

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT.

AS DIRECT

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21136	*Pool Code 42289	*Pool Name LYBROOK GALLUP
*Property Code 40021	*Property Name CHACO 2306-19E	*Well Number 188H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6965

OIL CONS. DIV DIST. 3
AUG 13 2014

¹⁰ Surface Location

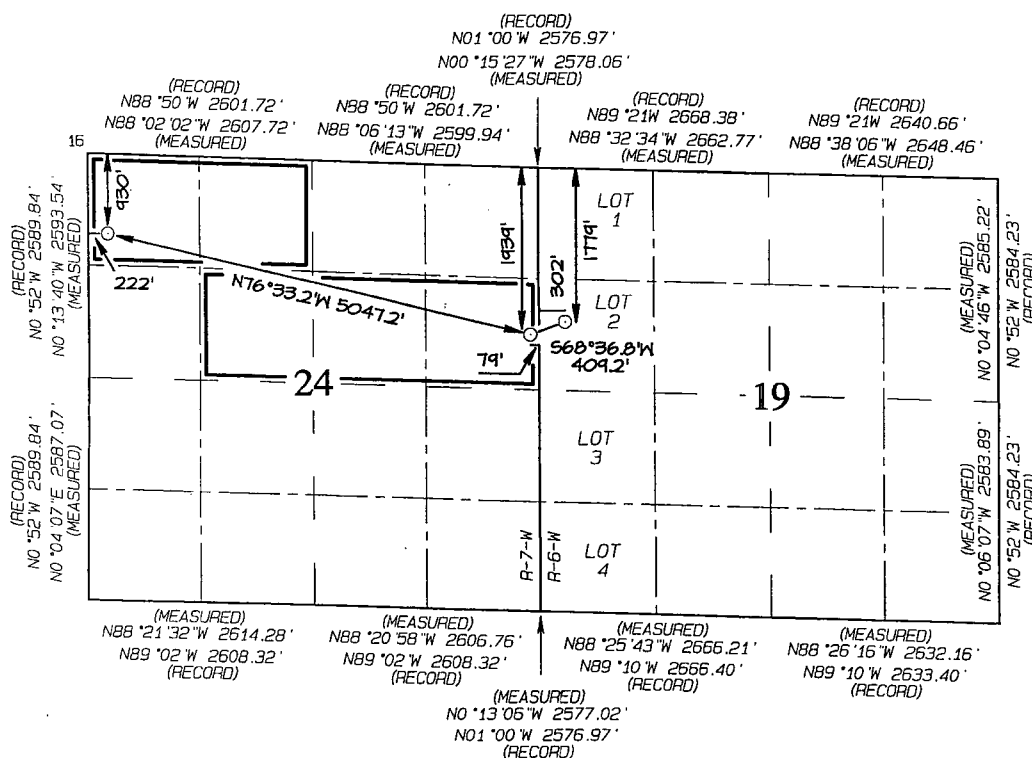
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	19	23N	6W	2	1779	NORTH	302	WEST	SANDOVAL

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	24	23N	7W		930	NORTH	222	WEST	SANDOVAL

12	Dedicated Acres	200.0 Acres - Section 24 N/2 NW/4 - S/2 NE/4 - SE/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



END-OF-LATERAL
930' FNL 222' FWL
SECTION 24, T23N, R7W
LAT: 36.21592°N
LONG: 107.53472°W
DATUM: NAD1927

LAT: 36.21593 *N
LONG: 107.53532 *W
DATUM: NAD1983

POINT-OF-ENTRY
1939' FNL 79' FEL
SECTION 24, T23N, R7W
LAT: 36.21287°N
LONG: 107.51803°W
DATUM: NAD1927

LAT: 36.21288 *N
LONG: 107.51863 *W
DATUM: NAD1983

SURFACE LOCATION
1779' FNL 302' FWL
SECTION 19, T23N, R6W
LAT: 36.21329°N
LONG: 107.51674°W
DATUM: NAD1927

LAT: 36.21331°N
LONG: 107.51735°W
DATUM: NAD1983

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 working interest or a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Larry Higgins Date 5/11/14

Larry Higgins
Printed Name
larry.higgins@wpxenergy.com

¹⁸ SURVEYOR CERTIFICATION

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

Date Revised: JUNE 27, 2014
Date of Survey: JULY 10, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number	15269
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Company Name: WPX Energy Rocky Mountain, LLC
 Project: Sandoval County, NM NAD27
 Site: Chaco 2306-19E
 Well: Chaco 2306-19E #188H



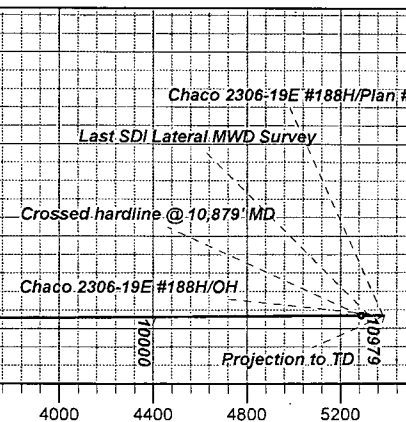
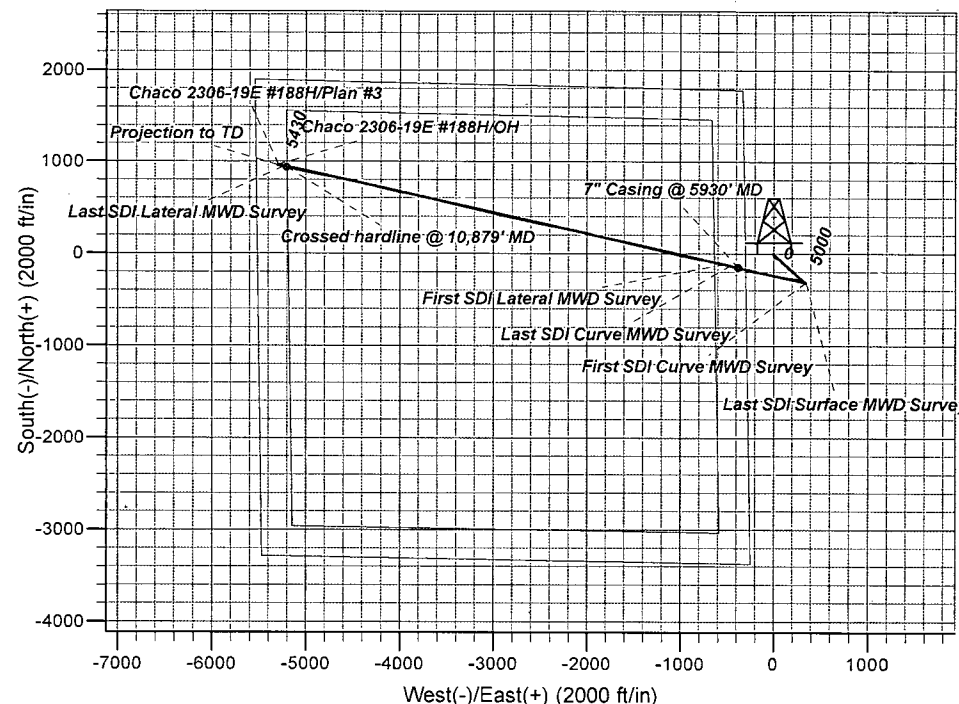
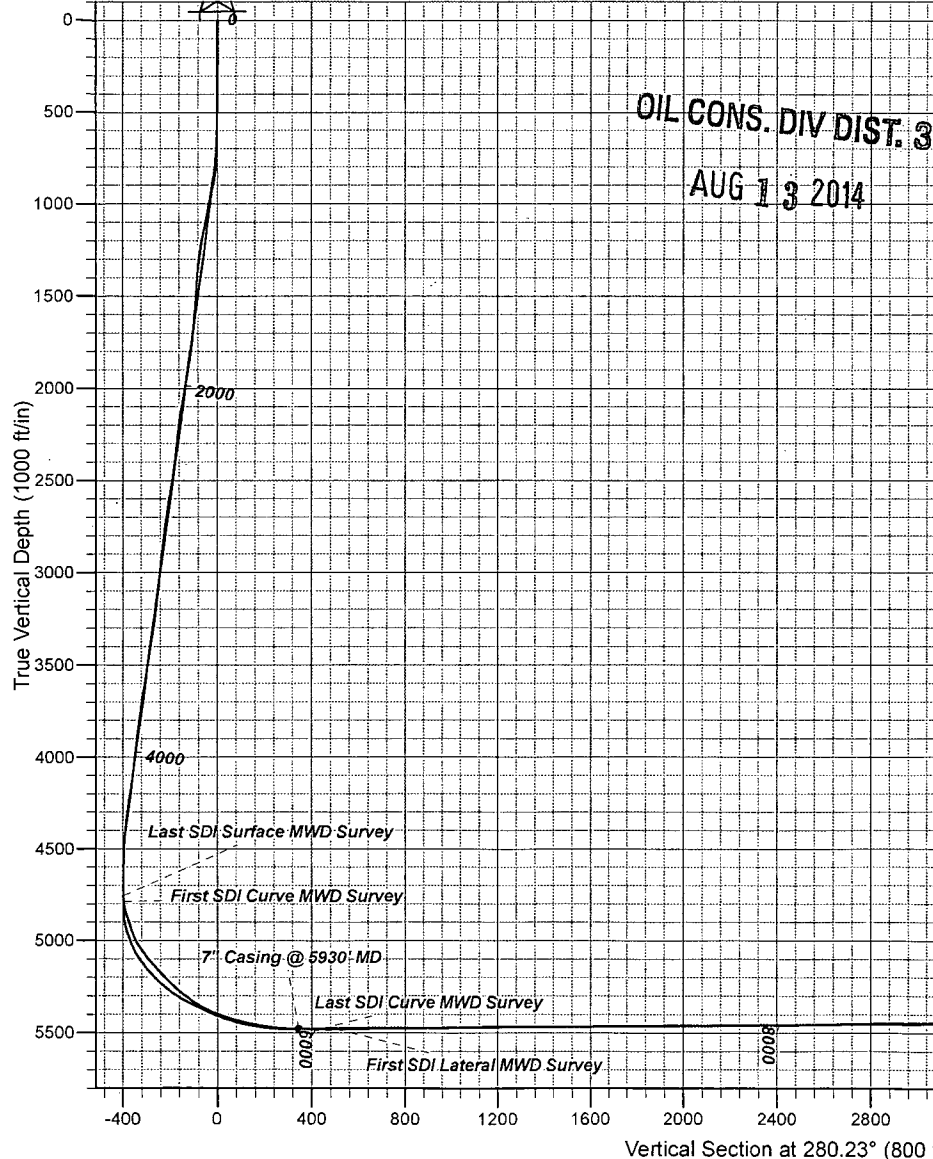
Azimuths to True North -
 Magnetic North: 9.44°

Magnetic Field
 Strength: 50087.4snT
 Dip Angle: 63.00°
 Date: 6/12/2014
 Model: BGGM2014

CONFIDENTIAL

WELL DETAILS: Chaco 2306-19E #188H

GL 6965' & RKB 14' @ 6979.00ft
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.00 0.00 1899288.10 126313.86 36° 12' 47.844 N 107° 31' 0.264 W



Design: OH (Chaco 2306-19E #188H/OH)
Created By: Janie Collins Date: 16:02, June 25 2014
PROJECT DETAILS: Sandoval County, NM NAD27
Geodetic System: US State Plane 1927 (Exact solution) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: New Mexico Central 3002
System Datum: Mean Sea Level Local North: True



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Project:	Sandoval County NM NAD27	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Well:	Chaco 2306-19E #188H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Project	Sandoval County NM NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site	Chaco 2306-19E		
Site Position:		Northing:	1,899,266.26 usft
From:	Lat/Long	Easting:	126,313.58 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	36° 12' 47.628 N
		Longitude:	107° 31' 0.264 W
		Grid Convergence:	-0.75 °

Well	Chaco 2306-19E #188H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	36° 12' 47.844 N
		Longitude:	107° 31' 0.264 W
		Ground Level:	6,965.00 ft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	BGGM2014	6/12/2014	(°)
			9.44
			Dip Angle
			(°)
			63.00
			Field Strength
			(nT)
			50,087

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			280.23

Survey Program	Date 6/25/2014		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
471.00	4,788.00	Survey #1 - Surface MWD Survey (OH)	MWD SDI
4,820.00	6,022.00	Survey #2 - Curve MWD Survey (OH)	MWD SDI
6,084.00	10,979.00	Survey #3 - Lateral MWD Survey (OH)	MWD SDI
			Description
			MWD - Standard ver 1.0.1
			MWD - Standard ver 1.0.1
			MWD - Standard ver 1.0.1

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map		
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting	Latitude	Longitude
(ft)			(ft)			(usft)	(usft)		
0.00	0.00	0.00	0.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
471.00	0.68	32.51	470.99	2.36	1.50	1,899,290.44	126,315.40	36° 12' 47.867 N	107° 31' 0.246 W
523.00	0.34	348.11	522.99	2.77	1.64	1,899,290.85	126,315.54	36° 12' 47.871 N	107° 31' 0.244 W
555.00	0.43	274.06	554.99	2.87	1.50	1,899,290.96	126,315.40	36° 12' 47.872 N	107° 31' 0.246 W
586.00	0.57	261.94	585.99	2.86	1.23	1,899,290.95	126,315.13	36° 12' 47.872 N	107° 31' 0.249 W
617.00	1.19	214.53	616.98	2.57	0.89	1,899,290.66	126,314.79	36° 12' 47.869 N	107° 31' 0.253 W
649.00	1.91	191.93	648.97	1.77	0.59	1,899,289.87	126,314.48	36° 12' 47.862 N	107° 31' 0.257 W
680.00	3.47	181.44	679.94	0.33	0.46	1,899,288.43	126,314.33	36° 12' 47.847 N	107° 31' 0.258 W
712.00	4.59	177.79	711.86	-1.92	0.49	1,899,286.18	126,314.33	36° 12' 47.825 N	107° 31' 0.258 W
775.00	7.27	164.58	774.52	-8.28	1.65	1,899,279.80	126,315.40	36° 12' 47.762 N	107° 31' 0.244 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Project:	Sandoval County, NM, NAD27	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Well:	Chaco 2306-19E #188H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
838.00	9.48	152.66	836.84	-16.73	5.09	1,899,271.31	126,318.73	36° 12' 47.679 N	107° 31' 0.202 W
901.00	10.81	139.48	898.87	-25.83	11.31	1,899,262.13	126,324.84	36° 12' 47.589 N	107° 31' 0.126 W
964.00	11.59	134.49	960.67	-34.76	19.67	1,899,253.09	126,333.07	36° 12' 47.500 N	107° 31' 0.024 W
1,027.00	10.83	120.72	1,022.48	-42.22	29.27	1,899,245.51	126,342.58	36° 12' 47.427 N	107° 30' 59.907 W
1,089.00	9.88	112.05	1,083.47	-47.19	39.21	1,899,240.40	126,352.45	36° 12' 47.377 N	107° 30' 59.786 W
1,152.00	7.92	112.03	1,145.71	-50.85	48.24	1,899,236.63	126,361.44	36° 12' 47.341 N	107° 30' 59.675 W
1,215.00	6.62	110.73	1,208.20	-53.76	55.66	1,899,233.62	126,368.82	36° 12' 47.312 N	107° 30' 59.585 W
1,277.00	6.22	118.08	1,269.81	-56.61	61.97	1,899,230.69	126,375.09	36° 12' 47.284 N	107° 30' 59.508 W
1,341.00	5.34	129.42	1,333.49	-60.13	67.33	1,899,227.10	126,380.40	36° 12' 47.249 N	107° 30' 59.442 W
1,404.00	4.51	137.12	1,396.26	-63.81	71.28	1,899,223.37	126,384.30	36° 12' 47.213 N	107° 30' 59.394 W
1,464.00	4.62	143.24	1,456.07	-67.48	74.33	1,899,219.67	126,387.31	36° 12' 47.177 N	107° 30' 59.357 W
1,525.00	4.80	141.19	1,516.86	-71.43	77.40	1,899,215.67	126,390.32	36° 12' 47.138 N	107° 30' 59.320 W
1,586.00	5.07	140.94	1,577.63	-75.51	80.70	1,899,211.54	126,393.57	36° 12' 47.097 N	107° 30' 59.279 W
1,648.00	5.10	142.60	1,639.39	-79.83	84.10	1,899,207.18	126,396.91	36° 12' 47.055 N	107° 30' 59.238 W
1,709.00	6.08	140.12	1,700.10	-84.46	87.82	1,899,202.50	126,400.57	36° 12' 47.009 N	107° 30' 59.192 W
1,770.00	6.50	137.01	1,760.73	-89.47	92.24	1,899,197.44	126,404.93	36° 12' 46.959 N	107° 30' 59.138 W
1,830.00	7.66	132.18	1,820.27	-94.64	97.52	1,899,192.20	126,410.14	36° 12' 46.908 N	107° 30' 59.074 W
1,922.00	7.57	130.52	1,911.46	-102.69	106.67	1,899,184.03	126,419.18	36° 12' 46.829 N	107° 30' 58.962 W
1,983.00	8.35	130.88	1,971.87	-108.20	113.07	1,899,178.44	126,425.51	36° 12' 46.774 N	107° 30' 58.884 W
2,044.00	8.22	128.51	2,032.24	-113.82	119.84	1,899,172.73	126,432.20	36° 12' 46.719 N	107° 30' 58.802 W
2,105.00	8.70	128.30	2,092.57	-119.39	126.87	1,899,167.07	126,439.16	36° 12' 46.663 N	107° 30' 58.716 W
2,165.00	7.66	124.04	2,151.96	-124.44	133.74	1,899,161.93	126,445.97	36° 12' 46.613 N	107° 30' 58.632 W
2,226.00	6.71	120.89	2,212.48	-128.55	140.17	1,899,157.74	126,452.34	36° 12' 46.573 N	107° 30' 58.554 W
2,288.00	5.70	122.87	2,274.12	-132.08	145.87	1,899,154.13	126,457.99	36° 12' 46.538 N	107° 30' 58.484 W
2,350.00	6.16	151.48	2,335.80	-136.67	150.04	1,899,149.49	126,462.11	36° 12' 46.493 N	107° 30' 58.433 W
2,411.00	7.97	155.61	2,396.34	-143.40	153.35	1,899,142.72	126,465.33	36° 12' 46.426 N	107° 30' 58.393 W
2,473.00	9.48	146.65	2,457.62	-151.58	157.93	1,899,134.48	126,469.80	36° 12' 46.345 N	107° 30' 58.337 W
2,532.00	9.50	133.55	2,515.82	-158.99	164.13	1,899,126.98	126,475.90	36° 12' 46.272 N	107° 30' 58.261 W
2,593.00	8.50	125.28	2,576.07	-165.07	171.46	1,899,120.81	126,483.15	36° 12' 46.212 N	107° 30' 58.172 W
2,655.00	6.67	121.49	2,637.53	-169.59	178.27	1,899,116.20	126,489.91	36° 12' 46.167 N	107° 30' 58.089 W
2,715.00	5.99	119.54	2,697.16	-172.96	183.97	1,899,112.76	126,495.56	36° 12' 46.134 N	107° 30' 58.019 W
2,777.00	6.15	121.26	2,758.81	-176.28	189.62	1,899,109.37	126,501.17	36° 12' 46.101 N	107° 30' 57.950 W
2,838.00	5.92	121.76	2,819.47	-179.63	195.09	1,899,105.94	126,506.59	36° 12' 46.068 N	107° 30' 57.884 W
2,900.00	5.91	123.31	2,881.14	-183.06	200.48	1,899,102.44	126,511.93	36° 12' 46.034 N	107° 30' 57.818 W
2,963.00	6.21	125.30	2,943.79	-186.81	205.97	1,899,098.62	126,517.37	36° 12' 45.997 N	107° 30' 57.751 W
3,026.00	5.94	137.92	3,006.44	-191.20	210.93	1,899,094.16	126,522.28	36° 12' 45.953 N	107° 30' 57.690 W
3,088.00	5.46	142.93	3,068.13	-195.94	214.86	1,899,089.38	126,526.15	36° 12' 45.906 N	107° 30' 57.642 W
3,152.00	6.35	140.19	3,131.79	-201.09	218.96	1,899,084.18	126,530.18	36° 12' 45.856 N	107° 30' 57.592 W
3,215.00	6.94	144.12	3,194.37	-206.85	223.42	1,899,078.36	126,534.57	36° 12' 45.799 N	107° 30' 57.538 W
3,278.00	7.39	133.56	3,256.88	-212.72	228.59	1,899,072.42	126,539.66	36° 12' 45.741 N	107° 30' 57.475 W
3,341.00	8.12	129.26	3,319.31	-218.33	234.97	1,899,066.72	126,545.96	36° 12' 45.685 N	107° 30' 57.397 W
3,404.00	8.06	129.33	3,381.68	-223.95	241.83	1,899,061.02	126,552.75	36° 12' 45.630 N	107° 30' 57.313 W
3,467.00	8.28	128.69	3,444.04	-229.58	248.79	1,899,055.30	126,559.63	36° 12' 45.574 N	107° 30' 57.228 W
3,530.00	8.23	128.08	3,506.39	-235.20	255.88	1,899,049.59	126,566.65	36° 12' 45.518 N	107° 30' 57.142 W
3,593.00	8.30	128.61	3,568.73	-240.82	262.98	1,899,043.88	126,573.68	36° 12' 45.463 N	107° 30' 57.055 W
3,657.00	6.96	134.39	3,632.16	-246.41	269.36	1,899,038.20	126,579.99	36° 12' 45.407 N	107° 30' 56.977 W
3,720.00	6.58	130.65	3,694.73	-251.43	274.83	1,899,033.10	126,585.39	36° 12' 45.358 N	107° 30' 56.911 W
3,783.00	6.47	136.90	3,757.32	-256.38	280.00	1,899,028.09	126,590.48	36° 12' 45.309 N	107° 30' 56.848 W
3,846.00	7.19	134.06	3,819.87	-261.71	285.25	1,899,022.69	126,595.67	36° 12' 45.256 N	107° 30' 56.783 W
3,909.00	7.11	133.01	3,882.38	-267.11	290.94	1,899,017.22	126,601.29	36° 12' 45.203 N	107° 30' 56.714 W
3,972.00	6.85	132.38	3,944.91	-272.30	296.56	1,899,011.95	126,606.84	36° 12' 45.151 N	107° 30' 56.645 W
4,035.00	7.00	134.64	4,007.45	-277.53	302.07	1,899,006.65	126,612.28	36° 12' 45.100 N	107° 30' 56.578 W
4,097.00	7.10	131.28	4,068.99	-282.71	307.64	1,899,001.40	126,617.78	36° 12' 45.048 N	107° 30' 56.510 W
4,160.00	6.35	131.08	4,131.55	-287.57	313.19	1,898,996.47	126,623.27	36° 12' 45.000 N	107° 30' 56.443 W
4,223.00	6.32	127.07	4,194.17	-291.95	318.58	1,898,992.02	126,628.61	36° 12' 44.957 N	107° 30' 56.377 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Project:	Sandoval County, NM NAD27	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Well:	Chaco 2306-19E #188H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,285.00	6.25	131.13	4,255.80	-296.23	323.85	1,898,987.67	126,633.81	36° 12' 44.915 N	107° 30' 56.313 W
4,348.00	6.37	130.21	4,318.41	-300.74	329.10	1,898,983.09	126,639.01	36° 12' 44.870 N	107° 30' 56.248 W
4,411.00	6.01	129.14	4,381.05	-305.08	334.33	1,898,978.69	126,644.18	36° 12' 44.827 N	107° 30' 56.185 W
4,475.00	4.41	124.19	4,444.78	-308.58	338.96	1,898,975.13	126,648.76	36° 12' 44.793 N	107° 30' 56.128 W
4,538.00	2.02	120.37	4,507.68	-310.50	341.92	1,898,973.17	126,651.70	36° 12' 44.774 N	107° 30' 56.092 W
4,601.00	1.19	107.28	4,570.65	-311.26	343.51	1,898,972.39	126,653.27	36° 12' 44.766 N	107° 30' 56.073 W
4,664.00	1.45	115.78	4,633.64	-311.80	344.85	1,898,971.83	126,654.61	36° 12' 44.761 N	107° 30' 56.056 W
4,726.00	0.60	110.23	4,695.62	-312.25	345.86	1,898,971.36	126,655.61	36° 12' 44.756 N	107° 30' 56.044 W
4,788.00	1.88	304.28	4,757.62	-311.79	345.32	1,898,971.83	126,655.08	36° 12' 44.761 N	107° 30' 56.050 W
Last SDI Surface MWD Survey									
4,820.00	6.12	296.96	4,789.53	-310.72	343.37	1,898,972.93	126,653.14	36° 12' 44.771 N	107° 30' 56.074 W
First SDI Curve MWD Survey									
4,851.00	10.13	297.28	4,820.21	-308.72	339.47	1,898,974.98	126,649.27	36° 12' 44.791 N	107° 30' 56.122 W
4,882.00	13.21	299.22	4,850.57	-305.74	333.96	1,898,978.03	126,643.80	36° 12' 44.821 N	107° 30' 56.189 W
4,914.00	13.75	298.48	4,881.69	-302.14	327.42	1,898,981.71	126,637.31	36° 12' 44.856 N	107° 30' 56.269 W
4,945.00	13.93	296.63	4,911.79	-298.71	320.85	1,898,985.23	126,630.78	36° 12' 44.890 N	107° 30' 56.349 W
4,976.00	15.06	294.58	4,941.80	-295.37	313.85	1,898,988.67	126,623.83	36° 12' 44.923 N	107° 30' 56.435 W
5,008.00	19.11	290.22	4,972.38	-291.82	305.15	1,898,992.32	126,615.17	36° 12' 44.958 N	107° 30' 56.541 W
5,039.00	22.06	287.95	5,001.40	-288.28	294.85	1,898,996.00	126,604.92	36° 12' 44.993 N	107° 30' 56.666 W
5,070.00	25.60	285.19	5,029.75	-284.73	282.84	1,898,999.71	126,592.96	36° 12' 45.029 N	107° 30' 56.813 W
5,102.00	28.56	282.27	5,058.24	-281.29	268.69	1,899,003.33	126,578.86	36° 12' 45.063 N	107° 30' 56.986 W
5,133.00	32.49	279.41	5,084.94	-278.35	253.23	1,899,006.47	126,563.44	36° 12' 45.092 N	107° 30' 57.174 W
5,165.00	34.40	278.40	5,111.64	-275.62	235.81	1,899,009.43	126,546.05	36° 12' 45.119 N	107° 30' 57.387 W
5,196.00	35.01	277.05	5,137.13	-273.25	218.32	1,899,012.02	126,528.59	36° 12' 45.142 N	107° 30' 57.600 W
5,228.00	35.31	277.28	5,163.29	-270.95	200.03	1,899,014.56	126,510.34	36° 12' 45.165 N	107° 30' 57.823 W
5,259.00	35.13	275.79	5,188.62	-268.92	182.27	1,899,016.83	126,492.61	36° 12' 45.185 N	107° 30' 58.040 W
5,291.00	36.48	276.69	5,214.57	-266.88	163.67	1,899,019.11	126,474.03	36° 12' 45.205 N	107° 30' 58.267 W
5,323.00	39.16	279.10	5,239.85	-264.18	144.24	1,899,022.07	126,454.64	36° 12' 45.232 N	107° 30' 58.504 W
5,354.00	41.83	281.16	5,263.42	-260.63	124.42	1,899,025.88	126,434.87	36° 12' 45.267 N	107° 30' 58.746 W
5,386.00	44.07	283.74	5,286.84	-255.92	103.14	1,899,030.86	126,413.65	36° 12' 45.313 N	107° 30' 59.006 W
5,418.00	45.95	285.15	5,309.47	-250.27	81.23	1,899,036.80	126,391.82	36° 12' 45.369 N	107° 30' 59.273 W
5,450.00	48.81	283.50	5,331.13	-244.45	58.42	1,899,042.91	126,369.08	36° 12' 45.427 N	107° 30' 59.551 W
5,481.00	52.96	280.89	5,350.69	-239.39	34.91	1,899,048.28	126,345.64	36° 12' 45.477 N	107° 30' 59.838 W
5,513.00	57.28	279.67	5,368.98	-234.71	9.09	1,899,053.30	126,319.88	36° 12' 45.523 N	107° 31' 0.153 W
5,544.00	60.91	279.65	5,384.90	-230.25	-17.13	1,899,058.10	126,293.73	36° 12' 45.567 N	107° 31' 0.473 W
5,576.00	63.21	280.85	5,399.90	-225.21	-44.95	1,899,063.50	126,265.98	36° 12' 45.617 N	107° 31' 0.812 W
5,607.00	66.70	282.05	5,413.02	-219.64	-72.47	1,899,069.44	126,238.53	36° 12' 45.672 N	107° 31' 1.148 W
5,638.00	69.28	282.02	5,424.63	-213.64	-100.57	1,899,075.79	126,210.51	36° 12' 45.731 N	107° 31' 1.491 W
5,670.00	71.53	281.76	5,435.36	-207.43	-130.07	1,899,082.39	126,181.09	36° 12' 45.793 N	107° 31' 1.851 W
5,701.00	74.07	281.16	5,444.53	-201.55	-159.09	1,899,088.65	126,152.15	36° 12' 45.851 N	107° 31' 2.205 W
5,734.00	76.29	281.15	5,452.97	-195.38	-190.39	1,899,095.23	126,120.94	36° 12' 45.912 N	107° 31' 2.587 W
5,765.00	78.05	281.01	5,459.85	-189.57	-220.05	1,899,101.43	126,091.35	36° 12' 45.969 N	107° 31' 2.949 W
5,797.00	79.71	281.62	5,466.03	-183.41	-250.84	1,899,107.99	126,060.65	36° 12' 46.030 N	107° 31' 3.325 W
5,828.00	82.08	282.08	5,470.93	-177.12	-280.79	1,899,114.66	126,030.78	36° 12' 46.093 N	107° 31' 3.690 W
5,860.00	84.29	283.17	5,474.73	-170.18	-311.80	1,899,122.01	125,999.87	36° 12' 46.161 N	107° 31' 4.068 W
5,886.00	86.44	284.52	5,476.83	-163.98	-336.96	1,899,128.54	125,974.79	36° 12' 46.223 N	107° 31' 4.375 W
5,930.00	88.48	285.21	5,478.78	-152.70	-379.44	1,899,140.37	125,932.46	36° 12' 46.334 N	107° 31' 4.894 W
7" Casing @ 5930' MD									
5,958.00	89.78	285.65	5,479.20	-145.25	-406.43	1,899,148.17	125,905.57	36° 12' 46.408 N	107° 31' 5.223 W
6,022.00	90.13	284.51	5,479.25	-128.60	-468.22	1,899,165.63	125,844.00	36° 12' 46.572 N	107° 31' 5.977 W
Last SDI Curve MWD Survey									
6,084.00	90.54	283.41	5,478.89	-113.65	-528.39	1,899,181.37	125,784.04	36° 12' 46.720 N	107° 31' 6.711 W
First SDI Lateral MWD Survey									
6,147.00	90.61	281.13	5,478.26	-100.26	-589.94	1,899,195.56	125,722.66	36° 12' 46.853 N	107° 31' 7.462 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Project:	Sandoval County, NM NAD27	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Well:	Chaco 2306-19E #188H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,210.00	90.00	280.43	5,477.92	-88.48	-651.83	1,899,208.15	125,660.94	36° 12' 46.969 N	107° 31' 8.217 W
6,274.00	90.40	280.52	5,477.70	-76.84	-714.76	1,899,220.61	125,598.16	36° 12' 47.084 N	107° 31' 8.985 W
6,337.00	91.04	280.74	5,476.91	-65.22	-776.68	1,899,233.04	125,536.40	36° 12' 47.199 N	107° 31' 9.741 W
6,401.00	90.84	280.17	5,475.86	-53.61	-839.60	1,899,245.47	125,473.63	36° 12' 47.314 N	107° 31' 10.509 W
6,464.00	90.94	281.63	5,474.88	-41.70	-901.46	1,899,258.19	125,411.94	36° 12' 47.432 N	107° 31' 11.263 W
6,526.00	91.65	282.23	5,473.48	-28.88	-962.10	1,899,271.79	125,351.47	36° 12' 47.558 N	107° 31' 12.003 W
6,589.00	91.58	284.28	5,471.70	-14.45	-1,023.40	1,899,287.03	125,290.37	36° 12' 47.701 N	107° 31' 12.751 W
6,653.00	91.81	284.55	5,469.81	1.48	-1,085.35	1,899,303.76	125,228.62	36° 12' 47.858 N	107° 31' 13.507 W
6,715.00	91.25	284.06	5,468.16	16.79	-1,145.41	1,899,319.86	125,168.77	36° 12' 48.010 N	107° 31' 14.240 W
6,776.00	90.57	284.11	5,467.19	31.64	-1,204.57	1,899,335.48	125,109.81	36° 12' 48.157 N	107° 31' 14.962 W
6,836.00	90.24	283.53	5,466.76	45.97	-1,262.83	1,899,350.57	125,051.74	36° 12' 48.298 N	107° 31' 15.673 W
6,898.00	90.17	283.12	5,466.54	60.26	-1,323.16	1,899,365.64	124,991.61	36° 12' 48.440 N	107° 31' 16.409 W
6,959.00	90.04	282.66	5,466.43	73.87	-1,382.62	1,899,380.03	124,932.33	36° 12' 48.574 N	107° 31' 17.135 W
7,020.00	90.27	282.34	5,466.26	87.07	-1,442.18	1,899,394.01	124,872.95	36° 12' 48.705 N	107° 31' 17.861 W
7,081.00	90.50	283.63	5,465.85	100.77	-1,501.61	1,899,408.49	124,813.70	36° 12' 48.840 N	107° 31' 18.586 W
7,142.00	90.81	283.55	5,465.16	115.11	-1,560.90	1,899,423.59	124,754.60	36° 12' 48.982 N	107° 31' 19.310 W
7,204.00	90.94	283.65	5,464.21	129.68	-1,621.16	1,899,438.96	124,694.54	36° 12' 49.126 N	107° 31' 20.045 W
7,265.00	91.11	283.77	5,463.12	144.14	-1,680.41	1,899,454.18	124,635.48	36° 12' 49.269 N	107° 31' 20.768 W
7,326.00	90.47	283.60	5,462.28	158.57	-1,739.67	1,899,469.39	124,576.41	36° 12' 49.411 N	107° 31' 21.491 W
7,387.00	90.40	283.29	5,461.81	172.75	-1,799.00	1,899,484.34	124,517.28	36° 12' 49.552 N	107° 31' 22.215 W
7,447.00	90.27	282.96	5,461.46	186.38	-1,857.43	1,899,498.73	124,459.03	36° 12' 49.686 N	107° 31' 22.928 W
7,508.00	90.74	283.73	5,460.93	200.46	-1,916.78	1,899,513.58	124,399.87	36° 12' 49.826 N	107° 31' 23.652 W
7,570.00	91.11	283.86	5,459.92	215.24	-1,976.98	1,899,529.15	124,339.86	36° 12' 49.972 N	107° 31' 24.387 W
7,631.00	90.94	283.56	5,458.83	229.69	-2,036.24	1,899,544.38	124,280.81	36° 12' 50.115 N	107° 31' 25.110 W
7,693.00	90.61	282.51	5,458.00	243.67	-2,096.63	1,899,559.15	124,220.60	36° 12' 50.253 N	107° 31' 25.847 W
7,754.00	90.57	280.46	5,457.37	255.82	-2,156.40	1,899,572.07	124,160.99	36° 12' 50.373 N	107° 31' 26.576 W
7,814.00	90.51	280.41	5,456.80	266.69	-2,215.41	1,899,583.71	124,102.13	36° 12' 50.480 N	107° 31' 27.296 W
7,875.00	90.37	280.42	5,456.33	277.71	-2,275.40	1,899,595.52	124,042.29	36° 12' 50.589 N	107° 31' 28.028 W
7,936.00	90.10	280.39	5,456.08	288.73	-2,335.40	1,899,607.32	123,982.44	36° 12' 50.698 N	107° 31' 28.760 W
7,997.00	90.57	281.87	5,455.73	300.50	-2,395.25	1,899,619.87	123,922.75	36° 12' 50.815 N	107° 31' 29.491 W
8,059.00	90.84	282.06	5,454.96	313.36	-2,455.90	1,899,633.52	123,862.27	36° 12' 50.942 N	107° 31' 30.231 W
8,120.00	90.10	281.46	5,454.46	325.79	-2,515.61	1,899,646.73	123,802.73	36° 12' 51.064 N	107° 31' 30.959 W
8,183.00	90.40	282.50	5,454.19	338.87	-2,577.24	1,899,660.61	123,741.28	36° 12' 51.194 N	107° 31' 31.711 W
8,245.00	90.74	282.17	5,453.57	352.11	-2,637.81	1,899,674.64	123,680.89	36° 12' 51.325 N	107° 31' 32.450 W
8,309.00	91.48	281.70	5,452.33	365.34	-2,700.41	1,899,688.69	123,618.46	36° 12' 51.455 N	107° 31' 33.214 W
8,372.00	93.19	281.96	5,449.76	378.25	-2,762.02	1,899,702.40	123,557.03	36° 12' 51.583 N	107° 31' 33.966 W
8,434.00	90.44	282.55	5,447.80	391.40	-2,822.57	1,899,716.34	123,496.65	36° 12' 51.713 N	107° 31' 34.705 W
8,497.00	90.81	283.24	5,447.11	405.46	-2,883.98	1,899,731.20	123,435.44	36° 12' 51.852 N	107° 31' 35.454 W
8,560.00	91.89	283.72	5,445.63	420.14	-2,945.22	1,899,746.68	123,374.39	36° 12' 51.997 N	107° 31' 36.201 W
8,623.00	90.64	283.24	5,444.24	434.82	-3,006.47	1,899,762.16	123,313.34	36° 12' 52.142 N	107° 31' 36.949 W
8,686.00	90.30	283.73	5,443.72	449.51	-3,067.73	1,899,777.65	123,252.27	36° 12' 52.287 N	107° 31' 37.696 W
8,749.00	90.04	284.51	5,443.54	464.88	-3,128.83	1,899,793.82	123,191.38	36° 12' 52.439 N	107° 31' 38.442 W
8,812.00	90.77	284.23	5,443.09	480.51	-3,189.85	1,899,810.25	123,130.57	36° 12' 52.594 N	107° 31' 39.187 W
8,875.00	90.04	283.89	5,442.64	495.82	-3,250.96	1,899,826.35	123,069.66	36° 12' 52.745 N	107° 31' 39.932 W
8,938.00	90.07	283.65	5,442.58	510.82	-3,312.15	1,899,842.14	123,008.67	36° 12' 52.893 N	107° 31' 40.679 W
9,002.00	90.07	283.46	5,442.51	525.82	-3,374.37	1,899,857.96	122,946.66	36° 12' 53.041 N	107° 31' 41.438 W
9,065.00	90.04	283.28	5,442.45	540.38	-3,435.66	1,899,873.32	122,885.56	36° 12' 53.185 N	107° 31' 42.186 W
9,128.00	91.18	283.71	5,441.77	555.08	-3,496.92	1,899,888.82	122,824.50	36° 12' 53.331 N	107° 31' 42.933 W
9,191.00	90.22	283.54	5,441.00	569.92	-3,558.14	1,899,904.46	122,763.48	36° 12' 53.477 N	107° 31' 43.680 W
9,254.00	90.00	283.19	5,440.88	584.49	-3,619.43	1,899,919.82	122,702.38	36° 12' 53.621 N	107° 31' 44.428 W
9,317.00	90.67	282.63	5,440.52	598.56	-3,680.84	1,899,934.70	122,641.16	36° 12' 53.760 N	107° 31' 45.178 W
9,379.00	90.04	282.49	5,440.13	612.04	-3,741.36	1,899,948.97	122,580.83	36° 12' 53.894 N	107° 31' 45.916 W
9,442.00	90.07	281.58	5,440.07	625.18	-3,802.97	1,899,962.91	122,519.39	36° 12' 54.024 N	107° 31' 46.668 W
9,505.00	90.03	281.38	5,440.02	637.72	-3,864.71	1,899,976.25	122,457.82	36° 12' 54.147 N	107° 31' 47.421 W
9,568.00	90.04	281.26	5,439.98	650.08	-3,926.48	1,899,989.43	122,396.21	36° 12' 54.270 N	107° 31' 48.175 W



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Project:	Sandoval County, NM NAD27	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Well:	Chaco 2306-19E #188H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,631.00	90.04	281.17	5,439.93	662.34	-3,988.28	1,900,002.49	122,334.58	36° 12' 54.391 N	107° 31' 48.929 W
9,694.00	90.04	282.05	5,439.89	675.02	-4,049.99	1,900,015.97	122,273.04	36° 12' 54.516 N	107° 31' 49.682 W
9,757.00	90.31	283.19	5,439.70	688.78	-4,111.47	1,900,030.54	122,211.75	36° 12' 54.652 N	107° 31' 50.432 W
9,820.00	90.04	285.21	5,439.50	704.23	-4,172.54	1,900,046.79	122,150.89	36° 12' 54.805 N	107° 31' 51.178 W
9,883.00	90.92	284.60	5,438.98	720.44	-4,233.42	1,900,063.78	122,090.23	36° 12' 54.965 N	107° 31' 51.920 W
9,945.00	90.34	284.25	5,438.30	735.88	-4,293.46	1,900,080.01	122,030.39	36° 12' 55.117 N	107° 31' 52.653 W
10,008.00	90.24	283.83	5,437.98	751.16	-4,354.58	1,900,096.09	121,969.48	36° 12' 55.269 N	107° 31' 53.399 W
10,071.00	90.04	283.54	5,437.82	766.07	-4,415.79	1,900,111.79	121,908.47	36° 12' 55.416 N	107° 31' 54.146 W
10,135.00	90.71	282.39	5,437.40	780.43	-4,478.15	1,900,126.97	121,846.30	36° 12' 55.558 N	107° 31' 54.907 W
10,198.00	90.24	281.85	5,436.88	793.65	-4,539.75	1,900,141.00	121,784.88	36° 12' 55.688 N	107° 31' 55.658 W
10,262.00	90.40	281.10	5,436.52	806.39	-4,602.46	1,900,154.55	121,722.34	36° 12' 55.814 N	107° 31' 56.424 W
10,325.00	90.20	281.71	5,436.19	818.84	-4,664.22	1,900,167.81	121,660.75	36° 12' 55.937 N	107° 31' 57.177 W
10,389.00	91.72	281.37	5,435.12	831.64	-4,726.91	1,900,181.43	121,598.23	36° 12' 56.064 N	107° 31' 57.942 W
10,451.00	90.04	280.82	5,434.17	843.57	-4,787.75	1,900,194.15	121,537.56	36° 12' 56.182 N	107° 31' 58.685 W
10,514.00	90.64	280.48	5,433.80	855.22	-4,849.66	1,900,206.60	121,475.80	36° 12' 56.297 N	107° 31' 59.440 W
10,577.00	90.04	280.20	5,433.42	866.52	-4,911.64	1,900,218.72	121,413.98	36° 12' 56.408 N	107° 32' 0.196 W
10,639.00	90.10	280.98	5,433.35	877.92	-4,972.58	1,900,230.91	121,353.19	36° 12' 56.521 N	107° 32' 0.940 W
10,703.00	90.91	281.56	5,432.78	890.43	-5,035.34	1,900,244.23	121,290.59	36° 12' 56.644 N	107° 32' 1.706 W
10,766.00	91.01	283.05	5,431.73	903.85	-5,096.88	1,900,258.46	121,229.23	36° 12' 56.777 N	107° 32' 2.457 W
10,829.00	90.04	284.95	5,431.15	919.09	-5,158.01	1,900,274.50	121,168.31	36° 12' 56.928 N	107° 32' 3.203 W
10,879.00	90.30	284.70	5,431.00	931.88	-5,206.34	1,900,287.92	121,120.15	36° 12' 57.054 N	107° 32' 3.793 W
Crossed hardline @ 10,879' MD									
10,893.00	90.37	284.63	5,430.92	935.43	-5,219.89	1,900,291.64	121,106.65	36° 12' 57.089 N	107° 32' 3.958 W
10,913.00	90.00	284.15	5,430.86	940.40	-5,239.26	1,900,296.86	121,087.35	36° 12' 57.138 N	107° 32' 4.194 W
Last SDI Lateral MWD Survey									
10,979.00	91.00	284.63	5,430.28	956.80	-5,303.18	1,900,314.10	121,023.64	36° 12' 57.300 N	107° 32' 4.974 W
Projection to TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,788.00	4,757.62	-311.79	345.32	Last SDI Surface MWD Survey
4,820.00	4,789.53	-310.72	343.37	First SDI Curve MWD Survey
5,930.00	5,478.78	-152.70	-379.44	7" Casing @ 5930' MD
6,022.00	5,479.25	-128.60	-468.22	Last SDI Curve MWD Survey
6,084.00	5,478.89	-113.65	-528.39	First SDI Lateral MWD Survey
10,879.00	5,431.00	931.88	-5,206.34	Crossed hardline @ 10,879' MD
10,913.00	5,430.86	940.40	-5,239.26	Last SDI Lateral MWD Survey
10,979.00	5,430.28	956.80	-5,303.18	Projection to TD

Checked By:	Approved By:	Date:
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