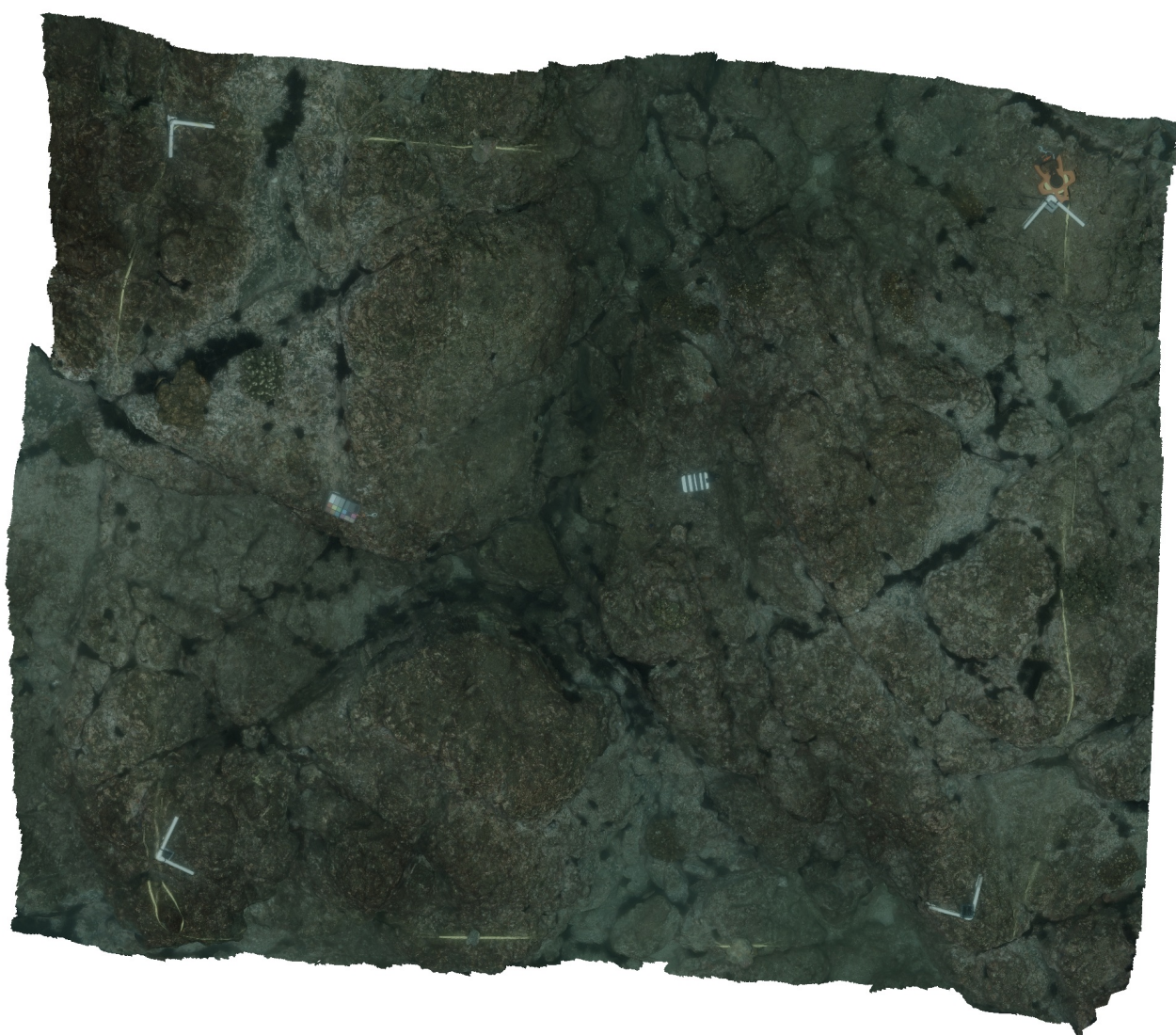


# Agisoft Metashape

Processing Report

29 April 2025



# Survey Data

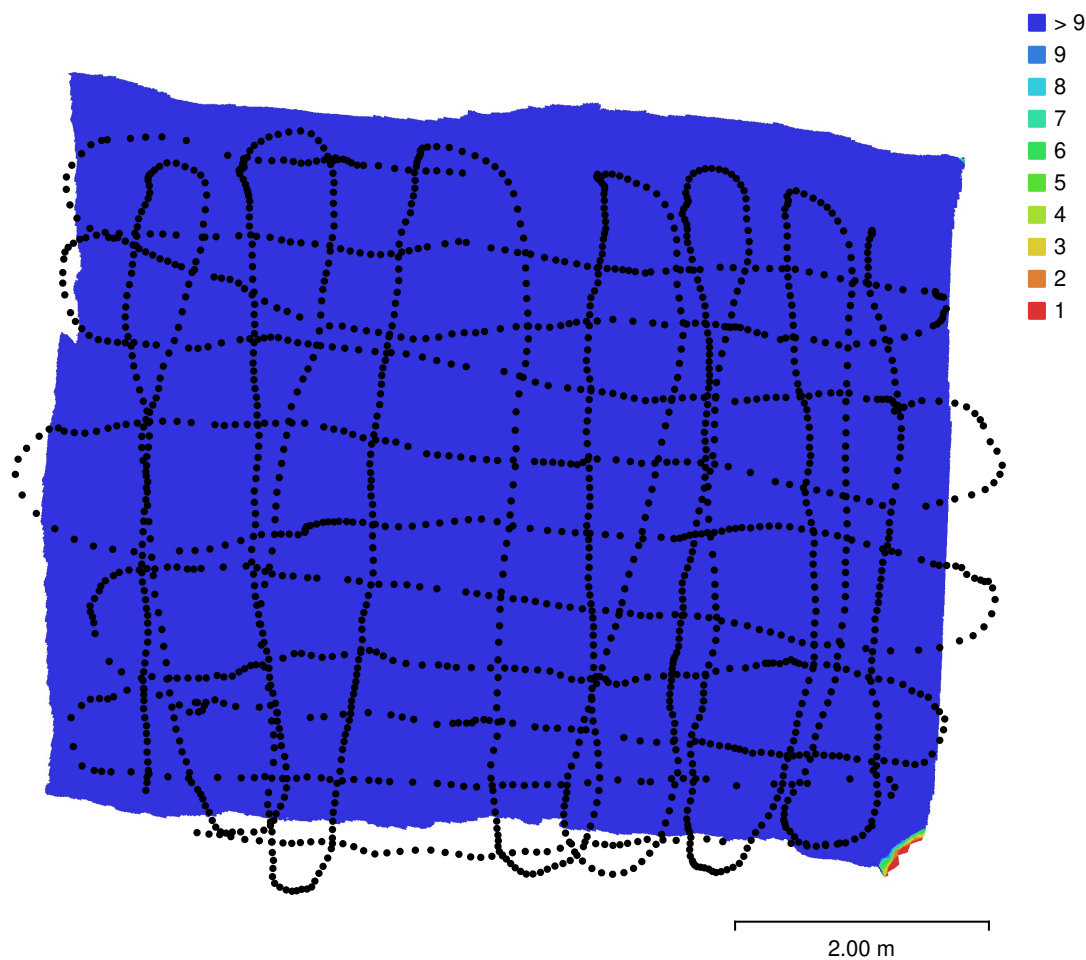


Fig. 1. Camera locations and image overlap.

Number of images:	1,773	Camera stations:	1,773
Flying altitude:	77.2 cm	Tie points:	232,978
Ground resolution:	0.244 mm/pix	Projections:	1,055,605
Coverage area:	39.3 m <sup>2</sup>	Reprojection error:	1.42 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
unknown	5312 x 4648	unknown	unknown	No

Table 1. Cameras.

# Camera Calibration

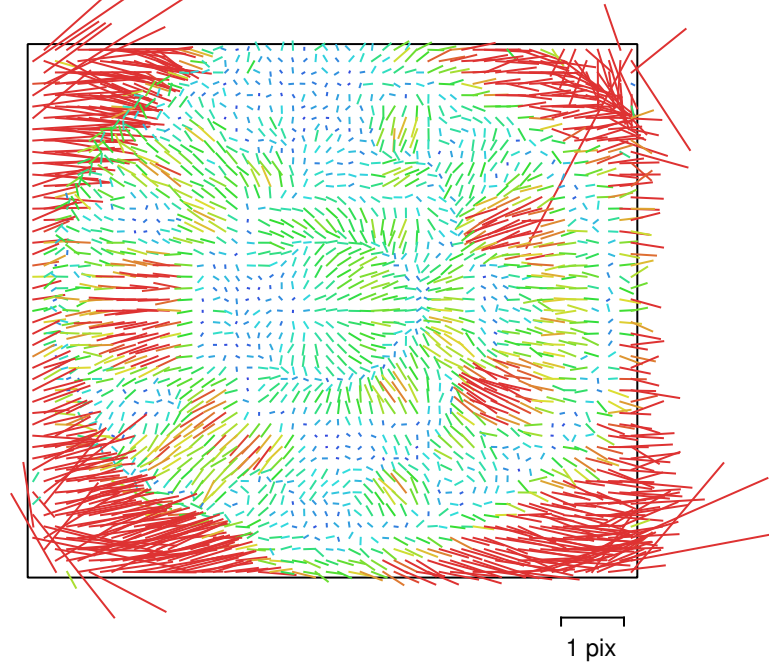


Fig. 2. Image residuals for unknown.

unknown

1773 images

Type	Resolution	Focal Length	Pixel Size
<b>Frame</b>	<b>5312 x 4648</b>	<b>unknown</b>	<b>unknown</b>

	Value	Error	F	Cx	Cy	B1	B2	K1	K2	K3	K4	P1	P2
<b>F</b>	<b>3163.53</b>	0.15	1.00	0.36	0.27	-0.15	-0.07	-0.16	0.25	-0.21	0.23	0.02	0.04
<b>Cx</b>	<b>-19.9357</b>	0.032		1.00	0.10	-0.14	-0.10	-0.03	0.07	-0.08	0.10	0.65	0.01
<b>Cy</b>	<b>-4.1158</b>	0.032			1.00	-0.03	-0.14	-0.01	0.05	-0.04	0.04	0.01	0.76
<b>B1</b>	<b>-12.5741</b>	0.011				1.00	0.01	0.03	-0.03	0.02	-0.01	-0.03	-0.03
<b>B2</b>	<b>-2.11082</b>	0.0096					1.00	0.01	-0.01	0.01	-0.01	-0.02	-0.07
<b>K1</b>	<b>-0.132164</b>	8.1e-05						1.00	-0.94	0.88	-0.81	0.02	0.03
<b>K2</b>	<b>0.223718</b>	0.00032							1.00	-0.98	0.94	0.03	0.01
<b>K3</b>	<b>-0.169404</b>	0.00048								1.00	-0.99	-0.04	-0.01
<b>K4</b>	<b>0.0775614</b>	0.00025									1.00	0.05	0.01
<b>P1</b>	<b>-0.00382059</b>	3.2e-06										1.00	0.06
<b>P2</b>	<b>-0.000131456</b>	3.5e-06											1.00

Table 2. Calibration coefficients and correlation matrix.

# Scale Bars

Label	Distance (m)	Error (m)
point 1_point 2	4.68193	-0.318075
point 2_point 3	5.61237	0.612373
point 3_point 4	4.49879	-0.501209
point 1_point 4	5.06087	0.0608662
point 5_point 6	0.205187	0.00518661
point 7_point 8	0.121378	-0.00862217
<b>Total</b>		<b>0.349091</b>

Table 3. Control scale bars.

# Digital Elevation Model

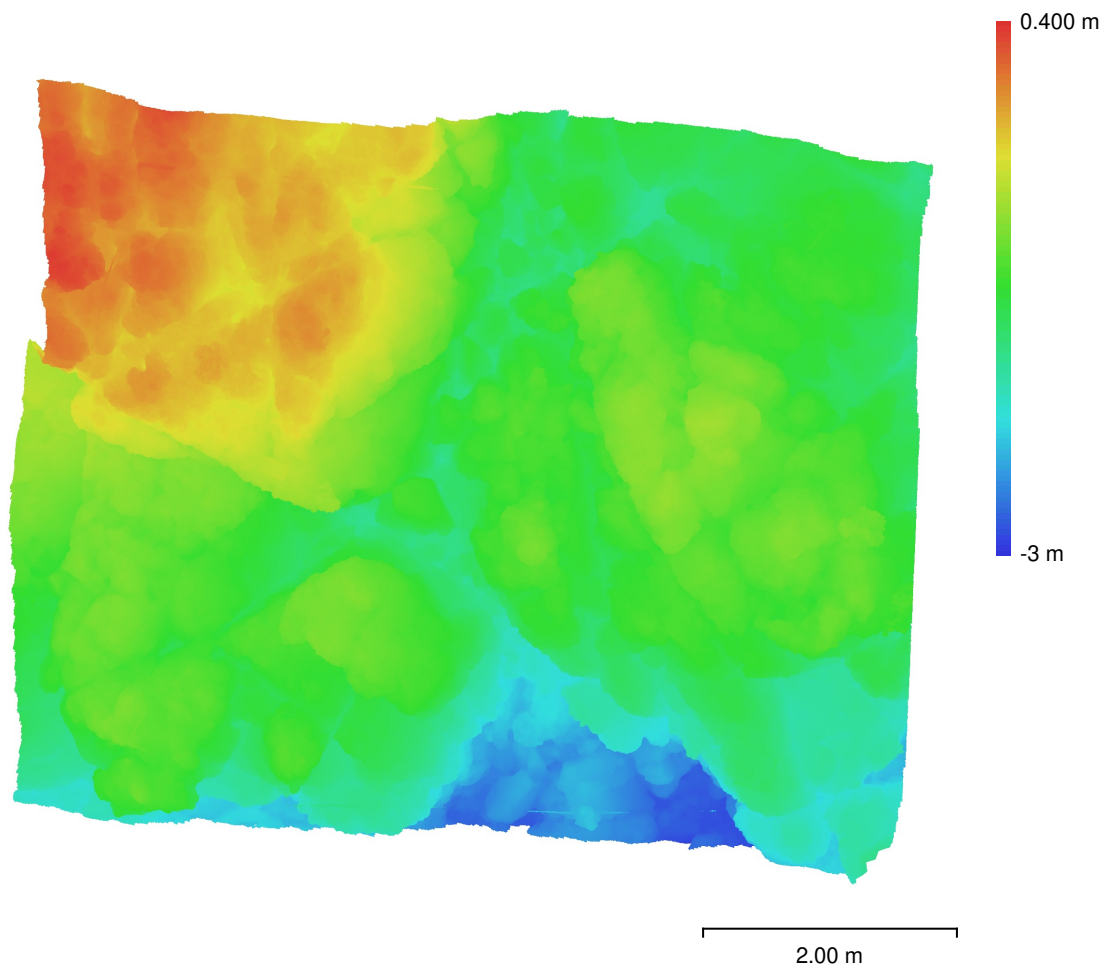


Fig. 3. Reconstructed digital elevation model.

Resolution: unknown

Point density: unknown

# Processing Parameters

## General

Images	1773
Aligned images	1773
Markers	8
Scale bars	6
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

## Tie Points

Points	232,978 of 993,368
RMS reprojection error	0.229741 (1.41551 pix)
Max reprojection error	0.949089 (9.62594 pix)
Mean key point size	5.74842 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	8.08426

## 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	8 hours 50 minutes
Matching memory usage	3.06 GB
Alignment time	49 minutes 45 seconds
Alignment memory usage	4.19 GB

## Optimization parameters

Parameters	f, b1, b2, cx, cy, k1-k4, p1, p2
Adaptive camera model fitting	Yes
Exclude corners	No
Optimization time	10 seconds
Date created	2025:03:18 00:44:44
Software version	2.1.2.18548
File size	130.94 MB

## Depth Maps

Count	1772
-------	------

## Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	2 days 13 hours
Memory usage	2.81 GB
Date created	2025:03:21 01:35:53
Software version	2.1.2.18548
File size	4.63 GB

## Point Cloud

Points	109,006,573
--------	-------------

<b>Point attributes</b>	
Color	3 bands, uint8
Normal	
<b>Point classes</b>	
Created (never classified)	109,006,573
<b>Depth maps generation parameters</b>	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	2 days 13 hours
Memory usage	2.81 GB
<b>Point cloud generation parameters</b>	
Source data	Depth maps
Processing time	6 hours 25 minutes
Memory usage	20.76 GB
Date created	2025:03:25 19:05:57
Software version	2.1.2.18548
File size	1.38 GB
<b>Model</b>	
Faces	15,704,344
Vertices	7,857,949
Vertex colors	3 bands, uint8
Texture	8,192 x 8,192, 3 bands, uint8
<b>Depth maps generation parameters</b>	
Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	2 days 13 hours
Memory usage	2.81 GB
<b>Reconstruction parameters</b>	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	1 hours 40 minutes
Memory usage	13.01 GB
<b>Texturing parameters</b>	
Mapping mode	Orthophoto
Blending mode	Mosaic
Texture size	8,192
Page count	1
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	59 seconds
UV mapping memory usage	1.56 GB
Blending time	1 hours 0 minutes
Blending memory usage	8.24 GB
Date created	2025:03:21 03:14:50
Software version	2.1.2.18548
File size	773.23 MB
<b>DEM</b>	
Size	6,676 x 6,070
Resolution	1.10 mm/pix
Coordinate system	Local Coordinates (m)
<b>Reconstruction parameters</b>	
Source data	Point cloud

Interpolation	Enabled
Processing time	38 seconds
Memory usage	307.24 MB
Date created	2025:04:22 10:43:54
Software version	2.2.0.19890
File size	126.72 MB
<b>System</b>	
Software name	Agisoft Metashape Professional
Software version	2.2.0 build 19890
OS	Linux 64 bit
RAM	251.28 GB
CPU	Intel(R) Xeon(R) W-2223 CPU @ 3.60GHz
GPU(s)	NVIDIA RTX A5000