

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: 2/5/2018

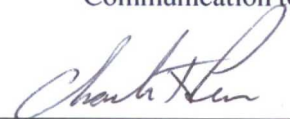
Well information;

Operator WAX, Well Name and Number Rodeo Unit 510H

API# 30-045-35871, Section 25, Township 25 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

4-17-2018
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

19

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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. NMNM136328X
3a. Address 720 S Main Aztec NM 87410		8. Lease Name and Well No. RODEO UNIT 510H
3b. Phone No. (include area code) (505)333-1822		9. API Well No. 30-045-35871
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SENE / 1511 FNL / 409 FEL / LAT 36.200912 / LONG -107.732912 At proposed prod. zone SESW / 330 FSL / 2369 FWL / LAT 36.177 / LONG -107.705572		10. Field and Pool, or Exploratory BASIN MANCOS / MANCOS
14. Distance in miles and direction from nearest town or post office* 37.8 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 25 / T23N / R9W / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 409 feet	16. No. of acres in lease 643.12	17. Spacing Unit dedicated to this well 1283.88
18. Distance from proposed location* to nearest well, drilling, completed, 40 feet applied for, on this lease, ft.	19. Proposed Depth 4766 feet / 15764 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

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must 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 BLM.

25. Signature (Electronic Submission)	Name (Printed/Typed) Lacey Granillo / Ph: (505)333-1816	Date 02/05/2018
Title Permitting Tech III		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 3/29/18
Title AEM	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)

*(Instructions on page 2)

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

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

NMOC

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

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

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

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. Florez* Date: 1/30/2018

Printed Name: Marie E. Florez
E-mail Address: marie.jaramillo@wpenergy.com

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-04535871	2 Pool Code 97232	3 Pool Name BASIN MANCOS
4 Property Code 347827	5 Property Name RODEO UNIT	6 Well Number 510H
7 GRID No. 120782	8 Operator Name WPX ENERGY PRODUCTION, LLC	9 Elevation 6883'

10 Surface Location

U. or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
H	25	23N	9W		1511	NORTH	409	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

U. or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
N	32	23N	8W		330	SOUTH	2369	WEST	SAN JUAN

12 Dedicated Acres 1283.88	13 S/2 - Section 30 N/2 - Section 31 Entire Section 32	14 Joint or Infill	15 Consolidation Code	16 Order No. R-14313
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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

18 SURVEYOR CERTIFICATION

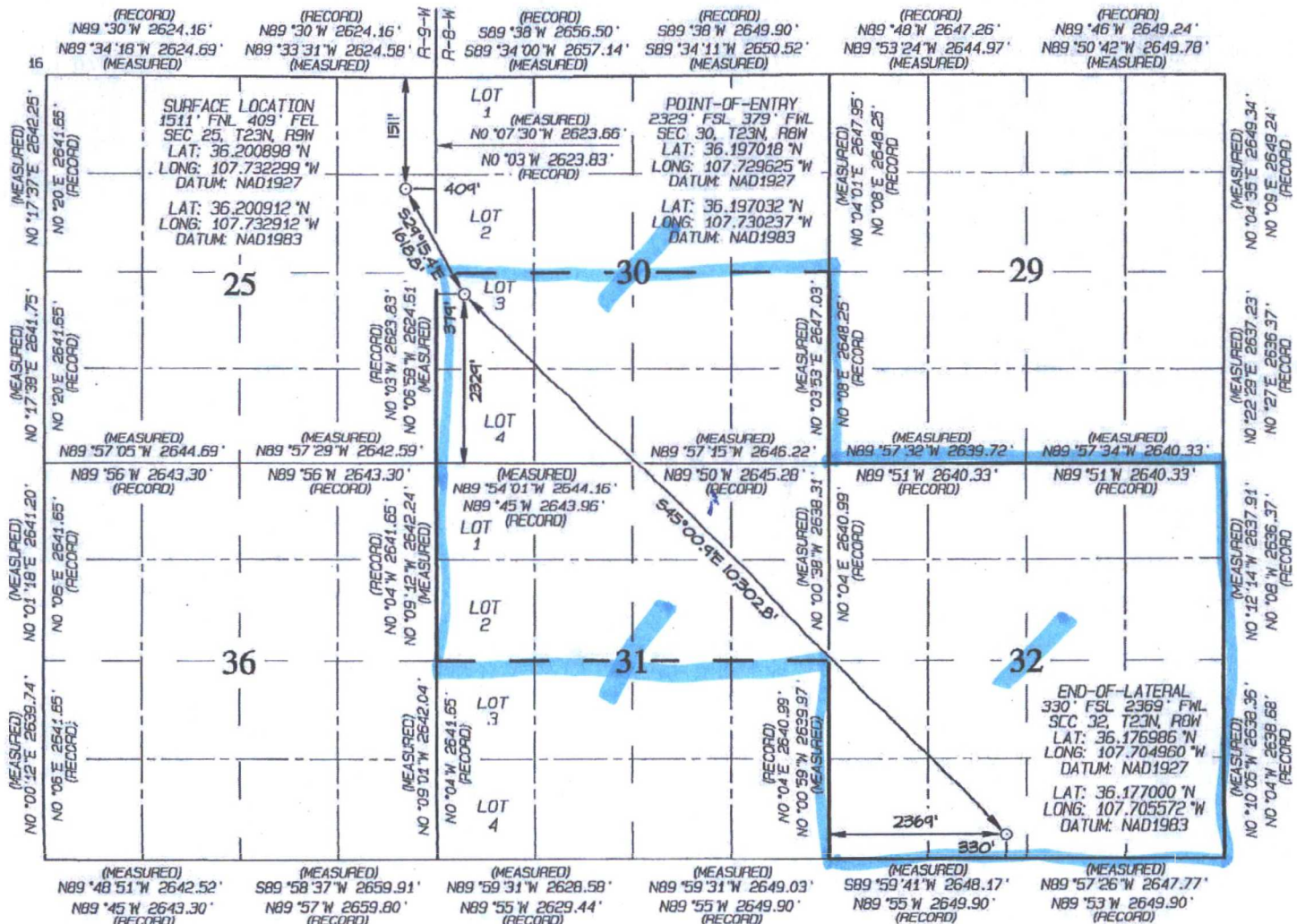
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: JANUARY 24, 2018
Survey Date: AUGUST 24, 2017

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: January 23, 2018
Well Name: Rodeo Unit #510H
SH Location: SENE Sec 25 23N-09W
BH Location: SESw Sec 32 23N-08W

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

Measured Depth: 15,764'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (KB)

NAME	MD	TVD	NAME	MD	TVD
Ojo Alamo	594	594	Mancos	3805	3722
Kirtland	703	702	Gallup	4163	4070
Picture Cliffs	1239	1228			
Lewis	1360	1346	KICKOFF POINT	4442	4341
Chacra	1593	1572	LANDING POINT	5311	4841
Cliff House	2598	2549	TOP TARGET	5311	4841
Menefee	2657	2606			
Point Lookout	3663	3584	TD	15764	4766

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"	5311'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5161' - 15764'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5161'	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: 118 bbls, 341 sks, (665 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 108 bbls, 464 sks, (604 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 209 bbl Drilling mud or water.
Total Cement: 226 bbls, 805 sks, (1269 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 (990 sk /1346 cuft /240 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-199bbl Fr Water.
Total Cement: 240 bbls, 990 sks, (1346 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 510H

API: ?

Wellbore #1

Plan: Plan #1

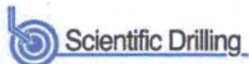
Standard Planning Report

19 October, 2017



www.scientificdrilling.com

Rodeo UT 510H
San Juan County, NM
Northing: 1892383.70
Easting: 529809.42
Plan #1



WELL DETAILS Rodeo UT 510H

Ground Level: 6883.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1892383.70	529809.42	36.200898	-107.732299

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
1079.88	13.60	161.32	1073.52	-76.07	25.71	2.00	161.32	72.00
4442.10	13.60	161.32	4341.50	-824.91	278.84	0.00	0.00	780.74
5311.43	90.41	135.04	4841.00	-1306.59	683.61	9.00	-26.89	1407.59
15763.81	90.41	135.04	4766.00	-8703.09	8068.62	0.00	0.00	11859.70

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
1073.52	1079.88	13.60	161.32	-76.07	25.71	72.00	Start 3362.22 hold at 1079.88 MD
4341.49	4442.10	13.60	161.32	-824.91	278.84	780.74	KOP
4341.50	4442.10	13.60	161.32	-824.91	278.84	780.74	Start DLS 9.00 TFO -26.89
4841.00	5311.43	90.41	135.04	-1306.59	683.61	1407.59	Start 10452.38 hold at 5311.43 MD
4766.00	15763.81	90.41	135.04	-8703.09	8068.62	11859.70	TD at 15763.81

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

L 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

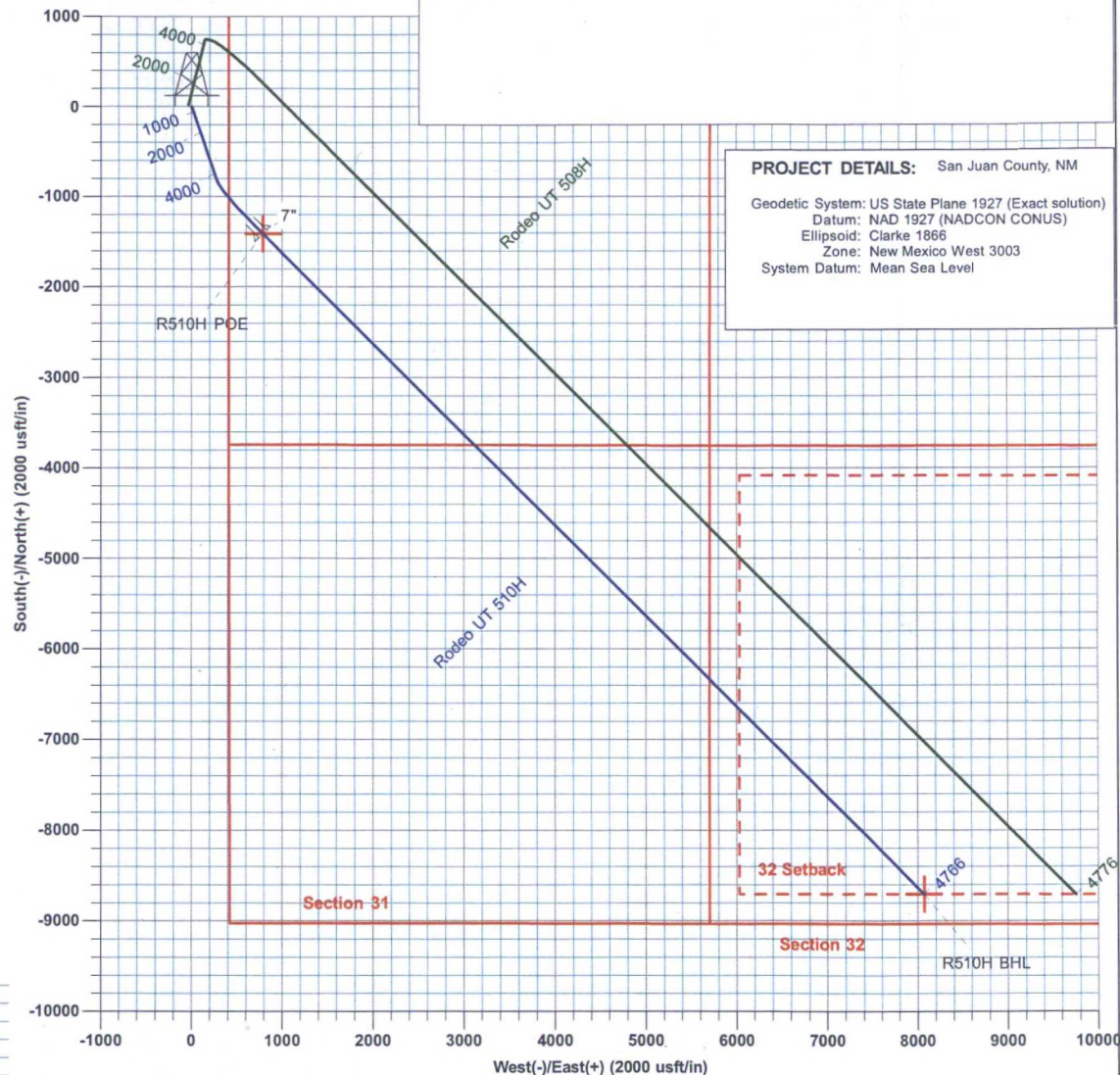
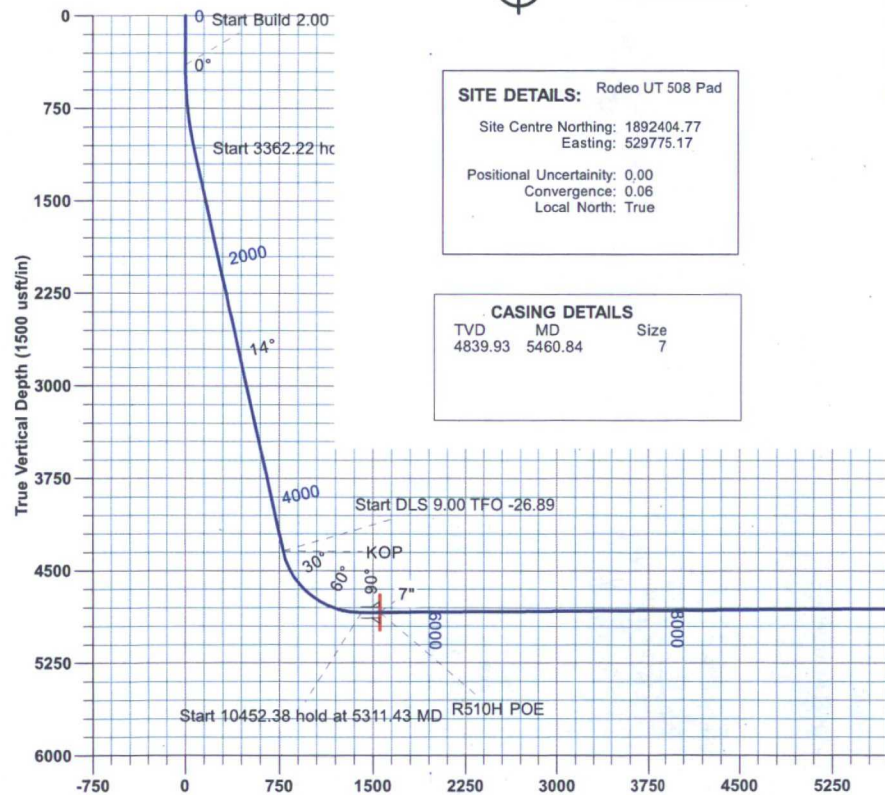
SITE DETAILS: Rodeo UT 508 Pad

Site Centre Northing: 1892404.77
 Easting: 529775.17

Positional Uncertainty: 0.00
 Convergence: 0.06
 Local North: True

CASING DETAILS

TVD	MD	Size
4839.93	5460.84	7



9:58:00 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 510H
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 510H	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 510H					
Well Position	+N/-S	-21.11 usft	Northing:	1,892,383.70 usft	Latitude:	36.200898
	+E/-W	34.22 usft	Easting:	529,809.42 usft	Longitude:	-107.732299
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	135.04	

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	
1,079.88	13.60	161.32	1,073.52	-76.07	25.71	2.00	2.00	0.00	161.32	
4,442.10	13.60	161.32	4,341.50	-824.91	278.84	0.00	0.00	0.00	0.00	
5,311.43	90.41	135.04	4,841.00	-1,306.59	683.61	9.00	8.84	-3.02	-26.89	
15,763.81	90.41	135.04	4,766.00	-8,703.09	8,068.62	0.00	0.00	0.00	0.00	R510H BHL

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 510H
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 510H	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	161.32	499.98	-1.65	0.56	1.56	2.00	2.00	0.00
594.15	3.88	161.32	594.00	-6.23	2.11	5.90	2.00	2.00	0.00
Ojo Alamo									
600.00	4.00	161.32	599.84	-6.61	2.23	6.26	2.00	2.00	0.00
700.00	6.00	161.32	699.45	-14.87	5.03	14.07	2.00	2.00	0.00
702.56	6.05	161.32	702.00	-15.12	5.11	14.31	2.00	2.00	0.00
Kirtland									
800.00	8.00	161.32	798.70	-26.41	8.93	25.00	2.00	2.00	0.00
900.00	10.00	161.32	897.47	-41.23	13.94	39.02	2.00	2.00	0.00
1,000.00	12.00	161.32	995.62	-59.31	20.05	56.13	2.00	2.00	0.00
1,079.88	13.60	161.32	1,073.52	-76.07	25.71	72.00	2.00	2.00	0.00
Start 3362.22 hold at 1079.88 MD									
1,100.00	13.60	161.32	1,093.07	-80.55	27.23	76.24	0.00	0.00	0.00
1,200.00	13.60	161.32	1,190.27	-102.82	34.76	97.32	0.00	0.00	0.00
1,238.82	13.60	161.32	1,228.00	-111.47	37.68	105.50	0.00	0.00	0.00
Picture Cliffs									
1,300.00	13.60	161.32	1,287.47	-125.10	42.28	118.40	0.00	0.00	0.00
1,360.22	13.60	161.32	1,346.00	-138.51	46.82	131.09	0.00	0.00	0.00
Lewis									
1,400.00	13.60	161.32	1,384.66	-147.37	49.81	139.48	0.00	0.00	0.00
1,500.00	13.60	161.32	1,481.86	-169.64	57.34	160.56	0.00	0.00	0.00
1,592.74	13.60	161.32	1,572.00	-190.30	64.32	180.10	0.00	0.00	0.00
Chacra									
1,600.00	13.60	161.32	1,579.06	-191.91	64.87	181.64	0.00	0.00	0.00
1,700.00	13.60	161.32	1,676.25	-214.18	72.40	202.71	0.00	0.00	0.00
1,800.00	13.60	161.32	1,773.45	-236.46	79.93	223.79	0.00	0.00	0.00
1,900.00	13.60	161.32	1,870.65	-258.73	87.46	244.87	0.00	0.00	0.00
2,000.00	13.60	161.32	1,967.85	-281.00	94.98	265.95	0.00	0.00	0.00
2,100.00	13.60	161.32	2,065.04	-303.27	102.51	287.03	0.00	0.00	0.00
2,200.00	13.60	161.32	2,162.24	-325.55	110.04	308.11	0.00	0.00	0.00
2,300.00	13.60	161.32	2,259.44	-347.82	117.57	329.19	0.00	0.00	0.00
2,400.00	13.60	161.32	2,356.63	-370.09	125.10	350.27	0.00	0.00	0.00
2,500.00	13.60	161.32	2,453.83	-392.36	132.63	371.35	0.00	0.00	0.00
2,597.91	13.60	161.32	2,549.00	-414.17	140.00	391.99	0.00	0.00	0.00
Cliff House									
2,600.00	13.60	161.32	2,551.03	-414.64	140.15	392.43	0.00	0.00	0.00
2,656.56	13.60	161.32	2,606.00	-427.23	144.41	404.35	0.00	0.00	0.00
Menefee									
2,700.00	13.60	161.32	2,648.22	-436.91	147.68	413.51	0.00	0.00	0.00
2,800.00	13.60	161.32	2,745.42	-459.18	155.21	434.59	0.00	0.00	0.00
2,900.00	13.60	161.32	2,842.62	-481.45	162.74	455.67	0.00	0.00	0.00
3,000.00	13.60	161.32	2,939.82	-503.72	170.27	476.75	0.00	0.00	0.00
3,100.00	13.60	161.32	3,037.01	-526.00	177.80	497.83	0.00	0.00	0.00
3,200.00	13.60	161.32	3,134.21	-548.27	185.33	518.91	0.00	0.00	0.00
3,300.00	13.60	161.32	3,231.41	-570.54	192.85	539.99	0.00	0.00	0.00

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 510H
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 510H	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	13.60	161.32	3,328.60	-592.81	200.38	561.07	0.00	0.00	0.00
3,500.00	13.60	161.32	3,425.80	-615.09	207.91	582.15	0.00	0.00	0.00
3,600.00	13.60	161.32	3,523.00	-637.36	215.44	603.23	0.00	0.00	0.00
3,662.76	13.60	161.32	3,584.00	-651.34	220.16	616.46	0.00	0.00	0.00
Point Lookout									
3,700.00	13.60	161.32	3,620.20	-659.63	222.97	624.31	0.00	0.00	0.00
3,800.00	13.60	161.32	3,717.39	-681.90	230.50	645.39	0.00	0.00	0.00
3,804.74	13.60	161.32	3,722.00	-682.96	230.85	646.39	0.00	0.00	0.00
Mancos									
3,900.00	13.60	161.32	3,814.59	-704.18	238.02	666.47	0.00	0.00	0.00
4,000.00	13.60	161.32	3,911.79	-726.45	245.55	687.55	0.00	0.00	0.00
4,100.00	13.60	161.32	4,008.98	-748.72	253.08	708.63	0.00	0.00	0.00
4,162.78	13.60	161.32	4,070.00	-762.70	257.81	721.86	0.00	0.00	0.00
Gallup									
4,200.00	13.60	161.32	4,106.18	-770.99	260.61	729.71	0.00	0.00	0.00
4,300.00	13.60	161.32	4,203.38	-793.27	268.14	750.78	0.00	0.00	0.00
4,363.40	13.60	161.32	4,265.00	-807.39	272.91	764.15	0.00	0.00	0.00
Gallup Upper									
4,400.00	13.60	161.32	4,300.57	-815.54	275.67	771.86	0.00	0.00	0.00
4,442.10	13.60	161.32	4,341.50	-824.91	278.84	780.74	0.00	0.00	0.00
KOP - Start DLS 9.00 TFO -26.89									
4,450.00	14.24	160.02	4,349.16	-826.71	279.47	782.45	9.00	8.07	-16.55
4,500.00	18.39	153.85	4,397.14	-839.57	285.05	795.50	9.00	8.32	-12.34
4,550.00	22.68	149.91	4,443.96	-855.00	293.36	812.29	9.00	8.57	-7.86
4,600.00	27.03	147.19	4,489.32	-872.90	304.36	832.73	9.00	8.71	-5.46
4,650.00	31.42	145.17	4,532.94	-893.16	317.97	856.68	9.00	8.78	-4.03
4,700.00	35.84	143.60	4,574.56	-915.65	334.10	884.00	9.00	8.83	-3.13
4,719.26	37.54	143.09	4,590.00	-924.88	340.97	895.38	9.00	8.86	-2.68
Mancos Lwr									
4,750.00	40.27	142.34	4,613.92	-940.24	352.67	914.52	9.00	8.87	-2.43
4,752.73	40.51	142.28	4,616.00	-941.64	353.76	916.27	9.00	8.88	-2.28
El Vado									
4,800.00	44.72	141.29	4,650.78	-966.77	373.56	948.05	9.00	8.89	-2.09
4,850.00	49.17	140.39	4,684.91	-995.08	396.63	984.39	9.00	8.90	-1.80
4,893.14	53.01	139.71	4,712.00	-1,020.81	418.19	1,017.82	9.00	8.92	-1.58
Frac Barrier									
4,900.00	53.63	139.61	4,716.10	-1,025.00	421.75	1,023.31	9.00	8.92	-1.49
4,950.00	58.09	138.91	4,744.15	-1,056.34	448.76	1,064.57	9.00	8.93	-1.40
4,975.10	60.33	138.58	4,757.00	-1,072.55	462.97	1,086.08	9.00	8.93	-1.30
PS 3									
5,000.00	62.55	138.27	4,768.90	-1,088.91	477.49	1,107.91	9.00	8.93	-1.24
5,049.50	66.98	137.69	4,790.00	-1,122.16	507.45	1,152.61	9.00	8.94	-1.17
PS2									
5,050.00	67.02	137.69	4,790.20	-1,122.51	507.76	1,153.08	9.00	8.94	-1.13
5,100.00	71.49	137.14	4,807.90	-1,156.92	539.40	1,199.79	9.00	8.94	-1.09
5,120.17	73.30	136.93	4,814.00	-1,170.99	552.50	1,219.00	9.00	8.94	-1.05
PS1									
5,150.00	75.97	136.62	4,821.90	-1,191.95	572.20	1,247.75	9.00	8.95	-1.03
5,182.59	78.88	136.29	4,829.00	-1,215.00	594.11	1,279.54	9.00	8.95	-1.00
PSA									

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 510H
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 510H	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)
5,200.00	80.44	136.12	4,832.12	-1,227.36	605.97	1,296.66	9.00	8.95	-0.99
5,250.00	84.91	135.63	4,838.50	-1,262.95	640.48	1,346.24	9.00	8.95	-0.97
5,300.00	89.39	135.15	4,840.98	-1,298.50	675.54	1,396.16	9.00	8.95	-0.96
5,311.43	90.41	135.04	4,841.00	-1,306.59	683.61	1,407.59	9.00	8.95	-0.96
Start 10452.38 hold at 5311.43 MD									
5,400.00	90.41	135.04	4,840.36	-1,369.27	746.19	1,496.16	0.00	0.00	0.00
5,460.84	90.41	135.04	4,839.93	-1,412.32	789.18	1,557.00	0.00	0.00	0.00
7"									
5,500.00	90.41	135.04	4,839.65	-1,440.03	816.84	1,596.16	0.00	0.00	0.00
5,600.00	90.41	135.04	4,838.93	-1,510.79	887.50	1,696.16	0.00	0.00	0.00
5,700.00	90.41	135.04	4,838.21	-1,581.56	958.15	1,796.15	0.00	0.00	0.00
5,800.00	90.41	135.04	4,837.49	-1,652.32	1,028.80	1,896.15	0.00	0.00	0.00
5,900.00	90.41	135.04	4,836.78	-1,723.09	1,099.46	1,996.15	0.00	0.00	0.00
6,000.00	90.41	135.04	4,836.06	-1,793.85	1,170.11	2,096.15	0.00	0.00	0.00
6,100.00	90.41	135.04	4,835.34	-1,864.61	1,240.77	2,196.14	0.00	0.00	0.00
6,200.00	90.41	135.04	4,834.62	-1,935.38	1,311.42	2,296.14	0.00	0.00	0.00
6,300.00	90.41	135.04	4,833.91	-2,006.14	1,382.07	2,396.14	0.00	0.00	0.00
6,400.00	90.41	135.04	4,833.19	-2,076.90	1,452.73	2,496.13	0.00	0.00	0.00
6,500.00	90.41	135.04	4,832.47	-2,147.67	1,523.38	2,596.13	0.00	0.00	0.00
6,600.00	90.41	135.04	4,831.75	-2,218.43	1,594.04	2,696.13	0.00	0.00	0.00
6,700.00	90.41	135.04	4,831.04	-2,289.20	1,664.69	2,796.13	0.00	0.00	0.00
6,800.00	90.41	135.04	4,830.32	-2,359.96	1,735.34	2,896.12	0.00	0.00	0.00
6,900.00	90.41	135.04	4,829.60	-2,430.72	1,806.00	2,996.12	0.00	0.00	0.00
7,000.00	90.41	135.04	4,828.88	-2,501.49	1,876.65	3,096.12	0.00	0.00	0.00
7,100.00	90.41	135.04	4,828.17	-2,572.25	1,947.31	3,196.12	0.00	0.00	0.00
7,200.00	90.41	135.04	4,827.45	-2,643.01	2,017.96	3,296.11	0.00	0.00	0.00
7,300.00	90.41	135.04	4,826.73	-2,713.78	2,088.61	3,396.11	0.00	0.00	0.00
7,400.00	90.41	135.04	4,826.01	-2,784.54	2,159.27	3,496.11	0.00	0.00	0.00
7,500.00	90.41	135.04	4,825.30	-2,855.31	2,229.92	3,596.11	0.00	0.00	0.00
7,600.00	90.41	135.04	4,824.58	-2,926.07	2,300.58	3,696.10	0.00	0.00	0.00
7,700.00	90.41	135.04	4,823.86	-2,996.83	2,371.23	3,796.10	0.00	0.00	0.00
7,800.00	90.41	135.04	4,823.14	-3,067.60	2,441.88	3,896.10	0.00	0.00	0.00
7,900.00	90.41	135.04	4,822.43	-3,138.36	2,512.54	3,996.10	0.00	0.00	0.00
8,000.00	90.41	135.04	4,821.71	-3,209.12	2,583.19	4,096.09	0.00	0.00	0.00
8,100.00	90.41	135.04	4,820.99	-3,279.89	2,653.84	4,196.09	0.00	0.00	0.00
8,200.00	90.41	135.04	4,820.27	-3,350.65	2,724.50	4,296.09	0.00	0.00	0.00
8,300.00	90.41	135.04	4,819.56	-3,421.42	2,795.15	4,396.09	0.00	0.00	0.00
8,400.00	90.41	135.04	4,818.84	-3,492.18	2,865.81	4,496.08	0.00	0.00	0.00
8,500.00	90.41	135.04	4,818.12	-3,562.94	2,936.46	4,596.08	0.00	0.00	0.00
8,600.00	90.41	135.04	4,817.40	-3,633.71	3,007.11	4,696.08	0.00	0.00	0.00
8,700.00	90.41	135.04	4,816.69	-3,704.47	3,077.77	4,796.08	0.00	0.00	0.00
8,800.00	90.41	135.04	4,815.97	-3,775.23	3,148.42	4,896.07	0.00	0.00	0.00
8,900.00	90.41	135.04	4,815.25	-3,846.00	3,219.08	4,996.07	0.00	0.00	0.00
9,000.00	90.41	135.04	4,814.53	-3,916.76	3,289.73	5,096.07	0.00	0.00	0.00
9,100.00	90.41	135.04	4,813.82	-3,987.53	3,360.38	5,196.07	0.00	0.00	0.00
9,200.00	90.41	135.04	4,813.10	-4,058.29	3,431.04	5,296.06	0.00	0.00	0.00
9,300.00	90.41	135.04	4,812.38	-4,129.05	3,501.69	5,396.06	0.00	0.00	0.00
9,400.00	90.41	135.04	4,811.66	-4,199.82	3,572.35	5,496.06	0.00	0.00	0.00
9,500.00	90.41	135.04	4,810.95	-4,270.58	3,643.00	5,596.06	0.00	0.00	0.00
9,600.00	90.41	135.04	4,810.23	-4,341.34	3,713.65	5,696.05	0.00	0.00	0.00
9,700.00	90.41	135.04	4,809.51	-4,412.11	3,784.31	5,796.05	0.00	0.00	0.00
9,800.00	90.41	135.04	4,808.79	-4,482.87	3,854.96	5,896.05	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

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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 510H	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)
9,900.00	90.41	135.04	4,808.08	-4,553.64	3,925.62	5,996.04	0.00	0.00	0.00
10,000.00	90.41	135.04	4,807.36	-4,624.40	3,996.27	6,096.04	0.00	0.00	0.00
10,100.00	90.41	135.04	4,806.64	-4,695.16	4,066.92	6,196.04	0.00	0.00	0.00
10,200.00	90.41	135.04	4,805.92	-4,765.93	4,137.58	6,296.04	0.00	0.00	0.00
10,300.00	90.41	135.04	4,805.21	-4,836.69	4,208.23	6,396.03	0.00	0.00	0.00
10,400.00	90.41	135.04	4,804.49	-4,907.46	4,278.88	6,496.03	0.00	0.00	0.00
10,500.00	90.41	135.04	4,803.77	-4,978.22	4,349.54	6,596.03	0.00	0.00	0.00
10,600.00	90.41	135.04	4,803.05	-5,048.98	4,420.19	6,696.03	0.00	0.00	0.00
10,700.00	90.41	135.04	4,802.33	-5,119.75	4,490.85	6,796.02	0.00	0.00	0.00
10,800.00	90.41	135.04	4,801.62	-5,190.51	4,561.50	6,896.02	0.00	0.00	0.00
10,900.00	90.41	135.04	4,800.90	-5,261.27	4,632.15	6,996.02	0.00	0.00	0.00
11,000.00	90.41	135.04	4,800.18	-5,332.04	4,702.81	7,096.02	0.00	0.00	0.00
11,100.00	90.41	135.04	4,799.46	-5,402.80	4,773.46	7,196.01	0.00	0.00	0.00
11,200.00	90.41	135.04	4,798.75	-5,473.57	4,844.12	7,296.01	0.00	0.00	0.00
11,300.00	90.41	135.04	4,798.03	-5,544.33	4,914.77	7,396.01	0.00	0.00	0.00
11,400.00	90.41	135.04	4,797.31	-5,615.09	4,985.42	7,496.01	0.00	0.00	0.00
11,500.00	90.41	135.04	4,796.59	-5,685.86	5,056.08	7,596.00	0.00	0.00	0.00
11,600.00	90.41	135.04	4,795.88	-5,756.62	5,126.73	7,696.00	0.00	0.00	0.00
11,700.00	90.41	135.04	4,795.16	-5,827.38	5,197.39	7,796.00	0.00	0.00	0.00
11,800.00	90.41	135.04	4,794.44	-5,898.15	5,268.04	7,896.00	0.00	0.00	0.00
11,900.00	90.41	135.04	4,793.72	-5,968.91	5,338.69	7,995.99	0.00	0.00	0.00
12,000.00	90.41	135.04	4,793.01	-6,039.68	5,409.35	8,095.99	0.00	0.00	0.00
12,100.00	90.41	135.04	4,792.29	-6,110.44	5,480.00	8,195.99	0.00	0.00	0.00
12,200.00	90.41	135.04	4,791.57	-6,181.20	5,550.66	8,295.99	0.00	0.00	0.00
12,300.00	90.41	135.04	4,790.85	-6,251.97	5,621.31	8,395.98	0.00	0.00	0.00
12,400.00	90.41	135.04	4,790.14	-6,322.73	5,691.96	8,495.98	0.00	0.00	0.00
12,500.00	90.41	135.04	4,789.42	-6,393.49	5,762.62	8,595.98	0.00	0.00	0.00
12,600.00	90.41	135.04	4,788.70	-6,464.26	5,833.27	8,695.98	0.00	0.00	0.00
12,700.00	90.41	135.04	4,787.98	-6,535.02	5,903.92	8,795.97	0.00	0.00	0.00
12,800.00	90.41	135.04	4,787.27	-6,605.79	5,974.58	8,895.97	0.00	0.00	0.00
12,900.00	90.41	135.04	4,786.55	-6,676.55	6,045.23	8,995.97	0.00	0.00	0.00
13,000.00	90.41	135.04	4,785.83	-6,747.31	6,115.89	9,095.96	0.00	0.00	0.00
13,100.00	90.41	135.04	4,785.11	-6,818.08	6,186.54	9,195.96	0.00	0.00	0.00
13,200.00	90.41	135.04	4,784.40	-6,888.84	6,257.19	9,295.96	0.00	0.00	0.00
13,300.00	90.41	135.04	4,783.68	-6,959.60	6,327.85	9,395.96	0.00	0.00	0.00
13,400.00	90.41	135.04	4,782.96	-7,030.37	6,398.50	9,495.95	0.00	0.00	0.00
13,500.00	90.41	135.04	4,782.24	-7,101.13	6,469.16	9,595.95	0.00	0.00	0.00
13,600.00	90.41	135.04	4,781.53	-7,171.90	6,539.81	9,695.95	0.00	0.00	0.00
13,700.00	90.41	135.04	4,780.81	-7,242.66	6,610.46	9,795.95	0.00	0.00	0.00
13,800.00	90.41	135.04	4,780.09	-7,313.42	6,681.12	9,895.94	0.00	0.00	0.00
13,900.00	90.41	135.04	4,779.37	-7,384.19	6,751.77	9,995.94	0.00	0.00	0.00
14,000.00	90.41	135.04	4,778.66	-7,454.95	6,822.43	10,095.94	0.00	0.00	0.00
14,100.00	90.41	135.04	4,777.94	-7,525.71	6,893.08	10,195.94	0.00	0.00	0.00
14,200.00	90.41	135.04	4,777.22	-7,596.48	6,963.73	10,295.93	0.00	0.00	0.00
14,300.00	90.41	135.04	4,776.50	-7,667.24	7,034.39	10,395.93	0.00	0.00	0.00
14,400.00	90.41	135.04	4,775.79	-7,738.01	7,105.04	10,495.93	0.00	0.00	0.00
14,500.00	90.41	135.04	4,775.07	-7,808.77	7,175.69	10,595.93	0.00	0.00	0.00
14,600.00	90.41	135.04	4,774.35	-7,879.53	7,246.35	10,695.92	0.00	0.00	0.00
14,700.00	90.41	135.04	4,773.63	-7,950.30	7,317.00	10,795.92	0.00	0.00	0.00
14,800.00	90.41	135.04	4,772.92	-8,021.06	7,387.66	10,895.92	0.00	0.00	0.00
14,900.00	90.41	135.04	4,772.20	-8,091.82	7,458.31	10,995.92	0.00	0.00	0.00
15,000.00	90.41	135.04	4,771.48	-8,162.59	7,528.96	11,095.91	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 510H
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 510H	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)
15,100.00	90.41	135.04	4,770.76	-8,233.35	7,599.62	11,195.91	0.00	0.00	0.00
15,200.00	90.41	135.04	4,770.05	-8,304.12	7,670.27	11,295.91	0.00	0.00	0.00
15,300.00	90.41	135.04	4,769.33	-8,374.88	7,740.93	11,395.91	0.00	0.00	0.00
15,400.00	90.41	135.04	4,768.61	-8,445.64	7,811.58	11,495.90	0.00	0.00	0.00
15,500.00	90.41	135.04	4,767.89	-8,516.41	7,882.23	11,595.90	0.00	0.00	0.00
15,600.00	90.41	135.04	4,767.18	-8,587.17	7,952.89	11,695.90	0.00	0.00	0.00
15,700.00	90.41	135.04	4,766.46	-8,657.93	8,023.54	11,795.90	0.00	0.00	0.00
15,763.81	90.41	135.04	4,766.00	-8,703.09	8,068.62	11,859.70	0.00	0.00	0.00
TD at 15763.81									

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									
R510H BHL	0.00	0.00	4,766.00	-8,703.09	8,068.62	1,883,689.02	537,887.10	36.176986	-107.704960
- plan hits target center									
- Point									
R510H POE	0.00	0.00	4,841.00	-1,412.35	790.75	1,890,972.17	530,601.64	36.197018	-107.729619
- plan misses target center by 1.54usft at 5461.97usft MD (4839.92 TVD, -1413.12 N, 789.97 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,460.84	4,839.93	7"	7	8-3/4

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 510H
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 510H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
594.15	594.00	Ojo Alamo			
702.56	702.00	Kirtland			
1,238.82	1,228.00	Picture Cliffs			
1,360.22	1,346.00	Lewis			
1,592.74	1,572.00	Chacra			
2,597.91	2,549.00	Cliff House			
2,656.56	2,606.00	Menefee			
3,662.76	3,584.00	Point Lookout			
3,804.74	3,722.00	Mancos			
4,162.78	4,070.00	Gallup			
4,363.40	4,265.00	Gallup Upper			
4,719.26	4,590.00	Mancos Lwr			
4,752.73	4,616.00	El Vado			
4,893.14	4,712.00	Frac Barrier			
4,975.10	4,757.00	PS 3			
5,049.50	4,790.00	PS2			
5,120.17	4,814.00	PS1			
5,182.59	4,829.00	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
1,079.88	1,073.52	-76.07	25.71	Start 3362.22 hold at 1079.88 MD
4,442.10	4,341.49	-824.91	278.84	KOP
4,442.10	4,341.50	-824.91	278.84	Start DLS 9.00 TFO -26.89
5,311.43	4,841.00	-1,306.59	683.61	Start 10452.38 hold at 5311.43 MD
15,763.81	4,766.00	-8,703.09	8,068.62	TD at 15763.81

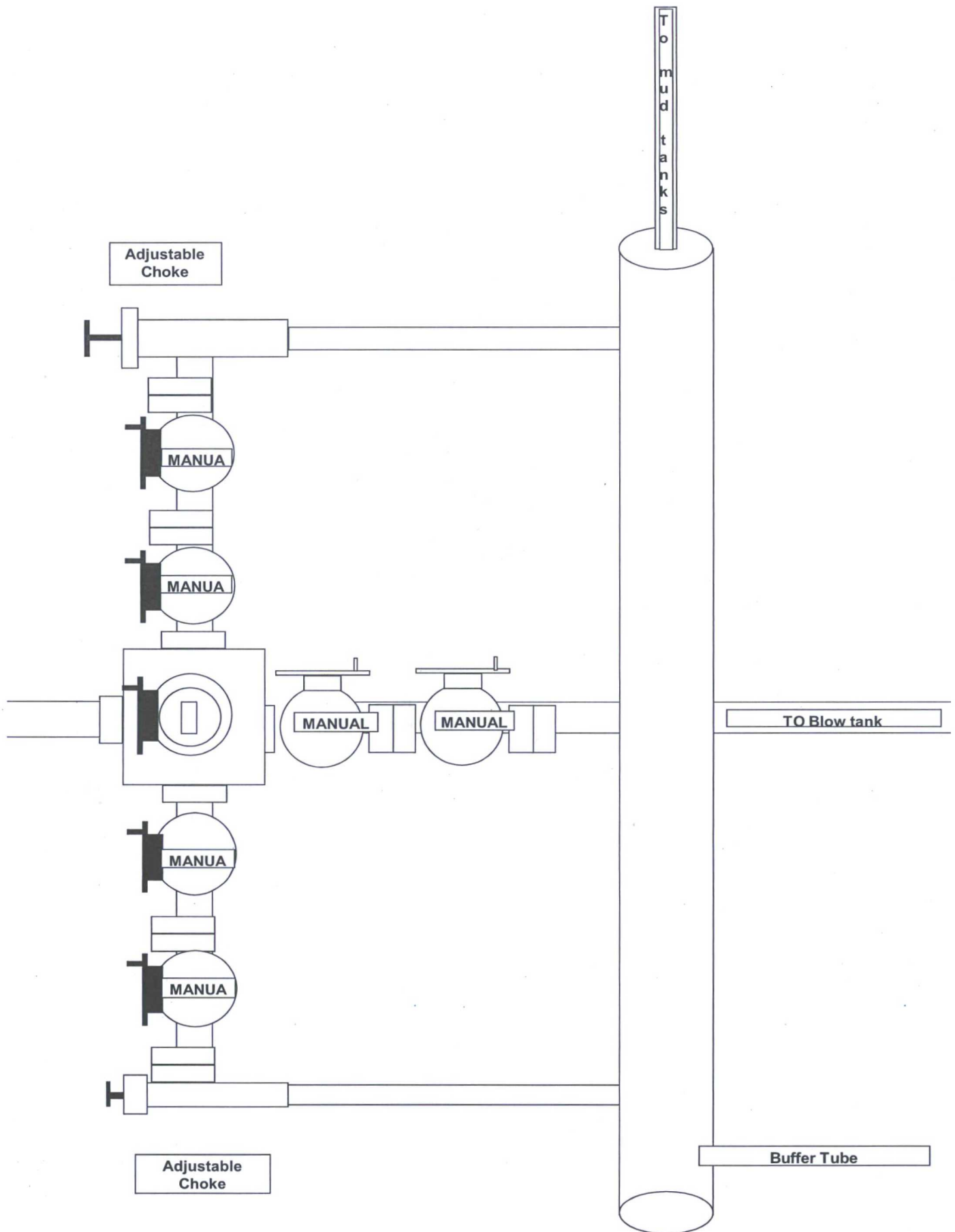
disturbance survey efforts. WPX would conduct onsite inspections with BLM resource staff for proposed well pads after they have been staked and surveyed to verify that sensitive resources have been avoided and to identify changes or mitigation measures required for BLM approval.

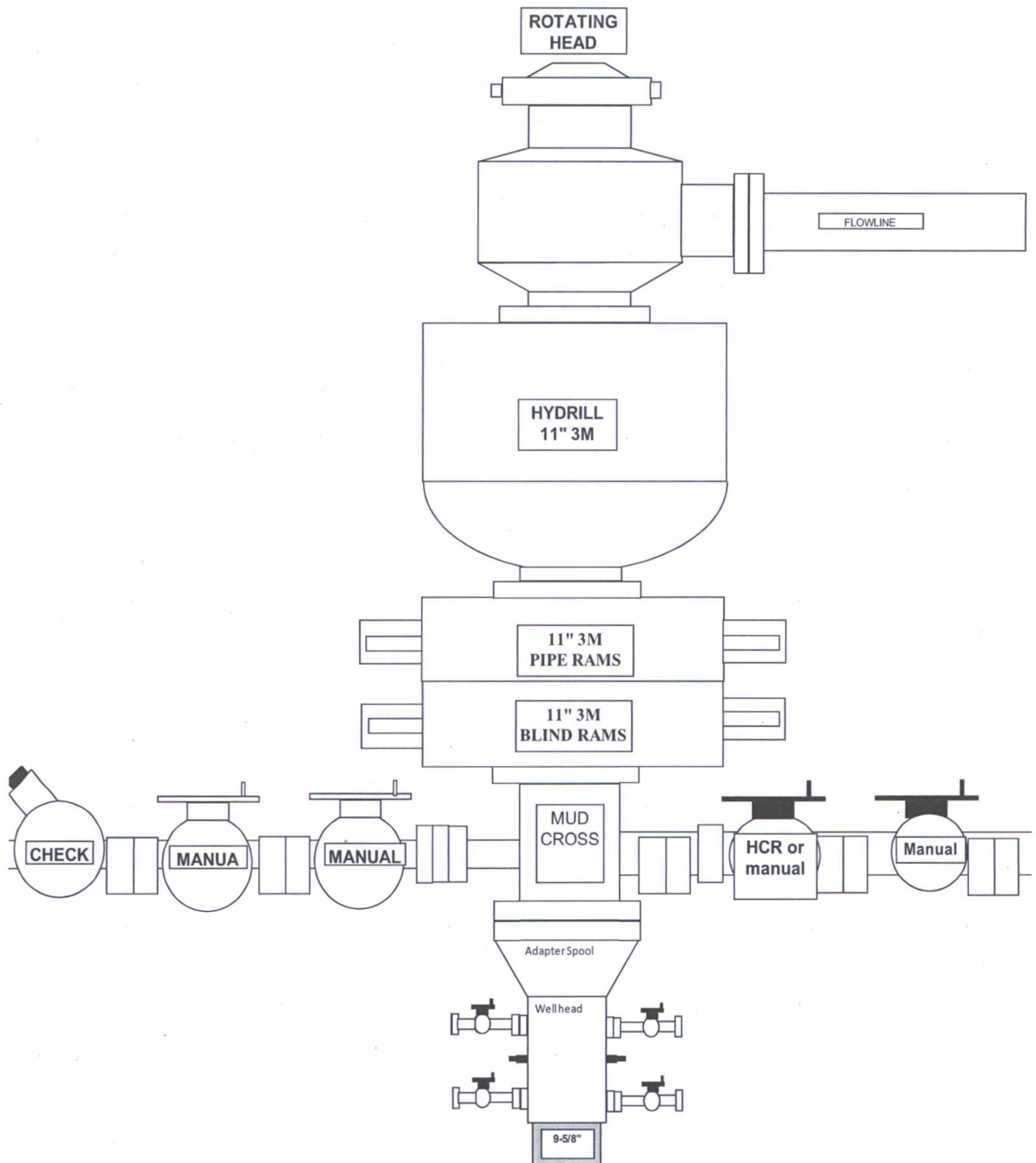
3.12.1 Control of Waste

- 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 #510H
1511' FNL & 409' FEL, Section 25, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.200912°N Longitude: 107.732912°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 #510H location.