

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

*API Number 30-039-31268		*Pool Code 98088	*Pool Name CHACO UNIT NE HZ (OIL)
*Property Code 313800	*Property Name NE CHACO COM		*Well Number 198H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6845'

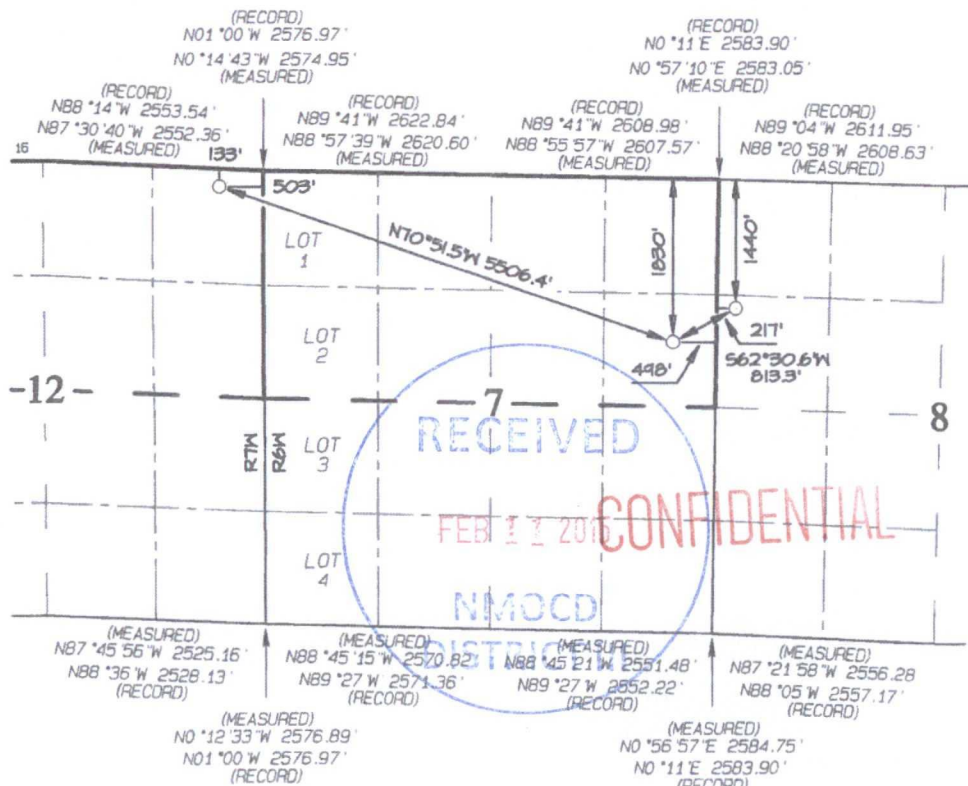
¹⁰ Surface Location

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		1440	NORTH	217	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
A	12	23N	7W		133	NORTH	503	EAST	RIO ARriba
¹² Dedicated Acres N/2 - Section 12, T23N, R7W 640.96 N/2 - Section 7, T23N, R6W					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.

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

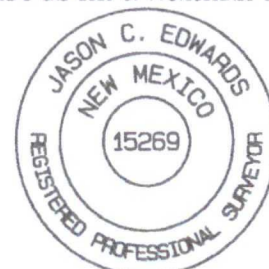
Printed Name
LACEY.GRANILLO@WPXENERGY.COM
E-mail Address

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: JANUARY 12, 2015
Survey Date: AUGUST 22, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

END-OF-LATERAL 133' FNL 503' FEL SECTION 12, T23N, R7W LAT: 36.246164°N LONG: 107.520174°W DATUM: NAD1927	BASE PERFORATION 154' FNL 414' FEL SECTION 12, T23N, R7W LAT: 36.246099°N LONG: 107.519870°W DATUM: NAD1927	POINT-OF-ENTRY 1830' FNL 498' FEL SECTION 7, T23N, R6W LAT: 36.241391°N LONG: 107.502458°W DATUM: NAD1927	SURFACE LOCATION 1440' FNL 217' FWL SECTION 8, T23N, R6W LAT: 36.242448°N LONG: 107.500029°W DATUM: NAD1927
LAT: 36.246178°N LONG: 107.520780°W DATUM: NAD1983	LAT: 36.246112°N LONG: 107.520475°W DATUM: NAD1983	LAT: 36.241405°N LONG: 107.503063°W DATUM: NAD1983	LAT: 36.242461°N LONG: 107.500634°W DATUM: NAD1983

AV

10



WPX Energy Rocky Mountain, LLC

Rio Arriba County, NM NAD27

Chaco 2306-08E

NE Chaco Com #198H

OH

Design: OH



Survey Report - Geographic

09 January, 2015



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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 #198H

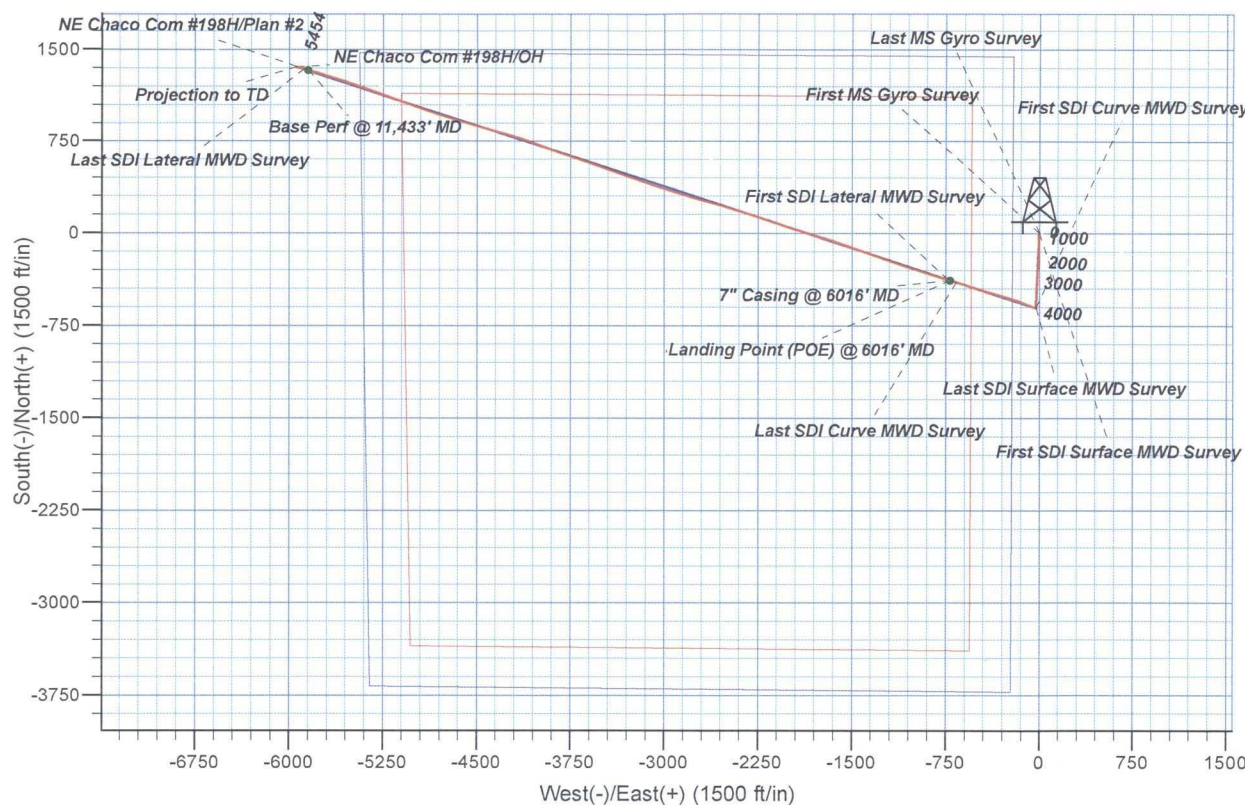
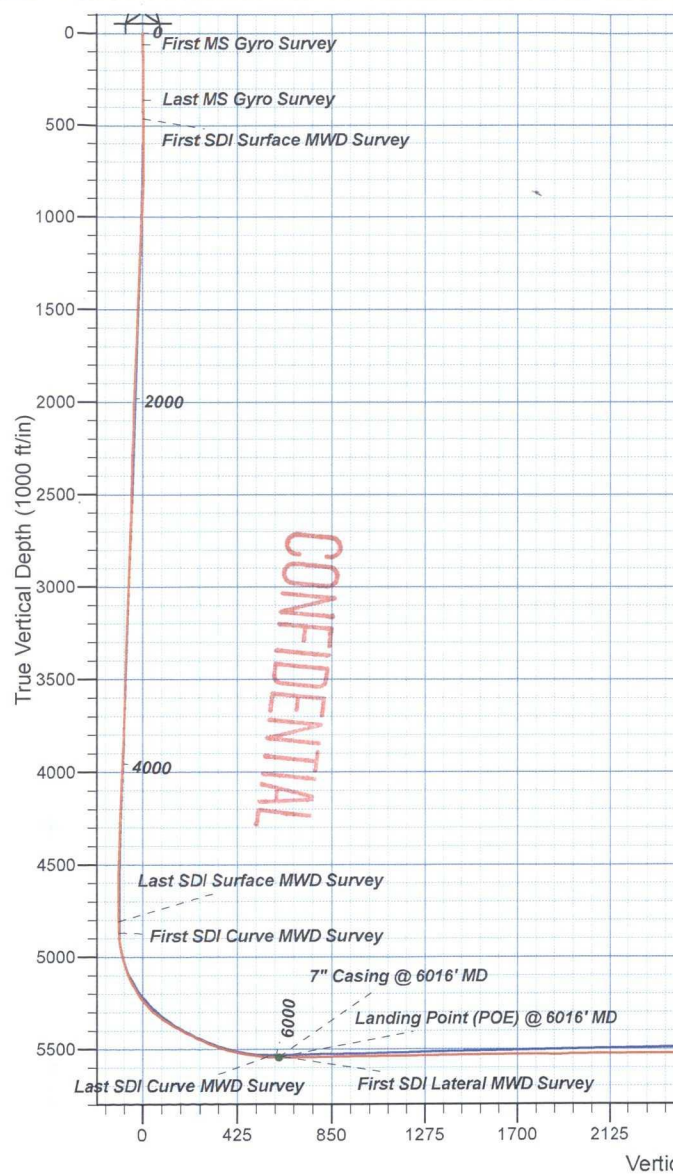
WPXENERGY



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 #198H

+N/-S	+E/-W	GL 6845' & RKB 13' @ 6858.00ft (Aztec 222)	6845.00
0.00	0.00	Northing	Easting
1909838.59	131380.70	Latitude	Longitude
		36.2424480	-107.5000290



Design: OH (NE Chaco Com #198H/OH)
Created By: Janie Collins Date: 10:56, January 09 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 #198H
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 #198H	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 #198H					
Well Position	+N/-S	0.00 ft	Northing:	1,909,838.59 usft	Latitude:	36.2424480
	+E/-W	0.00 ft	Easting:	131,380.70 usft	Longitude:	-107.5000290
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	282.83	

Survey Program	Date	1/9/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
63.00	363.00	Survey #1 - Gyro Survey (OH)	Gyro		
465.00	4,858.00	Survey #2 - Surface MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
4,921.00	5,965.00	Survey #3 - Curve MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
6,034.00	11,526.00	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	1,909,838.59	131,380.70	36.2424480	-107.5000290
63.00	0.32	272.52	63.00	0.01	-0.18	1,909,838.60	131,380.53	36.2424480	-107.5000296
First MS Gyro Survey									
113.00	0.35	311.66	113.00	0.12	-0.43	1,909,838.71	131,380.28	36.2424483	-107.5000305
163.00	0.50	296.76	163.00	0.32	-0.74	1,909,838.92	131,379.97	36.2424488	-107.5000315
213.00	0.43	297.44	213.00	0.50	-1.10	1,909,839.11	131,379.61	36.2424493	-107.5000328
263.00	0.47	305.97	262.99	0.71	-1.43	1,909,839.32	131,379.28	36.2424499	-107.5000339
313.00	0.31	307.55	312.99	0.91	-1.71	1,909,839.53	131,379.01	36.2424505	-107.5000348

CONFIDENTIAL



Survey Report - Geographic



Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2306-08E
Well: NE Chaco Com #198H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NE Chaco Com #198H
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
363.00	0.42	308.13	362.99	1.11	-1.96	1,909,839.72	131,378.76	36.2424510	-107.5000357
Last MS Gyro Survey									
465.00	0.41	327.56	464.99	1.64	-2.45	1,909,840.27	131,378.28	36.2424525	-107.5000373
First SDI Surface MWD Survey									
528.00	0.41	321.04	527.99	2.01	-2.71	1,909,840.64	131,378.02	36.2424535	-107.5000382
592.00	1.60	199.12	591.98	1.34	-3.15	1,909,839.98	131,377.58	36.2424517	-107.5000397
655.00	3.03	192.45	654.93	-1.11	-3.79	1,909,837.53	131,376.90	36.2424449	-107.5000419
716.00	5.06	194.08	715.77	-5.30	-4.79	1,909,833.36	131,375.84	36.2424334	-107.5000453
776.00	6.68	190.31	775.46	-11.30	-6.06	1,909,827.37	131,374.49	36.2424169	-107.5000496
838.00	8.04	183.05	836.94	-19.18	-6.94	1,909,819.51	131,373.52	36.2423953	-107.5000526
898.00	8.54	182.38	896.32	-27.82	-7.35	1,909,810.87	131,373.00	36.2423716	-107.5000540
959.00	8.91	180.28	956.61	-37.07	-7.56	1,909,801.63	131,372.67	36.2423462	-107.5000547
1,020.00	9.06	179.26	1,016.86	-46.59	-7.52	1,909,792.10	131,372.58	36.2423200	-107.5000545
1,081.00	8.90	178.27	1,077.12	-56.11	-7.32	1,909,782.58	131,372.66	36.2422939	-107.5000538
1,142.00	8.90	177.30	1,137.38	-65.54	-6.95	1,909,773.15	131,372.91	36.2422679	-107.5000526
1,203.00	8.84	180.08	1,197.65	-74.94	-6.74	1,909,763.74	131,373.00	36.2422421	-107.5000519
1,264.00	9.00	181.11	1,257.91	-84.40	-6.83	1,909,754.29	131,372.78	36.2422162	-107.5000522
1,325.00	8.99	178.07	1,318.16	-93.93	-6.77	1,909,744.76	131,372.73	36.2421900	-107.5000520
1,386.00	9.65	182.33	1,378.36	-103.81	-6.81	1,909,734.89	131,372.55	36.2421628	-107.5000521
1,446.00	10.16	182.68	1,437.47	-114.12	-7.27	1,909,724.58	131,371.97	36.2421345	-107.5000537
1,507.00	9.88	181.87	1,497.53	-124.72	-7.69	1,909,713.98	131,371.41	36.2421054	-107.5000551
1,568.00	10.25	180.68	1,557.60	-135.38	-7.92	1,909,703.33	131,371.04	36.2420761	-107.5000559
1,630.00	9.82	179.40	1,618.65	-146.18	-7.93	1,909,692.53	131,370.89	36.2420465	-107.5000559
1,691.00	9.37	178.72	1,678.79	-156.35	-7.77	1,909,682.36	131,370.92	36.2420185	-107.5000554
1,750.00	9.22	178.28	1,737.02	-165.87	-7.52	1,909,672.83	131,371.05	36.2419924	-107.5000545
1,811.00	9.07	176.14	1,797.24	-175.56	-7.05	1,909,663.14	131,371.39	36.2419658	-107.5000529
1,872.00	9.24	179.71	1,857.47	-185.25	-6.70	1,909,653.45	131,371.61	36.2419391	-107.5000518
1,933.00	9.31	178.71	1,917.67	-195.08	-6.56	1,909,643.61	131,371.62	36.2419121	-107.5000513
1,994.00	9.52	181.29	1,977.85	-205.06	-6.57	1,909,633.64	131,371.49	36.2418847	-107.5000513
2,054.00	9.91	187.64	2,036.99	-215.13	-7.36	1,909,623.57	131,370.56	36.2418571	-107.5000540
2,115.00	9.50	189.71	2,097.12	-225.30	-8.91	1,909,613.43	131,368.89	36.2418291	-107.5000593
2,176.00	9.40	185.82	2,157.29	-235.22	-10.27	1,909,603.53	131,367.40	36.2418019	-107.5000639
2,236.00	9.35	184.38	2,216.49	-244.95	-11.13	1,909,593.81	131,366.41	36.2417752	-107.5000668
2,297.00	9.15	183.13	2,276.69	-254.73	-11.78	1,909,584.03	131,365.64	36.2417483	-107.5000690
2,360.00	9.11	179.33	2,338.90	-264.72	-11.99	1,909,574.05	131,365.30	36.2417208	-107.5000697
2,424.00	8.99	186.78	2,402.10	-274.76	-12.52	1,909,564.02	131,364.64	36.2416933	-107.5000715
2,487.00	10.30	187.64	2,464.21	-285.23	-13.85	1,909,553.57	131,363.17	36.2416645	-107.5000760
2,549.00	10.27	189.86	2,525.21	-296.16	-15.54	1,909,542.65	131,361.35	36.2416345	-107.5000817
2,613.00	9.94	186.89	2,588.22	-307.27	-17.18	1,909,531.57	131,359.56	36.2416040	-107.5000873
2,677.00	9.76	184.90	2,651.28	-318.16	-18.30	1,909,520.70	131,358.30	36.2415741	-107.5000911
2,741.00	9.40	184.06	2,714.39	-328.78	-19.14	1,909,510.09	131,357.33	36.2415449	-107.5000939
2,803.00	9.29	184.59	2,775.56	-338.82	-19.90	1,909,500.06	131,356.44	36.2415173	-107.5000965
2,867.00	9.29	182.77	2,838.72	-349.12	-20.56	1,909,489.76	131,355.64	36.2414890	-107.5000988
2,930.00	8.95	181.31	2,900.93	-359.10	-20.92	1,909,479.79	131,355.16	36.2414616	-107.5001000
2,993.00	9.82	182.87	2,963.08	-369.37	-21.30	1,909,469.53	131,354.64	36.2414334	-107.5001013
3,056.00	10.19	184.64	3,025.13	-380.29	-22.02	1,909,458.62	131,353.78	36.2414034	-107.5001037
3,119.00	9.97	181.87	3,087.15	-391.29	-22.65	1,909,447.63	131,353.01	36.2413732	-107.5001058
3,182.00	9.64	180.25	3,149.23	-402.02	-22.85	1,909,436.90	131,352.67	36.2413437	-107.5001065
3,245.00	9.39	180.06	3,211.37	-412.43	-22.88	1,909,426.49	131,352.51	36.2413151	-107.5001066
3,308.00	9.19	178.92	3,273.54	-422.60	-22.79	1,909,416.32	131,352.47	36.2412872	-107.5001063
3,371.00	8.74	180.96	3,335.77	-432.42	-22.77	1,909,406.51	131,352.36	36.2412602	-107.5001063
3,434.00	8.49	179.91	3,398.06	-441.85	-22.84	1,909,397.07	131,352.16	36.2412343	-107.5001065
3,497.00	9.07	187.02	3,460.32	-451.43	-23.44	1,909,387.50	131,351.44	36.2412080	-107.5001085
3,560.00	9.28	189.18	3,522.52	-461.38	-24.86	1,909,377.58	131,349.89	36.2411807	-107.5001133
3,623.00	8.88	186.66	3,584.73	-471.22	-26.24	1,909,367.75	131,348.39	36.2411536	-107.5001180



Survey Report - Geographic



Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2306-08E
Well: NE Chaco Com #198H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NE Chaco Com #198H
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
3,686.00	9.85	182.71	3,646.89	-481.43	-27.05	1,909,357.55	131,347.44	36.2411256	-107.5001208
3,749.00	9.73	180.95	3,708.97	-492.14	-27.40	1,909,346.85	131,346.96	36.2410962	-107.5001219
3,812.00	9.28	181.18	3,771.11	-502.54	-27.59	1,909,336.45	131,346.63	36.2410676	-107.5001226
3,876.00	8.99	179.78	3,834.29	-512.70	-27.68	1,909,326.29	131,346.42	36.2410397	-107.5001229
3,939.00	9.07	178.15	3,896.51	-522.59	-27.50	1,909,316.41	131,346.47	36.2410126	-107.5001223
4,002.00	9.15	178.73	3,958.72	-532.56	-27.23	1,909,306.43	131,346.61	36.2409852	-107.5001214
4,066.00	8.44	183.94	4,021.97	-542.33	-27.44	1,909,296.66	131,346.27	36.2409583	-107.5001221
4,129.00	8.50	180.96	4,084.28	-551.60	-27.83	1,909,287.40	131,345.76	36.2409329	-107.5001234
4,192.00	8.63	181.63	4,146.58	-560.98	-28.04	1,909,278.02	131,345.42	36.2409071	-107.5001241
4,256.00	8.48	182.90	4,209.87	-570.49	-28.42	1,909,268.52	131,344.93	36.2408810	-107.5001254
4,320.00	7.56	184.46	4,273.24	-579.40	-28.99	1,909,259.62	131,344.25	36.2408565	-107.5001273
4,383.00	7.15	181.28	4,335.72	-587.45	-29.40	1,909,251.57	131,343.73	36.2408344	-107.5001287
4,447.00	5.73	171.66	4,399.32	-594.60	-29.02	1,909,244.42	131,344.01	36.2408148	-107.5001274
4,510.00	4.78	168.19	4,462.05	-600.28	-28.03	1,909,238.73	131,344.93	36.2407992	-107.5001241
4,573.00	3.43	167.28	4,524.89	-604.69	-27.08	1,909,234.31	131,345.83	36.2407870	-107.5001208
4,636.00	2.11	164.01	4,587.81	-607.64	-26.34	1,909,231.35	131,346.53	36.2407789	-107.5001184
4,699.00	1.01	198.75	4,650.79	-609.28	-26.20	1,909,229.70	131,346.65	36.2407744	-107.5001179
4,762.00	0.68	256.74	4,713.79	-609.89	-26.74	1,909,229.10	131,346.10	36.2407727	-107.5001197
4,825.00	0.65	277.67	4,776.78	-609.93	-27.46	1,909,229.07	131,345.38	36.2407726	-107.5001222
4,858.00	0.69	268.71	4,809.78	-609.91	-27.84	1,909,229.10	131,344.99	36.2407727	-107.5001235
Last SDI Surface MWD Survey									
4,921.00	2.25	295.88	4,872.76	-609.38	-29.34	1,909,229.65	131,343.51	36.2407742	-107.5001285
First SDI Curve MWD Survey									
4,952.00	5.06	291.55	4,903.69	-608.61	-31.16	1,909,230.44	131,341.70	36.2407763	-107.5001347
4,983.00	7.16	293.88	4,934.51	-607.33	-34.19	1,909,231.76	131,338.68	36.2407798	-107.5001450
5,015.00	8.39	295.32	4,966.22	-605.52	-38.13	1,909,233.62	131,334.77	36.2407848	-107.5001583
5,046.00	10.83	291.71	4,996.78	-603.48	-42.88	1,909,235.72	131,330.04	36.2407904	-107.5001744
5,078.00	13.62	289.15	5,028.05	-601.13	-49.23	1,909,238.15	131,323.72	36.2407968	-107.5001960
5,109.00	16.19	288.95	5,058.01	-598.53	-56.77	1,909,240.85	131,316.22	36.2408040	-107.5002215
5,140.00	18.44	289.42	5,087.60	-595.49	-65.48	1,909,244.00	131,307.54	36.2408123	-107.5002511
5,173.00	20.50	291.30	5,118.71	-591.66	-75.79	1,909,247.97	131,297.29	36.2408228	-107.5002860
5,204.00	23.83	291.43	5,147.42	-587.40	-86.68	1,909,252.37	131,286.45	36.2408345	-107.5003229
5,236.00	26.04	294.43	5,176.43	-582.13	-99.09	1,909,257.79	131,274.11	36.2408490	-107.5003650
5,267.00	29.90	293.36	5,203.81	-576.25	-112.39	1,909,263.84	131,260.89	36.2408652	-107.5004101
5,299.00	33.00	291.84	5,231.10	-569.84	-127.80	1,909,270.45	131,245.56	36.2408828	-107.5004624
5,331.00	36.25	289.85	5,257.43	-563.39	-144.79	1,909,277.12	131,228.65	36.2409005	-107.5005200
5,362.00	40.31	289.44	5,281.76	-556.93	-162.88	1,909,283.81	131,210.65	36.2409182	-107.5005813
5,393.00	43.91	289.15	5,304.76	-550.07	-182.50	1,909,290.93	131,191.13	36.2409371	-107.5006478
5,425.00	47.39	288.82	5,327.12	-542.63	-204.13	1,909,298.65	131,169.59	36.2409575	-107.5007212
5,456.00	51.51	288.09	5,347.27	-535.18	-226.47	1,909,306.39	131,147.35	36.2409780	-107.5007969
5,488.00	54.89	286.93	5,366.44	-527.47	-250.90	1,909,314.40	131,123.02	36.2409991	-107.5008798
5,519.00	56.50	285.61	5,383.91	-520.30	-275.49	1,909,321.89	131,098.53	36.2410188	-107.5009631
5,551.00	58.06	285.16	5,401.21	-513.16	-301.44	1,909,329.37	131,072.67	36.2410384	-107.5010511
5,582.00	58.58	284.97	5,417.49	-506.30	-326.92	1,909,336.55	131,047.28	36.2410573	-107.5011375
5,613.00	57.80	284.68	5,433.83	-499.56	-352.38	1,909,343.62	131,021.91	36.2410758	-107.5012238
5,645.00	59.18	285.04	5,450.55	-492.57	-378.75	1,909,350.96	130,995.63	36.2410950	-107.5013132
5,676.00	62.49	287.48	5,465.66	-484.98	-404.73	1,909,358.88	130,969.75	36.2411158	-107.5014013
5,708.00	65.42	288.88	5,479.71	-476.01	-432.04	1,909,368.20	130,942.56	36.2411405	-107.5014939
5,739.00	67.80	288.39	5,492.01	-466.92	-459.00	1,909,377.64	130,915.72	36.2411655	-107.5015853
5,771.00	70.73	288.14	5,503.34	-457.54	-487.42	1,909,387.38	130,887.43	36.2411912	-107.5016817
5,802.00	73.76	287.87	5,512.79	-448.41	-515.49	1,909,396.87	130,859.47	36.2412163	-107.5017769
5,833.00	75.81	287.98	5,520.93	-439.21	-543.95	1,909,406.44	130,831.13	36.2412416	-107.5018734
5,865.00	78.63	288.25	5,528.01	-429.51	-573.61	1,909,416.52	130,801.60	36.2412682	-107.5019739
5,896.00	80.02	288.00	5,533.75	-420.03	-602.56	1,909,426.37	130,772.78	36.2412942	-107.5020721
5,927.00	81.71	287.35	5,538.67	-410.74	-631.72	1,909,436.04	130,743.74	36.2413198	-107.5021710

Company: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2306-08E
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Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NE Chaco Com #198H
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
5,959.00	84.50	287.47	5,542.51	-401.23	-662.03	1,909,445.94	130,713.55	36.2413459	-107.5022737
5,965.00	85.36	287.59	5,543.04	-399.43	-667.73	1,909,447.81	130,707.88	36.2413508	-107.5022931
Last SDI Curve MWD Survey									
6,016.00	88.79	286.06	5,545.64	-384.69	-716.47	1,909,463.17	130,659.33	36.2413913	-107.5024583
7" Casing @ 6016' MD - Landing Point (POE) @ 6016' MD									
6,034.00	90.00	285.52	5,545.84	-379.80	-733.79	1,909,468.30	130,642.07	36.2414047	-107.5025171
First SDI Lateral MWD Survey									
6,095.00	90.97	287.67	5,545.32	-362.38	-792.25	1,909,486.47	130,583.85	36.2414526	-107.5027152
6,156.00	91.44	288.04	5,544.04	-343.68	-850.29	1,909,505.91	130,526.05	36.2415039	-107.5029121
6,217.00	91.34	287.81	5,542.56	-324.91	-908.32	1,909,525.43	130,468.27	36.2415555	-107.5031088
6,278.00	91.27	287.97	5,541.17	-306.18	-966.35	1,909,544.91	130,410.48	36.2416069	-107.5033056
6,339.00	90.70	287.98	5,540.12	-287.35	-1,024.37	1,909,564.48	130,352.72	36.2416586	-107.5035023
6,400.00	90.64	288.33	5,539.41	-268.35	-1,082.32	1,909,584.23	130,295.01	36.2417108	-107.5036988
6,461.00	90.37	288.39	5,538.87	-249.13	-1,140.22	1,909,604.19	130,237.37	36.2417636	-107.5038951
6,522.00	90.10	288.73	5,538.62	-229.72	-1,198.04	1,909,624.35	130,179.80	36.2418169	-107.5040912
6,583.00	90.74	290.19	5,538.17	-209.40	-1,255.56	1,909,645.41	130,122.55	36.2418727	-107.5042862
6,644.00	91.44	290.37	5,537.01	-188.26	-1,312.76	1,909,667.29	130,065.62	36.2419308	-107.5044801
6,705.00	91.24	289.91	5,535.58	-167.26	-1,370.02	1,909,689.02	130,008.64	36.2419885	-107.5046743
6,766.00	90.64	289.61	5,534.58	-146.64	-1,427.42	1,909,710.38	129,951.51	36.2420451	-107.5048689
6,827.00	91.21	290.25	5,533.60	-125.85	-1,484.76	1,909,731.91	129,894.45	36.2421022	-107.5050633
6,888.00	91.31	290.36	5,532.26	-104.69	-1,541.95	1,909,753.81	129,837.53	36.2421603	-107.5052573
6,949.00	91.44	289.89	5,530.79	-83.71	-1,599.21	1,909,775.52	129,780.55	36.2422179	-107.5054514
7,010.00	90.47	288.22	5,529.78	-63.79	-1,656.86	1,909,796.18	129,723.16	36.2422726	-107.5056469
7,071.00	89.87	287.14	5,529.59	-45.27	-1,714.98	1,909,815.45	129,665.29	36.2423235	-107.5058439
7,131.00	90.03	286.83	5,529.65	-27.74	-1,772.36	1,909,833.72	129,608.14	36.2423716	-107.5060385
7,192.00	90.34	287.23	5,529.45	-9.88	-1,830.68	1,909,852.33	129,550.05	36.2424207	-107.5062363
7,252.00	90.77	286.68	5,528.87	7.62	-1,888.07	1,909,870.57	129,492.89	36.2424687	-107.5064308
7,312.00	90.71	286.16	5,528.09	24.58	-1,945.62	1,909,888.27	129,435.57	36.2425153	-107.5066260
7,374.00	92.15	288.61	5,526.55	43.10	-2,004.76	1,909,907.55	129,376.67	36.2425662	-107.5068265
7,435.00	90.57	288.56	5,525.10	62.53	-2,062.56	1,909,927.73	129,319.12	36.2426195	-107.5070225
7,496.00	90.13	288.97	5,524.73	82.15	-2,120.32	1,909,948.09	129,261.62	36.2426734	-107.5072183
7,556.00	90.87	289.31	5,524.20	101.82	-2,177.00	1,909,968.49	129,205.20	36.2427274	-107.5074105
7,617.00	90.48	289.23	5,523.48	121.95	-2,234.58	1,909,989.36	129,147.89	36.2427827	-107.5076058
7,678.00	90.13	288.76	5,523.16	141.81	-2,292.26	1,910,009.96	129,090.47	36.2428372	-107.5078013
7,739.00	90.22	287.91	5,522.97	161.00	-2,350.16	1,910,029.89	129,032.82	36.2428899	-107.5079977
7,802.00	90.13	287.30	5,522.78	180.05	-2,410.21	1,910,049.72	128,973.02	36.2429423	-107.5082013
7,865.00	90.22	286.59	5,522.59	198.41	-2,470.47	1,910,068.86	128,913.00	36.2429927	-107.5084056
7,928.00	90.17	285.68	5,522.37	215.92	-2,530.99	1,910,087.15	128,852.71	36.2430408	-107.5086108
7,991.00	90.31	285.98	5,522.11	233.11	-2,591.60	1,910,105.11	128,792.33	36.2430879	-107.5088163
8,054.00	90.40	285.54	5,521.72	250.22	-2,652.23	1,910,123.00	128,731.93	36.2431349	-107.5090219
8,117.00	90.40	285.71	5,521.28	267.18	-2,712.90	1,910,140.75	128,671.48	36.2431815	-107.5092276
8,179.00	90.40	286.42	5,520.85	284.34	-2,772.48	1,910,158.68	128,612.13	36.2432286	-107.5094297
8,242.00	90.84	286.68	5,520.17	302.29	-2,832.86	1,910,177.40	128,551.98	36.2432779	-107.5096344
8,305.00	90.24	287.02	5,519.57	320.55	-2,893.16	1,910,196.44	128,491.93	36.2433280	-107.5098388
8,368.00	90.10	288.63	5,519.38	339.83	-2,953.13	1,910,216.49	128,432.21	36.2433810	-107.5100422
8,431.00	89.26	288.66	5,519.74	359.97	-3,012.82	1,910,237.40	128,372.78	36.2434363	-107.5102446
8,493.00	90.91	288.20	5,519.64	379.57	-3,071.64	1,910,257.76	128,314.22	36.2434901	-107.5104440
8,556.00	92.49	288.45	5,517.78	399.37	-3,131.42	1,910,278.33	128,254.71	36.2435445	-107.5106467
8,619.00	91.74	289.36	5,515.45	419.77	-3,190.98	1,910,299.49	128,195.41	36.2436005	-107.5108487
8,682.00	91.21	289.61	5,513.83	440.78	-3,250.35	1,910,321.26	128,136.32	36.2436582	-107.5110500
8,745.00	91.68	290.34	5,512.24	462.29	-3,309.54	1,910,343.54	128,077.41	36.2437173	-107.5112507
8,807.00	91.61	290.45	5,510.46	483.89	-3,367.63	1,910,365.88	128,019.60	36.2437766	-107.5114477
8,870.00	91.11	290.48	5,508.96	505.91	-3,426.64	1,910,388.66	127,960.89	36.2438370	-107.5116478
8,933.00	89.70	289.70	5,508.52	527.55	-3,485.80	1,910,411.06	127,902.01	36.2438964	-107.5118484
8,997.00	90.60	290.33	5,508.35	549.45	-3,545.93	1,910,433.74	127,842.16	36.2439566	-107.5120523



Survey Report - Geographic



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Project: Rio Arriba County, NM NAD27
Site: Chaco 2306-08E
Well: NE Chaco Com #198H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NE Chaco Com #198H
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
9,059.00	90.23	290.43	5,507.90	571.04	-3,604.05	1,910,456.08	127,784.33	36.2440159	-107.5122494
9,122.00	90.00	289.23	5,507.78	592.41	-3,663.31	1,910,478.21	127,725.35	36.2440746	-107.5124503
9,185.00	90.50	289.14	5,507.50	613.12	-3,722.81	1,910,499.68	127,666.12	36.2441314	-107.5126521
9,249.00	90.77	288.90	5,506.79	633.97	-3,783.31	1,910,521.32	127,605.89	36.2441887	-107.5128572
9,312.00	90.40	289.14	5,506.15	654.50	-3,842.87	1,910,542.61	127,546.60	36.2442450	-107.5130592
9,375.00	90.77	290.61	5,505.51	675.92	-3,902.11	1,910,564.79	127,487.64	36.2443038	-107.5132601
9,438.00	90.40	291.25	5,504.86	698.42	-3,960.95	1,910,588.05	127,429.10	36.2443656	-107.5134596
9,500.00	90.20	291.39	5,504.54	720.96	-4,018.71	1,910,611.34	127,371.64	36.2444275	-107.5136554
9,563.00	90.17	290.82	5,504.33	743.65	-4,077.48	1,910,634.78	127,313.16	36.2444898	-107.5138547
9,626.00	90.66	289.14	5,503.88	765.17	-4,136.69	1,910,657.07	127,254.24	36.2445489	-107.5140555
9,689.00	90.77	287.14	5,503.09	784.79	-4,196.55	1,910,677.45	127,194.64	36.2446028	-107.5142585
9,752.00	90.13	285.10	5,502.60	802.28	-4,257.07	1,910,695.72	127,134.35	36.2446508	-107.5144637
9,814.00	90.97	284.18	5,502.00	817.95	-4,317.05	1,910,712.16	127,074.57	36.2446938	-107.5146671
9,877.00	93.72	287.71	5,499.42	835.23	-4,377.56	1,910,730.23	127,014.29	36.2447412	-107.5148723
9,940.00	94.06	288.50	5,495.15	854.76	-4,437.30	1,910,750.53	126,954.80	36.2447949	-107.5150748
10,003.00	92.69	287.40	5,491.44	874.15	-4,497.13	1,910,770.68	126,895.23	36.2448481	-107.5152777
10,066.00	91.17	286.52	5,489.32	892.51	-4,557.35	1,910,789.82	126,835.25	36.2448985	-107.5154819
10,128.00	92.62	286.92	5,487.27	910.34	-4,616.70	1,910,808.41	126,776.14	36.2449474	-107.5156832
10,191.00	91.95	286.47	5,484.76	928.42	-4,676.99	1,910,827.27	126,716.08	36.2449971	-107.5158876
10,254.00	92.15	287.69	5,482.50	946.91	-4,737.18	1,910,846.54	126,656.15	36.2450478	-107.5160917
10,317.00	92.75	288.60	5,479.81	966.51	-4,796.99	1,910,866.91	126,596.59	36.2451017	-107.5162945
10,380.00	94.00	289.64	5,476.10	987.11	-4,856.41	1,910,888.27	126,537.44	36.2451582	-107.5164960
10,443.00	95.04	290.04	5,471.14	1,008.43	-4,915.48	1,910,910.35	126,478.65	36.2452167	-107.5166963
10,506.00	92.89	289.10	5,466.78	1,029.48	-4,974.70	1,910,932.16	126,419.71	36.2452745	-107.5168971
10,569.00	92.85	290.14	5,463.63	1,050.61	-5,033.96	1,910,954.05	126,360.72	36.2453325	-107.5170981
10,632.00	89.97	289.66	5,462.08	1,072.04	-5,093.18	1,910,976.25	126,301.79	36.2453914	-107.5172989
10,694.00	90.70	290.49	5,461.71	1,093.32	-5,151.41	1,910,998.28	126,243.84	36.2454498	-107.5174963
10,757.00	90.50	289.53	5,461.05	1,114.88	-5,210.60	1,911,020.59	126,184.93	36.2455090	-107.5176971
10,821.00	91.24	290.08	5,460.08	1,136.56	-5,270.81	1,911,043.05	126,125.01	36.2455685	-107.5179012
10,884.00	90.10	289.60	5,459.35	1,157.94	-5,330.06	1,911,065.19	126,066.03	36.2456272	-107.5181022
10,946.00	90.40	290.31	5,459.07	1,179.10	-5,388.34	1,911,087.10	126,008.03	36.2456853	-107.5182998
11,009.00	90.10	289.04	5,458.80	1,200.31	-5,447.66	1,911,109.08	125,948.99	36.2457435	-107.5185009
11,072.00	90.40	288.93	5,458.52	1,220.80	-5,507.23	1,911,130.34	125,889.69	36.2457998	-107.5187029
11,135.00	90.40	288.97	5,458.09	1,241.26	-5,566.82	1,911,151.56	125,830.37	36.2458559	-107.5189050
11,198.00	90.22	287.91	5,457.74	1,261.19	-5,626.58	1,911,172.26	125,770.87	36.2459106	-107.5191077
11,261.00	90.31	287.65	5,457.45	1,280.43	-5,686.57	1,911,192.27	125,711.13	36.2459634	-107.5193111
11,324.00	91.04	287.53	5,456.71	1,299.46	-5,746.62	1,911,212.08	125,651.34	36.2460157	-107.5195147
11,387.00	90.67	285.72	5,455.77	1,317.49	-5,806.98	1,911,230.88	125,591.22	36.2460652	-107.5197194
11,433.00	90.47	285.03	5,455.31	1,329.68	-5,851.33	1,911,243.65	125,547.03	36.2460987	-107.5198698
Base Perf @ 11,433' MD									
11,450.00	90.40	284.78	5,455.18	1,334.06	-5,867.76	1,911,248.23	125,530.66	36.2461107	-107.5199255
11,462.00	90.57	284.91	5,455.08	1,337.13	-5,879.36	1,911,251.45	125,519.10	36.2461191	-107.5199648
Last SDI Lateral MWD Survey									
11,526.00	90.57	284.91	5,454.44	1,353.60	-5,941.20	1,911,268.72	125,457.47	36.2461643	-107.5201745
Projection to TD									



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North Reference: True
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Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
63.00	63.00	0.01	-0.18	First MS Gyro Survey
363.00	362.99	1.11	-1.96	Last MS Gyro Survey
465.00	464.99	1.64	-2.45	First SDI Surface MWD Survey
4,858.00	4,809.78	-609.91	-27.84	Last SDI Surface MWD Survey
4,921.00	4,872.76	-609.38	-29.34	First SDI Curve MWD Survey
5,965.00	5,543.04	-399.43	-667.73	Last SDI Curve MWD Survey
6,016.00	5,545.64	-384.69	-716.47	7" Casing @ 6016' MD
6,016.00	5,545.64	-384.69	-716.47	Landing Point (POE) @ 6016' MD
6,034.00	5,545.84	-379.80	-733.79	First SDI Lateral MWD Survey
11,433.00	5,455.31	1,329.68	-5,851.33	Base Perf @ 11,433' MD
11,462.00	5,455.08	1,337.13	-5,879.36	Last SDI Lateral MWD Survey
11,526.00	5,454.44	1,353.60	-5,941.20	Projection to TD

Checked By: _____ Approved By: _____ Date: _____