



Dempster Highway LiDAR Accuracy Report

Prepared For: Government of the Yukon

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Date: 16 October, 2013



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1 BACKGROUND

The purpose of this document is to summarize the procedures used to analyze the accuracy of the LiDAR survey of the Dempster highway in the Yukon Territory.

2 GROUND SURVEY AND TARGETING METHODOLOGY AND RESULTS

The ground control survey was carried out along the length of the corridor to be mapped. GPS base stations were set up at intervals of approximately 20km. Leica GS15 receivers paired with Leica Viva controllers were used for the acquisition of all the data.

The process used was to locate a position with a good view of the sky for visibility from the aircraft and to ensure good satellite geometry. The target was first set up; a "V" target formation was used with 0.5m lengths of cloth. The base station was then set up over the centre of the target and static data was collected. The collection time varied but a minimum of three hours of data was collected. The raw data was later transformed into a RINEX file format and submitted to Natural Resource Canada's Precise Point Positioning service. The results were then sent back with coordinates in Latitude and Longitude as well as UTM (CSRS). Part of the reporting obtained from NRCan was a listing of residuals for the results of each coordinate at a 95% confidence level (see Appendix A). The largest residual for Latitude was 0.018m with the average being 0.012m. The largest residual for the Longitude was 0.052m and the average was 0.020m. The residuals for Ellipsoidal elevation had a maximum of 0.050m and an average of 0.032m.

The mini surveys were carried out while the base stations were collecting data. The "shots" were taken using RTK GPS. The system was using a UTM projection in either zone 7 or 8, depending on the location along the corridor. The Geoid model Htv2 was used. The field surveyor located the position of the shoulder of the road for a stretch of approximately 50m on each side of the road. These mini surveys were done at each target location for the purpose of proving the LiDAR data correct.

Topographic data was provided to Scott Rhodes, BCLS, CLS (Allnorth Land Surveyors) by IGI Consulting. Mr. Rhodes imported the mini survey's data into an Autocad file with the contour data created from the LiDAR. An initial comparison was done at this time to determine if any blunders could be detected. Each mini survey was reviewed to see if the Northing, Easting and Elevation values agreed with the contour data. There were no significant discrepancies discovered. After this check was completed the mini survey data was passed along to IGI Consulting for further analysis.



3 LIDAR SURVEY ACCURACY ANALYSIS

IGI Consulting's Principal Mr. Ian Grady performed the LiDAR survey accuracy analysis.

Within Zone 7 a total of 13 mini surveys were conducted with a total of 346 'road shoulder' readings taken. Within Zone 8 a total of 11 'mini surveys were conducted with a total of 286 'road shoulder' readings taken.

The survey point number and the XYZ coordinates of these 'mini-topographic surveys' were imported into an ESRI ArcMap shape file for the Nad83 UTM Zone 7 points as well as the Nad83 UTM Zone 8 points.

The topographic survey shape files were compared against the unclassified LiDAR data outside of the Priority Area (km 85-246) and against the classified LiDAR data within the Priority Area, using Global Mapper, an industry standard GPS/GIS mapping software.

Methodology

The mini survey coordinate shape file was loaded into Global Mapper along with the LiDAR tile index. Starting at the south end and working north, the operator zoomed into each mini survey group of points and determined which LiDAR tile coincided with that survey. The surrounding LiDAR tiles were then imported into Global Mapper as a point cloud with all points loaded.

The index and the survey coordinate points were turned off leaving only the LiDAR data. This was done so the survey data did not get incorporated into the next step – the creation of a LiDAR surface file.

Using the "Create Elevation Grid from 3D Vector Data" option a Triangulated Irregular Network (TIN) wire mesh surface file was created. Global Mapper provides for the option of setting a user definable grid spacing or letting the system automatically generate the surface or having the user define the grid spacing. For this accuracy analysis the operator let the system determine the optimum spacing.

For the classified data this spacing was ~12-15cm while the spacing within the unclassified data was ~17-20cm.

Once the TIN was created the LiDAR data was unloaded and the survey coordinate data turned on. The spread sheet of the survey coordinates provided by Allnorth was opened and an additional column was added to record the elevation reading for each survey point as read from the LiDAR generated TIN surface within Global Mapper.

Using a zoom level of ~1:62 to 1:65, the operator moved the screen position so three or four points were visible at a time on the monitor. Using a mouse to move the cursor, the cursor was positioned over the center of each survey point. The points were read in numeric order moving along one row of survey points and then moving back along the other side survey points.

Using Global Mapper's coordinate readout, the elevation value was then read and recorded in the spreadsheet beside the corresponding survey point. The survey point number in the spread sheet was confirmed against the survey point number shown in Global Mapper to ensure the elevation readings were recorded against the correct survey point. Once the elevation reading and the survey point number were confirmed, the next survey point was read. Upon completing the readings for each mini



survey area, the operator zoomed out to locate the next set of coordinates and then zoomed into that area and repeated the procedure.

In several locations of the 'unclassified data', multiple flight lines or swaths covered the mini survey points. As a general guideline the surface file was created using all of the LiDAR swaths available. As a test of the difference between the elevation values within each swath, one location was chosen randomly – within UTM Zone 7 and near base station location # 104 – and readings were taken for each set or pair of swaths. This location had 3 sets of 2 swaths covering the area.

The average difference between the survey control elevation and the tin of each of the sets of swaths ranged from 0.04092m to 0.05376m with an average between the three sets of 0.047253m. The average difference between the survey control elevations and a tin of using all the swaths was 0.03776m.

During the readings, in order to provide as unbiased a reading as possible, the 'surveyed coordinate' X, Y and Z columns were hid within Excel so only the survey point number and the Global Mapper recorded reading were visible. Once all of the survey points were read, the spread sheet columns were then 'unhidden' showing the survey X, Y and Z coordinates.

A second column was then added to record the difference between the field surveyed elevations and the Global Mapper LiDAR surface recorded elevations. For each mini survey location, the average elevation difference between the field survey elevations and the LiDAR tinned surface elevations were calculated and listed in the spread sheet as well as an average elevation difference for all of the readings within each zone.

Zone 7 data:

Zone 7 data consisted of 13 mini surveys with 8 of these falling inside the Priority Area (classified data) with 5 falling outside the Priority Area (unclassified data).

Average elevation difference at the 13 base stations was 0.084m.

For the 346 field survey points, the three maximum elevation differences for individual points were: 0.309m, 0.300m and two values at 0.263m. The smallest elevation difference was 0.00m with 31 readings under 0.010m.

The average elevation difference was 0.070m.

Zone 8 data:

Zone 8 data consisted of 11 mini surveys with none of the locations within the Priority Area.

Average elevation difference at the 11 base stations was 0.055m

For the 286 field survey points, the three maximum elevation differences for individual points was higher overall within the Zone 8 data: 0.620m, 0.454m, 0.386m with one additional reading over 0.300m at 0.332. Conversely, the Zone 8 data also had 4 readings at 0 elevation difference and a total of 39 readings below 0.010m.

The average elevation difference was slightly better for Zone 8 at 0.063m.



4 CONCLUSION

This report and all of the comparisons have been reviewed and analyzed by the undersigned. To the best of my knowledge all the data contained within this report and its appendices are correct.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Rhodes".

Scott Rhodes, BCLS, CLS

Land Surveyor



Appendix A NRCan Results

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:28 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 100_2000

Importance: High

~~~~~

Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

~~~~~

Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1346_100_2000/20130723_1346_100_2000_full_output.zip>

~~~~~ 100\_2000  
~~~~~

The estimated coordinates / standard deviations (95%) for the 100_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 63 59 23.9987 (dms) / 0.016 (m) Longitude (NAD83(CSRS)): -138 44 13.7861 (dms) / 0.024 (m)
Ellipsoidal Height (NAD83(CSRS)): 452.812 (m) / 0.029 (m)

UTM (North) Northing: 7097864.775m Easting: 610702.121m Zone: 7 Scale Factor: 0.99975007 (point) 0.99967902 (combined)

MTM (North) Northing: 7098238.011m Easting: 268720.670m Zone: 31 Scale Factor: 0.99991593 (point) 0.99984487 (combined)

Orthometric Height CGVD28 (HTv2.0): 443.332 m

Cartesian coordinates (X Y Z in metres) -2108332.968, -1849794.224, 5709633.098

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1346_100_2000/zip_dir_1/100_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1346_100_2000/zip_dir_1/100_2000_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:28 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 101_2000

Importance: High

~~~~~

Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1351_101_2000/20130723_1351_101_2000_full_output.zip>

~~~~~ 101\_2000  
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The estimated coordinates / standard deviations (95%) for the 101_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 64 06 38.4188 (dms) / 0.013 (m) Longitude (NAD83(CSRS)): -138 31 54.8505 (dms) / 0.021 (m)
Ellipsoidal Height (NAD83(CSRS)): 710.552 (m) / 0.028 (m)

UTM (North) Northing: 7111676.672m Easting: 620219.274m Zone: 7 Scale Factor: 0.99977698 (point) 0.99966549
(combined)

MTM (North) Northing: 7111588.633m Easting: 278878.878m Zone: 31 Scale Factor: 0.99990822 (point) 0.99979671
(combined)

Orthometric Height CGVD28 (HTv2.0): 700.704 m

Cartesian coordinates (X Y Z in metres) -2092712.466, -1849399.284, 5715751.870

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1351_101_2000/zip_dir_1/101_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1351_101_2000/zip_dir_1/101_2000_res.zip>

Orbits & Clocks Used: NRCan Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:28 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 102_2000

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1350_102_2000/20130723_1350_102_2000_full_output.zip>

~~~~~ 102\_2000  
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The estimated coordinates / standard deviations (95%) for the 102_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 64 16 52.4213 (dms) / 0.012 (m) Longitude (NAD83(CSRS)): -138 29 21.1349 (dms) / 0.020 (m)
Ellipsoidal Height (NAD83(CSRS)): 781.859 (m) / 0.033 (m)

UTM (North) Northing: 7130752.722m Easting: 621548.422m Zone: 7 Scale Factor: 0.99978091 (point) 0.99965823
(combined)

MTM (North) Northing: 7130583.293m Easting: 281105.818m Zone: 31 Scale Factor: 0.99990687 (point) 0.99978418
(combined)

Orthometric Height CGVD28 (HTv2.0): 771.082 m

Cartesian coordinates (X Y Z in metres) -2078537.076, -1839632.581, 5724093.582

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1350_102_2000/zip_dir_1/102_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1350_102_2000/zip_dir_1/102_2000_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:25 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 103_2000

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1341_103_2000/20130723_1341_103_2000_full_output.zip>

~~~~~ 103\_2000  
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The estimated coordinates / standard deviations (95%) for the 103_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 64 26 02.5156 (dms) / 0.015 (m) Longitude (NAD83(CSRS)): -138 16 04.5583 (dms) / 0.021 (m)
Ellipsoidal Height (NAD83(CSRS)): 956.397 (m) / 0.044 (m)

UTM (North) Northing: 7148210.471m Easting: 631523.345m Zone: 7 Scale Factor: 0.99981181 (point) 0.99966174
(combined)

MTM (North) Northing: 7147552.700m Easting: 291894.641m Zone: 31 Scale Factor: 0.99990204 (point) 0.99975196
(combined)

Orthometric Height CGVD28 (HTv2.0): 945.278 m

Cartesian coordinates (X Y Z in metres) -2060011.286, -1837472.309, 5731623.879

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1341_103_2000/zip_dir_1/103_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1341_103_2000/zip_dir_1/103_2000_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:23 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 104_2000

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1338_104_2000/20130723_1338_104_2000_full_output.zip>

~~~~~ 104\_2000  
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The estimated coordinates / standard deviations (95%) for the 104_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 64 34 42.6832 (dms) / 0.015 (m) Longitude (NAD83(CSRS)): -138 15 48.9824 (dms) / 0.052 (m)
Ellipsoidal Height (NAD83(CSRS)): 1334.536 (m) / 0.050 (m)

UTM (North) Northing: 7164310.031m Easting: 631037.357m Zone: 7 Scale Factor: 0.99981024 (point) 0.99960085 (combined)

MTM (North) Northing: 7163658.707m Easting: 292169.929m Zone: 31 Scale Factor: 0.99990195 (point) 0.99969254 (combined)

Orthometric Height CGVD28 (HTv2.0): 1323.266 m

Cartesian coordinates (X Y Z in metres) -2049141.953, -1828055.038, 5738899.778

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1338_104_2000/zip_dir_1/104_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1338_104_2000/zip_dir_1/104_2000_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:28 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 105_2000

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1347_105_2000/20130723_1347_105_2000_full_output.zip>

~~~~~ 105\_2000  
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The estimated coordinates / standard deviations (95%) for the 105_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 64 43 25.4988 (dms) / 0.007 (m) Longitude (NAD83(CSRS)): -138 22 40.9714 (dms) / 0.019 (m)
Ellipsoidal Height (NAD83(CSRS)): 1107.379 (m) / 0.025 (m)

UTM (North) Northing: 7180252.230m Easting: 624890.244m Zone: 7 Scale Factor: 0.99979097 (point) 0.99961722 (combined)

MTM (North) Northing: 7179875.516m Easting: 286783.317m Zone: 31 Scale Factor: 0.99990397 (point) 0.99973020 (combined)

Orthometric Height CGVD28 (HTv2.0): 1096.525 m

Cartesian coordinates (X Y Z in metres) -2041776.318, -1814173.255, 5745627.615

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1347_105_2000/zip_dir_1/105_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1347_105_2000/zip_dir_1/105_2000_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:28 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 106_2000

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1352_106_2000/20130723_1352_106_2000_full_output.zip>

~~~~~ 106\_2000  
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The estimated coordinates / standard deviations (95%) for the 106_2000 RINEX file are as follow:

Latitude (NAD83(CSRS)): 64 52 38.5367 (dms) / 0.007 (m) Longitude (NAD83(CSRS)): -138 17 11.9700 (dms) / 0.011 (m)
Ellipsoidal Height (NAD83(CSRS)): 961.160 (m) / 0.022 (m)

UTM (North) Northing: 7197543.675m Easting: 628507.684m Zone: 7 Scale Factor: 0.99980219 (point) 0.99965138
(combined)

MTM (North) Northing: 7196978.037m Easting: 291216.172m Zone: 31 Scale Factor: 0.99990226 (point) 0.99975143
(combined)

Orthometric Height CGVD28 (HTv2.0): 950.933 m

Cartesian coordinates (X Y Z in metres) -2027263.263, -1807072.650, 5752788.751

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1352_106_2000/zip_dir_1/106_2000.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1352_106_2000/zip_dir_1/106_2000_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:28 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 108_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1349_108_2010/20130723_1349_108_2010_full_output.zip>

~~~~~ 108\_2010  
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The estimated coordinates / standard deviations (95%) for the 108_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 01 54.5511 (dms) / 0.011 (m) Longitude (NAD83(CSRS)): -138 10 40.7620 (dms) / 0.015 (m)
Ellipsoidal Height (NAD83(CSRS)): 875.326 (m) / 0.032 (m)

UTM (North) Northing: 7214968.298m Easting: 632883.684m Zone: 7 Scale Factor: 0.99981619 (point) 0.99967884
(combined)

MTM (North) Northing: 7214177.111m Easting: 296414.090m Zone: 31 Scale Factor: 0.99990086 (point) 0.99976350
(combined)

Orthometric Height CGVD28 (HTv2.0): 865.489 m

Cartesian coordinates (X Y Z in metres) -2012177.629, -1800485.853, 5760001.782

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1349_108_2010/zip_dir_1/108_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1349_108_2010/zip_dir_1/108_2010_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:26 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 109_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1340_109_2010/20130723_1340_109_2010_full_output.zip>

~~~~~ 109\_2010  
~~~~~

The estimated coordinates / standard deviations (95%) for the 109_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 06 04.7883 (dms) / 0.015 (m) Longitude (NAD83(CSRS)): -138 21 20.3040 (dms) / 0.022 (m)
Ellipsoidal Height (NAD83(CSRS)): 863.743 (m) / 0.033 (m)

UTM (North) Northing: 7222347.979m Easting: 624198.151m Zone: 7 Scale Factor: 0.99978885 (point) 0.99965332
(combined)

MTM (North) Northing: 7221961.533m Easting: 288087.816m Zone: 31 Scale Factor: 0.99990342 (point) 0.99976788
(combined)

Orthometric Height CGVD28 (HTv2.0): 854.195 m

Cartesian coordinates (X Y Z in metres) -2012494.499, -1789564.488, 5763258.833

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1340_109_2010/zip_dir_1/109_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1340_109_2010/zip_dir_1/109_2010_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:25 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 111_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1339_111_2010/20130723_1339_111_2010_full_output.zip>

~~~~~ 111\_2010  
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The estimated coordinates / standard deviations (95%) for the 111_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 23 55.6066 (dms) / 0.015 (m) Longitude (NAD83(CSRS)): -138 16 24.8263 (dms) / 0.021 (m)
Ellipsoidal Height (NAD83(CSRS)): 591.669 (m) / 0.043 (m)

UTM (North) Northing: 7255638.797m Easting: 626618.597m Zone: 7 Scale Factor: 0.99979627 (point) 0.99970343
(combined)

MTM (North) Northing: 7255103.301m Easting: 292088.538m Zone: 31 Scale Factor: 0.99990198 (point) 0.99980913
(combined)

Orthometric Height CGVD28 (HTv2.0): 583.364 m

Cartesian coordinates (X Y Z in metres) -1987363.183, -1772321.618, 5776897.946

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1339_111_2010/zip_dir_1/111_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1339_111_2010/zip_dir_1/111_2010_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:26 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 112_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1342_112_2010/20130723_1342_112_2010_full_output.zip>

~~~~~ 112\_2010  
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The estimated coordinates / standard deviations (95%) for the 112_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 32 01.4779 (dms) / 0.012 (m) Longitude (NAD83(CSRS)): -138 13 57.8745 (dms) / 0.016 (m)
Ellipsoidal Height (NAD83(CSRS)): 546.548 (m) / 0.035 (m)

UTM (North) Northing: 7270752.393m Easting: 627852.428m Zone: 7 Scale Factor: 0.99980011 (point) 0.99971435 (combined)

MTM (North) Northing: 7270142.552m Easting: 294040.888m Zone: 31 Scale Factor: 0.99990142 (point) 0.99981565 (combined)

Orthometric Height CGVD28 (HTv2.0): 538.759 m

Cartesian coordinates (X Y Z in metres) -1975874.463, -1764604.873, 5783106.010

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1342_112_2010/zip_dir_1/112_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1342_112_2010/zip_dir_1/112_2010_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Monday, July 29, 2013 8:43 AM
To: Scott Rhodes
Subject: CSRS-PPP Results for 113_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130729_1039_113_2010/20130729_1039_113_2010_full_output.zip>

~~~~~ 113\_2010  
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The estimated coordinates / standard deviations (95%) for the 113_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 42 00.5297 (dms) / 0.013 (m) Longitude (NAD83(CSRS)): -138 04 29.3470 (dms) / 0.032 (m)
Ellipsoidal Height (NAD83(CSRS)): 499.597 (m) / 0.035 (m)

UTM (North) Northing: 7289613.299m Easting: 634282.328m Zone: 7 Scale Factor: 0.99982074 (point) 0.99974234 (combined)

MTM (North) Northing: 7288677.118m Easting: 301363.386m Zone: 31 Scale Factor: 0.99990014 (point) 0.99982174 (combined)

Orthometric Height CGVD28 (HTv2.0): 492.526 m

Cartesian coordinates (X Y Z in metres) -1958414.332, -1758738.941, 5790723.722

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1039_113_2010/zip_dir_1/113_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1039_113_2010/zip_dir_1/113_2010_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:22 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 114_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1336_114_2010/20130723_1336_114_2010_full_output.zip>

~~~~~ 114\_2010  
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The estimated coordinates / standard deviations (95%) for the 114_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 47 44.7350 (dms) / 0.010 (m) Longitude (NAD83(CSRS)): -137 45 39.5857 (dms) / 0.021 (m)
Ellipsoidal Height (NAD83(CSRS)): 852.476 (m) / 0.028 (m)

UTM (North) Northing: 7299921.033m Easting: 373718.952m Zone: 8 Scale Factor: 0.99979521 (point) 0.99966145 (combined)

MTM (North) Northing: 7299355.975m Easting: 315737.513m Zone: 31 Scale Factor: 0.99990146 (point) 0.99976769 (combined)

Orthometric Height CGVD28 (HTv2.0): 845.932 m

Cartesian coordinates (X Y Z in metres) -1941662.137, -1763001.735, 5795425.008

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1336_114_2010/zip_dir_1/114_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1336_114_2010/zip_dir_1/114_2010_res.zip>

Orbits & Clocks Used: NRCan Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:22 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 115_2010

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1335_115_2010/20130723_1335_115_2010_full_output.zip>

~~~~~ 115\_2010  
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The estimated coordinates / standard deviations (95%) for the 115_2010 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 52 01.5368 (dms) / 0.011 (m) Longitude (NAD83(CSRS)): -137 33 45.3501 (dms) / 0.021 (m)
Ellipsoidal Height (NAD83(CSRS)): 751.861 (m) / 0.031 (m)

UTM (North) Northing: 7307482.037m Easting: 383113.481m Zone: 8 Scale Factor: 0.99976725 (point) 0.99964928
(combined)

MTM (North) Northing: 7307357.985m Easting: 324761.331m Zone: 31 Scale Factor: 0.99990488 (point) 0.99978689
(combined)

Orthometric Height CGVD28 (HTv2.0): 745.733 m

Cartesian coordinates (X Y Z in metres) -1930158.994, -1764789.340, 5798590.202

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1335_115_2010/zip_dir_1/115_2010.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1335_115_2010/zip_dir_1/115_2010_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Monday, July 29, 2013 8:44 AM
To: Scott Rhodes
Subject: CSRS-PPP Results for 116_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130729_1041_116_2020/20130729_1041_116_2020_full_output.zip>

~~~~~ 116\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 116_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 57 22.1969 (dms) / 0.010 (m) Longitude (NAD83(CSRS)): -137 21 44.5968 (dms) / 0.010 (m)
Ellipsoidal Height (NAD83(CSRS)): 623.300 (m) / 0.025 (m)

UTM (North) Northing: 7317046.280m Easting: 392615.641m Zone: 8 Scale Factor: 0.99974116 (point) 0.99964336 (combined)

MTM (North) Northing: 7317366.908m Easting: 333796.983m Zone: 31 Scale Factor: 0.99991029 (point) 0.99981247 (combined)

Orthometric Height CGVD28 (HTv2.0): 617.544 m

Cartesian coordinates (X Y Z in metres) -1917270.885, -1765345.186, 5802527.011

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1041_116_2020/zip_dir_1/116_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1041_116_2020/zip_dir_1/116_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:27 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 117_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1345_117_2020/20130723_1345_117_2020_full_output.zip>

~~~~~ 117\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 117_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 05 02.0283 (dms) / 0.010 (m) Longitude (NAD83(CSRS)): -137 19 03.4264 (dms) / 0.009 (m)
Ellipsoidal Height (NAD83(CSRS)): 625.536 (m) / 0.027 (m)

UTM (North) Northing: 7331199.855m Easting: 395176.121m Zone: 8 Scale Factor: 0.99973450 (point) 0.99963635 (combined)

MTM (North) Northing: 7331629.214m Easting: 335677.953m Zone: 31 Scale Factor: 0.99991167 (point) 0.99981350 (combined)

Orthometric Height CGVD28 (HTv2.0): 619.973 m

Cartesian coordinates (X Y Z in metres) -1906324.006, -1758020.125, 5808318.215

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1345_117_2020/zip_dir_1/117_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1345_117_2020/zip_dir_1/117_2020_res.zip>

Orbits & Clocks Used: NRCan Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:27 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 118_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1344_118_2020/20130723_1344_118_2020_full_output.zip>

~~~~~ 118\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 118_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 11 04.7129 (dms) / 0.009 (m) Longitude (NAD83(CSRS)): -137 01 03.4241 (dms) / 0.009 (m)
Ellipsoidal Height (NAD83(CSRS)): 648.595 (m) / 0.024 (m)

UTM (North) Northing: 7341955.429m Easting: 409102.472m Zone: 8 Scale Factor: 0.99970114 (point) 0.99959938 (combined)

MTM (North) Northing: 7343041.362m Easting: 349076.178m Zone: 31 Scale Factor: 0.99992399 (point) 0.99982220 (combined)

Orthometric Height CGVD28 (HTv2.0): 643.166 m

Cartesian coordinates (X Y Z in metres) -1889583.260, -1760978.931, 5812885.010

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1344_118_2020/zip_dir_1/118_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1344_118_2020/zip_dir_1/118_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:22 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 119_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1334_119_2020/20130723_1334_119_2020_full_output.zip>

~~~~~ 119\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 119_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 17 50.7630 (dms) / 0.013 (m) Longitude (NAD83(CSRS)): -136 43 05.1242 (dms) / 0.024 (m)
Ellipsoidal Height (NAD83(CSRS)): 619.858 (m) / 0.035 (m)

UTM (North) Northing: 7354121.576m Easting: 422938.854m Zone: 8 Scale Factor: 0.99967269 (point) 0.99957544
(combined)

MTM (North) Northing: 7355859.533m Easting: 362317.090m Zone: 31 Scale Factor: 0.99994048 (point) 0.99984320
(combined)

Orthometric Height CGVD28 (HTv2.0): 614.570 m

Cartesian coordinates (X Y Z in metres) -1871961.991, -1762932.178, 5817926.561

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1334_119_2020/zip_dir_1/119_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1334_119_2020/zip_dir_1/119_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Monday, July 29, 2013 8:44 AM
To: Scott Rhodes
Subject: CSRS-PPP Results for 120_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130729_1042_120_2020/20130729_1042_120_2020_full_output.zip>

~~~~~ 120\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 120_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 26 34.1735 (dms) / 0.012 (m) Longitude (NAD83(CSRS)): -136 40 45.9122 (dms) / 0.016 (m)
Ellipsoidal Height (NAD83(CSRS)): 348.770 (m) / 0.027 (m)

UTM (North) Northing: 7370276.325m Easting: 425108.176m Zone: 8 Scale Factor: 0.99966865 (point) 0.99961393
(combined)

MTM (North) Northing: 7372104.121m Easting: 363709.623m Zone: 31 Scale Factor: 0.99994246 (point) 0.99988772
(combined)

Orthometric Height CGVD28 (HTv2.0): 343.658 m

Cartesian coordinates (X Y Z in metres) -1859885.438, -1753929.094, 5824177.317

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1042_120_2020/zip_dir_1/120_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1042_120_2020/zip_dir_1/120_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:27 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 121_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1343_121_2020/20130723_1343_121_2020_full_output.zip>

~~~~~ 121\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 121_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 32 08.0335 (dms) / 0.011 (m) Longitude (NAD83(CSRS)): -136 23 46.3914 (dms) / 0.012 (m)
Ellipsoidal Height (NAD83(CSRS)): 691.274 (m) / 0.022 (m)

UTM (North) Northing: 7380301.087m Easting: 437966.293m Zone: 8 Scale Factor: 0.99964710 (point) 0.99953865 (combined)

MTM (North) Northing: 7382516.063m Easting: 242747.676m Zone: 30 Scale Factor: 0.99994711 (point) 0.99983862 (combined)

Orthometric Height CGVD28 (HTv2.0): 686.110 m

Cartesian coordinates (X Y Z in metres) -1844424.812, -1756654.066, 5828617.269

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1343_121_2020/zip_dir_1/121_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1343_121_2020/zip_dir_1/121_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Tuesday, July 23, 2013 1:19 PM
To: Scott Rhodes
Subject: CSRS-PPP Results for 122_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130723_1330_122_2020/20130723_1330_122_2020_full_output.zip>

~~~~~ 122\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 122_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 41 14.7966 (dms) / 0.011 (m) Longitude (NAD83(CSRS)): -136 21 05.2204 (dms) / 0.016 (m)
Ellipsoidal Height (NAD83(CSRS)): 669.163 (m) / 0.035 (m)

UTM (North) Northing: 7397184.275m Easting: 440321.668m Zone: 8 Scale Factor: 0.99964359 (point) 0.99953861 (combined)

MTM (North) Northing: 7399404.318m Easting: 245103.757m Zone: 30 Scale Factor: 0.99994360 (point) 0.99983858 (combined)

Orthometric Height CGVD28 (HTv2.0): 664.150 m

Cartesian coordinates (X Y Z in metres) -1831795.705, -1747357.646, 5835321.037

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1330_122_2020/zip_dir_1/122_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130723_1330_122_2020/zip_dir_1/122_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Monday, July 29, 2013 8:42 AM
To: Scott Rhodes
Subject: CSRS-PPP Results for 123_2020

Importance: High

~~~~~

Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

~~~~~

Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130729_1037_123_2020/20130729_1037_123_2020_full_output.zip>

~~~~~ 123\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 123_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 66 51 46.0187 (dms) / 0.011 (m) Longitude (NAD83(CSRS)): -136 20 22.9119 (dms) / 0.018 (m)
Ellipsoidal Height (NAD83(CSRS)): 577.523 (m) / 0.033 (m)

UTM (North) Northing: 7416715.196m Easting: 441260.556m Zone: 8 Scale Factor: 0.99964223 (point) 0.99955162
(combined)

MTM (North) Northing: 7418941.101m Easting: 246042.927m Zone: 30 Scale Factor: 0.99994224 (point) 0.99985160
(combined)

Orthometric Height CGVD28 (HTv2.0): 573.127 m

Cartesian coordinates (X Y Z in metres) -1818410.200, -1735301.676, 5842948.367

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1037_123_2020/zip_dir_1/123_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1037_123_2020/zip_dir_1/123_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Monday, July 29, 2013 8:51 AM
To: Scott Rhodes
Subject: CSRS-PPP Results for 124_2020

Importance: High

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Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

~~~~~

Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130729_1048_124_2020/20130729_1048_124_2020_full_output.zip>

~~~~~ 124\_2020  
~~~~~

The estimated coordinates / standard deviations (95%) for the 124_2020 RINEX file are as follow:

Latitude (NAD83(CSRS)): 67 00 49.3328 (dms) / 0.012 (m) Longitude (NAD83(CSRS)): -136 12 35.0474 (dms) / 0.022 (m)
Ellipsoidal Height (NAD83(CSRS)): 736.216 (m) / 0.036 (m)

UTM (North) Northing: 7433420.086m Easting: 447285.009m Zone: 8 Scale Factor: 0.99963401 (point) 0.99951851 (combined)

MTM (North) Northing: 7435651.004m Easting: 252069.188m Zone: 30 Scale Factor: 0.99993402 (point) 0.99981848 (combined)

Orthometric Height CGVD28 (HTv2.0): 732.303 m

Cartesian coordinates (X Y Z in metres) -1803334.306, -1728747.324, 5849688.069

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1048_124_2020/zip_dir_1/124_2020.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1048_124_2020/zip_dir_1/124_2020_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation

Scott Rhodes

From: CSRS-PPP <information@geod.nrcan.gc.ca>
Sent: Monday, July 29, 2013 8:42 AM
To: Scott Rhodes
Subject: CSRS-PPP Results for 125_2030

Importance: High

~~~~~

Latest update to CSRS-PPP performed on January 07, 2013 .  
<[http://webapp.csrnrcan.gc.ca/field/CSRS\\_PPP\\_updates\\_PPP\\_Direct\\_e.html](http://webapp.csrnrcan.gc.ca/field/CSRS_PPP_updates_PPP_Direct_e.html)>

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Results of your CSRS-PPP processing can be downloaded by clicking on the following link:

<http://webapp.csrnrcan.gc.ca/field/data/20130729_1036_125_2030/20130729_1036_125_2030_full_output.zip>

~~~~~ 125\_2030  
~~~~~

The estimated coordinates / standard deviations (95%) for the 125_2030 RINEX file are as follow:

Latitude (NAD83(CSRS)): 65 15 13.2174 (dms) / 0.018 (m) Longitude (NAD83(CSRS)): -138 17 10.7410 (dms) / 0.028 (m)
Ellipsoidal Height (NAD83(CSRS)): 689.892 (m) / 0.040 (m)

UTM (North) Northing: 7239452.323m Easting: 626722.635m Zone: 7 Scale Factor: 0.99979660 (point) 0.99968835
(combined)

MTM (North) Northing: 7238928.492m Easting: 291422.445m Zone: 31 Scale Factor: 0.99990219 (point) 0.99979393
(combined)

Orthometric Height CGVD28 (HTv2.0): 680.982 m

Cartesian coordinates (X Y Z in metres) -1998764.116, -1781690.301, 5770232.502

URL to PDF summary file:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1036_125_2030/zip_dir_1/125_2030.pdf>

URL to file of observations residual and satellites azimuth and elevation:
<http://webapp.csrnrcan.gc.ca/field/data/20130729_1036_125_2030/zip_dir_1/125_2030_res.zip>

Orbits & Clocks Used: NRCAN Rapid

GNSS Data: GPS_&_GLONASS

WGS84 ellipsoid used for (x,y,z) to (lat,long,h) transformation



Appendix B Comparison Zone 7

| Point # | Allnorth Survey XYZ | Location | LIDAR El. | Difference | Δz^2 (m ²) | type | LIDAR tile # |
|---------|---------------------|------------|-----------|------------|--------------------------------|--------------|--|
| 100 | 7097864.775 | 610702.121 | 443.332 | 0.035 | 0.0012 | Unclassified | 00005.LAS / 00214.LAS |
| 101 | 7111676.807 | 620217.957 | 700.704 | 0.063 | 0.0040 | Unclassified | 00315.LAS / 00319.LAS |
| 102 | 7130752.722 | 621548.422 | 771.082 | 0.014 | 0.0002 | Unclassified | 00007.LAS / 00314.LAS |
| 103 | 7148210.471 | 631523.345 | 945.278 | 0.022 | 0.0005 | Unclassified | 00008.LAS / 00313.LAS |
| 104 | 7164310.031 | 631037.357 | 1323.266 | 0.003 | 0.0000 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 105 | 7180252.23 | 624890.244 | 1096.525 | 0.418 | 0.1747 | Classified | Dempster_35 |
| 106 | 7197543.675 | 628507.684 | 950.933 | 0.001 | 0.0000 | Classified | Dempster_70 |
| 108 | 7214968.298 | 632883.684 | 865.489 | 0.102 | 0.0104 | Classified | Dempster_107/Dempster_109 |
| 109 | 7222347.979 | 624198.151 | 854.195 | 0.004 | 0.0000 | Classified | Dempster_146 |
| 111 | 7255638.797 | 626618.597 | 583.364 | 0.112 | 0.0125 | Classified | Dempster_220 |
| 112 | 7270752.393 | 627852.428 | 538.759 | 0.186 | 0.0346 | Classified | Dempster_259 |
| 113 | 7289613.299 | 634282.328 | 492.526 | 0.121 | 0.0146 | Classified | Dempster_296 |
| 125 | 7239452.323 | 626722.635 | 680.982 | 0.016 | 0.0003 | Classified | Dempster_181 / Dempster_182 |

Mini surveys

| | | | | | | | |
|------|-------------|------------|---------|-------|--------|--------------|-----------------------|
| 1000 | 7097846.61 | 610671.715 | 444.337 | 0.031 | 0.0010 | Unclassified | 00005.LAS / 00214.LAS |
| 1001 | 7097846.19 | 610676.946 | 444.498 | 0.029 | 0.0008 | Unclassified | 00005.LAS / 00214.LAS |
| 1002 | 7097845.913 | 610682.541 | 444.708 | 0.034 | 0.0012 | Unclassified | 00005.LAS / 00214.LAS |
| 1003 | 7097845.768 | 610688.03 | 444.913 | 0.027 | 0.0007 | Unclassified | 00005.LAS / 00214.LAS |
| 1004 | 7097845.421 | 610693.68 | 445.067 | 0.032 | 0.0010 | Unclassified | 00005.LAS / 00214.LAS |
| 1005 | 7097844.833 | 610699.388 | 445.212 | 0.099 | 0.0098 | Unclassified | 00005.LAS / 00214.LAS |
| 1006 | 7097844.399 | 610704.848 | 445.323 | 0.137 | 0.0188 | Unclassified | 00005.LAS / 00214.LAS |
| 1007 | 7097843.827 | 610710.237 | 445.432 | 0.084 | 0.0071 | Unclassified | 00005.LAS / 00214.LAS |
| 1008 | 7097843.292 | 610715.823 | 445.525 | 0.125 | 0.0156 | Unclassified | 00005.LAS / 00214.LAS |
| 1009 | 7097842.786 | 610721.425 | 445.628 | 0.038 | 0.0014 | Unclassified | 00005.LAS / 00214.LAS |
| 1010 | 7097842.324 | 610726.815 | 445.716 | 0.082 | 0.0067 | Unclassified | 00005.LAS / 00214.LAS |
| 1011 | 7097841.816 | 610732.486 | 445.799 | 0.026 | 0.0007 | Unclassified | 00005.LAS / 00214.LAS |
| 1012 | 7097831.744 | 610731.391 | 445.772 | 0.036 | 0.0013 | Unclassified | 00005.LAS / 00214.LAS |
| 1013 | 7097832.276 | 610726.127 | 445.706 | 0.051 | 0.0026 | Unclassified | 00005.LAS / 00214.LAS |
| 1014 | 7097832.648 | 610720.602 | 445.624 | 0.015 | 0.0002 | Unclassified | 00005.LAS / 00214.LAS |
| 1015 | 7097833.186 | 610715.078 | 445.515 | 0.073 | 0.0053 | Unclassified | 00005.LAS / 00214.LAS |
| 1016 | 7097833.575 | 610709.492 | 445.345 | 0.044 | 0.0019 | Unclassified | 00005.LAS / 00214.LAS |
| 1017 | 7097833.871 | 610704.172 | 445.217 | 0.166 | 0.0276 | Unclassified | 00005.LAS / 00214.LAS |
| 1018 | 7097834.478 | 610698.71 | 445.036 | 0.175 | 0.0306 | Unclassified | 00005.LAS / 00214.LAS |

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|------|-------------|------------|---------|----------|---------|-------|--------|--------------|-----------------------|
| 1019 | 7097835.337 | 610692.861 | 444.928 | SHOULDER | 444.806 | 0.122 | 0.0149 | Unclassified | 00005.LAS / 00214.LAS |
| 1020 | 7097836.19 | 610687.165 | 444.796 | SHOULDER | 444.712 | 0.084 | 0.0071 | Unclassified | 00005.LAS / 00214.LAS |
| 1021 | 7097836.913 | 610681.549 | 444.64 | SHOULDER | 444.555 | 0.085 | 0.0072 | Unclassified | 00005.LAS / 00214.LAS |
| 1022 | 7097837.464 | 610675.97 | 444.466 | SHOULDER | 444.382 | 0.084 | 0.0071 | Unclassified | 00005.LAS / 00214.LAS |
| 1023 | 7097837.952 | 610670.859 | 444.315 | SHOULDER | 444.259 | 0.056 | 0.0031 | Unclassified | 00005.LAS / 00214.LAS |
| 1024 | 7111648.686 | 620229.117 | 700.943 | SHOULDER | 701.034 | 0.091 | 0.0083 | Unclassified | 00315.LAS / 00319.LAS |
| 1025 | 7111653.543 | 620226.366 | 701 | SHOULDER | 701.14 | 0.14 | 0.0196 | Unclassified | 00315.LAS / 00319.LAS |
| 1026 | 7111658 | 620223.41 | 701.172 | SHOULDER | 701.263 | 0.091 | 0.0083 | Unclassified | 00315.LAS / 00319.LAS |
| 1027 | 7111662.493 | 620220.946 | 701.263 | SHOULDER | 701.357 | 0.094 | 0.0088 | Unclassified | 00315.LAS / 00319.LAS |
| 1028 | 7111666.693 | 620218.339 | 701.376 | SHOULDER | 701.436 | 0.06 | 0.0036 | Unclassified | 00315.LAS / 00319.LAS |
| 1029 | 7111670.707 | 620215.461 | 701.503 | SHOULDER | 701.565 | 0.062 | 0.0038 | Unclassified | 00315.LAS / 00319.LAS |
| 1030 | 7111674.708 | 620213.187 | 701.546 | SHOULDER | 701.624 | 0.078 | 0.0061 | Unclassified | 00315.LAS / 00319.LAS |
| 1031 | 7111678.826 | 620210.387 | 701.64 | SHOULDER | 701.77 | 0.13 | 0.0169 | Unclassified | 00315.LAS / 00319.LAS |
| 1032 | 7111683.531 | 620207.646 | 701.685 | SHOULDER | 701.82 | 0.135 | 0.0182 | Unclassified | 00315.LAS / 00319.LAS |
| 1033 | 7111687.802 | 620204.741 | 701.803 | SHOULDER | 701.929 | 0.126 | 0.0159 | Unclassified | 00315.LAS / 00319.LAS |
| 1034 | 7111692.015 | 620201.864 | 701.919 | SHOULDER | 702.022 | 0.103 | 0.0106 | Unclassified | 00315.LAS / 00319.LAS |
| 1035 | 7111696.667 | 620199.28 | 702.005 | SHOULDER | 702.102 | 0.097 | 0.0094 | Unclassified | 00315.LAS / 00319.LAS |
| 1036 | 7111701.084 | 620196.618 | 702.111 | SHOULDER | 702.192 | 0.081 | 0.0066 | Unclassified | 00315.LAS / 00319.LAS |
| 1037 | 7111705.328 | 620193.957 | 702.215 | SHOULDER | 702.298 | 0.083 | 0.0069 | Unclassified | 00315.LAS / 00319.LAS |
| 1038 | 7111700.225 | 620185.528 | 702.278 | SHOULDER | 701.969 | 0.309 | 0.0955 | Unclassified | 00315.LAS / 00319.LAS |
| 1039 | 7111696.112 | 620188.215 | 702.19 | SHOULDER | 701.927 | 0.263 | 0.0692 | Unclassified | 00315.LAS / 00319.LAS |
| 1040 | 7111691.608 | 620190.861 | 702.061 | SHOULDER | 701.903 | 0.158 | 0.0250 | Unclassified | 00315.LAS / 00319.LAS |
| 1041 | 7111687.223 | 620193.611 | 701.965 | SHOULDER | 701.762 | 0.203 | 0.0412 | Unclassified | 00315.LAS / 00319.LAS |
| 1042 | 7111682.593 | 620196.448 | 701.87 | SHOULDER | 701.86 | 0.01 | 0.0001 | Unclassified | 00315.LAS / 00319.LAS |
| 1043 | 7111678.14 | 620199.259 | 701.769 | SHOULDER | 701.559 | 0.21 | 0.0441 | Unclassified | 00315.LAS / 00319.LAS |
| 1044 | 7111673.73 | 620201.911 | 701.657 | SHOULDER | 701.411 | 0.246 | 0.0605 | Unclassified | 00315.LAS / 00319.LAS |
| 1045 | 7111668.942 | 620204.845 | 701.548 | SHOULDER | 701.539 | 0.009 | 0.0001 | Unclassified | 00315.LAS / 00319.LAS |
| 1046 | 7111664.318 | 620207.916 | 701.456 | SHOULDER | 701.256 | 0.2 | 0.0400 | Unclassified | 00315.LAS / 00319.LAS |
| 1047 | 7111661.215 | 620209.809 | 701.392 | SHOULDER | 701.174 | 0.218 | 0.0475 | Unclassified | 00315.LAS / 00319.LAS |
| 1048 | 7111657.034 | 620212.532 | 701.317 | SHOULDER | 701.11 | 0.207 | 0.0428 | Unclassified | 00315.LAS / 00319.LAS |
| 1049 | 7111652.673 | 620215.296 | 701.211 | SHOULDER | 700.975 | 0.236 | 0.0557 | Unclassified | 00315.LAS / 00319.LAS |
| 1050 | 7111648.021 | 620218.165 | 701.095 | SHOULDER | 700.899 | 0.196 | 0.0384 | Unclassified | 00315.LAS / 00319.LAS |
| 1051 | 7111643.712 | 620220.916 | 700.994 | SHOULDER | 700.779 | 0.215 | 0.0462 | Unclassified | 00315.LAS / 00319.LAS |
| 1052 | 7111639.207 | 620223.851 | 700.902 | SHOULDER | 700.639 | 0.263 | 0.0692 | Unclassified | 00315.LAS / 00319.LAS |
| 1053 | 7130721.453 | 621547.013 | 772.065 | SHOULDER | 772.101 | 0.036 | 0.0013 | Unclassified | 00007.LAS / 00314.LAS |

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|------|-------------|------------|---------|----------|---------|-------|--------|--------------|-----------------------|
| 1054 | 7130726.862 | 621548.431 | 771.974 | SHOULDER | 772.147 | 0.173 | 0.0299 | Unclassified | 00007.LAS / 00314.LAS |
| 1055 | 7130731.81 | 621548.95 | 771.847 | SHOULDER | 771.827 | 0.02 | 0.0004 | Unclassified | 00007.LAS / 00314.LAS |
| 1056 | 7130736.912 | 621550.07 | 771.718 | SHOULDER | 771.719 | 0.001 | 0.0000 | Unclassified | 00007.LAS / 00314.LAS |
| 1057 | 7130741.623 | 621550.802 | 771.586 | SHOULDER | 771.613 | 0.027 | 0.0007 | Unclassified | 00007.LAS / 00314.LAS |
| 1058 | 7130746.946 | 621551.747 | 771.444 | SHOULDER | 771.404 | 0.04 | 0.0016 | Unclassified | 00007.LAS / 00314.LAS |
| 1059 | 7130751.769 | 621552.79 | 771.314 | SHOULDER | 771.34 | 0.026 | 0.0007 | Unclassified | 00007.LAS / 00314.LAS |
| 1060 | 7130756.892 | 621553.798 | 771.132 | SHOULDER | 771.159 | 0.027 | 0.0007 | Unclassified | 00007.LAS / 00314.LAS |
| 1061 | 7130762.002 | 621555.043 | 770.966 | SHOULDER | 770.993 | 0.027 | 0.0007 | Unclassified | 00007.LAS / 00314.LAS |
| 1062 | 7130766.69 | 621556.025 | 770.797 | SHOULDER | 770.824 | 0.027 | 0.0007 | Unclassified | 00007.LAS / 00314.LAS |
| 1063 | 7130771.837 | 621556.973 | 770.611 | SHOULDER | 770.644 | 0.033 | 0.0011 | Unclassified | 00007.LAS / 00314.LAS |
| 1064 | 7130777.144 | 621558.19 | 770.423 | SHOULDER | 770.723 | 0.3 | 0.0900 | Unclassified | 00007.LAS / 00314.LAS |
| 1065 | 7130782.145 | 621559.403 | 770.237 | SHOULDER | 770.209 | 0.028 | 0.0008 | Unclassified | 00007.LAS / 00314.LAS |
| 1066 | 7130787.1 | 621560.482 | 770.042 | SHOULDER | 769.997 | 0.045 | 0.0020 | Unclassified | 00007.LAS / 00314.LAS |
| 1067 | 7130784.935 | 621569.507 | 770.149 | SHOULDER | 770.087 | 0.062 | 0.0038 | Unclassified | 00007.LAS / 00314.LAS |
| 1068 | 7130780.231 | 621568.412 | 770.313 | SHOULDER | 770.359 | 0.046 | 0.0021 | Unclassified | 00007.LAS / 00314.LAS |
| 1069 | 7130775.133 | 621567.456 | 770.497 | SHOULDER | 770.512 | 0.015 | 0.0002 | Unclassified | 00007.LAS / 00314.LAS |
| 1070 | 7130769.927 | 621566.411 | 770.671 | SHOULDER | 770.669 | 0.002 | 0.0000 | Unclassified | 00007.LAS / 00314.LAS |
| 1071 | 7130764.744 | 621565.547 | 770.846 | SHOULDER | 770.946 | 0.1 | 0.0100 | Unclassified | 00007.LAS / 00314.LAS |
| 1072 | 7130759.689 | 621564.605 | 771.001 | SHOULDER | 770.985 | 0.016 | 0.0003 | Unclassified | 00007.LAS / 00314.LAS |
| 1073 | 7130754.568 | 621563.731 | 771.156 | SHOULDER | 771.336 | 0.18 | 0.0324 | Unclassified | 00007.LAS / 00314.LAS |
| 1074 | 7130749.496 | 621562.719 | 771.294 | SHOULDER | 771.321 | 0.027 | 0.0007 | Unclassified | 00007.LAS / 00314.LAS |
| 1075 | 7130744.453 | 621561.638 | 771.455 | SHOULDER | 771.453 | 0.002 | 0.0000 | Unclassified | 00007.LAS / 00314.LAS |
| 1076 | 7130739.209 | 621560.691 | 771.584 | SHOULDER | 771.547 | 0.037 | 0.0014 | Unclassified | 00007.LAS / 00314.LAS |
| 1077 | 7130733.76 | 621559.716 | 771.719 | SHOULDER | 771.65 | 0.069 | 0.0048 | Unclassified | 00007.LAS / 00314.LAS |
| 1078 | 7130729.943 | 621558.745 | 771.83 | SHOULDER | 771.869 | 0.039 | 0.0015 | Unclassified | 00007.LAS / 00314.LAS |
| 1079 | 7130724.894 | 621557.832 | 771.918 | SHOULDER | 771.999 | 0.081 | 0.0066 | Unclassified | 00007.LAS / 00314.LAS |
| 1080 | 7130719.269 | 621556.716 | 772.088 | SHOULDER | 772.23 | 0.142 | 0.0202 | Unclassified | 00007.LAS / 00314.LAS |
| 1081 | 7148186.796 | 631501.288 | 945.714 | SHOULDER | 945.737 | 0.023 | 0.0005 | Unclassified | 00008.LAS / 00313.LAS |
| 1082 | 7148190.433 | 631505.293 | 945.707 | SHOULDER | 945.698 | 0.009 | 0.0001 | Unclassified | 00008.LAS / 00313.LAS |
| 1083 | 7148194.118 | 631509.4 | 945.702 | SHOULDER | 945.479 | 0.223 | 0.0497 | Unclassified | 00008.LAS / 00313.LAS |
| 1084 | 7148197.843 | 631513.437 | 945.723 | SHOULDER | 945.664 | 0.059 | 0.0035 | Unclassified | 00008.LAS / 00313.LAS |
| 1085 | 7148201.522 | 631517.44 | 945.762 | SHOULDER | 945.73 | 0.032 | 0.0010 | Unclassified | 00008.LAS / 00313.LAS |
| 1086 | 7148205.401 | 631521.463 | 945.785 | SHOULDER | 945.738 | 0.047 | 0.0022 | Unclassified | 00008.LAS / 00313.LAS |
| 1087 | 7148208.578 | 631524.971 | 945.812 | SHOULDER | 945.819 | 0.007 | 0.0000 | Unclassified | 00008.LAS / 00313.LAS |
| 1088 | 7148212.128 | 631528.863 | 945.874 | SHOULDER | 945.88 | 0.006 | 0.0000 | Unclassified | 00008.LAS / 00313.LAS |

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|------|-------------|------------|----------|----------|----------|-------|--------|--------------|--|
| 1089 | 7148215.835 | 631532.698 | 945.944 | SHOULDER | 945.881 | 0.063 | 0.0040 | Unclassified | 00008.LAS / 00313.LAS |
| 1090 | 7148219.763 | 631536.676 | 946.008 | SHOULDER | 945.936 | 0.072 | 0.0052 | Unclassified | 00008.LAS / 00313.LAS |
| 1091 | 7148223.659 | 631540.443 | 946.047 | SHOULDER | 946.012 | 0.035 | 0.0012 | Unclassified | 00008.LAS / 00313.LAS |
| 1092 | 7148227.444 | 631544.08 | 946.098 | SHOULDER | 946.036 | 0.062 | 0.0038 | Unclassified | 00008.LAS / 00313.LAS |
| 1093 | 7148231.195 | 631547.584 | 946.14 | SHOULDER | 946.138 | 0.002 | 0.0000 | Unclassified | 00008.LAS / 00313.LAS |
| 1094 | 7148223.201 | 631556.404 | 946.55 | SHOULDER | 946.531 | 0.019 | 0.0004 | Unclassified | 00008.LAS / 00313.LAS |
| 1095 | 7148219.371 | 631552.869 | 946.492 | SHOULDER | 946.503 | 0.011 | 0.0001 | Unclassified | 00008.LAS / 00313.LAS |
| 1096 | 7148215.5 | 631549.113 | 946.424 | SHOULDER | 946.391 | 0.033 | 0.0011 | Unclassified | 00008.LAS / 00313.LAS |
| 1097 | 7148211.571 | 631545.135 | 946.36 | SHOULDER | 946.365 | 0.005 | 0.0000 | Unclassified | 00008.LAS / 00313.LAS |
| 1098 | 7148207.789 | 631540.937 | 946.321 | SHOULDER | 946.354 | 0.033 | 0.0011 | Unclassified | 00008.LAS / 00313.LAS |
| 1099 | 7148203.938 | 631536.698 | 946.236 | SHOULDER | 946.293 | 0.057 | 0.0032 | Unclassified | 00008.LAS / 00313.LAS |
| 1100 | 7148200.185 | 631532.559 | 946.166 | SHOULDER | 946.177 | 0.011 | 0.0001 | Unclassified | 00008.LAS / 00313.LAS |
| 1101 | 7148196.867 | 631528.915 | 946.115 | SHOULDER | 946.149 | 0.034 | 0.0012 | Unclassified | 00008.LAS / 00313.LAS |
| 1102 | 7148193.257 | 631525.002 | 946.057 | SHOULDER | 946.011 | 0.046 | 0.0021 | Unclassified | 00008.LAS / 00313.LAS |
| 1103 | 7148189.503 | 631520.943 | 945.976 | SHOULDER | 945.996 | 0.02 | 0.0004 | Unclassified | 00008.LAS / 00313.LAS |
| 1104 | 7148185.99 | 631517.003 | 945.943 | SHOULDER | 945.903 | 0.04 | 0.0016 | Unclassified | 00008.LAS / 00313.LAS |
| 1105 | 7148182.404 | 631512.962 | 945.902 | SHOULDER | 945.91 | 0.008 | 0.0001 | Unclassified | 00008.LAS / 00313.LAS |
| 1106 | 7148178.76 | 631508.745 | 945.87 | SHOULDER | 945.779 | 0.091 | 0.0083 | Unclassified | 00008.LAS / 00313.LAS |
| 1107 | 7164308.797 | 631071.265 | 1325.704 | SHOULDER | 1325.698 | 0.006 | 0.0000 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1108 | 7164310.542 | 631066.099 | 1325.532 | SHOULDER | 1325.539 | 0.007 | 0.0000 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1109 | 7164312.383 | 631061.116 | 1325.37 | SHOULDER | 1325.41 | 0.04 | 0.0016 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1110 | 7164314.151 | 631056.088 | 1325.197 | SHOULDER | 1325.249 | 0.052 | 0.0027 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1111 | 7164315.878 | 631051.19 | 1325.018 | SHOULDER | 1325.058 | 0.04 | 0.0016 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1112 | 7164317.663 | 631046.412 | 1324.798 | SHOULDER | 1324.825 | 0.027 | 0.0007 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1113 | 7164319.632 | 631041.63 | 1324.615 | SHOULDER | 1324.612 | 0.003 | 0.0000 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1114 | 7164321.584 | 631037.279 | 1324.39 | SHOULDER | 1324.375 | 0.015 | 0.0002 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1115 | 7164323.855 | 631032.544 | 1324.174 | SHOULDER | 1324.219 | 0.045 | 0.0020 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1116 | 7164325.806 | 631027.951 | 1323.945 | SHOULDER | 1324.003 | 0.058 | 0.0034 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1117 | 7164328.171 | 631023.327 | 1323.713 | SHOULDER | 1323.757 | 0.044 | 0.0019 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1118 | 7164330.54 | 631018.73 | 1323.447 | SHOULDER | 1323.496 | 0.049 | 0.0024 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1119 | 7164333.164 | 631014.054 | 1323.208 | SHOULDER | 1323.266 | 0.058 | 0.0034 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1120 | 7164342.058 | 631019.498 | 1322.598 | SHOULDER | 1322.709 | 0.111 | 0.0123 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1121 | 7164339.493 | 631023.827 | 1322.943 | SHOULDER | 1322.978 | 0.035 | 0.0012 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1122 | 7164336.777 | 631028.394 | 1323.234 | SHOULDER | 1323.237 | 0.003 | 0.0000 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |
| 1123 | 7164334.238 | 631033.054 | 1323.531 | SHOULDER | 1323.471 | 0.06 | 0.0036 | Unclassified | 00009.LAS/00010.LAS / 00321.LAS / 00322.LAS/ 00323.LAS |

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|------|-------------|------------|----------|----------|----------|-------|--------|--------------|---|
| 1124 | 7164332.168 | 631037.321 | 1323.755 | SHOULDER | 1323.696 | 0.059 | 0.0035 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1125 | 7164329.865 | 631041.918 | 1324.025 | SHOULDER | 1324.006 | 0.019 | 0.0004 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1126 | 7164327.8 | 631046.5 | 1324.28 | SHOULDER | 1324.306 | 0.026 | 0.0007 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1127 | 7164326.111 | 631050.004 | 1324.472 | SHOULDER | 1324.467 | 0.005 | 0.0000 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1128 | 7164324.078 | 631054.944 | 1324.715 | SHOULDER | 1324.651 | 0.064 | 0.0041 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1129 | 7164322.296 | 631059.276 | 1324.902 | SHOULDER | 1324.847 | 0.055 | 0.0030 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1130 | 7164320.517 | 631064.039 | 1325.093 | SHOULDER | 1325.061 | 0.032 | 0.0010 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1131 | 7164318.59 | 631069.048 | 1325.306 | SHOULDER | 1325.275 | 0.031 | 0.0010 | Unclassified | 00009.LAS/00010.LAS/00321.LAS/00322.LAS/00323.LAS |
| 1132 | 7180225.297 | 624876.007 | 1096.927 | SHOULDER | 1096.952 | 0.025 | 0.0006 | Classified | Demposter_35 |
| 1133 | 7180230.072 | 624878.006 | 1096.91 | SHOULDER | 1096.967 | 0.057 | 0.0032 | Classified | Demposter_35 |
| 1134 | 7180234.807 | 624880.108 | 1096.88 | SHOULDER | 1096.918 | 0.038 | 0.0014 | Classified | Demposter_35 |
| 1135 | 7180239.553 | 624882.008 | 1096.864 | SHOULDER | 1096.927 | 0.063 | 0.0040 | Classified | Demposter_35 |
| 1136 | 7180243.955 | 624883.826 | 1096.817 | SHOULDER | 1096.889 | 0.072 | 0.0052 | Classified | Demposter_35 |
| 1137 | 7180248.527 | 624885.777 | 1096.797 | SHOULDER | 1096.842 | 0.045 | 0.0020 | Classified | Demposter_35 |
| 1138 | 7180253.284 | 624887.648 | 1096.778 | SHOULDER | 1096.819 | 0.041 | 0.0017 | Classified | Demposter_35 |
| 1139 | 7180257.926 | 624889.63 | 1096.773 | SHOULDER | 1096.83 | 0.057 | 0.0032 | Classified | Demposter_35 |
| 1140 | 7180262.706 | 624891.536 | 1096.764 | SHOULDER | 1096.825 | 0.061 | 0.0037 | Classified | Demposter_35 |
| 1141 | 7180267.083 | 624893.421 | 1096.746 | SHOULDER | 1096.786 | 0.04 | 0.0016 | Classified | Demposter_35 |
| 1142 | 7180271.705 | 624895.365 | 1096.705 | SHOULDER | 1096.763 | 0.058 | 0.0034 | Classified | Demposter_35 |
| 1143 | 7180276.06 | 624897.204 | 1096.67 | SHOULDER | 1096.752 | 0.082 | 0.0067 | Classified | Demposter_35 |
| 1144 | 7180280.863 | 624899.26 | 1096.637 | SHOULDER | 1096.678 | 0.041 | 0.0017 | Classified | Demposter_35 |
| 1145 | 7180284.426 | 624890.869 | 1096.682 | SHOULDER | 1096.662 | 0.02 | 0.0004 | Classified | Demposter_35 |
| 1146 | 7180279.303 | 624888.841 | 1096.746 | SHOULDER | 1096.722 | 0.024 | 0.0006 | Classified | Demposter_35 |
| 1147 | 7180274.766 | 624887.073 | 1096.789 | SHOULDER | 1096.825 | 0.036 | 0.0013 | Classified | Demposter_35 |
| 1148 | 7180270.301 | 624885.215 | 1096.816 | SHOULDER | 1096.801 | 0.015 | 0.0002 | Classified | Demposter_35 |
| 1149 | 7180265.826 | 624883.44 | 1096.835 | SHOULDER | 1096.836 | 0.001 | 0.0000 | Classified | Demposter_35 |
| 1150 | 7180261.315 | 624881.583 | 1096.854 | SHOULDER | 1096.853 | 0.001 | 0.0000 | Classified | Demposter_35 |
| 1151 | 7180256.578 | 624879.756 | 1096.865 | SHOULDER | 1096.887 | 0.022 | 0.0005 | Classified | Demposter_35 |
| 1152 | 7180251.866 | 624877.964 | 1096.887 | SHOULDER | 1096.869 | 0.018 | 0.0003 | Classified | Demposter_35 |
| 1153 | 7180246.799 | 624875.974 | 1096.906 | SHOULDER | 1096.926 | 0.02 | 0.0004 | Classified | Demposter_35 |
| 1154 | 7180242.955 | 624874.34 | 1096.904 | SHOULDER | 1096.912 | 0.008 | 0.0001 | Classified | Demposter_35 |
| 1155 | 7180237.856 | 624872.519 | 1096.876 | SHOULDER | 1096.807 | 0.069 | 0.0048 | Classified | Demposter_35 |
| 1156 | 7180233.027 | 624870.366 | 1096.943 | SHOULDER | 1096.949 | 0.006 | 0.0000 | Classified | Demposter_35 |
| 1157 | 7180228.074 | 624868.249 | 1096.982 | SHOULDER | 1096.983 | 0.001 | 0.0000 | Classified | Demposter_35 |
| 1158 | 7197532.046 | 628444.599 | 952.795 | SHOULDER | 952.904 | 0.109 | 0.0119 | Classified | Demposter_70 |

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|------|-------------|------------|---------|----------|---------|-------|--------|------------|---------------|
| 1159 | 7197537.456 | 628445.475 | 952.729 | SHOULDER | 952.788 | 0.059 | 0.0035 | Classified | Demposter_70 |
| 1160 | 7197542.376 | 628446.345 | 952.666 | SHOULDER | 952.706 | 0.04 | 0.0016 | Classified | Demposter_70 |
| 1161 | 7197547.408 | 628447.275 | 952.625 | SHOULDER | 952.737 | 0.112 | 0.0125 | Classified | Demposter_70 |
| 1162 | 7197552.836 | 628448.487 | 952.568 | SHOULDER | 952.665 | 0.097 | 0.0094 | Classified | Demposter_70 |
| 1163 | 7197558.083 | 628449.271 | 952.519 | SHOULDER | 952.619 | 0.1 | 0.0100 | Classified | Demposter_70 |
| 1164 | 7197563.804 | 628450.185 | 952.408 | SHOULDER | 952.52 | 0.112 | 0.0125 | Classified | Demposter_70 |
| 1165 | 7197568.617 | 628450.632 | 952.366 | SHOULDER | 952.432 | 0.066 | 0.0044 | Classified | Demposter_70 |
| 1166 | 7197573.953 | 628451.487 | 952.275 | SHOULDER | 952.378 | 0.103 | 0.0106 | Classified | Demposter_70 |
| 1167 | 7197578.881 | 628452.406 | 952.195 | SHOULDER | 952.28 | 0.085 | 0.0072 | Classified | Demposter_70 |
| 1168 | 7197584.041 | 628453.39 | 952.1 | SHOULDER | 952.23 | 0.13 | 0.0169 | Classified | Demposter_70 |
| 1169 | 7197589.209 | 628454.262 | 952.051 | SHOULDER | 952.182 | 0.131 | 0.0172 | Classified | Demposter_70 |
| 1170 | 7197594.605 | 628455.212 | 952 | SHOULDER | 952.123 | 0.123 | 0.0151 | Classified | Demposter_70 |
| 1171 | 7197596.307 | 628445.192 | 952.141 | SHOULDER | 952.198 | 0.057 | 0.0032 | Classified | Demposter_70 |
| 1172 | 7197591.111 | 628444.313 | 952.214 | SHOULDER | 952.224 | 0.01 | 0.0001 | Classified | Demposter_70 |
| 1173 | 7197585.668 | 628443.315 | 952.28 | SHOULDER | 952.336 | 0.056 | 0.0031 | Classified | Demposter_70 |
| 1174 | 7197580.394 | 628442.58 | 952.348 | SHOULDER | 952.428 | 0.08 | 0.0064 | Classified | Demposter_70 |
| 1175 | 7197575.422 | 628441.658 | 952.419 | SHOULDER | 952.498 | 0.079 | 0.0062 | Classified | Demposter_70 |
| 1176 | 7197570.059 | 628440.571 | 952.434 | SHOULDER | 952.517 | 0.083 | 0.0069 | Classified | Demposter_70 |
| 1177 | 7197565.394 | 628439.791 | 952.494 | SHOULDER | 952.552 | 0.058 | 0.0034 | Classified | Demposter_70 |
| 1178 | 7197560.109 | 628438.771 | 952.541 | SHOULDER | 952.511 | 0.03 | 0.0009 | Classified | Demposter_70 |
| 1179 | 7197554.69 | 628437.989 | 952.55 | SHOULDER | 952.614 | 0.064 | 0.0041 | Classified | Demposter_70 |
| 1180 | 7197549.287 | 628437.306 | 952.626 | SHOULDER | 952.704 | 0.078 | 0.0061 | Classified | Demposter_70 |
| 1181 | 7197544.231 | 628436.638 | 952.695 | SHOULDER | 952.727 | 0.032 | 0.0010 | Classified | Demposter_70 |
| 1182 | 7197539.074 | 628435.74 | 952.727 | SHOULDER | 952.78 | 0.053 | 0.0028 | Classified | Demposter_70 |
| 1183 | 7197533.65 | 628434.829 | 952.788 | SHOULDER | 952.799 | 0.011 | 0.0001 | Classified | Demposter_70 |
| 1184 | 7222380.722 | 624201.268 | 853.852 | SHOULDER | 853.823 | 0.029 | 0.0008 | Classified | Demposter_146 |
| 1185 | 7222375.891 | 624200.004 | 853.93 | SHOULDER | 853.98 | 0.05 | 0.0025 | Classified | Demposter_146 |
| 1186 | 7222370.852 | 624200.633 | 853.788 | SHOULDER | 853.831 | 0.043 | 0.0018 | Classified | Demposter_146 |
| 1187 | 7222365.664 | 624202.031 | 853.867 | SHOULDER | 853.859 | 0.008 | 0.0001 | Classified | Demposter_146 |
| 1188 | 7222360.557 | 624202.387 | 853.89 | SHOULDER | 853.905 | 0.015 | 0.0002 | Classified | Demposter_146 |
| 1189 | 7222355.159 | 624201.803 | 853.986 | SHOULDER | 854.009 | 0.023 | 0.0005 | Classified | Demposter_146 |
| 1190 | 7222349.842 | 624200.732 | 854.119 | SHOULDER | 854.126 | 0.007 | 0.0000 | Classified | Demposter_146 |
| 1191 | 7222344.729 | 624198.716 | 854.153 | SHOULDER | 854.18 | 0.027 | 0.0007 | Classified | Demposter_146 |
| 1192 | 7222339.778 | 624196.393 | 854.124 | SHOULDER | 854.162 | 0.038 | 0.0014 | Classified | Demposter_146 |
| 1193 | 7222334.714 | 624194.018 | 854.146 | SHOULDER | 854.135 | 0.011 | 0.0001 | Classified | Demposter_146 |

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|------|-------------|------------|---------|----------|---------|-------|--------|------------|----------------------------|
| 1194 | 7222330.345 | 624190.483 | 854.182 | SHOULDER | 854.269 | 0.087 | 0.0076 | Classified | Demposter_146 |
| 1195 | 7222325.87 | 624186.722 | 854.165 | SHOULDER | 854.232 | 0.067 | 0.0045 | Classified | Demposter_146 |
| 1196 | 7222321.312 | 624182.752 | 854.345 | SHOULDER | 854.443 | 0.098 | 0.0096 | Classified | Demposter_146 |
| 1197 | 7222317.71 | 624178.484 | 854.672 | SHOULDER | 854.726 | 0.054 | 0.0029 | Classified | Demposter_146 |
| 1198 | 7222311.868 | 624176.308 | 854.814 | SHOULDER | 854.866 | 0.052 | 0.0027 | Classified | Demposter_146 |
| 1199 | 7222307.028 | 624174.844 | 854.911 | SHOULDER | 854.959 | 0.048 | 0.0023 | Classified | Demposter_146 |
| 1200 | 7222310.611 | 624165.966 | 854.789 | SHOULDER | 854.874 | 0.085 | 0.0072 | Classified | Demposter_146 |
| 1201 | 7222316.288 | 624167.534 | 854.709 | SHOULDER | 854.751 | 0.042 | 0.0018 | Classified | Demposter_146 |
| 1202 | 7222321.451 | 624169.603 | 854.667 | SHOULDER | 854.711 | 0.044 | 0.0019 | Classified | Demposter_146 |
| 1203 | 7222326.267 | 624171.58 | 854.595 | SHOULDER | 854.63 | 0.035 | 0.0012 | Classified | Demposter_146 |
| 1204 | 7222331.063 | 624173.402 | 854.549 | SHOULDER | 854.577 | 0.028 | 0.0008 | Classified | Demposter_146 |
| 1205 | 7222335.916 | 624175.255 | 854.534 | SHOULDER | 854.557 | 0.023 | 0.0005 | Classified | Demposter_146 |
| 1206 | 7222340.762 | 624177.022 | 854.486 | SHOULDER | 854.486 | 0 | 0.0000 | Classified | Demposter_146 |
| 1207 | 7222345.692 | 624178.812 | 854.428 | SHOULDER | 854.424 | 0.004 | 0.0000 | Classified | Demposter_146 |
| 1208 | 7222350.668 | 624180.557 | 854.404 | SHOULDER | 854.374 | 0.03 | 0.0009 | Classified | Demposter_146 |
| 1209 | 7222355.725 | 624182.178 | 854.365 | SHOULDER | 854.396 | 0.031 | 0.0010 | Classified | Demposter_146 |
| 1210 | 7222360.634 | 624183.974 | 854.318 | SHOULDER | 854.32 | 0.002 | 0.0000 | Classified | Demposter_146 |
| 1211 | 7222365.998 | 624185.762 | 854.239 | SHOULDER | 854.311 | 0.072 | 0.0052 | Classified | Demposter_146 |
| 1212 | 7222371.354 | 624187.775 | 854.151 | SHOULDER | 854.174 | 0.023 | 0.0005 | Classified | Demposter_146 |
| 1213 | 7222376.299 | 624189.701 | 854.065 | SHOULDER | 854.077 | 0.012 | 0.0001 | Classified | Demposter_146 |
| 1214 | 7222381.115 | 624191.737 | 853.961 | SHOULDER | 853.966 | 0.005 | 0.0000 | Classified | Demposter_146 |
| 1215 | 7222383.911 | 624192.846 | 853.898 | SHOULDER | 853.9 | 0.002 | 0.0000 | Classified | Demposter_146 |
| 1216 | 7214941.177 | 632865.888 | 865.858 | SHOULDER | 865.952 | 0.094 | 0.0088 | Classified | Demposter_107/Dempster_109 |
| 1217 | 7214946.005 | 632868.265 | 865.812 | SHOULDER | 865.901 | 0.089 | 0.0079 | Classified | Demposter_107/Dempster_109 |
| 1218 | 7214950.876 | 632870.674 | 865.773 | SHOULDER | 865.865 | 0.092 | 0.0085 | Classified | Demposter_107/Dempster_109 |
| 1219 | 7214955.498 | 632873.025 | 865.747 | SHOULDER | 865.867 | 0.12 | 0.0144 | Classified | Demposter_107/Dempster_109 |
| 1220 | 7214960.298 | 632875.67 | 865.687 | SHOULDER | 865.824 | 0.137 | 0.0188 | Classified | Demposter_107/Dempster_109 |
| 1221 | 7214964.811 | 632878.93 | 865.68 | SHOULDER | 865.757 | 0.077 | 0.0059 | Classified | Demposter_107/Dempster_109 |
| 1222 | 7214969.503 | 632881.341 | 865.714 | SHOULDER | 865.828 | 0.114 | 0.0130 | Classified | Demposter_107/Dempster_109 |
| 1223 | 7214974.339 | 632883.194 | 865.758 | SHOULDER | 865.876 | 0.118 | 0.0139 | Classified | Demposter_107/Dempster_109 |
| 1224 | 7214979.082 | 632885.329 | 865.786 | SHOULDER | 865.915 | 0.129 | 0.0166 | Classified | Demposter_107/Dempster_109 |
| 1225 | 7214984.351 | 632887.473 | 865.829 | SHOULDER | 865.932 | 0.103 | 0.0106 | Classified | Demposter_107/Dempster_109 |
| 1226 | 7214989.024 | 632889.521 | 865.802 | SHOULDER | 865.902 | 0.1 | 0.0100 | Classified | Demposter_107/Dempster_109 |
| 1227 | 7214993.548 | 632891.527 | 865.814 | SHOULDER | 865.885 | 0.071 | 0.0050 | Classified | Demposter_107/Dempster_109 |
| 1228 | 7214998.857 | 632894.07 | 865.791 | SHOULDER | 865.906 | 0.115 | 0.0132 | Classified | Demposter_107/Dempster_109 |

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|------|-------------|------------|---------|----------|---------|-------|--------|------------|----------------------------|
| 1229 | 7215002.539 | 632886.588 | 865.758 | SHOULDER | 865.828 | 0.07 | 0.0049 | Classified | Demposter_107/Dempster_109 |
| 1230 | 7214997.709 | 632884.032 | 865.76 | SHOULDER | 865.878 | 0.118 | 0.0139 | Classified | Demposter_107/Dempster_109 |
| 1231 | 7214992.917 | 632881.574 | 865.758 | SHOULDER | 865.874 | 0.116 | 0.0135 | Classified | Demposter_107/Dempster_109 |
| 1232 | 7214988.329 | 632879.315 | 865.765 | SHOULDER | 865.882 | 0.117 | 0.0137 | Classified | Demposter_107/Dempster_109 |
| 1233 | 7214983.14 | 632876.815 | 865.78 | SHOULDER | 865.914 | 0.134 | 0.0180 | Classified | Demposter_107/Dempster_109 |
| 1234 | 7214978.509 | 632874.24 | 865.738 | SHOULDER | 865.779 | 0.041 | 0.0017 | Classified | Demposter_107/Dempster_109 |
| 1235 | 7214973.258 | 632871.776 | 865.773 | SHOULDER | 865.854 | 0.081 | 0.0066 | Classified | Demposter_107/Dempster_109 |
| 1236 | 7214969.311 | 632869.83 | 865.789 | SHOULDER | 865.867 | 0.078 | 0.0061 | Classified | Demposter_107/Dempster_109 |
| 1237 | 7214964.435 | 632867.464 | 865.784 | SHOULDER | 865.868 | 0.084 | 0.0071 | Classified | Demposter_107/Dempster_109 |
| 1238 | 7214959.647 | 632865.209 | 865.827 | SHOULDER | 865.935 | 0.108 | 0.0117 | Classified | Demposter_107/Dempster_109 |
| 1239 | 7214954.777 | 632862.902 | 865.864 | SHOULDER | 865.933 | 0.069 | 0.0048 | Classified | Demposter_107/Dempster_109 |
| 1240 | 7214949.836 | 632860.486 | 865.873 | SHOULDER | 865.988 | 0.115 | 0.0132 | Classified | Demposter_107/Dempster_109 |
| 1241 | 7214945.12 | 632858.156 | 865.927 | SHOULDER | 865.959 | 0.032 | 0.0010 | Classified | Demposter_107/Dempster_109 |
| 1268 | 7255609.953 | 626628.218 | 583.555 | SHOULDER | 583.687 | 0.132 | 0.0174 | Classified | Demposter_220 |
| 1269 | 7255614.88 | 626626.473 | 583.535 | SHOULDER | 583.648 | 0.113 | 0.0128 | Classified | Demposter_220 |
| 1270 | 7255619.738 | 626624.68 | 583.466 | SHOULDER | 583.576 | 0.11 | 0.0121 | Classified | Demposter_220 |
| 1271 | 7255624.667 | 626622.96 | 583.39 | SHOULDER | 583.522 | 0.132 | 0.0174 | Classified | Demposter_220 |
| 1272 | 7255629.271 | 626621.5 | 583.381 | SHOULDER | 583.481 | 0.1 | 0.0100 | Classified | Demposter_220 |
| 1273 | 7255633.752 | 626619.751 | 583.42 | SHOULDER | 583.54 | 0.12 | 0.0144 | Classified | Demposter_220 |
| 1274 | 7255638.565 | 626617.998 | 583.448 | SHOULDER | 583.534 | 0.086 | 0.0074 | Classified | Demposter_220 |
| 1275 | 7255643.28 | 626616.132 | 583.446 | SHOULDER | 583.57 | 0.124 | 0.0154 | Classified | Demposter_220 |
| 1276 | 7255647.79 | 626614.569 | 583.432 | SHOULDER | 583.562 | 0.13 | 0.0169 | Classified | Demposter_220 |
| 1277 | 7255652.127 | 626612.827 | 583.443 | SHOULDER | 583.553 | 0.11 | 0.0121 | Classified | Demposter_220 |
| 1278 | 7255656.926 | 626611.264 | 583.422 | SHOULDER | 583.549 | 0.127 | 0.0161 | Classified | Demposter_220 |
| 1279 | 7255661.454 | 626609.199 | 583.403 | SHOULDER | 583.53 | 0.127 | 0.0161 | Classified | Demposter_220 |
| 1280 | 7255666.579 | 626607.614 | 583.41 | SHOULDER | 583.502 | 0.092 | 0.0085 | Classified | Demposter_220 |
| 1281 | 7255662.515 | 626597.429 | 583.573 | SHOULDER | 583.694 | 0.121 | 0.0146 | Classified | Demposter_220 |
| 1282 | 7255657.701 | 626599.22 | 583.579 | SHOULDER | 583.691 | 0.112 | 0.0125 | Classified | Demposter_220 |
| 1283 | 7255653.053 | 626600.805 | 583.576 | SHOULDER | 583.708 | 0.132 | 0.0174 | Classified | Demposter_220 |
| 1284 | 7255648.565 | 626602.493 | 583.599 | SHOULDER | 583.724 | 0.125 | 0.0156 | Classified | Demposter_220 |
| 1285 | 7255643.542 | 626604.171 | 583.567 | SHOULDER | 583.651 | 0.084 | 0.0071 | Classified | Demposter_220 |
| 1286 | 7255639.039 | 626605.79 | 583.563 | SHOULDER | 583.678 | 0.115 | 0.0132 | Classified | Demposter_220 |
| 1287 | 7255634.499 | 626607.41 | 583.552 | SHOULDER | 583.652 | 0.1 | 0.0100 | Classified | Demposter_220 |
| 1288 | 7255629.874 | 626609.34 | 583.597 | SHOULDER | 583.692 | 0.095 | 0.0090 | Classified | Demposter_220 |
| 1289 | 7255625.408 | 626611.08 | 583.595 | SHOULDER | 583.732 | 0.137 | 0.0188 | Classified | Demposter_220 |

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|------|-------------|------------|---------|----------|---------|-------|--------|------------|---------------|
| 1290 | 7255620.656 | 626612.83 | 583.652 | SHOULDER | 583.752 | 0.1 | 0.0100 | Classified | Demposter_220 |
| 1291 | 7255615.481 | 626614.546 | 583.657 | SHOULDER | 583.725 | 0.068 | 0.0046 | Classified | Demposter_220 |
| 1292 | 7255610.908 | 626616.257 | 583.697 | SHOULDER | 583.766 | 0.069 | 0.0048 | Classified | Demposter_220 |
| 1293 | 7255606.017 | 626617.792 | 583.682 | SHOULDER | 583.761 | 0.079 | 0.0062 | Classified | Demposter_220 |
| 1294 | 7270728.545 | 627834.096 | 539.079 | SHOULDER | 539.183 | 0.104 | 0.0108 | Classified | Demposter_259 |
| 1295 | 7270732.741 | 627836.915 | 539.09 | SHOULDER | 539.2 | 0.11 | 0.0121 | Classified | Demposter_259 |
| 1296 | 7270736.695 | 627840.046 | 539.081 | SHOULDER | 539.152 | 0.071 | 0.0050 | Classified | Demposter_259 |
| 1297 | 7270741.06 | 627842.598 | 539.126 | SHOULDER | 539.24 | 0.114 | 0.0130 | Classified | Demposter_259 |
| 1298 | 7270745.199 | 627845.47 | 539.146 | SHOULDER | 539.263 | 0.117 | 0.0137 | Classified | Demposter_259 |
| 1299 | 7270749.156 | 627848.285 | 539.163 | SHOULDER | 539.267 | 0.104 | 0.0108 | Classified | Demposter_259 |
| 1300 | 7270753.265 | 627851.105 | 539.178 | SHOULDER | 539.295 | 0.117 | 0.0137 | Classified | Demposter_259 |
| 1301 | 7270756.94 | 627853.651 | 539.212 | SHOULDER | 539.293 | 0.081 | 0.0066 | Classified | Demposter_259 |
| 1302 | 7270760.717 | 627855.828 | 539.205 | SHOULDER | 539.33 | 0.125 | 0.0156 | Classified | Demposter_259 |
| 1303 | 7270764.485 | 627858.186 | 539.243 | SHOULDER | 539.359 | 0.116 | 0.0135 | Classified | Demposter_259 |
| 1304 | 7270768.473 | 627860.844 | 539.251 | SHOULDER | 539.325 | 0.074 | 0.0055 | Classified | Demposter_259 |
| 1305 | 7270772.501 | 627863.249 | 539.282 | SHOULDER | 539.399 | 0.117 | 0.0137 | Classified | Demposter_259 |
| 1306 | 7270776.333 | 627865.929 | 539.31 | SHOULDER | 539.398 | 0.088 | 0.0077 | Classified | Demposter_259 |
| 1307 | 7270782.134 | 627857.41 | 539.193 | SHOULDER | 539.241 | 0.048 | 0.0023 | Classified | Demposter_259 |
| 1308 | 7270778.199 | 627854.964 | 539.152 | SHOULDER | 539.219 | 0.067 | 0.0045 | Classified | Demposter_259 |
| 1309 | 7270774.026 | 627852.439 | 539.139 | SHOULDER | 539.199 | 0.06 | 0.0036 | Classified | Demposter_259 |
| 1310 | 7270769.99 | 627849.916 | 539.116 | SHOULDER | 539.181 | 0.065 | 0.0042 | Classified | Demposter_259 |
| 1311 | 7270766.359 | 627847.423 | 539.083 | SHOULDER | 539.173 | 0.09 | 0.0081 | Classified | Demposter_259 |
| 1312 | 7270762.624 | 627844.809 | 539.101 | SHOULDER | 539.142 | 0.041 | 0.0017 | Classified | Demposter_259 |
| 1313 | 7270758.549 | 627841.982 | 539.103 | SHOULDER | 539.136 | 0.033 | 0.0011 | Classified | Demposter_259 |
| 1314 | 7270755.061 | 627839.476 | 539.126 | SHOULDER | 539.158 | 0.032 | 0.0010 | Classified | Demposter_259 |
| 1315 | 7270751.035 | 627836.679 | 539.103 | SHOULDER | 539.15 | 0.047 | 0.0022 | Classified | Demposter_259 |
| 1316 | 7270747.019 | 627834.119 | 539.101 | SHOULDER | 539.166 | 0.065 | 0.0042 | Classified | Demposter_259 |
| 1317 | 7270742.064 | 627830.951 | 539.131 | SHOULDER | 539.168 | 0.037 | 0.0014 | Classified | Demposter_259 |
| 1318 | 7270738.131 | 627828.292 | 539.126 | SHOULDER | 539.156 | 0.03 | 0.0009 | Classified | Demposter_259 |
| 1319 | 7270734.089 | 627825.698 | 539.182 | SHOULDER | 539.223 | 0.041 | 0.0017 | Classified | Demposter_259 |
| 1320 | 7289598.756 | 634255.607 | 493.103 | SHOULDER | 493.193 | 0.09 | 0.0081 | Classified | Demposter_296 |
| 1321 | 7289601.707 | 634259.99 | 493.079 | SHOULDER | 493.2 | 0.121 | 0.0146 | Classified | Demposter_296 |
| 1322 | 7289604.61 | 634264.129 | 493.058 | SHOULDER | 493.111 | 0.053 | 0.0028 | Classified | Demposter_296 |
| 1323 | 7289607.367 | 634268.621 | 493.003 | SHOULDER | 493.146 | 0.143 | 0.0204 | Classified | Demposter_296 |
| 1324 | 7289609.865 | 634272.686 | 492.945 | SHOULDER | 493.071 | 0.126 | 0.0159 | Classified | Demposter_296 |

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|------|-------------|------------|---------|----------|---------|-------|--------|------------|----------------------------|
| 1325 | 7289612.39 | 634277.015 | 492.911 | SHOULDER | 493.021 | 0.11 | 0.0121 | Classified | Demposter_296 |
| 1326 | 7289615.107 | 634281.034 | 492.934 | SHOULDER | 493.014 | 0.08 | 0.0064 | Classified | Demposter_296 |
| 1327 | 7289618.148 | 634285.185 | 492.885 | SHOULDER | 492.989 | 0.104 | 0.0108 | Classified | Demposter_296 |
| 1328 | 7289621.507 | 634289.434 | 492.859 | SHOULDER | 492.981 | 0.122 | 0.0149 | Classified | Demposter_296 |
| 1329 | 7289624.572 | 634293.558 | 492.85 | SHOULDER | 492.948 | 0.098 | 0.0096 | Classified | Demposter_296 |
| 1330 | 7289627.599 | 634297.774 | 492.788 | SHOULDER | 492.85 | 0.062 | 0.0038 | Classified | Demposter_296 |
| 1331 | 7289630.326 | 634302.188 | 492.708 | SHOULDER | 492.825 | 0.117 | 0.0137 | Classified | Demposter_296 |
| 1332 | 7289633.085 | 634306.585 | 492.615 | SHOULDER | 492.735 | 0.12 | 0.0144 | Classified | Demposter_296 |
| 1333 | 7289641.601 | 634300.519 | 492.705 | SHOULDER | 492.783 | 0.078 | 0.0061 | Classified | Demposter_296 |
| 1334 | 7289638.747 | 634296.196 | 492.719 | SHOULDER | 492.772 | 0.053 | 0.0028 | Classified | Demposter_296 |
| 1335 | 7289636.285 | 634292.172 | 492.712 | SHOULDER | 492.817 | 0.105 | 0.0110 | Classified | Demposter_296 |
| 1336 | 7289633.435 | 634287.715 | 492.725 | SHOULDER | 492.832 | 0.107 | 0.0114 | Classified | Demposter_296 |
| 1337 | 7289630.539 | 634283.577 | 492.804 | SHOULDER | 492.729 | 0.075 | 0.0056 | Classified | Demposter_296 |
| 1338 | 7289627.444 | 634279.199 | 492.831 | SHOULDER | 492.875 | 0.044 | 0.0019 | Classified | Demposter_296 |
| 1339 | 7289624.697 | 634275.155 | 492.88 | SHOULDER | 492.896 | 0.016 | 0.0003 | Classified | Demposter_296 |
| 1340 | 7289621.45 | 634270.855 | 492.903 | SHOULDER | 492.964 | 0.061 | 0.0037 | Classified | Demposter_296 |
| 1341 | 7289618.726 | 634266.452 | 492.915 | SHOULDER | 492.849 | 0.066 | 0.0044 | Classified | Demposter_296 |
| 1342 | 7289615.752 | 634262.114 | 492.935 | SHOULDER | 492.998 | 0.063 | 0.0040 | Classified | Demposter_296 |
| 1343 | 7289613.206 | 634257.907 | 492.935 | SHOULDER | 492.986 | 0.051 | 0.0026 | Classified | Demposter_296 |
| 1344 | 7289610.556 | 634253.781 | 492.959 | SHOULDER | 493.093 | 0.134 | 0.0180 | Classified | Demposter_296 |
| 1345 | 7289607.549 | 634249.58 | 493.031 | SHOULDER | 493.102 | 0.071 | 0.0050 | Classified | Demposter_296 |
| 1632 | 7239427.022 | 626706.095 | 681.728 | SHOULDER | 681.789 | 0.061 | 0.0037 | Classified | Demposter_181/Desmpter_182 |
| 1633 | 7239431.41 | 626708.58 | 681.738 | SHOULDER | 681.813 | 0.075 | 0.0056 | Classified | Demposter_181/Desmpter_182 |
| 1634 | 7239435.787 | 626711.138 | 681.745 | SHOULDER | 681.803 | 0.058 | 0.0034 | Classified | Demposter_181/Desmpter_182 |
| 1635 | 7239440.013 | 626713.734 | 681.723 | SHOULDER | 681.761 | 0.038 | 0.0014 | Classified | Demposter_181/Desmpter_182 |
| 1636 | 7239444.102 | 626716.26 | 681.669 | SHOULDER | 681.71 | 0.041 | 0.0017 | Classified | Demposter_181/Desmpter_182 |
| 1637 | 7239448.394 | 626718.729 | 681.623 | SHOULDER | 681.683 | 0.06 | 0.0036 | Classified | Demposter_181/Desmpter_182 |
| 1638 | 7239453.208 | 626720.926 | 681.676 | SHOULDER | 681.713 | 0.037 | 0.0014 | Classified | Demposter_181/Desmpter_182 |
| 1639 | 7239457.175 | 626723.051 | 681.712 | SHOULDER | 681.747 | 0.035 | 0.0012 | Classified | Demposter_181/Desmpter_182 |
| 1640 | 7239461.604 | 626725.105 | 681.722 | SHOULDER | 681.745 | 0.023 | 0.0005 | Classified | Demposter_181/Desmpter_182 |
| 1641 | 7239466.205 | 626727.345 | 681.721 | SHOULDER | 681.773 | 0.052 | 0.0027 | Classified | Demposter_181/Desmpter_182 |
| 1642 | 7239470.698 | 626730.035 | 681.663 | SHOULDER | 681.704 | 0.041 | 0.0017 | Classified | Demposter_181/Desmpter_182 |
| 1643 | 7239475.707 | 626732.546 | 681.703 | SHOULDER | 681.751 | 0.048 | 0.0023 | Classified | Demposter_181/Desmpter_182 |
| 1644 | 7239479.977 | 626734.796 | 681.703 | SHOULDER | 681.756 | 0.053 | 0.0028 | Classified | Demposter_181/Desmpter_182 |
| 1645 | 7239484.386 | 626724.743 | 681.188 | SHOULDER | 681.137 | 0.051 | 0.0026 | Classified | Demposter_181/Desmpter_182 |

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|------|-------------|------------|---------|----------|---------|-------|--------|------------|---------------------------|
| 1646 | 7239480.567 | 626723.02 | 681.223 | SHOULDER | 681.26 | 0.037 | 0.0014 | Classified | Dempster_181/Desmpter_182 |
| 1647 | 7239476.051 | 626720.533 | 681.265 | SHOULDER | 681.295 | 0.03 | 0.0009 | Classified | Dempster_181/Desmpter_182 |
| 1648 | 7239471.477 | 626717.823 | 681.306 | SHOULDER | 681.337 | 0.031 | 0.0010 | Classified | Dempster_181/Desmpter_182 |
| 1649 | 7239466.585 | 626715.385 | 681.358 | SHOULDER | 681.402 | 0.044 | 0.0019 | Classified | Dempster_181/Desmpter_182 |
| 1650 | 7239462.236 | 626713.062 | 681.391 | SHOULDER | 681.414 | 0.023 | 0.0005 | Classified | Dempster_181/Desmpter_182 |
| 1651 | 7239458.006 | 626710.695 | 681.434 | SHOULDER | 681.462 | 0.028 | 0.0008 | Classified | Dempster_181/Desmpter_182 |
| 1652 | 7239454.004 | 626708.659 | 681.528 | SHOULDER | 681.527 | 0.001 | 0.0000 | Classified | Dempster_181/Desmpter_182 |
| 1653 | 7239450.13 | 626706.609 | 681.549 | SHOULDER | 681.556 | 0.007 | 0.0000 | Classified | Dempster_181/Desmpter_182 |
| 1654 | 7239445.492 | 626704.206 | 681.598 | SHOULDER | 681.625 | 0.027 | 0.0007 | Classified | Dempster_181/Desmpter_182 |
| 1655 | 7239441.272 | 626701.842 | 681.629 | SHOULDER | 681.657 | 0.028 | 0.0008 | Classified | Dempster_181/Desmpter_182 |
| 1656 | 7239436.963 | 626699.429 | 681.675 | SHOULDER | 681.676 | 0.001 | 0.0000 | Classified | Dempster_181/Desmpter_182 |
| 1657 | 7239432.622 | 626697.029 | 681.725 | SHOULDER | 681.734 | 0.009 | 0.0001 | Classified | Dempster_181/Desmpter_182 |



Appendix C Comparison Zone 8

| Point # | Allnorth Survey XYZ | Location | LIDAR EL. | Difference | Δz^2 (m ²) | LIDAR type | LIDAR tile # |
|---------|---------------------|---------------|-----------|------------|--------------------------------|--------------|---|
| 114 | 7299921.033 | Ground target | 845.912 | 0.02 | 0.0004 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 115 | 7307482.037 | Ground target | 745.733 | 0.034 | 0.0012 | Unclassified | 00237.LAS / 00238.LAS |
| 116 | 7317046.28 | Ground target | 617.544 | 0.03 | 0.0009 | Unclassified | 00242.LAS / 00249.LAS |
| 117 | 7331199.855 | Ground target | 619.948 | 0.025 | 0.0006 | Unclassified | 00252.LAS / 00253.LAS |
| 118 | 7341955.429 | Ground target | 643.166 | 0.074 | 0.0055 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 119 | 7354121.576 | Ground target | 614.57 | 0.031 | 0.0010 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 120 | 7370276.325 | Ground target | 343.658 | 0.072 | 0.0052 | Unclassified | 00396.LAS / 00399.LAS |
| 121 | 7380301.087 | Ground target | 686.11 | 0.022 | 0.0005 | Unclassified | 00406.LAS |
| 122 | 7397184.275 | Ground target | 664.15 | 0.114 | 0.0130 | Unclassified | 00292.LAS / 00293/LAS |
| 123 | 7416715.196 | Ground target | 573.127 | 0.087 | 0.0076 | Unclassified | 00289.LAS / 00290.LAS |
| 124 | 7433420.086 | Ground target | 732.303 | 0.095 | 0.0090 | Unclassified | 00276.LAS / 00277.LAS |

Mini surveys

| | | | | | | | |
|------|-------------|----------|---------|-------|--------|--------------|---|
| 1346 | 7299903.634 | SHOULDER | 847.626 | 0.009 | 0.0001 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1347 | 7299908.016 | SHOULDER | 847.609 | 0.023 | 0.0005 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1348 | 7299912.31 | SHOULDER | 847.582 | 0.006 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1349 | 7299916.703 | SHOULDER | 847.56 | 0.031 | 0.0010 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1350 | 7299921.025 | SHOULDER | 847.521 | 0.006 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1351 | 7299925.26 | SHOULDER | 847.482 | 0.019 | 0.0004 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1352 | 7299929.644 | SHOULDER | 847.435 | 0.069 | 0.0048 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1353 | 7299933.877 | SHOULDER | 847.414 | 0.003 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1354 | 7299938.372 | SHOULDER | 847.387 | 0.019 | 0.0004 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1355 | 7299942.597 | SHOULDER | 847.373 | 0.002 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1356 | 7299946.831 | SHOULDER | 847.346 | 0.03 | 0.0009 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1357 | 7299951.147 | SHOULDER | 847.324 | 0.009 | 0.0001 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1358 | 7299955.533 | SHOULDER | 847.313 | 0.016 | 0.0003 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1359 | 7299960.522 | SHOULDER | 847.374 | 0.008 | 0.0001 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1360 | 7299955.977 | SHOULDER | 847.368 | 0.039 | 0.0015 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1361 | 7299951.753 | SHOULDER | 847.385 | 0.018 | 0.0003 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1362 | 7299946.927 | SHOULDER | 847.408 | 0.012 | 0.0001 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1363 | 7299943.2 | SHOULDER | 847.428 | 0.056 | 0.0031 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1364 | 7299938.987 | SHOULDER | 847.439 | 0.01 | 0.0001 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1365 | 7299934.77 | SHOULDER | 847.459 | 0.003 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1366 | 7299930.264 | SHOULDER | 847.493 | 0.03 | 0.0009 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |

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|------|-------------|------------|---------|----------|---------|-------|--------|--------------|---|
| 1367 | 7299926.326 | 373688.973 | 847.517 | SHOULDER | 847.481 | 0.036 | 0.0013 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1368 | 7299921.772 | 373686.249 | 847.537 | SHOULDER | 847.513 | 0.024 | 0.0006 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1369 | 7299917.385 | 373683.813 | 847.59 | SHOULDER | 847.58 | 0.01 | 0.0001 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1370 | 7299913.24 | 373681.403 | 847.606 | SHOULDER | 847.601 | 0.005 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1371 | 7299908.978 | 373678.946 | 847.642 | SHOULDER | 847.649 | 0.007 | 0.0000 | Unclassified | 00221.LAS / 00222.LAS / 00229.LAS / 00390.LAS |
| 1372 | 7307448.766 | 383095.237 | 744.393 | SHOULDER | 744.451 | 0.058 | 0.0034 | Unclassified | 00237.LAS / 00238.LAS |
| 1373 | 7307454.021 | 383094.758 | 744.671 | SHOULDER | 744.752 | 0.081 | 0.0066 | Unclassified | 00237.LAS / 00238.LAS |
| 1374 | 7307459.112 | 383094.343 | 744.945 | SHOULDER | 744.996 | 0.051 | 0.0026 | Unclassified | 00237.LAS / 00238.LAS |
| 1375 | 7307464.278 | 383093.915 | 745.221 | SHOULDER | 745.274 | 0.053 | 0.0028 | Unclassified | 00237.LAS / 00238.LAS |
| 1376 | 7307469.321 | 383093.37 | 745.455 | SHOULDER | 745.514 | 0.059 | 0.0035 | Unclassified | 00237.LAS / 00238.LAS |
| 1377 | 7307474.373 | 383092.875 | 745.631 | SHOULDER | 745.69 | 0.059 | 0.0035 | Unclassified | 00237.LAS / 00238.LAS |
| 1378 | 7307479.387 | 383092.131 | 745.776 | SHOULDER | 745.832 | 0.056 | 0.0031 | Unclassified | 00237.LAS / 00238.LAS |
| 1379 | 7307484.301 | 383091.455 | 745.89 | SHOULDER | 745.96 | 0.07 | 0.0049 | Unclassified | 00237.LAS / 00238.LAS |
| 1380 | 7307489.331 | 383090.861 | 745.997 | SHOULDER | 746.03 | 0.033 | 0.0011 | Unclassified | 00237.LAS / 00238.LAS |
| 1381 | 7307494.224 | 383090.394 | 746.1 | SHOULDER | 746.161 | 0.061 | 0.0037 | Unclassified | 00237.LAS / 00238.LAS |
| 1382 | 7307499.175 | 383089.868 | 746.185 | SHOULDER | 746.237 | 0.052 | 0.0027 | Unclassified | 00237.LAS / 00238.LAS |
| 1383 | 7307504.249 | 383089.325 | 746.272 | SHOULDER | 746.323 | 0.051 | 0.0026 | Unclassified | 00237.LAS / 00238.LAS |
| 1384 | 7307509.333 | 383088.479 | 746.358 | SHOULDER | 746.377 | 0.019 | 0.0004 | Unclassified | 00237.LAS / 00238.LAS |
| 1385 | 7307508.209 | 383077.448 | 746.335 | SHOULDER | 746.383 | 0.048 | 0.0023 | Unclassified | 00237.LAS / 00238.LAS |
| 1386 | 7307503.208 | 383078.114 | 746.291 | SHOULDER | 746.35 | 0.059 | 0.0035 | Unclassified | 00237.LAS / 00238.LAS |
| 1387 | 7307498.481 | 383078.553 | 746.238 | SHOULDER | 746.297 | 0.059 | 0.0035 | Unclassified | 00237.LAS / 00238.LAS |
| 1388 | 7307493.631 | 383079.076 | 746.176 | SHOULDER | 746.21 | 0.034 | 0.0012 | Unclassified | 00237.LAS / 00238.LAS |
| 1389 | 7307488.241 | 383079.857 | 746.107 | SHOULDER | 746.146 | 0.039 | 0.0015 | Unclassified | 00237.LAS / 00238.LAS |
| 1390 | 7307483.148 | 383080.493 | 745.999 | SHOULDER | 746.023 | 0.024 | 0.0006 | Unclassified | 00237.LAS / 00238.LAS |
| 1391 | 7307478.042 | 383081.002 | 745.859 | SHOULDER | 745.85 | 0.009 | 0.0001 | Unclassified | 00237.LAS / 00238.LAS |
| 1392 | 7307473.148 | 383081.598 | 745.666 | SHOULDER | 745.701 | 0.035 | 0.0012 | Unclassified | 00237.LAS / 00238.LAS |
| 1393 | 7307468.201 | 383082.123 | 745.458 | SHOULDER | 745.51 | 0.052 | 0.0027 | Unclassified | 00237.LAS / 00238.LAS |
| 1394 | 7307463.126 | 383082.765 | 745.24 | SHOULDER | 745.296 | 0.056 | 0.0031 | Unclassified | 00237.LAS / 00238.LAS |
| 1395 | 7307458.193 | 383083.408 | 744.998 | SHOULDER | 745.04 | 0.042 | 0.0018 | Unclassified | 00237.LAS / 00238.LAS |
| 1396 | 7307453.146 | 383083.909 | 744.737 | SHOULDER | 744.793 | 0.056 | 0.0031 | Unclassified | 00237.LAS / 00238.LAS |
| 1397 | 7307447.596 | 383084.421 | 744.447 | SHOULDER | 744.475 | 0.028 | 0.0008 | Unclassified | 00237.LAS / 00238.LAS |
| 1398 | 7317016.177 | 392594.35 | 617.985 | SHOULDER | 618.032 | 0.047 | 0.0022 | Unclassified | 00242.LAS / 00249.LAS |
| 1399 | 7317021.521 | 392594.603 | 618.011 | SHOULDER | 617.987 | 0.024 | 0.0006 | Unclassified | 00242.LAS / 00249.LAS |
| 1400 | 7317026.763 | 392595.057 | 618.026 | SHOULDER | 618.03 | 0.004 | 0.0000 | Unclassified | 00242.LAS / 00249.LAS |

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|------|-------------|------------|---------|----------|---------|-------|--------|--------------|-----------------------|
| 1401 | 7317031.881 | 392595.62 | 618.038 | SHOULDER | 618.034 | 0.004 | 0.0000 | Unclassified | 00242.LAS / 00249.LAS |
| 1402 | 7317037.082 | 392596.203 | 618.057 | SHOULDER | 618.092 | 0.035 | 0.0012 | Unclassified | 00242.LAS / 00249.LAS |
| 1403 | 7317042.236 | 392596.909 | 618.067 | SHOULDER | 618.054 | 0.013 | 0.0002 | Unclassified | 00242.LAS / 00249.LAS |
| 1404 | 7317047.343 | 392597.54 | 618.076 | SHOULDER | 618.104 | 0.028 | 0.0008 | Unclassified | 00242.LAS / 00249.LAS |
| 1405 | 7317052.672 | 392598.167 | 618.082 | SHOULDER | 618.098 | 0.016 | 0.0003 | Unclassified | 00242.LAS / 00249.LAS |
| 1406 | 7317057.866 | 392598.863 | 618.082 | SHOULDER | 618.082 | 0 | 0.0000 | Unclassified | 00242.LAS / 00249.LAS |
| 1407 | 7317062.723 | 392599.6 | 618.083 | SHOULDER | 618.075 | 0.008 | 0.0001 | Unclassified | 00242.LAS / 00249.LAS |
| 1408 | 7317067.846 | 392600.535 | 618.085 | SHOULDER | 618.075 | 0.01 | 0.0001 | Unclassified | 00242.LAS / 00249.LAS |
| 1409 | 7317072.828 | 392601.411 | 618.097 | SHOULDER | 618.08 | 0.017 | 0.0003 | Unclassified | 00242.LAS / 00249.LAS |
| 1410 | 7317077.931 | 392602.336 | 618.097 | SHOULDER | 618.112 | 0.015 | 0.0002 | Unclassified | 00242.LAS / 00249.LAS |
| 1411 | 7317079.401 | 392594.625 | 618.292 | SHOULDER | 618.088 | 0.204 | 0.0416 | Unclassified | 00242.LAS / 00249.LAS |
| 1412 | 7317074.085 | 392593.655 | 618.263 | SHOULDER | 618.322 | 0.059 | 0.0035 | Unclassified | 00242.LAS / 00249.LAS |
| 1413 | 7317069.193 | 392592.794 | 618.208 | SHOULDER | 618.168 | 0.04 | 0.0016 | Unclassified | 00242.LAS / 00249.LAS |
| 1414 | 7317063.592 | 392591.818 | 618.197 | SHOULDER | 618.197 | 0 | 0.0000 | Unclassified | 00242.LAS / 00249.LAS |
| 1415 | 7317058.826 | 392591.309 | 618.206 | SHOULDER | 618.189 | 0.017 | 0.0003 | Unclassified | 00242.LAS / 00249.LAS |
| 1416 | 7317053.602 | 392590.569 | 618.21 | SHOULDER | 618.202 | 0.008 | 0.0001 | Unclassified | 00242.LAS / 00249.LAS |
| 1417 | 7317048.389 | 392589.516 | 618.186 | SHOULDER | 618.145 | 0.041 | 0.0017 | Unclassified | 00242.LAS / 00249.LAS |
| 1418 | 7317043.315 | 392588.64 | 618.193 | SHOULDER | 618.145 | 0.048 | 0.0023 | Unclassified | 00242.LAS / 00249.LAS |
| 1419 | 7317038.155 | 392587.901 | 618.138 | SHOULDER | 618.173 | 0.035 | 0.0012 | Unclassified | 00242.LAS / 00249.LAS |
| 1420 | 7317032.798 | 392587.278 | 618.105 | SHOULDER | 618.031 | 0.074 | 0.0055 | Unclassified | 00242.LAS / 00249.LAS |
| 1421 | 7317027.623 | 392586.782 | 618.121 | SHOULDER | 618.07 | 0.051 | 0.0026 | Unclassified | 00242.LAS / 00249.LAS |
| 1422 | 7317022.073 | 392586.582 | 618.123 | SHOULDER | 618.174 | 0.051 | 0.0026 | Unclassified | 00242.LAS / 00249.LAS |
| 1423 | 7317016.684 | 392585.52 | 618.086 | SHOULDER | 618.151 | 0.065 | 0.0042 | Unclassified | 00242.LAS / 00249.LAS |
| 1424 | 7331170.493 | 395157.074 | 622.069 | SHOULDER | 622.081 | 0.012 | 0.0001 | Unclassified | 00252.LAS / 00253.LAS |
| 1425 | 7331175.755 | 395157.623 | 621.94 | SHOULDER | 621.962 | 0.022 | 0.0005 | Unclassified | 00252.LAS / 00253.LAS |
| 1426 | 7331180.984 | 395158.129 | 621.824 | SHOULDER | 621.824 | 0 | 0.0000 | Unclassified | 00252.LAS / 00253.LAS |
| 1427 | 7331186.173 | 395158.736 | 621.69 | SHOULDER | 621.662 | 0.028 | 0.0008 | Unclassified | 00252.LAS / 00253.LAS |
| 1428 | 7331191.518 | 395159.488 | 621.539 | SHOULDER | 621.572 | 0.033 | 0.0011 | Unclassified | 00252.LAS / 00253.LAS |
| 1429 | 7331196.653 | 395160.25 | 621.428 | SHOULDER | 621.419 | 0.009 | 0.0001 | Unclassified | 00252.LAS / 00253.LAS |
| 1430 | 7331201.994 | 395161.188 | 621.298 | SHOULDER | 621.293 | 0.005 | 0.0000 | Unclassified | 00252.LAS / 00253.LAS |
| 1431 | 7331206.893 | 395162.343 | 621.145 | SHOULDER | 621.168 | 0.023 | 0.0005 | Unclassified | 00252.LAS / 00253.LAS |
| 1432 | 7331211.769 | 395163.605 | 620.972 | SHOULDER | 621 | 0.028 | 0.0008 | Unclassified | 00252.LAS / 00253.LAS |
| 1433 | 7331216.949 | 395164.691 | 620.829 | SHOULDER | 620.823 | 0.006 | 0.0000 | Unclassified | 00252.LAS / 00253.LAS |
| 1434 | 7331221.804 | 395165.801 | 620.684 | SHOULDER | 620.698 | 0.014 | 0.0002 | Unclassified | 00252.LAS / 00253.LAS |

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| 1435 | 7331226.246 | 395167.072 | 620.533 | SHOULDER | 620.558 | 0.025 | 0.0006 | Unclassified | 00252.LAS / 00253.LAS |
| 1436 | 7331231.529 | 395168.708 | 620.351 | SHOULDER | 620.373 | 0.022 | 0.0005 | Unclassified | 00252.LAS / 00253.LAS |
| 1437 | 7331234.21 | 395159.596 | 620.625 | SHOULDER | 620.572 | 0.053 | 0.0028 | Unclassified | 00252.LAS / 00253.LAS |
| 1438 | 7331228.807 | 395158.215 | 620.813 | SHOULDER | 621.433 | 0.62 | 0.3844 | Unclassified | 00252.LAS / 00253.LAS |
| 1439 | 7331224.131 | 395156.862 | 620.98 | SHOULDER | 620.973 | 0.007 | 0.0000 | Unclassified | 00252.LAS / 00253.LAS |
| 1440 | 7331219.292 | 395155.736 | 621.164 | SHOULDER | 621.107 | 0.057 | 0.0032 | Unclassified | 00252.LAS / 00253.LAS |
| 1441 | 7331214.182 | 395154.442 | 621.327 | SHOULDER | 621.713 | 0.386 | 0.1490 | Unclassified | 00252.LAS / 00253.LAS |
| 1442 | 7331209.049 | 395153.008 | 621.51 | SHOULDER | 621.498 | 0.012 | 0.0001 | Unclassified | 00252.LAS / 00253.LAS |
| 1443 | 7331204.413 | 395151.452 | 621.612 | SHOULDER | 621.592 | 0.02 | 0.0004 | Unclassified | 00252.LAS / 00253.LAS |
| 1444 | 7331199.569 | 395150.379 | 621.769 | SHOULDER | 621.755 | 0.014 | 0.0002 | Unclassified | 00252.LAS / 00253.LAS |
| 1445 | 7331194.442 | 395149.448 | 621.892 | SHOULDER | 621.982 | 0.09 | 0.0081 | Unclassified | 00252.LAS / 00253.LAS |
| 1446 | 7331188.242 | 395148.702 | 622.059 | SHOULDER | 622.018 | 0.041 | 0.0017 | Unclassified | 00252.LAS / 00253.LAS |
| 1447 | 7331182.875 | 395147.944 | 622.196 | SHOULDER | 622.124 | 0.072 | 0.0052 | Unclassified | 00252.LAS / 00253.LAS |
| 1448 | 7331177.282 | 395147.304 | 622.328 | SHOULDER | 622.268 | 0.06 | 0.0036 | Unclassified | 00252.LAS / 00253.LAS |
| 1449 | 7331171.55 | 395146.809 | 622.443 | SHOULDER | 622.393 | 0.05 | 0.0025 | Unclassified | 00252.LAS / 00253.LAS |
| 1450 | 7341946.972 | 409059.676 | 643.502 | SHOULDER | 643.555 | 0.053 | 0.0028 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1451 | 7341951.464 | 409062.636 | 643.651 | SHOULDER | 643.733 | 0.082 | 0.0067 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1452 | 7341956.228 | 409065.624 | 643.811 | SHOULDER | 643.868 | 0.057 | 0.0032 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1453 | 7341960.767 | 409068.433 | 643.973 | SHOULDER | 644.047 | 0.074 | 0.0055 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1454 | 7341965.184 | 409071.171 | 644.161 | SHOULDER | 644.378 | 0.217 | 0.0471 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1455 | 7341969.6 | 409074.092 | 644.291 | SHOULDER | 644.38 | 0.089 | 0.0079 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1456 | 7341974.298 | 409077.043 | 644.491 | SHOULDER | 644.547 | 0.056 | 0.0031 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1457 | 7341978.368 | 409079.668 | 644.623 | SHOULDER | 644.681 | 0.058 | 0.0034 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1458 | 7341982.964 | 409082.674 | 644.712 | SHOULDER | 644.781 | 0.069 | 0.0048 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1459 | 7341987.354 | 409085.42 | 644.896 | SHOULDER | 645.058 | 0.162 | 0.0262 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1460 | 7341991.774 | 409088.277 | 644.998 | SHOULDER | 645.131 | 0.133 | 0.0177 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1461 | 7341996.053 | 409091.317 | 645.071 | SHOULDER | 645.128 | 0.057 | 0.0032 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1462 | 7342000.383 | 409094.473 | 645.147 | SHOULDER | 645.601 | 0.454 | 0.2061 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1463 | 7342007.044 | 409085.656 | 645.74 | SHOULDER | 645.565 | 0.175 | 0.0306 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1464 | 7342003.001 | 409082.717 | 645.544 | SHOULDER | 645.318 | 0.226 | 0.0511 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1465 | 7341998.298 | 409079.697 | 645.383 | SHOULDER | 645.256 | 0.127 | 0.0161 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1466 | 7341993.649 | 409076.83 | 645.212 | SHOULDER | 645.318 | 0.106 | 0.0112 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1467 | 7341989.005 | 409073.972 | 645.089 | SHOULDER | 645.256 | 0.167 | 0.0279 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1468 | 7341984.187 | 409070.978 | 644.896 | SHOULDER | 644.91 | 0.014 | 0.0002 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |

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| 1469 | 7341980.339 | 409068.385 | 644.743 | SHOULDER | 644.807 | 0.064 | 0.0041 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1470 | 7341975.581 | 409065.199 | 644.509 | SHOULDER | 644.536 | 0.027 | 0.0007 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1471 | 7341971.016 | 409062.178 | 644.289 | SHOULDER | 644.281 | 0.008 | 0.0001 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1472 | 7341966.389 | 409059.349 | 644.091 | SHOULDER | 644.202 | 0.111 | 0.0123 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1473 | 7341962.05 | 409056.647 | 643.923 | SHOULDER | 643.899 | 0.024 | 0.0006 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1474 | 7341957.828 | 409054.011 | 643.74 | SHOULDER | 643.678 | 0.062 | 0.0038 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1475 | 7341953.03 | 409050.967 | 643.546 | SHOULDER | 643.583 | 0.037 | 0.0014 | Unclassified | 00352.LAS / 00353.LAS / 00372.LAS |
| 1476 | 7354090.845 | 422940.735 | 614.176 | SHOULDER | 614.179 | 0.003 | 0.0000 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1477 | 7354095.494 | 422943.561 | 614.36 | SHOULDER | 614.391 | 0.031 | 0.0010 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1478 | 7354099.945 | 422946.182 | 614.555 | SHOULDER | 614.589 | 0.034 | 0.0012 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1479 | 7354104.171 | 422948.963 | 614.725 | SHOULDER | 614.735 | 0.01 | 0.0001 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1480 | 7354108.463 | 422951.705 | 614.91 | SHOULDER | 614.884 | 0.026 | 0.0007 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1481 | 7354113.026 | 422954.36 | 615.103 | SHOULDER | 615.081 | 0.022 | 0.0005 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1482 | 7354117.578 | 422957.114 | 615.299 | SHOULDER | 615.289 | 0.01 | 0.0001 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1483 | 7354122.084 | 422959.993 | 615.495 | SHOULDER | 615.524 | 0.029 | 0.0008 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1484 | 7354126.499 | 422962.563 | 615.733 | SHOULDER | 615.731 | 0.002 | 0.0000 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1485 | 7354131.041 | 422965.428 | 615.914 | SHOULDER | 615.927 | 0.013 | 0.0002 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1486 | 7354135.483 | 422968.247 | 616.116 | SHOULDER | 616.128 | 0.012 | 0.0001 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1487 | 7354139.875 | 422970.859 | 616.346 | SHOULDER | 616.357 | 0.011 | 0.0001 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1488 | 7354144.161 | 422973.645 | 616.577 | SHOULDER | 616.571 | 0.006 | 0.0000 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1489 | 7354149.455 | 422964.915 | 616.637 | SHOULDER | 616.639 | 0.002 | 0.0000 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1490 | 7354145.029 | 422962.336 | 616.421 | SHOULDER | 616.401 | 0.02 | 0.0004 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1491 | 7354140.461 | 422959.666 | 616.212 | SHOULDER | 616.194 | 0.018 | 0.0003 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1492 | 7354136.194 | 422956.877 | 615.987 | SHOULDER | 615.983 | 0.004 | 0.0000 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1493 | 7354131.87 | 422954.11 | 615.793 | SHOULDER | 615.777 | 0.016 | 0.0003 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1494 | 7354127.311 | 422951.355 | 615.604 | SHOULDER | 615.576 | 0.028 | 0.0008 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1495 | 7354122.845 | 422948.69 | 615.407 | SHOULDER | 615.381 | 0.026 | 0.0007 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1496 | 7354118.394 | 422946.177 | 615.195 | SHOULDER | 615.163 | 0.032 | 0.0010 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1497 | 7354113.841 | 422943.236 | 614.948 | SHOULDER | 614.892 | 0.056 | 0.0031 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1498 | 7354109.261 | 422940.395 | 614.73 | SHOULDER | 614.713 | 0.017 | 0.0003 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1499 | 7354104.773 | 422937.873 | 614.54 | SHOULDER | 614.519 | 0.021 | 0.0004 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1500 | 7354100.495 | 422935.395 | 614.366 | SHOULDER | 614.366 | 0 | 0.0000 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1501 | 7354095.849 | 422932.565 | 614.166 | SHOULDER | 614.187 | 0.021 | 0.0004 | Unclassified | 00338.LAS / 00359.LAS / 00373.LAS / 00378.LAS |
| 1502 | 7370278.486 | 425077.278 | 342.812 | SHOULDER | 342.759 | 0.053 | 0.0028 | Unclassified | 00396.LAS / 00399.LAS |

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|------|-------------|------------|---------|----------|---------|-------|--------|--------------|-----------------------|
| 1503 | 7370278.817 | 425082.192 | 343.018 | SHOULDER | 342.857 | 0.161 | 0.0259 | Unclassified | 00396.LAS / 00399.LAS |
| 1504 | 7370279.183 | 425086.956 | 343.228 | SHOULDER | 343.108 | 0.12 | 0.0144 | Unclassified | 00396.LAS / 00399.LAS |
| 1505 | 7370279.667 | 425092.182 | 343.445 | SHOULDER | 343.337 | 0.108 | 0.0117 | Unclassified | 00396.LAS / 00399.LAS |
| 1506 | 7370280.272 | 425097.146 | 343.653 | SHOULDER | 343.467 | 0.186 | 0.0346 | Unclassified | 00396.LAS / 00399.LAS |
| 1507 | 7370280.708 | 425102.068 | 343.837 | SHOULDER | 343.734 | 0.103 | 0.0106 | Unclassified | 00396.LAS / 00399.LAS |
| 1508 | 7370281.689 | 425107.021 | 344.025 | SHOULDER | 343.952 | 0.073 | 0.0053 | Unclassified | 00396.LAS / 00399.LAS |
| 1509 | 7370282.532 | 425111.857 | 344.225 | SHOULDER | 344.172 | 0.053 | 0.0028 | Unclassified | 00396.LAS / 00399.LAS |
| 1510 | 7370283.399 | 425116.994 | 344.409 | SHOULDER | 344.351 | 0.058 | 0.0034 | Unclassified | 00396.LAS / 00399.LAS |
| 1511 | 7370284.109 | 425122.015 | 344.567 | SHOULDER | 344.507 | 0.06 | 0.0036 | Unclassified | 00396.LAS / 00399.LAS |
| 1512 | 7370285.248 | 425126.962 | 344.75 | SHOULDER | 344.71 | 0.04 | 0.0016 | Unclassified | 00396.LAS / 00399.LAS |
| 1513 | 7370286.406 | 425131.37 | 344.911 | SHOULDER | 344.893 | 0.018 | 0.0003 | Unclassified | 00396.LAS / 00399.LAS |
| 1514 | 7370287.665 | 425136.242 | 345.076 | SHOULDER | 345.044 | 0.032 | 0.0010 | Unclassified | 00396.LAS / 00399.LAS |
| 1515 | 7370296.926 | 425133.718 | 344.517 | SHOULDER | 344.514 | 0.003 | 0.0000 | Unclassified | 00396.LAS / 00399.LAS |
| 1516 | 7370295.706 | 425129.014 | 344.335 | SHOULDER | 344.307 | 0.028 | 0.0008 | Unclassified | 00396.LAS / 00399.LAS |
| 1517 | 7370294.648 | 425124.435 | 344.135 | SHOULDER | 344.075 | 0.06 | 0.0036 | Unclassified | 00396.LAS / 00399.LAS |
| 1518 | 7370293.392 | 425119.723 | 343.964 | SHOULDER | 343.948 | 0.016 | 0.0003 | Unclassified | 00396.LAS / 00399.LAS |
| 1519 | 7370292.666 | 425115.472 | 343.815 | SHOULDER | 343.819 | 0.004 | 0.0000 | Unclassified | 00396.LAS / 00399.LAS |
| 1520 | 7370291.773 | 425110.623 | 343.613 | SHOULDER | 343.605 | 0.008 | 0.0001 | Unclassified | 00396.LAS / 00399.LAS |
| 1521 | 7370291.02 | 425105.788 | 343.44 | SHOULDER | 343.432 | 0.008 | 0.0001 | Unclassified | 00396.LAS / 00399.LAS |
| 1522 | 7370290.491 | 425101.082 | 343.217 | SHOULDER | 343.2 | 0.017 | 0.0003 | Unclassified | 00396.LAS / 00399.LAS |
| 1523 | 7370289.861 | 425096.412 | 343.067 | SHOULDER | 343.066 | 0.001 | 0.0000 | Unclassified | 00396.LAS / 00399.LAS |
| 1524 | 7370289.211 | 425091.431 | 342.885 | SHOULDER | 342.855 | 0.03 | 0.0009 | Unclassified | 00396.LAS / 00399.LAS |
| 1525 | 7370288.856 | 425086.468 | 342.694 | SHOULDER | 342.653 | 0.041 | 0.0017 | Unclassified | 00396.LAS / 00399.LAS |
| 1526 | 7370288.497 | 425081.803 | 342.47 | SHOULDER | 342.488 | 0.018 | 0.0003 | Unclassified | 00396.LAS / 00399.LAS |
| 1527 | 7370288.16 | 425077.074 | 342.28 | SHOULDER | 342.251 | 0.029 | 0.0008 | Unclassified | 00396.LAS / 00399.LAS |
| 1528 | 7380275.6 | 437947.039 | 684.525 | SHOULDER | 684.857 | 0.332 | 0.1102 | Unclassified | 00406.LAS |
| 1529 | 7380278.496 | 437950.931 | 684.753 | SHOULDER | 684.776 | 0.023 | 0.0005 | Unclassified | 00406.LAS |
| 1530 | 7380281.489 | 437955.468 | 685.039 | SHOULDER | 685.045 | 0.006 | 0.0000 | Unclassified | 00406.LAS |
| 1531 | 7380284.533 | 437959.638 | 685.276 | SHOULDER | 685.316 | 0.04 | 0.0016 | Unclassified | 00406.LAS |
| 1532 | 7380287.55 | 437963.76 | 685.501 | SHOULDER | 685.598 | 0.097 | 0.0094 | Unclassified | 00406.LAS |
| 1533 | 7380290.482 | 437967.96 | 685.768 | SHOULDER | 685.742 | 0.026 | 0.0007 | Unclassified | 00406.LAS |
| 1534 | 7380293.307 | 437971.983 | 686.009 | SHOULDER | 685.973 | 0.036 | 0.0013 | Unclassified | 00406.LAS |
| 1535 | 7380296.347 | 437976.085 | 686.228 | SHOULDER | 686.156 | 0.072 | 0.0052 | Unclassified | 00406.LAS |
| 1536 | 7380299.21 | 437980.51 | 686.446 | SHOULDER | 686.417 | 0.029 | 0.0008 | Unclassified | 00406.LAS |

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| 1537 | 7380302.392 | 437985.096 | 686.648 | SHOULDER | 686.612 | 0.036 | 0.0013 | Unclassified | 00406.LAS |
| 1538 | 7380305.368 | 437989.67 | 686.851 | SHOULDER | 686.847 | 0.004 | 0.0000 | Unclassified | 00406.LAS |
| 1539 | 7380308.596 | 437993.815 | 687.048 | SHOULDER | 686.91 | 0.138 | 0.0190 | Unclassified | 00406.LAS |
| 1540 | 7380311.727 | 437998.28 | 687.247 | SHOULDER | 687.167 | 0.08 | 0.0064 | Unclassified | 00406.LAS |
| 1541 | 7380304.582 | 438002.926 | 687.251 | SHOULDER | 687.116 | 0.135 | 0.0182 | Unclassified | 00406.LAS |
| 1542 | 7380301.665 | 437999.022 | 687.023 | SHOULDER | 686.923 | 0.1 | 0.0100 | Unclassified | 00406.LAS |
| 1543 | 7380298.874 | 437994.992 | 686.839 | SHOULDER | 686.624 | 0.215 | 0.0462 | Unclassified | 00406.LAS |
| 1544 | 7380295.867 | 437990.793 | 686.635 | SHOULDER | 686.578 | 0.057 | 0.0032 | Unclassified | 00406.LAS |
| 1545 | 7380292.279 | 437986.275 | 686.381 | SHOULDER | 686.326 | 0.055 | 0.0030 | Unclassified | 00406.LAS |
| 1546 | 7380289.418 | 437982.289 | 686.2 | SHOULDER | 686.112 | 0.088 | 0.0077 | Unclassified | 00406.LAS |
| 1547 | 7380286.205 | 437977.876 | 685.989 | SHOULDER | 685.872 | 0.117 | 0.0137 | Unclassified | 00406.LAS |
| 1548 | 7380282.932 | 437973.742 | 685.731 | SHOULDER | 685.656 | 0.075 | 0.0056 | Unclassified | 00406.LAS |
| 1549 | 7380280.169 | 437969.784 | 685.532 | SHOULDER | 685.347 | 0.185 | 0.0342 | Unclassified | 00406.LAS |
| 1550 | 7380277.317 | 437965.468 | 685.309 | SHOULDER | 685.173 | 0.136 | 0.0185 | Unclassified | 00406.LAS |
| 1551 | 7380274.143 | 437961.136 | 685.051 | SHOULDER | 684.99 | 0.061 | 0.0037 | Unclassified | 00406.LAS |
| 1552 | 7380271.113 | 437957.086 | 684.794 | SHOULDER | 684.696 | 0.098 | 0.0096 | Unclassified | 00406.LAS |
| 1553 | 7380268.058 | 437952.958 | 684.555 | SHOULDER | 684.516 | 0.039 | 0.0015 | Unclassified | 00406.LAS |
| 1554 | 7397154.338 | 440333.695 | 664.405 | SHOULDER | 664.345 | 0.06 | 0.0036 | Unclassified | 00292.LAS / 00293/LAS |
| 1555 | 7397159.229 | 440331.474 | 664.42 | SHOULDER | 664.339 | 0.081 | 0.0066 | Unclassified | 00292.LAS / 00293/LAS |
| 1556 | 7397164.032 | 440329.388 | 664.437 | SHOULDER | 664.369 | 0.068 | 0.0046 | Unclassified | 00292.LAS / 00293/LAS |
| 1557 | 7397168.61 | 440327.37 | 664.473 | SHOULDER | 664.426 | 0.047 | 0.0022 | Unclassified | 00292.LAS / 00293/LAS |
| 1558 | 7397173.608 | 440325.178 | 664.484 | SHOULDER | 664.411 | 0.073 | 0.0053 | Unclassified | 00292.LAS / 00293/LAS |
| 1559 | 7397178.658 | 440322.983 | 664.485 | SHOULDER | 664.38 | 0.105 | 0.0110 | Unclassified | 00292.LAS / 00293/LAS |
| 1560 | 7397183.765 | 440320.744 | 664.441 | SHOULDER | 664.399 | 0.042 | 0.0018 | Unclassified | 00292.LAS / 00293/LAS |
| 1561 | 7397188.281 | 440318.547 | 664.462 | SHOULDER | 664.373 | 0.089 | 0.0079 | Unclassified | 00292.LAS / 00293/LAS |
| 1562 | 7397192.794 | 440316.61 | 664.441 | SHOULDER | 664.355 | 0.086 | 0.0074 | Unclassified | 00292.LAS / 00293/LAS |
| 1563 | 7397197.396 | 440314.578 | 664.402 | SHOULDER | 664.36 | 0.042 | 0.0018 | Unclassified | 00292.LAS / 00293/LAS |
| 1564 | 7397201.972 | 440312.661 | 664.343 | SHOULDER | 664.218 | 0.125 | 0.0156 | Unclassified | 00292.LAS / 00293/LAS |
| 1565 | 7397206.477 | 440310.561 | 664.295 | SHOULDER | 664.202 | 0.093 | 0.0086 | Unclassified | 00292.LAS / 00293/LAS |
| 1566 | 7397210.862 | 440308.509 | 664.242 | SHOULDER | 664.184 | 0.058 | 0.0034 | Unclassified | 00292.LAS / 00293/LAS |
| 1567 | 7397207.319 | 440299.952 | 664.128 | SHOULDER | 664.068 | 0.06 | 0.0036 | Unclassified | 00292.LAS / 00293/LAS |
| 1568 | 7397202.894 | 440301.932 | 664.216 | SHOULDER | 664.168 | 0.048 | 0.0023 | Unclassified | 00292.LAS / 00293/LAS |
| 1569 | 7397198.232 | 440303.962 | 664.273 | SHOULDER | 664.196 | 0.077 | 0.0059 | Unclassified | 00292.LAS / 00293/LAS |
| 1570 | 7397193.734 | 440306.001 | 664.323 | SHOULDER | 664.316 | 0.007 | 0.0000 | Unclassified | 00292.LAS / 00293/LAS |

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| 1571 | 7397189.247 | 440308.091 | 664.369 | SHOULDER | 664.271 | 0.098 | 0.0096 | Unclassified | 00292.LAS / 00293/LAS |
| 1572 | 7397184.341 | 440310.271 | 664.381 | SHOULDER | 664.319 | 0.062 | 0.0038 | Unclassified | 00292.LAS / 00293/LAS |
| 1573 | 7397180.049 | 440312.19 | 664.373 | SHOULDER | 664.379 | 0.006 | 0.0000 | Unclassified | 00292.LAS / 00293/LAS |
| 1574 | 7397175.171 | 440314.328 | 664.368 | SHOULDER | 664.412 | 0.044 | 0.0019 | Unclassified | 00292.LAS / 00293/LAS |
| 1575 | 7397170.412 | 440316.303 | 664.327 | SHOULDER | 664.325 | 0.002 | 0.0000 | Unclassified | 00292.LAS / 00293/LAS |
| 1576 | 7397165.652 | 440318.421 | 664.315 | SHOULDER | 664.245 | 0.07 | 0.0049 | Unclassified | 00292.LAS / 00293/LAS |
| 1577 | 7397160.849 | 440320.659 | 664.314 | SHOULDER | 664.272 | 0.042 | 0.0018 | Unclassified | 00292.LAS / 00293/LAS |
| 1578 | 7397155.82 | 440322.738 | 664.3 | SHOULDER | 664.323 | 0.023 | 0.0005 | Unclassified | 00292.LAS / 00293/LAS |
| 1579 | 7397150.904 | 440325.064 | 664.296 | SHOULDER | 664.331 | 0.035 | 0.0012 | Unclassified | 00292.LAS / 00293/LAS |
| 1580 | 7416687.562 | 441244.309 | 573.428 | SHOULDER | 573.37 | 0.058 | 0.0034 | Unclassified | 00289.LAS / 00290.LAS |
| 1581 | 7416692.843 | 441245.757 | 573.403 | SHOULDER | 573.322 | 0.081 | 0.0066 | Unclassified | 00289.LAS / 00290.LAS |
| 1582 | 7416697.861 | 441247.034 | 573.393 | SHOULDER | 573.335 | 0.058 | 0.0034 | Unclassified | 00289.LAS / 00290.LAS |
| 1583 | 7416702.844 | 441248.548 | 573.4 | SHOULDER | 573.322 | 0.078 | 0.0061 | Unclassified | 00289.LAS / 00290.LAS |
| 1584 | 7416707.654 | 441249.899 | 573.391 | SHOULDER | 573.295 | 0.096 | 0.0092 | Unclassified | 00289.LAS / 00290.LAS |
| 1585 | 7416712.525 | 441251.173 | 573.359 | SHOULDER | 573.253 | 0.106 | 0.0112 | Unclassified | 00289.LAS / 00290.LAS |
| 1586 | 7416716.941 | 441252.301 | 573.29 | SHOULDER | 573.246 | 0.044 | 0.0019 | Unclassified | 00289.LAS / 00290.LAS |
| 1587 | 7416721.732 | 441253.275 | 573.258 | SHOULDER | 573.186 | 0.072 | 0.0052 | Unclassified | 00289.LAS / 00290.LAS |
| 1588 | 7416726.423 | 441254.369 | 573.244 | SHOULDER | 573.192 | 0.052 | 0.0027 | Unclassified | 00289.LAS / 00290.LAS |
| 1589 | 7416731.344 | 441255.492 | 573.254 | SHOULDER | 573.187 | 0.067 | 0.0045 | Unclassified | 00289.LAS / 00290.LAS |
| 1590 | 7416736.145 | 441256.752 | 573.274 | SHOULDER | 573.212 | 0.062 | 0.0038 | Unclassified | 00289.LAS / 00290.LAS |
| 1591 | 7416741.094 | 441257.948 | 573.267 | SHOULDER | 573.204 | 0.063 | 0.0040 | Unclassified | 00289.LAS / 00290.LAS |
| 1592 | 7416745.868 | 441259.435 | 573.314 | SHOULDER | 573.198 | 0.116 | 0.0135 | Unclassified | 00289.LAS / 00290.LAS |
| 1593 | 7416748.33 | 441250.069 | 572.937 | SHOULDER | 572.779 | 0.158 | 0.0250 | Unclassified | 00289.LAS / 00290.LAS |
| 1594 | 7416743.039 | 441249.188 | 573.061 | SHOULDER | 572.917 | 0.144 | 0.0207 | Unclassified | 00289.LAS / 00290.LAS |
| 1595 | 7416738.157 | 441247.843 | 573.057 | SHOULDER | 572.954 | 0.103 | 0.0106 | Unclassified | 00289.LAS / 00290.LAS |
| 1596 | 7416733.729 | 441246.73 | 573.057 | SHOULDER | 572.988 | 0.069 | 0.0048 | Unclassified | 00289.LAS / 00290.LAS |
| 1597 | 7416728.923 | 441245.49 | 573.084 | SHOULDER | 572.978 | 0.106 | 0.0112 | Unclassified | 00289.LAS / 00290.LAS |
| 1598 | 7416723.788 | 441244.432 | 573.102 | SHOULDER | 573.006 | 0.096 | 0.0092 | Unclassified | 00289.LAS / 00290.LAS |
| 1599 | 7416719.153 | 441243.081 | 573.067 | SHOULDER | 572.88 | 0.187 | 0.0350 | Unclassified | 00289.LAS / 00290.LAS |
| 1600 | 7416714.554 | 441242.058 | 573.088 | SHOULDER | 572.998 | 0.09 | 0.0081 | Unclassified | 00289.LAS / 00290.LAS |
| 1601 | 7416709.779 | 441241.063 | 573.133 | SHOULDER | 573.017 | 0.116 | 0.0135 | Unclassified | 00289.LAS / 00290.LAS |
| 1602 | 7416704.997 | 441239.826 | 573.102 | SHOULDER | 572.943 | 0.159 | 0.0253 | Unclassified | 00289.LAS / 00290.LAS |
| 1603 | 7416700.059 | 441238.513 | 573.109 | SHOULDER | 573.014 | 0.095 | 0.0090 | Unclassified | 00289.LAS / 00290.LAS |
| 1604 | 7416694.926 | 441237.095 | 573.127 | SHOULDER | 573.032 | 0.095 | 0.0090 | Unclassified | 00289.LAS / 00290.LAS |

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| 1605 | 7416689.924 | 441235.7 | 573.136 | SHOULDER | 573.077 | 0.059 | 0.0035 | Unclassified | 00289.LAS / 00290.LAS |
| 1606 | 7433397.679 | 447263.235 | 731.851 | SHOULDER | 731.76 | 0.091 | 0.0083 | Unclassified | 00276.LAS / 00277.LAS |
| 1607 | 7433401.928 | 447265.774 | 732.069 | SHOULDER | 731.946 | 0.123 | 0.0151 | Unclassified | 00276.LAS / 00277.LAS |
| 1608 | 7433406.192 | 447268.113 | 732.276 | SHOULDER | 732.154 | 0.122 | 0.0149 | Unclassified | 00276.LAS / 00277.LAS |
| 1609 | 7433410.664 | 447270.489 | 732.481 | SHOULDER | 732.228 | 0.253 | 0.0640 | Unclassified | 00276.LAS / 00277.LAS |
| 1610 | 7433415.18 | 447272.778 | 732.742 | SHOULDER | 732.649 | 0.093 | 0.0086 | Unclassified | 00276.LAS / 00277.LAS |
| 1611 | 7433419.69 | 447275.113 | 732.993 | SHOULDER | 732.788 | 0.205 | 0.0420 | Unclassified | 00276.LAS / 00277.LAS |
| 1612 | 7433424.12 | 447277.581 | 733.231 | SHOULDER | 733.146 | 0.085 | 0.0072 | Unclassified | 00276.LAS / 00277.LAS |
| 1613 | 7433428.461 | 447279.871 | 733.445 | SHOULDER | 733.267 | 0.178 | 0.0317 | Unclassified | 00276.LAS / 00277.LAS |
| 1614 | 7433432.959 | 447282.125 | 733.677 | SHOULDER | 733.553 | 0.124 | 0.0154 | Unclassified | 00276.LAS / 00277.LAS |
| 1615 | 7433437.617 | 447284.57 | 733.944 | SHOULDER | 733.771 | 0.173 | 0.0299 | Unclassified | 00276.LAS / 00277.LAS |
| 1616 | 7433441.867 | 447286.894 | 734.179 | SHOULDER | 734.032 | 0.147 | 0.0216 | Unclassified | 00276.LAS / 00277.LAS |
| 1617 | 7433446.428 | 447289.199 | 734.451 | SHOULDER | 734.401 | 0.05 | 0.0025 | Unclassified | 00276.LAS / 00277.LAS |
| 1618 | 7433451.023 | 447291.811 | 734.68 | SHOULDER | 734.614 | 0.066 | 0.0044 | Unclassified | 00276.LAS / 00277.LAS |
| 1619 | 7433455.129 | 447283.975 | 734.377 | SHOULDER | 734.283 | 0.094 | 0.0088 | Unclassified | 00276.LAS / 00277.LAS |
| 1620 | 7433450.879 | 447281.571 | 734.143 | SHOULDER | 734.015 | 0.128 | 0.0164 | Unclassified | 00276.LAS / 00277.LAS |
| 1621 | 7433446.216 | 447279.144 | 733.939 | SHOULDER | 733.87 | 0.069 | 0.0048 | Unclassified | 00276.LAS / 00277.LAS |
| 1622 | 7433441.71 | 447276.914 | 733.712 | SHOULDER | 733.66 | 0.052 | 0.0027 | Unclassified | 00276.LAS / 00277.LAS |
| 1623 | 7433437.081 | 447274.406 | 733.468 | SHOULDER | 733.326 | 0.142 | 0.0202 | Unclassified | 00276.LAS / 00277.LAS |
| 1624 | 7433432.301 | 447272.423 | 733.286 | SHOULDER | 733.184 | 0.102 | 0.0104 | Unclassified | 00276.LAS / 00277.LAS |
| 1625 | 7433428.273 | 447269.795 | 732.953 | SHOULDER | 732.813 | 0.14 | 0.0196 | Unclassified | 00276.LAS / 00277.LAS |
| 1626 | 7433424.187 | 447267.436 | 732.77 | SHOULDER | 732.656 | 0.114 | 0.0130 | Unclassified | 00276.LAS / 00277.LAS |
| 1627 | 7433419.585 | 447264.918 | 732.525 | SHOULDER | 732.398 | 0.127 | 0.0161 | Unclassified | 00276.LAS / 00277.LAS |
| 1628 | 7433415.173 | 447262.579 | 732.287 | SHOULDER | 732.184 | 0.103 | 0.0106 | Unclassified | 00276.LAS / 00277.LAS |
| 1629 | 7433410.615 | 447260.053 | 732.042 | SHOULDER | 731.96 | 0.082 | 0.0067 | Unclassified | 00276.LAS / 00277.LAS |
| 1630 | 7433406.004 | 447257.924 | 731.858 | SHOULDER | 731.812 | 0.046 | 0.0021 | Unclassified | 00276.LAS / 00277.LAS |
| 1631 | 7433401.609 | 447255.502 | 731.568 | SHOULDER | 731.508 | 0.06 | 0.0036 | Unclassified | 00276.LAS / 00277.LAS |