

**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 #:	27550	PRINCIPAL POINT OFFSET ppy [mm]:	0
DATE OF CALIBRATION:	11-07-20211	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]:	28 km	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 16.6.0 Build 618	Variance Components Image Points [μm] (RMS):	0.71	Variance Components GPS positions [cm] (RMS):	11.73 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):	7.71 cm
IMAGE MEASUREMENT WEIGHTING [μ]/[PIXELS]:	3 um	Variance Components Image points y [μm] (RMS):	0.52	Variance Components GPS positions Y-NORTHINGS [cm] (RMS):	8.05 cm
GROUND CONTROL WEIGHTING in dN dE dZ [±m;±m;±m]:	0.10 / 0.10 0.10 meters	Variance Components Coordinates [μm] (RMS):	1.67	Variance Components GPS positions Z-ELEVATION [cm] (RMS):	3.66 cm
GPS POSITION WEIGHTING in dN dE dZ [±m;±m;±m]:	.5 / .5 / .5 meters	Variance Components Coordinates X-EASTING [cm] (RMS):	1.92 cm		
# 3D GROUND CONTROL POINTS:	17 control / 31 check points	Variance Components Coordinates Y-NORTHING [cm] (RMS):	2.84 cm		
		Variance Components Coordinates Z-ELEVATION [cm] (RMS):	2.85 cm		

BBA RESULTS	
A-Priory FOCAL LENGTH [mm]:	92 mm
A-Posteriori FOCAL LENGTH [mm]:	92 mm
A-Priori PRINCIPAL POINT OFFSET ppx [mm]:	0 mm
A-Posteriori PRINCIPAL POINT OFFSET ppx [mm]:	0 mm
A-Priori 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 [±°;±';±"]	.00082 / .00117 / .00044 degrees
Achieved positional Exterior Orientation Parameter Std.Dev in EAST/NORHT/ELEVATION [±m;±m;±m]	.02316 / .02226 / .01223 meters
Sigma Naught [μm]:	0.71 um
Average Residuals of control points dE dN dZ [m;m;m] (RMS):	0.00144 / -0.00000529 / -0.0000012

Full software and residuals output to be submitted with this report