

**Camera Calibration Reporting**

CAMERA CALIBRATION PARAMETERS							
PROJECT #:	Boresite Calibration Flight	GEOID MODEL:	CVGD 2013 (NAD83)	CAMERA NAME:	DMC III	PRINCIPAL POINT OFFSET ppx [mm]:	0
COMPANY NAME:	Peregrine Aerial Survey	IMU TYPE:	LCI-100C	CAMERA SERIAL #:	27542	PRINCIPAL POINT OFFSET ppy [mm]:	0
DATE OF CALIBRATION:	03-Feb-23	IMU orientation [ENU/NED]:	DD	# PIXEL (WIDTH)	14592		
CALIBRATION LOCATION:	Abbotsford, BC	BASE/ROVER GPS TYPE:	CORS	# PIXEL (LENGTH)	25728		
NAME OF PERSON PERFORMING CALIBRATION:	Paul Gagnon	GPS SOLUTION :	Differential / Multipass	PIXEL SIZE [µm]:	3.9		
GEODETTIC DATUM:	NAD83 (CSRS)	MAX BASELINE LENGTH [Km]:	32	A-Priory FOCAL LENGTH "f" [mm]:	92		
VERTICAL DATUM:	CVGD 2013 (NAD83)	A-Priory Spatial boresight offsets dX dY dZ [m;m;m]:	.087, 0.00, .182	#CHANNELS [R/G/B/iR/nIR]	R/G/B/NIR/Pan		
PROJECTION:	UTM 10N	A-Priory Angular boresight offsets dR dP dH [°]:	0, 0, 0	BIT DEPTH [bit]:	14		

BUNDLE BLOCK ADJUSTMENT (BBA)						
SOFTWARE NAME AND VERSION:	ImageStation Automatic Orientations 16.7.0 Build 573	Variance Components Image Points [µm] (RMS):	0.78	Variance Components GPS positions [cm] (RMS):	3.251 cm	
BUNDLE BLOCK ADJUSTMENT PARAMETER ESTIMATES USED DURING ADJUSTMENT:	X0, Y0, Z0, omega, Phi, Kappa	Variance Components Image points x [µm] (RMS):	0.64	Variance Components GPS positions X-EASTING [cm] (RMS):	2.161 cm	
IMAGE MEASUREMENT WEIGHTING [µ]/[PIXELS]:	3 µm	Variance Components Image points y [µm] (RMS):	0.64	Variance Components GPS positions Y-NORTHINGS [cm] (RMS):	2.117 cm	
GROUND CONTROL WEIGHTING in dN dE dZ [±m;±m;±m]:	0.10 / 0.10 0.10 meters	Variance Components Coordinates [µm] (RMS):	0.98	Variance Components GPS positions Z-ELEVATION [cm] (RMS):	1.191 cm	
GPS POSITION WEIGHTING in dN dE dZ [±m;±m;±m]:	0.10 / 0.10 / 0.10 meters	Variance Components Coordinates X-EASTING [cm] (RMS):	2.96			
# 3D GROUND CONTROL POINTS:	21 control / 30 check	Variance Components Coordinates Y-NORTHING [cm] (RMS):	3.31			
		Variance Components Coordinates Z-ELEVATION [cm] (RMS):	3.09			

BBA RESULTS	
A-Priory FOCAL LENGTH [mm]:	92 mm
A-Posteriori FOCAL LENGTH [mm]:	92 mm
A-Priory PRINCIPAL POINT OFFSET ppx [mm]:	0 mm
A-Posteriori PRINCIPAL POINT OFFSET ppx [mm]:	0 mm
A-Priory PRINCIPAL POINT OFFSET ppy [mm]:	0 mm
A-Posteriori PRINCIPAL POINT OFFSET ppy [mm]:	0 mm
Achieved angular Exterior Orientation Parameter Std.Dev Om/Phi/Kappa [±°;±°;±°]	0.00093 / 0.00105 / 0.00054 Degrees
Achieved positional Exterior Orientation Parameter Std.Dev in EAST/NORHT/ELEVATION [±m;±m;±m]	0.02161 / 0.02117 / 0.01191 meters
Sigma Naught [µm]:	0.77568
Average Residuals of control points dE dN dZ [m;m;m] (RMS):	0.01143 / 0.01121 / 0.03090

Full software and residuals output to be submitted with this report