

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

OIL CONS. DIV DIST. 3
☐ AMENDED REPORT
MAY 10 2017

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address WPX Energy Production, LLC. PO Box 640 Aztec NM 87410		² OGRID Number 120782
³ Property Name STATE 2207-36D		⁵ API Number 30.043-21308
⁴ Property Code 317749	⁶ Well No. 1937	

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
D	36	22N	7W		725	N	311	W	SANDOVAL

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
D	36	22N	7W		727	N	714	W	SANDOVAL

9. Pool Information

Pool Name WILDCAT GALLUP WC 22N7W36, Gallup (C)	Pool Code 98231
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Additional Well Information

¹¹ Work Type N	¹² Well Type O	¹³ Cable/Rotary R	¹⁴ Lease Type S	¹⁵ Ground Level Elevation 6942
¹⁶ Multiple NO	¹⁷ Proposed Depth 5838' MD- 5800' TVD	¹⁸ Formation GALLUP	¹⁹ Contractor TBD	²⁰ Spud Date 6/1/17
Depth to Ground water NA		Distance from nearest fresh water well NA		Distance to nearest surface water NA

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

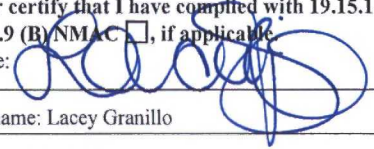
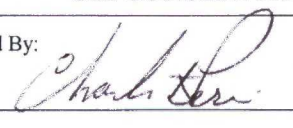
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	12.25"	9.625"	36#	320'	100	Surface
Production	8.75"	5-1/2"	17#	0'-5838'	1175	Surface

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
11" 3M	3000#	1500#	Schafer

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐ if applicable. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Lacey Granillo		Approved By:  5-17-2017	
Title: Permit Tech III		Title:	
E-mail Address: lacey.granillo@wpenergy.com		Approved Date: Expiration Date:	
Date: 5/9/17	Phone: 333-1816	Conditions: SEE ATTACHED NMOCD CONDITIONS OF APPROVAL	

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State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21308	*Pool Code 98231	Name WC 22N 7W 36, Tailup (L)
*Property Code 317749	*Property Name STATE 2207-36D	*Well Number 193
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6942'

¹⁰ Surface Location

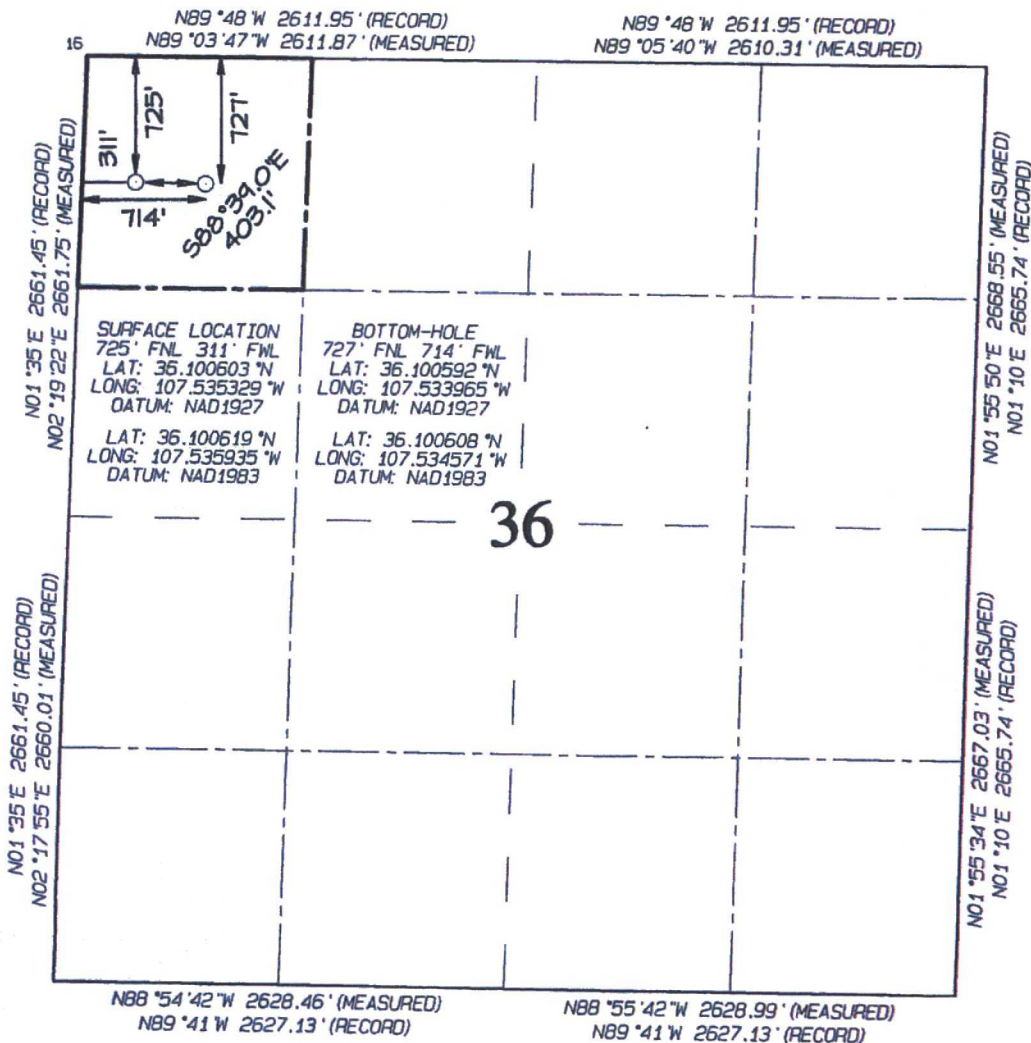
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	36	22N	7W		725	NORTH	311	WEST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	36	22N	7W		727	NORTH	714	WEST	SANDOVAL

¹² Dedicated Acres 40.00 Acres - NW/4 NW/4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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



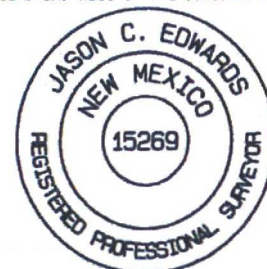
¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to 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
Lacey Granillo
Date
5/9/17
Printed Name
lacey.granillo@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: MAY 8, 2017
Survey Date: FEBRUARY 10, 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)

<u>Date:</u>	May 9, 2017	<u>Field:</u>	Wildcat Gallup
<u>Well Name:</u>	STATE 2207-36D #193V	<u>Surface:</u>	State
<u>SH Location:</u>	NWNW Section 36 22N-07W	<u>Elevation:</u>	6942' GR
		<u>Minerals:</u>	State

Measured Depth: 5837.91'

I. GEOLOGY: SURFACE FORMATION - NACIMIENTO

A. FORMATION TOPS (KB)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	638	638	POINT LOOKOUT	2,847	2,826
KIRTLAND	851	851	MANCOS	3,601	3,565
PICTURED CLIFFS	942	942	GALLUP	3,768	3,731
LEWIS	1,208	1,208	GREENHORN	5,610	5,572
CHACRA	1,325	1,325	DAKOTA	5,709	5,671
CLIFF HOUSE	1,631	1,631			
MENEFEE	2,806	2,786	TD	5838	5800

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

C. LOGGING PROGRAM: OH Wireline logs from surface casing to TD. LWD GR from surface casing to TD. Primary target is Macos Gallup. We are planning to evaluate Dakota with mud and wireline logs.

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. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

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

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320.00'	9.625"	36 LBS	J-55 or equiv	STC
PRODUCTION	8.75"	0' - 5837.91'	5-1/2"	17 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. PRODUCTION: Run 5-1/2" Production casing with cement nose guide Float Shoe + 1 jt. of 5-1/2" casing + Float collar.
Centralizer program: Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to surface.

C. CEMENTING:

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

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

2. Production: STAGE 1: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 49 bbls, 141 sks, (278 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 239 bbls, 1034 sks, (1344 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 124 bbl Drilling mud or water. Total Cement: 289 bbls, 1175 sks, (1622 cuft)

I. COMPLETION

A. CBL

Run CCL for perforating

A. PRESSURE TEST

1. Pressure test 5-1/2" casing to 5,000 psi max, for 30 minutes.

B. STIMULATION

1. Perform one or more DFITs in the Gallup/Mancos interval
2. Isolate each DFIT interval with a bridge plug.
3. Stimulate with approximately 235,000 lbs 20/40 sand, 1500 bbls water, 1.8 MMscf Nitrogen.
4. Isolate stages with flow through frac plug.
5. Drill out frac plugs and flowback for test only for a 3-6 month period.
6. Retrieve remaining bridge plugs once production test is complete.

C. RUNNING TUBING

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

NOTE:

Proposed Operations:

WPX Energy

Sandoval County, NM 3003 West

State 2207-36D

State 2207-36D #193V

???

Wellbore #1

Plan: Plan #1

Standard Planning Report

05 May, 2017



Scientific Drilling

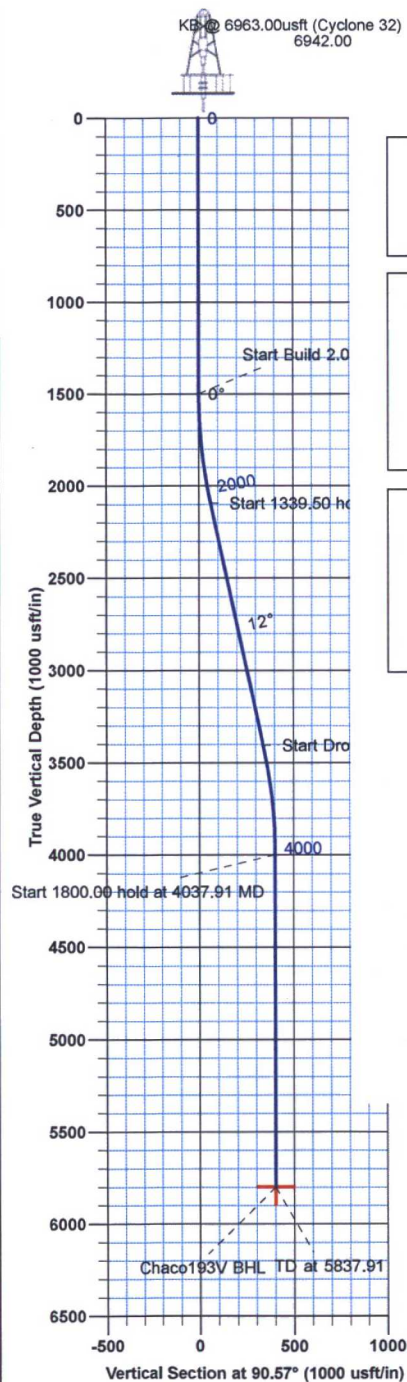
www.scientificdrilling.com

OIL CONS. DIV DIST. 3
MAY 17 2017

State 2207-36D #193V
Sandoval County, NM 3003 West
Northing: 1855994.90
Easting: 588036.00
Plan #1



Azimuths to True North
Magnetic North: 9.00°
Magnetic Field
Strength: 49511.2snT
Dip Angle: 62.87°
Date: 5/5/2017
Model: HDGM

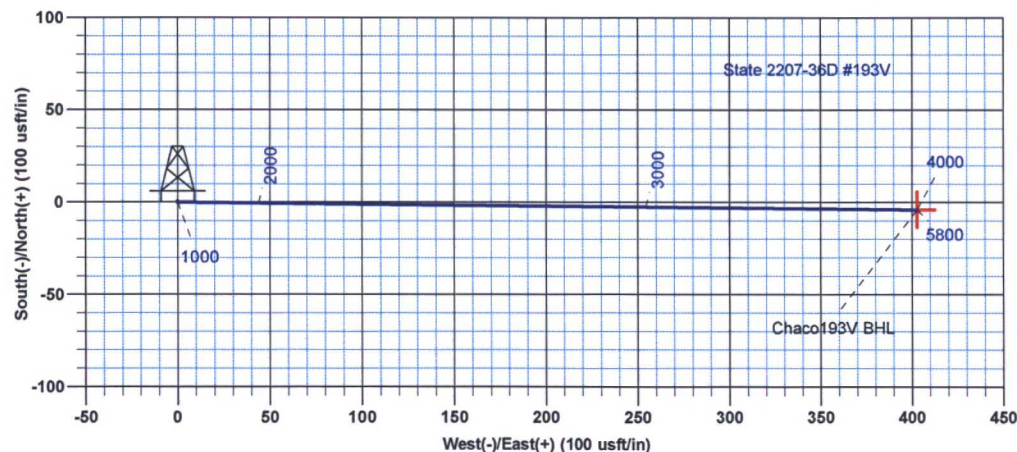


WELL DETAILS					
State 2207-36D #193V					
Ground Level: 6942.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1855994.90	588036.00	36° 6' 2.171 N	107° 32' 7.185 W

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	0.00
2099.21	11.98	90.57	2094.85	-0.63	62.43	2.00	90.57	62.44	0.00
3438.71	11.98	90.57	3405.15	-3.41	340.56	0.00	0.00	340.57	0.00
4037.91	0.00	0.00	4000.00	-4.04	402.99	2.00	180.00	403.01	0.00
5837.91	0.00	0.00	5800.00	-4.04	402.99	0.00	0.00	403.01	0.00

SITE DETAILS:	State 2207-36D	PROJECT DETAILS:	Sandoval County, NM 3003 West
Site Centre Northing:	1855994.90	Geodetic System:	US State Plane 1927 (Exact solution)
Easting:	588036.00	Datum:	NAD 1927 (NADCON CONUS)
Positional Uncertainty:	0.00	Ellipsoid:	Clarke 1866
Convergence:	0.18	Zone:	New Mexico West 3003
Local North:	True	System Datum:	Mean Sea Level

FORMATION TOP DETAILS	
TVDPath	Formation
638.00	Ojo Alamo
851.00	Kirtland
942.00	Fruitland
1208.00	Picture Cliffs
1325.00	Lewis
1631.00	Chacra
2786.00	Cliff House
2826.00	Menefee
3565.00	Point Lookout
3731.00	Mancos
4066.00	Gallup
4305.00	Gallup Upper
4583.00	Mancos Lwr
4591.00	El Vado
4705.00	Frac Barrier
4705.00	Mancos Unc
4766.00	PS 3
4785.00	PS2
4848.00	PS1
4860.00	PSA
4869.00	PSA Base
5195.00	Juana Lopez
5335.00	Sanastee
5572.00	Greenhorn
5634.00	Graneros
5671.00	Dakota



Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well State 2207-36D #193V
Company:	WPX Energy	TVD Reference:	KB @ 6963.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	KB @ 6963.00usft (Cyclone 32)
Site:	State 2207-36D	North Reference:	True
Well:	State 2207-36D #193V	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Sandoval County, NM 3003 West		
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	State 2207-36D		
Site Position:		Northing:	1,855,994.90 usft
From:	Map	Easting:	588,036.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 6' 2.171 N
		Longitude:	107° 32' 7.185 W
		Grid Convergence:	0.18 °

Well	State 2207-36D #193V		
Well Position	+N/-S	0.00 usft	Northing: 1,855,994.90 usft
	+E/-W	0.00 usft	Easting: 588,036.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	36° 6' 2.171 N
		Longitude:	107° 32' 7.185 W
		Ground Level:	6,942.00 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	5/5/2017	9.00
			Dip Angle (°)
			62.87
			Field Strength (nT)
			49,511

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)
	0.00	0.00	0.00
			Direction (°)
			90.57

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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,099.21	11.98	90.57	2,094.85	-0.63	62.43	2.00	2.00	0.00	90.57	
3,438.71	11.98	90.57	3,405.15	-3.41	340.56	0.00	0.00	0.00	0.00	
4,037.91	0.00	0.00	4,000.00	-4.04	402.99	2.00	-2.00	0.00	180.00	
5,837.91	0.00	0.00	5,800.00	-4.04	402.99	0.00	0.00	0.00	0.00	Chaco193V BHL

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well State 2207-36D #193V
Company:	WPX Energy	TVD Reference:	KB @ 6963.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	KB @ 6963.00usft (Cyclone 32)
Site:	State 2207-36D	North Reference:	True
Well:	State 2207-36D #193V	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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
638.00	0.00	0.00	638.00	0.00	0.00	0.00	0.00	0.00	0.00
Ojo Alamo									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
851.00	0.00	0.00	851.00	0.00	0.00	0.00	0.00	0.00	0.00
Kirtland									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
942.00	0.00	0.00	942.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruitland									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,208.00	0.00	0.00	1,208.00	0.00	0.00	0.00	0.00	0.00	0.00
Picture Cliffs									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,325.00	0.00	0.00	1,325.00	0.00	0.00	0.00	0.00	0.00	0.00
Lewis									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	2.00	90.57	1,599.98	-0.02	1.75	1.75	2.00	2.00	0.00
1,631.05	2.62	90.57	1,631.00	-0.03	3.00	3.00	2.00	2.00	0.00
Chacra									
1,700.00	4.00	90.57	1,699.84	-0.07	6.98	6.98	2.00	2.00	0.00
1,800.00	6.00	90.57	1,799.45	-0.16	15.69	15.69	2.00	2.00	0.00
1,900.00	8.00	90.57	1,898.70	-0.28	27.88	27.88	2.00	2.00	0.00
2,000.00	10.00	90.57	1,997.47	-0.44	43.52	43.52	2.00	2.00	0.00
2,099.21	11.98	90.57	2,094.85	-0.63	62.43	62.44	2.00	2.00	0.00
2,200.00	11.98	90.57	2,193.44	-0.83	83.36	83.37	0.00	0.00	0.00
2,300.00	11.98	90.57	2,291.26	-1.04	104.13	104.13	0.00	0.00	0.00
2,400.00	11.98	90.57	2,389.08	-1.25	124.89	124.89	0.00	0.00	0.00
2,500.00	11.98	90.57	2,486.91	-1.46	145.65	145.66	0.00	0.00	0.00
2,600.00	11.98	90.57	2,584.73	-1.67	166.41	166.42	0.00	0.00	0.00
2,700.00	11.98	90.57	2,682.55	-1.87	187.18	187.19	0.00	0.00	0.00
2,800.00	11.98	90.57	2,780.37	-2.08	207.94	207.95	0.00	0.00	0.00
2,805.76	11.98	90.57	2,786.00	-2.09	209.14	209.15	0.00	0.00	0.00
Cliff House									
2,846.65	11.98	90.57	2,826.00	-2.18	217.63	217.64	0.00	0.00	0.00
Menefee									
2,900.00	11.98	90.57	2,878.19	-2.29	228.70	228.71	0.00	0.00	0.00
3,000.00	11.98	90.57	2,976.01	-2.50	249.47	249.48	0.00	0.00	0.00
3,100.00	11.98	90.57	3,073.83	-2.71	270.23	270.24	0.00	0.00	0.00
3,200.00	11.98	90.57	3,171.65	-2.91	290.99	291.01	0.00	0.00	0.00
3,300.00	11.98	90.57	3,269.47	-3.12	311.76	311.77	0.00	0.00	0.00
3,400.00	11.98	90.57	3,367.29	-3.33	332.52	332.54	0.00	0.00	0.00
3,438.71	11.98	90.57	3,405.15	-3.41	340.56	340.57	0.00	0.00	0.00
3,500.00	10.76	90.57	3,465.24	-3.53	352.64	352.66	2.00	-2.00	0.00

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well State 2207-36D #193V
Company:	WPX Energy	TVD Reference:	KB @ 6963.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	KB @ 6963.00usft (Cyclone 32)
Site:	State 2207-36D	North Reference:	True
Well:	State 2207-36D #193V	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)
3,600.00	8.76	90.57	3,563.79	-3.70	369.59	369.61	2.00	-2.00	0.00
3,601.22	8.73	90.57	3,565.00	-3.70	369.77	369.79	2.00	-2.00	0.00
Point Lookout									
3,700.00	6.76	90.57	3,662.87	-3.84	383.08	383.10	2.00	-2.00	0.00
3,768.52	5.39	90.57	3,731.00	-3.91	390.33	390.35	2.00	-2.00	0.00
Mancos									
3,800.00	4.76	90.57	3,762.36	-3.94	393.12	393.14	2.00	-2.00	0.00
3,900.00	2.76	90.57	3,862.14	-4.00	399.67	399.69	2.00	-2.00	0.00
4,000.00	0.76	90.57	3,962.09	-4.03	402.74	402.76	2.00	-2.00	0.00
4,037.91	0.00	0.00	4,000.00	-4.04	402.99	403.01	2.00	-2.00	0.00
4,100.00	0.00	0.00	4,062.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,103.91	0.00	0.00	4,066.00	-4.04	402.99	403.01	0.00	0.00	0.00
Gallup									
4,200.00	0.00	0.00	4,162.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,300.00	0.00	0.00	4,262.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,342.91	0.00	0.00	4,305.00	-4.04	402.99	403.01	0.00	0.00	0.00
Gallup Upper									
4,400.00	0.00	0.00	4,362.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,500.00	0.00	0.00	4,462.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,600.00	0.00	0.00	4,562.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,620.91	0.00	0.00	4,583.00	-4.04	402.99	403.01	0.00	0.00	0.00
Mancos Lwr									
4,628.91	0.00	0.00	4,591.00	-4.04	402.99	403.01	0.00	0.00	0.00
El Vado									
4,700.00	0.00	0.00	4,662.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,742.91	0.00	0.00	4,705.00	-4.04	402.99	403.01	0.00	0.00	0.00
Frac Barrier - Mancos Unc									
4,800.00	0.00	0.00	4,762.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,803.91	0.00	0.00	4,766.00	-4.04	402.99	403.01	0.00	0.00	0.00
PS 3									
4,822.91	0.00	0.00	4,785.00	-4.04	402.99	403.01	0.00	0.00	0.00
PS2									
4,885.91	0.00	0.00	4,848.00	-4.04	402.99	403.01	0.00	0.00	0.00
PS1									
4,897.91	0.00	0.00	4,860.00	-4.04	402.99	403.01	0.00	0.00	0.00
PSA									
4,900.00	0.00	0.00	4,862.09	-4.04	402.99	403.01	0.00	0.00	0.00
4,906.91	0.00	0.00	4,869.00	-4.04	402.99	403.01	0.00	0.00	0.00
PSA Base									
5,000.00	0.00	0.00	4,962.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,100.00	0.00	0.00	5,062.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,200.00	0.00	0.00	5,162.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,232.91	0.00	0.00	5,195.00	-4.04	402.99	403.01	0.00	0.00	0.00
Juana Lopez									
5,300.00	0.00	0.00	5,262.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,372.91	0.00	0.00	5,335.00	-4.04	402.99	403.01	0.00	0.00	0.00
Sanastee									
5,400.00	0.00	0.00	5,362.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,500.00	0.00	0.00	5,462.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,600.00	0.00	0.00	5,562.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,609.91	0.00	0.00	5,572.00	-4.04	402.99	403.01	0.00	0.00	0.00
Greenhorn									

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Project:	Sandoval County, NM 3003 West	MD Reference:	KB @ 6963.00usft (Cyclone 32)
Site:	State 2207-36D	North Reference:	True
Well:	State 2207-36D #193V	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)
5,671.91	0.00	0.00	5,634.00	-4.04	402.99	403.01	0.00	0.00	0.00
Graneros									
5,700.00	0.00	0.00	5,662.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,708.91	0.00	0.00	5,671.00	-4.04	402.99	403.01	0.00	0.00	0.00
Dakota									
5,800.00	0.00	0.00	5,762.09	-4.04	402.99	403.01	0.00	0.00	0.00
5,837.91	0.00	0.00	5,800.00	-4.04	402.99	403.01	0.00	0.00	0.00

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									
Chaco193V BHL	0.00	0.00	5,800.00	-4.04	402.99	1,855,992.10	588,439.00	36° 6' 2.131 N	107° 32' 2.274 W
- plan hits target center									
- Point									

Formations

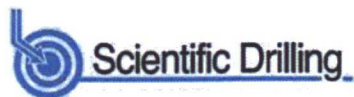
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
638.00	638.00	Ojo Alamo			
851.00	851.00	Kirtland			
942.00	942.00	Fruitland			
1,208.00	1,208.00	Picture Cliffs			
1,325.00	1,325.00	Lewis			
1,631.05	1,631.00	Chacra			
2,805.76	2,786.00	Cliff House			
2,846.65	2,826.00	Menefee			
3,601.22	3,565.00	Point Lookout			
3,768.52	3,731.00	Mancos			
4,103.91	4,066.00	Gallup			
4,342.91	4,305.00	Gallup Upper			
4,620.91	4,583.00	Mancos Lwr			
4,628.91	4,591.00	El Vado			
4,742.91	4,705.00	Frac Barrier			
4,742.91	4,705.00	Mancos Unc			
4,803.91	4,766.00	PS 3			
4,822.91	4,785.00	PS2			
4,885.91	4,848.00	PS1			
4,897.91	4,860.00	PSA			
4,906.91	4,869.00	PSA Base			
5,232.91	5,195.00	Juana Lopez			
5,372.91	5,335.00	Sanastee			
5,609.91	5,572.00	Greenhorn			
5,671.91	5,634.00	Graneros			
5,708.91	5,671.00	Dakota			

Scientific Drilling Int.

Planning Report

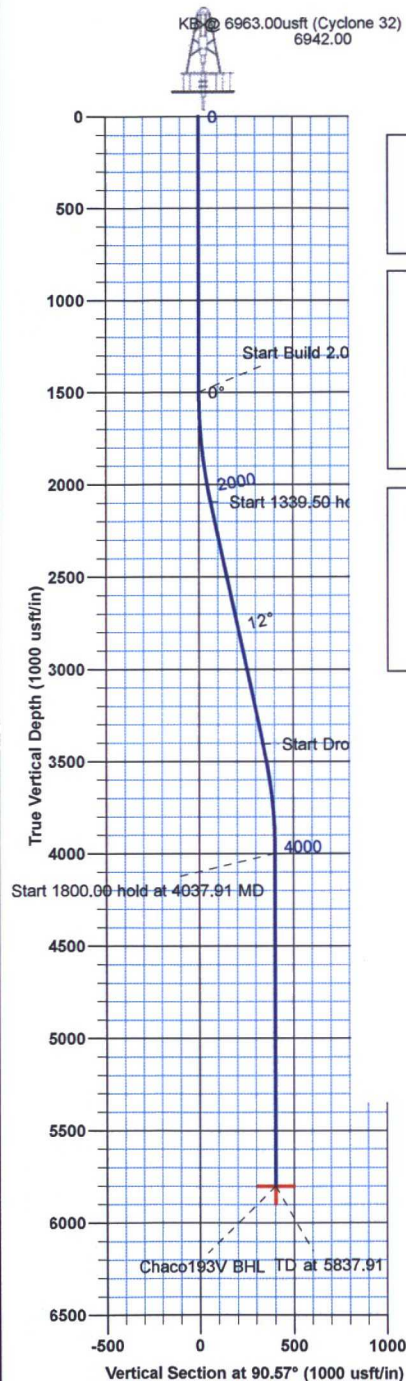
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Site:	State 2207-36D	North Reference:	True
Well:	State 2207-36D #193V	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

State 2207-36D #193V
Sandoval County, NM 3003 West
Northing: 1855994.90
Easting: 588036.00
Plan #1



Azimuths to True North
Magnetic North: 9.00°

Magnetic Field
Strength: 49511.2snT
Dip Angle: 62.87°
Date: 5/5/2017
Model: HDGM



WELL DETAILS

State 2207-36D #193V
Ground Level: 6942.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1855994.90	588036.00	36° 6' 2.171 N	107° 32' 7.185 W

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
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00
2099.21	11.98	90.57	2094.85	-0.63	62.43	2.00	90.57	62.44
3438.71	11.98	90.57	3405.15	-3.41	340.56	0.00	0.00	340.57
4037.91	0.00	0.00	4000.00	-4.04	402.99	2.00	180.00	403.01
5837.91	0.00	0.00	5800.00	-4.04	402.99	0.00	0.00	403.01

SITE DETAILS:

State 2207-36D
Site Centre Northing: 1855994.90
Easting: 588036.00

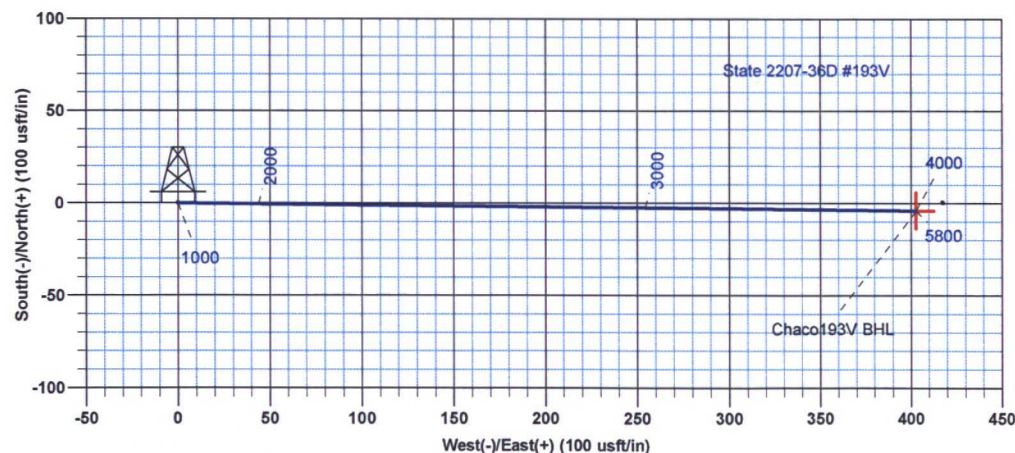
Positional Uncertainty: 0.00
Convergence: 0.18
Local North: True

PROJECT DETAILS:

Sandoval County, NM 3003 West
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

FORMATION TOP DETAILS

TVDPath	Formation
638.00	Ojo Alamo
851.00	Kirtland
942.00	Fruitland
1208.00	Picture Cliffs
1325.00	Lewis
1631.00	Chacra
2786.00	Cliff House
2826.00	Menefee
3565.00	Point Lookout
3731.00	Mancos
4066.00	Gallup
4305.00	Gallup Upper
4583.00	Mancos Lwr
4591.00	El Vado
4705.00	Frac Barrier
4705.00	Mancos Unc
4766.00	PS 3
4785.00	PS2
4848.00	PS1
4860.00	PSA
4869.00	PSA Base
5195.00	Juana Lopez
5335.00	Sanastee
5572.00	Greenhorn
5634.00	Graneros
5671.00	Dakota



1344, May 05 2017

Scientific Drilling
633 Rankin Circle N.
Houston, TX 77073

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

in Bloomfield, NM to WPX Energy Production, LLC State 2207-36D #193V

725' FNL & 311' FWL, Section 36, T22N, R7W, N.M.P.M., Sandoval County, NM

Latitude: 36.100619°N Longitude: 107.535935°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 53.6 miles to Mile Marker 97.7;

Go Right (Southerly) on Indian Service Route #474 for 3.6 miles to fork in roadway;

Go Right (Southerly) which is straight continuing on Indian Service Route #474 for 1.0 miles to fork in roadway;

Go Left (Southerly) continuing on Indian Service Route #474 for 0.1 miles to fork in roadway;

Go Right (Southerly) which is straight exiting Indian Service Route #474 entering Indian Service Route #46 for 3.4 miles to 4-way intersection in roadway;

Go Right (Westerly) exiting Indian Service Route #46 for 2.9 miles to new access on right-hand side of existing roadway which continues for 703.9' to staked WPX State 2207-36D #193V location.

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 Conditions of Approval
C-101 Application for Permit to Drill

Operator Signature Date: 5-9-17

Well information;

Operator WPX, Well Name and Number State 2207-36D# 193

API# 30-043-21308, Section 36, Township 22 NS, Range 7 EW

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.