

## General Information

### Mission Information

|                  |                     |
|------------------|---------------------|
| Project name     | 13284-1909_20190313 |
| Processing date  | 2019-03-14 23:43:04 |
| Mission date     | 2019-03-13 12:06:37 |
| Mission duration | 01:06:04.940        |
| Processing mode  | IN-Fusion SmartBase |
| GPS Station      | ASB                 |

### Rover Hardware Information

|               |                          |
|---------------|--------------------------|
| Product       | POS AV 610 VER6 HW2.5-12 |
| Serial number | S/N9865                  |
| IMU type      | 57                       |
| Receiver type | BD982                    |
| Antenna type  | AV37                     |

## Project File List

### Rover Data Files

| File name                   | File type |
|-----------------------------|-----------|
| 190313_120618_INS-GPS_1.raw | POS Data  |

### Input Files

| File Name       | File type                   |
|-----------------|-----------------------------|
| Ephm0720.19g    | GLONASS Broadcast Ephemeris |
| Ephm0720.19n    | GPS Broadcast Ephemeris     |
| KYGB072A.19g    | GLONASS Broadcast Ephemeris |
| WVLA072A.19o    | GNSS SingleBase             |
| WVSA072A.19o    | GNSS SingleBase             |
| WVHU072A.19o    | GNSS SingleBase             |
| KYPA072A.19o    | GNSS SingleBase             |
| KYTL072A.19o    | GNSS SingleBase             |
| WVCH072A.19o    | GNSS SingleBase             |
| WVSW072A.19o    | GNSS SingleBase             |
| var10721.19o    | GNSS SingleBase             |
| var1072m00.19o  | GNSS SingleBase             |
| var1072n.19o    | GNSS SingleBase             |
| var1072o.19o    | GNSS SingleBase             |
| var1072p.19o    | GNSS SingleBase             |
| wvbf0721.19o    | GNSS SingleBase             |
| wvbf072m00.19o  | GNSS SingleBase             |
| wvbf072n.19o    | GNSS SingleBase             |
| wvbf072o.19o    | GNSS SingleBase             |
| wvbf072p.19o    | GNSS SingleBase             |
| igu20442_00.sp3 | GPS Precise Ephemeris       |
| igu20442_06.sp3 | GPS Precise Ephemeris       |
| igu20442_12.sp3 | GPS Precise Ephemeris       |
| igu20442_18.sp3 | GPS Precise Ephemeris       |
| igu20443_00.sp3 | GPS Precise Ephemeris       |
| igu20443_06.sp3 | GPS Precise Ephemeris       |
| igu20443_12.sp3 | GPS Precise Ephemeris       |
| igu20443_18.sp3 | GPS Precise Ephemeris       |
| igu20444_00.sp3 | GPS Precise Ephemeris       |
| igu20444_06.sp3 | GPS Precise Ephemeris       |

### Output Files

| Filename          | File type            |
|-------------------|----------------------|
| sbet_20190313.out | SBET Trajectory File |

## Rover Data Summary

|  |  |       |       |
|--|--|-------|-------|
| First raw data file                                      | 190313_120618_INS-GPS_1.raw  |       |       |
| Last raw data file                                       | 190313_120618_INS-GPS_1.raw  |       |       |
| Start GPS week   | 2044   |       |       |
| Start time   | 302778.956 (3/13/2019 12:06:18 PM)   |       |       |
| End time   | 310563.798 (3/13/2019 2:16:03 PM)  |       |       |
| Start of fine alignment                                  | 304824.038 (3/13/2019 12:40:24 PM)   |       |       |
| Available subsystems                                     | Primary GNSS, Gimbal, IMU  |       |       |
| POS Event Input  | Event 1 Input, Event 2 Input, Event 3 Input, Event 4 Input, Event 5 Input, Event 6 Input |       |       |
| Correction data  | None   |       |       |
| <b>IMU Installation Lever Arms &amp; Mounting Angles</b> |  |       |       |
| Gimbal to IMU lever arm [m]                              | 0.000  | 0.000 | 0.000 |
| Gimbal to IMU mounting angles [deg]                      | 0.000  | 0.000 | 0.000 |
| Gimbal to Primary GNSS lever arm [m]                     | 0.000  | 0.000 | 0.000 |
| Gimbal to Primary GNSS lever arm std dev [m]             | -1.000   |       |       |
| Aircraft to Reference mounting angles [deg]              | 0.000  | 0.000 | 0.000 |

## Raw Data QC

### Raw IMU Import QC Summary

|                         |                    |
|-------------------------|--------------------|
| IMU data input file     | imu_Mission 1.dat  |
| IMU data check log file | imudt_20190313.log |
| IMU Records Processed   | 1556645            |
| Termination Status      | Normal             |
| IMU Anomalies           | 0                  |

## SmartBase Processing Summary

### Smart Select Options

|                              |       |
|------------------------------|-------|
| Archive enabled              | False |
| User database enabled        | False |
| Include high-rate data sites | False |
| Target GNSS Selection        | GNSS  |

### Basestation Selection

| Date | ID | Dist | Data Type | Rate | Service | Database | Status |
|------|----|------|-----------|------|---------|----------|--------|
|------|----|------|-----------|------|---------|----------|--------|

### SmartBase Results

|   |               |
|---|---------------|
| SmartBase status                          |               |
| Primary station Id                        |               |
| Primary station data rate [sec]           | 0.0           |
| VRS/ASB generation rate [sec]             | 0.0           |
| VRS/ASB timespan                          |               |
| Number of reference stations              | 0             |
| Primary station GPS measurement usage [%] | 0.0           |
| Average number of satellites per epoch    | 0.0           |
| Max number of GPS stations used           | 0             |
| Min number of GPS stations used           | 0             |
| Total full data gap [sec]                 | 0             |
| Total individual satellite data gap [sec] | 0             |
| GPS precise vs. broadcast ephemeris used  | 0.0 % / 0.0 % |
| Termination Status                        |               |

## **SmartBase Quality Check**

## GNSS QC

### GNSS QC Statistics

| Statistics           | Min     | Max    | Mean        |
|----------------------|---------|--------|-------------|
| Baseline length [km] | 5.71    | 149.62 |             |
| Number of GPS SV     | 8       | 11     | 10          |
| Number of GLONASS SV | 0       | 6      | 5           |
| Number of QZSS SV    | 0       | 0      | 0           |
| Number of BEIDOU SV  | 0       | 0      | 0           |
| Total number of SV   | 9       | 16     | 14          |
| PDOP                 | 1.23    | 1.90   | 1.39        |
| QC Solution Gaps     | 1.00    | 1.00   |             |
| Solution Type        | Fixed   | Float  | No solution |
| Epoch (s)            | 7734.00 | 0.00   | 1.00        |
| Percentage           | 99.99   | 0.00   | 0.01        |

## GNSS-Inertial Processor Configuration

|  |                                    |       |        |
|--|------------------------------------|-------|--------|
| Processing mode                              | IN-Fusion SmartBase                |       |        |
| Stabilized mount                             | True                               |       |        |
| Base station                                 | ASB                                |       |        |
| Processing start time                        | 304823.428 (3/13/2019 12:40:23 PM) |       |        |
| Processing end time                          | 308788.368 (3/13/2019 1:46:28 PM)  |       |        |
| Initial attitude source                      | Real-Time VNAV/RNAV Attitude       |       |        |
| IMU Sensor Context                           | Processing with Onboard IMU        |       |        |
| Gimbal to IMU lever arm [m]                  | 0.000                              | 0.000 | 0.000  |
| Gimbal to IMU mounting angles [deg]          | 0.000                              | 0.000 | 0.000  |
| Gimbal to Primary GNSS lever arm [m]         | -0.016                             | 0.008 | -0.680 |
| Gimbal to Primary GNSS lever arm std dev [m] | 0.030                              | 0.030 | 0.030  |
| Aircraft to Reference mounting angles [deg]  | 0.000                              | 0.000 | 0.000  |