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## **Ground Survey Report**

### **USGS Humboldt, NV Lidar** 312021411

October 2021

### **Executive Summary**

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[The Sanborn Map Company, Inc.](#) (Sanborn) was tasked to provide ground survey in the support of aerial survey of lidar for the Humboldt, NV Lidar project. A GNSS ground survey network has been designed and implemented into the project process to establish a common basis for geo-referencing the lidar data products. A total of five hundred and fifty-two (552) ground survey points (136 GCP + 245 NVA + 171 VVA) were established, all points will serve for lidar accuracy validation.

The adjusted GNSS survey of points meets a final adjusted RMS 1/3 of the required product accuracy for Lidar (USGS – QL1 and QL2).

The GNSS survey network was designed using Trimble Business Center (TBC) version 5.4. Final coordinates are in NAD83 (2011), UTM Zone 11 North, NAVD88 (Geoid18), Meters.

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# Introduction

This report contains the technical write-up of the Trimble CenterPoint RTX GNSS Ground Survey performed in support of lidar products.

Sanborn oversaw the survey team(s) for execution of the GNSS ground survey; all fieldwork including reconnaissance of existing control points, establishment of additional control points, and GNSS surveys. All GNSS data processing and reductions were performed in support of the Humboldt, NV Lidar project. **Figure 1** illustrates the initial survey plan within the project Area of Interest (AOI).

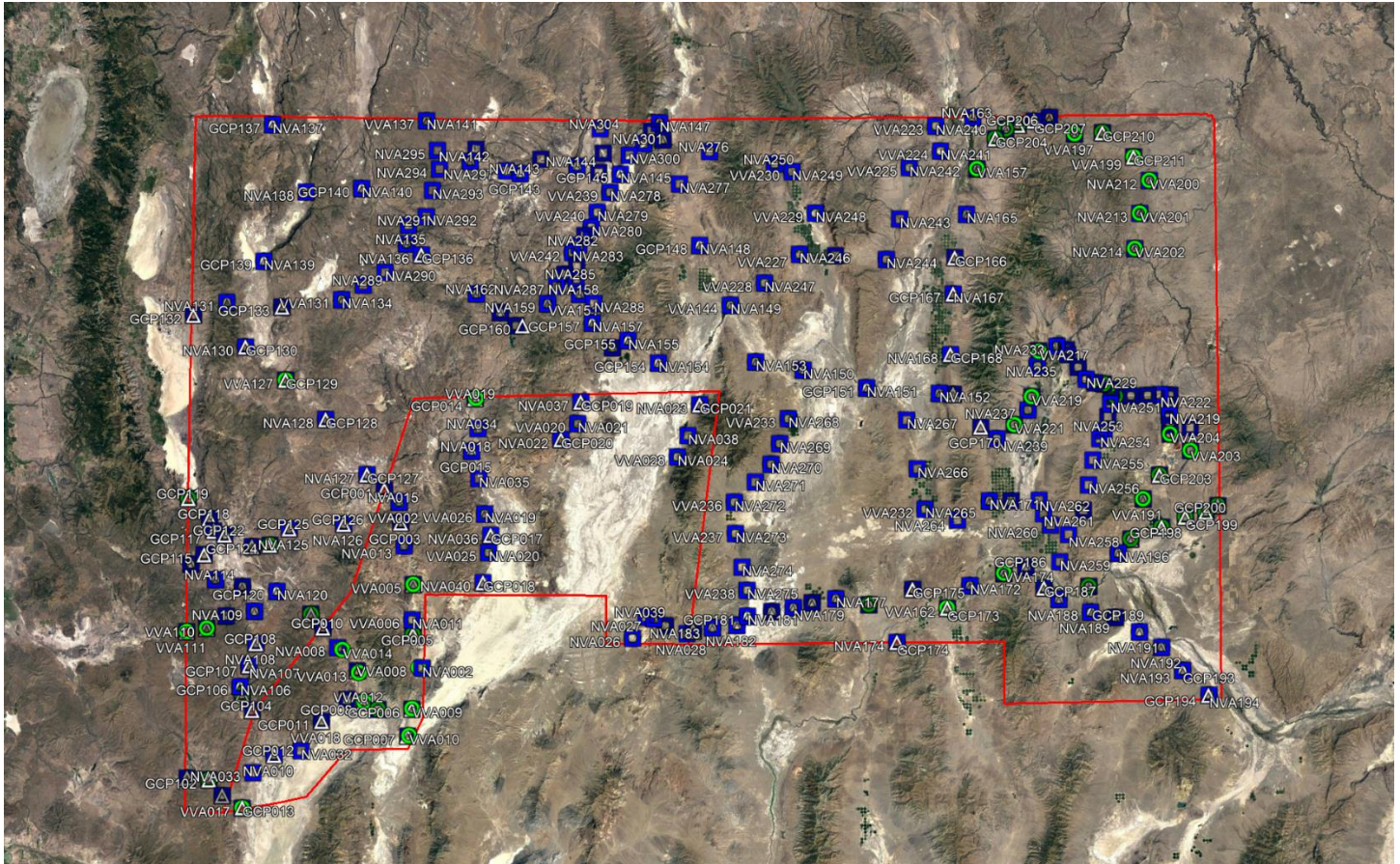


Figure 1: Survey Plan and AOI

## Survey Purpose

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The GNSS Logs of the observed points can be found in **Attachment A**. **Attachment B** contains the photos of the observed points in the GNSS Network Survey. **Attachment C** contains the overviews of the observed points in the GNSS Network Survey. The ground control points were strategically positioned to satisfy aerial survey requirements for the area of interest (AOI).

## Duration/Time Period

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The GNSS ground survey was performed from September 13<sup>th</sup>, 2021 to October 3<sup>rd</sup>, 2021.

## Equipment

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The GNSS ground survey was performed using survey grade Trimble R10 GNSS Antennas attached to 2 meter fixed-height rods, leveled over each observed point.

## Field Procedures

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A careful reconnaissance was undertaken prior to the monumentation and subsequent GNSS survey. The satellite window provided a minimum of 4-hour constellation coverage; GNSS observation sessions were scheduled between 08:00 and 18:00 local time. No difficulties were experienced during this survey.

Personnel navigated to points using local maps, or GNSS navigation. The field crews had approximate geodetic coordinates loaded for the required observation points. Upon arriving at the desired location, the field personnel initiated a search for the point locations. The receiver was set on the 2-meter fixed-height rod and leveled over the point. The GNSS survey was set up as RTX survey style connected via satellite for near real-time positioning. Field crew members followed a session schedule established by office personnel to facilitate observation location and duration.

The GNSS Log Sheet was produced with the following information: Point ID, Stamping (if available), Date, Observer Name, Antenna Height Measurement Point, Antenna Height, Start Time and End Time. Digital photographs were taken at each point showing the control point surveyed and its relationship to its surroundings.

## Processing

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Trimble CenterPoint RTX was utilized and provided in field correction services. The Survey Network Diagrams (**Appendix A**) and the Coordinates (**Appendix B**) can be found below.

# Accuracy

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Category	Value (m)	1/3 Value (m)	Value (ft)	1/3 Value (ft)
RMSEz	≤0.100	≤ 0.033	≤0.328	≤ 0.109
@ 95-Percent Confidence Level	≤0.196	≤ 0.065	≤0.643	≤ 0.214

Table 1: Lidar Absolute Accuracy Requirements

The final survey networked coordinates yielded station levels of 0.018m horizontally (X, Y) and 0.056m vertically (Z) at  $2\sigma$  or (95-Percent Confidence Level) meeting and/or exceeding project requirements.

## Coordinate Reference System

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<b>Horizontal Datum:</b>	North American Datum of 1983 (2011)
<b>Projection:</b>	Universal Transverse Mercator Zone 11 North
<b>Vertical Datum:</b>	North American Vertical Datum of 1988
<b>Geoid Model:</b>	Geoid18
<b>Units:</b>	Meters

## Contact Information

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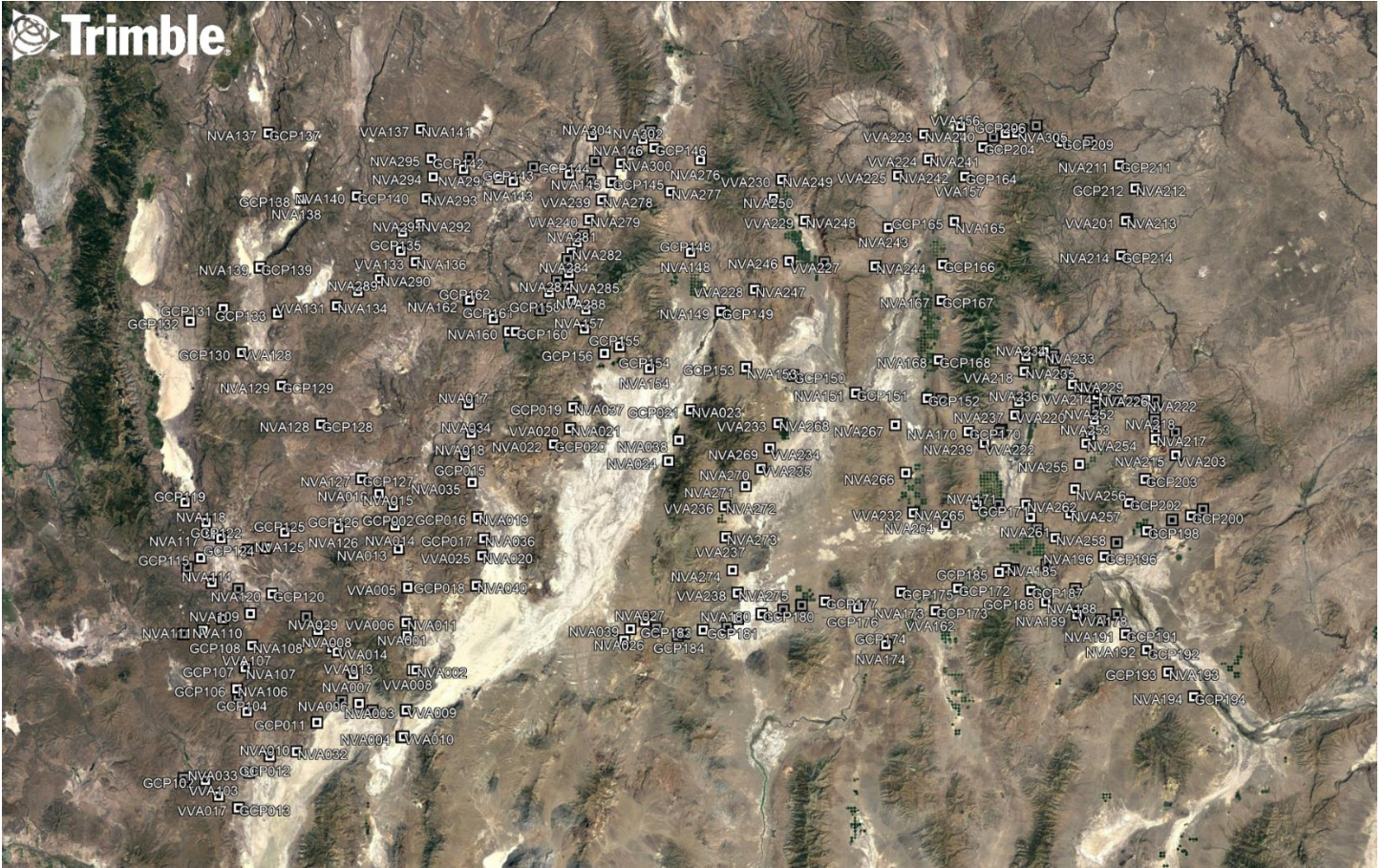
Questions regarding technical aspects of this report should be addressed to:

**The Sanborn Map Company, Inc.**  
1935 Jamboree Drive, Suite 100  
Colorado Springs, Colorado, 80920

Program Director:	Shawn Benham
Geodetic Engineer:	Jared Martin
Telephone:	+1 (719) 593-0093
Fax:	+1 (719) 528-5093



# Appendix A - Survey Network Diagram



## Appendix B – Coordinates

Point ID	Code	Easting	Northing	Elevation	H. Precision	V. Precision	PDOP
GCP001	GCP	296265.866	4562392.126	1713.734	0.013	0.046	1.448
GCP002	GCP	299726.434	4559362.834	1770.657	0.014	0.063	1.717
GCP003	GCP	300102.664	4554443.944	1756.077	0.012	0.047	1.299
GCP004	GCP	302834.247	4539377.718	1305.334	0.011	0.047	1.760
GCP005	GCP	302583.446	4527553.634	1231.985	0.015	0.048	1.530
GCP006	GCP	301935.884	4509310.899	1197.928	0.019	0.048	1.344
GCP007	GCP	300742.329	4502814.202	1204.385	0.011	0.049	1.866
GCP008	GCP	290372.555	4511133.317	1200.844	0.012	0.047	1.572
GCP009	GCP	288817.499	4518796.497	1293.160	0.013	0.048	1.867
GCP010	GCP	280662.336	4529249.692	1729.989	0.013	0.049	1.825
GCP011	GCP	279901.858	4506675.663	1183.510	0.016	0.048	2.071
GCP012	GCP	268123.157	4498603.131	1187.986	0.009	0.044	2.226
GCP013	GCP	260040.479	4485950.137	1192.136	0.022	0.048	1.222
GCP014	GCP	318616.935	4583981.363	1369.894	0.009	0.049	1.943
GCP015	GCP	317584.821	4571317.399	1290.939	0.011	0.048	1.966
GCP016	GCP	320405.454	4556215.947	1225.067	0.013	0.049	1.681
GCP017	GCP	321861.876	4550998.734	1215.156	0.017	0.048	1.467
GCP018	GCP	319803.363	4539580.391	1214.628	0.012	0.048	1.937
GCP019	GCP	344261.785	4582700.715	1240.279	0.012	0.045	1.666
GCP020	GCP	339338.002	4573757.746	1338.682	0.010	0.049	2.315
GCP021	GCP	373013.157	4581505.387	1232.007	0.012	0.048	1.511
GCP022	GCP	360915.900	4530212.636	1324.760	0.016	0.047	2.100
GCP101	GCP	246654.808	4493342.669	1334.218	0.014	0.046	1.742
GCP102	GCP	252003.559	4492832.815	1271.615	0.017	0.048	1.455
GCP103	GCP	255198.667	4488922.818	1226.207	0.014	0.048	1.798
GCP104	GCP	262689.879	4509594.721	1418.540	0.024	0.062	2.288
GCP105	GCP	260582.404	4513382.566	1327.547	0.013	0.049	1.689
GCP106	GCP	260282.990	4515170.265	1391.949	0.010	0.048	2.060
GCP107	GCP	262478.275	4520405.646	1523.989	0.014	0.046	1.915
GCP108	GCP	264226.658	4525760.524	1546.019	0.011	0.048	1.870
GCP109	GCP	263992.318	4533530.732	1498.222	0.013	0.048	1.464
GCP110	GCP	257033.568	4532487.717	1806.875	0.010	0.048	1.780
GCP111	GCP	252206.208	4529611.100	1972.680	0.015	0.047	1.351
GCP112	GCP	247280.845	4528866.616	1899.767	0.023	0.047	1.411
GCP113	GCP	261121.319	4539625.968	1458.367	0.012	0.048	1.357
GCP114	GCP	254576.872	4541355.368	1438.691	0.013	0.048	1.686
GCP115	GCP	251957.366	4547432.890	1439.184	0.013	0.048	1.607
GCP116	GCP	248594.724	4545206.101	1519.307	0.011	0.037	1.366
GCP117	GCP	254404.437	4553112.264	1440.340	0.013	0.048	3.162
GCP118	GCP	253408.601	4556155.018	1420.257	0.020	0.046	1.448
GCP119	GCP	248301.627	4561114.896	1382.910	0.010	0.048	1.511
GCP120	GCP	269480.733	4538289.271	1470.833	0.013	0.047	1.696
GCP121	GCP	277820.038	4532586.276	1660.699	0.016	0.047	1.346
GCP122	GCP	257074.701	4552121.942	1432.862	0.015	0.046	1.693
GCP123	GCP	263694.031	4549197.828	1518.432	0.008	0.049	2.007
GCP124	GCP	268121.896	4549550.149	1599.747	0.018	0.042	1.379

GCP125	GCP	272856.074	4553373.832	1835.637	0.012	0.047	1.590
GCP126	GCP	286168.804	4554235.716	1713.202	0.013	0.028	1.873
GCP127	GCP	292059.806	4566085.570	1616.023	0.009	0.047	2.062
GCP128	GCP	282221.914	4579619.343	1794.863	0.015	0.048	1.597
GCP129	GCP	272626.380	4589281.209	1733.949	0.011	0.048	1.540
GCP130	GCP	262912.681	4597523.076	1694.860	0.018	0.048	1.323
GCP131	GCP	258567.705	4608382.687	1839.462	0.008	0.047	1.940
GCP132	GCP	250292.345	4605420.952	1517.323	0.018	0.046	1.445
GCP133	GCP	272008.206	4606977.560	1701.853	0.012	0.049	1.868
GCP134	GCP	286528.348	4608502.082	1763.908	0.015	0.046	1.381
GCP135	GCP	302595.646	4621638.437	1796.290	0.008	0.049	1.943
GCP136	GCP	306161.656	4618929.637	1803.076	0.018	0.046	1.335
GCP137	GCP	270303.265	4651238.626	1430.778	0.012	0.048	1.975
GCP138	GCP	278323.940	4634766.906	1700.702	0.010	0.049	1.821
GCP139	GCP	267823.485	4618323.055	1683.482	0.013	0.044	1.794
GCP140	GCP	291893.014	4635295.566	1727.095	0.019	0.048	1.608
GCP141	GCP	307901.955	4651428.672	1844.332	0.021	0.046	1.364
GCP142	GCP	318332.887	4641325.137	1701.468	0.009	0.049	1.906
GCP143	GCP	330523.590	4638150.167	1489.223	0.015	0.047	1.438
GCP144	GCP	344326.370	4639624.493	1313.228	0.015	0.048	1.405
GCP145	GCP	354693.796	4637509.181	1289.434	0.008	0.048	1.933
GCP146	GCP	365201.896	4645677.983	1286.181	0.021	0.047	1.349
GCP147	GCP	364465.109	4649737.462	1281.445	0.008	0.049	2.013
GCP148	GCP	373685.530	4619954.799	1316.236	0.017	0.048	1.285
GCP149	GCP	380859.835	4605369.343	1256.023	0.013	0.048	1.800
GCP150	GCP	398238.689	4589452.286	1256.527	0.014	0.046	1.261
GCP151	GCP	413483.877	4584898.907	1258.127	0.019	0.049	1.402
GCP152	GCP	431003.449	4583304.633	1286.222	0.011	0.048	1.481
GCP153	GCP	386723.688	4591601.321	1257.376	0.018	0.043	1.254
GCP154	GCP	363154.729	4591780.200	1240.860	0.008	0.048	2.297
GCP155	GCP	355946.416	4597331.070	1296.759	0.010	0.047	1.903
GCP156	GCP	352165.801	4595669.195	1257.844	0.017	0.048	1.614
GCP157	GCP	347423.667	4601935.166	1580.086	0.011	0.047	1.456
GCP158	GCP	344417.464	4608704.074	1461.251	0.011	0.048	1.833
GCP159	GCP	336602.472	4606516.330	1891.540	0.016	0.048	1.738
GCP160	GCP	330474.378	4601352.583	1816.306	0.011	0.047	1.808
GCP161	GCP	325096.527	4604632.353	1782.012	0.014	0.040	1.672
GCP162	GCP	319373.135	4609265.091	1784.352	0.011	0.047	1.665
GCP163	GCP	440429.178	4649746.265	1350.396	0.010	0.049	1.982
GCP164	GCP	441210.424	4637361.615	1344.881	0.012	0.048	2.093
GCP165	GCP	438459.703	4626409.006	1343.470	0.018	0.048	1.783
GCP166	GCP	435380.016	4615943.194	1342.339	0.013	0.047	4.182
GCP167	GCP	434847.168	4607195.448	1365.550	0.008	0.048	2.813
GCP168	GCP	433906.538	4592628.008	1335.182	0.013	0.048	3.251
GCP169	GCP	434539.308	4582993.780	1418.210	0.018	0.048	1.518
GCP170	GCP	440929.104	4575010.360	1494.773	0.015	0.048	1.375
GCP171	GCP	442708.711	4557128.808	1380.622	0.013	0.046	1.886
GCP172	GCP	437659.327	4536847.156	1319.318	0.018	0.046	1.450
GCP173	GCP	432089.369	4531489.176	1299.670	0.014	0.044	1.931
GCP174	GCP	419807.427	4523440.863	1335.796	0.016	0.048	1.410



GCP175	GCP	423748.414	4536196.047	1377.976	0.016	0.048	1.218
GCP176	GCP	413089.334	4532699.096	1313.102	0.010	0.048	1.651
GCP177	GCP	405148.443	4534286.902	1287.024	0.016	0.048	1.611
GCP178	GCP	399378.790	4533391.953	1275.685	0.012	0.044	1.752
GCP179	GCP	394856.536	4532314.248	1274.969	0.011	0.048	2.221
GCP180	GCP	389598.329	4531442.089	1273.005	0.008	0.046	2.119
GCP181	GCP	383672.796	4530415.136	1270.196	0.015	0.045	2.683
GCP182	GCP	381110.024	4528290.099	1273.203	0.015	0.046	4.820
GCP183	GCP	375165.395	4527780.923	1328.209	0.013	0.048	1.899
GCP184	GCP	370499.031	4527076.521	1407.150	0.011	0.038	1.361
GCP185	GCP	447892.791	4540575.814	1366.288	0.008	0.048	3.309
GCP186	GCP	451456.281	4541128.254	1336.910	0.012	0.046	1.986
GCP187	GCP	455599.418	4535957.054	1337.762	0.012	0.047	1.794
GCP188	GCP	459201.215	4533135.042	1352.856	0.013	0.048	1.848
GCP189	GCP	467143.990	4530021.128	1568.074	0.021	0.043	1.753
GCP190	GCP	472773.798	4528554.236	1427.884	0.009	0.048	2.222
GCP191	GCP	478689.229	4524919.184	1344.626	0.017	0.048	1.601
GCP192	GCP	483891.752	4521000.190	1349.878	0.012	0.044	1.964
GCP193	GCP	489058.253	4515366.761	1380.064	0.017	0.048	1.416
GCP194	GCP	495296.812	4509228.157	1378.485	0.011	0.049	2.106
GCP195	GCP	466518.742	4536148.951	1331.141	0.017	0.047	1.473
GCP196	GCP	473804.921	4543999.488	1345.021	0.009	0.048	1.861
GCP197	GCP	476912.725	4547318.826	1362.529	0.013	0.047	1.523
GCP198	GCP	484411.673	4550055.002	1369.631	0.014	0.045	1.206
GCP199	GCP	490730.928	4552630.444	1398.379	0.013	0.047	1.488
GCP200	GCP	495338.903	4553492.395	1425.592	0.009	0.048	1.760
GCP201	GCP	498277.327	4555035.166	1417.465	0.017	0.048	1.181
GCP202	GCP	480067.971	4557002.258	1552.551	0.026	0.047	1.498
GCP203	GCP	484146.449	4562636.191	1474.362	0.009	0.048	2.210
GCP204	GCP	445807.384	4644548.639	1389.688	0.021	0.044	1.371
GCP205	GCP	448430.391	4646865.953	1410.685	0.012	0.047	1.492
GCP206	GCP	451377.470	4647735.939	1527.414	0.010	0.047	1.876
GCP207	GCP	455342.052	4648689.327	1535.537	0.014	0.048	1.421
GCP208	GCP	459017.944	4649554.788	1552.122	0.016	0.049	1.559
GCP209	GCP	465085.348	4645460.821	1608.010	0.010	0.047	2.006
GCP210	GCP	471856.795	4645638.027	1908.903	0.017	0.048	1.314
GCP211	GCP	479317.306	4639648.681	1821.253	0.016	0.048	1.813
GCP212	GCP	483080.924	4633903.556	1791.637	0.013	0.048	1.537
GCP213	GCP	480897.555	4626360.866	1877.401	0.009	0.048	1.861
GCP214	GCP	479197.452	4617492.936	1803.211	0.024	0.048	1.364
NVA001	NVA	302591.335	4527563.629	1231.514	0.011	0.064	1.931
NVA002	NVA	304596.123	4519176.721	1215.616	0.026	0.062	1.997
NVA003	NVA	301940.328	4509290.654	1197.944	0.020	0.055	1.427
NVA004	NVA	300758.287	4502814.617	1204.139	0.012	0.064	1.974
NVA005	NVA	293678.833	4509360.474	1196.959	0.012	0.062	1.819
NVA006	NVA	290408.588	4511156.966	1201.155	0.020	0.062	1.280
NVA007	NVA	288807.567	4518798.423	1293.257	0.019	0.060	3.468
NVA008	NVA	283969.865	4524865.026	1408.413	0.012	0.064	1.501
NVA009	NVA	279866.511	4506664.184	1183.746	0.026	0.058	1.770
NVA010	NVA	268118.787	4498624.873	1188.848	0.028	0.061	1.760

NVA011	NVA	302395.147	4530820.311	1256.415	0.014	0.062	1.583
NVA012	NVA	302830.793	4539388.799	1305.094	0.026	0.054	1.634
NVA013	NVA	300775.939	4548814.485	1561.080	0.011	0.064	2.461
NVA014	NVA	300109.173	4554457.487	1756.027	0.022	0.055	1.338
NVA015	NVA	299736.458	4559360.308	1769.834	0.014	0.061	1.818
NVA016	NVA	296261.430	4562410.409	1712.991	0.023	0.059	1.418
NVA017	NVA	318622.276	4583976.491	1369.793	0.020	0.057	1.549
NVA018	NVA	317576.645	4571322.401	1290.900	0.023	0.055	1.734
NVA019	NVA	320409.602	4556217.460	1224.921	0.026	0.054	1.709
NVA020	NVA	321271.640	4546810.335	1211.378	0.020	0.062	1.864
NVA021	NVA	343402.943	4577515.663	1284.667	0.015	0.064	1.753
NVA022	NVA	339277.387	4573746.485	1339.049	0.021	0.060	1.663
NVA023	NVA	373020.064	4581526.422	1232.105	0.024	0.049	1.496
NVA024	NVA	367411.841	4569103.759	1224.937	0.019	0.064	1.445
NVA025	NVA	363792.023	4528412.048	1355.696	0.018	0.063	1.519
NVA026	NVA	355790.791	4525575.206	1257.192	0.019	0.063	17.914
NVA027	NVA	360957.793	4530219.800	1325.916	0.023	0.056	1.383
NVA028	NVA	368954.476	4526448.691	1420.484	0.010	0.064	1.945
NVA029	NVA	280654.054	4529256.787	1730.218	0.012	0.054	1.620
NVA030	NVA	259975.848	4485883.013	1189.064	0.023	0.063	1.610
NVA031	NVA	286158.799	4511893.942	1182.589	0.017	0.057	1.385
NVA032	NVA	274743.271	4499613.461	1199.236	0.015	0.063	1.608
NVA033	NVA	262857.157	4494581.817	1205.922	0.016	0.062	1.779
NVA034	NVA	319216.962	4576780.943	1318.570	0.021	0.060	1.818
NVA035	NVA	319195.597	4564735.167	1275.133	0.012	0.064	2.676
NVA036	NVA	321852.928	4551010.126	1215.320	0.023	0.052	1.756
NVA037	NVA	344276.515	4582706.277	1240.322	0.024	0.052	1.211
NVA038	NVA	370033.469	4574171.164	1231.186	0.012	0.063	1.746
NVA039	NVA	357346.004	4528357.959	1261.861	0.016	0.059	1.511
NVA040	NVA	319784.420	4539587.931	1215.161	0.023	0.049	1.591
NVA101	NVA	246670.115	4493345.631	1334.651	0.021	0.063	1.494
NVA102	NVA	251961.102	4492843.397	1271.500	0.031	0.053	1.238
NVA103	NVA	255191.673	4488940.151	1226.384	0.009	0.063	2.526
NVA104	NVA	262655.786	4509582.299	1415.965	0.018	0.063	1.700
NVA105	NVA	260571.816	4513394.352	1327.035	0.018	0.063	1.490
NVA106	NVA	260299.794	4515176.895	1391.949	0.014	0.063	2.067
NVA107	NVA	262403.121	4520363.545	1531.632	0.030	0.063	1.406
NVA108	NVA	264228.667	4525749.803	1545.703	0.019	0.060	1.528
NVA109	NVA	264012.525	4533548.760	1497.545	0.023	0.053	1.389
NVA110	NVA	257043.162	4532512.440	1808.347	0.023	0.057	1.793
NVA111	NVA	252231.605	4529610.541	1972.363	0.022	0.053	1.221
NVA112	NVA	247280.950	4528845.150	1900.081	0.025	0.061	1.449
NVA113	NVA	261154.460	4539614.751	1458.456	0.022	0.060	1.220
NVA114	NVA	254616.453	4541353.998	1438.813	0.020	0.063	1.677
NVA115	NVA	251922.987	4547431.529	1440.934	0.028	0.061	1.315
NVA116	NVA	248634.164	4545184.582	1518.936	0.023	0.051	1.266
NVA117	NVA	254433.354	4553093.234	1440.621	0.023	0.050	1.451
NVA118	NVA	253432.541	4556067.525	1421.000	0.020	0.061	1.528
NVA119	NVA	248317.352	4561114.746	1382.987	0.021	0.062	1.864
NVA120	NVA	269484.228	4538289.225	1470.841	0.020	0.051	1.339

NVA121	NVA	277821.087	4532593.724	1660.649	0.022	0.063	1.269
NVA122	NVA	257058.227	4552116.699	1433.355	0.014	0.062	1.296
NVA123	NVA	263699.856	4549216.370	1518.296	0.018	0.063	1.592
NVA124	NVA	268117.398	4549551.007	1599.762	0.023	0.043	1.390
NVA125	NVA	272850.688	4553374.530	1834.815	0.021	0.054	1.576
NVA126	NVA	286152.805	4554229.525	1713.982	0.024	0.045	1.413
NVA127	NVA	292074.661	4566077.658	1616.975	0.014	0.061	1.475
NVA128	NVA	282218.665	4579634.949	1794.533	0.019	0.063	1.569
NVA129	NVA	272620.449	4589289.792	1733.974	0.025	0.060	1.512
NVA130	NVA	262920.087	4597513.708	1694.720	0.022	0.059	1.366
NVA131	NVA	258506.730	4608412.190	1836.583	0.025	0.049	1.555
NVA132	NVA	250309.050	4605446.291	1518.008	0.020	0.063	1.389
NVA133	NVA	271980.198	4606992.520	1701.868	0.022	0.062	1.878
NVA134	NVA	286579.987	4608497.748	1765.416	0.022	0.046	1.402
NVA135	NVA	302591.537	4621673.436	1796.742	0.021	0.062	1.417
NVA136	NVA	306171.593	4618914.092	1802.699	0.026	0.046	1.306
NVA137	NVA	270300.725	4651261.705	1430.149	0.024	0.050	1.529
NVA138	NVA	278319.710	4634729.396	1699.807	0.020	0.054	1.722
NVA139	NVA	267803.720	4618287.466	1683.643	0.029	0.056	1.550
NVA140	NVA	291863.662	4635303.824	1728.392	0.018	0.063	1.501
NVA141	NVA	307904.486	4651384.538	1844.677	0.019	0.062	1.290
NVA142	NVA	318358.718	4641359.957	1701.507	0.016	0.063	1.828
NVA143	NVA	330510.675	4638153.790	1489.706	0.020	0.061	1.404
NVA144	NVA	344294.503	4639618.593	1313.485	0.021	0.046	1.700
NVA145	NVA	354752.259	4637503.602	1289.397	0.018	0.063	1.269
NVA146	NVA	365219.615	4645661.962	1286.553	0.022	0.051	1.175
NVA147	NVA	364469.722	4649726.240	1281.472	0.017	0.063	1.640
NVA148	NVA	373675.675	4619970.481	1316.429	0.025	0.046	1.313
NVA149	NVA	380847.972	4605384.195	1256.241	0.022	0.056	1.760
NVA150	NVA	398296.633	4589432.942	1256.389	0.014	0.062	2.132
NVA151	NVA	413468.427	4584900.941	1258.132	0.022	0.063	1.520
NVA152	NVA	431037.047	4583301.657	1286.553	0.010	0.064	1.925
NVA153	NVA	386724.011	4591629.967	1256.997	0.024	0.047	1.130
NVA154	NVA	363200.288	4591765.912	1240.875	0.014	0.064	2.291
NVA155	NVA	355936.254	4597324.657	1296.174	0.023	0.056	1.911
NVA156	NVA	352128.263	4595656.773	1258.092	0.021	0.048	1.471
NVA157	NVA	347358.783	4601704.526	1584.328	0.024	0.062	1.293
NVA158	NVA	344414.510	4608707.985	1461.092	0.022	0.060	1.562
NVA159	NVA	336589.929	4606545.283	1891.309	0.026	0.053	1.794
NVA160	NVA	328818.674	4601385.870	1798.080	0.016	0.059	1.464
NVA161	NVA	325106.531	4604604.845	1781.951	0.022	0.047	1.193
NVA162	NVA	319119.488	4609180.643	1797.863	0.011	0.065	1.945
NVA163	NVA	440408.083	4649757.526	1350.155	0.021	0.058	1.771
NVA164	NVA	441217.969	4637336.824	1344.975	0.022	0.060	1.496
NVA165	NVA	438450.761	4626382.697	1343.419	0.020	0.060	1.559
NVA166	NVA	435412.923	4615970.259	1343.474	0.022	0.061	1.382
NVA167	NVA	434845.584	4607170.566	1365.245	0.013	0.064	3.140
NVA168	NVA	433904.118	4592591.470	1335.301	0.011	0.048	2.339
NVA169	NVA	434500.760	4582993.839	1416.363	0.016	0.063	1.555
NVA170	NVA	440938.513	4574968.913	1494.445	0.025	0.058	1.316

NVA171	NVA	442720.371	4557177.193	1380.579	0.022	0.062	1.570
NVA172	NVA	437658.271	4536871.734	1319.236	0.016	0.061	1.927
NVA173	NVA	432138.633	4531446.638	1299.643	0.026	0.056	1.240
NVA174	NVA	419806.593	4523447.026	1335.736	0.024	0.062	1.446
NVA175	NVA	423756.280	4536195.923	1377.964	0.021	0.046	1.216
NVA176	NVA	413109.162	4532699.290	1313.040	0.017	0.042	1.448
NVA177	NVA	405153.435	4534258.051	1286.423	0.024	0.057	1.592
NVA178	NVA	399313.254	4533373.163	1275.420	0.017	0.059	1.395
NVA179	NVA	394869.167	4532315.993	1274.980	0.027	0.062	1.956
NVA180	NVA	389575.366	4531437.228	1272.940	0.021	0.054	1.471
NVA181	NVA	383683.162	4530415.291	1270.253	0.020	0.047	1.332
NVA182	NVA	381105.426	4528276.315	1273.212	0.020	0.039	1.126
NVA183	NVA	375144.855	4527769.261	1327.867	0.022	0.054	1.494
NVA184	NVA	370512.972	4527070.559	1407.277	0.020	0.051	1.261
NVA185	NVA	449539.174	4541456.991	1338.004	0.024	0.063	1.491
NVA186	NVA	451312.415	4541077.838	1341.764	0.012	0.064	1.681
NVA187	NVA	455601.888	4535959.871	1337.704	0.022	0.063	1.852
NVA188	NVA	459199.816	4533131.777	1352.779	0.014	0.063	1.877
NVA189	NVA	466824.248	4529882.988	1575.738	0.036	0.055	1.294
NVA190	NVA	472841.496	4528524.934	1426.377	0.017	0.062	2.395
NVA191	NVA	478705.759	4524884.004	1345.208	0.020	0.063	3.307
NVA192	NVA	483950.651	4521057.065	1350.183	0.011	0.062	7.117
NVA193	NVA	489035.658	4515383.623	1380.148	0.026	0.062	1.369
NVA194	NVA	495421.758	4509315.640	1377.094	0.012	0.063	2.199
NVA195	NVA	466515.096	4536139.010	1331.035	0.027	0.063	1.259
NVA196	NVA	473819.281	4544014.501	1345.075	0.015	0.063	1.617
NVA197	NVA	476899.920	4547300.829	1362.486	0.009	0.062	1.938
NVA198	NVA	484421.308	4550044.638	1369.519	0.023	0.044	1.172
NVA199	NVA	490715.977	4552599.470	1397.913	0.022	0.049	1.363
NVA200	NVA	495334.119	4553535.972	1426.148	0.020	0.053	1.789
NVA201	NVA	498297.319	4555046.381	1417.339	0.023	0.052	1.350
NVA202	NVA	480081.049	4556999.270	1551.688	0.035	0.055	1.394
NVA203	NVA	484164.081	4562649.861	1473.988	0.018	0.064	1.997
NVA204	NVA	445807.774	4644569.072	1389.169	0.022	0.046	1.693
NVA205	NVA	448375.974	4646884.534	1413.734	0.021	0.060	1.307
NVA206	NVA	451388.826	4647748.678	1527.887	0.020	0.062	1.892
NVA207	NVA	455319.550	4648695.295	1537.298	0.024	0.051	1.415
NVA208	NVA	459053.601	4649496.808	1541.941	0.027	0.056	1.560
NVA209	NVA	465098.888	4645454.278	1607.979	0.019	0.055	1.669
NVA210	NVA	471862.469	4645648.581	1909.417	0.025	0.052	1.256
NVA211	NVA	479338.099	4639655.006	1820.931	0.026	0.055	1.571
NVA212	NVA	483052.933	4633893.042	1792.055	0.026	0.051	1.528
NVA213	NVA	480560.897	4625966.275	1873.526	0.013	0.063	1.989
NVA214	NVA	479192.741	4617469.247	1802.716	0.032	0.051	1.316
NVA215	NVA	491812.593	4568461.687	1551.308	0.017	0.063	1.715
NVA216	NVA	491838.132	4574032.361	1577.169	0.023	0.062	1.489
NVA217	NVA	486899.368	4572551.742	1585.734	0.022	0.062	1.276
NVA218	NVA	486875.032	4574671.477	1528.701	0.022	0.059	1.392
NVA219	NVA	486790.069	4577111.313	1479.469	0.018	0.059	1.305
NVA220	NVA	486856.677	4579514.754	1436.464	0.015	0.063	1.609



NVA221	NVA	487014.946	4581926.144	1422.105	0.021	0.062	1.395
NVA222	NVA	484657.781	4582107.210	1397.757	0.015	0.063	1.285
NVA223	NVA	481606.030	4581938.574	1391.074	0.012	0.064	1.996
NVA224	NVA	477564.161	4581882.725	1382.941	0.022	0.062	1.737
NVA225	NVA	473697.478	4581852.467	1378.011	0.015	0.063	1.606
NVA226	NVA	472747.227	4583448.023	1376.011	0.013	0.063	1.529
NVA227	NVA	470880.713	4584892.969	1372.862	0.014	0.063	1.621
NVA228	NVA	468821.396	4585204.703	1369.374	0.022	0.052	1.430
NVA229	NVA	466723.045	4586112.896	1361.983	0.024	0.059	1.399
NVA230	NVA	464836.614	4589015.525	1403.033	0.026	0.057	1.266
NVA231	NVA	462346.633	4592118.448	1384.353	0.043	0.060	1.354
NVA232	NVA	462067.984	4593301.064	1386.596	0.014	0.053	1.696
NVA233	NVA	459789.186	4594201.416	1381.631	0.012	0.062	1.590
NVA234	NVA	455379.956	4593123.567	1378.107	0.010	0.065	1.911
NVA235	NVA	454926.031	4589523.232	1370.175	0.016	0.063	1.291
NVA236	NVA	453463.621	4582091.764	1364.810	0.015	0.063	1.532
NVA237	NVA	452469.805	4578898.947	1349.414	0.009	0.064	2.295
NVA238	NVA	448653.776	4574958.040	1347.655	0.018	0.062	1.447
NVA239	NVA	444811.351	4572142.200	1335.019	0.016	0.062	1.432
NVA240	NVA	431370.041	4647851.748	1380.612	0.026	0.063	1.439
NVA241	NVA	432415.127	4641772.616	1401.732	0.030	0.052	1.221
NVA242	NVA	424776.793	4637876.879	1571.539	0.021	0.063	1.503
NVA243	NVA	422272.540	4625178.969	1463.482	0.009	0.064	1.995
NVA244	NVA	418810.844	4615800.069	1376.033	0.013	0.063	1.526
NVA245	NVA	406467.620	4616901.755	1327.309	0.023	0.062	1.517
NVA246	NVA	397792.690	4617384.003	1287.808	0.019	0.063	1.591
NVA247	NVA	389207.115	4610596.039	1486.904	0.009	0.064	2.538
NVA248	NVA	401810.587	4627254.318	1296.005	0.016	0.063	3.486
NVA249	NVA	396332.266	4637360.126	1358.723	0.016	0.062	2.109
NVA250	NVA	394179.664	4632777.858	1326.622	0.014	0.063	1.766
NVA251	NVA	472539.841	4580050.512	1399.552	0.021	0.061	1.461
NVA252	NVA	471911.467	4577349.355	1403.918	0.026	0.055	1.462
NVA253	NVA	470877.499	4573570.544	1412.844	0.015	0.052	1.465
NVA254	NVA	469758.222	4571686.731	1432.801	0.009	0.062	2.210
NVA255	NVA	468028.515	4566572.258	1428.455	0.017	0.056	1.673
NVA256	NVA	466833.883	4560586.187	1482.433	0.034	0.061	1.370
NVA257	NVA	465506.479	4554537.423	1497.996	0.043	0.062	1.518
NVA258	NVA	461781.992	4548750.640	1368.128	0.019	0.061	1.510
NVA259	NVA	459559.908	4542180.158	1364.707	0.023	0.062	1.815
NVA260	NVA	457465.248	4551086.307	1388.249	0.015	0.063	2.033
NVA261	NVA	455787.345	4553865.214	1352.309	0.017	0.063	1.481
NVA262	NVA	454741.371	4557045.502	1334.826	0.018	0.063	1.741
NVA263	NVA	447970.744	4557112.474	1318.338	0.009	0.062	1.962
NVA264	NVA	434898.766	4552666.921	1474.795	0.024	0.061	1.813
NVA265	NVA	427086.059	4555444.003	1272.946	0.023	0.055	1.371
NVA266	NVA	425381.478	4565212.767	1281.211	0.024	0.058	1.215
NVA267	NVA	423026.239	4576972.694	1281.374	0.010	0.050	1.694
NVA268	NVA	394394.299	4577820.717	1269.426	0.015	0.062	1.948
NVA269	NVA	392208.934	4571847.386	1275.881	0.015	0.064	1.880
NVA270	NVA	389977.931	4566894.644	1278.757	0.022	0.058	1.263

NVA271	NVA	386134.135	4562714.301	1279.491	0.024	0.060	1.549
NVA272	NVA	380999.813	4557935.692	1283.197	0.028	0.050	1.437
NVA273	NVA	381128.476	4550350.493	1287.565	0.016	0.063	1.787
NVA274	NVA	382578.538	4542267.648	1280.627	0.014	0.063	1.546
NVA275	NVA	383689.906	4536661.748	1271.615	0.014	0.063	1.586
NVA276	NVA	376499.730	4642507.290	1550.190	0.013	0.063	1.935
NVA277	NVA	369027.021	4634865.492	1424.226	0.017	0.061	5.695
NVA278	NVA	352170.690	4633172.168	1296.360	0.020	0.053	1.484
NVA279	NVA	349006.700	4628414.719	1314.428	0.018	0.060	1.351
NVA280	NVA	347503.335	4624741.711	1360.036	0.016	0.057	2.547
NVA281	NVA	345916.528	4622851.055	1343.062	0.014	0.063	1.471
NVA282	NVA	344404.540	4620506.428	1351.779	0.009	0.064	2.122
NVA283	NVA	343536.480	4618742.883	1367.448	0.013	0.064	2.134
NVA284	NVA	343820.126	4615378.797	1396.537	0.020	0.062	2.567
NVA285	NVA	343619.038	4612411.675	1409.631	0.017	0.060	3.309
NVA286	NVA	340888.155	4613555.924	1433.000	0.017	0.062	2.135
NVA287	NVA	338898.067	4610776.391	1662.927	0.032	0.062	1.317
NVA288	NVA	347813.475	4606383.906	1534.351	0.015	0.062	2.228
NVA289	NVA	291891.185	4611903.164	1819.648	0.014	0.063	1.643
NVA290	NVA	297246.325	4614899.815	1794.060	0.013	0.064	1.493
NVA291	NVA	303113.101	4626185.750	1830.344	0.019	0.059	1.281
NVA292	NVA	307484.679	4628139.569	1882.719	0.014	0.063	1.876
NVA293	NVA	309098.943	4634489.078	1880.950	0.018	0.062	1.466
NVA294	NVA	310869.842	4639608.203	1814.069	0.015	0.061	1.599
NVA295	NVA	310450.278	4644105.186	1877.742	0.022	0.062	1.476
NVA296	NVA	319817.413	4644203.461	1682.101	0.017	0.062	1.314
NVA297	NVA	327111.001	4638853.946	1538.253	0.016	0.063	1.445
NVA298	NVA	335530.138	4641512.330	1510.396	0.015	0.063	2.522
NVA299	NVA	349490.240	4638040.926	1297.898	0.012	0.065	2.416
NVA300	NVA	356986.399	4642073.749	1295.476	0.017	0.063	1.792
NVA301	NVA	360524.151	4644802.406	1285.436	0.013	0.064	1.456
NVA302	NVA	362465.746	4647791.983	1288.291	0.022	0.064	1.488
NVA303	NVA	350671.270	4642687.386	1306.146	0.020	0.059	1.374
NVA304	NVA	350087.180	4648944.796	1332.170	0.018	0.060	1.312
NVA305	NVA	454152.767	4647877.234	1574.838	0.016	0.060	1.393
VVA001	VVA	296261.634	4562426.752	1711.940	0.024	0.059	1.267
VVA002	VVA	299744.147	4559368.801	1769.559	0.013	0.064	1.934
VVA003	VVA	300105.576	4554477.066	1755.982	0.022	0.054	1.548
VVA004	VVA	300797.760	4548788.225	1559.247	0.018	0.063	1.674
VVA005	VVA	302913.792	4539398.478	1298.698	0.023	0.060	1.317
VVA006	VVA	302336.524	4530879.342	1257.809	0.023	0.062	1.581
VVA007	VVA	302570.704	4527586.633	1231.661	0.021	0.061	1.431
VVA008	VVA	303763.723	4519214.688	1222.182	0.010	0.060	1.999
VVA009	VVA	301989.216	4509389.841	1198.505	0.024	0.048	1.641
VVA010	VVA	301176.935	4502879.168	1198.462	0.013	0.060	2.367
VVA011	VVA	293694.516	4509382.136	1197.575	0.012	0.065	1.769
VVA012	VVA	290378.520	4511173.701	1200.312	0.027	0.062	1.886
VVA013	VVA	289203.221	4518286.692	1292.557	0.021	0.062	1.821
VVA014	VVA	285298.114	4523916.451	1368.135	0.012	0.064	3.250
VVA015	VVA	280682.411	4529227.563	1728.783	0.010	0.064	1.975

VVA016	VVA	268116.009	4498643.828	1188.520	0.027	0.056	1.389
VVA017	VVA	259994.831	4485912.233	1188.933	0.023	0.050	1.860
VVA018	VVA	279870.474	4506677.929	1183.444	0.025	0.053	1.729
VVA019	VVA	318622.397	4584015.612	1370.695	0.015	0.046	1.862
VVA020	VVA	343417.672	4577483.761	1286.864	0.020	0.063	1.674
VVA021	VVA	373001.408	4581507.977	1231.750	0.021	0.050	1.508
VVA022	VVA	363784.159	4528407.326	1356.718	0.020	0.062	1.511
VVA023	VVA	355705.497	4525598.983	1254.075	0.020	0.055	1.523
VVA024	VVA	339287.935	4573731.437	1338.818	0.023	0.063	1.680
VVA025	VVA	321260.102	4546822.868	1211.532	0.012	0.063	2.030
VVA026	VVA	320412.571	4556224.412	1224.910	0.026	0.053	1.709
VVA027	VVA	317581.728	4571346.450	1289.702	0.022	0.050	1.772
VVA028	VVA	367371.201	4569113.125	1223.443	0.021	0.063	1.763
VVA101	VVA	246677.248	4493349.571	1334.707	0.018	0.060	1.481
VVA102	VVA	251983.195	4492844.507	1271.349	0.030	0.060	1.220
VVA103	VVA	255217.994	4488930.673	1226.124	0.013	0.062	2.258
VVA104	VVA	260575.670	4513385.939	1327.339	0.014	0.063	1.832
VVA105	VVA	260296.011	4515156.985	1391.580	0.010	0.061	2.446
VVA106	VVA	262379.695	4520358.332	1535.313	0.020	0.064	2.958
VVA107	VVA	264217.796	4525712.946	1543.514	0.018	0.061	1.731
VVA108	VVA	263983.000	4533545.940	1497.971	0.023	0.055	1.339
VVA109	VVA	257047.175	4532457.028	1806.271	0.024	0.056	1.808
VVA110	VVA	252206.464	4529504.243	1972.198	0.021	0.053	1.210
VVA111	VVA	247304.583	4528877.139	1899.424	0.025	0.049	1.535
VVA112	VVA	261138.932	4539595.315	1459.875	0.024	0.060	1.514
VVA113	VVA	254618.164	4541334.450	1439.079	0.013	0.063	2.310
VVA114	VVA	251955.513	4547423.149	1439.516	0.029	0.062	1.705
VVA115	VVA	248623.022	4545167.320	1517.840	0.023	0.048	1.408
VVA116	VVA	254383.960	4553091.067	1439.861	0.025	0.054	1.433
VVA117	VVA	253433.739	4556135.152	1419.404	0.024	0.063	1.573
VVA118	VVA	248306.890	4561128.653	1382.386	0.019	0.062	1.928
VVA119	VVA	269469.979	4538271.267	1470.375	0.019	0.055	1.397
VVA120	VVA	277835.808	4532606.540	1660.379	0.016	0.054	1.637
VVA121	VVA	257045.638	4552112.057	1432.917	0.014	0.063	1.340
VVA122	VVA	263706.804	4549213.034	1518.615	0.011	0.060	1.639
VVA123	VVA	268124.783	4549551.227	1599.780	0.026	0.046	1.389
VVA124	VVA	286136.827	4554210.098	1715.052	0.021	0.047	1.294
VVA125	VVA	292082.149	4566094.767	1616.497	0.022	0.060	1.510
VVA126	VVA	282232.095	4579628.127	1794.471	0.020	0.063	1.555
VVA127	VVA	272604.338	4589290.486	1733.159	0.022	0.061	1.563
VVA128	VVA	262931.587	4597520.406	1694.670	0.025	0.059	1.257
VVA129	VVA	250290.352	4605447.112	1517.524	0.011	0.061	1.873
VVA130	VVA	271975.657	4607014.427	1701.855	0.021	0.062	1.686
VVA131	VVA	286566.805	4608519.781	1764.493	0.023	0.044	1.335
VVA132	VVA	302570.087	4621676.681	1796.439	0.021	0.058	1.399
VVA133	VVA	306188.349	4618920.338	1802.552	0.026	0.042	1.284
VVA134	VVA	270316.398	4651265.639	1430.268	0.023	0.051	1.568
VVA135	VVA	267796.305	4618313.755	1683.436	0.029	0.051	1.215
VVA136	VVA	291873.428	4635317.234	1728.059	0.027	0.045	1.522
VVA137	VVA	307913.290	4651397.706	1844.367	0.016	0.044	1.335

VVA138	VVA	318367.588	4641372.740	1700.920	0.017	0.063	1.718
VVA139	VVA	330473.546	4638138.264	1489.849	0.023	0.054	1.375
VVA140	VVA	344294.343	4639630.579	1312.719	0.022	0.050	1.421
VVA141	VVA	354698.137	4637489.176	1289.172	0.018	0.063	1.286
VVA142	VVA	365182.774	4645683.868	1286.311	0.019	0.060	1.321
VVA143	VVA	364488.983	4649718.761	1281.242	0.017	0.058	1.895
VVA144	VVA	380862.200	4605393.254	1255.988	0.022	0.055	1.551
VVA145	VVA	398196.949	4589464.150	1256.281	0.018	0.061	1.246
VVA146	VVA	413479.402	4584923.359	1257.701	0.016	0.063	1.506
VVA147	VVA	386736.572	4591673.360	1256.740	0.023	0.044	1.161
VVA148	VVA	355907.931	4597317.552	1295.982	0.024	0.055	1.918
VVA149	VVA	352142.399	4595660.164	1258.007	0.020	0.048	1.486
VVA150	VVA	347344.328	4601713.595	1585.027	0.022	0.053	1.246
VVA151	VVA	344406.843	4608709.630	1461.430	0.022	0.059	1.373
VVA152	VVA	336584.370	4606569.797	1890.956	0.022	0.047	1.558
VVA153	VVA	328848.176	4601411.939	1798.569	0.023	0.059	1.420
VVA154	VVA	325069.250	4604635.299	1782.069	0.023	0.041	1.205
VVA155	VVA	319109.076	4609187.651	1798.818	0.011	0.064	2.571
VVA156	VVA	440389.317	4649721.223	1349.595	0.018	0.062	1.590
VVA157	VVA	441185.721	4637336.532	1343.871	0.020	0.062	1.637
VVA158	VVA	434828.311	4607167.088	1363.584	0.013	0.062	5.037
VVA159	VVA	434480.186	4583009.332	1415.305	0.012	0.063	1.827
VVA160	VVA	442737.074	4557108.047	1379.547	0.017	0.060	1.442
VVA161	VVA	437629.023	4536858.621	1320.720	0.012	0.063	1.663
VVA162	VVA	432115.136	4531407.953	1299.143	0.053	0.040	1.357
VVA163	VVA	419824.187	4523441.799	1336.917	0.021	0.063	1.909
VVA164	VVA	423744.656	4536164.349	1376.904	0.020	0.045	1.187
VVA165	VVA	413123.062	4532695.248	1312.773	0.021	0.049	1.288
VVA166	VVA	405159.845	4534288.327	1287.141	0.024	0.056	1.379
VVA167	VVA	399294.321	4533361.719	1275.492	0.016	0.063	1.715
VVA168	VVA	394864.524	4532331.885	1275.043	0.030	0.061	1.765
VVA169	VVA	389588.142	4531452.081	1272.525	0.018	0.046	1.262
VVA170	VVA	383649.535	4530410.202	1269.914	0.020	0.049	1.352
VVA171	VVA	381140.346	4528300.120	1272.876	0.024	0.047	1.203
VVA172	VVA	375163.511	4527761.553	1328.175	0.022	0.052	1.491
VVA173	VVA	370502.093	4527050.842	1407.779	0.021	0.052	1.504
VVA174	VVA	449520.890	4541449.025	1337.771	0.029	0.059	6.247
VVA175	VVA	451407.914	4541169.728	1335.870	0.016	0.062	1.600
VVA176	VVA	455611.193	4535946.383	1337.477	0.029	0.062	1.988
VVA177	VVA	459217.721	4533137.292	1353.030	0.016	0.063	2.029
VVA178	VVA	466840.263	4529887.492	1576.494	0.048	0.064	1.875
VVA179	VVA	472804.396	4528490.093	1429.679	0.014	0.063	2.052
VVA180	VVA	476700.152	4529762.801	1342.640	0.015	0.063	2.096
VVA181	VVA	484001.052	4521075.206	1351.588	0.009	0.064	7.587
VVA182	VVA	489078.318	4515403.447	1379.821	0.030	0.058	1.272
VVA183	VVA	495437.011	4509318.313	1376.966	0.018	0.062	1.513
VVA184	VVA	466505.090	4536142.345	1330.798	0.023	0.060	1.211
VVA185	VVA	473800.763	4544022.296	1344.569	0.011	0.062	1.516
VVA186	VVA	476890.764	4547370.903	1363.603	0.023	0.061	1.386
VVA187	VVA	484457.958	4550035.691	1369.527	0.022	0.043	1.206



VVA188	VVA	490659.797	4552595.832	1397.436	0.022	0.047	1.359
VVA189	VVA	495342.836	4553558.935	1426.474	0.020	0.050	1.642
VVA190	VVA	498264.037	4555041.433	1417.909	0.022	0.051	1.500
VVA191	VVA	480077.909	4556984.909	1551.567	0.028	0.058	1.666
VVA192	VVA	484146.358	4562664.001	1474.296	0.022	0.063	1.723
VVA193	VVA	445826.478	4644574.123	1389.185	0.021	0.044	1.314
VVA194	VVA	448419.136	4646846.850	1410.036	0.023	0.060	1.520
VVA195	VVA	451405.061	4647733.202	1526.986	0.020	0.061	1.898
VVA196	VVA	459036.894	4649491.943	1541.896	0.029	0.058	1.549
VVA197	VVA	465100.236	4645439.548	1608.418	0.025	0.062	1.506
VVA198	VVA	471849.004	4645668.217	1909.678	0.025	0.049	1.261
VVA199	VVA	479355.218	4639672.257	1820.402	0.025	0.053	1.284
VVA200	VVA	483062.441	4633906.678	1791.823	0.023	0.052	1.517
VVA201	VVA	480576.356	4625961.477	1873.640	0.018	0.063	1.451
VVA202	VVA	479221.678	4617481.693	1802.265	0.031	0.055	1.306
VVA203	VVA	491817.856	4568491.054	1551.726	0.025	0.063	1.367
VVA204	VVA	486895.925	4572533.677	1585.441	0.028	0.064	1.545
VVA205	VVA	486783.437	4577112.562	1479.398	0.020	0.062	1.301
VVA206	VVA	486840.516	4579514.554	1437.295	0.017	0.062	1.464
VVA207	VVA	487001.414	4581910.998	1422.243	0.027	0.062	1.533
VVA208	VVA	481591.159	4581942.911	1390.877	0.020	0.063	1.880
VVA209	VVA	477538.017	4581880.983	1382.706	0.029	0.062	1.315
VVA210	VVA	473709.126	4581859.555	1378.016	0.019	0.060	1.672
VVA211	VVA	472762.982	4583444.912	1375.701	0.019	0.062	1.529
VVA212	VVA	470909.729	4584864.292	1372.685	0.020	0.063	1.444
VVA213	VVA	468805.506	4585206.018	1368.845	0.019	0.058	1.447
VVA214	VVA	466711.533	4586083.629	1361.406	0.024	0.055	1.361
VVA215	VVA	464798.281	4589001.908	1402.062	0.023	0.062	1.466
VVA216	VVA	459829.536	4594200.028	1381.323	0.016	0.063	1.855
VVA217	VVA	455380.391	4593147.670	1378.124	0.015	0.063	1.762
VVA218	VVA	454928.347	4589549.263	1369.876	0.021	0.057	1.295
VVA219	VVA	453440.375	4582078.314	1364.869	0.014	0.062	1.343
VVA220	VVA	452413.905	4578856.654	1348.806	0.017	0.062	1.843
VVA221	VVA	449046.637	4575349.545	1342.148	0.014	0.052	1.654
VVA222	VVA	444781.745	4572148.302	1334.624	0.016	0.060	1.538
VVA223	VVA	431380.158	4647830.512	1379.508	0.023	0.061	1.458
VVA224	VVA	432429.972	4641773.794	1400.812	0.021	0.061	3.879
VVA225	VVA	424781.702	4637888.140	1571.386	0.017	0.063	1.496
VVA226	VVA	418807.507	4615803.035	1375.908	0.019	0.062	1.432
VVA227	VVA	397816.425	4617379.252	1287.685	0.025	0.063	1.579
VVA228	VVA	389213.695	4610598.587	1487.019	0.014	0.064	1.635
VVA229	VVA	401813.117	4627239.803	1296.016	0.019	0.057	1.580
VVA230	VVA	396325.997	4637371.599	1359.170	0.022	0.063	1.778
VVA231	VVA	394186.882	4632760.636	1326.415	0.023	0.060	1.385
VVA232	VVA	427100.171	4555458.613	1273.195	0.023	0.064	1.397
VVA233	VVA	394337.275	4577728.738	1270.316	0.011	0.064	1.864
VVA234	VVA	392188.084	4571852.013	1276.350	0.018	0.063	1.881
VVA235	VVA	389973.892	4566913.828	1279.222	0.026	0.054	1.269
VVA236	VVA	380999.794	4557971.486	1283.175	0.026	0.054	1.450
VVA237	VVA	381097.544	4550296.562	1288.230	0.019	0.063	1.572

VVA238	VVA	383739.282	4536653.223	1271.612	0.020	0.063	1.365
VVA239	VVA	352164.264	4633177.706	1296.818	0.016	0.063	1.487
VVA240	VVA	349021.215	4628403.676	1314.057	0.022	0.057	1.407
VVA241	VVA	347504.990	4624760.199	1359.505	0.024	0.050	1.187
VVA242	VVA	343469.021	4618752.510	1366.632	0.010	0.064	3.661
VVA243	VVA	340891.050	4613577.002	1432.213	0.023	0.061	1.693

# Attachment A – GNSS Logs

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(Electronically Attached)

## Attachment B – Photos

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(Electronically Attached)



# Attachment C – Overviews

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(Electronically Attached)