

Minimum Radius of Curvature

API: 42-389-40675 **Well: Sunnyside State 2 10U A10HU** **Wellhead Location N+/S- : 31.728519**
Operator: PDC **Area: Orla** **E+/W- : -104.017081**
Rig: Citadel 4 **Type: U-Lateral** **Magnetic Declination: 6.48**
TD: 19,404' **Plane of Proposal: 1.84**

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			
225	0.62	179.73	225	225.0	-29.59	-1.22	0.01	1.22	179.73	0.28	0.28	79.88
318	4.53	206.43	93	317.9	-33.43	-5.01	-1.63	5.27	197.99	4.29	4.20	28.71
410	8.03	203.25	92	409.3	-42.72	-14.17	-5.78	15.31	202.20	3.82	3.80	-3.46
503	6.77	197.98	93	501.5	-54.04	-25.35	-10.04	27.27	201.60	1.54	-1.35	-5.67
595	5.10	191.60	92	593.0	-63.27	-34.52	-12.53	36.72	199.96	1.95	-1.82	-6.93
687	4.71	183.55	92	684.7	-71.08	-42.29	-13.59	44.42	197.81	0.86	-0.42	-8.75
780	4.25	181.68	93	777.4	-78.34	-49.55	-13.93	51.47	195.70	0.52	-0.49	-2.01
872	3.79	182.11	92	869.2	-84.79	-56.00	-14.14	57.75	194.17	0.50	-0.50	0.47
963	3.44	184.95	91	960.0	-90.53	-61.72	-14.49	63.40	193.21	0.43	-0.38	3.12
1055	3.37	188.14	92	1051.9	-95.97	-67.15	-15.11	68.83	192.68	0.22	-0.08	3.47
1150	3.35	185.42	95	1146.7	-101.52	-72.67	-15.77	74.37	192.24	0.17	-0.02	-2.86
1245	3.11	185.68	95	1241.5	-106.86	-78.00	-16.28	79.68	191.79	0.25	-0.25	0.27
1338	2.68	180.52	93	1334.4	-111.55	-82.69	-16.55	84.33	191.32	0.54	-0.46	-5.55
1433	2.79	180.79	95	1429.3	-116.08	-87.22	-16.60	88.79	190.78	0.12	0.12	0.28
1527	3.04	180.73	94	1523.2	-120.86	-92.00	-16.67	93.50	190.27	0.27	0.27	-0.06
1621	2.44	183.50	94	1617.1	-125.35	-96.49	-16.82	97.94	189.89	0.65	-0.64	2.95
1716	2.61	190.89	95	1712.0	-129.51	-100.63	-17.35	102.12	189.78	0.39	0.18	7.78
1810	3.78	189.56	94	1805.8	-134.69	-105.79	-18.27	107.36	189.80	1.25	1.24	-1.41
1905	3.25	191.77	95	1900.7	-140.45	-111.51	-19.34	113.18	189.84	0.58	-0.56	2.33
1999	2.91	186.59	94	1994.5	-145.45	-116.49	-20.16	118.22	189.82	0.47	-0.36	-5.51
2093	3.65	174.30	94	2088.4	-150.80	-121.84	-20.14	123.49	189.38	1.08	0.79	-13.07
2187	4.47	176.25	94	2182.1	-157.41	-128.47	-19.60	129.96	188.67	0.88	0.87	2.07
2233	4.11	179.66	46	2228.0	-160.84	-131.91	-19.47	133.34	188.40	0.96	-0.78	7.41
2376	3.22	176.08	143	2370.7	-169.96	-141.04	-19.17	142.34	187.74	0.64	-0.62	-2.50
2470	4.04	161.36	94	2464.5	-175.68	-146.81	-17.93	147.90	186.96	1.31	0.87	-15.66
2564	5.37	144.76	94	2558.2	-182.30	-153.54	-14.33	154.21	185.33	2.01	1.41	-17.66
2658	5.29	126.84	94	2651.8	-188.29	-159.73	-8.33	159.95	182.98	1.77	-0.09	-19.06
2753	4.60	120.34	95	2746.5	-192.62	-164.28	-1.53	164.29	180.53	0.93	-0.73	-6.84
2847	4.52	122.41	94	2840.2	-196.30	-168.17	4.85	168.24	178.35	0.19	-0.09	2.20
2941	4.91	124.19	94	2933.8	-200.34	-172.42	11.30	172.79	176.25	0.44	0.41	1.89
3035	5.68	128.31	94	3027.4	-205.26	-177.56	18.28	178.50	174.12	0.91	0.82	4.38
3130	5.43	128.00	95	3122.0	-210.70	-183.25	25.51	185.01	172.07	0.27	-0.26	-0.33
3224	4.87	130.38	94	3215.6	-215.81	-188.57	32.06	191.27	170.35	0.64	-0.60	2.53
3318	6.05	126.47	94	3309.2	-221.12	-194.10	39.08	197.99	168.62	1.32	1.26	-4.16
3413	5.88	124.43	95	3403.7	-226.58	-199.83	47.12	205.31	166.73	0.29	-0.18	-2.15
3507	5.39	126.28	94	3497.2	-231.67	-205.16	54.65	212.31	165.08	0.56	-0.52	1.97
3601	4.91	124.54	94	3590.8	-236.34	-210.05	61.52	218.88	163.68	0.54	-0.51	-1.85
3695	4.96	128.46	94	3684.5	-240.94	-214.86	68.02	225.37	162.43	0.36	0.05	4.17
3760	5.64	129.69	65	3749.2	-244.58	-218.65	72.68	230.41	161.61	1.06	1.05	1.89
3889	5.42	125.89	129	3877.6	-251.88	-226.27	82.49	240.84	159.97	0.33	-0.17	-2.95
3983	5.28	124.71	94	3971.2	-256.71	-231.33	89.64	248.10	158.82	0.19	-0.15	-1.26
4077	5.01	124.12	94	4064.8	-261.25	-236.10	96.59	255.10	157.75	0.29	-0.29	-0.63
4171	4.77	122.81	94	4158.5	-265.45	-240.52	103.28	261.76	156.76	0.28	-0.26	-1.39
4266	5.09	116.66	95	4253.1	-269.25	-244.55	110.36	268.30	155.71	0.65	0.34	-6.47
4360	5.66	113.46	94	4346.7	-272.71	-248.27	118.34	275.03	154.51	0.68	0.61	-3.40
4454	5.65	112.38	94	4440.3	-276.04	-251.87	126.87	282.02	153.26	0.11	-0.01	-1.15
4549	5.44	112.22	95	4534.8	-279.25	-255.36	135.37	289.02	152.07	0.22	-0.22	-0.17
4643	4.32	104.38	94	4628.5	-281.57	-257.92	142.92	294.87	151.01	1.38	-1.19	-8.34
4738	3.84	93.51	95	4723.2	-282.44	-259.01	149.56	299.09	150.00	0.96	-0.51	-11.44
4832	3.47	94.27	94	4817.0	-282.66	-259.41	155.54	302.47	149.05	0.40	-0.39	0.81
4927	3.14	97.36	95	4911.9	-283.03	-259.96	160.99	305.77	148.23	0.39	-0.35	3.25
5021	2.97	96.04	94	5005.8	-283.45	-260.54	165.96	308.91	147.50	0.20	-0.18	-1.40
5115	2.89	97.28	94	5099.6	-283.86	-261.10	170.73	311.97	146.82	0.11	-0.09	1.32
5209	2.62	98.09	94	5193.5	-284.31	-261.70	175.21	314.94	146.20	0.29	-0.29	0.86
5303	2.52	96.79	94	5287.4	-284.73	-262.25	179.39	317.74	145.63	0.12	-0.11	-1.38
5397	2.19	98.50	94	5381.4	-285.11	-262.76	183.22	320.33	145.11	0.36	-0.35	1.82
5491	1.81	105.63	94	5475.3	-285.68	-263.43	186.43	322.72	144.71	0.48	-0.40	7.59

Minimum Radius of Curvature

API: 42-389-40675 **Well: Sunnyside State 2 10U A10HU** **Wellhead Location N+/S- : 31.728519**
Operator: PDC **Area: Orla** **E+/W- : -104.017081**
Rig: Citadel 4 **Type: U-Lateral** **Magnetic Declination: 6.48**
TD: 19,404' **Plane of Proposal: 1.84**

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			
5586	1.72	105.12	95	5570.2	-286.36	-264.20	189.25	324.99	144.39	0.10	-0.09	-0.54
5680	1.71	111.25	94	5664.2	-287.15	-265.08	191.92	327.26	144.10	0.20	-0.01	6.52
5774	1.55	108.53	94	5758.2	-287.98	-265.99	194.43	329.47	143.83	0.19	-0.17	-2.89
5869	1.40	111.50	95	5853.1	-288.74	-266.82	196.73	331.51	143.60	0.18	-0.16	3.13
5963	1.35	123.98	94	5947.1	-289.72	-267.86	198.71	333.52	143.43	0.32	-0.05	13.28
6057	1.10	131.71	94	6041.1	-290.88	-269.08	200.31	335.45	143.34	0.32	-0.27	8.22
6152	0.92	116.99	95	6136.1	-291.79	-270.04	201.67	337.03	143.25	0.33	-0.19	-15.49
6245	0.92	110.92	93	6229.1	-292.35	-270.64	203.03	338.33	143.12	0.10	0.00	-6.53
6339	0.93	122.86	94	6323.1	-292.99	-271.32	204.37	339.68	143.01	0.20	0.01	12.70
6434	0.91	139.65	95	6418.0	-293.95	-272.32	205.51	341.16	142.96	0.28	-0.02	17.67
6528	0.41	140.64	94	6512.0	-294.76	-273.15	206.21	342.24	142.95	0.53	-0.53	1.05
6622	0.39	140.00	94	6606.0	-295.25	-273.65	206.63	342.90	142.94	0.02	-0.02	-0.68
6716	0.68	135.92	94	6700.0	-295.87	-274.30	207.22	343.77	142.93	0.31	0.31	-4.34
6810	0.58	61.88	94	6794.0	-296.02	-274.47	208.03	344.40	142.84	0.81	-0.11	-78.77
6905	1.36	77.60	95	6889.0	-295.51	-274.00	209.55	344.95	142.59	0.86	0.82	16.55
6999	1.63	94.53	94	6983.0	-295.30	-273.87	211.97	346.32	142.26	0.55	0.29	18.01
7094	1.81	99.20	95	7077.9	-295.55	-274.22	214.80	348.33	141.93	0.24	0.19	4.92
7188	0.95	103.20	94	7171.9	-295.90	-274.63	217.03	350.03	141.68	0.92	-0.91	4.26
7282	0.30	32.69	94	7265.9	-295.84	-274.60	217.92	350.56	141.57	0.95	-0.69	-75.01
7377	0.30	11.36	95	7360.9	-295.38	-274.15	218.10	350.32	141.50	0.12	0.00	-22.45
7472	0.17	322.90	95	7455.9	-295.02	-273.79	218.07	350.02	141.46	0.24	-0.14	327.94
7567	0.12	134.14	95	7550.9	-294.98	-273.75	218.05	349.98	141.46	0.30	-0.05	-198.69
7661	0.24	269.99	94	7644.9	-295.05	-273.82	217.93	349.96	141.48	0.36	0.13	144.52
7755	0.50	251.89	94	7738.9	-295.20	-273.95	217.34	349.69	141.57	0.30	0.28	-19.26
7846	0.36	281.12	91	7829.9	-295.29	-274.02	216.68	349.34	141.66	0.28	-0.15	32.12
7940	0.40	289.77	94	7923.9	-295.14	-273.85	216.08	348.83	141.72	0.07	0.04	9.20
8034	0.38	253.14	94	8017.9	-295.14	-273.83	215.48	348.44	141.80	0.26	-0.02	-38.97
8129	0.57	218.79	95	8112.9	-295.62	-274.29	214.88	348.43	141.92	0.35	0.20	-36.16
8223	0.23	248.26	94	8206.9	-296.07	-274.72	214.41	348.49	142.03	0.41	-0.36	31.35
8317	0.56	282.66	94	8300.9	-296.06	-274.69	213.79	348.08	142.11	0.42	0.35	36.60
8412	0.45	278.84	95	8395.9	-295.92	-274.53	212.96	347.45	142.20	0.12	-0.12	-4.02
8506	0.58	258.33	94	8489.9	-295.99	-274.57	212.13	346.97	142.31	0.24	0.14	-21.82
8600	0.56	257.72	94	8583.9	-296.21	-274.76	211.22	346.57	142.45	0.02	-0.02	-0.65
8694	0.70	295.68	94	8677.9	-296.09	-274.61	210.25	345.86	142.56	0.46	0.15	40.38
8788	0.59	267.74	94	8771.9	-295.90	-274.38	209.25	345.07	142.67	0.35	-0.12	-29.72
8882	0.88	283.49	94	8865.9	-295.78	-274.23	208.07	344.23	142.81	0.37	0.31	16.76
8919	1.03	262.98	37	8902.8	-295.78	-274.21	207.46	343.85	142.89	1.00	0.41	-55.43
8999	4.46	339.34	80	8983.2	-293.00	-271.37	205.64	340.48	142.85	5.39	4.27	94.96
9027	5.92	342.67	28	9010.6	-290.66	-269.01	204.84	338.12	142.71	5.40	5.29	12.07
9121	18.27	357.11	94	9102.4	-271.32	-249.59	202.64	321.49	140.93	13.43	13.14	15.36
9216	31.79	6.94	95	9188.3	-231.36	-209.67	204.92	293.18	135.66	14.84	14.23	-368.60
9310	44.03	14.65	94	9262.4	-174.59	-153.24	216.23	265.02	125.33	13.94	13.02	8.20
9403	49.73	14.32	93	9325.9	-108.38	-87.54	233.19	249.08	110.58	6.13	6.13	-0.35
9498	54.65	13.62	95	9384.1	-35.02	-14.73	251.29	251.72	93.35	5.21	5.18	-0.74
9592	60.32	13.20	94	9434.6	42.60	62.35	269.66	276.77	76.98	6.04	6.03	-0.45
9687	67.04	14.70	95	9476.7	125.80	144.93	290.20	324.38	63.46	7.21	7.07	1.58
9781	74.03	13.54	94	9508.0	212.35	230.83	311.79	387.94	53.49	7.53	7.44	-1.23
9837	76.24	13.21	56	9522.4	265.38	283.48	324.31	430.74	48.84	3.99	3.95	-0.59
9871	77.17	13.22	34	9530.2	297.82	315.69	331.87	458.04	46.43	2.74	2.74	0.03
10006	78.90	11.36	135	9558.2	427.68	444.73	359.98	572.16	38.99	1.86	1.28	-1.38
10100	83.64	9.10	94	9572.5	519.57	536.13	376.46	655.10	35.08	5.57	5.04	-2.40
10132	86.62	7.96	32	9575.2	551.23	567.66	381.19	683.77	33.88	9.97	9.31	-3.56
10194	88.95	6.78	62	9577.6	612.89	629.09	389.13	739.72	31.74	4.21	3.76	-1.90
10289	88.82	6.41	95	9579.4	707.55	723.45	400.04	826.69	28.94	0.41	-0.14	-0.39
10383	91.36	5.40	94	9579.3	801.30	816.94	409.71	913.92	26.63	2.91	2.70	-1.07
10477	91.16	4.87	94	9577.2	895.12	910.54	418.12	1001.95	24.66	0.60	-0.21	-0.56
10571	89.44	4.21	94	9576.7	989.01	1004.24	425.56	1090.69	22.97	1.96	-1.83	-0.70
10665	90.41	4.38	94	9576.9	1082.93	1097.97	432.60	1180.12	21.50	1.05	1.03	0.18

Minimum Radius of Curvature

API: 42-389-40675 **Well: Sunnyside State 2 10U A10HU** **Wellhead Location N+/S- : 31.728519**
Operator: PDC **Area: Orla** **E+/W- : -104.017081**
Rig: Citadel 4 **Type: U-Lateral** **Magnetic Declination: 6.48**
TD: 19,404' **Plane of Proposal: 1.84**

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			
10760	88.75	3.96	95	9577.6	1177.84	1192.72	439.51	1271.12	20.23	1.80	-1.75	-0.44
10853	88.61	4.37	93	9579.7	1270.74	1285.45	446.26	1360.71	19.15	0.47	-0.15	0.44
10947	90.27	5.13	94	9580.6	1364.61	1379.11	454.05	1451.93	18.22	1.94	1.77	0.81
11041	90.27	5.11	94	9580.2	1458.45	1472.74	462.44	1543.63	17.43	0.02	0.00	-0.02
11135	90.24	5.20	94	9579.8	1552.30	1566.36	470.88	1635.60	16.73	0.10	-0.03	0.10
11229	90.92	4.85	94	9578.8	1646.15	1659.99	479.12	1727.75	16.10	0.81	0.72	-0.37
11323	90.13	2.63	94	9577.9	1740.08	1753.78	485.25	1819.67	15.47	2.51	-0.84	-2.36
11418	89.72	2.99	95	9578.1	1835.07	1848.66	489.90	1912.48	14.84	0.57	-0.43	0.38
11511	90.50	3.63	93	9577.9	1928.04	1941.51	495.27	2003.68	14.31	1.08	0.84	0.69
11605	90.14	3.60	94	9577.4	2021.99	2035.32	501.20	2096.12	13.83	0.38	-0.38	-0.03
11699	88.81	0.89	94	9578.2	2115.97	2129.23	504.88	2188.27	13.34	3.21	-1.41	-2.88
11793	89.87	1.58	94	9579.3	2209.96	2223.20	506.91	2280.26	12.84	1.35	1.13	0.73
11887	89.59	1.44	94	9579.8	2303.96	2317.17	509.38	2372.50	12.40	0.33	-0.30	-0.15
11981	88.95	1.24	94	9581.0	2397.95	2411.13	511.58	2464.81	11.98	0.71	-0.68	-0.21
12075	89.45	1.47	94	9582.3	2491.93	2505.10	513.81	2557.25	11.59	0.59	0.53	0.24
12169	90.66	2.31	94	9582.2	2585.93	2599.05	516.91	2649.95	11.25	1.57	1.29	0.89
12263	90.92	3.35	94	9580.9	2679.91	2692.92	521.55	2742.96	10.96	1.14	0.28	1.11
12357	87.80	3.23	94	9581.9	2773.86	2786.75	526.94	2836.13	10.71	3.32	-3.32	-0.13
12452	87.62	3.59	95	9585.7	2868.75	2881.50	532.59	2930.31	10.47	0.42	-0.19	0.38
12545	89.06	3.65	93	9588.4	2961.66	2974.28	538.45	3022.62	10.26	1.55	1.55	0.06
12640	92.20	1.85	95	9587.4	3056.63	3069.15	543.01	3116.81	10.03	3.81	3.31	-1.89
12735	90.29	1.61	95	9585.3	3151.60	3164.08	545.88	3210.82	9.79	2.03	-2.01	-0.25
12829	91.15	1.62	94	9584.1	3245.59	3258.03	548.53	3303.88	9.56	0.91	0.91	0.01
12924	90.39	1.92	95	9582.8	3340.58	3352.98	551.46	3398.02	9.34	0.86	-0.80	0.32
13018	91.61	2.97	94	9581.2	3434.56	3446.87	555.47	3491.34	9.15	1.71	1.30	1.12
13113	88.35	1.95	95	9581.2	3529.54	3541.77	559.55	3585.70	8.98	3.60	-3.43	-1.07
13207	88.70	2.24	94	9583.7	3623.51	3635.68	562.98	3679.01	8.80	0.48	0.37	0.31
13302	90.36	2.09	95	9584.4	3718.50	3730.60	566.57	3773.38	8.64	1.75	1.75	-0.16
13396	90.90	2.34	94	9583.4	3812.49	3824.53	570.21	3866.80	8.48	0.63	0.57	0.27
13490	89.10	2.22	94	9583.4	3906.48	3918.45	573.94	3960.26	8.33	1.92	-1.91	-0.13
13584	88.31	11.74	94	9585.5	3999.97	4011.62	585.35	4054.10	8.30	10.16	-0.84	10.13
13678	86.93	25.80	94	9589.5	4089.60	4100.32	615.49	4146.26	8.54	15.02	-1.47	14.96
13707	87.23	28.81	29	9590.9	4115.74	4126.05	628.77	4173.69	8.66	10.42	1.03	10.38
13741	87.60	32.35	34	9592.5	4145.58	4155.35	646.09	4205.28	8.84	10.44	1.09	10.39
13772	87.94	35.56	31	9593.7	4171.75	4180.98	663.35	4233.28	9.02	10.43	1.10	10.38
13866	89.06	46.42	94	9596.1	4244.51	4251.80	724.89	4313.15	9.68	11.61	1.19	11.55
13960	90.52	60.13	94	9596.5	4302.97	4307.87	800.05	4381.54	10.52	14.67	1.55	14.59
14054	90.84	66.78	94	9595.4	4347.63	4349.86	884.09	4438.79	11.49	7.08	0.34	7.07
14149	88.39	75.55	95	9596.0	4381.13	4380.50	973.90	4487.45	12.53	9.58	-2.58	9.23
14243	89.15	87.23	94	9598.0	4398.15	4394.54	1066.66	4522.14	13.64	12.45	0.81	12.43
14337	88.22	95.51	94	9600.2	4398.92	4392.29	1160.53	4543.03	14.80	8.86	-0.99	8.81
14431	88.92	106.07	94	9602.6	4384.32	4374.73	1252.71	4550.55	15.98	11.26	0.74	11.23
14526	86.30	114.03	95	9606.5	4354.69	4342.22	1341.79	4544.81	17.17	8.81	-2.76	8.38
14620	89.09	124.28	94	9610.3	4311.65	4296.52	1423.70	4526.26	18.33	11.29	2.97	10.90
14714	88.25	133.18	94	9612.5	4255.29	4237.79	1496.93	4494.40	19.45	9.51	-0.89	9.47
14808	87.75	143.43	94	9615.8	4187.28	4167.73	1559.34	4449.89	20.51	10.91	-0.53	10.90
14868	87.86	149.61	60	9618.1	4138.24	4117.60	1592.49	4414.82	21.14	10.26	0.18	10.27
14902	87.93	153.08	34	9619.3	4109.12	4087.95	1608.70	4393.09	21.48	10.26	0.21	10.26
14996	90.99	160.03	94	9620.2	4024.19	4001.77	1646.07	4327.09	22.36	8.08	3.26	7.39
15091	89.90	168.61	95	9619.5	3933.69	3910.40	1671.72	4252.75	23.15	9.10	-1.15	9.03
15185	90.24	176.53	94	9619.4	3840.99	3817.26	1683.86	4172.16	23.80	8.43	0.36	8.43
15280	89.51	181.55	95	9619.6	3746.13	3722.31	1685.45	4086.11	24.36	5.34	-0.77	5.28
15374	87.70	182.35	94	9621.9	3652.17	3628.39	1682.26	3999.40	24.87	2.11	-1.93	0.85
15468	87.32	182.72	94	9625.9	3558.26	3534.58	1678.10	3912.70	25.40	0.56	-0.40	0.39
15562	87.60	183.42	94	9630.1	3464.38	3440.80	1673.07	3826.00	25.93	0.80	0.30	0.74
15656	85.19	183.93	94	9636.0	3370.62	3347.19	1667.06	3739.35	26.48	2.62	-2.56	0.54
15750	84.81	183.84	94	9644.2	3277.04	3253.76	1660.72	3653.07	27.04	0.42	-0.40	-0.10
15844	86.51	184.07	94	9651.3	3183.37	3160.26	1654.25	3567.04	27.63	1.82	1.81	0.24

Minimum Radius of Curvature

API: 42-389-40675 **Well: Sunnyside State 2 10U A10HU** **Wellhead Location N+/S- : 31.728519**
Operator: PDC **Area: Orla** **E+/W- : -104.017081**
Rig: Citadel 4 **Type: U-Lateral** **Magnetic Declination: 6.48**
TD: 19,404' **Plane of Proposal: 1.84**

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			
15939	85.33	183.74	95	9658.1	3088.68	3065.72	1647.80	3480.50	28.26	1.29	-1.24	-0.35
16032	87.28	183.75	93	9664.1	2995.93	2973.12	1641.74	3396.28	28.91	2.10	2.10	0.01
16127	87.69	184.05	95	9668.3	2901.08	2878.43	1635.28	3310.51	29.60	0.53	0.43	0.32
16221	86.92	183.02	94	9672.7	2807.23	2784.71	1629.49	3226.43	30.33	1.37	-0.82	-1.10
16316	89.78	182.32	95	9675.4	2712.29	2689.87	1625.07	3142.65	31.14	3.10	3.01	-0.74
16410	90.52	182.67	94	9675.2	2618.29	2595.96	1620.98	3060.48	31.98	0.87	0.79	0.37
16505	89.82	182.05	95	9674.9	2523.30	2501.04	1617.07	2978.27	32.88	0.98	-0.74	-0.65
16599	89.87	182.43	94	9675.1	2429.30	2407.11	1613.39	2897.79	33.83	0.41	0.05	0.40
16694	90.78	183.12	95	9674.6	2334.32	2312.23	1608.79	2816.84	34.83	1.20	0.96	0.73
16789	92.17	183.19	95	9672.1	2239.38	2217.40	1603.57	2736.48	35.87	1.47	1.46	0.07
16883	92.05	183.61	94	9668.7	2145.47	2123.63	1597.99	2657.71	36.96	0.46	-0.13	0.45
16978	90.39	183.22	95	9666.7	2050.54	2028.83	1592.34	2579.08	38.13	1.79	-1.75	-0.41
17072	89.10	181.91	94	9667.1	1956.55	1934.93	1588.13	2503.22	39.38	1.96	-1.37	-1.39
17165	87.34	181.05	93	9670.0	1863.60	1842.01	1585.73	2430.54	40.72	2.11	-1.89	-0.92
17260	86.75	180.91	95	9674.9	1768.74	1747.15	1584.11	2358.37	42.20	0.64	-0.62	-0.15
17353	87.14	180.89	93	9679.8	1675.88	1654.29	1582.65	2289.42	43.73	0.42	0.42	-0.02
17448	89.72	183.30	95	9682.4	1580.93	1559.40	1579.18	2219.36	45.36	3.72	2.72	2.54
17541	89.71	183.16	93	9682.9	1487.96	1466.55	1573.94	2151.29	47.02	0.15	-0.01	-0.15
17637	90.70	184.19	96	9682.5	1392.01	1370.75	1567.78	2082.52	48.84	1.49	1.03	1.07
17731	90.87	183.77	94	9681.3	1298.09	1276.99	1561.26	2016.99	50.72	0.48	0.18	-0.45
17825	90.88	183.66	94	9679.8	1204.15	1183.20	1555.17	1954.10	52.74	0.12	0.01	-0.12
17919	92.40	184.32	94	9677.1	1110.26	1089.47	1548.63	1893.46	54.87	1.76	1.62	0.70
18013	91.85	184.55	94	9673.6	1016.42	995.81	1541.37	1835.06	57.14	0.63	-0.59	0.24
18107	91.69	184.91	94	9670.7	922.58	902.18	1533.62	1779.30	59.53	0.42	-0.17	0.38
18201	92.25	185.40	94	9667.5	828.80	808.61	1525.18	1726.28	62.07	0.79	0.60	0.52
18295	87.76	181.81	94	9667.5	734.88	714.84	1519.27	1679.04	64.80	6.12	-4.78	-3.82
18389	91.22	182.98	94	9668.3	640.91	620.94	1515.34	1637.63	67.72	3.89	3.68	1.24
18484	89.89	181.97	95	9667.4	545.92	526.04	1511.24	1600.18	70.81	1.76	-1.40	-1.06
18578	89.05	181.13	94	9668.3	451.93	432.08	1508.70	1569.35	74.02	1.26	-0.89	-0.89
18672	93.73	183.81	94	9666.0	357.99	338.23	1504.65	1542.20	77.33	5.74	4.98	2.85
18766	92.09	181.19	94	9661.2	264.13	244.45	1500.56	1520.34	80.75	3.29	-1.74	-2.79
18860	90.46	182.49	94	9659.1	170.16	150.53	1497.54	1505.09	84.26	2.22	-1.73	1.38
18955	89.30	183.20	95	9659.3	75.18	55.65	1492.83	1493.86	87.87	1.43	-1.22	0.75
19049	89.09	183.44	94	9660.7	-18.78	-38.19	1487.38	1487.87	91.47	0.34	-0.22	0.26
19143	87.00	182.74	94	9663.9	-112.70	-131.99	1482.32	1488.19	95.09	2.34	-2.22	-0.74
19237	86.18	183.24	94	9669.5	-206.51	-225.69	1477.43	1494.57	98.69	1.02	-0.87	0.53
19332	85.23	183.06	95	9676.6	-301.22	-320.28	1472.22	1506.66	102.27	1.02	-1.00	-0.19
19353	84.95	183.04	21	9678.4	-322.14	-341.18	1471.11	1510.15	103.06	1.34	-1.33	-0.10
19401	84.95	183.04	48	9682.6	-369.66	-388.64	1468.59	1519.14	104.82	0.00	0.00	0.00
19404	84.95	183.04	3	9682.9	-372.93	-391.91	1468.41	1519.81	104.94	0.00	0.00	0.00