

Minimum Radius of Curvature

API: 42-389-39376 **Well: Old Monarch State 2 A3HU** **Wellhead Location N+S- : 31.738535**
Operator: PDC **Area: Orla** **E+/W- : -103.914508**
Rig: H&P 629 **Type: U-Lateral** **Magnetic Declination: 6.62**
TD: 20,602' **Plane of Proposal: 1.00**

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			
174	1.11	94.65	174	174.0	-30.03	-0.14	1.68	1.69	94.65	0.64	0.64	54.40
236	0.83	91.18	62	236.0	-30.07	-0.19	2.73	2.73	94.08	0.46	-0.45	-5.60
267	0.41	98.33	31	267.0	-30.08	-0.22	3.06	3.07	94.02	1.38	-1.35	23.06
328	0.61	274.72	61	328.0	-30.09	-0.22	2.95	2.96	94.26	1.67	0.33	289.16
420	1.39	270.88	92	420.0	-30.06	-0.16	1.35	1.36	96.87	0.85	0.85	-4.17
514	1.47	271.43	94	513.9	-30.05	-0.12	-1.00	1.00	263.40	0.09	0.09	0.59
607	0.66	278.82	93	606.9	-29.97	0.00	-2.72	2.72	269.93	0.88	-0.87	7.95
701	0.49	316.50	94	700.9	-29.61	0.37	-3.53	3.55	276.01	0.43	-0.18	40.09
794	0.46	339.00	93	793.9	-28.98	1.01	-3.94	4.06	284.37	0.20	-0.03	24.19
886	0.67	350.46	92	885.9	-28.11	1.88	-4.16	4.56	294.37	0.26	0.23	12.46
979	0.81	354.80	93	978.9	-26.92	3.07	-4.31	5.29	305.52	0.16	0.15	4.67
1073	0.71	21.38	94	1072.9	-25.71	4.28	-4.16	5.96	315.84	0.39	-0.11	-354.70
1166	0.91	51.34	93	1165.9	-24.70	5.28	-3.37	6.26	327.44	0.50	0.22	32.22
1259	1.05	69.15	93	1258.9	-23.91	6.04	-2.00	6.36	341.72	0.36	0.15	19.15
1356	1.24	76.15	97	1355.8	-23.32	6.61	-0.15	6.61	358.73	0.24	0.20	7.22
1435	1.40	87.12	79	1434.8	-23.03	6.86	1.65	7.06	13.50	0.38	0.20	13.89
1531	1.10	237.74	96	1530.8	-23.46	6.43	2.04	6.74	17.60	2.52	-0.31	156.90
1626	3.99	241.77	95	1625.7	-25.57	4.38	-1.64	4.68	339.42	3.05	3.04	4.24
1721	6.73	245.46	95	1720.3	-29.59	0.50	-9.62	9.63	272.99	2.91	2.88	3.88
1817	8.84	247.56	96	1815.4	-34.95	-4.65	-21.56	22.05	257.83	2.22	2.20	2.19
1912	7.79	247.56	95	1909.4	-40.41	-9.89	-34.26	35.66	253.89	1.11	-1.11	0.00
2008	6.91	255.74	96	2004.6	-44.52	-13.80	-45.87	47.90	253.25	1.42	-0.92	8.52
2103	9.06	256.71	95	2098.7	-47.87	-16.93	-58.69	61.08	253.91	2.27	2.26	1.02
2199	9.61	257.12	96	2193.4	-51.66	-20.45	-73.85	76.63	254.52	0.58	0.57	0.43
2295	8.15	254.22	96	2288.3	-55.54	-24.09	-88.21	91.44	254.73	1.59	-1.52	-3.02
2390	7.83	254.92	95	2382.3	-59.28	-27.60	-100.94	104.65	254.71	0.35	-0.34	0.74
2485	7.59	242.99	95	2476.5	-64.02	-32.14	-112.78	117.27	254.10	1.70	-0.25	-12.56
2581	7.58	239.02	96	2571.6	-70.35	-38.28	-123.86	129.64	252.83	0.55	-0.01	-4.14
2677	7.53	243.75	96	2666.8	-76.58	-44.32	-134.93	142.02	251.82	0.65	-0.05	4.93
2772	7.56	231.46	95	2761.0	-83.41	-50.96	-145.40	154.07	250.68	1.70	0.03	-12.94
2867	7.97	225.30	95	2855.1	-92.11	-59.49	-154.97	166.00	249.00	0.98	0.43	-6.48
2963	8.06	227.62	96	2950.2	-101.49	-68.71	-164.67	178.43	247.35	0.35	0.09	2.42
3059	7.42	226.28	96	3045.3	-110.48	-77.53	-174.12	190.60	246.00	0.69	-0.67	-1.40
3154	6.84	228.01	95	3139.6	-118.65	-85.55	-182.76	201.79	244.92	0.65	-0.61	1.82
3250	7.78	230.88	96	3234.8	-126.74	-93.48	-192.05	213.59	244.05	1.05	0.98	2.99
3344	8.29	231.62	94	3327.9	-135.13	-101.70	-202.30	226.42	243.31	0.55	0.54	0.79
3440	7.78	234.12	96	3422.9	-143.43	-109.80	-212.99	239.63	242.73	0.64	-0.53	2.60
3536	7.51	234.20	96	3518.1	-151.08	-117.28	-223.34	252.27	242.30	0.28	-0.28	0.08
3631	9.55	236.79	95	3612.0	-159.23	-125.23	-234.97	266.26	241.94	2.18	2.15	2.73
3727	10.16	236.48	96	3706.6	-168.51	-134.27	-248.70	282.63	241.64	0.64	0.64	-0.32
3822	9.76	238.81	95	3800.2	-177.55	-143.07	-262.57	299.02	241.42	0.60	-0.42	2.45
3918	9.45	238.28	96	3894.8	-186.14	-151.42	-276.23	315.02	241.27	0.34	-0.32	-0.55
4013	9.28	237.34	95	3988.6	-194.60	-159.66	-289.32	330.45	241.11	0.24	-0.18	-0.99
4109	8.84	238.72	96	4083.4	-202.83	-167.67	-302.14	345.54	240.97	0.51	-0.46	1.44
4300	8.88	249.06	191	4272.1	-216.18	-180.55	-328.45	374.81	241.20	0.83	0.02	5.41
4395	8.80	251.81	95	4366.0	-221.31	-185.44	-342.20	389.22	241.55	0.45	-0.08	2.89
4491	8.86	252.54	96	4460.8	-226.06	-189.95	-356.23	403.71	241.93	0.13	0.06	0.76
4586	8.87	252.20	95	4554.7	-230.74	-194.39	-370.18	418.12	242.30	0.06	0.01	-0.36
4682	8.39	251.88	96	4649.6	-235.42	-198.83	-383.89	432.32	242.62	0.50	-0.50	-0.33
4777	8.17	250.89	95	4743.6	-240.01	-203.19	-396.85	445.85	242.89	0.28	-0.23	-1.04
4873	8.23	250.56	96	4838.6	-244.75	-207.71	-409.78	459.42	243.12	0.08	0.06	-0.34
4968	8.21	247.28	95	4932.7	-249.86	-212.60	-422.45	472.92	243.29	0.49	-0.02	-3.45
5064	7.95	248.75	96	5027.7	-255.13	-217.65	-434.96	486.37	243.42	0.35	-0.27	1.53
5160	7.78	246.29	96	5122.8	-260.36	-222.67	-447.09	499.47	243.52	0.39	-0.18	-2.56
5255	7.53	247.31	95	5217.0	-265.55	-227.66	-458.72	512.11	243.61	0.30	-0.26	1.07
5351	6.92	248.87	96	5312.2	-270.25	-232.17	-469.92	524.14	243.71	0.67	-0.64	1.63
5446	5.28	246.87	95	5406.7	-274.20	-235.95	-479.28	534.21	243.79	1.74	-1.73	-2.11

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						N-S Ft	E-W Ft	Distance FT	Direction Deg			
5541	4.90	249.80	95	5501.3	-277.45	-239.07	-487.11	542.61	243.86	0.48	-0.40	3.08
5637	4.43	247.36	96	5597.0	-280.42	-241.91	-494.38	550.39	243.93	0.53	-0.49	-2.54
5732	3.96	245.53	95	5691.7	-283.30	-244.68	-500.75	557.33	243.96	0.51	-0.49	-1.93
5827	2.02	248.14	95	5786.6	-285.36	-246.66	-505.29	562.28	243.98	2.05	-2.04	2.75
5923	0.78	271.45	96	5882.5	-286.02	-247.28	-507.51	564.55	244.02	1.40	-1.29	24.28
6018	2.09	254.13	95	5977.5	-286.51	-247.73	-509.82	566.83	244.08	1.44	1.38	-18.23
6114	1.65	270.42	96	6073.5	-287.04	-248.20	-512.89	569.79	244.18	0.71	-0.46	16.97
6209	1.21	289.23	95	6168.4	-286.74	-247.86	-515.21	571.73	244.31	0.67	-0.46	19.80
6305	0.75	312.12	96	6264.4	-286.01	-247.11	-516.63	572.68	244.44	0.62	-0.48	23.84
6400	1.13	278.58	95	6359.4	-285.47	-246.55	-518.02	573.70	244.55	0.69	0.40	-35.31
6495	0.73	315.26	95	6454.4	-284.93	-245.98	-519.37	574.67	244.66	0.73	-0.42	38.61
6591	1.37	256.27	96	6550.4	-284.79	-245.82	-520.91	576.00	244.74	1.22	0.67	-61.45
6686	0.39	214.37	95	6645.4	-285.35	-246.35	-522.20	577.39	244.74	1.17	-1.03	-44.11
6782	2.43	88.76	96	6741.3	-285.54	-246.58	-520.35	575.82	244.64	2.79	2.13	-130.84
6878	2.86	85.61	96	6837.2	-285.24	-246.35	-515.93	571.73	244.48	0.47	0.45	-3.28
6973	3.03	89.59	95	6932.1	-284.96	-246.15	-511.05	567.24	244.28	0.28	0.18	4.19
7069	2.76	86.35	96	7028.0	-284.71	-245.99	-506.21	562.81	244.08	0.33	-0.28	-3.38
7164	2.49	82.67	95	7122.9	-284.22	-245.58	-501.88	558.74	243.93	0.33	-0.28	-3.87
7260	1.90	95.34	96	7218.8	-284.04	-245.46	-498.23	555.41	243.77	0.79	-0.61	13.20
7355	1.08	128.86	95	7313.8	-284.71	-246.17	-495.96	553.69	243.60	1.23	-0.86	35.28
7451	1.09	85.82	96	7409.8	-285.18	-246.67	-494.35	552.47	243.48	0.83	0.01	-44.83
7546	1.81	50.63	95	7504.7	-284.13	-245.65	-492.28	550.17	243.48	1.17	0.76	-37.04
7642	1.30	272.45	96	7600.7	-283.12	-244.64	-492.20	549.65	243.57	3.03	-0.53	231.06
7738	3.36	259.33	96	7696.6	-283.66	-245.12	-496.05	553.31	243.70	2.20	2.15	-13.67
7833	2.13	291.21	95	7791.5	-283.61	-245.00	-500.44	557.19	243.92	2.02	-1.29	33.56
7929	2.67	268.66	96	7887.5	-283.09	-244.40	-504.33	560.43	244.14	1.12	0.56	-23.49
8024	1.47	268.94	95	7982.4	-283.22	-244.48	-507.77	563.56	244.29	1.26	-1.26	0.29
8120	0.71	263.12	96	8078.4	-283.35	-244.57	-509.59	565.24	244.36	0.80	-0.79	-6.06
8216	1.30	236.34	96	8174.4	-284.05	-245.25	-511.08	566.88	244.37	0.77	0.61	-27.90
8311	1.37	145.64	95	8269.3	-285.59	-246.78	-511.34	567.78	244.24	2.00	0.07	-95.47
8407	2.86	102.72	96	8365.3	-287.01	-248.26	-508.36	565.74	243.97	2.16	1.55	-44.71
8503	2.72	118.45	96	8461.2	-288.55	-249.87	-504.02	562.55	243.63	0.81	-0.15	16.39
8599	1.84	110.72	96	8557.1	-290.12	-251.50	-500.57	560.20	243.32	0.97	-0.92	-8.05
8694	1.27	66.62	95	8652.1	-290.20	-251.62	-498.18	558.12	243.20	1.35	-0.60	-46.42
8789	1.41	56.11	95	8747.0	-289.09	-250.55	-496.24	555.91	243.21	0.30	0.15	-11.06
8885	1.10	25.28	96	8843.0	-287.58	-249.06	-494.87	554.01	243.28	0.76	-0.32	-32.11
8980	3.44	53.61	95	8937.9	-285.02	-246.54	-492.18	550.48	243.39	2.66	2.46	29.82
9076	3.38	49.27	96	9033.8	-281.38	-242.99	-487.72	544.90	243.52	0.28	-0.06	-4.52
9172	2.42	39.02	96	9129.6	-277.90	-239.57	-484.30	540.31	243.68	1.13	-1.00	-10.68
9267	1.69	33.13	95	9224.6	-275.14	-236.84	-482.27	537.29	243.85	0.80	-0.77	-6.20
9362	1.43	36.39	95	9319.5	-272.98	-234.71	-480.80	535.03	243.98	0.29	-0.27	3.43
9457	1.04	27.37	95	9414.5	-271.24	-232.99	-479.70	533.29	244.09	0.46	-0.41	-9.49
9553	0.78	21.98	96	9510.5	-269.85	-231.61	-479.06	532.11	244.20	0.28	-0.27	-5.61
9648	3.78	355.76	95	9605.4	-266.13	-227.88	-479.05	530.49	244.56	3.26	3.16	351.35
9744	11.74	346.54	96	9700.5	-253.50	-215.21	-481.56	527.46	245.92	8.37	8.29	-9.60
9839	19.94	345.71	95	9791.8	-228.47	-190.07	-487.82	523.54	248.71	8.63	8.63	-0.87
9935	27.90	345.83	96	9879.5	-190.95	-152.37	-497.37	520.19	252.97	8.29	8.29	0.13
10030	35.05	351.83	95	9960.5	-142.49	-103.74	-506.70	517.22	258.43	8.21	7.53	6.32
10126	40.08	359.16	96	10036.6	-84.32	-45.49	-511.08	513.10	264.91	7.00	5.24	7.64
10221	48.85	359.65	95	10104.3	-17.86	20.99	-511.75	512.18	272.35	9.24	9.23	0.52
10317	57.47	2.46	96	10161.8	58.88	97.72	-510.23	519.50	280.84	9.28	8.98	-372.07
10413	64.45	3.95	96	10208.4	142.69	181.46	-505.50	537.09	289.75	7.40	7.27	1.55
10509	71.00	2.13	96	10244.8	231.42	270.12	-500.83	569.03	298.34	7.04	6.82	-1.90
10604	79.18	359.39	95	10269.2	323.13	361.83	-499.65	616.91	305.91	9.05	8.61	376.06
10636	83.04	359.59	32	10274.1	354.73	393.44	-499.93	636.18	308.20	12.08	12.06	0.62
10668	86.97	0.17	32	10276.9	386.60	425.31	-500.00	656.42	310.39	12.41	12.28	-1123.19
10690	87.95	359.87	22	10277.9	408.57	447.29	-499.99	670.86	311.82	4.66	4.45	1635.00
10700	88.09	359.74	10	10278.2	418.56	457.28	-500.03	677.59	312.44	1.91	1.40	-1.30

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10777	91.12	0.74	77	10278.8	495.55	534.27	-499.70	731.54	316.91	4.14	3.94	-466.23
10795	91.57	0.87	18	10278.4	513.54	552.26	-499.45	744.61	317.87	2.60	2.50	0.72
10853	90.76	2.23	58	10277.2	571.52	610.23	-497.88	787.57	320.79	2.73	-1.40	2.34
10934	89.33	3.13	81	10277.1	652.49	691.13	-494.10	849.59	324.44	2.09	-1.77	1.11
10949	89.36	3.24	15	10277.3	667.47	706.11	-493.26	861.34	325.06	0.76	0.20	0.73
11044	89.33	3.34	95	10278.4	762.39	800.95	-487.81	937.80	328.66	0.11	-0.03	0.11
11140	88.43	3.04	96	10280.2	858.30	896.78	-482.47	1018.33	331.72	0.99	-0.94	-0.31
11235	87.87	2.71	95	10283.3	953.20	991.61	-477.71	1100.68	334.28	0.68	-0.59	-0.35
11331	87.84	3.36	96	10286.9	1049.07	1087.41	-472.63	1185.68	336.51	0.68	-0.03	0.68
11426	87.79	3.34	95	10290.5	1143.92	1182.18	-467.08	1271.10	338.44	0.06	-0.05	-0.02
11521	87.84	3.51	95	10294.1	1238.77	1276.94	-461.41	1357.74	340.13	0.19	0.05	0.18
11617	88.54	3.47	96	10297.2	1334.63	1372.71	-455.57	1446.33	341.64	0.73	0.73	-0.04
11712	88.26	3.21	95	10299.8	1429.51	1467.51	-450.03	1534.97	342.95	0.40	-0.29	-0.27
11808	88.46	2.74	96	10302.6	1525.42	1563.34	-445.05	1625.46	344.11	0.53	0.21	-0.49
11903	88.46	3.05	95	10305.1	1620.33	1658.19	-440.26	1715.64	345.13	0.33	0.00	0.33
11999	88.29	3.00	96	10307.9	1716.23	1754.02	-435.19	1807.20	346.07	0.18	-0.18	-0.05
12094	88.29	2.93	95	10310.7	1811.13	1848.85	-430.28	1898.26	346.90	0.07	0.00	-0.07
12190	88.26	2.53	96	10313.6	1907.05	1944.69	-425.71	1990.74	347.65	0.42	-0.03	-0.42
12285	88.94	2.52	95	10315.9	2001.98	2039.57	-421.53	2082.68	348.32	0.72	0.72	-0.01
12381	88.94	2.88	96	10317.7	2097.93	2135.45	-417.01	2175.78	348.95	0.37	0.00	0.38
12476	88.60	3.18	95	10319.7	2192.84	2230.29	-411.99	2268.03	349.53	0.48	-0.36	0.32
12572	88.88	2.96	96	10321.8	2288.76	2326.13	-406.85	2361.44	350.08	0.37	0.29	-0.23
12667	88.85	1.98	95	10323.7	2383.71	2421.02	-402.75	2454.30	350.55	1.03	-0.03	-1.03
12763	88.94	1.53	96	10325.6	2479.68	2516.96	-399.81	2548.52	350.97	0.48	0.09	-0.47
12858	88.96	1.60	95	10327.3	2574.66	2611.91	-397.22	2641.94	351.35	0.08	0.02	0.07
12954	88.94	1.72	96	10329.1	2670.64	2707.85	-394.44	2736.43	351.71	0.13	-0.02	0.13
13049	89.33	2.00	95	10330.5	2765.62	2802.79	-391.36	2829.98	352.05	0.51	0.41	0.29
13145	88.99	1.69	96	10331.9	2861.59	2898.73	-388.27	2924.62	352.37	0.48	-0.35	-0.32
13240	88.74	1.20	95	10333.8	2956.57	2993.68	-385.87	3018.45	352.66	0.58	-0.26	-0.52
13335	89.02	1.07	95	10335.6	3051.55	3088.65	-383.99	3112.42	352.91	0.32	0.29	-0.14
13431	89.05	1.12	96	10337.3	3147.54	3184.62	-382.15	3207.46	353.16	0.06	0.03	0.05
13527	89.24	1.20	96	10338.7	3243.53	3280.58	-380.21	3302.54	353.39	0.21	0.20	0.08
13622	89.44	0.92	95	10339.8	3338.52	3375.56	-378.45	3396.71	353.60	0.36	0.21	-0.29
13718	89.41	0.85	96	10340.7	3434.52	3471.55	-376.97	3491.95	353.80	0.08	-0.03	-0.07
13813	89.33	0.87	95	10341.8	3529.51	3566.53	-375.55	3586.25	353.99	0.09	-0.08	0.02
13908	89.50	1.11	95	10342.8	3624.51	3661.51	-373.90	3680.55	354.17	0.31	0.18	0.25
14004	88.68	0.61	96	10344.3	3720.49	3757.49	-372.46	3775.90	354.34	1.00	-0.85	-0.52
14099	89.30	0.58	95	10346.0	3815.48	3852.47	-371.48	3870.33	354.49	0.65	0.65	-0.03
14138	89.47	0.60	39	10346.4	3854.47	3891.46	-371.08	3909.11	354.55	0.44	0.44	0.05
14152	89.47	0.82	14	10346.5	3868.47	3905.46	-370.90	3923.03	354.57	1.57	0.00	1.57
14247	88.29	351.37	95	10348.4	3963.00	4000.11	-377.36	4017.87	354.61	10.02	-1.24	369.00
14342	86.72	343.51	95	10352.5	4055.19	4092.68	-397.98	4111.98	354.45	8.43	-1.65	-8.27
14438	91.65	338.25	96	10353.9	4145.26	4183.31	-429.40	4205.29	354.14	7.51	5.14	-5.48
14533	91.74	328.58	95	10351.1	4229.32	4268.13	-471.85	4294.13	353.69	10.17	0.09	-10.18
14628	88.88	321.72	95	10350.5	4306.27	4346.03	-526.10	4377.76	353.10	7.82	-3.01	-7.22
14724	90.00	318.66	96	10351.5	4378.92	4419.76	-587.55	4458.65	352.43	3.39	1.17	-3.19
14820	91.71	312.05	96	10350.0	4445.98	4488.02	-654.96	4535.56	351.70	7.11	1.78	-6.89
14915	89.61	303.64	95	10349.0	4502.89	4546.24	-729.90	4604.46	350.88	9.12	-2.21	-8.85
15010	91.51	298.44	95	10348.0	4550.43	4595.21	-811.26	4666.27	349.99	5.83	2.00	-5.47
15106	90.84	291.22	96	10346.1	4589.18	4635.48	-898.31	4721.73	349.03	7.55	-0.70	-7.52
15202	91.93	288.13	96	10343.7	4619.91	4667.79	-988.67	4771.35	348.04	3.41	1.14	-3.22
15297	89.41	275.48	95	10342.6	4637.68	4687.18	-1081.46	4810.33	347.01	13.58	-2.65	-13.32
15393	88.60	265.64	96	10344.3	4636.94	4688.12	-1177.32	4833.69	345.90	10.28	-0.84	-10.25
15488	91.54	260.32	95	10344.2	4623.69	4676.52	-1271.57	4846.31	344.79	6.40	3.09	-5.60
15584	91.60	258.25	96	10341.5	4604.21	4658.68	-1365.85	4854.77	343.66	2.16	0.06	-2.16
15679	92.61	242.74	95	10338.0	4571.06	4627.08	-1455.06	4850.47	342.54	16.35	1.06	-16.33
15774	91.43	232.17	95	10334.7	4518.67	4576.07	-1534.98	4826.66	341.46	11.19	-1.24	-11.13
15870	92.05	223.98	96	10331.8	4453.38	4512.02	-1606.31	4789.42	340.40	8.55	0.65	-8.53

Minimum Radius of Curvature

API: 42-389-39376 **Well: Old Monarch State 2 A3HU** **Wellhead Location N+/S- : 31.738535**
Operator: PDC **Area: Orla** **E+/W- : -103.914508**
Rig: H&P 629 **Type: U-Lateral** **Magnetic Declination: 6.62**
TD: 20,602' **Plane of Proposal: 1.00**

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			
15965	91.60	215.47	95	10328.7	4379.37	4439.05	-1666.94	4741.72	339.42	8.97	-0.47	-8.96
16060	90.34	209.85	95	10327.1	4298.55	4359.12	-1718.18	4685.52	338.49	6.06	-1.33	-5.92
16155	92.52	203.42	95	10324.7	4212.98	4274.28	-1760.73	4622.73	337.61	7.14	2.29	-6.77
16201	92.47	203.19	46	10322.7	4170.46	4232.07	-1778.91	4590.75	337.20	0.51	-0.11	-0.50
16263	92.63	202.87	62	10320.0	4113.04	4175.07	-1803.14	4547.81	336.64	0.58	0.26	-0.52
16296	92.58	202.36	33	10318.5	4082.40	4144.64	-1815.82	4524.96	336.34	1.55	-0.15	-1.55
16317	92.63	202.42	21	10317.5	4062.86	4125.24	-1823.81	4510.42	336.15	0.37	0.24	0.29
16392	90.56	199.54	75	10315.4	3992.42	4055.25	-1850.65	4457.57	335.47	4.73	-2.76	-3.84
16487	90.59	197.50	95	10314.5	3901.83	3965.18	-1880.82	4388.64	334.62	2.15	0.03	-2.15
16583	91.82	194.63	96	10312.5	3809.16	3872.96	-1907.38	4317.17	333.78	3.25	1.28	-2.99
16679	90.42	191.91	96	10310.6	3715.39	3779.55	-1929.41	4243.54	332.96	3.19	-1.46	-2.83
16775	90.53	189.39	96	10309.8	3620.75	3685.22	-1947.15	4168.00	332.15	2.63	0.11	-2.63
16870	90.95	187.32	95	10308.6	3526.55	3591.24	-1960.95	4091.74	331.36	2.22	0.44	-2.18
16966	90.78	185.37	96	10307.1	3430.98	3495.84	-1971.56	4013.47	330.58	2.04	-0.18	-2.03
17062	90.48	183.88	96	10306.1	3335.18	3400.16	-1979.30	3934.30	329.80	1.58	-0.31	-1.55
17157	90.28	181.87	95	10305.4	3240.24	3305.29	-1984.06	3855.05	329.02	2.13	-0.21	-2.12
17253	89.64	180.49	96	10305.5	3144.24	3209.31	-1986.04	3774.13	328.25	1.58	-0.67	-1.44
17348	90.17	178.60	95	10305.7	3049.28	3114.32	-1985.28	3693.28	327.48	2.07	0.56	-1.99
17444	89.75	179.97	96	10305.7	2953.33	3018.33	-1984.09	3612.05	326.68	1.49	-0.44	1.43
17539	89.94	181.54	95	10306.0	2858.33	2923.34	-1985.34	3533.77	325.82	1.66	0.20	1.65
17635	89.94	182.22	96	10306.1	2762.34	2827.40	-1988.49	3456.62	324.88	0.71	0.00	0.71
17731	90.56	181.74	96	10305.7	2666.36	2731.46	-1991.80	3380.55	323.90	0.82	0.65	-0.50
17826	90.42	181.17	95	10304.8	2571.36	2636.49	-1994.22	3305.75	322.90	0.62	-0.15	-0.60
17921	90.03	180.65	95	10304.5	2476.37	2541.50	-1995.72	3231.43	321.86	0.68	-0.41	-0.55
18017	90.98	180.60	96	10303.6	2380.37	2445.51	-1996.77	3157.16	320.77	0.99	0.99	-0.05
18112	90.95	180.42	95	10302.0	2285.39	2350.53	-1997.62	3084.72	319.64	0.19	-0.03	-0.19
18208	90.08	180.42	96	10301.2	2189.40	2254.54	-1998.32	3012.68	318.45	0.91	-0.91	0.00
18303	90.28	180.24	95	10300.9	2094.41	2159.54	-1998.87	2942.63	317.21	0.28	0.21	-0.19
18398	90.73	180.09	95	10300.0	1999.42	2064.54	-1999.14	2873.83	315.92	0.50	0.47	-0.16
18494	90.34	180.12	96	10299.1	1903.44	1968.55	-1999.32	2805.79	314.56	0.41	-0.41	0.03
18589	90.25	180.26	95	10298.6	1808.45	1873.55	-1999.63	2740.20	313.14	0.18	-0.09	0.15
18685	90.25	180.47	96	10298.2	1712.45	1777.55	-2000.24	2675.94	311.63	0.22	0.00	0.22
18780	90.64	180.70	95	10297.5	1617.46	1682.56	-2001.21	2614.55	310.06	0.48	0.41	0.24
18876	90.84	180.70	96	10296.2	1521.47	1586.58	-2002.39	2554.76	308.39	0.21	0.21	0.00
18971	91.12	180.96	95	10294.6	1426.48	1491.60	-2003.76	2497.99	306.66	0.40	0.29	0.27
19067	91.99	181.12	96	10292.0	1330.52	1395.65	-2005.50	2443.34	304.83	0.92	0.91	0.17
19162	92.38	181.17	95	10288.4	1235.59	1300.74	-2007.40	2391.98	302.94	0.41	0.41	0.05
19258	89.72	180.17	96	10286.6	1139.62	1204.77	-2008.52	2342.15	300.96	2.96	-2.77	-1.04
19353	90.00	180.25	95	10286.9	1044.63	1109.78	-2008.87	2295.03	298.92	0.31	0.29	0.08
19449	90.06	180.27	96	10286.8	948.63	1013.78	-2009.31	2250.57	296.77	0.07	0.06	0.02
19544	90.00	180.38	95	10286.8	853.64	918.78	-2009.85	2209.89	294.57	0.13	-0.06	0.12
19640	93.28	181.45	96	10284.0	757.69	822.84	-2011.38	2173.18	292.25	3.59	3.42	1.11
19735	92.97	181.34	95	10278.8	662.84	728.01	-2013.69	2141.25	289.88	0.35	-0.33	-0.12
19831	92.52	181.77	96	10274.2	566.95	632.16	-2016.29	2113.06	287.41	0.65	-0.47	0.45
19927	90.81	182.21	96	10271.5	471.01	536.26	-2019.62	2089.60	284.87	1.84	-1.78	0.46
20022	90.00	182.10	95	10270.8	376.03	441.33	-2023.19	2070.77	282.31	0.86	-0.85	-0.12
20118	90.42	182.39	96	10270.4	280.06	345.41	-2026.95	2056.17	279.67	0.53	0.44	0.30
20213	91.68	182.37	95	10268.7	185.10	250.51	-2030.90	2046.29	277.03	1.33	1.33	-0.02
20309	91.40	182.55	96	10266.1	89.17	154.63	-2035.02	2040.88	274.35	0.35	-0.29	0.19
20404	90.92	182.45	95	10264.2	-5.78	59.74	-2039.16	2040.03	271.68	0.52	-0.51	-0.11
20500	90.64	182.65	96	10262.9	-101.73	-36.16	-2043.43	2043.75	268.99	0.36	-0.29	0.21
20548	92.07	182.84	48	10261.7	-149.70	-84.09	-2045.73	2047.46	267.65	3.01	2.98	0.40
20602	92.07	182.84	54	10259.8	-203.63	-137.99	-2048.40	2053.04	266.15	0.00	0.00	0.00