

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

AUG 22 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.

SUBMIT IN TRIPLICATE - Other instructions on page 2		5. Lease Serial No. N0-G-1402-1893
1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator WPX Energy Production, LLC		7. If Unit of CA/Agreement, Name and/or No. NMNM 136328A
3a. Address PO Box 640 Aztec, NM 87410	3b. Phone No. (include area code) 505-333-1808	8. Well Name and No. Chaco 2308 31D 493H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL: 225' FNL & 915' FWL Sec 31 T23N R8W Unit: D BHL: 2339' FNL & 1897' FWL Sec 6 T22N R8W Unit: F		9. API Well No. 30-045-35724
		10. Field and Pool or Exploratory Area Basin Mancos
		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 <u>Name change & Change in Plans</u>
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recompleat 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.)

**ADHERE TO PREVIOUS NMOCD
CONDITIONS OF APPROVAL**

WPX Energy request a name change from **Chaco 2308 31D 493H** to **Rodeo Unit 493H** & 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**

OIL CONS. DIV DIST. 3

AUG 24 2017

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

Title: Permit Tech

Signature

Date: 8/22/17

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

PE

Date

8/23/17

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

PTD

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: (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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35724	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 317527	⁵ Property Name RODEO UNIT	⁶ Well Number 493H
⁷ GRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC	⁹ Elevation 6680'

¹⁰ Surface Location

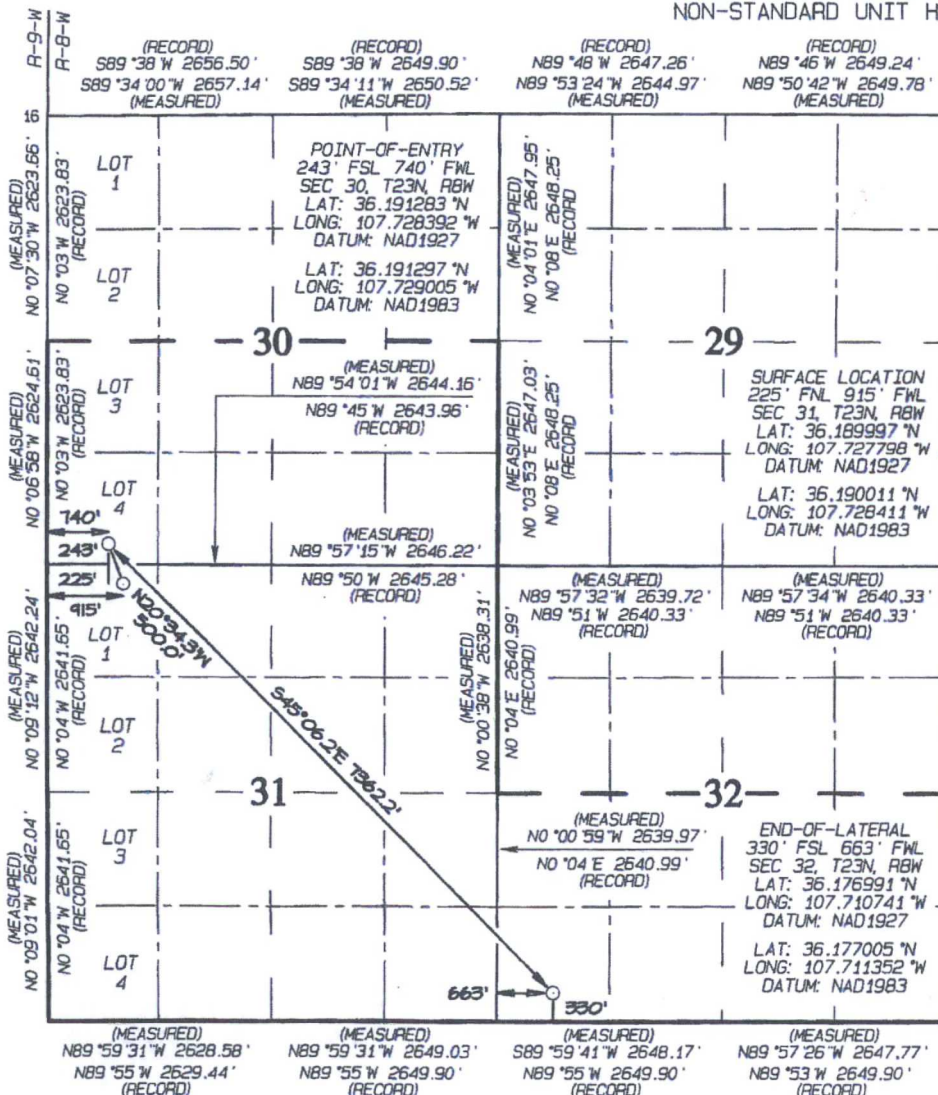
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	31	23N	8W	1	225	NORTH	915	WEST	SAN JUAN

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
M	32	23N	8W		330	SOUTH	663	WEST	SAN JUAN

¹² Dedicated Acres 1283.63	S/2 - Section 30 Entire Section 31 S/2 - Section 32	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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



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 8/22/17

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

¹⁸ SURVEYOR CERTIFICATION

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

Date Revised: AUGUST 21, 2017
Date of Survey: APRIL 12, 2016

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 22, 2017
Well Name: Rodeo Unit #493H
SH Location: NWNW Sec 31 23N-08W
BH Location: SWSW Sec 32 23N-08W

Field: Basin Mancos
Surface: IA
Elevation: 6680' GR
Minerals: IA

Measured Depth: 12549.2'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (GR)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	238.00	238.00	POINT LOOKOUT	3,497.00	3,339.00
KIRTLAND	393.00	393.00	MANCOS	3,675.00	3,504.00
PICTURED CLIFFS	877.00	876.00	GALLUP	4,022.00	3,829.00
LEWIS	1,068.00	1,064.00	KICKOFF POINT	3,944.84	3,755.55
CHACRA	1,291.00	1,281.00	TOP TARGET	5,182.00	4,621.00
CLIFF HOUSE	2,444.00	2,359.00	LANDING POINT	5,186.74	4,621.00
MENEFEE	2,475.00	2,388.00	BASE TARGET	5,186.74	4,621.00
			TD	12,549.20	4,549.00

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"	5186.74'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5036.74' - 12549.2'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5036.74'	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 cancellation 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: 94 bbls, 268 sks, (527 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/ +/- 204 bbl Drilling mud or water. Total Cement: (153 bbls, 522 sks, 858 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 (736 sx /1001 cuft /178 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/-169bbl Fr Water. Total Cement (736 sx /1001 cuft /178bbls).

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

San Juan County, NM

Rodeo UT 492 Pad

Rodeo UT 493H

API:

Wellbore #1

Plan: Plan #1

Standard Planning Report

25 July, 2017



Scientific Drilling

www.scientificdrilling.com



Rodeo UT 493H
San Juan County, NM
Northing: 1888417.03
Easting: 531141.72
Plan #1

GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)



Azimuths to True North
Magnetic North: 9.05°
Magnetic Field
Strength: 49619.1nT
Dip Angle: 62.83°
Date: 6/21/2017
Model: HDGM



WELL DETAILS Rodeo UT 493H

Ground Level: 6680.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1888417.03	531141.72	36.189997	-107.727798

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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00
1572.83	21.46	323.42	1547.93	159.44	-118.32	2.00	323.42	-196.38
3944.84	21.46	323.42	3755.55	856.21	-635.39	0.00	0.00	-1054.61
5186.74	90.56	134.96	4621.00	468.25	-175.30	9.00	170.88	-454.91
12549.20	90.56	134.96	4549.00	-4733.77	5034.27	0.00	-78.42	6907.20

SITE DETAILS: Rodeo UT 492 Pad

Site Centre Northing: 1888416.99
Easting: 531101.59

Positional Uncertainty: 0.00
Convergence: 0.06
Local North: True

PROJECT DETAILS: San Juan County, NM

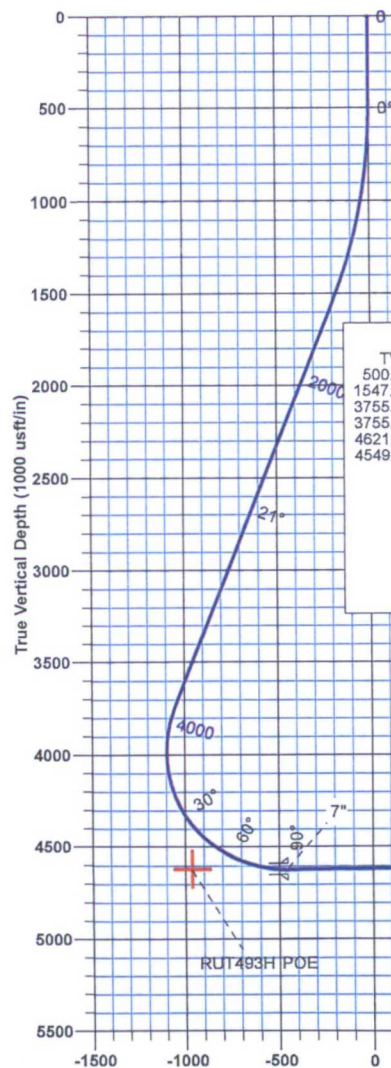
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level

ANNOTATIONS

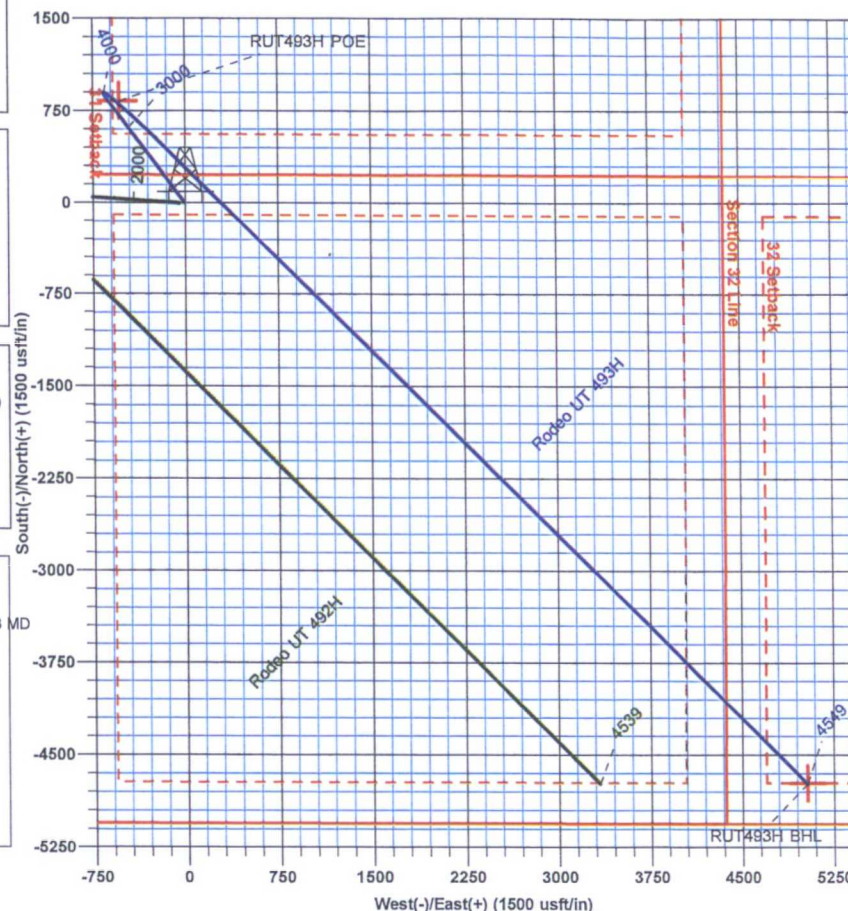
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1547.93	1572.83	21.46	323.42	159.44	-118.32	-196.38	198.55	Start 2372.01 hold at 1572.83 MD
3755.55	3944.84	21.46	323.42	856.21	-635.39	-1054.61	1066.22	KOP
3755.55	3944.84	21.46	323.42	856.21	-635.39	-1054.61	1066.22	Start DLS 9.00 TFO 170.88
4621.00	5186.74	90.56	134.96	468.25	-175.30	-454.91	1760.05	Start DLS 0.00 TFO -78.42
4549.00	12549.20	90.56	134.96	-4733.77	5034.27	6907.20	9122.16	TD at 12549.20

CASING DETAILS

TVD	MD	Size
4621.00	5186.74	7



Vertical Section at 134.96° (1000 usft/in)



Bailey Follows
15.08, July 25 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 493H
Company:	WPX Energy	TVD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Site:	Rodeo UT 492 Pad	North Reference:	True
Well:	Rodeo UT 493H	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 492 Pad				
Site Position:		Northing:	1,888,416.99 usft	Latitude:	36.189997
From:	Lat/Long	Easting:	531,101.59 usft	Longitude:	-107.727934
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.06

Well	Rodeo UT 493H, Sec. 31, T23N, R8W					
Well Position	+N/-S	0.00 usft	Northing:	1,888,417.03 usft	Latitude:	36.189997
	+E/-W	40.13 usft	Easting:	531,141.72 usft	Longitude:	-107.727798
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,680.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/21/2017	9.05	62.83	49,619

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	134.96

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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,572.83	21.46	323.42	1,547.93	159.44	-118.32	2.00	2.00	0.00	323.42	
3,944.84	21.46	323.42	3,755.55	856.21	-635.39	0.00	0.00	0.00	0.00	
5,186.74	90.56	134.96	4,621.00	468.25	-175.30	9.00	5.56	13.81	170.88	
12,549.20	90.56	134.96	4,549.00	-4,733.77	5,034.27	0.00	0.00	0.00	-78.42	RUT493H BHL

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 493H
Company:	WPX Energy	TVD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Site:	Rodeo UT 492 Pad	North Reference:	True
Well:	Rodeo UT 493H	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
238.00	0.00	0.00	238.00	0.00	0.00	0.00	0.00	0.00	0.00
Ojo Alamo									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
393.00	0.00	0.00	393.00	0.00	0.00	0.00	0.00	0.00	0.00
Kirtland									
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
600.00	2.00	323.42	599.98	1.40	-1.04	-1.73	2.00	2.00	0.00
700.00	4.00	323.42	699.84	5.60	-4.16	-6.90	2.00	2.00	0.00
800.00	6.00	323.42	799.45	12.60	-9.35	-15.52	2.00	2.00	0.00
877.09	7.54	323.42	876.00	19.90	-14.77	-24.51	2.00	2.00	0.00
Picture Cliffs									
900.00	8.00	323.42	898.70	22.39	-16.61	-27.58	2.00	2.00	0.00
1,000.00	10.00	323.42	997.47	34.95	-25.94	-43.05	2.00	2.00	0.00
1,067.71	11.35	323.42	1,064.00	45.02	-33.41	-55.46	2.00	2.00	0.00
Lewis									
1,100.00	12.00	323.42	1,095.62	50.27	-37.31	-61.92	2.00	2.00	0.00
1,200.00	14.00	323.42	1,193.06	68.34	-50.71	-84.17	2.00	2.00	0.00
1,291.01	15.82	323.42	1,281.00	87.14	-64.67	-107.33	2.00	2.00	0.00
Chacra									
1,300.00	16.00	323.42	1,289.64	89.12	-66.13	-109.77	2.00	2.00	0.00
1,400.00	18.00	323.42	1,385.27	112.60	-83.56	-138.69	2.00	2.00	0.00
1,500.00	20.00	323.42	1,479.82	138.74	-102.96	-170.89	2.00	2.00	0.00
1,572.83	21.46	323.42	1,547.93	159.44	-118.32	-196.38	2.00	2.00	0.00
Start 2372.01 hold at 1572.83 MD									
1,600.00	21.46	323.42	1,573.22	167.42	-124.24	-206.21	0.00	0.00	0.00
1,700.00	21.46	323.42	1,666.29	196.79	-146.04	-242.40	0.00	0.00	0.00
1,800.00	21.46	323.42	1,759.36	226.17	-167.84	-278.58	0.00	0.00	0.00
1,900.00	21.46	323.42	1,852.42	255.54	-189.64	-314.76	0.00	0.00	0.00
2,000.00	21.46	323.42	1,945.49	284.92	-211.44	-350.94	0.00	0.00	0.00
2,100.00	21.46	323.42	2,038.56	314.29	-233.24	-387.12	0.00	0.00	0.00
2,200.00	21.46	323.42	2,131.63	343.67	-255.03	-423.30	0.00	0.00	0.00
2,300.00	21.46	323.42	2,224.70	373.04	-276.83	-459.48	0.00	0.00	0.00
2,400.00	21.46	323.42	2,317.77	402.42	-298.63	-495.67	0.00	0.00	0.00
2,444.30	21.46	323.42	2,359.00	415.43	-308.29	-511.69	0.00	0.00	0.00
Cliff House									
2,475.46	21.46	323.42	2,388.00	424.58	-315.08	-522.97	0.00	0.00	0.00
Menefee									
2,500.00	21.46	323.42	2,410.84	431.79	-320.43	-531.85	0.00	0.00	0.00
2,600.00	21.46	323.42	2,503.91	461.17	-342.23	-568.03	0.00	0.00	0.00
2,700.00	21.46	323.42	2,596.98	490.54	-364.03	-604.21	0.00	0.00	0.00
2,800.00	21.46	323.42	2,690.05	519.92	-385.83	-640.39	0.00	0.00	0.00
2,900.00	21.46	323.42	2,783.12	549.29	-407.63	-676.57	0.00	0.00	0.00
3,000.00	21.46	323.42	2,876.19	578.67	-429.42	-712.76	0.00	0.00	0.00
3,100.00	21.46	323.42	2,969.26	608.04	-451.22	-748.94	0.00	0.00	0.00
3,200.00	21.46	323.42	3,062.33	637.42	-473.02	-785.12	0.00	0.00	0.00
3,300.00	21.46	323.42	3,155.40	666.79	-494.82	-821.30	0.00	0.00	0.00

Scientific Drilling Int. Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 493H
Company:	WPX Energy	TVD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Site:	Rodeo UT 492 Pad	North Reference:	True
Well:	Rodeo UT 493H	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	21.46	323.42	3,248.47	696.17	-516.62	-857.48	0.00	0.00	0.00
3,497.27	21.46	323.42	3,339.00	724.74	-537.82	-892.68	0.00	0.00	0.00
Point Lookout									
3,500.00	21.46	323.42	3,341.54	725.54	-538.42	-893.66	0.00	0.00	0.00
3,600.00	21.46	323.42	3,434.61	754.92	-560.22	-929.84	0.00	0.00	0.00
3,674.56	21.46	323.42	3,504.00	776.82	-576.47	-956.82	0.00	0.00	0.00
Mancos									
3,700.00	21.46	323.42	3,527.68	784.29	-582.02	-966.03	0.00	0.00	0.00
3,800.00	21.46	323.42	3,620.74	813.67	-603.82	-1,002.21	0.00	0.00	0.00
3,900.00	21.46	323.42	3,713.81	843.04	-625.61	-1,038.39	0.00	0.00	0.00
3,944.84	21.46	323.42	3,755.55	856.21	-635.39	-1,054.61	0.00	0.00	0.00
KOP - Start DLS 9.00 TFO 170.88									
3,950.00	21.00	323.63	3,760.36	857.72	-636.50	-1,056.46	9.00	-8.88	3.98
4,000.00	16.57	326.18	3,807.68	870.86	-645.79	-1,072.32	9.00	-8.85	5.10
4,022.13	14.63	327.78	3,829.00	875.85	-649.03	-1,078.14	9.00	-8.79	7.24
Gallup									
4,050.00	12.20	330.50	3,856.10	881.39	-652.36	-1,084.41	9.00	-8.71	9.77
4,100.00	7.97	339.43	3,905.32	889.23	-656.18	-1,092.66	9.00	-8.47	17.86
4,150.00	4.31	5.32	3,955.04	894.35	-657.23	-1,097.01	9.00	-7.32	51.77
4,200.00	3.76	72.78	4,004.94	896.71	-655.49	-1,097.45	9.00	-1.10	134.93
4,231.17	5.64	98.92	4,036.00	896.77	-653.00	-1,095.73	9.00	6.04	83.86
Gallup Upper									
4,250.00	7.08	107.06	4,054.72	896.29	-650.97	-1,093.96	9.00	7.64	43.21
4,300.00	11.25	117.96	4,104.07	893.10	-643.72	-1,086.57	9.00	8.34	21.80
4,350.00	15.60	122.93	4,152.70	887.15	-633.76	-1,075.32	9.00	8.71	9.94
4,400.00	20.02	125.76	4,200.29	878.49	-621.16	-1,060.29	9.00	8.83	5.66
4,450.00	24.47	127.60	4,246.56	867.16	-606.01	-1,041.56	9.00	8.89	3.68
4,500.00	28.93	128.90	4,291.22	853.25	-588.38	-1,019.25	9.00	8.92	2.60
4,550.00	33.40	129.88	4,333.99	836.82	-568.40	-993.51	9.00	8.94	1.96
4,558.44	34.16	130.02	4,341.00	833.81	-564.80	-988.83	9.00	8.95	1.69
Mancos Lwr									
4,591.66	37.13	130.53	4,368.00	821.29	-550.03	-969.54	9.00	8.96	1.54
El Vado									
4,600.00	37.88	130.65	4,374.61	817.99	-546.18	-964.48	9.00	8.96	1.41
4,650.00	42.36	131.28	4,412.84	796.87	-521.86	-932.34	9.00	8.96	1.26
4,700.00	46.84	131.81	4,448.43	773.58	-495.59	-897.31	9.00	8.97	1.06
4,729.34	49.48	132.08	4,468.00	758.97	-479.34	-875.48	9.00	8.97	0.94
Frac Barrier									
4,746.54	51.02	132.24	4,479.00	750.10	-469.53	-862.27	9.00	8.97	0.88
Mancos Unc									
4,750.00	51.33	132.26	4,481.17	748.29	-467.54	-859.58	9.00	8.98	0.86
4,800.00	55.82	132.67	4,510.85	721.13	-437.87	-819.40	9.00	8.98	0.81
4,816.61	57.31	132.79	4,520.00	711.72	-427.69	-805.54	9.00	8.98	0.75
PS 3									
4,850.00	60.31	133.03	4,537.29	692.27	-406.77	-777.00	9.00	8.98	0.71
4,887.74	63.70	133.28	4,555.00	669.49	-382.47	-743.70	9.00	8.98	0.67
PS2									
4,900.00	64.80	133.36	4,560.33	661.91	-374.44	-732.66	9.00	8.98	0.64
4,939.42	68.34	133.61	4,576.00	637.02	-348.20	-696.51	9.00	8.98	0.62
PS1									

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 493H
Company:	WPX Energy	TVD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Site:	Rodeo UT 492 Pad	North Reference:	True
Well:	Rodeo UT 493H	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)
4,950.00	69.29	133.67	4,579.82	630.21	-341.06	-686.65	9.00	8.98	0.60
4,994.17	73.26	133.93	4,594.00	601.26	-310.87	-644.83	9.00	8.98	0.58
PSA									
5,000.00	73.78	133.96	4,595.65	597.38	-306.85	-639.24	9.00	8.98	0.57
5,050.00	78.27	134.24	4,607.72	563.63	-272.01	-590.74	9.00	8.98	0.55
5,092.74	82.11	134.47	4,615.00	534.19	-241.90	-548.64	9.00	8.98	0.54
PSA Base									
5,100.00	82.77	134.51	4,615.96	529.15	-236.77	-541.44	9.00	8.98	0.53
5,150.00	87.26	134.77	4,620.30	494.16	-201.33	-491.64	9.00	8.98	0.53
5,186.74	90.56	134.96	4,621.00	468.25	-175.30	-454.91	9.00	8.98	0.52
Start DLS 0.00 TFO -78.42 - 7"									
5,200.00	90.56	134.96	4,620.87	458.88	-165.92	-441.65	0.00	0.00	0.00
5,300.00	90.56	134.96	4,619.89	388.22	-95.16	-341.66	0.00	0.00	0.00
5,400.00	90.56	134.96	4,618.92	317.56	-24.40	-241.66	0.00	0.00	0.00
5,500.00	90.56	134.96	4,617.94	246.91	46.35	-141.67	0.00	0.00	0.00
5,600.00	90.56	134.96	4,616.96	176.25	117.11	-41.67	0.00	0.00	0.00
5,700.00	90.56	134.96	4,615.98	105.59	187.87	58.32	0.00	0.00	0.00
5,800.00	90.56	134.96	4,615.01	34.93	258.62	158.32	0.00	0.00	0.00
5,900.00	90.56	134.96	4,614.03	-35.72	329.38	258.31	0.00	0.00	0.00
6,000.00	90.56	134.96	4,613.05	-106.38	400.14	358.31	0.00	0.00	0.00
6,100.00	90.56	134.96	4,612.07	-177.04	470.89	458.30	0.00	0.00	0.00
6,200.00	90.56	134.96	4,611.10	-247.70	541.65	558.30	0.00	0.00	0.00
6,300.00	90.56	134.96	4,610.12	-318.35	612.41	658.29	0.00	0.00	0.00
6,400.00	90.56	134.96	4,609.14	-389.01	683.17	758.29	0.00	0.00	0.00
6,500.00	90.56	134.96	4,608.16	-459.67	753.92	858.28	0.00	0.00	0.00
6,600.00	90.56	134.96	4,607.19	-530.32	824.68	958.28	0.00	0.00	0.00
6,700.00	90.56	134.96	4,606.21	-600.98	895.44	1,058.27	0.00	0.00	0.00
6,800.00	90.56	134.96	4,605.23	-671.64	966.20	1,158.27	0.00	0.00	0.00
6,900.00	90.56	134.96	4,604.25	-742.30	1,036.95	1,258.26	0.00	0.00	0.00
7,000.00	90.56	134.96	4,603.28	-812.95	1,107.71	1,358.26	0.00	0.00	0.00
7,100.00	90.56	134.96	4,602.30	-883.61	1,178.47	1,458.25	0.00	0.00	0.00
7,200.00	90.56	134.96	4,601.32	-954.27	1,249.23	1,558.25	0.00	0.00	0.00
7,300.00	90.56	134.96	4,600.34	-1,024.92	1,319.98	1,658.25	0.00	0.00	0.00
7,400.00	90.56	134.96	4,599.36	-1,095.58	1,390.74	1,758.24	0.00	0.00	0.00
7,500.00	90.56	134.96	4,598.39	-1,166.24	1,461.50	1,858.24	0.00	0.00	0.00
7,600.00	90.56	134.96	4,597.41	-1,236.89	1,532.26	1,958.23	0.00	0.00	0.00
7,700.00	90.56	134.96	4,596.43	-1,307.55	1,603.02	2,058.23	0.00	0.00	0.00
7,800.00	90.56	134.96	4,595.45	-1,378.21	1,673.77	2,158.22	0.00	0.00	0.00
7,900.00	90.56	134.96	4,594.48	-1,448.86	1,744.53	2,258.22	0.00	0.00	0.00
8,000.00	90.56	134.96	4,593.50	-1,519.52	1,815.29	2,358.21	0.00	0.00	0.00
8,100.00	90.56	134.96	4,592.52	-1,590.18	1,886.05	2,458.21	0.00	0.00	0.00
8,200.00	90.56	134.96	4,591.54	-1,660.83	1,956.81	2,558.20	0.00	0.00	0.00
8,300.00	90.56	134.96	4,590.56	-1,731.49	2,027.56	2,658.20	0.00	0.00	0.00
8,400.00	90.56	134.96	4,589.59	-1,802.15	2,098.32	2,758.19	0.00	0.00	0.00
8,500.00	90.56	134.96	4,588.61	-1,872.80	2,169.08	2,858.19	0.00	0.00	0.00
8,600.00	90.56	134.96	4,587.63	-1,943.46	2,239.84	2,958.18	0.00	0.00	0.00
8,700.00	90.56	134.96	4,586.65	-2,014.11	2,310.60	3,058.18	0.00	0.00	0.00
8,800.00	90.56	134.96	4,585.68	-2,084.77	2,381.36	3,158.17	0.00	0.00	0.00
8,900.00	90.56	134.96	4,584.70	-2,155.43	2,452.11	3,258.17	0.00	0.00	0.00
9,000.00	90.56	134.96	4,583.72	-2,226.08	2,522.87	3,358.16	0.00	0.00	0.00
9,100.00	90.56	134.96	4,582.74	-2,296.74	2,593.63	3,458.16	0.00	0.00	0.00
9,200.00	90.56	134.96	4,581.76	-2,367.39	2,664.39	3,558.15	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 493H
Company:	WPX Energy	TVD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Site:	Rodeo UT 492 Pad	North Reference:	True
Well:	Rodeo UT 493H	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)
9,300.00	90.56	134.96	4,580.79	-2,438.05	2,735.15	3,658.15	0.00	0.00	0.00
9,400.00	90.56	134.96	4,579.81	-2,508.70	2,805.91	3,758.15	0.00	0.00	0.00
9,500.00	90.56	134.96	4,578.83	-2,579.36	2,876.67	3,858.14	0.00	0.00	0.00
9,600.00	90.56	134.96	4,577.85	-2,650.02	2,947.43	3,958.14	0.00	0.00	0.00
9,700.00	90.56	134.96	4,576.87	-2,720.67	3,018.19	4,058.13	0.00	0.00	0.00
9,800.00	90.56	134.96	4,575.90	-2,791.33	3,088.94	4,158.13	0.00	0.00	0.00
9,900.00	90.56	134.96	4,574.92	-2,861.98	3,159.70	4,258.12	0.00	0.00	0.00
10,000.00	90.56	134.96	4,573.94	-2,932.64	3,230.46	4,358.12	0.00	0.00	0.00
10,100.00	90.56	134.96	4,572.96	-3,003.29	3,301.22	4,458.11	0.00	0.00	0.00
10,200.00	90.56	134.96	4,571.98	-3,073.95	3,371.98	4,558.11	0.00	0.00	0.00
10,300.00	90.56	134.96	4,571.00	-3,144.60	3,442.74	4,658.10	0.00	0.00	0.00
10,400.00	90.56	134.96	4,570.03	-3,215.26	3,513.50	4,758.10	0.00	0.00	0.00
10,500.00	90.56	134.96	4,569.05	-3,285.91	3,584.26	4,858.09	0.00	0.00	0.00
10,600.00	90.56	134.96	4,568.07	-3,356.57	3,655.02	4,958.09	0.00	0.00	0.00
10,700.00	90.56	134.96	4,567.09	-3,427.22	3,725.78	5,058.08	0.00	0.00	0.00
10,800.00	90.56	134.96	4,566.11	-3,497.88	3,796.54	5,158.08	0.00	0.00	0.00
10,900.00	90.56	134.96	4,565.14	-3,568.53	3,867.30	5,258.07	0.00	0.00	0.00
11,000.00	90.56	134.96	4,564.16	-3,639.19	3,938.06	5,358.07	0.00	0.00	0.00
11,100.00	90.56	134.96	4,563.18	-3,709.84	4,008.82	5,458.06	0.00	0.00	0.00
11,200.00	90.56	134.96	4,562.20	-3,780.50	4,079.58	5,558.06	0.00	0.00	0.00
11,300.00	90.56	134.96	4,561.22	-3,851.15	4,150.34	5,658.05	0.00	0.00	0.00
11,400.00	90.56	134.96	4,560.24	-3,921.81	4,221.10	5,758.05	0.00	0.00	0.00
11,500.00	90.56	134.96	4,559.27	-3,992.46	4,291.86	5,858.04	0.00	0.00	0.00
11,600.00	90.56	134.96	4,558.29	-4,063.12	4,362.62	5,958.04	0.00	0.00	0.00
11,700.00	90.56	134.96	4,557.31	-4,133.77	4,433.38	6,058.04	0.00	0.00	0.00
11,800.00	90.56	134.96	4,556.33	-4,204.43	4,504.14	6,158.03	0.00	0.00	0.00
11,900.00	90.56	134.96	4,555.35	-4,275.08	4,574.90	6,258.03	0.00	0.00	0.00
12,000.00	90.56	134.96	4,554.37	-4,345.73	4,645.66	6,358.02	0.00	0.00	0.00
12,100.00	90.56	134.96	4,553.40	-4,416.39	4,716.42	6,458.02	0.00	0.00	0.00
12,200.00	90.56	134.96	4,552.42	-4,487.04	4,787.18	6,558.01	0.00	0.00	0.00
12,300.00	90.56	134.96	4,551.44	-4,557.70	4,857.94	6,658.01	0.00	0.00	0.00
12,400.00	90.56	134.96	4,550.46	-4,628.35	4,928.70	6,758.00	0.00	0.00	0.00
12,500.00	90.56	134.96	4,549.48	-4,699.01	4,999.46	6,858.00	0.00	0.00	0.00
12,549.20	90.56	134.96	4,549.00	-4,733.77	5,034.27	6,907.20	0.00	0.00	0.00
TD at 12549.20									

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									
RUT493H BHL	0.00	0.00	4,549.00	-4,733.77	5,034.27	1,883,688.74	536,181.14	36.176991	-107.710741
- plan hits target center									
- Point									
RUT493H POE	0.00	0.00	4,621.00	829.97	-535.75	1,889,246.42	530,605.07	36.192277	-107.729614
- plan misses target center by 175.72usft at 4750.00usft MD (4481.17 TVD, 748.29 N, -467.54 E)									
- Point									

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Rodeo UT 493H
Company:	WPX Energy	TVD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Project:	San Juan County, NM	MD Reference:	GL 6680 + KB 21= @ 6701.00usft (Cyclone 32)
Site:	Rodeo UT 492 Pad	North Reference:	True
Well:	Rodeo UT 493H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
5,186.74	4,621.00	7"	7	8-3/4	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
238.00	238.00	Ojo Alamo				
393.00	393.00	Kirtland				
877.09	876.00	Picture Cliffs				
1,067.71	1,064.00	Lewis				
1,291.01	1,281.00	Chacra				
2,444.30	2,359.00	Cliff House				
2,475.46	2,388.00	Menefee				
3,497.27	3,339.00	Point Lookout				
3,674.56	3,504.00	Mancos				
4,022.13	3,829.00	Gallup				
4,231.17	4,036.00	Gallup Upper				
4,558.44	4,341.00	Mancos Lwr				
4,591.66	4,368.00	El Vado				
4,729.34	4,468.00	Frac Barrier				
4,746.54	4,479.00	Mancos Unc				
4,816.61	4,520.00	PS 3				
4,887.74	4,555.00	PS2				
4,939.42	4,576.00	PS1				
4,994.17	4,594.00	PSA				
5,092.74	4,615.00	PSA Base				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
500.00	500.00	0.00	0.00	Start Build 2.00	
1,572.83	1,547.93	159.44	-118.32	Start 2372.01 hold at 1572.83 MD	
3,944.84	3,755.55	856.21	-635.39	KOP	
3,944.84	3,755.55	856.21	-635.39	Start DLS 9.00 TFO 170.88	
5,186.74	4,621.00	468.25	-175.30	Start DLS 0.00 TFO -78.42	
12,549.20	4,549.00	-4,733.77	5,034.27	TD at 12549.20	

Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to WPX Energy Production, LLC Rodeo UT #493H
225' FNL & 915' FWL, Section 31, T23N, R8W, N.M.P.M., San Juan County, NM

Latitude: 36.190011°N Longitude: 107.728411°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 38.7 miles to Mile Marker 112.7:

Go Right (Southerly) on County Road #7900 for 2.3 miles to fork in road:

Go Right (Westerly) on County Road #7940 for 2.6 miles to new access on right-hand side of existing roadway which continues for 1071.2' to staked WPX Rodeo UT #493H location.