Agisoft Metashape

Processing Report

29 April 2025

Survey Data
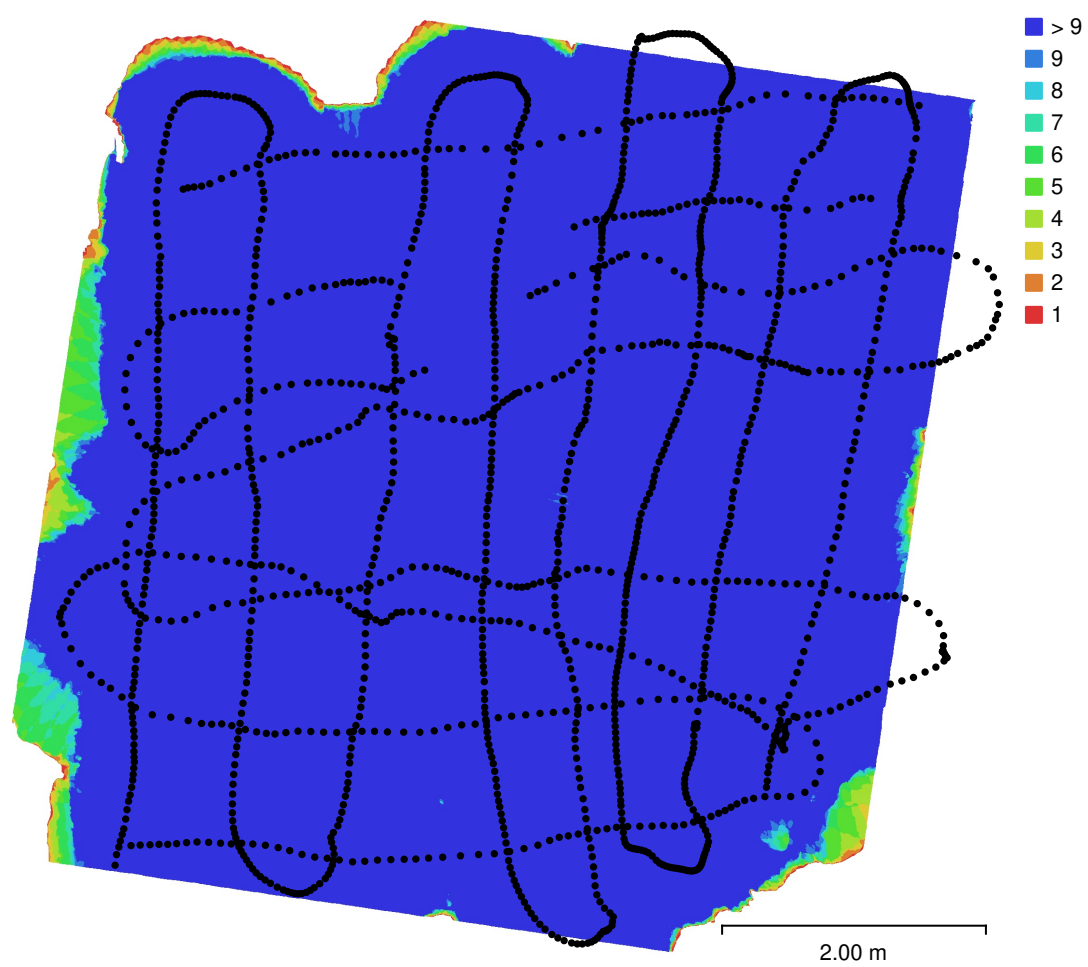
Fig. 1. Camera locations and image overlap.

Number of images:	1,566	Camera stations:	1,566
Flying altitude:	59.6 cm	Tie points:	517,838
Ground resolution:	0.191 mm/pix	Projections:	4,568,919
Coverage area:	41.5 m²	Reprojection error:	4.22 pix

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

Table 1. Cameras.

Camera Calibration

5 pix
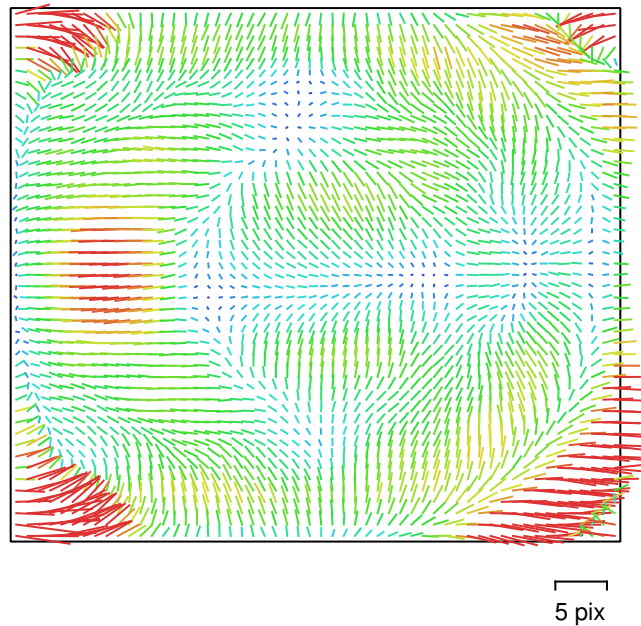
Fig. 2. Image residuals for unknown.

unknown

1566 images

Type	Resolution	Focal Length	Pixel Size
Frame	**5312 x 4648**	**unknown**	**unknown**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**3126.37**	0.16	1.00	0.29	-0.32	-0.25	0.32	-0.00	-0.08	0.06
Cx	**-19.517**	0.033		1.00	-0.12	-0.02	0.01	0.11	0.38	0.06
Cy	**-18.9675**	0.031			1.00	0.07	-0.09	-0.01	0.02	0.34
K1	**-0.0989087**	3.5e-05				1.00	-0.92	0.86	0.09	-0.10
K2	**0.0930771**	6.8e-05					1.00	-0.93	-0.06	0.02
K3	**0.00133964**	4.1e-05						1.00	0.06	-0.02
P1	**-0.00454578**	2.6e-06							1.00	-0.04
P2	**0.000844252**	3e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
point 1_point 2	4.68471	-0.315287
point 2_point 3	4.46397	-0.536027
point 3_point 4	5.29429	0.29429
point 1_point 4	5.42695	0.426947
point 5_point 6	0.180751	-0.0192494
point 7_point 8	0.114845	-0.0151547
Total		**0.330712**

Table 3. Control scale bars.

Digital Elevation Model
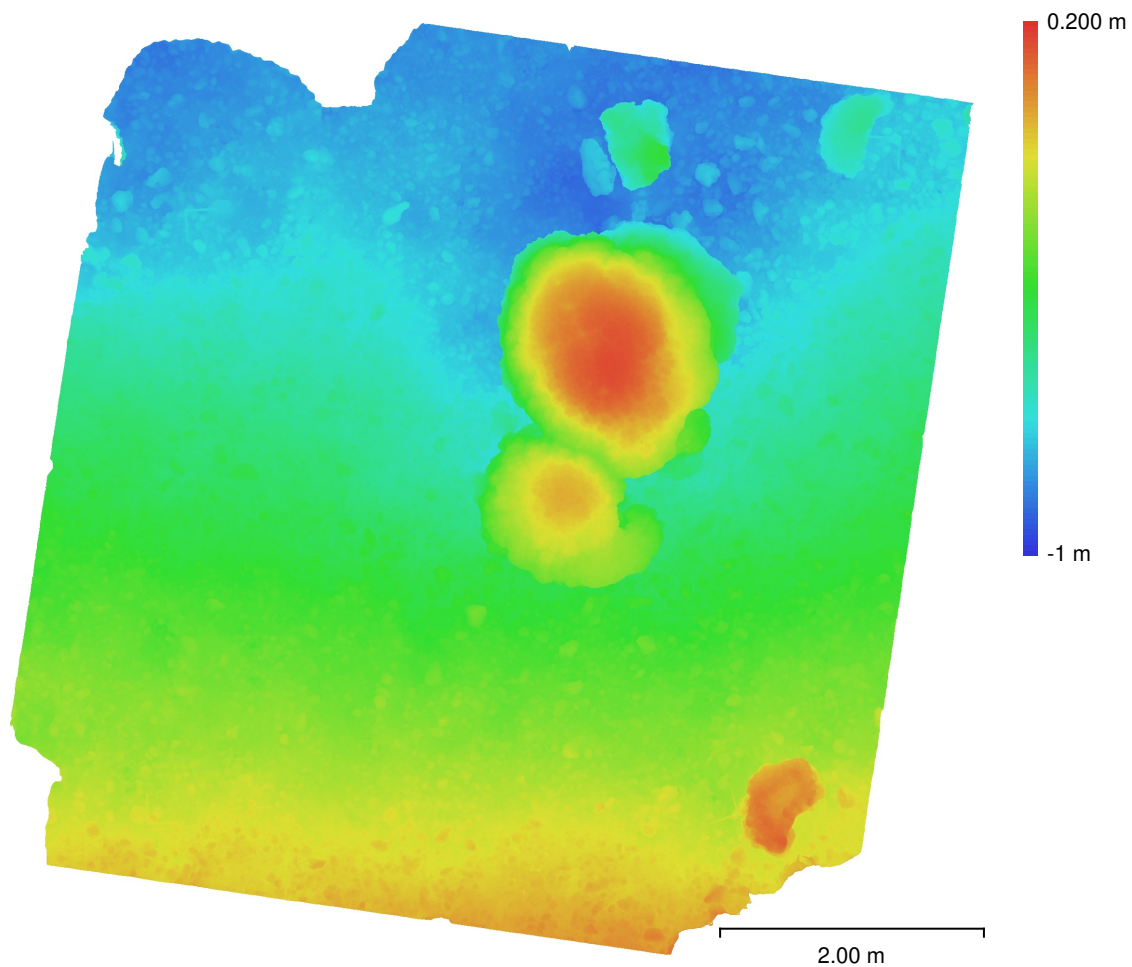

Fig. 3. Reconstructed digital elevation model.

Resolution: unknown
Point density: unknown

Processing Parameters

General

Images	1566
Aligned images	1566
Markers	8
Scale bars	6
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	517,838 of 794,018
RMS reprojection error	0.522999 (4.22388 pix)
Max reprojection error	1.5932 (98.3772 pix)
Mean key point size	7.81764 pix
Point colors	3 bands, uint8
Key points	5.02 GB
Average tie point multiplicity	9.40628

  Alignment parameters

Accuracy	Medium
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	44 minutes 12 seconds
Matching memory usage	3.33 GB
Alignment time	1 hours 30 minutes
Alignment memory usage	730.54 MB
Date created	2025:04:24 10:01:39
Software version	2.2.0.19890
File size	5.17 GB

Depth Maps

Count	1536

  Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	57 minutes 14 seconds
Memory usage	1.94 GB
Date created	2025:04:24 14:44:28
Software version	2.2.0.19890
File size	4.28 GB

Point Cloud

Points	139,037,979
Coordinate precision	0.189 mm

  Point attributes

Color	3 bands, uint8
Normal	
Confidence	1 - 57

Point classes
  Created (never classified)   139,037,979

Depth maps generation parameters
  Quality   Medium
  Filtering mode   Mild
  Max neighbors   16
  Processing time   57 minutes 14 seconds
  Memory usage   1.94 GB

Point cloud generation parameters
  Source data   Depth maps
  Processing time   8 hours 30 minutes
  Memory usage   3.70 GB
Date created   2025:04:24 23:15:11
Software version   2.2.0.19890
File size   1.94 GB

Model
  Faces   10,946,072
  Vertices   5,480,812
  Vertex colors   3 bands, uint8
  Texture   8,192 x 8,192, 3 bands, uint8

Depth maps generation parameters
  Quality   Medium
  Filtering mode   Mild
  Max neighbors   16
  Processing time   57 minutes 14 seconds
  Memory usage   1.94 GB

Reconstruction parameters
  Surface type   Arbitrary
  Source data   Depth maps
  Interpolation   Enabled
  Strict volumetric masks   No
  Processing time   38 minutes 59 seconds
  Memory usage   12.73 GB

Texturing parameters
  Mapping mode   Generic
  Blending mode   Mosaic
  Texture size   8,192
  Page count   1
  Enable hole filling   Yes
  Enable ghosting filter   Yes
  UV mapping time   5 minutes 45 seconds
  UV mapping memory usage   2.89 GB
  Blending time   12 minutes 49 seconds
  Blending memory usage   6.96 GB
  Blending GPU memory usage   2.62 GB
Date created   2025:04:24 23:53:39
Software version   2.2.0.19890
File size   584.75 MB

DEM
  Size   9,634 x 9,318
  Resolution   0.756 mm/pix
  Coordinate system   Local Coordinates (m)

Reconstruction parameters
  Source data   Point cloud
  Interpolation   Enabled
  Processing time   1 minutes 8 seconds

Memory usage	304.77 MB
Date created	2025:04:24 23:16:23
Software version	2.2.0.19890
File size	209.48 MB

Orthomosaic

Size	14,575 x 14,096
Resolution	0.500 mm/pix
Coordinate system	Local Coordinates (m)
Colors	3 bands, uint8
Orthophotos	1.56 GB

Reconstruction parameters

Blending mode	Mosaic
Surface	DEM
Enable hole filling	Yes
Enable ghosting filter	No
Processing time	26 minutes 6 seconds
Memory usage	1.22 GB
Date created	2025:04:29 08:30:06
Software version	2.2.0.19890
File size	1.72 GB

System

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