

Minimum Radius of Curvature

API: 42-389-40509 **Well: Sunnyside State 2 A5HU** **Wellhead Location N+/S- : 31.728597**
Operator: PDC **Area: Orla** **E+/W- : -104.024154**
Rig: Citadel 4 **Type: U-Lateral** **Magnetic Declination: 6.48**
TD: 19,794' **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			
226	2.12	262.68	226	225.9	-29.04	-0.53	-4.15	4.18	262.68	0.94	0.94	116.23
319	2.19	264.49	93	318.9	-29.54	-0.92	-7.62	7.68	263.10	0.10	0.08	1.95
411	1.11	286.05	92	410.8	-29.54	-0.84	-10.23	10.26	265.28	1.33	-1.17	23.43
503	0.04	270.19	92	502.8	-29.33	-0.60	-11.12	11.13	266.92	1.16	-1.16	-17.24
595	1.14	98.08	92	594.8	-29.43	-0.73	-10.24	10.27	265.94	1.28	1.20	-187.08
687	1.55	101.32	92	686.8	-29.73	-1.10	-8.12	8.19	262.28	0.45	0.45	3.52
780	1.57	95.92	93	779.8	-30.03	-1.48	-5.62	5.81	255.25	0.16	0.02	-5.81
872	1.42	90.82	92	871.7	-30.10	-1.62	-3.22	3.61	243.24	0.22	-0.16	-5.54
965	1.23	103.02	93	964.7	-30.27	-1.87	-1.10	2.16	210.46	0.36	-0.20	13.12
1056	0.96	110.19	91	1055.7	-30.70	-2.35	0.57	2.42	166.36	0.33	-0.30	7.88
1151	0.75	104.92	95	1150.7	-31.09	-2.78	1.92	3.38	145.44	0.24	-0.22	-5.55
1246	0.59	103.89	95	1245.7	-31.34	-3.06	2.99	4.28	135.64	0.17	-0.17	-1.08
1341	0.45	77.86	95	1340.7	-31.35	-3.10	3.83	4.93	128.97	0.29	-0.15	-27.40
1435	0.38	78.96	94	1434.7	-31.19	-2.96	4.50	5.39	123.36	0.07	-0.07	1.17
1454	0.50	64.40	19	1453.7	-31.14	-2.91	4.64	5.48	122.16	0.86	0.63	-76.63
1626	2.49	127.52	172	1625.6	-32.97	-4.87	8.28	9.60	120.45	1.34	1.16	36.70
1720	3.57	132.22	94	1719.5	-36.06	-8.08	12.06	14.52	123.80	1.18	1.15	5.00
1814	3.29	132.86	94	1813.3	-39.72	-11.88	16.21	20.09	126.24	0.30	-0.30	0.68
1908	4.76	134.53	94	1907.1	-44.14	-16.45	20.97	26.65	128.11	1.57	1.56	1.78
2002	5.00	138.51	94	2000.7	-49.76	-22.25	26.46	34.57	130.06	0.44	0.26	4.23
2096	6.41	137.22	94	2094.3	-56.48	-29.17	32.74	43.85	131.70	1.51	1.50	-1.37
2190	8.20	131.82	94	2187.5	-64.52	-37.49	41.30	55.78	132.24	2.04	1.90	-5.74
2284	8.76	128.81	94	2280.5	-73.13	-46.45	51.87	69.63	131.84	0.76	0.60	-3.20
2378	7.98	129.80	94	2373.5	-81.45	-55.11	62.46	83.30	131.42	0.84	-0.83	1.05
2472	7.86	133.81	94	2466.6	-89.76	-63.74	72.11	96.25	131.47	0.60	-0.13	4.27
2566	9.23	131.18	94	2559.5	-98.84	-73.15	82.43	110.21	131.59	1.52	1.46	-2.80
2661	8.16	130.83	95	2653.4	-107.91	-82.58	93.26	124.57	131.52	1.13	-1.13	-0.37
2756	9.39	127.94	95	2747.3	-116.72	-91.75	104.48	139.05	131.29	1.38	1.29	-3.04
2850	9.14	128.17	94	2840.1	-125.66	-101.08	116.39	154.16	130.97	0.27	-0.27	0.24
2944	10.18	130.99	94	2932.8	-135.33	-111.14	128.53	169.92	130.85	1.22	1.11	3.00
3038	9.56	131.72	94	3025.4	-145.58	-121.79	140.63	186.03	130.89	0.67	-0.66	0.78
3132	9.24	131.41	94	3118.1	-155.39	-131.97	152.12	201.39	130.94	0.34	-0.34	-0.33
3226	10.26	134.16	94	3210.8	-165.84	-142.80	163.78	217.29	131.08	1.19	1.09	2.93
3320	9.79	135.63	94	3303.3	-177.00	-154.34	175.38	233.62	131.35	0.57	-0.50	1.56
3415	9.88	133.89	95	3396.9	-188.05	-165.77	186.90	249.82	131.57	0.33	0.09	-1.83
3509	11.10	135.06	94	3489.4	-199.65	-177.76	199.10	266.91	131.76	1.32	1.30	1.24
3602	9.92	135.14	93	3580.8	-211.27	-189.78	211.08	283.85	131.96	1.27	-1.27	0.09
3697	10.11	137.74	95	3674.3	-222.87	-201.75	222.46	300.32	132.21	0.52	0.20	2.74
3791	10.67	138.78	94	3766.8	-235.16	-214.40	233.74	317.18	132.53	0.63	0.60	1.11
3886	9.99	138.67	95	3860.3	-247.59	-227.20	244.98	334.12	132.84	0.72	-0.72	-0.12
3980	9.78	139.23	94	3952.9	-259.42	-239.37	255.57	350.17	133.13	0.25	-0.22	0.60
4075	9.55	137.47	95	4046.5	-270.99	-251.29	266.17	366.05	133.35	0.39	-0.24	-1.85
4168	9.47	137.23	93	4138.2	-281.95	-262.59	276.58	381.38	133.51	0.10	-0.09	-0.26
4263	10.20	138.15	95	4231.8	-293.59	-274.59	287.50	397.57	133.68	0.79	0.77	0.97
4357	9.48	138.03	94	4324.5	-305.20	-286.55	298.23	413.58	133.86	0.77	-0.77	-0.13
4451	9.14	139.36	94	4417.2	-316.29	-297.97	308.27	428.74	134.03	0.43	-0.36	1.41
4545	8.35	140.31	94	4510.1	-326.91	-308.89	317.49	442.96	134.21	0.85	-0.84	1.01
4640	7.62	139.09	95	4604.2	-336.70	-318.96	326.02	456.10	134.37	0.79	-0.77	-1.28
4734	6.91	138.21	94	4697.4	-345.37	-327.88	333.87	467.95	134.48	0.76	-0.76	-0.94
4828	6.45	140.35	94	4790.8	-353.41	-336.16	341.01	478.85	134.59	0.56	-0.49	2.28
4922	6.16	143.52	94	4884.2	-361.33	-344.28	347.38	489.08	134.74	0.48	-0.31	3.37
5016	5.84	144.45	94	4977.7	-369.08	-352.23	353.15	498.78	134.92	0.36	-0.34	0.99
5110	5.54	145.14	94	5071.3	-376.52	-359.84	358.53	507.97	135.10	0.33	-0.32	0.73
5203	5.29	146.39	93	5163.8	-383.61	-367.10	363.47	516.60	135.28	0.30	-0.27	1.34
5298	5.21	148.13	95	5258.5	-390.77	-374.41	368.17	525.10	135.48	0.19	-0.08	1.83
5392	4.96	147.64	94	5352.1	-397.68	-381.47	372.60	533.24	135.67	0.27	-0.27	-0.52
5486	4.71	147.30	94	5445.7	-404.22	-388.15	376.86	541.00	135.85	0.27	-0.27	-0.36

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						N-S Ft	E-W Ft	Distance FT	Direction Deg			
5499	4.69	147.17	13	5459.1	-405.12	-389.07	377.45	542.07	135.87	0.17	-0.15	-0.97
5581	4.58	146.38	82	5540.4	-410.52	-394.59	381.06	548.55	136.00	0.16	-0.13	-0.97
5676	4.31	147.62	95	5635.1	-416.56	-400.76	385.08	555.78	136.14	0.30	-0.28	1.31
5770	4.16	147.64	94	5728.9	-422.30	-406.62	388.79	562.58	136.28	0.16	-0.16	0.02
5864	3.89	149.16	94	5822.7	-427.80	-412.24	392.25	569.04	136.42	0.31	-0.29	1.62
5959	3.70	150.68	95	5917.5	-433.14	-417.68	395.41	575.15	136.57	0.23	-0.20	1.60
6053	3.71	153.10	94	6011.3	-438.40	-423.04	398.27	581.01	136.73	0.17	0.01	2.57
6147	3.48	151.45	94	6105.1	-443.53	-428.25	401.01	586.69	136.88	0.27	-0.24	-1.76
6241	3.63	157.05	94	6198.9	-448.69	-433.50	403.53	592.25	137.05	0.40	0.16	5.96
6335	3.28	160.89	94	6292.7	-453.90	-438.78	405.57	597.51	137.25	0.45	-0.37	4.09
6430	2.76	163.23	95	6387.6	-458.61	-443.54	407.12	602.06	137.45	0.56	-0.55	2.46
6524	2.17	163.01	94	6481.5	-462.44	-447.41	408.29	605.70	137.62	0.63	-0.63	-0.23
6618	1.76	166.87	94	6575.4	-465.52	-450.52	409.14	608.57	137.76	0.46	-0.44	4.11
6712	0.54	162.33	94	6669.4	-467.33	-452.34	409.60	610.24	137.84	1.30	-1.30	-4.83
6807	1.08	341.91	95	6764.4	-466.91	-451.92	409.46	609.83	137.82	1.71	0.57	189.03
6901	1.13	322.99	94	6858.4	-465.36	-450.34	408.63	608.10	137.78	0.39	0.05	-20.13
6995	0.98	309.94	94	6952.4	-464.14	-449.08	407.45	606.38	137.78	0.30	-0.16	-13.88
7089	1.14	299.14	94	7046.4	-463.21	-448.11	406.02	604.69	137.82	0.27	0.17	-11.49
7183	1.49	295.70	94	7140.3	-462.29	-447.12	404.10	602.68	137.89	0.38	0.37	-3.66
7277	1.75	286.68	94	7234.3	-461.43	-446.18	401.63	600.32	138.01	0.39	0.28	-9.60
7371	1.87	274.09	94	7328.3	-461.00	-445.66	398.72	597.99	138.18	0.44	0.13	-13.39
7465	1.91	269.73	94	7422.2	-461.00	-445.56	395.63	595.85	138.40	0.16	0.04	-4.64
7560	1.91	266.44	95	7517.2	-461.21	-445.66	392.46	593.84	138.63	0.12	0.00	-3.46
7653	1.80	263.13	93	7610.1	-461.57	-445.94	389.47	592.07	138.87	0.17	-0.12	-3.56
7747	1.78	267.89	94	7704.1	-461.90	-446.17	386.54	590.32	139.10	0.16	-0.02	5.06
7841	1.66	266.96	94	7798.0	-462.11	-446.29	383.72	588.57	139.31	0.13	-0.13	-0.99
7936	1.53	279.06	95	7893.0	-462.07	-446.17	381.10	586.77	139.50	0.38	-0.14	12.74
8030	1.48	289.51	94	7987.0	-461.54	-445.56	378.71	584.76	139.64	0.30	-0.05	11.12
8124	1.73	304.73	94	8080.9	-460.41	-444.35	376.40	582.34	139.73	0.52	0.27	16.19
8218	1.96	305.99	94	8174.9	-458.73	-442.60	373.94	579.41	139.81	0.25	0.24	1.34
8312	2.10	311.89	94	8268.8	-456.72	-440.50	371.35	576.15	139.87	0.27	0.15	6.28
8406	2.15	310.26	94	8362.7	-454.52	-438.21	368.72	572.70	139.92	0.08	0.05	-1.73
8500	2.02	307.67	94	8456.7	-452.45	-436.06	366.07	569.34	139.99	0.17	-0.14	-2.76
8593	1.94	305.76	93	8549.6	-450.61	-434.14	363.49	566.22	140.06	0.11	-0.09	-2.05
8687	1.87	305.47	94	8643.6	-448.88	-432.32	360.95	563.19	140.14	0.08	-0.07	-0.31
8781	1.91	305.08	94	8737.5	-447.17	-430.53	358.42	560.20	140.22	0.04	0.04	-0.41
8875	1.87	302.64	94	8831.5	-445.53	-428.80	355.85	557.22	140.31	0.10	-0.04	-2.60
8969	1.85	303.59	94	8925.4	-443.94	-427.13	353.29	554.31	140.40	0.04	-0.02	1.01
9025	1.74	296.54	56	8981.4	-443.11	-426.25	351.78	552.67	140.47	0.44	-0.20	-12.59
9070	1.92	324.54	45	9026.0	-442.23	-425.34	350.74	551.30	140.49	2.02	0.40	62.72
9094	2.18	336.34	24	9050.4	-441.49	-424.58	350.32	550.45	140.47	2.03	1.07	48.44
9188	11.53	19.34	94	9143.6	-430.89	-414.06	352.72	543.92	139.57	10.69	9.95	-337.23
9282	22.23	21.03	94	9233.3	-405.09	-388.55	362.23	531.20	137.01	11.41	11.40	1.80
9283	22.36	21.04	1	9234.4	-404.69	-388.16	362.38	531.02	136.97	11.82	11.82	0.91
9377	33.83	16.93	94	9317.1	-362.40	-346.29	376.46	511.51	132.61	12.37	12.20	-4.37
9471	44.33	10.24	94	9390.0	-304.46	-288.76	389.97	485.23	126.52	12.02	11.17	-7.12
9565	52.34	10.53	94	9452.5	-235.07	-219.74	402.62	458.69	118.62	8.52	8.52	0.31
9659	61.23	8.13	94	9503.9	-157.18	-142.21	415.28	438.95	108.90	9.69	9.46	-2.55
9742	64.83	6.57	83	9541.6	-83.56	-68.86	424.72	430.27	99.21	4.65	4.34	-1.88
9812	71.86	8.15	70	9567.4	-18.85	-4.38	433.07	433.10	90.58	10.26	10.04	2.26
9875	80.71	7.97	63	9582.3	41.94	56.16	441.64	445.20	82.75	14.05	14.05	-0.29
9966	82.97	6.06	91	9595.2	131.64	145.55	452.64	475.47	72.17	3.24	2.48	-2.10
10060	85.54	4.50	94	9604.6	224.99	238.67	461.24	519.34	62.64	3.19	2.73	-1.66
10155	87.16	2.91	95	9610.7	319.74	333.27	467.37	574.02	54.51	2.39	1.71	-1.67
10249	88.31	1.03	94	9614.4	413.66	427.14	470.60	635.54	47.77	2.34	1.22	-2.00
10343	89.34	0.09	94	9616.3	507.61	521.11	471.51	702.77	42.14	1.48	1.10	-1.00
10437	87.90	359.27	94	9618.6	601.51	615.08	470.99	774.70	37.44	1.76	-1.53	382.11
10531	88.78	359.34	94	9621.3	695.38	709.03	469.85	850.58	33.53	0.94	0.94	0.07

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10625	89.69	0.76	94	9622.6	789.32	803.02	469.93	930.42	30.34	1.79	0.97	-381.47
10720	90.07	2.75	95	9622.8	884.32	897.97	472.84	1014.86	27.77	2.13	0.40	2.09
10814	89.05	0.57	94	9623.5	978.31	991.92	475.56	1100.03	25.61	2.56	-1.09	-2.32
10908	89.10	0.49	94	9625.0	1072.27	1085.91	476.43	1185.83	23.69	0.10	0.05	-0.09
11002	88.70	358.93	94	9626.8	1166.19	1179.89	475.96	1272.27	21.97	1.71	-0.43	381.32
11096	89.61	359.77	94	9628.2	1260.09	1273.87	474.89	1359.51	20.45	1.32	0.97	0.89
11191	89.64	1.58	95	9628.8	1355.06	1368.85	476.01	1449.26	19.17	1.91	0.03	-377.04
11284	90.63	2.81	93	9628.6	1448.06	1461.78	479.57	1538.44	18.16	1.70	1.06	1.32
11378	90.06	3.53	94	9628.0	1542.03	1555.64	484.77	1629.42	17.31	0.98	-0.61	0.77
11473	90.11	3.56	95	9627.9	1636.99	1650.45	490.64	1721.84	16.56	0.06	0.05	0.03
11567	90.18	3.94	94	9627.7	1730.93	1744.25	496.79	1813.62	15.90	0.41	0.07	0.40
11662	89.87	4.14	95	9627.6	1825.86	1839.02	503.49	1906.69	15.31	0.39	-0.33	0.21
11756	88.84	3.53	94	9628.7	1919.80	1932.80	509.77	1998.89	14.78	1.27	-1.10	-0.65
11850	88.91	3.96	94	9630.5	2013.73	2026.58	515.91	2091.22	14.28	0.46	0.07	0.46
11944	88.95	3.42	94	9632.3	2107.66	2120.37	521.96	2183.67	13.83	0.58	0.04	-0.57
12038	88.95	3.55	94	9634.0	2201.61	2214.18	527.67	2276.19	13.40	0.14	0.00	0.14
12133	89.16	3.32	95	9635.6	2296.56	2308.99	533.36	2369.80	13.01	0.33	0.22	-0.24
12227	88.64	1.88	94	9637.4	2390.53	2402.88	537.63	2462.29	12.61	1.63	-0.55	-1.53
12321	88.89	1.35	94	9639.4	2484.51	2496.82	540.28	2554.60	12.21	0.62	0.27	-0.56
12415	89.73	1.79	94	9640.5	2578.50	2590.78	542.85	2647.04	11.83	1.01	0.89	0.47
12509	89.71	1.57	94	9641.0	2672.50	2684.73	545.61	2739.61	11.49	0.24	-0.02	-0.23
12603	87.76	0.57	94	9643.1	2766.46	2778.69	547.36	2832.09	11.14	2.33	-2.07	-1.06
12696	89.48	0.40	93	9645.3	2859.40	2871.65	548.15	2923.50	10.81	1.86	1.85	-0.18
12790	88.19	359.98	94	9647.2	2953.34	2965.63	548.46	3015.92	10.48	1.44	-1.37	382.53
12885	89.96	0.63	95	9648.7	3048.29	3060.61	548.97	3109.46	10.17	1.98	1.86	-378.26
12979	90.01	1.28	94	9648.8	3142.28	3154.60	550.53	3202.28	9.90	0.69	0.05	0.69
13073	90.10	1.37	94	9648.7	3236.28	3248.58	552.71	3295.26	9.66	0.14	0.10	0.10
13168	89.52	1.00	95	9649.0	3331.27	3343.55	554.67	3389.25	9.42	0.72	-0.61	-0.39
13262	87.32	359.69	94	9651.6	3425.19	3437.51	555.24	3482.06	9.18	2.72	-2.34	381.59
13356	89.68	0.26	94	9654.0	3519.10	3531.47	555.20	3574.85	8.93	2.58	2.51	-382.37
13449	89.40	1.23	93	9654.8	3612.08	3624.46	556.41	3666.92	8.73	1.09	-0.30	1.04
13543	90.22	3.58	94	9655.1	3706.07	3718.37	560.35	3760.35	8.57	2.65	0.87	2.50
13637	90.14	5.15	94	9654.8	3799.97	3812.09	567.50	3854.10	8.47	1.67	-0.09	1.67
13731	90.22	6.15	94	9654.5	3893.77	3905.63	576.76	3947.99	8.40	1.07	0.09	1.06
13781	89.50	5.76	50	9654.6	3943.64	3955.36	581.95	3997.94	8.37	1.64	-1.44	-0.78
13854	90.52	8.19	73	9654.6	4016.34	4027.82	590.81	4070.92	8.34	3.61	1.40	3.33
13947	89.57	24.01	93	9654.5	4106.18	4116.88	616.52	4162.79	8.52	17.04	-1.02	17.01
13989	88.94	30.50	42	9655.1	4144.26	4154.36	635.82	4202.73	8.70	15.46	-1.49	15.39
14041	88.19	38.48	52	9656.4	4187.84	4197.02	665.13	4249.40	9.01	15.46	-1.45	15.40
14136	88.12	47.29	95	9659.5	4259.38	4266.52	729.68	4328.47	9.71	9.27	-0.07	9.27
14230	88.66	56.40	94	9662.1	4319.71	4324.51	803.49	4398.52	10.53	9.70	0.57	9.69
14324	86.06	61.28	94	9666.4	4370.83	4373.08	883.81	4461.50	11.43	5.88	-2.77	5.19
14418	87.32	67.77	94	9671.9	4413.87	4413.42	968.49	4518.43	12.38	7.02	1.34	6.90
14512	88.35	77.72	94	9675.4	4444.56	4441.25	1058.08	4565.54	13.40	10.63	1.10	10.59
14606	90.41	90.20	94	9676.5	4457.42	4451.11	1151.36	4597.61	14.50	13.45	2.19	13.28
14701	87.42	97.36	95	9678.3	4454.21	4444.86	1246.07	4616.22	15.66	8.17	-3.15	7.54
14795	90.98	107.59	94	9679.6	4436.88	4424.58	1337.70	4622.38	16.82	11.52	3.79	10.88
14889	89.09	118.86	94	9679.5	4402.66	4387.58	1423.94	4612.86	17.98	12.16	-2.01	11.99
14982	89.12	133.19	93	9681.0	4350.55	4333.03	1498.95	4584.97	19.08	15.41	0.03	15.41
15076	88.45	142.02	94	9683.0	4283.28	4263.69	1562.25	4540.89	20.12	9.42	-0.71	9.39
15170	90.43	151.75	94	9683.9	4206.34	4185.06	1613.54	4485.34	21.08	10.56	2.11	10.35
15238	90.32	159.71	68	9683.4	4145.74	4123.54	1641.28	4438.17	21.70	11.79	-0.16	11.79
15264	90.28	162.83	26	9683.3	4120.97	4098.49	1649.77	4418.07	21.93	11.79	-0.15	11.79
15357	90.28	168.66	93	9682.9	4031.66	4008.39	1672.66	4343.39	22.65	6.27	0.00	6.27
15451	89.94	174.67	94	9682.7	3939.18	3915.43	1686.28	4263.11	23.30	6.40	-0.36	6.39
15545	89.12	180.82	94	9683.4	3845.47	3821.55	1689.98	4178.55	23.86	6.60	-0.87	6.54
15639	91.92	184.53	94	9682.6	3751.51	3727.68	1685.59	4091.07	24.33	4.94	2.98	3.95
15734	90.77	184.44	95	9680.4	3656.64	3633.00	1678.17	4001.87	24.79	1.21	-1.21	-0.09

Minimum Radius of Curvature

API: 42-389-40509 **Well: Sunnyside State 2 A5HU** **Wellhead Location N+/S-: 31.728597**
Operator: PDC **Area: Orla** **E+/W-: -104.024154**
Rig: Citadel 4 **Type: U-Lateral** **Magnetic Declination: 6.48**
TD: 19,794' **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			
15829	88.73	183.14	95	9680.8	3561.70	3538.22	1671.89	3913.33	25.29	2.55	-2.15	-1.37
15923	88.07	183.68	94	9683.4	3467.77	3444.42	1666.30	3826.30	25.82	0.91	-0.70	0.57
16018	89.96	182.94	95	9685.0	3372.82	3349.60	1660.81	3738.73	26.37	2.14	1.99	-0.78
16112	90.39	183.40	94	9684.7	3278.85	3255.74	1655.62	3652.52	26.95	0.67	0.46	0.49
16206	90.49	184.95	94	9684.0	3184.93	3162.00	1648.77	3566.05	27.54	1.65	0.11	1.65
16300	88.82	185.09	94	9684.6	3091.08	3068.36	1640.55	3479.40	28.13	1.78	-1.78	0.15
16394	90.17	182.90	94	9685.4	2997.16	2974.60	1634.00	3393.85	28.78	2.74	1.44	-2.33
16488	89.36	183.99	94	9685.8	2903.20	2880.77	1628.35	3309.14	29.48	1.44	-0.86	1.16
16582	89.33	184.15	94	9686.9	2809.28	2787.02	1621.68	3224.49	30.19	0.17	-0.03	0.17
16677	90.29	181.29	95	9687.2	2714.30	2692.14	1617.17	3140.52	30.99	3.18	1.01	-3.01
16770	89.23	179.56	93	9687.6	2621.34	2599.14	1616.48	3060.81	31.88	2.18	-1.14	-1.86
16864	90.88	181.06	94	9687.5	2527.38	2505.15	1615.98	2981.13	32.82	2.37	1.76	1.60
16958	90.28	181.04	94	9686.5	2433.39	2411.17	1614.25	2901.65	33.80	0.64	-0.64	-0.02
17052	93.07	181.92	94	9683.8	2339.44	2317.26	1611.83	2822.70	34.82	3.11	2.97	0.94
17146	92.49	181.31	94	9679.2	2245.55	2223.40	1609.18	2744.63	35.90	0.89	-0.62	-0.65
17240	91.33	180.97	94	9676.1	2151.61	2129.48	1607.31	2667.98	37.05	1.29	-1.23	-0.36
17334	91.32	181.22	94	9673.9	2057.65	2035.52	1605.52	2592.49	38.26	0.27	-0.01	0.27
17429	90.60	181.07	95	9672.3	1962.67	1940.55	1603.62	2517.41	39.57	0.77	-0.76	-0.16
17523	90.98	180.85	94	9671.0	1868.69	1846.57	1602.04	2444.66	40.94	0.47	0.40	-0.23
17617	90.53	179.45	94	9669.8	1774.74	1752.59	1601.80	2374.30	42.43	1.56	-0.48	-1.49
17712	92.75	180.91	95	9667.1	1679.83	1657.63	1601.50	2304.90	44.01	2.80	2.34	1.54
17806	91.75	183.08	94	9663.4	1585.91	1563.77	1598.23	2236.00	45.62	2.54	-1.06	2.31
17900	91.22	182.21	94	9661.0	1491.95	1469.90	1593.89	2168.20	47.32	1.08	-0.56	-0.93
17995	90.88	180.90	95	9659.2	1396.97	1374.96	1591.32	2103.04	49.17	1.42	-0.36	-1.38
18089	91.29	181.21	94	9657.4	1302.99	1280.99	1589.59	2041.50	51.14	0.55	0.44	0.33
18184	92.86	183.48	95	9654.0	1208.07	1186.14	1585.70	1980.25	53.20	2.90	1.65	2.39
18278	90.57	182.52	94	9651.2	1114.14	1092.32	1580.79	1921.47	55.36	2.64	-2.44	-1.02
18372	90.00	181.78	94	9650.7	1020.14	998.39	1577.26	1866.69	57.67	0.99	-0.61	-0.79
18466	90.14	181.11	94	9650.6	926.15	904.42	1574.89	1816.11	60.13	0.73	0.15	-0.71
18561	89.80	181.12	95	9650.7	831.15	809.43	1573.04	1769.08	62.77	0.36	-0.36	0.01
18654	89.50	180.59	93	9651.2	738.17	716.45	1571.65	1727.25	65.49	0.65	-0.32	-0.57
18747	90.85	182.14	93	9650.9	645.18	623.48	1569.44	1688.74	68.33	2.21	1.45	1.67
18841	92.27	183.68	94	9648.4	551.23	529.64	1564.67	1651.88	71.30	2.23	1.51	1.64
18936	91.90	183.05	95	9644.9	456.33	434.87	1559.10	1618.61	74.41	0.77	-0.39	-0.66
19029	91.06	181.98	93	9642.5	363.37	341.99	1555.02	1592.18	77.60	1.46	-0.90	-1.15
19123	91.40	182.48	94	9640.5	269.40	248.08	1551.36	1571.07	80.91	0.64	0.36	0.53
19218	91.26	181.84	95	9638.3	174.42	153.18	1547.78	1555.34	84.35	0.69	-0.15	-0.67
19312	89.78	182.79	94	9637.4	80.43	59.26	1543.98	1545.12	87.80	1.87	-1.57	1.01
19406	89.80	183.04	94	9637.8	-13.55	-34.62	1539.20	1539.59	91.29	0.27	0.02	0.27
19500	90.39	182.93	94	9637.6	-107.53	-128.49	1534.31	1539.68	94.79	0.64	0.63	-0.12
19595	90.06	182.16	95	9637.3	-202.52	-223.39	1530.09	1546.31	98.31	0.88	-0.35	-0.81
19689	90.04	181.26	94	9637.2	-296.52	-317.35	1527.28	1559.91	101.74	0.96	-0.02	-0.96
19744	89.85	181.74	55	9637.2	-351.52	-372.33	1525.84	1570.62	103.71	0.94	-0.35	0.87
19794	89.85	181.74	50	9637.4	-401.52	-422.31	1524.33	1581.74	105.49	0.00	0.00	0.00