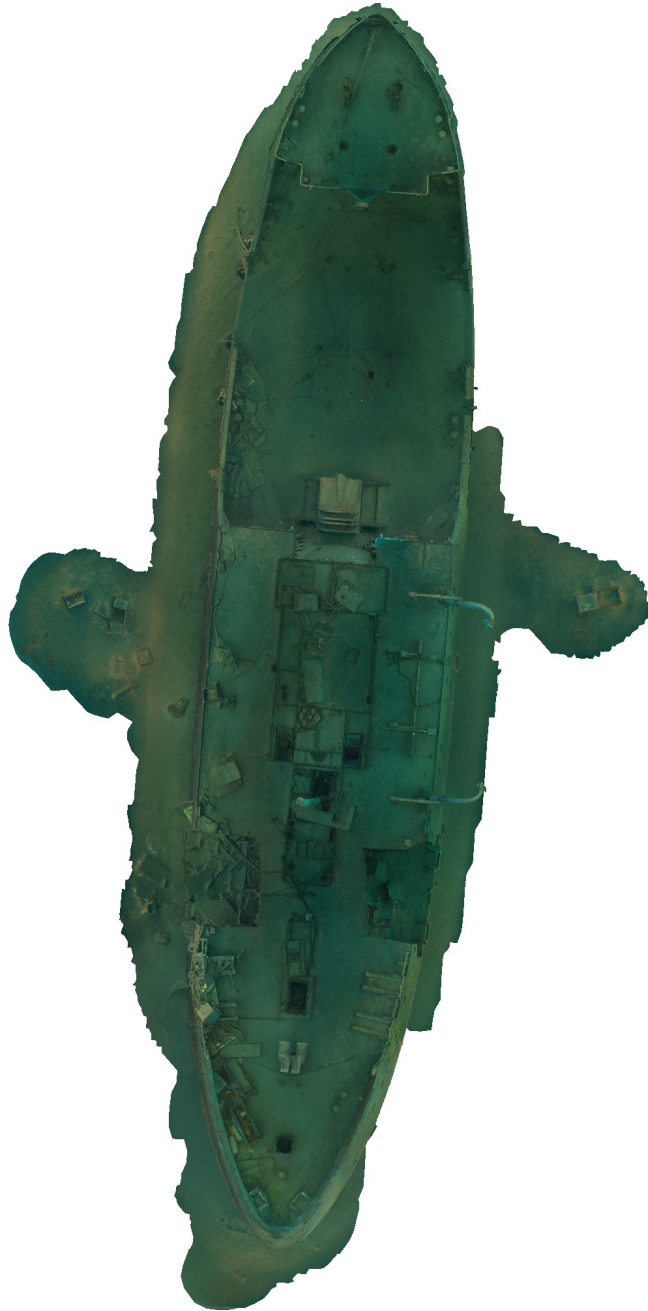


# Agisoft Metashape Report

Processing Report

09 March 2024



# Survey Data

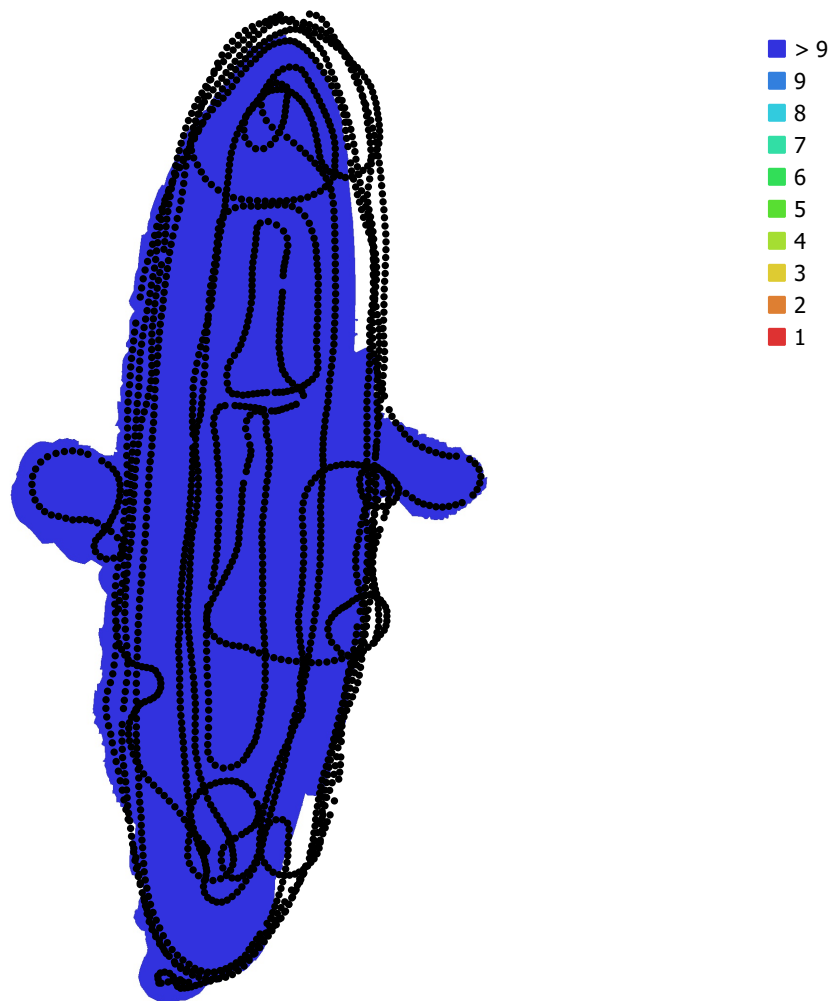


Fig. 1. Camera locations and image overlap.

Number of images: 2,198

Camera stations: 2,191

Tie points: 1,526,615

Projections: 4,355,525

Reprojection error: 1.95 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
Canon EOS 5D Mark IV, ...	6720 x 4480	15 mm	5.36 x 5.36 $\mu\text{m}$	No

Table 1. Cameras.

# Camera Calibration

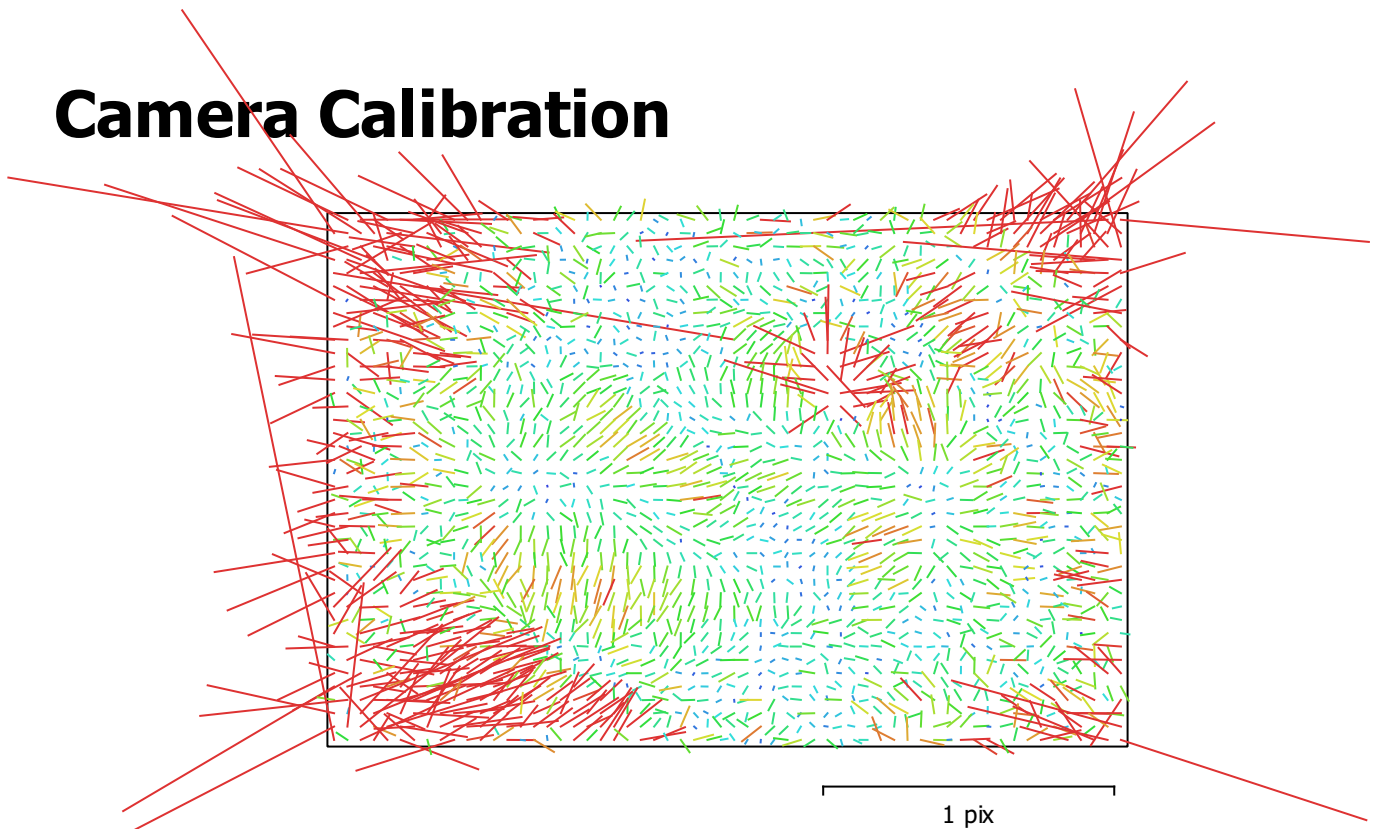


Fig. 2. Image residuals for Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm).

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

2197 images

Type	Resolution	Focal Length	Pixel Size
<b>Fisheye</b>	<b>6720 x 4480</b>	<b>15 mm</b>	<b>5.36 x 5.36 <math>\mu</math>m</b>

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
<b>F</b>	<b>3082.12</b>	0.041	1.00	-0.58	0.01	-0.55	0.27	-0.21	0.50	-0.05
<b>Cx</b>	<b>-6.23037</b>	0.039		1.00	-0.02	0.14	0.01	-0.00	-0.77	0.03
<b>Cy</b>	<b>-27.1899</b>	0.033			1.00	-0.02	0.01	-0.00	0.05	-0.74
<b>K1</b>	<b>-0.0463081</b>	1.5e-05				1.00	-0.89	0.80	-0.19	0.03
<b>K2</b>	<b>0.00531079</b>	2.1e-05					1.00	-0.97	-0.04	-0.01
<b>K3</b>	<b>-0.00127011</b>	9.2e-06						1.00	0.03	-0.00
<b>P1</b>	<b>-0.000172439</b>	2.3e-06							1.00	-0.05
<b>P2</b>	<b>-0.000148315</b>	1.6e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

# Digital Elevation Model

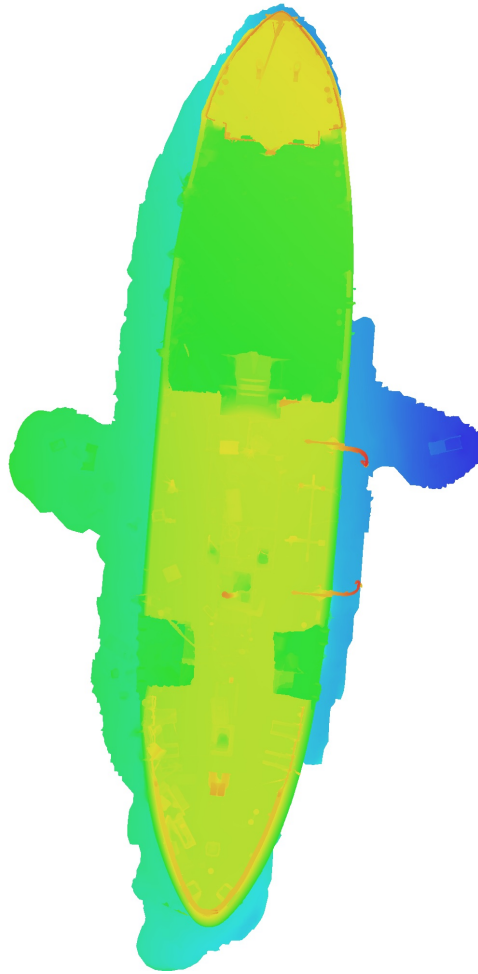


Fig. 3. Reconstructed digital elevation model.

# Processing Parameters

## General

Cameras	2198
Aligned cameras	2191

## Tie Points

Points	1,526,615 of 1,741,792
RMS reprojection error	0.180844 (1.94573 pix)
Max reprojection error	0.549838 (59.9543 pix)
Mean key point size	8.53183 pix
Point colors	3 bands, uint8
Key points	7.02 GB
Average tie point multiplicity	3.0243

## Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	No
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	1 hours 9 minutes
Matching memory usage	15.24 GB
Alignment time	20 minutes 44 seconds
Alignment memory usage	1.02 GB
Date created	2024:03:08 12:52:09
Software version	2.1.0.17532
File size	140.73 MB

## Depth Maps

Count	2176
<b>Depth maps generation parameters</b>	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	45 minutes 43 seconds
Memory usage	1.93 GB
Date created	2024:03:08 16:20:13
Software version	2.1.0.17532
File size	2.40 GB

## Point Cloud

Points	222,053,000
<b>Point attributes</b>	
Color	3 bands, uint8
Normal	
<b>Point classes</b>	
Created (never classified)	222,053,000
<b>Depth maps generation parameters</b>	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16

Processing time	45 minutes 43 seconds
Memory usage	1.93 GB
<b>Point cloud generation parameters</b>	
Processing time	3 hours 26 minutes
Memory usage	7.01 GB
Date created	2024:03:09 04:05:55
Software version	2.1.0.17532
File size	2.85 GB
<b>Model</b>	
Faces	7,999,999
Vertices	3,999,981
Vertex colors	3 bands, uint8
Texture	8,192 x 8,192, 4 bands, uint8
<b>Depth maps generation parameters</b>	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	45 minutes 43 seconds
Memory usage	1.93 GB
<b>Reconstruction parameters</b>	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	12 minutes 58 seconds
Memory usage	7.99 GB
<b>Texturing parameters</b>	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	2 minutes 24 seconds
UV mapping memory usage	2.98 GB
Blending time	24 minutes 12 seconds
Blending memory usage	4.91 GB
Blending GPU memory usage	2.65 GB
Date created	2024:03:08 16:32:24
Software version	2.1.0.17532
File size	385.24 MB
<b>System</b>	
Software name	Agisoft Metashape Standard
Software version	2.1.0 build 17532
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