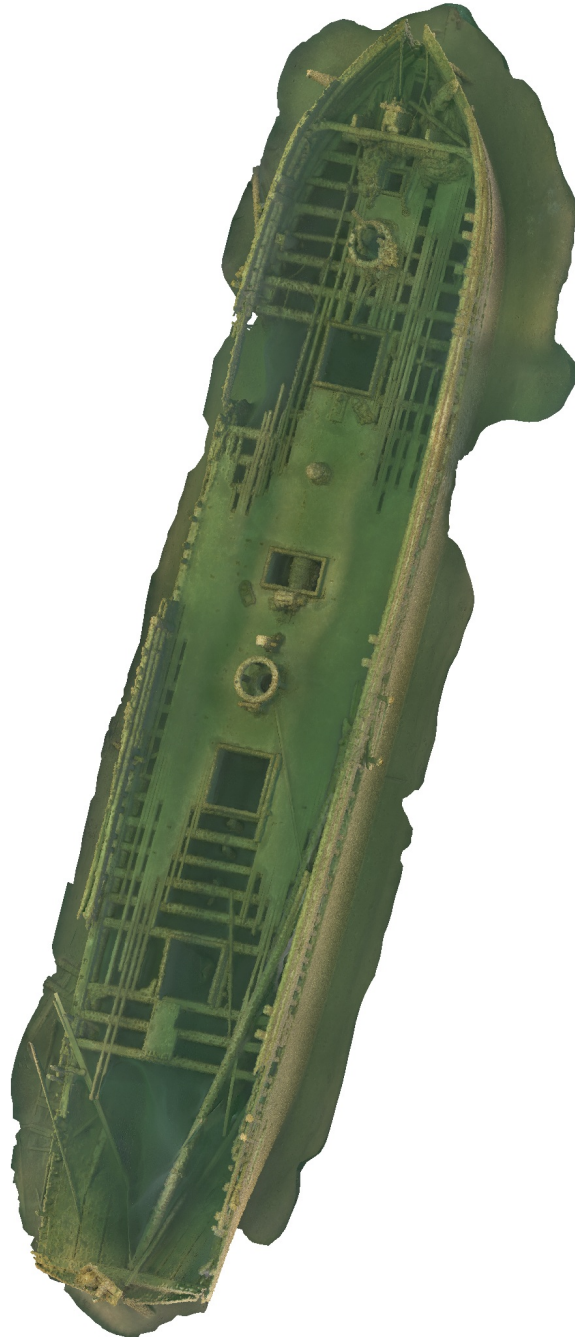


Agisoft Metashape

Processing Report

04 June 2023



Survey Data

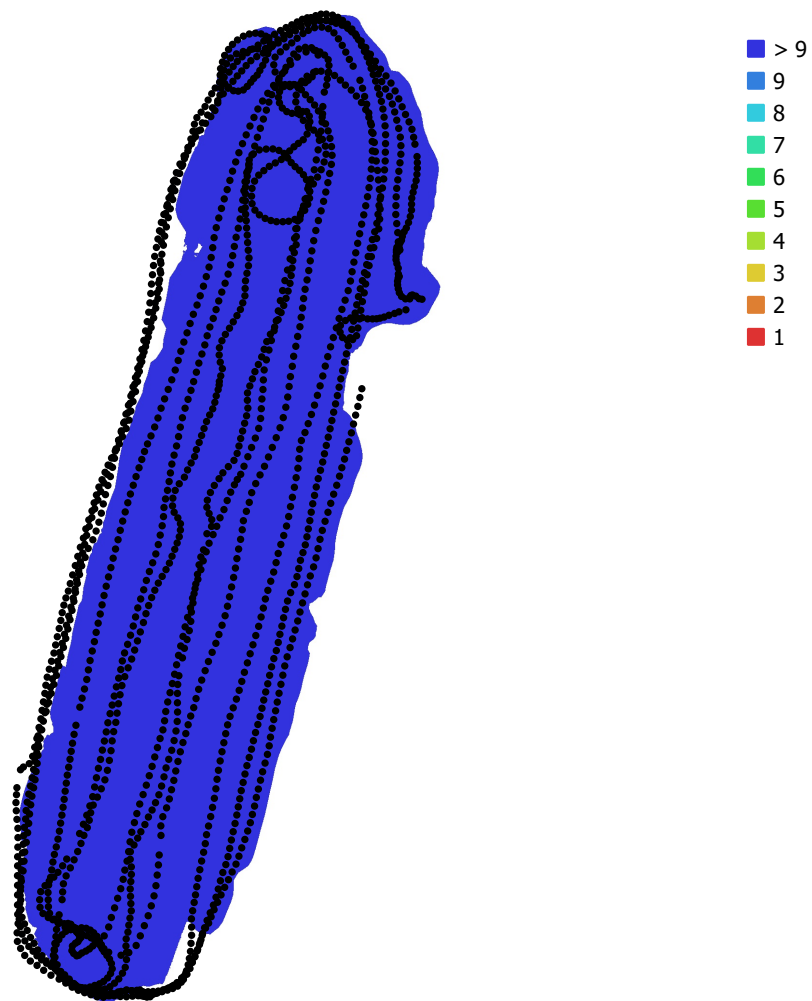


Fig. 1. Camera locations and image overlap.

Number of images: 1,758

Camera stations: 1,737

Tie points: 919,741

Projections: 2,220,049

Reprojection error: 1.44 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

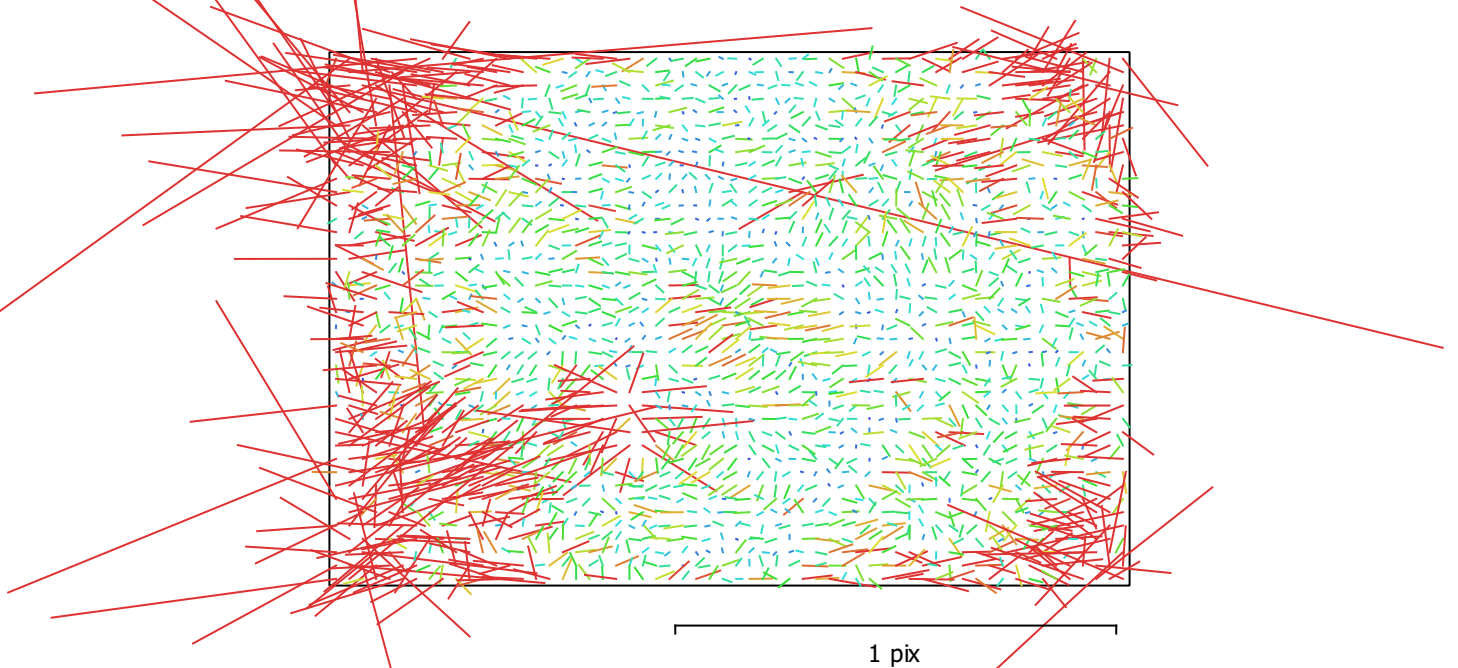


Fig. 2. Image residuals for Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm).

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

1758 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	3086.21	0.051	1.00	-0.59	0.11	-0.55	0.28	-0.22	0.44	-0.15
Cx	1.5329	0.05		1.00	-0.10	0.13	-0.01	0.01	-0.74	0.07
Cy	-27.365	0.046			1.00	-0.04	0.01	-0.00	0.06	-0.69
K1	-0.0468139	1.8e-05				1.00	-0.90	0.81	-0.17	0.08
K2	0.00568726	2.4e-05					1.00	-0.97	-0.01	-0.04
K3	-0.00131723	1e-05						1.00	0.00	0.03
P1	-0.000155044	2.5e-06							1.00	-0.04
P2	-0.000170403	1.9e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

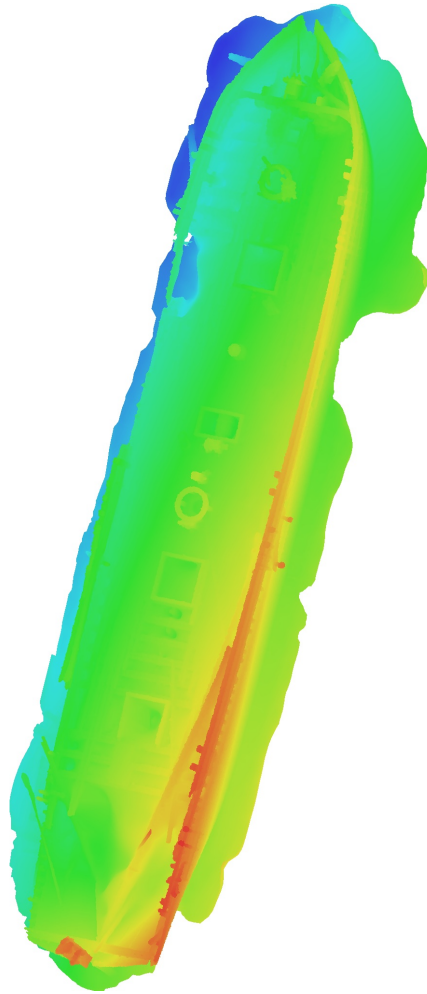


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	1758
Aligned cameras	1737
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	919,741 of 1,040,331
RMS reprojection error	0.136484 (1.44369 pix)
Max reprojection error	0.41195 (43.0911 pix)
Mean key point size	7.30782 pix
Point colors	3 bands, uint8
Key points	4.30 GB
Average tie point multiplicity	2.53697

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 seconds
Matching memory usage	3.26 MB
Alignment time	10 minutes 13 seconds
Alignment memory usage	501.86 MB
Date created	2023:06:04 01:29:42
Software version	1.8.0.13794
File size	84.47 MB

Depth Maps

Count	1729
Depth maps generation parameters	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	30 minutes 26 seconds
Memory usage	1.55 GB
Date created	2023:06:04 02:10:42
Software version	1.8.0.13794
File size	1.94 GB

Dense Point Cloud

Points	332,512,601
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	30 minutes 26 seconds
Memory usage	1.55 GB

Dense cloud generation parameters

Processing time	2 hours 12 minutes
Memory usage	6.29 GB
Date created	2023:06:04 05:41:49
Software version	1.8.0.13794
File size	4.24 GB

Model

Faces	8,000,000
Vertices	3,999,990
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	30 minutes 26 seconds
Memory usage	1.55 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	14 minutes 41 seconds
Memory usage	7.29 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 34 seconds
UV mapping memory usage	3.20 GB
Blending time	7 minutes 8 seconds
Blending memory usage	4.67 GB
Blending GPU memory usage	2.43 GB
Date created	2023:06:04 02:24:25
Software version	1.8.0.13794
File size	422.44 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