

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
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 3160-5 form.
Operator Signature Date: Original APD 11/6/2016 **Sundry Date 8/10/2017**

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf_Owner	UL	Sec	Twp	N/S	Rng	W/E
30-045-35812-00-00	W LYBROOK UNIT	719H	WPX ENERGY PRODUCTION, LLC	O	N	San Juan	I	I	14	23	N	9	W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement. **Run CBL if cement does not circulate**
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☐ Hold C-104 for NSL, NSP, DHC,
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☒ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - ☒ A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - ☒ A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - ☒ A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☒ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ Submit Gas Capture Plan form prior to spudding or initiating recompletions operations.
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84

August 24, 2017

Page 2

- ✓ 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.
- ✓ Comply with current regulations at time of spud
Prior to production operator needs to be in compliance with RULE 19.15.5.9



NMOCD Approved by Signature

8/22/17

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

AUG 10 2017

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

Farmington Field Office
Bureau of Land Management

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

WPX Energy Production, LLC

3a. Address

PO Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

505-333-1808

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 1846' FSL & 640' FEL Sec 14 T23N R9W Unit: I

BHL: 330' FNL & 5' FWL Sec 14 T23N R9W Unit: D

5. Lease Serial No.

N0G14031948

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

NMNM 135216A

8. Well Name and No.

W Lybrook Unit 719H

9. API Well No.

30-045-35812

10. Field and Pool or Exploratory Area

Lybrook Mancos W

11. Country or Parish, State

San Juan, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change in Plans
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

OIL CONS. DIV DIST. 3

AUG 17 2017

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

WPX Energy request a change in plans for the POE, BHL and Total Depth (TD) per attached C102, OPS & Directional Drill Plans.

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

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Marie E. Jaramillo

Title: Permit Tech

Signature

Date: 8/10/17

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title PE

Date

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

Office FFO

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.

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: (505) 748-1283 Fax: (505) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35812	*Pool Code 98157	*Pool Name LYBROOK MANCOS W
*Property Code 315250	*Property Name W LYBROOK UNIT	*Well Number 719H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6719'

¹⁰ Surface Location

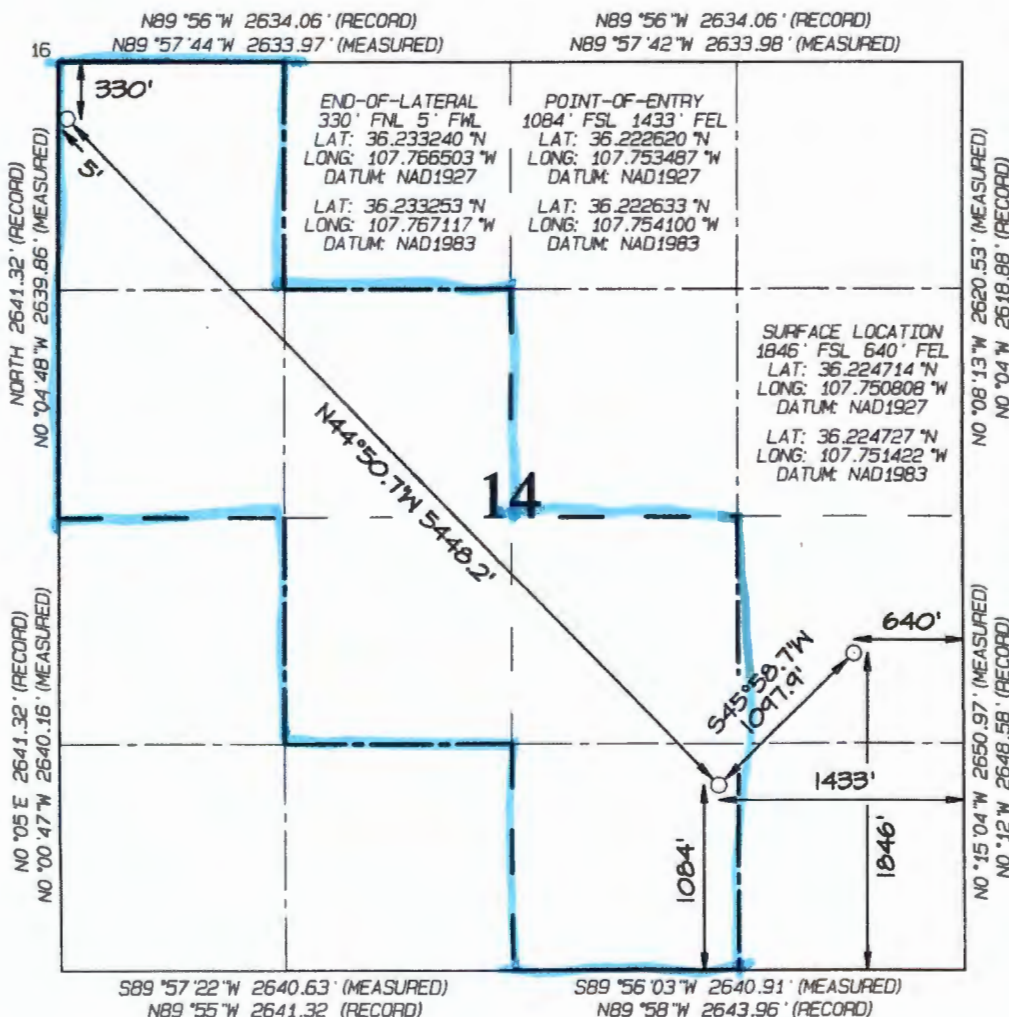
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	14	23N	9W		1846	SOUTH	640	EAST	SAN JUAN

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
D	14	23N	9W		330	NORTH	5	WEST	SAN JUAN

¹² Dedicated Acres 240.00 W/2 NW/4, SE/4 NW/4 NE/4 SW/4, W/2 SE/4 - Section 14	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14051 - 12,807.24 Acres
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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



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: Marie E. Jaramillo Date: 8/10/17

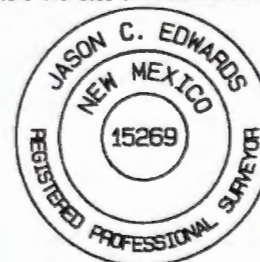
Printed Name: Marie E. Jaramillo
E-mail Address: marie.jaramillo@wpxenergy.com

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: AUGUST 9, 2017
Survey Date: SEPTEMBER 16, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



WPX Energy

Operations Plan

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

Date: August 10, 2017
Well Name: W Lybrook Unit 719H
SH Location: NESE Sec 14 23N-09W
BH Location: NWNW Sec 14 23N-09W

Field: Lybrook Mancos W
Surface: IA
Elevation: 6719' GR
Minerals: IA

Measured Depth: 10956.63'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (KB)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	409.00	409.00	POINT LOOKOUT	3,644.00	3,479.00
KIRTLAND	551.00	551.00	MANCOS	3,829.00	3,652.00
PICTURED CLIFFS	1,021.00	1,018.00	GALLUP	4,187.00	3,986.00
LEWIS	1,226.00	1,218.00	KICKOFF POINT	4,210.25	4,007.36
CHACRA	1,448.00	1,431.00	TOP TARGET	5,359.00	4,762.00
CLIFF HOUSE	2,651.00	2,553.00	LANDING POINT	5,359.19	4,762.00
MENEFEE	2,662.00	2,564.00	BASE TARGET	5,359.19	4,762.00
			TD	10,956.63	4,782.00

B. MUD LOGGING PROGRAM:

Mudlogger on location from surface csg to TD.

C. LOGGING PROGRAM:

LWD GR from surface casing to TD.

D. NATURAL GAUGES:

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

II. DRILLING

A. MUD PROGRAM:

LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. BOP TESTING:

While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The BOPE will be tested to 2,000 psi (High) for 10 minutes and the annular tested to 1,500 psi for 10 minutes. Pressure test surface casing to 1,500 psi for 30 minutes and intermediate casing to 1,500 psi for 30 minutes. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. All tests and inspections will be recorded in the tour book as to time and results.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320.00'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	5359.19'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5209.19' - 10956.63'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5209.19'	4.5"	11.6 LBS	P-110 or equiv	LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING:

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

2. INTERMEDIATE CASING:

7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. If losses are encountered during the drilling of the intermediate section a DV tool will be utilized and a 2 stage cement job may be planned to ensure cement circ back to surface. The DV tool will be placed 100' above the top of the Chacra formation. If cement is circulated back to surface on the first stage, a cancelation device will be dropped to shift the dv tool closed and the 2nd stage cement job will be aborted at that time, if no cement is seen at surface on the 1st stage the stage tool will be opened and a 2nd stage cement job will be pumped.

3. PRODUCTION LINER:

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

C. CEMENT:

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

1. Surface:

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

2. Intermediate:

Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 99 bbls, 282 sks, (556 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 59 bbls, 254 sks, (331 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 211 bbl Drilling mud or water. Total Cement: 158 bbls, 536 sks, (886 cuft)

3. Prod Liner:

Spacer #1: 10 bbl (56 cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem™ System. Yield 1.36 cuft/sk 13.3 ppg (563 sx /766 cuft /136 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-143bbl Fr Water. Total Cement (563 sx /766bbls).

D. COMPLETION:

Run CCL for perforating

A. PRESSURE TEST:

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

B. STIMULATION:

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

C. RUNNING TUBING:

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

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

NOTES:

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

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

WPX Energy

T23N R9W

W Lybrook UT 716 Pad

W Lybrook UT 719H

API: 30-045-35812

Wellbore #1

Plan: Plan #1

Standard Planning Report

27 July, 2017



www.scientificdrilling.com

GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)



Magnetic Field
Strength: 49661.0nT
Dip Angle: 62.85°
Date: 8/13/2017
Model: HDGM



Ground Level: 6719.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1901047.83	524341.10	38.224714	-107.750808

MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	Vsect
321.00	0.81	234.43	320.98	-2.52	-1.74	0.00	0.00	-0.56
361.50	0.00	0.00	361.48	-2.68	-1.97	2.00	-0.51	180.00
500.02	0.00	0.00	500.00	-2.68	-1.97	0.00	-0.51	0.00
1558.52	21.17	184.57	1534.58	-195.40	-17.39	2.00	184.57	-128.40
4210.25	21.17	184.57	4007.36	-1149.99	-93.77	0.00	0.00	-749.93
5359.19	89.80	315.20	4762.00	-868.12	-684.99	9.00	128.72	-133.33
10956.83	89.80	315.20	4782.00	3103.95	-4828.79	0.00	0.00	5464.07

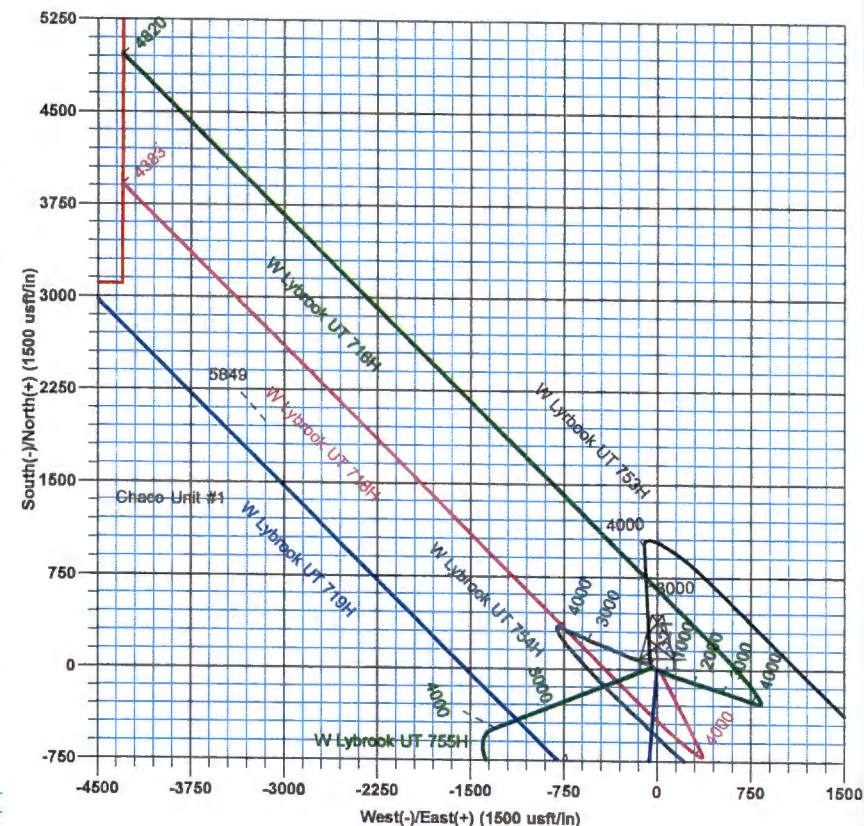
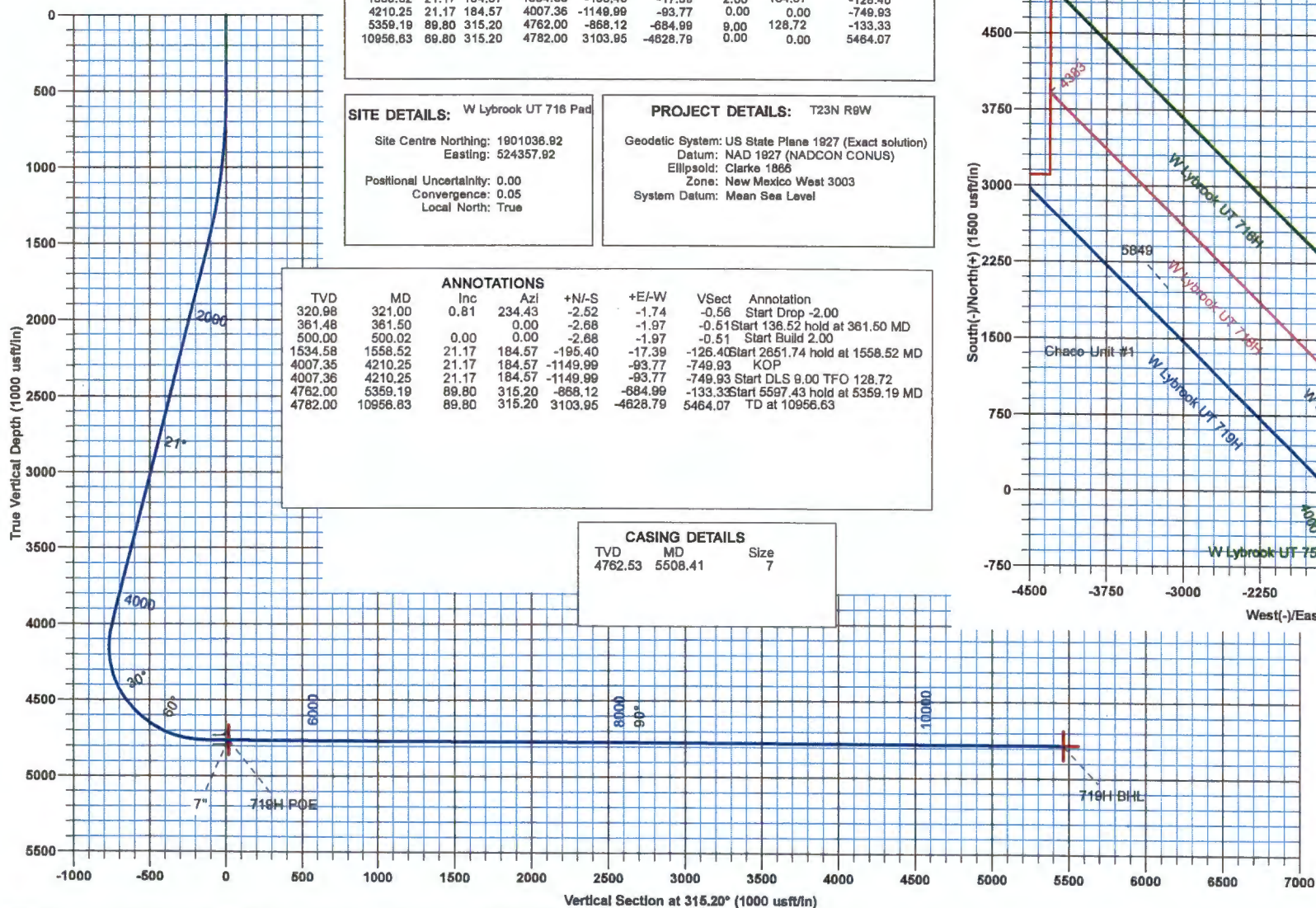
Site Centre Northing: 1901038.92
Easting: 524357.92

Positional Uncertainty: 0.00
Convergence: 0.05
Local North: True

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Annotation
320.98	321.00	0.81	234.43	-2.52	-1.74	-0.56	Start Drop -2.00
361.48	361.50	0.00	0.00	-2.88	-1.97	-0.51	Start 136.52 hold at 361.50 MD
500.00	500.02	0.00	0.00	-2.88	-1.97	-0.51	Start Build 2.00
1534.58	1558.52	21.17	184.57	-195.40	-17.39	-1.28	40Bstart 2651.74 hold at 1558.52 MD
4207.35	4210.25	21.17	184.57	-1149.99	-93.77	-749.43	KOP
4207.35	4210.25	21.17	184.57	-1149.99	-93.77	-749.43	Start DLS 9.00 TFO 128.72
4782.00	5359.19	89.80	315.20	-868.12	-684.96	-133.33	Start 5597.43 hold at 5359.19 MD
4782.00	10956.83	89.80	315.20	3103.95	-4628.79	5464.07	TD at 10956.63

TVD	MD	Size
4762.53	5508.41	7



Bailey Fellows
10:21, July 27 2017
Scientific Drilling
325 S Faudree Rd.
Odessa, TX 79765

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well W Lybrook UT 719H
Company:	WPX Energy	TVD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Project:	T23N R9W	MD Reference:	GL 8719 + KB 21 = @ 8740.00usft (Cyclone 32)
Site:	W Lybrook UT 716 Pad	North Reference:	True
Well:	W Lybrook UT 719H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

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 UT 716 Pad			
Site Position:		Northing:	1,901,036.93 usft	Latitude:	36.224684
From:	Lat/Long	Easting:	524,357.92 usft	Longitude:	-107.750751
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.05

Well	W Lybrook UT 719H					
Well Position	+N/-S	10.92 usft	Northing:	1,901,047.83 usft	Latitude:	38.224714
	+E/-W	-18.81 usft	Easting:	524,341.10 usft	Longitude:	-107.750808
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,719.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/13/2017	9.03	62.85	49,661

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	321.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	315.20

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
321.00	0.81	234.43	320.98	-2.52	-1.74	0.00	0.00	0.00	0.00	
361.50	0.00	0.00	361.48	-2.68	-1.97	2.00	-2.00	0.00	180.00	
500.02	0.00	0.00	500.00	-2.88	-1.97	0.00	0.00	0.00	0.00	
1,558.52	21.17	184.57	1,534.58	-195.40	-17.39	2.00	2.00	0.00	184.67	
4,210.25	21.17	184.57	4,007.38	-1,149.99	-93.77	0.00	0.00	0.00	0.00	
5,359.19	89.80	315.20	4,762.00	-868.12	-884.99	9.00	5.97	11.37	128.72	
10,956.63	89.80	315.20	4,762.00	3,103.95	-4,628.79	0.00	0.00	0.00	0.00	719H BHL

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well W Lybrook UT 719H
Company:	WPX Energy	TVD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Project:	T23N R9W	MD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Site:	W Lybrook UT 716 Pad	North Reference:	True
Well:	W Lybrook UT 719H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	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
21.00	0.00	0.00	21.00	0.00	0.00	0.00	0.00	0.00	0.00
51.00	0.33	252.02	51.00	-0.03	-0.08	0.04	1.10	1.10	0.00
81.00	0.53	212.33	81.00	-0.17	-0.24	0.05	1.16	0.67	-132.30
111.00	0.61	207.29	111.00	-0.43	-0.39	-0.03	0.31	0.27	-16.80
141.00	0.73	204.37	141.00	-0.75	-0.54	-0.15	0.42	0.40	-9.73
171.00	0.71	196.79	170.99	-1.10	-0.67	-0.31	0.32	-0.07	-25.27
201.00	0.63	203.43	200.99	-1.43	-0.79	-0.46	0.37	-0.27	22.13
231.00	0.53	209.06	230.99	-1.70	-0.92	-0.56	0.38	-0.33	18.77
261.00	0.77	224.99	260.99	-1.96	-1.13	-0.60	0.99	0.80	53.10
291.00	0.76	225.43	290.98	-2.25	-1.42	-0.59	0.04	0.03	1.47
321.00	0.81	234.43	320.98	-2.52	-1.74	-0.56	0.43	0.10	30.00
Start Drop -2.00									
361.50	0.00	0.00	361.48	-2.68	-1.97	-0.51	2.00	-2.00	310.05
Start 138.52 hold at 361.50 MD									
400.00	0.00	0.00	399.98	-2.68	-1.97	-0.51	0.00	0.00	0.00
500.02	0.00	0.00	500.00	-2.68	-1.97	-0.51	0.00	0.00	0.00
Start Build 2.00									
600.00	2.00	184.57	599.96	-4.42	-2.11	-1.65	2.00	2.00	0.00
700.00	4.00	184.57	699.82	-9.64	-2.53	-5.06	2.00	2.00	0.00
800.00	6.00	184.57	799.43	-18.32	-3.22	-10.73	2.00	2.00	0.00
900.00	8.00	184.57	898.68	-30.47	-4.19	-18.67	2.00	2.00	0.00
1,000.00	10.00	184.57	997.45	-46.06	-5.44	-28.85	2.00	2.00	0.00
1,100.00	12.00	184.57	1,095.60	-65.08	-6.96	-41.27	2.00	2.00	0.00
1,200.00	14.00	184.57	1,193.04	-87.50	-8.76	-55.92	2.00	2.00	0.00
1,300.00	16.00	184.57	1,289.62	-113.30	-10.82	-72.77	2.00	2.00	0.00
1,400.00	18.00	184.57	1,385.25	-142.44	-13.15	-91.80	2.00	2.00	0.00
1,500.00	20.00	184.57	1,479.80	-174.89	-15.75	-113.00	2.00	2.00	0.00
1,558.52	21.17	184.57	1,534.58	-195.40	-17.39	-126.40	2.00	2.00	0.00
Start 2651.74 hold at 1558.52 MD									
1,600.00	21.17	184.57	1,573.26	-210.34	-18.59	-136.15	0.00	0.00	0.00
1,700.00	21.17	184.57	1,666.51	-246.33	-21.47	-159.67	0.00	0.00	0.00
1,800.00	21.17	184.57	1,759.76	-282.33	-24.35	-183.18	0.00	0.00	0.00
1,900.00	21.17	184.57	1,853.01	-318.33	-27.23	-206.69	0.00	0.00	0.00
2,000.00	21.17	184.57	1,946.27	-354.33	-30.11	-230.21	0.00	0.00	0.00
2,100.00	21.17	184.57	2,039.52	-390.33	-32.99	-253.72	0.00	0.00	0.00
2,200.00	21.17	184.57	2,132.77	-426.33	-35.87	-277.24	0.00	0.00	0.00
2,300.00	21.17	184.57	2,226.02	-462.32	-38.75	-300.75	0.00	0.00	0.00
2,400.00	21.17	184.57	2,319.27	-498.32	-41.63	-324.26	0.00	0.00	0.00
2,500.00	21.17	184.57	2,412.52	-534.32	-44.51	-347.78	0.00	0.00	0.00
2,600.00	21.17	184.57	2,505.77	-570.32	-47.39	-371.29	0.00	0.00	0.00
2,700.00	21.17	184.57	2,599.03	-606.32	-50.27	-394.81	0.00	0.00	0.00
2,800.00	21.17	184.57	2,692.28	-642.32	-53.15	-418.32	0.00	0.00	0.00
2,900.00	21.17	184.57	2,785.53	-678.32	-56.03	-441.83	0.00	0.00	0.00
3,000.00	21.17	184.57	2,878.78	-714.31	-58.91	-465.35	0.00	0.00	0.00
3,100.00	21.17	184.57	2,972.03	-750.31	-61.79	-488.86	0.00	0.00	0.00
3,200.00	21.17	184.57	3,065.28	-786.31	-64.67	-512.38	0.00	0.00	0.00
3,300.00	21.17	184.57	3,158.53	-822.31	-67.55	-535.89	0.00	0.00	0.00
3,400.00	21.17	184.57	3,251.78	-858.31	-70.43	-559.40	0.00	0.00	0.00
3,500.00	21.17	184.57	3,345.04	-894.31	-73.31	-582.92	0.00	0.00	0.00
3,600.00	21.17	184.57	3,438.29	-930.31	-76.19	-606.43	0.00	0.00	0.00
3,700.00	21.17	184.57	3,531.54	-966.30	-79.07	-629.95	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well W Lybrook UT 719H
Company:	WPX Energy	TVD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Project:	T23N R9W	MD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Site:	W Lybrook UT 716 Pad	North Reference:	True
Well:	W Lybrook UT 719H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.00	21.17	184.57	3,624.79	-1,002.30	-81.85	-653.46	0.00	0.00	0.00
3,900.00	21.17	184.57	3,718.04	-1,038.30	-84.83	-676.97	0.00	0.00	0.00
4,000.00	21.17	184.57	3,811.29	-1,074.30	-87.71	-700.49	0.00	0.00	0.00
4,100.00	21.17	184.57	3,904.54	-1,110.30	-90.59	-724.00	0.00	0.00	0.00
4,200.00	21.17	184.57	3,997.80	-1,146.30	-93.47	-747.52	0.00	0.00	0.00
4,210.25	21.17	184.57	4,007.36	-1,149.99	-93.77	-749.93	0.00	0.00	0.00
KOP - Start DLS 9.00 TFO 128.72									
4,250.00	19.13	193.12	4,044.68	-1,163.49	-95.82	-758.06	9.00	-5.14	21.49
4,300.00	17.25	206.27	4,092.20	-1,178.12	-100.96	-764.82	9.00	-3.75	26.30
4,350.00	16.40	221.58	4,140.08	-1,190.06	-108.93	-767.68	9.00	-1.71	30.62
4,400.00	16.72	237.37	4,188.03	-1,199.22	-119.67	-766.60	9.00	0.64	31.60
4,450.00	18.15	251.66	4,235.76	-1,205.55	-133.13	-761.62	9.00	2.87	28.57
4,500.00	20.46	263.37	4,282.96	-1,209.01	-149.21	-752.74	9.00	4.63	23.42
4,550.00	23.40	272.53	4,329.35	-1,209.58	-187.82	-740.03	9.00	5.87	18.32
4,600.00	26.75	279.63	4,374.64	-1,207.26	-188.84	-723.57	9.00	6.70	14.21
4,650.00	30.38	285.21	4,418.55	-1,202.06	-212.15	-703.46	9.00	7.26	11.15
4,700.00	34.20	289.67	4,460.82	-1,194.01	-237.60	-679.81	9.00	7.64	8.92
4,750.00	38.15	293.32	4,501.18	-1,183.16	-285.03	-652.79	9.00	7.90	7.30
4,800.00	42.20	296.37	4,539.37	-1,169.58	-294.27	-622.55	9.00	8.09	6.11
4,850.00	46.32	298.98	4,575.18	-1,153.36	-325.15	-589.28	9.00	8.23	5.22
4,900.00	50.48	301.25	4,608.37	-1,134.58	-357.47	-553.18	9.00	8.34	4.54
4,950.00	54.69	303.26	4,638.74	-1,113.38	-391.04	-514.48	9.00	8.41	4.02
5,000.00	58.93	305.07	4,666.11	-1,089.87	-425.64	-473.42	9.00	8.47	3.62
5,050.00	63.19	306.73	4,690.30	-1,064.21	-481.06	-430.25	9.00	8.52	3.31
5,100.00	67.47	308.27	4,711.17	-1,036.55	-497.09	-385.24	9.00	8.56	3.07
5,150.00	71.76	309.71	4,728.58	-1,007.07	-533.51	-338.66	9.00	8.58	2.89
5,200.00	76.06	311.09	4,742.44	-975.94	-570.08	-290.80	9.00	8.60	2.75
5,250.00	80.37	312.41	4,752.65	-943.35	-606.59	-241.95	9.00	8.62	2.65
5,300.00	84.68	313.70	4,759.15	-909.51	-642.80	-192.42	9.00	8.63	2.58
5,350.00	89.00	314.97	4,761.90	-874.63	-678.50	-142.52	9.00	8.63	2.54
5,359.19	89.80	315.20	4,762.00	-868.12	-684.99	-133.33	9.00	8.64	2.54
Start 5597.43 hold at 5359.19 MD									
5,400.00	89.80	315.20	4,762.15	-839.18	-713.74	-92.52	0.00	0.00	0.00
5,500.00	89.80	315.20	4,762.50	-768.20	-784.20	7.48	0.00	0.00	0.00
5,508.41	89.80	315.20	4,762.53	-762.23	-790.12	15.89	0.00	0.00	0.00
7"									
5,600.00	89.80	315.20	4,762.86	-697.24	-854.68	107.48	0.00	0.00	0.00
5,700.00	89.80	315.20	4,763.22	-626.28	-925.11	207.48	0.00	0.00	0.00
5,800.00	89.80	315.20	4,763.58	-555.31	-995.57	307.48	0.00	0.00	0.00
5,900.00	89.80	315.20	4,763.93	-484.35	-1,066.03	407.48	0.00	0.00	0.00
6,000.00	89.80	315.20	4,764.29	-413.39	-1,136.48	507.48	0.00	0.00	0.00
6,100.00	89.80	315.20	4,764.65	-342.43	-1,206.94	607.48	0.00	0.00	0.00
6,200.00	89.80	315.20	4,765.00	-271.46	-1,277.40	707.48	0.00	0.00	0.00
6,300.00	89.80	315.20	4,765.36	-200.50	-1,347.86	807.47	0.00	0.00	0.00
6,400.00	89.80	315.20	4,765.72	-129.54	-1,418.31	907.47	0.00	0.00	0.00
6,500.00	89.80	315.20	4,766.08	-58.58	-1,488.77	1,007.47	0.00	0.00	0.00
6,600.00	89.80	315.20	4,766.43	12.38	-1,559.23	1,107.47	0.00	0.00	0.00
6,700.00	89.80	315.20	4,766.79	83.35	-1,629.68	1,207.47	0.00	0.00	0.00
6,800.00	89.80	315.20	4,767.15	154.31	-1,700.14	1,307.47	0.00	0.00	0.00
6,900.00	89.80	315.20	4,767.51	225.27	-1,770.60	1,407.47	0.00	0.00	0.00
7,000.00	89.80	315.20	4,767.86	296.23	-1,841.06	1,507.47	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well W Lybrook UT 719H
Company:	WPX Energy	TVD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Project:	T23N R9W	MD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Site:	W Lybrook UT 716 Pad	North Reference:	True
Well:	W Lybrook UT 719H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,100.00	89.80	315.20	4,768.22	367.20	-1,911.51	1,607.47	0.00	0.00	0.00
7,200.00	89.80	315.20	4,768.58	438.16	-1,981.97	1,707.47	0.00	0.00	0.00
7,300.00	89.80	315.20	4,768.93	509.12	-2,052.43	1,807.47	0.00	0.00	0.00
7,400.00	89.80	315.20	4,769.29	580.08	-2,122.89	1,907.47	0.00	0.00	0.00
7,500.00	89.80	315.20	4,769.65	651.04	-2,193.34	2,007.47	0.00	0.00	0.00
7,600.00	89.80	315.20	4,770.01	722.01	-2,263.80	2,107.47	0.00	0.00	0.00
7,700.00	89.80	315.20	4,770.36	792.97	-2,334.26	2,207.47	0.00	0.00	0.00
7,800.00	89.80	315.20	4,770.72	863.93	-2,404.71	2,307.47	0.00	0.00	0.00
7,900.00	89.80	315.20	4,771.08	934.89	-2,475.17	2,407.46	0.00	0.00	0.00
8,000.00	89.80	315.20	4,771.44	1,005.86	-2,545.63	2,507.46	0.00	0.00	0.00
8,100.00	89.80	315.20	4,771.79	1,076.82	-2,616.09	2,607.46	0.00	0.00	0.00
8,200.00	89.80	315.20	4,772.15	1,147.78	-2,686.54	2,707.46	0.00	0.00	0.00
8,300.00	89.80	315.20	4,772.51	1,218.74	-2,757.00	2,807.46	0.00	0.00	0.00
8,400.00	89.80	315.20	4,772.87	1,289.71	-2,827.46	2,907.46	0.00	0.00	0.00
8,500.00	89.80	315.20	4,773.22	1,360.67	-2,897.92	3,007.46	0.00	0.00	0.00
8,600.00	89.80	315.20	4,773.58	1,431.63	-2,968.37	3,107.46	0.00	0.00	0.00
8,700.00	89.80	315.20	4,773.94	1,502.59	-3,038.83	3,207.46	0.00	0.00	0.00
8,800.00	89.80	315.20	4,774.29	1,573.55	-3,109.29	3,307.46	0.00	0.00	0.00
8,900.00	89.80	315.20	4,774.65	1,644.52	-3,179.74	3,407.46	0.00	0.00	0.00
9,000.00	89.80	315.20	4,775.01	1,715.48	-3,250.20	3,507.46	0.00	0.00	0.00
9,100.00	89.80	315.20	4,775.37	1,786.44	-3,320.66	3,607.48	0.00	0.00	0.00
9,200.00	89.80	315.20	4,775.72	1,857.40	-3,391.12	3,707.46	0.00	0.00	0.00
9,300.00	89.80	315.20	4,776.08	1,928.37	-3,461.57	3,807.48	0.00	0.00	0.00
9,400.00	89.80	315.20	4,776.44	1,999.33	-3,532.03	3,907.45	0.00	0.00	0.00
9,500.00	89.80	315.20	4,776.80	2,070.29	-3,602.49	4,007.45	0.00	0.00	0.00
9,600.00	89.80	315.20	4,777.15	2,141.25	-3,672.95	4,107.45	0.00	0.00	0.00
9,700.00	89.80	315.20	4,777.51	2,212.22	-3,743.40	4,207.45	0.00	0.00	0.00
9,800.00	89.80	315.20	4,777.87	2,283.18	-3,813.86	4,307.45	0.00	0.00	0.00
9,900.00	89.80	315.20	4,778.22	2,354.14	-3,884.32	4,407.45	0.00	0.00	0.00
10,000.00	89.80	315.20	4,778.58	2,425.10	-3,954.77	4,507.45	0.00	0.00	0.00
10,100.00	89.80	315.20	4,778.94	2,496.06	-4,025.23	4,607.45	0.00	0.00	0.00
10,200.00	89.80	315.20	4,779.30	2,567.03	-4,095.69	4,707.45	0.00	0.00	0.00
10,300.00	89.80	315.20	4,779.65	2,637.99	-4,166.15	4,807.45	0.00	0.00	0.00
10,400.00	89.80	315.20	4,780.01	2,708.95	-4,236.60	4,907.45	0.00	0.00	0.00
10,500.00	89.80	315.20	4,780.37	2,779.91	-4,307.06	5,007.45	0.00	0.00	0.00
10,600.00	89.80	315.20	4,780.73	2,850.88	-4,377.52	5,107.45	0.00	0.00	0.00
10,700.00	89.80	315.20	4,781.08	2,921.84	-4,447.98	5,207.45	0.00	0.00	0.00
10,800.00	89.80	315.20	4,781.44	2,992.80	-4,518.43	5,307.45	0.00	0.00	0.00
10,900.00	89.80	315.20	4,781.80	3,063.76	-4,588.89	5,407.45	0.00	0.00	0.00
10,956.63	89.80	315.20	4,782.00	3,103.95	-4,628.79	5,464.07	0.00	0.00	0.00
TD at 10956.63									

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well W Lybrook UT 719H
Company:	WPX Energy	TVD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Project:	T23N R9W	MD Reference:	GL 6719 + KB 21 = @ 6740.00usft (Cyclone 32)
Site:	W Lybrook UT 716 Pad	North Reference:	True
Well:	W Lybrook UT 719H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
719H POE	0.00	0.00	4,762.00	-762.23	-791.09	1,900,284.93	523,550.66	36.222620	-107.753490
- plan misses target center by 0.87usft at 5509.09usft MD (4762.54 TVD, -761.75 N, -790.60 E)									
- Point									
719H BHL	0.00	0.00	4,782.00	3,103.95	-4,628.79	1,904,147.84	519,709.67	36.233240	-107.766503
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
(usft)	(usft)	Name	(")	(")
5,508.41	4,762.53	7"	7	8-3/4

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment
321.00	320.98	-2.52	-1.74	Start Drop -2.00
361.50	361.48	-2.68	-1.97	Start 138.52 hold at 361.50 MD
500.02	500.00	-2.68	-1.97	Start Build 2.00
1,558.52	1,534.58	-195.40	-17.39	Start 2651.74 hold at 1558.52 MD
4,210.25	4,007.35	-1,149.99	-93.77	KOP
4,210.25	4,007.36	-1,149.99	-93.77	Start DLS 9.00 TFO 128.72
5,359.19	4,762.00	-888.12	-884.99	Start 5597.43 hold at 5359.19 MD
10,956.63	4,782.00	3,103.95	-4,628.79	TD at 10956.63