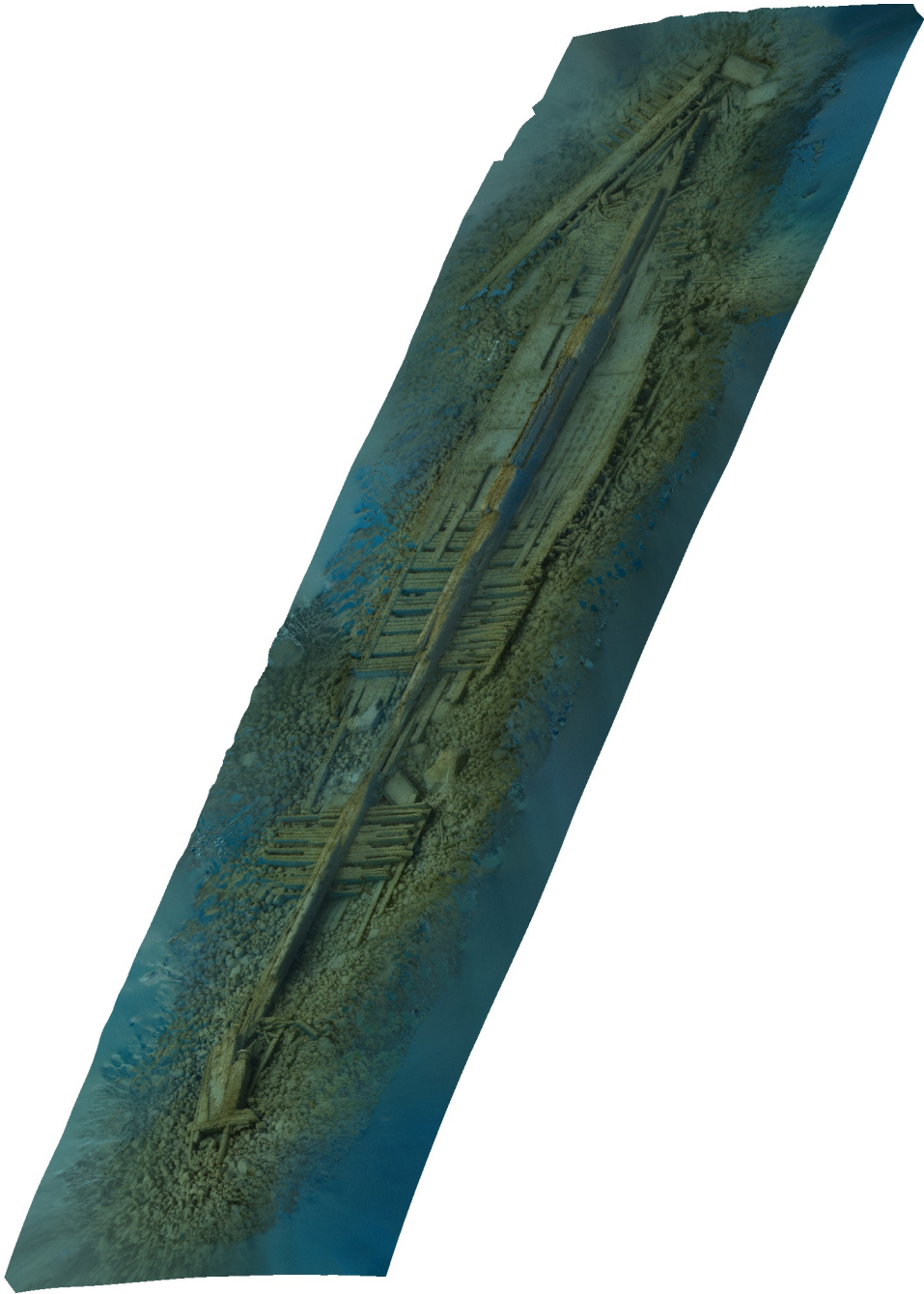


Agisoft Metashape

Processing Report

15 April 2021



Survey Data

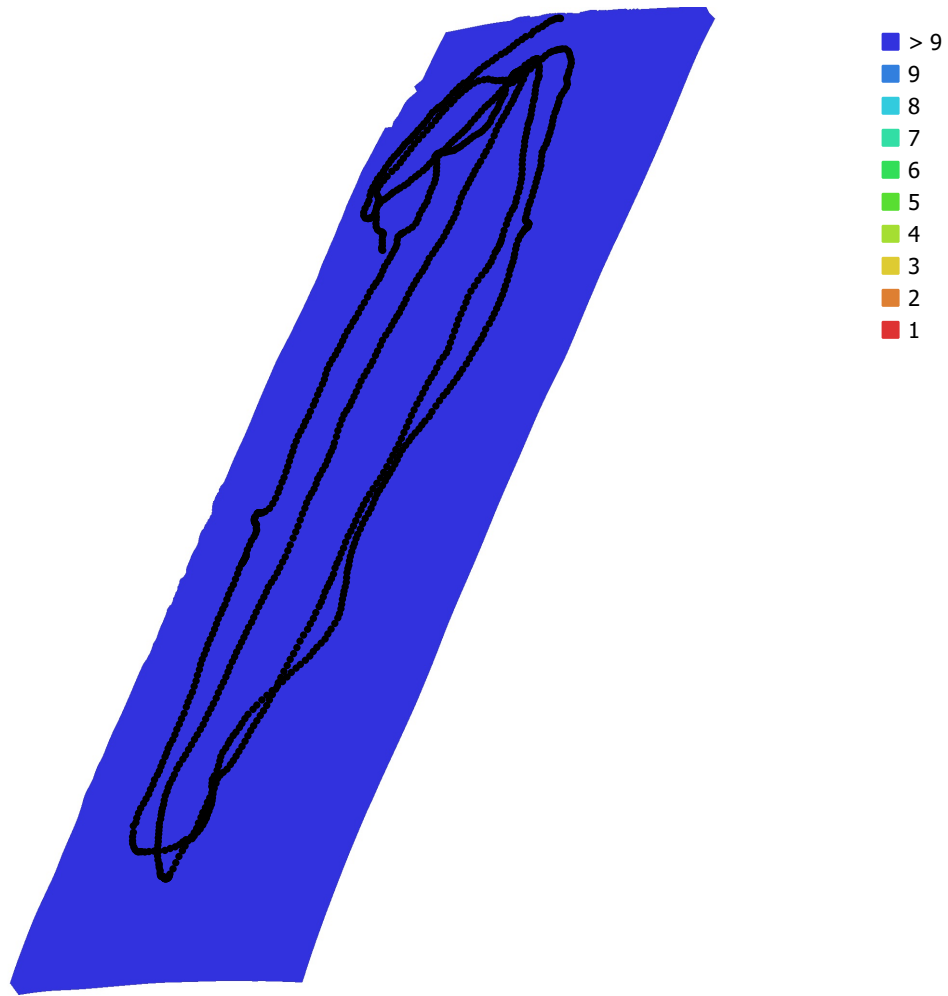


Fig. 1. Camera locations and image overlap.

Number of images: 1,079

Camera stations: 1,079

Tie points: 1,260,608

Projections: 3,878,300

Reprojection error: 1.29 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibration
EOS 5D Mark IV, EF16-35mm f/2.8L II USM (16mm)	6720 x 4480	16 mm	5.36 x 5.36 μm	No

Table 1. Cameras.

Camera Calibration

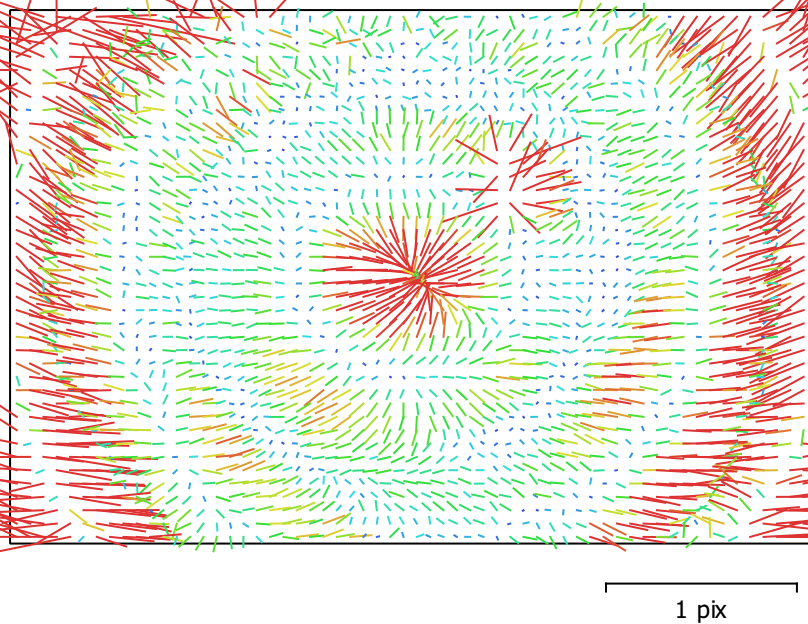


Fig. 2. Image residuals for Canon EOS 5D Mark IV, EF16-35mm f/2.8L II USM (16mm).

Canon EOS 5D Mark IV, EF16-35mm f/2.8L II USM (16mm)

1079 images

Type Resolution Focal Length Pixel Size
Frame 6720 x 4480 16 mm 5.36 x 5.36 μ m

	Value	Error	F	Cx	Cy	B1	B2	K1	K2	K3	K4	P1	P2
F	3120.58	0.04	1.00	-0.26	-0.27	-0.24	-0.02	-0.09	0.19	-0.19	0.18	-0.13	-0.09
Cx	24.6897	0.034		1.00	0.34	-0.00	0.56	-0.06	0.01	0.00	-0.01	0.49	0.16
Cy	-14.8643	0.063			1.00	-0.56	0.31	-0.08	0.03	-0.02	0.01	0.13	0.50
B1	2.62882	0.025				1.00	-0.12	-0.01	-0.02	0.02	-0.01	0.06	0.10
B2	1.53556	0.024					1.00	0.01	0.01	-0.01	0.01	-0.10	0.04
K1	-0.0794026	1.9e-05						1.00	-0.93	0.87	-0.80	-0.12	-0.17
K2	0.0901951	4.9e-05							1.00	-0.98	0.94	0.02	0.05
K3	-0.0598219	5.1e-05								1.00	-0.99	-0.01	-0.03
K4	0.0155618	1.8e-05									1.00	0.00	0.02
P1	0.000438494	1.7e-06										1.00	0.30
P2	0.000250334	3.3e-06											1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

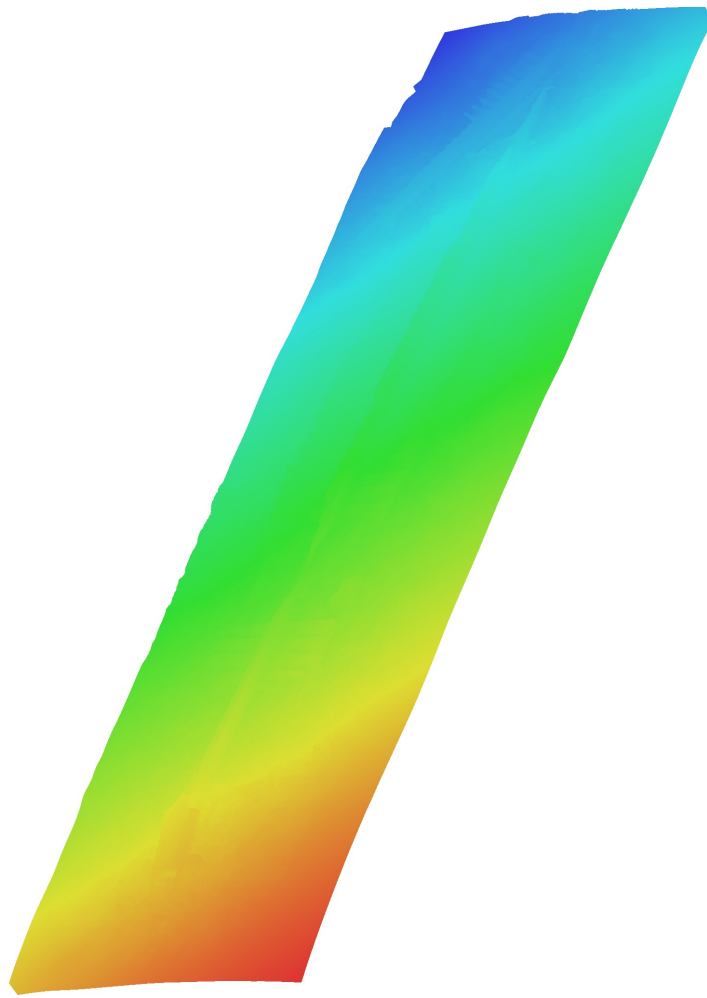


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	1079
Aligned cameras	1079
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	1,260,608 of 1,351,950
RMS reprojection error	0.13688 (1.28674 pix)
Max reprojection error	0.413453 (46.2095 pix)
Mean key point size	7.38661 pix
Point colors	3 bands, uint8
Key points	2.58 GB
Average tie point multiplicity	3.28757

Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	No
Key point limit	30,000
Tie point limit	4,000
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	15 minutes 35 seconds
Matching memory usage	3.18 GB
Alignment time	8 minutes 17 seconds
Alignment memory usage	551.25 MB
Software version	1.6.3.10732
File size	117.66 MB

Depth Maps

Count	1079
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Depth maps generation parameters

Quality	Medium
Filtering mode	Aggressive
Processing time	36 minutes 23 seconds
Memory usage	1.35 GB
Software version	1.6.3.10732
File size	2.81 GB

Dense Point Cloud

Points	139,853,681
Point colors	3 bands, uint8

Depth maps generation parameters

Quality	Medium
Filtering mode	Aggressive
Processing time	36 minutes 23 seconds
Memory usage	1.35 GB

Dense cloud generation parameters

Processing time	2 hours 19 minutes
Memory usage	13.54 GB
Software version	1.6.3.10732
File size	2.33 GB

Model

Faces	7,999,999
Vertices	4,010,859
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096 x 2, 4 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Aggressive
Processing time	36 minutes 23 seconds
Memory usage	1.35 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Extrapolated
Strict volumetric masks	No
Processing time	55 minutes 30 seconds
Memory usage	54.43 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	No
UV mapping time	7 minutes 24 seconds
Blending time	4 minutes 39 seconds
Software version	1.6.3.10732
File size	393.47 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.1 build 11797
OS	Windows 64 bit
RAM	63.92 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GPU(s)	GeForce RTX 2060 SUPER