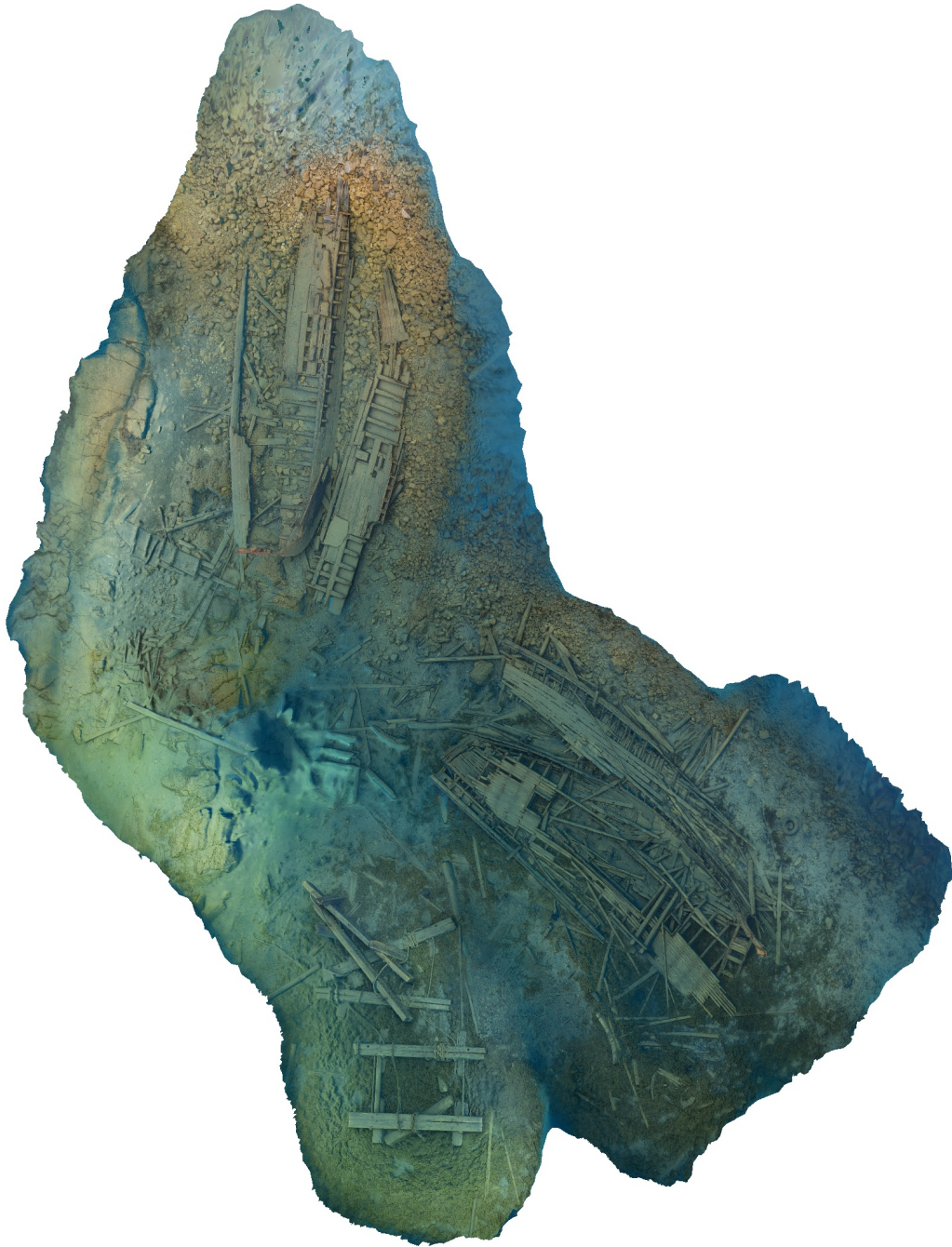


Agisoft Metashape

Processing Report
03 February 2023



Survey Data

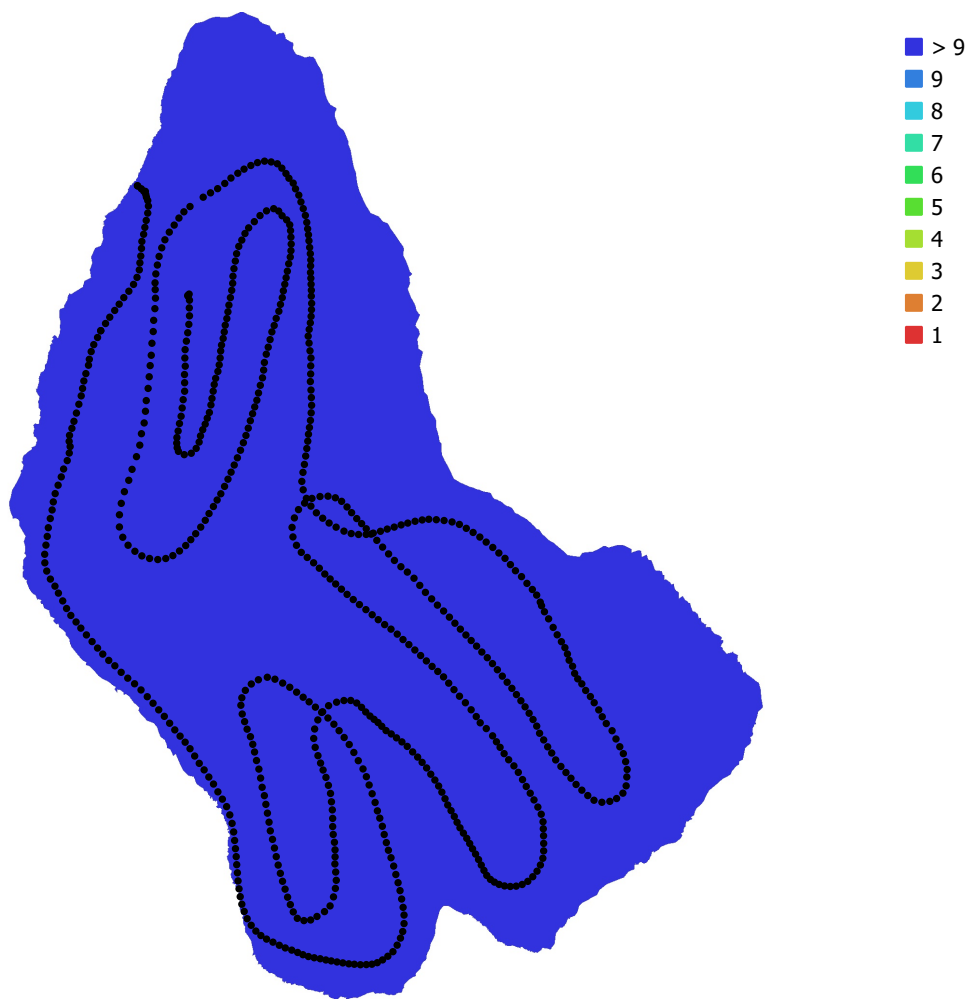


Fig. 1. Camera locations and image overlap.

Number of images: 679

Camera stations: 679

Tie points: 350,592

Projections: 1,492,069

Reprojection error: 1.26 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
Canon EOS 5D Mark IV, ...	6720 x 4480	15 mm	5.36 x 5.36 μm	No

Table 1. Cameras.

Camera Calibration

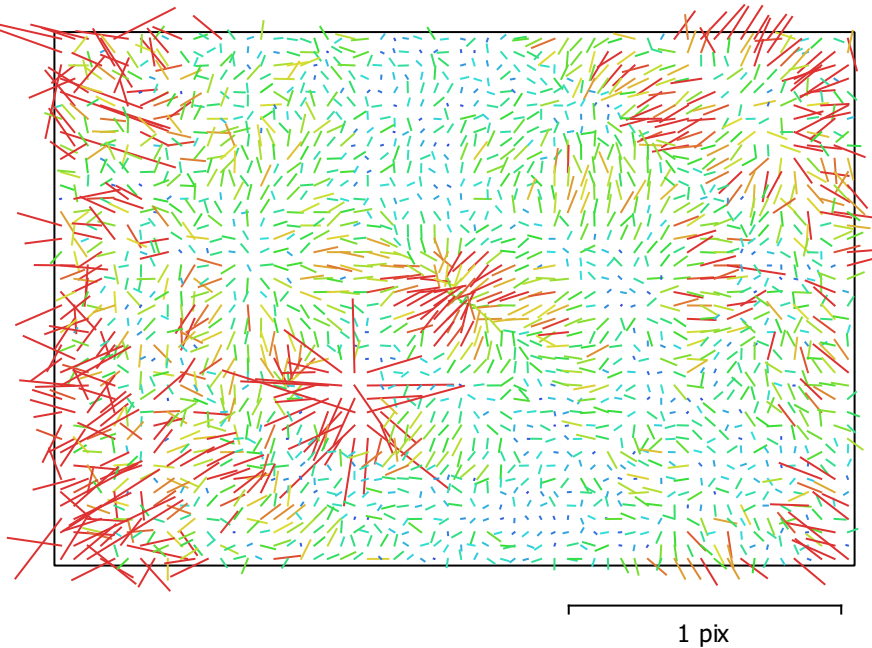


Fig. 2. Image residuals for Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm).

Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm)

679 images

Type	Resolution	Focal Length	Pixel Size
Fisheye	6720 x 4480	15 mm	5.36 x 5.36 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	3084.8	0.04	1.00	-0.36	0.00	-0.72	0.36	-0.24	0.33	-0.06
Cx	-4.85074	0.023		1.00	-0.03	0.10	-0.03	0.05	-0.71	-0.01
Cy	-22.2718	0.023			1.00	0.01	-0.00	-0.00	0.02	-0.67
K1	-0.0453949	1.4e-05				1.00	-0.85	0.73	-0.20	0.04
K2	0.00496546	1.5e-05					1.00	-0.97	0.04	-0.01
K3	-0.00129839	5.8e-06						1.00	-0.05	0.01
P1	-0.00011871	1.7e-06							1.00	-0.02
P2	-8.43992e-05	1.4e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

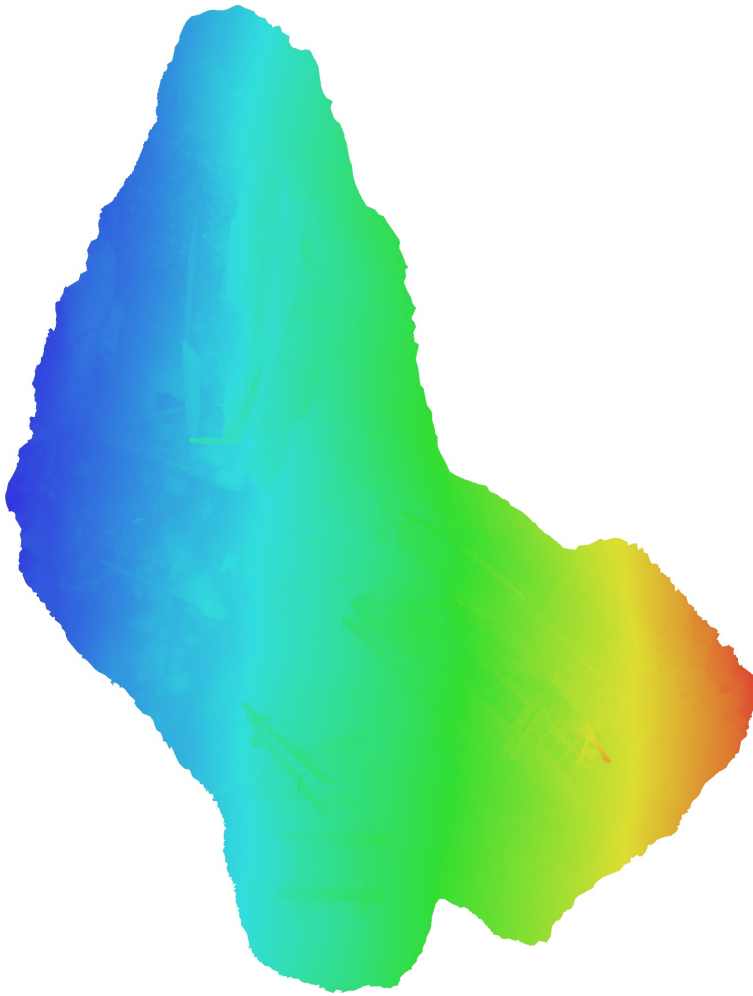


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	679
Aligned cameras	679
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	350,592 of 405,101
RMS reprojection error	0.1875 (1.26319 pix)
Max reprojection error	0.708835 (50.4394 pix)
Mean key point size	5.02321 pix
Point colors	3 bands, uint8
Key points	1.66 GB
Average tie point multiplicity	4.52413

Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	No
Key point limit	30,000
Key point limit per Mpx	1,000
Tie point limit	2,500
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	7 minutes 8 seconds
Matching memory usage	3.72 GB
Alignment time	3 minutes 26 seconds
Alignment memory usage	411.62 MB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	4 seconds
Date created	2022:07:28 00:55:17
Software version	1.8.0.13794
File size	44.24 MB

Depth Maps

Count	679
Depth maps generation parameters	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	17 minutes 22 seconds
Memory usage	1.96 GB
Date created	2022:07:28 01:24:11
Software version	1.8.0.13794
File size	2.11 GB

Model

Faces	5,831,913
Vertices	2,917,375
Vertex colors	3 bands, uint8
Texture	8,192 x 8,192, 4 bands, uint8

Depth maps generation parameters

Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	17 minutes 22 seconds
Memory usage	1.96 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	10 minutes 21 seconds
Memory usage	6.88 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	No
UV mapping time	2 minutes 32 seconds
UV mapping memory usage	2.91 GB
Blending time	2 minutes 15 seconds
Blending memory usage	4.25 GB
Blending GPU memory usage	2.31 GB
Date created	2022:07:28 01:34:20
Software version	1.8.0.13794
File size	346.44 MB

System

Software name	Agisoft Metashape Professional
Software version	1.8.0 build 13794
OS	Windows 64 bit
RAM	63.92 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GPU(s)	NVIDIA GeForce RTX 2060 SUPER