

Fjordnibba

Processing Report
31 January 2022



Survey Data

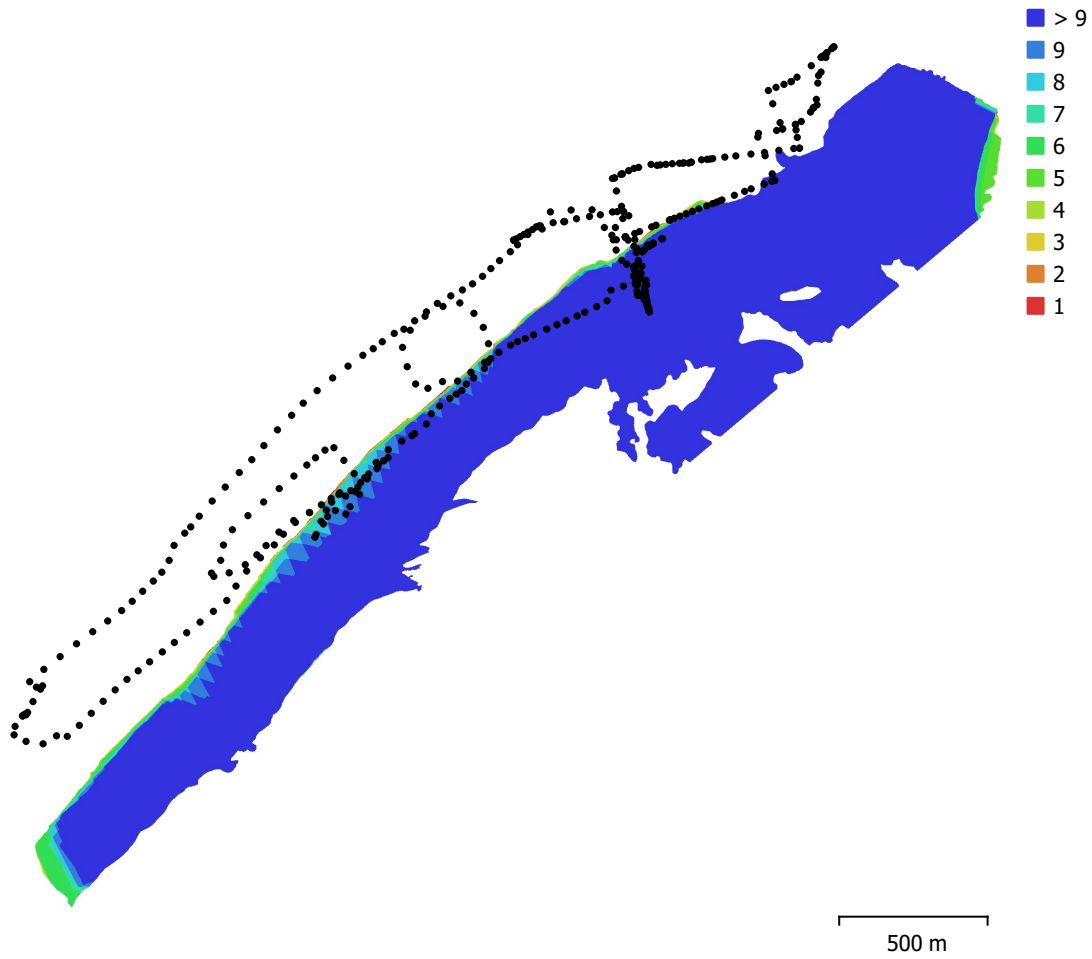


Fig. 1. Camera locations and image overlap.

Number of images:	412	Camera stations:	412
Flying altitude:	325 m	Tie points:	107,526
Ground resolution:	7.25 cm/pix	Projections:	1,453,273
Coverage area:	1.67 km ²	Reprojection error:	0.75 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
L1D-20c (10.26mm)	5472 x 3648	10.26 mm	2.41 x 2.41 μ m	No

Table 1. Cameras.

Camera Calibration

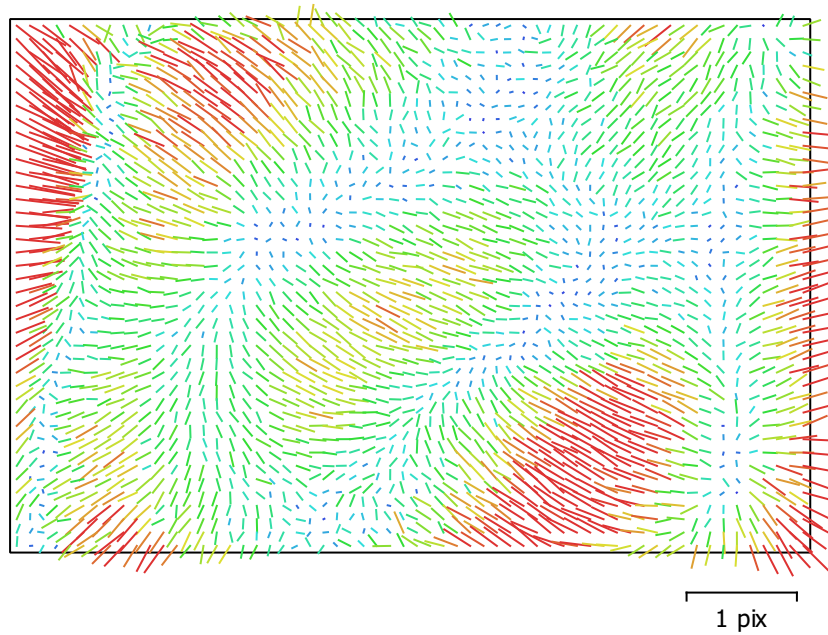


Fig. 2. Image residuals for L1D-20c (10.26mm).

L1D-20c (10.26mm)

412 images

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

	Value	Error	F	Cx	Cy	B1	B2	K1	K2	K3	P1	P2
F	4349.65	0.097	1.00	0.07	0.70	-0.95	0.05	-0.03	0.06	-0.06	0.09	0.05
Cx	5.23627	0.062		1.00	0.01	-0.06	0.38	0.01	0.00	-0.00	0.84	-0.10
Cy	-48.1564	0.097			1.00	-0.84	-0.04	-0.02	0.00	-0.00	0.04	0.55
B1	0.139967	0.11				1.00	0.00	0.00	-0.00	0.00	-0.09	-0.15
B2	1.96452	0.051					1.00	0.01	0.01	-0.01	-0.09	-0.02
K1	0.00582482	2.3e-05						1.00	-0.96	0.90	0.01	-0.07
K2	0.0296575	9.8e-05							1.00	-0.98	0.01	0.02
K3	-0.0305395	0.00012								1.00	-0.01	-0.02
P1	-0.000329116	4.3e-06									1.00	-0.11
P2	-0.00357665	2.7e-06										1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

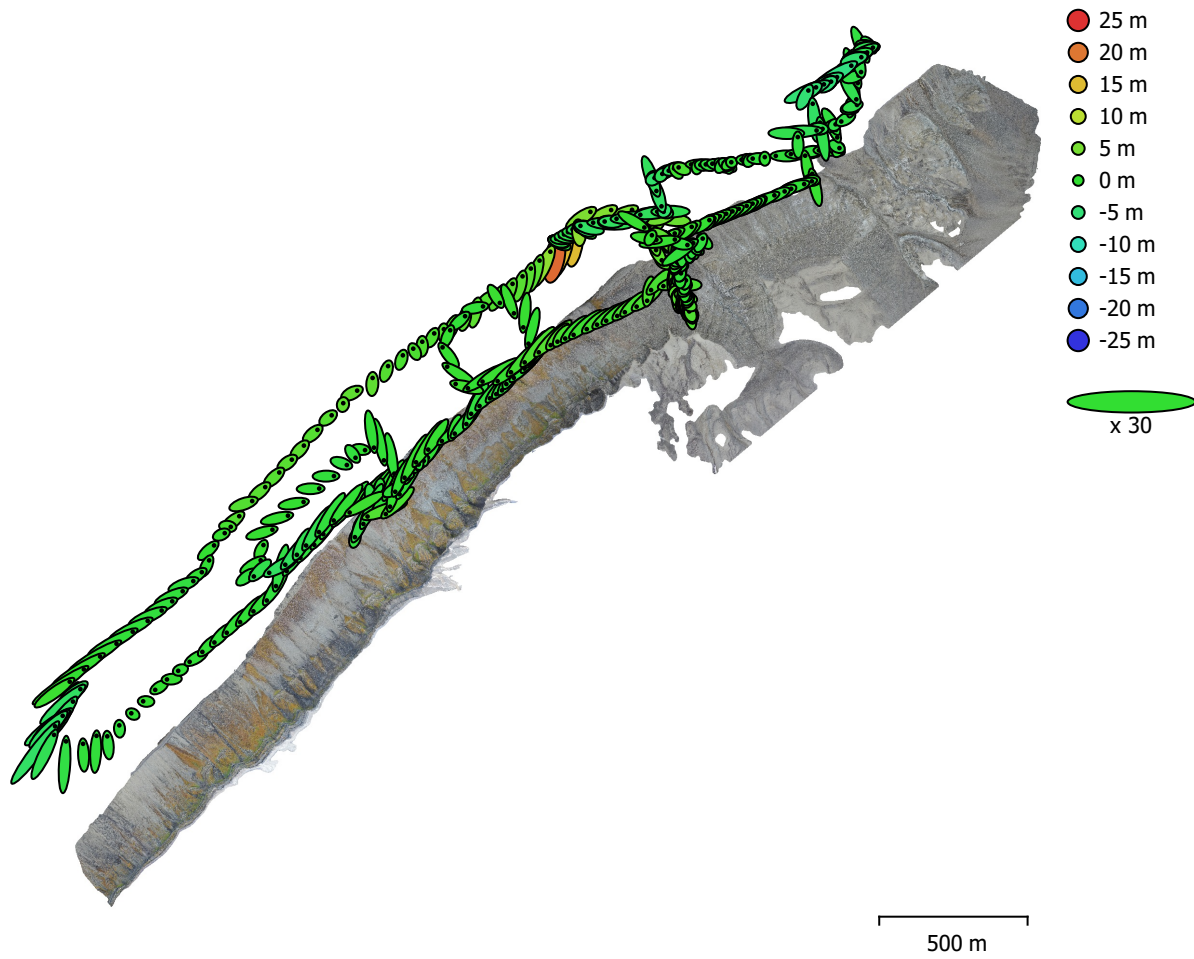


Fig. 3. Camera locations and error estimates.

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)
1.65877	1.79583	2.53417	2.44469	3.52115

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

Digital Elevation Model

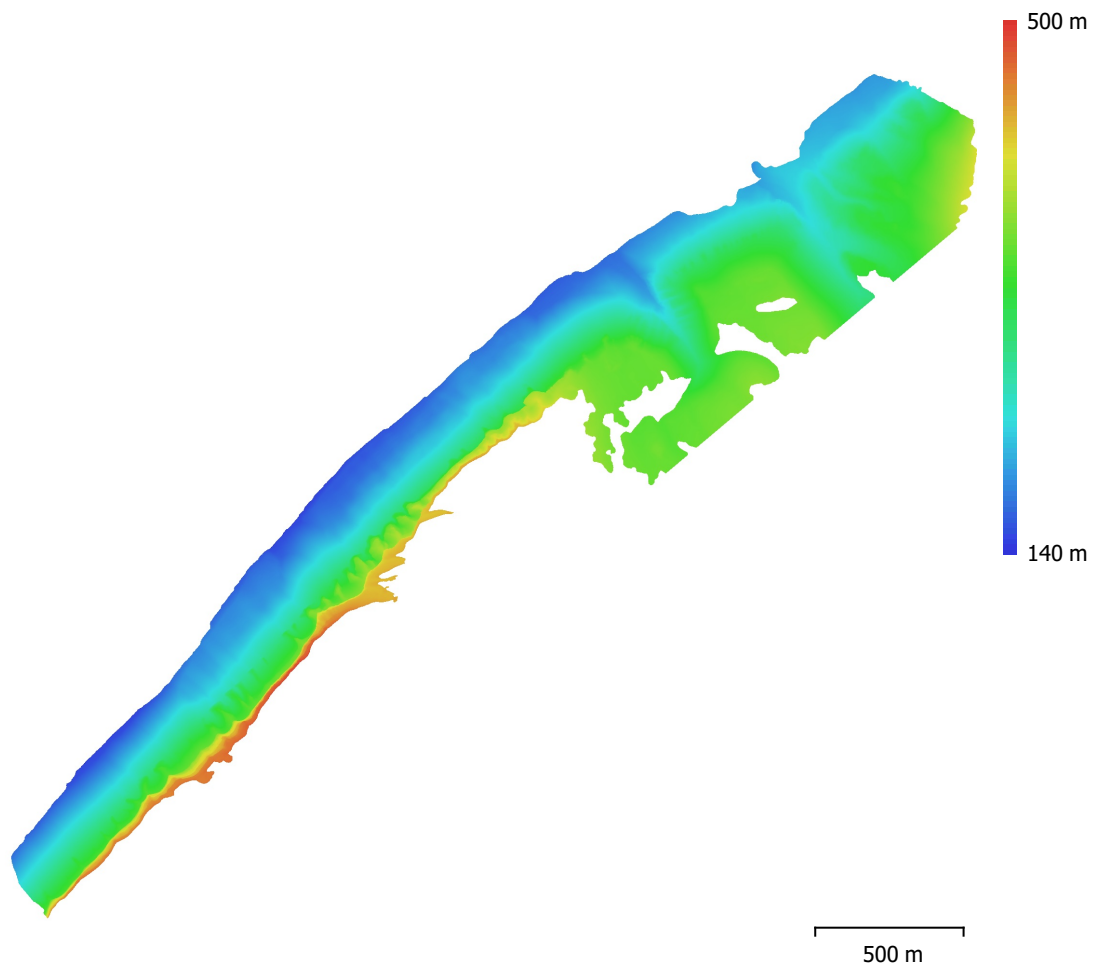


Fig. 4. Reconstructed digital elevation model.

Resolution: 29 cm/pix
Point density: 11.9 points/m²

Processing Parameters

General

Cameras	412
Aligned cameras	412
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	107,526 of 155,238
RMS reprojection error	0.472352 (0.750497 pix)
Max reprojection error	5.23597 (27.1251 pix)
Mean key point size	1.48732 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	15.9099

Alignment parameters

Accuracy	Highest
Generic preselection	No
Reference preselection	No
Key point limit	40,000
Tie point limit	4,000
Exclude stationary tie points	No
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	3 hours 9 minutes
Matching memory usage	1.59 GB
Alignment time	7 minutes 22 seconds
Alignment memory usage	262.36 MB

Optimization parameters

Parameters	f, b1, b2, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	10 seconds
Software version	1.7.2.12040
File size	40.65 MB

Depth Maps

Count	412
-------	-----

Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Processing time	20 minutes 42 seconds
Memory usage	1.81 GB
Software version	1.7.2.12040
File size	729.97 MB

Dense Point Cloud

Points	27,777,025
Point colors	3 bands, uint8

Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Processing time	20 minutes 42 seconds
Memory usage	1.81 GB

Dense cloud generation parameters

Processing time	39 minutes 22 seconds
Memory usage	5.34 GB
Software version	1.7.2.12040
File size	472.81 MB
Model	
Faces	1,848,358
Vertices	930,577
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
Processing time	20 minutes 42 seconds
Memory usage	1.81 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	10 minutes 27 seconds
Memory usage	14.50 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	2 minutes 19 seconds
UV mapping memory usage	3.63 GB
Blending time	44 minutes 28 seconds
Blending memory usage	5.18 GB
Software version	1.7.2.12040
File size	327.17 MB
Tiled Model	
Texture	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Mild
Processing time	20 minutes 42 seconds
Memory usage	1.81 GB
Reconstruction parameters	
Source data	Dense cloud
Tile size	256
Face count	Medium
Enable ghosting filter	No
Processing time	1 hours 7 minutes
Memory usage	3.13 GB
Software version	1.7.2.12040
File size	638.01 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.2 build 12040
OS	Windows 64 bit
RAM	127.78 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GPU(s)	GeForce RTX 2080