

Sandsteinfjellet

Dense cloud confidence 3-255
Connected component size 99%

23 February 2022



Survey Data

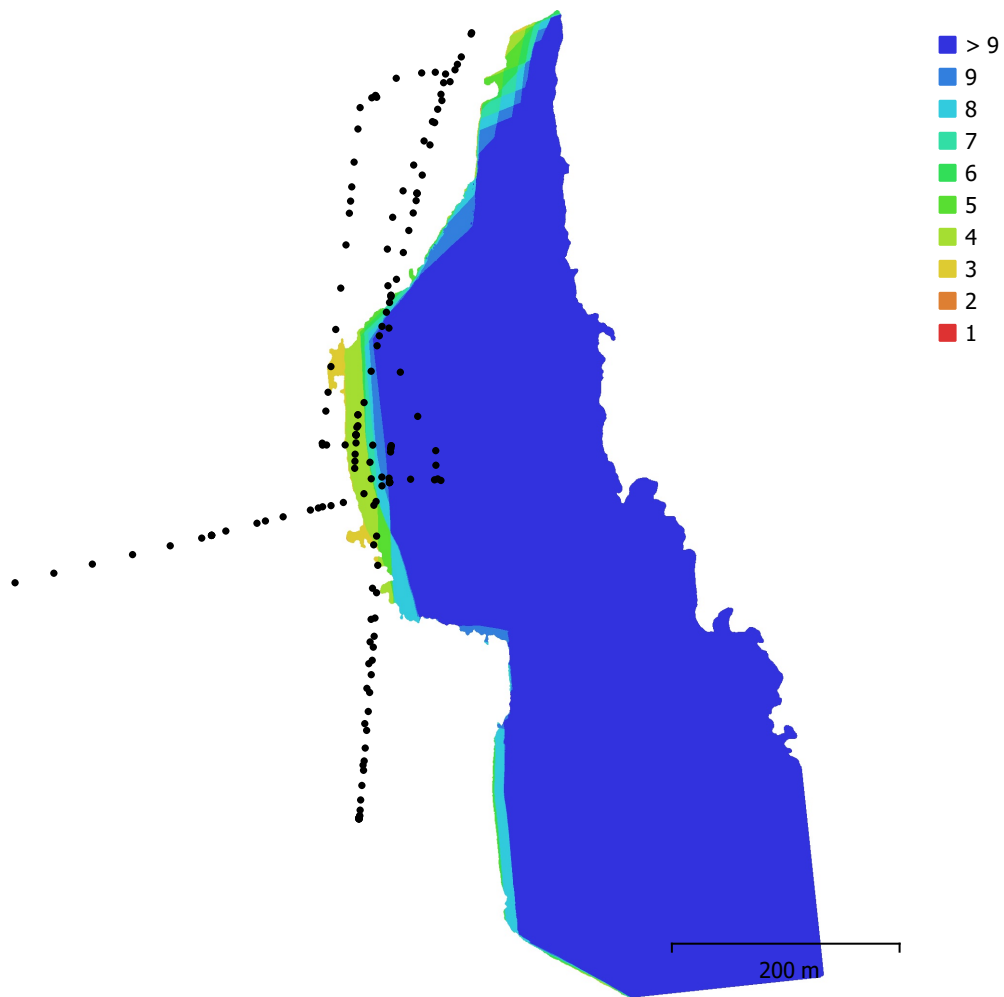


Fig. 1. Camera locations and image overlap.

Number of images:	161	Camera stations:	161
Flying altitude:	171 m	Tie points:	53,112
Ground resolution:	3.94 cm/pix	Projections:	453,530
Coverage area:	0.172 km ²	Reprojection error:	1.18 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

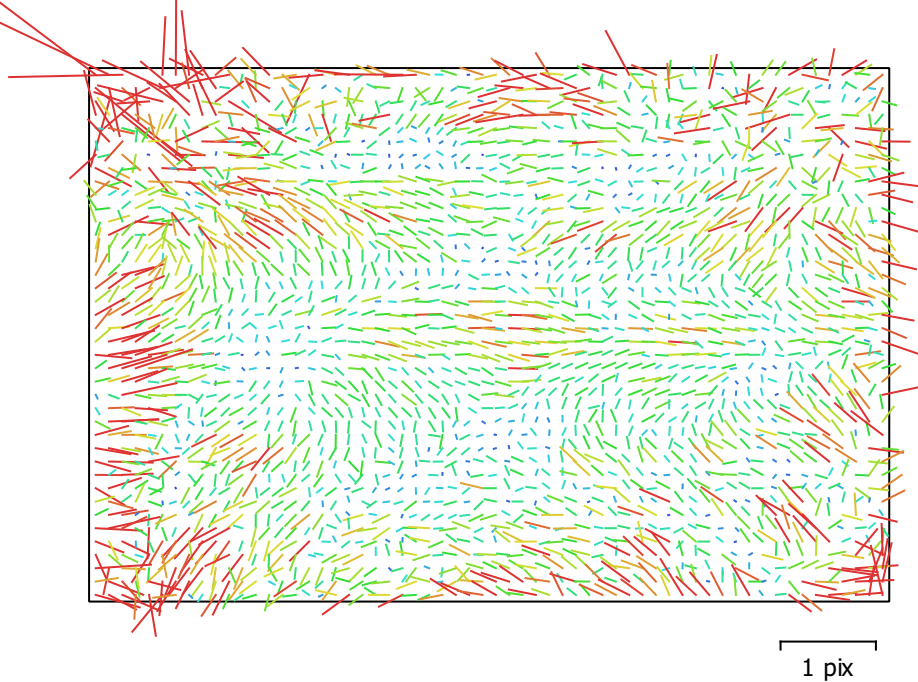


Fig. 2. Image residuals for Test_Pro (10.26mm).

Test_Pro (10.26mm)

161 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	B1	B2	K1	K2	K3	P1	P2
F	4344.37	0.15	1.00	-0.02	0.19	-0.70	0.11	-0.02	0.07	-0.05	0.02	0.07
Cx	41.6592	0.25		1.00	-0.05	0.08	0.29	0.01	0.00	-0.00	0.96	-0.12
Cy	-59.4375	0.18			1.00	-0.46	-0.09	0.00	-0.00	0.01	-0.04	0.64
B1	7.50966	0.16				1.00	0.11	-0.04	0.04	-0.05	0.03	-0.10
B2	31.1337	0.14					1.00	-0.02	0.03	-0.03	0.19	-0.01
K1	0.00519537	7.4e-05						1.00	-0.95	0.88	0.01	-0.09
K2	0.0173103	0.00032							1.00	-0.98	0.00	0.05
K3	-0.0245884	0.00042								1.00	0.00	-0.05
P1	0.0015034	1.7e-05									1.00	-0.12
P2	-0.00382349	7.3e-06										1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

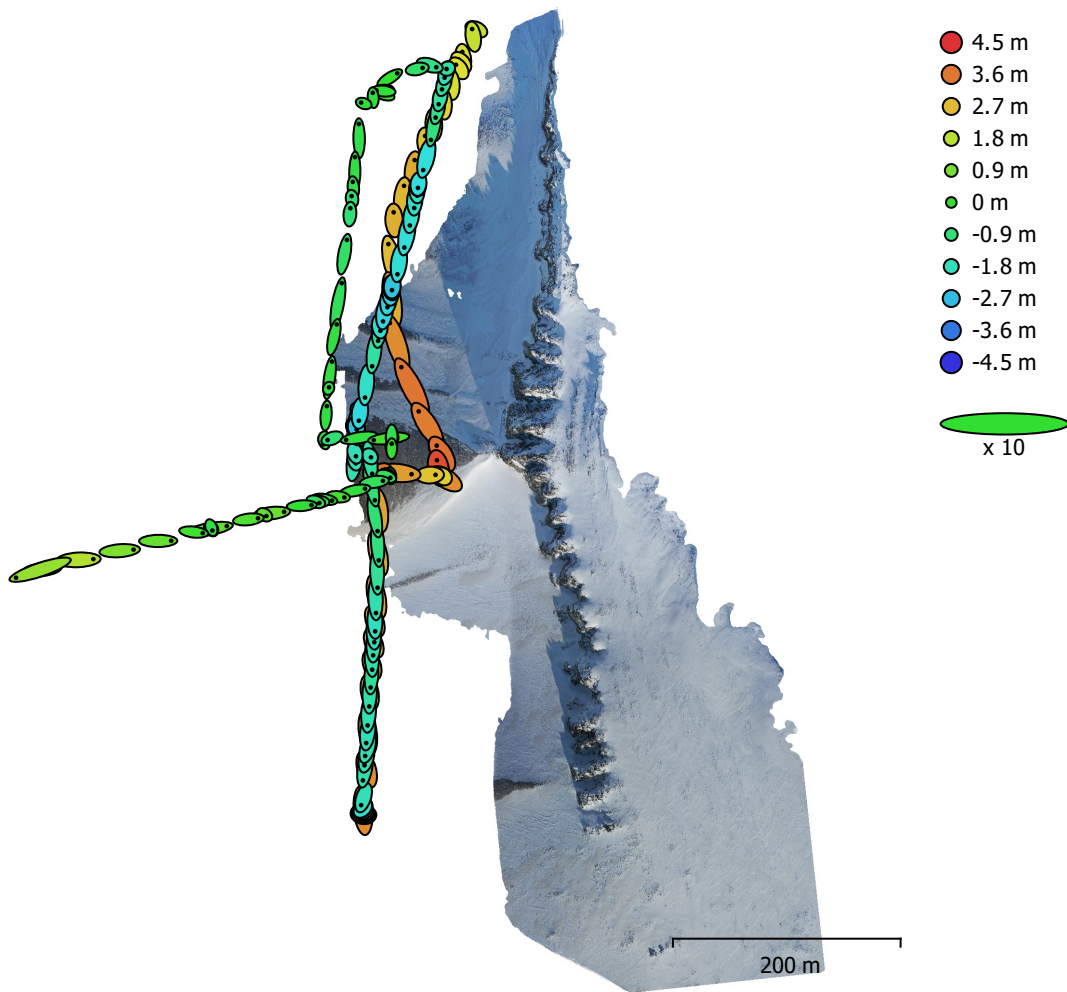


Fig. 3. Camera locations and error estimates.
 Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
 Estimated camera locations are marked with a black dot.

X error (m)	Y error (m)	Z error (m)	XY error (m)	Total error (m)
0.879589	1.43176	1.85067	1.68036	2.49972

Table 3. Average camera location error.
 X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

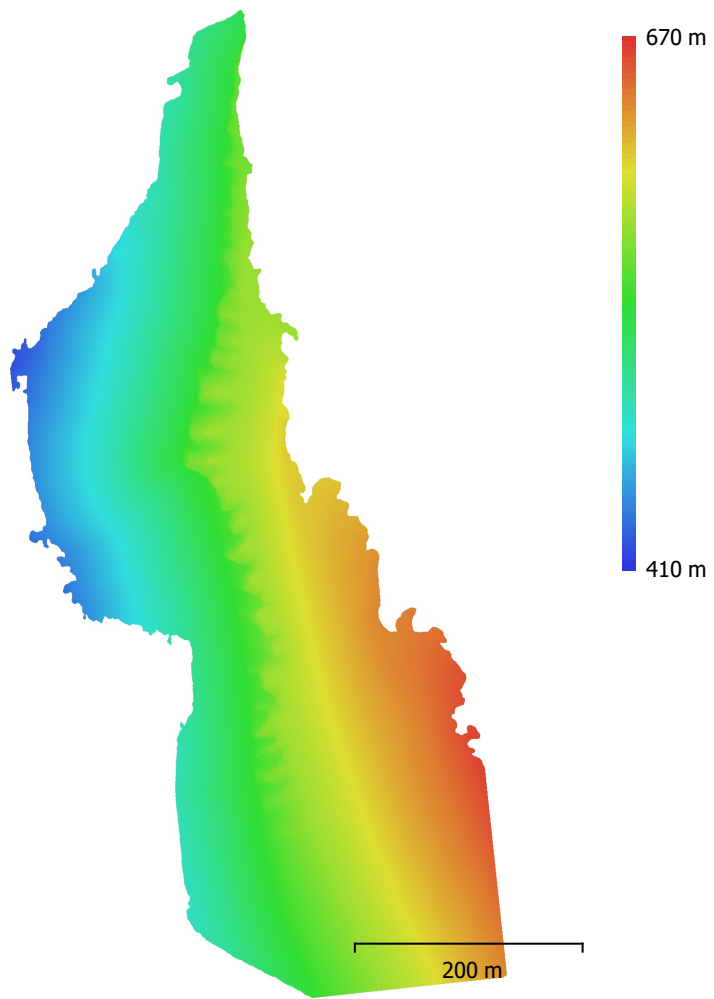


Fig. 4. Reconstructed digital elevation model.

Resolution: 7.88 cm/pix
Point density: 161 points/m²

Processing Parameters

General

Cameras	161
Aligned cameras	161
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	53,112 of 75,510
RMS reprojection error	0.568027 (1.17982 pix)
Max reprojection error	2.20036 (48.397 pix)
Mean key point size	2.10069 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	10.7841

Alignment parameters

Accuracy	Highest
Generic preselection	Yes
Reference preselection	Source
Key point limit	40,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	5 minutes 9 seconds
Matching memory usage	601.95 MB
Alignment time	7 minutes 5 seconds
Alignment memory usage	58.35 MB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	Yes
Optimization time	8 seconds
Software version	1.7.3.12473
File size	13.88 MB

Depth Maps

Count	161
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Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	28 minutes 40 seconds
Memory usage	7.13 GB
Software version	1.7.3.12473
File size	1.11 GB

Dense Point Cloud

Points	37,163,291
Point colors	3 bands, uint8

Depth maps generation parameters

Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	28 minutes 40 seconds

Memory usage	7.13 GB
Dense cloud generation parameters	
Processing time	1 hours 37 minutes
Memory usage	10.81 GB
Software version	1.7.3.12473
File size	753.52 MB
Model	
Faces	2,467,531
Vertices	1,239,069
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096 x 10, 4 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	28 minutes 40 seconds
Memory usage	7.13 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	13 minutes 22 seconds
Memory usage	20.61 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	3 minutes 57 seconds
UV mapping memory usage	3.37 GB
Blending time	6 minutes 34 seconds
Blending memory usage	5.33 GB
Software version	1.7.2.12040
File size	303.17 MB
Tiled Model	
Texture	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Max neighbors	100
Processing time	28 minutes 40 seconds
Memory usage	7.13 GB
Reconstruction parameters	
Source data	Dense cloud
Tile size	256
Face count	Medium
Enable ghosting filter	No
Processing time	1 hours 8 minutes
Memory usage	2.07 GB
Software version	1.7.2.12040
File size	203.78 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.2 build 12040

OS
RAM
CPU
GPU(s)

Windows 64 bit
127.78 GB
Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GeForce RTX 2080