

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

PCUD OCT 2 '14
AS DRILLED
OIL CONS. DIV.

WELL LOCATION AND ACREAGE DEDICATION PLAT

DIST. 3

*API Number 30-039-31217		*Pool Code 98088		*Pool Name Chaco Unit NE HZ (oil)	
*Property Code 313800		*Property Name CHACO 2307-12L NE Chaco com		*Well Number 171H	
*GRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 7002'	

10 Surface Location

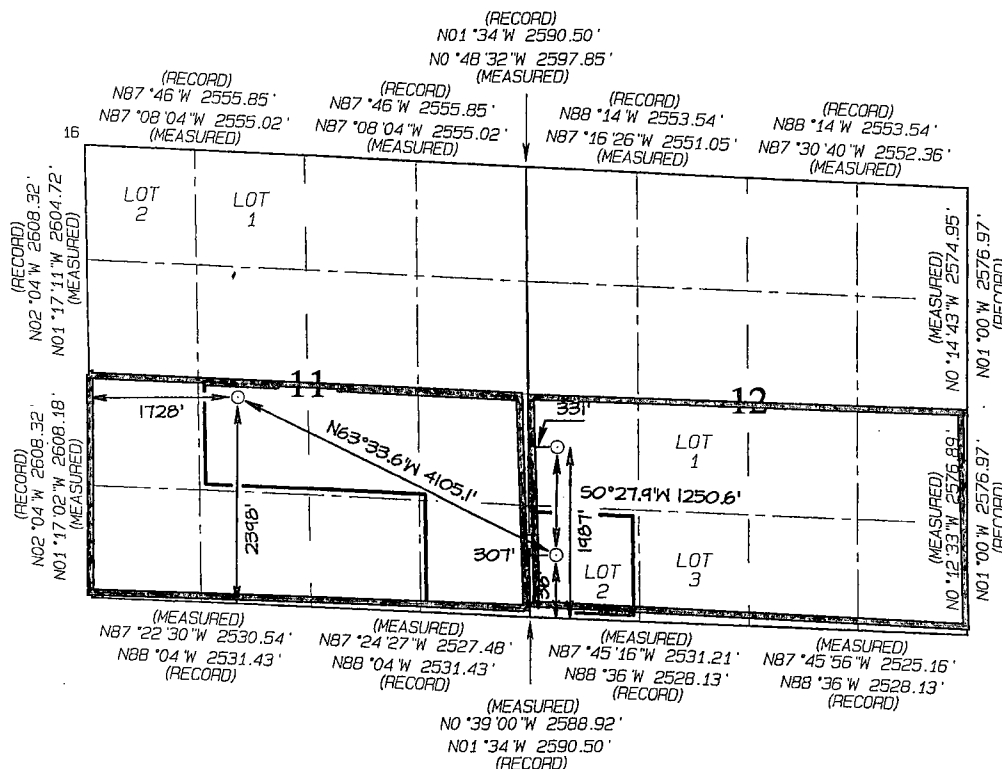
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	12	23N	7W		1987	SOUTH	331	WEST	RIO ARriba

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
K	11	23N	7W		2398	SOUTH	1728	WEST	RIO ARriba

12 Dedicated Acres S/2 11 & S/2 12 - 632.7 acres		13 Joint or Infill		14 Consolidation Code		15 Order No. R-13817-A acres 9,237.3	
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



END-OF-LATERAL
2398' FSL 1728' FSL
SECTION 11, T23N, R7W
LAT: 36.239583°N
LONG: 107.546876°W
DATUM: NAD1927

LAT: 36.239597°N
LONG: 107.547482°W
DATUM: NAD1983

POINT-OF-ENTRY
736' FSL 307' FSL
SECTION 12, T23N, R7W
LAT: 36.234698°N
LONG: 107.534332°W
DATUM: NAD1927

LAT: 36.234711°N
LONG: 107.534939°W
DATUM: NAD1983

SURFACE LOCATION
1987' FSL 331' FSL
SECTION 12, T23N, R7W
LAT: 36.238133°N
LONG: 107.534354°W
DATUM: NAD1927

LAT: 36.238146°N
LONG: 107.534950°W
DATUM: NAD1983

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Larry Higgins* Date: 8/26/14
LARRY HIGGINS

Printed Name
larry.higgins@wpxenergy.com

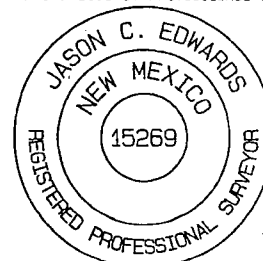
E-mail Address

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: SEPTEMBER 19, 2014
Date of Survey: AUGUST 17, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

AV



Company Name: WPX Energy Rocky Mountain, LLC
Project: Rio Arriba County, NM NAD27
Site: Chaco 2307-12L
Well: Chaco 2307-12L #171H

WPXENERGY

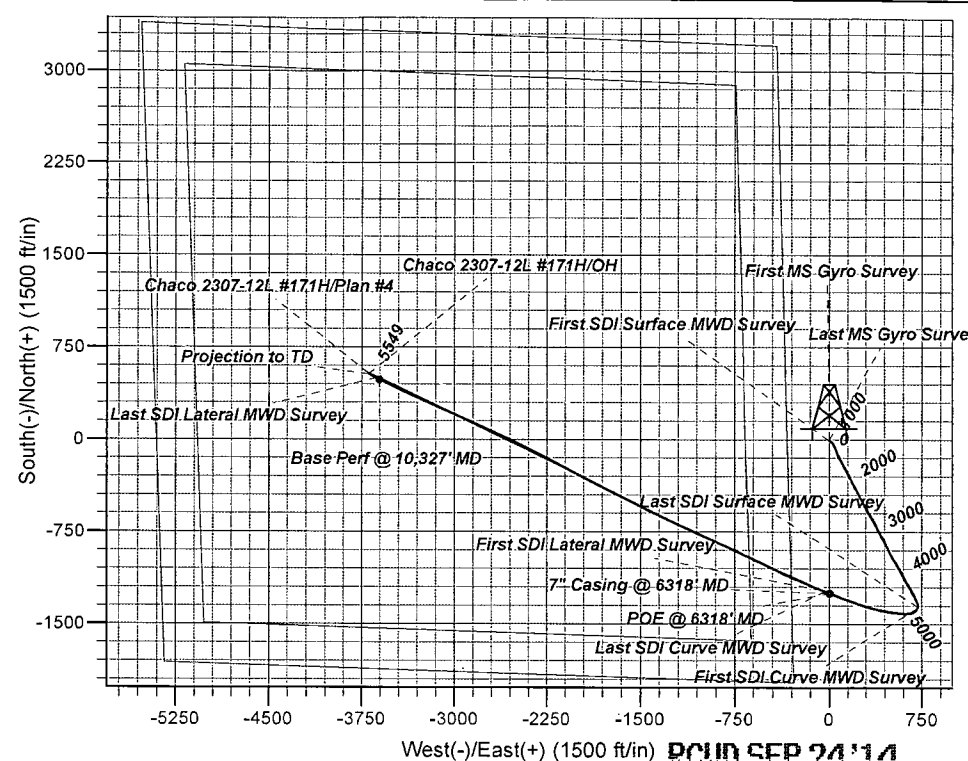
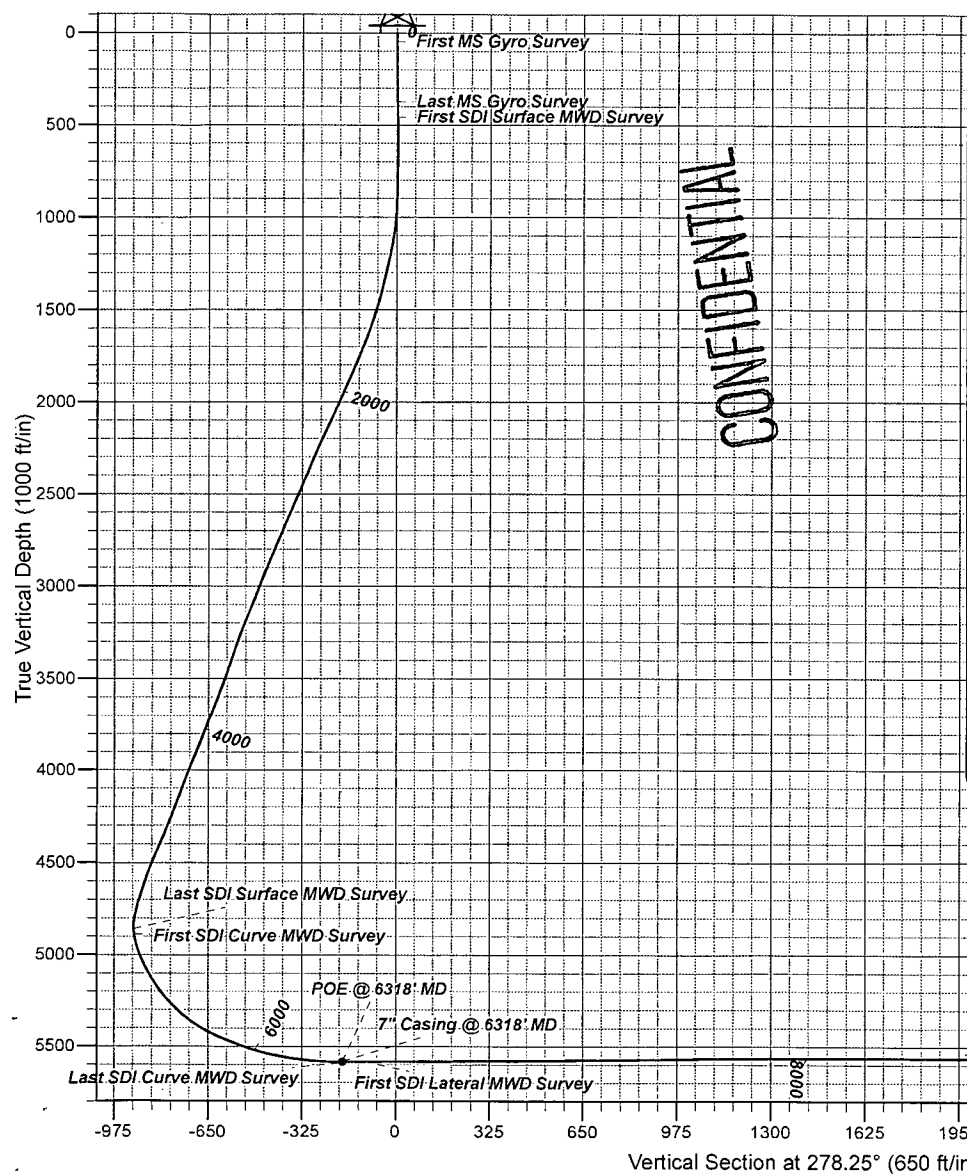


Azimuths to True North
Magnetic North: 9.43°

Magnetic Field
Strength: 50069.4snT
Dip Angle: 63.01°
Date: 9/4/2014
Model: BGGM2014

WELL DETAILS: Chaco 2307-12L #171H

+N/-S	+E/-W	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)	7002.00		
		Northing	Easting	Latitude	Longitude
0.00	0.00	1908399.05	121238.49	36.2381300	-107.5343500



ROUND SEP 24 '14
OIL CONS. DIV.
DIST. 3

Design: OH (Chaco 2307-12L #171H/OH)
Created By: Janie Collins Date: 14:31, September 16 2014

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



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12L #171H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Site:	Chaco 2307-12L	MD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Well:	Chaco 2307-12L #171H	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 2307-12L			
Site Position:		Northing:	1,908,399.05 usft	Latitude:	36.2381300
From:	Lat/Long	Easting:	121,238.49 usft	Longitude:	-107.5343500
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.76 °

Well	Chaco 2307-12L #171H					
Well Position	+N-S	0.00 ft	Northing:	1,908,399.05 usft	Latitude:	36.2381300
	+E-W	0.00 ft	Easting:	121,238.49 usft	Longitude:	-107.5343500
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	7,002.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	9/4/2014	9.43	63.01	50,069

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	278.25	

Survey Program	Date 9/16/2014				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
50.00	377.00	Survey #1 - MS Gyro Survey (OH)	Gyro		
460.00	5,168.00	Survey #2 - Surface MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
5,199.00	6,361.00	Survey #3 - Curve MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
6,392.00	10,425.00	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	1,908,399.05	121,238.49	36.2381300	-107.5343500
	50.00	0.48	229.09	50.00	-0.14	-0.16	1,908,398.92	121,238.33	36.2381296	-107.5343506
First MS Gyro Survey										
	100.00	0.58	227.83	100.00	-0.44	-0.50	1,908,398.62	121,237.98	36.2381288	-107.5343518
	150.00	0.67	225.65	149.99	-0.82	-0.90	1,908,398.25	121,237.58	36.2381277	-107.5343531
	200.00	0.69	231.99	199.99	-1.21	-1.35	1,908,397.86	121,237.13	36.2381267	-107.5343546
	250.00	0.93	227.95	249.99	-1.67	-1.89	1,908,397.41	121,236.58	36.2381254	-107.5343564
	300.00	0.94	233.30	299.98	-2.18	-2.52	1,908,396.91	121,235.95	36.2381240	-107.5343586
	350.00	0.80	240.07	349.97	-2.60	-3.15	1,908,396.49	121,235.31	36.2381228	-107.5343607



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12L #171H
Project:	Rio Arriba County, NM-NAD27	TVD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Site:	Chaco 2307-12L	MD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Well:	Chaco 2307-12L #171H	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
377.00	0.71	243.90	376.97	-2.77	-3.46	1,908,396.33	121,234.99	36.2381224	-107.5343618
Last MS Gyro Survey									
460.00	0.47	274.62	459.97	-2.97	-4.26	1,908,396.14	121,234.19	36.2381218	-107.5343645
First SDI Surface MWD Survey									
523.00	0.48	273.33	522.96	-2.93	-4.78	1,908,396.19	121,233.67	36.2381219	-107.5343663
587.00	0.11	140.70	586.96	-2.96	-5.01	1,908,396.16	121,233.44	36.2381218	-107.5343670
649.00	0.73	96.94	648.96	-3.06	-4.58	1,908,396.06	121,233.87	36.2381216	-107.5343656
712.00	0.63	100.47	711.96	-3.17	-3.84	1,908,395.94	121,234.61	36.2381213	-107.5343631
774.00	0.50	113.37	773.95	-3.34	-3.26	1,908,395.76	121,235.19	36.2381208	-107.5343611
838.00	0.66	98.70	837.95	-3.50	-2.64	1,908,395.58	121,235.80	36.2381203	-107.5343590
901.00	0.75	107.53	900.95	-3.68	-1.89	1,908,395.40	121,236.55	36.2381199	-107.5343564
963.00	1.35	110.03	962.94	-4.06	-0.81	1,908,395.01	121,237.62	36.2381188	-107.5343528
1,026.00	4.32	122.49	1,025.85	-5.59	1.89	1,908,393.44	121,240.30	36.2381146	-107.5343436
1,089.00	6.78	131.90	1,088.55	-9.34	6.66	1,908,389.62	121,245.02	36.2381043	-107.5343275
1,151.00	8.67	136.97	1,149.99	-15.20	12.57	1,908,383.68	121,250.86	36.2380882	-107.5343074
1,212.00	10.57	139.15	1,210.13	-22.80	19.37	1,908,376.00	121,257.55	36.2380674	-107.5342844
1,273.00	12.47	145.38	1,269.90	-32.45	26.77	1,908,366.25	121,264.83	36.2380408	-107.5342593
1,334.00	14.45	150.84	1,329.22	-44.52	34.22	1,908,354.09	121,272.12	36.2380077	-107.5342340
1,395.00	15.76	154.17	1,388.12	-58.62	41.54	1,908,339.89	121,279.25	36.2379690	-107.5342092
1,414.00	16.47	154.85	1,406.37	-63.38	43.81	1,908,335.10	121,281.45	36.2379559	-107.5342015
1,456.00	18.05	156.17	1,446.48	-74.73	48.97	1,908,323.69	121,286.46	36.2379247	-107.5341840
1,517.00	20.91	158.24	1,503.98	-93.48	56.82	1,908,304.83	121,294.07	36.2378732	-107.5341574
1,566.50	22.33	158.41	1,550.00	-110.43	63.56	1,908,287.79	121,300.58	36.2378266	-107.5341346
1,577.00	22.63	158.44	1,559.70	-114.17	65.03	1,908,284.04	121,302.00	36.2378164	-107.5341296
1,638.00	23.32	155.25	1,615.86	-136.05	74.40	1,908,262.03	121,311.08	36.2377563	-107.5340978
1,698.00	23.81	151.52	1,670.86	-157.48	85.15	1,908,240.46	121,321.54	36.2376974	-107.5340614
1,758.00	23.80	151.61	1,725.76	-178.77	96.68	1,908,219.01	121,332.79	36.2376389	-107.5340223
1,820.00	24.27	151.16	1,782.38	-200.94	108.78	1,908,196.69	121,344.59	36.2375780	-107.5339813
1,881.00	24.37	151.51	1,837.97	-222.98	120.83	1,908,174.49	121,356.35	36.2375175	-107.5339404
1,942.00	24.03	150.37	1,893.61	-244.84	132.97	1,908,152.47	121,368.20	36.2374575	-107.5338992
2,003.00	25.15	150.51	1,949.07	-266.92	145.49	1,908,130.23	121,380.43	36.2373968	-107.5338568
2,064.00	25.43	152.10	2,004.23	-289.78	158.00	1,908,107.21	121,392.64	36.2373340	-107.5338144
2,071.50	25.60	152.16	2,011.00	-292.63	159.51	1,908,104.33	121,394.11	36.2373262	-107.5338092
2,126.00	26.82	152.56	2,059.89	-313.96	170.68	1,908,082.86	121,404.99	36.2372676	-107.5337714
2,174.51	27.76	153.23	2,103.00	-333.76	180.81	1,908,062.93	121,414.86	36.2372132	-107.5337370
2,187.00	28.00	153.39	2,114.04	-338.98	183.43	1,908,057.68	121,417.41	36.2371989	-107.5337281
2,248.00	27.62	153.33	2,168.00	-364.41	196.19	1,908,032.07	121,429.83	36.2371290	-107.5336849
2,309.00	26.88	152.74	2,222.23	-389.31	208.85	1,908,007.01	121,442.17	36.2370606	-107.5336419
2,369.00	24.72	152.57	2,276.24	-412.50	220.85	1,907,983.66	121,453.85	36.2369969	-107.5336013
2,430.00	23.56	152.71	2,331.91	-434.66	232.31	1,907,961.35	121,465.02	36.2369361	-107.5335624
2,492.00	23.43	151.36	2,388.77	-456.49	243.90	1,907,939.37	121,476.32	36.2368761	-107.5335231
2,547.91	23.78	150.22	2,440.00	-476.03	254.83	1,907,919.69	121,486.99	36.2368224	-107.5334861
2,554.00	23.82	150.10	2,445.57	-478.16	256.05	1,907,917.54	121,488.18	36.2368166	-107.5334819
2,614.00	24.57	150.02	2,500.30	-499.47	268.32	1,907,896.07	121,500.17	36.2367581	-107.5334403
2,677.00	25.08	149.58	2,557.48	-522.33	281.63	1,907,873.04	121,513.17	36.2366953	-107.5333952
2,740.00	24.36	152.52	2,614.71	-545.37	294.39	1,907,849.83	121,525.62	36.2366320	-107.5333520
2,803.00	24.06	152.52	2,672.17	-568.29	306.31	1,907,826.75	121,537.24	36.2365690	-107.5333115
2,866.00	24.75	151.31	2,729.54	-591.25	318.57	1,907,803.63	121,549.19	36.2365059	-107.5332700
2,929.00	24.30	150.89	2,786.85	-614.15	331.20	1,907,780.57	121,561.52	36.2364431	-107.5332271
2,992.00	22.81	148.77	2,844.60	-635.92	343.84	1,907,758.64	121,573.87	36.2363833	-107.5331843
3,056.00	22.61	149.97	2,903.64	-657.18	356.43	1,907,737.21	121,586.18	36.2363249	-107.5331416
3,119.00	23.74	154.02	2,961.56	-679.06	368.05	1,907,715.17	121,597.50	36.2362648	-107.5331022
3,182.00	24.69	155.20	3,019.02	-702.41	379.12	1,907,691.68	121,608.27	36.2362006	-107.5330647
3,245.00	23.89	152.11	3,076.44	-725.63	390.61	1,907,668.31	121,619.45	36.2361368	-107.5330257
3,308.00	22.76	148.88	3,134.29	-747.34	402.88	1,907,646.44	121,631.43	36.2360772	-107.5329842



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12L #171H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Site:	Chaco 2307-12L	MD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Well:	Chaco 2307-12L #171H	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
3,371.00	22.35	147.87	3,192.48	-767.92	415.55	1,907,625.70	121,643.82	36.2360207	-107.5329412
3,434.00	21.69	151.11	3,250.88	-788.25	427.54	1,907,605.21	121,655.55	36.2359648	-107.5329005
3,497.00	21.90	154.84	3,309.38	-809.08	438.16	1,907,584.24	121,665.89	36.2359076	-107.5328645
3,560.00	22.07	155.33	3,367.80	-830.47	448.10	1,907,562.72	121,675.54	36.2358489	-107.5328308
3,623.00	21.81	155.15	3,426.24	-851.85	457.95	1,907,541.21	121,685.11	36.2357902	-107.5327974
3,686.00	22.77	155.01	3,484.53	-873.52	468.02	1,907,519.41	121,694.89	36.2357306	-107.5327633
3,748.46	23.34	154.17	3,542.00	-895.61	478.52	1,907,497.18	121,705.10	36.2356700	-107.5327277
3,749.00	23.34	154.16	3,542.50	-895.80	478.61	1,907,496.99	121,705.19	36.2356694	-107.5327274
3,809.39	23.08	153.34	3,598.00	-917.15	489.14	1,907,475.51	121,715.43	36.2356108	-107.5326917
3,811.00	23.07	153.32	3,599.48	-917.71	489.42	1,907,474.94	121,715.71	36.2356092	-107.5326907
3,875.00	23.15	150.39	3,658.35	-939.85	501.27	1,907,452.64	121,727.26	36.2355484	-107.5326506
3,938.00	22.76	149.25	3,716.36	-961.09	513.62	1,907,431.24	121,739.33	36.2354901	-107.5326087
4,001.00	22.07	148.47	3,774.60	-981.66	526.04	1,907,410.51	121,751.47	36.2354336	-107.5325666
4,064.00	21.32	148.89	3,833.13	-1,001.55	538.15	1,907,390.46	121,763.31	36.2353790	-107.5325256
4,127.00	21.16	147.76	3,891.85	-1,020.97	550.13	1,907,370.88	121,775.04	36.2353256	-107.5324849
4,190.00	21.31	147.73	3,950.58	-1,040.27	562.31	1,907,351.42	121,786.96	36.2352726	-107.5324436
4,253.00	21.28	150.23	4,009.28	-1,059.87	574.10	1,907,331.67	121,798.49	36.2352188	-107.5324037
4,317.00	22.36	152.46	4,068.69	-1,080.75	585.49	1,907,310.64	121,809.61	36.2351614	-107.5323650
4,380.00	21.84	154.19	4,127.06	-1,101.92	596.14	1,907,289.33	121,819.97	36.2351033	-107.5323290
4,444.00	22.75	152.02	4,186.28	-1,123.57	607.12	1,907,267.54	121,830.67	36.2350438	-107.5322917
4,507.00	22.91	151.46	4,244.34	-1,145.10	618.70	1,907,245.86	121,841.96	36.2349847	-107.5322525
4,571.00	23.01	151.47	4,303.27	-1,167.03	630.62	1,907,223.77	121,853.59	36.2349244	-107.5322120
4,578.31	23.13	151.45	4,310.00	-1,169.55	631.99	1,907,221.23	121,854.93	36.2349175	-107.5322074
4,632.00	24.00	151.32	4,359.21	-1,188.39	642.27	1,907,202.26	121,864.95	36.2348657	-107.5321725
4,696.00	24.42	149.66	4,417.58	-1,211.23	655.20	1,907,179.25	121,877.58	36.2348030	-107.5321287
4,759.00	23.61	149.32	4,475.13	-1,233.32	668.22	1,907,156.99	121,890.30	36.2347423	-107.5320846
4,785.01	23.19	150.46	4,499.00	-1,242.25	673.40	1,907,147.99	121,895.37	36.2347178	-107.5320670
4,822.00	22.61	152.14	4,533.08	-1,254.88	680.31	1,907,135.27	121,902.11	36.2346831	-107.5320436
4,884.00	21.56	155.88	4,590.53	-1,275.81	690.54	1,907,114.20	121,912.06	36.2346256	-107.5320089
4,947.00	20.74	155.57	4,649.28	-1,296.53	699.88	1,907,093.36	121,921.13	36.2345687	-107.5319772
4,978.00	20.22	156.03	4,678.32	-1,306.43	704.33	1,907,083.41	121,925.44	36.2345415	-107.5319622
5,010.00	19.61	154.98	4,708.41	-1,316.35	708.85	1,907,073.43	121,929.83	36.2345143	-107.5319469
5,038.00	18.73	158.05	4,734.86	-1,324.77	712.52	1,907,064.96	121,933.38	36.2344911	-107.5319344
5,041.00	18.64	158.40	4,737.70	-1,325.67	712.87	1,907,064.06	121,933.73	36.2344887	-107.5319332
5,073.00	16.57	162.61	4,768.20	-1,334.78	716.12	1,907,054.91	121,936.85	36.2344637	-107.5319222
5,105.00	14.97	169.10	4,799.00	-1,343.19	718.26	1,907,046.46	121,938.89	36.2344405	-107.5319149
5,136.00	14.38	177.99	4,828.99	-1,350.97	719.16	1,907,038.67	121,939.68	36.2344192	-107.5319119
5,168.00	14.42	192.33	4,860.00	-1,358.84	718.45	1,907,030.82	121,938.86	36.2343976	-107.5319143
Last SDI Surface MWD Survey									
5,199.00	15.91	205.55	4,889.92	-1,366.44	715.79	1,907,023.25	121,936.10	36.2343767	-107.5319233
First SDI Curve MWD Survey									
5,202.20	16.11	206.65	4,893.00	-1,367.24	715.40	1,907,022.46	121,935.70	36.2343745	-107.5319246
5,231.00	18.11	215.45	4,920.53	-1,374.46	711.01	1,907,015.30	121,931.22	36.2343547	-107.5319395
5,262.00	18.90	219.99	4,949.93	-1,382.23	704.99	1,907,007.61	121,925.10	36.2343333	-107.5319599
5,294.00	19.08	226.26	4,980.19	-1,389.82	697.88	1,907,000.11	121,917.89	36.2343125	-107.5319840
5,326.00	19.21	234.08	5,010.42	-1,396.52	689.83	1,906,993.52	121,909.75	36.2342941	-107.5320113
5,357.00	19.79	242.52	5,039.65	-1,401.94	681.05	1,906,988.22	121,900.90	36.2342792	-107.5320411
5,389.00	20.46	249.49	5,069.70	-1,406.40	671.00	1,906,983.89	121,890.79	36.2342669	-107.5320752
5,420.00	21.28	256.49	5,098.67	-1,409.61	660.45	1,906,980.82	121,880.20	36.2342581	-107.5321109
5,420.35	21.28	256.55	5,099.00	-1,409.64	660.33	1,906,980.79	121,880.08	36.2342580	-107.5321113
5,451.00	21.80	261.65	5,127.51	-1,411.76	649.29	1,906,978.82	121,869.01	36.2342522	-107.5321488
5,482.00	22.60	267.39	5,156.22	-1,412.87	637.64	1,906,977.86	121,857.35	36.2342492	-107.5321883
5,514.00	24.47	270.78	5,185.55	-1,413.06	624.87	1,906,977.84	121,844.58	36.2342486	-107.5322316
5,545.00	26.73	272.40	5,213.51	-1,412.68	611.48	1,906,978.40	121,831.20	36.2342497	-107.5322769
5,577.00	29.18	273.43	5,241.77	-1,411.91	596.51	1,906,979.37	121,816.23	36.2342518	-107.5323277



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12L #171H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Site:	Chaco 2307-12L	MD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Well:	Chaco 2307-12L #171H	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	
5,608.00	31.22	273.10	5,268.56	-1,411.02	580.94	1,906,980.46	121,800.67	36.2342542	-107.5323805	
5,640.00	33.20	273.74	5,295.64	-1,410.00	563.91	1,906,981.70	121,783.66	36.2342570	-107.5324382	
5,671.00	35.88	274.60	5,321.17	-1,408.72	546.38	1,906,983.22	121,766.16	36.2342606	-107.5324977	
5,703.00	39.06	276.16	5,346.57	-1,406.89	527.01	1,906,985.31	121,746.80	36.2342656	-107.5325633	
5,734.00	43.09	277.41	5,369.93	-1,404.47	506.79	1,906,987.99	121,726.62	36.2342722	-107.5326319	
5,765.00	46.47	279.04	5,391.93	-1,401.34	485.18	1,906,991.41	121,705.06	36.2342808	-107.5327051	
5,797.00	50.47	281.36	5,413.15	-1,397.08	461.62	1,906,995.98	121,681.55	36.2342925	-107.5327850	
5,829.00	53.63	282.33	5,432.82	-1,391.90	436.92	1,907,001.49	121,656.93	36.2343068	-107.5328688	
5,860.00	56.72	284.00	5,450.53	-1,386.10	412.15	1,907,007.62	121,632.23	36.2343227	-107.5329527	
5,891.00	57.91	283.86	5,467.27	-1,379.82	386.83	1,907,014.23	121,607.00	36.2343400	-107.5330386	
5,923.00	58.21	283.82	5,484.20	-1,373.32	360.46	1,907,021.08	121,580.72	36.2343578	-107.5331280	
5,954.00	60.01	284.26	5,500.11	-1,366.87	334.65	1,907,027.87	121,555.00	36.2343755	-107.5332155	
5,985.00	63.58	286.11	5,514.76	-1,359.71	308.30	1,907,035.38	121,528.74	36.2343952	-107.5333048	
6,017.00	66.62	286.68	5,528.23	-1,351.51	280.46	1,907,043.95	121,501.01	36.2344177	-107.5333992	
6,048.00	70.55	288.20	5,539.55	-1,342.86	252.93	1,907,052.96	121,473.60	36.2344415	-107.5334925	
6,080.00	73.52	289.01	5,549.42	-1,333.15	224.09	1,907,063.06	121,444.89	36.2344682	-107.5335903	
6,112.00	74.81	289.16	5,558.15	-1,323.08	194.99	1,907,073.51	121,415.93	36.2344958	-107.5336890	
6,143.00	76.71	289.89	5,565.77	-1,313.04	166.68	1,907,083.92	121,387.75	36.2345234	-107.5337850	
6,175.00	79.21	290.50	5,572.45	-1,302.24	137.31	1,907,095.12	121,358.52	36.2345531	-107.5338845	
6,206.00	81.29	291.20	5,577.70	-1,291.36	108.76	1,907,106.37	121,330.12	36.2345829	-107.5339813	
6,238.00	83.78	291.80	5,581.86	-1,279.73	79.24	1,907,118.39	121,300.76	36.2346149	-107.5340814	
6,271.00	88.26	292.39	5,584.15	-1,267.35	48.74	1,907,131.17	121,270.43	36.2346489	-107.5341848	
6,318.00	89.47	291.96	5,585.08	-1,249.62	5.23	1,907,149.48	121,227.16	36.2346976	-107.5343323	
7" Casing @ 6318' MD - POE @ 6318' MD										
6,361.00	90.57	291.57	5,585.06	-1,233.67	-34.70	1,907,165.95	121,187.44	36.2347414	-107.5344677	
Last SDI Curve MWD Survey										
6,392.00	90.24	291.55	5,584.85	-1,222.28	-63.53	1,907,177.73	121,158.76	36.2347727	-107.5345655	
First SDI Lateral MWD Survey										
6,457.00	90.40	292.23	5,584.48	-1,198.05	-123.85	1,907,202.76	121,098.78	36.2348392	-107.5347699	
6,519.00	90.57	294.05	5,583.96	-1,173.68	-180.85	1,907,227.87	121,042.10	36.2349062	-107.5349632	
6,582.00	90.57	294.24	5,583.33	-1,147.92	-238.34	1,907,254.40	120,984.96	36.2349769	-107.5351581	
6,644.00	90.50	294.09	5,582.75	-1,122.54	-294.90	1,907,280.53	120,928.73	36.2350467	-107.5353499	
6,706.00	90.37	294.01	5,582.28	-1,097.27	-351.52	1,907,306.54	120,872.46	36.2351161	-107.5355418	
6,769.00	90.67	296.09	5,581.71	-1,070.60	-408.59	1,907,333.97	120,815.75	36.2351893	-107.5357353	
6,832.00	90.71	295.92	5,580.95	-1,042.98	-465.21	1,907,362.34	120,759.50	36.2352652	-107.5359272	
6,894.00	90.88	296.01	5,580.09	-1,015.84	-520.94	1,907,390.21	120,704.13	36.2353397	-107.5361162	
6,956.00	90.80	295.80	5,579.18	-988.75	-576.71	1,907,418.03	120,648.73	36.2354141	-107.5363053	
7,019.00	90.87	296.22	5,578.26	-961.13	-633.32	1,907,446.41	120,592.49	36.2354900	-107.5364972	
7,082.00	90.61	296.21	5,577.45	-933.30	-689.84	1,907,474.98	120,536.35	36.2355664	-107.5366888	
7,144.00	90.91	295.75	5,576.63	-906.14	-745.56	1,907,502.87	120,480.98	36.2356410	-107.5368778	
7,207.00	91.51	295.02	5,575.30	-879.14	-802.47	1,907,530.63	120,424.44	36.2357152	-107.5370707	
7,269.00	91.28	295.10	5,573.79	-852.89	-858.62	1,907,557.62	120,368.65	36.2357873	-107.5372610	
7,332.00	90.97	295.04	5,572.55	-826.20	-915.67	1,907,585.07	120,311.95	36.2358606	-107.5374545	
7,395.00	90.94	294.91	5,571.50	-799.60	-972.77	1,907,612.42	120,255.21	36.2359336	-107.5376481	
7,457.00	90.44	294.60	5,570.75	-773.64	-1,029.07	1,907,639.12	120,199.26	36.2360049	-107.5378389	
7,520.00	90.03	294.59	5,570.50	-747.42	-1,086.35	1,907,666.10	120,142.33	36.2360769	-107.5380332	
7,583.00	90.70	294.97	5,570.09	-721.02	-1,143.55	1,907,693.26	120,085.49	36.2361495	-107.5382271	
7,646.00	90.87	295.28	5,569.23	-694.27	-1,200.58	1,907,720.76	120,028.81	36.2362229	-107.5384205	
7,709.00	91.91	296.59	5,567.70	-666.73	-1,257.22	1,907,749.05	119,972.55	36.2362986	-107.5386125	
7,772.00	91.35	295.87	5,565.91	-638.89	-1,313.71	1,907,777.63	119,916.43	36.2363750	-107.5388040	
7,835.00	90.67	295.39	5,564.80	-611.65	-1,370.50	1,907,805.63	119,860.00	36.2364499	-107.5389966	
7,898.00	90.17	297.95	5,564.34	-583.37	-1,426.79	1,907,834.64	119,804.09	36.2365275	-107.5391874	
7,961.00	89.76	297.56	5,564.38	-554.03	-1,482.54	1,907,864.72	119,748.74	36.2366081	-107.5393764	
8,024.00	90.30	297.48	5,564.34	-524.92	-1,538.42	1,907,894.57	119,693.26	36.2366880	-107.5395659	
8,087.00	90.37	297.23	5,563.98	-495.98	-1,594.37	1,907,924.25	119,637.69	36.2367675	-107.5397556	

Company:	WPX Energy, Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12L #171H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Site:	Chaco 2307-12L	MD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Well:	Chaco 2307-12L #171H	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
8,150.00	90.13	297.89	5,563.70	-466.83	-1,650.22	1,907,954.14	119,582.23	36.2368476	-107.5399449
8,213.00	89.60	297.61	5,563.85	-437.49	-1,705.97	1,907,984.21	119,526.87	36.2369282	-107.5401340
8,276.00	90.57	296.88	5,563.76	-408.65	-1,761.98	1,908,013.79	119,471.25	36.2370074	-107.5403239
8,338.00	90.71	296.81	5,563.06	-380.66	-1,817.30	1,908,042.52	119,416.31	36.2370843	-107.5405114
8,402.00	89.08	298.06	5,563.18	-351.17	-1,874.10	1,908,072.75	119,359.91	36.2371652	-107.5407040
8,528.00	90.20	297.71	5,563.97	-292.24	-1,985.46	1,908,133.15	119,249.33	36.2373271	-107.5410816
8,591.00	90.07	297.73	5,563.82	-262.94	-2,041.23	1,908,163.19	119,193.96	36.2374076	-107.5412707
8,654.00	90.17	297.61	5,563.69	-233.68	-2,097.03	1,908,193.18	119,138.55	36.2374879	-107.5414598
8,717.00	90.24	297.42	5,563.47	-204.58	-2,152.90	1,908,223.03	119,083.07	36.2375678	-107.5416493
8,779.00	89.83	297.22	5,563.43	-176.12	-2,207.98	1,908,252.21	119,028.37	36.2376460	-107.5418360
8,842.00	90.10	297.33	5,563.47	-147.25	-2,263.98	1,908,281.82	118,972.76	36.2377253	-107.5420259
8,905.00	90.40	296.54	5,563.19	-118.72	-2,320.15	1,908,311.10	118,916.98	36.2378036	-107.5422163
8,968.00	91.21	296.90	5,562.31	-90.39	-2,376.41	1,908,340.16	118,861.09	36.2378814	-107.5424071
9,031.00	92.52	297.09	5,560.26	-61.81	-2,432.52	1,908,369.49	118,805.37	36.2379599	-107.5425973
9,095.00	92.39	296.75	5,557.52	-32.86	-2,489.53	1,908,399.19	118,748.75	36.2380394	-107.5427906
9,157.00	91.51	295.79	5,555.41	-5.44	-2,545.09	1,908,427.35	118,693.55	36.2381147	-107.5429790
9,221.00	90.64	295.22	5,554.20	22.11	-2,602.84	1,908,455.66	118,636.17	36.2381904	-107.5431748
9,283.00	89.06	294.30	5,554.37	48.08	-2,659.14	1,908,482.37	118,580.22	36.2382617	-107.5433657
9,346.00	89.60	293.98	5,555.10	73.84	-2,716.63	1,908,508.89	118,523.08	36.2383325	-107.5435606
9,409.00	89.70	293.99	5,555.49	99.45	-2,774.19	1,908,535.26	118,465.87	36.2384028	-107.5437558
9,472.00	90.13	295.02	5,555.58	125.58	-2,831.51	1,908,562.15	118,408.90	36.2384745	-107.5439502
9,535.00	89.36	294.72	5,555.86	152.08	-2,888.67	1,908,589.40	118,352.10	36.2385473	-107.5441439
9,598.00	89.80	294.03	5,556.32	178.08	-2,946.05	1,908,616.16	118,295.06	36.2386187	-107.5443385
9,661.00	90.64	293.54	5,556.08	203.48	-3,003.70	1,908,642.33	118,237.76	36.2386885	-107.5445340
9,723.00	91.34	293.70	5,555.01	228.32	-3,060.50	1,908,667.92	118,181.29	36.2387567	-107.5447265
9,786.00	93.36	294.51	5,552.43	254.03	-3,117.95	1,908,694.38	118,124.19	36.2388273	-107.5449214
9,848.00	91.35	295.01	5,549.88	279.97	-3,174.20	1,908,721.07	118,068.29	36.2388985	-107.5451121
9,911.00	91.51	295.15	5,548.31	306.67	-3,231.24	1,908,748.52	118,011.60	36.2389718	-107.5453055
9,973.00	91.44	294.85	5,546.71	332.86	-3,287.41	1,908,775.45	117,955.78	36.2390437	-107.5454959
10,036.00	88.92	293.06	5,546.51	358.44	-3,344.98	1,908,801.79	117,898.56	36.2391140	-107.5456911
10,100.00	90.22	295.51	5,546.99	384.76	-3,403.31	1,908,828.88	117,840.58	36.2391863	-107.5458889
10,162.00	90.27	295.80	5,546.73	411.60	-3,459.20	1,908,856.46	117,785.06	36.2392600	-107.5460784
10,226.00	89.53	296.60	5,546.84	439.85	-3,516.62	1,908,885.48	117,728.01	36.2393376	-107.5462731
10,289.00	89.33	296.68	5,547.47	468.10	-3,572.93	1,908,914.47	117,672.08	36.2394151	-107.5464640
10,327.00	89.48	296.75	5,547.86	485.18	-3,606.87	1,908,931.99	117,638.37	36.2394620	-107.5465791
Base Perf @ 10,327 MD									
10,358.00	89.60	296.80	5,548.11	499.15	-3,634.55	1,908,946.32	117,610.88	36.2395004	-107.5466730
Last SDI Lateral MWD Survey									
10,425.00	89.60	296.80	5,548.58	529.35	-3,694.35	1,908,977.32	117,551.49	36.2395833	-107.5468757
Projection to TD									

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12L #171H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Site:	Chaco 2307-12L	MD Reference:	GL 7002' & RKB 14' @ 7016.00ft (Aztec 730)
Well:	Chaco 2307-12L #171H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
50.00	50.00	-0.14	-0.16	First MS Gyro Survey
377.00	376.97	-2.77	-3.46	Last MS Gyro Survey
460.00	459.97	-2.97	-4.26	First SDI Surface MWD Survey
5,168.00	4,860.00	-1,358.84	718.45	Last SDI Surface MWD Survey
5,199.00	4,889.92	-1,366.44	715.79	First SDI Curve MWD Survey
6,318.00	5,585.08	-1,249.62	5.23	7" Casing @ 6318' MD
6,318.00	5,585.08	-1,249.62	5.23	POE @ 6318' MD
6,361.00	5,585.06	-1,233.67	-34.70	Last SDI Curve MWD Survey
6,392.00	5,584.85	-1,222.28	-63.53	First SDI Lateral MWD Survey
10,327.00	5,547.86	485.18	-3,606.87	Base Perf @ 10,327' MD
10,358.00	5,548.11	499.15	-3,634.55	Last SDI Lateral MWD Survey
10,425.00	5,548.58	529.35	-3,694.35	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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