

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

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31211		*Pool Code 42289		*Pool Name LYBROOK GALLUP	
*Property Code 39688		*Property Name CHACO 2307-12E			*Well Number 169H
*GRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 7039'

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	12	23N	7W		1524	NORTH	262	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
E	11	23N	7W		1819	NORTH	129	WEST	RIO ARriba

¹² Dedicated Acres 160.0 Acres S/2 N/2 - Section 11					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD APR 23 '14 OIL CONS. DIV. DIST. 3		
--	--	--	--	--	-------------------------------	----------------------------------	---	--	--

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
1819' FNL 129' FWL
SECTION 11, T23N, R7W
LAT: 36.24244°N
LONG: 107.55242°W
DATUM: NAD1927

LAT: 36.24245°N
LONG: 107.55303°W
DATUM: NAD1983

POINT-OF-ENTRY
1757' FNL 387' FEL
SECTION 11, T23N, R7W
LAT: 36.24215°N
LONG: 107.53692°W
DATUM: NAD1927

LAT: 36.24216°N
LONG: 107.53753°W
DATUM: NAD1983

SURFACE LOCATION
1524' FNL 262' FWL
SECTION 12, T23N, R7W
LAT: 36.24273°N
LONG: 107.53474°W
DATUM: NAD1927

LAT: 36.24274°N
LONG: 107.53534°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: 4/22/14
Printed Name: Larry Higgins

Printed Name: larry.higgins@wpxenergy.com
E-mail Address:

¹⁸ SURVEYOR CERTIFICATION

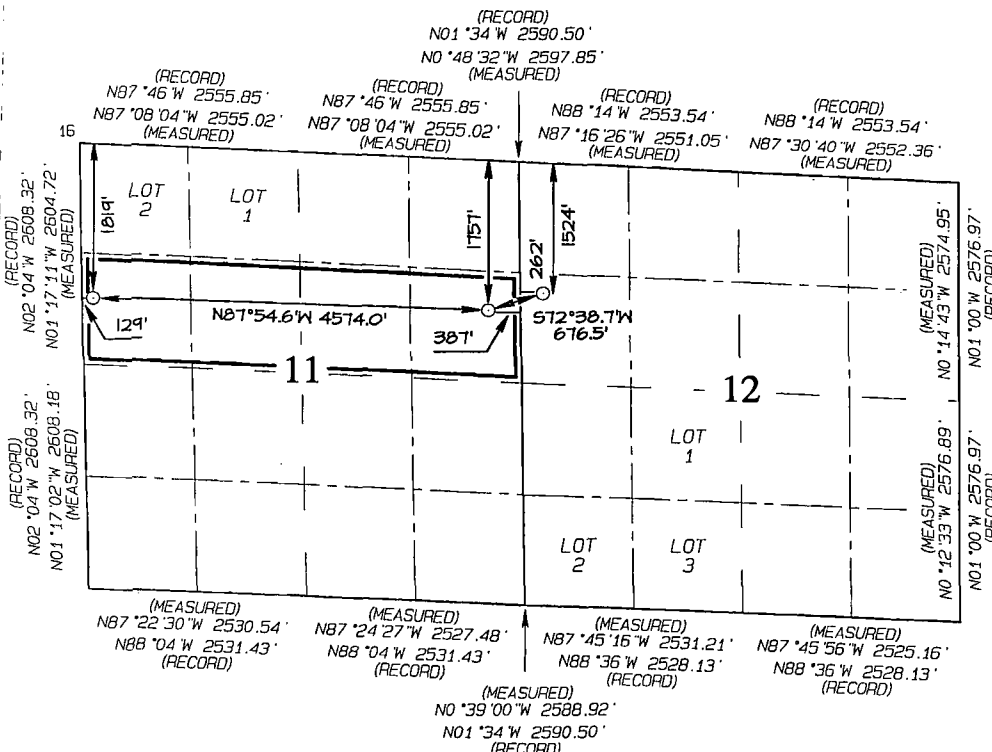
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

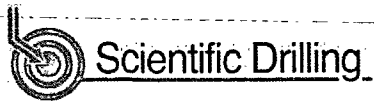
Date Revised: APRIL 11, 2014
Survey Date: AUGUST 20, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269





Company Name: WPX Energy Rocky Mountain, LLC

Project: Rio Arriba County, NM NAD27

Site: Chaco 2307-12E

Well: Chaco 2307-12E #169H

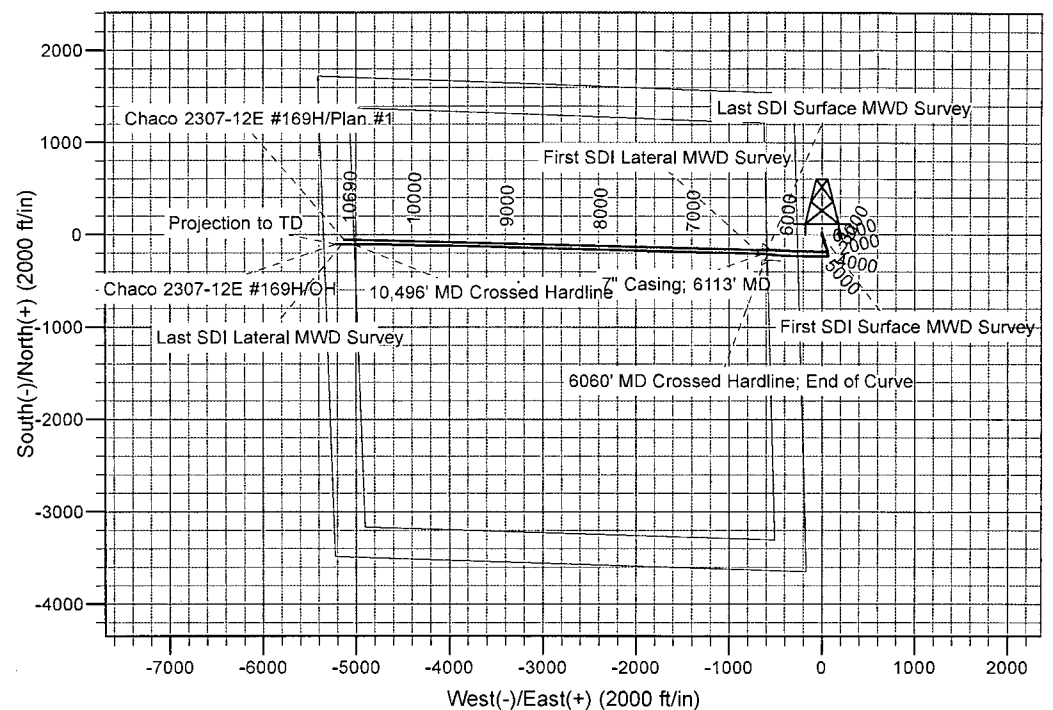
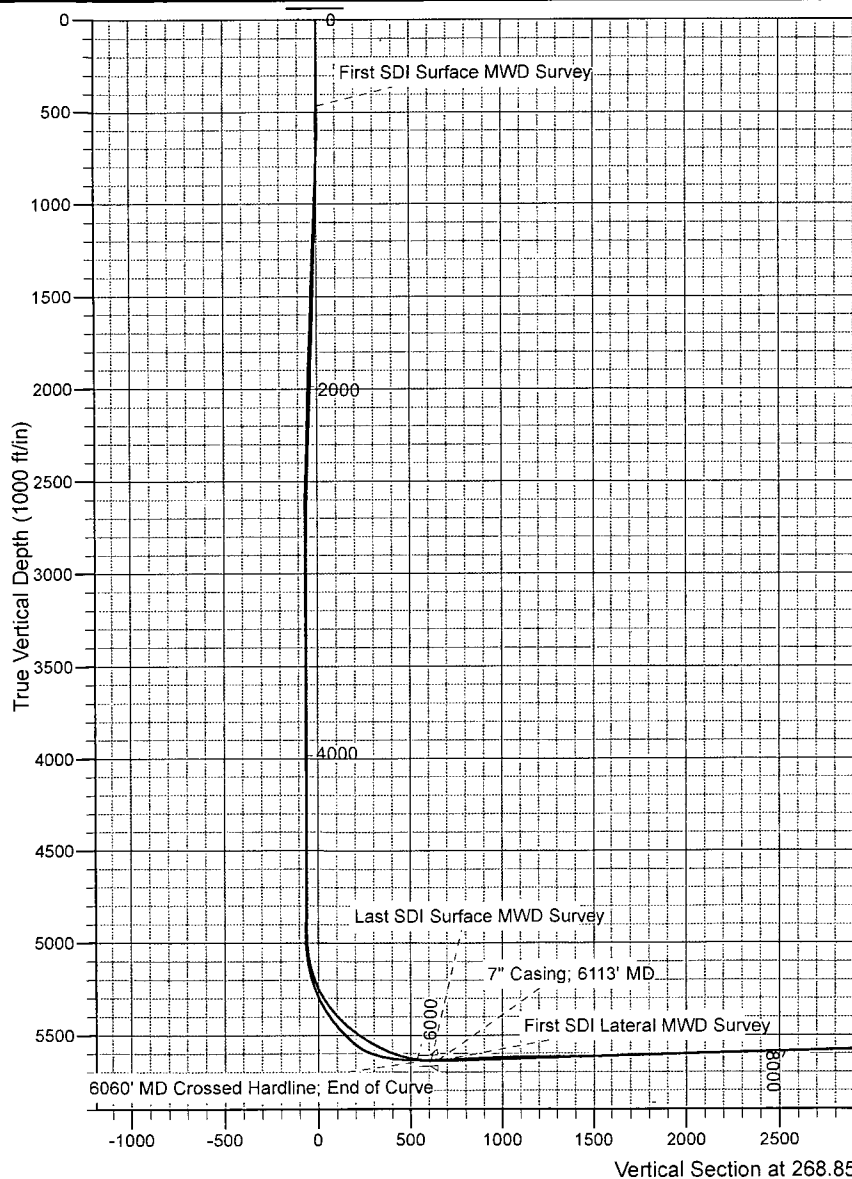


Azimuths to True North:
Magnetic North: 9.43°

Magnetic Field
Strength: 50138.3snT
Dip Angle: 63.02°
Date: 3/15/2014
Model: BGGM2013

WELL DETAILS: Chaco 2307-12E #169H

GL 7039' & RKB 14' @ 7053.01ft 7039.01		North	East	Lat	Long
+N/-S	+E/-W	North	East	Latitude	Longitude
0.00	0.00	1910075.14	121145.67	36° 14' 33.828 N	107° 32' 5.064 W



CONFIDENTIAL

Design: OH (Chaco 2307-12E #169H/OH)

Created By: Janie Collins Date: 10:25, April 08 2014

PROJECT DETAILS: Rio Arriba County, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)

Datum: NAD 1927 (NADCON CONUS)

Ellipsoid: Clarke 1886

Zone: New Mexico Central 3002

System Datum: Mean Sea Level
Local North: True

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12E #169H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Site:	Chaco 2307-12E	MD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Well:	Chaco 2307-12E #169H	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 2307-12E				
Site Position:		Northing:	1,910,075.14	usft	Latitude:	36° 14' 33.828 N
From:	Lat/Long	Easting:	121,145.67	usft	Longitude:	107° 32' 5.064 W
Position Uncertainty:		0.00	ft	Slot Radius:	13.200	in
				Grid Convergence:	-0.76 °	

Well	Chaco 2307-12E #169H					
Well Position	+N/-S	0.00 ft	Northing:	1,910,075.14 usft	Latitude:	36° 14' 33.828 N
	+E/-W	0.00 ft	Easting:	121,145.67 usft	Longitude:	107° 32' 5.064 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	7,039.01 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	3/15/2014	9.45	63.02	50,138

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	268.85	

Survey Program	Date	4/7/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
465.00	6,076.00	Survey #1 - Surface MWD Survey (OH)	MWD SDI	MWD - Standard ver 1.0.1	
6,130.00	10,690.00	Survey #2 - 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	1,910,075.14	121,145.67	36° 14' 33.828 N	107° 32' 5.064 W
465.00	0.82	244.66	464.98	-1.42	-3.01	1,910,073.76	121,142.65	36° 14' 33.814 N	107° 32' 5.101 W
First SDI Surface MWD Survey									
528.00	0.90	238.96	527.98	-1.87	-3.84	1,910,073.32	121,141.81	36° 14' 33.809 N	107° 32' 5.111 W
590.00	2.05	184.63	589.96	-3.23	-4.35	1,910,071.97	121,141.28	36° 14' 33.796 N	107° 32' 5.117 W
653.00	3.76	172.70	652.88	-6.40	-4.17	1,910,068.79	121,141.41	36° 14' 33.765 N	107° 32' 5.115 W
714.00	5.74	161.17	713.66	-11.27	-2.93	1,910,063.91	121,142.59	36° 14' 33.717 N	107° 32' 5.100 W
775.00	6.89	154.37	774.29	-17.46	-0.37	1,910,057.69	121,145.07	36° 14' 33.655 N	107° 32' 5.068 W
836.00	7.09	152.69	834.84	-24.10	2.94	1,910,051.00	121,148.29	36° 14' 33.590 N	107° 32' 5.028 W
898.00	7.04	151.47	896.37	-30.84	6.51	1,910,044.22	121,151.78	36° 14' 33.523 N	107° 32' 4.985 W
959.00	7.41	158.46	956.89	-37.78	9.74	1,910,037.23	121,154.91	36° 14' 33.454 N	107° 32' 4.945 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12E #169H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Site:	Chaco 2307-12E	MD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Well:	Chaco 2307-12E #169H	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
1,021.00	7.68	163.52	1,018.35	-45.48	12.39	1,910,029.50	121,157.45	36° 14' 33.378 N	107° 32' 4.913 W
1,083.00	7.96	162.22	1,079.77	-53.54	14.87	1,910,021.41	121,159.83	36° 14' 33.299 N	107° 32' 4.882 W
1,143.00	8.01	161.52	1,139.19	-61.46	17.47	1,910,013.46	121,162.32	36° 14' 33.220 N	107° 32' 4.851 W
1,204.00	8.22	160.79	1,199.58	-69.61	20.25	1,910,005.27	121,164.99	36° 14' 33.140 N	107° 32' 4.817 W
1,265.00	8.00	159.97	1,259.97	-77.71	23.14	1,909,997.13	121,167.78	36° 14' 33.060 N	107° 32' 4.782 W
1,326.00	8.05	160.87	1,320.37	-85.73	25.99	1,909,989.07	121,170.52	36° 14' 32.980 N	107° 32' 4.747 W
1,388.00	7.14	164.89	1,381.83	-93.56	28.42	1,909,981.21	121,172.85	36° 14' 32.903 N	107° 32' 4.717 W
1,450.00	6.66	166.84	1,443.38	-100.78	30.24	1,909,973.97	121,174.57	36° 14' 32.831 N	107° 32' 4.695 W
1,509.00	6.55	165.25	1,501.99	-107.36	31.88	1,909,967.36	121,176.12	36° 14' 32.766 N	107° 32' 4.675 W
1,568.00	7.12	165.35	1,560.57	-114.15	33.66	1,909,960.55	121,177.81	36° 14' 32.699 N	107° 32' 4.653 W
1,631.00	6.93	167.44	1,623.10	-121.64	35.47	1,909,953.04	121,179.53	36° 14' 32.625 N	107° 32' 4.631 W
1,691.00	6.48	151.90	1,682.69	-128.16	37.85	1,909,946.49	121,181.82	36° 14' 32.561 N	107° 32' 4.602 W
1,753.00	6.38	145.43	1,744.30	-134.09	41.46	1,909,940.52	121,185.35	36° 14' 32.502 N	107° 32' 4.558 W
1,814.00	6.33	154.91	1,804.93	-139.92	44.80	1,909,934.64	121,188.62	36° 14' 32.444 N	107° 32' 4.517 W
1,841.00	6.16	155.39	1,831.77	-142.59	46.04	1,909,931.96	121,189.82	36° 14' 32.418 N	107° 32' 4.502 W
1,932.00	5.70	159.71	1,922.28	-151.26	49.64	1,909,923.23	121,193.30	36° 14' 32.332 N	107° 32' 4.458 W
1,996.00	5.94	166.48	1,985.95	-157.47	51.52	1,909,917.01	121,195.10	36° 14' 32.271 N	107° 32' 4.435 W
2,058.00	5.76	171.63	2,047.63	-163.66	52.72	1,909,910.79	121,196.22	36° 14' 32.210 N	107° 32' 4.421 W
2,122.00	7.55	170.29	2,111.20	-170.98	53.90	1,909,903.46	121,197.30	36° 14' 32.137 N	107° 32' 4.406 W
2,185.00	8.26	167.97	2,173.60	-179.49	55.54	1,909,894.93	121,198.82	36° 14' 32.053 N	107° 32' 4.386 W
2,249.00	8.23	167.88	2,236.94	-188.47	57.46	1,909,885.93	121,200.62	36° 14' 31.964 N	107° 32' 4.363 W
2,313.00	8.09	167.77	2,300.29	-197.34	59.37	1,909,877.02	121,202.42	36° 14' 31.877 N	107° 32' 4.339 W
2,376.00	7.96	169.07	2,362.67	-205.96	61.14	1,909,868.39	121,204.07	36° 14' 31.791 N	107° 32' 4.318 W
2,440.00	7.08	164.17	2,426.12	-214.11	63.05	1,909,860.22	121,205.88	36° 14' 31.711 N	107° 32' 4.294 W
2,502.00	5.20	146.84	2,487.77	-220.14	65.63	1,909,854.15	121,208.38	36° 14' 31.651 N	107° 32' 4.263 W
2,566.00	3.33	140.05	2,551.59	-223.99	68.41	1,909,850.26	121,211.11	36° 14' 31.613 N	107° 32' 4.229 W
2,631.00	1.92	150.28	2,616.52	-226.38	70.17	1,909,847.85	121,212.83	36° 14' 31.589 N	107° 32' 4.208 W
2,694.00	0.71	219.99	2,679.50	-227.60	70.44	1,909,846.63	121,213.09	36° 14' 31.577 N	107° 32' 4.204 W
2,757.00	0.77	344.35	2,742.50	-227.49	70.07	1,909,846.74	121,212.72	36° 14' 31.579 N	107° 32' 4.209 W
2,820.00	1.28	5.59	2,805.49	-226.38	70.03	1,909,847.85	121,212.69	36° 14' 31.589 N	107° 32' 4.209 W
2,883.00	0.71	347.42	2,868.48	-225.30	70.01	1,909,848.93	121,212.69	36° 14' 31.600 N	107° 32' 4.209 W
2,946.00	0.44	289.88	2,931.48	-224.84	69.70	1,909,849.40	121,212.38	36° 14' 31.605 N	107° 32' 4.213 W
3,011.00	0.75	302.46	2,996.47	-224.52	69.11	1,909,849.72	121,211.79	36° 14' 31.608 N	107° 32' 4.220 W
3,074.00	0.35	289.92	3,059.47	-224.24	68.58	1,909,850.01	121,211.27	36° 14' 31.611 N	107° 32' 4.227 W
3,137.00	0.44	279.53	3,122.47	-224.13	68.16	1,909,850.13	121,210.85	36° 14' 31.612 N	107° 32' 4.232 W
3,200.00	0.26	326.28	3,185.47	-223.97	67.84	1,909,850.29	121,210.54	36° 14' 31.613 N	107° 32' 4.236 W
3,262.00	0.21	322.98	3,247.47	-223.76	67.69	1,909,850.50	121,210.39	36° 14' 31.615 N	107° 32' 4.238 W
3,325.00	0.24	308.75	3,310.47	-223.59	67.52	1,909,850.68	121,210.22	36° 14' 31.617 N	107° 32' 4.240 W
3,387.00	0.15	354.47	3,372.47	-223.43	67.41	1,909,850.84	121,210.11	36° 14' 31.619 N	107° 32' 4.241 W
3,450.00	0.19	295.27	3,435.47	-223.30	67.31	1,909,850.97	121,210.01	36° 14' 31.620 N	107° 32' 4.242 W
3,513.00	0.30	322.16	3,498.47	-223.13	67.11	1,909,851.14	121,209.82	36° 14' 31.622 N	107° 32' 4.245 W
3,575.00	0.26	31.46	3,560.47	-222.88	67.09	1,909,851.39	121,209.80	36° 14' 31.624 N	107° 32' 4.245 W
3,638.00	0.27	311.81	3,623.47	-222.66	67.05	1,909,851.61	121,209.76	36° 14' 31.626 N	107° 32' 4.246 W
3,701.00	0.38	223.28	3,686.47	-222.71	66.80	1,909,851.56	121,209.51	36° 14' 31.626 N	107° 32' 4.249 W
3,764.00	0.50	188.76	3,749.46	-223.13	66.61	1,909,851.14	121,209.32	36° 14' 31.622 N	107° 32' 4.251 W
3,827.00	0.65	174.67	3,812.46	-223.76	66.60	1,909,850.52	121,209.30	36° 14' 31.615 N	107° 32' 4.251 W
3,890.00	0.59	155.65	3,875.46	-224.41	66.77	1,909,849.86	121,209.46	36° 14' 31.609 N	107° 32' 4.249 W
3,953.00	0.66	190.05	3,938.45	-225.07	66.84	1,909,849.21	121,209.52	36° 14' 31.602 N	107° 32' 4.248 W
4,016.00	0.54	189.87	4,001.45	-225.71	66.73	1,909,848.56	121,209.40	36° 14' 31.596 N	107° 32' 4.250 W
4,080.00	0.60	196.66	4,065.45	-226.33	66.58	1,909,847.94	121,209.24	36° 14' 31.590 N	107° 32' 4.251 W
4,143.00	0.54	192.37	4,128.44	-226.94	66.42	1,909,847.34	121,209.08	36° 14' 31.584 N	107° 32' 4.253 W
4,206.00	0.53	202.12	4,191.44	-227.50	66.25	1,909,846.78	121,208.90	36° 14' 31.578 N	107° 32' 4.255 W
4,269.00	0.68	214.41	4,254.44	-228.08	65.93	1,909,846.21	121,208.57	36° 14' 31.573 N	107° 32' 4.259 W
4,332.00	0.65	212.48	4,317.43	-228.69	65.52	1,909,845.60	121,208.16	36° 14' 31.567 N	107° 32' 4.264 W
4,395.00	0.85	226.02	4,380.43	-229.31	64.99	1,909,844.99	121,207.62	36° 14' 31.560 N	107° 32' 4.271 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12E #169H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Site:	Chaco 2307-12E	MD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Well:	Chaco 2307-12E #169H	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	
4,458.00	0.40	335.94	4,443.42	-229.44	64.57	1,909,844.87	121,207.19	36° 14' 31.559 N	107° 32' 4.276 W	
4,522.00	0.73	344.31	4,507.42	-228.84	64.37	1,909,845.47	121,207.00	36° 14' 31.565 N	107° 32' 4.278 W	
4,585.00	0.72	334.40	4,570.42	-228.10	64.09	1,909,846.21	121,206.73	36° 14' 31.573 N	107° 32' 4.282 W	
4,648.00	0.99	141.38	4,633.41	-228.17	64.26	1,909,846.14	121,206.90	36° 14' 31.572 N	107° 32' 4.280 W	
4,711.00	1.91	142.08	4,696.39	-229.42	65.24	1,909,844.88	121,207.87	36° 14' 31.559 N	107° 32' 4.268 W	
4,775.00	1.51	141.07	4,760.36	-230.92	66.43	1,909,843.36	121,209.03	36° 14' 31.545 N	107° 32' 4.253 W	
4,839.00	1.50	138.16	4,824.34	-232.20	67.52	1,909,842.07	121,210.10	36° 14' 31.532 N	107° 32' 4.240 W	
4,902.00	1.45	130.96	4,887.32	-233.33	68.67	1,909,840.92	121,211.24	36° 14' 31.521 N	107° 32' 4.226 W	
4,964.00	1.40	147.69	4,949.30	-234.49	69.66	1,909,839.75	121,212.22	36° 14' 31.509 N	107° 32' 4.214 W	
4,996.00	1.09	216.65	4,981.30	-235.06	69.69	1,909,839.17	121,212.24	36° 14' 31.504 N	107° 32' 4.213 W	
5,027.00	2.65	256.34	5,012.28	-235.47	68.82	1,909,838.78	121,211.36	36° 14' 31.500 N	107° 32' 4.224 W	
5,059.00	4.78	268.68	5,044.21	-235.67	66.77	1,909,838.60	121,209.31	36° 14' 31.498 N	107° 32' 4.249 W	
5,090.00	7.21	274.08	5,075.04	-235.56	63.54	1,909,838.75	121,206.08	36° 14' 31.499 N	107° 32' 4.288 W	
5,122.00	9.53	272.05	5,106.70	-235.33	58.88	1,909,839.05	121,201.43	36° 14' 31.501 N	107° 32' 4.345 W	
5,153.00	11.85	269.35	5,137.16	-235.27	53.14	1,909,839.18	121,195.68	36° 14' 31.502 N	107° 32' 4.415 W	
5,184.00	14.27	267.12	5,167.35	-235.50	46.14	1,909,839.05	121,188.68	36° 14' 31.499 N	107° 32' 4.501 W	
5,216.00	16.45	265.78	5,198.21	-236.03	37.68	1,909,838.63	121,180.22	36° 14' 31.494 N	107° 32' 4.604 W	
5,247.00	18.60	266.63	5,227.77	-236.64	28.36	1,909,838.14	121,170.90	36° 14' 31.488 N	107° 32' 4.718 W	
5,278.00	20.75	267.51	5,256.96	-237.17	17.94	1,909,837.75	121,160.47	36° 14' 31.483 N	107° 32' 4.845 W	
5,310.00	22.97	268.71	5,286.65	-237.56	6.03	1,909,837.52	121,148.56	36° 14' 31.479 N	107° 32' 4.990 W	
5,341.00	25.57	268.91	5,314.91	-237.82	-6.70	1,909,837.43	121,135.82	36° 14' 31.476 N	107° 32' 5.146 W	
5,371.00	27.99	269.86	5,341.69	-237.96	-20.22	1,909,837.46	121,122.30	36° 14' 31.475 N	107° 32' 5.311 W	
5,403.00	31.22	270.14	5,369.51	-237.96	-36.03	1,909,837.68	121,106.50	36° 14' 31.475 N	107° 32' 5.504 W	
5,434.00	33.92	269.75	5,395.63	-237.98	-52.71	1,909,837.88	121,089.81	36° 14' 31.475 N	107° 32' 5.707 W	
5,466.00	37.12	269.35	5,421.68	-238.13	-71.30	1,909,837.98	121,071.22	36° 14' 31.473 N	107° 32' 5.934 W	
5,498.00	38.78	268.20	5,446.91	-238.55	-90.97	1,909,837.81	121,051.54	36° 14' 31.469 N	107° 32' 6.174 W	
5,528.00	41.05	269.41	5,469.92	-238.95	-110.22	1,909,837.67	121,032.30	36° 14' 31.465 N	107° 32' 6.409 W	
5,559.00	43.64	269.55	5,492.83	-239.14	-131.10	1,909,837.76	121,011.42	36° 14' 31.463 N	107° 32' 6.664 W	
5,591.00	45.92	271.26	5,515.54	-238.97	-153.63	1,909,838.22	120,988.89	36° 14' 31.465 N	107° 32' 6.939 W	
5,622.00	48.44	273.96	5,536.61	-237.93	-176.34	1,909,839.57	120,966.19	36° 14' 31.475 N	107° 32' 7.216 W	
5,654.00	52.62	274.58	5,556.95	-236.08	-200.97	1,909,841.74	120,941.59	36° 14' 31.494 N	107° 32' 7.517 W	
5,685.00	57.73	273.12	5,574.65	-234.39	-226.35	1,909,843.78	120,916.23	36° 14' 31.510 N	107° 32' 7.827 W	
5,717.00	63.90	269.96	5,590.25	-233.66	-254.26	1,909,844.87	120,888.34	36° 14' 31.518 N	107° 32' 8.168 W	
5,748.00	69.89	268.01	5,602.41	-234.17	-282.75	1,909,844.73	120,859.84	36° 14' 31.512 N	107° 32' 8.515 W	
5,779.00	74.07	270.30	5,612.00	-234.60	-312.22	1,909,844.70	120,830.37	36° 14' 31.508 N	107° 32' 8.875 W	
5,811.00	76.35	271.61	5,620.16	-234.08	-343.15	1,909,845.63	120,799.45	36° 14' 31.513 N	107° 32' 9.253 W	
5,842.00	79.91	272.98	5,626.54	-232.87	-373.46	1,909,847.24	120,769.16	36° 14' 31.525 N	107° 32' 9.623 W	
5,874.00	83.41	274.28	5,631.18	-230.86	-405.05	1,909,849.67	120,737.59	36° 14' 31.545 N	107° 32' 10.008 W	
5,905.00	85.02	274.93	5,634.31	-228.39	-435.79	1,909,852.55	120,706.89	36° 14' 31.570 N	107° 32' 10.383 W	
5,936.00	87.35	275.32	5,636.37	-225.62	-466.60	1,909,855.72	120,676.12	36° 14' 31.597 N	107° 32' 10.759 W	
5,999.00	88.92	275.14	5,638.42	-219.88	-529.30	1,909,862.29	120,613.50	36° 14' 31.654 N	107° 32' 11.525 W	
6,060.00	90.20	274.80	5,638.89	-214.60	-590.07	1,909,868.38	120,552.81	36° 14' 31.706 N	107° 32' 12.267 W	
6060' MD Crossed Hardline										
6,062.00	90.24	274.79	5,638.88	-214.43	-592.06	1,909,868.58	120,550.82	36° 14' 31.708 N	107° 32' 12.291 W	
6,076.00	91.28	274.82	5,638.69	-213.26	-606.01	1,909,869.94	120,536.89	36° 14' 31.719 N	107° 32' 12.461 W	
Last SDI Surface MWD Survey										
6,130.00	92.56	272.14	5,636.89	-209.98	-659.88	1,909,873.92	120,483.07	36° 14' 31.752 N	107° 32' 13.119 W	
First SDI Lateral MWD Survey										
6,193.00	93.36	272.88	5,633.63	-207.23	-722.73	1,909,877.51	120,420.26	36° 14' 31.779 N	107° 32' 13.886 W	
6,256.00	92.83	272.19	5,630.23	-204.44	-785.58	1,909,881.13	120,357.46	36° 14' 31.806 N	107° 32' 14.653 W	
6,319.00	91.81	271.63	5,627.68	-202.35	-848.49	1,909,884.06	120,294.58	36° 14' 31.827 N	107° 32' 15.421 W	
6,382.00	91.25	271.59	5,626.00	-200.58	-911.44	1,909,886.66	120,231.65	36° 14' 31.845 N	107° 32' 16.189 W	
6,445.00	92.12	270.86	5,624.15	-199.23	-974.40	1,909,888.85	120,168.72	36° 14' 31.858 N	107° 32' 16.958 W	
6,508.00	91.17	270.70	5,622.34	-198.37	-1,037.37	1,909,890.54	120,105.77	36° 14' 31.866 N	107° 32' 17.726 W	
6,571.00	90.81	271.03	5,621.25	-197.42	-1,100.35	1,909,892.32	120,042.80	36° 14' 31.876 N	107° 32' 18.495 W	

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12E #169H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Site:	Chaco 2307-12E	MD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Well:	Chaco 2307-12E #169H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,635.00	91.75	271.03	5,619.82	-196.27	-1,164.32	1,909,894.32	119,978.85	36° 14' 31.887 N	107° 32' 19.276 W
6,697.00	90.30	270.66	5,618.71	-195.36	-1,226.30	1,909,896.06	119,916.89	36° 14' 31.896 N	107° 32' 20.033 W
6,759.00	89.66	271.18	5,618.73	-194.36	-1,288.30	1,909,897.87	119,854.92	36° 14' 31.906 N	107° 32' 20.789 W
6,822.00	90.50	270.97	5,618.64	-193.18	-1,351.28	1,909,899.89	119,791.95	36° 14' 31.917 N	107° 32' 21.558 W
6,885.00	90.07	271.61	5,618.33	-191.76	-1,414.27	1,909,902.14	119,728.99	36° 14' 31.931 N	107° 32' 22.327 W
6,948.00	91.55	271.58	5,617.44	-190.01	-1,477.23	1,909,904.73	119,666.05	36° 14' 31.949 N	107° 32' 23.095 W
7,011.00	92.38	270.99	5,615.28	-188.60	-1,540.18	1,909,906.98	119,603.13	36° 14' 31.963 N	107° 32' 23.864 W
7,074.00	91.38	270.96	5,613.21	-187.53	-1,603.14	1,909,908.89	119,540.19	36° 14' 31.973 N	107° 32' 24.632 W
7,136.00	90.51	271.73	5,612.19	-186.07	-1,665.11	1,909,911.16	119,478.24	36° 14' 31.988 N	107° 32' 25.389 W
7,200.00	92.05	271.67	5,610.76	-184.17	-1,729.06	1,909,913.91	119,414.32	36° 14' 32.006 N	107° 32' 26.169 W
7,264.00	92.66	271.18	5,608.13	-182.58	-1,792.99	1,909,916.35	119,350.42	36° 14' 32.022 N	107° 32' 26.950 W
7,327.00	91.04	271.29	5,606.10	-181.23	-1,855.94	1,909,918.54	119,287.50	36° 14' 32.035 N	107° 32' 27.718 W
7,390.00	90.74	272.10	5,605.12	-179.36	-1,918.90	1,909,921.24	119,224.56	36° 14' 32.054 N	107° 32' 28.487 W
7,452.00	91.91	271.56	5,603.68	-177.38	-1,980.85	1,909,924.04	119,162.64	36° 14' 32.073 N	107° 32' 29.243 W
7,515.00	92.72	271.48	5,601.14	-175.71	-2,043.78	1,909,926.54	119,099.75	36° 14' 32.090 N	107° 32' 30.011 W
7,579.00	91.01	271.42	5,599.06	-174.09	-2,107.72	1,909,929.01	119,035.83	36° 14' 32.106 N	107° 32' 30.791 W
7,642.00	90.00	271.75	5,598.50	-172.35	-2,170.70	1,909,931.58	118,972.89	36° 14' 32.123 N	107° 32' 31.560 W
7,705.00	91.48	272.08	5,597.69	-170.25	-2,233.65	1,909,934.52	118,909.96	36° 14' 32.144 N	107° 32' 32.328 W
7,768.00	92.29	271.61	5,595.62	-168.22	-2,296.59	1,909,937.38	118,847.06	36° 14' 32.164 N	107° 32' 33.097 W
7,830.00	90.88	271.60	5,593.90	-166.48	-2,358.54	1,909,939.94	118,785.14	36° 14' 32.181 N	107° 32' 33.853 W
7,893.00	91.92	271.16	5,592.36	-164.97	-2,421.50	1,909,942.29	118,722.20	36° 14' 32.196 N	107° 32' 34.621 W
7,956.00	90.94	271.39	5,590.79	-163.57	-2,484.46	1,909,944.53	118,659.26	36° 14' 32.210 N	107° 32' 35.390 W
8,019.00	92.05	271.49	5,589.15	-161.98	-2,547.42	1,909,946.95	118,596.33	36° 14' 32.225 N	107° 32' 36.158 W
8,082.00	91.07	271.56	5,587.43	-160.31	-2,610.37	1,909,949.46	118,533.41	36° 14' 32.242 N	107° 32' 36.927 W
8,144.00	92.29	271.35	5,585.61	-158.73	-2,672.33	1,909,951.85	118,471.48	36° 14' 32.257 N	107° 32' 37.683 W
8,207.00	91.54	271.10	5,583.51	-157.39	-2,735.28	1,909,954.03	118,408.55	36° 14' 32.270 N	107° 32' 38.451 W
8,270.00	92.08	270.75	5,581.52	-156.37	-2,798.24	1,909,955.88	118,345.61	36° 14' 32.280 N	107° 32' 39.220 W
8,334.00	91.04	271.06	5,579.78	-155.36	-2,862.20	1,909,957.74	118,281.67	36° 14' 32.290 N	107° 32' 40.001 W
8,396.00	91.82	270.84	5,578.23	-154.33	-2,924.18	1,909,959.59	118,219.71	36° 14' 32.300 N	107° 32' 40.757 W
8,459.00	90.44	271.62	5,576.99	-152.98	-2,987.15	1,909,961.78	118,156.77	36° 14' 32.314 N	107° 32' 41.526 W
8,522.00	91.78	271.78	5,575.77	-151.11	-3,050.11	1,909,964.48	118,093.84	36° 14' 32.332 N	107° 32' 42.294 W
8,585.00	92.29	271.46	5,573.53	-149.33	-3,113.04	1,909,967.10	118,030.93	36° 14' 32.350 N	107° 32' 43.062 W
8,649.00	91.31	271.93	5,571.52	-147.44	-3,176.98	1,909,969.83	117,967.02	36° 14' 32.368 N	107° 32' 43.843 W
8,711.00	92.22	271.86	5,569.61	-145.39	-3,238.92	1,909,972.71	117,905.12	36° 14' 32.389 N	107° 32' 44.599 W
8,774.00	91.31	272.72	5,567.67	-142.87	-3,301.83	1,909,976.06	117,842.24	36° 14' 32.413 N	107° 32' 45.367 W
8,838.00	91.71	271.76	5,565.98	-140.37	-3,365.76	1,909,979.40	117,778.35	36° 14' 32.438 N	107° 32' 46.147 W
8,901.00	90.60	271.52	5,564.71	-138.57	-3,428.72	1,909,982.04	117,715.42	36° 14' 32.456 N	107° 32' 46.916 W
8,964.00	91.78	271.57	5,563.40	-136.87	-3,491.69	1,909,984.57	117,652.49	36° 14' 32.472 N	107° 32' 47.684 W
9,027.00	92.59	271.07	5,561.00	-135.42	-3,554.62	1,909,986.86	117,589.57	36° 14' 32.487 N	107° 32' 48.453 W
9,090.00	92.49	272.00	5,558.21	-133.74	-3,617.54	1,909,989.38	117,526.69	36° 14' 32.503 N	107° 32' 49.220 W
9,153.00	90.74	272.03	5,556.43	-131.52	-3,680.47	1,909,992.43	117,463.79	36° 14' 32.525 N	107° 32' 49.989 W
9,216.00	90.00	272.03	5,556.03	-129.29	-3,743.43	1,909,995.49	117,400.87	36° 14' 32.547 N	107° 32' 50.757 W
9,279.00	91.41	272.31	5,555.25	-126.91	-3,806.38	1,909,998.71	117,337.95	36° 14' 32.571 N	107° 32' 51.526 W
9,342.00	92.52	271.91	5,553.09	-124.59	-3,869.30	1,910,001.86	117,275.07	36° 14' 32.593 N	107° 32' 52.294 W
9,404.00	90.30	270.73	5,551.57	-123.16	-3,931.26	1,910,004.11	117,213.14	36° 14' 32.608 N	107° 32' 53.050 W
9,467.00	90.47	270.42	5,551.14	-122.53	-3,994.25	1,910,005.58	117,150.15	36° 14' 32.614 N	107° 32' 53.819 W
9,530.00	90.64	269.89	5,550.53	-122.36	-4,057.25	1,910,006.59	117,087.17	36° 14' 32.615 N	107° 32' 54.588 W
9,593.00	90.44	269.21	5,549.94	-122.85	-4,120.24	1,910,006.93	117,024.17	36° 14' 32.610 N	107° 32' 55.357 W
9,656.00	90.74	269.17	5,549.29	-123.74	-4,183.23	1,910,006.87	116,961.17	36° 14' 32.601 N	107° 32' 56.126 W
9,719.00	90.37	269.81	5,548.68	-124.30	-4,246.23	1,910,007.15	116,898.18	36° 14' 32.596 N	107° 32' 56.894 W
9,782.00	92.22	271.04	5,547.26	-123.84	-4,309.21	1,910,008.45	116,835.21	36° 14' 32.600 N	107° 32' 57.663 W
9,845.00	92.68	272.19	5,544.56	-122.06	-4,372.12	1,910,011.06	116,772.32	36° 14' 32.618 N	107° 32' 58.431 W
9,908.00	94.31	272.21	5,540.72	-119.65	-4,434.96	1,910,014.30	116,709.53	36° 14' 32.642 N	107° 32' 59.198 W
9,971.00	95.32	271.86	5,535.43	-117.42	-4,497.69	1,910,017.36	116,646.83	36° 14' 32.663 N	107° 32' 59.964 W
10,034.00	93.56	271.78	5,530.56	-115.43	-4,560.47	1,910,020.19	116,584.08	36° 14' 32.683 N	107° 33' 0.730 W



Survey Report - Geographic



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-12E #169H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Site:	Chaco 2307-12E	MD Reference:	GL 7039' & RKB 14' @ 7053.01ft
Well:	Chaco 2307-12E #169H	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
10,097.00	91.28	271.08	5,527.90	-113.85	-4,623.39	1,910,022.59	116,521.19	36° 14' 32.699 N	107° 33' 1.498 W
10,159.00	89.56	271.20	5,527.44	-112.62	-4,685.37	1,910,024.65	116,459.23	36° 14' 32.711 N	107° 33' 2.255 W
10,223.00	90.61	270.82	5,527.35	-111.49	-4,749.36	1,910,026.63	116,395.26	36° 14' 32.722 N	107° 33' 3.036 W
10,287.00	91.14	270.50	5,526.37	-110.76	-4,813.35	1,910,028.21	116,331.29	36° 14' 32.729 N	107° 33' 3.817 W
10,350.00	91.38	270.34	5,524.99	-110.29	-4,876.33	1,910,029.51	116,268.31	36° 14' 32.733 N	107° 33' 4.586 W
10,413.00	89.56	269.89	5,524.47	-110.17	-4,939.33	1,910,030.47	116,205.33	36° 14' 32.734 N	107° 33' 5.355 W
10,476.00	91.24	270.64	5,524.03	-109.88	-5,002.32	1,910,031.60	116,142.34	36° 14' 32.737 N	107° 33' 6.124 W
10,496.00	92.08	271.02	5,523.45	-109.59	-5,022.31	1,910,032.15	116,122.36	36° 14' 32.740 N	107° 33' 6.368 W
10,496' MD Crossed Hardline									
10,539.00	93.90	271.85	5,521.20	-108.51	-5,065.24	1,910,033.80	116,079.45	36° 14' 32.751 N	107° 33' 6.891 W
10,603.00	94.57	271.16	5,516.48	-106.83	-5,129.04	1,910,036.32	116,015.68	36° 14' 32.767 N	107° 33' 7.670 W
10,624.00	95.12	271.30	5,514.70	-106.38	-5,149.96	1,910,037.05	115,994.76	36° 14' 32.772 N	107° 33' 7.926 W
Last SDI Lateral MWD Survey									
10,690.00	95.12	271.30	5,508.81	-104.89	-5,215.68	1,910,039.41	115,929.07	36° 14' 32.786 N	107° 33' 8.728 W
Projection to TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
465.00	464.98	-1.42	-3.01	First SDI Surface MWD Survey
6,060.00	5,638.89	-214.60	-590.07	6060' MD Crossed Hardline
6,076.00	5,638.69	-213.26	-606.01	Last SDI Surface MWD Survey
6,130.00	5,636.89	-209.98	-659.88	First SDI Lateral MWD Survey
10,496.00	5,523.45	-109.59	-5,022.31	10,496' MD Crossed Hardline
10,624.00	5,514.70	-106.38	-5,149.96	Last SDI Lateral MWD Survey
10,690.00	5,508.81	-104.89	-5,215.68	Projection to TD

Checked By:	Approved By:	Date:
-------------	--------------	-------