

WELL DETAILS: RG 313-18-297

+N/-S	+E/-W	Northing	Ground Level: Easting	6667.00 Latitude	Longitude	Slot
0.00	0.00	1754885.900	2203559.510	39.871824	-108.337864	RG 313-18-297 A8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP	8067.00	935.78	2074.96	1755756.410	2205662.680	39.874392	-108.330471
BHL	0567.00	935.78	2074.96	1755756.410	2205662.680	39.874392	-108.330471

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Departure	Annotation
297.76	298.00	3.95	75.07	2.65	9.92	10.13	10.27	First Survey @ 298 MD/ 297.76 TVD
10598.21	10937.00	3.99	237.05	892.91	2084.12	2266.94	2398.12	PTB @ 10937 MD/ 10598.21 TVD

SLOTS

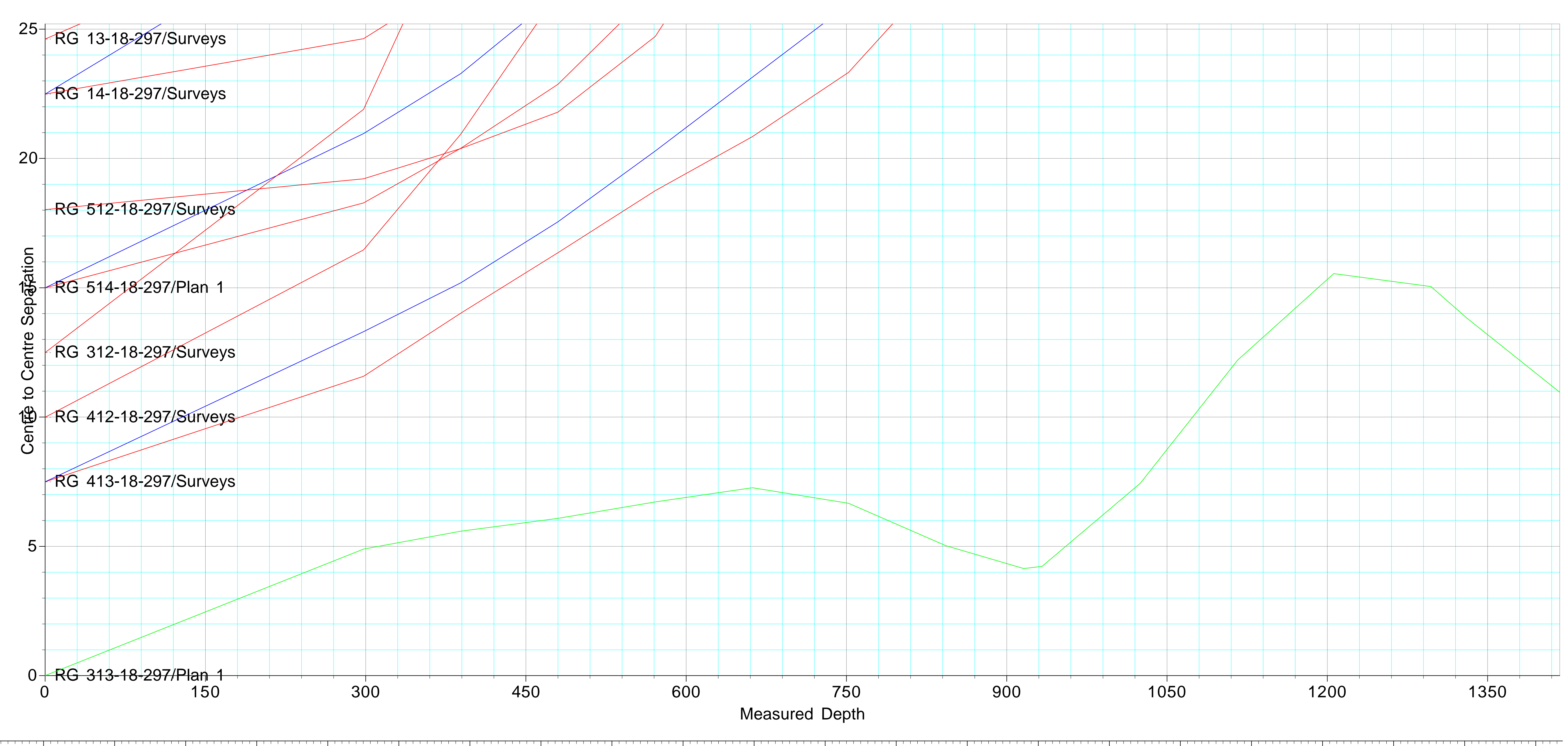
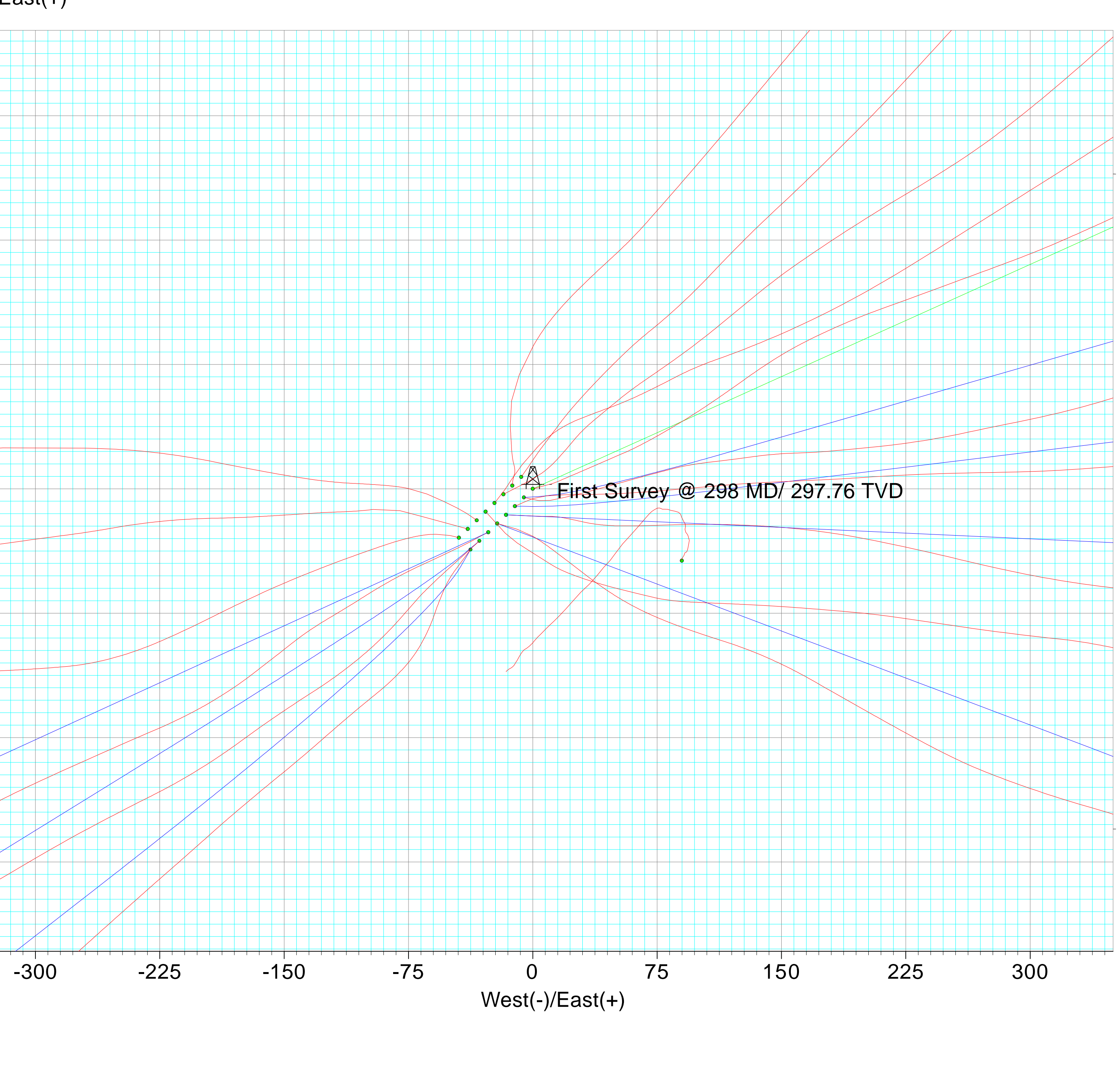
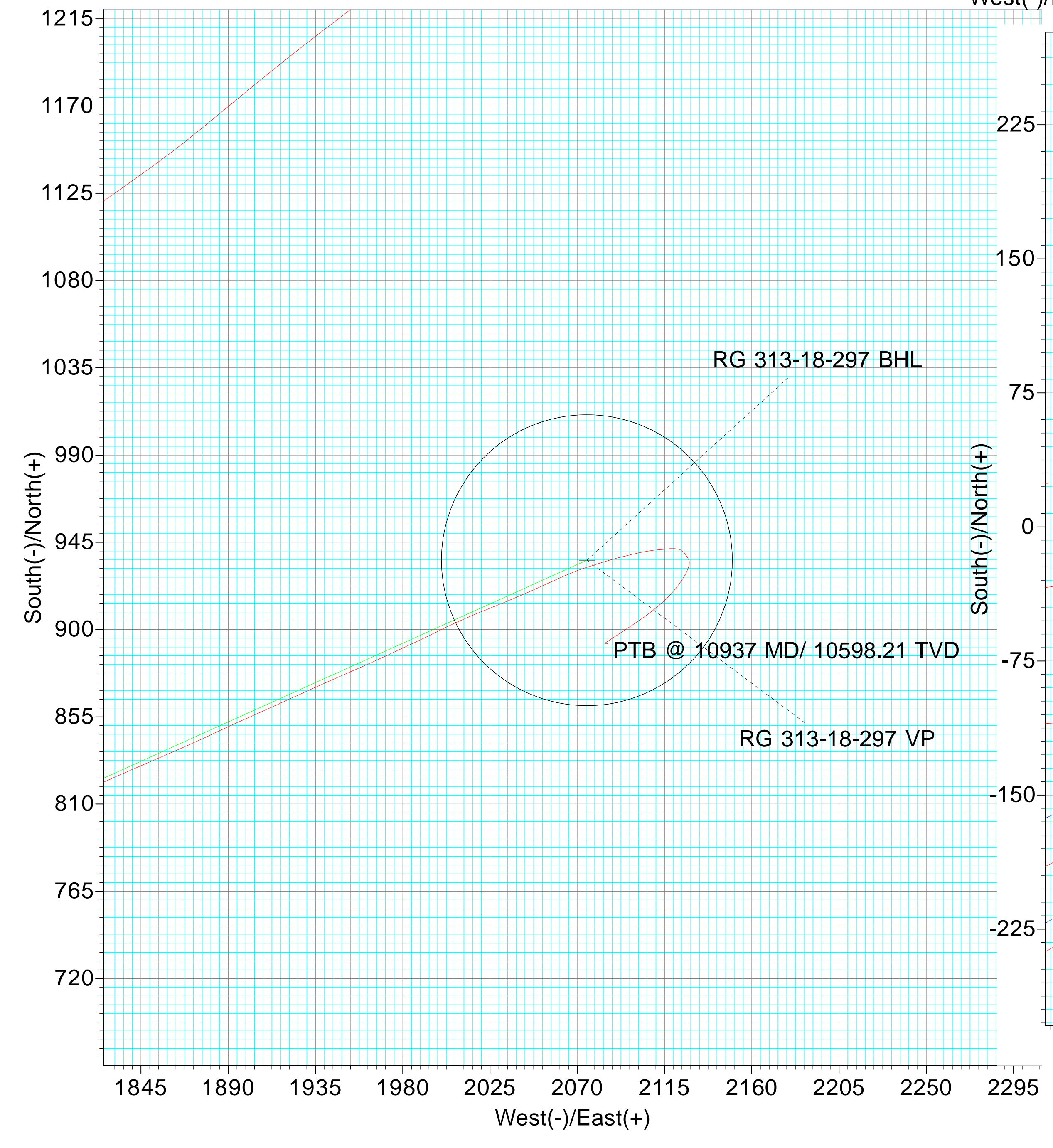
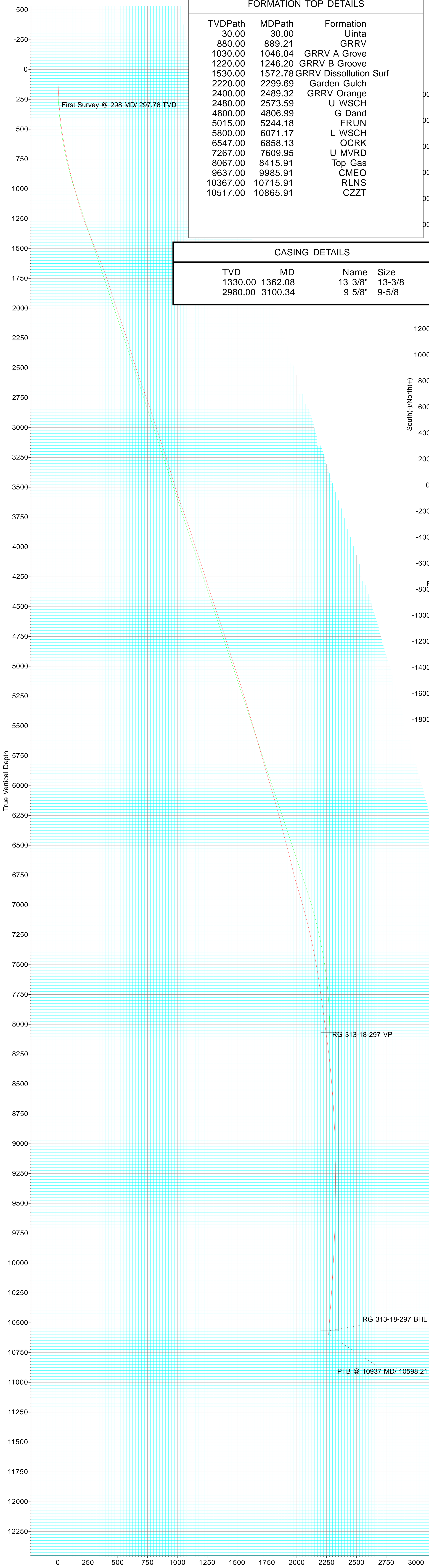
Slot Name	+N/-S	+E/-W	Northing	Easting
RG 13-18-297 B5	-8.55	-23.08	1754878.080	2203536.170
RG 14-18-297 A5	-15.70	-16.10	1754870.710	2203542.930
RG 21-24-298 A3	-26.18	-26.84	1754860.570	2203531.870
RG 312-18-297 B7	1.93	-12.35	1754888.210	2203547.230
RG 313-18-297 A8	0.00	0.00	1754885.900	2203559.510
RG 314-18-297 B4	-13.78	-28.44	1754873.020	2203530.650
RG 321-24-298 A2	-31.41	-32.20	1754855.510	2203526.340
RG 324-13-298 B3	-19.03	-33.81	1754867.940	2203525.120
RG 412-18-297 B8	7.16	-6.98	1754893.270	2203552.760
RG 413-18-297 A7	-5.23	-5.37	1754880.840	2203553.980
RG 414-18-297 A4	-20.94	-21.47	1754865.640	2203537.400
RG 421-24-298 A1	-36.65	-37.56	1754850.440	2203520.820
RG 424-13-298 B2	-24.26	-39.18	1754862.880	2203519.590
RG 512-18-297 B6	-3.31	-17.72	1754883.140	2203541.700
RG 514-18-297 A6	-10.47	-10.74	1754875.770	2203548.450
RG 524-13-298 B1	-29.50	-44.55	1754857.810	2203514.060

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
30.00	30.00	Uinta
880.00	889.21	GRRV
1030.00	1046.04	GRRV A Grove
1220.00	1246.20	GRRV B Groove
1530.00	1572.78	GRRV Dissolution Surf
2220.00	2299.69	Garden Gulch
2400.00	2489.32	GRRV Orange
2480.00	2573.59	U WSCH
4600.00	4806.99	G Dand
5015.00	5244.18	FRUN
5800.00	6071.17	L WSCH
6547.00	6858.13	OCRK
7267.00	7609.95	U MVRD
8067.00	8415.91	Top Gas
9637.00	9985.91	CMEO
10367.00	10715.91	RLNS
10517.00	10865.91	CZTZ

CASING DETAILS

TVD	MD	Name	Size
1330.00	1362.08	13 3/8"	13-3/8
2980.00	3100.34	9 5/8"	9-5/8





## **Terra Energy Partners, LLP**

**Garfield County, CO (Nad 83)**

**Fed 298-13-1 Pad**

**RG 313-18-297 - Slot RG 313-18-297 A8**

**OWB**

**Design: Surveys**

## **Standard Survey Report**

**18 July, 2024**



<b>Company:</b>	Terra Energy Partners, LLP	<b>Local Co-ordinate Reference:</b>	Well RG 313-18-297 - Slot RG 313-18-297 A8
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>TVD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Site:</b>	Fed 298-13-1 Pad	<b>MD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Well:</b>	RG 313-18-297	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	NN

<b>Project</b>	Garfield County, CO (Nad 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

<b>Site</b>	Fed 298-13-1 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,754,850.440 usft	<b>Latitude:</b>	39.871723
<b>From:</b>	Map	<b>Easting:</b>	2,203,520.820 usft	<b>Longitude:</b>	-108.337998
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-1.79 °

<b>Well</b>	RG 313-18-297 - Slot RG 313-18-297 A8					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,754,885.900 usft	<b>Latitude:</b>	39.871824
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,203,559.510 usft	<b>Longitude:</b>	-108.337864
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	6,697.00 ft	<b>Ground Level:</b>	6,667.00 ft

<b>Wellbore</b>	OWB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	12/31/2023	9.07	65.75	50,921

<b>Design</b>	Surveys				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	65.73	

<b>Survey Program</b>	<b>Date</b>	7/18/2024			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
298.00	10,937.00	Surveys (OWB)	OWSG (REV5) MWD HDGM	OWSG MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
298.00	3.95	75.07	297.76	2.65	9.92	10.13	1.33	1.33	0.00	
<b>First Survey @ 298 MD/ 297.76 TVD</b>										
389.00	5.71	66.37	388.44	5.27	17.10	17.75	2.09	1.93	-9.56	
480.00	7.47	66.90	478.83	9.40	26.69	28.19	1.94	1.93	0.58	
571.00	9.53	66.46	568.83	14.73	39.04	41.64	2.26	2.26	-0.48	
662.00	10.98	66.72	658.37	21.17	53.90	57.84	1.59	1.59	0.29	
752.00	12.04	61.36	746.56	29.05	70.02	75.77	1.67	1.18	-5.96	
843.00	13.66	59.16	835.28	39.11	87.57	95.91	1.86	1.78	-2.42	
933.00	15.02	56.09	922.48	51.07	106.38	117.97	1.73	1.51	-3.41	
1,025.00	16.65	54.33	1,010.98	65.41	126.98	142.64	1.85	1.77	-1.91	

<b>Company:</b>	Terra Energy Partners, LLP	<b>Local Co-ordinate Reference:</b>	Well RG 313-18-297 - Slot RG 313-18-297 A8
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>TVD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Site:</b>	Fed 298-13-1 Pad	<b>MD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Well:</b>	RG 313-18-297	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	NN

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,116.00	14.72	58.11	1,098.59	79.12	147.39	166.88	2.40	-2.12	4.15	
1,206.00	17.27	63.91	1,185.11	91.04	169.10	191.58	3.34	2.83	6.44	
1,297.00	20.52	67.60	1,271.20	103.06	195.99	221.03	3.80	3.57	4.05	
1,331.00	21.26	70.06	1,302.96	107.43	207.29	233.13	3.37	2.18	7.24	
1,468.00	21.92	69.80	1,430.35	124.73	254.64	283.40	0.49	0.48	-0.19	
1,559.00	22.67	69.62	1,514.55	136.70	287.02	317.84	0.83	0.82	-0.20	
1,649.00	22.19	66.46	1,597.74	149.53	318.86	352.14	1.44	-0.53	-3.51	
1,739.00	20.47	65.23	1,681.57	162.91	348.73	384.88	1.97	-1.91	-1.37	
1,830.00	18.28	65.32	1,767.41	175.54	376.15	415.06	2.41	-2.41	0.10	
1,921.00	17.22	66.11	1,854.08	186.96	401.44	442.80	1.19	-1.16	0.87	
2,011.00	18.58	66.28	1,939.72	198.12	426.75	470.46	1.51	1.51	0.19	
2,102.00	18.67	65.93	2,025.96	209.89	453.32	499.53	0.16	0.10	-0.38	
2,194.00	18.94	65.32	2,113.05	222.13	480.33	529.18	0.36	0.29	-0.66	
2,284.00	18.80	64.70	2,198.21	234.43	506.71	558.29	0.27	-0.16	-0.69	
2,375.00	17.18	62.41	2,284.76	246.92	531.88	586.37	1.94	-1.78	-2.52	
2,467.00	16.69	63.03	2,372.77	259.20	555.70	613.13	0.57	-0.53	0.67	
2,558.00	17.79	66.98	2,459.68	270.57	580.14	640.08	1.76	1.21	4.34	
2,648.00	18.89	66.90	2,545.11	281.66	606.20	668.39	1.22	1.22	-0.09	
2,739.00	19.20	67.34	2,631.13	293.20	633.56	698.08	0.38	0.34	0.48	
2,829.00	20.08	66.55	2,715.89	305.05	661.39	728.32	1.02	0.98	-0.88	
2,918.00	18.63	64.26	2,799.86	317.31	688.21	757.81	1.84	-1.63	-2.57	
3,010.00	17.92	62.15	2,887.22	330.30	713.96	786.63	1.05	-0.77	-2.29	
3,057.00	17.97	61.98	2,931.93	337.09	726.75	801.08	0.15	0.11	-0.36	
3,152.00	18.94	63.91	3,022.05	350.75	753.54	831.11	1.21	1.02	2.03	
3,243.00	17.22	62.15	3,108.55	363.54	778.71	859.32	1.98	-1.89	-1.93	
3,334.00	18.36	76.04	3,195.24	373.30	804.55	886.88	4.82	1.25	15.26	
3,425.00	18.63	72.08	3,281.54	381.23	832.29	915.43	1.41	0.30	-4.35	
3,516.00	16.56	70.50	3,368.28	390.03	858.34	942.80	2.33	-2.27	-1.74	
3,607.00	16.56	72.26	3,455.51	398.31	882.92	968.61	0.55	0.00	1.93	
3,699.00	17.88	71.91	3,543.38	406.69	908.83	995.67	1.44	1.43	-0.38	
3,790.00	19.68	66.72	3,629.54	417.08	936.19	1,024.89	2.70	1.98	-5.70	
3,881.00	19.59	66.63	3,715.25	429.19	964.27	1,055.46	0.10	-0.10	-0.10	
3,973.00	19.68	68.83	3,801.90	440.90	992.87	1,086.35	0.81	0.10	2.39	
4,065.00	17.53	64.44	3,889.09	452.48	1,019.82	1,115.68	2.79	-2.34	-4.77	
4,156.00	18.19	61.62	3,975.71	465.14	1,044.69	1,143.55	1.20	0.73	-3.10	
4,248.00	18.36	63.73	4,063.07	478.38	1,070.31	1,172.35	0.74	0.18	2.29	
4,340.00	18.36	65.93	4,150.38	490.71	1,096.54	1,201.32	0.75	0.00	2.39	
4,431.00	17.05	66.55	4,237.07	501.86	1,121.86	1,228.99	1.45	-1.44	0.68	
4,522.00	18.19	63.56	4,323.80	513.49	1,146.82	1,256.53	1.60	1.25	-3.29	
4,614.00	18.45	68.30	4,411.14	525.27	1,173.21	1,285.42	1.64	0.28	5.15	
4,706.00	17.88	66.90	4,498.56	536.19	1,199.72	1,314.09	0.78	-0.62	-1.52	
4,798.00	19.37	68.57	4,585.74	547.31	1,226.92	1,343.45	1.72	1.62	1.82	
4,889.00	18.76	67.60	4,671.75	558.40	1,254.49	1,373.14	0.76	-0.67	-1.07	

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<b>Site:</b>	Fed 298-13-1 Pad	<b>MD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Well:</b>	RG 313-18-297	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	NN

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,981.00	17.44	65.75	4,759.19	569.70	1,280.74	1,401.72	1.56	-1.43	-2.01	
5,073.00	17.27	65.14	4,847.01	581.10	1,305.70	1,429.16	0.27	-0.18	-0.66	
5,164.00	18.50	63.47	4,933.61	593.23	1,330.88	1,457.09	1.46	1.35	-1.84	
5,256.00	17.31	64.17	5,021.15	605.72	1,356.26	1,485.36	1.31	-1.29	0.76	
5,348.00	19.11	67.34	5,108.54	617.48	1,382.48	1,514.10	2.23	1.96	3.45	
5,439.00	17.00	66.02	5,195.06	628.63	1,408.38	1,542.30	2.36	-2.32	-1.45	
5,531.00	17.00	65.93	5,283.04	639.58	1,432.95	1,569.19	0.03	0.00	-0.10	
5,621.00	16.52	65.93	5,369.21	650.17	1,456.64	1,595.15	0.53	-0.53	0.00	
5,713.00	16.78	63.82	5,457.36	661.36	1,480.51	1,621.50	0.72	0.28	-2.29	
5,805.00	16.12	64.44	5,545.59	672.73	1,503.95	1,647.54	0.74	-0.72	0.67	
5,896.00	16.87	63.29	5,632.84	684.11	1,527.14	1,673.36	0.90	0.82	-1.26	
5,988.00	15.46	63.29	5,721.20	695.63	1,550.02	1,698.95	1.53	-1.53	0.00	
6,079.00	15.64	64.44	5,808.87	706.37	1,571.92	1,723.33	0.39	0.20	1.26	
6,171.00	16.52	63.82	5,897.27	717.49	1,594.84	1,748.81	0.97	0.96	-0.67	
6,262.00	17.05	65.67	5,984.40	728.70	1,618.61	1,775.08	0.83	0.58	2.03	
6,354.00	15.86	66.28	6,072.63	739.31	1,642.41	1,801.14	1.31	-1.29	0.66	
6,446.00	15.82	67.51	6,161.13	749.17	1,665.51	1,826.24	0.37	-0.04	1.34	
6,538.00	14.98	67.69	6,249.83	758.48	1,688.09	1,850.66	0.91	-0.91	0.20	
6,629.00	13.62	68.48	6,338.01	766.87	1,708.94	1,873.12	1.51	-1.49	0.87	
6,721.00	14.89	64.26	6,427.18	775.98	1,729.67	1,895.75	1.78	1.38	-4.59	
6,812.00	14.94	64.44	6,515.11	786.12	1,750.78	1,919.17	0.07	0.05	0.20	
6,904.00	14.01	64.88	6,604.19	795.96	1,771.56	1,942.16	1.02	-1.01	0.48	
6,997.00	13.18	64.00	6,694.58	805.39	1,791.29	1,964.02	0.92	-0.89	-0.95	
7,088.00	15.64	65.49	6,782.71	815.03	1,811.78	1,986.66	2.73	2.70	1.64	
7,179.00	16.87	66.28	6,870.07	825.43	1,835.03	2,012.13	1.37	1.35	0.87	
7,271.00	15.82	66.81	6,958.35	835.74	1,858.78	2,038.01	1.15	-1.14	0.58	
7,363.00	15.11	64.88	7,047.02	845.77	1,881.16	2,062.54	0.95	-0.77	-2.10	
7,455.00	14.45	65.93	7,135.98	855.54	1,902.50	2,086.01	0.77	-0.72	1.14	
7,546.00	12.91	65.40	7,224.40	864.40	1,922.11	2,107.53	1.70	-1.69	-0.58	
7,636.00	11.82	66.02	7,312.31	872.33	1,939.67	2,126.80	1.22	-1.21	0.69	
7,728.00	11.25	66.46	7,402.45	879.75	1,956.51	2,145.20	0.63	-0.62	0.48	
7,820.00	10.23	64.88	7,492.84	886.80	1,972.13	2,162.34	1.15	-1.11	-1.72	
7,912.00	8.92	65.14	7,583.55	893.27	1,986.00	2,177.64	1.42	-1.42	0.28	
8,004.00	7.64	63.12	7,674.59	899.03	1,997.93	2,190.88	1.43	-1.39	-2.20	
8,096.00	8.39	66.11	7,765.69	904.51	2,009.52	2,203.71	0.93	0.82	3.25	
8,187.00	8.12	67.95	7,855.75	909.61	2,021.55	2,216.77	0.42	-0.30	2.02	
8,279.00	7.25	67.60	7,946.92	914.27	2,032.94	2,229.06	0.95	-0.95	-0.38	
8,371.00	7.86	66.55	8,038.12	918.98	2,044.08	2,241.15	0.68	0.66	-1.14	
8,463.00	7.73	65.14	8,129.27	924.09	2,055.46	2,253.63	0.25	-0.14	-1.53	
8,554.00	7.03	67.07	8,219.52	928.83	2,066.14	2,265.32	0.82	-0.77	2.12	
8,645.00	5.97	72.79	8,309.93	932.40	2,075.79	2,275.58	1.36	-1.16	6.29	
8,736.00	5.31	72.43	8,400.49	935.07	2,084.33	2,284.46	0.73	-0.73	-0.40	
8,828.00	5.00	76.21	8,492.12	937.31	2,092.28	2,292.63	0.50	-0.34	4.11	

<b>Company:</b>	Terra Energy Partners, LLP	<b>Local Co-ordinate Reference:</b>	Well RG 313-18-297 - Slot RG 313-18-297 A8
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>TVD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Site:</b>	Fed 298-13-1 Pad	<b>MD Reference:</b>	RKB @ 30' @ 6697.00ft
<b>Well:</b>	RG 313-18-297	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	NN

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,920.00	4.43	76.65	8,583.81	939.09	2,099.63	2,300.06	0.62	-0.62	0.48	
9,011.00	3.91	80.52	8,674.57	940.41	2,106.11	2,306.51	0.65	-0.57	4.25	
9,103.00	3.16	85.62	8,766.39	941.12	2,111.73	2,311.93	0.88	-0.82	5.54	
9,195.00	2.90	83.16	8,858.26	941.59	2,116.57	2,316.53	0.32	-0.28	-2.67	
9,285.00	1.88	95.02	8,948.18	941.73	2,120.30	2,319.99	1.25	-1.13	13.18	
9,376.00	1.53	106.71	9,039.14	941.25	2,122.95	2,322.21	0.54	-0.38	12.85	
9,468.00	1.58	143.63	9,131.11	939.88	2,124.88	2,323.41	1.07	0.05	40.13	
9,560.00	1.40	142.13	9,223.08	937.97	2,126.32	2,323.94	0.20	-0.20	-1.63	
9,651.00	1.14	154.52	9,314.06	936.27	2,127.40	2,324.22	0.41	-0.29	13.62	
9,742.00	0.87	179.13	9,405.05	934.77	2,127.80	2,323.96	0.55	-0.30	27.04	
9,837.00	1.01	191.09	9,500.03	933.22	2,127.65	2,323.19	0.25	0.15	12.59	
9,931.00	1.36	200.32	9,594.01	931.36	2,127.10	2,321.93	0.42	0.37	9.82	
10,025.00	1.97	207.00	9,687.97	928.88	2,125.98	2,319.88	0.68	0.65	7.11	
10,119.00	2.54	213.94	9,781.90	925.71	2,124.08	2,316.85	0.67	0.61	7.38	
10,213.00	2.90	216.31	9,875.79	922.07	2,121.51	2,313.01	0.40	0.38	2.52	
10,307.00	3.33	223.69	9,969.66	918.18	2,118.22	2,308.41	0.62	0.46	7.85	
10,401.00	3.51	227.30	10,063.49	914.25	2,114.22	2,303.15	0.30	0.19	3.84	
10,495.00	3.69	231.67	10,157.30	910.42	2,109.73	2,297.48	0.35	0.19	4.65	
10,589.00	3.95	234.07	10,251.09	906.65	2,104.73	2,291.38	0.32	0.28	2.55	
10,684.00	4.17	236.79	10,345.86	902.84	2,099.20	2,284.76	0.31	0.23	2.86	
10,778.00	4.17	236.09	10,439.61	899.06	2,093.50	2,278.02	0.05	0.00	-0.74	
10,871.00	3.99	237.05	10,532.37	895.41	2,087.98	2,271.48	0.21	-0.19	1.03	
10,937.00	3.99	237.05	10,598.21	892.91	2,084.12	2,266.94	0.00	0.00	0.00	
PTB @ 10937 MD/ 10598.21 TVD										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
298.00	297.76	2.65	9.92	First Survey @ 298 MD/ 297.76 TVD	
10,937.00	10,598.21	892.91	2,084.12	PTB @ 10937 MD/ 10598.21 TVD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_