



Data Collection & Product Report for 2022 Project Mapping Koyukuk River System at Huslia, AK

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Data Collection Summary:

Collection Dates, Flights:	3 flights on August 21–23, 2022 (DOY 233–236)
Aircraft, Equipment:	Robinson R44 II (N2413X), RIEGL VQ-580 II (H2225798)
Flight Plan Parameters:	Flying Height: 600/850 m AGL, Speed: 70 kt, Overlap: 50%
Equipment Parameters:	PRR: 300 kHz, LPS: 155–160/s, Scan Angle: $\pm 37.5^\circ$
Collected Area:	292.8 km ²

GNSS Reference Station Summary:

Station Name	Operating Agency	Coordinates (ITRF2014 / Ellipsoid)
STA 1 F1	NCALM	65°41'47.35907" N, 156°21'40.93020" W, 74.893 m
STA 2 F1	NCALM	65°41'47.35900" N, 156°21'40.70146" W, 75.138 m
STA 1 F2	NCALM	65°41'47.45101" N, 156°21'40.67320" W, 74.840 m
STA 1 F3	NCALM	65°41'47.37847" N, 156°21'40.80251" W, 74.911 m
STA 2 F3	NCALM	65°41'47.23422" N, 156°21'40.77983" W, 75.144 m

Data Processing Summary:

Data Adjustments:	RIPRECISION least-squares best-fit adjustment to trajectory, north area (lines 4–20) z-shift of +0.69 m
Ground Classification:	Two iterations of default ground determination, manual classification of misclassified ground
Elevation Model Generation:	Kriging

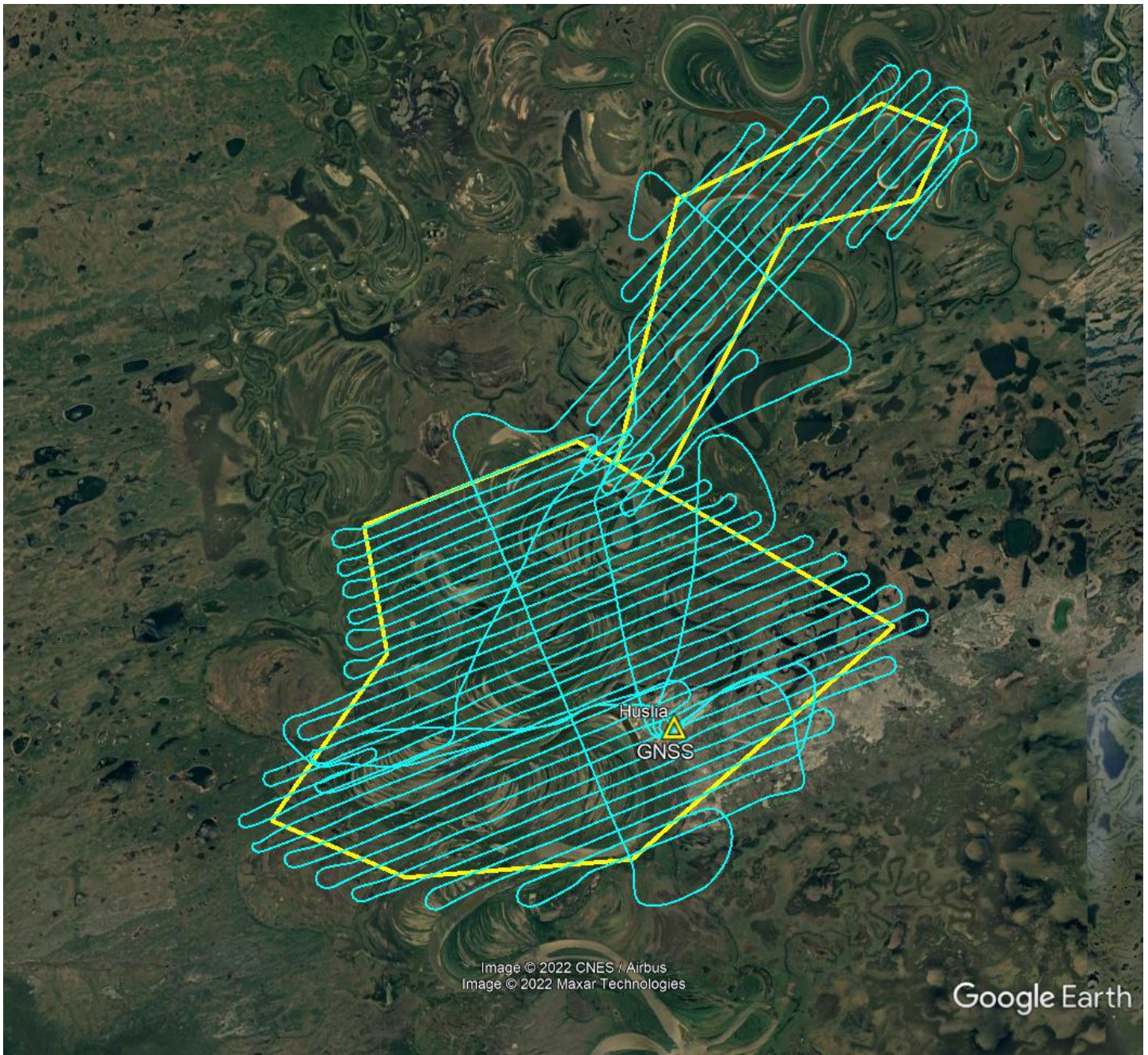
Data Accuracy Summary

Strip-to-Strip Average	0.092 m
GCP Residual RMS	N/A

Data Product Summary:

Horizontal / Vertical Datum:	WGS84 (ITRF2014) epoch 2022.64 / ellipsoid
Projection / Units:	UTM Zone 4N / meters
Point Cloud Tiles:	1000-m \times 1000-m tiles in LAS format (Version 1.4) with non-ground (1), ground (2), low point (7), and high point (18) returns
Bare-Earth Elevation Model:	GeoTIFF @ 1-m resolution from classified ground and water surface
First-Surface Elevation Model:	GeoTIFF @ 1-m resolution with canopy and buildings included

Area of Interest:



Location of survey polygons, aircraft trajectories, and GNSS reference stations

The requested survey area consisted of two adjacent polygons located over Huslia, AK. The polygons enclosed approximately 232.8 km² (89.9 mi²).