

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

☒ AMENDED REPORT

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-039-31278		2 Pool Code 98088		3 Pool Name CHACO UNIT NE HZ (OIL)	
4 Property Code 313800		5 Property Name NE CHACO COM		6 Well Number 197H	
7 GRID No. 120782		8 Operator Name WPX ENERGY PRODUCTION, LLC		9 Elevation 6845'	

10 Surface Location

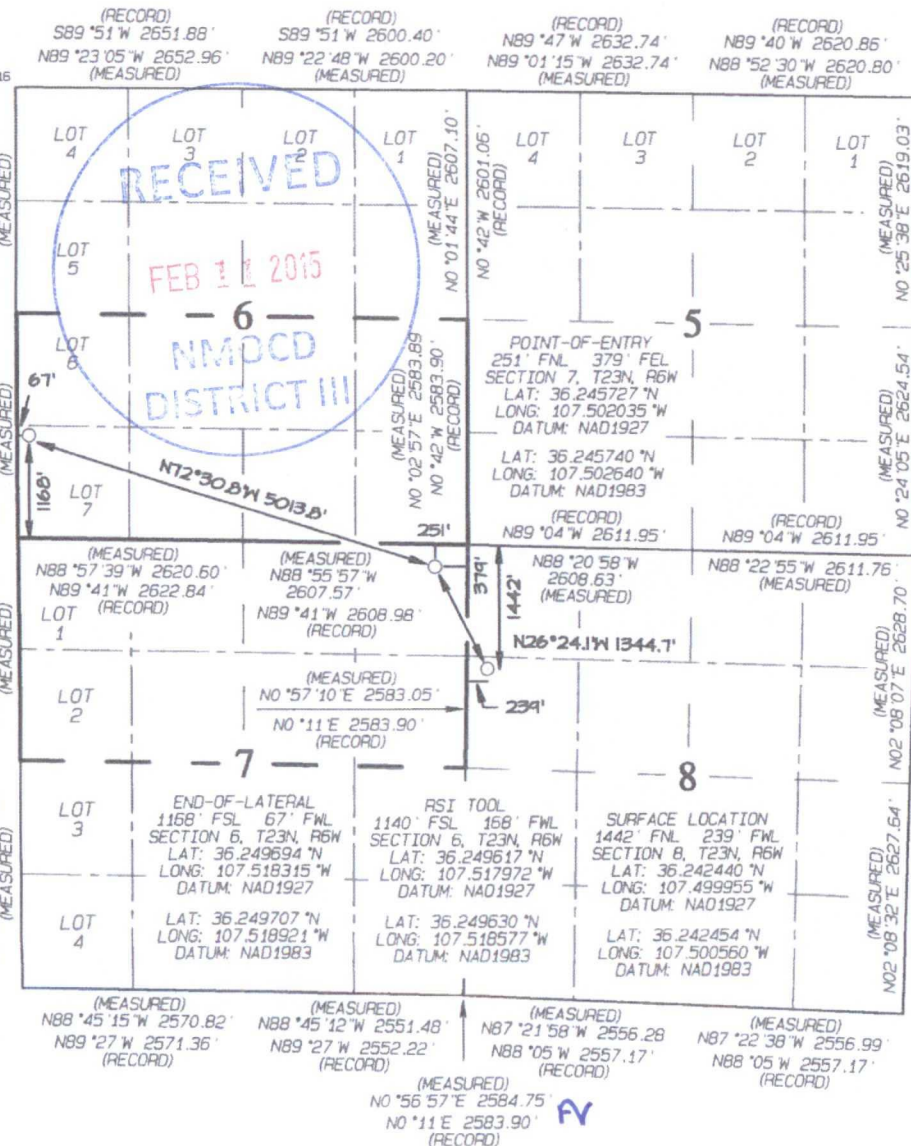
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	8	23N	6W		1442	NORTH	239	WEST	RIO ARriba

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	6	23N	6W	7	1168	SOUTH	67	WEST	RIO ARriba

12 Dedicated Acres 642.42	S/2 - Section 6, T23N, R6W N/2 - Section 7, T23N, R6W	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: *[Signature]* Date: 2/10/15
LACEY GRANILLO
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: FEBRUARY 5, 2015
Date of Survey: MARCH 27, 2014

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



WPX Energy Rocky Mountain, LLC

Rio Arriba County, NM NAD27

Chaco 2306-08E

NE Chaco Com #197H

OH

Design: OH



Survey Report - Geographic

23 January, 2015

CONFIDENTIAL



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5. Support Staff





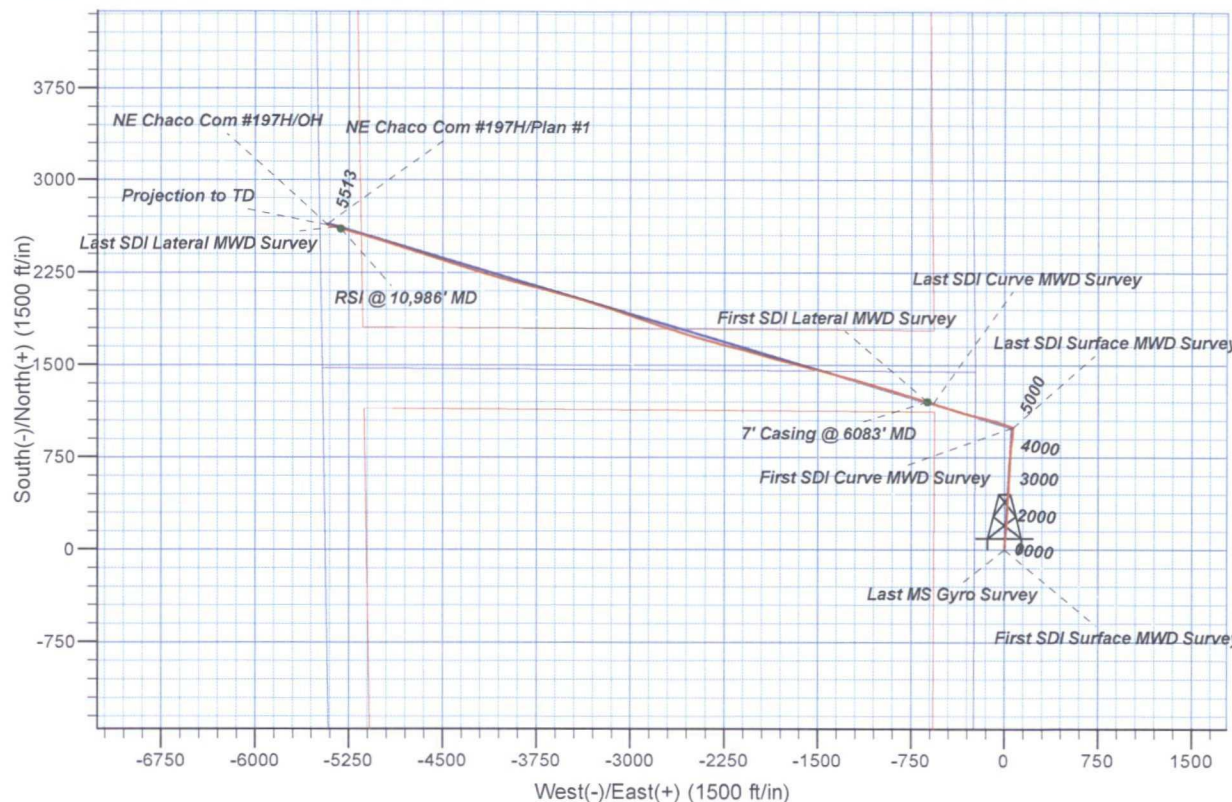
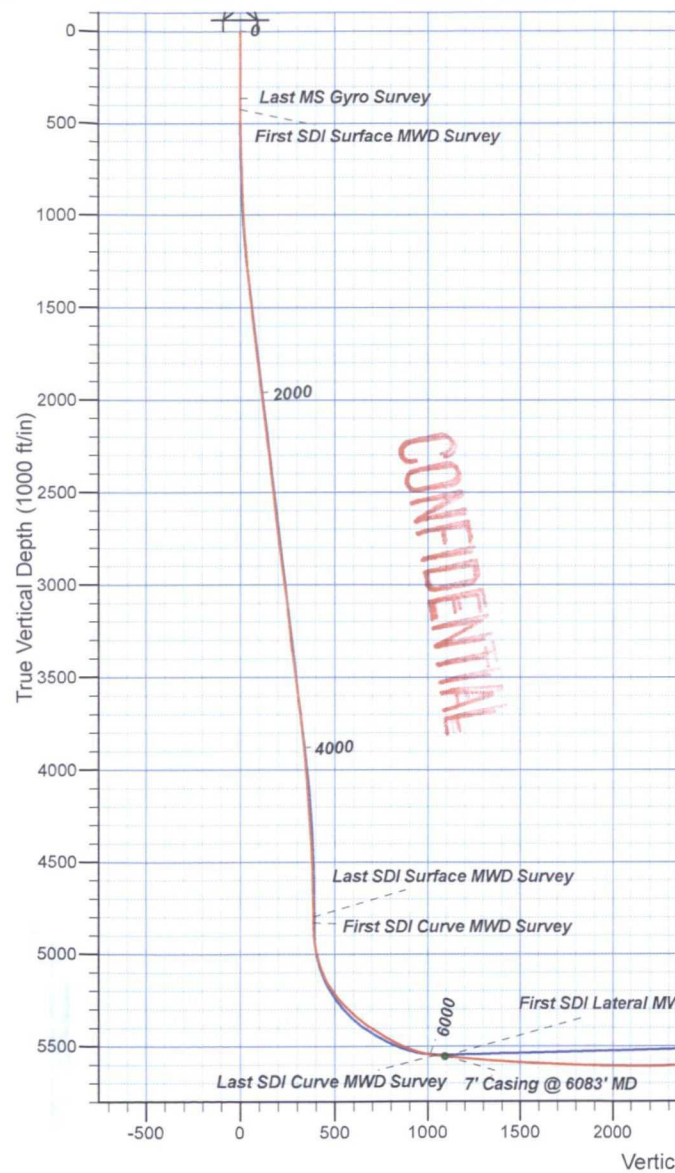
Company Name: WPX Energy Rocky Mountain, LLC
 Project: Rio Arriba County, NM NAD27
 Site: Chaco 2306-08E
 Well: NE Chaco Com #197H



Azimuths to True North
 Magnetic North: 9.39°
 Magnetic Field
 Strength: 50050.7snT
 Dip Angle: 63.01°
 Date: 11/19/2014
 Model: BGGM2014

WELL DETAILS: NE Chaco Com #197H

+N/-S	+E/-W	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)	6845.00
0.00	0.00	Northing	Longitude
		Easting	
		Latitude	
			-107.4999550



Design: OH (NE Chaco Com #197H/OH)
Created By: Janie Collins Date: 11:32, January 26 2015
PROJECT DETAILS: Rio Arriba 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



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #197H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Site:	Chaco 2306-08E	MD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Well:	NE Chaco Com #197H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Project	Rio Arriba 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 2306-08E				
Site Position:		Northing:	1,909,844.62 usft	Latitude:	36.2424630
From:	Lat/Long	Easting:	131,337.13 usft	Longitude:	-107.5001770
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.74 °

Well	NE Chaco Com #197H					
Well Position	+N/-S	0.00 ft	Northing:	1,909,835.40 usft	Latitude:	36.2424400
	+E/-W	0.00 ft	Easting:	131,402.49 usft	Longitude:	-107.4999550
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	6,845.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	11/19/2014	9.40	63.01	50,051

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	296.68	

Survey Program	Date 1/23/2015				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
63.00	363.00	Survey #1 - Gyro Survey (OH)	Gyro		
425.00	4,932.00	Survey #2 - Surface MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
4,964.00	6,035.00	Survey #3 - Curve MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
7,235.00	11,092.00	Survey #4 - Production 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	1,909,835.40	131,402.49	36.2424400	-107.4999550
63.00	0.34	72.36	63.00	0.06	0.18	1,909,835.45	131,402.67	36.2424401	-107.4999544
First MS Gyro Survey									
113.00	0.20	69.54	113.00	0.13	0.40	1,909,835.53	131,402.89	36.2424403	-107.4999537
163.00	0.19	157.34	163.00	0.09	0.51	1,909,835.48	131,403.00	36.2424402	-107.4999533
213.00	0.24	173.72	213.00	-0.09	0.56	1,909,835.30	131,403.05	36.2424397	-107.4999532
263.00	0.42	178.68	263.00	-0.38	0.57	1,909,835.01	131,403.06	36.2424389	-107.4999531
313.00	0.47	230.30	313.00	-0.70	0.42	1,909,834.70	131,402.90	36.2424381	-107.4999536

CONFIDENTIAL

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #197H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Site:	Chaco 2306-08E	MD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Well:	NE Chaco Com #197H	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
363.00	0.69	249.83	362.99	-0.93	-0.02	1,909,834.47	131,402.46	36.2424374	-107.4999551
Last MS Gyro Survey									
425.00	0.81	273.72	424.99	-1.03	-0.81	1,909,834.38	131,401.67	36.2424371	-107.4999578
First SDI Surface MWD Survey									
463.00	0.94	284.22	462.98	-0.94	-1.38	1,909,834.48	131,401.10	36.2424374	-107.4999597
493.00	0.97	286.42	492.98	-0.80	-1.86	1,909,834.62	131,400.62	36.2424378	-107.4999614
524.00	0.74	288.86	523.98	-0.67	-2.30	1,909,834.76	131,400.18	36.2424381	-107.4999628
587.00	2.79	9.46	586.95	0.98	-2.43	1,909,836.41	131,400.07	36.2424427	-107.4999633
651.00	4.33	1.32	650.82	4.93	-2.12	1,909,840.36	131,400.43	36.2424535	-107.4999622
711.00	5.60	0.17	710.60	10.12	-2.06	1,909,845.55	131,400.56	36.2424678	-107.4999620
772.00	6.01	0.14	771.28	16.29	-2.04	1,909,851.72	131,400.65	36.2424847	-107.4999620
833.00	5.73	7.14	831.97	22.51	-1.66	1,909,857.93	131,401.12	36.2425018	-107.4999607
894.00	5.72	8.22	892.66	28.54	-0.85	1,909,863.95	131,402.01	36.2425184	-107.4999579
955.00	7.28	4.81	953.27	35.40	-0.09	1,909,870.80	131,402.86	36.2425372	-107.4999553
1,016.00	8.91	6.76	1,013.66	43.94	0.79	1,909,879.33	131,403.85	36.2425607	-107.4999524
1,077.00	10.21	5.62	1,073.81	54.01	1.88	1,909,889.38	131,405.06	36.2425883	-107.4999487
1,137.00	11.04	3.94	1,132.78	65.04	2.79	1,909,900.39	131,406.12	36.2426186	-107.4999456
1,199.00	12.54	5.46	1,193.47	77.66	3.84	1,909,913.00	131,407.33	36.2426533	-107.4999420
1,259.00	14.32	6.77	1,251.83	91.51	5.34	1,909,926.84	131,409.01	36.2426913	-107.4999369
1,320.00	15.90	6.72	1,310.72	107.30	7.20	1,909,942.60	131,411.08	36.2427347	-107.4999306
1,381.00	15.97	5.91	1,369.37	123.95	9.05	1,909,959.22	131,413.13	36.2427804	-107.4999244
1,442.00	16.36	5.71	1,427.96	140.84	10.77	1,909,976.09	131,415.07	36.2428268	-107.4999185
1,503.00	16.55	6.00	1,486.46	158.03	12.53	1,909,993.26	131,417.05	36.2428741	-107.4999126
1,564.00	16.47	6.43	1,544.95	175.27	14.40	1,910,010.47	131,419.15	36.2429214	-107.4999062
1,624.00	16.69	6.68	1,602.45	192.28	16.36	1,910,027.45	131,421.33	36.2429681	-107.4998996
1,686.00	16.43	4.02	1,661.88	209.86	18.01	1,910,045.01	131,423.20	36.2430164	-107.4998940
1,747.00	15.97	2.14	1,720.46	226.86	18.93	1,910,061.99	131,424.34	36.2430631	-107.4998909
1,808.00	15.68	1.32	1,779.15	243.48	19.43	1,910,078.61	131,425.06	36.2431088	-107.4998892
1,869.00	16.09	1.16	1,837.82	260.18	19.79	1,910,095.30	131,425.64	36.2431546	-107.4998879
1,930.00	15.94	2.78	1,896.45	276.99	20.37	1,910,112.11	131,426.43	36.2432008	-107.4998860
1,991.00	15.21	3.82	1,955.21	293.34	21.31	1,910,128.44	131,427.58	36.2432457	-107.4998828
2,052.00	16.06	3.43	2,013.95	309.75	22.35	1,910,144.84	131,428.83	36.2432908	-107.4998793
2,112.00	17.08	3.99	2,071.46	326.83	23.46	1,910,161.89	131,430.16	36.2433377	-107.4998755
2,172.00	16.42	2.01	2,128.92	344.09	24.37	1,910,179.15	131,431.29	36.2433851	-107.4998724
2,234.00	16.03	0.69	2,188.45	361.41	24.78	1,910,196.46	131,431.93	36.2434327	-107.4998710
2,295.00	16.61	3.44	2,246.99	378.53	25.40	1,910,213.57	131,432.77	36.2434797	-107.4998689
2,356.00	16.38	3.18	2,305.48	395.82	26.40	1,910,230.85	131,433.99	36.2435272	-107.4998655
2,417.00	15.49	0.96	2,364.13	412.56	27.02	1,910,247.57	131,434.82	36.2435732	-107.4998634
2,477.00	14.88	2.66	2,422.04	428.26	27.51	1,910,263.27	131,435.52	36.2436163	-107.4998618
2,540.00	15.92	6.01	2,482.78	444.94	28.79	1,910,279.93	131,437.01	36.2436621	-107.4998574
2,603.00	16.82	5.41	2,543.22	462.61	30.55	1,910,297.57	131,439.01	36.2437106	-107.4998514
2,665.00	16.07	5.22	2,602.69	480.08	32.18	1,910,315.03	131,440.86	36.2437586	-107.4998459
2,728.00	16.83	3.77	2,663.11	497.87	33.57	1,910,332.79	131,442.48	36.2438075	-107.4998412
2,791.00	17.09	2.70	2,723.37	516.21	34.61	1,910,351.12	131,443.75	36.2438579	-107.4998377
2,854.00	16.59	2.62	2,783.67	534.44	35.45	1,910,369.34	131,444.83	36.2439080	-107.4998348
2,916.00	17.33	2.59	2,842.97	552.51	36.28	1,910,387.40	131,445.89	36.2439576	-107.4998320
2,979.00	17.00	2.34	2,903.16	571.09	37.08	1,910,405.96	131,446.93	36.2440086	-107.4998293
3,042.00	16.32	0.78	2,963.52	589.14	37.57	1,910,424.00	131,447.66	36.2440582	-107.4998276
3,105.00	16.71	2.04	3,023.92	607.04	38.02	1,910,441.90	131,448.33	36.2441074	-107.4998261
3,168.00	16.42	0.73	3,084.31	625.00	38.45	1,910,459.85	131,449.00	36.2441567	-107.4998247
3,231.00	15.29	2.84	3,144.91	642.20	38.98	1,910,477.04	131,449.75	36.2442039	-107.4998229
3,294.00	14.81	4.91	3,205.75	658.52	40.08	1,910,493.34	131,451.06	36.2442488	-107.4998191
3,357.00	15.57	4.60	3,266.55	674.97	41.44	1,910,509.78	131,452.64	36.2442940	-107.4998145
3,420.00	16.17	4.71	3,327.14	692.14	42.84	1,910,526.93	131,454.26	36.2443411	-107.4998098
3,483.00	17.41	4.36	3,387.46	710.28	44.28	1,910,545.05	131,455.93	36.2443909	-107.4998049

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #197H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Site:	Chaco 2306-08E	MD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Well:	NE Chaco Com #197H	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
3,545.00	17.54	3.75	3,446.60	728.85	45.60	1,910,563.60	131,457.48	36.2444420	-107.4998004
3,608.00	17.22	1.80	3,506.72	747.64	46.51	1,910,582.38	131,458.64	36.2444936	-107.4997973
3,671.00	16.37	0.72	3,567.03	765.84	46.91	1,910,600.57	131,459.28	36.2445436	-107.4997960
3,734.00	16.76	0.84	3,627.42	783.80	47.16	1,910,618.53	131,459.75	36.2445929	-107.4997951
3,797.00	16.63	1.41	3,687.76	801.90	47.51	1,910,636.62	131,460.34	36.2446426	-107.4997939
3,860.00	16.20	5.78	3,748.20	819.65	48.62	1,910,654.36	131,461.68	36.2446914	-107.4997902
3,923.00	16.03	7.90	3,808.72	837.01	50.70	1,910,671.69	131,463.98	36.2447391	-107.4997831
3,986.00	15.82	9.05	3,869.30	854.11	53.25	1,910,688.75	131,466.75	36.2447860	-107.4997745
4,049.00	15.67	8.82	3,929.94	871.00	55.90	1,910,705.60	131,469.62	36.2448324	-107.4997655
4,112.00	15.52	7.46	3,990.62	887.76	58.30	1,910,722.33	131,472.24	36.2448785	-107.4997574
4,175.00	14.33	7.81	4,051.49	903.84	60.46	1,910,738.39	131,474.60	36.2449226	-107.4997500
4,238.00	12.90	8.48	4,112.72	918.52	62.55	1,910,753.04	131,476.88	36.2449629	-107.4997429
4,301.00	11.34	5.08	4,174.32	931.65	64.14	1,910,766.14	131,478.64	36.2449990	-107.4997376
4,364.00	9.60	2.91	4,236.27	943.07	64.95	1,910,777.55	131,479.60	36.2450304	-107.4997348
4,427.00	8.60	3.71	4,298.47	953.01	65.53	1,910,787.49	131,480.30	36.2450577	-107.4997329
4,490.00	7.65	3.51	4,360.84	961.90	66.09	1,910,796.37	131,480.98	36.2450821	-107.4997310
4,554.00	6.96	358.65	4,424.32	970.03	66.26	1,910,804.49	131,481.25	36.2451044	-107.4997304
4,617.00	5.15	352.70	4,486.97	976.65	65.81	1,910,811.12	131,480.89	36.2451226	-107.4997319
4,680.00	4.22	356.28	4,549.76	981.77	65.30	1,910,816.24	131,480.44	36.2451367	-107.4997336
4,743.00	2.93	7.44	4,612.63	985.68	65.36	1,910,820.15	131,480.55	36.2451474	-107.4997334
4,805.00	1.02	21.18	4,674.59	987.76	65.76	1,910,822.23	131,480.98	36.2451531	-107.4997321
4,869.00	0.64	353.91	4,738.59	988.65	65.93	1,910,823.12	131,481.16	36.2451556	-107.4997315
4,932.00	0.62	348.85	4,801.58	989.34	65.82	1,910,823.80	131,481.07	36.2451574	-107.4997318
Last SDI Surface MWD Survey									
4,964.00	0.70	348.74	4,833.58	989.70	65.75	1,910,824.16	131,481.00	36.2451584	-107.4997321
First SDI Curve MWD Survey									
4,996.00	2.34	297.80	4,865.57	990.19	65.14	1,910,824.67	131,480.39	36.2451598	-107.4997342
5,028.00	5.36	289.59	4,897.49	991.00	63.15	1,910,825.50	131,478.42	36.2451620	-107.4997409
5,059.00	7.55	295.24	4,928.30	992.35	59.94	1,910,826.90	131,475.23	36.2451657	-107.4997518
5,091.00	9.76	295.74	4,959.93	994.43	55.60	1,910,829.03	131,470.91	36.2451714	-107.4997665
5,122.00	12.44	294.38	4,990.35	996.95	50.19	1,910,831.62	131,465.53	36.2451784	-107.4997849
5,154.00	14.95	291.52	5,021.43	999.89	43.21	1,910,834.64	131,458.59	36.2451864	-107.4998085
5,186.00	17.21	291.98	5,052.18	1,003.17	34.98	1,910,838.04	131,450.40	36.2451955	-107.4998364
5,218.00	19.43	289.90	5,082.56	1,006.76	25.58	1,910,841.74	131,441.06	36.2452053	-107.4998683
5,250.00	22.69	288.18	5,112.42	1,010.49	14.71	1,910,845.62	131,430.23	36.2452156	-107.4999052
5,281.00	26.48	288.30	5,140.60	1,014.53	2.46	1,910,849.81	131,418.04	36.2452267	-107.4999467
5,312.00	30.25	288.62	5,167.87	1,019.20	-11.50	1,910,854.66	131,404.13	36.2452395	-107.4999960
5,344.00	33.81	289.05	5,195.00	1,024.68	-27.56	1,910,860.35	131,388.15	36.2452545	-107.5000485
5,376.00	37.11	288.00	5,221.06	1,030.57	-45.16	1,910,866.46	131,370.62	36.2452707	-107.5001082
5,407.00	39.26	287.43	5,245.42	1,036.40	-63.42	1,910,872.53	131,352.44	36.2452867	-107.5001701
5,439.00	41.42	286.33	5,269.81	1,042.41	-83.24	1,910,878.79	131,332.70	36.2453032	-107.5002373
5,470.00	44.44	284.86	5,292.51	1,048.07	-103.58	1,910,884.72	131,312.44	36.2453188	-107.5003062
5,502.00	46.69	283.96	5,314.91	1,053.76	-125.70	1,910,890.69	131,290.39	36.2453344	-107.5003813
5,533.00	49.35	282.98	5,335.65	1,059.12	-148.11	1,910,896.34	131,268.05	36.2453491	-107.5004573
5,565.00	51.79	283.52	5,355.97	1,064.79	-172.17	1,910,902.32	131,244.07	36.2453647	-107.5005388
5,596.00	53.89	284.55	5,374.69	1,070.78	-196.14	1,910,908.62	131,220.18	36.2453812	-107.5006201
5,628.00	56.10	284.05	5,393.05	1,077.25	-221.53	1,910,915.42	131,194.87	36.2453989	-107.5007062
5,659.00	57.85	284.89	5,409.94	1,083.75	-246.70	1,910,922.24	131,169.79	36.2454168	-107.5007915
5,690.00	58.21	285.10	5,426.36	1,090.55	-272.10	1,910,929.37	131,144.48	36.2454355	-107.5008777
5,722.00	60.08	285.49	5,442.77	1,097.80	-298.60	1,910,936.96	131,118.08	36.2454554	-107.5009675
5,753.00	60.58	285.73	5,458.11	1,105.05	-324.54	1,910,944.54	131,092.23	36.2454753	-107.5010555
5,785.00	60.73	285.34	5,473.80	1,112.52	-351.41	1,910,952.36	131,065.46	36.2454958	-107.5011466
5,816.00	63.30	286.16	5,488.34	1,119.95	-377.76	1,910,960.13	131,039.21	36.2455162	-107.5012359
5,847.00	66.91	287.05	5,501.39	1,127.99	-404.70	1,910,968.51	131,012.37	36.2455383	-107.5013273
5,879.00	68.78	287.54	5,513.46	1,136.80	-433.00	1,910,977.69	130,984.19	36.2455625	-107.5014232

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #197H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Site:	Chaco 2306-08E	MD Reference:	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
Well:	NE Chaco Com #197H	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
5,911.00	72.63	288.32	5,524.03	1,146.10	-461.72	1,910,987.36	130,955.59	36.2455880	-107.5015207
5,942.00	74.50	289.21	5,532.80	1,155.66	-489.88	1,910,997.29	130,927.56	36.2456143	-107.5016161
5,974.00	76.32	289.14	5,540.86	1,165.84	-519.12	1,911,007.83	130,898.45	36.2456422	-107.5017153
6,006.00	80.06	288.43	5,547.41	1,175.92	-548.77	1,911,018.30	130,868.93	36.2456699	-107.5018158
6,035.00	84.17	287.93	5,551.38	1,184.88	-576.06	1,911,027.61	130,841.76	36.2456945	-107.5019083
Last SDI Curve MWD Survey									
6,083.00	84.41	287.77	5,556.16	1,199.52	-621.52	1,911,042.84	130,796.49	36.2457348	-107.5020625
7' Casing @ 6083' MD									
6,085.00	84.42	287.77	5,556.35	1,200.13	-623.42	1,911,043.47	130,794.61	36.2457364	-107.5020689
First SDI Lateral MWD Survey									
7,235.00	90.20	284.07	5,610.31	1,514.93	-1,727.46	1,911,372.48	129,694.72	36.2466010	-107.5058126
7,296.00	92.45	285.23	5,608.90	1,530.35	-1,786.46	1,911,388.66	129,635.92	36.2466433	-107.5060126
7,357.00	91.18	285.47	5,606.97	1,546.49	-1,845.25	1,911,405.56	129,577.34	36.2466877	-107.5062120
7,418.00	91.71	286.20	5,605.43	1,563.13	-1,903.92	1,911,422.96	129,518.90	36.2467333	-107.5064109
7,479.00	91.61	287.28	5,603.67	1,580.69	-1,962.31	1,911,441.27	129,460.74	36.2467816	-107.5066089
7,540.00	90.71	285.93	5,602.43	1,598.12	-2,020.75	1,911,459.45	129,402.53	36.2468294	-107.5068071
7,600.00	90.54	285.33	5,601.78	1,614.28	-2,078.53	1,911,476.36	129,344.96	36.2468738	-107.5070030
7,664.00	90.00	284.28	5,601.47	1,630.64	-2,140.40	1,911,493.51	129,283.31	36.2469187	-107.5072128
7,727.00	90.70	284.71	5,601.09	1,646.41	-2,201.39	1,911,510.06	129,222.52	36.2469620	-107.5074196
7,790.00	90.87	284.35	5,600.23	1,662.21	-2,262.37	1,911,526.65	129,161.75	36.2470054	-107.5076264
7,853.00	90.81	284.81	5,599.30	1,678.07	-2,323.34	1,911,543.29	129,101.00	36.2470490	-107.5078331
7,917.00	91.24	286.67	5,598.16	1,695.43	-2,384.92	1,911,561.44	129,039.64	36.2470966	-107.5080420
7,980.00	90.10	286.56	5,597.42	1,713.44	-2,445.29	1,911,580.23	128,979.51	36.2471461	-107.5082467
8,043.00	90.34	287.76	5,597.18	1,732.02	-2,505.48	1,911,599.60	128,919.56	36.2471971	-107.5084508
8,107.00	90.23	287.15	5,596.86	1,751.22	-2,566.53	1,911,619.58	128,858.76	36.2472498	-107.5086578
8,170.00	90.30	287.11	5,596.57	1,769.78	-2,626.74	1,911,638.91	128,798.80	36.2473008	-107.5088620
8,234.00	91.07	288.41	5,595.80	1,789.30	-2,687.68	1,911,659.21	128,738.12	36.2473544	-107.5090686
8,296.00	90.13	287.78	5,595.15	1,808.55	-2,746.61	1,911,679.23	128,679.44	36.2474073	-107.5092684
8,360.00	90.54	289.62	5,594.78	1,829.07	-2,807.23	1,911,700.53	128,619.09	36.2474636	-107.5094740
8,423.00	90.77	289.69	5,594.06	1,850.26	-2,866.55	1,911,722.48	128,560.05	36.2475218	-107.5096752
8,486.00	90.20	288.85	5,593.53	1,871.05	-2,926.02	1,911,744.03	128,500.85	36.2475789	-107.5098768
8,550.00	90.90	290.24	5,592.91	1,892.46	-2,986.33	1,911,766.22	128,440.83	36.2476377	-107.5100813
8,613.00	91.01	289.73	5,591.86	1,913.99	-3,045.53	1,911,788.51	128,381.91	36.2476968	-107.5102821
8,676.00	90.97	288.53	5,590.77	1,934.63	-3,105.04	1,911,809.92	128,322.67	36.2477535	-107.5104839
8,738.00	90.54	288.53	5,589.96	1,954.33	-3,163.82	1,911,830.38	128,264.15	36.2478076	-107.5106832
8,801.00	90.47	287.77	5,589.40	1,973.96	-3,223.68	1,911,850.77	128,204.55	36.2478615	-107.5108862
8,864.00	90.84	287.65	5,588.68	1,993.12	-3,283.69	1,911,870.71	128,144.79	36.2479141	-107.5110897
8,927.00	90.54	287.10	5,587.92	2,011.93	-3,343.81	1,911,890.29	128,084.91	36.2479657	-107.5112936
8,989.00	91.07	287.42	5,587.05	2,030.33	-3,403.01	1,911,909.45	128,025.95	36.2480162	-107.5114943
9,053.00	92.05	286.11	5,585.31	2,048.78	-3,464.27	1,911,928.69	127,964.94	36.2480669	-107.5117020
9,116.00	92.88	285.57	5,582.60	2,065.96	-3,524.82	1,911,946.65	127,904.62	36.2481141	-107.5119073
9,179.00	92.32	284.41	5,579.74	2,082.24	-3,585.61	1,911,963.71	127,844.04	36.2481588	-107.5121135
9,242.00	92.88	285.07	5,576.88	2,098.25	-3,646.48	1,911,980.51	127,783.39	36.2482027	-107.5123199
9,305.00	92.15	283.83	5,574.12	2,113.95	-3,707.42	1,911,997.00	127,722.65	36.2482458	-107.5125266
9,368.00	93.19	284.37	5,571.18	2,129.28	-3,768.46	1,912,013.11	127,661.82	36.2482879	-107.5127335
9,431.00	93.79	285.42	5,567.35	2,145.45	-3,829.23	1,912,030.06	127,601.26	36.2483323	-107.5129396
9,493.00	93.46	285.73	5,563.43	2,162.06	-3,888.83	1,912,047.44	127,541.88	36.2483779	-107.5131417
9,556.00	93.09	284.95	5,559.83	2,178.70	-3,949.49	1,912,064.86	127,481.44	36.2484236	-107.5133474
9,619.00	93.16	284.81	5,556.40	2,194.86	-4,010.28	1,912,081.80	127,420.86	36.2484679	-107.5135536
9,682.00	93.96	285.64	5,552.48	2,211.37	-4,070.95	1,912,099.09	127,360.41	36.2485133	-107.5137593
9,745.00	94.17	287.72	5,548.02	2,229.40	-4,131.15	1,912,117.90	127,300.45	36.2485628	-107.5139634
9,807.00	94.77	288.12	5,543.19	2,248.42	-4,189.96	1,912,137.68	127,241.89	36.2486150	-107.5141629
9,870.00	93.19	287.41	5,538.81	2,267.60	-4,249.81	1,912,157.62	127,182.29	36.2486676	-107.5143658
9,933.00	91.11	286.91	5,536.45	2,286.17	-4,309.96	1,912,176.97	127,122.39	36.2487186	-107.5145698
9,996.00	92.22	287.27	5,534.62	2,304.68	-4,370.15	1,912,196.25	127,062.44	36.2487694	-107.5147739



Survey Report - Geographic



Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2306-08E
Well: NE Chaco Com #197H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NE Chaco Com #197H
TVD Reference: GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
MD Reference: GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)
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
10,059.00	91.41	288.07	5,532.62	2,323.79	-4,430.15	1,912,216.14	127,002.70	36.2488219	-107.5149774
10,122.00	89.73	287.57	5,532.00	2,343.07	-4,490.12	1,912,236.19	126,942.98	36.2488748	-107.5151807
10,185.00	90.60	288.04	5,531.82	2,362.33	-4,550.10	1,912,256.22	126,883.25	36.2489277	-107.5153841
10,248.00	90.67	287.48	5,531.12	2,381.55	-4,610.09	1,912,276.21	126,823.51	36.2489805	-107.5155876
10,311.00	90.40	287.81	5,530.53	2,400.64	-4,670.13	1,912,296.08	126,763.73	36.2490329	-107.5157911
10,374.00	91.41	289.07	5,529.53	2,420.57	-4,729.88	1,912,316.77	126,704.23	36.2490876	-107.5159938
10,436.00	91.24	287.99	5,528.10	2,440.26	-4,788.65	1,912,337.23	126,645.72	36.2491417	-107.5161931
10,499.00	91.11	287.60	5,526.81	2,459.51	-4,848.62	1,912,357.25	126,586.00	36.2491945	-107.5163965
10,562.00	90.94	287.17	5,525.68	2,478.33	-4,908.74	1,912,376.84	126,526.14	36.2492462	-107.5166003
10,625.00	91.78	287.91	5,524.19	2,497.31	-4,968.79	1,912,396.60	126,466.34	36.2492983	-107.5168040
10,688.00	91.61	286.87	5,522.32	2,516.14	-5,028.88	1,912,416.19	126,406.49	36.2493500	-107.5170077
10,751.00	91.88	286.60	5,520.40	2,534.27	-5,089.19	1,912,435.10	126,346.43	36.2493997	-107.5172122
10,813.00	91.34	286.67	5,518.66	2,552.01	-5,148.57	1,912,453.61	126,287.28	36.2494484	-107.5174136
10,876.00	91.36	286.49	5,517.18	2,569.98	-5,208.93	1,912,472.35	126,227.15	36.2494978	-107.5176183
10,939.00	91.38	286.41	5,515.67	2,587.82	-5,269.34	1,912,490.97	126,166.98	36.2495467	-107.5178231
10,986.88	91.20	286.39	5,514.59	2,601.33	-5,315.26	1,912,505.08	126,121.24	36.2495838	-107.5179789
RSI @ 10,986' MD									
11,002.00	91.14	286.39	5,514.29	2,605.60	-5,329.76	1,912,509.53	126,106.80	36.2495956	-107.5180280
11,030.00	90.81	285.10	5,513.81	2,613.20	-5,356.70	1,912,517.47	126,079.95	36.2496164	-107.5181194
Last SDI Lateral MWD Survey									
11,092.00	90.81	285.10	5,512.93	2,629.35	-5,416.56	1,912,534.39	126,020.31	36.2496607	-107.5183224
Projection to TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
63.00	63.00	0.06	0.18	First MS Gyro Survey
363.00	362.99	-0.93	-0.02	Last MS Gyro Survey
425.00	424.99	-1.03	-0.81	First SDI Surface MWD Survey
4,932.00	4,801.58	989.34	65.82	Last SDI Surface MWD Survey
4,964.00	4,833.58	989.70	65.75	First SDI Curve MWD Survey
6,035.00	5,551.38	1,184.88	-576.06	Last SDI Curve MWD Survey
6,083.00	5,556.16	1,199.52	-621.52	7' Casing @ 6083' MD
6,085.00	5,556.35	1,200.13	-623.42	First SDI Lateral MWD Survey
10,986.88	5,514.59	2,601.33	-5,315.26	RSI @ 10,986' MD
11,030.00	5,513.81	2,613.20	-5,356.70	Last SDI Lateral MWD Survey
11,092.00	5,512.93	2,629.35	-5,416.56	Projection to TD

Checked By: _____ Approved By: _____ Date: _____