

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 3160-3 APD form.

Operator Signature Date: 1/23/2018

Well information:

Operator WAX, Well Name and Number Rodeo Unit 508H

API# 30-045-35869, Section 25, Township 23 N/S, Range 9 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
- ☐ 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 recompletion operations
- ☒ 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.


NMOCD Approved by Signature

4-16-2018
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3441 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

4-13-18 Sundry for operator change rec'd.

BLM SURFACE

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

NOS: N/A
APDP:
MP: PLM
SMA: URB000178
BOND: PENDING
CAPA: PENDING

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM120377
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator WPX ENERGY LLC		7. If Unit or CA Agreement, Name and No.
3a. Address 720 S Main Aztec NM 87410		8. Lease Name and Well No. RODEO UNIT 508H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. <u>30-045-35869</u>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <u>SENE / 1491 FNL / 443 FEL / LAT 36.200969 / LONG -107.733028</u> At proposed prod. zone <u>SESE / 330 FSL / 1239 FEL / LAT 36.176991 / LONG -107.699857</u>		10. Field and Pool, or Exploratory BASIN MANCOS / MANCOS
11. Sec., T. R. M. or Blk. and Survey or Area SEC 25 / T23N / R9W / NMP		12. County or Parish SAN JUAN
13. State NM		14. Distance in miles and direction from nearest town or post office* 37.8 miles
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 20 feet	16. No. of acres in lease 643.12	17. Spacing Unit dedicated to this well 1604.85
18. Distance from proposed location* to nearest well, drilling, completed, 443 feet applied for, on this lease, ft.	19. Proposed Depth 4776 feet / 18163 feet	20. BLM/BIA Bond No. on file FED: UTB000178
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6883 feet	22. Approximate date work will start* 04/30/2018	23. Estimated duration 30 days

NMOC

APR 1 - 2018

DISTRICT III

24. Attachments

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature (Electronic Submission)	Name (Printed/Typed) Lacey Granillo / Ph: (505)333-1816	Date 01/23/2018
Title Permitting Tech III		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 3/29/18
Title AFM	Office FARMINGTON	

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.

(Continued on page 2)

ACCEPTED FOR RECORD

NMOC

JAN 29 2018

FARMINGTON FIELD OFFICE
BY: *[Signature]*

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

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

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

Surface = Indian



WPX Energy

Operations Plan

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

Date: November 14, 2017
Well Name: Rodeo Unit #508H
SH Location: SENE Sec 25 23N-09W
BH Location: SESE Sec 32 23N-08W

Field: Basin Mancos
Surface: BLM
Elevation: 6,883'
Minerals: FED

Measured Depth: 18,163'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (KB)

NAME	MD	TVD	NAME	MD	TVD
Ojo Alamo	629	629	Mancos	3822	3757
Kirtland	738	737	Gallup	4177	4105
Picture Cliffs	1273	1263			
Lewis	1394	1381	KICKOFF POINT	4257	4183
Chacra	1625	1607	LANDING POINT	5330	4876
Cliff House	2623	2584	TOP TARGET	5330	4876
Menefee	2681	2641			
Point Lookout	3681	3619	TD	18163	4776

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'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	5330'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5180' - 18163'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5180'	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, 28.0 bbls, 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/ 28.0 Bbls). TOC at Surface.

2. Intermediate:

Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 120 bbls, 345 sks, (672 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 107 bbls, 463 sks, (602 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 210 bbl Drilling mud or water.
Total Cement: 227 bbls, 807 sks, (1273 cuft)

3. Prod Liner:

Spacer #1: 10 bbl (56 cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Toned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem™ System. Yield 1.36 cuft/sk 13.3 ppg (1210 sx /1646 cuft /293 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-236bbl Fr Water.
Total Cement: 293 bbls, 1210 sks, (1646 cuft)

D. COMPLETION:

Run CCL for perforating

A. PRESSURE TEST:

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

B. STIMULATION:

1. Stimulate with approximately 1,000#/ft 20/40 mesh sand and +/- 200' stage interval for full lateral length of the well with water and N2. 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

San Juan County, NM

Rodeo UT 508 Pad

Rodeo UT 508H

API: ?

Wellbore #1

Plan: Plan #1

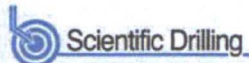
Standard Planning Report

19 October, 2017



www.scientificdrilling.com

Rodeo UT 508H
San Juan County, NM
Northing: 1892404.77
Easting: 529775.17
Plan #1



WELL DETAILS Rodeo UT 508H

Ground Level: 6883.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1892404.77	529775.17	36.200956	-107.732415

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00
993.19	11.86	13.91	988.96	59.40	14.71	2.00	13.91	-31.61
4257.06	11.86	13.91	4183.11	710.72	176.04	0.00	0.00	-378.18
5329.66	90.45	135.01	4876.00	348.45	715.92	9.00	120.47	259.71
18163.34	90.45	135.01	4776.00	-8726.94	9789.54	0.00	0.00	13093.00

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Annotation
400.00	400.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
988.96	993.19	11.86	13.91	59.40	14.71	-31.61	Start 3263.86 hold at 993.19 MD
4183.11	4257.06	11.86	13.91	710.72	176.04	-378.18	Start DLS 9.00 TFO 120.47
4183.11	4257.06	11.86	13.91	710.72	176.04	-378.18	KOP
4876.00	5329.66	90.45	135.01	348.45	715.92	259.71	Start 12833.68 hold at 5329.66 MD
4776.00	18163.34	90.45	135.01	-8726.94	9789.54	13093.00	TD at 18163.34

PROJECT DETAILS: San Juan County, NM

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

PL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)



Azimuths to True North
 Magnetic North: 9.00°

Magnetic Field
 Strength: 49593.1snT
 Dip Angle: 62.83°
 Date: 10/19/2017
 Model: HDGM

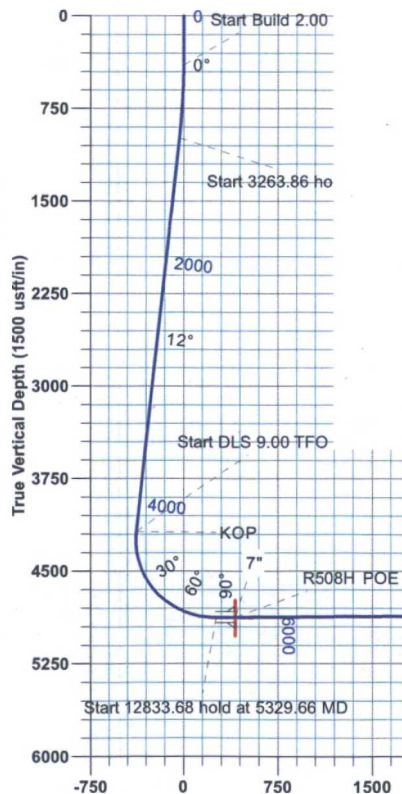
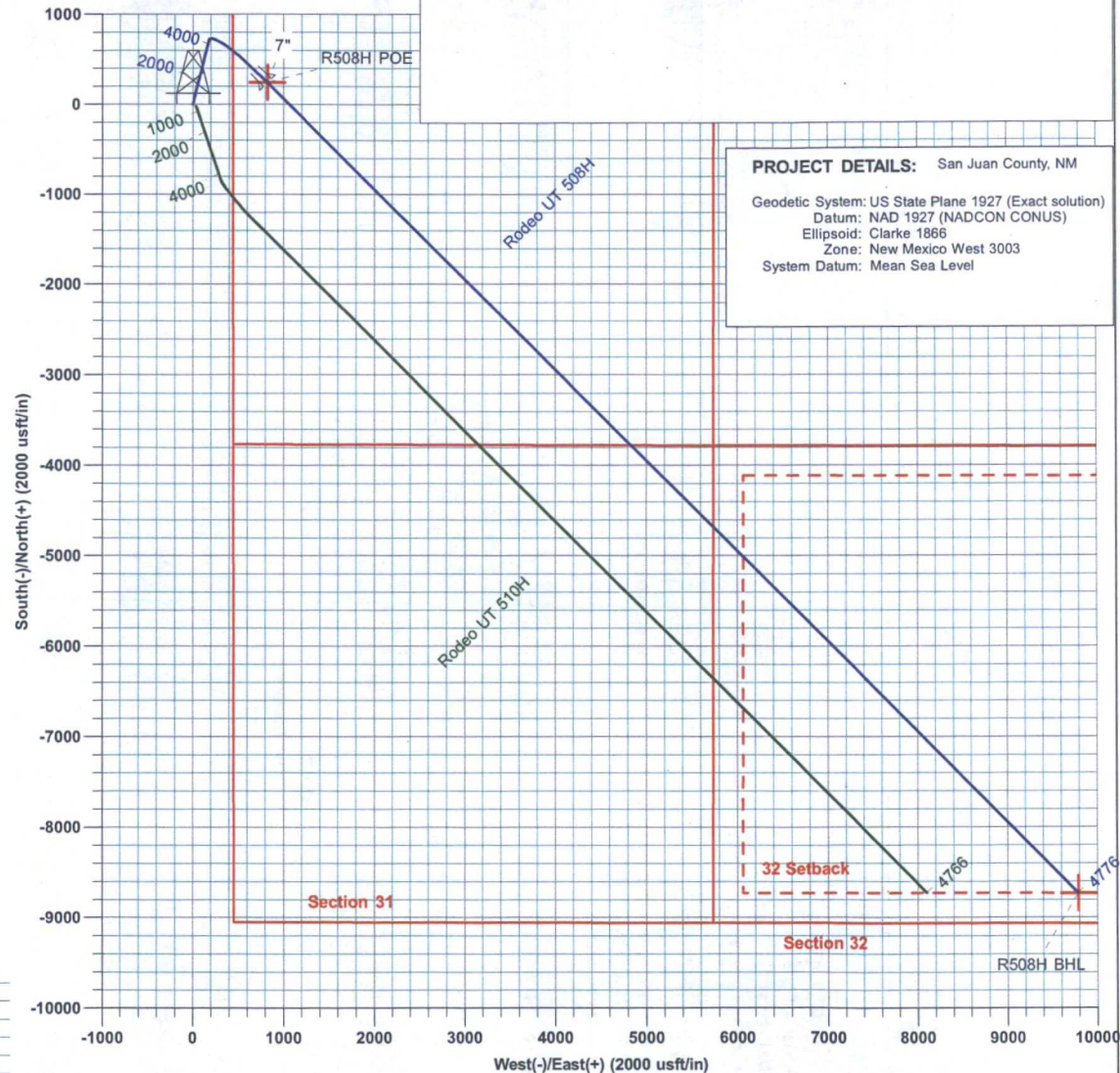
SITE DETAILS: Rodeo UT 508 Pad

Site Centre Northing: 1892404.77
 Easting: 529775.17

Positional Uncertainty: 0.00
 Convergence: 0.06
 Local North: True

CASING DETAILS

TVD	MD	Size
4874.83	5479.70	7



Vertical Section at 135.01° (1500 usft/in)

9:41, October 19 2017

Scientific Drilling
 633 Rankin Circle N.
 Houston, TX 77073

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	San Juan County, NM		
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		Rodeo UT 508 Pad			
Site Position:		Northing:	1,892,404.78 usft	Latitude:	36.200956
From:	Lat/Long	Easting:	529,775.17 usft	Longitude:	-107.732415
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.06 °

Well	Rodeo UT 508H					
Well Position	+N/-S	0.00 usft	Northing:	1,892,404.78 usft	Latitude:	36.200956
	+E/-W	0.00 usft	Easting:	529,775.17 usft	Longitude:	-107.732415
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,883.00 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/19/2017	9.00	62.83	49,593

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	135.01

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
993.19	11.86	13.91	988.96	59.40	14.71	2.00	2.00	0.00	13.91	
4,257.06	11.86	13.91	4,183.11	710.72	176.04	0.00	0.00	0.00	0.00	
5,329.66	90.45	135.01	4,876.00	348.45	715.92	9.00	7.33	11.29	120.47	
18,163.34	90.45	135.01	4,776.00	-8,726.94	9,789.54	0.00	0.00	0.00	0.00	R508H BHL

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
500.00	2.00	13.91	499.98	1.69	0.42	-0.90	2.00	2.00	0.00
600.00	4.00	13.91	599.84	6.77	1.68	-3.60	2.00	2.00	0.00
629.24	4.58	13.91	629.00	8.90	2.20	-4.73	2.00	2.00	0.00
Ojo Alamo									
700.00	6.00	13.91	699.45	15.23	3.77	-8.11	2.00	2.00	0.00
737.78	6.76	13.91	737.00	19.31	4.78	-10.27	2.00	2.00	0.00
Kirtland									
800.00	8.00	13.91	798.70	27.06	6.70	-14.40	2.00	2.00	0.00
900.00	10.00	13.91	897.47	42.25	10.46	-22.48	2.00	2.00	0.00
993.19	11.86	13.91	988.96	59.40	14.71	-31.61	2.00	2.00	0.00
Start 3263.86 hold at 993.19 MD									
1,000.00	11.86	13.91	995.62	60.76	15.05	-32.33	0.00	0.00	0.00
1,100.00	11.86	13.91	1,093.49	80.71	19.99	-42.95	0.00	0.00	0.00
1,200.00	11.86	13.91	1,191.35	100.67	24.94	-53.57	0.00	0.00	0.00
1,273.21	11.86	13.91	1,263.00	115.28	28.55	-61.34	0.00	0.00	0.00
Picture Cliffs									
1,300.00	11.86	13.91	1,289.22	120.63	29.88	-64.19	0.00	0.00	0.00
1,393.79	11.86	13.91	1,381.00	139.34	34.51	-74.14	0.00	0.00	0.00
Lewis									
1,400.00	11.86	13.91	1,387.08	140.58	34.82	-74.80	0.00	0.00	0.00
1,500.00	11.86	13.91	1,484.94	160.54	39.76	-85.42	0.00	0.00	0.00
1,600.00	11.86	13.91	1,582.81	180.49	44.71	-96.04	0.00	0.00	0.00
1,624.72	11.86	13.91	1,607.00	185.42	45.93	-98.67	0.00	0.00	0.00
Chacra									
1,700.00	11.86	13.91	1,680.67	200.45	49.65	-106.66	0.00	0.00	0.00
1,800.00	11.86	13.91	1,778.54	220.40	54.59	-117.28	0.00	0.00	0.00
1,900.00	11.86	13.91	1,876.40	240.36	59.54	-127.90	0.00	0.00	0.00
2,000.00	11.86	13.91	1,974.26	260.31	64.48	-138.52	0.00	0.00	0.00
2,100.00	11.86	13.91	2,072.13	280.27	69.42	-149.13	0.00	0.00	0.00
2,200.00	11.86	13.91	2,169.99	300.23	74.37	-159.75	0.00	0.00	0.00
2,300.00	11.86	13.91	2,267.86	320.18	79.31	-170.37	0.00	0.00	0.00
2,400.00	11.86	13.91	2,365.72	340.14	84.25	-180.99	0.00	0.00	0.00
2,500.00	11.86	13.91	2,463.58	360.09	89.19	-191.61	0.00	0.00	0.00
2,600.00	11.86	13.91	2,561.45	380.05	94.14	-202.23	0.00	0.00	0.00
2,623.05	11.86	13.91	2,584.00	384.65	95.28	-204.67	0.00	0.00	0.00
Cliff House									
2,681.29	11.86	13.91	2,641.00	396.27	98.16	-210.86	0.00	0.00	0.00
Menefee									
2,700.00	11.86	13.91	2,659.31	400.00	99.08	-212.85	0.00	0.00	0.00
2,800.00	11.86	13.91	2,757.17	419.96	104.02	-223.47	0.00	0.00	0.00
2,900.00	11.86	13.91	2,855.04	439.91	108.97	-234.08	0.00	0.00	0.00
3,000.00	11.86	13.91	2,952.90	459.87	113.91	-244.70	0.00	0.00	0.00
3,100.00	11.86	13.91	3,050.77	479.83	118.85	-255.32	0.00	0.00	0.00
3,200.00	11.86	13.91	3,148.63	499.78	123.79	-265.94	0.00	0.00	0.00
3,300.00	11.86	13.91	3,246.49	519.74	128.74	-276.56	0.00	0.00	0.00

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	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)	
3,400.00	11.86	13.91	3,344.36	539.69	133.68	-287.18	0.00	0.00	0.00	
3,500.00	11.86	13.91	3,442.22	559.65	138.62	-297.80	0.00	0.00	0.00	
3,600.00	11.86	13.91	3,540.09	579.60	143.57	-308.41	0.00	0.00	0.00	
3,680.64	11.86	13.91	3,619.00	595.69	147.55	-316.98	0.00	0.00	0.00	
Point Lookout										
3,700.00	11.86	13.91	3,637.95	599.56	148.51	-319.03	0.00	0.00	0.00	
3,800.00	11.86	13.91	3,735.81	619.51	153.45	-329.65	0.00	0.00	0.00	
3,821.65	11.86	13.91	3,757.00	623.83	154.52	-331.95	0.00	0.00	0.00	
Mancos										
3,900.00	11.86	13.91	3,833.68	639.47	158.40	-340.27	0.00	0.00	0.00	
4,000.00	11.86	13.91	3,931.54	659.43	163.34	-350.89	0.00	0.00	0.00	
4,100.00	11.86	13.91	4,029.41	679.38	168.28	-361.51	0.00	0.00	0.00	
4,177.24	11.86	13.91	4,105.00	694.80	172.10	-369.71	0.00	0.00	0.00	
Gallup										
4,200.00	11.86	13.91	4,127.27	699.34	173.22	-372.13	0.00	0.00	0.00	
4,257.06	11.86	13.91	4,183.11	710.72	176.04	-378.18	0.00	0.00	0.00	
Start DLS 9.00 TFO 120.47 - KOP										
4,300.00	10.44	32.61	4,225.25	718.29	179.20	-381.30	9.00	-3.31	43.54	
4,350.00	10.46	57.61	4,274.45	724.54	185.48	-381.28	9.00	0.03	50.01	
4,376.01	11.20	69.47	4,300.00	726.69	189.84	-379.72	9.00	2.84	45.57	
Gallup Upper										
4,400.00	12.24	78.80	4,323.49	728.00	194.51	-377.35	9.00	4.34	38.92	
4,450.00	15.17	93.32	4,372.08	728.65	206.25	-369.51	9.00	5.87	29.03	
4,500.00	18.73	102.84	4,419.91	726.49	220.61	-357.82	9.00	7.11	19.05	
4,550.00	22.61	109.31	4,466.69	721.52	237.52	-342.36	9.00	7.77	12.93	
4,600.00	26.68	113.93	4,512.13	713.78	256.86	-323.21	9.00	8.14	9.24	
4,650.00	30.86	117.39	4,555.95	703.33	278.52	-300.51	9.00	8.36	6.92	
4,700.00	35.12	120.09	4,597.88	690.21	302.36	-274.37	9.00	8.51	5.40	
4,733.77	38.02	121.61	4,625.00	679.88	319.63	-254.87	9.00	8.59	4.50	
Mancos Lwr										
4,750.00	39.42	122.27	4,637.66	674.51	328.24	-244.98	9.00	8.63	4.08	
4,767.46	40.93	122.94	4,651.00	668.44	337.72	-233.98	9.00	8.65	3.83	
El Vado										
4,800.00	43.76	124.09	4,675.05	656.34	355.99	-212.50	9.00	8.68	3.52	
4,850.00	48.12	125.63	4,709.82	635.79	385.45	-177.14	9.00	8.72	3.09	
4,900.00	52.49	126.98	4,741.74	613.01	416.44	-139.12	9.00	8.76	2.70	
4,908.71	53.26	127.20	4,747.00	608.82	421.98	-132.24	9.00	8.77	2.51	
Frac Barrier										
4,950.00	56.89	128.18	4,770.64	588.12	448.76	-98.67	9.00	8.79	2.37	
4,991.12	60.51	129.08	4,792.00	566.18	476.20	-63.76	9.00	8.80	2.19	
PS 3										
5,000.00	61.29	129.27	4,796.32	561.29	482.21	-56.04	9.00	8.81	2.09	
5,050.00	65.70	130.26	4,818.62	532.67	516.59	-11.49	9.00	8.82	1.99	
5,065.93	67.11	130.57	4,825.00	523.20	527.71	3.05	9.00	8.83	1.90	
PS2										
5,100.00	70.12	131.19	4,837.42	502.44	551.69	34.69	9.00	8.84	1.84	
5,136.97	73.39	131.85	4,849.00	479.17	577.98	69.74	9.00	8.84	1.77	
PS1										
5,150.00	74.54	132.07	4,852.60	470.80	587.29	82.24	9.00	8.85	1.73	
5,199.72	78.94	132.91	4,864.00	438.12	622.96	130.57	9.00	8.85	1.68	

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	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)
PSA									
5,200.00	78.96	132.91	4,864.05	437.93	623.16	130.85	9.00	8.85	1.66
5,250.00	83.39	133.73	4,871.72	404.04	659.10	180.22	9.00	8.85	1.63
5,300.00	87.82	134.53	4,875.55	369.33	694.87	230.06	9.00	8.86	1.60
5,329.66	90.45	135.01	4,876.00	348.45	715.92	259.71	9.00	8.86	1.60
Start 12833.68 hold at 5329.66 MD									
5,400.00	90.45	135.01	4,875.45	298.71	765.65	330.05	0.00	0.00	0.00
5,479.70	90.45	135.01	4,874.83	242.35	822.00	409.75	0.00	0.00	0.00
7"									
5,500.00	90.45	135.01	4,874.67	227.99	836.36	430.05	0.00	0.00	0.00
5,600.00	90.45	135.01	4,873.89	157.28	907.06	530.04	0.00	0.00	0.00
5,700.00	90.45	135.01	4,873.11	86.56	977.76	630.04	0.00	0.00	0.00
5,800.00	90.45	135.01	4,872.34	15.85	1,048.46	730.04	0.00	0.00	0.00
5,900.00	90.45	135.01	4,871.56	-54.87	1,119.16	830.03	0.00	0.00	0.00
6,000.00	90.45	135.01	4,870.78	-125.59	1,189.86	930.03	0.00	0.00	0.00
6,100.00	90.45	135.01	4,870.00	-196.30	1,260.56	1,030.03	0.00	0.00	0.00
6,200.00	90.45	135.01	4,869.22	-267.02	1,331.27	1,130.03	0.00	0.00	0.00
6,300.00	90.45	135.01	4,868.44	-337.73	1,401.97	1,230.02	0.00	0.00	0.00
6,400.00	90.45	135.01	4,867.66	-408.45	1,472.67	1,330.02	0.00	0.00	0.00
6,500.00	90.45	135.01	4,866.88	-479.16	1,543.37	1,430.02	0.00	0.00	0.00
6,600.00	90.45	135.01	4,866.10	-549.88	1,614.07	1,530.01	0.00	0.00	0.00
6,700.00	90.45	135.01	4,865.32	-620.59	1,684.77	1,630.01	0.00	0.00	0.00
6,800.00	90.45	135.01	4,864.54	-691.31	1,755.48	1,730.01	0.00	0.00	0.00
6,900.00	90.45	135.01	4,863.76	-762.02	1,826.18	1,830.00	0.00	0.00	0.00
7,000.00	90.45	135.01	4,862.98	-832.74	1,896.88	1,930.00	0.00	0.00	0.00
7,100.00	90.45	135.01	4,862.21	-903.46	1,967.58	2,030.00	0.00	0.00	0.00
7,200.00	90.45	135.01	4,861.43	-974.17	2,038.28	2,130.00	0.00	0.00	0.00
7,300.00	90.45	135.01	4,860.65	-1,044.89	2,108.98	2,229.99	0.00	0.00	0.00
7,400.00	90.45	135.01	4,859.87	-1,115.60	2,179.69	2,329.99	0.00	0.00	0.00
7,500.00	90.45	135.01	4,859.09	-1,186.32	2,250.39	2,429.99	0.00	0.00	0.00
7,600.00	90.45	135.01	4,858.31	-1,257.03	2,321.09	2,529.98	0.00	0.00	0.00
7,700.00	90.45	135.01	4,857.53	-1,327.75	2,391.79	2,629.98	0.00	0.00	0.00
7,800.00	90.45	135.01	4,856.75	-1,398.46	2,462.49	2,729.98	0.00	0.00	0.00
7,900.00	90.45	135.01	4,855.97	-1,469.18	2,533.19	2,829.97	0.00	0.00	0.00
8,000.00	90.45	135.01	4,855.19	-1,539.89	2,603.90	2,929.97	0.00	0.00	0.00
8,100.00	90.45	135.01	4,854.41	-1,610.61	2,674.60	3,029.97	0.00	0.00	0.00
8,200.00	90.45	135.01	4,853.63	-1,681.32	2,745.30	3,129.96	0.00	0.00	0.00
8,300.00	90.45	135.01	4,852.86	-1,752.04	2,816.00	3,229.96	0.00	0.00	0.00
8,400.00	90.45	135.01	4,852.08	-1,822.76	2,886.70	3,329.96	0.00	0.00	0.00
8,500.00	90.45	135.01	4,851.30	-1,893.47	2,957.40	3,429.96	0.00	0.00	0.00
8,600.00	90.45	135.01	4,850.52	-1,964.19	3,028.11	3,529.95	0.00	0.00	0.00
8,700.00	90.45	135.01	4,849.74	-2,034.90	3,098.81	3,629.95	0.00	0.00	0.00
8,800.00	90.45	135.01	4,848.96	-2,105.62	3,169.51	3,729.95	0.00	0.00	0.00
8,900.00	90.45	135.01	4,848.18	-2,176.33	3,240.21	3,829.94	0.00	0.00	0.00
9,000.00	90.45	135.01	4,847.40	-2,247.05	3,310.91	3,929.94	0.00	0.00	0.00
9,100.00	90.45	135.01	4,846.62	-2,317.76	3,381.61	4,029.94	0.00	0.00	0.00
9,200.00	90.45	135.01	4,845.84	-2,388.48	3,452.32	4,129.93	0.00	0.00	0.00
9,300.00	90.45	135.01	4,845.06	-2,459.19	3,523.02	4,229.93	0.00	0.00	0.00
9,400.00	90.45	135.01	4,844.28	-2,529.91	3,593.72	4,329.93	0.00	0.00	0.00
9,500.00	90.45	135.01	4,843.50	-2,600.63	3,664.42	4,429.93	0.00	0.00	0.00
9,600.00	90.45	135.01	4,842.73	-2,671.34	3,735.12	4,529.92	0.00	0.00	0.00
9,700.00	90.45	135.01	4,841.95	-2,742.06	3,805.82	4,629.92	0.00	0.00	0.00

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	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)
9,800.00	90.45	135.01	4,841.17	-2,812.77	3,876.53	4,729.92	0.00	0.00	0.00
9,900.00	90.45	135.01	4,840.39	-2,883.49	3,947.23	4,829.91	0.00	0.00	0.00
10,000.00	90.45	135.01	4,839.61	-2,954.20	4,017.93	4,929.91	0.00	0.00	0.00
10,100.00	90.45	135.01	4,838.83	-3,024.92	4,088.63	5,029.91	0.00	0.00	0.00
10,200.00	90.45	135.01	4,838.05	-3,095.63	4,159.33	5,129.90	0.00	0.00	0.00
10,300.00	90.45	135.01	4,837.27	-3,166.35	4,230.03	5,229.90	0.00	0.00	0.00
10,400.00	90.45	135.01	4,836.49	-3,237.06	4,300.74	5,329.90	0.00	0.00	0.00
10,500.00	90.45	135.01	4,835.71	-3,307.78	4,371.44	5,429.89	0.00	0.00	0.00
10,600.00	90.45	135.01	4,834.93	-3,378.49	4,442.14	5,529.89	0.00	0.00	0.00
10,700.00	90.45	135.01	4,834.15	-3,449.21	4,512.84	5,629.89	0.00	0.00	0.00
10,800.00	90.45	135.01	4,833.38	-3,519.93	4,583.54	5,729.89	0.00	0.00	0.00
10,900.00	90.45	135.01	4,832.60	-3,590.64	4,654.24	5,829.88	0.00	0.00	0.00
11,000.00	90.45	135.01	4,831.82	-3,661.36	4,724.95	5,929.88	0.00	0.00	0.00
11,100.00	90.45	135.01	4,831.04	-3,732.07	4,795.65	6,029.88	0.00	0.00	0.00
11,200.00	90.45	135.01	4,830.26	-3,802.79	4,866.35	6,129.87	0.00	0.00	0.00
11,300.00	90.45	135.01	4,829.48	-3,873.50	4,937.05	6,229.87	0.00	0.00	0.00
11,400.00	90.45	135.01	4,828.70	-3,944.22	5,007.75	6,329.87	0.00	0.00	0.00
11,500.00	90.45	135.01	4,827.92	-4,014.93	5,078.45	6,429.86	0.00	0.00	0.00
11,600.00	90.45	135.01	4,827.14	-4,085.65	5,149.16	6,529.86	0.00	0.00	0.00
11,700.00	90.45	135.01	4,826.36	-4,156.36	5,219.86	6,629.86	0.00	0.00	0.00
11,800.00	90.45	135.01	4,825.58	-4,227.08	5,290.56	6,729.86	0.00	0.00	0.00
11,900.00	90.45	135.01	4,824.80	-4,297.80	5,361.26	6,829.85	0.00	0.00	0.00
12,000.00	90.45	135.01	4,824.02	-4,368.51	5,431.96	6,929.85	0.00	0.00	0.00
12,100.00	90.45	135.01	4,823.25	-4,439.23	5,502.66	7,029.85	0.00	0.00	0.00
12,200.00	90.45	135.01	4,822.47	-4,509.94	5,573.37	7,129.84	0.00	0.00	0.00
12,300.00	90.45	135.01	4,821.69	-4,580.66	5,644.07	7,229.84	0.00	0.00	0.00
12,400.00	90.45	135.01	4,820.91	-4,651.37	5,714.77	7,329.84	0.00	0.00	0.00
12,500.00	90.45	135.01	4,820.13	-4,722.09	5,785.47	7,429.83	0.00	0.00	0.00
12,600.00	90.45	135.01	4,819.35	-4,792.80	5,856.17	7,529.83	0.00	0.00	0.00
12,700.00	90.45	135.01	4,818.57	-4,863.52	5,926.87	7,629.83	0.00	0.00	0.00
12,800.00	90.45	135.01	4,817.79	-4,934.23	5,997.58	7,729.83	0.00	0.00	0.00
12,900.00	90.45	135.01	4,817.01	-5,004.95	6,068.28	7,829.82	0.00	0.00	0.00
13,000.00	90.45	135.01	4,816.23	-5,075.66	6,138.98	7,929.82	0.00	0.00	0.00
13,100.00	90.45	135.01	4,815.45	-5,146.38	6,209.68	8,029.82	0.00	0.00	0.00
13,200.00	90.45	135.01	4,814.67	-5,217.10	6,280.38	8,129.81	0.00	0.00	0.00
13,300.00	90.45	135.01	4,813.90	-5,287.81	6,351.08	8,229.81	0.00	0.00	0.00
13,400.00	90.45	135.01	4,813.12	-5,358.53	6,421.79	8,329.81	0.00	0.00	0.00
13,500.00	90.45	135.01	4,812.34	-5,429.24	6,492.49	8,429.80	0.00	0.00	0.00
13,600.00	90.45	135.01	4,811.56	-5,499.96	6,563.19	8,529.80	0.00	0.00	0.00
13,700.00	90.45	135.01	4,810.78	-5,570.67	6,633.89	8,629.80	0.00	0.00	0.00
13,800.00	90.45	135.01	4,810.00	-5,641.39	6,704.59	8,729.79	0.00	0.00	0.00
13,900.00	90.45	135.01	4,809.22	-5,712.10	6,775.29	8,829.79	0.00	0.00	0.00
14,000.00	90.45	135.01	4,808.44	-5,782.82	6,846.00	8,929.79	0.00	0.00	0.00
14,100.00	90.45	135.01	4,807.66	-5,853.53	6,916.70	9,029.79	0.00	0.00	0.00
14,200.00	90.45	135.01	4,806.88	-5,924.25	6,987.40	9,129.78	0.00	0.00	0.00
14,300.00	90.45	135.01	4,806.10	-5,994.97	7,058.10	9,229.78	0.00	0.00	0.00
14,400.00	90.45	135.01	4,805.32	-6,065.68	7,128.80	9,329.78	0.00	0.00	0.00
14,500.00	90.45	135.01	4,804.54	-6,136.40	7,199.50	9,429.77	0.00	0.00	0.00
14,600.00	90.45	135.01	4,803.77	-6,207.11	7,270.20	9,529.77	0.00	0.00	0.00
14,700.00	90.45	135.01	4,802.99	-6,277.83	7,340.91	9,629.77	0.00	0.00	0.00
14,800.00	90.45	135.01	4,802.21	-6,348.54	7,411.61	9,729.76	0.00	0.00	0.00
14,900.00	90.45	135.01	4,801.43	-6,419.26	7,482.31	9,829.76	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	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)
15,000.00	90.45	135.01	4,800.65	-6,489.97	7,553.01	9,929.76	0.00	0.00	0.00
15,100.00	90.45	135.01	4,799.87	-6,560.69	7,623.71	10,029.76	0.00	0.00	0.00
15,200.00	90.45	135.01	4,799.09	-6,631.40	7,694.41	10,129.75	0.00	0.00	0.00
15,300.00	90.45	135.01	4,798.31	-6,702.12	7,765.12	10,229.75	0.00	0.00	0.00
15,400.00	90.45	135.01	4,797.53	-6,772.83	7,835.82	10,329.75	0.00	0.00	0.00
15,500.00	90.45	135.01	4,796.75	-6,843.55	7,906.52	10,429.74	0.00	0.00	0.00
15,600.00	90.45	135.01	4,795.97	-6,914.27	7,977.22	10,529.74	0.00	0.00	0.00
15,700.00	90.45	135.01	4,795.19	-6,984.98	8,047.92	10,629.74	0.00	0.00	0.00
15,800.00	90.45	135.01	4,794.42	-7,055.70	8,118.62	10,729.73	0.00	0.00	0.00
15,900.00	90.45	135.01	4,793.64	-7,126.41	8,189.33	10,829.73	0.00	0.00	0.00
16,000.00	90.45	135.01	4,792.86	-7,197.13	8,260.03	10,929.73	0.00	0.00	0.00
16,100.00	90.45	135.01	4,792.08	-7,267.84	8,330.73	11,029.73	0.00	0.00	0.00
16,200.00	90.45	135.01	4,791.30	-7,338.56	8,401.43	11,129.72	0.00	0.00	0.00
16,300.00	90.45	135.01	4,790.52	-7,409.27	8,472.13	11,229.72	0.00	0.00	0.00
16,400.00	90.45	135.01	4,789.74	-7,479.99	8,542.83	11,329.72	0.00	0.00	0.00
16,500.00	90.45	135.01	4,788.96	-7,550.70	8,613.54	11,429.71	0.00	0.00	0.00
16,600.00	90.45	135.01	4,788.18	-7,621.42	8,684.24	11,529.71	0.00	0.00	0.00
16,700.00	90.45	135.01	4,787.40	-7,692.14	8,754.94	11,629.71	0.00	0.00	0.00
16,800.00	90.45	135.01	4,786.62	-7,762.85	8,825.64	11,729.70	0.00	0.00	0.00
16,900.00	90.45	135.01	4,785.84	-7,833.57	8,896.34	11,829.70	0.00	0.00	0.00
17,000.00	90.45	135.01	4,785.06	-7,904.28	8,967.04	11,929.70	0.00	0.00	0.00
17,100.00	90.45	135.01	4,784.29	-7,975.00	9,037.75	12,029.69	0.00	0.00	0.00
17,200.00	90.45	135.01	4,783.51	-8,045.71	9,108.45	12,129.69	0.00	0.00	0.00
17,300.00	90.45	135.01	4,782.73	-8,116.43	9,179.15	12,229.69	0.00	0.00	0.00
17,400.00	90.45	135.01	4,781.95	-8,187.14	9,249.85	12,329.69	0.00	0.00	0.00
17,500.00	90.45	135.01	4,781.17	-8,257.86	9,320.55	12,429.68	0.00	0.00	0.00
17,600.00	90.45	135.01	4,780.39	-8,328.57	9,391.25	12,529.68	0.00	0.00	0.00
17,700.00	90.45	135.01	4,779.61	-8,399.29	9,461.96	12,629.68	0.00	0.00	0.00
17,800.00	90.45	135.01	4,778.83	-8,470.00	9,532.66	12,729.67	0.00	0.00	0.00
17,900.00	90.45	135.01	4,778.05	-8,540.72	9,603.36	12,829.67	0.00	0.00	0.00
18,000.00	90.45	135.01	4,777.27	-8,611.44	9,674.06	12,929.67	0.00	0.00	0.00
18,100.00	90.45	135.01	4,776.49	-8,682.15	9,744.76	13,029.66	0.00	0.00	0.00
18,163.34	90.45	135.01	4,776.00	-8,726.94	9,789.54	13,093.00	0.00	0.00	0.00
TD at 18163.34									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
R508H BHL	0.00	0.00	4,776.00	-8,726.94	9,789.54	1,883,688.02	539,573.79	36.176977	-107.699245
- plan hits target center									
- Point									
R508H POE	0.00	0.00	4,876.00	243.54	823.16	1,892,649.17	530,598.08	36.201625	-107.729625
- plan misses target center by 2.03usft at 5479.67usft MD (4874.83 TVD, 242.37 N, 821.98 E)									
- Point									

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 508H
Company:	WPX Energy	TVD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6883 + KB 21 = @ 6904.00usft (Cyclone 32)
Site:	Rodeo UT 508 Pad	North Reference:	True
Well:	Rodeo UT 508H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,479.70	4,874.83	7"	7	8-3/4

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
629.24	629.00	Ojo Alamo				
737.78	737.00	Kirtland				
1,273.21	1,263.00	Picture Cliffs				
1,393.79	1,381.00	Lewis				
1,624.72	1,607.00	Chacra				
2,623.05	2,584.00	Cliff House				
2,681.29	2,641.00	Menefee				
3,680.64	3,619.00	Point Lookout				
3,821.65	3,757.00	Mancos				
4,177.24	4,105.00	Gallup				
4,376.01	4,300.00	Gallup Upper				
4,733.77	4,625.00	Mancos Lwr				
4,767.46	4,651.00	El Vado				
4,908.71	4,747.00	Frac Barrier				
4,991.12	4,792.00	PS 3				
5,065.93	4,825.00	PS2				
5,136.97	4,849.00	PS1				
5,199.72	4,864.00	PSA				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.00	400.00	0.00	0.00	Start Build 2.00
993.19	988.96	59.40	14.71	Start 3263.86 hold at 993.19 MD
4,257.06	4,183.11	710.72	176.04	Start DLS 9.00 TFO 120.47
4,257.06	4,183.11	710.72	176.04	KOP
5,329.66	4,876.00	348.45	715.92	Start 12833.68 hold at 5329.66 MD
18,163.34	4,776.00	-8,726.94	9,789.54	TD at 18163.34

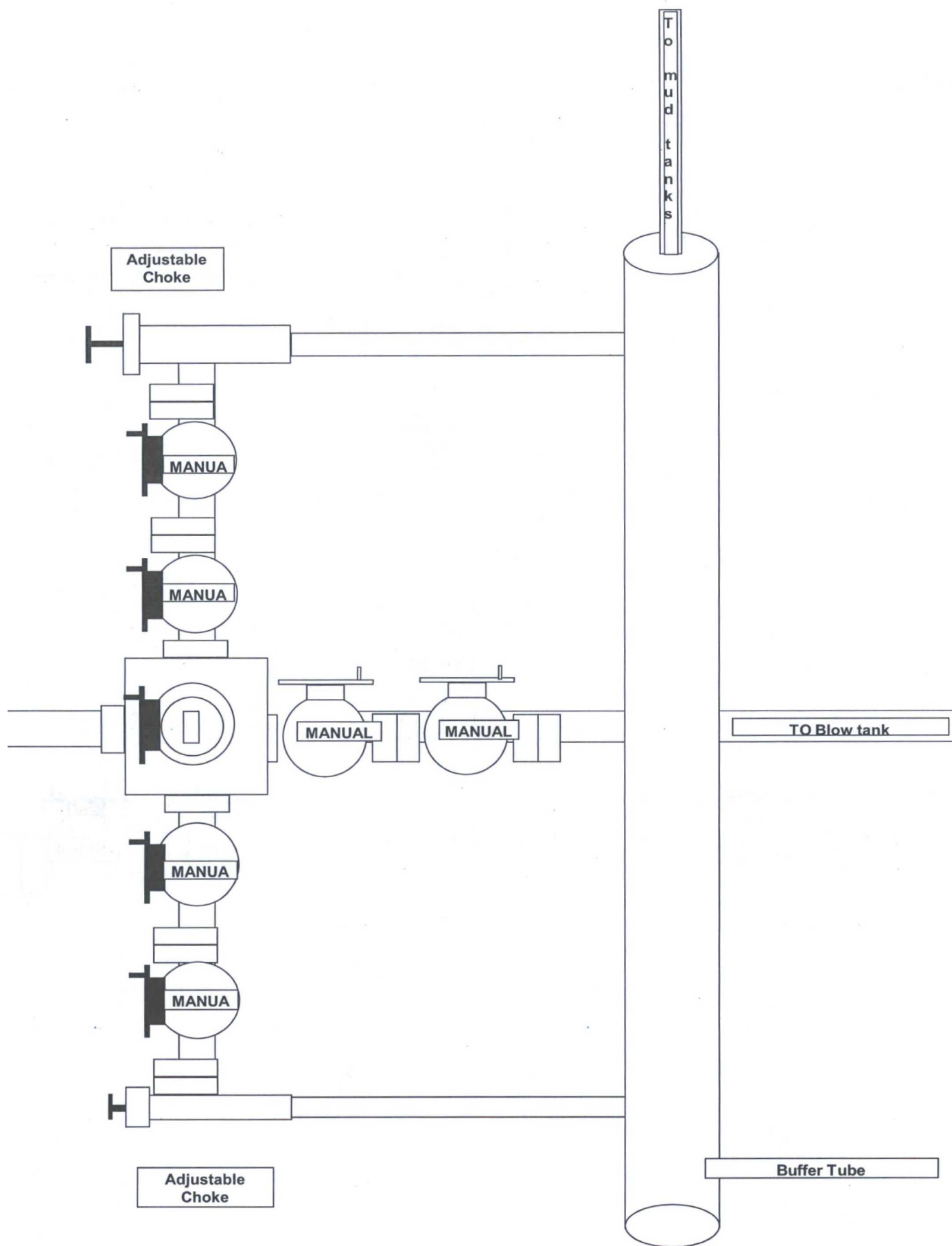
disturbance survey efforts. WPX would conduct onsite inspections with BLM resource staff for proposed well pads after they have been staked and surveyed to verify that sensitive resources have been avoided and to identify changes or mitigation measures required for BLM approval.

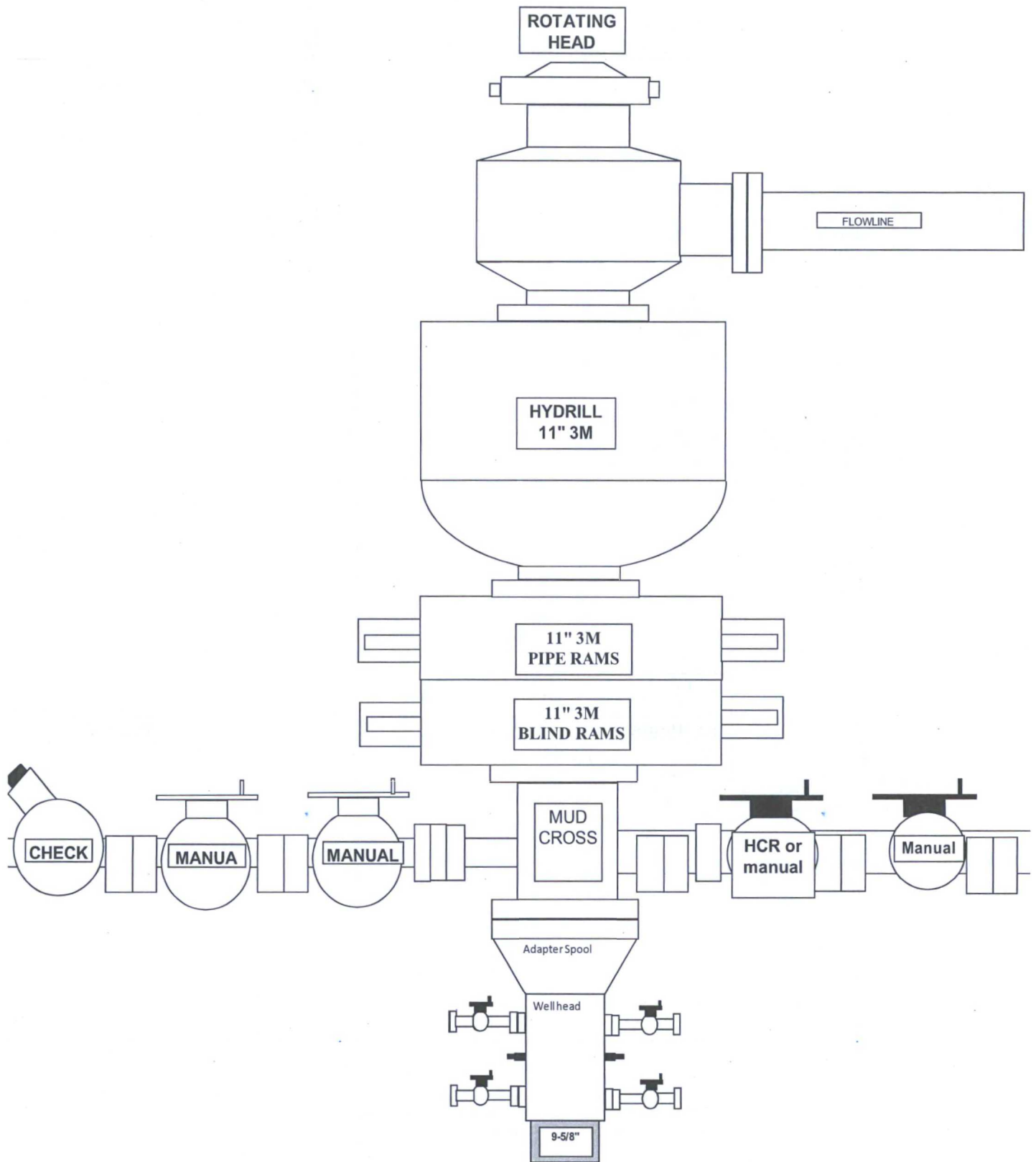
3.12.1 Control of Waste

- Drilling of the horizontal laterals would be accomplished with water-based mud. All cuttings would be placed in roll-off bins and hauled to a commercial disposal facility or land farm. No blow pit would be used.
- ✓ • The closed-loop system storage tanks would be sized to ensure confinement of all fluids and would provide sufficient freeboard to prevent uncontrolled releases.
- Drilling fluids would be stored on-site in aboveground storage tanks. Upon termination of drilling operations, the drilling fluids would be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids would be hauled to a commercial disposal facility.
- Any spills of non-freshwater fluids would be immediately cleaned up in accordance with State and Federal regulations and disposed of appropriately.
- Any solid waste produced during water recycling would be properly disposed of, following NMOCD rules and regulations.
- Portable toilets would be provided and maintained as needed during construction.
- Garbage, trash, and other waste materials would be collected in a portable, self-contained, and fully enclosed trash container during drilling and completion operations. The accumulated trash would be removed, as needed, and would be disposed of at an authorized sanitary landfill. No trash would be buried or burned on location.
- Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash container would be cleaned up and removed from the well location.
- No chemicals subject to reporting under the Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds would be used, produced, stored, transported, or disposed annually in association with the drilling, testing, or completing of these wells.
- No extremely hazardous substances (as defined in 40 CFR 355) in threshold planning quantities would be used, produced, stored, transported, or disposed in association with the drilling, testing, or completing of these wells.
- Berms would be constructed around all storage facilities sufficient in size to contain 110% of the capacity of the largest single container within it for 72 hours. Berm walls would be compacted with appropriate equipment to assure containment.

3.12.2 Protection of Paleontological Resources

- A site specific onsite visit would be conducted for each well pad location and associated facilities prior to APD/ROW Grant approval. During this onsite visit a site-specific survey and assessment of paleontological resources would be conducted. Any identified paleontological resources would





Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to WPX Energy Production, LLC Rodeo Unit #508H
1491' FNL & 443' FEL, Section 25, T23N, R9W, N.M.P.M., San Juan County, NM
Latitude: 36.200969°N Longitude: 107.733028°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 1.3 miles to four-way intersection;

Go Left (South-easterly) remaining on County Road #7890 for 0.6 miles to fork in roadway;

Go Right (South-westerly) remaining on County Road #7890 for 0.5 miles to begin proposed access on left-hand side which continues for 2169.7' to staked WPX Rodeo Unit #508H location.