



Great Western Operating Co, LLC  
Directional Survey Report  
MDs and TVDs are from Rig Floor 4808.0ft above Mean Sea Level

**Wellbore Information**

Date Created	Date Revised	API #	RKB above GL	Well Name
Jul-31-2021	Aug-9-2021	05-123-51585	20.00	Raindance FC 23-289HN

**Wellpath Report**

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]
0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00
100.00	1.01	263.88	100.00	-0.08	-0.74
191.00	0.18	0.65	190.99	-0.02	-1.54
278.00	0.79	94.16	277.99	0.07	-0.94
368.00	0.62	69.29	367.98	0.20	0.13
458.00	1.10	321.45	457.98	1.05	0.05
548.00	0.04	277.94	547.97	1.73	-0.52
637.00	0.44	295.78	636.97	1.88	-0.86
727.00	0.62	140.30	726.97	1.65	-0.86
817.00	1.19	153.66	816.96	0.44	-0.13
907.00	0.53	101.28	906.95	-0.48	0.69
997.00	1.32	86.51	996.93	-0.50	2.13
1087.00	1.49	78.25	1086.91	-0.19	4.31
1177.00	0.40	122.20	1176.89	-0.12	5.73
1267.00	1.05	90.36	1266.89	-0.30	6.82
1357.00	1.14	85.46	1356.87	-0.23	8.53
1447.00	0.97	94.95	1446.85	-0.22	10.18
1537.00	1.23	83.44	1536.84	-0.18	11.90
1627.00	1.10	69.29	1626.82	0.24	13.67
1717.00	0.79	80.80	1716.81	0.64	15.09
1806.00	0.79	79.57	1805.80	0.85	16.30
1896.00	0.75	64.81	1895.79	1.21	17.44
1986.00	0.35	60.85	1985.79	1.60	18.22
2014.00	0.57	28.07	2013.79	1.76	18.36
2141.00	0.26	57.13	2140.78	2.48	18.90
2230.00	0.08	61.20	2229.78	2.62	19.12
2320.00	0.12	145.61	2319.78	2.57	19.23
2409.00	0.09	164.89	2408.78	2.42	19.30
2499.00	0.07	196.73	2498.78	2.30	19.30
2589.00	0.09	141.52	2588.78	2.19	19.33
2679.00	0.16	68.98	2678.78	2.18	19.49
2769.00	0.20	60.60	2768.78	2.31	19.75
2858.00	0.15	217.82	2857.78	2.29	19.81
2948.00	0.16	263.13	2947.78	2.18	19.61
3037.00	0.03	141.65	3036.78	2.15	19.50
3127.00	0.34	230.16	3126.78	1.96	19.31
3217.00	0.15	268.59	3216.78	1.79	18.99
3307.00	0.05	295.88	3306.78	1.80	18.84
3396.00	0.14	204.16	3395.78	1.72	18.76
3486.00	1.27	49.71	3485.77	2.26	19.47
3575.00	4.53	46.47	3574.65	5.32	22.78
3665.00	7.51	33.27	3664.14	12.69	28.58
3754.00	10.73	23.70	3752.01	25.14	35.10
3844.00	13.63	15.17	3839.98	43.05	41.25
3933.00	15.95	13.13	3926.03	65.09	46.77
4023.00	15.94	30.45	4012.62	87.80	55.85
4113.00	15.60	30.93	4099.23	108.83	68.33
4202.00	19.99	22.75	4183.96	133.14	80.37
4291.00	22.46	27.41	4266.93	162.27	94.08
4381.00	25.14	27.29	4349.26	194.53	110.77
4470.00	28.12	27.80	4428.81	229.89	129.22
4560.00	31.37	26.25	4506.95	269.67	149.48
4650.00	31.56	19.40	4583.74	312.91	167.67
4739.00	35.55	24.94	4657.91	358.37	186.33
4829.00	39.38	25.88	4729.33	407.80	209.83
4919.00	39.86	26.02	4798.66	459.40	234.94
5009.00	39.82	26.32	4867.76	511.15	260.37
5098.00	39.74	26.46	4936.16	562.16	285.69
5188.00	39.24	25.97	5005.62	613.51	310.97
5278.00	39.86	25.69	5075.01	665.09	335.94
5367.00	39.81	26.22	5143.36	716.35	360.89
5457.00	39.87	26.22	5212.46	768.08	386.36
5547.00	40.48	26.09	5281.23	820.19	411.96
5637.00	40.60	25.30	5349.62	872.90	437.32
5726.00	40.55	26.05	5417.22	925.08	462.40
5816.00	40.58	25.01	5485.59	977.89	487.62
5906.00	40.76	24.40	5553.86	1031.17	512.14
5995.00	40.20	26.28	5621.56	1083.39	536.86
6085.00	39.93	27.32	5690.44	1135.09	562.97
6175.00	40.30	27.42	5759.26	1186.59	589.63
6265.00	39.56	26.70	5828.28	1238.03	615.92
6354.00	39.70	27.64	5896.82	1288.53	641.84

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]
6444.00	38.88	27.00	5966.48	1339.17	668.00
6533.00	40.00	27.83	6035.21	1389.35	694.03
6623.00	40.14	26.76	6104.09	1440.84	720.60
6713.00	39.53	26.82	6173.20	1492.30	746.58
6803.00	40.12	25.27	6242.32	1544.08	771.88
6892.00	39.13	24.31	6310.87	1595.61	795.69
6982.00	40.37	19.62	6380.08	1648.96	817.17
7072.00	37.08	15.97	6450.29	1702.52	834.43
7162.00	37.53	354.96	6522.18	1756.13	839.51
7251.00	38.13	340.73	6592.61	1809.18	828.04
7341.00	39.15	339.06	6662.90	1861.94	808.71
7431.00	41.02	328.25	6731.84	1913.66	782.98
7520.00	43.93	319.05	6797.55	1961.87	747.34
7609.00	49.41	313.05	6858.62	2008.31	702.35
7699.00	54.49	304.73	6914.14	2052.59	647.18
7789.00	60.00	293.86	6962.92	2089.33	581.24
7879.00	62.76	289.23	7006.04	2118.29	507.78
7968.00	70.79	284.42	7041.12	2141.83	429.56
8058.00	78.51	278.97	7064.95	2159.33	344.66
8148.00	84.16	273.15	7078.51	2168.68	256.25
8237.00	83.64	274.07	7087.97	2174.25	167.93
8327.00	88.74	273.28	7093.95	2180.00	78.35
8417.00	90.36	269.57	7094.66	2182.24	-11.60
8506.00	90.15	269.76	7094.26	2181.72	-100.60
8596.00	90.03	268.20	7094.12	2180.12	-190.58
8686.00	89.82	268.32	7094.24	2177.39	-280.54
8775.00	90.43	269.97	7094.04	2176.06	-369.53
8865.00	90.06	268.73	7093.66	2175.04	-459.52
8954.00	90.74	270.67	7093.04	2174.57	-548.51
9044.00	90.92	271.20	7091.73	2176.04	-638.49
9133.00	90.24	269.67	7090.83	2176.71	-727.48
9223.00	90.95	271.06	7089.90	2177.29	-817.47
9312.00	90.40	268.75	7088.85	2177.14	-906.46
9402.00	90.57	269.69	7088.09	2175.92	-996.44
9492.00	90.75	270.02	7087.05	2175.69	-1086.44
9582.00	91.37	269.90	7085.38	2175.62	-1176.42
9671.00	90.81	268.09	7083.69	2174.06	-1265.39
9761.00	91.21	270.06	7082.10	2172.61	-1355.36
9851.00	91.10	269.34	7080.29	2172.14	-1445.34
9940.00	91.16	270.10	7078.54	2171.71	-1534.32
10030.00	90.78	267.88	7077.01	2170.12	-1624.29
10120.00	91.07	269.74	7075.56	2168.25	-1714.25
10209.00	90.96	268.63	7073.98	2166.98	-1803.23
10299.00	91.46	269.40	7072.08	2165.44	-1893.19
10389.00	93.19	268.46	7068.43	2163.76	-1983.10
10479.00	92.58	268.01	7063.90	2160.99	-2072.94
10568.00	93.47	270.57	7059.20	2159.89	-2161.80
10658.00	93.36	271.01	7053.84	2161.13	-2251.63
10748.00	93.06	270.63	7048.80	2162.41	-2341.48
10838.00	92.94	269.29	7044.09	2162.35	-2431.36
10927.00	93.62	270.79	7039.00	2162.41	-2520.21
11017.00	94.59	270.12	7032.56	2163.12	-2609.97
11107.00	94.44	270.18	7025.47	2163.36	-2699.69
11197.00	94.38	270.70	7018.55	2164.05	-2789.42
11286.00	94.47	270.53	7011.68	2165.00	-2878.15
11376.00	94.34	269.86	7004.77	2165.31	-2967.89
11466.00	94.86	270.11	6997.55	2165.28	-3057.60
11556.00	94.66	270.96	6990.09	2166.12	-3147.28
11645.00	94.32	269.25	6983.12	2166.28	-3236.00
11735.00	94.40	269.44	6976.28	2165.26	-3325.74
11824.00	94.37	269.37	6969.47	2164.34	-3414.47
11914.00	95.21	270.98	6961.96	2164.61	-3504.15
12004.00	94.29	270.37	6954.50	2165.67	-3593.84
12093.00	94.10	270.91	6947.99	2166.66	-3682.59
12183.00	93.79	269.19	6941.80	2166.73	-3772.38
12273.00	94.07	270.81	6935.63	2166.73	-3862.16
12362.00	94.12	270.15	6929.28	2167.48	-3950.93
12452.00	94.36	269.56	6922.62	2167.25	-4040.68
12542.00	93.88	268.34	6916.15	2165.61	-4130.43
12631.00	93.73	267.83	6910.25	2162.64	-4219.19
12721.00	94.21	269.61	6904.02	2160.63	-4308.95
12811.00	94.23	269.57	6897.39	2159.99	-4398.70
12900.00	94.41	269.46	6890.69	2159.24	-4487.44
12990.00	94.06	268.87	6884.04	2157.93	-4577.19
13080.00	92.31	269.56	6879.04	2156.70	-4667.04
13169.00	92.13	268.75	6875.60	2155.39	-4755.96
13259.00	90.17	269.64	6873.79	2154.12	-4845.93
13349.00	83.98	269.09	6878.38	2153.13	-4935.76
13439.00	83.37	268.40	6888.30	2151.17	-5025.19
13529.00	86.24	268.53	6896.44	2148.77	-5114.78
13619.00	90.39	268.46	6899.09	2146.41	-5204.69
13708.00	92.35	269.06	6896.96	2144.48	-5293.64
13798.00	92.35	268.71	6893.27	2142.73	-5383.54

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]
13887.00	90.07	269.18	6891.39	2141.10	-5472.50
13977.00	91.79	270.96	6889.93	2141.20	-5562.48
14067.00	89.87	268.64	6888.63	2140.89	-5652.46
14156.00	89.61	267.93	6889.03	2138.23	-5741.42
14246.00	90.32	268.62	6889.09	2135.52	-5831.38
14336.00	90.94	269.20	6888.10	2133.81	-5921.36
14425.00	90.89	268.80	6886.68	2132.25	-6010.33
14515.00	90.71	269.13	6885.42	2130.63	-6100.31
14605.00	90.40	269.75	6884.55	2129.75	-6190.30
14695.00	90.74	270.12	6883.65	2129.65	-6280.30
14784.00	90.77	270.24	6882.48	2129.92	-6369.29
14874.00	90.66	269.60	6881.36	2129.80	-6459.28
14964.00	90.70	270.24	6880.29	2129.67	-6549.27
15054.00	90.64	270.41	6879.24	2130.18	-6639.27
15143.00	89.98	270.35	6878.75	2130.77	-6728.26
15233.00	90.26	270.31	6878.57	2131.29	-6818.26
15323.00	90.11	270.15	6878.27	2131.65	-6908.26
15413.00	89.86	269.72	6878.30	2131.55	-6998.26
15503.00	90.10	269.74	6878.33	2131.13	-7088.26
15592.00	90.17	270.16	6878.12	2131.05	-7177.26
15682.00	90.20	270.04	6877.83	2131.21	-7267.26
15772.00	90.02	270.11	6877.66	2131.32	-7357.26
15861.00	89.94	269.60	6877.69	2131.10	-7446.26
15951.00	90.05	270.06	6877.70	2130.83	-7536.25
16041.00	90.12	270.24	6877.56	2131.07	-7626.25
16130.00	90.45	270.00	6877.12	2131.25	-7715.25
16220.00	91.33	272.55	6875.72	2133.26	-7805.21
16309.00	93.02	276.23	6872.34	2140.06	-7893.87
16399.00	89.74	271.15	6870.17	2145.85	-7983.61
16489.00	89.66	266.61	6870.65	2144.09	-8073.57
16578.00	91.62	268.35	6869.65	2140.17	-8162.47
16668.00	91.69	268.47	6867.05	2137.68	-8252.40
16758.00	91.86	268.91	6864.26	2135.62	-8342.33
16847.00	91.79	268.79	6861.43	2133.84	-8431.27
16937.00	91.71	268.64	6858.68	2131.82	-8521.21
17027.00	91.70	269.03	6856.00	2129.99	-8611.15
17116.00	90.17	268.15	6854.55	2127.80	-8700.10
17206.00	90.90	268.66	6853.71	2125.30	-8790.06
17296.00	90.86	268.84	6852.33	2123.33	-8880.03
17385.00	90.89	268.68	6850.97	2121.41	-8969.00
17475.00	90.77	268.78	6849.67	2119.41	-9058.97
17565.00	90.74	268.67	6848.48	2117.41	-9148.94
17654.00	91.66	268.96	6846.62	2115.57	-9237.90
17744.00	91.72	270.53	6843.96	2115.17	-9327.86
17834.00	91.71	270.67	6841.27	2116.11	-9417.81
17923.00	91.71	270.11	6838.61	2116.72	-9506.77
18013.00	91.75	270.96	6835.89	2117.56	-9596.72
18103.00	92.54	271.13	6832.53	2119.20	-9686.65
18192.00	93.69	270.66	6827.69	2120.59	-9775.50
18282.00	94.82	271.21	6821.01	2122.05	-9865.24
18372.00	95.74	271.29	6812.73	2124.00	-9954.84
18462.00	95.71	271.16	6803.75	2125.92	-10044.37
18551.00	97.93	270.98	6793.18	2127.57	-10132.72
18641.00	98.18	271.68	6780.57	2129.64	-10221.80
18730.00	98.28	271.65	6767.83	2132.20	-10309.85
18820.00	98.13	268.91	6754.99	2132.63	-10398.92
18910.00	98.27	268.62	6742.15	2130.71	-10487.98
19000.00	98.32	268.99	6729.17	2128.85	-10577.02
19089.00	98.25	268.78	6716.34	2127.14	-10665.07
19179.00	98.18	268.66	6703.48	2125.15	-10754.12
19269.00	98.74	268.82	6690.24	2123.19	-10843.12
19358.00	97.13	269.05	6677.95	2121.56	-10931.25
19448.00	97.15	268.62	6666.77	2119.74	-11020.54
19537.00	97.25	268.60	6655.61	2117.60	-11108.81
19627.00	100.39	268.80	6641.82	2115.58	-11197.71
19717.00	100.28	268.71	6625.67	2113.66	-11286.23
19807.00	100.34	269.37	6609.56	2112.17	-11374.76
19896.00	103.38	269.31	6591.27	2111.17	-11461.85
19986.00	109.29	269.94	6565.97	2110.60	-11548.17
20075.00	112.08	270.11	6534.54	2110.63	-11631.43
20165.00	115.17	269.58	6498.47	2110.41	-11713.87
20255.00	115.22	269.98	6460.16	2110.10	-11795.31
20344.00	115.31	269.92	6422.17	2110.03	-11875.80
20434.00	115.19	269.95	6383.78	2109.94	-11957.20
20524.00	115.26	270.07	6345.43	2109.95	-12038.62
20613.00	115.25	270.44	6307.45	2110.31	-12119.11
20703.00	115.38	270.60	6268.97	2111.05	-12200.46
20793.00	115.31	270.09	6230.45	2111.54	-12281.80
20883.00	115.31	270.09	6211.63	2111.60	-12321.57