



Chevron RBU

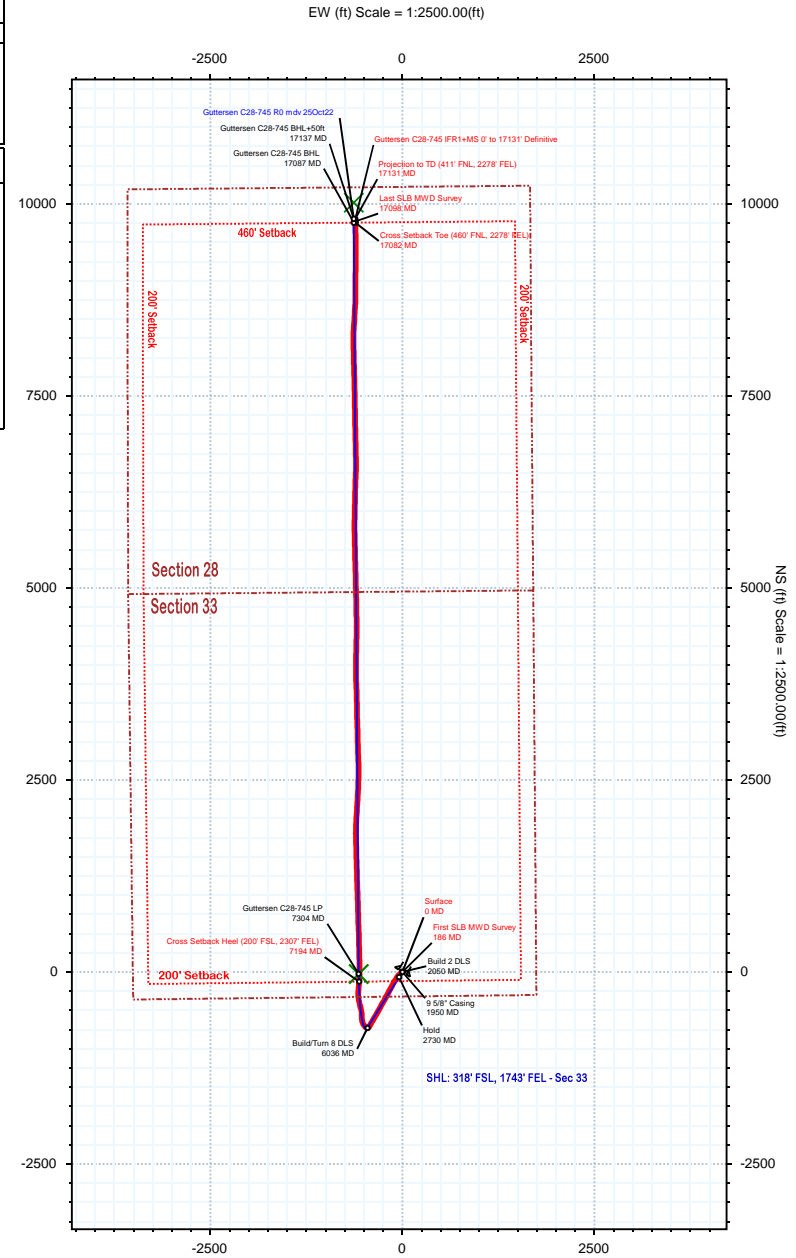
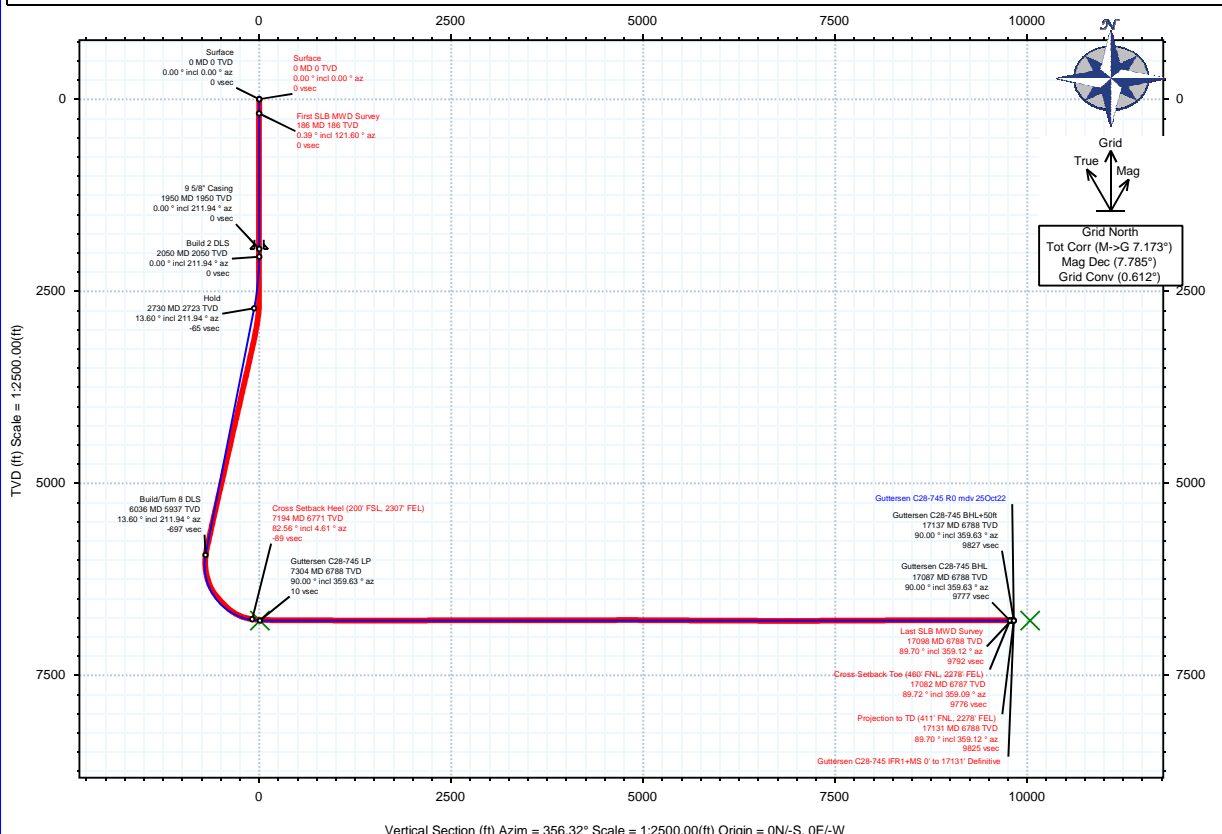


Borehole: Guttersen C28-745	Well: Guttersen C28-745	Field: CO, Weld County (NAD 83 NZ) - 2019	Structure: Chevron RBU 33-04N-64W (CC33-15 Pad)
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Gravity & Magnetic Parameters			Surface Location			NAD83 Colorado State Plane, Northern Zone, US Feet			Miscellaneous		
Model: IFR	Dip: 66.54°	Date: 03-Nov-2022	Lat: N 40 15 45.43	Northing: 1339925.81ftUS	Grid Conv: 0.612°	Slot: Guttersen C28-745	TVD Ref: KB 29ft(4743ft above MSL)				
MagDec: 7.785°	FS: 51688nT	Gravity FS: 999.03mgn (9.80665 Based)	Lon: W 104 33 10.04	Easting: 3264337.36ftUS	Scale Fact: 0.99995687	Plan: Guttersen C28-745 IFR1+MS 0' to 17131' Definitive					

Surface Location								
Northing:	1339925.806	Easting:	3264337.355	Latitude:	N 40 15 45.43	Longitude:	W 104 33 10.04	
VSec Azimuth:				356.32				
Target Description	Grid Coord			Local Coord				
	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)
CC33-15 Pad Sec 33-28 - SB	N 40 15 45.43	W 104 33 10.04	1339925.81	3264337.36	4743.00	0.00	0.00	0.00
CC33-15 Pad Sec 33-28	N 40 15 45.43	W 104 33 10.04	1339925.81	3264337.36	4743.00	0.00	0.00	0.00
Guttersen C28-745 LP	N 40 15 45.23	W 104 33 17.38	1339899.39	3263769.19	6788.00	10.10	-26.42	-568.19
Guttersen C28-745 BHL	N 40 17 24.49	W 104 33 16.83	1349943.17	3263704.77	6788.00	10037.77	10017.82	-632.61

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	186.00	0.39	121.60	186.00	-0.37	-0.33	0.54	0.21
Cross Setback Heel (200' FSL, 2307' FEL)	7194.33	82.56	4.61	6770.89	-89.41	-125.80	-562.93	6.13
Cross Setback Toe (460' FNL, 2278' FEL)	17082.00	89.72	359.09	6787.42	9776.03	9756.90	-611.44	0.23
Last SLB MWD Survey	17098.00	89.70	359.12	6787.50	9792.01	9772.90	-611.69	0.23
Projection to TD (411' FNL, 2278' FEL)	17131.00	89.70	359.12	6787.68	9824.97	9805.90	-612.19	0.00





Guttersen C28-745 IFR1+MS 0' to 17131' Definitive Survey Geodetic Report (Def Survey)

Report Date: December 01, 2022 - 07:56 AM
Client: Chevron RBU
Field: CO, Weld County (NAD 83 NZ) - 2019
Structure / Slot: Chevron RBU 33-04N-64W (CC33-15 Pad) / Guttersen C28-745
Well: Guttersen C28-745
Borehole: Guttersen C28-745
UWI / API#: Unknown / 05-123-48931
Survey Name: Guttersen C28-745 IFR1+MS 0' to 17131' Definitive
Survey Date: November 03, 2022
Tort / AHD / DDI / ERD Ratio: 271.530 ° / 11452.587 ft / 6.894 / 1.686
Coordinate Reference System: NAD83 Colorado State Plane, Northern Zone, US Feet
Location Lat / Long: N 40° 15' 45.43200", W 104° 33' 10.04400"
Location Grid N/E Y/X: N 1339925.806 ftUS, E 3264337.355 ftUS
CRS Grid Convergence Angle: 0.6120 °
Grid Scale Factor: 0.99995687
Version / Patch: 2.10.833.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 356.320 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB 29ft
TVD Reference Elevation: 4743.000 ft above MSL
Seabed / Ground Elevation: 4714.000 ft above MSL
Magnetic Declination: 7.785 °
Total Gravity Field Strength: 999.0303mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 51688.000 nT
Magnetic Dip Angle: 66.540 °
Declination Date: November 03, 2022
Magnetic Declination Model: IFR
North Reference: Grid North
Grid Convergence Used: 0.6120 °
Total Corr Mag North->Grid North: 7.1730 °
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	1339925.81	3264337.36	40.262620	-104.552790
First SLB MWD Survey	186.00	0.39	121.60	186.00	-0.37	-0.33	0.54	0.21	1339925.47	3264337.89	40.262619	-104.552788
	278.00	0.46	134.76	278.00	-0.82	-0.76	1.07	0.13	1339925.05	3264338.42	40.262618	-104.552786
	370.00	0.05	308.23	370.00	-1.07	-0.99	1.30	0.55	1339924.82	3264338.65	40.262617	-104.552785
	462.00	0.51	173.06	461.99	-1.45	-1.37	1.32	0.59	1339924.43	3264338.67	40.262616	-104.552785
	557.00	0.49	234.38	556.99	-2.09	-2.03	1.04	0.54	1339923.78	3264338.39	40.262614	-104.552786
	650.00	0.58	211.68	649.99	-2.69	-2.66	0.47	0.25	1339923.15	3264337.82	40.262613	-104.552788
	743.00	0.16	210.98	742.98	-3.18	-3.17	0.15	0.45	1339922.63	3264337.51	40.262611	-104.552790
	836.00	0.17	233.36	835.98	-3.36	-3.37	-0.02	0.07	1339922.44	3264337.33	40.262611	-104.552790
	938.00	0.57	269.51	937.98	-3.41	-3.46	-0.65	0.44	1339922.34	3264336.70	40.262611	-104.552792
	1035.00	0.08	285.91	1034.98	-3.36	-3.45	-1.20	0.51	1339922.36	3264336.15	40.262611	-104.552794
	1130.00	0.25	301.54	1129.98	-3.22	-3.32	-1.44	0.18	1339922.49	3264335.91	40.262611	-104.552795
	1225.00	0.33	303.79	1224.98	-2.93	-3.06	-1.85	0.09	1339922.75	3264335.51	40.262612	-104.552797
	1319.00	0.48	253.21	1318.98	-2.86	-3.02	-2.45	0.40	1339922.78	3264334.91	40.262612	-104.552799
	1414.00	0.32	218.78	1413.97	-3.15	-3.34	-2.99	0.30	1339922.46	3264334.36	40.262611	-104.552801
	1509.00	0.27	0.16	1508.97	-3.12	-3.33	-3.16	0.59	1339922.48	3264334.20	40.262611	-104.552801
	1604.00	0.46	67.68	1603.97	-2.77	-2.96	-2.81	0.46	1339922.85	3264334.55	40.262612	-104.552800
	1699.00	0.27	68.70	1698.97	-2.58	-2.73	-2.25	0.20	1339923.07	3264335.11	40.262613	-104.552798
	1793.00	0.21	151.06	1792.97	-2.67	-2.80	-1.96	0.34	1339923.00	3264335.40	40.262612	-104.552797
	1888.00	0.09	46.13	1887.97	-2.78	-2.90	-1.82	0.26	1339922.90	3264335.54	40.262612	-104.552797
	1916.00	0.31	293.20	1915.97	-2.73	-2.86	-1.87	1.27	1339922.95	3264335.48	40.262612	-104.552797
	1980.00	0.65	327.57	1979.97	-2.34	-2.48	-2.22	0.67	1339923.32	3264335.13	40.262613	-104.552798
	2170.00	0.14	321.39	2169.96	-1.20	-1.39	-2.95	0.27	1339924.41	3264334.41	40.262616	-104.552801
	2265.00	0.02	168.59	2264.96	-1.12	-1.32	-3.02	0.17	1339924.49	3264334.34	40.262616	-104.552801
	2360.00	0.04	255.29	2359.96	-1.15	-1.34	-3.05	0.05	1339924.46	3264334.31	40.262616	-104.552801
	2454.00	0.10	305.27	2453.96	-1.10	-1.30	-3.14	0.09	1339924.50	3264334.21	40.262617	-104.552801
	2549.00	0.04	248.05	2548.96	-1.06	-1.27	-3.24	0.09	1339924.54	3264334.11	40.262617	-104.552802
	2644.00	0.03	269.44	2643.96	-1.07	-1.28	-3.30	0.02	1339924.52	3264334.06	40.262617	-104.552802
	2739.00	6.56	230.56	2738.75	-4.24	-4.73	-7.52	6.88	1339921.07	3264329.84	40.262607	-104.552817
	2833.00	13.44	230.85	2831.27	-13.73	-15.05	-20.15	7.32	1339910.75	3264317.20	40.262579	-104.552863
	2928.00	14.23	225.95	2923.52	-27.70	-30.14	-37.11	1.49	1339895.66	3264300.25	40.262538	-104.552924
	3023.00	14.52	221.86	3015.54	-43.60	-47.13	-53.45	1.11	1339878.68	3264283.91	40.262492	-104.552983
	3118.00	14.06	211.51	3107.62	-61.38	-65.84	-67.43	2.73	1339859.97	3264269.93	40.262441	-104.553034
	3213.00	14.64	208.60	3199.66	-80.96	-86.22	-79.21	0.97	1339839.59	3264258.15	40.262386	-104.553077
	3307.00	15.41	210.64	3290.44	-101.32	-107.40	-91.26	0.99	1339818.41	3264246.10	40.262328	-104.553121
	3402.00	14.90	214.03	3382.14	-121.41	-128.38	-104.53	1.08	1339797.43	3264232.83	40.262271	-104.553169
	3497.00	15.42	210.49	3473.84	-141.52	-149.38	-117.77	1.12	1339776.43	3264219.59	40.262213	-104.553218
	3592.00	15.11	207.81	3565.49	-162.53	-171.22	-129.95	0.81	1339754.59	3264207.41	40.262154	-104.553262
	3686.00	15.82	208.50	3656.13	-183.68	-193.18	-141.71	0.58	1339732.64	3264195.65	40.262094	-104.553305
	3781.00	15.55	210.11	3747.63	-205.09	-215.43	-154.20	0.46	1339710.38	3264183.16	40.262033	-104.553351
	3876.00	14.68	207.14	3839.35	-226.01	-237.16	-166.08	1.23	1339688.65	3264171.28	40.261974	-104.553394
	3971.00	14.99	207.64	3931.18	-246.85	-258.76	-177.27	0.35	1339667.06	3264160.09	40.261915	-104.553435
	4066.00	14.95	206.89	4022.96	-267.89	-280.57	-188.51	0.21	1339645.25	3264148.85	40.261855	-104.553476
	4160.00	15.04	211.15	4113.76	-288.34	-301.82	-200.30	1.18	1339624.00	3264137.06	40.261797	-104.553519
	4255.00	14.90	204.14	4205.54	-309.27	-323.52	-211.68	1.91	1339602.30	3264125.69	40.261738	-104.553561
	4350.00	15.51	209.44	4297.22	-330.71	-345.73	-222.92	1.60	1339580.09	3264114.45	40.261678	-104.553602
	4445.00	15.27	209.14	4388.81	-351.86	-367.72	-235.25	0.27	1339558.11	3264102.12	40.261618	-104.553647
	4540.00	15.21	211.35	4480.47	-372.58	-389.29	-247.83	0.61	1339536.54	3264089.54	40.261559	-104.553693
	4634.00	15.27	210.37	4571.17	-392.93	-410.50	-260.50	0.28	1339515.33	3264076.87	40.261501	-104.553739
	4729.00	15.05	207.27	4662.86	-413.87	-432.25	-272.48	0.88	1339493.57	3264064.89	40.261442	-104.553783
	4824.00	14.97	208.48	4754.62	-434.84	-454.00	-283.98	0.34	1339471.83	3264053.39	40.261382	-104.553825
	4919.00	14.51	208.73	4846.50	-455.27	-475.22	-295.55	0.49	1339450.61	3264041.82	40.261324	-104.553867
	5013.00	15.60	209.95	4937.27	-475.74	-496.50	-307.52	1.21	1339429.33	3264029.85	40.261266	-104.553911
	5108.00	15.12	207.66	5028.88	-496.96	-518.54	-319.65	0.81	1339407.29	3264017.72	40.261206	-104.553955
	5203.00	15.15	208.50	5120.58	-518.05	-540.43	-331.32	0.23	1339385.40	3264006.05	40.261146	-104.553998
	5298.00	15.33	212.05	5212.24	-538.75	-561.98	-343.91	1.00	1339363.85	3263993.46	40.261088	-104.554044
	5392.00	15.43	213.15	5302.88	-558.84	-582.98	-357.34	0.33	1339342.85	3263980.03	40.261030	-104.554093
	5487.00	15.08	208.63	5394.53	-579.41	-604.41	-370.18	1.30	1339321.42	3263967.20	40.260972	-104.554139
	5582.00	14.93	208.44	5486.29	-600.21	-626.02	-381.93	0.17	1339299.82	3263955.45	40.260913	-104.554182
	5677.00	15.11	212.38	5578.05	-620.59	-647.24	-394.39	1.09	1339278.60	3263942.99	40.260855	-104.554228
	5771.00	14.72	207.17	5668.89	-640.75	-668.21	-406.40	1.49	1339257.63	3263930.97	40.260798	-104.554272
	5866.00	15.25	212.41	5760.66	-661.21	-689.50	-418.61	1.53	1339236.34	3263918.77	40.260740	-104.554316
	5961.00	15.14	210.32	5852.34	-681.59	-710.75	-431.57	0.59	1339215.08	3263905.81	40.260682	-104.554363
	6056.00	10.49	229.18	5944.99	-697.11	-727.13	-444.39	6.52	1339198.71	3263892.99	40.260637	-104.554410
	6151.00	5.68	271.97	6039.09	-701.87	-732.63	-455.65	7.78	1339193.21	3263881.73	40.260622	-104.554451
	6245.00	11.27	305.65	6132.08	-695.59	-727.11	-467.78	7.72	1339198.73	3263869.60	40.260638	-104.554494
	6340.00	18.64	317.54	6223.82	-677.84	-710.47	-485.60	8.36	1339215.37	3263851.78	40.260684	-104.554557

Comments	MD (ft)	Incl (°)	Azim (°)	Grid (ft)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Cross Setback													
Heel (200' FSL, 2307' FEL)	7194.33	82.56	4.61	6770.89	-89.41	-125.80	-562.93	6.13	1339800.01	3263774.45	40.262291	-104.554812	
	7288.00	86.43	0.34	6779.88	3.26	-32.69	-558.92	6.13	1339893.12	3263778.46	40.262547	-104.554794	
	7383.00	89.67	359.94	6783.11	97.98	62.25	-558.69	3.44	1339988.05	3263778.69	40.262807	-104.554789	
	7478.00	89.86	359.31	6783.50	192.82	157.24	-559.31	0.69	1340083.04	3263778.07	40.263068	-104.554788	
	7572.00	89.47	358.01	6784.05	286.74	251.21	-561.51	1.44	1340177.01	3263775.87	40.263326	-104.554792	
	7667.00	89.93	359.02	6784.54	381.66	346.18	-563.97	1.17	1340271.97	3263773.41	40.263587	-104.554797	
	7762.00	89.73	358.72	6784.83	476.57	441.16	-565.84	0.38	1340366.95	3263771.54	40.263847	-104.554801	
	7857.00	89.71	357.59	6785.29	571.52	536.11	-568.90	1.19	1340461.89	3263768.48	40.264108	-104.554808	
	7951.00	89.55	358.55	6785.90	665.47	630.05	-572.07	1.04	1340555.83	3263765.31	40.264366	-104.554816	
	8046.00	89.72	357.93	6786.50	760.41	725.00	-574.99	0.68	1340650.78	3263762.39	40.264627	-104.554822	
	8141.00	89.75	358.68	6786.94	855.36	819.96	-577.80	0.79	1340745.73	3263759.58	40.264888	-104.554829	
	8236.00	89.75	358.82	6787.36	950.27	914.94	-579.87	0.15	1340840.70	3263757.51	40.265148	-104.554833	
	8330.00	89.68	357.29	6787.82	1044.22	1008.88	-583.06	1.63	1340934.64	3263754.32	40.265406	-104.554841	
	8425.00	89.78	358.54	6788.27	1139.18	1103.81	-586.52	1.32	1341029.57	3263750.87	40.265667	-104.554849	
	8520.00	89.50	358.68	6788.87	1234.10	1198.78	-588.82	0.33	1341124.54	3263748.56	40.265928	-104.554854	
	8615.00	90.02	358.14	6789.27	1329.04	1293.75	-591.46	0.79	1341219.49	3263745.93	40.266188	-104.554860	
	8709.00	90.38	357.99	6788.94	1423.00	1387.69	-594.63	0.41	1341313.43	3263742.75	40.266446	-104.554868	
	8804.00	90.00	358.90	6788.62	1517.93	1482.65	-597.21	1.04	1341408.39	3263740.17	40.266707	-104.554873	
	8899.00	90.24	358.32	6788.42	1612.85	1577.63	-599.51	0.66	1341503.36	3263737.87	40.266968	-104.554878	
	8994.00	90.12	358.53	6788.13	1707.79	1672.59	-602.12	0.25	1341598.32	3263735.26	40.267229	-104.554883	
	9088.00	90.00	358.29	6788.03	1801.72	1766.55	-604.73	0.29	1341692.28	3263732.65	40.267487	-104.554889	
	9183.00	89.90	2.26	6788.11	1896.48	1861.53	-604.28	4.18	1341787.25	3263733.11	40.267747	-104.554884	
	9278.00	90.14	3.17	6788.08	1990.89	1956.43	-599.78	0.99	1341882.14	3263737.61	40.268008	-104.554864	
	9373.00	90.18	3.08	6787.81	2085.22	2051.28	-594.60	1.10	1341977.00	3263742.79	40.268268	-104.554842	
	9467.00	90.25	2.87	6787.46	2178.58	2145.16	-589.72	0.24	1342070.87	3263747.66	40.268525	-104.554821	
	9562.00	90.10	3.89	6787.17	2272.86	2239.99	-584.12	1.09	1342165.89	3263753.22	40.268785	-104.554797	
	9657.00	90.18	3.81	6786.94	2367.04	2334.77	-577.74	0.12	1342260.48	3263759.64	40.269045	-104.554771	
	9752.00	90.09	1.12	6786.71	2461.49	2429.68	-573.65	2.83	1342355.37	3263763.73	40.269306	-104.554753	
	9847.00	90.15	2.09	6786.51	2556.08	2524.64	-570.99	1.02	1342450.33	3263766.39	40.269566	-104.554739	
	9941.00	90.02	359.93	6786.37	2649.76	2618.62	-569.34	2.30	1342544.31	3263768.05	40.269824	-104.554730	
	10036.00	90.08	357.69	6786.29	2744.67	2713.59	-571.31	2.36	1342639.28	3263766.07	40.270085	-104.554733	
	10131.00	90.12	358.11	6786.13	2839.63	2808.53	-574.79	0.44	1342734.21	3263762.59	40.270346	-104.554742	
	10226.00	89.89	358.23	6786.12	2934.58	2903.48	-577.82	0.27	1342829.15	3263759.56	40.270606	-104.554749	
	10320.00	90.02	358.23	6786.19	3028.53	2997.43	-580.73	0.14	1342923.11	3263756.65	40.270864	-104.554756	
	10415.00	90.24	359.04	6785.98	3123.45	3092.41	-582.99	0.88	1343018.07	3263754.39	40.271125	-104.554761	
	10510.00	89.98	358.38	6785.79	3218.37	3187.38	-585.13	0.75	1343113.04	3263752.25	40.271386	-104.554765	
	10605.00	89.97	358.08	6785.84	3313.31	3282.34	-588.06	0.32	1343207.99	3263749.32	40.271647	-104.554772	
	10700.00	90.32	359.33	6785.59	3408.23	3377.31	-590.21	1.37	1343302.96	3263747.17	40.271907	-104.554776	
	10794.00	90.09	358.63	6785.26	3502.13	3471.29	-591.88	0.78	1343396.94	3263745.50	40.272165	-104.554778	
	10889.00	89.92	358.91	6785.25	3597.04	3566.27	-596.90	0.34	1343491.92	3263743.46	40.272426	-104.554782	
	10984.00	90.06	357.50	6785.27	3691.98	3661.22	-596.90	1.49	1343586.86	3263740.48	40.272687	-104.554789	
	11079.00	90.15	358.09	6785.09	3786.95	3756.15	-600.55	0.63	1343681.79	3263736.83	40.272947	-104.554798	
	11174.00	90.10	358.46	6784.89	3881.90	3851.11	-603.41	0.39	1343776.74	3263733.97	40.273208	-104.554805	
	11269.00	89.52	0.52	6785.20	3976.75	3946.10	-604.26	2.25	1343871.73	3263733.12	40.273469	-104.554804	
	11363.00	90.48	0.81	6785.20	4070.47	4040.09	-603.17	1.07	1343966.71	3263734.22	40.273727	-104.554797	
	11458.00	89.78	1.08	6784.98	4165.16	4135.08	-601.60	0.79	1344060.70	3263735.78	40.273988	-104.554788	
	11553.00	90.08	0.61	6785.10	4259.87	4230.07	-600.20	0.59	1344155.68	3263737.18	40.274248	-104.554779	
	11648.00	89.97	2.74	6785.06	4354.45	4325.02	-597.42	2.25	1344250.63	3263739.96	40.274509	-104.554765	
	11742.00	90.40	0.87	6784.76	4448.01	4418.97	-594.46	2.04	1344344.57	3263742.92	40.274767	-104.554751	
	11837.00	90.34	358.68	6784.14	4542.83	4513.96	-594.83	2.31	1344439.56	3263742.55	40.275027	-104.554749	
	11932.00	90.59	358.90	6783.37	4637.74	4608.94	-596.84	0.35	1344534.53	3263740.54	40.275288	-104.554752	
	12026.00	90.15	359.68	6782.76	4731.61	4702.93	-598.01	0.95	1344628.52	3263739.38	40.275546	-104.554753	
	12121.00	89.86	358.68	6782.76	4826.49	4797.91	-599.37	1.10	1344723.50	3263738.02	40.275807	-104.554754	
	12216.00	89.68	358.12	6783.14	4921.43	4892.88	-602.02	0.62	1344818.46	3263735.36	40.276068	-104.554760	
	12310.00	89.69	358.80	6783.65	5015.36	4986.84	-604.54	0.72	1344912.42	3263732.84	40.276326	-104.554766	
	12405.00	89.51	358.61	6784.32	5110.28	5081.81	-606.69	0.28	1345007.39	3263730.69	40.276586	-104.554770	
	12500.00	89.82	358.45	6784.87	5205.20	5176.78	-609.13	0.37	1345102.35	3263728.25	40.276847	-104.554775	
	12595.00	89.66	358.40	6785.30	5300.14	5271.74	-611.74	0.18	1345197.31	3263725.64	40.277108	-104.554780	
	12689.00	89.64	359.12	6785.88	5394.05	5385.72	-613.77	0.77	1345292.18	3263723.61	40.277366	-104.554784	
	12784.00	89.79	358.19	6786.35	5488.97	5480.69	-616.00	0.99	1345386.25	3263721.38	40.277627	-104.554789	
	12879.00	89.26	358.94	6787.14	5583.89	5555.66	-618.38	0.97	1345481.21	3263719.00	40.277887	-104.554793	
	12973.00	89.59	358.34	6788.08	5677.81	5649.62	-620.61	0.73	1345575.18	3263716.77	40.278145	-104.554798	
	13068.00	89.64	358.43	6788.72	5772.75	5744.58	-623.29	0.11	1345670.13	3263714.09	40.278406	-104.554804	
	13163.00	89.48	1.38	6789.45	5867.55	5859.57	-623.45	3.11	1345765.11	3263713.94	40.278667	-104.554801	
	13258.00	89.88	2.35	6789.98	5962.10	5934.52	-620.36	1.10	1345860.06	3263717.03	40.278927	-104.554786	
	13353.00	89.99	359.94	6790.09	6056.76	6029.49	-618.46	2.54	1345955.03	3263718.93	40.279188	-104.554776	
	13447.00	89.72	1.68	6790.33	6150.46	6123.48	-617.13	1.87	1346049.01	3263720.25	40.279446	-104.554767	
	13542.00	89.87	0.89	6790.67	6245.10	6218.45	-615.00	0.85	1346143.98	3263722.38	40.279706	-104.554756	
	13637.00	89.72	1.86	6791.01	6339.73	6313.42	-612.72	1.03	1346238.95	3263724.66	40.279967	-104.554744	
	13731.00	89.88	1.59	6791.33	6433.31	6407.38	-609.89	0.33	1346332.90	3263727.49	40.280225	-104.554730	
	13826.00	89.41	3.68	6791.92	6527.73	6502.27	-605.52	2.25	1346427.79	3263731.86	40.280485	-104.554711	
	13921.00	89.78	359.64	6792.59	6622.30	6597.21	-602.77	4.27	1346522.72	3263734.61	40.280746	-104.554698	
	14016.00	89.80	358.08	6792.94	6717.20	6692.19	-604.66	1.64	1346617.69	3263732.72	40.281006	-104.554701	
	14110.00	89.74	359.26	6793.32	6811.12	6786.16	-606.84	1.26	1346711.66	3263730.54	40.281264	-104.554705	
	14205.00	90.18	358.56	6793.39	6906.02	6881.14	-608.65	0.87	1346806.64	3263728.73	40.281525	-104.554708	
	14300.00	90.28	358.63	6793.00	7000.94	6976.11	-610.98	0.13	1346901.61	3263726.40	40.281786	-104.554713	
	14395.00	90.21	358.79	6792.60	7095.86	7071.09	-613.12	0.18	1346996.58	3263724.26	40.282047	-104.554717	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Cross Setback Toe (460' FNL, 2278' FEL)	17082.00	89.72	359.09	6787.42	9776.03	9756.90	-611.44	0.23	1349682.27	3263725.95	40.289419	-104.554608
Last SLB MWD Survey Projection to TD (411' FNL, 2278' FEL)	17098.00	89.70	359.12	6787.50	9792.01	9772.90	-611.69	0.23	1349698.26	3263725.70	40.289463	-104.554608
	17131.00	89.70	359.12	6787.68	9824.97	9805.90	-612.19	0.00	1349731.26	3263725.19	40.289553	-104.554609

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 C28-745 / Guttersen C28-745 IFR1+MS 0' to 17131' Definitive
	1	29.000	29.000	Act Stns	13.500	9.625	A005Mb_MWD+IFR1-Depth Only	Guttersen C28-745 / Guttersen C28-745 IFR1+MS 0' to 17131' Definitive
	1	29.000	1916.000	Act Stns	13.500	9.625	A005Mb_MWD+IFR1	Guttersen C28-745 / Guttersen C28-745 IFR1+MS 0' to 17131' Definitive
	1	1916.000	17131.000	Act Stns	8.500	5.500	A008Mb_MWD+IFR1+MS	Guttersen C28-745 / Guttersen C28-745 IFR1+MS 0' to 17131' Definitive