517996.78	36.189463	-107.772345	Point
	- plan hits target center							
End 60 tan #765H	4439.75	66.35	-115.36	1888174.36	518033.39	36.189361	-107.772221	Point
	- plan hits target center							
BHL #765H	4460.00	-4406.06	4321.23	1883704.77	522472.82	36.177074	-107.757188	Point
	- plan hits target center							
POE #765H	4525.00	-164.55	113.69	1887943.61	518262.59	36.188727	-107.771445	Point
	- plan hits target center							



SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A1	-2.19	19.77	1888105.91	518168.57
A2	0.00	0.00	1888108.09	518148.80
A3	4.73	-39.84	1888112.79	518108.96

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
3745.07	3795.21	0.00	0.00	351.13	-394.81	-527.13	0.00	Start Build 8.22
3775.81	3825.96	2.53	308.82	351.56	-395.34	-527.81	0.68	Start DLS 8.22 TFO -173.74
4409.75	4586.14	60.00	135.23	103.24	-151.95	-180.10	350.19	Hold 60.00 Inclination
4439.75	4646.14	60.00	135.23	66.35	-115.36	-128.14	402.15	Start Build DLS 9.01 TFO 0.00
4502.90	4811.12	74.86	135.23	-41.50	-8.37	23.77	554.06	Start DLS 8.99 TFO 0.00
4525.00	4986.40	90.62	135.23	-164.55	113.69	197.08	727.39	POE at 90.62 Inc 135.23 deg
4460.00	10961.18	90.62	135.23	-4406.06	4321.23	6171.42	6701.82	TD at 10961.18

C. Well pad
   1. The construction phase of the project will commence upon receipt of the approved APDs.
   2. Vegetation and topsoil removal, storage, and protection are described in detail in the Reclamation Plan (Appendix C).
   3. The well pad will be leveled to provide space and a level surface for vehicles and equipment. Excavated materials from cuts will be used on fill portions of the well pad to level the pad. Construction of the well pad will require a maximum fill of approximately 3 feet on the west end, and a cut of 5 feet at the northeast corner to create a level well pad. No additional surfacing materials will be required for construction.
   4. As determined during the onsite on July 22, 2015, the following best management practices will be implemented:
      a. Diversions will be installed upon reclamation.
      b. No additional fill would be required to construct the pad.
      c. On the northeast side of the edge of disturbance an area of approximately 15-by-310 feet will be removed from the edge of disturbance to avoid proximity to the edge of the mesa.
   5. All project activities will be confined to permitted areas only.
   6. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and a dozer.
   7. If drilling has not been initiated on the well pad within 120 days of the well pad being constructed, the operator will consult with the BLM to address a site-stabilization plan.

D. Production Facilities
   1. As practical, access will be a teardrop-shaped road through the production area so that the center may be revegetated.
   2. Within 90 days of installation, production facilities would be painted Juniper Green to blend with the natural color of the landscape and would be located, to the extent practical, to reasonably minimize visual impact.
   3. Berms will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks. Berm walls will be compacted with appropriate equipment to assure containment.

After the completion phases and pipeline installation, portions of the project area not needed for operation will be reclaimed. When the well is plugged, final reclamation will occur within the remainder of the project area. Reclamation is described in detail in the Reclamation Plan (Appendix C).

7.0 Methods for Handling Waste

A. Cuttings
   1. Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals will be accomplished with water-based mud. All cuttings will be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX will follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit will be used.
   2. Closed-loop tanks will be adequately sized for containment of all fluids.

B. Drilling Fluids

Directions from the Intersection of US Hwy 550 & US Hwy 64

in Bloomfield, NM to WPX Energy Production, LLC W Lybrook Unit #765H

550' FNL & 1508' FEL, Section 34, T23N, R9W, N.M.P.M., San Juan County, NM

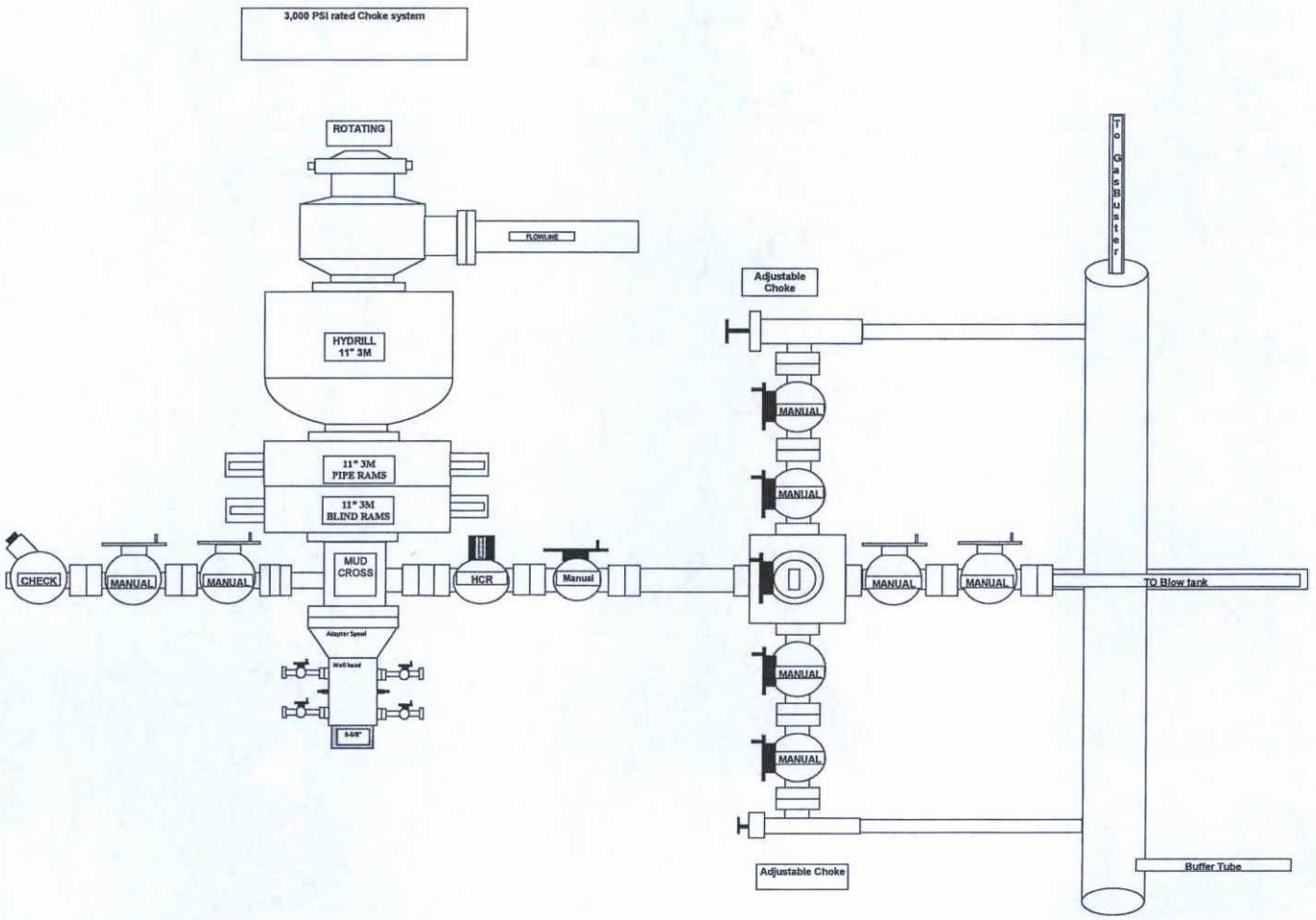
Latitude: 36.189193°N Longitude: 107.772444°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 37.8 miles to Mile Marker 113.4;

Go Right (South-westerly) on County Road #7890 for 0.8 miles to fork in roadway;

Go Left (Southerly) remaining on County Road #7890 for 1.9 miles to fork in roadway;

Go Right (South-westerly) remaining on County Road #7890 for 2.4 miles to begin access on right-hand side of existing roadway which continues for 3910.5' to staked WPX W Lybrook Unit #765H location.


3,000 PSI rated Choke system
ROTATING
FLOWLINE
HYDRILL
11" 3M
11" 3M
PIPE RAMS
11" 3M
BLIND RAMS
MUD
CROSS
CHECK
MANUAL
MANUAL
HCR
Manual
Adjustable
Choke
MANUAL
MANUAL
MANUAL
MANUAL
MANUAL
MANUAL
TO Blow tank
Buffer Tube
Adjustable Choke