

9

WPXENERGY

WPX Energy Rocky Mountain, LLC

San Juan County, NM NAD27

Chaco 2308-08A

Chaco 2308-08A #285H

OH

OIL CONS. DIV DIST. 3

APR 28 2015

Design: OH

Survey Report - Geographic

31 March, 2015

CONFIDENTIAL



Scientific Drilling

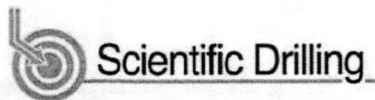
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Company Name: WPX Energy Rocky Mountain, LLC
 Project: San Juan County, NM NAD27
 Site: Chaco 2308-08A
 Well: Chaco 2308-08A #285H

WPXENERGY

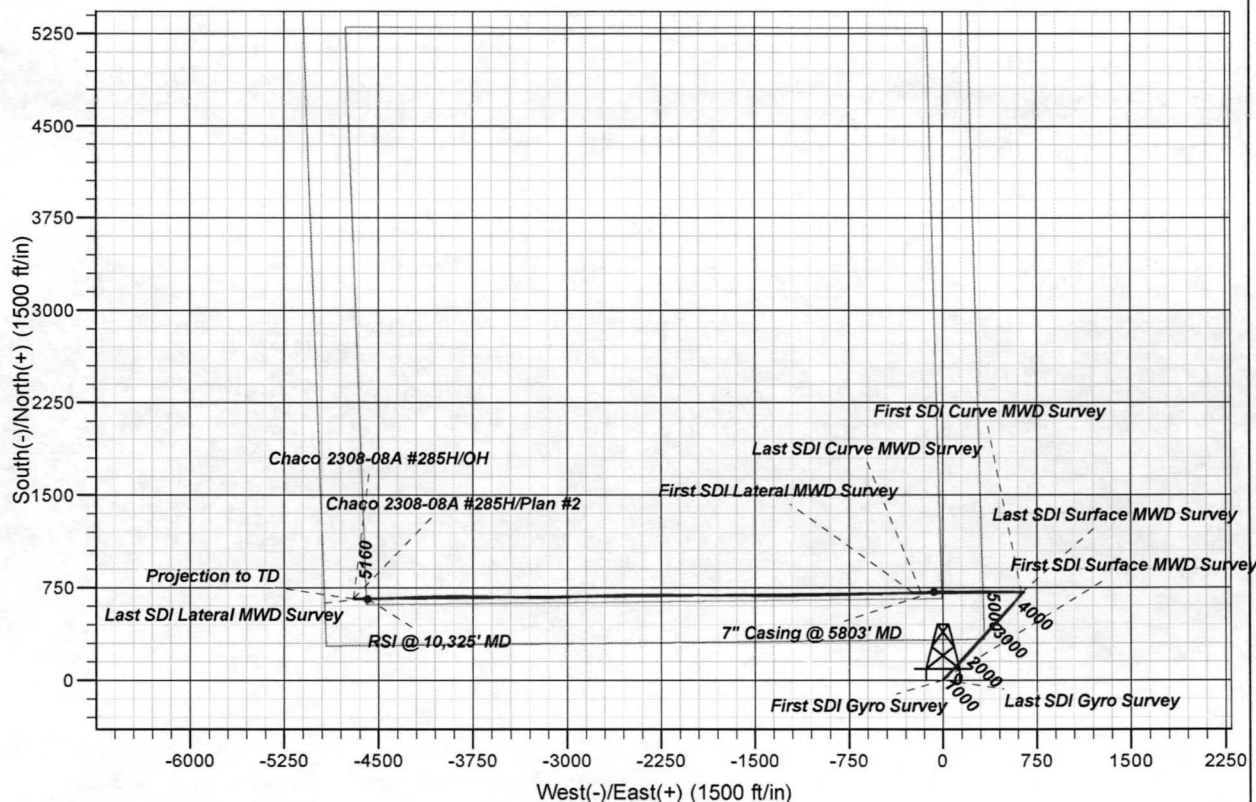
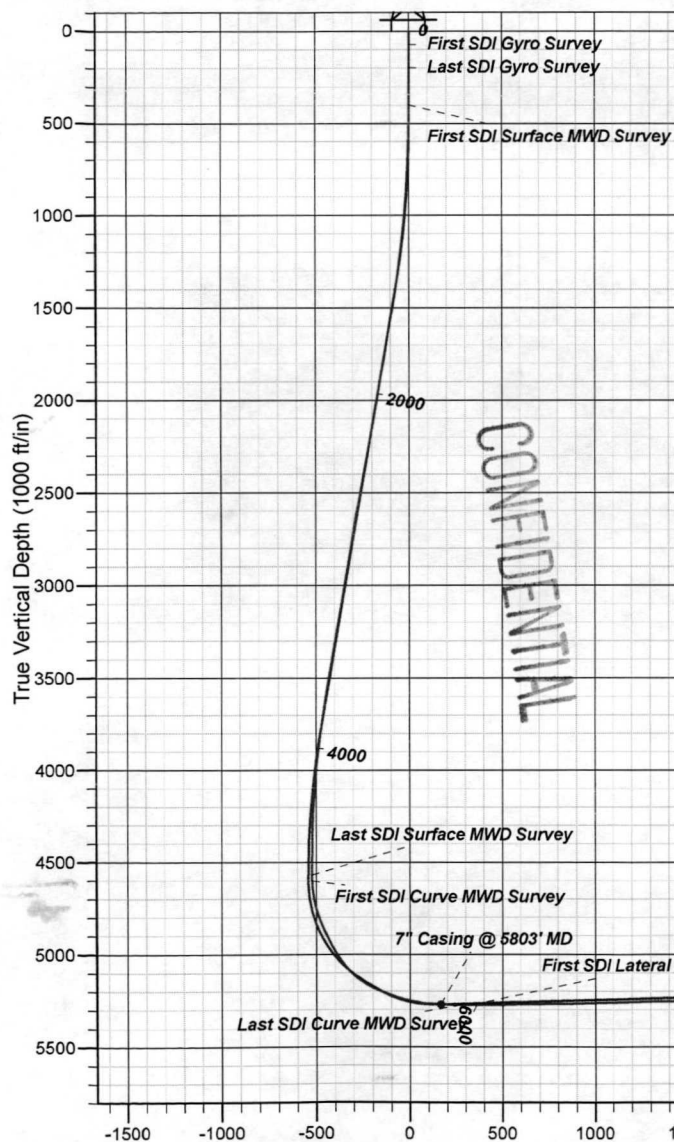


Azimuths to True North
 Magnetic North: 9.45°

Magnetic Field
 Strength: 49988.5nT
 Dip Angle: 62.98°
 Date: 3/14/2015
 Model: BGGM2014

WELL DETAILS: Chaco 2308-08A #285H

GL 6846' & RKB 14' @ 6860.00ft (Aztec 730)		6846.00	
+N/-S	+E/-W	Northing	Easting
0.00	0.00	1909585.05	540411.96
			Latitude
			Longitude
			36.2481170 -107.6962810



Vertical Section at 278.01° (1000 ft/in)

Design: OH (Chaco 2308-08A #285H/OH)
Created By: Janie Collins Date: 17:48, March 31 2015
PROJECT DETAILS: San Juan County, NM NAD27
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
Local North: True

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2308-08A #285H
Project:	San Juan County, NM NAD27	TVD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Site:	Chaco 2308-08A	MD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Well:	Chaco 2308-08A #285H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Project	San Juan 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 West 3003		

Site		Chaco 2308-08A			
Site Position:		Northing:	1,909,585.05 usft	Latitude:	36.2481170
From:	Lat/Long	Easting:	540,411.97 usft	Longitude:	-107.6962810
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.08 °

Well	Chaco 2308-08A #285H					
Well Position	+N/-S	0.00 usft	Northing:	1,909,585.05 usft	Latitude:	36.2481170
	+E/-W	0.00 usft	Easting:	540,411.97 usft	Longitude:	-107.6962810
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,845.99 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	3/14/2015			

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	278.01	

Survey Program	Date	4/1/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
73.79	198.86	Survey #1 - Gyro Survey (OH)	SDI Standard Keeper 103	SDI Standard Wireline Keeper ver 1.0.3	
399.00	4,697.00	Survey #2 - Surface MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
4,728.00	5,914.00	Survey #3 - Curve MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
5,975.00	10,437.00	Survey #4 - Lateral MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,909,585.05	540,411.97	36.2481170	-107.6962810
73.79	0.54	30.40	73.79	0.30	0.18	1,909,585.35	540,412.14	36.2481178	-107.6962804
First SDI Gyro Survey									
99.41	0.60	35.68	99.41	0.51	0.32	1,909,585.56	540,412.28	36.2481184	-107.6962800
124.67	0.54	28.64	124.67	0.72	0.45	1,909,585.77	540,412.41	36.2481190	-107.6962795
149.22	0.57	38.74	149.21	0.92	0.58	1,909,585.97	540,412.55	36.2481195	-107.6962791
174.68	0.35	42.95	174.67	1.08	0.71	1,909,586.13	540,412.68	36.2481199	-107.6962786
198.86	0.51	21.44	198.85	1.23	0.80	1,909,586.28	540,412.77	36.2481204	-107.6962783
Last SDI Gyro Survey									

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Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2308-08A #285H
Project:	San Juan County, NM NAD27	TVD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Site:	Chaco 2308-08A	MD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Well:	Chaco 2308-08A #285H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
399.00	0.47	312.82	398.99	2.62	0.53	1,909,587.67	540,412.49	36.2481242	-107.6962793
First SDI Surface MWD Survey									
462.00	0.27	307.09	461.99	2.88	0.22	1,909,587.93	540,412.18	36.2481249	-107.6962803
525.00	0.39	345.06	524.99	3.18	0.05	1,909,588.23	540,412.01	36.2481257	-107.6962809
588.00	3.23	42.36	587.95	4.70	1.19	1,909,589.75	540,413.14	36.2481299	-107.6962770
651.00	3.91	45.57	650.83	7.51	3.92	1,909,592.57	540,415.87	36.2481376	-107.6962678
714.00	3.72	54.69	713.69	10.20	7.12	1,909,595.26	540,419.07	36.2481450	-107.6962569
776.00	4.48	49.33	775.53	12.94	10.60	1,909,598.00	540,422.54	36.2481525	-107.6962451
839.00	6.16	49.17	838.26	16.75	15.02	1,909,601.82	540,426.96	36.2481630	-107.6962301
902.00	6.96	46.75	900.84	21.58	20.36	1,909,606.66	540,432.29	36.2481763	-107.6962120
965.00	7.52	45.11	963.34	27.10	26.06	1,909,612.19	540,437.99	36.2481914	-107.6961927
1,028.00	8.49	44.76	1,025.73	33.32	32.25	1,909,618.41	540,444.17	36.2482085	-107.6961717
1,090.00	9.56	42.90	1,086.96	40.34	38.98	1,909,625.44	540,450.89	36.2482278	-107.6961488
1,153.00	10.81	41.64	1,148.96	48.59	46.47	1,909,633.70	540,458.36	36.2482504	-107.6961234
1,215.00	11.93	43.04	1,209.75	57.61	54.71	1,909,642.74	540,466.59	36.2482753	-107.6960955
1,276.00	12.77	46.98	1,269.33	66.82	63.94	1,909,651.96	540,475.81	36.2483005	-107.6960642
1,337.00	13.92	47.48	1,328.69	76.38	74.27	1,909,661.53	540,486.13	36.2483268	-107.6960291
1,399.00	14.64	47.18	1,388.77	86.75	85.52	1,909,671.92	540,497.36	36.2483553	-107.6959910
1,460.00	14.53	46.73	1,447.80	97.23	96.74	1,909,682.42	540,508.57	36.2483841	-107.6959529
1,522.00	15.78	46.00	1,507.65	108.42	108.47	1,909,693.62	540,520.28	36.2484148	-107.6959132
1,583.00	16.26	44.17	1,566.28	120.31	120.39	1,909,705.53	540,532.18	36.2484475	-107.6958728
1,644.00	17.07	44.42	1,624.72	132.83	132.61	1,909,718.06	540,544.38	36.2484819	-107.6958313
1,705.00	17.16	42.45	1,683.02	145.86	144.95	1,909,731.11	540,556.71	36.2485177	-107.6957895
1,767.00	16.93	40.85	1,742.29	159.44	157.02	1,909,744.71	540,568.76	36.2485550	-107.6957485
1,828.00	16.23	40.52	1,800.76	172.64	168.37	1,909,757.92	540,580.09	36.2485912	-107.6957100
1,889.00	15.79	40.81	1,859.39	185.40	179.34	1,909,770.70	540,591.04	36.2486263	-107.6956728
1,951.00	15.61	42.49	1,919.08	197.93	190.48	1,909,783.25	540,602.17	36.2486607	-107.6956350
2,012.00	16.82	42.26	1,977.65	210.52	201.96	1,909,795.85	540,613.63	36.2486953	-107.6955961
2,073.00	18.04	41.66	2,035.85	224.11	214.18	1,909,809.46	540,625.82	36.2487326	-107.6955547
2,135.00	17.82	41.16	2,094.84	238.42	226.80	1,909,823.79	540,638.43	36.2487720	-107.6955119
2,196.00	17.50	40.26	2,152.96	252.45	238.87	1,909,837.84	540,650.48	36.2488105	-107.6954709
2,257.00	17.13	40.03	2,211.20	266.33	250.58	1,909,851.73	540,662.17	36.2488486	-107.6954312
2,319.00	17.52	39.99	2,270.38	280.47	262.45	1,909,865.89	540,674.02	36.2488875	-107.6953910
2,380.00	17.46	42.60	2,328.56	294.24	274.54	1,909,879.68	540,686.09	36.2489253	-107.6953500
2,441.00	17.33	43.39	2,386.78	307.58	286.98	1,909,893.03	540,698.51	36.2489619	-107.6953078
2,503.00	17.36	42.75	2,445.96	321.08	299.60	1,909,906.55	540,711.11	36.2489990	-107.6952650
2,564.00	17.60	42.81	2,504.14	334.53	312.04	1,909,920.02	540,723.54	36.2490360	-107.6952228
2,625.00	17.66	42.30	2,562.27	348.14	324.54	1,909,933.65	540,736.01	36.2490734	-107.6951804
2,687.00	17.64	42.22	2,621.36	362.05	337.18	1,909,947.58	540,748.63	36.2491116	-107.6951375
2,748.00	16.98	41.61	2,679.59	375.56	349.31	1,909,961.10	540,760.74	36.2491487	-107.6950964
2,809.00	16.85	41.20	2,737.95	388.87	361.04	1,909,974.43	540,772.46	36.2491852	-107.6950566
2,871.00	16.99	40.37	2,797.27	402.53	372.83	1,909,988.11	540,784.23	36.2492228	-107.6950166
2,932.00	16.48	40.04	2,855.69	415.94	384.17	1,910,001.54	540,795.55	36.2492596	-107.6949782
2,995.00	16.16	40.29	2,916.15	429.47	395.59	1,910,015.08	540,806.95	36.2492968	-107.6949394
3,058.00	16.71	42.51	2,976.57	442.84	407.38	1,910,028.46	540,818.72	36.2493335	-107.6948995
3,120.00	16.95	43.35	3,035.92	455.98	419.60	1,910,041.62	540,830.92	36.2493696	-107.6948580
3,183.00	17.23	42.54	3,096.14	469.53	432.22	1,910,055.19	540,843.52	36.2494068	-107.6948152
3,246.00	16.36	42.58	3,156.45	482.94	444.53	1,910,068.62	540,855.81	36.2494437	-107.6947735
3,309.00	17.01	43.28	3,216.80	496.18	456.85	1,910,081.88	540,868.11	36.2494801	-107.6947317
3,372.00	17.26	43.02	3,277.00	509.72	469.54	1,910,095.44	540,880.79	36.2495173	-107.6946886
3,435.00	16.62	42.49	3,337.27	523.20	482.01	1,910,108.93	540,893.23	36.2495543	-107.6946463
3,497.00	16.21	42.02	3,396.74	536.17	493.79	1,910,121.92	540,905.00	36.2495899	-107.6946064
3,560.00	15.85	41.91	3,457.29	549.10	505.42	1,910,134.87	540,916.61	36.2496254	-107.6945669
3,623.00	16.66	40.34	3,517.77	562.39	517.01	1,910,148.17	540,928.18	36.2496619	-107.6945276
3,686.00	17.24	39.66	3,578.03	576.46	528.82	1,910,162.26	540,939.97	36.2497006	-107.6944876

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2308-08A #285H
Project:	San Juan County, NM NAD27	TVD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Site:	Chaco 2308-08A	MD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Well:	Chaco 2308-08A #285H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,749.00	17.06	39.97	3,638.23	590.73	540.71	1,910,176.54	540,951.84	36.2497398	-107.6944472
3,811.00	16.61	39.31	3,697.57	604.56	552.17	1,910,190.39	540,963.28	36.2497778	-107.6944084
3,874.00	16.64	38.12	3,757.94	618.62	563.44	1,910,204.47	540,974.53	36.2498164	-107.6943702
3,937.00	15.05	39.26	3,818.55	632.05	574.19	1,910,217.91	540,985.26	36.2498533	-107.6943337
4,000.00	13.29	34.97	3,879.63	644.32	583.52	1,910,230.19	540,994.57	36.2498870	-107.6943021
4,063.00	12.04	36.40	3,941.09	655.54	591.57	1,910,241.43	541,002.60	36.2499178	-107.6942748
4,126.00	10.35	39.16	4,002.89	665.22	599.04	1,910,251.12	541,010.06	36.2499444	-107.6942494
4,188.00	9.63	37.46	4,063.95	673.65	605.71	1,910,259.56	541,016.72	36.2499676	-107.6942268
4,251.00	8.02	38.04	4,126.21	681.30	611.62	1,910,267.21	541,022.62	36.2499886	-107.6942067
4,314.00	6.69	36.65	4,188.69	687.70	616.52	1,910,273.63	541,027.51	36.2500062	-107.6941901
4,377.00	5.48	38.30	4,251.33	693.01	620.58	1,910,278.94	541,031.56	36.2500208	-107.6941764
4,440.00	3.54	37.16	4,314.13	696.92	623.62	1,910,282.85	541,034.60	36.2500315	-107.6941661
4,503.00	2.57	28.14	4,377.04	699.72	625.46	1,910,285.65	541,036.43	36.2500392	-107.6941598
4,566.00	1.89	26.63	4,439.99	701.89	626.59	1,910,287.83	541,037.56	36.2500452	-107.6941560
4,629.00	0.62	27.73	4,502.98	703.12	627.21	1,910,289.06	541,038.18	36.2500485	-107.6941539
4,665.00	0.36	44.91	4,538.98	703.37	627.38	1,910,289.31	541,038.35	36.2500492	-107.6941533
4,696.99	0.17	27.00	4,570.97	703.49	627.48	1,910,289.42	541,038.45	36.2500495	-107.6941530
Last SDI Surface MWD Survey									
4,697.00	0.17	26.99	4,570.98	703.49	627.48	1,910,289.42	541,038.45	36.2500495	-107.6941530
4,728.00	1.73	271.34	4,601.97	703.54	627.03	1,910,289.47	541,038.00	36.2500497	-107.6941545
First SDI Curve MWD Survey									
4,760.00	4.75	282.39	4,633.92	703.84	625.25	1,910,289.77	541,036.22	36.2500505	-107.6941605
4,791.00	7.52	284.24	4,664.74	704.61	622.03	1,910,290.54	541,033.00	36.2500526	-107.6941714
4,823.00	10.87	282.30	4,696.32	705.77	617.05	1,910,291.69	541,028.02	36.2500558	-107.6941883
4,854.00	13.67	281.10	4,726.61	707.10	610.60	1,910,293.01	541,021.57	36.2500595	-107.6942102
4,885.00	16.27	281.29	4,756.55	708.65	602.75	1,910,294.55	541,013.71	36.2500637	-107.6942369
4,917.00	18.29	281.62	4,787.11	710.54	593.43	1,910,296.43	541,004.39	36.2500689	-107.6942684
4,948.00	20.49	278.74	4,816.35	712.35	583.30	1,910,298.22	540,994.26	36.2500739	-107.6943028
4,980.00	22.52	273.75	4,846.12	713.60	571.65	1,910,299.45	540,982.61	36.2500773	-107.6943423
5,011.00	24.97	272.41	4,874.50	714.26	559.19	1,910,300.10	540,970.14	36.2500791	-107.6943846
5,043.00	25.52	272.80	4,903.44	714.88	545.55	1,910,300.70	540,956.51	36.2500808	-107.6944308
5,074.00	26.47	272.15	4,931.30	715.47	531.98	1,910,301.27	540,942.93	36.2500825	-107.6944769
5,106.00	28.52	270.04	4,959.69	715.74	517.21	1,910,301.52	540,928.16	36.2500832	-107.6945269
5,137.00	31.04	267.67	4,986.59	715.42	501.82	1,910,301.18	540,912.77	36.2500823	-107.6945791
5,168.00	33.16	266.33	5,012.85	714.55	485.37	1,910,300.29	540,896.33	36.2500799	-107.6946349
5,200.00	35.96	269.16	5,039.20	713.85	467.24	1,910,299.56	540,878.20	36.2500780	-107.6946964
5,231.00	39.22	271.97	5,063.77	714.06	448.34	1,910,299.74	540,859.29	36.2500786	-107.6947605
5,263.00	43.79	273.38	5,087.73	715.06	427.16	1,910,300.71	540,838.12	36.2500813	-107.6948323
5,294.00	47.57	272.55	5,109.38	716.20	405.02	1,910,301.82	540,815.97	36.2500845	-107.6949074
5,326.00	52.23	270.74	5,129.99	716.89	380.56	1,910,302.48	540,791.51	36.2500864	-107.6949904
5,357.00	56.10	270.39	5,148.13	717.14	355.43	1,910,302.69	540,766.38	36.2500870	-107.6950756
5,388.00	61.20	270.39	5,164.26	717.32	328.97	1,910,302.83	540,739.92	36.2500875	-107.6951654
5,420.00	63.97	269.08	5,178.99	717.18	300.57	1,910,302.65	540,711.52	36.2500872	-107.6952617
5,451.00	65.07	269.25	5,192.33	716.77	272.58	1,910,302.21	540,683.53	36.2500861	-107.6953566
5,483.00	67.01	269.92	5,205.32	716.56	243.34	1,910,301.95	540,654.30	36.2500855	-107.6954558
5,514.00	69.12	270.74	5,216.90	716.73	214.59	1,910,302.08	540,625.54	36.2500859	-107.6955533
5,546.00	71.12	270.18	5,227.78	716.97	184.50	1,910,302.28	540,595.45	36.2500866	-107.6956553
5,577.00	74.22	270.13	5,237.01	717.05	154.91	1,910,302.32	540,565.86	36.2500868	-107.6957557
5,609.00	75.14	269.20	5,245.47	716.87	124.05	1,910,302.09	540,535.00	36.2500863	-107.6958603
5,640.00	77.12	270.83	5,252.90	716.88	93.96	1,910,302.06	540,504.91	36.2500863	-107.6959624
5,672.00	80.26	270.82	5,259.18	717.33	62.58	1,910,302.47	540,473.53	36.2500876	-107.6960688
5,703.00	83.89	270.48	5,263.45	717.68	31.89	1,910,302.77	540,442.84	36.2500885	-107.6961729
5,735.00	85.18	269.50	5,266.50	717.67	0.03	1,910,302.72	540,410.98	36.2500885	-107.6962809
5,760.00	85.69	268.84	5,268.49	717.31	-24.88	1,910,302.32	540,386.07	36.2500875	-107.6963654

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2308-08A #285H
Project:	San Juan County, NM NAD27	TVD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Site:	Chaco 2308-08A	MD Reference:	GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
Well:	Chaco 2308-08A #285H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,803.00	87.25	267.87	5,271.13	716.08	-67.78	1,910,301.03	540,343.17	36.2500841	-107.6965109
36.2500842, -107.6965108 - 7" Casing @ 5803' MD									
5,853.00	89.06	266.74	5,272.75	713.73	-117.70	1,910,298.61	540,293.26	36.2500777	-107.6966802
5,914.00	89.56	266.89	5,273.48	710.34	-178.60	1,910,295.13	540,232.36	36.2500684	-107.6968868
Last SDI Curve MWD Survey									
5,975.00	90.24	268.34	5,273.59	707.80	-239.54	1,910,292.51	540,171.42	36.2500614	-107.6970934
First SDI Lateral MWD Survey									
6,037.00	90.07	267.70	5,273.42	705.66	-301.51	1,910,290.28	540,109.46	36.2500555	-107.6973036
6,098.00	90.40	267.26	5,273.17	702.98	-362.45	1,910,287.51	540,048.52	36.2500481	-107.6975103
6,159.00	90.77	267.65	5,272.55	700.27	-423.38	1,910,284.72	539,987.59	36.2500407	-107.6977169
6,220.00	90.64	267.76	5,271.80	697.83	-484.33	1,910,282.19	539,926.65	36.2500340	-107.6979236
6,282.00	90.67	269.37	5,271.09	696.27	-546.30	1,910,280.55	539,864.68	36.2500297	-107.6981338
6,343.00	90.87	268.14	5,270.27	694.95	-607.28	1,910,279.14	539,803.70	36.2500261	-107.6983406
6,404.00	90.37	268.40	5,269.61	693.11	-668.25	1,910,277.21	539,742.73	36.2500210	-107.6985474
6,466.00	90.74	268.45	5,269.01	691.40	-730.23	1,910,275.42	539,680.76	36.2500163	-107.6987576
6,527.00	91.01	268.46	5,268.07	689.76	-791.20	1,910,273.69	539,619.79	36.2500118	-107.6989643
6,588.00	91.41	268.04	5,266.79	687.89	-852.15	1,910,271.74	539,558.84	36.2500067	-107.6991711
6,650.00	91.92	269.49	5,264.98	686.56	-914.11	1,910,270.31	539,496.88	36.2500030	-107.6993812
6,711.00	91.88	269.93	5,262.96	686.25	-975.08	1,910,269.92	539,435.92	36.2500022	-107.6995880
6,772.00	91.71	269.69	5,261.05	686.05	-1,036.05	1,910,269.63	539,374.95	36.2500016	-107.6997947
6,834.00	91.75	268.93	5,259.18	685.30	-1,098.01	1,910,268.80	539,312.98	36.2499995	-107.7000049
6,895.00	91.48	269.12	5,257.46	684.26	-1,158.98	1,910,267.67	539,252.02	36.2499967	-107.7002117
6,956.00	91.21	270.24	5,256.03	683.92	-1,219.96	1,910,267.25	539,191.04	36.2499957	-107.7004185
7,018.00	91.25	269.38	5,254.70	683.72	-1,281.95	1,910,266.95	539,129.05	36.2499952	-107.7006287
7,079.00	91.28	269.91	5,253.35	683.34	-1,342.93	1,910,266.49	539,068.07	36.2499941	-107.7008355
7,140.00	91.41	269.67	5,251.92	683.12	-1,403.91	1,910,266.18	539,007.09	36.2499935	-107.7010424
7,203.00	90.34	270.63	5,250.96	683.28	-1,466.90	1,910,266.26	538,944.10	36.2499939	-107.7012560
7,266.00	89.63	269.58	5,250.97	683.40	-1,529.90	1,910,266.28	538,881.10	36.2499943	-107.7014696
7,329.00	90.61	269.15	5,250.84	682.70	-1,592.90	1,910,265.49	538,818.10	36.2499923	-107.7016833
7,392.00	90.67	270.54	5,250.14	682.53	-1,655.89	1,910,265.23	538,755.11	36.2499918	-107.7018969
7,455.00	90.77	271.11	5,249.35	683.44	-1,718.88	1,910,266.05	538,692.12	36.2499943	-107.7021105
7,518.00	90.81	271.24	5,248.48	684.73	-1,781.86	1,910,267.26	538,629.14	36.2499979	-107.7023241
7,581.00	91.25	270.96	5,247.35	685.94	-1,844.84	1,910,268.38	538,566.16	36.2500012	-107.7025377
7,643.00	92.56	270.48	5,245.28	686.72	-1,906.80	1,910,269.07	538,504.20	36.2500033	-107.7027479
7,706.00	92.46	270.29	5,242.53	687.14	-1,969.74	1,910,269.40	538,441.26	36.2500045	-107.7029613
7,769.00	91.01	271.18	5,240.62	687.95	-2,032.70	1,910,270.12	538,378.29	36.2500067	-107.7031749
7,832.00	91.38	271.09	5,239.30	689.19	-2,095.67	1,910,271.28	538,315.32	36.2500101	-107.7033884
7,895.00	91.55	271.25	5,237.69	690.48	-2,158.64	1,910,272.48	538,252.35	36.2500136	-107.7036020
7,958.00	91.71	271.06	5,235.90	691.75	-2,221.60	1,910,273.66	538,189.39	36.2500171	-107.7038155
8,021.00	90.77	269.66	5,234.54	692.15	-2,284.58	1,910,273.96	538,126.41	36.2500181	-107.7040291
8,084.00	90.81	269.37	5,233.67	691.61	-2,347.57	1,910,273.34	538,063.41	36.2500167	-107.7042427
8,147.00	90.47	269.46	5,232.97	690.97	-2,410.57	1,910,272.61	538,000.42	36.2500149	-107.7044564
8,210.00	91.04	269.46	5,232.14	690.38	-2,473.56	1,910,271.92	537,937.43	36.2500132	-107.7046700
8,272.00	91.75	269.16	5,230.63	689.63	-2,535.54	1,910,271.09	537,875.46	36.2500112	-107.7048802
8,335.00	90.10	267.86	5,229.61	687.99	-2,598.50	1,910,269.36	537,812.49	36.2500067	-107.7050938
8,398.00	90.84	267.93	5,229.09	685.68	-2,661.46	1,910,266.96	537,749.54	36.2500003	-107.7053073
8,461.00	91.21	268.56	5,227.97	683.75	-2,724.42	1,910,264.94	537,686.58	36.2499950	-107.7055208
8,524.00	91.62	267.52	5,226.41	681.59	-2,787.36	1,910,262.70	537,623.64	36.2499890	-107.7057343
8,587.00	91.55	267.44	5,224.67	678.82	-2,850.28	1,910,259.84	537,560.73	36.2499814	-107.7059476
8,650.00	90.66	267.23	5,223.45	675.90	-2,913.19	1,910,256.82	537,497.82	36.2499734	-107.7061610
8,712.00	90.34	266.52	5,222.91	672.52	-2,975.10	1,910,253.36	537,435.92	36.2499640	-107.7063710
8,775.00	91.18	269.04	5,222.08	670.08	-3,038.04	1,910,250.83	537,372.98	36.2499573	-107.7065844
8,838.00	91.88	268.78	5,220.39	668.88	-3,101.01	1,910,249.54	537,310.02	36.2499540	-107.7067980
8,901.00	92.29	269.04	5,218.10	667.68	-3,163.95	1,910,248.25	537,247.07	36.2499507	-107.7070114
8,964.00	93.20	271.24	5,215.08	667.83	-3,226.88	1,910,248.32	537,184.15	36.2499511	-107.7072248

Company: WPX Energy Rocky Mountain, LLC
Project: San Juan County, NM NAD27
Site: Chaco 2308-08A
Well: Chaco 2308-08A #285H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Chaco 2308-08A #285H
TVD Reference: GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
MD Reference: GL 6846' & RKB 14' @ 6859.99usft (Aztec 730)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,027.00	93.67	271.32	5,211.31	669.24	-3,289.75	1,910,249.63	537,121.27	36.2499550	-107.7074381
9,090.00	93.20	271.00	5,207.53	670.51	-3,352.62	1,910,250.82	537,058.40	36.2499584	-107.7076513
9,153.00	92.29	271.30	5,204.52	671.77	-3,415.54	1,910,251.99	536,995.48	36.2499619	-107.7078647
9,216.00	93.09	271.81	5,201.56	673.48	-3,478.44	1,910,253.61	536,932.57	36.2499665	-107.7080780
9,281.00	92.59	270.95	5,198.34	675.05	-3,543.34	1,910,255.08	536,867.67	36.2499708	-107.7082981
9,342.00	92.35	271.33	5,195.71	676.26	-3,604.27	1,910,256.21	536,806.74	36.2499741	-107.7085048
9,405.00	92.69	271.35	5,192.94	677.73	-3,667.20	1,910,257.59	536,743.81	36.2499782	-107.7087182
9,467.00	92.56	270.62	5,190.10	678.79	-3,729.12	1,910,258.57	536,681.89	36.2499811	-107.7089282
9,530.00	92.32	270.56	5,187.42	679.44	-3,792.06	1,910,259.13	536,618.95	36.2499828	-107.7091416
9,593.00	92.69	270.62	5,184.67	680.09	-3,855.00	1,910,259.69	536,556.01	36.2499846	-107.7093551
9,656.00	92.69	269.73	5,181.71	680.28	-3,917.93	1,910,259.79	536,493.08	36.2499851	-107.7095685
9,719.00	92.66	269.25	5,178.77	679.72	-3,980.86	1,910,259.14	536,430.15	36.2499835	-107.7097819
9,782.00	91.01	268.01	5,176.75	678.22	-4,043.80	1,910,257.55	536,367.21	36.2499793	-107.7099954
9,845.00	91.71	268.37	5,175.26	676.23	-4,106.75	1,910,255.47	536,304.26	36.2499739	-107.7102089
9,907.00	91.95	267.83	5,173.28	674.17	-4,168.69	1,910,253.33	536,242.33	36.2499682	-107.7104190
9,970.00	91.89	268.37	5,171.17	672.09	-4,231.62	1,910,251.15	536,179.40	36.2499624	-107.7106324
10,033.00	91.85	267.78	5,169.11	669.97	-4,294.55	1,910,248.94	536,116.48	36.2499566	-107.7108458
10,096.00	91.55	267.54	5,167.24	667.40	-4,357.47	1,910,246.28	536,053.56	36.2499495	-107.7110592
10,159.00	90.84	267.23	5,165.93	664.53	-4,420.39	1,910,243.32	535,990.64	36.2499416	-107.7112726
10,222.00	90.81	267.53	5,165.02	661.65	-4,483.31	1,910,240.35	535,927.72	36.2499336	-107.7114860
10,285.00	91.15	268.29	5,163.94	659.35	-4,546.26	1,910,237.97	535,864.78	36.2499273	-107.7116995
10,325.00	91.55	268.82	5,163.00	658.34	-4,586.24	1,910,236.90	535,824.80	36.2499245	-107.7118351
36.2499245, -107.7118350 - RSI @ 10,325' MD									
10,348.00	91.78	269.13	5,162.33	657.93	-4,609.22	1,910,236.46	535,801.81	36.2499234	-107.7119130
10,373.00	91.28	270.23	5,161.66	657.79	-4,634.22	1,910,236.28	535,776.82	36.2499230	-107.7119978
Last SDI Lateral MWD Survey									
10,437.00	91.28	270.23	5,160.23	658.05	-4,698.20	1,910,236.45	535,712.84	36.2499237	-107.7122148
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,325.00	5,163.00	658.34	-4,586.24	36.2499245, -107.7118350
10,325.00	5,163.00	658.34	-4,586.24	RSI @ 10,325' MD
10,373.00	5,161.66	657.79	-4,634.22	Last SDI Lateral MWD Survey
10,437.00	5,160.23	658.05	-4,698.20	Projection to TD

Checked By: _____ Approved By: _____ Date: _____