

Agisoft Metashape

Processing Report

Rec Unc: 15

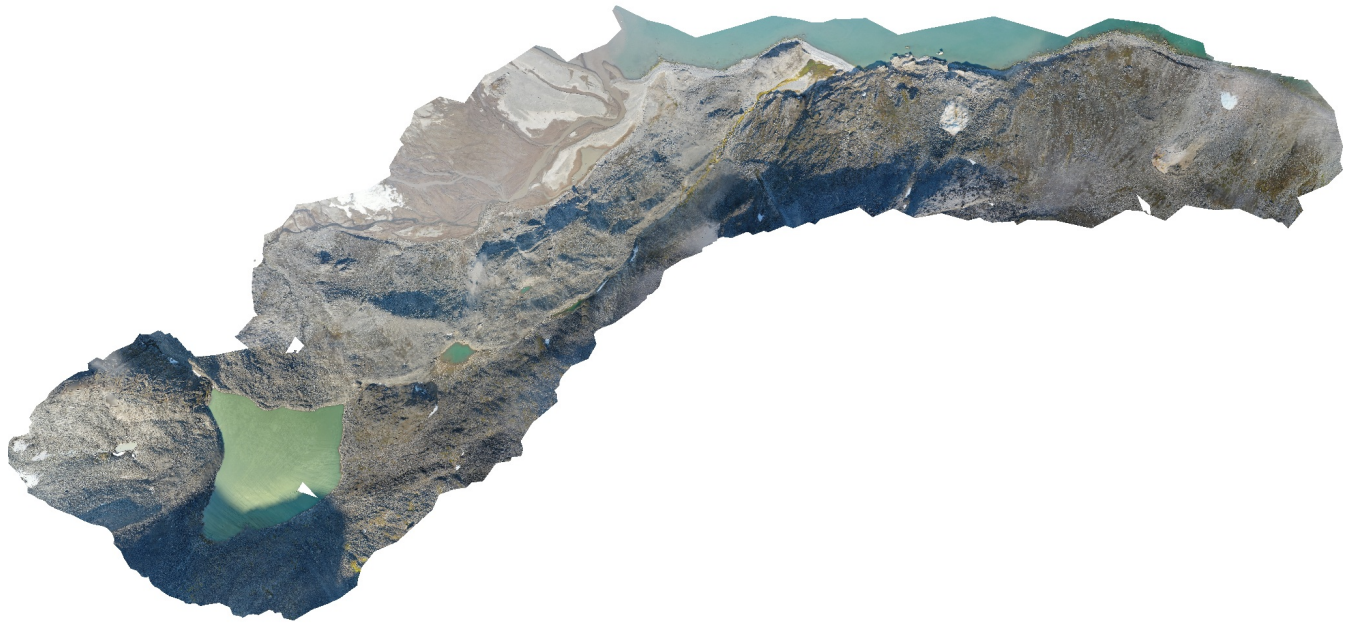
Proj Acc: 3

Rep Err: 0.3

PcConf: 5

MeshCC: 99%

21 May 2024



Survey Data

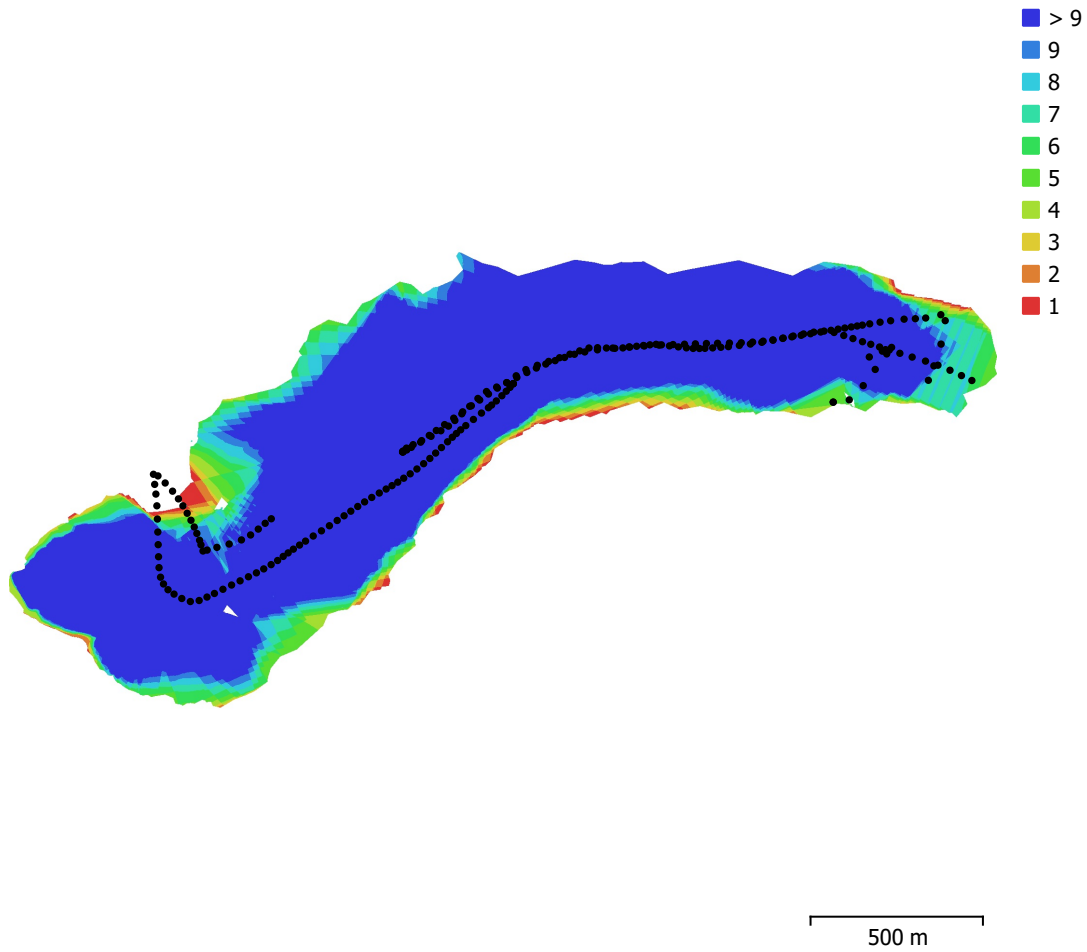


Fig. 1. Camera locations and image overlap.

Number of images:	223	Camera stations:	223
Flying altitude:	214 m	Tie points:	389,903
Ground resolution:	5.74 cm/pix	Projections:	1,392,558
Coverage area:	1.48 km ²	Reprojection error:	0.218 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
Test_Pro (10.26mm)	5472 x 3648	10.26 mm	2.41 x 2.41 μ m	No

Table 1. Cameras.

Camera Calibration

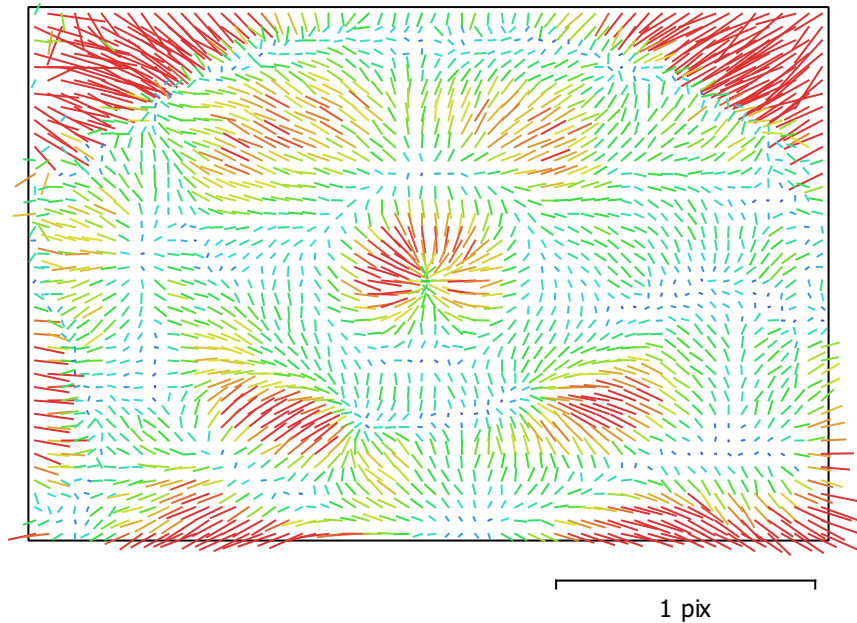


Fig. 2. Image residuals for Test_Pro (10.26mm).

Test_Pro (10.26mm)

223 images

Type	Resolution	Focal Length	Pixel Size
Frame	5472 x 3648	10.26 mm	2.41 x 2.41 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	4378.94	0.046	1.00	-0.15	-0.69	0.11	0.07	-0.08	-0.01	-0.39
Cx	-16.1712	0.026		1.00	0.07	0.02	-0.02	0.02	0.70	0.00
Cy	-51.8358	0.057			1.00	-0.15	0.04	-0.01	0.05	0.76
K1	0.0146602	1.5e-05				1.00	-0.91	0.84	-0.01	-0.20
K2	0.0234668	6.5e-05					1.00	-0.98	0.00	0.06
K3	-0.0245602	8.7e-05						1.00	-0.00	-0.03
P1	-0.000646736	1.4e-06							1.00	0.09
P2	-0.00262879	2.7e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

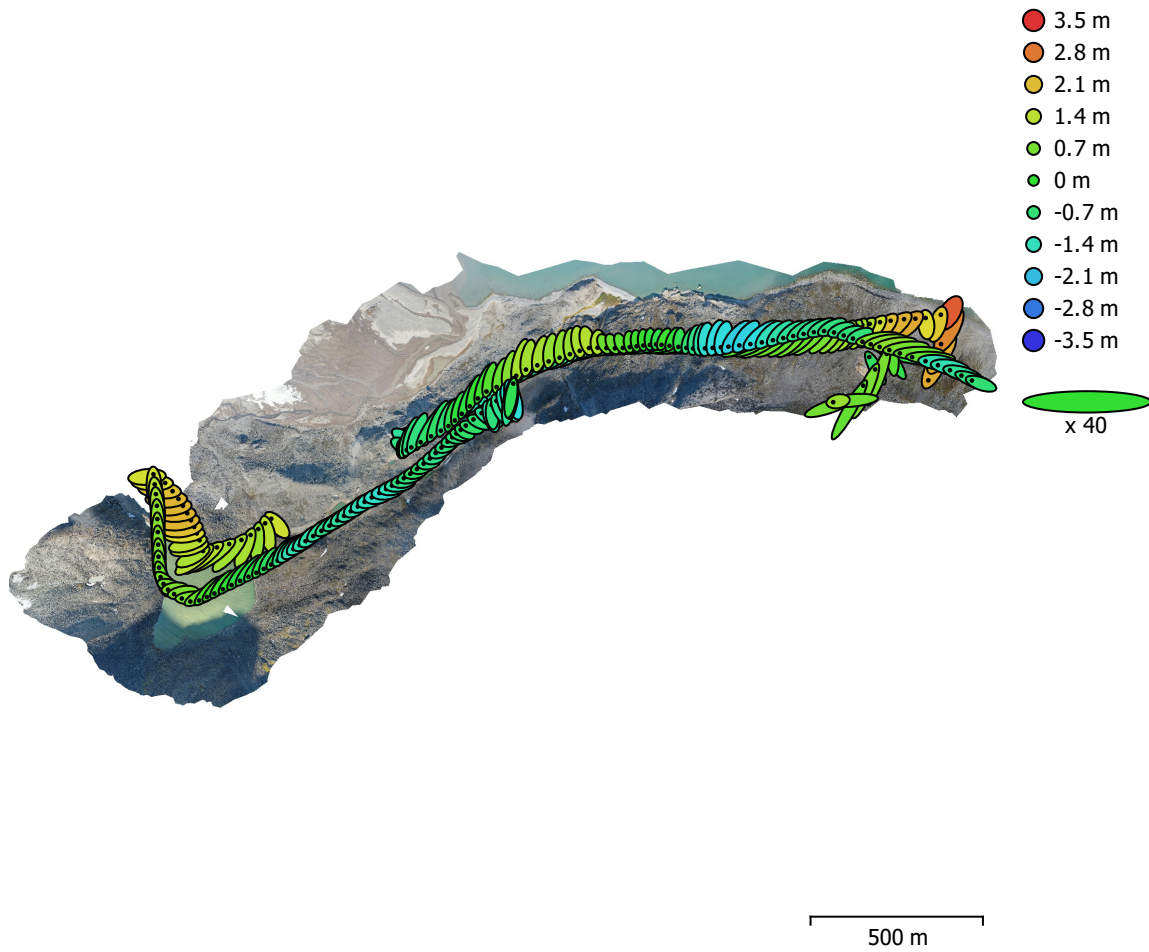


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.

Estimated camera locations are marked with a black dot.

X error (m)	Y error (m)	Z error (m)	XY error (m)	Total error (m)
1.2549	1.18035	1.07666	1.72279	2.03155

Table 3. Average camera location error.

X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

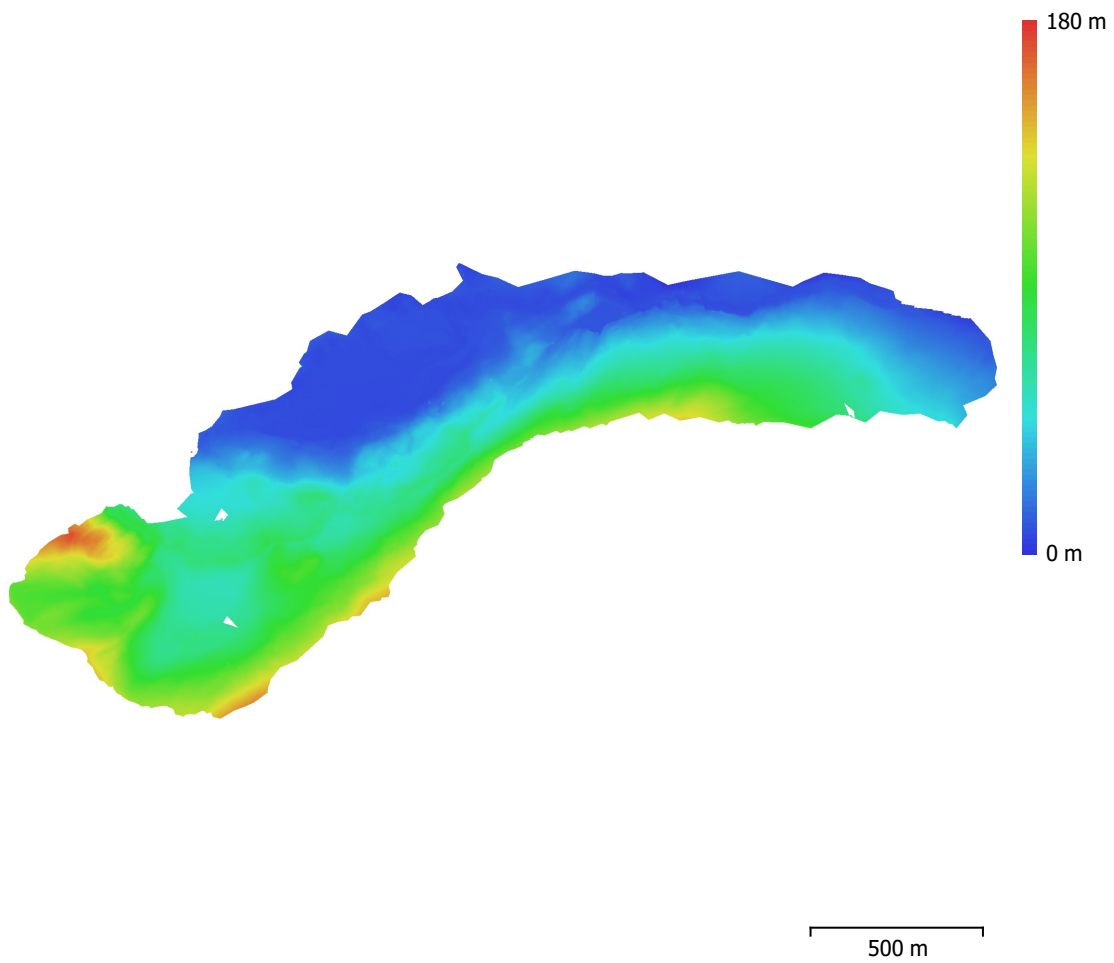


Fig. 4. Reconstructed digital elevation model.

Resolution: 23 cm/pix
Point density: 18.9 points/m²

Processing Parameters

General

Cameras	223
Aligned cameras	223
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	389,903 of 1,585,959
RMS reprojection error	0.138974 (0.217665 pix)
Max reprojection error	0.299999 (1.77875 pix)
Mean key point size	1.55789 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.27927

Alignment parameters

Accuracy	Highest
Generic preselection	Yes
Reference preselection	Source
Key point limit	60,000
Key point limit per Mpx	1,000
Tie point limit	0
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	4 minutes 20 seconds
Matching memory usage	755.31 MB
Alignment time	5 minutes 30 seconds
Alignment memory usage	2.24 GB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	6 seconds
Date created	2024:05:21 13:11:21
Software version	2.1.0.17532
File size	92.85 MB

Depth Maps

Count	223
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Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	3 minutes 20 seconds
Memory usage	1.26 GB
Date created	2024:05:21 13:44:53
Software version	2.1.0.17532
File size	395.51 MB

Point Cloud

Points	19,217,656
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Point attributes

Color	3 bands, uint8
Normal	

Confidence	6 - 41
Point classes	
Created (never classified)	19,217,656
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	3 minutes 20 seconds
Memory usage	1.26 GB
Point cloud generation parameters	
Processing time	8 minutes 48 seconds
Memory usage	4.13 GB
Date created	2024:05:21 13:53:41
Software version	2.1.0.17532
File size	477.77 MB
Model	
Faces	1,283,714
Vertices	642,075
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096 x 10, 4 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	3 minutes 20 seconds
Memory usage	1.26 GB
Point cloud generation parameters	
Processing time	8 minutes 48 seconds
Memory usage	4.13 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Point cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	5 minutes 57 seconds
Memory usage	5.76 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	1 minutes 49 seconds
UV mapping memory usage	2.77 GB
Blending time	1 minutes 33 seconds
Blending memory usage	5.40 GB
Blending GPU memory usage	4.40 GB
Date created	2024:05:21 14:51:10
Software version	2.1.0.17532
File size	271.66 MB
System	
Software name	Agisoft Metashape Professional
Software version	2.1.0 build 17532
OS	Windows 64 bit
RAM	127.78 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz

GPU(s)

GeForce RTX 2080