



# Verdad Resources LLC

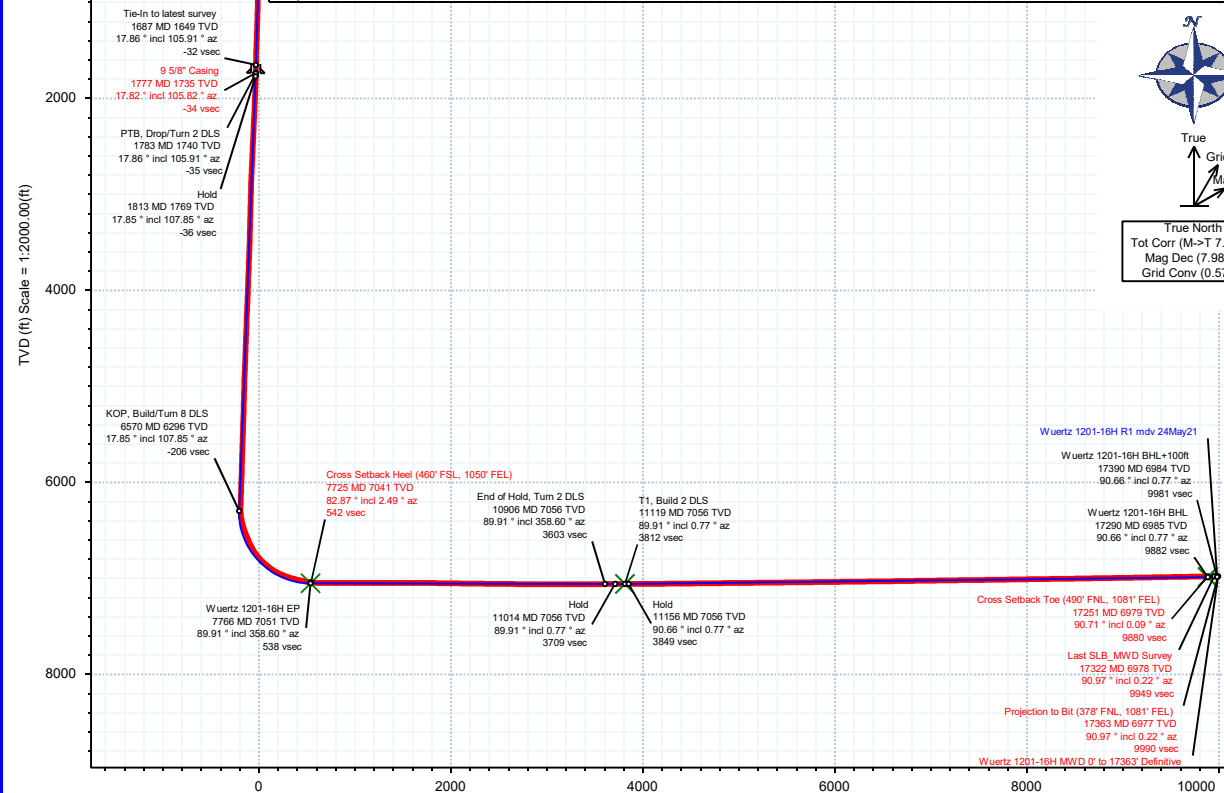


Borehole:	Well:	Field:	Structure:
Original Hole	Wuertz 1201-16H	CO, Weld County (NAD 83 NZ) - 2019	Verdad Resources 12-01N-65W (Wuertz 1201 Pad)

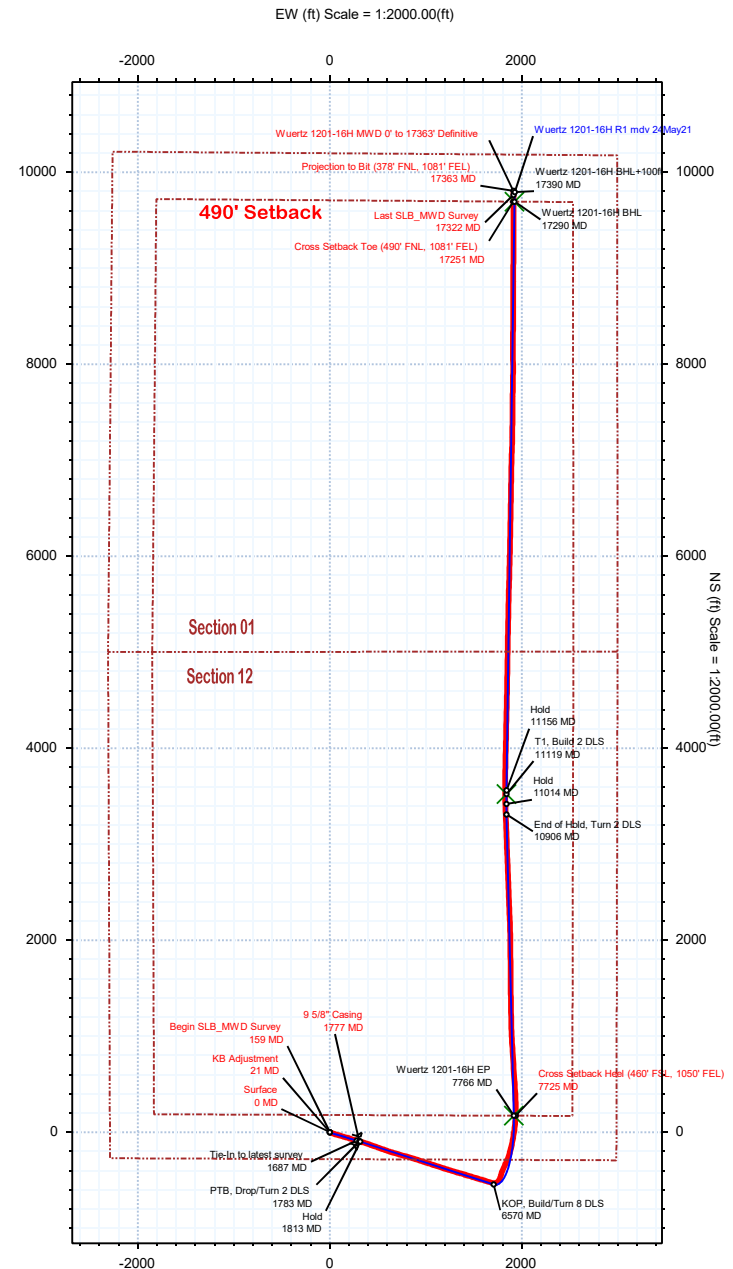
Gravity & Magnetic Parameters	Surface Location	NAD83 Colorado State Plane, Northern Zone, US Feet	Miscellaneous
Model: HDGM 2021 Dip: 66.335° Date: 31-May-2021	Lat: N 40 3 34.15 Northing: 1265756.42ftUS Grid Conv: 0.5729°	Lon: W 104 36 48.14 Easting: 3248170.94ftUS Scale Fact: 0.99996239	Slot: Wuertz 1201-16H TVD Ref: KB 21ft(5002ft above MSL)
MagDec: 7.989° FS: 51759.771nT Gravity FS: 998.999mgn (9.80665 Based)			Plan: Wuertz 1201-16H MWD 0' to 17363' Definitive

Surface Location									
Northing: 1265756.42261167		Easting: 3248170.94303997		Latitude: N 40 3 34.15		Longitude: W 104 36 48.14		VSec Azimuth: 11.13	
Target Description			Grid Coord				Local Coord		
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)	
Wuertz 1201 Pad Sec 12-01 - SB	N 40 3 34.15	W 104 36 49.81	1265755.12	3248041.07	5002.00	-25.06	0.00	-129.88	
Wuertz 1201 Pad Sec 12-01	N 40 3 34.15	W 104 36 49.56	1265755.32	3248060.94	5002.00	-21.23	0.00	-110.01	
Wuertz 1201-16H BHL	N 40 5 9.93	W 104 36 23.38	1275467.93	3249998.40	6985.00	9882.33	9693.13	1924.54	
Wuertz 1201-16H EP	N 40 3 35.84	W 104 36 23.49	1265946.87	3250086.22	7051.00	538.02	171.29	1917.16	
Wuertz 1201-16H T1	N 40 4 8.96	W 104 36 24.46	1269297.52	3249976.81	7056.00	3812.09	3523.00	1841.26	

Critical Points							
Target Description	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KB Adjustment	21.00	0.00	0.00	21.00	0.00	0.00	0.00
Begin SLB_MWD Survey	159.00	0.15	156.51	159.00	-0.15	-0.17	0.07
9 5/8" Casing	1777.00	17.82	105.82	1734.63	-34.48	-95.47	306.76
Cross Setback Heel (460' FSL, 1050' FEL)	7725.28	82.87	2.49	7040.71	541.66	171.30	1935.98
Cross Setback Toe (490' FNL, 1081' FEL)	17251.30	90.71	0.09	6978.85	9879.87	9693.10	1911.98
Last SLB_MWD Survey	17322.00	90.97	0.22	6977.84	9949.26	9763.79	1912.17
Projection to Bit (378' FNL, 1081' FEL)	17363.00	90.97	0.22	6977.14	9989.52	9804.78	1912.32



Vertical Section (ft) Azim = 11.13° Scale = 1:2000.00(ft) Origin = 0N/-S, 0E/-W



## Wuertz 1201-16H MWD 0' to 17363' Definitive Survey Geodetic Report

(Def Survey)

**Report Date:** June 07, 2021 - 01:53 PM  
**Client:** Verdad Resources LLC  
**Field:** CO, Weld County (NAD 83 NZ) - 2019  
**Structure / Slot:** Verdad Resources 12-01N-65W (Wuertz 1201 Pad) / Wuertz 1201-16H  
**Well:** Wuertz 1201-16H  
**Borehole:** Original Hole  
**UWI / API#:** Unknown / 05-123-49741  
**Survey Name:** Wuertz 1201-16H MWD 0' to 17363' Definitive  
**Survey Date:** May 31, 2021  
**Tort / AHD / DDI / ERD Ratio:** 209.070 ° / 12193.632 ft / 6.797 / 1.727  
**Coordinate Reference System:** NAD83 Colorado State Plane, Northern Zone, US Feet  
**Location Lat / Long:** N 40° 3' 34.14600", W 104° 36' 48.14280"  
**Location Grid N/E Y/X:** N 1265756.423 ftUS, E 3248170.943 ftUS  
**CRS Grid Convergence Angle:** 0.5729 °  
**Grid Scale Factor:** 0.99996239  
**Version / Patch:** 2.10.824.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 11.126 ° (True North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** KB 21ft  
**TVD Reference Elevation:** 5002.000 ft above MSL  
**Seabed / Ground Elevation:** 4981.000 ft above MSL  
**Magnetic Declination:** 7.989 °  
**Total Gravity Field Strength:** 998.9992mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 51759.771 nT  
**Magnetic Dip Angle:** 66.335 °  
**Declination Date:** May 31, 2021  
**Magnetic Declination Model:** HDGM 2021  
**North Reference:** True North  
**Grid Convergence Used:** 0.0000 °  
**Total Corr Mag North→True North:** 7.9889 °  
**Local Coord Referenced To:** Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	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	1265756.42	3248170.94	40.059485	-104.613373
KB Adjustment	21.00	0.00	0.00	21.00	0.00	0.00	0.00	0.00	1265756.42	3248170.94	40.059485	-104.613373
Begin												
SLB_MWD	159.00	0.15	156.51	159.00	-0.15	-0.17	0.07	0.11	1265756.26	3248171.02	40.059485	-104.613373
Survey												
	243.00	0.73	283.08	243.00	-0.22	-0.15	-0.41	0.99	1265756.27	3248170.54	40.059485	-104.613374
	337.00	1.04	90.15	336.99	-0.04	-0.01	-0.14	1.87	1265756.41	3248170.81	40.059485	-104.613373
	427.00	3.23	110.22	426.93	-0.28	-0.89	3.06	2.53	1265755.56	3248174.01	40.059483	-104.613362
	517.00	5.43	113.16	516.66	-1.57	-3.44	9.36	2.46	1265753.07	3248180.33	40.059476	-104.613340
	607.00	7.33	113.41	606.10	-3.68	-7.40	18.54	2.11	1265749.21	3248189.56	40.059465	-104.613307
	697.00	9.37	114.27	695.14	-6.57	-12.69	30.49	2.27	1265744.04	3248201.56	40.059450	-104.613264
	787.00	10.64	108.34	783.78	-9.28	-18.32	45.06	1.82	1265738.56	3248216.18	40.059435	-104.613212
	877.00	12.03	107.03	872.02	-11.29	-23.68	61.91	1.57	1265733.36	3248233.09	40.059420	-104.613152
	967.00	13.19	103.96	959.85	-12.76	-28.90	80.84	1.49	1265728.33	3248252.07	40.059406	-104.613084
	1057.00	15.26	104.74	1047.08	-14.01	-34.39	102.27	2.31	1265723.05	3248273.54	40.059391	-104.613008
	1147.00	16.02	107.53	1133.75	-16.15	-41.15	125.56	1.19	1265716.53	3248296.91	40.059372	-104.612924
	1237.00	16.07	106.96	1220.25	-18.80	-48.52	149.32	0.18	1265709.40	3248320.73	40.059352	-104.612840
	1327.00	17.89	107.62	1306.32	-21.63	-56.34	174.41	2.03	1265701.83	3248345.90	40.059330	-104.612750
	1417.00	17.95	107.32	1391.95	-24.69	-64.66	200.83	0.12	1265693.78	3248372.40	40.059308	-104.612656
	1507.00	17.58	106.03	1477.66	-27.35	-72.54	227.13	0.60	1265686.16	3248398.78	40.059286	-104.612562
	1597.00	18.06	106.35	1563.34	-29.78	-80.22	253.58	0.54	1265678.75	3248425.30	40.059265	-104.612467
	1687.00	17.86	105.91	1648.96	-32.20	-87.93	280.24	0.27	1265671.30	3248452.04	40.059244	-104.612372
9 5/8" Casing	1777.00	17.82	105.82	1734.63	-34.48	-95.47	306.76	0.05	1265664.03	3248478.63	40.059223	-104.612277
	1865.00	17.78	105.73	1818.42	-36.66	-102.78	332.65	0.05	1265656.98	3248504.59	40.059203	-104.612185
	1954.00	17.50	106.25	1903.23	-38.94	-110.21	358.57	0.36	1265649.81	3248530.59	40.059182	-104.612092
	2044.00	17.36	109.65	1989.10	-42.14	-118.51	384.21	1.14	1265641.77	3248556.30	40.059160	-104.612000
	2133.00	17.44	109.61	2074.03	-46.08	-127.45	409.28	0.09	1265633.08	3248581.46	40.059135	-104.611911
	2222.00	17.29	109.60	2158.97	-49.99	-136.36	434.30	0.17	1265624.41	3248606.57	40.059111	-104.611821
	2312.00	17.62	108.64	2244.83	-53.74	-145.20	459.81	0.48	1265615.83	3248632.61	40.059086	-104.611730
	2401.00	17.47	109.35	2329.69	-57.42	-153.93	485.17	0.30	1265607.36	3248657.61	40.059062	-104.611640
	2491.00	17.78	109.35	2415.47	-61.31	-162.96	510.88	0.35	1265598.59	3248683.41	40.059038	-104.611548
	2580.00	17.49	108.73	2500.28	-65.03	-171.76	536.37	0.39	1265590.04	3248708.98	40.059014	-104.611457
	2669.00	17.48	110.09	2585.17	-68.88	-180.64	561.59	0.46	1265581.41	3248734.29	40.058999	-104.611367
	2759.00	17.57	109.80	2670.99	-73.03	-189.88	587.06	0.14	1265572.42	3248759.85	40.058964	-104.611276
	2848.00	16.83	110.17	2756.01	-77.08	-198.88	611.79	0.84	1265563.68	3248784.67	40.058939	-104.611187
	2938.00	16.00	106.63	2841.89	-80.46	-207.35	637.35	1.75	1265555.46	3248810.31	40.058916	-104.611096
	3027.00	17.95	105.66	2926.55	-82.87	-214.98	663.72	0.34	1265548.10	3248836.76	40.058895	-104.611002
	3116.00	17.95	106.85	3011.22	-85.32	-222.66	690.06	0.41	1265540.68	3248863.16	40.058874	-104.610908
	3206.00	18.20	106.46	3096.78	-88.00	-230.66	716.81	0.30	1265532.95	3248889.99	40.058852	-104.610812
	3296.00	17.91	105.53	3182.35	-90.37	-238.35	743.62	0.45	1265525.53	3248916.87	40.058831	-104.610717
	3385.00	18.09	105.52	3266.99	-92.48	-245.71	770.11	0.21	1265518.44	3248943.44	40.058810	-104.610622
	3474.00	17.97	105.53	3351.62	-94.60	-253.08	796.66	0.13	1265511.33	3248970.06	40.058790	-104.610527
	3564.00	17.97	104.97	3437.23	-96.59	-260.39	823.45	0.19	1265504.29	3248996.92	40.058770	-104.610431
	3654.00	18.05	106.84	3522.82	-98.91	-268.01	850.21	0.65	1265496.93	3249023.75	40.058749	-104.610336
	3743.00	18.11	107.74	3607.42	-101.88	-276.22	876.58	0.32	1265488.99	3249050.20	40.058727	-104.610242
	3833.00	16.97	107.24	3693.24	-104.89	-284.37	902.45	1.27	1265481.10	3249076.15	40.058704	-104.610149
	3922.00	18.15	108.57	3778.09	-108.07	-292.64	927.99	1.40	1265473.09	3249101.78	40.058682	-104.610058
	4012.00	17.30	108.51	3863.82	-111.60	-301.35	953.97	0.94	1265464.64	3249127.84	40.058658	-104.609965
	4101.00	17.85	106.68	3948.66	-114.62	-309.47	979.59	0.87	1265456.78	3249153.54	40.058635	-104.609874
	4191.00	17.96	108.83	4034.30	-117.82	-317.91	1005.94	0.74	1265448.60	3249179.97	40.058612	-104.609779
	4280.00	17.86	107.90	4118.99	-121.27	-326.53	1031.91	0.34	1265440.24	3249206.03	40.058589	-104.609687
	4370.00	17.92	108.85	4204.64	-124.76	-335.25	1058.16	0.33	1265431.78	3249232.36	40.058565	-104.609593
	4459.00	18.15	108.04	4289.26	-128.27	-343.97	1084.30	0.38	1265423.33	3249258.59	40.058541	-104.609499
	4549.00	18.03	106.80	4374.81	-131.33	-352.34	1110.97	0.45	1265415.23	3249285.34	40.058518	-104.609404
	4638.00	18.15	107.63	4459.41	-134.26	-360.52	1137.37	0.32	1265407.31	3249311.82	40.058495	-104.609310
	4728.00	18.16	109.03	4544.93	-137.78	-369.33	1163.99	0.49	1265398.76	3249338.53	40.058471	-104.609215
	4817.00	18.11	107.18	4629.51	-141.14	-377.94	1190.32	0.65	1265390.42	3249364.94	40.058447	-104.609121
	4906.00	17.99	106.30	4714.13	-143.84	-385.88	1216.73	0.33	1265382.74	3249391.42	40.058426	-104.609026
	4996.00	18.22	108.62	4799.67	-146.93	-394.28	1243.40	0.84	1265374.61	3249418.18	40.058403	-104.608931
	5085.00	17.70	107.02	4884.34	-150.13	-402.68	1269.53	0.81	1265366.47	3249444.38	40.058380	-104.608838
	5175.00	17.96	106.41	4970.01	-152.82	-410.61	1295.92	0.36	1265358.81	3249470.85	40.058358	-104.608743
	5264.00	17.48	107.06	5054.79	-155.46	-418.40	1321.86	0.58	1265351.27	3249496.87	40.058336	-104.608651
	5354.00	17.30	105.07	5140.68	-157.78	-425.85	1347.71	0.69	1265344.09	3249522.79	40.058316	-104.608558
	5443.00	17.92	105.76	5225.51	-159.80	-433.01	1373.66	0.74	1265337.19	3249548.81	40.058296	-104.608466
	5533.00	18.04	106.56	5311.11	-162.24	-440.74	1400.34	0.30	1265329.72	3249575.57	40.058275	-104.608370
	5623.00	17.93	106.64	5396.72	-164.89	-448.68	1426.97	0.12	1265322.05	3249602.27	40.058253	-104.608275
	5712.00	17.90	106.38	5481.40	-167.46	-456.46	1453.22	0.10	1265314.53	3249628.59	40.058232	-104.608182
	5802.00	17.70	107.22	5567.10	-170.18	-464.41	1479.55	0.36	1265306.85	3249655.00	40.058210	-104.608087
	5891.00	17.77	107.43	5651.87	-173.11	-472.48	1505.43	0.11	1265299.03	3249680.96	40.058188	-104.607995
	5981.00	17.88	106.28	5737.57	-175.85	-480.45	1531.73	0.39	1265291.33	3249707.33	40.058166	-104.607901
	6071.00	17.86	106.96	5823.25	-178.49	-488.33	1558.12	0.24	1265283.71	3249733.80	40.058144	-104.607807
	6160.00	18.02	107.15	5907.92	-181.32	-496.38	1584.32	0.20	1265275.93	3249760.09	40.058122	-104.607713
	6250.00	18.00	107.63	5993.51	-184.36	-504.69	1610.88	0.16	1265267.88	3249786.73	40.058099	-104.607618

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	6787.00	20.23	29.85	6503.34	-150.02	-499.76	1763.75	9.39	1265274.34	3249939.53	40.058113	-104.607072
	6876.00	23.00	16.87	6586.12	-118.12	-469.75	1776.47	6.19	1265304.47	3249951.95	40.058195	-104.607027
	6966.00	27.42	15.45	6667.52	-79.95	-432.93	1787.10	4.96	1265341.39	3249962.21	40.058296	-104.606989
	7055.00	36.14	24.02	6743.15	-33.82	-389.10	1803.28	11.01	1265385.38	3249977.95	40.058417	-104.606931
	7145.00	46.01	25.01	6810.91	23.63	-335.39	1827.83	10.99	1265439.34	3250001.96	40.058564	-104.606843
	7234.00	51.14	20.72	6869.79	88.93	-273.91	1853.65	6.80	1265501.07	3250027.16	40.058733	-104.606751
	7324.00	59.20	16.13	6921.17	162.14	-203.86	1876.83	9.88	1265571.34	3250049.64	40.058925	-104.606668
	7413.00	66.87	12.23	6961.51	241.27	-127.01	1896.15	9.46	1265648.38	3250068.20	40.059136	-104.606599
	7503.00	72.95	9.38	6992.42	325.74	-44.03	1911.95	7.38	1265731.52	3250083.16	40.059364	-104.606543
	7593.00	77.74	7.34	7015.18	412.68	42.09	1924.59	5.76	1265817.75	3250094.94	40.059600	-104.606498
	7682.00	78.32	4.34	7033.64	499.37	128.69	1933.44	3.36	1265904.44	3250102.93	40.059838	-104.606466
Cross Setback Heel (460' FSL, 1050' FEL)	7725.28	82.87	2.49	7040.71	541.66	171.30	1935.98	11.32	1265947.06	3250105.04	40.059955	-104.606457
	7772.00	87.79	0.54	7044.52	587.56	217.84	1937.21	11.32	1265993.61	3250105.80	40.060083	-104.606452
	7861.00	89.59	358.04	7046.55	674.63	306.80	1936.11	3.46	1266082.55	3250103.81	40.060327	-104.606456
	7951.00	89.94	356.80	7046.92	762.07	396.70	1932.06	1.43	1266172.41	3250098.86	40.060574	-104.606471
	8040.00	89.83	356.22	7047.10	848.19	485.54	1926.64	0.66	1266261.18	3250092.56	40.060818	-104.606490
	8129.00	89.84	356.27	7047.36	934.20	574.34	1920.81	0.06	1266349.92	3250085.84	40.061061	-104.606511
	8219.00	89.78	356.38	7047.66	1021.22	664.16	1915.04	0.14	1266439.67	3250079.17	40.061308	-104.606531
	8308.00	89.85	356.45	7047.94	1107.30	752.98	1909.48	0.11	1266528.43	3250072.72	40.061552	-104.606551
	8398.00	90.08	356.59	7048.00	1194.39	842.82	1904.01	0.30	1266618.20	3250066.36	40.061798	-104.606571
	8487.00	89.97	356.19	7047.96	1280.46	931.64	1898.41	0.47	1266706.96	3250059.87	40.062042	-104.606591
	8577.00	90.08	357.56	7047.92	1367.69	1021.51	1893.50	1.53	1266796.77	3250054.06	40.062289	-104.606608
	8666.00	89.84	358.60	7047.98	1454.39	1110.45	1890.53	1.20	1266885.68	3250050.20	40.062533	-104.606619
	8756.00	89.99	359.10	7048.12	1542.34	1200.44	1888.73	0.58	1266975.63	3250047.50	40.062780	-104.606625
	8845.00	90.23	359.28	7047.95	1629.41	1289.43	1887.47	0.34	1267064.60	3250045.35	40.063024	-104.606630
	8935.00	89.92	358.76	7047.83	1717.41	1379.41	1885.93	0.68	1267154.57	3250042.91	40.063271	-104.606635
	9025.00	89.89	359.32	7047.98	1805.41	1469.40	1884.42	0.63	1267244.53	3250040.50	40.063518	-104.606641
	9114.00	89.23	359.43	7048.67	1892.55	1558.39	1883.45	0.74	1267333.51	3250038.64	40.063763	-104.606644
	9204.00	89.05	359.31	7050.02	1980.65	1648.38	1882.46	0.25	1267423.47	3250036.75	40.064010	-104.606648
	9293.00	89.31	359.99	7051.29	2067.86	1737.36	1881.91	0.82	1267512.45	3250035.32	40.064254	-104.606649
	9383.00	89.40	359.87	7052.30	2156.14	1827.36	1881.80	0.17	1267602.43	3250034.31	40.064501	-104.606650
	9472.00	89.53	359.13	7053.14	2243.31	1916.35	1881.03	0.84	1267691.41	3250032.64	40.064745	-104.606653
	9562.00	88.93	359.23	7054.35	2331.35	2006.33	1879.75	0.67	1267781.37	3250030.46	40.064992	-104.606657
	9651.00	89.40	358.71	7055.66	2418.35	2095.31	1878.14	0.79	1267870.32	3250027.97	40.065237	-104.606663
	9741.00	89.45	357.94	7056.56	2506.11	2185.26	1875.51	0.85	1267960.24	3250024.44	40.065483	-104.606672
	9830.00	89.40	357.25	7057.46	2592.63	2274.18	1871.78	0.78	1268049.11	3250019.82	40.065728	-104.606686
	9920.00	89.33	357.93	7058.46	2680.12	2364.10	1867.99	0.76	1268138.98	3250015.13	40.065974	-104.606699
	10009.00	89.45	357.81	7059.41	2766.75	2453.03	1864.68	0.19	1268227.87	3250010.93	40.066219	-104.606711
	10099.00	89.80	358.06	7059.99	2854.37	2542.97	1861.44	0.48	1268317.77	3250006.79	40.066465	-104.606722
	10188.00	90.08	357.55	7060.09	2940.98	2631.90	1858.03	0.66	1268406.67	3250002.50	40.066710	-104.606735
	10278.00	89.82	357.69	7060.17	3028.49	2721.82	1854.30	0.33	1268496.54	3249997.86	40.066956	-104.606748
	10368.00	90.22	357.90	7060.14	3116.06	2811.76	1850.84	0.50	1268586.43	3249993.50	40.067203	-104.606760
	10457.00	90.07	357.45	7059.91	3202.62	2900.68	1847.23	0.52	1268675.32	3249989.00	40.067447	-104.606773
	10546.00	90.35	357.85	7059.59	3289.17	2989.61	1843.58	0.55	1268764.20	3249984.47	40.067691	-104.606786
	10636.00	90.10	357.92	7059.23	3376.78	3079.55	1840.26	0.29	1268854.09	3249980.25	40.067938	-104.606798
	10725.00	90.40	357.78	7058.84	3463.40	3168.48	1836.92	0.37	1268942.99	3249976.02	40.068182	-104.606810
	10815.00	90.21	358.05	7058.36	3551.02	3258.42	1833.65	0.36	1269032.89	3249971.85	40.068429	-104.606822
	10904.00	90.13	357.90	7058.09	3637.68	3347.37	1830.51	0.19	1269121.79	3249967.82	40.068674	-104.606833
	10994.00	90.18	357.88	7057.84	3725.29	3437.30	1827.19	0.06	1269211.69	3249963.60	40.068920	-104.606845
	11083.00	90.44	0.16	7057.36	3812.30	3526.28	1825.66	2.58	1269300.64	3249961.19	40.069165	-104.606850
	11173.00	90.18	0.91	7056.88	3900.77	3616.28	1826.51	0.89	1269390.64	3249961.13	40.069412	-104.606847
	11262.00	90.04	0.57	7056.71	3988.31	3705.27	1827.66	0.42	1269479.63	3249961.39	40.069656	-104.606843
	11351.00	90.38	1.10	7056.38	4075.88	3794.26	1828.96	0.71	1269568.63	3249961.80	40.069900	-104.606838
	11441.00	90.54	1.23	7055.66	4164.52	3884.24	1830.79	0.23	1269658.62	3249962.74	40.070147	-104.606832
	11530.00	90.74	1.03	7054.67	4252.16	3973.22	1832.55	0.31	1269747.60	3249963.60	40.070392	-104.606825
	11620.00	90.65	1.46	7053.58	4340.82	4063.19	1834.50	0.49	1269837.59	3249964.66	40.070639	-104.606818
	11709.00	90.54	1.13	7052.66	4428.51	4152.16	1836.52	0.39	1269926.57	3249965.78	40.070883	-104.606811
	11799.00	90.73	1.20	7051.67	4517.15	4242.14	1838.35	0.23	1270016.56	3249966.71	40.071130	-104.606804
	11888.00	90.69	1.23	7050.57	4604.81	4331.11	1840.23	0.06	1270105.54	3249967.71	40.071374	-104.606798
	11978.00	90.62	1.23	7049.54	4693.47	4421.08	1842.17	0.07	1270195.53	3249968.75	40.071621	-104.606791
	12068.00	90.64	1.29	7048.55	4782.13	4511.05	1844.15	0.06	1270285.51	3249969.83	40.071868	-104.606784
	12157.00	90.73	0.83	7047.48	4869.75	4600.03	1845.79	0.53	1270374.50	3249970.58	40.072112	-104.606778
	12247.00	90.44	1.08	7046.56	4958.33	4690.02	1847.29	0.42	1270464.49	3249971.18	40.072359	-104.606772
	12336.00	90.54	0.82	7045.81	5045.93	4779.00	1848.76	0.31	1270553.48	3249971.76	40.072603	-104.606767
	12425.00	90.63	1.13	7044.90	5133.53	4867.98	1850.27	0.36	1270642.47	3249972.38	40.072848	-104.606762
	12515.00	90.74	0.86	7043.82	5222.12	4957.96	1851.83	0.31	1270732.46	3249973.04	40.073095	-104.606756
	12604.00	90.49	0.77	7042.87	5309.68	5046.95	1853.10	0.30	1270821.45	3249973.41	40.073339	-104.606752
	12694.00	90.47	0.74	7042.12	5398.21	5136.94	1854.28	0.03	1270911.44	3249973.70	40.073586	-104.606747
	12783.00	90.56	1.28	7041.32	5485.82	5225.92	1855.86	0.62	1271000.43	3249974.38	40.073830	-104.606742
	12873.00	90.64	1.10	7040.37	5574.46	5315.90	1857.73	0.23	1271090.42	3249975.35	40.074077	-104.606735
	12962.00	90.56	1.35	7039.44	5662.13	5404.87	1859.62	0.30	1271179.40	3249976.36	40.074321	-104.606728
	13052.00	90.59	1.21	7038.54	5750.80	5494.84	1861.63	0.16	1271269.39	3249977.47	40.074568	-104.606721
	13141.00	90.49	1.25	7037.70	5838.47	5583.82	1863.54	0.13	1271358.37	3249978.49	40.074813	-104.606714
	13231.00	90.92	1.83	7036.59	5927.21	5673.78	1865.96	0.80	1271448.35	3249980.01	40.075060	-104.606705
	13320.00	90.69	1.50	7035.34	6014.99	5762.73	1868.54	0.45	1271537.32	3249981.70	40.075304	-104.606696
	13410.00	90.68	1.01	7034.26	6103.65	5852.70	1870.51	0.55	1271627.30	3249982.77	40.075551	-104.606689
	13499.00	90.87	2.01	7033.05	6191.39	5941.66	1872.85	1.15	1271716.28	3249984.22	40.075795	-104.606681
	13589.00	90.58	1.45	7031.91	6280.18	6031.61	1875.57	0.70	12			

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	16274.00	90.84	0.53	6994.49	8920.75	8715.95	1910.26	0.11	1274490.69	3249993.89	40.083411	-104.606546
	16363.00	90.90	359.93	6993.14	9008.14	8804.94	1910.61	0.68	1274579.67	3249993.35	40.083655	-104.606545
	16452.00	91.02	0.95	6991.65	9095.58	8893.92	1911.29	1.16	1274668.66	3249993.14	40.083899	-104.606543
	16542.00	90.95	359.55	6990.10	9183.95	8983.91	1911.68	1.56	1274758.64	3249992.63	40.084146	-104.606541
	16632.00	90.85	1.38	6988.69	9272.38	9073.89	1912.42	2.04	1274848.62	3249992.47	40.084393	-104.606539
	16721.00	91.09	0.03	6987.18	9359.90	9162.87	1913.51	1.55	1274937.60	3249992.68	40.084637	-104.606535
	16811.00	90.97	359.57	6985.56	9448.13	9252.85	1913.20	0.53	1275027.57	3249991.46	40.084884	-104.606536
	16900.00	90.81	359.59	6984.18	9535.32	9341.84	1912.55	0.18	1275116.54	3249989.92	40.085129	-104.606538
	16990.00	90.92	359.97	6982.81	9623.55	9431.83	1912.20	0.44	1275206.52	3249988.68	40.085376	-104.606539
	17079.00	90.93	359.77	6981.37	9710.83	9520.81	1912.00	0.23	1275295.50	3249987.59	40.085620	-104.606540
	17168.00	90.85	0.06	6979.98	9798.12	9609.80	1911.87	0.34	1275384.48	3249986.56	40.085864	-104.606540
Cross Setback Toe (490' FNL, 1081' FEL)	17251.30	90.71	0.09	6978.85	9879.87	9693.10	1911.98	0.18	1275467.77	3249985.84	40.086093	-104.606540
	17258.00	90.69	0.10	6978.77	9886.44	9699.80	1911.99	0.18	1275474.46	3249985.78	40.086111	-104.606540
Last SLB_MWD Survey	17322.00	90.97	0.22	6977.84	9949.26	9763.79	1912.17	0.47	1275538.45	3249985.32	40.086287	-104.606539
Projection to Bit (378' FNL, 1081' FEL)	17363.00	90.97	0.22	6977.14	9989.52	9804.78	1912.32	0.01	1275579.45	3249985.06	40.086399	-104.606539

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	21.000	1/98.425	13.500	9.625	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Hole / Wuertz 1201-16H MWD 0' to 17363' Definitive
	1	21.000	21.000	Act Stns	13.500	9.625	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Hole / Wuertz 1201-16H MWD 0' to 17363' Definitive
	1	21.000	1687.000	Act Stns	13.500	9.625	NAL_MWD_PLUS_0.5_DEG	Original Hole / Wuertz 1201-16H MWD 0' to 17363' Definitive
	1	1687.000	17363.000	Act Stns	8.500	5.500	NAL_MWD_PLUS_0.5_DEG	Original Hole / Wuertz 1201-16H MWD 0' to 17363' Definitive