



Data Collection & Product Report for 2018 Seed Project: Variations in Bedrock Cliff Morphologies with Fracture Density and Incision Rate Along a Transient Stream

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Data Collection Summary:

Collection Dates, Flights:	1 flight on September 23, 2019 (DOY 266)
Aircraft, Equipment:	Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: 500 m AGL, Speed: 140 kt, Overlap: 50%
Equipment Parameters:	PRF: 75 kHz, Scan Frequency: 32 Hz, Scan Angle: $\pm 25^\circ$
Collected Area:	56.3 km ²

GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates (NAD83(2011) epoch 2010.00/Ellipsoid)
GSE3	NCALM	45°21'59.62248" N, 113°24'32.79323" W, 1963.396 m
GSE4	NCALM	45°15'12.41302" N, 112°33'18.57960" W, 1579.737 m
IDSN	UNAVCO	45°11'31.44485" N, 113°53'48.90677" W, 1185.168 m

Data Processing Summary:

Scan Angle Cutoff:	$\pm 1^\circ$
Intensity Normalization:	500 m
Data Adjustments:	Line-by-line/channel-by-channel roll/elevation correction, project elevation shift of -17.4 cm
Ground Classification:	Two iterations of moderate ground determination
Elevation Model Generation:	Elevation values calculated from Kriging

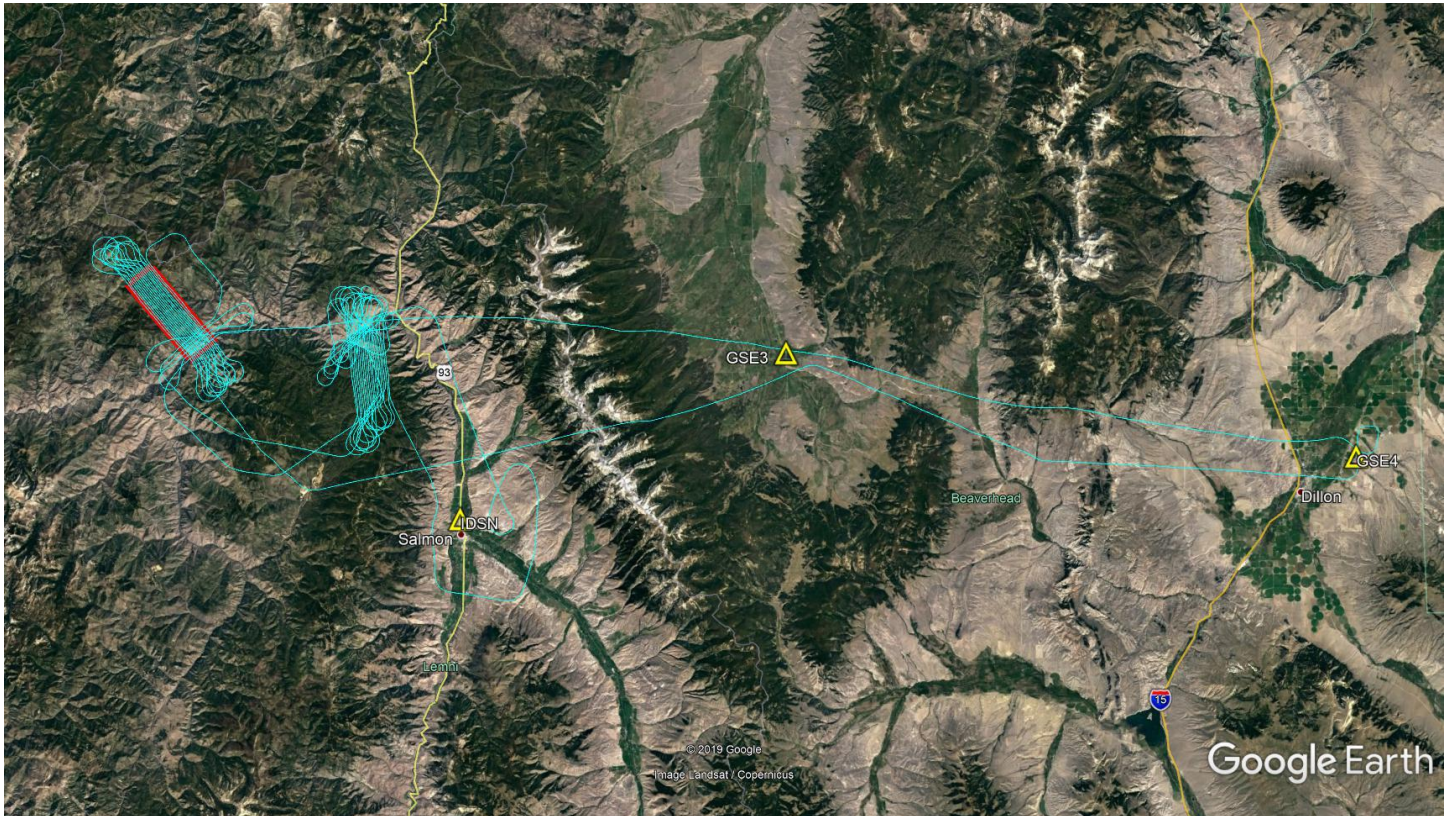
Data Accuracy Summary

Strip-to-Strip Average	0.089 m
GCP Residual RMS	N/A

Data Product Summary:

Horizontal / Vertical Datum:	NAD83(2011) epoch 2010.00 / ellipsoid
Projection / Units:	UTM Zone 12N / meters
Point Cloud Tiles:	1000-m \times 1000-m tiles in LAS format (Version 1.4) with non-ground (1), ground (2), and outlier (7) returns
Bare-Earth Elevation Model:	ESRI FLT format @ 1-m resolution from classified ground points
Bare-Earth Hillshade:	ESRI-created raster @ 1-m resolution
First-Surface Elevation Model:	ESRI FLT format @ 1-m resolution with canopy
First-Surface Hillshade:	ESRI-created raster @ 1-m resolution

Area of Interest:



Location of survey polygon, aircraft trajectory, and GNSS reference stations

The requested survey area consisted of one polygon located at Boulder Creek, northwest of Salmon, ID. The polygon enclosed approximately 39.9 km² (15.4 mi²).