

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

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

~~CONFIDENTIAL~~

¹ API Number 30-039-31197		² Pool Code 42289	³ Pool Name LYBROOK GALLUP
⁴ Property Code 40069	⁵ Property Name CHACO 2307-13L		⁶ Well Number 174H
⁷ OGRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC		⁹ Elevation 7046 '

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	13	23N	7W		1519	SOUTH	90	WEST	RIO ARBITA

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
L	14	23N	7W		1524	SOUTH	267	WEST	RIO ARRIBA

12	Dedicated Acres	160.0 Acres
	N/2 S/2 - Section 14	

¹³ Joint or Infill

14 Consolidation Code

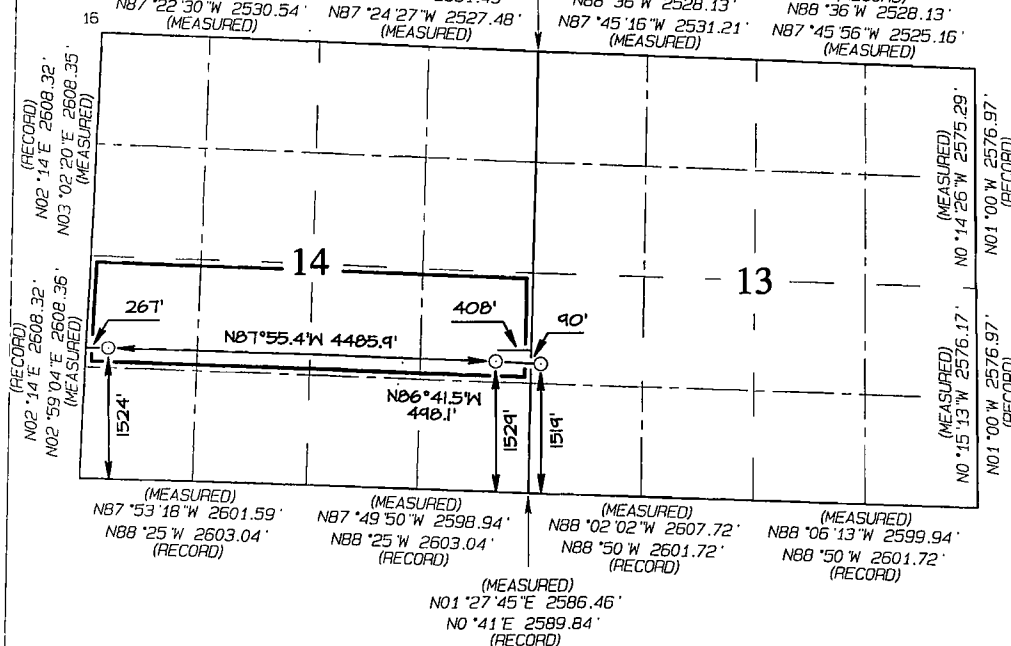
15	Order No.
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RCVD APR 9 '14
FBI CHICAGO ILL

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

(RECORD)
NO *41'E 2589.84'
NO1 *24'57"E 2588.69'
(MEASURED)

(RECORD) N88°04'W 2531.43'	(RECORD) N88°04'W 2531.43'	(MEASURED)	(RECORD) N88°36'W 2528.13'	(RECORD) N88°36'W 2528.13'
N87°22'30"W 2530.54'	N87°24'27"W 2527.48'		N87°45'16"W 2531.21'	N87°45'56"W 2525.16'
(MEASURED)	(MEASURED)		(MEASURED)	(MEASURED)



END-OF-LATERAL
1524' FSL 267' FWL
SECTION 14, T23N, R7W
LAT: 35.22299°N
LONG: 107.55204°W
DATUM: NAD1927

LAT: 36.22301°N
LONG: 107.55265°W
DATUM: NAD1983

POINT-OF-ENTRY
1529' FSL 408' FEL
SECTION 14, T23N, R7W
LAT: 36.22271°N
LONG: 107.53684°W
DATUM: NAD1927

LAT: 36.22272°N
LONG: 107.53744°W
DATUM: NAD1983

SURFACE LOCATION
1519' FSL 90' FWL
SECTION 13, T23N, R7W
LAT: 36.22265°N
LONG: 107.53515°W
DATUM: NAD1927

LAT: 36.22266 °N
LONG: 107.53576 °W
DATUM: NAD1983

From: [redacted]
To: [redacted]
Subject: [redacted]

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 an 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 4/8/14
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: MARCH 11, 2014
Date of Survey: JULY 5, 2012

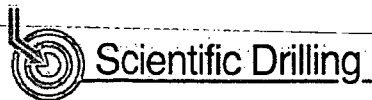
Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number	15269
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A



Company Name: WPX Energy Rocky Mountain, LLC

Project: Río Arriba County, NM NAD27

Site: Chaco 2307-13L

Well: Chaco 2307-13L #174H

WPX ENERGY

CONFIDENTIAL

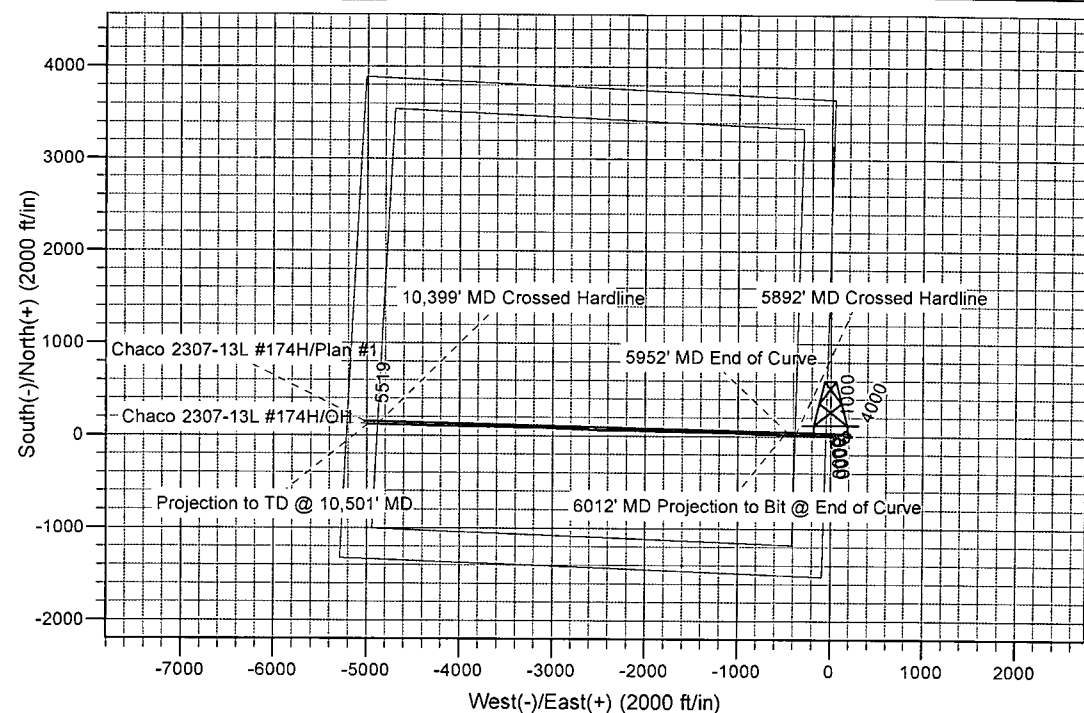
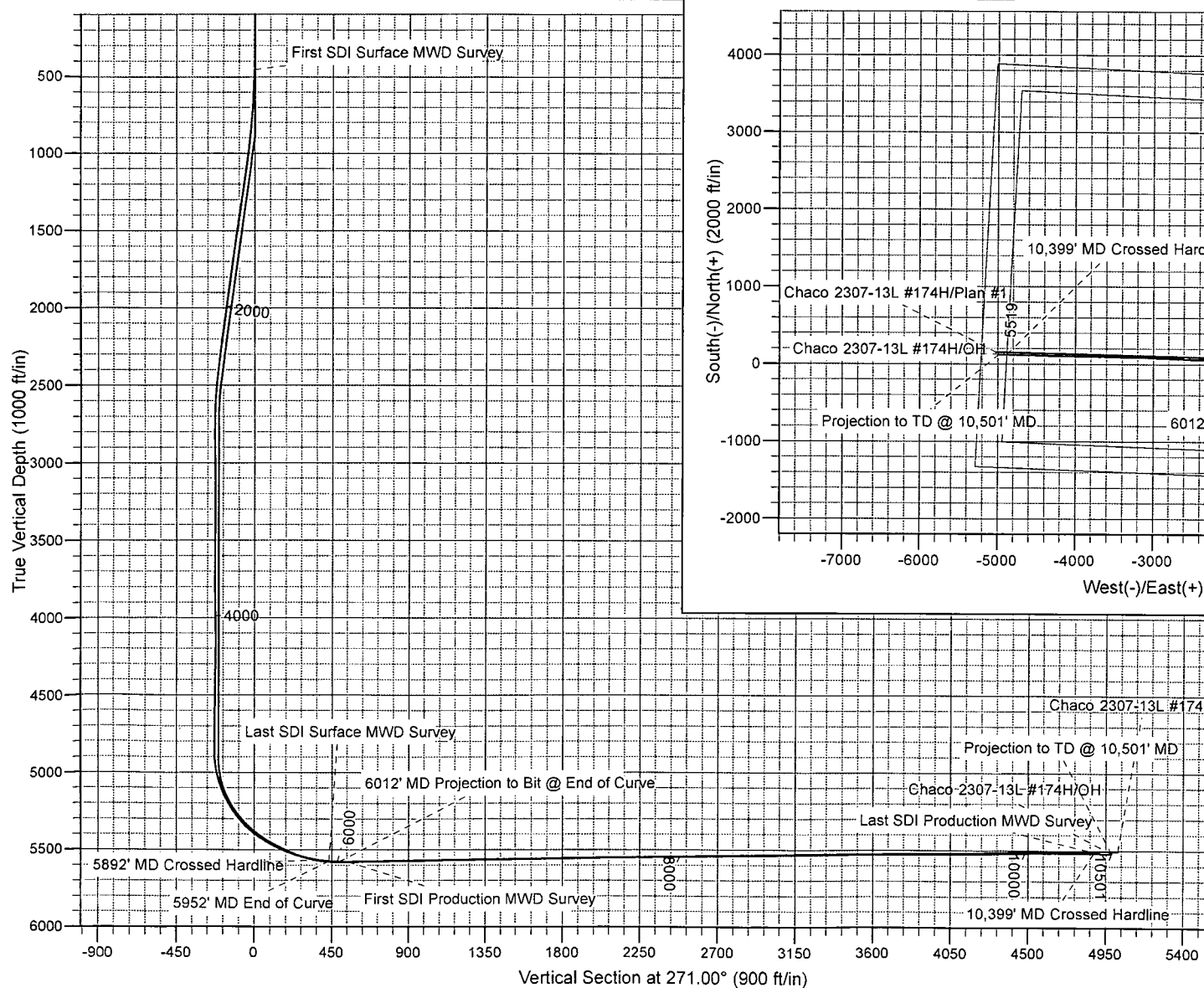


Azimuths to True North
Magnetic North: 9.46°

Magnetic Field
Strength: 50139.5nT
Dip Angle: 63.00°
Date: 2/4/2014
Model: BGGM2013

WELL DETAILS: Chaco 2307-13L #174H

GL 7046' & KB 14' @ 7060.00ft 7046.00
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 1902766.93 120927.83 36° 13' 21.540 N 107° 32' 6.540 W



RCVD APR 9 '14
OIL CONS. DIV.
DIST. 3

Design: OH (Chaco 2307-13L #174H/OH)

Created By: Janie Collins Date: 17:32, March 05 2014

PROJECT DETAILS: Río 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 Chaco 2307-13L #174H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7046' & KB 14' @ 7060.00ft
Site:	Chaco 2307-13L	MD Reference:	GL 7046' & KB 14' @ 7060.00ft
Well:	Chaco 2307-13L #174H	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		

CONFIDENTIAL

Site	Chaco 2307-13L		
Site Position:		Northing:	1,902,766.93 usft
From:	Lat/Long	Easting:	120,927.83 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	36° 13' 21.540 N
		Longitude:	107° 32' 6.540 W
		Grid Convergence:	-0.76 °

Well	Chaco 2307-13L #174H		
Well Position	+N-S	0.00 ft	Northing:
	+E-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	36° 13' 21.540 N
		Longitude:	107° 32' 6.540 W
		Ground Level:	7,046.00 ft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2013	2/4/2014	9.46
			Dip Angle
			(°)
			Field Strength
			(nT)
			50,140

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			271.00

Survey Program	Date 3/5/2014		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
455.00	5,952.00	Survey #1 - Surface MWD Survey (OH)	MWD SDI
6,062.00	10,501.00	Survey #2 - Production MWD Survey (OH)	MWD SDI
			Description
			MWD - Standard ver 1.0.1
			MWD - Standard ver 1.0.1

Survey									
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting		
(ft)			(ft)			(usft)	(usft)		
0.00	0.00	0.00	0.00	0.00	0.00	1,902,766.93	120,927.83	36° 13' 21.540 N	107° 32' 6.540 W
455.00	0.66	96.17	454.99	-0.28	2.61	1,902,766.61	120,930.44	36° 13' 21.537 N	107° 32' 6.508 W
First SDI Surface MWD Survey									
486.00	0.48	99.68	485.99	-0.32	2.91	1,902,766.57	120,930.74	36° 13' 21.537 N	107° 32' 6.504 W
518.00	0.92	92.94	517.99	-0.36	3.30	1,902,766.53	120,931.13	36° 13' 21.536 N	107° 32' 6.500 W
550.00	1.42	105.65	549.98	-0.48	3.94	1,902,766.40	120,931.77	36° 13' 21.535 N	107° 32' 6.492 W
582.00	1.55	107.57	581.97	-0.72	4.73	1,902,766.15	120,932.56	36° 13' 21.533 N	107° 32' 6.482 W
613.00	1.86	93.73	612.95	-0.88	5.63	1,902,765.98	120,933.46	36° 13' 21.531 N	107° 32' 6.471 W
676.00	2.96	80.79	675.90	-0.68	8.26	1,902,766.14	120,936.08	36° 13' 21.533 N	107° 32' 6.439 W
739.00	3.76	88.95	738.79	-0.38	11.93	1,902,766.39	120,939.76	36° 13' 21.536 N	107° 32' 6.394 W
770.00	4.14	83.82	769.72	-0.24	14.06	1,902,766.50	120,941.89	36° 13' 21.538 N	107° 32' 6.368 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-13L #174H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7046' & KB 14' @ 7060.00ft
Site:	Chaco 2307-13L	MD Reference:	GL 7046' & KB 14' @ 7060.00ft
Well:	Chaco 2307-13L #174H	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
801.00	4.54	89.38	800.63	-0.11	16.40	1,902,766.60	120,944.23	36° 13' 21.539 N	107° 32' 6.340 W
833.00	5.29	87.11	832.51	-0.02	19.14	1,902,766.65	120,946.97	36° 13' 21.540 N	107° 32' 6.306 W
864.00	5.76	89.13	863.37	0.07	22.12	1,902,766.71	120,949.96	36° 13' 21.541 N	107° 32' 6.270 W
895.00	6.51	90.46	894.19	0.08	25.43	1,902,766.67	120,953.27	36° 13' 21.541 N	107° 32' 6.230 W
959.00	6.49	91.05	957.78	-0.01	32.68	1,902,766.48	120,960.51	36° 13' 21.540 N	107° 32' 6.141 W
1,022.00	6.88	89.85	1,020.35	-0.07	40.01	1,902,766.33	120,967.84	36° 13' 21.539 N	107° 32' 6.052 W
1,085.00	7.12	92.99	1,082.88	-0.26	47.68	1,902,766.04	120,975.51	36° 13' 21.537 N	107° 32' 5.958 W
1,148.00	7.06	89.43	1,145.40	-0.43	55.45	1,902,765.77	120,983.28	36° 13' 21.536 N	107° 32' 5.863 W
1,211.00	7.05	88.50	1,207.92	-0.29	63.19	1,902,765.80	120,991.02	36° 13' 21.537 N	107° 32' 5.769 W
1,273.00	7.00	87.86	1,269.46	-0.05	70.77	1,902,765.94	120,998.60	36° 13' 21.540 N	107° 32' 5.676 W
1,336.00	6.98	90.36	1,331.99	0.07	78.43	1,902,765.96	121,006.26	36° 13' 21.541 N	107° 32' 5.583 W
1,398.00	7.08	92.09	1,393.52	-0.09	86.02	1,902,765.70	121,013.85	36° 13' 21.539 N	107° 32' 5.490 W
1,461.00	7.60	89.47	1,456.00	-0.19	94.07	1,902,765.49	121,021.89	36° 13' 21.538 N	107° 32' 5.392 W
1,524.00	7.71	92.65	1,518.44	-0.35	102.45	1,902,765.22	121,030.27	36° 13' 21.537 N	107° 32' 5.290 W
1,583.00	7.45	90.08	1,576.93	-0.54	110.23	1,902,764.93	121,038.05	36° 13' 21.535 N	107° 32' 5.195 W
1,644.00	7.06	84.60	1,637.44	-0.19	117.92	1,902,765.17	121,045.74	36° 13' 21.538 N	107° 32' 5.101 W
1,704.00	6.91	86.14	1,696.99	0.40	125.19	1,902,765.67	121,053.02	36° 13' 21.544 N	107° 32' 5.012 W
1,764.00	7.15	84.05	1,756.54	1.03	132.51	1,902,766.20	121,060.34	36° 13' 21.550 N	107° 32' 4.923 W
1,824.00	6.92	87.65	1,816.09	1.56	139.83	1,902,766.64	121,067.67	36° 13' 21.555 N	107° 32' 4.834 W
1,885.00	7.28	83.13	1,876.63	2.18	147.34	1,902,767.15	121,075.19	36° 13' 21.562 N	107° 32' 4.742 W
1,947.00	6.85	83.01	1,938.15	3.10	154.91	1,902,767.97	121,082.77	36° 13' 21.571 N	107° 32' 4.650 W
2,007.00	6.62	77.66	1,997.74	4.27	161.84	1,902,769.05	121,089.72	36° 13' 21.582 N	107° 32' 4.565 W
2,068.00	6.66	86.82	2,058.33	5.22	168.81	1,902,769.91	121,096.70	36° 13' 21.592 N	107° 32' 4.480 W
2,131.00	7.20	86.34	2,120.87	5.67	176.39	1,902,770.26	121,104.29	36° 13' 21.596 N	107° 32' 4.387 W
2,194.00	6.91	88.38	2,183.40	6.03	184.12	1,902,770.52	121,112.02	36° 13' 21.600 N	107° 32' 4.293 W
2,256.00	6.60	94.74	2,244.97	5.84	191.40	1,902,770.24	121,119.30	36° 13' 21.598 N	107° 32' 4.204 W
2,318.00	6.49	94.28	2,306.56	5.29	198.45	1,902,769.59	121,126.33	36° 13' 21.592 N	107° 32' 4.118 W
2,380.00	6.04	100.10	2,368.19	4.45	205.15	1,902,768.66	121,133.03	36° 13' 21.584 N	107° 32' 4.036 W
2,443.00	5.61	96.98	2,430.87	3.50	211.47	1,902,767.62	121,139.33	36° 13' 21.575 N	107° 32' 3.959 W
2,506.00	4.85	84.87	2,493.61	3.36	217.18	1,902,767.41	121,145.04	36° 13' 21.573 N	107° 32' 3.890 W
2,594.00	3.78	62.87	2,581.36	5.02	223.47	1,902,768.98	121,151.35	36° 13' 21.590 N	107° 32' 3.813 W
2,657.00	2.36	60.74	2,644.27	6.60	226.45	1,902,770.53	121,154.35	36° 13' 21.605 N	107° 32' 3.777 W
2,719.00	0.99	105.51	2,706.24	7.08	228.08	1,902,770.99	121,155.99	36° 13' 21.610 N	107° 32' 3.757 W
2,782.00	0.96	158.61	2,769.24	6.44	228.80	1,902,770.34	121,156.70	36° 13' 21.604 N	107° 32' 3.748 W
2,845.00	1.25	212.51	2,832.23	5.37	228.62	1,902,769.27	121,156.50	36° 13' 21.593 N	107° 32' 3.750 W
2,907.00	1.17	248.35	2,894.21	4.57	227.67	1,902,768.48	121,155.54	36° 13' 21.585 N	107° 32' 3.762 W
2,970.00	1.17	271.37	2,957.20	4.35	226.43	1,902,768.27	121,154.30	36° 13' 21.583 N	107° 32' 3.777 W
3,033.00	1.01	261.88	3,020.19	4.28	225.23	1,902,768.23	121,153.10	36° 13' 21.582 N	107° 32' 3.791 W
3,096.00	0.62	313.19	3,083.18	4.44	224.44	1,902,768.39	121,152.31	36° 13' 21.584 N	107° 32' 3.801 W
3,158.00	0.19	23.12	3,145.18	4.76	224.23	1,902,768.72	121,152.11	36° 13' 21.587 N	107° 32' 3.804 W
3,221.00	0.65	68.25	3,208.18	4.99	224.60	1,902,768.94	121,152.48	36° 13' 21.589 N	107° 32' 3.799 W
3,283.00	0.51	65.68	3,270.18	5.24	225.18	1,902,769.18	121,153.07	36° 13' 21.592 N	107° 32' 3.792 W
3,346.00	0.47	67.49	3,333.17	5.45	225.68	1,902,769.39	121,153.56	36° 13' 21.594 N	107° 32' 3.786 W
3,409.00	0.17	77.99	3,396.17	5.57	226.01	1,902,769.50	121,153.89	36° 13' 21.595 N	107° 32' 3.782 W
3,472.00	0.08	19.81	3,459.17	5.63	226.11	1,902,769.56	121,154.00	36° 13' 21.596 N	107° 32' 3.781 W
3,535.00	0.26	110.17	3,522.17	5.62	226.26	1,902,769.55	121,154.15	36° 13' 21.596 N	107° 32' 3.779 W
3,598.00	0.18	11.48	3,585.17	5.67	226.42	1,902,769.60	121,154.31	36° 13' 21.596 N	107° 32' 3.777 W
3,660.00	0.34	136.49	3,647.17	5.63	226.56	1,902,769.56	121,154.45	36° 13' 21.596 N	107° 32' 3.775 W
3,723.00	0.26	277.72	3,710.17	5.51	226.55	1,902,769.44	121,154.44	36° 13' 21.595 N	107° 32' 3.775 W
3,786.00	0.10	325.73	3,773.17	5.58	226.38	1,902,769.51	121,154.26	36° 13' 21.595 N	107° 32' 3.777 W
3,849.00	0.75	268.80	3,836.17	5.62	225.93	1,902,769.55	121,153.82	36° 13' 21.596 N	107° 32' 3.783 W
3,912.00	0.93	279.97	3,899.16	5.70	225.02	1,902,769.64	121,152.91	36° 13' 21.596 N	107° 32' 3.794 W
3,974.00	0.83	290.00	3,961.16	5.94	224.10	1,902,769.89	121,151.99	36° 13' 21.599 N	107° 32' 3.805 W
4,037.00	0.50	297.53	4,024.15	6.22	223.43	1,902,770.19	121,151.32	36° 13' 21.601 N	107° 32' 3.813 W
4,100.00	0.34	294.72	4,087.15	6.42	223.01	1,902,770.40	121,150.91	36° 13' 21.604 N	107° 32' 3.819 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-13L #174H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7046' & KB 14' @ 7060.00ft
Site:	Chaco 2307-13L	MD Reference:	GL 7046' & KB 14' @ 7060.00ft
Well:	Chaco 2307-13L #174H	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
4,163.00	0.51	284.56	4,150.15	6.57	222.57	1,902,770.55	121,150.47	36° 13' 21.605 N	107° 32' 3.824 W
4,226.00	0.56	165.66	4,213.15	6.35	222.38	1,902,770.33	121,150.28	36° 13' 21.603 N	107° 32' 3.826 W
4,288.00	0.99	140.74	4,275.14	5.64	222.79	1,902,769.61	121,150.68	36° 13' 21.596 N	107° 32' 3.821 W
4,351.00	0.75	131.69	4,338.13	4.94	223.44	1,902,768.91	121,151.32	36° 13' 21.589 N	107° 32' 3.813 W
4,414.00	0.61	136.67	4,401.13	4.42	223.98	1,902,768.38	121,151.85	36° 13' 21.584 N	107° 32' 3.807 W
4,477.00	0.47	105.60	4,464.13	4.11	224.46	1,902,768.06	121,152.33	36° 13' 21.581 N	107° 32' 3.801 W
4,540.00	0.75	104.57	4,527.12	3.94	225.11	1,902,767.88	121,152.98	36° 13' 21.579 N	107° 32' 3.793 W
4,603.00	1.17	89.71	4,590.11	3.84	226.15	1,902,767.77	121,154.02	36° 13' 21.578 N	107° 32' 3.780 W
4,666.00	0.78	97.12	4,653.10	3.79	227.22	1,902,767.70	121,155.08	36° 13' 21.577 N	107° 32' 3.767 W
4,729.00	1.00	102.46	4,716.10	3.61	228.18	1,902,767.52	121,156.04	36° 13' 21.576 N	107° 32' 3.755 W
4,792.00	0.93	80.61	4,779.09	3.58	229.22	1,902,767.47	121,157.08	36° 13' 21.575 N	107° 32' 3.743 W
4,823.00	0.58	46.06	4,810.09	3.73	229.58	1,902,767.61	121,157.45	36° 13' 21.577 N	107° 32' 3.738 W
4,854.00	0.40	351.04	4,841.08	3.94	229.68	1,902,767.83	121,157.55	36° 13' 21.579 N	107° 32' 3.737 W
4,885.00	0.81	287.70	4,872.08	4.12	229.45	1,902,768.01	121,157.32	36° 13' 21.581 N	107° 32' 3.740 W
4,916.00	2.75	269.84	4,903.07	4.18	228.50	1,902,768.08	121,156.37	36° 13' 21.581 N	107° 32' 3.752 W
4,948.00	5.27	264.76	4,934.99	4.05	226.27	1,902,767.98	121,154.14	36° 13' 21.580 N	107° 32' 3.779 W
4,977.00	7.88	267.18	4,963.79	3.83	222.96	1,902,767.80	121,150.82	36° 13' 21.578 N	107° 32' 3.819 W
5,010.00	11.04	268.15	4,996.34	3.61	217.54	1,902,767.66	121,145.40	36° 13' 21.576 N	107° 32' 3.885 W
5,041.00	13.38	268.88	5,026.64	3.45	210.99	1,902,767.58	121,138.85	36° 13' 21.574 N	107° 32' 3.965 W
5,072.00	16.15	269.57	5,056.61	3.35	203.09	1,902,767.58	121,130.95	36° 13' 21.573 N	107° 32' 4.062 W
5,104.00	18.08	271.53	5,087.19	3.44	193.67	1,902,767.81	121,121.53	36° 13' 21.574 N	107° 32' 4.177 W
5,136.00	19.82	272.82	5,117.46	3.84	183.29	1,902,768.34	121,111.16	36° 13' 21.578 N	107° 32' 4.303 W
5,167.00	21.76	272.16	5,146.44	4.32	172.30	1,902,768.96	121,100.17	36° 13' 21.583 N	107° 32' 4.437 W
5,198.00	24.47	270.81	5,174.95	4.63	160.13	1,902,769.43	121,088.01	36° 13' 21.586 N	107° 32' 4.586 W
5,229.00	26.83	269.88	5,202.89	4.70	146.72	1,902,769.69	121,074.60	36° 13' 21.586 N	107° 32' 4.750 W
5,261.00	29.46	269.67	5,231.10	4.64	131.62	1,902,769.83	121,059.51	36° 13' 21.586 N	107° 32' 4.934 W
5,293.00	31.86	271.01	5,258.63	4.75	115.31	1,902,770.15	121,043.19	36° 13' 21.587 N	107° 32' 5.133 W
5,324.00	33.91	271.45	5,284.66	5.11	98.48	1,902,770.73	121,026.37	36° 13' 21.591 N	107° 32' 5.338 W
5,356.00	37.07	271.00	5,310.71	5.50	79.91	1,902,771.37	121,007.81	36° 13' 21.594 N	107° 32' 5.565 W
5,387.00	40.85	271.22	5,334.81	5.88	60.42	1,902,772.01	120,988.33	36° 13' 21.598 N	107° 32' 5.803 W
5,419.00	44.65	272.09	5,358.31	6.52	38.72	1,902,772.93	120,966.63	36° 13' 21.604 N	107° 32' 6.068 W
5,450.00	47.53	272.39	5,379.80	7.39	16.40	1,902,774.10	120,944.33	36° 13' 21.613 N	107° 32' 6.340 W
5,482.00	50.32	272.96	5,400.83	8.52	-7.69	1,902,775.55	120,920.26	36° 13' 21.624 N	107° 32' 6.634 W
5,513.00	53.09	272.48	5,420.03	9.67	-31.99	1,902,777.02	120,895.97	36° 13' 21.636 N	107° 32' 6.930 W
5,545.00	55.89	271.72	5,438.62	10.62	-58.02	1,902,778.32	120,869.96	36° 13' 21.645 N	107° 32' 7.248 W
5,577.00	57.37	271.02	5,456.22	11.26	-84.74	1,902,779.31	120,843.25	36° 13' 21.651 N	107° 32' 7.574 W
5,608.00	58.99	271.60	5,472.57	11.86	-111.07	1,902,780.26	120,816.93	36° 13' 21.657 N	107° 32' 7.895 W
5,640.00	61.46	271.38	5,488.46	12.58	-138.83	1,902,781.35	120,789.18	36° 13' 21.664 N	107° 32' 8.234 W
5,671.00	64.10	271.72	5,502.63	13.33	-166.39	1,902,782.46	120,761.64	36° 13' 21.672 N	107° 32' 8.570 W
5,702.00	66.59	272.43	5,515.56	14.35	-194.54	1,902,783.86	120,733.50	36° 13' 21.682 N	107° 32' 8.914 W
5,733.00	69.18	272.87	5,527.23	15.68	-223.23	1,902,785.57	120,704.84	36° 13' 21.695 N	107° 32' 9.264 W
5,765.00	71.28	271.96	5,538.06	16.95	-253.31	1,902,787.23	120,674.77	36° 13' 21.708 N	107° 32' 9.631 W
5,796.00	73.99	271.87	5,547.31	17.94	-282.88	1,902,788.61	120,645.22	36° 13' 21.717 N	107° 32' 9.992 W
5,827.00	76.19	271.25	5,555.29	18.75	-312.82	1,902,789.83	120,615.29	36° 13' 21.725 N	107° 32' 10.357 W
5,858.00	78.36	270.92	5,562.11	19.32	-343.05	1,902,790.80	120,585.07	36° 13' 21.731 N	107° 32' 10.726 W
5,890.00	80.62	271.24	5,567.95	19.92	-374.51	1,902,791.81	120,553.62	36° 13' 21.737 N	107° 32' 11.110 W
5,892.00	80.77	271.21	5,568.27	19.96	-376.48	1,902,791.88	120,551.65	36° 13' 21.737 N	107° 32' 11.134 W
5892' MD Crossed Hardline									
5,921.00	82.88	270.74	5,572.40	20.45	-405.18	1,902,792.75	120,522.96	36° 13' 21.742 N	107° 32' 11.485 W
5,952.00	85.33	270.81	5,575.58	20.86	-436.01	1,902,793.57	120,492.14	36° 13' 21.746 N	107° 32' 11.861 W
Last SDI Surface MWD Survey - 5952' MD End of Curve									
6,062.00	90.57	270.70	5,579.52	22.31	-545.89	1,902,796.48	120,382.28	36° 13' 21.761 N	107° 32' 13.202 W
First SDI Production MWD Survey									
6,123.00	91.28	270.75	5,578.53	23.08	-606.88	1,902,798.06	120,321.31	36° 13' 21.768 N	107° 32' 13.946 W
6,184.00	91.63	270.67	5,576.98	23.84	-667.86	1,902,799.62	120,260.35	36° 13' 21.776 N	107° 32' 14.690 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-13L #174H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7046' & KB 14' @ 7060.00ft
Site:	Chaco 2307-13L	MD Reference:	GL 7046' & KB 14' @ 7060.00ft
Well:	Chaco 2307-13L #174H	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
6,245.00	91.55	270.36	5,575.29	24.39	-728.83	1,902,800.98	120,199.39	36° 13' 21.781 N	107° 32' 15.434 W
6,304.00	90.94	272.12	5,574.01	25.66	-787.80	1,902,803.03	120,140.44	36° 13' 21.794 N	107° 32' 16.154 W
6,366.00	90.70	273.45	5,573.12	28.68	-849.72	1,902,806.87	120,078.57	36° 13' 21.823 N	107° 32' 16.909 W
6,427.00	90.91	273.08	5,572.26	32.15	-910.61	1,902,811.15	120,017.73	36° 13' 21.858 N	107° 32' 17.652 W
6,487.00	91.14	273.15	5,571.19	35.41	-970.52	1,902,815.20	119,957.87	36° 13' 21.890 N	107° 32' 18.383 W
6,547.00	91.21	272.84	5,569.96	38.54	-1,030.42	1,902,819.13	119,898.02	36° 13' 21.921 N	107° 32' 19.114 W
6,609.00	91.18	271.58	5,568.67	40.93	-1,092.36	1,902,822.34	119,836.11	36° 13' 21.945 N	107° 32' 19.870 W
6,670.00	90.27	271.15	5,567.89	42.39	-1,153.34	1,902,824.60	119,775.16	36° 13' 21.959 N	107° 32' 20.614 W
6,728.00	90.61	271.11	5,567.45	43.53	-1,211.32	1,902,826.51	119,717.20	36° 13' 21.970 N	107° 32' 21.322 W
6,789.00	91.08	271.01	5,566.55	44.66	-1,272.31	1,902,828.45	119,656.23	36° 13' 21.981 N	107° 32' 22.066 W
6,850.00	91.55	271.00	5,565.15	45.73	-1,333.28	1,902,830.33	119,595.28	36° 13' 21.992 N	107° 32' 22.810 W
6,911.00	91.38	270.29	5,563.59	46.42	-1,394.26	1,902,831.82	119,534.32	36° 13' 21.999 N	107° 32' 23.554 W
6,970.00	90.37	271.04	5,562.69	47.10	-1,453.25	1,902,833.29	119,475.34	36° 13' 22.005 N	107° 32' 24.274 W
7,030.00	90.74	270.87	5,562.11	48.10	-1,513.23	1,902,835.08	119,415.37	36° 13' 22.015 N	107° 32' 25.006 W
7,090.00	91.21	271.14	5,561.09	49.15	-1,573.22	1,902,836.93	119,355.41	36° 13' 22.026 N	107° 32' 25.738 W
7,150.00	91.41	270.93	5,559.71	50.24	-1,633.19	1,902,838.81	119,295.46	36° 13' 22.036 N	107° 32' 26.470 W
7,214.00	90.27	271.22	5,558.78	51.44	-1,697.17	1,902,840.86	119,231.50	36° 13' 22.048 N	107° 32' 27.251 W
7,276.00	90.50	271.05	5,558.36	52.66	-1,759.16	1,902,842.91	119,169.53	36° 13' 22.060 N	107° 32' 28.007 W
7,340.00	90.54	270.91	5,557.78	53.76	-1,823.15	1,902,844.85	119,105.57	36° 13' 22.071 N	107° 32' 28.788 W
7,404.00	90.94	271.24	5,556.95	54.96	-1,887.13	1,902,846.90	119,041.60	36° 13' 22.083 N	107° 32' 29.569 W
7,467.00	91.14	271.33	5,555.81	56.37	-1,950.10	1,902,849.15	118,978.65	36° 13' 22.097 N	107° 32' 30.337 W
7,531.00	91.48	271.45	5,554.35	57.92	-2,014.07	1,902,851.55	118,914.72	36° 13' 22.112 N	107° 32' 31.118 W
7,595.00	91.58	271.13	5,552.64	59.36	-2,078.03	1,902,853.84	118,850.78	36° 13' 22.126 N	107° 32' 31.899 W
7,659.00	91.21	270.59	5,551.08	60.32	-2,142.00	1,902,855.64	118,786.83	36° 13' 22.136 N	107° 32' 32.679 W
7,722.00	90.64	271.25	5,550.06	61.34	-2,204.98	1,902,857.49	118,723.86	36° 13' 22.146 N	107° 32' 33.448 W
7,786.00	90.84	271.55	5,549.24	62.90	-2,268.96	1,902,859.90	118,659.91	36° 13' 22.161 N	107° 32' 34.229 W
7,849.00	90.98	270.24	5,548.23	63.88	-2,331.94	1,902,861.72	118,596.95	36° 13' 22.171 N	107° 32' 34.997 W
7,912.00	91.45	270.33	5,546.90	64.20	-2,394.93	1,902,862.87	118,533.97	36° 13' 22.174 N	107° 32' 35.766 W
7,975.00	91.58	270.10	5,545.23	64.43	-2,457.91	1,902,863.94	118,471.00	36° 13' 22.176 N	107° 32' 36.534 W
8,039.00	90.57	271.20	5,544.03	65.16	-2,521.89	1,902,865.51	118,407.04	36° 13' 22.183 N	107° 32' 37.315 W
8,104.00	90.24	272.18	5,543.57	67.08	-2,586.86	1,902,868.29	118,342.10	36° 13' 22.202 N	107° 32' 38.108 W
8,168.00	90.66	272.95	5,543.07	69.94	-2,650.79	1,902,872.00	118,278.21	36° 13' 22.230 N	107° 32' 38.888 W
8,231.00	90.67	272.55	5,542.34	72.96	-2,713.71	1,902,875.86	118,215.33	36° 13' 22.260 N	107° 32' 39.656 W
8,295.00	91.28	272.47	5,541.25	75.77	-2,777.64	1,902,879.51	118,151.45	36° 13' 22.288 N	107° 32' 40.436 W
8,358.00	91.75	272.80	5,539.58	78.66	-2,840.55	1,902,883.24	118,088.58	36° 13' 22.316 N	107° 32' 41.204 W
8,421.00	91.58	272.11	5,537.75	81.36	-2,903.47	1,902,886.77	118,025.71	36° 13' 22.343 N	107° 32' 41.972 W
8,485.00	91.21	272.32	5,536.20	83.83	-2,967.40	1,902,890.09	117,961.81	36° 13' 22.367 N	107° 32' 42.752 W
8,549.00	91.41	272.29	5,534.73	86.40	-3,031.33	1,902,893.51	117,897.92	36° 13' 22.393 N	107° 32' 43.532 W
8,612.00	91.61	272.07	5,533.07	88.80	-3,094.27	1,902,896.74	117,835.02	36° 13' 22.416 N	107° 32' 44.300 W
8,675.00	91.48	271.74	5,531.37	90.89	-3,157.21	1,902,899.67	117,772.12	36° 13' 22.437 N	107° 32' 45.068 W
8,739.00	91.11	271.04	5,529.93	92.45	-3,221.17	1,902,902.07	117,708.18	36° 13' 22.452 N	107° 32' 45.849 W
8,803.00	90.54	270.88	5,529.01	93.52	-3,285.16	1,902,903.99	117,644.21	36° 13' 22.463 N	107° 32' 46.629 W
8,866.00	90.84	270.89	5,528.25	94.49	-3,348.14	1,902,905.80	117,581.24	36° 13' 22.472 N	107° 32' 47.398 W
8,930.00	90.40	270.27	5,527.55	95.14	-3,412.14	1,902,907.29	117,517.27	36° 13' 22.479 N	107° 32' 48.179 W
8,994.00	90.54	270.56	5,527.03	95.60	-3,476.13	1,902,908.60	117,453.28	36° 13' 22.483 N	107° 32' 48.960 W
9,058.00	90.57	270.25	5,526.41	96.05	-3,540.13	1,902,909.90	117,389.30	36° 13' 22.488 N	107° 32' 49.741 W
9,121.00	89.43	270.51	5,526.41	96.47	-3,603.13	1,902,911.16	117,326.31	36° 13' 22.492 N	107° 32' 50.510 W
9,184.00	89.90	270.41	5,526.78	96.98	-3,666.12	1,902,912.50	117,263.33	36° 13' 22.497 N	107° 32' 51.278 W
9,247.00	90.13	270.13	5,526.76	97.27	-3,729.12	1,902,913.63	117,200.34	36° 13' 22.500 N	107° 32' 52.047 W
9,311.00	90.04	270.23	5,526.67	97.48	-3,793.12	1,902,914.68	117,136.35	36° 13' 22.501 N	107° 32' 52.828 W
9,375.00	90.24	271.72	5,526.51	98.56	-3,857.11	1,902,916.62	117,072.38	36° 13' 22.512 N	107° 32' 53.609 W
9,437.00	90.57	271.75	5,526.07	100.44	-3,919.08	1,902,919.31	117,010.44	36° 13' 22.531 N	107° 32' 54.365 W
9,500.00	90.50	271.47	5,525.48	102.21	-3,982.05	1,902,921.92	116,947.50	36° 13' 22.548 N	107° 32' 55.134 W
9,563.00	89.80	270.82	5,525.32	103.47	-4,045.04	1,902,924.01	116,884.53	36° 13' 22.560 N	107° 32' 55.902 W
9,627.00	89.76	270.15	5,525.56	104.01	-4,109.04	1,902,925.40	116,820.55	36° 13' 22.566 N	107° 32' 56.683 W

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well Chaco 2307-13L #174H
Project:	Rio Arriba County, NM NAD27	TVD Reference:	GL 7046' & KB 14' @ 7060.00ft
Site:	Chaco 2307-13L	MD Reference:	GL 7046' & KB 14' @ 7060.00ft
Well:	Chaco 2307-13L #174H	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	
9,690.00	90.50	271.57	5,525.42	104.96	-4,172.03	1,902,927.18	116,757.57	36° 13' 22.575 N	107° 32' 57.452 W	
9,754.00	90.91	272.03	5,524.63	106.97	-4,235.99	1,902,930.04	116,693.64	36° 13' 22.595 N	107° 32' 58.233 W	
9,817.00	91.54	271.84	5,523.29	109.09	-4,298.94	1,902,933.00	116,630.73	36° 13' 22.616 N	107° 32' 59.001 W	
9,879.00	91.95	271.68	5,521.40	111.00	-4,360.88	1,902,935.73	116,568.82	36° 13' 22.634 N	107° 32' 59.757 W	
9,942.00	92.32	271.57	5,519.05	112.78	-4,423.81	1,902,938.35	116,505.92	36° 13' 22.652 N	107° 33' 0.525 W	
10,006.00	90.17	271.03	5,517.66	114.23	-4,487.78	1,902,940.65	116,441.98	36° 13' 22.666 N	107° 33' 1.305 W	
10,069.00	89.87	271.04	5,517.64	115.37	-4,550.77	1,902,942.62	116,379.01	36° 13' 22.677 N	107° 33' 2.074 W	
10,133.00	89.73	270.45	5,517.86	116.20	-4,614.76	1,902,944.30	116,315.03	36° 13' 22.685 N	107° 33' 2.855 W	
10,197.00	90.00	270.28	5,518.01	116.61	-4,678.76	1,902,945.55	116,251.04	36° 13' 22.689 N	107° 33' 3.636 W	
10,261.00	89.66	270.06	5,518.20	116.80	-4,742.76	1,902,946.59	116,187.05	36° 13' 22.691 N	107° 33' 4.417 W	
10,325.00	89.50	271.32	5,518.67	117.57	-4,806.75	1,902,948.21	116,123.08	36° 13' 22.699 N	107° 33' 5.198 W	
10,388.00	90.03	272.83	5,518.93	119.85	-4,869.71	1,902,951.33	116,060.16	36° 13' 22.721 N	107° 33' 5.966 W	
10,399.00	89.87	272.74	5,518.94	120.39	-4,880.69	1,902,952.01	116,049.18	36° 13' 22.726 N	107° 33' 6.100 W	
10,399' MD Crossed Hardline										
10,434.00	89.36	272.46	5,519.18	121.98	-4,915.66	1,902,954.06	116,014.24	36° 13' 22.742 N	107° 33' 6.527 W	
Last SDI Production MWD Survey										
10,501.00	90.26	272.46	5,519.40	124.85	-4,982.59	1,902,957.82	115,947.34	36° 13' 22.770 N	107° 33' 7.344 W	
Projection to TD @ 10,501' MD										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
455.00	454.99	-0.28	2.61	First SDI Surface MWD Survey	
5,892.00	5,568.27	19.96	-376.48	5892' MD Crossed Hardline	
5,952.00	5,575.58	20.86	-436.01	Last SDI Surface MWD Survey	
5,952.00	5,575.58	20.86	-436.01	5952' MD End of Curve	
6,062.00	5,579.52	22.31	-545.89	First SDI Production MWD Survey	
10,399.00	5,518.94	120.39	-4,880.69	10,399' MD Crossed Hardline	
10,434.00	5,519.18	121.98	-4,915.66	Last SDI Production MWD Survey	
10,501.00	5,519.40	124.85	-4,982.59	Projection to TD @ 10,501' MD	

Checked By: _____ Approved By: _____ Date: _____