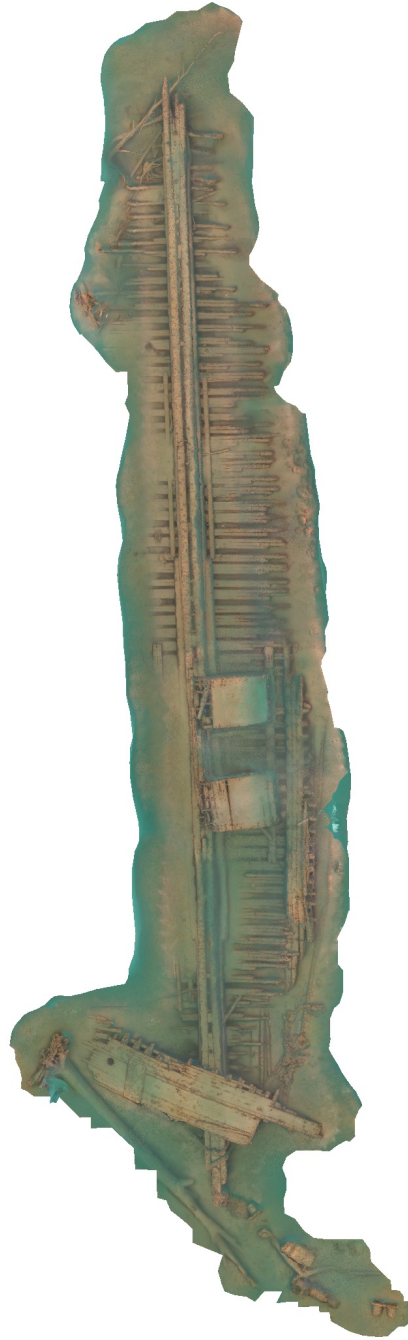


# Annabell Wilson Processing Report 2023

Processing Report  
12 June 2023



# Survey Data

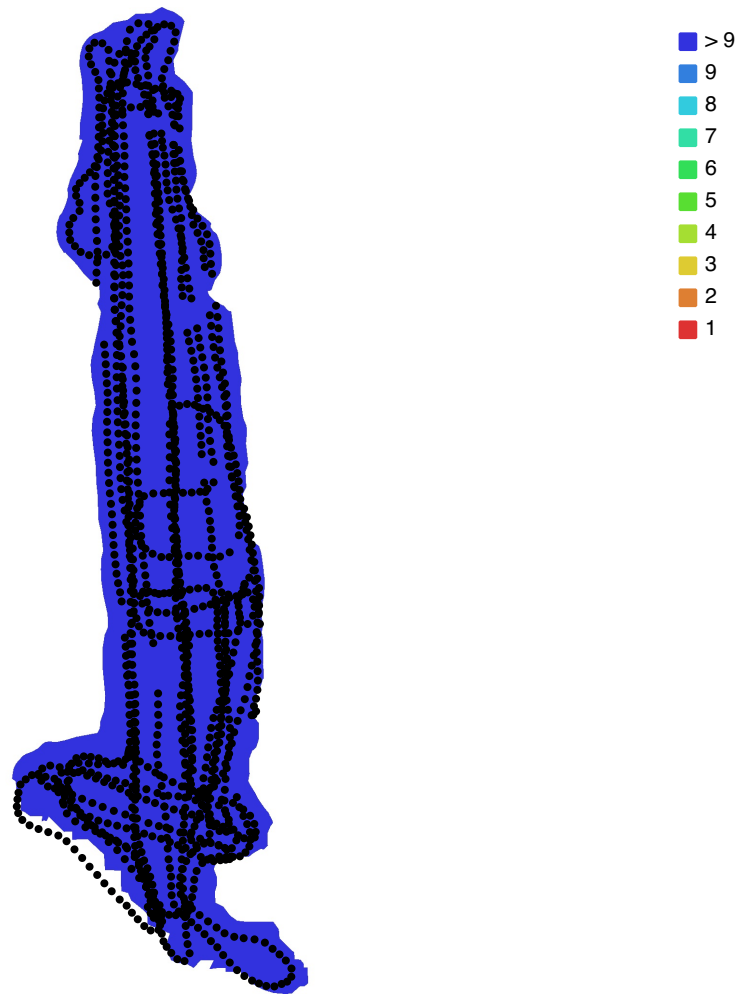


Fig. 1. Camera locations and image overlap.

Number of images: 1,480

Camera stations: 1,442

Tie points: 665,760

Projections: 1,639,001

Reprojection error: 3.49 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
ILCE-1, EF8-15mm f/4L FI...	8640 x 5760	15 mm	4.16 x 4.16 $\mu\text{m}$	No

Table 1. Cameras.

# Camera Calibration

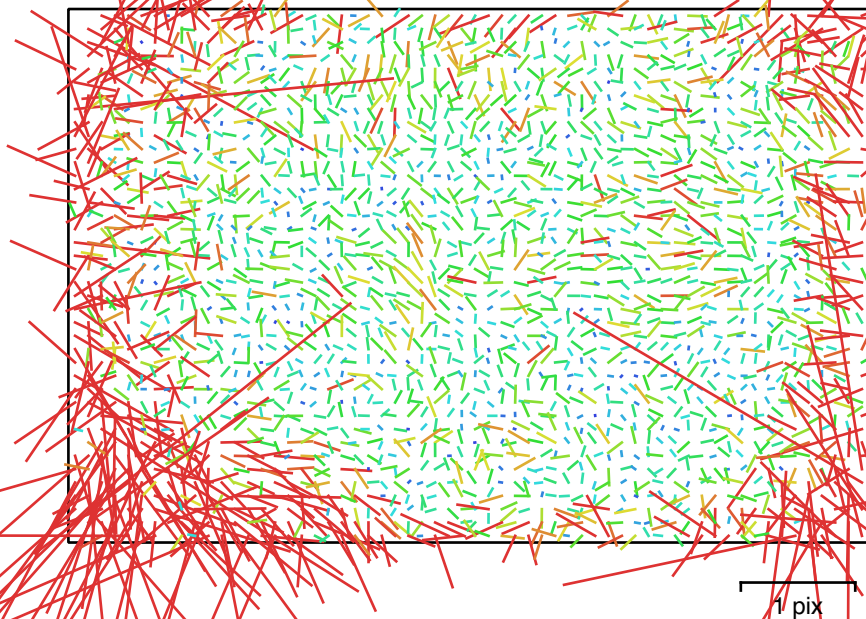


Fig. 2. Image residuals for ILCE-1, EF8-15mm f/4L FISHEYE USM (15mm).

**ILCE-1, EF8-15mm f/4L FISHEYE USM (15mm)**

1480 images

Type	Resolution	Focal Length	Pixel Size
<b>Fisheye</b>	<b>8640 x 5760</b>	<b>15 mm</b>	<b>4.16 x 4.16 <math>\mu</math>m</b>

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
<b>F</b>	<b>3814.45</b>	0.16	1.00	-0.23	0.33	-0.50	0.28	-0.23	0.19	-0.28
<b>Cx</b>	<b>7.2248</b>	0.087		1.00	-0.05	0.04	-0.00	0.01	-0.68	0.04
<b>Cy</b>	<b>26.4112</b>	0.086			1.00	-0.06	0.01	-0.02	0.06	-0.70
<b>K1</b>	<b>-0.0299951</b>	5e-05				1.00	-0.93	0.85	-0.05	0.12
<b>K2</b>	<b>0.00379149</b>	6.5e-05					1.00	-0.98	-0.03	-0.03
<b>K3</b>	<b>-0.000991249</b>	2.7e-05						1.00	0.02	0.03
<b>P1</b>	<b>5.09557e-05</b>	3.3e-06							1.00	-0.11
<b>P2</b>	<b>0.000191089</b>	3.7e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

# Digital Elevation Model

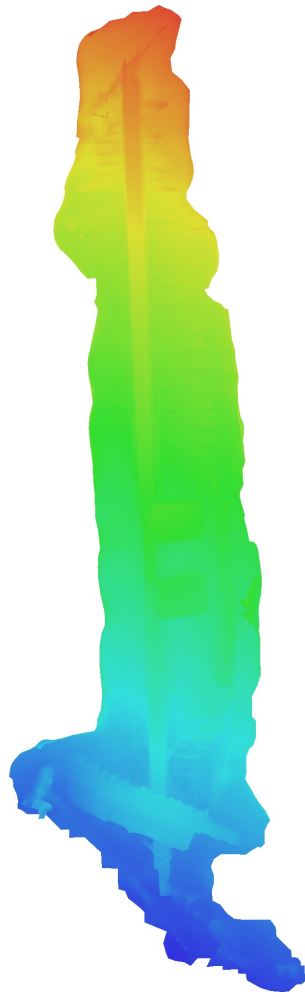


Fig. 3. Reconstructed digital elevation model.

# Processing Parameters

## General

Cameras	1480
Aligned cameras	1442
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

## Tie Points

Points	665,760 of 791,603
RMS reprojection error	0.181352 (3.48618 pix)
Max reprojection error	0.555142 (60.1198 pix)
Mean key point size	17.8149 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	2.52087

## Alignment parameters

Accuracy	High
Generic preselection	Yes
Reference preselection	Source
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	36 minutes 47 seconds
Matching memory usage	2.02 GB
Alignment time	5 minutes 6 seconds
Alignment memory usage	379.28 MB
Date created	2023:06:07 02:13:28
Software version	2.0.1.16069
File size	48.14 MB

## Depth Maps

Count	1433
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## Depth maps generation parameters

Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	48 minutes 2 seconds
Memory usage	2.35 GB
Date created	2023:06:07 03:10:30
Software version	2.0.1.16069
File size	695.34 MB

## Point Cloud

Points	360,946,881
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## Point attributes

Position	
Color	3 bands, uint8
Normal	

## Point classes

Created (never classified)	360,946,881
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## Depth maps generation parameters

Quality	Medium
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Filtering mode	Moderate
Max neighbors	16
Processing time	48 minutes 2 seconds
Memory usage	2.35 GB
<b>Point cloud generation parameters</b>	
Processing time	2 hours 39 minutes
Memory usage	5.17 GB
Date created	2023:06:07 07:04:59
Software version	2.0.1.16069
File size	4.61 GB
<b>Model</b>	
Faces	1,759,664
Vertices	880,145
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	48 minutes 2 seconds
Memory usage	2.35 GB
<b>Reconstruction parameters</b>	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	2 minutes 14 seconds
Memory usage	2.85 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 14 seconds
UV mapping memory usage	2.02 GB
Blending time	27 minutes 53 seconds
Blending memory usage	24.01 GB
Date created	2023:06:07 03:12:44
Software version	2.0.1.16069
File size	154.81 MB
<b>System</b>	
Software name	Agisoft Metashape Professional
Software version	2.0.1 build 16069
OS	Mac OS 64 bit
RAM	96.00 GB
CPU	
GPU(s)	Apple M2 Max