

Agisoft Metashape

Processing Report

10 August 2023



Survey Data

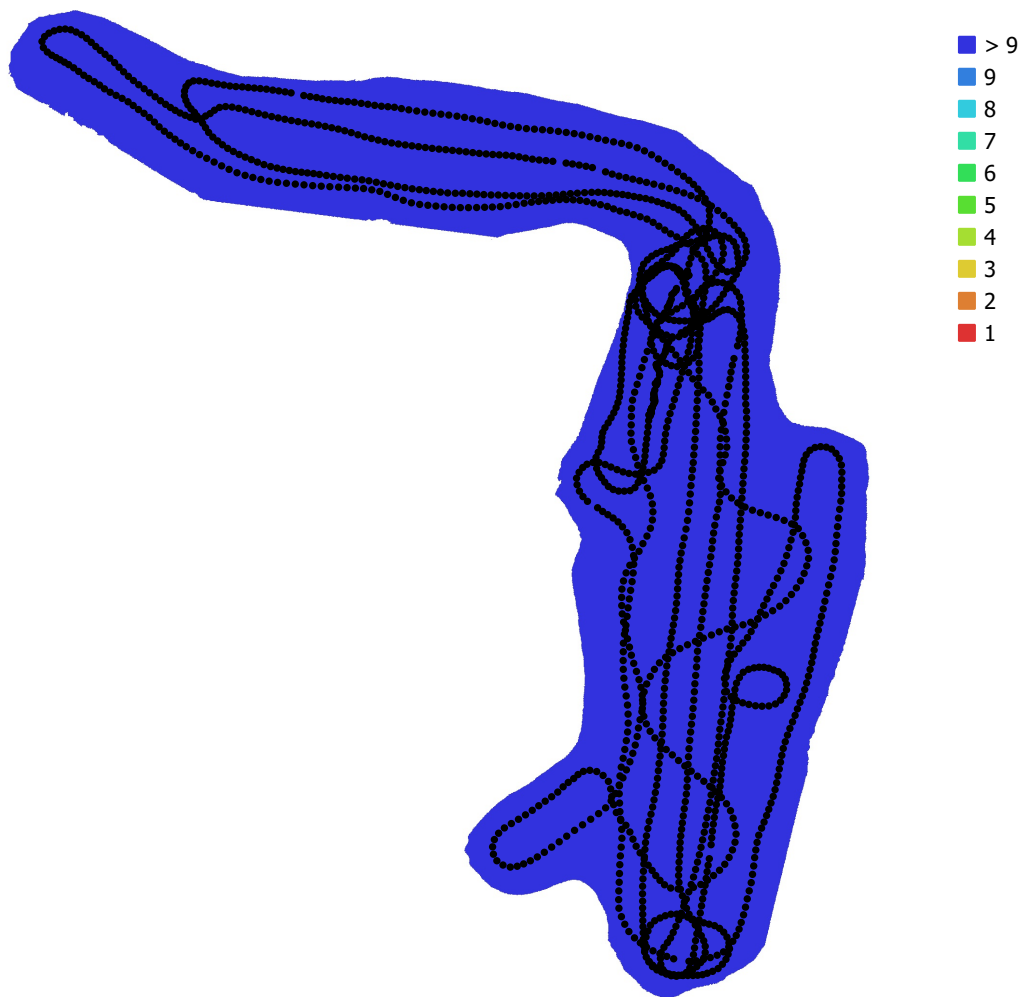


Fig. 1. Camera locations and image overlap.

Number of images: 1,564

Camera stations: 1,564

Tie points: 1,066,270

Projections: 3,174,480

Reprojection error: 2.42 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

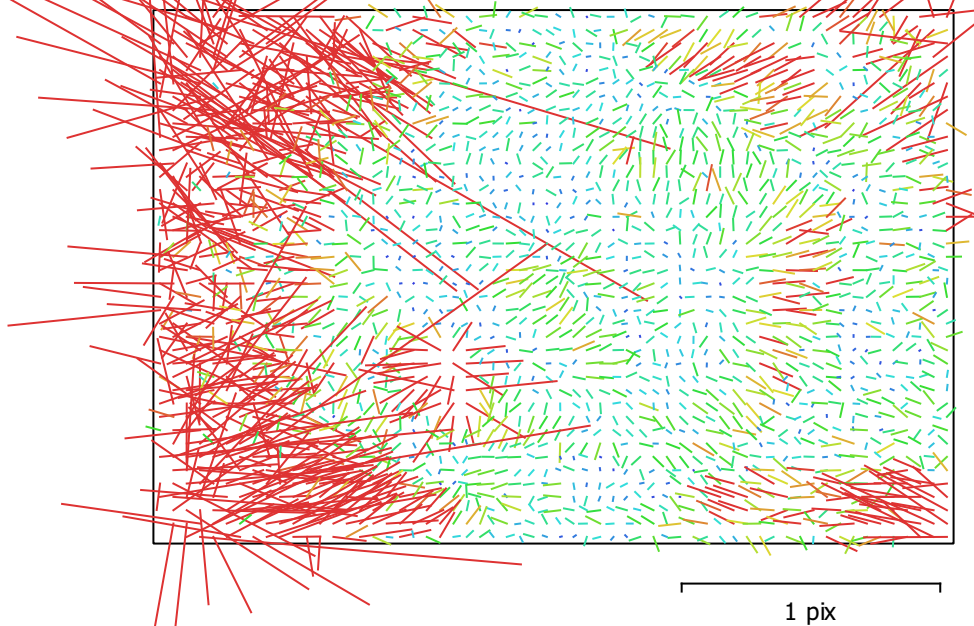


Fig. 2. Image residuals for Canon EOS 5D Mark IV, EF8-15mm f/4L FISHEYE USM (15mm).

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

1564 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	3086.3	0.051	1.00	-0.68	-0.14	-0.52	0.18	-0.15	0.64	0.14
Cx	-2.0521	0.05		1.00	0.18	0.07	0.08	-0.05	-0.76	-0.14
Cy	-17.5454	0.035			1.00	-0.01	0.03	-0.01	-0.13	-0.71
K1	-0.0464007	1.7e-05				1.00	-0.85	0.76	-0.21	-0.06
K2	0.00536947	2.1e-05					1.00	-0.97	-0.11	-0.02
K3	-0.00130694	8.5e-06						1.00	0.10	-0.01
P1	-0.000112162	2.8e-06							1.00	0.19
P2	0.000120075	1.7e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Digital Elevation Model

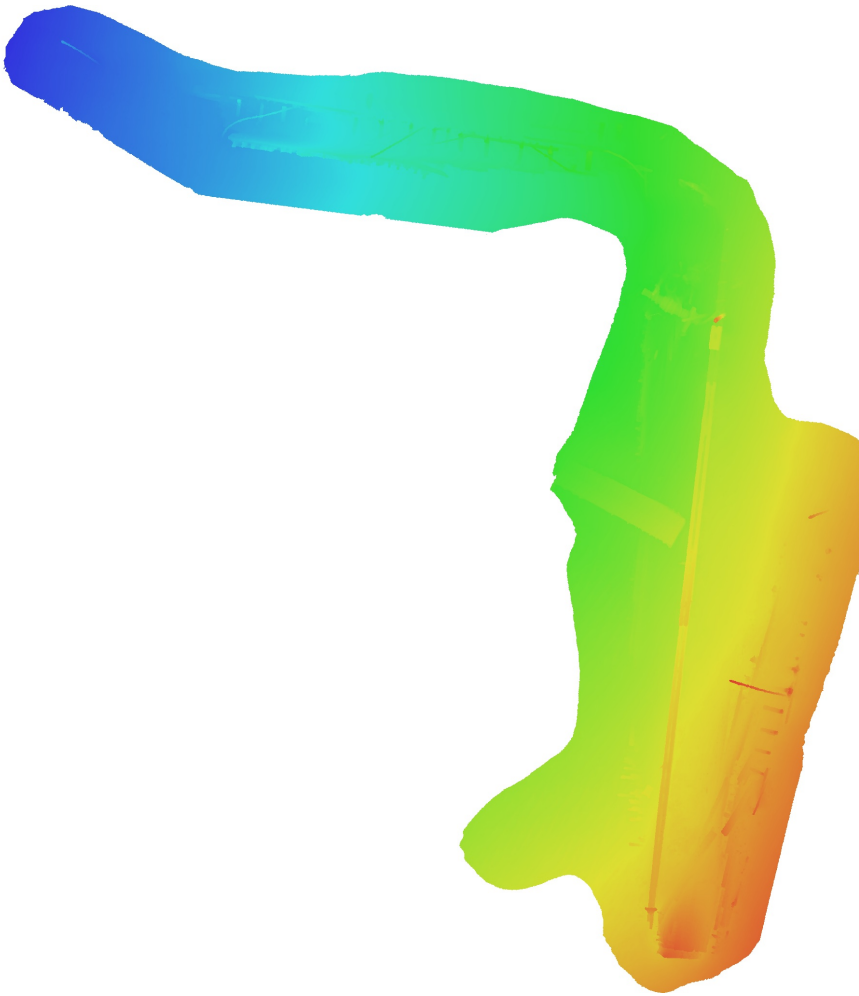


Fig. 3. Reconstructed digital elevation model.

Processing Parameters

General

Cameras	1564
Aligned cameras	1564
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	1,066,270 of 1,178,208
RMS reprojection error	0.176218 (2.42141 pix)
Max reprojection error	0.534434 (58.2341 pix)
Mean key point size	10.9559 pix
Point colors	3 bands, uint8
Key points	3.83 GB
Average tie point multiplicity	3.1721

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	46 minutes 5 seconds
Matching memory usage	1.10 GB
Alignment time	17 minutes 40 seconds
Alignment memory usage	563.39 MB
Date created	2023:06:25 22:10:09
Software version	1.8.0.13794
File size	99.30 MB

Depth Maps

Count	1562
Depth maps generation parameters	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	54 minutes 13 seconds
Memory usage	2.20 GB
Date created	2023:06:25 23:55:54
Software version	1.8.0.13794
File size	2.47 GB

Dense Point Cloud

Points	209,786,168
Point colors	3 bands, uint8
Depth maps generation parameters	
Quality	Medium
Filtering mode	Moderate
Max neighbors	16
Processing time	54 minutes 13 seconds
Memory usage	2.20 GB

Dense cloud generation parameters

Processing time	4 hours 13 minutes
Memory usage	7.22 GB
Date created	2023:08:10 05:54:07
Software version	1.8.0.13794
File size	2.72 GB

Model

Faces	6,999,999
Vertices	3,509,376
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	54 minutes 13 seconds
Memory usage	2.20 GB

Reconstruction parameters

Surface type	Arbitrary
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	33 minutes 51 seconds
Memory usage	14.86 GB

Texturing parameters

Mapping mode	Generic
Blending mode	Mosaic
Texture size	8,192
Enable hole filling	Yes
Enable ghosting filter	No
UV mapping time	1 minutes 40 seconds
UV mapping memory usage	3.19 GB
Blending time	6 minutes 12 seconds
Blending memory usage	4.78 GB
Blending GPU memory usage	2.37 GB
Date created	2023:08:10 06:27:18
Software version	1.8.0.13794
File size	366.05 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