

# Minimum Radius of Curvature

**API: 42-383-41369**      **Well: Alexis Rae E 5H**      **Wellhead Location N+/S- : 31.420259**  
**Operator: Hibernia Resources III**      **Area: Midland Basin**      **E+/W- : -101.707175**  
**Rig: Precision 101**      **Type: U-Lateral**      **Magnetic Declination: 5.66**  
**TD: 21,161'**      **Plane of Proposal: 163.00**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
0.00	0.00	0.00		0.0	0.00	0.00	0.00	0.00	0.00			
138	0.98	53.46	138	138.0	59.39	0.70	0.95	1.18	53.46	0.71	0.71	38.74
227	2.39	43.83	89	227.0	58.23	2.49	2.84	3.78	48.75	1.61	1.58	-10.82
324	3.12	42.25	97	323.8	55.89	5.91	6.02	8.43	45.54	0.76	0.75	-1.63
417	4.25	22.91	93	416.6	51.96	10.96	9.06	14.22	39.60	1.79	1.22	-20.80
514	4.18	18.31	97	513.4	46.31	17.62	11.57	21.08	33.29	0.36	-0.07	-4.74
688	3.99	22.28	174	686.9	36.45	29.24	15.86	33.27	28.47	0.20	-0.11	2.28
782	5.60	25.69	94	780.6	30.55	36.40	19.09	41.11	27.67	1.74	1.71	3.63
876	7.09	26.61	94	874.0	22.98	45.72	23.68	51.49	27.38	1.59	1.59	0.98
970	6.49	28.50	94	967.4	15.06	55.58	28.81	62.60	27.40	0.68	-0.64	2.01
1063	6.20	29.70	93	1059.8	7.93	64.56	33.81	72.88	27.64	0.34	-0.31	1.29
1157	5.93	29.10	94	1153.3	1.08	73.21	38.68	82.80	27.85	0.30	-0.29	-0.64
1245	5.75	28.22	88	1240.8	-5.18	81.07	42.98	91.76	27.93	0.23	-0.20	-1.00
1335	5.41	28.77	90	1330.4	-11.31	88.76	47.15	100.51	27.98	0.38	-0.38	0.61
1424	6.17	27.79	89	1418.9	-17.63	96.67	51.40	109.49	28.00	0.86	0.85	-1.10
1514	7.15	29.92	90	1508.3	-24.89	105.80	56.45	119.92	28.08	1.12	1.09	2.37
1604	6.82	28.42	90	1597.7	-32.47	115.36	61.79	130.86	28.17	0.42	-0.37	-1.67
1693	6.66	27.38	89	1686.1	-39.87	124.59	66.67	141.31	28.15	0.23	-0.18	-1.17
1783	6.41	28.62	90	1775.5	-47.11	133.63	71.48	151.55	28.14	0.32	-0.28	1.38
1872	7.61	27.59	89	1863.8	-54.78	143.22	76.59	162.41	28.14	1.36	1.35	-1.16
1962	8.22	27.06	90	1952.9	-63.65	154.23	82.28	174.80	28.08	0.68	0.68	-0.59
2052	7.86	27.37	90	2042.1	-72.67	165.42	88.03	187.39	28.02	0.40	-0.40	0.34
2141	7.76	26.77	89	2130.2	-81.36	176.19	93.54	199.48	27.96	0.14	-0.11	-0.67
2231	7.64	26.74	90	2219.4	-90.07	186.96	98.97	211.54	27.89	0.13	-0.13	-0.03
2320	7.39	26.23	89	2307.7	-98.52	197.38	104.16	223.17	27.82	0.29	-0.28	-0.57
2410	7.13	26.22	90	2396.9	-106.80	207.58	109.18	234.54	27.74	0.29	-0.29	-0.01
2500	7.09	36.02	90	2486.2	-114.22	217.08	114.92	245.62	27.90	1.35	-0.04	10.89
2589	7.16	43.35	89	2574.6	-120.26	225.56	121.96	256.42	28.40	1.02	0.08	8.24
2679	6.89	41.18	90	2663.9	-125.88	233.70	129.36	267.11	28.97	0.42	-0.30	-2.41
2768	6.70	42.17	89	2752.3	-131.36	241.57	136.36	277.40	29.44	0.25	-0.21	1.11
2858	6.37	43.01	90	2841.7	-136.55	249.11	143.29	287.38	29.91	0.38	-0.37	0.93
2947	6.10	42.63	89	2930.1	-141.40	256.20	149.86	296.81	30.33	0.31	-0.30	-0.43
3037	6.03	42.33	90	3019.6	-146.23	263.21	156.28	306.11	30.70	0.09	-0.08	-0.33
3127	5.79	42.24	90	3109.2	-150.97	270.07	162.52	315.20	31.04	0.27	-0.27	-0.10
3216	5.33	42.16	89	3197.7	-155.38	276.45	168.31	323.66	31.33	0.52	-0.52	-0.09
3306	5.40	40.54	90	3287.4	-159.80	282.77	173.87	331.95	31.59	0.19	0.08	-1.80
3396	4.98	42.22	90	3377.0	-164.07	288.88	179.25	339.97	31.82	0.50	-0.47	1.87
3485	4.79	39.33	89	3465.7	-168.11	294.62	184.20	347.46	32.01	0.35	-0.21	-3.25
3575	4.69	39.91	90	3555.4	-172.20	300.35	188.94	354.83	32.17	0.12	-0.11	0.64
3664	4.24	40.77	89	3644.1	-175.94	305.63	193.42	361.69	32.33	0.51	-0.51	0.97
3754	3.93	39.16	90	3733.9	-179.43	310.54	197.54	368.05	32.46	0.37	-0.34	-1.79
3843	3.58	40.24	89	3822.7	-182.63	315.03	201.26	373.83	32.57	0.40	-0.39	1.21
3933	3.68	39.64	90	3912.5	-185.74	319.40	204.92	379.48	32.68	0.12	0.11	-0.67
4022	3.44	39.67	89	4001.3	-188.78	323.65	208.45	384.97	32.78	0.27	-0.27	0.03
4112	3.45	41.31	90	4091.1	-191.69	327.76	211.96	390.33	32.89	0.11	0.01	1.82
4201	2.03	37.71	89	4180.0	-194.00	331.02	214.69	394.55	32.97	1.61	-1.60	-4.04
4291	0.36	58.79	90	4270.0	-194.99	332.43	215.91	396.39	33.00	1.89	-1.86	23.42
4380	0.04	140.18	89	4359.0	-195.03	332.55	216.17	396.63	33.03	0.40	-0.36	91.45
4470	0.33	44.75	90	4449.0	-195.13	332.71	216.37	396.88	33.04	0.37	0.32	-106.03
4559	0.29	31.61	89	4538.0	-195.40	333.08	216.67	397.35	33.04	0.09	-0.04	-14.76
4649	0.34	24.31	90	4628.0	-195.75	333.52	216.90	397.85	33.04	0.07	0.06	-8.11
4738	0.25	38.42	89	4717.0	-196.06	333.91	217.13	398.30	33.03	0.13	-0.10	15.85
4828	0.19	51.53	90	4807.0	-196.22	334.16	217.37	398.64	33.04	0.09	-0.07	14.57
4918	0.30	331.20	90	4897.0	-196.51	334.46	217.37	398.89	33.02	0.36	0.12	310.74
5007	0.49	315.75	89	4986.0	-197.08	334.94	216.99	399.08	32.94	0.24	0.21	-17.36
5097	0.51	312.07	90	5076.0	-197.76	335.48	216.43	399.23	32.83	0.04	0.02	-4.09
5186	0.40	316.51	89	5165.0	-198.38	335.97	215.92	399.37	32.73	0.13	-0.12	4.99
5276	0.43	318.97	90	5255.0	-198.97	336.45	215.48	399.54	32.64	0.04	0.03	2.73

# Minimum Radius of Curvature

**API: 42-383-41369**      **Well: Alexis Rae E 5H**      **Wellhead Location N+/S- : 31.420259**  
**Operator: Hibernia Resources III**      **Area: Midland Basin**      **E+/W- : -101.707175**  
**Rig: Precision 101**      **Type: U-Lateral**      **Magnetic Declination: 5.66**  
**TD: 21,161'**      **Plane of Proposal: 163.00**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
5365	0.25	323.53	89	5344.0	-199.46	336.86	215.15	399.71	32.57	0.20	-0.20	5.12
5455	0.21	302.05	90	5434.0	-199.77	337.11	214.89	399.77	32.52	0.10	-0.04	-23.87
5544	0.21	313.96	89	5523.0	-200.03	337.31	214.63	399.81	32.47	0.05	0.00	13.38
5634	0.15	353.63	90	5613.0	-200.29	337.54	214.50	399.93	32.44	0.15	-0.07	44.08
5724	0.16	358.33	90	5703.0	-200.53	337.78	214.49	400.13	32.41	0.02	0.01	5.22
5813	0.25	355.67	89	5792.0	-200.84	338.10	214.47	400.38	32.39	0.10	0.10	-2.99
5903	0.37	331.07	90	5882.0	-201.31	338.55	214.31	400.68	32.33	0.20	0.13	-27.33
5992	0.36	8.13	89	5971.0	-201.85	339.08	214.21	401.07	32.28	0.26	-0.01	-362.85
6082	0.33	351.98	90	6061.0	-202.36	339.62	214.22	401.53	32.24	0.11	-0.03	382.06
6172	0.35	8.81	90	6151.0	-202.86	340.14	214.22	401.98	32.20	0.11	0.02	-381.30
6261	0.34	348.54	89	6240.0	-203.37	340.67	214.21	402.42	32.16	0.14	-0.01	381.72
6351	0.23	336.10	90	6330.0	-203.82	341.10	214.08	402.72	32.11	0.14	-0.12	-13.82
6440	0.34	8.10	89	6419.0	-204.23	341.52	214.05	403.06	32.08	0.21	0.12	-368.54
6530	0.18	32.32	90	6509.0	-204.57	341.91	214.16	403.44	32.06	0.21	-0.18	26.91
6620	0.28	21.77	90	6599.0	-204.83	342.23	214.32	403.80	32.06	0.12	0.11	-11.72
6709	0.20	342.37	89	6688.0	-205.16	342.58	214.35	404.11	32.03	0.20	-0.09	360.22
6799	0.26	44.11	90	6778.0	-205.41	342.88	214.45	404.42	32.02	0.27	0.07	-331.40
6888	0.22	75.25	89	6867.0	-205.50	343.06	214.75	404.74	32.05	0.15	-0.04	34.99
6978	0.20	67.46	90	6957.0	-205.51	343.17	215.07	404.99	32.08	0.04	-0.02	-8.66
7068	0.06	40.00	90	7047.0	-205.55	343.27	215.24	405.17	32.09	0.17	-0.16	-30.51
7157	0.19	43.99	89	7136.0	-205.65	343.41	215.37	405.36	32.09	0.15	0.15	4.48
7247	0.15	10.74	90	7226.0	-205.83	343.63	215.50	405.61	32.09	0.12	-0.04	-36.94
7336	0.17	29.94	89	7315.0	-206.02	343.86	215.59	405.85	32.09	0.06	0.02	21.57
7426	0.20	47.84	90	7405.0	-206.18	344.08	215.77	406.14	32.09	0.07	0.03	19.89
7515	0.19	9.02	89	7494.0	-206.38	344.33	215.91	406.42	32.09	0.15	-0.01	-43.62
7605	0.20	43.67	90	7584.0	-206.59	344.59	216.04	406.71	32.09	0.13	0.01	38.50
7694	0.05	69.45	89	7673.0	-206.67	344.72	216.18	406.90	32.09	0.18	-0.17	28.97
7784	0.11	10.33	90	7763.0	-206.74	344.82	216.24	407.01	32.09	0.11	0.07	-65.69
7874	0.17	90.00	90	7853.0	-206.78	344.90	216.39	407.16	32.10	0.21	0.07	88.52
7928	0.11	24.93	54	7907.0	-206.80	344.95	216.49	407.25	32.11	0.29	-0.11	-120.50
8018	0.65	82.65	90	7997.0	-206.78	345.09	217.03	407.66	32.17	0.67	0.60	64.13
8108	11.33	170.51	90	8086.4	-197.90	336.41	219.00	401.41	33.06	12.58	11.87	97.62
8197	23.12	163.69	89	8171.3	-171.66	310.92	225.37	384.01	35.94	13.42	13.25	-7.66
8287	37.27	161.99	90	8248.8	-126.52	267.83	238.83	358.85	41.72	15.75	15.72	-1.89
8376	44.21	163.33	89	8316.2	-68.47	212.41	256.08	332.71	50.33	7.86	7.80	1.51
8466	50.44	160.68	90	8377.2	-2.36	149.54	276.58	314.42	61.60	7.25	6.92	-2.94
8555	60.27	164.35	89	8427.8	70.75	79.77	298.42	308.89	75.03	11.55	11.04	4.12
8645	72.59	165.22	90	8463.7	153.04	0.31	320.00	320.00	89.94	13.72	13.69	0.97
8734	80.64	165.79	89	8484.3	239.47	-83.44	341.64	351.69	103.73	9.07	9.04	0.64
8789	86.69	165.37	55	8490.3	294.05	-136.36	355.25	380.52	111.00	11.03	11.00	-0.76
8878	86.28	165.69	89	8495.8	382.80	-222.38	377.45	438.08	120.50	0.58	-0.46	0.36
8967	86.10	165.69	89	8501.7	471.50	-308.42	399.40	504.62	127.68	0.20	-0.20	0.00
9057	87.41	165.59	90	8506.8	561.26	-395.47	421.68	578.11	133.16	1.46	1.46	-0.11
9146	90.76	167.14	89	8508.2	650.08	-481.94	442.65	654.37	137.43	4.15	3.76	1.74
9236	91.22	166.83	90	8506.7	739.85	-569.61	462.92	734.00	140.90	0.62	0.51	-0.34
9325	89.28	165.30	89	8506.3	828.71	-655.98	484.35	815.42	143.56	2.78	-2.18	-1.72
9415	88.70	164.39	90	8507.9	918.65	-742.84	507.88	899.86	145.64	1.20	-0.64	-1.01
9504	89.22	164.77	89	8509.5	1007.60	-828.62	531.54	984.45	147.32	0.72	0.58	0.43
9594	89.74	165.38	90	8510.3	1097.54	-915.58	554.72	1070.51	148.79	0.89	0.58	0.68
9683	89.48	164.11	89	8510.9	1186.49	-1001.44	578.13	1156.34	150.00	1.46	-0.29	-1.43
9773	90.30	165.12	90	8511.1	1276.46	-1088.21	602.01	1243.63	151.05	1.45	0.91	1.12
9862	90.62	165.91	89	8510.4	1365.37	-1174.38	624.27	1329.99	152.01	0.96	0.36	0.89
9952	90.95	165.89	90	8509.1	1455.24	-1261.66	646.19	1417.52	152.88	0.37	0.37	-0.02
10041	89.16	163.35	89	8509.0	1544.20	-1347.46	669.79	1504.75	153.57	3.49	-2.01	-2.85
10131	90.16	164.91	90	8509.6	1634.17	-1434.03	694.40	1593.31	154.16	2.06	1.11	1.73
10220	89.73	163.87	89	8509.7	1723.15	-1519.74	718.35	1680.97	154.70	1.26	-0.48	-1.17
10310	89.88	163.88	90	8510.0	1813.14	-1606.20	743.35	1769.87	155.17	0.17	0.17	0.01
10399	88.98	162.63	89	8510.9	1902.13	-1691.42	768.99	1858.02	155.55	1.73	-1.01	-1.40

# Minimum Radius of Curvature

**API: 42-383-41369**      **Well: Alexis Rae E 5H**      **Wellhead Location N+/S- : 31.420259**  
**Operator: Hibernia Resources III**      **Area: Midland Basin**      **E+/W- : -101.707175**  
**Rig: Precision 101**      **Type: U-Lateral**      **Magnetic Declination: 5.66**  
**TD: 21,161'**      **Plane of Proposal: 163.00**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
10489	89.34	162.99	90	8512.2	1992.12	-1777.39	795.58	1947.32	155.89	0.57	0.40	0.40
10578	89.27	162.35	89	8513.3	2081.11	-1862.34	822.09	2035.72	156.18	0.72	-0.08	-0.72
10668	89.37	162.35	90	8514.3	2171.10	-1948.10	849.38	2125.22	156.44	0.11	0.11	0.00
10757	88.99	161.49	89	8515.6	2260.07	-2032.70	877.00	2213.82	156.66	1.06	-0.43	-0.97
10847	89.17	164.51	90	8517.0	2350.05	-2118.74	903.30	2303.27	156.91	3.36	0.20	3.36
10936	89.34	163.98	89	8518.2	2439.02	-2204.39	927.47	2391.56	157.18	0.63	0.19	-0.60
11026	89.35	163.65	90	8519.2	2529.00	-2290.82	952.55	2480.97	157.42	0.37	0.01	-0.37
11115	89.09	163.62	89	8520.4	2617.99	-2376.21	977.62	2569.46	157.64	0.29	-0.29	-0.03
11205	89.86	164.10	90	8521.3	2707.98	-2462.65	1002.64	2658.94	157.85	1.01	0.86	0.53
11294	90.44	164.56	89	8521.0	2796.95	-2548.35	1026.68	2747.39	158.06	0.83	0.65	0.52
11384	91.43	165.01	90	8519.6	2886.89	-2635.18	1050.30	2836.77	158.27	1.21	1.10	0.50
11473	91.43	165.03	89	8517.3	2975.81	-2721.13	1073.29	2925.15	158.47	0.02	0.00	0.02
11562	91.23	164.69	89	8515.3	3064.74	-2807.01	1096.53	3013.59	158.66	0.44	-0.22	-0.38
11652	90.49	163.70	90	8513.9	3154.71	-2893.60	1121.04	3103.17	158.82	1.37	-0.82	-1.10
11741	89.99	162.43	89	8513.6	3243.71	-2978.74	1146.97	3191.93	158.94	1.53	-0.56	-1.43
11831	88.87	164.31	90	8514.5	3333.69	-3064.96	1172.72	3281.66	159.06	2.43	-1.24	2.09
11920	89.66	166.53	89	8515.6	3422.60	-3151.08	1195.12	3370.11	159.23	2.65	0.89	2.49
12010	88.94	166.29	90	8516.7	3512.43	-3238.56	1216.27	3459.42	159.42	0.84	-0.80	-0.27
12099	87.11	165.77	89	8519.8	3601.25	-3324.87	1237.74	3547.78	159.58	2.14	-2.06	-0.58
12189	87.00	165.91	90	8524.4	3691.02	-3412.02	1259.73	3637.14	159.74	0.20	-0.12	0.16
12278	87.16	165.78	89	8528.9	3779.80	-3498.21	1281.46	3725.53	159.88	0.23	0.18	-0.15
12368	88.28	166.45	90	8532.5	3869.59	-3585.51	1303.04	3814.94	160.03	1.45	1.24	0.74
12457	88.52	166.45	89	8535.0	3958.40	-3671.99	1323.89	3903.36	160.17	0.27	0.27	0.00
12547	89.48	166.52	90	8536.6	4048.21	-3759.49	1344.92	3992.81	160.32	1.07	1.07	0.08
12636	90.44	166.64	89	8536.6	4137.04	-3846.06	1365.57	4081.29	160.45	1.09	1.08	0.13
12726	90.26	166.36	90	8536.1	4226.87	-3933.57	1386.58	4170.80	160.58	0.37	-0.20	-0.31
12816	90.66	166.79	90	8535.3	4316.69	-4021.11	1407.48	4260.31	160.71	0.65	0.44	0.48
12905	90.59	166.73	89	8534.4	4405.50	-4107.73	1427.86	4348.82	160.83	0.10	-0.08	-0.07
12995	90.31	164.50	90	8533.7	4495.39	-4194.90	1450.22	4438.51	160.93	2.50	-0.31	-2.48
13084	90.20	164.54	89	8533.3	4584.36	-4280.68	1473.97	4527.34	161.00	0.13	-0.12	0.04
13174	90.22	162.72	90	8532.9	4674.35	-4367.02	1499.33	4617.24	161.05	2.02	0.02	-2.02
13263	90.06	162.18	89	8532.7	4763.35	-4451.88	1526.17	4706.21	161.08	0.63	-0.18	-0.61
13353	90.08	161.74	90	8532.6	4853.33	-4537.45	1554.04	4796.20	161.09	0.49	0.02	-0.49
13442	89.84	161.08	89	8532.7	4942.30	-4621.81	1582.41	4885.20	161.10	0.79	-0.27	-0.74
13532	89.48	159.96	90	8533.2	5032.21	-4706.66	1612.43	4975.19	161.09	1.31	-0.40	-1.24
13621	89.07	166.92	89	8534.3	5121.14	-4791.90	1637.78	5064.06	161.13	7.83	-0.46	7.82
13711	88.28	175.26	90	8536.4	5210.15	-4880.72	1651.70	5152.62	161.30	9.31	-0.88	9.27
13801	87.04	182.08	90	8540.1	5296.68	-4970.56	1653.79	5238.46	161.60	7.70	-1.38	7.58
13890	89.58	191.66	89	8542.7	5377.92	-5058.77	1643.16	5318.94	162.01	11.13	2.85	10.76
13980	89.56	199.60	90	8543.4	5453.66	-5145.37	1618.93	5394.05	162.53	8.82	-0.02	8.82
14069	89.17	207.92	89	8544.4	5521.01	-5226.75	1583.10	5461.24	163.15	9.36	-0.44	9.35
14159	89.38	215.94	90	8545.5	5580.08	-5303.07	1535.55	5520.91	163.85	8.91	0.23	8.91
14248	88.31	223.12	89	8547.3	5629.12	-5371.65	1478.95	5571.53	164.61	8.15	-1.20	8.07
14338	91.23	229.50	90	8547.7	5669.52	-5433.78	1413.91	5614.72	165.41	7.80	3.24	7.09
14427	92.76	235.62	89	8544.6	5700.57	-5487.83	1343.33	5649.85	166.25	7.08	1.72	6.88
14517	94.40	239.47	90	8539.0	5724.50	-5536.02	1267.55	5679.28	167.10	4.64	1.82	4.28
14606	95.95	247.83	89	8530.9	5738.90	-5575.34	1188.20	5700.54	167.97	9.52	1.74	9.39
14696	93.01	253.80	90	8523.9	5742.31	-5604.79	1103.50	5712.39	168.86	7.38	-3.27	6.63
14786	89.95	262.59	90	8521.6	5734.17	-5623.18	1015.53	5714.14	169.76	10.34	-3.40	9.77
14875	89.33	271.61	89	8522.1	5712.51	-5627.67	926.74	5703.47	170.65	10.16	-0.70	10.13
14965	87.57	279.31	90	8524.6	5678.17	-5619.12	837.25	5681.16	171.53	8.77	-1.96	8.56
15054	87.66	285.04	89	8528.3	5634.84	-5600.38	750.37	5650.42	172.37	6.43	0.10	6.44
15144	87.71	288.32	90	8531.9	5584.97	-5574.57	664.23	5614.00	173.20	3.64	0.06	3.64
15233	88.81	298.14	89	8534.6	5527.59	-5539.52	582.59	5570.07	174.00	11.10	1.24	11.03
15323	88.37	308.00	90	8536.8	5458.68	-5490.49	507.29	5513.88	174.72	10.96	-0.49	10.96
15413	89.78	310.17	90	8538.3	5384.01	-5433.76	437.44	5451.34	175.40	2.88	1.57	2.41
15502	91.95	314.64	89	8536.9	5307.43	-5373.77	371.75	5386.61	176.04	5.58	2.44	5.02
15592	87.65	323.90	90	8537.3	5225.15	-5305.66	313.10	5314.89	176.62	11.34	-4.78	10.29

# Minimum Radius of Curvature

**API: 42-383-41369**      **Well: Alexis Rae E 5H**      **Wellhead Location N+S- : 31.420259**  
**Operator: Hibernia Resources III**      **Area: Midland Basin**      **E+/W- : -101.707175**  
**Rig: Precision 101**      **Type: U-Lateral**      **Magnetic Declination: 5.66**  
**TD: 21,161'**      **Plane of Proposal: 163.00**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
15681	85.85	333.27	89	8542.3	5139.19	-5229.92	266.84	5236.72	177.08	10.70	-2.02	10.53
15771	86.28	338.78	90	8548.5	5050.11	-5147.91	230.37	5153.06	177.44	6.13	0.48	6.12
15860	89.67	339.66	89	8551.6	4961.37	-5064.76	198.82	5068.66	177.75	3.94	3.81	0.99
15950	90.68	344.35	90	8551.4	4871.41	-4979.19	171.02	4982.13	178.03	5.33	1.12	5.21
16039	90.34	343.65	89	8550.6	4782.43	-4893.64	146.49	4895.83	178.29	0.87	-0.38	-0.79
16129	90.84	343.52	90	8549.6	4692.44	-4807.31	121.06	4808.84	178.56	0.57	0.56	-0.14
16218	92.82	347.96	89	8546.8	4603.61	-4721.13	99.15	4722.17	178.80	5.46	2.22	4.99
16308	92.75	347.82	90	8542.4	4514.04	-4633.23	80.29	4633.93	179.01	0.17	-0.08	-0.16
16397	92.61	347.68	89	8538.3	4425.45	-4546.36	61.43	4546.77	179.23	0.22	-0.16	-0.16
16487	92.91	347.94	90	8533.9	4335.87	-4458.49	42.45	4458.69	179.45	0.44	0.33	0.29
16577	93.21	347.91	90	8529.1	4246.33	-4370.60	23.65	4370.67	179.69	0.33	0.33	-0.03
16666	93.23	347.51	89	8524.1	4157.77	-4283.78	4.73	4283.78	179.94	0.45	0.02	-0.45
16756	89.86	345.52	90	8521.7	4067.99	-4196.31	-16.24	4196.34	180.22	4.35	-3.74	-2.21
16845	91.38	345.50	89	8520.7	3979.08	-4110.15	-38.51	4110.33	180.54	1.71	1.71	-0.02
16935	92.81	346.44	90	8517.5	3889.26	-4022.90	-60.31	4023.35	180.86	1.90	1.59	1.04
17024	93.16	346.66	89	8512.8	3800.56	-3936.45	-80.99	3937.29	181.18	0.46	0.39	0.25
17114	89.65	344.36	90	8510.6	3710.69	-3849.36	-103.49	3850.75	181.54	4.66	-3.90	-2.56
17203	89.49	344.48	89	8511.3	3621.72	-3763.64	-127.40	3765.79	181.94	0.22	-0.18	0.13
17293	90.22	346.36	90	8511.5	3531.80	-3676.54	-150.05	3679.60	182.34	2.24	0.81	2.09
17382	89.93	345.97	89	8511.4	3442.94	-3590.12	-171.33	3594.21	182.73	0.55	-0.33	-0.44
17472	90.53	345.97	90	8511.0	3353.06	-3502.81	-193.15	3508.13	183.16	0.67	0.67	0.00
17561	90.51	346.94	89	8510.2	3264.23	-3416.29	-214.00	3422.98	183.58	1.09	-0.02	1.09
17651	89.96	346.63	90	8509.9	3174.43	-3328.67	-234.57	3336.93	184.03	0.70	-0.61	-0.34
17740	89.30	346.37	89	8510.4	3085.60	-3242.13	-255.35	3252.17	184.50	0.80	-0.74	-0.29
17830	89.57	347.12	90	8511.3	2995.79	-3154.54	-275.98	3166.59	185.00	0.89	0.30	0.83
17919	91.48	347.39	89	8510.5	2907.05	-3067.74	-295.61	3081.95	185.50	2.17	2.15	0.30
18009	91.85	347.65	90	8507.9	2817.36	-2979.90	-315.05	2996.51	186.04	0.50	0.41	0.29
18098	92.17	347.59	89	8504.8	2728.71	-2893.02	-334.12	2912.25	186.59	0.37	0.36	-0.07
18188	89.26	346.01	90	8503.6	2638.93	-2805.42	-354.67	2827.75	187.21	3.68	-3.23	-1.76
18278	88.23	345.37	90	8505.6	2549.05	-2718.24	-376.91	2744.24	187.89	1.35	-1.14	-0.71
18367	88.13	345.53	89	8508.4	2460.17	-2632.13	-399.26	2662.24	188.63	0.21	-0.11	0.18
18457	87.95	345.69	90	8511.5	2370.32	-2545.01	-421.61	2579.69	189.41	0.27	-0.20	0.18
18546	88.78	345.69	89	8514.1	2281.45	-2458.81	-443.60	2498.50	190.23	0.93	0.93	0.00
18636	89.61	344.97	90	8515.3	2191.54	-2371.75	-466.39	2417.17	191.12	1.22	0.92	-0.80
18725	90.40	344.64	89	8515.3	2102.58	-2285.86	-489.72	2337.73	192.09	0.96	0.89	-0.37
18815	87.78	345.15	90	8516.7	2012.65	-2198.99	-513.17	2258.07	193.14	2.97	-2.91	0.57
18904	87.07	344.08	89	8520.7	1923.78	-2113.27	-536.75	2180.37	194.25	1.44	-0.80	-1.20
18993	89.51	344.61	89	8523.4	1834.85	-2027.61	-560.76	2103.73	195.46	2.81	2.74	0.60
19083	88.96	344.24	90	8524.6	1744.89	-1940.93	-584.92	2027.15	196.77	0.74	-0.61	-0.41
19173	88.44	343.35	90	8526.6	1654.92	-1854.53	-610.03	1952.28	198.21	1.15	-0.58	-0.99
19262	87.94	342.70	89	8529.4	1565.97	-1769.45	-636.00	1880.28	199.77	0.92	-0.56	-0.73
19352	87.59	342.40	90	8533.0	1476.04	-1683.65	-662.97	1809.48	201.49	0.51	-0.39	-0.33
19441	87.20	342.65	89	8537.0	1387.13	-1598.85	-689.67	1741.25	203.33	0.52	-0.44	0.28
19531	89.11	346.38	90	8539.9	1297.23	-1512.18	-713.68	1672.13	205.27	4.65	2.12	4.14
19620	88.69	346.07	89	8541.6	1208.39	-1425.76	-734.86	1604.00	207.27	0.59	-0.47	-0.35
19710	88.60	346.45	90	8543.7	1118.56	-1338.36	-756.23	1537.23	209.47	0.43	-0.10	0.42
19799	88.41	346.50	89	8546.1	1029.75	-1251.85	-777.04	1473.41	211.83	0.22	-0.21	0.06
19889	87.92	345.63	90	8548.9	939.93	-1164.55	-798.70	1412.13	214.44	1.11	-0.54	-0.97
19978	91.36	349.46	89	8549.5	851.24	-1077.67	-817.89	1352.90	217.20	5.78	3.87	4.30
20068	91.16	348.42	90	8547.5	761.75	-989.37	-835.15	1294.73	220.17	1.18	-0.22	-1.16
20157	91.41	348.32	89	8545.5	673.16	-902.22	-853.09	1241.68	223.40	0.30	0.28	-0.11
20247	90.88	347.53	90	8543.7	583.51	-814.23	-871.91	1192.98	226.96	1.06	-0.59	-0.88
20337	91.46	347.88	90	8541.9	493.83	-726.31	-891.07	1149.58	230.82	0.75	0.64	0.39
20426	91.68	347.97	89	8539.5	405.20	-639.31	-909.68	1111.87	234.90	0.27	0.25	0.10
20516	91.38	347.25	90	8537.0	315.52	-551.44	-928.99	1080.33	239.31	0.87	-0.33	-0.80
20605	90.59	345.35	89	8535.5	226.68	-464.99	-950.06	1057.75	243.92	2.31	-0.89	-2.13
20695	91.62	345.28	90	8533.8	136.78	-377.95	-972.87	1043.71	248.77	1.15	1.14	-0.08
20784	92.04	345.77	89	8530.9	47.91	-291.82	-995.11	1037.01	253.66	0.72	0.47	0.55

## Minimum Radius of Curvature

**API:** 42-383-41369      **Well:** Alexis Rae E 5H      **Wellhead Location N+/S- :** 31.420259  
**Operator:** Hibernia Resources III      **Area:** Midland Basin      **E+/W- :** -101.707175  
**Rig:** Precision 101      **Type:** U-Lateral      **Magnetic Declination:** 5.66  
**TD:** 21,161'      **Plane of Proposal:** 163.00

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
20874	91.58	345.27	90	8528.1	-41.96	-204.72	-1017.60	1037.99	258.63	0.75	-0.51	-0.56
20963	92.03	345.84	89	8525.3	-130.83	-118.58	-1039.79	1046.53	263.49	0.82	0.51	0.64
21053	91.97	345.31	90	8522.2	-220.68	-31.47	-1062.20	1062.66	268.30	0.59	-0.07	-0.59
21084	92.10	345.22	31	8521.1	-251.64	-1.51	-1070.08	1070.08	269.92	0.51	0.42	-0.29
21161	92.10	345.22	77	8518.2	-328.53	72.90	-1089.71	1092.14	273.83	0.00	0.00	0.00