

Minimum Radius of Curvature

API: 42-389-41119 **Well: MEADE 402BH** **Wellhead Location** **Lat: 31.662924**
Operator: Apache **Area: Delaware** **Long: -103.858924**
Rig: TD: 22,213' **Type: U Lateral** **Magnetic Declination: 8.21**
Plane of Proposal: 1.47

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			
223	1.26	145.41	223	223.0	-1.98	-2.02	1.39	2.45	145.41	0.57	0.57	65.21
403	1.15	170.40	180	402.9	-5.35	-5.43	2.82	6.12	152.58	0.30	-0.06	13.88
498	1.33	174.21	95	497.9	-7.38	-7.47	3.09	8.08	157.54	0.21	0.19	4.01
589	0.99	190.97	91	588.9	-9.21	-9.29	3.04	9.77	161.86	0.52	-0.37	18.42
681	0.69	208.95	92	680.9	-10.48	-10.55	2.62	10.87	166.03	0.43	-0.33	19.54
772	0.92	314.41	91	771.9	-10.47	-10.52	1.84	10.68	170.09	1.42	0.25	115.89
864	1.49	331.39	92	863.9	-8.93	-8.95	0.74	8.98	175.30	0.72	0.62	18.46
962	1.44	338.73	98	961.8	-6.69	-6.69	-0.32	6.70	182.74	0.20	-0.05	7.49
1150	0.94	346.34	188	1149.8	-3.03	-2.99	-1.54	3.36	207.28	0.28	-0.27	4.05
1245	0.70	358.18	95	1244.8	-1.70	-1.65	-1.74	2.40	226.56	0.31	-0.25	12.46
1339	0.38	353.81	94	1338.8	-0.81	-0.77	-1.80	1.95	246.85	0.34	-0.34	-4.65
1433	0.06	214.72	94	1432.8	-0.55	-0.50	-1.86	1.92	254.99	0.45	-0.34	-147.97
1527	0.03	42.55	94	1526.8	-0.57	-0.52	-1.87	1.94	254.44	0.10	-0.03	-183.16
1621	0.13	6.10	94	1620.8	-0.44	-0.40	-1.84	1.88	257.85	0.11	0.11	-38.78
1716	0.12	353.91	95	1715.8	-0.24	-0.19	-1.84	1.85	264.10	0.03	-0.01	366.12
1810	0.80	326.49	94	1809.8	0.40	0.45	-2.21	2.26	281.62	0.74	0.72	-29.17
1870	1.39	330.76	60	1869.8	1.37	1.44	-2.80	3.15	297.21	0.99	0.98	7.12
1999	1.32	331.14	129	1998.7	3.99	4.11	-4.28	5.93	313.81	0.05	-0.05	0.29
2093	2.64	326.14	94	2092.7	6.70	6.85	-6.01	9.11	318.75	1.41	1.40	-5.32
2187	4.36	329.69	94	2186.5	11.50	11.73	-9.02	14.80	322.46	1.84	1.83	3.78
2282	5.28	325.80	95	2281.2	18.12	18.47	-13.30	22.76	324.24	1.03	0.97	-4.09
2376	6.22	323.41	94	2374.7	25.64	26.13	-18.76	32.17	324.32	1.03	1.00	-2.54
2470	8.67	323.66	94	2467.9	35.25	35.93	-26.00	44.35	324.11	2.61	2.61	0.27
2564	9.28	324.90	94	2560.7	46.94	47.84	-34.56	59.01	324.16	0.68	0.65	1.32
2658	8.33	326.10	94	2653.6	58.58	59.69	-42.71	73.40	324.41	1.03	-1.01	1.28
2752	9.98	327.10	94	2746.4	70.85	72.18	-50.93	88.34	324.79	1.76	1.76	1.06
2847	11.10	331.19	95	2839.8	85.55	87.11	-59.81	105.67	325.52	1.42	1.18	4.31
2941	9.85	332.16	94	2932.2	100.37	102.15	-67.93	122.67	326.38	1.34	-1.33	1.03
3035	9.50	334.78	94	3024.9	114.31	116.27	-74.99	138.36	327.18	0.60	-0.37	2.79
3130	10.81	328.23	95	3118.4	128.77	130.94	-83.02	155.04	327.62	1.84	1.38	-6.89
3224	11.56	323.82	94	3210.6	143.60	146.04	-93.22	173.26	327.45	1.21	0.80	-4.69
3319	10.65	328.48	95	3303.9	158.50	161.21	-103.43	191.53	327.32	1.34	-0.96	4.91
3413	10.00	329.74	94	3396.3	172.73	175.66	-112.09	208.37	327.46	0.73	-0.69	1.34
3507	9.27	329.63	94	3489.0	186.10	189.24	-120.03	224.10	327.62	0.78	-0.78	-0.12
3602	8.41	327.40	95	3582.9	198.36	201.70	-127.64	238.69	327.67	0.97	-0.91	-2.35
3696	8.98	316.48	94	3675.8	209.24	212.81	-136.39	252.77	327.34	1.85	0.61	-11.62
3790	9.77	310.60	94	3768.6	219.46	223.32	-147.50	267.63	326.56	1.32	0.84	-6.26
3884	9.81	311.46	94	3861.2	229.64	233.81	-159.56	283.07	325.69	0.16	0.04	0.91
3978	9.54	313.11	94	3953.9	239.96	244.44	-171.25	298.45	324.99	0.41	-0.29	1.76
4166	8.94	312.41	188	4139.4	259.89	264.94	-193.41	328.02	323.87	0.32	-0.32	-0.37
4261	7.74	313.01	95	4233.4	268.97	274.28	-203.53	341.55	323.42	1.27	-1.26	0.63
4355	7.38	315.75	94	4326.6	277.38	282.92	-212.38	353.76	323.11	0.54	-0.38	2.91
4450	6.73	321.15	95	4420.9	285.88	291.63	-220.12	365.38	322.95	0.98	-0.68	5.68
4544	5.44	330.11	94	4514.3	293.89	299.78	-225.80	375.30	323.01	1.70	-1.37	9.53
4639	5.06	330.77	95	4608.9	301.34	307.34	-230.09	383.93	323.18	0.41	-0.40	0.69
4734	4.14	336.10	95	4703.6	308.04	314.13	-233.53	391.42	323.37	1.07	-0.97	5.61
4828	3.26	339.13	94	4797.4	313.57	319.73	-235.85	397.31	323.59	0.96	-0.94	3.22
4923	2.92	336.07	95	4892.3	318.26	324.47	-237.80	402.28	323.76	0.40	-0.36	-3.22
5017	2.09	340.46	94	4986.2	322.02	328.27	-239.34	406.26	323.90	0.91	-0.88	4.67
5112	1.36	11.55	95	5081.2	324.75	331.01	-239.69	408.68	324.09	1.22	-0.77	-346.22
5206	0.96	8.25	94	5175.1	326.63	332.88	-239.36	410.00	324.28	0.43	-0.43	-3.51
5301	0.62	50.22	95	5270.1	327.76	334.00	-238.85	410.61	324.43	0.68	-0.36	44.18
5395	0.37	46.46	94	5364.1	328.31	334.53	-238.24	410.69	324.54	0.27	-0.27	-4.00
5490	0.09	358.41	95	5459.1	328.60	334.82	-238.02	410.80	324.59	0.33	-0.29	328.37
5584	0.37	180.34	94	5553.1	328.37	334.59	-238.02	410.61	324.57	0.49	0.30	-189.44
5679	1.20	183.24	95	5648.1	327.07	333.29	-238.08	409.59	324.46	0.87	0.87	3.05
5773	1.30	179.95	94	5742.1	325.02	331.24	-238.13	407.95	324.29	0.13	0.11	-3.50

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						N-S Ft	E-W Ft	Distance FT	Direction Deg			
5868	1.32	186.44	95	5837.1	322.85	329.07	-238.26	406.27	324.09	0.16	0.02	6.83
5962	0.54	186.58	94	5931.1	321.33	327.56	-238.43	405.14	323.95	0.83	-0.83	0.15
6057	0.31	175.81	95	6026.1	320.63	326.86	-238.46	404.60	323.89	0.26	-0.24	-11.34
6151	0.44	177.65	94	6120.1	320.02	326.24	-238.43	404.08	323.84	0.14	0.14	1.96
6245	0.48	211.41	94	6214.1	319.32	325.54	-238.62	403.63	323.76	0.29	0.04	35.91
6339	0.75	217.35	94	6308.1	318.48	324.72	-239.20	403.31	323.62	0.29	0.29	6.32
6434	0.61	218.55	95	6403.0	317.57	323.83	-239.89	403.00	323.47	0.15	-0.15	1.26
6528	0.87	231.41	94	6497.0	316.71	322.99	-240.76	402.85	323.30	0.33	0.28	13.68
6623	0.86	237.73	95	6592.0	315.85	322.16	-241.92	402.89	323.10	0.10	-0.01	6.65
6717	0.98	236.23	94	6686.0	314.99	321.34	-243.19	402.99	322.88	0.13	0.13	-1.60
6811	0.86	229.01	94	6780.0	314.05	320.43	-244.39	402.99	322.67	0.18	-0.13	-7.68
6906	0.97	226.67	95	6875.0	313.01	319.41	-245.51	402.86	322.45	0.12	0.12	-2.46
7001	0.84	213.18	95	6970.0	311.85	318.28	-246.48	402.56	322.25	0.26	-0.14	-14.20
7095	0.51	198.94	94	7064.0	310.86	317.30	-246.99	402.10	322.10	0.39	-0.35	-15.15
7190	0.83	216.82	95	7159.0	309.90	316.35	-247.54	401.69	321.96	0.40	0.34	18.82
7285	0.80	231.51	95	7254.0	308.91	315.39	-248.47	401.51	321.77	0.22	-0.03	15.46
7382	3.06	326.91	97	7350.9	310.61	317.14	-250.42	404.09	321.70	3.33	2.33	98.35
7477	3.69	321.06	95	7445.7	315.02	321.64	-253.72	409.67	321.73	0.75	0.66	-6.16
7571	2.34	323.69	94	7539.6	318.84	325.54	-256.76	414.61	321.74	1.44	-1.44	2.80
7665	1.46	330.67	94	7633.6	321.39	328.13	-258.48	417.71	321.77	0.97	-0.94	7.43
7759	1.09	0.81	94	7727.5	323.31	330.07	-259.06	419.59	321.87	0.80	-0.39	-350.91
7854	1.00	40.50	95	7822.5	324.86	331.60	-258.51	420.46	322.06	0.75	-0.09	41.78
7948	0.91	69.03	94	7916.5	325.78	332.49	-257.28	420.41	322.27	0.51	-0.10	30.35
8043	1.43	83.06	95	8011.5	326.24	332.90	-255.40	419.59	322.51	0.62	0.55	14.77
8138	1.85	89.28	95	8106.4	326.48	333.07	-252.69	418.07	322.81	0.48	0.44	6.55
8232	1.31	122.49	94	8200.4	325.98	332.51	-250.26	416.17	323.03	1.11	-0.57	35.33
8326	1.46	127.83	94	8294.4	324.72	331.20	-248.41	414.00	323.13	0.21	0.16	5.68
8421	1.37	118.82	95	8389.4	323.48	329.91	-246.46	411.80	323.24	0.25	-0.09	-9.48
8516	1.25	120.19	95	8484.3	322.46	328.84	-244.57	409.82	323.36	0.13	-0.13	1.44
8610	1.42	83.91	94	8578.3	322.12	328.45	-242.52	408.28	323.56	0.90	0.18	-38.60
8705	1.86	54.52	95	8673.3	323.20	329.47	-240.10	407.67	323.92	0.98	0.46	-30.94
8799	1.37	64.28	94	8767.2	324.63	330.84	-237.84	407.46	324.29	0.60	-0.52	10.38
8893	1.90	62.41	94	8861.2	325.90	332.05	-235.45	407.05	324.66	0.57	0.56	-1.99
8987	1.60	57.83	94	8955.2	327.38	333.47	-232.96	406.78	325.06	0.35	-0.32	-4.87
9081	1.37	55.89	94	9049.1	328.76	334.80	-230.92	406.71	325.41	0.25	-0.24	-2.06
9176	0.85	68.30	95	9144.1	329.70	335.70	-229.32	406.55	325.66	0.60	-0.55	13.06
9270	0.61	111.67	94	9238.1	329.80	335.77	-228.21	405.98	325.80	0.62	-0.26	46.14
9365	0.74	143.52	95	9333.1	329.15	335.09	-227.37	404.95	325.84	0.41	0.14	33.53
9458	0.64	150.40	93	9426.1	328.23	334.15	-226.76	403.83	325.84	0.14	-0.11	7.40
9553	0.69	176.96	95	9521.1	327.20	333.12	-226.47	402.81	325.79	0.33	0.05	27.96
9648	0.76	188.57	95	9616.1	326.01	331.93	-226.53	401.86	325.69	0.17	0.07	12.22
9742	0.69	199.05	94	9710.1	324.85	330.78	-226.81	401.07	325.56	0.16	-0.07	11.15
9836	0.81	198.34	94	9804.1	323.67	329.61	-227.20	400.33	325.42	0.13	0.13	-0.76
9931	0.68	212.80	95	9899.0	322.55	328.50	-227.72	399.71	325.27	0.24	-0.14	15.22
10026	0.76	207.20	95	9994.0	321.50	327.47	-228.31	399.20	325.12	0.11	0.08	-5.89
10101	0.79	204.90	75	10069.0	320.58	326.55	-228.76	398.71	324.99	0.06	0.04	-3.07
10256	4.25	339.41	155	10223.9	324.92	330.96	-231.23	403.74	325.06	3.12	2.23	86.78
10350	18.22	359.66	94	10315.9	342.93	349.01	-232.55	419.39	326.32	15.22	14.86	21.54
10444	25.61	2.85	94	10403.0	377.98	384.05	-231.62	448.49	328.91	7.96	7.86	-379.59
10539	35.49	357.38	95	10484.8	426.14	432.23	-231.86	490.49	331.79	10.79	10.40	373.19
10633	45.81	353.48	94	10556.0	486.91	493.15	-236.95	547.12	334.34	11.30	10.98	-4.15
10727	56.10	354.24	94	10615.1	559.17	565.64	-244.72	616.31	336.60	10.96	10.95	0.81
10822	61.82	354.80	95	10664.1	639.94	646.63	-252.47	694.17	338.67	6.04	6.02	0.59
10916	66.73	356.73	94	10704.9	724.18	731.05	-258.70	775.48	340.51	5.54	5.22	2.05
11010	70.52	357.35	94	10739.2	811.43	818.45	-263.21	859.74	342.17	4.08	4.03	0.66
11104	76.02	358.74	94	10766.2	901.26	908.39	-266.26	946.61	343.66	6.02	5.85	1.48
11199	84.02	358.63	95	10782.7	994.63	1001.85	-268.41	1037.18	345.00	8.42	8.42	-0.12
11293	88.99	358.96	94	10788.4	1088.33	1095.62	-270.38	1128.49	346.14	5.30	5.29	0.35

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11388	90.45	1.02	95	10788.8	1183.29	1190.61	-270.40	1220.93	347.20	2.66	1.54	-376.78
11482	92.21	2.26	94	10786.7	1277.25	1284.55	-267.71	1312.14	348.23	2.29	1.87	1.32
11576	91.98	2.14	94	10783.2	1371.18	1378.41	-264.10	1403.49	349.15	0.28	-0.24	-0.13
11671	89.46	2.75	95	10782.0	1466.15	1473.31	-260.05	1496.09	349.99	2.73	-2.65	0.64
11765	87.37	1.70	94	10784.6	1560.10	1567.20	-256.40	1588.03	350.71	2.49	-2.22	-1.12
11860	86.41	1.77	95	10789.8	1654.96	1662.01	-253.53	1681.24	351.33	1.01	-1.01	0.07
11954	87.53	1.10	94	10794.8	1748.83	1755.85	-251.18	1773.73	351.86	1.39	1.19	-0.71
12049	87.87	0.36	95	10798.6	1843.74	1850.77	-249.97	1867.57	352.31	0.86	0.36	-0.78
12143	89.66	1.50	94	10800.6	1937.71	1944.73	-248.45	1960.53	352.72	2.26	1.90	1.21
12238	91.51	2.20	95	10799.6	2032.70	2039.67	-245.38	2054.37	353.14	2.08	1.95	0.74
12319	91.81	1.64	81	10797.3	2113.66	2120.59	-242.67	2134.43	353.47	0.78	0.37	-0.69
12413	90.43	1.66	94	10795.4	2207.64	2214.53	-239.96	2227.49	353.82	1.47	-1.47	0.02
12508	91.10	1.25	95	10794.2	2302.63	2309.49	-237.55	2321.67	354.13	0.83	0.71	-0.43
12602	91.08	1.33	94	10792.4	2396.62	2403.45	-235.43	2414.95	354.41	0.09	-0.02	0.09
12697	89.85	2.12	95	10791.6	2491.61	2498.40	-232.57	2509.20	354.68	1.54	-1.29	0.83
12791	89.83	2.17	94	10791.9	2585.60	2592.33	-229.05	2602.43	354.95	0.06	-0.02	0.05
12885	89.82	3.17	94	10792.2	2679.58	2686.23	-224.68	2695.61	355.22	1.06	-0.01	1.06
12980	88.68	1.94	95	10793.4	2774.55	2781.12	-220.44	2789.84	355.47	1.77	-1.20	-1.29
13075	89.38	0.88	95	10795.0	2869.54	2876.08	-218.10	2884.34	355.66	1.34	0.74	-1.12
13169	89.06	1.75	94	10796.3	2963.53	2970.04	-215.95	2977.88	355.84	0.99	-0.34	0.93
13264	89.28	0.59	95	10797.7	3058.51	3065.01	-214.01	3072.47	356.01	1.24	0.23	-1.22
13359	89.13	0.95	95	10799.0	3153.50	3159.99	-212.73	3167.15	356.15	0.41	-0.16	0.38
13453	89.11	1.06	94	10800.4	3247.48	3253.97	-211.08	3260.81	356.29	0.12	-0.02	0.12
13547	90.74	2.85	94	10800.6	3341.47	3347.91	-207.88	3354.35	356.45	2.58	1.73	1.90
13641	90.73	2.91	94	10799.3	3435.44	3441.78	-203.15	3447.77	356.62	0.06	-0.01	0.06
13736	91.42	4.20	95	10797.6	3530.35	3536.58	-197.26	3542.08	356.81	1.54	0.73	1.36
13830	90.04	1.76	94	10796.4	3624.30	3630.43	-192.38	3635.53	356.97	2.98	-1.47	-2.60
13924	90.49	3.31	94	10795.9	3718.28	3724.34	-188.22	3729.09	357.11	1.72	0.48	1.65
14019	90.41	1.71	95	10795.2	3813.26	3819.24	-184.06	3823.67	357.24	1.69	-0.08	-1.68
14113	90.25	2.54	94	10794.6	3907.25	3913.17	-180.58	3917.34	357.36	0.90	-0.17	0.88
14207	88.66	2.02	94	10795.5	4001.24	4007.09	-176.84	4010.99	357.47	1.78	-1.69	-0.55
14302	88.94	0.13	95	10797.5	4096.21	4102.05	-175.05	4105.78	357.56	2.01	0.29	-1.99
14397	89.76	1.20	95	10798.6	4191.19	4197.03	-173.95	4200.64	357.63	1.42	0.86	1.13
14491	89.61	2.76	94	10799.1	4285.18	4290.97	-170.70	4294.37	357.72	1.67	-0.16	1.66
14586	89.34	1.87	95	10800.0	4380.17	4385.89	-166.87	4389.06	357.82	0.98	-0.28	-0.94
14620	88.54	0.67	34	10800.6	4414.16	4419.88	-166.11	4423.00	357.85	4.24	-2.35	-3.53
14715	90.64	0.16	95	10801.3	4509.14	4514.87	-165.43	4517.90	357.90	2.27	2.21	-0.54
14809	92.60	0.23	94	10798.6	4603.07	4608.82	-165.11	4611.78	357.95	2.09	2.09	0.07
14964	93.53	1.39	155	10790.4	4757.83	4763.58	-162.92	4766.37	358.04	0.96	0.60	0.75
15058	89.33	2.55	94	10788.0	4851.78	4857.47	-159.69	4860.10	358.12	4.64	-4.47	1.23
15153	88.74	2.71	95	10789.6	4946.75	4952.36	-155.33	4954.80	358.20	0.64	-0.62	0.17
15247	89.19	2.11	94	10791.3	5040.72	5046.26	-151.38	5048.53	358.28	0.80	0.48	-0.64
15342	87.03	2.48	95	10794.4	5135.65	5141.13	-147.58	5143.25	358.36	2.31	-2.27	0.39
15436	87.32	1.68	94	10799.1	5229.53	5234.95	-144.17	5236.94	358.42	0.90	0.31	-0.85
15626	92.20	358.19	190	10799.9	5419.37	5424.86	-144.38	5426.78	358.48	3.16	2.57	187.64
15720	99.57	351.91	94	10790.2	5512.18	5517.91	-152.41	5520.01	358.42	10.27	7.84	-6.68
15814	99.09	344.99	94	10775.0	5602.50	5608.73	-170.97	5611.33	358.25	7.28	-0.51	-7.36
15909	93.36	338.96	95	10764.7	5691.43	5698.44	-200.20	5701.96	357.99	8.73	-6.03	-6.35
16003	89.69	329.13	94	10762.2	5774.72	5782.81	-241.27	5787.84	357.61	11.16	-3.90	-10.46
16098	88.67	318.33	95	10763.5	5849.73	5859.28	-297.38	5866.83	357.09	11.42	-1.07	-11.37
16192	91.04	307.40	94	10763.8	5911.78	5923.13	-366.17	5934.44	356.46	11.90	2.52	-11.63
16287	86.88	296.84	95	10765.5	5960.13	5973.55	-446.48	5990.21	355.73	11.94	-4.38	-11.12
16381	86.36	287.84	94	10771.0	5993.53	6009.18	-533.18	6032.79	354.93	9.57	-0.55	-9.57
16475	88.78	280.37	94	10775.0	6014.05	6032.05	-624.20	6064.26	354.09	8.35	2.57	-7.95
16570	88.24	272.52	95	10777.5	6022.28	6042.70	-718.49	6085.27	353.22	8.28	-0.57	-8.26
16663	91.32	266.01	93	10777.9	6018.70	6041.51	-811.42	6095.75	352.35	7.74	3.31	-7.00
16758	91.20	259.68	95	10775.8	6004.47	6029.68	-905.61	6097.31	351.46	6.66	-0.13	-6.66
16852	89.97	252.50	94	10774.8	5979.55	6007.10	-996.79	6089.24	350.58	7.75	-1.31	-7.64

Minimum Radius of Curvature

API: 42-389-41119 **Well: MEADE 402BH** **Wellhead Location** **Lat: 31.662924**
Operator: Apache **Area: Delaware** **Long: -103.858924**
Rig: TD: 22,213' **Type: U Lateral** **Magnetic Declination: 8.21**
Plane of Proposal: 1.47

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			
16947	89.66	246.55	95	10775.1	5944.07	5973.89	-1085.75	6071.75	349.70	6.27	-0.33	-6.26
17041	89.03	241.68	94	10776.2	5900.89	5932.87	-1170.28	6047.19	348.84	5.22	-0.67	-5.18
17135	89.35	238.53	94	10777.5	5851.98	5886.03	-1251.76	6017.66	347.99	3.37	0.34	-3.35
17168	89.83	236.50	33	10777.8	5833.55	5868.30	-1279.59	6006.19	347.70	6.32	1.45	-6.15
17263	89.36	233.60	95	10778.4	5777.15	5813.89	-1357.45	5970.26	346.86	3.09	-0.49	-3.05
17357	91.43	223.59	94	10777.8	5713.28	5751.80	-1427.86	5926.38	346.06	10.87	2.20	-10.65
17451	92.95	214.36	94	10774.2	5638.85	5678.86	-1486.88	5870.29	345.33	9.94	1.62	-9.82
17546	92.72	204.37	95	10769.5	5555.10	5596.28	-1533.34	5802.54	344.68	10.51	-0.24	-10.52
17640	91.24	195.80	94	10766.2	5466.15	5508.13	-1565.57	5726.30	344.13	9.25	-1.57	-9.12
17735	89.61	186.87	95	10765.5	5372.66	5415.08	-1584.22	5642.06	343.69	9.55	-1.72	-9.40
17829	89.67	177.51	94	10766.1	5278.77	5321.26	-1587.81	5553.10	343.39	9.96	0.06	-9.96
17923	88.94	174.73	94	10767.2	5185.20	5227.49	-1581.45	5461.47	343.17	3.06	-0.78	-2.96
18017	89.44	175.43	94	10768.6	5091.79	5133.85	-1573.39	5369.54	342.96	0.92	0.53	0.74
18111	89.81	175.61	94	10769.2	4998.30	5040.14	-1566.05	5277.83	342.74	0.44	0.39	0.19
18205	89.95	175.67	94	10769.4	4904.79	4946.41	-1558.90	5186.24	342.51	0.16	0.15	0.06
18300	90.00	175.43	95	10769.4	4810.29	4851.69	-1551.53	5093.74	342.27	0.26	0.05	-0.25
18394	89.78	175.73	94	10769.6	4716.79	4757.97	-1544.29	5002.31	342.02	0.40	-0.23	0.32
18488	89.98	175.86	94	10769.8	4623.25	4664.23	-1537.40	4911.07	341.76	0.25	0.21	0.14
18583	89.81	175.70	95	10770.0	4528.72	4569.48	-1530.40	4818.96	341.48	0.25	-0.18	-0.17
18677	89.95	175.48	94	10770.2	4435.22	4475.76	-1523.18	4727.85	341.21	0.28	0.15	-0.23
18865	89.39	175.66	188	10771.3	4248.22	4288.33	-1508.66	4545.97	340.62	0.31	-0.30	0.10
18960	89.94	175.50	95	10771.8	4153.72	4193.61	-1501.33	4454.26	340.30	0.60	0.58	-0.17
19053	90.36	177.50	93	10771.6	4061.07	4100.79	-1495.66	4365.03	339.96	2.20	0.45	2.15
19147	90.42	178.31	94	10770.9	3967.26	4006.86	-1492.22	4275.70	339.57	0.86	0.06	0.86
19241	90.22	178.69	94	10770.4	3873.39	3912.89	-1489.76	4186.90	339.16	0.46	-0.21	0.40
19336	90.56	178.77	95	10769.8	3778.50	3817.92	-1487.65	4097.51	338.71	0.37	0.36	0.08
19429	90.03	180.12	93	10769.3	3685.56	3724.93	-1486.75	4010.67	338.24	1.56	-0.57	1.45
19523	90.42	180.07	94	10768.9	3591.59	3630.93	-1486.91	3923.59	337.73	0.42	0.41	-0.05
19618	89.89	179.98	95	10768.7	3496.62	3535.93	-1486.95	3835.86	337.19	0.57	-0.56	-0.09
19713	90.70	181.26	95	10768.2	3401.63	3440.94	-1487.98	3748.88	336.61	1.59	0.85	1.35
19807	90.84	181.76	94	10766.9	3307.64	3346.98	-1490.46	3663.84	336.00	0.55	0.15	0.53
19901	90.14	181.53	94	10766.1	3213.65	3253.02	-1493.15	3579.34	335.34	0.78	-0.74	-0.24
19996	89.80	181.63	95	10766.1	3118.65	3158.06	-1495.77	3494.38	334.66	0.37	-0.36	0.11
20090	89.24	181.52	94	10766.9	3024.65	3064.10	-1498.36	3410.83	333.94	0.61	-0.60	-0.12
20185	89.69	181.25	95	10767.8	2929.65	2969.13	-1500.65	3326.81	333.19	0.55	0.47	-0.28
20279	89.41	181.33	94	10768.6	2835.66	2875.16	-1502.77	3244.20	332.41	0.31	-0.30	0.09
20374	89.55	181.84	95	10769.4	2740.66	2780.20	-1505.40	3161.60	331.57	0.56	0.15	0.54
20468	89.30	181.87	94	10770.4	2646.67	2686.25	-1508.44	3080.80	330.68	0.27	-0.27	0.03
20562	89.80	182.01	94	10771.1	2552.68	2592.31	-1511.62	3000.84	329.75	0.55	0.53	0.15
20657	89.41	181.53	95	10771.8	2457.68	2497.36	-1514.56	2920.73	328.76	0.65	-0.41	-0.51
20751	89.50	181.52	94	10772.7	2363.68	2403.39	-1517.06	2842.14	327.74	0.10	0.10	-0.01
20845	89.38	181.59	94	10773.6	2269.69	2309.43	-1519.61	2764.54	326.66	0.15	-0.13	0.07
20940	89.89	181.54	95	10774.2	2174.69	2214.47	-1522.20	2687.19	325.50	0.54	0.54	-0.05
21035	89.61	181.58	95	10774.6	2079.69	2119.51	-1524.79	2610.99	324.27	0.30	-0.29	0.04
21127	89.47	181.19	92	10775.3	1987.70	2027.54	-1527.01	2538.24	323.02	0.45	-0.15	-0.42
21218	89.27	181.23	91	10776.3	1896.70	1936.56	-1528.93	2467.37	321.71	0.22	-0.22	0.04
21310	89.36	181.43	92	10777.4	1804.71	1844.59	-1531.07	2397.23	320.31	0.24	0.10	0.22
21413	89.36	181.72	103	10778.6	1701.72	1741.64	-1533.90	2320.81	318.63	0.28	0.00	0.28
21507	89.64	181.15	94	10779.4	1607.72	1647.67	-1536.25	2252.75	317.00	0.68	0.30	-0.61
21602	89.36	181.68	95	10780.2	1512.72	1552.71	-1538.60	2185.91	315.26	0.63	-0.29	0.56
21697	89.83	181.34	95	10780.9	1417.73	1457.74	-1541.10	2121.32	313.41	0.61	0.49	-0.36
21791	89.30	181.49	94	10781.6	1323.73	1363.77	-1543.42	2059.62	311.46	0.59	-0.56	0.16
21885	90.65	181.52	94	10781.7	1229.73	1269.81	-1545.89	2000.55	309.40	1.44	1.44	0.03
21980	90.42	180.97	95	10780.8	1134.74	1174.83	-1547.96	1943.30	307.20	0.63	-0.24	-0.58
22074	91.18	181.65	94	10779.5	1040.75	1080.87	-1550.11	1889.74	304.89	1.08	0.81	0.72
22150	91.07	181.25	76	10778.0	964.76	1004.91	-1552.03	1848.95	302.92	0.55	-0.14	-0.53
22213	91.07	181.25	63	10776.8	901.77	941.93	-1553.40	1816.67	301.23	0.00	0.00	0.00