

Agisoft Metashape

Processing Report

12 May 2021



Survey Data

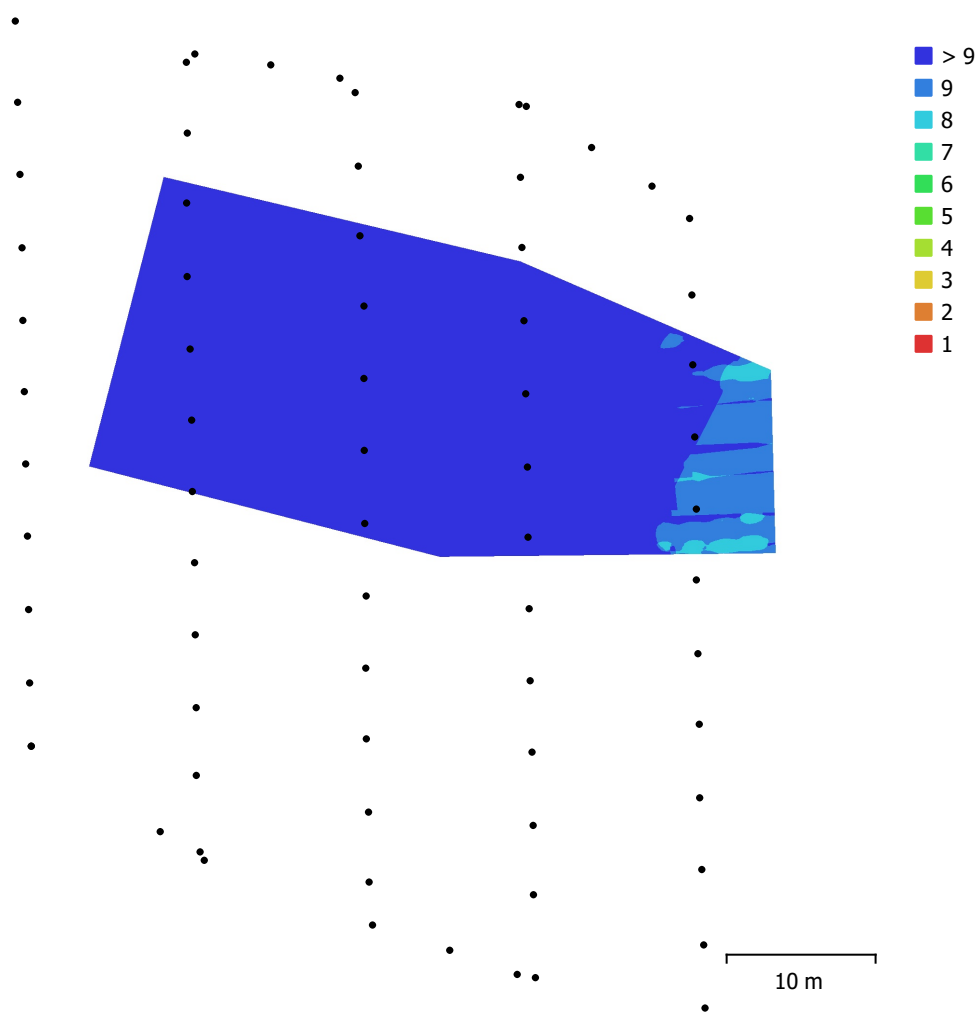


Fig. 1. Camera locations and image overlap.

Number of images:	72	Camera stations:	72
Flying altitude:	30.9 m	Tie points:	6,679
Ground resolution:	1.43 cm/pix	Projections:	21,336
Coverage area:	821 m ²	Reprojection error:	3.05 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
L1D-20c (10.26mm)	2736 x 1539	10.26 mm	5.05 x 5.05 μm	No

Table 1. Cameras.

Camera Calibration

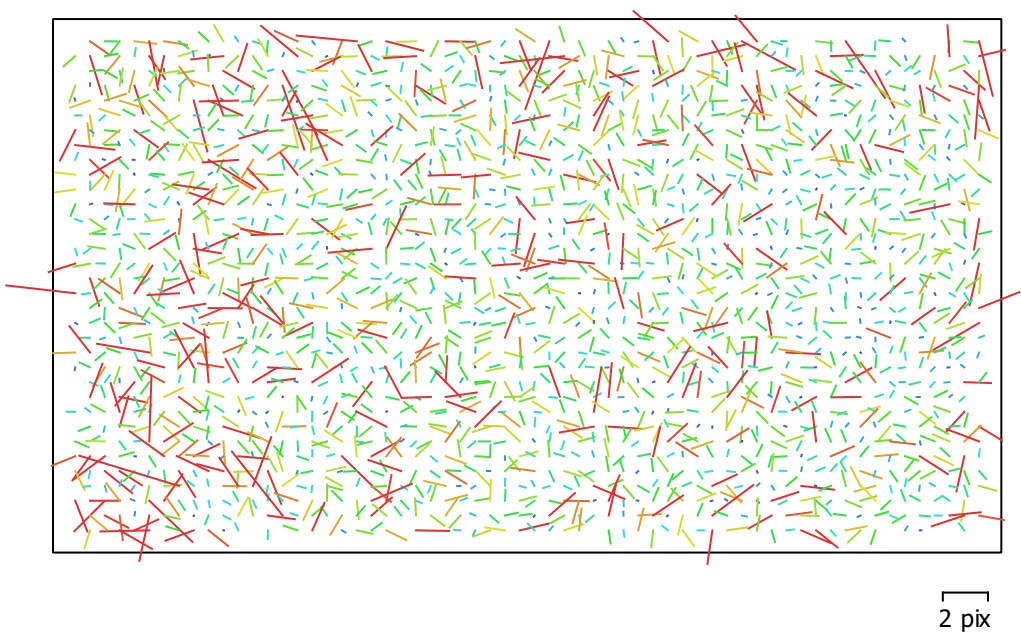


Fig. 2. Image residuals for L1D-20c (10.26mm).

L1D-20c (10.26mm)

72 images

Type Frame	Resolution 2736 x 1539	Focal Length 10.26 mm	Pixel Size 5.05 x 5.05 μm
F:	2031.5		
Cx:	0	B1:	0
Cy:	0	B2:	0
K1:	0	P1:	0
K2:	0	P2:	0
K3:	0	P3:	0
K4:	0	P4:	0

Camera Locations

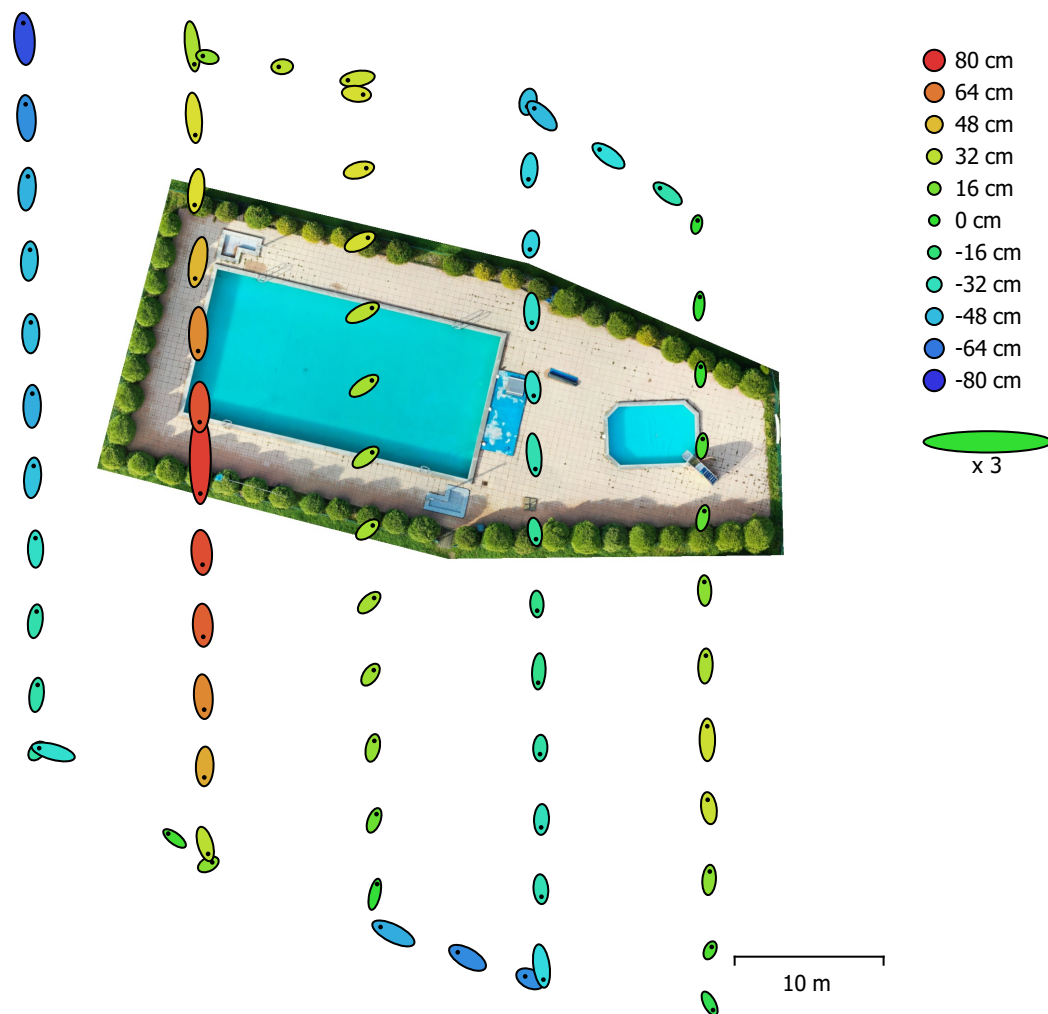


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.

Estimated camera locations are marked with a black dot.

X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total error (cm)
19.4538	45.5117	39.1401	49.4951	63.1008

Table 2. Average camera location error.

X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

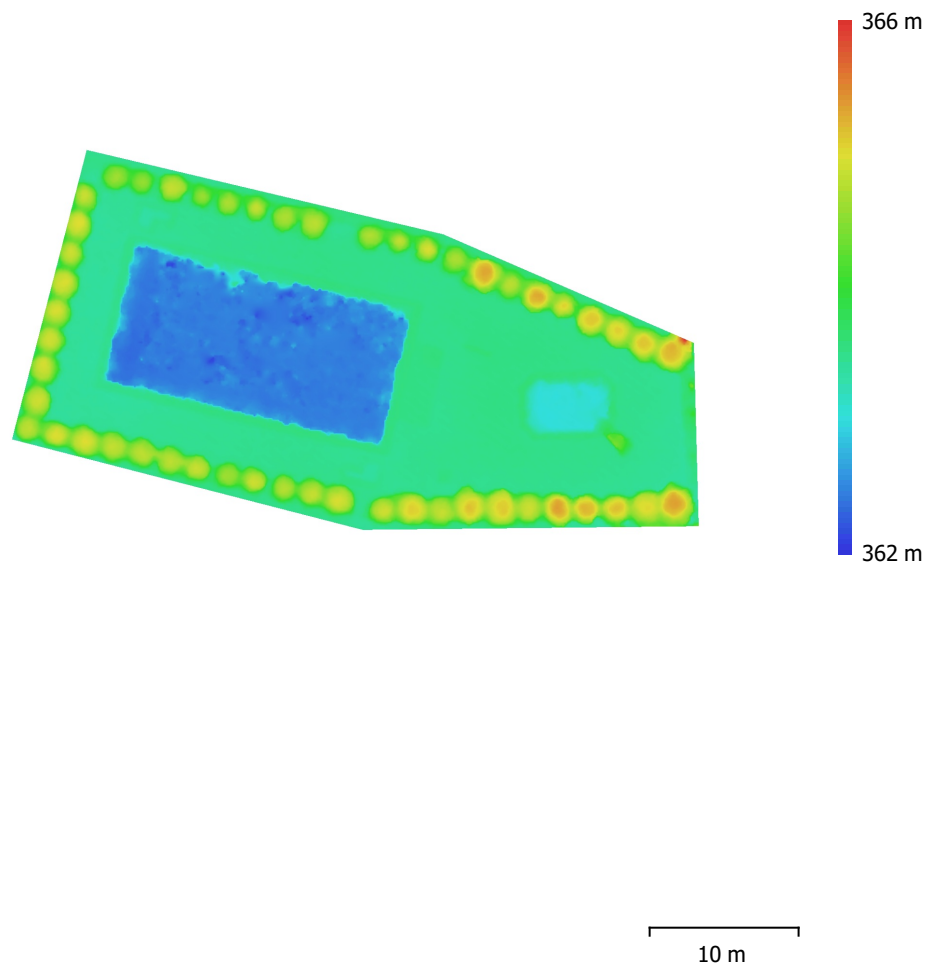


Fig. 4. Reconstructed digital elevation model.

Resolution: 11.5 cm/pix
Point density: 76.2 points/m²

Processing Parameters

General

Cameras	72
Aligned cameras	72

Shapes

Polygon	1
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	6,679 of 8,148
RMS reprojection error	0.188653 (3.04978 pix)
Max reprojection error	0.576806 (27.1421 pix)
Mean key point size	14.7221 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	3.48687

Alignment parameters

Accuracy	Low
Generic preselection	Yes
Reference preselection	Source
Key point limit	40,000
Tie point limit	4,000
Exclude stationary tie points	No
Guided image matching	Yes
Adaptive camera model fitting	Yes
Matching time	1 minutes 37 seconds
Matching memory usage	50.83 MB
Alignment time	38 seconds
Alignment memory usage	12.48 MB
Software version	1.7.2.12070
File size	633.89 KB

Dense Point Cloud

Points	656,122
Point colors	None

Depth maps generation parameters

Quality	Low
Filtering mode	Moderate
Processing time	28 minutes 37 seconds

Dense cloud generation parameters

Processing time	36 seconds
Software version	1.7.2.12070
File size	6.00 MB

Model

Faces	171,220
Vertices	86,622
Vertex colors	3 bands, uint8
Texture	4,096 x 4,096, 4 bands, uint8

Depth maps generation parameters

Quality	Low
Filtering mode	Moderate
Processing time	28 minutes 37 seconds

Reconstruction parameters	
Surface type	Height field
Source data	Dense cloud
Interpolation	Enabled
Strict volumetric masks	No
Processing time	3 seconds
Memory usage	17.36 MB
Texturing parameters	
Mapping mode	Adaptive orthophoto
Blending mode	Mosaic
Texture size	4,096
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	27 seconds
UV mapping memory usage	53.25 MB
Blending time	3 minutes 19 seconds
Blending memory usage	1.53 GB
Software version	1.7.2.12070
File size	32.89 MB
DEM	
Size	1,151 x 1,217
Coordinate system	WGS 84 (EPSG::4326)
Reconstruction parameters	
Source data	Dense cloud
Interpolation	Enabled
Processing time	4 seconds
Memory usage	39.33 MB
Software version	1.7.2.12070
File size	2.04 MB
Orthomosaic	
Size	6,256 x 7,040
Coordinate system	WGS 84 (EPSG::4326)
Colors	3 bands, uint8
Reconstruction parameters	
Blending mode	Mosaic
Surface	DEM
Enable hole filling	Yes
Enable ghosting filter	No
Processing time	3 minutes 22 seconds
Memory usage	702.11 MB
Software version	1.7.2.12070
File size	520.34 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.2 build 12070
OS	Windows 64 bit
RAM	5.93 GB
CPU	Intel(R) Core(TM) i3-4005U CPU @ 1.70GHz
GPU(s)	None