



# Chevron RBU



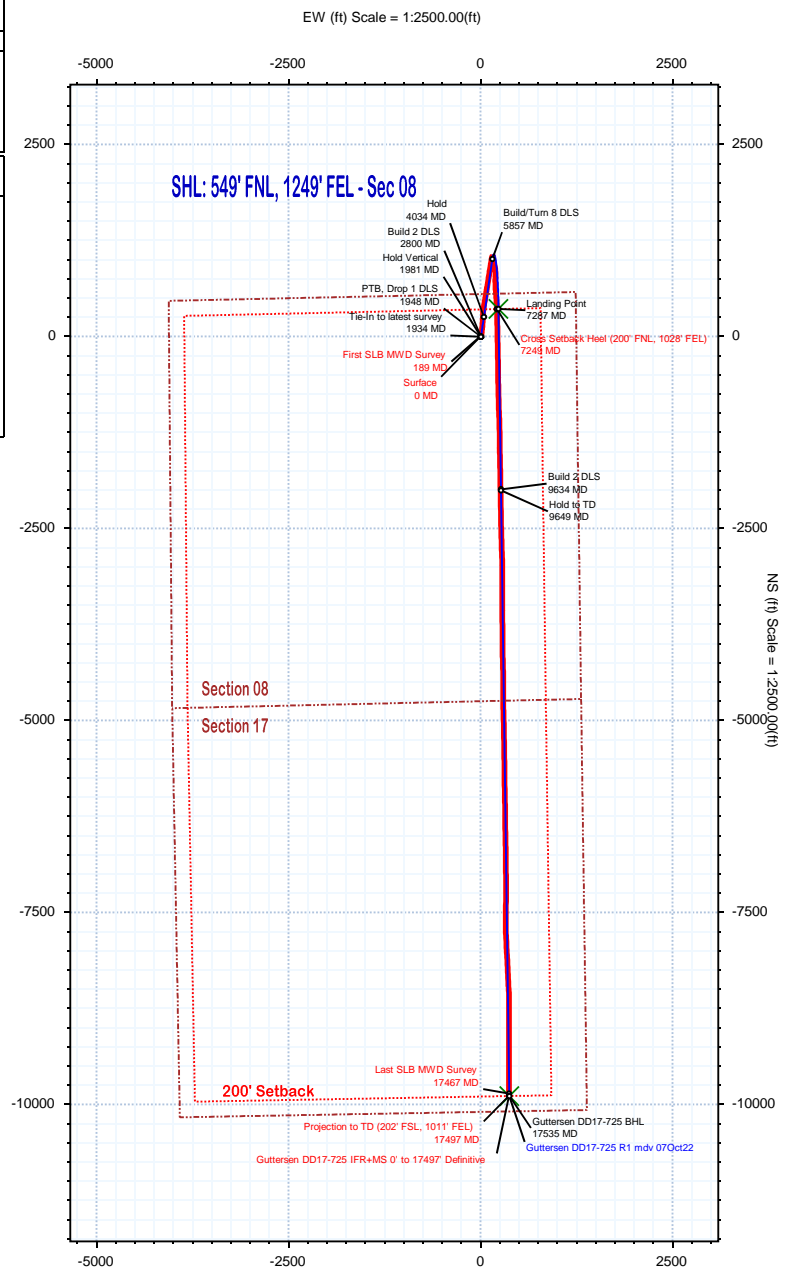
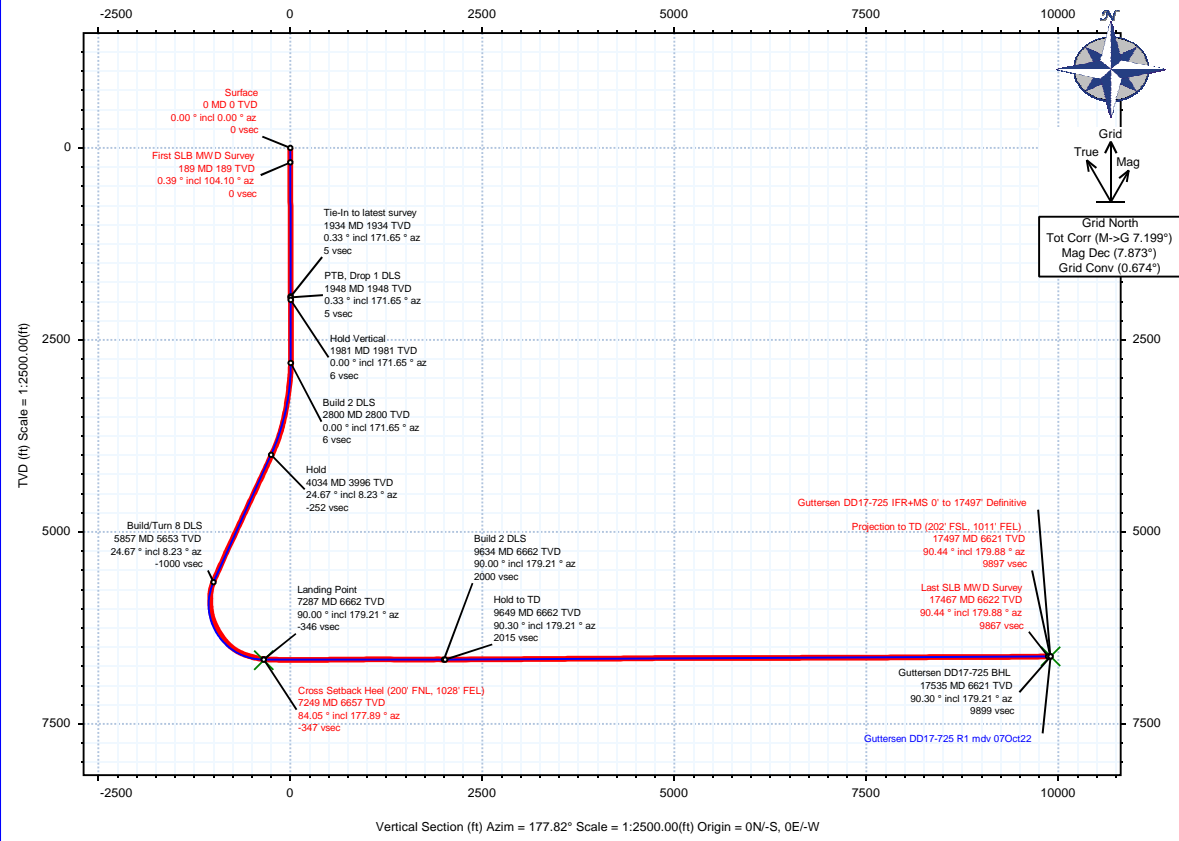
<b>Borehole:</b> Guttersen DD17-725	<b>Well:</b> Guttersen DD17-725	<b>Field:</b> CO, Weld County (NAD 83 NZ) - 2019	<b>Structure:</b> Chevron RBU 08-03N-63W (DD08-02 Pad)
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<b>Gravity &amp; Magnetic Parameters</b>				<b>Surface Location</b>				<b>NAD83 Colorado State Plane, Northern Zone, US Feet</b>				<b>Miscellaneous</b>			
Model:	IFR	Dip:	66.58°	Date:	06-Oct-2022	Lat:	N 40 14 45.20	Northing:	1334132.98ftUS	Grid Conv:	0.6742°	Slot:	725	TVD Ref:	KB 29ft(4894ft above MSL)
MagDec:	7.873°	FS:	51821nT	Gravity FS:	999.022mgn (9.80665 Based)	Lon:	W 104 27 23.80	Easting:	3291248.78ftUS	Scale Fact:	0.99995685	Plan:	Guttersen DD17-725 IFR+MS 0' to 17497' Definitive		

Surface Location									
Northing:	1334132.981	Easting:	3291248.78	Latitude:	N 40 14 45.20	Longitude:	W 104 27 23.80	VSec Azimuth:	177.82
Target Description			Grid Coord			Local Coord			
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)	
Guttersen DD08-02 Pad Sec 08-17	N 40 13 58.40	W 104 27 7.61	1329411.51	3292560.00	4894.00	4768.15	-4721.69	1311.28	
Guttersen DD08-02 Pad Sec 08-17 - 200'NSx460'EW	N 40 13 58.39	W 104 27 13.54	1329405.17	3292100.06	4894.00	4756.99	-4728.03	851.32	
Guttersen DD17-725 BHL	N 40 13 7.42	W 104 27 20.43	1324241.60	3291625.92	6621.00	9899.02	-9891.83	377.16	
Guttersen DD17-725 LP	N 40 14 48.69	W 104 27 20.70	1334488.48	3291484.80	6672.00	-346.28	355.52	236.03	

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First SLB MWD Survey	189.00	0.39	104.10	189.00	0.18	-0.16	0.62	0.21
Cross Setback Heel (200' FNL, 1028' FEL)	7249.41	84.05	177.89	6657.17	-346.64	355.10	215.75	7.51
Last SLB MWD Survey	17467.00	90.44	179.88	6621.71	9866.78	-9859.70	373.70	1.23
Projection to TD (202' FSL, 1011' FEL)	17497.00	90.44	179.88	6621.48	9896.76	-9889.70	373.76	0.00



## Guttersen DD17-725 IFR+MS 0' to 17497' Definitive Survey Geodetic Report (Def Survey)



**Report Date:** October 28, 2022 - 08:52 AM  
**Client:** Chevron RBU  
**Field:** CO, Weld County (NAD 83 NZ) - 2019  
**Structure / Slot:** Chevron RBU 08-03N-63W (DD08-02 Pad) / 725  
**Well:** Guttersen DD17-725  
**Borehole:** Guttersen DD17-725  
**UWI / API#:** Unknown / 05-123-49065  
**Survey Name:** Guttersen DD17-725 IFR+MS 0' to 17497' Definitive  
**Survey Date:** October 06, 2022  
**Tort / AHD / DDI / ERD Ratio:** 235.743 ° / 12031.660 ft / 6.872 / 1.805  
**Coordinate Reference System:** NAD83 Colorado State Plane, Northern Zone, US Feet  
**Location Lat / Long:** N 40° 14' 45.20400", W 104° 27' 23.79600"  
**Location Grid N/E Y/X:** N 1334132.981 ftUS, E 3291248.780 ftUS  
**CRS Grid Convergence Angle:** 0.6742 °  
**Grid Scale Factor:** 0.99995685  
**Version / Patch:** 2.10.833.1

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 177.820 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** KB 29ft  
**TVD Reference Elevation:** 4894.000 ft above MSL  
**Seabed / Ground Elevation:** 4865.000 ft above MSL  
**Magnetic Declination:** 7.873 °  
**Total Gravity Field Strength:** 999.0217mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 51821.000 nT  
**Magnetic Dip Angle:** 66.580 °  
**Declination Date:** October 06, 2022  
**Magnetic Declination Model:** IFR  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.6742 °  
**Total Corr Mag North->Grid North:** 7.1988 °  
**Local Coord Referenced To:** Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1334132.98	3291248.78	40.245890	-104.456610
First SLB MWD Survey	189.00	0.39	104.10	189.00	0.18	-0.16	0.62	0.21	1334132.82	3291249.40	40.245890	-104.456608
	279.00	0.34	132.40	279.00	0.45	-0.41	1.12	0.21	1334132.57	3291249.90	40.245889	-104.456606
	373.00	0.09	192.93	373.00	0.72	-0.67	1.31	0.33	1334132.31	3291250.09	40.245888	-104.456605
	465.00	0.46	95.14	465.00	0.84	-0.77	1.66	0.52	1334132.21	3291250.44	40.245888	-104.456604
	563.00	0.29	149.64	562.99	1.11	-1.02	2.18	0.38	1334131.96	3291250.96	40.245887	-104.456602
	658.00	0.23	185.63	657.99	1.51	-1.42	2.28	0.18	1334131.56	3291251.06	40.245886	-104.456602
	753.00	0.08	214.41	752.99	1.75	-1.67	2.22	0.17	1334131.32	3291251.00	40.245885	-104.456602
	847.00	0.15	77.75	846.99	1.78	-1.69	2.31	0.23	1334131.29	3291251.09	40.245885	-104.456602
	942.00	0.36	116.95	941.99	1.90	-1.80	2.69	0.28	1334131.18	3291251.47	40.245885	-104.456600
	1037.00	0.49	118.29	1036.99	2.26	-2.13	3.32	0.14	1334130.85	3291252.10	40.245884	-104.456598
	1132.00	0.38	118.01	1131.99	2.62	-2.47	3.95	0.12	1334130.51	3291252.73	40.245883	-104.456596
	1227.00	0.31	89.54	1226.98	2.79	-2.62	4.49	0.19	1334130.36	3291253.27	40.245883	-104.456594
	1322.00	0.64	83.68	1321.98	2.76	-2.56	5.27	0.35	1334130.42	3291254.05	40.245883	-104.456591
	1416.00	0.37	125.64	1415.98	2.90	-2.68	6.04	0.47	1334130.31	3291254.82	40.245882	-104.456588
	1511.00	0.43	123.45	1510.97	3.30	-3.05	6.59	0.07	1334129.93	3291255.37	40.245881	-104.456587
	1606.00	0.22	133.23	1605.97	3.64	-3.37	7.02	0.23	1334129.61	3291255.80	40.245881	-104.456585
	1701.00	0.33	147.48	1700.97	4.00	-3.73	7.30	0.14	1334129.25	3291256.08	40.245880	-104.456584
	1795.00	0.30	160.93	1794.97	4.47	-4.19	7.52	0.08	1334128.79	3291256.30	40.245878	-104.456583
	1890.00	0.51	157.82	1889.97	5.11	-4.82	7.77	0.22	1334128.17	3291256.54	40.245877	-104.456582
	1934.00	0.33	171.65	1933.97	5.42	-5.12	7.86	0.47	1334127.86	3291256.64	40.245876	-104.456582
	1982.00	1.13	163.27	1981.96	6.01	-5.71	8.01	1.68	1334127.27	3291256.79	40.245874	-104.456582
	2077.00	0.08	144.76	2076.96	6.97	-6.66	8.32	1.11	1334126.32	3291257.10	40.245871	-104.456580
	2171.00	0.07	44.22	2170.96	6.99	-6.68	8.40	0.12	1334126.31	3291257.18	40.245871	-104.456580
	2266.00	0.07	25.47	2265.96	6.90	-6.58	8.46	0.02	1334126.40	3291257.24	40.245872	-104.456580
	2361.00	0.07	292.34	2360.96	6.82	-6.51	8.44	0.11	1334126.47	3291257.22	40.245872	-104.456580
	2456.00	0.06	152.92	2455.96	6.84	-6.53	8.41	0.13	1334126.45	3291257.18	40.245872	-104.456580
	2551.00	0.08	199.45	2550.96	6.95	-6.64	8.41	0.06	1334126.35	3291257.19	40.245872	-104.456580
	2645.00	0.09	196.85	2644.96	7.08	-6.77	8.36	0.01	1334126.21	3291257.14	40.245871	-104.456580
	2740.00	0.04	259.42	2739.96	7.16	-6.85	8.31	0.08	1334126.14	3291257.09	40.245871	-104.456581
	2835.00	1.36	10.97	2834.95	6.06	-5.75	8.49	1.45	1334127.24	3291257.27	40.245874	-104.456580
	2930.00	3.48	8.50	2929.86	2.13	-1.79	9.13	2.23	1334131.19	3291257.91	40.245885	-104.456577
	3025.00	5.80	9.29	3024.54	-5.41	5.80	10.33	2.44	1334138.78	3291259.11	40.245906	-104.456573
	3119.00	6.88	9.53	3117.96	-15.57	16.04	12.03	1.15	1334149.02	3291260.81	40.245934	-104.456566
	3214.00	7.82	8.21	3212.18	-27.50	28.05	13.90	1.01	1334161.03	3291262.68	40.245967	-104.456559
	3309.00	9.03	7.17	3306.15	-41.22	41.85	15.75	1.28	1334174.82	3291264.53	40.246004	-104.456552
	3403.00	10.64	8.01	3398.77	-57.04	57.76	17.88	1.72	1334190.74	3291266.66	40.246048	-104.456544
	3498.00	12.34	7.32	3491.86	-75.68	76.51	20.40	1.80	1334209.49	3291269.17	40.246099	-104.456534
	3593.00	14.17	6.08	3584.33	-97.20	98.15	22.92	1.95	1334231.12	3291271.70	40.246159	-104.456524
	3688.00	16.07	4.36	3676.04	-121.78	122.82	25.15	2.05	1334255.80	3291273.93	40.246226	-104.456515
	3783.00	18.68	3.50	3766.69	-149.98	151.12	27.08	2.76	1334284.10	3291275.86	40.246304	-104.456507
	3877.00	21.45	3.30	3854.98	-182.08	183.21	28.99	2.95	1334316.29	3291277.77	40.246392	-104.456498
	3972.00	24.11	3.92	3942.56	-218.67	220.02	31.32	2.81	1334352.99	3291280.09	40.246493	-104.456489
	4067.00	24.48	2.14	4029.15	-257.59	259.05	33.38	0.86	1334392.02	3291282.16	40.246600	-104.456480
	4162.00	24.39	2.52	4115.64	-296.77	298.31	34.98	0.19	1334431.28	3291283.75	40.246708	-104.456472
	4257.00	25.36	6.35	4201.83	-336.44	338.13	38.09	1.98	1334471.10	3291286.87	40.246817	-104.456459
	4352.00	25.48	8.25	4287.64	-376.65	378.57	43.27	0.87	1334511.54	3291292.05	40.246928	-104.456439
	4446.00	25.58	9.83	4372.46	-416.39	418.58	49.64	0.73	1334551.54	3291298.41	40.247037	-104.456415
	4541.00	25.46	10.29	4458.19	-456.39	458.88	56.79	0.24	1334591.84	3291305.56	40.247148	-104.456387
	4636.00	25.45	9.53	4543.97	-496.31	499.10	63.81	0.34	1334632.06	3291312.59	40.247258	-104.456360
	4731.00	25.65	8.93	4629.68	-536.47	539.54	70.38	0.34	1334672.50	3291319.16	40.247369	-104.456335
	4826.00	25.64	9.94	4715.32	-576.75	580.10	77.12	0.46	1334713.06	3291325.90	40.247480	-104.456309
	4920.00	25.32	9.71	4800.18	-616.30	619.95	84.02	0.36	1334752.90	3291332.80	40.247589	-104.456283
	5015.00	25.59	9.14	4885.95	-656.30	660.23	90.71	0.38	1334793.18	3291339.49	40.247699	-104.456257
	5110.00	25.09	9.10	4971.81	-696.17	700.37	97.15	0.53	1334833.32	3291345.93	40.247809	-104.456232
	5205.00	25.41	8.62	5057.74	-735.94	740.41	103.39	0.40	1334873.36	3291352.17	40.247919	-104.456208
	5299.00	25.51	9.16	5142.61	-775.60	780.33	109.64	0.27	1334913.28	3291358.41	40.248028	-104.456184
	5394.00	25.49	9.33	5228.35	-815.69	820.70	116.21	0.08	1334953.64	3291364.98	40.248139	-104.456159
	5489.00	24.15	10.50	5314.58	-854.68	859.98	123.07	1.50	1334992.92	3291371.84	40.248246	-104.456133
	5584.00	24.51	7.88	5401.14	-893.04	898.61	129.31	1.20	1335033.55	3291378.08	40.248352	-104.456109
	5679.00	24.57	9.42	5487.56	-931.79	937.62	135.24	0.68	1335070.55	3291384.02	40.248459	-104.456086
	5773.00	24.34	9.02	5573.13	-969.94	976.03	141.48	0.30	1335108.96	3291390.25	40.248564	-104.456062
	5868.00	21.87	7.67	5660.50	-1006.58	1012.90	146.91	2.66	1335145.84	3291395.68	40.248665	-104.456041
	5963.00	11.42	19.79	5751.42	-1032.82	1039.37	152.47	11.53	1335172.30	3291401.25	40.248738	-104.456020
	6058.00	3.16	64.17	5845.62	-1042.61	1049.38	158.03	9.92	1335182.31	3291406.80	40.248765	-104.456000
	6153.00	3.63	133.29	5940.49	-1041.52	1048.46	162.57	4.07	1335181.39	3291411.35	40.248763	-104.455983
	6247.00	8.61	189.26	6033.99	-1032.49	1039.46	163.61	7.69	1335172.40	3291412.38	40.248738	-104.455980
	6342.00	17.99	178.57	6126.35	-1010.80	1017.73	162.83	10.17	1335150.66	3291411.60	40.248678	-104.455984
	6437.00	25.41	166.36	6214.60	-976.09	983.19	168.01	9.10	1335116.12	3291416.78	40.248583	-104.455967
	6532.00	31.35	163.13	6298.15	-932.16	939.69	180.00	6.46	1335072.63	3291428.77	40.248463	-104.455926
	6627.00	36.40	172.12	6377.05	-880.14	888.05	191.05	7.48	1335021.00	3291439.82	40.248321	-104.455888
	6721.00	43.10	178.51	6449.31	-820.19	828.23	195.72	8.34	1334961.17	3291444.49	40.248157	-104.455874
	6816.00	52.00	181.72	6513.37	-750.24	758.22	195.44	9.69	1334891.17	3291444.21	40.247965	-104.455878
	6911.00	63.00	178.21	6564.35	-670.31	678.24	195.64	11.99	1334811.19	3291444.41	40.247745	-104.455881
	7006.00	71.12										

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Cross Setback												
Heel (200' FNL, 1028' FEL)	7249.41	84.05	177.89	6657.17	-346.64	355.10	215.75	7.51	1334488.07	3291464.52	40.246858	-104.455822
	7290.00	86.94	178.88	6660.35	-306.18	314.66	216.89	7.51	1334447.63	3291465.66	40.246747	-104.455820
	7385.00	88.95	178.74	6663.76	-211.26	219.75	218.86	2.12	1334352.72	3291467.63	40.246486	-104.455817
	7479.00	89.24	179.38	6665.24	-117.30	125.77	220.41	0.75	1334258.75	3291469.18	40.246228	-104.455815
	7574.00	89.35	179.17	6666.41	-22.33	30.79	221.61	0.25	1334163.77	3291470.38	40.245967	-104.455815
	7669.00	89.63	178.42	6667.26	72.65	-64.19	223.61	0.84	1334068.80	3291472.38	40.245707	-104.455812
	7764.00	90.42	179.12	6667.22	167.63	-159.17	225.64	1.11	1333973.82	3291474.41	40.245446	-104.455808
	7859.00	90.23	178.86	6666.68	262.61	-254.15	227.32	0.34	1333878.84	3291476.09	40.245185	-104.455806
	7953.00	90.42	178.39	6666.15	356.60	-348.12	229.57	0.54	1333784.88	3291478.34	40.244927	-104.455802
	8048.00	90.64	181.66	6665.27	451.51	-443.10	229.53	3.45	1333689.90	3291478.30	40.244666	-104.455807
	8143.00	90.38	177.81	6664.42	546.44	-538.08	229.97	4.06	1333594.92	3291478.74	40.244406	-104.455809
	8237.00	90.44	178.62	6663.75	640.43	-632.03	232.90	0.86	1333500.98	3291481.67	40.244148	-104.455802
	8332.00	90.45	178.67	6663.01	735.42	-727.00	235.15	0.05	1333406.01	3291483.92	40.243887	-104.455798
	8427.00	90.59	178.61	6662.15	830.41	-821.97	237.40	0.16	1333311.05	3291486.17	40.243626	-104.455794
	8522.00	90.72	178.34	6661.06	925.39	-916.93	239.93	0.32	1333216.09	3291488.70	40.243365	-104.455789
	8616.00	90.35	177.82	6660.18	1019.39	-1010.87	243.08	0.68	1333122.15	3291491.85	40.243108	-104.455782
	8711.00	89.68	178.16	6660.16	1114.39	-1105.82	246.41	0.79	1333027.22	3291495.18	40.242847	-104.455774
	8806.00	89.96	178.96	6660.46	1209.38	-1200.78	248.80	0.89	1332932.25	3291497.57	40.242586	-104.455769
	8901.00	89.91	178.96	6660.57	1304.36	-1295.77	250.52	0.05	1332837.27	3291499.29	40.242325	-104.455767
	8995.00	89.90	179.03	6660.72	1398.34	-1389.75	252.17	0.08	1332743.29	3291500.94	40.242067	-104.455765
	9090.00	89.92	179.71	6660.87	1493.30	-1484.75	253.22	0.72	1332648.30	3291501.98	40.241807	-104.455766
	9185.00	90.02	179.06	6660.92	1588.27	-1579.74	254.24	0.69	1332553.31	3291503.00	40.241546	-104.455766
	9280.00	90.04	178.36	6660.87	1683.26	-1674.72	256.37	0.74	1332458.34	3291505.14	40.241285	-104.455762
	9375.00	90.07	179.29	6660.78	1778.24	-1769.70	258.32	0.98	1332363.37	3291507.09	40.241024	-104.455759
	9469.00	90.15	178.94	6660.60	1872.22	-1863.68	259.77	0.38	1332269.38	3291508.54	40.240766	-104.455758
	9564.00	89.79	179.05	6660.65	1967.20	-1958.67	261.44	0.40	1332174.40	3291510.21	40.240505	-104.455756
	9659.00	89.99	178.97	6660.83	2062.18	-2053.65	263.08	0.23	1332079.42	3291511.85	40.240245	-104.455754
	9754.00	90.04	179.35	6660.81	2157.15	-2148.64	264.47	0.40	1331984.43	3291513.24	40.239984	-104.455753
	9849.00	90.18	178.91	6660.44	2252.13	-2243.62	267.40	0.24	1331791.47	3291516.17	40.239724	-104.455751
	10038.00	90.25	178.80	6660.09	2347.10	-2338.60	269.22	0.14	1331700.49	3291517.99	40.239464	-104.455748
	10133.00	89.87	178.49	6659.99	2442.08	-2433.58	271.47	0.52	1331605.52	3291520.24	40.239204	-104.455744
	10228.00	90.15	178.51	6659.98	2537.06	-2528.56	273.96	0.30	1331510.56	3291522.72	40.238944	-104.455744
	10323.00	90.68	178.43	6659.29	2726.06	-2717.51	276.49	0.56	1331415.60	3291525.26	40.238684	-104.455744
	10417.00	90.58	178.04	6658.26	2820.05	-2811.46	279.39	0.43	1331321.65	3291528.16	40.238424	-104.455742
	10512.00	90.60	177.65	6657.28	2915.04	-2906.38	282.96	0.41	1331226.73	3291531.73	40.238164	-104.455742
	10607.00	90.37	179.35	6656.47	3010.03	-3001.34	285.45	1.81	1331131.77	3291534.21	40.237903	-104.455741
	10702.00	90.38	180.52	6655.85	3104.96	-3096.34	285.55	1.23	1331036.78	3291537.32	40.237643	-104.455741
	10797.00	90.49	180.31	6655.13	3199.86	-3191.33	284.87	0.25	1330941.79	3291540.43	40.237382	-104.455741
	10892.00	90.55	180.02	6654.27	3294.78	-3286.33	284.59	0.31	1330846.80	3291543.66	40.237121	-104.455741
	10986.00	90.45	179.63	6653.45	3389.72	-3381.33	284.88	0.43	1330752.81	3291546.89	40.236861	-104.455741
	11081.00	90.21	180.33	6652.90	3483.65	-3475.32	284.91	0.78	1330657.81	3291549.32	40.236601	-104.455741
	11176.00	90.41	179.58	6652.39	3578.58	-3570.32	284.99	0.82	1330562.82	3291551.75	40.236341	-104.455740
	11271.00	90.18	179.15	6651.90	3673.54	-3665.31	286.04	0.51	1330467.83	3291554.81	40.236081	-104.455740
	11366.00	89.92	178.98	6651.82	3768.52	-3760.30	287.50	0.33	1330372.85	3291557.36	40.235820	-104.455738
	11460.00	90.27	179.42	6651.66	3863.49	-3858.29	288.90	0.60	1330277.86	3291560.42	40.235560	-104.455738
	11555.00	90.39	179.62	6651.11	3958.46	-3956.28	289.70	0.25	1330183.87	3291563.47	40.235301	-104.455738
	11650.00	90.62	180.22	6650.27	4053.38	-4048.28	289.83	0.68	1330088.88	3291566.52	40.235041	-104.455738
	11745.00	90.51	179.26	6649.34	4148.32	-4139.28	290.26	1.02	1329993.89	3291569.57	40.234780	-104.455745
	11840.00	90.41	178.36	6648.58	4243.26	-4234.25	292.24	0.95	1329898.92	3291572.62	40.234519	-104.455745
	11934.00	90.50	178.73	6647.83	4338.29	-4328.22	294.62	0.41	1329804.96	3291575.67	40.234258	-104.455745
	12029.00	90.75	179.93	6646.79	4433.25	-4423.20	295.73	1.29	1329709.98	3291578.72	40.234000	-104.455745
	12124.00	90.76	179.86	6645.54	4528.18	-4518.20	295.91	0.07	1329614.99	3291581.77	40.233740	-104.455745
	12219.00	90.37	179.36	6644.60	4623.13	-4613.19	296.55	0.67	1329520.00	3291584.82	40.233480	-104.455745
	12314.00	90.40	179.67	6643.97	4718.09	-4708.18	297.36	0.33	1329425.01	3291587.87	40.233220	-104.455745
	12408.00	90.01	179.31	6643.63	4813.05	-4802.18	298.19	0.56	1329330.02	3291590.92	40.232960	-104.455745
	12503.00	90.27	177.73	6643.40	4908.03	-4897.14	300.65	1.69	1329236.06	3291593.97	40.232700	-104.455745
	12598.00	90.32	178.88	6642.91	5003.03	-4992.10	303.46	1.21	1329141.11	3291597.02	40.232440	-104.455745
	12693.00	90.29	178.96	6642.40	5098.03	-5087.08	305.25	0.09	1329046.13	3291600.07	40.232180	-104.455745
	12788.00	90.16	179.10	6642.03	5193.03	-5182.07	306.86	0.20	1328951.15	3291603.12	40.231920	-104.455745
	12882.00	89.97	179.22	6641.92	5288.06	-5277.06	308.24	0.24	1328857.16	3291606.17	40.231660	-104.455745
	12977.00	90.22	178.83	6641.77	5383.06	-5372.04	309.85	0.49	1328762.18	3291609.22	40.231400	-104.455745
	13072.00	89.98	179.50	6641.60	5478.09	-5467.03	311.24	0.75	1328667.20	3291612.27	40.231140	-104.455745
	13167.00	90.03	179.08	6641.59	5573.06	-5562.02	312.41	0.45	1328572.21	3291615.32	40.230880	-104.455745
	13261.00	90.11	179.68	6641.48	5668.06	-5657.01	313.43	0.64	1328477.22	3291618.37	40.230620	-104.455745
	13356.00	90.21	179.95	6641.21	5763.06	-5752.02	313.74	0.30	1328382.23	3291621.42	40.230360	-104.455745
	13451.00	89.99	178.54	6641.04	5858.06	-5847.01	314.99	1.50	1328287.24	3291624.47	40.230100	-104.455745
	13546.00	90.13	178.51	6640.95	5953.06	-5942.00	317.43	0.15	1328192.25	3291627.52	40.229840	-104.455745
	13640.00	89.83	178.95	6640.98	6048.06	-6037.00	319.52	0.57	1328097.26	3291630.57	40.229580	-104.455745
	13735.00	90.15	179.13	6640.99	6143.06	-6132.00	321.11	0.39	1328002.27	3291633.62	40.229320	-104.455745
	13830.00	90.12	179.82	6640.77	6238.06	-6227.00	321.98	0.73	1327907.28	3291636.67	40.229060	-104.455745
	13925.00	90.08	179.10	6640.61	6333.06	-6322.00	322.88	0.76	1327812.29	3291639.72	40.228800	-104.455745
	14019.00	90.01	179.33	6640.53	6428.06	-6417.00	324.16	0.26	1327717.30	3291642.77	40.228540	-104.455745
	14114.00	90.18	179.09	6640.37	6523.06	-6512.00	325.47	0.31	1327622.31	3291645.82	40.228280	-104.455745
	14209.00	90.31	178.39	6639.97	6618.06	-6607.00	327.56	0.75	1327527.32	3291648.87	40.228020	-104.455745
	14304.00	90.45	179.67	6639.34	6713.06	-6697.87	329.17	1.36	1327432.33	3291651.92	40.227760	-104.455745
	14399.00	90.17	178.82	6638.82	6808.06	-6792.86	330.42	0.94	1327337.34	3291654.97	40.227500	-104.455745
	14494.00	90.42	179.97	6638.33	6898.06	-6887.85	331.42	1.24	1327242.35	3291658.02		

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	17432.00	90.86	179.97	6622.11	9831.80	-9824.70	373.66	0.51	1324308.72	3291622.42	40.218911	-104.455686
Last SLB MWD Survey Projection to TD (202' FSL, 1011' FEL)	17467.00	90.44	179.88	6621.71	9866.78	-9859.70	373.70	1.23	1324273.73	3291622.47	40.218815	-104.455687
	17497.00	90.44	179.88	6621.48	9896.76	-9889.70	373.76	0.00	1324243.73	3291622.53	40.218733	-104.455688

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 \*\*\* 3-D 97.071% Confidence 3.0000 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	29.000	1/98.425	13.500	9.625	A005Mb_MWD+IFR1-Depth Only	Guttersen DD17-725 / Guttersen DD17-725 IFR+MS 0' to 17497' Definitive
	1	29.000	29.000	Act Stns	13.500	9.625	A005Mb_MWD+IFR1-Depth Only	Guttersen DD17-725 / Guttersen DD17-725 IFR+MS 0' to 17497' Definitive
	1	29.000	1934.000	Act Stns	13.500	9.625	A005Mb_MWD+IFR1	Guttersen DD17-725 / Guttersen DD17-725 IFR+MS 0' to 17497'
	1	1934.000	17497.000	Act Stns	8.500	5.500	A008Mb_MWD+IFR1+MS	Guttersen DD17-725 / Guttersen DD17-725 IFR+MS 0' to 17497'