

Great Western Operating Co, LLC
 Directional Survey Report
 Wellpath: DeTienne FD 10-242HN
 MDs and TVDs are from Rig Floor 4855.2ft above Mean Sea Level

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	DLS [deg/100ft]	Vertical Section[ft]
0.00	0.00	0.00	0.00	0.00	0.00		0.00
16.20	0.00	0.00	16.20	0.00	0.00	==>	0.00
154.20	0.20	261.40	154.20	-0.04	-0.24	0.14	-0.24
185.20	0.20	295.70	185.20	-0.02	-0.34	0.38	-0.34
216.20	0.10	258.70	216.20	0.00	-0.42	0.43	-0.42
250.20	0.20	263.30	250.20	-0.02	-0.50	0.30	-0.50
280.20	0.20	298.40	280.20	0.00	-0.60	0.40	-0.60
310.20	0.40	290.60	310.20	0.07	-0.75	0.68	-0.75
340.20	0.40	298.00	340.20	0.15	-0.94	0.17	-0.94
370.20	0.30	283.40	370.20	0.22	-1.11	0.44	-1.11
400.20	0.30	294.30	400.20	0.27	-1.25	0.19	-1.26
430.20	0.10	300.20	430.20	0.31	-1.35	0.67	-1.36
460.20	0.20	302.50	460.20	0.36	-1.41	0.33	-1.42
490.20	0.10	295.10	490.20	0.40	-1.48	0.34	-1.49
520.20	0.10	280.60	520.20	0.41	-1.53	0.08	-1.54
550.20	0.10	336.20	550.20	0.44	-1.57	0.31	-1.58
580.20	0.40	335.50	580.20	0.56	-1.62	1.00	-1.64
610.20	0.20	5.20	610.20	0.71	-1.66	0.82	-1.68
640.20	0.20	302.40	640.20	0.79	-1.70	0.69	-1.72
670.20	0.40	279.40	670.20	0.83	-1.85	0.77	-1.87
700.20	0.30	266.70	700.19	0.84	-2.03	0.42	-2.05
730.20	0.30	287.50	730.19	0.86	-2.18	0.36	-2.20
760.20	0.40	304.70	760.19	0.95	-2.34	0.48	-2.37
790.20	0.10	292.20	790.19	1.02	-2.45	1.01	-2.48
820.20	0.20	218.20	820.19	0.99	-2.51	0.66	-2.53
850.20	0.30	136.90	850.19	0.89	-2.49	1.11	-2.51
880.20	0.40	165.30	880.19	0.73	-2.41	0.66	-2.43
910.20	0.20	159.60	910.19	0.58	-2.36	0.67	-2.38
940.20	0.20	233.40	940.19	0.50	-2.39	0.80	-2.40
970.20	0.20	163.70	970.19	0.42	-2.42	0.76	-2.43
1000.20	0.20	228.10	1000.19	0.33	-2.44	0.71	-2.45
1030.20	0.30	229.30	1030.19	0.24	-2.54	0.33	-2.54
1060.20	0.10	165.80	1060.19	0.17	-2.59	0.90	-2.59
1142.00	0.35	6.24	1141.99	0.35	-2.55	0.54	-2.55
1237.00	0.53	353.14	1236.99	1.07	-2.57	0.22	-2.59
1333.00	0.35	319.75	1332.99	1.74	-2.81	0.32	-2.85
1429.00	0.53	312.45	1428.98	2.26	-3.33	0.20	-3.38
1525.00	2.82	127.09	1524.95	1.13	-1.77	3.49	-1.80
1621.00	2.38	111.71	1620.85	-1.03	1.97	0.86	1.99
1717.00	0.62	163.12	1716.82	-2.26	3.97	2.14	4.03
1813.00	1.23	269.38	1812.81	-2.77	3.09	1.59	3.16
1909.00	1.41	274.83	1908.78	-2.68	0.88	0.23	0.95
2004.00	1.58	285.21	2003.75	-2.24	-1.55	0.34	-1.49
2100.00	0.44	256.90	2099.74	-1.98	-3.18	1.26	-3.13
2196.00	0.79	90.97	2195.73	-2.07	-2.88	1.27	-2.83
2291.00	0.79	79.10	2290.72	-1.96	-1.58	0.17	-1.53
2387.00	0.44	89.47	2386.72	-1.83	-0.56	0.38	-0.52
2482.00	0.26	83.50	2481.72	-1.80	0.01	0.19	0.06
2578.00	0.18	64.69	2577.72	-1.71	0.37	0.11	0.41
2674.00	0.18	353.32	2673.72	-1.50	0.49	0.22	0.52
2770.00	0.18	6.06	2769.72	-1.20	0.48	0.04	0.52
2866.00	0.44	331.17	2865.71	-0.72	0.32	0.32	0.34
2962.00	0.44	307.97	2961.71	-0.18	-0.15	0.18	-0.14
3058.00	0.18	238.62	3057.71	-0.03	-0.56	0.43	-0.56
3154.00	0.26	202.50	3153.71	-0.31	-0.78	0.16	-0.77
3250.00	0.35	154.34	3249.71	-0.77	-0.73	0.27	-0.71

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	DLS [deg/100ft]	Vertical Section[ft]
3345.00	0.44	125.42	3344.71	-1.25	-0.31	0.23	-0.28
3441.00	0.35	87.10	3440.70	-1.44	0.28	0.28	0.32
3537.00	0.18	335.57	3536.70	-1.29	0.51	0.47	0.55
3633.00	0.53	338.91	3632.70	-0.74	0.29	0.37	0.31
3729.00	0.97	313.15	3728.69	0.23	-0.46	0.57	-0.47
3824.00	0.88	311.50	3823.68	1.26	-1.59	0.10	-1.63
3920.00	0.35	344.80	3919.67	2.03	-2.22	0.64	-2.27
4016.00	0.62	351.56	4015.67	2.83	-2.38	0.29	-2.45
4112.00	0.88	357.71	4111.66	4.08	-2.48	0.28	-2.59
4207.00	0.79	47.81	4206.65	5.25	-2.03	0.75	-2.16
4304.00	0.79	110.92	4303.65	5.46	-0.91	0.85	-1.05
4399.00	1.32	177.80	4398.63	4.13	-0.25	1.31	-0.36
4495.00	0.97	172.27	4494.61	2.22	-0.10	0.38	-0.16
4591.00	0.53	150.12	4590.61	1.03	0.23	0.54	0.20
4686.00	0.44	137.11	4685.60	0.38	0.70	0.15	0.69
4782.00	0.18	132.89	4781.60	0.01	1.06	0.27	1.06
4878.00	0.09	31.82	4877.60	-0.03	1.21	0.23	1.21
4975.00	0.35	314.12	4974.60	0.24	1.04	0.35	1.03
5071.00	0.44	315.70	5070.60	0.71	0.57	0.09	0.55
5167.00	0.53	290.21	5166.59	1.13	-0.11	0.24	-0.13
5263.00	3.52	248.91	5262.53	0.22	-3.27	3.27	-3.28
5358.00	2.38	246.71	5357.40	-1.61	-7.81	1.21	-7.76
5454.00	1.94	267.63	5453.33	-2.46	-11.26	0.93	-11.19
5550.00	4.75	257.70	5549.16	-3.38	-16.77	2.98	-16.68
5603.00	6.70	251.30	5601.89	-4.84	-21.84	3.87	-21.71
5696.00	9.40	252.10	5693.97	-8.91	-34.21	2.91	-33.97
5788.00	10.30	260.70	5784.62	-12.55	-49.48	1.87	-49.14
5880.00	13.80	267.30	5874.58	-14.40	-68.56	4.08	-68.17
5972.00	15.40	272.70	5963.61	-14.34	-91.73	2.28	-91.33
6065.00	18.00	268.60	6052.68	-14.11	-118.43	3.07	-118.03
6157.00	22.20	263.10	6139.07	-16.54	-149.91	5.00	-149.44
6249.00	27.20	258.50	6222.63	-22.83	-187.80	5.82	-187.15
6339.00	27.30	249.80	6302.67	-34.06	-227.34	4.42	-226.39
6386.00	25.60	248.00	6344.75	-41.59	-246.87	4.00	-245.72
6431.00	21.80	240.60	6385.96	-49.33	-263.18	10.71	-261.82
6478.00	20.70	227.80	6429.79	-59.20	-276.94	10.12	-275.33
6524.00	17.10	211.70	6473.33	-70.43	-286.53	13.71	-284.62
6571.00	14.10	199.50	6518.61	-81.71	-292.07	9.43	-289.88
6616.00	11.20	181.80	6562.53	-91.25	-294.04	10.69	-291.60
6663.00	9.90	153.80	6608.76	-99.44	-292.40	11.13	-289.75
6708.00	11.70	126.50	6652.99	-105.63	-287.02	11.92	-284.21
6755.00	17.00	122.80	6698.51	-112.20	-277.41	11.44	-274.43
6800.00	18.80	119.10	6741.33	-119.29	-265.54	4.73	-262.39
6847.00	18.10	108.90	6785.93	-125.34	-252.01	7.02	-248.71
6893.00	19.70	88.90	6829.49	-127.50	-237.48	14.43	-234.13
6940.00	25.00	92.10	6872.95	-127.72	-219.63	11.57	-216.27
6985.00	30.10	98.00	6912.84	-129.64	-198.93	12.84	-195.53
7032.00	35.40	97.60	6952.35	-133.08	-173.75	11.29	-170.27
7080.00	39.80	97.70	6990.37	-136.98	-144.73	9.17	-141.16
7127.00	42.80	97.20	7025.68	-141.00	-113.97	6.42	-110.31
7175.00	48.30	93.70	7059.28	-144.20	-79.88	12.58	-76.15
7222.00	53.60	89.80	7088.89	-145.27	-43.42	12.98	-39.68
7271.00	58.30	85.40	7116.33	-143.52	-2.89	12.14	0.80
7318.00	65.20	82.20	7138.56	-139.02	38.23	15.86	41.79
7367.00	71.50	81.80	7156.63	-132.68	83.31	12.88	86.69
7414.00	75.40	82.10	7170.02	-126.37	127.91	8.32	131.12
7426.45	75.83	82.84	7173.11	-124.79	139.87	6.71	143.03
7463.00	77.10	85.00	7181.67	-121.03	175.20	6.71	178.25
7510.00	81.30	91.30	7190.48	-119.56	221.31	15.91	224.31
7561.00	87.50	95.60	7195.46	-122.62	271.93	14.77	275.00
7658.00	93.90	96.30	7194.27	-132.67	368.35	6.64	371.64
7754.00	95.90	92.60	7186.07	-140.10	463.69	4.37	467.14
7850.00	94.90	88.50	7177.03	-141.01	559.24	4.38	562.68
7946.00	92.70	89.00	7170.67	-138.92	655.00	2.35	658.35

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	DLS [deg/100ft]	Vertical Section[ft]
8042.00	91.70	89.00	7166.99	-137.25	750.91	1.04	754.19
8137.00	89.80	89.10	7165.74	-135.67	845.89	2.00	849.10
8233.00	91.20	89.30	7164.90	-134.33	941.87	1.47	945.01
8329.00	91.50	89.80	7162.64	-133.58	1037.84	0.61	1040.93
8424.00	89.00	90.40	7162.23	-133.74	1132.83	2.71	1135.90
8520.00	87.30	88.30	7165.33	-132.66	1228.77	2.81	1231.77
8616.00	87.40	88.30	7169.77	-129.81	1324.62	0.10	1327.52
8712.00	89.00	88.30	7172.78	-126.97	1420.53	1.67	1423.32
8808.00	90.90	88.30	7172.86	-124.12	1516.48	1.98	1519.17
8903.00	90.50	88.50	7171.70	-121.47	1611.44	0.47	1614.03
8999.00	86.90	91.20	7173.88	-121.21	1707.39	4.69	1709.94
9095.00	87.20	91.50	7178.82	-123.47	1803.24	0.44	1805.81
9191.00	88.70	87.90	7182.26	-122.97	1899.15	4.06	1901.69
9287.00	88.80	87.10	7184.35	-118.78	1995.04	0.84	1997.43
9383.00	89.60	87.80	7185.69	-114.51	2090.93	1.11	2093.19
9479.00	87.00	87.60	7188.54	-110.66	2186.81	2.72	2188.93
9574.00	88.10	90.60	7192.60	-109.17	2281.69	3.36	2283.75
9670.00	88.70	90.70	7195.28	-110.26	2377.65	0.63	2379.70
9766.00	89.90	91.00	7196.46	-111.68	2473.63	1.29	2475.68
9862.00	88.50	88.90	7197.80	-111.60	2569.61	2.63	2571.63
9958.00	89.40	89.00	7199.56	-109.84	2665.58	0.94	2667.52
10053.00	88.40	88.90	7201.38	-108.10	2760.55	1.06	2762.41
10149.00	89.00	89.30	7203.56	-106.59	2856.51	0.75	2858.30
10245.00	89.50	89.20	7204.81	-105.34	2952.49	0.53	2954.22
10340.00	90.10	88.70	7205.14	-103.60	3047.47	0.82	3049.13
10436.00	90.60	89.60	7204.56	-102.17	3143.46	1.07	3145.05
10532.00	90.30	89.10	7203.80	-101.08	3239.45	0.61	3240.98
10627.00	90.50	89.70	7203.14	-100.09	3334.44	0.67	3335.91
10723.00	92.00	89.30	7201.05	-99.25	3430.41	1.62	3431.83
10819.00	93.00	90.40	7196.86	-99.00	3526.32	1.55	3527.70
10915.00	94.40	90.60	7190.66	-99.83	3622.11	1.47	3623.48
11011.00	94.40	91.90	7183.30	-101.92	3717.81	1.35	3719.20
11107.00	93.80	93.10	7176.44	-106.10	3813.47	1.39	3814.93
11203.00	92.50	93.50	7171.16	-111.62	3909.16	1.42	3910.74
11299.00	90.50	91.90	7168.65	-116.14	4005.01	2.67	4006.67
11395.00	88.00	90.10	7169.90	-117.81	4100.98	3.21	4102.65
11586.00	88.30	89.00	7176.07	-116.31	4291.87	0.60	4293.44
11664.00	87.60	89.00	7178.86	-114.95	4369.81	0.90	4371.32
11724.00	87.60	89.00	7181.37	-113.91	4429.75	==>	4431.21