
Assessment Report:

UAV Aerial Photogrammetry Survey

Mascot Creek

Five Mile Placer Lease

Placer Lease: IW00559

Tenure Holder: Braeden Paun-Burnett 100%

Whitehorse Mining District

NTS: 115J/16

Latitude: **62.758497° N**

Longitude: **--138.454406° W**

All Work Performed On: October 3rd – 4th, 2017

Date of Report: October 10th, 2017

AUTHOR OF REPORT: Isaac Fage

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1 Introduction

GroundTruth Exploration Inc. conducted an aerial drone survey on the Mascot Creek placer lease IW00559 held by Braeden Paun-Burnet. The full extent of the lease was imaged with high resolution imagery and topography to establish exploration targets and plan a follow up program.

All work was undertaken by GroundTruth Exploration Inc.

2 Location and Access

Placer lease IW00559 is a five mile lease located on Mascot Creek approximately 150km south of Dawson City within the Yukon River drainage system in west-central Yukon Territory. It is accessible in winter on the Yukon River via snowmobile and accessible by helicopter year round. The adjacent Coffee Gold Camp has an airstrip that is accessible year round. The lease is located within the Whitehorse Mining District on NTS mapsheet 115J/16. (figure 1)

The October 3rd - 4th, 2017 UAV survey was accessed from Dawson City via helicopter and the survey was staged in a clearing on a ridge west of the lease.

3 Physiography

The lease is located in Canada's Boreal Cordillera ecozone. Due to its location in Canada's discontinuous permafrost zone, permafrost is distributed unevenly throughout the property. The valley bottoms and northern slopes have thick moss mats, black spruce, and alder thickets over ice rich permafrost, while southern slopes are generally more sparsely vegetated with ground leaf cover and white spruce, aspen and birch forests.

4 Climate

The interior intermontane plateau receive about 400 mm of annual precipitation. Snowfall accounts for 35 to 60% of all precipitation. Winters are long and cold, with January mean temperatures between -15°C and -27°C. Summers are warm but short, with July mean temperatures between 12°C and 15°C.

(http://www.emr.gov.yk.ca/oilandgas/pdf/bmp_boreal_cordillera_ecozone.pdf)

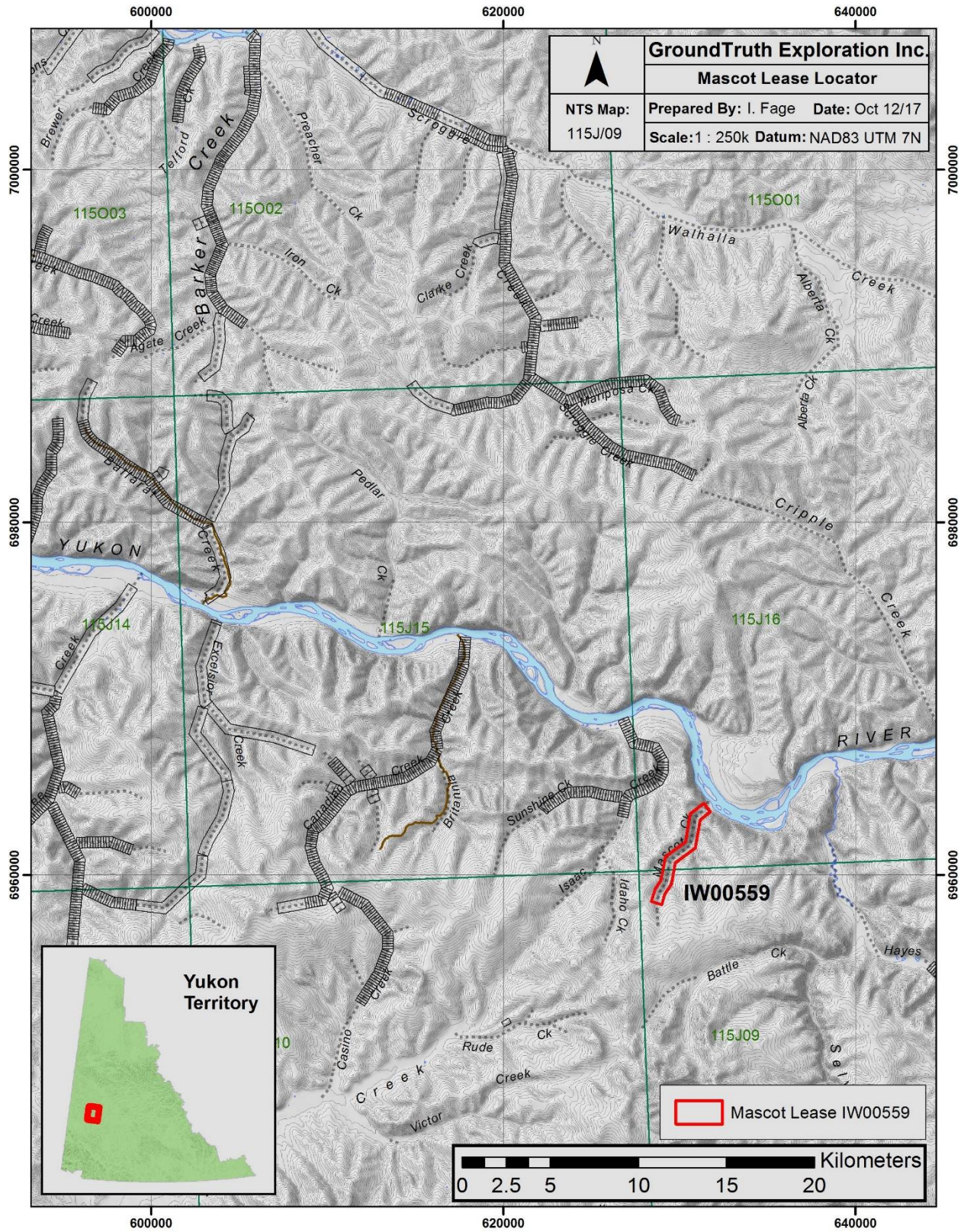
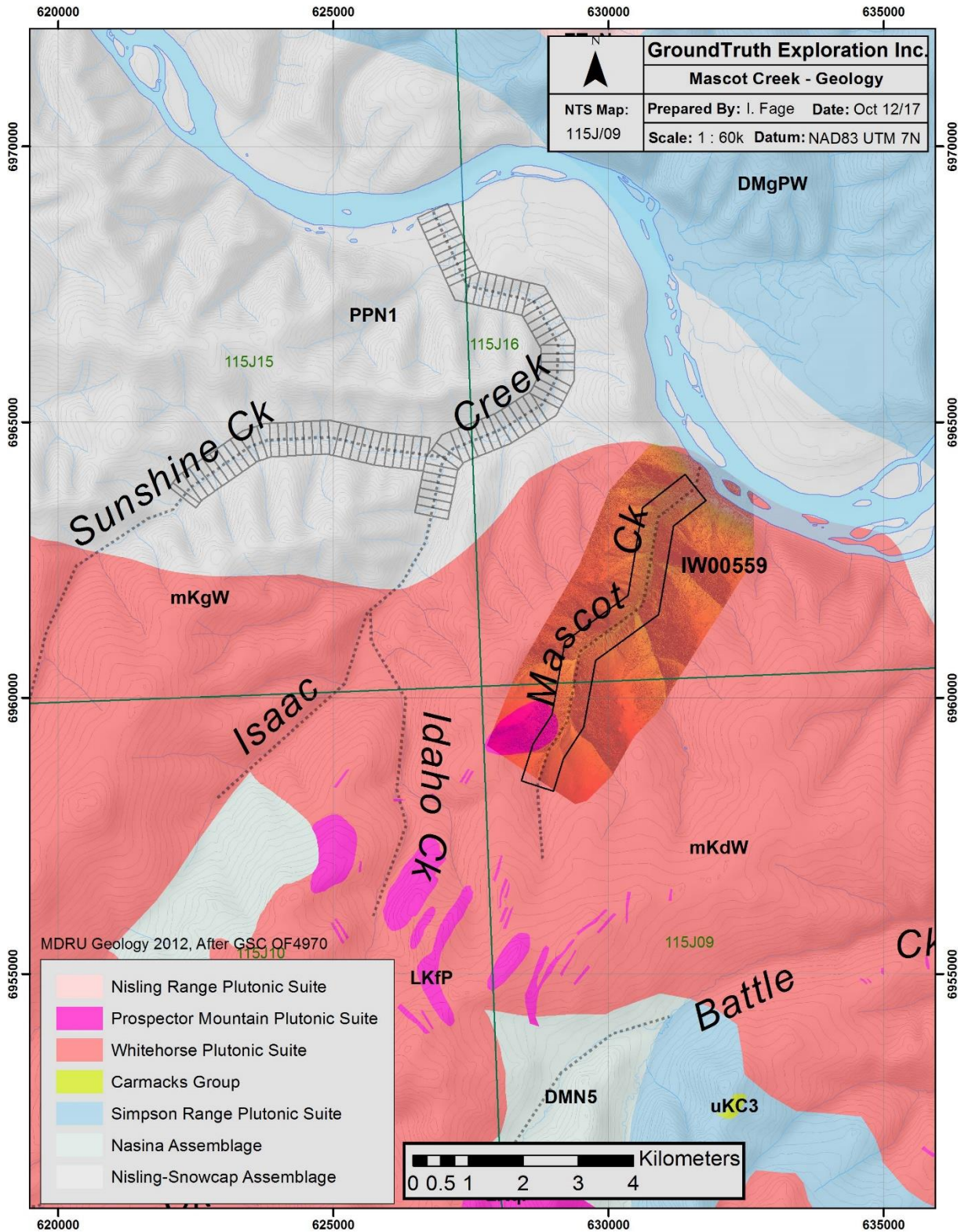


Figure 1: Locator Map

5 GEOLOGICAL SETTING



5.1 Geological Description

The Lease is underlain primarily by the Whitehorse Plutonic Suite. Regionally, it is coded as mKdW, a granitic unit of the mid-cretaceous era consisting of grey, medium to coarse grained, generally equigranular granitic rocks of locally mafic composition (hornblende diorite, biotite-hornblende quartz diorite and mesocratic, often strongly magnetic, hypersthene-hornblende diorite, quartz diorite and gabbro).

There is a small intrusion in the upper section of the lease called the Prospector Mountain Plutonic Suite (LKfP) consisting of grey, fine to coarse grained, massive, granitic rocks of felsic dykes (quartz-feldspar porphyry). (figure 2)

6 WORK PERFORMED

The 2017 UAV survey consisted of a 2 day survey staffed with a lead UAV operator and assistant UAV operator (spotter). A total of 20 flights were run to cover the lease area with Photogrammetry (UAV High Resolution Imagery/Elevation Survey) at 10cm resolution.

The Drone survey lines and spatial resolution are approved by client prior to survey in accordance with Transport Canada UAV operating permit regulations.

6.1.1 Personnel and Equipment

The Drone survey is typically conducted by one trained operator and one spotter. The lead operator is responsible for coordinating efficient operation of survey and ensuring optimal data quality, the spotter is responsible for maintaining visual contact with the drone, monitoring the radio, and looking for flight path conflicts.

The following equipment is used for the completion of the survey:

| | |
|-------------------|--|
| UAV Drone: | Ebee UAV 'Drone' with internal GPS and radio link |
| Camera: | Cannon 16 megapixel camera |
| Base Station: | Panasonic Toughbook laptop with radio link |
| Power Generation: | 1000watt Honda generator (for battery charging) |
| GPS units: | 2x Promark3 GPS receivers (if GCPs are collected) |
| Radios: | VHF radio with aircraft frequencies |
| Processing: | Laptop computer with adequate RAM |
| Software: | Emotion software for flight planning/monitoring Postflight Terra3D for image Orthorectification |

6.1.2 Operating Procedure

The survey is completed in the field according to the following procedure:

- Survey is planned using Emotion software prior to departing for field.
- Spatial resolution, footprint, number of planned flights and launch location is determined.
- Operator arrives onsite and sets up base station, UAV unit and ensures adequate launch and landing path is available.
- Prior to launch, operator calls out on Aircraft frequencies to notify Drone survey in progress. Through duration of survey, operator calls out every 5 minutes to notify aircraft of survey in progress.
- Operator Hand launches aircraft and flies survey as planned with number of required flights and maintains visual contact with the UAV
- Data is downloaded from drone after each flight and inspected for quality.
- After survey, all imagery and drone data files are Orthorectified using Postflight Terra 3D software package.

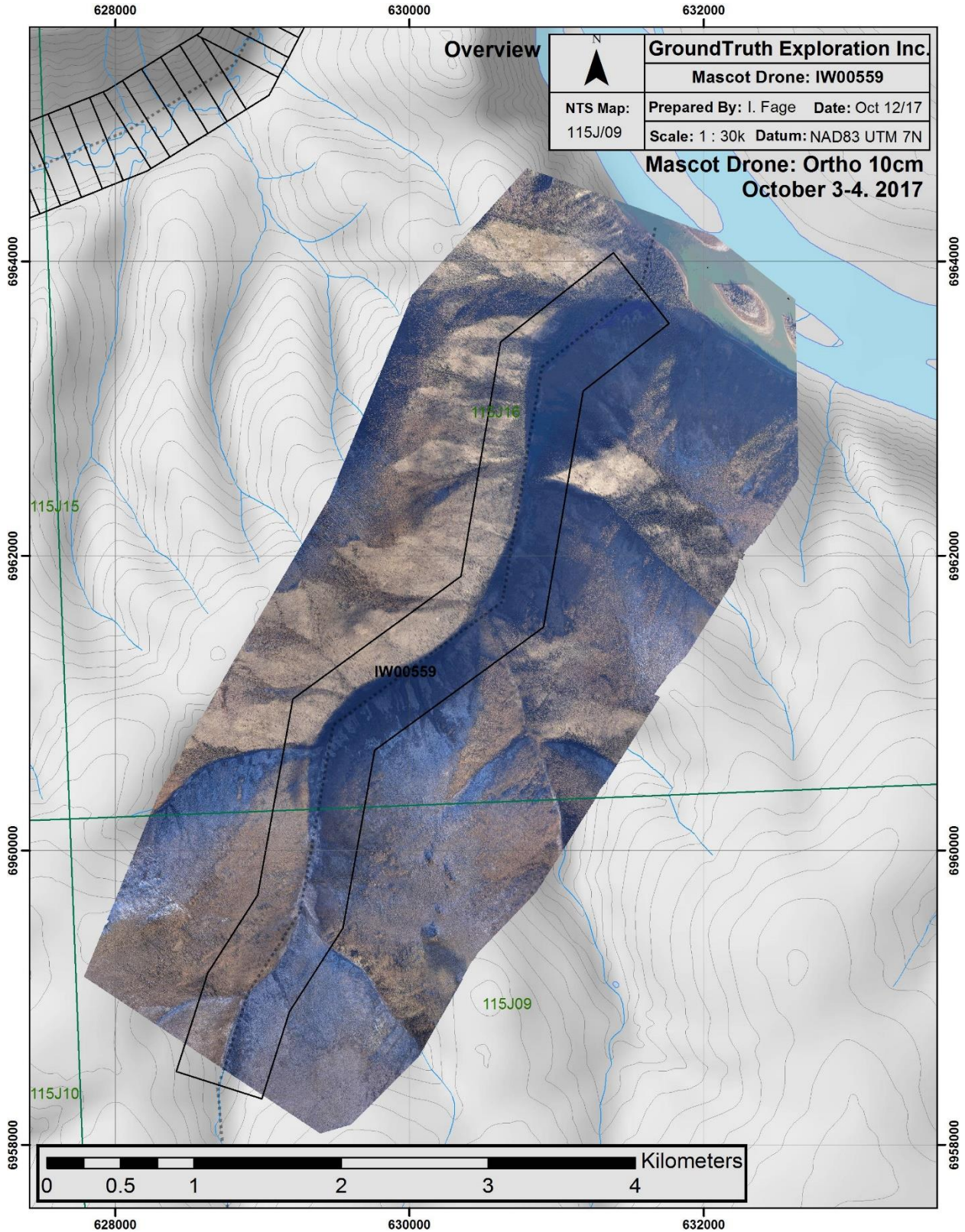
6.1.3 Data Processing

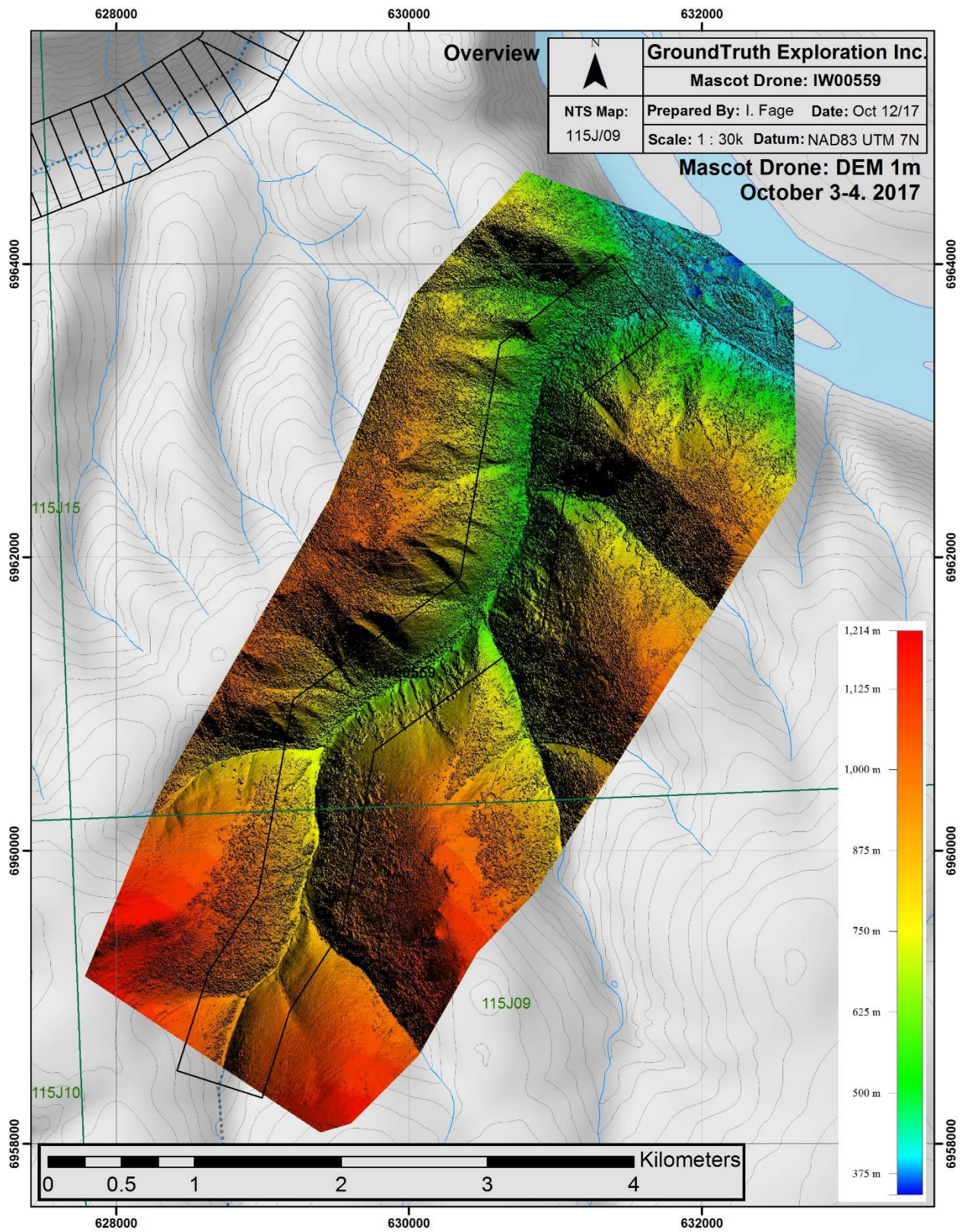
The collected data is downloaded in the field after every flight and checked for integrity. This allows any low quality imagery to be identified and resurveyed while onsite. The drone imagery data is processed every evening by the lead operator in the field using Postflight Terra 3D software provided by Sensefly. The initial orthorectified image product is generated by an automated process. This image is then cleaned up manually within the Postflight software by visually checking for low quality portions of the image and selecting another overlapping image for that location. The final cleaned image and DEM product is the result of this manual QC process. The final Image and DEM are georeferenced to NAD83 UTM projection. A final QC report is generated automatically with the final cleaned product.

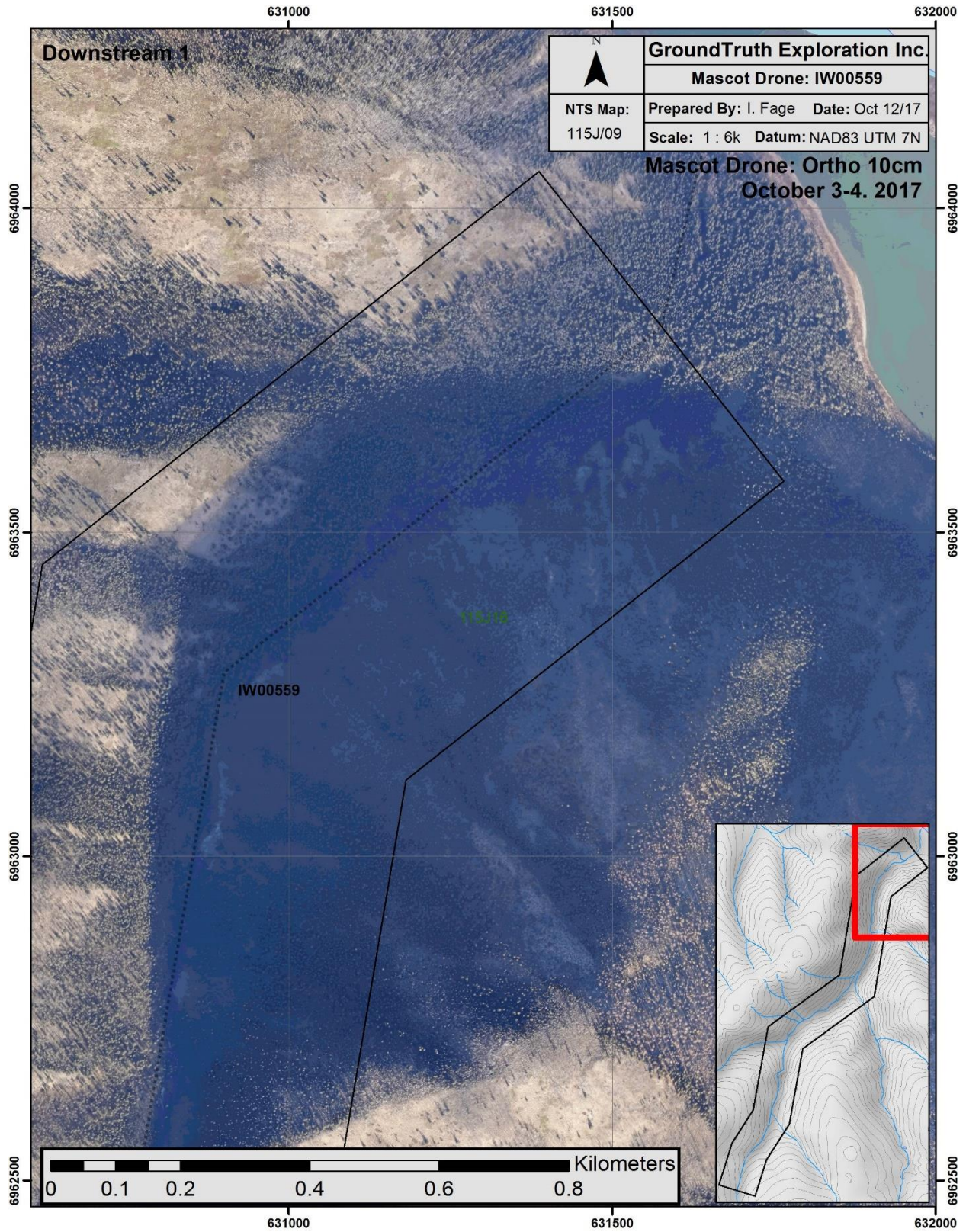
Standard data output:

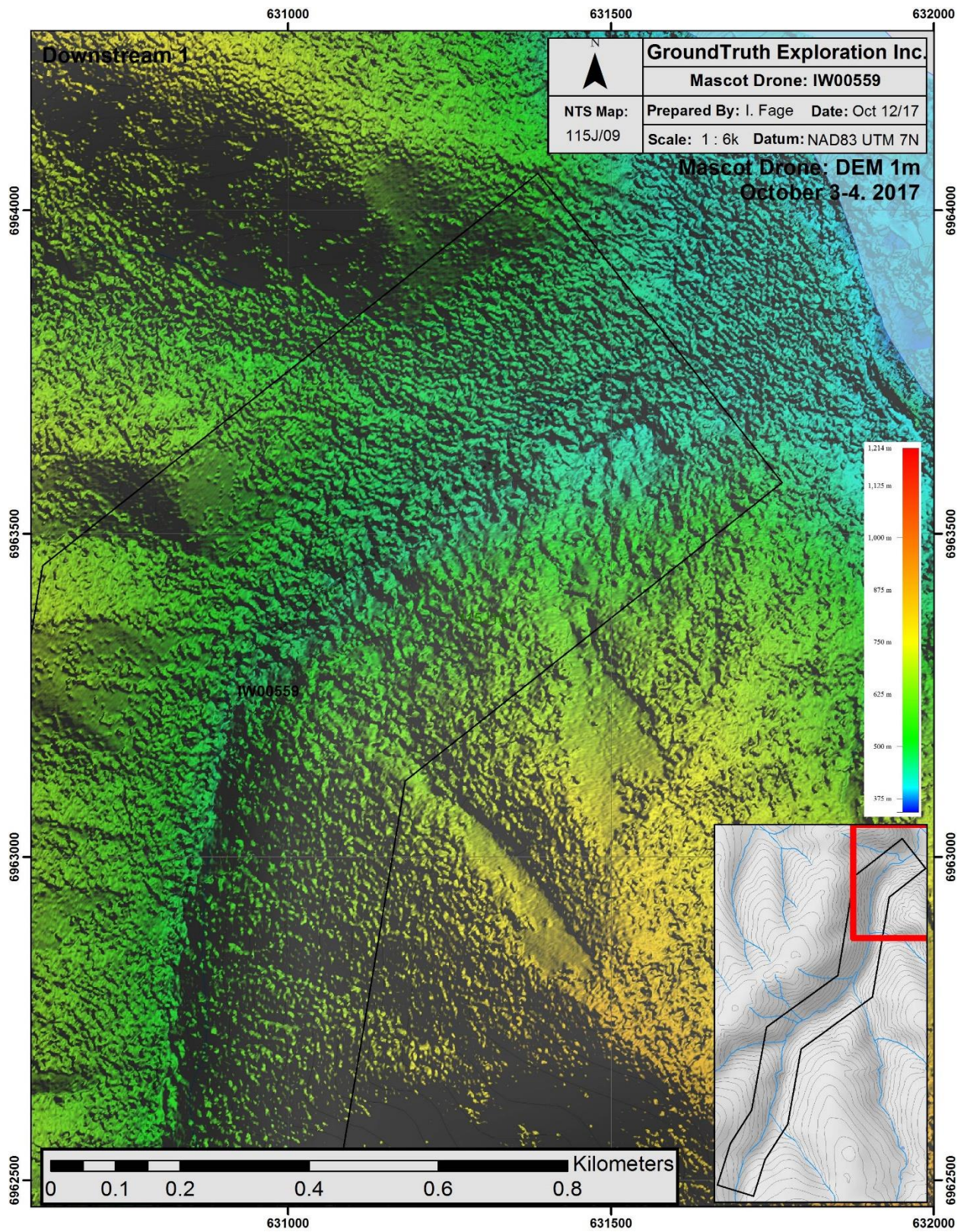
| | |
|---------------------------|---|
| Imagery: | Georeferenced Orthoimage (.geotiff format) |
| Digital Elevation Model: | Gridded Elevation model (geotiff format) |
| Automated Quality Report: | Report with survey statistics (.pdf format) |

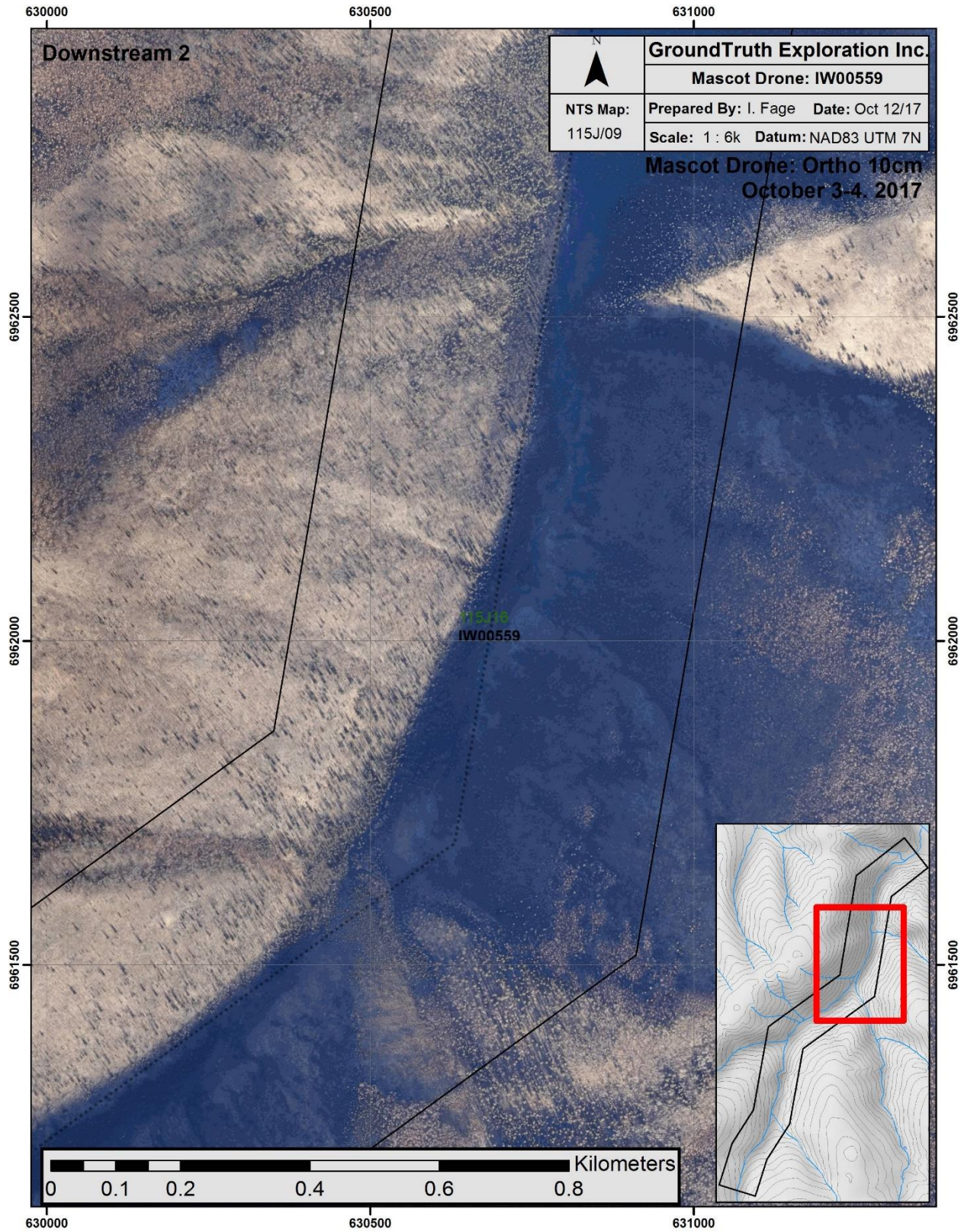
6.1.4 Results

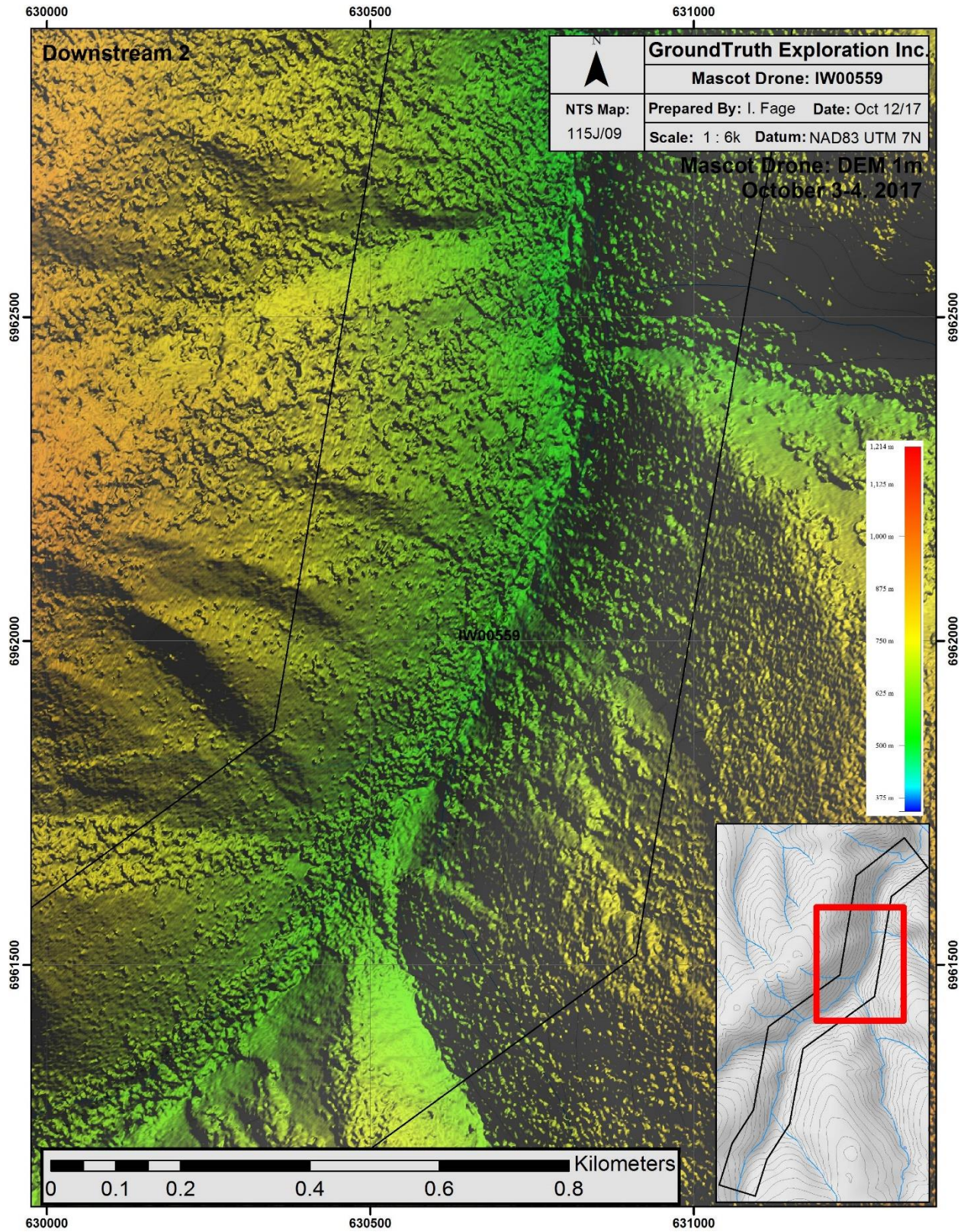


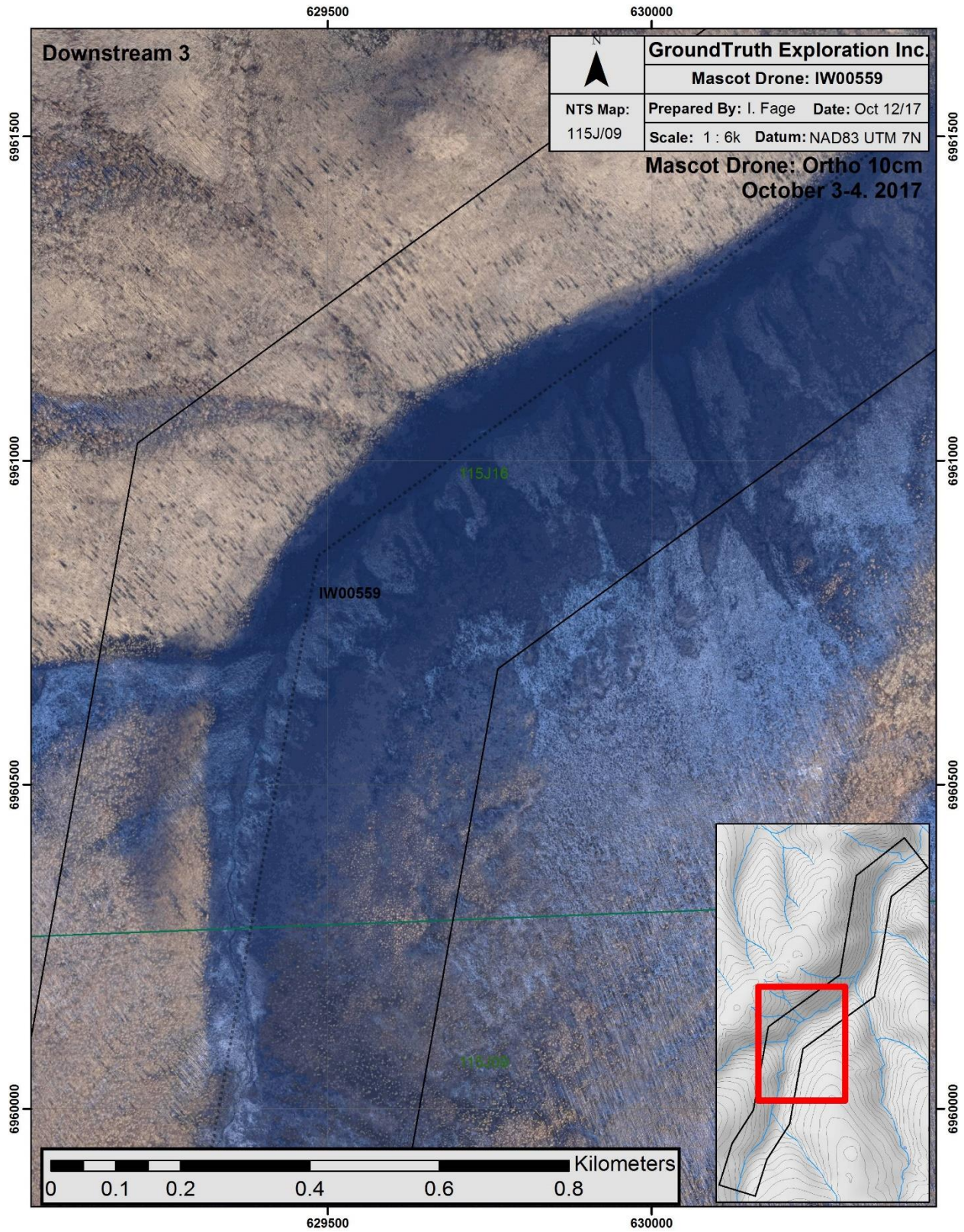


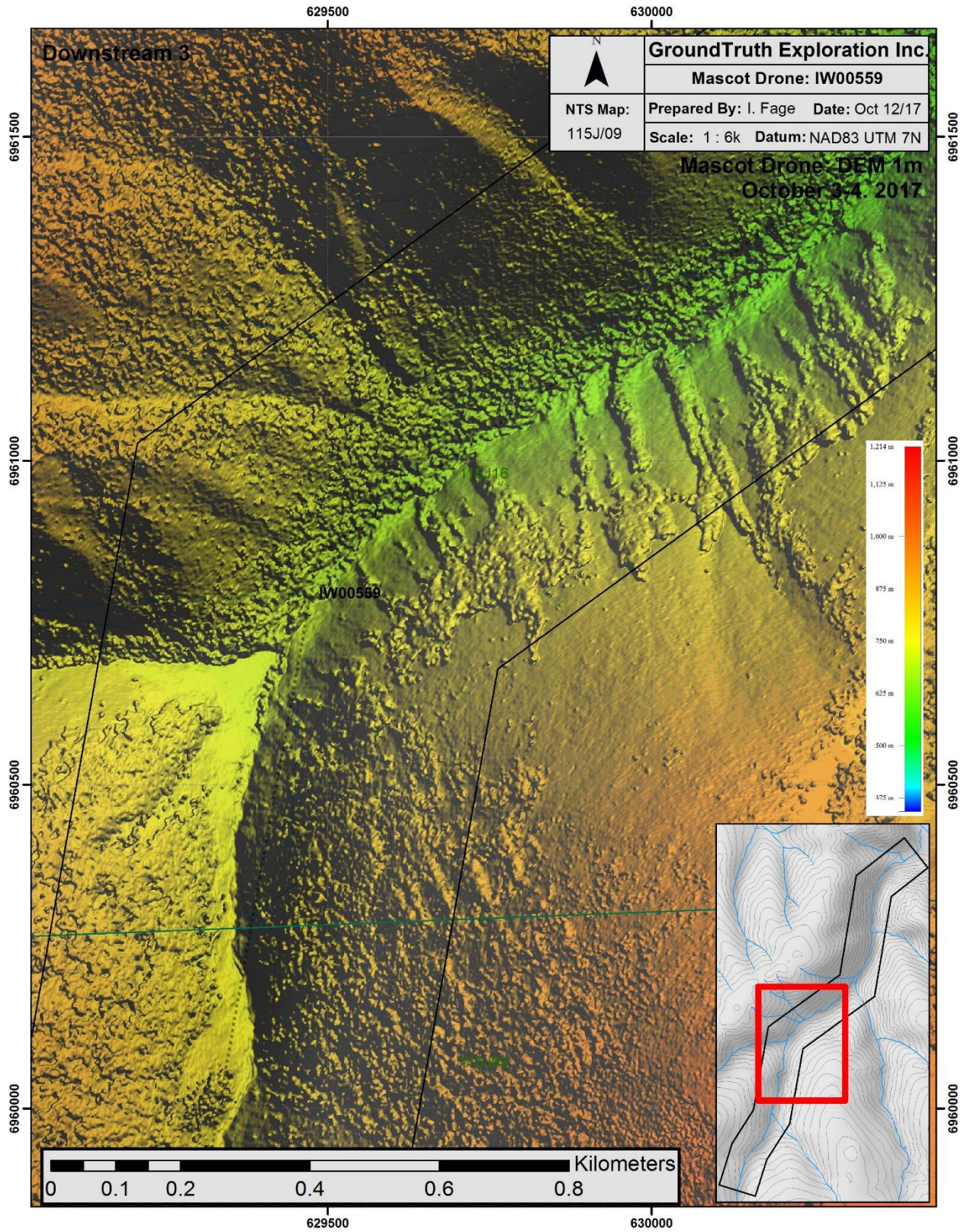




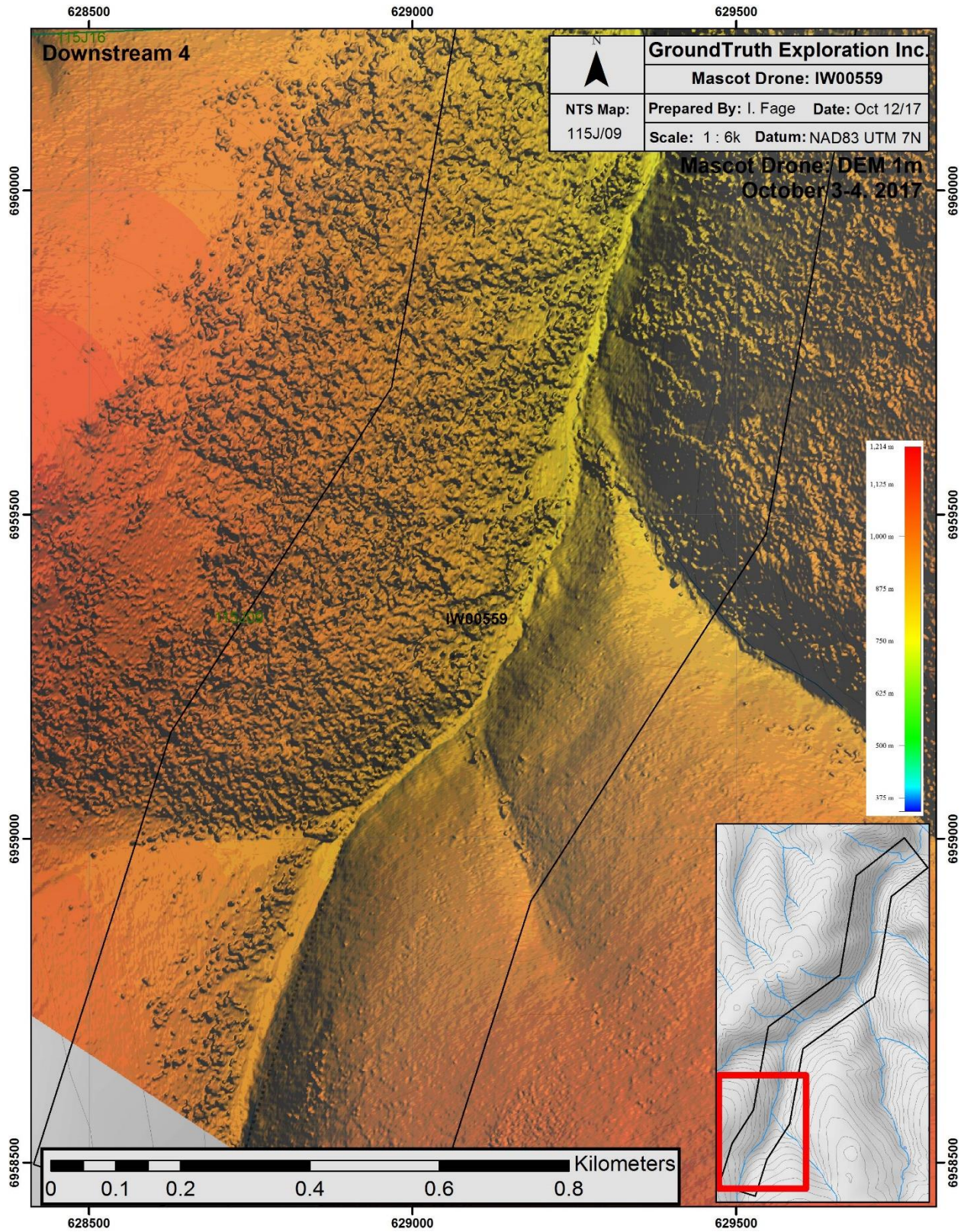












6.1.5 Discussion and Recommendations

The UAV survey is useful for both planning and interpreting geophysical surveys to know in detail what the ground conditions are. Locations of permafrost, drainage and slope have a significant impact on geophysical surveys such as resistivity and GPR data. The imagery/topography allows us to get an accurate measurement of true valley floor width and margins from creek drainage. Future access and planning of exploration work locations will be planned from this dataset. Figures below show the imagery and topographic model and the level of detail which the local topography is imaged.

Basic targeting interpretations are made on the topographic model figures below. Three areas of interest have been identified as potential targets. (figure 3). Figures 4-6 show target gravels outlined in dashed white lines and potential resistivity surveys as black lines crossing valley.

Target 1 is the widest part of the valley at the valley mouth. It represents the easiest to access and largest body of potential placer deposit. It is 280m wide for the bottom half of the target, tapering to a narrow point at the first corner in the valley 900m upstream.

Target 2 is a widening of the valley where pups drain into the main channel from both sides. This valley widening could create a good environment for placer gold deposition due to creek/valley widening and complex hydrology.

Target 3 is the second widest section of the creek at 115m at the widest point and 1.2km long. This represents approximately 9600m squared after accounting for taper at either end of central target.

All three targets warrant further investigation. We have identified potential zones of significant gravel based on hydrology and valley width, but depth of gravels, bedrock profile indicating zones of gold concentration, and proof of gold are still required.

The immediate recommendation is to cross each target with a number of resistivity lines to determine the depth to bedrock and profile the bedrock to search for paleochannels and possible zones of accumulation. These proposed lines are indicated in figures 4, 5, and 6 as black lines.

After these targets have been refined, a drilling or shafting program will be developed to test for gold.

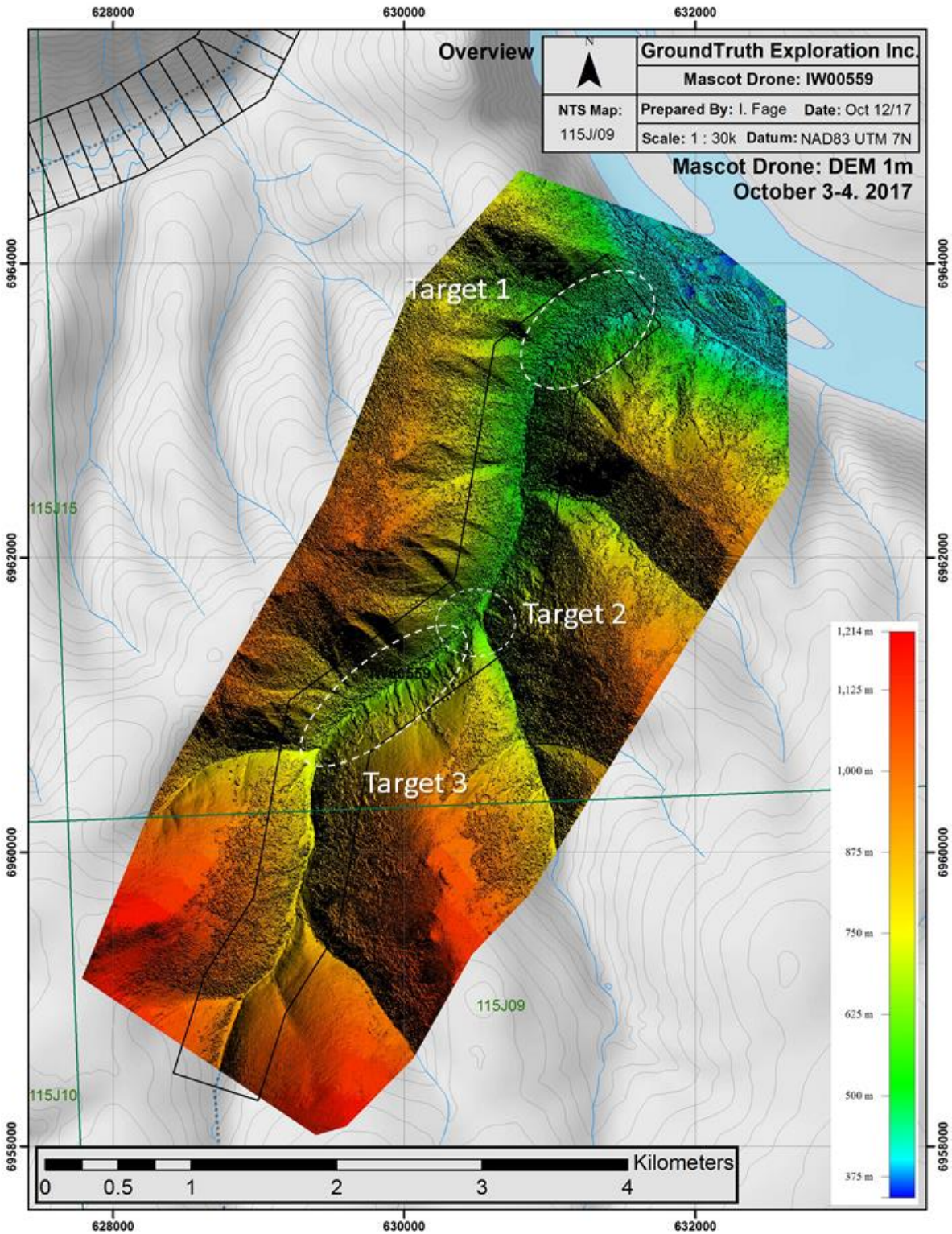


Figure 3: Placer Targets Overview

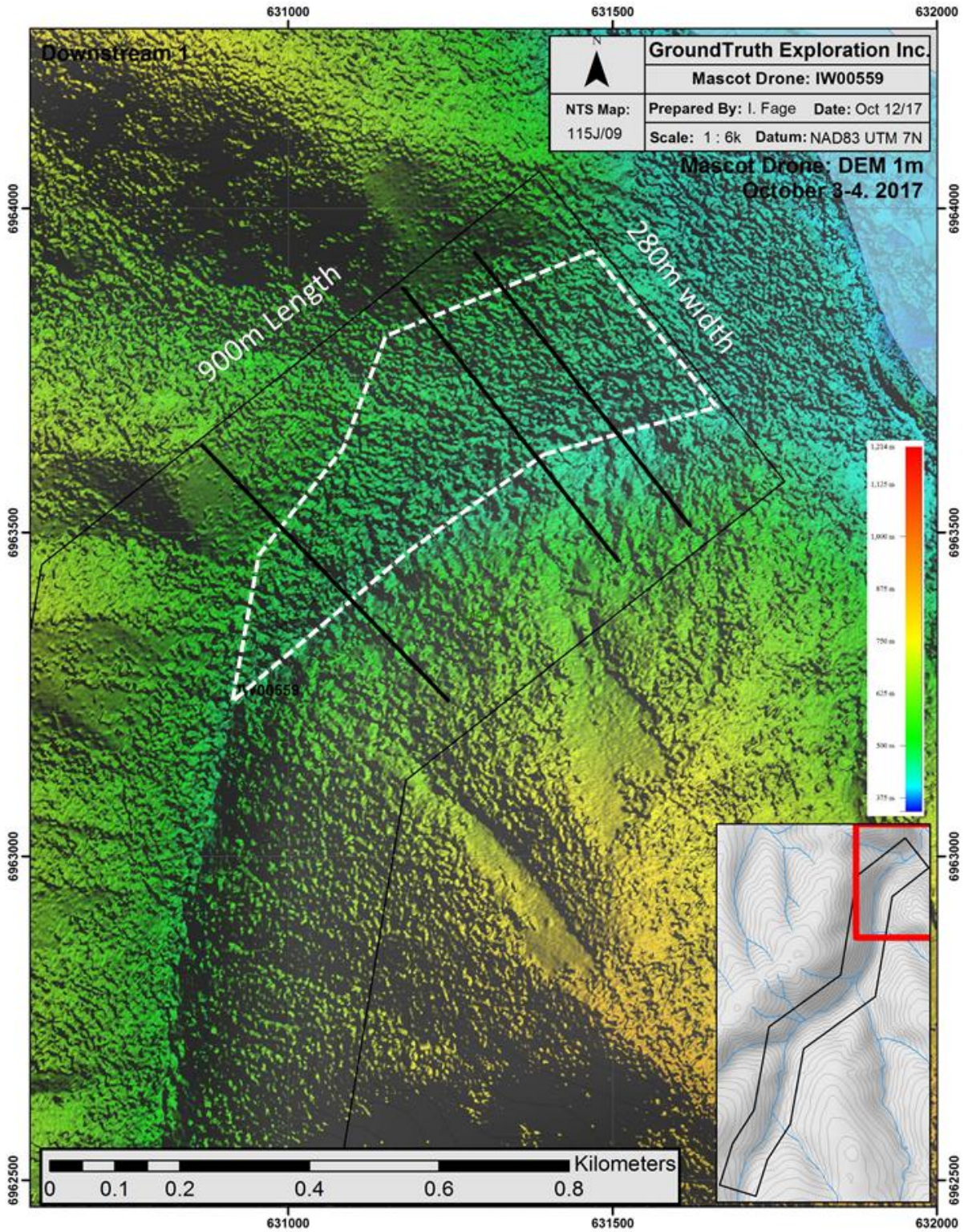


Figure 4: Placer Target 1

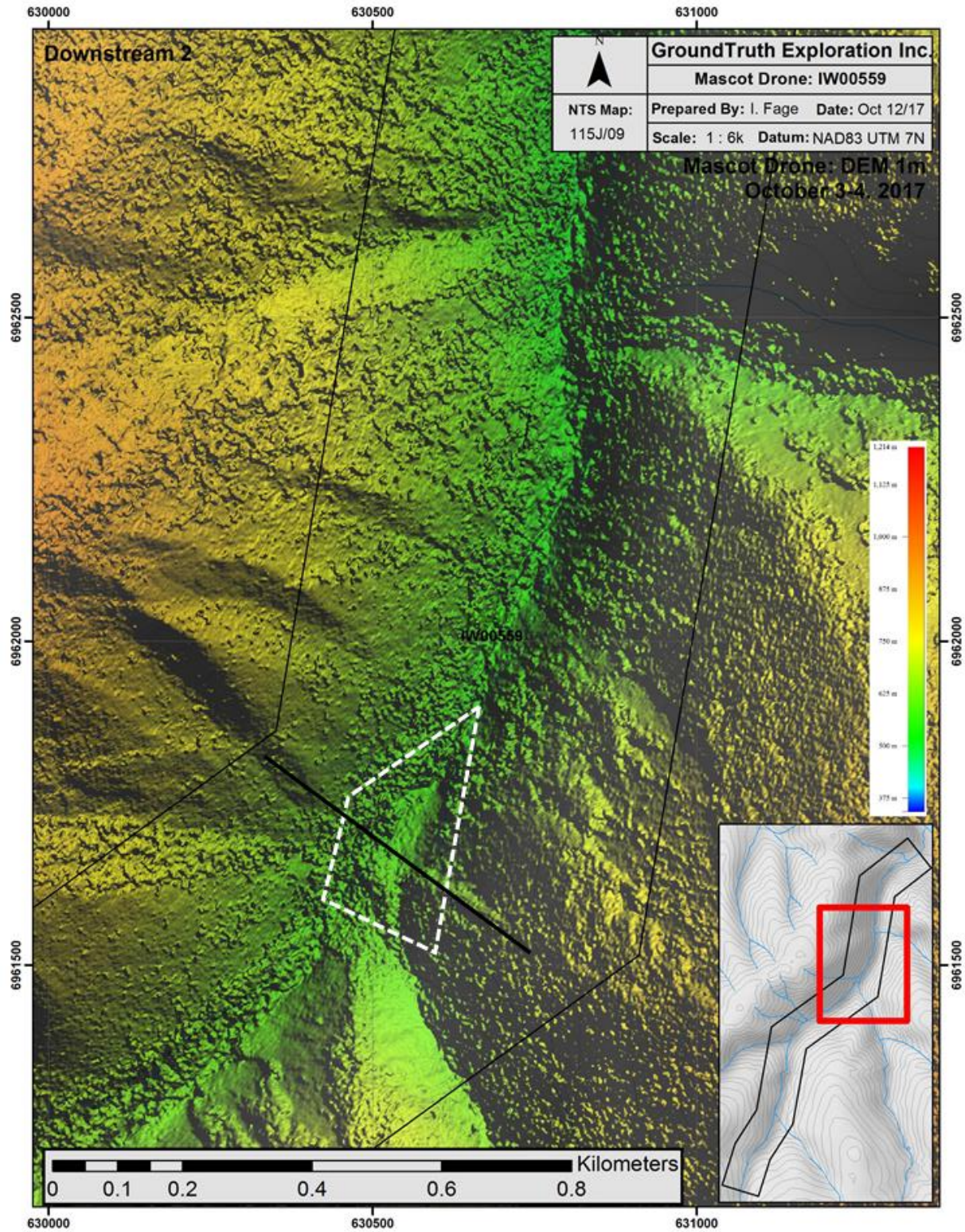


Figure 5: Target 2 detail

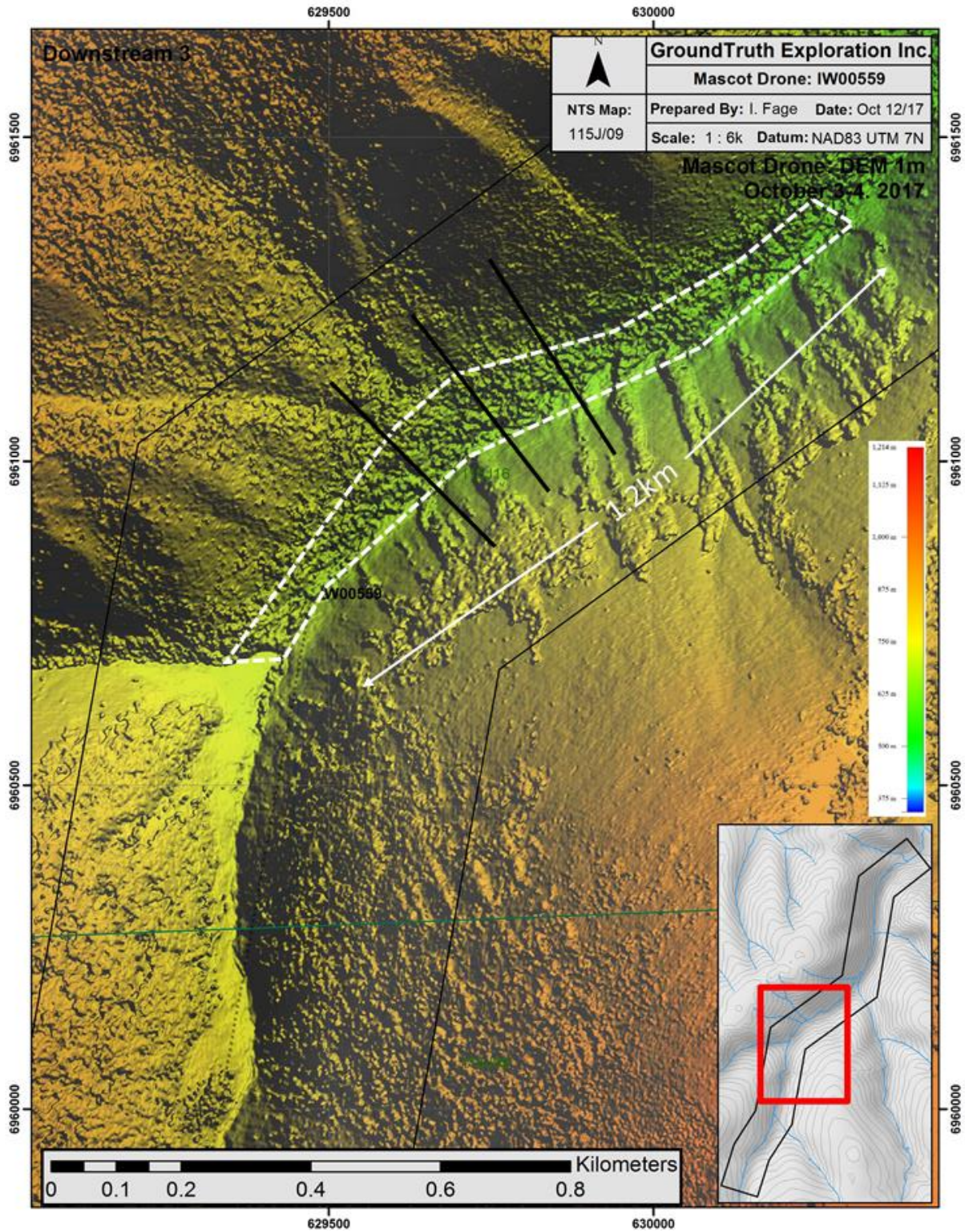


Figure 6: Target 3 Detail with proposed RES lines

7 Statement of Costs

UAV Survey conducted on: October 3rd - 4th, 2017

Report Written on: October 10th

Expenses:

2 Day UAV Drone survey for high resolution Imagery and Tomography by GroundTruth Exploration Inc. using Sensefly Ebee Drones and crew of 2. Processing and final data deliver by GroundTruth Exploration Inc.

Final Product is full lease coverage with Orthoimagery and Topographic Model at 10cm ground resolution.

Survey work with labour and equipment, data processing and interpretation/reporting charged out at \$1000/mile.

Total Invoice for 5 Mile Lease: \$5,000

8 References

Regional Geology: Gordey, S.P. and Makepeace, A.J. (comp.) 1999: Yukon bedrock geology in Yukon digital geology, S.P. Gordey and A.J. Makepeace (comp.); Geological Survey of Canada Open File D3826 and Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1999-1(D)

Mineral Titles: Yukon Mining Recorder, Mining Claims Database – www.yukonminingrecorder.ca

Topographic data: NR Canada, CanVec Topographic Database- www.geogratis.ca

Additional review of various published scientific and reporting papers on the geology and mineral deposits of the region for indirect reference.

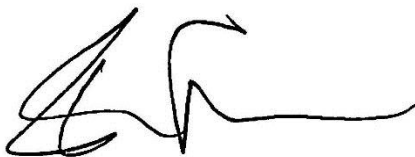
9 Qualification

I, Isaac Fage have been president of GroundTruth Exploration in Whitehorse City since May 2010. I have worked continuously in Mineral Exploration since 2004. I hold an advanced diploma in Remote Sensing from the Centre of Geographic Sciences in Lawrencetown, Nova Scotia.

I have overseen the survey work described in this report on Placer Lease IW00559 at Mascot Creek.

Dated this 12th day of October, 2017 in Dawson City, YT.

Respectfully submitted,



Isaac Fage