

DIRECTION Total Directional Services, LLC
 OPERATOR Continental Resources, Inc.
 WELL NAMI UTL Bobcat 2536D 04H
 API 14 42495349850000
 RIG Scan Denali
 COUNTY Winkler County, TX (NAD 27-Grid)
 MAP DATUM NAD 1927 (NADCON CONUS)
 MAP SYSTEM US State Plane 1927 (Exact solution)
 MAP ZONE Texas Central 4203
 WELL LAT 31.733475
 WELL LON -103.172533
 WELL EWN 1117375
 WELL NSM 762955
 CONVERGE -1.46
 MAGMODE HDGM2024
 DECLINATION 6.45
 NORTH REF Grid
 GROUND E 2757
 KB ELEV 2784.5
 VS AZI 163.73

SURVEY LIST

Measured I	Inclination	Azimuth	Course Len	True Vertic	SubSea TVL	Local N/S	Local E/W	Easting	Northing	Latitude	Longitude	Dogleg	Sev Build Rate	Turn Rate	Vertical Section
MD	INC	AZI	CL	TVD	SSTVD	NS	EW	X	Y	LAT	LON	DLS	BLD	TRN	VS
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	LAT(decim	LON(decim	(/100 ft)	(/100 ft)	(/100 ft)	(ft)
0	0	0	0	0	2784.5	0	0	1117375	762955	31.73348	-103.173	0	0	0	0
171	0.22	173.25	171	171	2613.5	-0.326	0.039	1117375	762954.7	31.73347	-103.173	0.129	0.13	0	0.324
226	0.31	155.23	55	225.999	2558.501	-0.566	0.113	1117375	762954.4	31.73347	-103.173	0.221	0.16	-32.76	0.575
312	0.75	171.41	86	311.995	2472.505	-1.334	0.295	1117375	762953.7	31.73347	-103.173	0.535	0.51	18.81	1.363
400	0.66	174.57	88	399.988	2384.512	-2.408	0.429	1117375	762952.6	31.73347	-103.173	0.111	-0.1	3.59	2.432
500	0.62	152.07	100	499.982	2284.518	-3.459	0.737	1117376	762951.5	31.73347	-103.173	0.253	-0.04	-22.5	3.527
596	0.62	171.93	96	595.977	2188.523	-4.432	1.053	1117376	762950.6	31.73346	-103.173	0.223	0	20.69	4.55
692	0.79	153.39	96	691.97	2092.53	-5.538	1.422	1117376	762949.5	31.73346	-103.173	0.294	0.18	-19.31	5.715
788	0.48	183.36	96	787.964	1996.536	-6.531	1.695	1117377	762948.5	31.73346	-103.173	0.463	-0.32	31.22	6.745
884	1.19	184.85	96	883.953	1900.547	-7.926	1.587	1117377	762947.1	31.73345	-103.173	0.74	0.74	1.55	8.053
980	2.24	219.66	96	979.911	1804.589	-10.364	0.306	1117375	762944.6	31.73345	-103.173	1.494	1.09	36.26	10.034
1076	2.99	231.88	96	1075.811	1708.689	-13.354	-2.862	1117372	762941.6	31.73344	-103.173	0.969	0.78	12.73	12.017
1172	3.69	235.3	96	1171.648	1612.852	-16.658	-7.371	1117368	762938.3	31.73343	-103.173	0.758	0.73	3.56	13.926
1268	4.09	235.04	96	1267.426	1517.074	-20.378	-12.717	1117362	762934.6	31.73342	-103.173	0.417	0.42	-0.27	16
1365	4.04	227.83	97	1364.183	1420.317	-24.655	-18.084	1117357	762930.3	31.73341	-103.173	0.529	-0.05	-7.43	18.601
1459	4.26	223.7	94	1457.937	1326.563	-29.402	-22.95	1117352	762925.6	31.73339	-103.173	0.395	0.23	-4.39	21.794
1554	4.57	229.15	95	1552.655	1231.845	-34.428	-28.251	1117347	762920.6	31.73338	-103.173	0.549	0.33	5.74	25.134
1649	4.82	246.82	95	1647.354	1137.146	-38.41	-34.631	1117340	762916.6	31.73337	-103.173	1.485	0.05	18.6	27.169
1743	4.68	264.92	94	1741.037	1043.463	-40.254	-42.094	1117333	762914.7	31.73336	-103.173	1.611	0.28	19.26	26.849
1838	4.75	263.96	95	1835.702	948.798	-41.026	-50.031	1117325	762914	31.73336	-103.173	0.161	-0.14	-1.01	25.366
1933	4.53	264.92	95	1930.39	854.11	-41.772	-57.679	1117317	762913.2	31.73336	-103.173	0.246	-0.23	1.01	23.939
2028	3.87	262.46	95	2025.135	759.365	-42.525	-64.594	1117310	762912.5	31.73335	-103.173	0.72	-0.69	-2.59	22.725
2123	4	270.9	95	2119.911	664.589	-42.893	-71.086	1117304	762912.1	31.73335	-103.173	0.624	0.14	8.88	21.26
2217	6.68	279.16	94	2213.496	571.004	-41.971	-79.763	1117295	762913	31.73335	-103.173	2.959	2.85	8.79	17.944
2312	6.64	279.69	95	2307.855	476.645	-40.167	-90.632	1117284	762914.8	31.73336	-103.173	0.077	-0.04	0.56	13.167
2407	7.78	280.04	95	2402.102	382.398	-38.122	-102.378	1117273	762916.9	31.73336	-103.173	1.201	1.2	0.37	7.912
2502	8.4	275.03	95	2496.158	288.342	-36.392	-115.622	1117259	762918.6	31.73337	-103.173	0.988	0.65	-5.27	2.542
2596	7.87	278.02	94	2589.212	195.288	-34.892	-128.834	1117246	762920.1	31.73337	-103.173	0.721	-0.56	3.18	-2.6
2691	7.3	274.94	95	2683.381	101.119	-33.465	-141.288	1117234	762921.5	31.73337	-103.173	0.737	-0.6	-3.24	-7.459
2786	7.3	269.05	95	2777.612	6.888	-33.045	-153.336	1117222	762922	31.73337	-103.173	0.787	0	-6.2	-11.237
2881	7.96	262.9	95	2871.772	-87.272	-33.959	-165.899	1117209	762921	31.73337	-103.173	1.104	0.69	-6.47	-13.88
2976	8.79	256.75	95	2965.76	-181.26	-36.435	-179.492	1117196	762918.6	31.73336	-103.173	1.284	0.87	-6.47	-15.311
3070	8.79	245.15	94	3058.663	-274.163	-41.1	-193.001	1117182	762913.9	31.73335	-103.173	1.883	0	-12.34	-14.618
3165	8.18	240.58	95	3152.624	-368.124	-47.471	-205.475	1117170	762907.5	31.73333	-103.173	0.957	-0.64	-4.81	-11.997
3260	7.74	245.85	95	3246.71	-462.21	-53.408	-217.2	1117158	762901.6	31.73331	-103.173	0.897	-0.46	5.55	-9.583
3355	7.3	244.62	95	3340.893	-556.393	-58.612	-228.49	1117147	762896.4	31.7333	-103.173	0.493	-0.46	-1.29	-7.75
3450	6.55	245.59	95	3435.199	-650.699	-63.438	-238.877	1117136	762891.6	31.73328	-103.173	0.799	-0.79	1.02	-6.027
3545	5.76	248.66	95	3529.651	-745.151	-67.412	-248.252	1117127	762887.6	31.73327	-103.173	0.901	-0.83	3.23	-4.839
3639	5.36	243.13	94	3623.209	-838.709	-71.113	-256.562	1117118	762883.9	31.73326	-103.173	0.711	-0.43	-5.88	-3.614
3734	7.25	244.09	95	3717.63	-933.13	-75.738	-265.913	1117109	762879.3	31.73325	-103.173	1.992	1.99	1.01	-1.794
3829	6.64	248.31	95	3811.933	-1027.43	-80.388	-276.408	1117099	762874.6	31.73324	-103.173	0.837	-0.64	4.44	-0.271
3924	6.73	246.73	95	3906.287	-1121.79	-84.617	-286.626	1117088	762870.4	31.73322	-103.173	0.216	0.09	-1.66	0.926
4019	9.14	242.16	95	4000.372	-1215.87	-90.341	-298.413	1117077	762864.7	31.73321	-103.173	2.62	2.54	-4.81	3.118
4113	8.35	242.77	94	4093.278	-1308.78	-96.95	-311.084	1117064	762858.1	31.73319	-103.174	0.846	-0.84	0.65	5.913
4208	7.69	244.8	95	4187.349	-1402.85	-102.813	-322.969	1117052	762852.2	31.73317	-103.174	0.756	-0.69	2.14	8.211
4303	6.99	248.14	95	4281.57	-1497.07	-107.672	-334.085	1117041	762847.3	31.73316	-103.174	0.863	-0.74	3.52	9.761
4398	8.04	245.94	95	4375.753	-1591.25	-112.533	-345.517	1117029	762842.5	31.73314	-103.174	1.146	1.11	-2.32	11.225
4493	9.71	241.98	95	4469.613	-1685.11	-119.005	-358.656	1117016	762836	31.73312	-103.174	1.871	1.76	-4.17	13.757
4587	9.01	241.28	94	4562.361	-1777.86	-126.266	-372.11	1117003	762828.7	31.7331	-103.174	0.754	-0.74	-0.74	16.958
4682	8.7	243.13	95	4656.229	-1871.73	-133.088	-385.042	1116990	762821.9	31.73308	-103.174	0.443	-0.33	1.95	19.883
4777	8.13	244	95	4750.206	-1965.71	-139.28	-397.489	1116978	762815.7	31.73306	-103.174	0.615	-0.6	0.92	22.34
4872	7.78	244.8	95	4844.292	-2059.79	-144.963	-409.345	1116966	762810	31.73305	-103.174	0.386	-0.37	0.84	24.474
4967	7.16	245.76	95	4938.485	-2153.99	-150.131	-420.562	1116954	762804.9	31.73303	-103.174	0.666	-0.65	1.01	26.293

5062	6.68	248.93	95	5032.793	-2248.29	-154.549	-431.116	1116944	762800.5	31.73302	-103.174	0.646	-0.51	3.34	27.576
5156	5.93	249.8	94	5126.224	-2341.72	-158.191	-440.775	1116934	762796.8	31.73301	-103.174	0.804	-0.8	0.93	28.366
5167	6.11	247.87	11	5137.163	-2352.66	-158.608	-441.851	1116933	762796.4	31.73301	-103.174	2.462	1.64	-17.55	28.465
5266	5.45	249.89	99	5235.659	-2451.16	-162.209	-451.146	1116924	762792.8	31.733	-103.174	0.698	-0.67	2.04	29.318
5361	5.32	247.7	95	5330.24	-2545.74	-165.431	-459.457	1116916	762789.6	31.73299	-103.174	0.256	-0.14	-2.31	30.083
5455	6.11	238.64	94	5423.774	-2639.27	-169.688	-467.761	1116907	762785.3	31.73298	-103.174	1.273	0.84	-9.64	31.843
5550	6.99	232.67	95	5518.154	-2733.65	-175.825	-476.675	1116898	762779.2	31.73296	-103.174	1.17	0.93	-6.28	35.236
5645	7.74	225.9	95	5612.372	-2827.87	-183.782	-485.866	1116889	762771.2	31.73294	-103.174	1.206	0.79	-7.13	40.3
5740	7.74	231.35	95	5706.507	-2922.01	-192.23	-495.456	1116880	762762.8	31.73291	-103.174	0.772	0	5.74	45.722
5834	7.65	240.4	94	5799.664	-3015.16	-199.274	-505.84	1116869	762755.7	31.73289	-103.174	1.291	-0.1	9.63	49.575
5929	7.69	250.68	95	5893.819	-3109.32	-204.5	-517.337	1116858	762750.5	31.73288	-103.174	1.443	0.04	10.82	51.371
6024	7.65	258.42	95	5987.971	-3203.47	-207.873	-529.53	1116845	762747.1	31.73287	-103.174	1.087	-0.04	8.15	51.193
6119	7.43	265.27	95	6082.152	-3297.65	-209.649	-541.846	1116833	762745.4	31.73286	-103.174	0.973	-0.23	7.21	49.447
6213	7.47	266.86	94	6175.358	-3390.86	-210.484	-554.004	1116821	762744.5	31.73286	-103.174	0.223	0.04	1.69	46.843
6308	7.69	264.83	95	6269.528	-3485.03	-211.395	-566.501	1116808	762743.6	31.73285	-103.174	1.365	0.23	-2.14	44.216
6403	7.52	263.08	95	6363.693	-3579.19	-212.717	-579.002	1116796	762742.3	31.73285	-103.174	0.302	-0.18	-1.84	41.983
6498	6.59	260.18	95	6457.973	-3673.47	-214.396	-590.545	1116784	762740.6	31.73284	-103.174	1.048	-0.98	-3.05	40.36
6592	6.51	260.26	94	6551.359	-3766.86	-216.217	-601.112	1116774	762738.8	31.73284	-103.174	0.086	-0.09	0.09	39.148
6687	6.07	256.48	95	6645.788	-3861.29	-218.303	-611.303	1116764	762736.7	31.73283	-103.174	0.636	-0.46	-3.98	38.295
6782	6.02	250.6	95	6740.26	-3955.76	-221.132	-620.886	1116754	762733.9	31.73282	-103.175	0.654	-0.05	-6.19	38.326
6877	6.2	246.47	95	6834.721	-4050.22	-224.834	-630.288	1116745	762730.2	31.73281	-103.175	0.5	0.19	-4.35	39.246
6971	6.46	242.69	94	6928.148	-4143.65	-229.287	-639.641	1116735	762725.7	31.7328	-103.175	0.522	0.28	-4.02	40.9
7066	6.37	242.69	95	7022.553	-4238.05	-234.157	-649.072	1116726	762720.8	31.73279	-103.175	0.095	-0.09	0	42.933
7161	6.24	240.66	95	7116.979	-4332.48	-239.105	-658.255	1116717	762715.9	31.73277	-103.175	0.272	-0.14	-2.14	45.11
7255	6.73	238.03	94	7210.377	-4425.88	-244.524	-667.381	1116708	762710.5	31.73276	-103.175	0.609	0.52	-2.8	47.755
7350	7.52	237.68	95	7304.643	-4520.14	-250.795	-677.357	1116698	762704.2	31.73274	-103.175	0.833	0.83	-0.37	50.98
7445	8.75	241.02	95	7398.686	-4614.19	-257.62	-688.932	1116686	762697.4	31.73272	-103.175	1.386	1.29	3.52	54.289
7540	9.85	242.16	95	7492.436	-4707.94	-264.916	-702.439	1116673	762690.1	31.7327	-103.175	1.174	1.16	1.2	57.509
7634	9.32	242.95	94	7585.123	-4800.62	-272.133	-716.327	1116659	762682.9	31.73268	-103.175	0.581	-0.56	0.84	60.545
7729	9.27	243.39	95	7678.876	-4894.38	-279.058	-730.019	1116645	762675.9	31.73266	-103.175	0.091	-0.05	0.46	63.357
7824	8.79	245.15	95	7772.698	-4988.2	-285.536	-743.447	1116632	762669.5	31.73264	-103.175	0.583	-0.51	1.85	65.814
7919	8.53	249.63	95	7866.616	-5082.12	-291.039	-756.639	1116618	762664	31.73262	-103.175	0.761	-0.27	4.72	67.4
8014	8.26	254.2	95	7960.599	-5176.1	-295.349	-769.81	1116605	762659.7	31.73261	-103.175	0.757	-0.28	4.81	67.848
8108	8.31	258.24	94	8053.619	-5269.12	-298.572	-782.958	1116592	762656.4	31.7326	-103.175	0.621	0.05	4.3	67.258
8203	8.13	258.77	95	8147.643	-5363.14	-301.28	-796.268	1116579	762653.7	31.73259	-103.175	0.206	-0.19	0.56	66.128
8298	7.3	256.66	95	8241.783	-5457.28	-303.981	-808.729	1116566	762651	31.73258	-103.175	0.923	-0.87	-2.22	65.23
8393	6.42	259.3	95	8336.102	-5551.6	-306.359	-819.821	1116555	762648.6	31.73258	-103.175	0.984	-0.93	2.78	64.406
8487	6.11	260.09	94	8429.54	-5645.04	-308.196	-829.913	1116545	762646.8	31.73257	-103.175	0.342	-0.33	0.84	63.341
8582	5.63	263.87	95	8524.042	-5739.54	-309.564	-839.527	1116535	762645.4	31.73257	-103.175	0.648	-0.51	3.98	61.961
8677	5.93	261.67	95	8618.559	-5834.06	-310.772	-849.016	1116526	762644.2	31.73256	-103.175	0.393	0.32	-2.32	60.463
8717	6.02	260.7	40	8658.342	-5873.84	-311.411	-853.13	1116522	762643.6	31.73256	-103.175	0.338	0.22	-2.42	59.923
8772	6.11	252.97	55	8713.035	-5928.54	-312.734	-858.775	1116516	762642.3	31.73256	-103.175	1.493	0.16	-14.05	59.612
8866	4.7	233.98	94	8806.622	-6022.12	-316.464	-866.674	1116508	762638.5	31.73254	-103.175	2.404	-1.5	-20.2	60.979
8961	3.91	210.87	95	8901.36	-6116.86	-321.534	-871.485	1116504	762633.5	31.73253	-103.175	1.988	-0.83	-24.33	64.498
9056	5.01	200.32	95	8996.073	-6211.57	-328.204	-874.587	1116500	762626.8	31.73251	-103.175	1.44	1.16	-11.11	70.032
9114	4.88	198.48	58	9053.857	-6269.36	-332.919	-876.249	1116499	762622.1	31.7325	-103.175	0.354	-0.22	-3.17	74.093
9151	4.7	198.83	37	9090.728	-6306.23	-335.846	-877.237	1116498	762619.2	31.73249	-103.175	0.493	-0.49	0.95	76.626
9245	4.48	196.63	94	9184.426	-6399.93	-343.009	-879.53	1116495	762612	31.73247	-103.175	0.3	-0.23	-2.34	82.859
9340	4.26	187.4	95	9279.151	-6494.65	-350.063	-881.047	1116494	762604.9	31.73245	-103.175	0.775	-0.23	-9.72	89.206
9435	4.22	182.13	95	9373.892	-6589.39	-357.055	-881.631	1116493	762597.9	31.73243	-103.175	0.412	-0.04	-5.55	95.754
9530	2.46	180.99	95	9468.727	-6684.23	-362.587	-881.796	1116493	762592.4	31.73242	-103.175	1.854	-1.85	-1.2	101.018
9625	0.75	199.71	95	9563.686	-6779.19	-365.211	-882.041	1116493	762589.8	31.73241	-103.175	1.859	-1.8	19.71	103.669
9719	0.18	243.56	94	9657.683	-6873.18	-365.856	-882.381	1116493	762589.1	31.73241	-103.175	0.673	-0.61	46.65	103.993
9814	0.18	308.78	95	9752.683	-6968.18	-365.829	-882.631	1116492	762589.2	31.73241	-103.175	0.204	0	68.65	103.897
9909	1.41	267.73	95	9847.672	-7063.17	-365.782	-883.915	1116491	762589.2	31.73241	-103.175	1.347	1.29	-43.21	103.492
10004	2.64	272.3	95	9942.611	-7158.11	-365.74	-887.269	1116488	762589.3	31.73241	-103.175	1.305	1.29	4.81	102.512
10098	2.95	276.61	94	10036.5	-7252	-365.375	-891.835	1116483	762589.6	31.73241	-103.175	0.398	0.33	4.59	100.882
10193	2.64	283.2	95	10131.39	-7346.89	-364.594	-896.394	1116479	762590.4	31.73241	-103.175	0.469	-0.33	6.94	98.855
10288	2.33	287.16	95	10226.3	-7441.8	-363.525	-900.369	1116475	762591.5	31.73241	-103.175	0.373	-0.33	4.17	96.715
10382	0.75	303.95	94	10320.26	-7535.76	-362.617	-902.705	1116472	762592.4	31.73242	-103.175	1.73	-1.68	17.86	95.192
10477	0.18	165.17	95	10415.26	-7630.76	-362.414	-903.183	1116472	762592.6	31.73242	-103.175	0.94	-0.6	-146.08	94.861
10572	0.31	57.32	95	10510.26	-7725.76	-362.42	-902.928	1116472	762592.6	31.73242	-103.175	0.425	0.14	-113.53	94.938
10667	0.31	65.94	95	10605.26	-7820.76	-362.176	-902.477	1116473	762592.8	31.73242	-103.175	0.049	0	9.07	94.83
10761	0.26	152.95	94	10699.26	-7914.76	-362.262	-902.148	1116473	762592.7	31.73242	-103.175	0.419	-0.05	92.56	95.005
10856	0.35	139.77	95	10794.25	-8009.75	-362.676	-901.862	1116473	762592.3	31.73242	-103.175	0.12	0.09	-13.87	95.482
10951	0.09	245.15	95	10889.25	-8104.75	-362.929	-901.743	1116473	762592.1	31.73241	-103.175	0.404	-0.27	110.93	95.758
11045	0.31	65.76	94	10983.25	-8198.75	-362.855	-901.578	1116473	762592.1	31.73241	-103.175	0.426	0.23	-190.84	95.734
11140	0.26	150.84	95	11078.25	-8293.75	-362.938	-901.238	1116474	762592.1	31.73241	-103.175	0.408	-0.05	89.56	95.909
11235	0.09	245.76	95	11173.25	-8388.75	-363.157	-901.201	1116474	762591.8	31.73241	-103.175	0.297	-0.18	99.92	96.129
11330	0.44	82.64	95	11268.2											

12372	1.8	245.13	95	12310.03	-9525.53	-369.397	-914.532	1116460	762585.6	31.7324	-103.175	0.201	-0.19	-2.03	98.385
12467	2.51	252.16	95	12404.96	-9620.46	-370.662	-917.866	1116457	762584.3	31.73239	-103.175	0.796	0.75	7.4	98.665
12562	2.02	258.05	95	12499.89	-9715.39	-371.646	-921.484	1116454	762583.4	31.73239	-103.175	0.57	-0.52	6.2	98.595
12656	0.75	217.97	94	12593.86	-9809.36	-372.474	-923.483	1116452	762582.5	31.73239	-103.175	1.622	-1.35	-42.64	98.83
12751	0.57	223.24	95	12688.85	-9904.35	-373.308	-924.19	1116451	762581.7	31.73238	-103.175	0.2	-0.19	5.55	99.433
12846	0.75	264.73	95	12783.85	-9999.35	-373.71	-925.132	1116450	762581.3	31.73238	-103.175	0.523	0.19	43.67	99.554
12940	1.1	279.67	94	12877.83	-10093.3	-373.615	-926.635	1116448	762581.4	31.73238	-103.175	0.449	0.37	15.89	99.042
13035	0.75	284.59	95	12972.82	-10188.3	-373.305	-928.135	1116447	762581.7	31.73238	-103.175	0.377	-0.37	5.18	98.325
13130	0.97	295.4	95	13067.81	-10283.3	-372.803	-929.463	1116446	762582.2	31.73239	-103.175	0.287	0.23	11.38	97.471
13224	1.14	300.32	94	13161.8	-10377.3	-371.99	-930.989	1116444	762583	31.73239	-103.175	0.205	0.18	5.23	96.263
13319	1.23	292.59	95	13256.78	-10472.3	-371.121	-932.746	1116442	762583.9	31.73239	-103.176	0.193	0.09	-8.14	94.937
13414	1.49	286.7	95	13351.75	-10567.2	-370.375	-934.871	1116440	762584.6	31.73239	-103.176	0.031	0.27	-6.2	93.625
13509	1.58	273.6	95	13446.71	-10662.2	-369.937	-937.361	1116438	762585.1	31.73239	-103.176	0.38	0.09	-13.79	92.507
13604	1.54	273.16	95	13541.68	-10757.2	-369.785	-939.943	1116435	762585.2	31.73239	-103.176	0.044	-0.04	-0.46	91.638
13699	1.71	269.47	95	13636.64	-10852.1	-369.728	-942.635	1116432	762585.3	31.73239	-103.176	0.21	0.18	-3.88	90.828
13793	1.76	274.75	94	13730.6	-10946.1	-369.621	-945.476	1116430	762585.4	31.73239	-103.176	0.178	0.05	5.62	89.93
13888	1.93	284.06	95	13825.55	-11041	-369.112	-948.481	1116427	762585.9	31.73239	-103.176	0.362	0.18	9.8	88.599
13982	1.49	299.62	94	13919.51	-11135	-368.123	-951.079	1116424	762586.9	31.7324	-103.176	0.676	-0.47	16.55	86.922
14076	1.71	299.88	94	14013.47	-11229	-366.82	-953.358	1116422	762588.2	31.7324	-103.176	0.234	0.23	0.28	85.033
14171	1.27	329.77	95	14108.44	-11323.9	-365.204	-955.117	1116420	762589.8	31.7324	-103.176	0.924	-0.46	31.46	82.989
14266	1.19	329.85	95	14203.42	-11418.9	-363.442	-956.142	1116419	762591.6	31.73241	-103.176	0.084	-0.08	0.08	81.01
14361	1.23	334.42	95	14298.4	-11513.9	-361.669	-957.078	1116418	762593.3	31.73241	-103.176	0.11	0.04	4.81	79.046
14456	1.14	323.79	95	14393.38	-11608.9	-359.987	-958.077	1116417	762595	31.73242	-103.176	0.25	-0.09	-11.19	77.152
14550	1.23	338.55	94	14487.36	-11702.9	-358.293	-958.998	1116416	762596.7	31.73242	-103.176	0.337	0.1	15.7	75.268
14645	1.27	345.94	95	14582.33	-11797.8	-356.323	-959.627	1116415	762598.7	31.73243	-103.176	0.175	0.04	7.78	73.2
14741	1.23	335.04	96	14678.31	-11893.8	-354.357	-960.32	1116415	762600.6	31.73243	-103.176	0.251	-0.04	-11.35	71.119
14837	1.36	318.16	96	14774.29	-11989.8	-352.574	-961.515	1116413	762602.4	31.73244	-103.176	0.418	0.14	-17.58	69.072
14933	1.23	323.35	96	14870.26	-12085.8	-350.899	-962.89	1116412	762604.1	31.73244	-103.176	0.182	-0.14	5.41	67.079
15029	1.41	320.8	96	14966.24	-12181.7	-349.157	-964.251	1116411	762605.8	31.73245	-103.176	0.197	0.19	-2.66	65.025
15115	1.36	320.27	86	15052.21	-12267.7	-347.552	-965.572	1116409	762607.4	31.73245	-103.176	0.06	-0.06	-0.62	63.115
15225	1.45	310.78	110	15162.18	-12377.7	-345.639	-967.46	1116408	762609.4	31.73246	-103.176	0.226	0.08	-8.63	60.749
15320	1.13	141.15	95	15256.63	-12472.1	-352.129	-962.512	1116412	762602.9	31.73244	-103.176	13.399	10.37	-178.56	68.366
15415	25.67	145.11	95	15346.5	-12562	-376.384	-944.81	1116430	762578.6	31.73237	-103.176	15.175	15.13	4.17	96.608
15510	35.82	154.6	95	15428.09	-12643.6	-418.508	-921.04	1116454	762536.5	31.73226	-103.175	11.813	10.68	9.99	143.705
15604	49.71	156.09	94	15496.93	-12712.4	-476.415	-894.581	1116480	762478.6	31.7321	-103.175	14.815	14.78	1.59	206.706
15655	57.71	159.26	51	15527.1	-12742.6	-514.424	-879.036	1116496	762440.6	31.732	-103.175	16.464	15.69	6.22	247.548
15771	64.75	162.16	116	15582.9	-12798.4	-610.35	-845.554	1116529	762344.7	31.73174	-103.175	6.452	6.07	2.5	349.013
15866	71.69	164.53	95	15618.13	-12833.6	-694.821	-820.33	1116555	762260.2	31.73151	-103.175	7.663	7.31	2.49	437.168
15961	75.21	163.21	95	15645.19	-12860.7	-782.282	-795.026	1116580	762172.7	31.73127	-103.175	3.937	3.71	-1.39	528.215
16055	80.62	162.77	94	15664.86	-12880.4	-870.143	-768.144	1116607	762084.9	31.73103	-103.175	5.773	5.76	-0.47	620.09
16150	86.51	161.72	95	15675.5	-12891	-960.006	-739.365	1116636	761995	31.73079	-103.175	6.296	6.2	-1.11	714.416
16245	86.95	161.63	95	15680.92	-12896.4	-1050.04	-709.545	1116665	761905	31.73054	-103.175	0.473	0.46	-0.09	809.2
16340	90.02	163.3	95	15683.44	-12898.9	-1140.58	-680.938	1116694	761814.4	31.73029	-103.175	3.678	3.23	1.76	904.129
16435	90.55	163.48	95	15682.96	-12898.5	-1231.62	-653.782	1116721	761723.4	31.73004	-103.175	0.589	0.56	0.19	999.126
16529	91.08	163.65	94	15681.63	-12897.1	-1321.77	-627.19	1116748	761633.2	31.7298	-103.174	0.592	0.56	0.18	1093.116
16624	90.37	163.48	95	15680.42	-12895.9	-1412.88	-600.314	1116775	761542.1	31.72955	-103.174	0.768	-0.75	-0.18	1188.107
16719	90.73	163.48	95	15679.51	-12895	-1503.95	-573.302	1116802	761451.1	31.7293	-103.174	0.379	0.38	0	1283.102
16814	88.88	163.12	95	15679.83	-12895.3	-1594.94	-546.004	1116829	761360.1	31.72905	-103.174	1.984	-1.95	-0.38	1378.094
16908	88.88	162.69	94	15681.67	-12897.2	-1684.77	-518.377	1116857	761270.2	31.72881	-103.174	0.457	0	-0.46	1472.066
17003	89.85	162.25	95	15682.73	-12898.2	-1775.35	-489.765	1116885	761179.7	31.72856	-103.174	1.121	1.02	-0.46	1567.036
17098	88.53	164.18	95	15684.07	-12899.6	-1866.29	-462.335	1116913	761088.7	31.72831	-103.174	2.461	-1.39	2.03	1662.016
17193	89.14	164.36	95	15686	-12901.5	-1957.71	-436.586	1116938	760997.3	31.72806	-103.174	0.669	0.64	0.19	1756.992
17288	87.16	164.09	95	15689.07	-12904.6	-2049.08	-410.774	1116964	760905.9	31.72782	-103.174	2.103	-2.08	-0.28	1851.934
17382	87.78	164.18	94	15693.22	-12908.7	-2139.41	-385.102	1116990	760815.6	31.72757	-103.174	0.666	0.66	0.1	1945.84
17477	88.04	165.32	95	15696.68	-12912.2	-2231	-360.131	1117015	760724	31.72732	-103.174	1.23	0.27	1.2	2040.76
17572	88	165.94	95	15699.96	-12915.5	-2322.98	-336.568	1117038	760632	31.72707	-103.173	0.654	-0.04	0.65	2135.65
17667	88.04	166.38	95	15703.25	-12918.7	-2415.16	-313.857	1117061	760539.8	31.72682	-103.173	0.465	0.04	0.46	2230.508
17762	88.35	166.38	95	15706.24	-12921.7	-2507.44	-291.497	1117084	760447.6	31.72656	-103.173	0.326	0.33	0	2325.359
17857	88.26	166.2	95	15709.05	-12924.5	-2599.7	-268.991	1117106	760355.3	31.72631	-103.173	0.212	-0.09	0.19	2420.223
17951	89.58	166.03	94	15710.82	-12926.3	-2690.93	-246.438	1117129	760264.1	31.72606	-103.173	1.416	1.4	-0.18	2514.123
18046	88.31	165.94	95	15712.57	-12928.1	-2783.09	-223.436	1117152	760171.9	31.72581	-103.173	1.34	-1.34	-0.09	2609.031
18141	88.22	166.2	95	15715.44	-12930.9	-2875.25	-200.576	1117174	760079.8	31.72556	-103.173	0.289	-0.09	0.27	2703.908
18236	88.97	164.97	95	15717.77	-12933.3	-2967.23	-176.934	1117198	759987.8	31.72531	-103.173	1.516	0.79	-1.29	2798.827
18331	89.85	163.74	95	15718.75	-12934.3	-3058.7	-151.317	1117224	759896.3	31.72506	-103.173	1.592	0.93	-1.29	2893.814
18425	90.9	163.12	94	15718.14	-12933.6	-3148.8	-124.511	1117250	759806.2	31.72481	-103.173	1.297	1.12	-0.66	2987.809
18520	90.15	163.12	95	15717.27	-12932.8	-3239.7	-96.927	1117278	759715.3	31.72457	-103.173	0.789	-0.79	0	3082.799
18615	89.76	163.04	95	15717.34	-12932.8	-3330.59	-69.279	1117306	759624.4	31.72432	-103.172	0.419	-0.41	-0.08	3177.924
18710	87.82	162.25	95	15719.35	-12934.8	-3421.24	-40.949	1117334	759533.8	31.72407	-103.172	2.205	-2.04	-0.83	3272.749
18805	88.13	161.81	95	15722.7	-12938.2	-3511.54	-11.658	1117363	759443.5						

19942	88.4	163.83	95	15776.16	-12991.7	-4583.84	361.463	1117736	758371.2	31.7209	-103.171	0.611	0.61	0	4501.532
20037	87.74	162.77	95	15779.36	-12994.9	-4674.78	388.746	1117764	758280.2	31.72066	-103.171	1.314	-0.69	-1.12	4596.474
20132	88.31	162.77	95	15782.64	-12998.1	-4765.46	416.869	1117792	758189.5	31.72041	-103.171	0.6	0.6	0	4691.404
20226	87.08	164.71	94	15786.42	-13001.9	-4855.62	443.167	1117818	758099.4	31.72016	-103.171	2.442	-1.31	2.06	4785.321
20321	88.09	165.85	95	15790.42	-13005.9	-4947.42	467.283	1117842	758007.6	31.71991	-103.171	1.602	1.06	1.2	4880.2
20416	86.29	164.53	95	15795.08	-13010.6	-5039.15	491.535	1117867	757915.9	31.71966	-103.171	2.349	-1.89	-1.39	4975.048
20511	87.16	164.62	95	15800.5	-13016	-5130.57	516.761	1117892	757824.4	31.71941	-103.17	0.921	0.92	0.09	5069.882
20606	85.54	164.97	95	15806.55	-13022.1	-5222.06	541.626	1117917	757732.9	31.71916	-103.17	1.744	-1.71	0.37	5164.67
20700	86.11	164.44	94	15813.39	-13028.9	-5312.49	566.357	1117941	757642.5	31.71892	-103.17	0.827	0.61	-0.56	5258.406
20795	87.3	164.79	95	15818.86	-13034.4	-5403.93	591.518	1117967	757551.1	31.71867	-103.17	1.306	1.25	0.37	5353.236
20890	87.43	164.79	95	15823.22	-13038.7	-5495.51	616.416	1117991	757459.5	31.71842	-103.17	0.137	0.14	0	5448.119
20984	87.6	164.71	94	15827.3	-13042.8	-5586.11	641.117	1118016	757368.9	31.71817	-103.17	0.2	0.18	-0.09	5542.016
21079	86.29	164.88	95	15832.36	-13047.9	-5677.65	665.997	1118041	757277.3	31.71792	-103.17	1.39	-1.38	0.18	5636.862
21174	84.97	164.44	95	15839.6	-13055.1	-5769	691.055	1118066	757186	31.71767	-103.17	1.464	-1.39	-0.46	5731.571
21268	85.76	164.97	94	15847.2	-13062.7	-5859.37	715.77	1118091	757095.6	31.71742	-103.17	1.011	0.84	0.56	5825.249
21363	86.15	164.79	95	15853.9	-13069.4	-5950.85	740.488	1118115	757004.1	31.71717	-103.17	0.452	0.41	-0.19	5919.993
21458	87.56	164.97	95	15859.11	-13074.6	-6042.43	765.23	1118140	756912.6	31.71692	-103.17	1.496	1.48	0.19	6014.829
21553	86.46	164.09	95	15864.06	-13079.6	-6133.86	790.534	1118166	756821.1	31.71667	-103.169	1.482	-1.16	-0.93	6109.688
21647	86.95	163.65	94	15869.47	-13085	-6224.01	816.606	1118192	756731	31.71643	-103.169	0.7	0.52	-0.47	6203.531
21742	88.04	164.27	95	15873.62	-13089.1	-6315.22	842.829	1118218	756639.8	31.71618	-103.169	1.32	1.15	0.65	6298.438
21837	85.67	164.09	95	15878.83	-13094.3	-6406.48	868.687	1118244	756548.5	31.71593	-103.169	2.502	-2.49	-0.19	6393.285
21932	85.8	163.48	95	15885.9	-13101.4	-6497.44	895.141	1118270	756457.6	31.71568	-103.169	0.655	0.14	-0.64	6488.022
22026	83.74	162.69	94	15894.46	-13110	-6587	922.374	1118297	756368	31.71544	-103.169	2.346	-2.19	-0.84	6581.619
22121	83.43	161.37	95	15905.08	-13120.6	-6676.8	951.499	1118326	756278.2	31.71519	-103.169	1.419	-0.33	-1.39	6675.98
22216	84.09	161.28	95	15915.4	-13130.9	-6766.26	981.738	1118357	756188.7	31.71495	-103.169	0.701	0.69	-0.09	6770.333
22311	85.36	161.63	95	15924.14	-13139.6	-6855.94	1011.823	1118387	756099.1	31.7147	-103.169	1.386	1.34	0.37	6864.854
22401	84.18	164.09	90	15932.34	-13147.8	-6941.58	1038.236	1118413	756013.4	31.71447	-103.169	3.021	-1.31	2.73	6954.461
22496	84.75	164.62	95	15941.51	-13157	-7032.63	1063.735	1118439	755922.4	31.71422	-103.169	0.818	0.6	0.56	7049.011
22591	84.97	164.36	95	15950.02	-13165.5	-7123.81	1089.037	1118464	755831.2	31.71397	-103.168	0.358	0.23	-0.27	7143.621
22685	84.26	163.56	94	15958.84	-13174.3	-7213.75	1114.894	1118490	755741.3	31.71373	-103.168	1.135	-0.76	-0.85	7237.204
22780	85.14	164.27	95	15967.61	-13183.1	-7304.64	1141.102	1118516	755650.4	31.71348	-103.168	1.188	0.93	0.75	7331.796
22875	85.49	165.5	95	15975.37	-13190.9	-7396.04	1165.79	1118541	755559	31.71323	-103.168	1.342	0.37	1.29	7426.457
22970	86.55	166.2	95	15981.97	-13197.5	-7487.93	1188.957	1118564	755467.1	31.71298	-103.168	1.336	1.12	0.74	7521.161
23064	85.54	165.59	94	15988.45	-13204	-7578.88	1211.81	1118587	755376.1	31.71273	-103.168	1.254	-1.07	-0.65	7614.869
23159	84.66	166.11	95	15996.57	-13212.1	-7670.66	1234.949	1118610	755284.3	31.71248	-103.168	1.075	-0.93	0.55	7709.456
23254	84.84	166.38	95	16005.26	-13220.8	-7762.55	1257.442	1118632	755192.5	31.71223	-103.168	0.341	0.19	0.28	7803.966
23349	84.7	166.38	95	16013.92	-13229.4	-7854.49	1279.72	1118655	755100.5	31.71198	-103.168	0.147	-0.15	0	7898.469
23443	85.58	166.29	94	16021.88	-13237.4	-7945.5	1301.847	1118677	755009.5	31.71173	-103.168	0.941	0.94	-0.1	7992.033
23538	85.14	165.15	95	16029.57	-13245.1	-8037.26	1325.202	1118700	754917.7	31.71148	-103.168	1.263	-0.46	-1.2	8086.663
23633	84.66	164.62	95	16038.01	-13253.5	-8128.61	1349.876	1118725	754826.4	31.71123	-103.168	0.751	-0.51	-0.56	8181.267
23728	84.18	164.36	95	16047.25	-13262.7	-8219.72	1375.159	1118750	754735.3	31.71098	-103.167	0.574	-0.51	-0.27	8275.808
23823	83.56	165.15	95	16057.39	-13272.9	-8310.85	1399.996	1118775	754644.1	31.71073	-103.167	1.053	-0.65	0.83	8370.249
23917	84.79	164.79	94	16066.93	-13282.4	-8401.17	1424.246	1118799	754553.8	31.71049	-103.167	1.363	1.31	-0.38	8463.74
24012	86.33	164.36	95	16074.29	-13289.8	-8492.47	1449.438	1118824	754462.5	31.71024	-103.167	1.683	1.62	-0.45	8558.441
24107	89.27	163.65	95	16077.93	-13293.4	-8583.71	1475.594	1118851	754371.3	31.70999	-103.167	3.184	3.09	-0.75	8653.359
24202	90.24	163.65	95	16078.34	-13293.8	-8674.87	1502.336	1118877	754280.1	31.70974	-103.167	1.021	1.02	0	8748.357
24296	91.08	163.74	94	16077.26	-13292.8	-8765.08	1528.724	1118904	754189.9	31.70949	-103.167	0.899	0.89	0.1	8842.35
24391	91.74	163.56	95	16074.92	-13290.4	-8856.21	1555.459	1118930	754098.8	31.70925	-103.167	0.72	0.69	-0.19	8937.32
24486	92.09	163.39	95	16071.75	-13287.2	-8947.23	1582.465	1118957	754007.8	31.709	-103.167	0.41	0.37	-0.18	9032.266
24580	92.18	163.39	94	16068.24	-13283.7	-9037.25	1609.317	1118984	753917.8	31.70875	-103.167	0.096	0.1	0	9126.199
24675	89.45	162.51	95	16066.89	-13282.4	-9128.06	1637.166	1119012	753826.9	31.7085	-103.167	3.019	-2.87	-0.93	9221.171
24770	89.8	162.77	95	16067.51	-13283	-9218.73	1665.511	1119041	753736.3	31.70826	-103.166	0.459	0.37	0.27	9316.151
24865	92.04	164.09	95	16065.99	-13281.5	-9309.76	1692.598	1119068	753645.2	31.70801	-103.166	2.737	2.36	1.39	9411.13
24959	92.57	163.83	94	16062.21	-13277.7	-9400.03	1718.55	1119094	753555	31.70776	-103.166	0.628	0.56	-0.28	9505.052
25054	93.05	164.36	95	16057.55	-13273.1	-9491.28	1744.553	1119120	753463.7	31.70751	-103.166	0.752	0.51	0.56	9599.936
25149	90.77	162.95	95	16054.39	-13269.9	-9582.38	1771.271	1119146	753372.6	31.70727	-103.166	2.821	-2.4	-1.48	9694.874
25244	92.04	163.3	95	16052.06	-13267.6	-9673.26	1798.839	1119174	753281.7	31.70702	-103.166	1.387	1.34	0.37	9789.838
25338	90.37	163.21	94	16050.08	-13265.6	-9763.25	1825.915	1119201	753191.7	31.70677	-103.166	1.779	-1.78	-0.1	9883.811
25433	92.04	163.83	95	16048.08	-13263.6	-9854.33	1852.858	1119228	753100.7	31.70652	-103.166	1.875	1.76	0.65	9978.785
25528	92.09	164	95	16044.66	-13260.2	-9945.55	1879.162	1119254	753009.5	31.70627	-103.166	0.186	0.05	0.18	10073.72
25623	91.08	163.56	95	16042.03	-13257.5	-10036.7	1905.687	1119281	752918.3	31.70603	-103.166	1.16	-1.06	-0.46	10168.69
25717	91.21	164	94	16040.15	-13255.7	-10127	1931.939	1119307	752828	31.70578	-103.165	0.488	0.14	0.47	10262.67
25812	91.03	163.83	95	16038.3	-13253.8	-10218.2	1958.254	1119333	752736.8	31.70553	-103.165	0.261	-0.19	-0.18	10357.65
25907	91.03	163.56	95	16036.59	-13252.1	-10309.4	1984.921	1119360	752645.6	31.70528	-103.165	0.284	0	-0.28	10452.63
26002	92.35	163.3	95	16033.79	-13249.3	-10400.4	2012.002	1119387	752554.6	31.70503	-103.165	1.416	1.39	-0.27	10547.59
26096	91.74	162.33	94	16030.43	-13245.9	-10490.2	2039.757	1119415	752464.8	31.70479	-103.165	1.218	-0.65	-1.03	10641.51
26191	92.4	162.25	95	16027	-13242.5	-10580.6	2068.637	1119444	752374.4	31.70454	-103.165	0.7	0.69	-0.08	10736.42
26248	91.65	161.72	57	16024.99	-13240.5	-10634.8	2086.254	1119461	752320.2	31.7044	-103.165	1.611	-1.32	-0.93	10793.36</