

# Minimum Radius of Curvature

**API: 42-389-40518**      **Well: Sunnyside State 2 9U C9HU**      **Wellhead Location N+/S- : 31.728506**  
**Operator: PDC**      **Area: Orla**      **E+/W- : -104.017019**  
**Rig: Citadel 4**      **Type: U-Lateral**      **Magnetic Declination: 6.48**  
**TD: 21,887'**      **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			
201	0.99	300.97	201	201.0	-27.53	0.89	-1.49	1.74	300.97	0.49	0.49	149.74
293	2.09	303.75	92	293.0	-26.25	2.23	-3.57	4.21	302.08	1.20	1.20	3.02
385	2.24	306.64	92	384.9	-24.34	4.24	-6.40	7.68	303.51	0.20	0.16	3.14
477	1.12	299.48	92	476.8	-22.90	5.76	-8.63	10.37	303.70	1.24	-1.22	-7.78
569	1.16	293.84	92	568.8	-22.13	6.57	-10.26	12.19	302.64	0.13	0.04	-6.13
662	0.80	321.56	93	661.8	-21.28	7.46	-11.53	13.73	302.92	0.63	-0.39	29.81
754	0.24	343.63	92	753.8	-20.61	8.15	-11.98	14.49	304.23	0.64	-0.61	23.99
847	0.32	24.28	93	846.8	-20.19	8.57	-11.93	14.69	305.71	0.22	0.09	-343.39
940	0.28	28.97	93	939.8	-19.74	9.01	-11.71	14.78	307.57	0.05	-0.04	5.04
1071	0.08	92.02	131	1070.8	-19.46	9.29	-11.47	14.76	309.01	0.19	-0.15	48.13
1166	2.06	246.47	95	1165.8	-20.19	8.60	-12.97	15.56	303.57	2.24	2.08	162.58
1260	4.33	237.25	94	1259.6	-22.93	6.01	-17.50	18.50	288.95	2.47	2.41	-9.81
1354	6.84	239.26	94	1353.2	-27.96	1.23	-25.30	25.33	272.78	2.68	2.67	2.14
1448	8.08	239.64	94	1446.4	-34.49	-4.97	-35.81	36.15	262.09	1.32	1.32	0.40
1542	8.25	241.96	94	1539.4	-41.37	-11.48	-47.46	48.83	256.40	0.39	0.18	2.47
1637	8.52	245.41	95	1633.4	-47.90	-17.62	-59.88	62.41	253.61	0.60	0.28	3.63
1731	8.99	247.01	94	1726.3	-54.08	-23.38	-72.97	76.62	252.23	0.56	0.50	1.70
1825	9.11	246.35	94	1819.2	-60.37	-29.24	-86.55	91.35	251.34	0.17	0.13	-0.70
1920	8.84	245.75	95	1913.0	-66.82	-35.25	-100.09	106.12	250.60	0.30	-0.28	-0.63
2014	8.71	247.31	94	2005.9	-72.95	-40.96	-113.24	120.42	250.11	0.29	-0.14	1.66
2109	8.67	248.35	95	2099.8	-78.79	-46.38	-126.53	134.77	249.87	0.17	-0.04	1.09
2203	8.94	247.89	94	2192.7	-84.58	-51.74	-139.89	149.15	249.70	0.30	0.29	-0.49
2296	9.36	239.49	93	2284.5	-91.56	-58.30	-153.10	163.82	249.15	1.50	0.45	-9.03
2391	9.42	233.45	95	2378.2	-100.52	-66.85	-166.00	178.95	248.06	1.04	0.06	-6.36
2485	9.15	231.99	94	2471.0	-110.09	-76.04	-178.07	193.62	246.88	0.38	-0.29	-1.55
2579	9.55	233.62	94	2563.8	-119.70	-85.26	-190.23	208.47	245.86	0.51	0.43	1.73
2673	9.31	228.95	94	2656.5	-129.70	-94.88	-202.25	223.40	244.87	0.85	-0.26	-4.97
2768	8.95	225.46	95	2750.3	-140.28	-105.11	-213.31	237.80	243.77	0.70	-0.38	-3.67
2862	9.04	224.80	94	2843.1	-150.98	-115.48	-223.72	251.77	242.70	0.15	0.10	-0.70
2956	9.14	224.66	94	2936.0	-161.86	-126.03	-234.17	265.94	241.71	0.11	0.11	-0.15
3051	9.20	225.66	95	3029.7	-172.87	-136.71	-244.91	280.48	240.83	0.18	0.06	1.05
3145	9.33	224.81	94	3122.5	-183.87	-147.36	-255.65	295.08	240.04	0.20	0.14	-0.90
3239	9.51	222.43	94	3215.2	-195.34	-158.50	-266.26	309.87	239.24	0.46	0.19	-2.53
3333	9.61	222.82	94	3307.9	-207.16	-169.99	-276.84	324.86	238.45	0.13	0.11	0.41
3428	9.29	220.62	95	3401.7	-219.13	-181.63	-287.22	339.83	237.69	0.51	-0.34	-2.32
3522	9.63	220.43	94	3494.4	-231.19	-193.37	-297.26	354.62	236.96	0.36	0.36	-0.20
3616	9.16	224.72	94	3587.1	-242.81	-204.67	-307.62	369.49	236.36	0.90	-0.50	4.56
3710	8.63	229.41	94	3680.0	-253.06	-214.58	-318.24	383.82	236.01	0.96	-0.56	4.99
3805	8.57	228.34	95	3773.9	-262.74	-223.92	-328.94	397.92	235.76	0.18	-0.06	-1.13
3899	8.73	228.49	94	3866.8	-272.45	-233.30	-339.52	411.95	235.50	0.17	0.17	0.16
3993	8.93	228.05	94	3959.7	-282.40	-242.91	-350.28	426.27	235.26	0.22	0.21	-0.47
4087	9.65	228.40	94	4052.5	-292.87	-253.01	-361.60	441.33	235.02	0.77	0.77	0.37
4182	10.13	227.45	95	4146.1	-304.19	-263.95	-373.71	457.52	234.77	0.53	0.51	-1.00
4276	9.70	228.43	94	4238.7	-315.41	-274.79	-385.72	473.60	234.53	0.49	-0.46	1.04
4370	8.58	226.29	94	4331.5	-325.86	-284.90	-396.72	488.42	234.32	1.24	-1.19	-2.28
4465	7.28	226.12	95	4425.6	-335.23	-293.96	-406.18	501.39	234.11	1.37	-1.37	-0.18
4559	6.93	225.14	94	4518.9	-343.62	-302.09	-414.49	512.90	233.91	0.39	-0.37	-1.04
4653	4.98	224.52	94	4612.3	-350.75	-309.00	-421.37	522.53	233.75	2.08	-2.07	-0.66
4748	3.52	213.91	95	4707.1	-356.25	-314.36	-425.89	529.35	233.57	1.74	-1.54	-11.17
4842	2.09	227.91	94	4801.0	-359.88	-317.91	-428.77	533.77	233.45	1.68	-1.52	14.89
4937	2.55	247.74	95	4895.9	-361.95	-319.87	-432.02	537.54	233.48	0.97	0.48	20.87
5031	2.54	248.77	94	4989.8	-363.62	-321.42	-435.89	541.58	233.60	0.05	-0.01	1.10
5125	3.04	243.58	94	5083.7	-365.61	-323.28	-440.07	546.05	233.70	0.60	0.53	-5.52
5219	3.19	241.20	94	5177.5	-368.13	-325.65	-444.59	551.10	233.78	0.21	0.16	-2.53
5314	3.28	238.23	95	5272.4	-370.98	-328.35	-449.22	556.43	233.84	0.20	0.09	-3.13
5407	3.25	236.94	93	5365.2	-373.96	-331.19	-453.69	561.71	233.87	0.09	-0.03	-1.39
5501	3.20	233.60	94	5459.1	-377.11	-334.20	-458.03	567.00	233.88	0.21	-0.05	-3.55

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5596	3.15	234.44	95	5554.0	-380.33	-337.29	-462.29	572.26	233.89	0.07	-0.05	0.88
5690	3.03	233.47	94	5647.8	-383.45	-340.27	-466.39	577.32	233.89	0.14	-0.13	-1.03
5784	2.92	228.79	94	5741.7	-386.62	-343.33	-470.19	582.19	233.86	0.28	-0.12	-4.98
5879	2.75	227.82	95	5836.6	-389.86	-346.45	-473.69	586.87	233.82	0.19	-0.18	-1.02
5973	2.59	226.95	94	5930.5	-392.92	-349.42	-476.92	591.22	233.77	0.18	-0.17	-0.93
6067	2.42	233.01	94	6024.4	-395.67	-352.06	-480.05	595.32	233.74	0.33	-0.18	6.45
6162	2.31	234.49	95	6119.3	-398.09	-354.38	-483.22	599.24	233.74	0.13	-0.12	1.56
6256	2.26	234.68	94	6213.2	-400.35	-356.55	-486.27	602.98	233.75	0.05	-0.05	0.20
6350	2.41	228.35	94	6307.1	-402.83	-358.94	-489.26	606.80	233.73	0.32	0.16	-6.73
6444	2.67	225.09	94	6401.1	-405.79	-361.80	-492.29	610.94	233.69	0.32	0.28	-3.47
6538	2.34	220.76	94	6495.0	-408.88	-364.80	-495.09	614.97	233.62	0.40	-0.35	-4.61
6632	2.02	219.93	94	6588.9	-411.67	-367.52	-497.41	618.45	233.54	0.34	-0.34	-0.88
6727	2.53	205.94	95	6683.8	-414.91	-370.69	-499.40	621.94	233.41	0.79	0.54	-14.73
6821	3.23	202.43	94	6777.7	-419.28	-375.00	-501.32	626.05	233.20	0.77	0.74	-3.73
6915	2.06	208.28	94	6871.6	-423.27	-378.94	-503.13	629.87	233.01	1.28	-1.24	6.22
7010	1.55	217.39	95	6966.6	-425.84	-381.46	-504.72	632.65	232.92	0.61	-0.54	9.59
7104	1.90	218.18	94	7060.5	-428.13	-383.70	-506.45	635.39	232.85	0.37	0.37	0.84
7198	1.24	230.06	94	7154.5	-430.07	-385.58	-508.19	637.91	232.81	0.78	-0.70	12.64
7292	0.87	238.28	94	7248.5	-431.14	-386.60	-509.58	639.64	232.81	0.42	-0.39	8.74
7387	0.47	200.29	95	7343.5	-431.91	-387.35	-510.33	640.68	232.80	0.61	-0.42	-39.99
7482	0.58	223.12	95	7438.4	-432.64	-388.07	-510.79	641.49	232.77	0.25	0.12	24.03
7577	0.61	234.09	95	7533.4	-433.31	-388.71	-511.53	642.47	232.77	0.12	0.03	11.55
7671	0.92	51.85	94	7627.4	-433.13	-388.54	-511.34	642.21	232.77	1.63	0.33	-193.87
7766	2.01	48.15	95	7722.4	-431.49	-386.96	-509.50	639.79	232.78	1.15	1.15	-3.89
7859	1.86	41.36	93	7815.4	-429.20	-384.74	-507.29	636.68	232.82	0.29	-0.16	-7.30
7954	1.39	48.52	95	7910.3	-427.22	-382.82	-505.41	634.02	232.86	0.54	-0.49	7.54
8045	0.81	85.24	91	8001.0	-426.39	-382.03	-503.94	632.38	232.83	0.98	-0.64	40.47
8048	0.80	87.38	3	8004.3	-426.39	-382.03	-503.90	632.35	232.83	0.97	-0.31	65.64
8143	0.60	75.07	95	8099.3	-426.19	-381.87	-502.76	631.34	232.78	0.26	-0.21	-12.96
8237	0.54	19.49	94	8193.3	-425.63	-381.33	-502.13	630.51	232.79	0.57	-0.06	-59.13
8331	0.63	349.98	94	8287.3	-424.70	-380.40	-502.07	629.91	232.85	0.33	0.10	351.59
8426	0.36	312.80	95	8382.3	-423.99	-379.69	-502.38	629.72	232.92	0.43	-0.28	-39.14
8520	0.20	209.32	94	8476.3	-423.94	-379.63	-502.68	629.92	232.94	0.48	-0.17	-110.09
8614	0.49	190.03	94	8570.3	-424.49	-380.17	-502.83	630.37	232.91	0.33	0.31	-20.52
8708	0.65	185.49	94	8664.3	-425.42	-381.09	-502.95	631.03	232.85	0.18	0.17	-4.83
8802	0.61	192.74	94	8758.3	-426.44	-382.11	-503.11	631.77	232.78	0.09	-0.04	7.71
8896	0.76	177.23	94	8852.3	-427.55	-383.22	-503.19	632.51	232.71	0.25	0.16	-16.50
8990	0.86	190.75	94	8946.3	-428.87	-384.54	-503.30	633.38	232.62	0.23	0.11	14.38
9084	1.04	188.84	94	9040.2	-430.42	-386.07	-503.56	634.53	232.52	0.19	0.19	-2.03
9179	1.14	193.32	95	9135.2	-432.20	-387.85	-503.91	635.88	232.42	0.14	0.11	4.72
9273	1.22	200.02	94	9229.2	-434.06	-389.70	-504.47	637.46	232.31	0.17	0.09	7.13
9367	1.37	199.51	94	9323.2	-436.09	-391.70	-505.18	639.25	232.21	0.16	0.16	-0.54
9462	1.40	197.41	95	9418.2	-438.29	-393.87	-505.91	641.16	232.10	0.06	0.03	-2.21
9556	1.35	195.36	94	9512.1	-440.47	-396.04	-506.55	642.99	231.98	0.07	-0.05	-2.18
9650	1.31	92.97	94	9606.1	-441.57	-397.16	-505.77	643.07	231.86	2.21	-0.04	-108.93
9686	2.09	70.64	36	9642.1	-441.34	-396.96	-504.74	642.14	231.82	2.80	2.17	-62.03
9764	4.24	59.76	78	9720.0	-439.29	-395.04	-500.90	637.94	231.74	2.85	2.76	-13.95
9858	16.60	38.11	94	9812.3	-426.57	-382.67	-489.57	621.38	231.99	13.57	13.15	-23.03
9952	20.84	27.84	94	9901.3	-400.70	-357.30	-473.46	593.15	232.96	5.70	4.51	-10.93
10033	24.85	13.77	81	9976.4	-370.91	-327.85	-462.62	567.01	234.67	8.29	4.93	-17.29
10047	25.63	11.85	14	9988.7	-365.22	-322.20	-461.33	562.71	235.07	8.31	5.74	-14.12
10141	32.43	4.90	94	10070.8	-319.96	-277.13	-454.99	532.75	238.66	8.06	7.23	-7.39
10235	37.14	0.49	94	10148.0	-266.39	-223.60	-452.60	504.82	243.71	5.68	5.01	-4.69
10329	49.32	2.55	94	10216.4	-202.13	-159.37	-450.76	478.10	250.53	13.04	12.96	2.19
10422	56.91	2.19	93	10272.2	-127.81	-85.10	-447.70	455.72	259.24	8.17	8.16	-0.39
10517	60.95	0.79	95	10321.2	-46.46	-3.78	-445.60	445.62	269.51	4.44	4.25	-1.47
10611	68.22	0.74	94	10361.5	38.38	81.06	-444.47	451.80	280.34	7.73	7.73	-0.05
10706	78.05	1.41	95	10389.0	129.17	171.85	-442.76	474.94	291.21	10.37	10.35	0.71

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10801	84.28	0.89	95	10403.6	222.99	265.65	-440.88	514.73	301.07	6.58	6.56	-0.55
10842	92.17	4.00	41	10404.9	263.93	306.56	-439.13	535.55	304.92	20.68	19.24	7.59
10895	91.68	4.22	53	10403.1	316.86	359.39	-435.33	564.51	309.54	1.01	-0.92	0.42
10990	87.54	4.51	95	10403.7	411.74	454.09	-428.10	624.08	316.69	4.37	-4.36	0.31
11084	87.94	3.68	94	10407.4	505.60	547.78	-421.39	691.11	322.43	0.98	0.43	-0.88
11178	88.15	3.12	94	10410.6	599.51	641.56	-415.82	764.53	327.05	0.64	0.22	-0.60
11273	90.15	1.00	95	10412.1	694.48	736.48	-412.41	844.09	330.75	3.07	2.11	-2.23
11373	88.95	2.65	100	10412.8	794.48	836.42	-409.23	931.16	333.93	2.04	-1.20	1.65
11467	88.47	1.48	94	10415.0	888.45	930.33	-405.84	1015.00	336.43	1.35	-0.51	-1.24
11561	88.66	4.43	94	10417.3	982.39	1024.17	-401.00	1099.87	338.62	3.14	0.20	3.14
11655	89.72	4.04	94	10418.6	1076.30	1117.90	-394.05	1185.32	340.58	1.20	1.13	-0.41
11749	88.01	359.87	94	10420.5	1170.26	1211.80	-390.85	1273.27	342.12	4.79	-1.82	378.54
11843	89.22	0.08	94	10422.8	1264.18	1305.77	-390.89	1363.03	343.33	1.31	1.29	-382.76
11937	87.60	0.54	94	10425.4	1358.10	1399.73	-390.38	1453.15	344.42	1.79	-1.72	0.49
12030	89.23	1.01	93	10428.0	1451.05	1492.69	-389.12	1542.57	345.39	1.82	1.75	0.51
12124	89.06	2.70	94	10429.4	1545.04	1586.62	-386.08	1632.92	346.32	1.81	-0.18	1.80
12218	89.85	4.65	94	10430.3	1638.98	1680.42	-380.06	1722.86	347.26	2.24	0.84	2.07
12313	89.44	3.25	95	10430.8	1733.91	1775.19	-373.51	1814.06	348.12	1.54	-0.43	-1.47
12407	89.05	0.70	94	10432.1	1827.89	1869.12	-370.27	1905.44	348.79	2.74	-0.41	-2.71
12501	89.82	357.12	94	10433.0	1921.75	1963.08	-372.06	1998.03	349.27	3.90	0.82	379.17
12595	89.79	355.70	94	10433.3	2015.32	2056.89	-377.95	2091.33	349.59	1.51	-0.03	-1.51
12689	89.87	355.96	94	10433.6	2108.81	2150.64	-384.78	2184.79	349.86	0.29	0.09	0.28
12783	89.13	356.82	94	10434.4	2202.38	2244.45	-390.70	2278.20	350.13	1.21	-0.79	0.91
12878	89.36	359.63	95	10435.7	2297.17	2339.39	-393.64	2372.28	350.45	2.97	0.24	2.96
12972	89.31	4.00	94	10436.8	2391.14	2433.31	-390.67	2464.47	350.88	4.65	-0.05	-378.33
13067	90.06	7.55	95	10437.3	2485.90	2527.81	-381.11	2556.38	351.43	3.82	0.79	3.74
13161	89.58	5.73	94	10437.6	2579.57	2621.18	-370.24	2647.20	351.96	2.00	-0.51	-1.94
13256	89.36	1.80	95	10438.5	2674.49	2715.95	-364.00	2740.23	352.37	4.14	-0.23	-4.14
13350	89.86	359.02	94	10439.1	2768.45	2809.94	-363.33	2833.33	352.63	3.00	0.53	380.02
13445	89.26	358.56	95	10439.8	2863.31	2904.91	-365.34	2927.79	352.83	0.80	-0.63	-0.48
13540	89.09	357.91	95	10441.2	2958.11	2999.86	-368.26	3022.37	353.00	0.71	-0.18	-0.68
13634	90.00	1.18	94	10442.0	3052.02	3093.84	-369.01	3115.76	353.20	3.61	0.97	-379.50
13728	89.17	3.73	94	10442.6	3146.00	3187.74	-364.98	3208.56	353.47	2.85	-0.88	2.71
13821	89.50	4.04	93	10443.7	3238.94	3280.52	-358.68	3300.07	353.76	0.49	0.35	0.33
13915	89.96	7.70	94	10444.2	3332.69	3374.01	-349.07	3392.02	354.09	3.92	0.49	3.89
14009	89.96	7.26	94	10444.2	3426.23	3467.21	-336.83	3483.53	354.45	0.47	0.00	-0.47
14103	89.20	4.49	94	10444.9	3519.99	3560.70	-327.21	3575.70	354.75	3.06	-0.81	-2.95
14198	90.08	3.57	95	10445.5	3614.91	3655.46	-320.54	3669.49	354.99	1.34	0.93	-0.97
14292	89.83	2.85	94	10445.6	3708.89	3749.31	-315.27	3762.55	355.19	0.81	-0.27	-0.77
14386	89.99	1.59	94	10445.7	3802.88	3843.24	-311.63	3855.86	355.36	1.35	0.17	-1.34
14480	89.65	359.98	94	10446.0	3896.86	3937.23	-310.34	3949.44	355.49	1.75	-0.36	381.27
14574	90.24	359.73	94	10446.1	3990.81	4031.23	-310.58	4043.18	355.59	0.68	0.63	-0.27
14669	89.50	3.75	95	10446.3	4085.78	4126.16	-307.70	4137.62	355.74	4.30	-0.78	-374.72
14732	89.72	7.00	63	10446.8	4188.66	4188.88	-301.80	4199.74	355.88	5.17	0.35	5.16
14776	89.33	8.43	44	10447.1	4192.44	4232.50	-295.89	4242.83	356.00	3.37	-0.89	3.25
14783	89.27	8.66	7	10447.2	4199.37	4239.40	-294.85	4249.64	356.02	3.41	-0.86	3.30
14877	87.07	12.21	94	10450.2	4292.25	4331.78	-277.84	4340.68	356.33	4.44	-2.34	3.78
14971	87.06	21.98	94	10455.0	4382.71	4421.40	-250.28	4428.47	356.76	10.38	-0.01	10.39
15065	89.68	32.79	94	10457.7	4467.35	4504.69	-207.12	4509.45	357.37	11.83	2.79	11.50
15134	88.35	37.39	69	10458.9	4524.61	4560.72	-167.76	4563.80	357.89	6.99	-1.94	6.72
15159	87.86	39.10	26	10459.7	4545.12	4580.74	-151.99	4583.26	358.10	6.97	-1.92	6.71
15254	90.45	50.35	95	10461.1	4614.60	4648.11	-85.25	4648.89	358.95	12.15	2.73	11.84
15348	88.54	58.30	94	10462.0	4671.80	4702.88	-8.96	4702.89	359.89	8.70	-2.03	8.46
15442	89.24	68.30	94	10463.8	4716.64	4745.05	74.89	4745.64	0.90	10.66	0.74	10.64
15537	88.26	79.22	95	10465.9	4746.07	4771.58	165.94	4774.46	1.99	11.54	-1.03	11.49
15630	88.75	89.11	93	10468.3	4758.47	4781.02	258.31	4787.99	3.09	10.64	0.53	10.63
15662	88.03	91.98	32	10469.2	4759.19	4780.71	290.30	4789.52	3.47	9.24	-2.25	8.97
15725	89.40	91.41	63	10470.6	4759.35	4778.85	353.25	4791.89	4.23	2.36	2.17	-0.90

# Minimum Radius of Curvature

**API: 42-389-40518**      **Well: Sunnyside State 2 9U C9HU**      **Wellhead Location N+/S-: 31.728506**  
**Operator: PDC**      **Area: Orla**      **E+/W-: -104.017019**  
**Rig: Citadel 4**      **Type: U-Lateral**      **Magnetic Declination: 6.48**  
**TD: 21,887'**      **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			
15819	90.70	90.85	94	10470.5	4760.52	4776.99	447.23	4797.88	5.35	1.51	1.38	-0.60
15913	88.66	89.65	94	10471.1	4763.13	4776.58	541.22	4807.15	6.46	2.52	-2.17	-1.28
16007	89.33	91.80	94	10472.7	4764.96	4775.40	635.19	4817.45	7.58	2.40	0.71	2.29
16101	88.54	90.32	94	10474.5	4766.23	4773.66	729.16	4829.02	8.68	1.78	-0.84	-1.57
16195	88.96	91.71	94	10476.5	4767.59	4771.99	823.12	4842.46	9.79	1.54	0.45	1.48
16289	88.73	92.86	94	10478.4	4766.86	4768.24	917.02	4855.62	10.89	1.25	-0.24	1.22
16384	88.75	93.10	95	10480.5	4764.97	4763.31	1011.87	4869.60	11.99	0.25	0.02	0.25
16478	89.16	98.09	94	10482.2	4758.82	4754.15	1105.38	4880.96	13.09	5.33	0.44	5.31
16573	89.36	107.96	95	10483.4	4740.41	4732.76	1197.81	4881.99	14.20	10.39	0.21	10.39
16668	89.38	117.14	95	10484.5	4706.85	4696.37	1285.45	4869.12	15.31	9.66	0.02	9.66
16762	88.61	128.02	94	10486.1	4658.89	4645.84	1364.53	4842.08	16.37	11.60	-0.82	11.57
16856	89.24	135.81	94	10487.9	4598.43	4583.11	1434.41	4802.33	17.38	8.31	0.67	8.29
16951	89.37	142.40	95	10489.1	4528.69	4511.34	1496.56	4753.09	18.35	6.94	0.14	6.94
16958	89.36	143.01	7	10489.1	4523.34	4505.85	1500.74	4749.20	18.42	8.84	-0.14	8.84
17046	89.20	150.84	88	10490.2	4451.16	4432.09	1548.78	4694.91	19.26	8.89	-0.18	8.89
17140	89.30	159.03	94	10491.5	4367.42	4347.02	1588.57	4628.19	20.07	8.71	0.11	8.71
17235	89.23	167.34	95	10492.7	4277.49	4256.17	1616.02	4552.64	20.79	8.75	-0.07	8.75
17328	90.32	174.62	93	10493.1	4186.22	4164.39	1630.59	4472.24	21.38	7.92	1.17	7.83
17423	89.43	179.08	95	10493.3	4091.61	4069.55	1635.81	4386.02	21.90	4.79	-0.94	4.69
17516	90.00	179.64	93	10493.7	3998.70	3976.56	1636.85	4300.27	22.37	0.86	0.61	0.60
17611	90.03	179.85	95	10493.7	3903.76	3881.56	1637.27	4212.74	22.87	0.22	0.03	0.22
17658	89.38	180.30	47	10494.0	3856.78	3834.56	1637.21	4169.45	23.12	1.68	-1.38	0.96
17701	90.81	180.04	43	10493.9	3813.80	3791.57	1637.08	4129.89	23.35	3.38	3.33	-0.60
17796	96.34	180.31	95	10488.0	3719.06	3696.79	1636.80	4042.94	23.88	5.83	5.82	0.28
17890	94.63	180.50	94	10479.0	3625.53	3603.22	1636.13	3957.29	24.42	1.83	-1.82	0.20
17984	94.63	180.92	94	10471.4	3531.85	3509.54	1634.97	3871.69	24.98	0.45	0.00	0.45
18078	94.35	181.71	94	10464.0	3438.15	3415.85	1632.82	3786.05	25.55	0.89	-0.30	0.84
18172	93.43	181.55	94	10457.7	3344.36	3322.11	1630.15	3700.51	26.14	0.99	-0.98	-0.17
18266	93.17	181.53	94	10452.2	3250.52	3228.30	1627.63	3615.40	26.76	0.28	-0.28	-0.02
18326	93.09	181.40	60	10449.0	3190.49	3168.29	1626.10	3561.21	27.17	0.25	-0.13	-0.22
18360	93.04	181.33	34	10447.1	3156.66	3134.46	1625.29	3530.78	27.41	0.25	-0.15	-0.21
18454	92.61	181.33	94	10442.5	3062.78	3040.60	1623.11	3446.70	28.09	0.46	-0.46	0.00
18548	91.90	181.36	94	10438.8	2968.86	2946.70	1620.91	3363.09	28.81	0.76	-0.76	0.03
18643	89.83	180.59	95	10437.4	2873.88	2851.73	1619.29	3279.40	29.59	2.32	-2.18	-0.81
18737	88.53	181.05	94	10438.7	2779.91	2757.76	1617.95	3197.34	30.40	1.47	-1.38	0.49
18831	93.31	181.35	94	10437.2	2685.96	2663.82	1615.98	3115.65	31.24	5.10	5.09	0.32
18925	92.04	181.11	94	10432.8	2592.07	2569.94	1613.96	3034.71	32.13	1.37	-1.35	-0.26
19020	92.30	181.65	95	10429.2	2497.14	2475.04	1611.68	2953.53	33.07	0.63	0.27	0.57
19114	92.07	181.36	94	10425.7	2403.21	2381.14	1609.21	2873.91	34.05	0.39	-0.24	-0.31
19208	91.34	181.76	94	10422.9	2309.25	2287.22	1606.65	2795.12	35.09	0.89	-0.78	0.43
19302	91.83	181.78	94	10420.3	2215.29	2193.30	1603.75	2717.09	36.17	0.52	0.52	0.02
19397	91.79	181.45	95	10417.3	2120.34	2098.38	1601.07	2639.44	37.34	0.35	-0.04	-0.35
19491	96.88	179.83	94	10410.2	2026.66	2004.69	1600.02	2564.93	38.59	5.68	5.41	-1.72
19586	93.71	183.44	95	10401.4	1932.09	1910.16	1597.32	2490.01	39.90	5.04	-3.34	3.80
19679	87.87	181.59	93	10400.1	1839.15	1817.31	1593.24	2416.82	41.24	6.59	-6.28	-1.99
19774	89.05	182.02	95	10402.7	1744.19	1722.39	1590.25	2344.25	42.72	1.32	1.24	0.45
19868	89.17	182.28	94	10404.1	1650.20	1628.47	1586.72	2273.67	44.26	0.30	0.13	0.28
19962	87.35	181.88	94	10407.0	1556.25	1534.58	1583.31	2204.95	45.90	1.98	-1.94	-0.43
20056	88.49	181.24	94	10410.4	1462.32	1440.68	1580.76	2138.77	47.65	1.39	1.21	-0.68
20149	89.83	180.61	93	10411.7	1369.34	1347.70	1579.25	2076.14	49.52	1.59	1.44	-0.68
20244	90.27	180.78	95	10411.7	1274.36	1252.71	1578.10	2014.86	51.56	0.50	0.46	0.18
20338	91.47	180.47	94	10410.2	1180.39	1158.73	1577.08	1956.99	53.69	1.32	1.28	-0.33
20432	92.28	180.29	94	10407.2	1086.47	1064.78	1576.45	1902.36	55.96	0.88	0.86	-0.19
20527	92.38	179.87	95	10403.3	991.60	969.86	1576.32	1850.79	58.40	0.45	0.11	-0.44
20620	91.27	180.27	93	10400.3	898.69	876.91	1576.21	1803.72	60.91	1.27	-1.19	0.43
20715	89.82	178.90	95	10399.4	803.77	781.92	1576.90	1760.11	63.63	2.10	-1.53	-1.44
20809	92.28	180.72	94	10397.7	709.86	687.95	1577.21	1720.71	66.43	3.26	2.62	1.94
20902	91.18	180.98	93	10394.9	616.92	595.00	1575.83	1684.42	69.31	1.22	-1.18	0.28

## Minimum Radius of Curvature

**API: 42-389-40518**      **Well: Sunnyside State 2 9U C9HU**      **Wellhead Location N+/S- : 31.728506**  
**Operator: PDC**      **Area: Orla**      **E+/W- : -104.017019**  
**Rig: Citadel 4**      **Type: U-Lateral**      **Magnetic Declination: 6.48**  
**TD: 21,887'**      **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			
20997	91.64	182.42	95	10392.6	521.95	500.07	1573.01	1650.59	72.36	1.59	0.48	1.52
21091	92.24	183.67	94	10389.4	428.03	406.26	1568.02	1619.80	75.47	1.47	0.64	1.33
21185	90.71	183.74	94	10387.0	334.11	312.49	1561.95	1592.90	78.69	1.63	-1.63	0.07
21278	87.40	183.19	93	10388.5	241.17	219.69	1556.33	1571.76	81.97	3.61	-3.56	-0.59
21373	87.83	183.61	95	10392.4	146.29	124.94	1550.70	1555.73	85.39	0.63	0.45	0.44
21467	87.94	183.86	94	10395.9	52.41	31.20	1544.58	1544.90	88.84	0.29	0.12	0.27
21561	88.89	184.19	94	10398.5	-41.49	-62.53	1537.99	1539.26	92.33	1.07	1.01	0.35
21655	86.92	184.41	94	10402.0	-135.33	-156.20	1530.94	1538.89	95.83	2.11	-2.10	0.23
21749	85.08	183.76	94	10408.5	-229.03	-249.73	1524.26	1544.58	99.30	2.08	-1.96	-0.69
21836	85.53	182.97	87	10415.6	-315.70	-336.28	1519.17	1555.95	102.48	1.04	0.52	-0.91
21887	85.53	182.97	51	10419.6	-366.54	-387.06	1516.54	1565.15	104.32	0.00	0.00	0.00