

Agisoft Metashape

Processing Report

11 December 2023



Survey Data

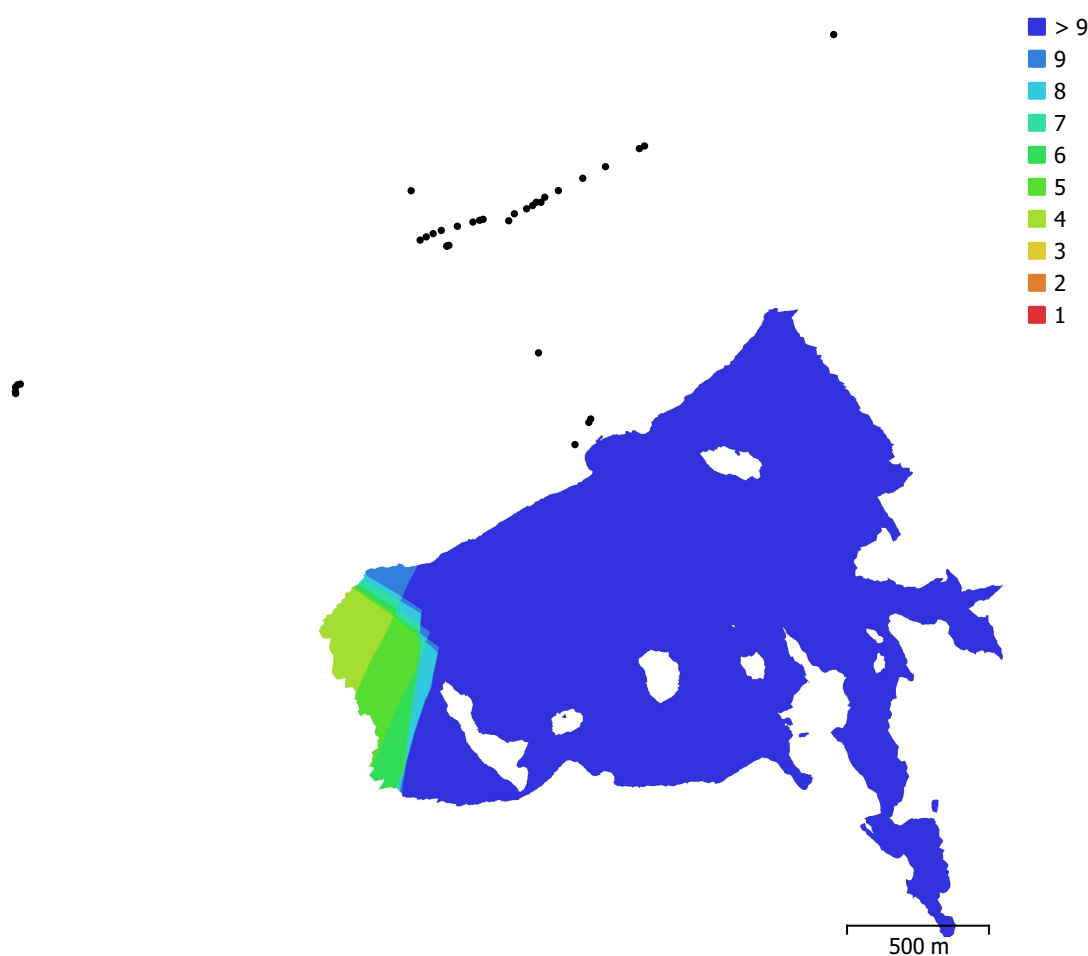


Fig. 1. Camera locations and image overlap.

Number of images:	37	Camera stations:	34
Flying altitude:	1.08 km	Tie points:	7,816
Ground resolution:	18.8 cm/pix	Projections:	37,682
Coverage area:	2.2 km ²	Reprojection error:	1.23 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
LEICA SL2, Summicron-...	4182 x 2791	50 mm	8.61 x 8.61 μm	No
DC-TZ202 (8.8mm)	5472 x 3648	8.8 mm	2.41 x 2.41 μm	No
DC-TZ202 (9.1mm)	5472 x 3648	9.1 mm	2.39 x 2.39 μm	No
LEICA SL2, Summicron-...	4184 x 2792	50 mm	8.6 x 8.6 μm	No
NIKON Z 8, 0.0 mm f/0.0	8256 x 5504	unknown	4.35 x 4.35 μm	No

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
NIKON D850, 24.0-70.0 ...	8256 x 5504	32 mm	4.35 x 4.35 μm	No
NIKON D850, 24.0-70.0 ...	8256 x 5504	48 mm	4.35 x 4.35 μm	No
NIKON D850, 24.0-70.0 ...	8256 x 5504	42 mm	4.35 x 4.35 μm	No
NIKON D850, 24.0-70.0 ...	8256 x 5504	44 mm	4.35 x 4.35 μm	No
NIKON D850, 24.0-70.0 ...	8256 x 5504	50 mm	4.35 x 4.35 μm	No
NIKON D850, 24.0-70.0 ...	8256 x 5504	38 mm	4.35 x 4.35 μm	No
NIKON D850, 24.0-70.0 ...	8256 x 5504	31 mm	4.35 x 4.35 μm	No

Table 1. Cameras.

Digital Elevation Model

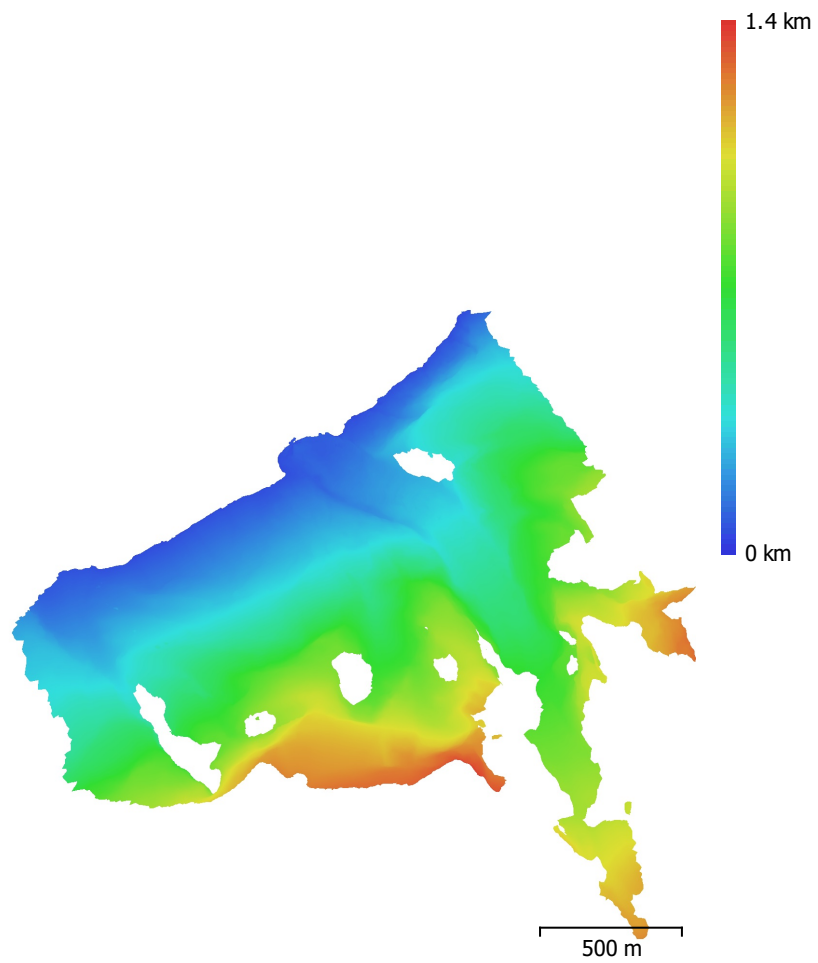


Fig. 14. Reconstructed digital elevation model.

Resolution: 75 cm/pix
Point density: 1.78 points/m²

Processing Parameters

General

Cameras	37
Aligned cameras	34
Coordinate system	WGS 84 / NSIDC Sea Ice Polar Stereographic North (EPSG::3413)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	7,816 of 29,475
RMS reprojection error	0.177695 (1.22663 pix)
Max reprojection error	0.702485 (31.5737 pix)
Mean key point size	5.34841 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	4.68594

Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	Source
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	No
Guided image matching	Yes
Adaptive camera model fitting	Yes
Matching time	40 seconds
Matching memory usage	567.95 MB
Alignment time	33 seconds
Alignment memory usage	396.56 MB

Optimization parameters

Parameters	f, cx, cy, k1, k2, p1, p2
Adaptive camera model fitting	Yes
Optimization time	1 seconds
Date created	2023:09:27 16:32:05
Software version	2.0.1.15986
File size	2.38 MB

Depth Maps

Count	34
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Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	39 seconds
Memory usage	1.50 GB
Date created	2023:09:27 16:36:02
Software version	2.0.1.15986
File size	74.51 MB

Point Cloud

Points	6,441,148
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Point attributes

Position	
Color	3 bands, uint8

Normal	
Point classes	
Created (never classified)	6,441,148
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	39 seconds
Memory usage	1.50 GB
Point cloud generation parameters	
Processing time	40 seconds
Memory usage	4.68 GB
Date created	2023:09:27 16:36:42
Software version	2.0.1.15986
File size	93.71 MB
Model	
Faces	3,123,447
Vertices	1,563,271
Vertex colors	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	39 seconds
Memory usage	1.50 GB
Point cloud generation parameters	
Processing time	40 seconds
Memory usage	4.68 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Point cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 minutes 18 seconds
Memory usage	3.65 GB
Date created	2023:09:27 16:56:48
Software version	2.0.1.15986
File size	67.05 MB
DEM	
Size	3,210 x 2,954
Coordinate system	WGS 84 / NSIDC Sea Ice Polar Stereographic North (EPSG::3413)
Reconstruction parameters	
Source data	Mesh
Interpolation	Disabled
Processing time	4 seconds
Memory usage	306.25 MB
Date created	2023:09:27 17:01:08
Software version	2.0.1.15986
File size	20.80 MB
Orthomosaic	
Size	11,941 x 10,988
Coordinate system	WGS 84 / NSIDC Sea Ice Polar Stereographic North (EPSG::3413)
Colors	3 bands, uint8
Reconstruction parameters	
Blending mode	Mosaic
Surface	DEM

Enable hole filling	Yes
Enable ghosting filter	No
Processing time	1 minutes 19 seconds
Memory usage	3.34 GB
Date created	2023:09:27 17:13:03
Software version	2.0.1.15986
File size	979.42 MB

System

Software name	Agisoft Metashape Professional
Software version	2.0.1 build 15986
OS	Windows 64 bit
RAM	63.70 GB
CPU	12th Gen Intel(R) Core(TM) i9-12900K
GPU(s)	NVIDIA GeForce RTX 3080