

# Minimum Radius of Curvature

**API:** 42-461-42516      **Well:** Allison 7-1280 B 21BL      **Wellhead Location**      **Lat:** 31.319982  
**Operator:** Vital Energy      **Area:** Midland      **Long:** -101.869610  
**Rig:** H&P 462      **Type:** U Lateral      **Magnetic Declination:** 5.83  
**TD:** 23,082'      **Plane of Proposal:** 0.00

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			
114	0.40	190.20	114	114.0	-0.39	-0.39	-0.07	0.40	190.20	0.35	0.35	166.84
145	0.30	140.20	31	145.0	-0.56	-0.56	-0.04	0.56	183.85	1.00	-0.32	-161.29
202	0.50	108.20	57	202.0	-0.75	-0.75	0.29	0.81	158.66	0.51	0.35	-56.14
290	1.00	125.20	88	290.0	-1.32	-1.32	1.29	1.84	135.64	0.62	0.57	19.32
384	0.50	100.20	94	384.0	-1.86	-1.86	2.36	3.01	128.25	0.62	-0.53	-26.60
478	0.30	103.20	94	478.0	-1.99	-1.99	3.00	3.60	123.52	0.21	-0.21	3.19
624	0.40	98.31	146	624.0	-2.15	-2.15	3.88	4.44	119.00	0.07	0.07	-3.35
718	0.70	6.87	94	718.0	-1.63	-1.63	4.27	4.57	110.85	0.87	0.32	-97.28
813	0.61	9.51	95	813.0	-0.55	-0.55	4.43	4.46	97.12	0.10	-0.09	2.78
908	1.40	340.63	95	908.0	1.04	1.04	4.12	4.25	75.84	0.96	0.83	348.55
1003	1.71	340.26	95	1002.9	3.47	3.47	3.26	4.76	43.23	0.33	0.33	-0.39
1097	1.65	339.80	94	1096.9	6.06	6.06	2.32	6.49	20.95	0.07	-0.06	-0.49
1192	1.43	332.17	95	1191.8	8.39	8.39	1.29	8.49	8.77	0.32	-0.23	-8.03
1287	1.55	315.76	95	1286.8	10.36	10.36	-0.16	10.36	359.14	0.46	0.13	-17.27
1381	1.42	280.87	94	1380.8	11.49	11.49	-2.19	11.70	349.23	0.96	-0.14	-37.12
1476	2.06	245.65	95	1475.7	11.01	11.01	-4.90	12.05	336.02	1.28	0.67	-37.07
1571	2.25	232.61	95	1570.7	9.17	9.17	-7.93	12.13	319.14	0.55	0.20	-13.73
1666	2.13	232.82	95	1665.6	6.97	6.97	-10.82	12.87	302.78	0.13	-0.13	-0.09
1761	2.15	230.11	95	1760.5	4.75	4.75	-13.59	14.39	289.27	0.10	0.02	-2.54
1856	2.03	231.52	95	1855.5	2.56	2.56	-16.27	16.47	278.94	0.14	-0.13	1.48
1951	2.71	237.23	95	1950.4	0.30	0.30	-19.48	19.48	270.87	0.76	0.72	6.01
2046	4.46	244.28	95	2045.2	-2.52	-2.52	-24.69	24.82	264.17	1.90	1.84	7.42
2141	5.44	244.26	95	2139.8	-6.08	-6.08	-32.08	32.65	259.27	1.03	1.03	-0.02
2236	5.96	242.62	95	2234.4	-10.31	-10.31	-40.51	41.80	255.73	0.57	0.55	-1.73
2331	6.02	242.51	95	2328.9	-14.87	-14.87	-49.31	51.51	253.22	0.06	0.06	-0.12
2425	6.46	247.85	94	2422.3	-19.14	-19.14	-58.58	61.63	251.90	0.77	0.47	5.68
2520	6.81	248.95	95	2516.7	-23.18	-23.18	-68.79	72.59	251.38	0.39	0.37	1.16
2615	6.59	248.73	95	2611.0	-27.18	-27.18	-79.12	83.66	251.04	0.23	-0.23	-0.23
2709	6.52	249.10	94	2704.4	-31.04	-31.04	-89.14	94.39	250.80	0.09	-0.07	0.39
2803	7.01	250.74	94	2797.7	-34.84	-34.84	-99.54	105.46	250.71	0.56	0.52	1.74
2898	6.68	251.88	95	2892.1	-38.47	-38.47	-110.26	116.78	250.77	0.38	-0.35	1.20
2993	6.48	252.55	95	2986.4	-41.79	-41.79	-120.63	127.66	250.89	0.23	-0.21	0.71
3087	6.33	251.11	94	3079.9	-45.06	-45.06	-130.59	138.15	250.96	0.23	-0.16	-1.53
3182	7.89	254.78	95	3174.1	-48.47	-48.47	-141.84	149.89	251.13	1.71	1.64	3.86
3276	7.85	255.42	94	3267.2	-51.78	-51.78	-154.28	162.73	251.45	0.10	-0.04	0.68
3371	7.77	255.48	95	3361.4	-55.02	-55.02	-166.77	175.61	251.74	0.08	-0.08	0.06
3465	7.52	254.82	94	3454.5	-58.23	-58.23	-178.86	188.10	251.97	0.28	-0.27	-0.70
3560	8.18	252.26	95	3548.6	-61.91	-61.91	-191.30	201.07	252.07	0.79	0.69	-2.69
3654	8.18	251.45	94	3641.7	-66.08	-66.08	-204.00	214.44	252.05	0.12	0.00	-0.86
3749	8.90	248.50	95	3735.6	-70.92	-70.92	-217.25	228.53	251.92	0.89	0.76	-3.11
3843	9.03	248.21	94	3828.5	-76.33	-76.33	-230.86	243.15	251.71	0.15	0.14	-0.31
3938	9.76	251.92	95	3922.2	-81.59	-81.59	-245.44	258.65	251.61	1.00	0.77	3.91
4032	9.62	253.53	94	4014.9	-86.29	-86.29	-260.55	274.47	251.68	0.32	-0.15	1.71
4127	9.67	254.42	95	4108.5	-90.68	-90.68	-275.85	290.37	251.80	0.17	0.05	0.94
4221	9.68	253.99	94	4201.2	-94.98	-94.98	-291.05	306.15	251.93	0.08	0.01	-0.46
4316	9.53	254.11	95	4294.8	-99.34	-99.34	-306.29	322.00	252.03	0.16	-0.16	0.13
4411	9.15	253.68	95	4388.6	-103.62	-103.62	-321.10	337.41	252.12	0.41	-0.40	-0.45
4505	8.77	253.66	94	4481.4	-107.73	-107.73	-335.15	352.04	252.18	0.40	-0.40	-0.02
4600	8.68	254.16	95	4575.3	-111.73	-111.73	-349.00	366.44	252.25	0.12	-0.09	0.53
4694	8.93	254.08	94	4668.2	-115.66	-115.66	-362.84	380.83	252.32	0.27	0.27	-0.09
4789	9.08	254.63	95	4762.1	-119.67	-119.67	-377.15	395.69	252.40	0.18	0.16	0.58
4883	8.62	254.15	94	4854.9	-123.56	-123.56	-391.08	410.14	252.47	0.50	-0.49	-0.51
4977	8.21	253.93	94	4947.9	-127.35	-127.35	-404.31	423.89	252.52	0.44	-0.44	-0.23
5072	8.01	253.53	95	5042.0	-131.10	-131.10	-417.17	437.29	252.55	0.22	-0.21	-0.42
5166	7.48	254.06	94	5135.1	-134.64	-134.64	-429.34	449.95	252.59	0.57	-0.56	0.56
5260	7.08	252.38	94	5228.4	-138.07	-138.07	-440.74	461.86	252.61	0.48	-0.43	-1.79
5355	7.27	250.97	95	5322.6	-141.80	-141.80	-452.01	473.73	252.58	0.27	0.20	-1.48

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						N-S Ft	E-W Ft	Distance FT	Direction Deg			
5449	8.48	256.55	94	5415.7	-145.35	-145.35	-464.37	486.59	252.62	1.52	1.29	5.94
5544	8.46	254.72	95	5509.7	-148.82	-148.82	-477.92	500.56	252.70	0.28	-0.02	-1.93
5638	8.03	254.61	94	5602.7	-152.39	-152.39	-490.92	514.03	252.75	0.46	-0.46	-0.12
5732	8.69	251.79	94	5695.7	-156.35	-156.35	-504.00	527.69	252.77	0.83	0.70	-3.00
5826	8.90	250.72	94	5788.6	-160.97	-160.97	-517.61	542.06	252.72	0.28	0.22	-1.14
5921	8.52	250.66	95	5882.5	-165.73	-165.73	-531.18	556.44	252.67	0.40	-0.40	-0.06
6015	7.92	251.26	94	5975.6	-170.11	-170.11	-543.89	569.87	252.63	0.64	-0.64	0.64
6109	6.98	250.73	94	6068.8	-174.08	-174.08	-555.41	582.05	252.60	1.00	-1.00	-0.56
6204	6.99	249.09	95	6163.1	-178.05	-178.05	-566.26	593.59	252.55	0.21	0.01	-1.73
6298	6.90	244.53	94	6256.4	-182.52	-182.52	-576.70	604.90	252.44	0.59	-0.10	-4.85
6393	7.48	239.47	95	6350.6	-188.11	-188.11	-587.18	616.58	252.24	0.90	0.61	-5.33
6487	7.06	241.38	94	6443.9	-193.99	-193.99	-597.52	628.22	252.01	0.52	-0.45	2.03
6582	6.16	240.12	95	6538.2	-199.32	-199.32	-607.07	638.95	251.82	0.96	-0.95	-1.33
6676	4.75	238.30	94	6631.8	-203.88	-203.88	-614.75	647.68	251.65	1.51	-1.50	-1.94
6771	3.70	235.80	95	6726.6	-207.67	-207.67	-620.63	654.46	251.50	1.12	-1.11	-2.63
6866	3.15	233.32	95	6821.4	-210.95	-210.95	-625.26	659.89	251.36	0.60	-0.58	-2.61
6960	2.78	230.42	94	6915.3	-213.95	-213.95	-629.09	664.48	251.22	0.42	-0.39	-3.09
7055	2.29	223.00	95	7010.2	-216.81	-216.81	-632.16	668.30	251.07	0.62	-0.52	-7.81
7150	2.89	236.92	95	7105.1	-219.50	-219.50	-635.46	672.30	250.94	0.91	0.63	14.65
7244	2.12	233.17	94	7199.0	-221.84	-221.84	-638.84	676.26	250.85	0.84	-0.82	-3.99
7339	1.85	234.86	95	7293.9	-223.77	-223.77	-641.50	679.41	250.77	0.29	-0.28	1.78
7433	1.40	210.12	94	7387.9	-225.64	-225.64	-643.32	681.74	250.67	0.88	-0.48	-26.32
7527	1.43	240.37	94	7481.9	-227.21	-227.21	-644.91	683.77	250.59	0.79	0.03	32.18
7622	1.13	242.11	95	7576.8	-228.24	-228.24	-646.77	685.86	250.56	0.32	-0.32	1.83
7716	0.75	237.28	94	7670.8	-229.00	-229.00	-648.11	687.38	250.54	0.41	-0.40	-5.14
7811	0.52	225.35	95	7765.8	-229.64	-229.64	-648.94	688.37	250.51	0.28	-0.24	-12.56
7905	0.08	84.64	94	7859.8	-229.94	-229.94	-649.17	688.69	250.50	0.62	-0.47	-149.69
8000	0.43	59.99	95	7954.8	-229.75	-229.75	-648.80	688.28	250.50	0.38	0.37	-25.95
8094	0.61	65.61	94	8048.8	-229.37	-229.37	-648.04	687.43	250.51	0.20	0.19	5.98
8188	0.65	75.86	94	8142.8	-229.03	-229.03	-647.07	686.40	250.51	0.13	0.04	10.90
8293	0.79	70.40	105	8247.8	-228.64	-228.64	-645.81	685.09	250.50	0.15	0.13	-5.20
8372	1.09	32.75	79	8326.8	-227.83	-227.83	-644.89	683.95	250.54	0.85	0.38	-47.66
8419	5.48	8.85	47	8373.7	-225.23	-225.23	-644.30	682.53	250.73	9.59	9.34	-50.85
8466	11.19	7.10	47	8420.2	-218.48	-218.48	-643.39	679.47	251.24	12.16	12.15	-3.72
8513	17.73	4.39	47	8465.7	-206.81	-206.81	-642.28	674.75	252.15	13.99	13.91	-5.77
8561	22.11	2.20	48	8510.8	-190.49	-190.49	-641.37	669.06	253.46	9.25	9.13	-4.56
8638	28.35	358.30	77	8580.4	-157.70	-157.70	-641.36	660.46	256.19	8.38	8.10	462.47
8725	31.79	357.33	87	8655.7	-114.15	-114.15	-643.04	653.09	259.93	3.99	3.95	-1.11
8772	32.51	357.23	47	8695.5	-89.17	-89.17	-644.22	650.37	262.12	1.54	1.53	-0.21
8820	35.13	357.07	48	8735.4	-62.49	-62.49	-645.55	648.57	264.47	5.46	5.46	-0.33
8865	39.17	357.82	45	8771.2	-35.34	-35.34	-646.76	647.72	266.87	9.03	8.98	1.67
8914	43.44	357.43	49	8808.0	-3.03	-3.03	-648.10	648.11	269.73	8.73	8.71	-0.80
8959	46.20	356.13	45	8839.9	28.63	28.63	-649.89	650.52	272.52	6.46	6.13	-2.89
9008	48.76	356.70	49	8873.0	64.67	64.67	-652.15	655.34	275.66	5.29	5.22	1.16
9053	51.95	357.22	45	8901.8	99.27	99.27	-653.98	661.47	278.63	7.14	7.09	1.16
9103	56.05	356.80	50	8931.1	139.66	139.66	-656.09	670.79	282.02	8.23	8.20	-0.84
9148	59.74	357.54	45	8955.0	177.72	177.72	-657.97	681.55	285.12	8.32	8.20	1.64
9198	62.15	357.76	50	8979.3	221.39	221.39	-659.76	695.91	288.55	4.84	4.82	0.44
9245	64.74	357.99	47	9000.3	263.40	263.40	-661.32	711.84	291.72	5.53	5.51	0.49
9292	68.26	359.25	47	9019.1	306.48	306.48	-662.35	729.82	294.83	7.88	7.49	2.68
9339	71.64	0.05	47	9035.2	350.62	350.62	-662.62	749.66	297.89	7.37	7.19	-764.26
9387	74.19	0.41	48	9049.3	396.50	396.50	-662.43	772.03	300.90	5.36	5.31	0.75
9434	75.71	0.63	47	9061.5	441.89	441.89	-662.02	795.95	303.72	3.27	3.23	0.47
9481	78.49	0.90	47	9072.0	487.69	487.69	-661.41	821.77	306.40	5.94	5.91	0.57
9528	81.54	1.52	47	9080.1	533.96	533.96	-660.43	849.28	308.96	6.62	6.49	1.32
9576	84.84	2.89	48	9085.8	581.58	581.58	-658.59	878.62	311.45	7.44	6.87	2.85
9670	89.68	2.41	94	9090.3	675.34	675.34	-654.25	940.29	315.91	5.17	5.15	-0.51
9702	89.75	2.72	32	9090.5	707.31	707.31	-652.82	962.53	317.29	0.99	0.22	0.97

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9802	91.17	2.33	100	9089.7	807.21	807.21	-648.42	1035.39	321.23	1.47	1.42	-0.39
9896	90.97	1.53	94	9087.9	901.14	901.14	-645.25	1108.33	324.40	0.88	-0.21	-0.85
9990	88.43	1.55	94	9088.4	995.10	995.10	-642.73	1184.61	327.14	2.70	-2.70	0.02
10085	88.87	2.90	95	9090.7	1090.00	1090.00	-639.04	1263.51	329.62	1.49	0.46	1.42
10180	87.43	1.41	95	9093.7	1184.87	1184.87	-635.47	1344.52	331.79	2.18	-1.52	-1.57
10275	89.32	1.36	95	9096.4	1279.80	1279.80	-633.17	1427.87	333.68	1.99	1.99	-0.05
10369	89.81	1.52	94	9097.1	1373.77	1373.77	-630.81	1511.68	335.34	0.55	0.52	0.17
10463	89.45	1.20	94	9097.7	1467.74	1467.74	-628.58	1596.68	336.82	0.51	-0.38	-0.34
10555	90.20	0.46	92	9098.0	1559.73	1559.73	-627.25	1681.13	338.09	1.15	0.82	-0.80
10652	90.30	359.20	97	9097.6	1656.73	1656.73	-627.53	1771.59	339.25	1.30	0.10	369.84
10746	90.05	359.46	94	9097.3	1750.72	1750.72	-628.63	1860.16	340.25	0.38	-0.27	0.28
10838	90.32	359.32	92	9097.0	1842.71	1842.71	-629.61	1947.31	341.14	0.33	0.29	-0.15
10932	90.28	0.66	94	9096.5	1936.71	1936.71	-629.63	2036.49	341.99	1.43	-0.04	-381.55
11026	90.19	1.79	94	9096.1	2030.69	2030.69	-627.62	2125.46	342.83	1.21	-0.10	1.20
11120	90.04	1.47	94	9095.9	2124.65	2124.65	-624.95	2214.65	343.61	0.38	-0.16	-0.34
11214	90.60	2.12	94	9095.4	2218.60	2218.60	-622.00	2304.14	344.34	0.91	0.60	0.69
11309	90.20	1.84	95	9094.8	2313.54	2313.54	-618.72	2394.85	345.03	0.51	-0.42	-0.29
11403	89.98	1.29	94	9094.6	2407.51	2407.51	-616.15	2485.10	345.64	0.63	-0.23	-0.59
11498	90.11	1.52	95	9094.5	2502.48	2502.48	-613.82	2576.66	346.22	0.28	0.14	0.24
11592	90.08	1.76	94	9094.4	2596.44	2596.44	-611.13	2667.39	346.76	0.26	-0.03	0.26
11686	90.12	1.78	94	9094.2	2690.39	2690.39	-608.23	2758.29	347.26	0.05	0.04	0.02
11781	90.36	2.32	95	9093.8	2785.33	2785.33	-604.83	2850.24	347.75	0.62	0.25	0.57
11875	90.18	1.80	94	9093.4	2879.27	2879.27	-601.45	2941.42	348.20	0.59	-0.19	-0.55
11969	91.12	2.43	94	9092.3	2973.20	2973.20	-597.98	3032.74	348.63	1.20	1.00	0.67
12064	90.16	1.68	95	9091.2	3068.13	3068.13	-594.58	3125.21	349.03	1.28	-1.01	-0.79
12158	90.20	1.77	94	9090.9	3162.09	3162.09	-591.75	3216.98	349.40	0.10	0.04	0.10
12253	90.18	1.13	95	9090.6	3257.05	3257.05	-589.34	3309.94	349.74	0.67	-0.02	-0.67
12348	89.86	0.34	95	9090.6	3352.04	3352.04	-588.13	3403.25	350.05	0.90	-0.34	-0.83
12442	90.35	1.44	94	9090.4	3446.03	3446.03	-586.67	3495.61	350.34	1.28	0.52	1.17
12537	91.05	2.27	95	9089.3	3540.97	3540.97	-583.59	3588.74	350.64	1.14	0.74	0.87
12631	89.74	1.29	94	9088.6	3634.92	3634.92	-580.67	3681.01	350.92	1.74	-1.39	-1.04
12726	89.48	1.11	95	9088.3	3729.90	3729.90	-578.68	3774.52	351.18	0.33	-0.27	-0.19
12820	90.50	2.33	94	9089.3	3823.85	3823.85	-575.86	3866.97	351.44	1.69	1.09	1.30
12915	90.98	1.99	95	9088.1	3918.78	3918.78	-572.28	3960.34	351.69	0.62	0.51	-0.36
13009	89.78	0.02	94	9087.4	4012.76	4012.76	-570.63	4053.13	351.91	2.45	-1.28	-2.10
13104	89.87	0.37	95	9087.7	4107.75	4107.75	-570.31	4147.16	352.10	0.38	0.09	0.37
13198	90.63	1.42	94	9087.3	4201.74	4201.74	-568.84	4240.07	352.29	1.38	0.81	1.12
13292	91.42	2.15	94	9085.6	4295.68	4295.68	-565.91	4332.79	352.50	1.14	0.84	0.78
13387	90.59	1.39	95	9084.0	4390.62	4390.62	-562.98	4426.56	352.69	1.18	-0.87	-0.80
13481	89.31	358.72	94	9084.0	4484.61	4484.61	-562.89	4519.79	352.85	3.15	-1.36	380.14
13575	90.46	359.87	94	9084.2	4578.60	4578.60	-564.04	4613.21	352.98	1.73	1.22	1.22
13670	90.21	0.54	95	9083.7	4673.59	4673.59	-563.70	4707.47	353.12	0.75	-0.26	-378.24
13764	90.52	0.06	94	9083.1	4767.59	4767.59	-563.21	4800.74	353.26	0.61	0.33	-0.51
13859	90.19	359.91	95	9082.5	4862.59	4862.59	-563.24	4895.10	353.39	0.38	-0.35	378.79
13953	90.22	358.97	94	9082.2	4956.58	4956.58	-564.16	4988.58	353.51	1.00	0.03	-1.00
14047	90.00	358.88	94	9082.0	5050.56	5050.56	-565.92	5082.17	353.61	0.25	-0.23	-0.10
14142	90.19	359.57	95	9081.8	5145.55	5145.55	-567.20	5176.72	353.71	0.75	0.20	0.73
14236	90.20	0.95	94	9081.5	5239.55	5239.55	-566.78	5270.12	353.83	1.47	0.01	-381.51
14330	90.21	359.74	94	9081.2	5333.55	5333.55	-566.21	5363.52	353.94	1.29	0.01	381.69
14425	90.03	0.08	95	9081.0	5428.55	5428.55	-566.36	5458.01	354.04	0.40	-0.19	-378.59
14519	89.10	359.05	94	9081.7	5522.54	5522.54	-567.07	5551.58	354.14	1.48	-0.99	381.88
14613	89.09	0.19	94	9083.2	5616.52	5616.52	-567.70	5645.14	354.23	1.21	-0.01	-381.77
14708	89.52	6.94	95	9084.3	5711.28	5711.28	-561.79	5738.84	354.38	7.12	0.45	7.11
14802	90.18	10.85	94	9084.6	5804.13	5804.13	-547.26	5829.87	354.61	4.22	0.70	4.16
14896	89.95	17.55	94	9084.5	5895.20	5895.20	-524.22	5918.47	354.92	7.13	-0.24	7.13
14943	89.88	22.16	47	9084.5	5939.40	5939.40	-508.26	5961.11	355.11	9.81	-0.15	9.81
14993	92.53	27.02	50	9083.5	5984.84	5984.84	-487.47	6004.66	355.34	11.07	5.30	9.72
15040	91.61	31.54	47	9081.8	6025.79	6025.79	-464.50	6043.67	355.59	9.81	-1.96	9.62

# Minimum Radius of Curvature

**API: 42-461-42516**      **Well: Allison 7-1280 B 21BL**      **Wellhead Location**      **Lat: 31.319982**  
**Operator: Vital Energy**      **Area: Midland**      **Long: -101.869610**  
**Rig: H&P 462**      **Type: U Lateral**      **Magnetic Declination: 5.83**  
**TD: 23,082'**      **Plane of Proposal: 0.00**

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			
15088	90.28	35.57	48	9081.0	6065.78	6065.78	-437.98	6081.57	355.87	8.84	-2.77	8.40
15135	89.58	39.79	47	9081.0	6102.97	6102.97	-409.26	6116.68	356.16	9.10	-1.49	8.98
15182	91.65	45.09	47	9080.5	6137.64	6137.64	-377.55	6149.24	356.48	12.10	4.40	11.28
15229	91.19	49.20	47	9079.4	6169.59	6169.59	-343.12	6179.12	356.82	8.80	-0.98	8.74
15277	91.31	52.76	48	9078.3	6199.80	6199.80	-305.84	6207.34	357.18	7.42	0.25	7.42
15324	89.24	55.65	47	9078.1	6227.28	6227.28	-267.72	6233.03	357.54	7.56	-4.40	6.15
15371	89.03	58.07	47	9078.8	6252.97	6252.97	-228.38	6257.14	357.91	5.17	-0.45	5.15
15418	89.38	59.57	47	9079.5	6277.30	6277.30	-188.17	6280.12	358.28	3.28	0.74	3.19
15466	90.41	62.61	48	9079.5	6300.50	6300.50	-146.16	6302.20	358.67	6.69	2.15	6.33
15513	89.77	65.38	47	9079.5	6321.11	6321.11	-103.92	6321.96	359.06	6.05	-1.36	5.89
15561	90.07	67.93	48	9079.5	6340.13	6340.13	-59.86	6340.41	359.46	5.35	0.62	5.31
15608	90.99	71.39	47	9079.1	6356.46	6356.46	-15.79	6356.48	359.86	7.62	1.96	7.36
15656	90.21	73.77	48	9078.6	6370.83	6370.83	30.00	6370.90	0.27	5.22	-1.63	4.96
15703	90.75	76.82	47	9078.2	6382.76	6382.76	75.45	6383.20	0.68	6.59	1.15	6.49
15751	91.10	79.56	48	9077.4	6392.58	6392.58	122.42	6393.75	1.10	5.75	0.73	5.71
15798	90.22	82.81	47	9076.9	6399.78	6399.78	168.86	6402.01	1.51	7.16	-1.87	6.91
15845	91.56	85.34	47	9076.2	6404.63	6404.63	215.60	6408.26	1.93	6.09	2.85	5.38
15892	91.06	88.41	47	9075.1	6407.19	6407.19	262.51	6412.57	2.35	6.62	-1.06	6.53
15940	91.78	90.81	48	9073.9	6407.52	6407.52	310.49	6415.04	2.77	5.22	1.50	5.00
15987	91.68	93.62	47	9072.5	6405.70	6405.70	357.43	6415.67	3.19	5.98	-0.21	5.98
16035	90.18	94.44	48	9071.7	6402.33	6402.33	405.30	6415.15	3.62	3.56	-3.13	1.71
16082	91.53	96.08	47	9071.0	6398.02	6398.02	452.10	6413.97	4.04	4.52	2.87	3.49
16130	91.36	98.12	48	9069.8	6392.09	6392.09	499.71	6411.59	4.47	4.26	-0.35	4.25
16176	91.92	102.21	46	9068.5	6383.98	6383.98	544.96	6407.20	4.88	8.97	1.22	8.89
16224	90.77	105.71	48	9067.3	6372.40	6372.40	591.52	6399.80	5.30	7.67	-2.40	7.29
16271	92.22	110.15	47	9066.1	6357.94	6357.94	636.21	6389.70	5.71	9.93	3.09	9.45
16319	92.00	114.47	48	9064.3	6339.74	6339.74	680.58	6376.16	6.13	9.01	-0.46	9.00
16366	92.14	119.12	47	9062.6	6318.57	6318.57	722.49	6359.74	6.52	9.89	0.30	9.89
16414	89.85	121.20	48	9061.8	6294.46	6294.46	763.98	6340.65	6.92	6.44	-4.77	4.33
16461	89.45	125.56	47	9062.1	6268.61	6268.61	803.22	6319.86	7.30	9.32	-0.85	9.28
16509	91.36	129.44	48	9061.8	6239.40	6239.40	841.29	6295.86	7.68	9.01	3.98	8.08
16556	90.67	133.16	47	9060.9	6208.39	6208.39	876.59	6269.97	8.04	8.05	-1.47	7.91
16604	89.24	135.96	48	9061.0	6174.71	6174.71	910.78	6241.52	8.39	6.55	-2.98	5.83
16651	90.86	141.30	47	9060.9	6139.45	6139.45	941.84	6211.28	8.72	11.87	3.45	11.36
16699	90.01	144.52	48	9060.6	6101.17	6101.17	970.78	6177.92	9.04	6.94	-1.77	6.71
16746	89.59	147.85	47	9060.7	6062.13	6062.13	996.93	6143.55	9.34	7.14	-0.89	7.09
16794	89.94	151.88	48	9060.9	6020.62	6020.62	1021.02	6106.59	9.63	8.43	0.73	8.40
16841	88.26	155.99	47	9061.7	5978.42	5978.42	1041.67	6068.49	9.88	9.45	-3.57	8.74
16889	89.60	160.14	48	9062.6	5933.91	5933.91	1059.59	6027.77	10.12	9.08	2.79	8.65
16936	91.27	164.86	47	9062.2	5889.10	5889.10	1073.72	5986.19	10.33	10.65	3.55	10.04
16984	91.44	167.26	48	9061.1	5842.53	5842.53	1085.28	5942.48	10.52	5.01	0.35	5.00
17031	90.05	165.70	47	9060.5	5796.84	5796.84	1096.26	5899.59	10.71	4.45	-2.96	-3.32
17079	90.15	164.00	48	9060.4	5750.51	5750.51	1108.81	5856.44	10.91	3.55	0.21	-3.54
17174	90.35	169.10	95	9060.0	5658.15	5658.15	1130.90	5770.06	11.30	5.37	0.21	5.37
17268	90.08	169.71	94	9059.6	5565.75	5565.75	1148.18	5682.95	11.66	0.71	-0.29	0.65
17363	90.21	169.63	95	9059.4	5472.29	5472.29	1165.22	5594.97	12.02	0.16	0.14	-0.08
17457	90.53	169.56	94	9058.8	5379.84	5379.84	1182.19	5508.20	12.39	0.35	0.34	-0.07
17553	90.20	170.84	96	9058.1	5285.25	5285.25	1198.53	5419.44	12.78	1.38	-0.34	1.33
17648	90.05	171.93	95	9057.9	5191.32	5191.32	1212.76	5331.10	13.15	1.16	-0.16	1.15
17743	90.39	173.64	95	9057.6	5097.08	5097.08	1224.69	5242.14	13.51	1.84	0.36	1.80
17837	90.34	175.76	94	9057.0	5003.49	5003.49	1233.37	5153.26	13.85	2.26	-0.05	2.26
17932	90.28	178.06	95	9056.5	4908.63	4908.63	1238.49	5062.46	14.16	2.42	-0.06	2.42
18026	90.05	181.14	94	9056.2	4814.65	4814.65	1239.15	4971.55	14.43	3.29	-0.24	3.28
18121	88.54	180.12	95	9057.4	4719.66	4719.66	1238.11	4879.36	14.70	1.92	-1.59	-1.07
18215	87.60	179.77	94	9060.5	4625.72	4625.72	1238.20	4788.57	14.99	1.07	-1.00	-0.37
18309	90.08	179.85	94	9062.4	4531.74	4531.74	1238.51	4697.94	15.29	2.64	2.64	0.09
18404	88.89	180.00	95	9063.3	4436.75	4436.75	1238.63	4606.40	15.60	1.26	-1.25	0.16
18498	90.12	179.74	94	9064.1	4342.76	4342.76	1238.85	4516.00	15.92	1.34	1.31	-0.28

# Minimum Radius of Curvature

**API: 42-461-42516**      **Well: Allison 7-1280 B 21BL**      **Wellhead Location Lat: 31.319982**  
**Operator: Vital Energy**      **Area: Midland**      **Long: -101.869610**  
**Rig: H&P 462**      **Type: U Lateral**      **Magnetic Declination: 5.83**  
**TD: 23,082'**      **Plane of Proposal: 0.00**

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			
18593	89.68	180.43	95	9064.3	4247.76	4247.76	1238.70	4424.68	16.26	0.86	-0.46	0.73
18687	89.98	182.60	94	9064.5	4153.80	4153.80	1236.22	4333.85	16.57	2.33	0.32	2.31
18782	89.57	182.76	95	9064.9	4058.90	4058.90	1231.78	4241.69	16.88	0.46	-0.43	0.17
18877	89.52	182.90	95	9065.7	3964.02	3964.02	1227.09	4149.60	17.20	0.16	-0.05	0.15
18971	89.55	183.17	94	9066.4	3870.15	3870.15	1222.11	4058.53	17.52	0.29	0.03	0.29
19066	89.58	182.94	95	9067.1	3775.29	3775.29	1217.05	3966.62	17.87	0.24	0.03	-0.24
19160	89.65	182.27	94	9067.8	3681.39	3681.39	1212.78	3876.01	18.23	0.72	0.07	-0.71
19255	89.95	183.25	95	9068.1	3586.50	3586.50	1208.20	3784.54	18.62	1.08	0.32	1.03
19350	89.35	182.95	95	9068.7	3491.65	3491.65	1203.06	3693.09	19.01	0.71	-0.63	-0.32
19444	89.68	183.28	94	9069.5	3397.79	3397.79	1197.96	3602.79	19.42	0.50	0.35	0.35
19538	89.82	181.36	94	9069.9	3303.87	3303.87	1194.15	3513.05	19.87	2.05	0.15	-2.04
19632	88.20	180.16	94	9071.5	3209.90	3209.90	1192.90	3424.39	20.39	2.14	-1.72	-1.28
19727	89.23	180.36	95	9073.6	3114.92	3114.92	1192.47	3335.38	20.95	1.10	1.08	0.21
19821	89.85	181.10	94	9074.4	3020.94	3020.94	1191.28	3247.34	21.52	1.03	0.66	0.79
20010	90.34	180.99	189	9074.1	2831.97	2831.97	1187.83	3070.99	22.75	0.27	0.26	-0.06
20105	90.67	181.38	95	9073.3	2736.99	2736.99	1185.86	2982.85	23.43	0.54	0.35	0.41
20199	90.25	181.00	94	9072.5	2643.02	2643.02	1183.91	2896.06	24.13	0.60	-0.45	-0.40
20293	90.51	180.85	94	9071.9	2549.03	2549.03	1182.39	2809.91	24.88	0.32	0.28	-0.16
20387	90.14	180.83	94	9071.3	2455.04	2455.04	1181.02	2724.34	25.69	0.39	-0.39	-0.02
20482	90.64	180.75	95	9070.7	2360.05	2360.05	1179.71	2638.48	26.56	0.53	0.53	-0.08
20576	90.22	180.70	94	9070.0	2266.06	2266.06	1178.52	2554.20	27.48	0.45	-0.45	-0.05
20670	91.69	181.66	94	9068.4	2172.10	2172.10	1176.58	2470.30	28.44	1.87	1.56	1.02
20765	91.18	181.79	95	9066.0	2077.17	2077.17	1173.72	2385.85	29.47	0.55	-0.54	0.14
20859	90.94	180.84	94	9064.3	1983.22	1983.22	1171.57	2303.41	30.57	1.04	-0.26	-1.01
20954	89.39	180.83	95	9064.0	1888.23	1888.23	1170.18	2221.43	31.79	1.63	-1.63	-0.01
21048	91.66	182.43	94	9063.2	1794.28	1794.28	1167.51	2140.68	33.05	2.95	2.41	1.70
21143	88.40	180.66	95	9063.1	1699.33	1699.33	1164.95	2060.30	34.43	3.90	-3.43	-1.86
21237	88.27	180.56	94	9065.9	1605.38	1605.38	1163.95	1982.93	35.94	0.17	-0.14	-0.11
21332	91.22	181.82	95	9066.3	1510.41	1510.41	1161.97	1905.66	37.57	3.38	3.11	1.33
21521	92.56	181.77	189	9060.0	1321.61	1321.61	1156.06	1755.88	41.18	0.71	0.71	-0.03
21616	91.26	183.03	95	9056.9	1226.75	1226.75	1152.08	1682.92	43.20	1.91	-1.37	1.33
21710	92.38	183.54	94	9053.9	1132.95	1132.95	1146.70	1611.99	45.35	1.31	1.19	0.54
21805	90.44	183.18	95	9051.6	1038.15	1038.15	1141.13	1542.71	47.71	2.08	-2.04	-0.38
21899	87.27	181.98	94	9053.4	944.28	944.28	1136.90	1477.91	50.29	3.61	-3.37	-1.28
21994	90.18	182.24	95	9055.5	849.38	849.38	1133.41	1416.35	53.15	3.08	3.06	0.27
22088	90.38	181.99	94	9055.1	755.44	755.44	1129.94	1359.21	56.23	0.34	0.21	-0.27
22183	89.88	182.71	95	9054.9	660.52	660.52	1126.04	1305.47	59.60	0.92	-0.53	0.76
22272	90.35	182.10	89	9054.7	571.60	571.60	1122.31	1259.48	63.01	0.87	0.53	-0.69
22372	89.55	181.14	100	9054.8	471.64	471.64	1119.48	1214.78	67.15	1.25	-0.80	-0.96
22466	89.62	181.86	94	9055.5	377.68	377.68	1117.02	1179.14	71.32	0.77	0.07	0.77
22561	90.59	182.63	95	9055.3	282.75	282.75	1113.30	1148.64	75.75	1.30	1.02	0.81
22749	88.75	181.90	188	9056.4	94.91	94.91	1105.87	1109.93	85.09	1.05	-0.98	-0.39
22844	88.63	179.09	95	9058.5	-0.05	-0.05	1105.05	1105.05	90.00	2.96	-0.13	-2.96
22938	88.75	181.16	94	9060.7	-94.02	-94.02	1104.84	1108.84	94.86	2.21	0.13	2.20
23033	88.61	180.92	95	9062.9	-188.98	-188.98	1103.12	1119.19	99.72	0.29	-0.15	-0.25
23052	88.51	180.95	19	9063.4	-207.97	-207.97	1102.81	1122.25	100.68	0.55	-0.53	0.16
23082	88.51	180.95	30	9064.1	-237.96	-237.96	1102.31	1127.70	102.18	0.00	0.00	0.00