

Survey Settings

Date: 14 September 2015
Job Name: NEW_TS
Average Backsites: Yes

Applied Corrections

UKTM: Yes
Scale: No
Curv & Refr: Yes
Mean Sea Level: Yes

Calibration Summary

Setup	Calibration Date	Gauge Correction (mm)	Cant Correction (mm)
STN02	N/A	0.0	0.0
STN04	N/A	0.0	0.0
STN04	N/A	0.0	0.0
STN05	N/A	0.0	0.0
STN06	N/A	0.0	0.0
STN06	N/A	0.0	0.0
STN06	N/A	0.0	0.0
STN06	N/A	0.0	0.0
STN08	N/A	0.0	0.0
STN10	N/A	0.0	0.0
STN13	N/A	0.0	0.0

Survey Summary

Track	Point No	Chainage	Gauge (mm)	Cant (mm)	Rot Corr (mm)	Tilt Corr (mm)	Easting	Northing	Height
LR1	1	0.00	1433.8	1.6	-0.9	8.5	456200.134	273354.788	111.472
LR1	4	10.01	1435.0	3.5	-1.9	7.6	456197.285	273345.198	111.569
LR1	12	19.99	1433.2	2.1	-1.2	8.5	456193.969	273335.778	111.675
LR1	20	30.00	1433.9	3.1	-1.7	6.4	456190.210	273326.502	111.765
LR1	29	40.00	1432.3	3.7	-2.1	7.4	456186.014	273317.433	111.865
LR1	37	50.00	1433.5	1.8	-1.0	8.3	456181.392	273308.562	111.969
LR1	46	60.01	1433.9	0.3	-0.2	7.9	456176.347	273299.917	112.067
LR1	55	70.00	1434.1	1.7	-0.9	8.8	456170.917	273291.536	112.170
LR1	63	79.99	1433.2	4.1	-2.3	8.0	456165.097	273283.424	112.266
LR1	71	89.99	1434.1	3.3	-1.8	7.3	456158.882	273275.592	112.363
LR1	79	99.99	1431.7	0.6	-0.3	8.1	456152.284	273268.070	112.463
LR1	87	110.00	1433.2	-1.1	0.6	7.8	456145.354	273260.857	112.560
LR1	95	119.99	1433.6	-1.2	0.7	8.6	456138.136	273253.939	112.659
LR1	103	129.99	1431.7	6.2	-3.5	7.8	456130.898	273247.050	112.759
LR1	112	139.98	1431.4	-1.5	0.8	7.2	456123.918	273239.894	112.867
LR1	120	149.99	1431.8	1.2	-0.7	8.1	456117.227	273232.453	112.961
LR1	128	159.99	1435.6	1.9	-1.1	8.1	456110.731	273224.854	113.066
LR1	135	169.99	1436.2	1.4	-0.8	6.8	456104.228	273217.252	113.160
LR1	142	179.98	1435.6	1.2	-0.7	7.2	456097.735	273209.667	113.254
LR1	150	189.98	1435.9	0.8	-0.4	8.8	456091.227	273202.066	113.349
LR1	158	199.99	1435.3	2.1	-1.2	6.4	456084.732	273194.463	113.439
LR1	166	209.99	1434.8	2.0	-1.1	3.2	456078.225	273186.862	113.494
LR1	175	219.99	1433.9	3.8	-2.1	1.6	456071.731	273179.260	113.524
LR2	176	0.00	1445.1	6.1	-3.4	3.1	456177.112	273311.352	111.951
LR2	184	9.96	1433.6	2.4	-1.3	11.0	456172.198	273302.677	112.074
LR2	192	19.96	1430.6	3.3	-1.8	7.7	456167.013	273294.140	112.168
LR2	200	29.95	1432.0	1.2	-0.7	9.4	456161.452	273285.837	112.278
LR2	209	39.95	1434.1	2.8	-1.6	8.1	456155.513	273277.800	112.370
LR2	217	49.95	1435.0	1.7	-0.9	7.5	456149.264	273269.994	112.471
LR2	225	59.95	1432.9	-0.9	0.5	6.5	456142.824	273262.352	112.572
LR2	234	69.96	1432.0	5.0	-2.8	8.8	456136.306	273254.754	112.667
LR2	243	79.94	1430.9	5.6	-3.1	7.3	456129.811	273247.170	112.769
LR2	252	89.81	1432.1	-2.9	1.6	9.8	456123.395	273239.668	112.875
LR1	252	200.06	1435.1	2.1	-1.2	4.4	456084.736	273194.477	113.436
LR1	257	210.07	1434.4	2.1	-1.2	2.0	456078.229	273186.871	113.490
LR1	264	220.07	1433.9	3.8	-2.1	2.4	456071.732	273179.267	113.520
LR1	257	220.08	1433.8	3.8	-2.1	2.5	456071.727	273179.270	113.521
LR1	272	230.07	1434.1	2.8	-1.6	-0.9	456065.232	273171.675	113.510
LR1	279	240.07	1434.2	1.0	-0.6	-4.3	456058.737	273164.082	113.471
LR1	287	250.07	1433.9	2.6	-1.4	-3.1	456052.231	273156.481	113.430
LR1	295	260.07	1434.5	5.2	-2.9	-1.5	456045.735	273148.875	113.397
LR1	302	270.08	1433.0	2.9	-1.6	-2.2	456039.225	273141.283	113.371
LR1	310	280.07	1433.2	0.7	-0.4	-2.5	456032.722	273133.691	113.335
LR1	315	290.07	1433.8	-1.9	1.1	-1.7	456026.219	273126.100	113.305
LR1	323	300.08	1433.5	0.4	-0.2	-0.5	456019.722	273118.486	113.288
LR1	331	310.08	1433.5	0.5	-0.3	2.8	456013.287	273110.829	113.306
LR1	339	320.09	1434.5	1.1	-0.6	4.5	456007.043	273103.000	113.354
LR1	348	330.06	1435.4	2.9	-1.6	5.2	456001.133	273094.968	113.422
LR1	357	340.08	1435.1	0.1	-0.1	5.8	455995.622	273086.611	113.491
LR1	365	350.07	1434.1	-1.1	0.6	5.9	455990.564	273077.997	113.562
LR1	373	360.08	1434.4	0.1	-0.1	5.6	455985.948	273069.112	113.631
LR1	381	370.07	1435.6	-1.5	0.8	4.0	455981.797	273060.033	113.691

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LR1	388	380.06	1434.4	-4.0	2.2	4.2	455978.106	273050.743	113.747
LR1	395	390.07	1434.2	-4.5	2.5	4.2	455974.911	273041.260	113.799
LR1	404	400.07	1435.6	-3.6	2.0	7.1	455972.235	273031.620	113.882
LR1	412	410.06	1436.2	-2.7	1.5	3.8	455970.088	273021.875	113.947
LR1	428	410.07	1436.3	-2.7	1.5	3.6	455970.081	273021.875	113.947
LR1	431	420.08	1441.8	-1.9	1.1	1.4	455968.429	273012.003	114.003
LR1	420	420.09	1441.8	-2.0	1.1	2.6	455968.435	273011.998	114.005
LR1	434	428.05	1440.9	-4.6	2.5	4.2	455967.497	273004.093	114.043
LR1	428	428.06	1440.6	-4.6	2.5	4.2	455967.505	273004.083	114.043
LR1	445	440.12	1438.8	-8.5	4.7	4.2	455966.918	272992.036	114.106
LR1	453	450.05	1440.8	-8.8	4.9	3.5	455967.164	272982.120	114.156
LR1	461	460.09	1440.3	-8.0	4.4	4.6	455968.110	272972.132	114.219
LR1	468	470.08	1439.3	-9.7	5.4	5.1	455969.744	272962.273	114.274
LR1	475	480.04	1440.2	-7.2	4.0	2.8	455972.080	272952.599	114.310
LR1	487	490.07	1439.1	-3.3	1.8	0.9	455974.995	272943.002	114.334
LR1	488	495.07	1439.3	-5.8	3.2	1.6	455976.667	272938.292	114.348
LR1	492	500.07	1438.7	-6.2	3.4	1.0	455978.494	272933.636	114.352
RR5	492	10000.00	1434.8	2.3	-1.3	-0.9	455992.078	272902.104	114.376
RR5	501	10010.02	1434.8	-8.7	4.8	-3.8	455997.213	272893.510	114.353
RR5	509	10020.00	1435.3	1.1	-0.6	-6.8	456002.766	272885.217	114.280
RR5	517	10030.00	1436.3	-0.3	0.2	-9.2	456008.805	272877.250	114.171
RR5	525	10039.99	1435.7	0.4	-0.2	-8.0	456015.281	272869.650	114.065
RR5	533	10049.99	1436.2	0.3	-0.2	-7.1	456022.164	272862.395	113.974
RR5	541	10059.96	1434.2	-0.4	0.2	-6.5	456029.376	272855.517	113.887
RR5	546	10064.96	1435.7	-2.4	1.3	-6.6	456033.114	272852.191	113.844
RR5	550	10069.95	1434.7	-2.8	1.6	-5.7	456036.955	272849.013	113.805
RR5	554	10074.95	1435.7	-9.1	5.1	-4.7	456040.952	272845.996	113.774
LR6	555	0.00	1426.3	-5.2	2.9	11.1	455965.767	272884.535	112.751
LR6	563	10.01	1429.9	-2.3	1.3	10.4	455974.602	272879.843	112.885
LR6	571	20.00	1428.1	-3.9	2.2	9.3	455983.419	272875.145	113.010
LR6	579	30.00	1429.9	-4.8	2.7	11.3	455992.247	272870.452	113.139
LR6	586	40.00	1428.1	-3.1	1.7	11.3	456001.077	272865.759	113.277
LR6	594	49.97	1431.2	-4.1	2.3	11.3	456009.883	272861.088	113.413
LR6	601	59.98	1428.4	-2.3	1.3	10.2	456018.731	272856.415	113.546
LR6	609	69.98	1429.4	-2.7	1.5	9.7	456027.578	272851.762	113.670
LR6	616	79.97	1430.9	-6.3	3.5	2.2	456036.414	272847.118	113.751
LR6	623	89.98	1429.3	-4.8	2.7	2.1	456045.278	272842.465	113.768
LR6	632	99.98	1428.3	-1.0	0.6	1.1	456054.128	272837.814	113.776
LR6	640	109.83	1430.2	-1.2	0.7	1.3	456062.846	272833.237	113.774
LR16	735	-40.00	1436.0	-6.3	3.5	0.1	456004.582	272889.415	114.374
LR16	728	-30.01	1434.2	-6.6	3.7	-4.9	456010.891	272881.662	114.402
LR16	720	-20.01	1438.3	5.8	-3.2	0.4	456017.477	272874.146	114.436
LR16	713	-10.01	1438.4	-2.0	1.1	-0.3	456024.457	272867.001	114.425
RR1	640	0.00	1428.3	2.0	-1.1	0.4	455982.032	272922.555	114.364
RR1	649	10.01	1431.7	0.2	-0.1	-0.9	455986.873	272913.801	114.357
RR1	656	20.00	1432.0	8.1	-4.5	-0.1	455992.336	272905.430	114.354
RR1	664	30.00	1434.1	9.4	-5.2	1.1	455998.285	272897.398	114.374
RR1	672	40.01	1434.4	-4.4	2.4	-0.9	456004.757	272889.770	114.376
RR1	681	50.00	1432.1	-0.2	0.1	4.3	456011.728	272882.604	114.407
RR1	690	60.00	1430.2	13.0	-7.2	-1.5	456019.185	272875.956	114.416
RR1	697	70.00	1433.3	1.0	-0.6	-0.6	456027.026	272869.752	114.423
RR1	705	79.52	1432.1	-1.1	0.6	3.4	456034.692	272864.112	114.447
RR3	738	0.00	1442.0	-10.6	5.9	2.5	455968.696	272960.350	114.257
RR3	746	10.01	1440.2	-5.7	3.2	2.9	455971.149	272950.652	114.294
RR3	753	20.01	1439.7	-3.3	1.8	2.5	455974.140	272941.112	114.321
RR3	761	30.00	1436.3	-4.8	2.7	1.6	455977.727	272931.786	114.337
RR4	763	0.00	1418.1	0.2	-0.1	1.3	455981.094	272924.086	114.361
RR4	770	10.01	1434.1	3.3	-1.8	-0.9	455985.352	272915.029	114.357

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RR4	778	20.00	1431.5	-2.5	1.4	0.7	455989.877	272906.117	114.353
RR4	788	30.01	1434.5	-8.3	4.6	-1.5	455994.803	272897.410	114.353
RR6	788	0.00	1431.2	5.0	-2.8	1.4	456052.443	272838.201	113.758
RR6	796	10.00	1430.5	-2.0	1.1	3.2	456060.958	272832.948	113.756
RR6	803	20.01	1434.8	-4.4	2.4	0.8	456069.674	272828.040	113.768
RR6	810	29.99	1435.3	-4.3	2.4	1.2	456078.515	272823.403	113.784
RR6	817	39.97	1435.3	-2.6	1.4	-1.2	456087.345	272818.763	113.784
RR6	825	50.02	1435.9	-2.7	1.5	-1.0	456096.244	272814.089	113.786
RR6	832	60.00	1435.3	-2.1	1.2	0.0	456105.084	272809.453	113.783
RR6	839	70.02	1436.2	-3.5	1.9	-0.2	456113.947	272804.792	113.779
RR6	846	80.01	1435.7	-1.8	1.0	0.5	456122.797	272800.144	113.780
RR6	853	90.00	1435.0	-2.4	1.3	0.4	456131.640	272795.494	113.779
RR6	860	100.01	1434.8	-4.2	2.3	0.6	456140.499	272790.836	113.781
RR6	868	110.00	1434.7	-2.4	1.3	3.1	456149.343	272786.187	113.797
RR6	875	120.00	1435.9	-4.6	2.6	2.2	456158.186	272781.536	113.821
RR6	882	130.01	1433.9	-4.0	2.2	5.1	456167.054	272776.874	113.850
RR6	889	139.99	1434.5	-4.8	2.7	3.6	456175.883	272772.234	113.893
RR6	896	149.99	1435.6	-7.6	4.2	4.5	456184.736	272767.577	113.951
RR6	904	161.01	1436.0	-3.7	2.1	2.9	456194.490	272762.447	114.014
RR6	912	169.99	1435.6	-4.6	2.6	3.8	456202.436	272758.265	114.054
RR6	919	179.99	1435.6	-3.3	1.8	2.9	456211.266	272753.623	114.098
RR6	927	189.98	1436.2	-4.3	2.4	3.2	456220.108	272748.973	114.133
RR6	934	200.00	1435.4	-4.1	2.3	4.4	456228.979	272744.315	114.174
RR6	942	210.00	1435.1	-2.4	1.3	3.8	456237.848	272739.682	114.216
RR6	946	220.01	1434.2	-1.8	1.0	4.1	456246.730	272735.077	114.261
RR6	952	230.03	1435.0	-2.9	1.6	1.8	456255.640	272730.504	114.298
RR6	960	239.98	1435.4	-1.7	0.9	2.9	456264.513	272726.003	114.330
RR6	968	249.95	1436.0	-2.2	1.2	3.6	456273.437	272721.535	114.368
RR6	975	260.00	1435.7	6.4	-3.6	4.3	456282.443	272717.082	114.408
RR6	982	269.99	1433.9	3.4	-1.9	0.8	456291.417	272712.700	114.439
RR6	990	280.00	1435.6	-7.4	4.1	2.5	456300.421	272708.325	114.481
LR7	990	0.00	1434.1	-1.1	0.6	-0.8	456337.385	272692.028	114.586
LR7	996	11.60	1433.6	-6.3	3.5	0.7	456347.817	272686.963	114.586
LR7	1002	20.03	1433.6	-9.9	5.5	-0.6	456355.401	272683.283	114.589
LR7	1006	30.11	1435.3	-9.8	5.4	-0.4	456364.475	272678.899	114.578
LR7	1013	40.06	1434.5	-10.3	5.7	2.7	456373.439	272674.570	114.593
LR7	1019	50.01	1435.0	-8.9	4.9	-3.8	456382.401	272670.249	114.545
LR7	1028	60.09	1431.4	3.4	-1.9	2.9	456391.477	272665.858	114.532
LR7	1036	70.05	1432.0	5.9	-3.3	1.0	456400.445	272661.539	114.569
LR7	1043	80.77	1434.2	-1.6	0.9	-2.0	456410.091	272656.866	114.575
LR8	1044	0.00	1442.7	11.6	-6.4	-1.3	456362.842	272686.855	114.536
LR8	1052	1.22	1432.7	3.2	-1.8	-1.3	456363.818	272686.118	114.534
LR11	1243	8.04	1437.1	2.3	-1.3	5.8	456763.954	272471.337	117.346
LR8	1054	10.06	1436.5	-2.2	1.2	-0.2	456371.055	272681.042	114.537
LR10	1098	10.82	1436.8	-3.2	1.8	7.9	456559.203	272580.641	115.792
LR11	1248	15.07	1434.7	-1.8	1.0	4.7	456770.256	272468.234	117.389
LR8	1061	19.85	1427.4	2.7	-1.5	2.6	456379.305	272675.783	114.565
LR10	1102	19.95	1433.8	-3.6	2.0	6.0	456566.509	272575.172	115.894
LR11	1252	20.20	1432.0	-0.1	0.1	0.4	456774.811	272465.871	117.391
LR10	1106	31.84	1435.6	13.5	-7.5	6.0	456575.952	272567.957	115.970
LR8	1069	38.25	1433.6	-10.5	5.8	3.8	456394.888	272665.993	114.566
LR10	1107	38.28	1437.2	-7.3	4.0	11.4	456581.070	272564.038	116.062
LR10	1115	50.18	1438.0	-11.0	6.1	5.3	456590.739	272557.130	116.092
LR8	1079	50.42	1434.8	-7.0	3.9	3.8	456405.336	272659.754	114.587
LR10	1123	60.12	1437.5	-7.5	4.2	7.3	456599.090	272551.738	116.213
LR8	1087	61.21	1428.8	0.3	-0.2	-0.4	456414.836	272654.641	114.568
LR10	1124	63.68	1435.7	-11.7	6.5	3.5	456602.123	272549.892	116.229
LR8	1094	70.59	1439.4	0.1	-0.1	1.2	456423.251	272650.499	114.579

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LR10	1130	73.33	1437.1	-10.9	6.0	11.0	456610.535	272545.134	116.390
LR10	1136	80.05	1435.9	-12.1	6.7	8.0	456616.437	272541.947	116.460
LR10	1142	90.20	1433.3	-10.8	6.0	4.9	456625.417	272537.216	116.561
LR10	1148	99.94	1434.4	-6.5	3.6	6.1	456634.051	272532.699	116.627
LR10	1154	109.94	1434.7	-3.2	1.8	4.3	456642.908	272528.067	116.734
LR10	1160	120.03	1434.8	4.2	-2.3	9.4	456651.859	272523.404	116.844
LR10	1165	129.99	1435.4	22.5	-12.5	9.3	456660.690	272518.804	116.868
LR10	1171	140.04	1434.5	7.5	-4.2	2.7	456669.582	272514.123	116.910
LR10	1177	149.99	1435.1	45.2	-25.1	3.4	456678.409	272509.542	116.938
LR10	1184	171.77	1438.8	10.2	-5.7	5.9	456697.695	272499.400	117.117
LR10	1190	180.33	1437.4	1.5	-0.8	-1.0	456705.365	272495.634	117.126
LR10	1197	190.25	1436.0	2.0	-1.1	-1.0	456714.440	272491.621	117.145
LR10	1204	199.71	1435.3	4.8	-2.7	3.2	456723.220	272488.081	117.165
LR10	1212	211.39	1435.9	13.4	-7.4	-0.3	456734.071	272483.784	117.198
LR10	1218	220.38	1432.3	4.6	-2.6	0.9	456742.425	272480.465	117.238
LR10	1224	228.08	1438.0	0.5	-0.3	11.8	456749.598	272477.628	117.280
LR10	1233	239.70	1432.7	2.4	-1.3	0.2	456760.403	272473.386	117.341
LR9	1253	0.00	1424.2	2.9	-1.6	-0.6	456727.689	272486.109	117.192
LR9	1259	9.31	1441.1	3.2	-1.8	7.7	456736.167	272482.238	117.227
LR9	1264	16.16	1438.1	5.0	-2.8	1.2	456742.288	272479.177	117.240
LR9	1272	27.23	1432.1	14.2	-7.9	9.0	456752.032	272473.926	117.305
LR9	1279	37.38	1433.9	18.9	-10.5	2.0	456760.850	272468.895	117.377
LR9	1286	48.14	1433.6	17.8	-9.9	3.9	456770.027	272463.283	117.405

Overlap Summary

Track	Chainage	Gauge (mm)	Gauge Spread (mm)	Cant (mm)	Cant Spread (mm)	Perp Offset (mm)	Horiz Offset (mm)	Dz (mm)
LR1	200.0	1435.2	0.2	-2.1	0.0	5.9	13.1	3.5
LR1	210.0	1434.6	0.4	-2.1	0.1	2.7	9.2	4.7
LR1	220.0	1433.9	0.0	-3.8	0.0	3.9	6.1	4.1

Rail Survey Summary

Track	Pt No	Chainage	Delta Chn	Twist (mm/M)	Gauge (mm)	Gauge Err (mm)	Cant (mm)	HzVsine (mm)	Radius (M)	Bearing	VtVsine (mm)
LR1	1	0.0			1433.8	-1.2	1.6			196°32'48"	
			10.0	0.2							
LR1	4	10.0			1435.0	0.0	3.5	248.2	201	199°23'32"	0.0
			10.0	-0.1							
LR1	12	20.0			1433.2	-1.8	2.1	232.9	215	202°03'45"	0.0
			10.0	0.1							
LR1	20	30.0			1433.9	-1.1	3.1	240.9	208	204°49'25"	0.0
			10.0	0.1							
LR1	29	40.0			1432.3	-2.7	3.7	235.5	212	207°31'23"	0.0
			10.0	-0.2							
LR1	37	50.0			1433.5	-1.5	1.8	239.5	209	210°15'57"	0.0
			10.0	-0.1							
LR1	46	60.0			1433.9	-1.1	0.3	233.1	214	212°56'16"	0.0
			10.0	0.1							
LR1	55	70.0			1434.1	-0.9	1.7	237.1	210	215°39'35"	0.0
			10.0	0.2							
LR1	63	80.0			1433.2	-1.8	4.1	241.9	206	218°26'04"	0.0
			10.0	-0.1							
LR1	71	90.0			1434.1	-0.9	3.3	246.5	203	221°15'32"	0.0
			10.0	-0.3							
LR1	79	100.0			1431.7	-3.3	0.6	226.1	221	223°50'56"	0.0
			10.0	-0.2							
LR1	87	110.0			1433.2	-1.8	-1.1	206.8	242	226°13'09"	0.0
			10.0	0.0							
LR1	95	120.0			1433.6	-1.4	-1.2	16.8	2982	226°24'41"	0.0
			10.0	0.7							
LR1	103	130.0			1431.7	-3.3	6.2	185.2	270	224°17'14"	0.0
			10.0	-0.8							
LR1	112	140.0			1431.4	-3.6	-1.5	202.7	247	221°57'54"	0.0
			10.0	0.3							
LR1	120	150.0			1431.8	-3.2	1.2	125.8	398	220°31'25"	0.0
			10.0	0.1							
LR1	128	160.0			1435.6	0.6	1.9	2.0	25521	220°32'46"	0.0
			10.0	-0.1							
LR1	135	170.0			1436.2	1.2	1.4	1.4	35488	220°33'44"	0.0
			10.0	0.0							
LR1	142	180.0			1435.6	0.6	1.2	1.0	49697	220°34'25"	0.0
			10.0	0.0							
LR1	150	190.0			1435.9	0.9	0.8	4.6	10864	220°31'15"	0.0
			10.0	0.1							
LR1	158	200.0			1435.2	0.2	2.1	3.1	16288	220°33'22"	0.0
			10.0	0.0							
LR1	166	210.0			1434.6	-0.4	2.0	4.0	12481	220°30'37"	0.0
			10.0	0.2							
LR1	175	220.0			1433.9	-1.1	3.8	4013.9	5	322°59'08"	0.0
			0.1	0.0							
LR1	257	220.1			1433.8	-1.2	3.8	4013.7	5	220°32'24"	0.0
			10.0	-0.1							
LR1	272	230.1			1434.1	-0.9	2.8	0.4	139899	220°32'39"	0.0
			10.0	-0.2							
LR1	279	240.1			1434.2	-0.8	1.0	1.5	33502	220°33'40"	0.0
			10.0	0.2							
LR1	287	250.1			1433.9	-1.1	2.6	5.2	9620	220°30'06"	0.0

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			10.0	0.3							
LR1	295	260.1			1434.5	-0.5	5.2	9.6	5217	220°36'41"	0.0
			10.0	-0.2							
LR1	302	270.1			1433.0	-2.0	2.9	2.7	18279	220°34'48"	0.0
			10.0	-0.2							
LR1	310	280.1			1433.2	-1.8	0.7	0.6	86271	220°35'12"	0.0
			10.0	-0.3							
LR1	315	290.1			1433.8	-1.2	-1.9	9.9	5040	220°28'23"	0.0
			10.0	0.2							
LR1	323	300.1			1433.5	-1.5	0.4	37.6	1330	220°02'31"	0.0
			10.0	0.0							
LR1	331	310.1			1433.5	-1.5	0.5	127.9	392	218°34'40"	0.0
			10.0	0.1							
LR1	339	320.1			1434.5	-0.5	1.1	194.5	257	216°20'50"	0.0
			10.0	0.2							
LR1	348	330.1			1435.4	0.4	2.9	257.1	194	213°23'54"	0.0
			10.0	-0.3							
LR1	357	340.1			1435.1	0.1	0.1	259.9	192	210°25'10"	0.0
			10.0	-0.1							
LR1	365	350.1			1434.1	-0.9	-1.1	258.8	193	207°27'15"	0.0
			10.0	0.1							
LR1	373	360.1			1434.4	-0.6	0.1	251.6	199	204°34'13"	0.0
			10.0	-0.2							
LR1	381	370.1			1435.6	0.6	-1.5	252.8	197	201°40'11"	0.0
			10.0	-0.3							
LR1	388	380.1			1434.4	-0.6	-4.0	266.4	188	198°37'02"	0.0
			10.0	-0.1							
LR1	395	390.1			1434.2	-0.8	-4.5	270.9	185	195°30'51"	0.0
			10.0	0.1							
LR1	404	400.1			1435.6	0.6	-3.6	269.4	185	192°25'28"	0.0
			10.0	0.1							
LR1	412	410.1			1436.2	1.2	-2.7	4511.2	5	276°39'24"	0.0
			0.0	0.0							
LR1	428	410.1			1436.3	1.3	-2.7	4762.7	5	189°29'59"	0.0
			10.0	0.1							
LR1	431	420.1			1441.8	6.8	-1.9	3157.9	6	125°01'01"	0.0
			0.0	-9.1							
LR1	420	420.1			1441.8	6.8	-2.0	2381.0	5	186°46'11"	0.0
			7.9	-0.3							
LR1	434	428.0			1440.9	5.9	-4.6	1646.6	6	141°51'56"	0.0
			0.1	0.0							
LR1	428	428.1			1440.6	5.6	-4.6	2252.1	9	182°47'19"	0.0
			12.0	-0.3							
LR1	445	440.1			1438.8	3.8	-8.5	403.4	150	178°34'52"	0.0
			10.0	0.0							
LR1	453	450.1			1440.8	5.8	-8.8	347.7	143	174°35'10"	0.0
			10.0	0.1							
LR1	461	460.1			1440.3	5.3	-8.0	349.3	144	170°35'16"	0.0
			10.0	-0.2							
LR1	468	470.1			1439.3	4.3	-9.7	362.2	137	166°25'29"	0.0
			9.9	0.3							
LR1	475	480.0			1440.2	5.2	-7.2	289.5	172	163°06'15"	0.0
			10.1	0.4							
LR1	487	490.1			1439.1	4.1	-3.3	173.3	163	160°27'43"	0.0
			5.0	-0.5							
LR1	488	495.1			1439.3	4.3	-5.8	82.5	152	158°34'15"	0.0
			5.0	-0.1							
LR1	492	500.1			1438.7	3.7	-6.2			158°34'15"	

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			500.1	0.0							
LR1	640	0.0								0	
			10.0	0.0							
LR1	649	10.0								0	
			10.0	0.0							
LR1	656	20.0								0	
			10.0	0.0							
LR1	664	30.0								0	
			10.0	0.0							
LR1	672	40.0								0	
			10.0	0.0							
LR1	681	50.0								0	
			10.0	0.0							
LR1	690	60.0								0	
			10.0	0.0							
LR1	697	70.0								0	
			9.5	0.0							
LR1	705	79.5								0	
LR10	1094	220.0			1436.5	1.5	-0.1			124°40'54"	
			0.0	-95.1							
LR10	1098	220.0			1436.8	1.8	-3.2	186.4	267	126°49'22"	0.0
			0.0	-12.3							
LR10	1102	220.0			1433.8	-1.2	-3.6	50.9	1085	127°22'40"	0.0
			0.0	524.5							
LR10	1106	220.0			1435.6	0.6	13.5	5.1	8236	127°26'30"	0.0
			0.0	-638.0							
LR10	1107	220.0			1437.2	2.2	-7.3	151.7	277	125°32'43"	0.0
			0.0	-113.5							
LR10	1115	220.0			1438.0	3.0	-11.0	256.6	232	122°50'59"	0.0
			0.0	107.4							
LR10	1123	220.0			1437.5	2.5	-7.5	89.9	253	121°19'18"	0.0
			0.0	-128.8							
LR10	1124	220.0			1435.7	0.7	-11.7	105.2	208	119°29'50"	0.0
			0.0	24.5							
LR10	1130	220.0			1437.1	2.1	-10.9	81.0	414	118°21'46"	0.0
			0.0	-36.8							
LR10	1136	220.0			1435.9	0.9	-12.1	42.4	837	117°47'10"	0.0
			0.0	39.9							
LR10	1142	220.0			1433.3	-1.7	-10.8	15.0	3291	117°36'46"	0.0
			0.0	131.9							
LR10	1148	220.0			1434.4	-0.6	-6.5	0.6	84258	117°36'22"	0.0
			0.0	101.2							
LR10	1154	220.0			1434.7	-0.3	-3.2	7.4	6835	117°31'19"	0.0
			0.0	227.0							
LR10	1160	220.0			1434.8	-0.2	4.2	0.9	56390	117°30'43"	0.0
			0.0	561.3							
LR10	1165	220.0			1435.4	0.4	22.5	22.0	2271	117°45'51"	0.0
			0.0	-460.1							
LR10	1171	220.0			1434.5	-0.5	7.5	29.3	1703	117°25'40"	0.0
			0.0	1156.4							
LR10	1177	220.0			1435.1	0.1	45.2	43.0	2927	117°44'19"	0.0
			0.0	-1073.6							
LR10	1184	220.0			1438.8	3.8	10.2	210.1	548	116°09'04"	0.0
			0.0	-266.9							
LR10	1190	220.0			1437.4	2.4	1.5	185.0	231	113°51'19"	0.0
			0.0	15.3							
LR10	1197	220.0			1436.0	1.0	2.0	160.1	294	111°57'47"	0.0
			0.0	85.9							

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LR10	1204	220.0			1435.3	0.3	4.8	33.2	1683	111°36'12"	0.0
			0.0	263.8							
LR10	1212	220.0			1435.9	0.9	13.4	5.6	9462	111°39'57"	0.0
			0.0	-269.9							
LR10	1218	220.0			1432.3	-2.7	4.6	6.5	5341	111°34'35"	0.0
			0.0	-125.8							
LR10	1224	220.0			1438.0	3.0	0.5	11.6	4019	111°26'19"	0.0
			0.0	58.3							
LR10	1233	220.0			1432.7	-2.3	2.4			111°26'19"	
LR11	1236	220.0			1436.5	1.5	1.9			114°37'00"	
			0.0	12.3							
LR11	1243	220.0			1437.1	2.1	2.3	105.2	270	116°12'59"	0.0
			0.0	-125.8							
LR11	1248	220.0			1434.7	-0.3	-1.8	63.7	290	117°25'04"	0.0
			0.0	52.1							
LR11	1252	220.0			1432.0	-3.0	-0.1			117°25'04"	
LR16	706	220.0			1437.7	2.7	0.1			312°27'47"	
			0.0	-64.4							
LR16	713	220.0			1438.4	3.4	-2.0	280.0	179	315°40'16"	0.0
			0.0	239.3							
LR16	720	220.0			1438.3	3.3	5.8	270.4	185	318°46'22"	0.0
			0.0	-380.4							
LR16	728	220.0			1434.2	-0.8	-6.6	182.3	274	320°51'49"	0.0
			0.0	9.2							
LR16	735	220.0			1436.0	1.0	-6.3			320°51'49"	
LR2	176	49.5			1445.1	10.1	6.1			209°31'35"	
			10.2	-0.4							
LR2	184	59.7			1433.6	-1.4	2.4	151.9	328	211°16'15"	0.0
			10.2	0.1							
LR2	192	69.9			1430.6	-4.4	3.3	221.7	225	213°48'50"	0.0
			10.5	-0.2							
LR2	200	80.4			1432.0	-3.0	1.2	231.1	216	216°27'52"	0.0
			10.1	0.2							
LR2	209	90.5			1434.1	-0.9	2.8	193.3	258	218°40'51"	0.0
			10.2	-0.1							
LR2	217	100.7			1435.0	0.0	1.7	125.2	399	220°07'00"	0.0
			10.1	-0.3							
LR2	225	110.8			1432.9	-2.1	-0.9	44.8	1117	220°37'46"	0.0
			9.9	0.6							
LR2	234	120.7			1432.0	-3.0	5.0	4.9	10193	220°34'24"	0.0
			9.9	0.1							
LR2	243	130.6			1430.9	-4.1	5.6	3.1	15789	220°32'14"	0.0
			9.9	-0.9							
LR2	252	140.5			1432.1	-2.9	-2.9			220°32'14"	
LR6	555	220.0			1426.3	-8.7	-5.2			117°58'27"	
			0.0	89.0							
LR6	563	220.0			1429.9	-5.1	-2.3	6.5	7674	118°02'56"	0.0
			0.0	-49.1							
LR6	571	220.0			1428.1	-6.9	-3.9	4.3	11666	117°59'59"	0.0
			0.0	-27.6							
LR6	579	220.0			1429.9	-5.1	-4.8	1.1	47580	117°59'16"	0.0
			0.0	52.1							
LR6	586	220.0			1428.1	-6.9	-3.1	3.9	12902	117°56'36"	0.0
			0.0	-30.7							
LR6	594	220.0			1431.2	-3.8	-4.1	9.2	5420	117°50'16"	0.0
			0.0	55.2							
LR6	601	220.0			1428.4	-6.6	-2.3	8.0	6244	117°44'45"	0.0
			0.0	-12.3							

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LR6	609	220.0			1429.4	-5.6	-2.7	2.1	23821	117°43'19"	0.0
			0.0	-110.4							
LR6	616	220.0			1430.9	-4.1	-6.3	2.0	25358	117°41'58"	0.0
			0.0	46.0							
LR6	623	220.0			1429.3	-5.7	-4.8	1.7	29603	117°43'07"	0.0
			0.0	116.6							
LR6	632	220.0			1428.3	-6.7	-1.0	1.2	39477	117°42'15"	0.0
			0.0	-6.1							
LR6	640	220.0			1430.2	-4.8	-1.2			117°42'15"	
			220.0	0.0							
LR6	788	0.0								0	
			10.0	0.0							
LR6	796	10.0								0	
			10.0	0.0							
LR6	803	20.0								0	
			10.0	0.0							
LR6	810	30.0								0	
			10.0	0.0							
LR6	817	40.0								0	
			10.0	0.0							
LR6	825	50.0								0	
			10.0	0.0							
LR6	832	60.0								0	
			10.0	0.0							
LR6	839	70.0								0	
			10.0	0.0							
LR6	846	80.0								0	
			10.0	0.0							
LR6	853	90.0								0	
			10.0	0.0							
LR6	860	100.0								0	
			10.0	0.0							
LR6	868	110.0								0	
			10.0	0.0							
LR6	875	120.0								0	
			10.0	0.0							
LR6	882	130.0								0	
			10.0	0.0							
LR6	889	140.0								0	
			10.0	0.0							
LR6	896	150.0								0	
			11.0	0.0							
LR6	904	161.0								0	
			9.0	0.0							
LR6	912	170.0								0	
			10.0	0.0							
LR6	919	180.0								0	
			10.0	0.0							
LR6	927	190.0								0	
			10.0	0.0							
LR6	934	200.0								0	
			10.0	0.0							
LR6	942	210.0								0	
			10.0	0.0							
LR6	946	220.0								0	
			10.0	0.0							
LR6	952	230.0								0	
			10.0	0.0							

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LR6	960	240.0								0	
			10.0	0.0							
LR6	968	250.0								0	
			10.0	0.0							
LR6	975	260.0								0	
			10.0	0.0							
LR6	982	270.0								0	
			10.0	0.0							
LR6	990	280.0								0	
LR7	990	220.0			1434.1	-0.9	-1.1			115°53'51"	
			0.0	-159.5							
LR7	996	220.0			1433.6	-1.4	-6.3	1.0	47762	115°53'08"	0.0
			0.0	-110.4							
LR7	1002	220.0			1433.6	-1.4	-9.9	7.6	5602	115°47'27"	0.0
			0.0	3.1							
LR7	1006	220.0			1435.3	0.3	-9.8	1.4	35048	115°46'28"	0.0
			0.0	-15.3							
LR7	1013	220.0			1434.5	-0.5	-10.3	3.0	16637	115°44'25"	0.0
			0.0	42.9							
LR7	1019	220.0			1435.0	0.0	-8.9	7.1	7046	115°49'18"	0.0
			0.0	377.3							
LR7	1028	220.0			1431.4	-3.6	3.4	9.4	5320	115°42'49"	0.0
			0.0	76.7							
LR7	1036	220.0			1432.0	-3.0	5.9	12.1	4401	115°50'54"	0.0
			0.0	-230.1							
LR7	1043	220.0			1434.2	-0.8	-1.6			115°50'54"	
LR8	1044	220.0			1442.7	7.7	11.6			127°04'55"	
			0.0	-257.7							
LR8	1052	220.0			1432.7	-2.3	3.2	89.5	141	125°02'37"	0.0
			0.0	-165.6							
LR8	1054	220.0			1436.5	1.5	-2.2	205.4	211	122°30'58"	0.0
			0.0	150.3							
LR8	1061	220.0			1427.4	-7.6	2.7	46.4	2142	122°08'21"	0.0
			0.0	-404.9							
LR8	1069	220.0			1433.6	-1.4	-10.5	172.7	677	120°50'41"	0.0
			0.0	107.4							
LR8	1079	220.0			1434.8	-0.2	-7.0	256.1	257	118°17'16"	0.0
			0.0	223.9							
LR8	1087	220.0			1428.8	-6.2	0.3	182.7	278	116°12'42"	0.0
			0.0	-6.1							
LR8	1094	220.0			1439.4	4.4	0.1			116°12'42"	
LR9	1253	220.0			1424.2	-10.8	2.9			114°32'36"	
			0.0	9.2							
LR9	1259	220.0			1441.1	6.1	3.2	143.0	228	116°34'14"	0.0
			0.0	55.2							
LR9	1264	220.0			1438.1	3.1	5.0	136.4	294	118°18'58"	0.0
			0.0	282.2							
LR9	1272	220.0			1432.1	-2.9	14.2	129.0	436	119°42'34"	0.0
			0.0	144.2							
LR9	1279	220.0			1433.9	-1.1	18.9	158.4	345	121°26'46"	0.0
			0.0	-33.7							
LR9	1286	220.0			1433.6	-1.4	17.8			121°26'46"	
RR3	738	220.0			1442.0	7.0	-10.6			165°48'26"	
			0.0	150.3							
RR3	746	220.0			1440.2	5.2	-5.7	280.8	178	162°35'20"	0.0
			0.0	73.6							
RR3	753	220.0			1439.7	4.7	-3.3	316.4	158	158°57'38"	0.0
			0.0	-46.0							

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RR3	761	220.0			1436.3	1.3	-4.8			158°57'38"	
RR4	763	220.0			1418.1	-16.9	0.2			154°49'07"	
			0.0	95.1							
RR4	770	220.0			1434.1	-0.9	3.3	151.4	330	153°05'00"	0.0
			0.0	-177.9							
RR4	778	220.0			1431.5	-3.5	-2.5	225.7	222	150°29'49"	0.0
			0.0	-177.9							
RR4	788	220.0			1434.5	-0.5	-8.3			150°29'49"	
RR5	492	220.0			1434.8	-0.2	2.3			149°08'25"	
			0.0	-337.4							
RR5	501	220.0			1434.8	-0.2	-8.7	256.9	195	146°11'41"	0.0
			0.0	300.6							
RR5	509	220.0			1435.3	0.3	1.1	292.5	171	142°50'18"	0.0
			0.0	-42.9							
RR5	517	220.0			1436.3	1.3	-0.3	285.1	175	139°34'05"	0.0
			0.0	21.5							
RR5	525	220.0			1435.7	0.7	0.4	266.9	187	136°30'25"	0.0
			0.0	-3.1							
RR5	533	220.0			1436.2	1.2	0.3	249.8	200	133°38'20"	0.0
			0.0	-21.5							
RR5	541	220.0			1434.2	-0.8	-0.4	128.8	217	131°39'59"	0.0
			0.0	-61.3							
RR5	546	220.0			1435.7	0.7	-2.4	90.1	139	129°35'58"	0.0
			0.0	-12.3							
RR5	550	220.0			1434.7	-0.3	-2.8	111.5	112	127°02'32"	0.0
			0.0	-193.3							
RR5	554	220.0			1435.7	0.7	-9.1			127°02'32"	