

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

☐ AMENDED REPORT

As Drilled Plat

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31226	*Pool Code 97232	*Pool Name BASIN MANCOS
*Property Code 313186	*Property Name CHACO 2307-17H	*Well Number 163H
*UGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 7257'

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
H	17	23N	7W		1871	NORTH	372	EAST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
E	17	23N	7W		1615	NORTH	311	WEST	RIO ARRIBA

¹² Dedicated Acres	160.0 Acres - (S/2 N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. NSP 2029 NSL - Pending 7280	Approved 5-19
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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

OIL CONS. DIV DIST. 3
MAY 15 2015

17

END-OF-LATERAL
1615' FNL 311' FWL
LAT: 36.229947°N
LONG: 107.604705°W
DATUM: NAD1927

ASI TOOL
1619' FNL 331' FWL
LAT: 36.229937°N
LONG: 107.604638°W
DATUM: NAD1927

POINT-OF-ENTRY
2517' FNL 461' FEL
LAT: 36.227568°N
LONG: 107.589624°W
DATUM: NAD1927

SURFACE LOCATION
1871' FNL 372' FEL
LAT: 36.229344°N
LONG: 107.589247°W
DATUM: NAD1927

LAT: 36.229961°N
LONG: 107.605314°W
DATUM: NAD1983

LAT: 36.229951°N
LONG: 107.605247°W
DATUM: NAD1983

LAT: 36.227582°N
LONG: 107.590232°W
DATUM: NAD1983

LAT: 36.229357°N
LONG: 107.589855°W
DATUM: NAD1983

NO *56°E 2660.46' (RECORD)
NO1 *40°46'E 2659.36' (MEASURED)

NO2 *43°10'E 2662.16' (MEASURED)
NO1 *57°E 2670.03' (RECORD)

NO *56°E 2660.46' (RECORD)
NO1 *46°38'E 2659.67' (MEASURED)

NO2 *43°08'E 2669.10' (MEASURED)
NO1 *57°E 2670.03' (RECORD)

S89°08'W 2640.66' (RECORD)
S89°53'49"W 2639.67' (MEASURED)

N89°54'W 2644.62' (RECORD)
N89°09'30"W 2638.46' (MEASURED)

N78°11.2'W 4532.4'

S10°32.3'W 655.8'

1615'

2517'

1871'

311'

372'

461'

N89°33'35"W 2596.47' (MEASURED)
S89°44'W 2594.13' (RECORD)

N89°29'51"W 2589.05' (MEASURED)
S89°44'W 2594.13' (RECORD)

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.

 51415

Signature _____ Date _____

Marie E. Jaramillo

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: MARCH 19, 2015
Survey Date: JANUARY 30, 2014

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269



Scientific Drilling

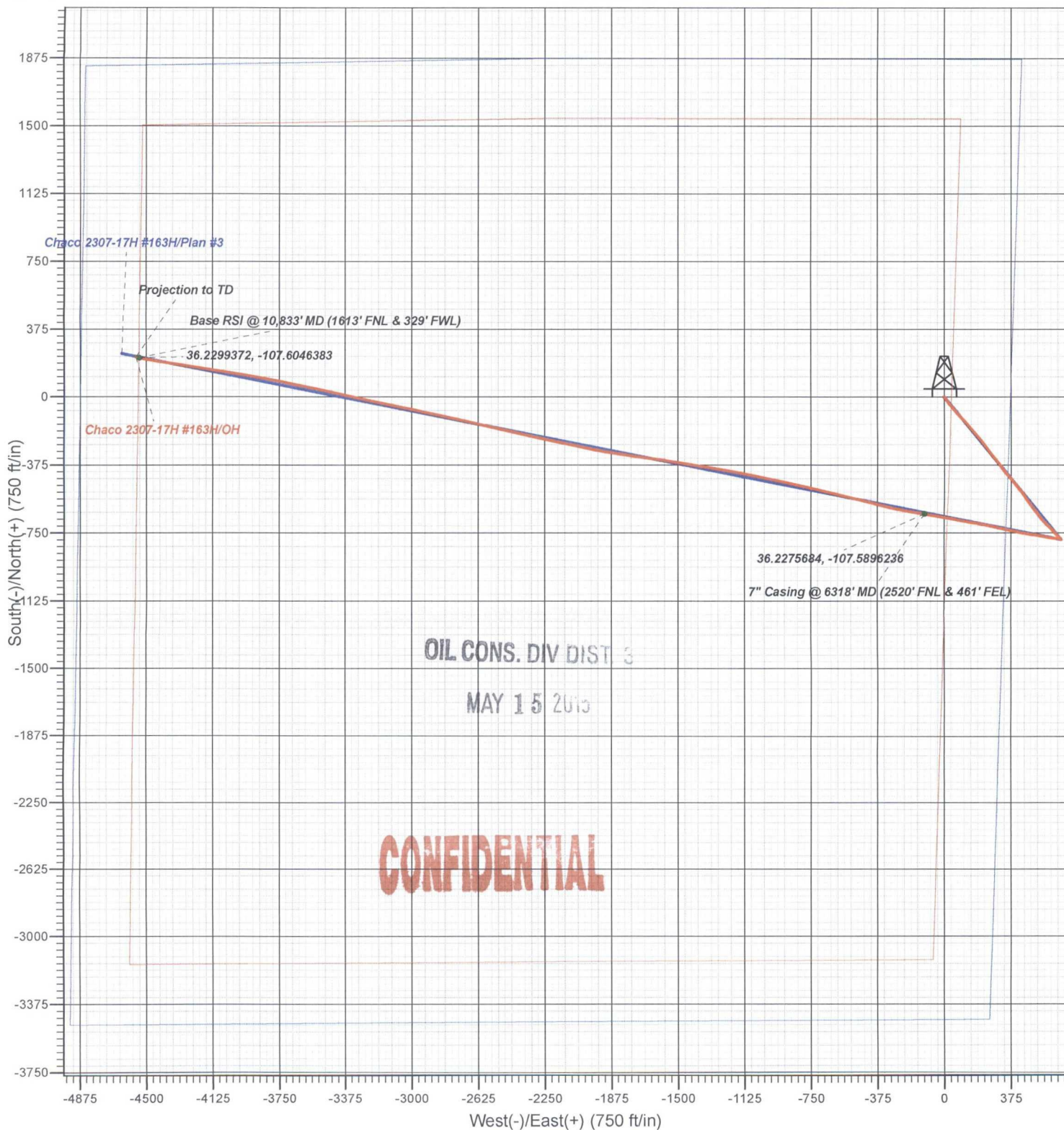
Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2307-17H



Well Details: Chaco 2307-17H #163H

TVD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1905418.33	105003.09	36.2293400	-107.5892500	



Plan: OH

11:06, March 04 2015
Created By: Janie Collins

Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2307-17H
Well: Chaco 2307-17H #163H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Chaco 2307-17H #163H
TVD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
MD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Project Rio Arriba County, NM NAD27

Map System: US State Plane 1927 (Exact solution)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: New Mexico Central 3002

System Datum:

Mean Sea Level

OIL CONS. DIV DIST. 3

MAY 15 2015

Site Chaco 2307-17H

Site Position:		Northing:	1,905,418.33 usft	Latitude:	36.2293399
From:	Lat/Long	Easting:	105,003.10 usft	Longitude:	-107.5892500
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.79 °

Well Chaco 2307-17H #163H

Well Position	+N/-S	0.00 ft	Northing:	1,905,418.33 usft	Latitude:	36.2293399
	+E/-W	0.00 ft	Easting:	105,003.10 usft	Longitude:	-107.5892500
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	7,257.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	8/27/2014	9.45	62.99	50,058

Design OH

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	272.98

Survey Program Date 3/4/2015

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
64.00	339.00	Survey #1 - Gyro Survey (OH)	Gyro	
465.00	5,103.00	Survey #2 - Surface MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1
5,134.00	6,268.00	Survey #3 - Curve MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1
6,348.00	10,853.00	Survey #4 - Lateral MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,905,418.33	105,003.10	36.2293399	-107.5892500
64.00	0.30	136.47	64.00	-0.12	0.12	1,905,418.21	105,003.21	36.2293396	-107.5892497
First Native Navigation Gyro Survey									
114.00	0.31	121.14	114.00	-0.29	0.32	1,905,418.04	105,003.41	36.2293392	-107.5892490
164.00	0.39	90.90	164.00	-0.36	0.61	1,905,417.97	105,003.70	36.2293390	-107.5892480
214.00	0.45	77.13	214.00	-0.32	0.97	1,905,418.00	105,004.06	36.2293391	-107.5892468
264.00	0.28	107.79	264.00	-0.31	1.28	1,905,418.00	105,004.37	36.2293391	-107.5892457
314.00	0.30	116.34	314.00	-0.41	1.51	1,905,417.90	105,004.60	36.2293388	-107.5892449



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-17H #163H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
Site:	Chaco 2307-17H	MD Reference:	GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
Well:	Chaco 2307-17H #163H	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
339.00	0.31	133.74	338.99	-0.48	1.62	1,905,417.83	105,004.71	36.2293386	-107.5892446
Last Native Navigation Gyro Survey									
465.00	0.47	127.33	464.99	-1.03	2.27	1,905,417.27	105,005.36	36.2293371	-107.5892423
First SDI Surface MWD Survey									
528.00	0.62	152.45	527.99	-1.49	2.64	1,905,416.81	105,005.71	36.2293359	-107.5892411
591.00	2.19	147.40	590.97	-2.81	3.44	1,905,415.48	105,006.50	36.2293322	-107.5892384
654.00	3.98	147.81	653.87	-5.67	5.26	1,905,412.59	105,008.28	36.2293244	-107.5892322
717.00	5.22	141.23	716.67	-9.76	8.22	1,905,408.46	105,011.18	36.2293131	-107.5892222
780.00	7.06	141.38	779.31	-15.02	12.43	1,905,403.15	105,015.32	36.2292987	-107.5892079
842.00	8.59	143.72	840.73	-21.73	17.55	1,905,396.37	105,020.34	36.2292803	-107.5891906
905.00	9.66	143.74	902.93	-29.78	23.46	1,905,388.23	105,026.14	36.2292581	-107.5891705
968.00	10.57	142.95	964.95	-38.66	30.07	1,905,379.27	105,032.63	36.2292338	-107.5891481
1,031.00	11.79	140.49	1,026.75	-48.23	37.64	1,905,369.58	105,040.07	36.2292075	-107.5891224
1,094.00	12.72	140.60	1,088.32	-58.56	46.14	1,905,359.14	105,048.42	36.2291791	-107.5890936
1,157.00	13.04	140.24	1,149.73	-69.38	55.09	1,905,348.20	105,057.22	36.2291494	-107.5890633
1,218.00	13.00	140.06	1,209.16	-79.93	63.89	1,905,337.53	105,065.88	36.2291204	-107.5890334
1,279.00	13.63	136.97	1,268.52	-90.45	73.20	1,905,326.88	105,075.04	36.2290915	-107.5890019
1,341.00	13.70	136.21	1,328.77	-101.09	83.27	1,905,316.10	105,084.96	36.2290623	-107.5889678
1,402.00	14.97	136.22	1,387.87	-111.99	93.72	1,905,305.06	105,095.26	36.2290323	-107.5889323
1,463.00	15.23	134.86	1,446.76	-123.33	104.85	1,905,293.57	105,106.23	36.2290012	-107.5888946
1,525.00	15.64	137.55	1,506.53	-135.24	116.26	1,905,281.50	105,117.48	36.2289685	-107.5888559
1,586.00	16.31	139.08	1,565.17	-147.78	127.42	1,905,268.81	105,128.47	36.2289340	-107.5888181
1,647.00	16.47	138.37	1,623.69	-160.72	138.78	1,905,255.71	105,139.64	36.2288985	-107.5887796
1,709.00	16.86	138.76	1,683.09	-174.05	150.54	1,905,242.22	105,151.22	36.2288619	-107.5887397
1,770.00	17.03	138.15	1,741.44	-187.35	162.33	1,905,228.76	105,162.83	36.2288253	-107.5886997
1,831.00	16.63	138.92	1,799.83	-200.59	174.03	1,905,215.36	105,174.34	36.2287890	-107.5886601
1,893.00	15.69	139.47	1,859.38	-213.65	185.31	1,905,202.15	105,185.44	36.2287531	-107.5886218
1,954.00	15.21	138.94	1,918.17	-225.95	195.92	1,905,189.70	105,195.88	36.2287193	-107.5885859
2,015.00	15.28	137.74	1,977.03	-237.93	206.59	1,905,177.57	105,206.38	36.2286864	-107.5885497
2,077.00	14.85	143.00	2,036.90	-250.32	216.86	1,905,165.04	105,216.48	36.2286524	-107.5885149
2,138.00	14.88	143.90	2,095.86	-262.89	226.18	1,905,152.34	105,225.62	36.2286178	-107.5884833
2,199.00	15.21	144.33	2,154.77	-275.72	235.46	1,905,139.38	105,234.73	36.2285826	-107.5884518
2,261.00	15.75	143.03	2,214.52	-289.05	245.27	1,905,125.92	105,244.34	36.2285460	-107.5884186
2,322.00	15.58	141.89	2,273.25	-302.11	255.30	1,905,112.72	105,254.20	36.2285101	-107.5883846
2,383.00	15.38	141.41	2,332.04	-314.88	265.40	1,905,099.81	105,264.12	36.2284751	-107.5883503
2,445.00	15.48	139.53	2,391.80	-327.60	275.90	1,905,086.95	105,274.44	36.2284401	-107.5883148
2,506.00	14.86	139.46	2,450.68	-339.74	286.27	1,905,074.67	105,284.64	36.2284068	-107.5882796
2,567.00	14.90	140.39	2,509.63	-351.73	296.35	1,905,062.55	105,294.56	36.2283738	-107.5882454
2,629.00	15.68	144.18	2,569.44	-364.66	306.34	1,905,049.47	105,304.37	36.2283383	-107.5882116
2,690.00	16.24	144.63	2,628.09	-378.30	316.10	1,905,035.70	105,313.94	36.2283009	-107.5881785
2,751.00	16.58	142.94	2,686.60	-392.20	326.28	1,905,021.66	105,323.93	36.2282627	-107.5881440
2,813.00	16.31	140.77	2,746.07	-406.01	337.12	1,905,007.71	105,334.57	36.2282248	-107.5881072
2,874.00	16.20	139.49	2,804.63	-419.11	348.06	1,904,994.45	105,345.34	36.2281888	-107.5880701
2,935.00	16.24	138.98	2,863.20	-432.01	359.19	1,904,981.40	105,356.28	36.2281533	-107.5880324
2,997.00	16.06	137.96	2,922.75	-444.92	370.62	1,904,968.33	105,367.54	36.2281179	-107.5879937
3,060.00	16.11	138.40	2,983.29	-457.93	382.26	1,904,955.16	105,378.99	36.2280821	-107.5879542
3,122.00	15.69	141.69	3,042.92	-470.94	393.17	1,904,942.00	105,389.72	36.2280464	-107.5879172
3,185.00	15.72	142.40	3,103.56	-484.39	403.66	1,904,928.41	105,400.02	36.2280095	-107.5878817
3,248.00	15.40	141.50	3,164.26	-497.70	414.07	1,904,914.96	105,410.25	36.2279729	-107.5878464
3,311.00	14.93	139.59	3,225.06	-510.42	424.54	1,904,902.09	105,420.54	36.2279379	-107.5878109
3,374.00	14.71	143.28	3,285.97	-523.02	434.58	1,904,889.36	105,430.41	36.2279034	-107.5877768
3,437.00	15.41	144.78	3,346.80	-536.27	444.19	1,904,875.98	105,439.84	36.2278670	-107.5877442
3,500.00	15.34	144.51	3,407.55	-549.89	453.86	1,904,862.23	105,449.31	36.2278295	-107.5877115
3,563.00	15.01	143.08	3,468.35	-563.20	463.60	1,904,848.79	105,458.87	36.2277930	-107.5876785
3,625.00	15.80	144.28	3,528.12	-576.47	473.35	1,904,835.38	105,468.43	36.2277565	-107.5876454



Survey Report - Geographic



Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2307-17H
Well: Chaco 2307-17H #163H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Chaco 2307-17H #163H
TVD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
MD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
North Reference: True
Survey Calculation Method: Minimum Curvature
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
3,688.00	16.56	144.60	3,588.63	-590.75	483.56	1,904,820.96	105,478.44	36.2277173	-107.5876108
3,751.00	16.85	143.79	3,648.97	-605.44	494.15	1,904,806.13	105,488.84	36.2276770	-107.5875749
3,814.00	16.79	141.90	3,709.28	-619.96	505.16	1,904,791.45	105,499.64	36.2276371	-107.5875376
3,877.00	16.91	141.61	3,769.57	-634.31	516.46	1,904,776.95	105,510.75	36.2275977	-107.5874993
3,940.00	16.96	141.09	3,829.84	-648.64	527.93	1,904,762.46	105,522.01	36.2275583	-107.5874604
4,002.00	16.72	140.39	3,889.18	-662.54	539.29	1,904,748.40	105,533.18	36.2275201	-107.5874219
4,065.00	16.85	139.68	3,949.50	-676.49	550.98	1,904,734.30	105,544.67	36.2274818	-107.5873823
4,128.00	17.26	138.38	4,009.73	-690.44	563.09	1,904,720.18	105,556.60	36.2274435	-107.5873412
4,191.00	15.90	134.52	4,070.11	-703.48	575.46	1,904,706.97	105,568.78	36.2274077	-107.5872993
4,254.00	15.79	133.69	4,130.71	-715.45	587.81	1,904,694.83	105,580.96	36.2273748	-107.5872574
4,317.00	14.59	134.29	4,191.51	-726.91	599.69	1,904,683.21	105,592.68	36.2273433	-107.5872172
4,380.00	12.57	134.63	4,252.75	-737.27	610.24	1,904,672.71	105,603.10	36.2273149	-107.5871814
4,443.00	12.00	135.89	4,314.30	-746.79	619.68	1,904,663.06	105,612.40	36.2272887	-107.5871494
4,506.00	10.41	135.36	4,376.10	-755.54	628.24	1,904,654.19	105,620.84	36.2272647	-107.5871204
4,569.00	8.64	138.90	4,438.23	-763.15	635.35	1,904,646.47	105,627.84	36.2272438	-107.5870963
4,632.00	7.23	137.77	4,500.63	-769.66	641.13	1,904,639.89	105,633.53	36.2272259	-107.5870767
4,694.00	5.52	126.04	4,562.24	-774.30	646.16	1,904,635.18	105,638.50	36.2272131	-107.5870596
4,757.00	4.84	127.40	4,624.98	-777.70	650.72	1,904,631.72	105,643.01	36.2272038	-107.5870441
4,820.00	3.25	144.31	4,687.83	-780.76	653.88	1,904,628.61	105,646.12	36.2271954	-107.5870335
4,883.00	1.80	166.58	4,750.77	-783.18	655.15	1,904,626.18	105,647.36	36.2271888	-107.5870291
4,946.00	1.69	169.39	4,813.74	-785.05	655.55	1,904,624.30	105,647.73	36.2271836	-107.5870278
5,009.00	0.79	73.80	4,876.73	-785.84	656.14	1,904,623.50	105,648.31	36.2271814	-107.5870258
5,040.00	0.94	73.74	4,907.72	-785.71	656.59	1,904,623.63	105,648.76	36.2271818	-107.5870243
5,071.00	0.93	67.47	4,938.72	-785.54	657.06	1,904,623.79	105,649.24	36.2271823	-107.5870227
5,103.00	0.77	56.06	4,970.72	-785.32	657.48	1,904,624.00	105,649.66	36.2271829	-107.5870212
Last SDI Surface MWD Survey									
5,134.00	0.79	261.48	5,001.71	-785.24	657.44	1,904,624.08	105,649.63	36.2271831	-107.5870214
First SDI Curve MWD Survey									
5,165.00	3.24	272.00	5,032.69	-785.24	656.35	1,904,624.10	105,648.54	36.2271831	-107.5870251
5,197.00	6.33	281.87	5,064.58	-784.85	653.72	1,904,624.53	105,645.91	36.2271842	-107.5870340
5,228.00	8.35	283.71	5,095.32	-783.96	649.86	1,904,625.47	105,642.07	36.2271866	-107.5870471
5,260.00	10.55	284.68	5,126.89	-782.67	644.77	1,904,626.83	105,636.99	36.2271902	-107.5870643
5,291.00	12.91	278.22	5,157.24	-781.45	638.60	1,904,628.13	105,630.84	36.2271935	-107.5870852
5,323.00	16.00	275.80	5,188.22	-780.50	630.67	1,904,629.20	105,622.92	36.2271961	-107.5871121
5,354.00	17.75	275.23	5,217.89	-779.63	621.71	1,904,630.18	105,613.98	36.2271985	-107.5871425
5,385.00	19.61	277.38	5,247.25	-778.54	611.85	1,904,631.42	105,604.13	36.2272015	-107.5871759
5,417.00	21.75	278.64	5,277.19	-776.95	600.66	1,904,633.15	105,592.96	36.2272059	-107.5872139
5,448.00	25.24	279.14	5,305.61	-775.04	588.45	1,904,635.24	105,580.78	36.2272111	-107.5872552
5,480.00	26.97	279.54	5,334.35	-772.75	574.56	1,904,637.71	105,566.92	36.2272174	-107.5873023
5,511.00	28.84	280.72	5,361.74	-770.20	560.28	1,904,640.47	105,552.68	36.2272244	-107.5873507
5,543.00	31.29	281.12	5,389.44	-767.16	544.54	1,904,643.72	105,536.98	36.2272328	-107.5874041
5,574.00	34.21	279.93	5,415.50	-764.10	528.05	1,904,647.01	105,520.54	36.2272412	-107.5874600
5,605.00	36.84	278.98	5,440.73	-761.15	510.29	1,904,650.21	105,502.82	36.2272493	-107.5875202
5,637.00	40.36	278.44	5,465.74	-758.13	490.56	1,904,653.50	105,483.13	36.2272576	-107.5875871
5,668.00	42.16	278.83	5,489.04	-755.06	470.34	1,904,656.85	105,462.96	36.2272660	-107.5876556
5,700.00	45.90	279.67	5,512.04	-751.48	448.40	1,904,660.73	105,441.07	36.2272758	-107.5877300
5,731.00	48.78	281.12	5,533.05	-747.36	425.98	1,904,665.16	105,418.71	36.2272872	-107.5878060
5,762.00	52.14	282.66	5,552.78	-742.43	402.59	1,904,670.41	105,395.39	36.2273007	-107.5878853
5,794.00	55.02	282.30	5,571.78	-736.87	377.45	1,904,676.32	105,370.33	36.2273160	-107.5879705
5,825.00	59.27	282.92	5,588.59	-731.18	352.05	1,904,682.36	105,345.01	36.2273316	-107.5880566
5,857.00	60.60	282.06	5,604.62	-725.19	325.01	1,904,688.72	105,318.05	36.2273480	-107.5881483
5,888.00	61.99	282.04	5,619.51	-719.52	298.42	1,904,694.76	105,291.54	36.2273636	-107.5882384
5,919.00	64.19	281.51	5,633.54	-713.88	271.36	1,904,700.78	105,264.56	36.2273791	-107.5883302
5,951.00	67.80	281.34	5,646.56	-708.09	242.71	1,904,706.96	105,236.00	36.2273950	-107.5884273
5,982.00	69.99	280.32	5,657.72	-702.66	214.31	1,904,712.78	105,207.67	36.2274100	-107.5885236

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-17H #163H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
Site:	Chaco 2307-17H	MD Reference:	GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
Well:	Chaco 2307-17H #163H	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
6,014.00	72.37	280.28	5,668.04	-697.24	184.51	1,904,718.61	105,177.95	36.2274248	-107.5886246
6,045.00	73.47	279.78	5,677.15	-692.08	155.33	1,904,724.17	105,148.85	36.2274390	-107.5887235
6,077.00	75.71	280.46	5,685.65	-686.66	124.96	1,904,730.01	105,118.56	36.2274539	-107.5888264
6,108.00	77.75	280.12	5,692.77	-681.27	95.27	1,904,735.81	105,088.95	36.2274687	-107.5889271
6,139.00	80.46	280.37	5,698.62	-675.86	65.32	1,904,741.64	105,059.07	36.2274836	-107.5890286
6,171.00	82.26	280.33	5,703.43	-670.17	34.20	1,904,747.75	105,028.03	36.2274992	-107.5891341
6,202.00	84.42	280.64	5,707.03	-664.57	3.93	1,904,753.77	104,997.84	36.2275146	-107.5892367
6,234.00	85.39	280.10	5,709.87	-658.83	-27.43	1,904,759.94	104,966.57	36.2275303	-107.5893430
6,268.00	88.55	279.71	5,711.67	-652.99	-60.87	1,904,766.25	104,933.21	36.2275464	-107.5894564
Last SDI Curve MWD Survey									
6,318.00	90.97	278.72	5,711.88	-644.98	-110.22	1,904,774.93	104,883.98	36.2275684	-107.5896237
7" Casing @ 6318' MD									
6,348.00	92.42	278.13	5,710.99	-640.59	-139.88	1,904,779.74	104,854.38	36.2275804	-107.5897242
First SDI Lateral MWD Survey									
6,379.00	93.10	278.31	5,709.50	-636.16	-170.53	1,904,784.59	104,823.80	36.2275926	-107.5898281
6,440.00	91.35	280.68	5,707.13	-626.11	-230.64	1,904,795.47	104,763.83	36.2276202	-107.5900319
6,502.00	90.50	283.27	5,706.13	-613.25	-291.28	1,904,809.17	104,703.38	36.2276555	-107.5902375
6,563.00	90.40	284.26	5,705.65	-598.73	-350.52	1,904,824.50	104,644.34	36.2276954	-107.5904383
6,624.00	90.71	284.18	5,705.06	-583.75	-409.65	1,904,840.30	104,585.42	36.2277365	-107.5906387
6,686.00	90.34	283.95	5,704.49	-568.68	-469.79	1,904,856.20	104,525.50	36.2277779	-107.5908426
6,747.00	90.61	283.58	5,703.98	-554.17	-529.03	1,904,871.53	104,466.46	36.2278178	-107.5910434
6,808.00	90.67	283.39	5,703.30	-539.95	-588.35	1,904,886.57	104,407.34	36.2278569	-107.5912445
6,870.00	90.20	283.71	5,702.83	-525.42	-648.62	1,904,901.93	104,347.28	36.2278968	-107.5914488
6,931.00	90.37	282.84	5,702.53	-511.41	-707.99	1,904,916.75	104,288.11	36.2279352	-107.5916501
6,992.00	90.07	282.04	5,702.29	-498.27	-767.56	1,904,930.71	104,228.73	36.2279713	-107.5918520
7,054.00	90.77	281.94	5,701.84	-485.39	-828.20	1,904,944.43	104,168.27	36.2280067	-107.5920576
7,116.00	90.57	282.95	5,701.11	-472.03	-888.74	1,904,958.62	104,107.92	36.2280434	-107.5922628
7,179.00	89.52	282.13	5,701.06	-458.35	-950.24	1,904,973.15	104,046.62	36.2280809	-107.5924713
7,242.00	89.97	281.69	5,701.34	-445.35	-1,011.88	1,904,987.00	103,985.16	36.2281166	-107.5926803
7,305.00	90.03	280.40	5,701.34	-433.28	-1,073.71	1,904,999.93	103,923.50	36.2281498	-107.5928899
7,368.00	90.74	280.46	5,700.92	-421.88	-1,135.67	1,905,012.19	103,861.71	36.2281811	-107.5930999
7,431.00	91.04	279.60	5,699.94	-410.91	-1,197.70	1,905,024.01	103,799.84	36.2282112	-107.5933102
7,494.00	91.01	279.50	5,698.81	-400.46	-1,259.81	1,905,035.32	103,737.87	36.2282399	-107.5935208
7,557.00	90.77	279.34	5,697.84	-390.15	-1,321.96	1,905,046.49	103,675.88	36.2282682	-107.5937314
7,620.00	90.94	279.38	5,696.90	-379.90	-1,384.11	1,905,057.59	103,613.87	36.2282964	-107.5939421
7,682.00	90.87	279.27	5,695.92	-369.86	-1,445.28	1,905,068.48	103,552.84	36.2283240	-107.5941495
7,745.00	90.60	278.60	5,695.11	-360.07	-1,507.51	1,905,079.12	103,490.75	36.2283508	-107.5943605
7,808.00	90.81	278.43	5,694.33	-350.75	-1,569.81	1,905,089.31	103,428.59	36.2283764	-107.5945717
7,871.00	90.74	278.87	5,693.48	-341.27	-1,632.09	1,905,099.64	103,366.45	36.2284024	-107.5947828
7,934.00	90.54	277.58	5,692.78	-332.26	-1,694.44	1,905,109.52	103,304.23	36.2284272	-107.5949941
7,997.00	89.96	276.77	5,692.50	-324.39	-1,756.94	1,905,118.25	103,241.84	36.2284488	-107.5952060
8,060.00	91.11	277.37	5,691.91	-316.64	-1,819.46	1,905,126.86	103,179.44	36.2284701	-107.5954180
8,123.00	91.81	280.47	5,690.31	-306.87	-1,881.67	1,905,137.49	103,117.37	36.2284969	-107.5956289
8,186.00	90.97	281.52	5,688.78	-294.86	-1,943.50	1,905,150.35	103,055.72	36.2285299	-107.5958384
8,249.00	91.24	281.70	5,687.57	-282.19	-2,005.19	1,905,163.88	102,994.20	36.2285647	-107.5960476
8,312.00	91.18	281.36	5,686.24	-269.60	-2,066.91	1,905,177.32	102,932.66	36.2285992	-107.5962568
8,375.00	90.57	281.74	5,685.27	-256.98	-2,128.63	1,905,190.78	102,871.13	36.2286339	-107.5964660
8,437.00	90.91	281.28	5,684.47	-244.61	-2,189.37	1,905,203.99	102,810.56	36.2286678	-107.5966720
8,500.00	91.31	281.65	5,683.25	-232.09	-2,251.11	1,905,217.36	102,749.00	36.2287022	-107.5968813
8,563.00	91.14	282.54	5,681.91	-218.90	-2,312.69	1,905,231.41	102,687.61	36.2287385	-107.5970900
8,626.00	90.47	283.01	5,681.02	-204.97	-2,374.13	1,905,246.19	102,626.37	36.2287767	-107.5972983
8,689.00	91.18	282.53	5,680.11	-191.04	-2,435.56	1,905,260.96	102,565.13	36.2288149	-107.5975066
8,752.00	91.41	282.36	5,678.69	-177.47	-2,497.06	1,905,275.38	102,503.82	36.2288522	-107.5977151
8,814.00	90.67	282.84	5,677.56	-163.95	-2,557.56	1,905,289.74	102,443.52	36.2288893	-107.5979202
8,877.00	90.97	283.05	5,676.66	-149.84	-2,618.95	1,905,304.70	102,382.33	36.2289281	-107.5981283



Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2307-17H
Well: Chaco 2307-17H #163H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Chaco 2307-17H #163H
TVD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
MD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
North Reference: True
Survey Calculation Method: Minimum Curvature
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
8,940.00	91.04	282.07	5,675.56	-136.14	-2,680.44	1,905,319.24	102,321.04	36.2289657	-107.5983367
9,003.00	91.04	281.91	5,674.41	-123.05	-2,742.05	1,905,333.18	102,259.61	36.2290016	-107.5985456
9,066.00	90.74	281.48	5,673.44	-110.28	-2,803.74	1,905,346.80	102,198.11	36.2290367	-107.5987547
9,128.00	90.34	281.81	5,672.85	-97.77	-2,864.46	1,905,360.15	102,137.57	36.2290710	-107.5989605
9,191.00	91.11	282.36	5,672.05	-84.58	-2,926.05	1,905,374.19	102,076.16	36.2291072	-107.5991694
9,254.00	90.57	281.85	5,671.13	-71.37	-2,987.65	1,905,388.25	102,014.76	36.2291435	-107.5993782
9,317.00	89.76	281.54	5,670.95	-58.60	-3,049.34	1,905,401.87	101,953.25	36.2291785	-107.5995873
9,380.00	90.30	281.27	5,670.92	-46.14	-3,111.09	1,905,415.18	101,891.67	36.2292127	-107.5997967
9,442.00	90.74	281.43	5,670.35	-33.94	-3,171.88	1,905,428.22	101,831.06	36.2292462	-107.6000027
9,505.00	90.71	281.72	5,669.56	-21.30	-3,233.59	1,905,441.71	101,769.53	36.2292809	-107.6002119
9,568.00	90.20	282.83	5,669.06	-7.91	-3,295.15	1,905,455.95	101,708.16	36.2293177	-107.6004206
9,631.00	90.61	282.50	5,668.61	5.90	-3,356.61	1,905,470.61	101,646.89	36.2293556	-107.6006290
9,694.00	91.31	282.26	5,667.55	19.41	-3,418.14	1,905,484.97	101,585.56	36.2293927	-107.6008376
9,757.00	90.81	282.30	5,666.39	32.81	-3,479.69	1,905,499.21	101,524.20	36.2294295	-107.6010462
9,820.00	90.13	282.81	5,665.87	46.50	-3,541.18	1,905,513.76	101,462.91	36.2294671	-107.6012547
9,883.00	90.27	280.97	5,665.65	59.48	-3,602.82	1,905,527.58	101,401.45	36.2295027	-107.6014637
9,945.00	91.68	280.27	5,664.60	70.90	-3,663.75	1,905,539.85	101,340.68	36.2295341	-107.6016702
10,008.00	90.81	280.92	5,663.23	82.48	-3,725.66	1,905,552.28	101,278.94	36.2295658	-107.6018801
10,071.00	91.01	280.52	5,662.23	94.20	-3,787.55	1,905,564.86	101,217.21	36.2295980	-107.6020899
10,134.00	91.52	280.34	5,660.84	105.60	-3,849.50	1,905,577.11	101,155.43	36.2296293	-107.6022999
10,197.00	90.77	279.66	5,659.58	116.54	-3,911.53	1,905,588.91	101,093.56	36.2296593	-107.6025102
10,260.00	90.71	279.10	5,658.76	126.81	-3,973.68	1,905,600.03	101,031.56	36.2296875	-107.6027209
10,323.00	91.18	278.58	5,657.73	136.49	-4,035.92	1,905,610.57	100,969.45	36.2297141	-107.6029319
10,386.00	90.75	278.53	5,656.66	145.86	-4,098.21	1,905,620.80	100,907.30	36.2297398	-107.6031431
10,448.00	91.41	279.35	5,655.50	155.49	-4,159.45	1,905,631.28	100,846.20	36.2297662	-107.6033507
10,511.00	90.67	279.58	5,654.35	165.85	-4,221.58	1,905,642.49	100,784.22	36.2297946	-107.6035613
10,574.00	90.61	278.89	5,653.65	175.96	-4,283.76	1,905,653.46	100,722.19	36.2298224	-107.6037721
10,637.00	91.01	278.86	5,652.76	185.68	-4,346.00	1,905,664.04	100,660.09	36.2298490	-107.6039831
10,700.00	91.21	278.52	5,651.54	195.19	-4,408.26	1,905,674.42	100,597.96	36.2298752	-107.6041942
10,763.00	91.68	279.61	5,649.95	205.12	-4,470.46	1,905,685.20	100,535.91	36.2299024	-107.6044050
10,789.00	90.54	280.62	5,649.45	209.68	-4,496.05	1,905,690.12	100,510.39	36.2299149	-107.6044918
Last SDI Lateral MWD Survey									
10,833.00	90.54	280.62	5,649.03	217.79	-4,539.29	1,905,698.82	100,467.26	36.2299372	-107.6046384
Base RSI @ 10,833' MD									
10,853.00	90.54	280.62	5,648.84	221.48	-4,558.95	1,905,702.78	100,447.65	36.2299473	-107.6047050
Projection to TD									



Company: WPX Energy Rocky Mountain, LLC
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Wellbore: OH
Design: OH

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TVD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
MD Reference: GL 7257' & RKB 14' @ 7271.00ft (Aztec 730)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
64.00	64.00	-0.12	0.12	First Native Navigation Gyro Survey
339.00	338.99	-0.48	1.62	Last Native Navigation Gyro Survey
465.00	464.99	-1.03	2.27	First SDI Surface MWD Survey
5,103.00	4,970.72	-785.32	657.48	Last SDI Surface MWD Survey
5,134.00	5,001.71	-785.24	657.44	First SDI Curve MWD Survey
6,268.00	5,711.67	-652.99	-60.87	Last SDI Curve MWD Survey
6,318.00	5,711.88	-644.98	-110.22	7" Casing @ 6318' MD
6,348.00	5,710.99	-640.59	-139.88	First SDI Lateral MWD Survey
10,789.00	5,649.45	209.68	-4,496.05	Last SDI Lateral MWD Survey
10,833.00	5,649.03	217.79	-4,539.29	Base RSI @ 10,833' MD
10,853.00	5,648.84	221.48	-4,558.95	Projection to TD

Checked By: _____ Approved By: _____ Date: _____