

District I
1629 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 30-039-31320	*Pool Code 97232	*Pool Name BASIN MANCOS
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 648H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 6305'

10 Surface Location

U. or Lot no.	Section	Township	Range	Lot 1st	Feet from the	North/South line	Feet from the	East/West line	County
C	19	31N	5W	1	955	NORTH	436	WEST	RIO ARriba

11 Bottom Hole Location If Different From Surface

U. or Lot no.	Section	Township	Range	Lot 1st	Feet from the	North/South line	Feet from the	East/West line	County
F	21	31N	5W		2059	NORTH	1954	WEST	RIO ARriba

*Dedicated Acres 872.01	N/2 - Sections 19, 20, 21, T31N, R5W	*Joint or Infill	*Consolidation Code	*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 an undivided 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, or a combination of the above.

Signature: *[Signature]* Date: 6/30/16
Lacey Granillo

Printed Name
lacey.granillo@wpenergy.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: JUNE 28, 2016
Date of Survey: JANUARY 2, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

SURFACE LOCATION
955' FNL 436' FNL
SECTION 19, T31N, R5W
LAT: 36.889700°N
LONG: 107.405683°W
DATUM: NAD1927

POINT-OF-ENTRY
2033' FNL 531' FNL
SECTION 19, T31N, R5W
LAT: 36.886739°N
LONG: 107.405361°W
DATUM: NAD1927

RSI TOOL
2053' FNL 1857' FNL
SECTION 21, T31N, R5W
LAT: 36.886673°N
LONG: 107.369748°W
DATUM: NAD1927

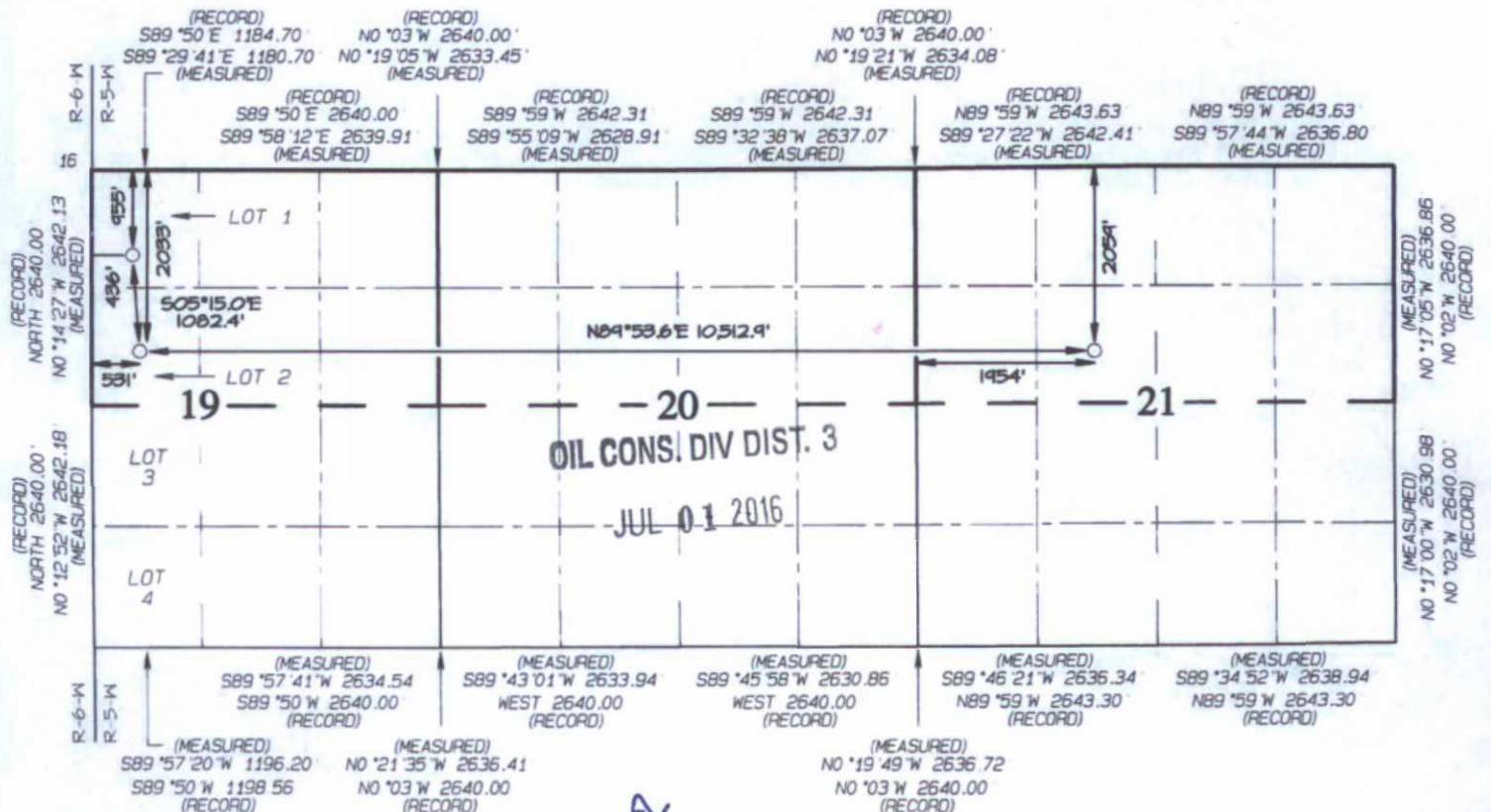
END-OF-LATERAL
2059' FNL 1954' FNL
SECTION 21, T31N, R5W
LAT: 36.886657°N
LONG: 107.369414°W
DATUM: NAD1927

LAT: 36.889706°N
LONG: 107.406286°W
DATUM: NAD1983

LAT: 36.886745°N
LONG: 107.405964°W
DATUM: NAD1983

LAT: 36.886679°N
LONG: 107.370350°W
DATUM: NAD1983

LAT: 36.886664°N
LONG: 107.370016°W
DATUM: NAD1983





OIL CONS. DIV DIST. 3
JUN 13 2016

WPX Energy

T31N R5W Rosa Unit

Pad 27

ROSA UT 27 #648H - Slot A07

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

03 November, 2015



www.scientificdrilling.com



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Company Name: WPX Energy
Project: T31N R5W Rosa Unit
Site: Pad 27
Well: ROSA UT 27 #648H

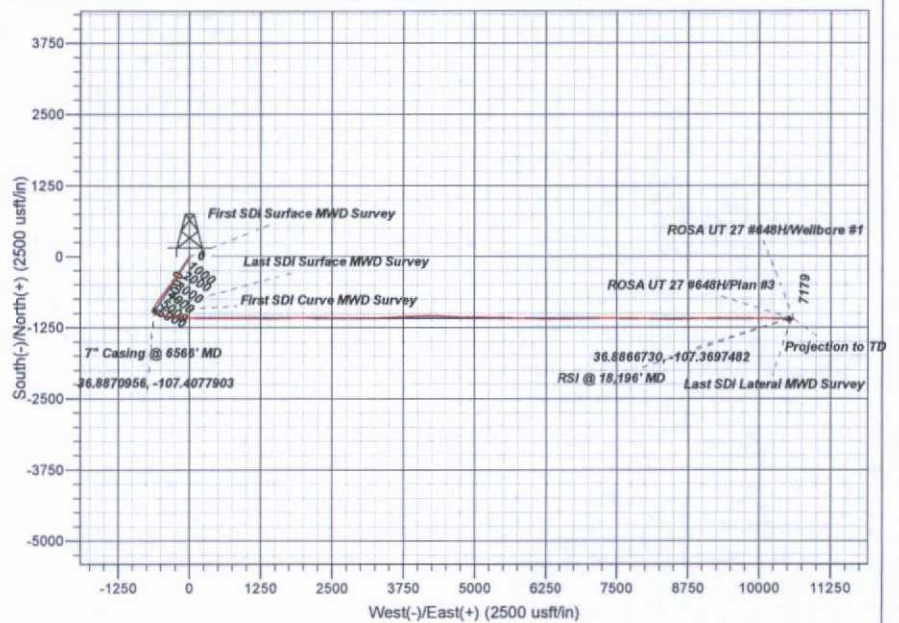
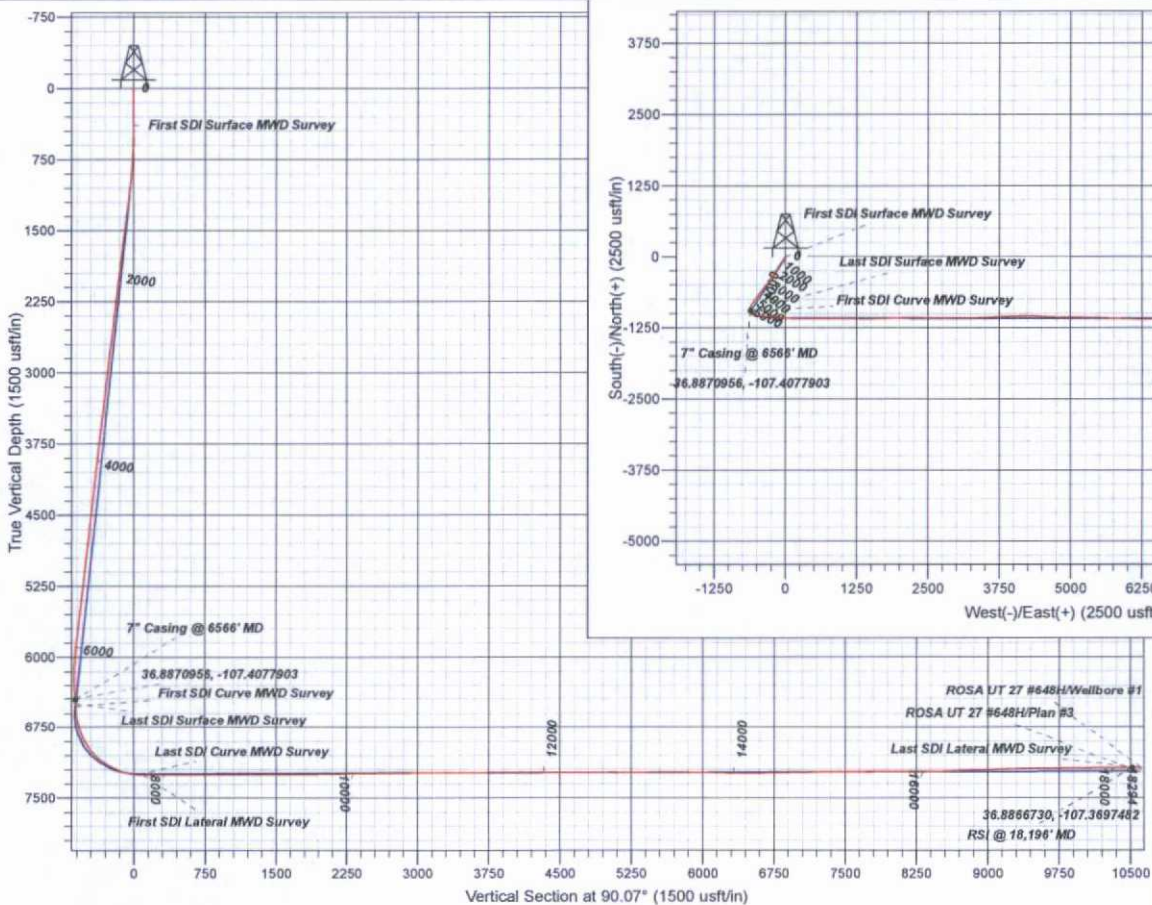


Azimuths to True North
Magnetic North: 9.20°

Magnetic Field
Strength: 50232.5nT
Dip Angle: 63.55°
Date: 10/14/2015
Model: HDGM

WELL DETAILS: ROSA UT 27 #648H

+N/-S	+E/-W	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)	6305.00		
		Northings	Eastings	Latitude	Longitude
0.00	0.00	2143394.50	625060.95	36.8897004	-107.4056828
					A07



Design: Wellbore #1 (ROSA UT 27 #648H/Wellbore #1)
Created By: Janie Collins Date: 10:06, November 03 2015

PROJECT DETAILS: T31N R5W Rosa Unit
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level
Local North: True

Company:	WPX Energy	Local Co-ordinate Reference:	Well ROSA UT 27 #648H - Slot A07
Project:	T31N R5W Rosa Unit	TVD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Site:	Pad 27	MD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Well:	ROSA UT 27 #648H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Project	T31N R5W Rosa Unit		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	Pad 27				
Site Position:		Northing:	2,143,400.02 usft	Latitude:	36.8897153
From:	Lat/Long	Easting:	625,077.55 usft	Longitude:	-107.4056260
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.26 °

Well	ROSA UT 27 #648H - Slot A07					
Well Position	+N/-S	0.00 usft	Northing:	2,143,394.49 usft	Latitude:	36.8897003
	+E/-W	0.00 usft	Easting:	625,060.95 usft	Longitude:	-107.4056828
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,305.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/14/2015	9.20	63.55	50,233

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	90.07	

Survey Program	Date 11/3/2015				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
25.00	291.00	Survey #1 - Gyro Survey (Wellbore #1)	NS-GYRO-MS	North sensing gyrocompassing m/s	
390.00	6,612.00	Survey #2 - Surface MWD Survey (Wellbo	SDI MWD	SDI MWD - Standard ver 1.0.1	
6,638.00	7,731.00	Survey #3 - Curve MWD Survey (Wellbore	SDI MWD	SDI MWD - Standard ver 1.0.1	
7,777.00	18,294.00	Survey #4 - Lateral MWD Survey (Wellbor	SDI MWD	SDI MWD - Standard ver 1.0.1	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	2,143,394.49	625,060.95	36.8897003	-107.4056828	
25.00	0.00	0.00	25.00	0.00	0.00	2,143,394.49	625,060.95	36.8897003	-107.4056828	
55.00	0.26	204.39	55.00	-0.06	-0.03	2,143,394.43	625,060.93	36.8897002	-107.4056829	
85.00	0.26	186.94	85.00	-0.19	-0.06	2,143,394.30	625,060.89	36.8896998	-107.4056830	
115.00	0.27	182.50	115.00	-0.33	-0.08	2,143,394.16	625,060.88	36.8896994	-107.4056831	
145.00	0.30	212.27	145.00	-0.47	-0.12	2,143,394.03	625,060.83	36.8896990	-107.4056832	
175.00	0.40	240.87	175.00	-0.58	-0.25	2,143,393.91	625,060.70	36.8896987	-107.4056837	
205.00	0.48	226.00	205.00	-0.72	-0.44	2,143,393.77	625,060.52	36.8896983	-107.4056843	
235.00	0.68	232.64	235.00	-0.92	-0.67	2,143,393.57	625,060.29	36.8896978	-107.4056851	

Company:	WPX Energy	Local Co-ordinate Reference:	Well ROSA UT 27 #648H - Slot A07
Project:	T31N R5W Rosa Unit	TVD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Site:	Pad 27	MD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Well:	ROSA UT 27 #648H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
265.00	0.74	233.51	264.99	-1.14	-0.97	2,143,393.35	625,059.99	36.8896972	-107.4056861
291.00	0.97	220.11	290.99	-1.41	-1.24	2,143,393.08	625,059.72	36.8896965	-107.4056871
390.00	0.53	166.44	389.98	-2.50	-1.67	2,143,391.99	625,059.29	36.8896935	-107.4056885
First SDI Surface MWD Survey									
450.00	0.88	199.22	449.98	-3.20	-1.76	2,143,391.29	625,059.21	36.8896915	-107.4056888
542.00	2.19	223.58	541.94	-5.14	-3.21	2,143,389.34	625,057.77	36.8896862	-107.4056938
631.00	3.52	222.60	630.83	-8.38	-6.23	2,143,386.08	625,054.76	36.8896773	-107.4057041
722.00	5.75	219.40	721.53	-13.96	-11.01	2,143,380.48	625,050.00	36.8896620	-107.4057205
812.00	7.81	217.77	810.89	-22.28	-17.62	2,143,372.13	625,043.43	36.8896391	-107.4057431
903.00	9.52	217.18	900.85	-33.17	-25.96	2,143,361.21	625,035.15	36.8896092	-107.4057716
993.00	10.12	217.82	989.53	-45.34	-35.30	2,143,348.99	625,025.86	36.8895758	-107.4058035
1,084.00	11.14	215.14	1,078.97	-58.85	-45.26	2,143,335.45	625,015.95	36.8895387	-107.4058376
1,175.00	11.57	216.09	1,168.19	-73.41	-55.70	2,143,320.84	625,005.58	36.8894987	-107.4058733
1,266.00	11.88	217.11	1,257.29	-88.25	-66.73	2,143,305.94	624,994.62	36.8894579	-107.4059110
1,355.00	12.39	214.19	1,344.30	-103.46	-77.62	2,143,290.69	624,983.80	36.8894162	-107.4059482
1,447.00	13.00	214.32	1,434.05	-120.17	-89.00	2,143,273.93	624,972.49	36.8893703	-107.4059872
1,538.00	12.96	216.36	1,522.73	-136.84	-100.82	2,143,257.20	624,960.75	36.8893245	-107.4060276
1,629.00	12.97	211.00	1,611.41	-153.81	-112.13	2,143,240.18	624,949.51	36.8892778	-107.4060662
1,720.00	13.10	209.95	1,700.07	-171.50	-122.54	2,143,222.45	624,939.18	36.8892293	-107.4061018
1,811.00	13.69	210.59	1,788.59	-189.71	-133.17	2,143,204.19	624,928.64	36.8891792	-107.4061382
1,902.00	13.84	210.74	1,876.98	-208.33	-144.21	2,143,185.52	624,917.68	36.8891281	-107.4061759
1,993.00	13.51	209.94	1,965.40	-226.90	-155.08	2,143,166.91	624,906.89	36.8890771	-107.4062131
2,083.00	12.89	210.13	2,053.02	-244.69	-165.36	2,143,149.07	624,896.69	36.8890282	-107.4062483
2,174.00	12.81	211.09	2,141.74	-262.11	-175.67	2,143,131.60	624,886.46	36.8889804	-107.4062835
2,265.00	13.33	210.81	2,230.38	-279.76	-186.25	2,143,113.91	624,875.96	36.8889319	-107.4063197
2,356.00	13.08	212.19	2,318.98	-297.48	-197.11	2,143,096.13	624,865.18	36.8888832	-107.4063568
2,447.00	12.30	212.53	2,407.75	-314.37	-207.81	2,143,079.20	624,854.56	36.8888368	-107.4063934
2,539.00	12.49	213.94	2,497.61	-330.88	-218.63	2,143,062.64	624,843.81	36.8887915	-107.4064304
2,630.00	11.83	213.27	2,586.57	-346.84	-229.24	2,143,046.63	624,833.27	36.8887476	-107.4064667
2,721.00	11.69	214.93	2,675.66	-362.20	-239.64	2,143,031.22	624,822.94	36.8887054	-107.4065023
2,812.00	11.73	214.78	2,764.76	-377.36	-250.19	2,143,016.02	624,812.45	36.8886638	-107.4065383
2,903.00	11.62	214.35	2,853.88	-392.52	-260.64	2,143,000.81	624,802.07	36.8886221	-107.4065741
2,993.00	11.38	212.31	2,942.07	-407.51	-270.50	2,142,985.78	624,792.28	36.8885810	-107.4066078
3,084.00	10.83	212.24	3,031.37	-422.33	-279.86	2,142,970.92	624,782.99	36.8885403	-107.4066398
3,175.00	9.17	218.16	3,120.99	-435.26	-288.90	2,142,957.94	624,774.00	36.8885047	-107.4066707
3,267.00	10.32	219.41	3,211.66	-447.39	-298.67	2,142,945.77	624,764.30	36.8884714	-107.4067041
3,357.00	11.78	221.08	3,299.99	-460.55	-309.82	2,142,932.56	624,753.20	36.8884353	-107.4067422
3,448.00	11.89	221.25	3,389.05	-474.60	-322.11	2,142,918.46	624,740.98	36.8883967	-107.4067842
3,540.00	11.71	219.99	3,479.11	-488.88	-334.35	2,142,904.12	624,728.79	36.8883575	-107.4068261
3,631.00	10.94	218.67	3,568.34	-502.69	-345.68	2,142,890.26	624,717.52	36.8883195	-107.4068649
3,722.00	10.29	216.62	3,657.78	-515.96	-355.93	2,142,876.95	624,707.34	36.8882831	-107.4068999
3,814.00	9.96	218.72	3,748.35	-528.76	-365.81	2,142,864.10	624,697.52	36.8882479	-107.4069337
3,905.00	10.29	219.60	3,837.93	-541.16	-375.91	2,142,851.65	624,687.47	36.8882139	-107.4069682
3,996.00	10.35	217.35	3,927.46	-553.93	-386.05	2,142,838.84	624,677.39	36.8881788	-107.4070029
4,087.00	10.67	218.08	4,016.93	-567.06	-396.21	2,142,825.67	624,667.29	36.8881427	-107.4070376
4,178.00	11.73	217.69	4,106.20	-581.01	-407.06	2,142,811.67	624,656.50	36.8881044	-107.4070747
4,269.00	10.25	216.16	4,195.53	-594.86	-417.49	2,142,797.77	624,646.13	36.8880663	-107.4071104
4,360.00	10.81	217.94	4,284.99	-608.13	-427.51	2,142,784.45	624,636.17	36.8880299	-107.4071447
4,451.00	11.71	216.60	4,374.24	-622.28	-438.27	2,142,770.26	624,625.48	36.8879911	-107.4071814
4,542.00	10.28	214.24	4,463.57	-636.40	-448.34	2,142,756.09	624,615.47	36.8879522	-107.4072159
4,633.00	11.08	214.42	4,552.99	-650.33	-457.85	2,142,742.12	624,606.02	36.8879140	-107.4072484
4,724.00	10.07	212.60	4,642.44	-664.24	-467.08	2,142,728.16	624,596.85	36.8878758	-107.4072800
4,815.00	10.32	216.43	4,732.01	-677.51	-476.21	2,142,714.86	624,587.78	36.8878393	-107.4073112
4,907.00	11.20	218.02	4,822.39	-691.17	-486.61	2,142,701.15	624,577.45	36.8878018	-107.4073467
4,998.00	9.99	216.99	4,911.84	-704.44	-496.80	2,142,687.83	624,567.31	36.8877654	-107.4073816

Company:	WPX Energy	Local Co-ordinate Reference:	Well ROSA UT 27 #648H - Slot A07
Project:	T31N R5W Rosa Unit	TVD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Site:	Pad 27	MD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Well:	ROSA UT 27 #648H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,089.00	10.80	218.34	5,001.34	-717.43	-506.84	2,142,674.80	624,557.33	36.8877297	-107.4074159
5,180.00	12.11	217.16	5,090.53	-731.73	-517.89	2,142,660.45	624,546.34	36.8876904	-107.4074537
5,271.00	11.62	215.45	5,179.58	-746.80	-528.98	2,142,645.33	624,535.33	36.8876490	-107.4074916
5,363.00	11.43	215.13	5,269.73	-761.81	-539.59	2,142,630.28	624,524.78	36.8876078	-107.4075279
5,454.00	11.41	218.13	5,358.93	-776.26	-550.34	2,142,615.78	624,514.10	36.8875681	-107.4075647
5,545.00	11.74	213.32	5,448.08	-791.08	-560.98	2,142,600.91	624,503.52	36.8875274	-107.4076010
5,636.00	11.84	212.21	5,537.16	-806.71	-571.05	2,142,585.23	624,493.53	36.8874844	-107.4076354
5,727.00	12.00	213.57	5,626.20	-822.49	-581.25	2,142,569.40	624,483.39	36.8874411	-107.4076704
5,818.00	12.07	212.52	5,715.20	-838.40	-591.60	2,142,553.45	624,473.12	36.8873974	-107.4077057
5,910.00	11.03	211.41	5,805.33	-854.02	-601.36	2,142,537.79	624,463.43	36.8873545	-107.4077391
6,001.00	10.06	208.80	5,894.80	-868.42	-609.72	2,142,523.36	624,455.13	36.8873149	-107.4077677
6,092.00	9.57	207.69	5,984.46	-882.08	-617.07	2,142,509.66	624,447.84	36.8872774	-107.4077928
6,183.00	9.13	199.51	6,074.26	-895.58	-622.99	2,142,496.13	624,441.98	36.8872403	-107.4078131
6,274.00	8.79	182.70	6,164.16	-909.34	-625.73	2,142,482.36	624,439.30	36.8872025	-107.4078224
6,366.00	8.44	172.93	6,255.13	-923.06	-625.23	2,142,468.64	624,439.86	36.8871649	-107.4078207
6,457.00	7.91	157.83	6,345.22	-935.49	-622.05	2,142,456.23	624,443.10	36.8871307	-107.4078098
6,514.00	7.39	155.36	6,401.71	-942.45	-619.04	2,142,449.28	624,446.14	36.8871116	-107.4077995
6,566.00	6.77	154.92	6,453.31	-948.26	-616.35	2,142,443.48	624,448.86	36.8870956	-107.4077903
7" Casing @ 6566' MD - 36.8870956, -107.4077903									
6,612.00	6.22	154.45	6,499.02	-952.97	-614.12	2,142,438.78	624,451.11	36.8870827	-107.4077827
Last SDI Surface MWD Survey									
6,638.00	5.65	153.97	6,524.88	-955.39	-612.95	2,142,436.37	624,452.29	36.8870760	-107.4077787
First SDI Curve MWD Survey									
6,684.00	9.50	151.63	6,570.47	-960.77	-610.15	2,142,431.00	624,455.11	36.8870613	-107.4077692
6,729.00	12.26	145.60	6,614.66	-967.98	-605.69	2,142,423.81	624,459.61	36.8870415	-107.4077539
6,775.00	16.01	137.27	6,659.26	-976.67	-598.62	2,142,415.15	624,466.71	36.8870176	-107.4077297
6,820.00	18.38	132.42	6,702.25	-986.02	-589.17	2,142,405.85	624,476.20	36.8869919	-107.4076974
6,866.00	19.74	124.54	6,745.73	-995.32	-577.42	2,142,396.60	624,488.00	36.8869664	-107.4076572
6,912.00	22.30	117.12	6,788.68	-1,003.70	-563.25	2,142,388.28	624,502.21	36.8869433	-107.4076088
6,957.00	25.32	112.03	6,829.84	-1,011.21	-546.72	2,142,380.85	624,518.77	36.8869227	-107.4075523
7,003.00	27.61	108.52	6,871.02	-1,018.28	-527.49	2,142,373.86	624,538.03	36.8869033	-107.4074865
7,049.00	30.20	105.23	6,911.29	-1,024.71	-506.22	2,142,367.53	624,559.33	36.8868856	-107.4074138
7,094.00	33.06	102.98	6,949.61	-1,030.44	-483.33	2,142,361.90	624,582.25	36.8868699	-107.4073355
7,140.00	36.93	100.17	6,987.28	-1,035.70	-457.49	2,142,356.75	624,608.11	36.8868555	-107.4072471
7,185.00	41.44	98.16	7,022.16	-1,040.20	-429.43	2,142,352.38	624,636.19	36.8868431	-107.4071512
7,231.00	45.81	97.71	7,055.45	-1,044.58	-398.00	2,142,348.14	624,667.64	36.8868311	-107.4070437
7,277.00	48.45	97.09	7,086.74	-1,048.92	-364.57	2,142,343.95	624,701.09	36.8868192	-107.4069294
7,322.00	52.14	96.30	7,115.48	-1,052.95	-330.19	2,142,340.08	624,735.48	36.8868081	-107.4068119
7,367.00	56.69	95.35	7,141.66	-1,056.65	-293.79	2,142,336.54	624,771.90	36.8867979	-107.4066874
7,413.00	61.64	94.54	7,165.23	-1,060.05	-254.46	2,142,333.32	624,811.25	36.8867886	-107.4065529
7,458.00	64.77	94.46	7,185.52	-1,063.20	-214.42	2,142,330.35	624,851.30	36.8867799	-107.4064160
7,504.00	67.88	94.45	7,203.99	-1,066.47	-172.42	2,142,327.26	624,893.31	36.8867709	-107.4062724
7,549.00	71.75	94.89	7,219.51	-1,069.91	-130.33	2,142,324.01	624,935.42	36.8867615	-107.4061285
7,595.00	76.68	93.31	7,232.02	-1,073.07	-86.20	2,142,321.05	624,979.57	36.8867528	-107.4059776
7,640.00	79.99	92.36	7,241.12	-1,075.24	-42.18	2,142,319.07	625,023.59	36.8867468	-107.4058271
7,686.00	83.98	91.03	7,247.53	-1,076.59	3.34	2,142,317.93	625,069.11	36.8867432	-107.4056714
7,731.00	88.02	91.20	7,250.67	-1,077.46	48.21	2,142,317.26	625,113.99	36.8867408	-107.4055180
Last SDI Curve MWD Survey									
7,777.00	90.04	90.76	7,251.45	-1,078.25	94.19	2,142,316.68	625,159.98	36.8867386	-107.4053607
First SDI Lateral MWD Survey									
7,822.00	91.11	90.69	7,251.00	-1,078.82	139.19	2,142,316.31	625,204.97	36.8867370	-107.4052069
7,913.00	90.30	90.78	7,249.88	-1,079.98	230.17	2,142,315.55	625,295.96	36.8867338	-107.4048958
8,004.00	90.66	91.38	7,249.11	-1,081.70	321.15	2,142,314.24	625,386.95	36.8867291	-107.4045847
8,095.00	89.90	89.78	7,248.67	-1,082.62	412.14	2,142,313.73	625,477.94	36.8867266	-107.4042736

Company:	WPX Energy	Local Co-ordinate Reference:	Well ROSA UT 27 #648H - Slot A07
Project:	T31N R5W Rosa Unit	TVD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Site:	Pad 27	MD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Well:	ROSA UT 27 #648H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,186.00	89.43	89.77	7,249.20	-1,082.26	503.14	2,142,314.50	625,568.94	36.8867276	-107.4039624
8,278.00	89.40	90.24	7,250.14	-1,082.27	595.13	2,142,314.90	625,660.93	36.8867275	-107.4036478
8,369.00	89.16	89.64	7,251.28	-1,082.18	686.13	2,142,315.40	625,751.92	36.8867278	-107.4033367
8,460.00	90.87	90.79	7,251.26	-1,082.52	777.12	2,142,315.47	625,842.92	36.8867268	-107.4030256
8,551.00	91.18	91.44	7,249.63	-1,084.29	868.09	2,142,314.11	625,933.89	36.8867220	-107.4027145
8,642.00	88.64	89.97	7,249.78	-1,085.41	959.07	2,142,313.39	626,024.88	36.8867189	-107.4024034
8,732.00	89.34	89.80	7,251.36	-1,085.23	1,049.06	2,142,313.98	626,114.86	36.8867194	-107.4020957
8,822.00	89.52	89.62	7,252.26	-1,084.77	1,139.05	2,142,314.84	626,204.85	36.8867206	-107.4017880
8,913.00	90.60	89.86	7,252.16	-1,084.36	1,230.05	2,142,315.66	626,295.85	36.8867217	-107.4014769
9,003.00	90.67	90.78	7,251.16	-1,084.86	1,320.04	2,142,315.56	626,385.84	36.8867203	-107.4011691
9,093.00	90.57	88.92	7,250.19	-1,084.63	1,410.03	2,142,316.20	626,475.83	36.8867210	-107.4008614
9,184.00	90.54	89.95	7,249.31	-1,083.73	1,501.02	2,142,317.50	626,566.82	36.8867234	-107.4005503
9,275.00	90.40	90.24	7,248.56	-1,083.88	1,592.02	2,142,317.76	626,657.81	36.8867230	-107.4002392
9,366.00	89.56	88.01	7,248.59	-1,082.49	1,683.00	2,142,319.56	626,748.79	36.8867268	-107.3999281
9,456.00	89.40	87.78	7,249.41	-1,079.18	1,772.94	2,142,323.27	626,838.71	36.8867359	-107.3996205
9,547.00	90.27	88.36	7,249.67	-1,076.12	1,863.88	2,142,326.74	626,929.64	36.8867443	-107.3993095
9,638.00	90.03	88.08	7,249.43	-1,073.29	1,954.84	2,142,329.97	627,020.58	36.8867520	-107.3989985
9,729.00	91.28	88.97	7,248.39	-1,070.95	2,045.80	2,142,332.72	627,111.53	36.8867584	-107.3986875
9,821.00	91.80	90.06	7,245.92	-1,070.17	2,137.76	2,142,333.91	627,203.49	36.8867606	-107.3983731
9,911.00	91.45	89.88	7,243.37	-1,070.12	2,227.73	2,142,334.36	627,293.45	36.8867607	-107.3980654
10,002.00	91.55	90.71	7,240.99	-1,070.59	2,318.69	2,142,334.30	627,384.42	36.8867594	-107.3977544
10,093.00	90.81	91.79	7,239.11	-1,072.58	2,409.65	2,142,332.72	627,475.38	36.8867539	-107.3974434
10,183.00	90.31	91.64	7,238.23	-1,075.27	2,499.60	2,142,330.43	627,565.35	36.8867465	-107.3971358
10,274.00	90.64	90.95	7,237.48	-1,077.33	2,590.58	2,142,328.78	627,656.33	36.8867408	-107.3968247
10,365.00	89.87	90.41	7,237.07	-1,078.41	2,681.57	2,142,328.11	627,747.33	36.8867378	-107.3965136
10,456.00	89.52	90.15	7,237.56	-1,078.85	2,772.57	2,142,328.08	627,838.33	36.8867366	-107.3962024
10,547.00	90.20	89.39	7,237.78	-1,078.49	2,863.56	2,142,328.85	627,929.32	36.8867375	-107.3958913
10,639.00	90.87	89.21	7,236.92	-1,077.36	2,955.55	2,142,330.38	628,021.30	36.8867406	-107.3955767
10,730.00	91.38	89.51	7,235.14	-1,076.35	3,046.53	2,142,331.81	628,112.27	36.8867434	-107.3952657
10,821.00	90.13	89.64	7,233.94	-1,075.67	3,137.52	2,142,332.89	628,203.26	36.8867452	-107.3949545
10,912.00	90.48	90.15	7,233.45	-1,075.51	3,228.51	2,142,333.47	628,294.25	36.8867456	-107.3946434
11,003.00	89.53	89.63	7,233.44	-1,075.33	3,319.51	2,142,334.05	628,385.25	36.8867461	-107.3943322
11,093.00	89.70	88.47	7,234.05	-1,073.84	3,409.50	2,142,335.94	628,475.23	36.8867501	-107.3940246
11,184.00	90.37	87.07	7,233.99	-1,070.30	3,500.43	2,142,339.89	628,566.14	36.8867598	-107.3937136
11,275.00	89.40	86.99	7,234.18	-1,065.58	3,591.30	2,142,345.01	628,656.99	36.8867728	-107.3934029
11,367.00	90.92	87.42	7,233.92	-1,061.10	3,683.19	2,142,349.91	628,748.86	36.8867850	-107.3930887
11,458.00	91.19	87.86	7,232.24	-1,057.35	3,774.10	2,142,354.07	628,839.75	36.8867953	-107.3927779
11,549.00	91.41	88.69	7,230.18	-1,054.61	3,865.03	2,142,357.21	628,930.67	36.8868028	-107.3924669
11,640.00	89.97	87.48	7,229.08	-1,051.57	3,955.97	2,142,360.66	629,021.59	36.8868111	-107.3921560
11,731.00	90.64	88.85	7,228.60	-1,048.66	4,046.92	2,142,363.98	629,112.53	36.8868191	-107.3918450
11,823.00	89.50	88.10	7,228.49	-1,046.21	4,138.88	2,142,366.84	629,204.48	36.8868258	-107.3915305
11,913.00	89.56	89.81	7,229.22	-1,044.57	4,228.86	2,142,368.89	629,294.45	36.8868302	-107.3912228
12,004.00	89.66	90.66	7,229.84	-1,044.94	4,319.86	2,142,368.92	629,385.45	36.8868292	-107.3909117
12,096.00	90.40	93.60	7,229.80	-1,048.36	4,411.78	2,142,365.91	629,477.39	36.8868197	-107.3905974
12,187.00	89.73	92.37	7,229.69	-1,053.10	4,502.66	2,142,361.58	629,568.29	36.8868067	-107.3902866
12,278.00	89.78	92.78	7,230.08	-1,057.19	4,593.57	2,142,357.90	629,659.21	36.8867954	-107.3899758
12,369.00	90.40	92.43	7,229.94	-1,061.32	4,684.47	2,142,354.17	629,750.13	36.8867840	-107.3896650
12,460.00	89.96	91.20	7,229.65	-1,064.20	4,775.42	2,142,351.70	629,841.10	36.8867761	-107.3893540
12,551.00	90.22	90.94	7,229.51	-1,065.90	4,866.41	2,142,350.41	629,932.09	36.8867713	-107.3890429
12,642.00	90.23	90.50	7,229.15	-1,067.05	4,957.40	2,142,349.67	630,023.08	36.8867682	-107.3887317
12,733.00	89.87	90.06	7,229.07	-1,067.49	5,048.40	2,142,349.63	630,114.08	36.8867669	-107.3884206
12,825.00	89.96	90.06	7,229.21	-1,067.59	5,140.40	2,142,349.95	630,206.08	36.8867666	-107.3881060
12,915.00	90.07	90.17	7,229.19	-1,067.77	5,230.40	2,142,350.17	630,296.08	36.8867660	-107.3877983
13,006.00	90.07	90.85	7,229.07	-1,068.58	5,321.39	2,142,349.77	630,387.08	36.8867638	-107.3874871
13,097.00	90.31	91.29	7,228.77	-1,070.28	5,412.38	2,142,348.48	630,478.07	36.8867591	-107.3871760

Company:	WPX Energy	Local Co-ordinate Reference:	Well ROSA UT 27 #648H - Slot A07
Project:	T31N R5W Rosa Unit	TVD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Site:	Pad 27	MD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Well:	ROSA UT 27 #648H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,188.00	90.27	92.32	7,228.31	-1,073.14	5,503.33	2,142,346.02	630,569.04	36.8867511	-107.3868650
13,279.00	89.96	92.08	7,228.13	-1,076.64	5,594.26	2,142,342.93	630,659.98	36.8867415	-107.3865541
13,371.00	89.96	93.22	7,228.19	-1,080.89	5,686.16	2,142,339.09	630,751.90	36.8867298	-107.3862398
13,462.00	89.87	92.43	7,228.33	-1,085.38	5,777.05	2,142,335.01	630,842.81	36.8867174	-107.3859291
13,553.00	89.23	90.82	7,229.04	-1,087.96	5,868.01	2,142,332.84	630,933.78	36.8867102	-107.3856181
13,644.00	89.46	91.16	7,230.08	-1,089.53	5,958.99	2,142,331.68	631,024.76	36.8867059	-107.3853070
13,735.00	88.96	90.95	7,231.34	-1,091.20	6,049.96	2,142,330.41	631,115.74	36.8867012	-107.3849959
13,797.00	88.19	89.60	7,232.88	-1,091.50	6,111.94	2,142,330.39	631,177.72	36.8867004	-107.3847840
13,887.00	88.96	89.53	7,235.12	-1,090.82	6,201.91	2,142,331.48	631,267.69	36.8867022	-107.3844763
13,978.00	89.13	89.16	7,236.64	-1,089.78	6,292.89	2,142,332.92	631,358.66	36.8867050	-107.3841652
14,069.00	90.04	89.53	7,237.29	-1,088.74	6,383.88	2,142,334.37	631,449.65	36.8867078	-107.3838541
14,160.00	90.75	91.20	7,236.67	-1,089.32	6,474.87	2,142,334.20	631,540.64	36.8867061	-107.3835430
14,252.00	89.96	90.59	7,236.10	-1,090.76	6,566.86	2,142,333.17	631,632.63	36.8867021	-107.3832284
14,342.00	90.91	90.95	7,235.41	-1,091.96	6,656.85	2,142,332.37	631,722.63	36.8866988	-107.3829207
14,433.00	90.44	90.23	7,234.34	-1,092.90	6,747.84	2,142,331.84	631,813.62	36.8866961	-107.3826096
14,524.00	90.97	89.22	7,233.22	-1,092.46	6,838.83	2,142,332.68	631,904.61	36.8866973	-107.3822985
14,616.00	90.50	89.14	7,232.04	-1,091.15	6,930.81	2,142,334.41	631,996.58	36.8867008	-107.3819840
14,707.00	90.74	88.49	7,231.06	-1,089.27	7,021.78	2,142,336.70	632,087.55	36.8867059	-107.3816729
14,798.00	90.74	89.21	7,229.88	-1,087.44	7,112.76	2,142,338.94	632,178.51	36.8867109	-107.3813618
14,888.00	90.17	89.27	7,229.17	-1,086.25	7,202.75	2,142,340.53	632,268.49	36.8867141	-107.3810541
14,980.00	90.57	88.63	7,228.57	-1,084.56	7,294.73	2,142,342.63	632,360.47	36.8867187	-107.3807396
15,071.00	90.03	88.71	7,228.10	-1,082.45	7,385.70	2,142,345.15	632,451.43	36.8867244	-107.3804285
15,162.00	89.60	89.36	7,228.39	-1,080.92	7,476.69	2,142,347.09	632,542.41	36.8867285	-107.3801174
15,253.00	90.13	89.27	7,228.60	-1,079.83	7,567.68	2,142,348.59	632,633.40	36.8867315	-107.3798063
15,344.00	91.80	91.64	7,227.07	-1,080.55	7,658.66	2,142,348.27	632,724.37	36.8867294	-107.3794952
15,435.00	91.34	91.90	7,224.58	-1,083.36	7,749.58	2,142,345.87	632,815.31	36.8867216	-107.3791843
15,526.00	90.17	91.25	7,223.38	-1,085.86	7,840.53	2,142,343.78	632,906.27	36.8867147	-107.3788733
15,617.00	90.23	92.13	7,223.06	-1,088.54	7,931.49	2,142,341.50	632,997.24	36.8867072	-107.3785623
15,708.00	89.83	91.52	7,223.01	-1,091.44	8,022.45	2,142,339.01	633,088.21	36.8866992	-107.3782513
15,800.00	89.16	91.52	7,223.83	-1,093.88	8,114.41	2,142,336.98	633,180.18	36.8866924	-107.3779368
15,891.00	89.50	91.53	7,224.89	-1,096.30	8,205.37	2,142,334.97	633,271.15	36.8866857	-107.3776258
15,982.00	90.37	90.76	7,224.99	-1,098.12	8,296.35	2,142,333.56	633,362.14	36.8866806	-107.3773147
16,073.00	91.11	90.16	7,223.82	-1,098.85	8,387.34	2,142,333.23	633,453.13	36.8866786	-107.3770036
16,164.00	91.38	89.46	7,221.84	-1,098.55	8,478.32	2,142,333.94	633,544.11	36.8866793	-107.3766925
16,255.00	92.38	88.58	7,218.85	-1,097.00	8,569.25	2,142,335.91	633,635.03	36.8866835	-107.3763816
16,345.00	91.58	88.98	7,215.75	-1,095.08	8,659.18	2,142,338.22	633,724.95	36.8866887	-107.3760741
16,436.00	92.28	88.07	7,212.68	-1,092.74	8,750.09	2,142,340.97	633,815.86	36.8866950	-107.3757632
16,527.00	91.88	88.23	7,209.38	-1,089.80	8,840.99	2,142,344.31	633,906.73	36.8867030	-107.3754524
16,618.00	92.28	88.13	7,206.07	-1,086.92	8,931.88	2,142,347.61	633,997.61	36.8867109	-107.3751416
16,709.00	92.11	88.45	7,202.59	-1,084.20	9,022.77	2,142,350.73	634,088.49	36.8867182	-107.3748308
16,800.00	90.92	88.13	7,200.18	-1,081.49	9,113.70	2,142,353.85	634,179.41	36.8867256	-107.3745199
16,891.00	91.88	89.10	7,197.96	-1,079.29	9,204.64	2,142,356.46	634,270.34	36.8867316	-107.3742089
16,982.00	92.32	90.70	7,194.63	-1,079.13	9,295.58	2,142,357.03	634,361.27	36.8867319	-107.3738980
17,073.00	91.51	90.99	7,191.58	-1,080.47	9,386.52	2,142,356.09	634,452.22	36.8867282	-107.3735871
17,164.00	90.20	89.94	7,190.23	-1,081.21	9,477.50	2,142,355.76	634,543.20	36.8867261	-107.3732760
17,255.00	91.14	89.98	7,189.16	-1,081.15	9,568.49	2,142,356.23	634,634.19	36.8867261	-107.3729648
17,346.00	90.74	90.36	7,187.67	-1,081.42	9,659.48	2,142,356.37	634,725.18	36.8867253	-107.3726537
17,436.00	90.50	90.76	7,186.70	-1,082.30	9,749.47	2,142,355.89	634,815.18	36.8867228	-107.3723460
17,527.00	90.23	91.11	7,186.12	-1,083.78	9,840.46	2,142,354.82	634,906.17	36.8867187	-107.3720349
17,618.00	89.60	90.85	7,186.25	-1,085.34	9,931.44	2,142,353.67	634,997.16	36.8867143	-107.3717238
17,709.00	90.20	90.90	7,186.41	-1,086.73	10,022.43	2,142,352.69	635,088.15	36.8867104	-107.3714127
17,801.00	89.87	91.55	7,186.35	-1,088.69	10,114.41	2,142,351.13	635,180.14	36.8867049	-107.3710982
17,892.00	91.17	91.42	7,185.53	-1,091.05	10,205.37	2,142,349.18	635,271.11	36.8866983	-107.3707871
17,983.00	91.11	91.87	7,183.72	-1,093.66	10,296.32	2,142,346.98	635,362.07	36.8866911	-107.3704762
18,074.00	90.60	91.07	7,182.36	-1,096.00	10,387.28	2,142,345.05	635,453.04	36.8866846	-107.3701651

Company:	WPX Energy	Local Co-ordinate Reference:	Well ROSA UT 27 #648H - Slot A07
Project:	T31N R5W Rosa Unit	TVD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Site:	Pad 27	MD Reference:	GL 6305' & RKB 25' @ 6330.00usft (Aztec 1000)
Well:	ROSA UT 27 #648H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
18,165.00	90.84	92.39	7,181.22	-1,098.75	10,478.23	2,142,342.71	635,544.00	36.8866769	-107.3698542
18,196.00	90.87	92.82	7,180.75	-1,100.15	10,509.19	2,142,341.44	635,574.97	36.8866730	-107.3697483
RSI @ 18,196' MD - 36.8866730, -107.3697482									
18,244.00	90.92	93.49	7,180.00	-1,102.80	10,557.11	2,142,339.01	635,622.90	36.8866657	-107.3695844
Last SDI Lateral MWD Survey									
18,294.00	90.92	93.49	7,179.20	-1,105.84	10,607.01	2,142,336.19	635,672.81	36.8866573	-107.3694138
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
390.00	389.98	-2.50	-1.67	First SDI Surface MWD Survey
6,566.00	6,453.31	-948.26	-616.35	7" Casing @ 6566' MD
6,566.00	6,453.31	-948.26	-616.35	36.8870956, -107.4077903
6,612.00	6,499.02	-952.97	-614.12	Last SDI Surface MWD Survey
6,638.00	6,524.88	-955.39	-612.95	First SDI Curve MWD Survey
7,731.00	7,250.67	-1,077.46	48.21	Last SDI Curve MWD Survey
7,777.00	7,251.45	-1,078.25	94.19	First SDI Lateral MWD Survey
18,196.00	7,180.75	-1,100.15	10,509.19	RSI @ 18,196' MD
18,196.00	7,180.75	-1,100.15	10,509.19	36.8866730, -107.3697482
18,244.00	7,180.00	-1,102.80	10,557.11	Last SDI Lateral MWD Survey
18,294.00	7,179.20	-1,105.84	10,607.01	Projection to TD

Checked By: _____ Approved By: _____ Date: _____