



GroundTruth Exploration Inc.

Box 70, Dawson YT, Y0B 1G0 (867) 993-5612

Assessment Report
on the
Coffee and Excesior Creek Placer Property



Whitehorse Mining District

Tenure:

Placer Prospecting Leases:

IW00571- IW00585, IW00587

IW00590-IW00592

Location:

62.7936° N, -139.1587°

Prepared by: Isaac Fage
GroundTruth Exploration Inc.

NTS Mapsheet: 115J/11, 13, 14, 15
Work Performed: Aug 25-31, 2017
Report Date: Sep 4, 2017



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Table of Contents

Contents

1	Description	3
1.1	Summary	3
1.2	Location and Access	3
1.3	Historic Regional Work	3
1.4	Physiology	4
1.5	Geology	4
1.6	Geological Legend (figure 2)	7
2	Xcam Orthoimagery-Topographic Survey	10
2.1	Survey Parameters	12
2.2	Data Processing	12
2.3	Survey Results	12
2.4	Discussion and Interpretation	37
3	Project Expenses	38
4	Statement of Qualifications	39
5	Conclusions and recommendations	39
	References	40



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1 Description

1.1 Summary

A High Resolution Orthoimagery and topographic survey was conducted on the full extent of the Coffee Creek placer property leases by GroundTruth Exploration Inc. The resulting dataset is being used to interpret surficial geology for placer gold deposit potential, and as a planning tool for precise placement of targeted geophysics and drilling work.

The leases are located approximately 130km South of Dawson on Independence and Carlisle Creek. (figure 1).

The property was accessed by fixed wing based in Dawson City, Yukon for the aerial survey.

The surveys were conducted by GroundTruth Exploration of Dawson, YT between August 25th and September 1st, 2017. The survey was conducted using a light fixed wing cessna 206.

The data collection system used was an externally mounted 'Xcam Ultra' imaging pod, manufactured by Waldo Air Inc. Parallel flightlines on survey areas were flown to acquire the data.

1.2 Location and Access

The prospecting leases are located approximately 140km South of Dawson City within the Yukon River drainage system in west-central Yukon Territory. All leases are located within the Coffee and Excelsior Creek drainages in the Yukon River watershed. They are located on NTS mapsheet 115J/11, 13, 14 & 15 (Figure 1). The project area accessible in winter on the Yukon River via snowmobile, and accessible by helicopter year round. Numerous active airstrips are located near the placer leases, including Thistle, Coffee and Independence airstrips.

1.3 Historic Regional Work

The Coffee and Independence Creek tributaries have seen prior geophysical surveys. Historic workings in the areas have been observed, no drilling or shafting results have been reported on the leases.



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1.4 Physiology

The prospecting leases are located within the Yukon-Tanana Terrane. The landscape is composed broad valleys bordered by moderately sloped, tree covered hills ranging in elevations from 1200 to 5000 feet. The area experiences typical climatic conditions for central Yukon Territory with short, warm and dry summers and cold winters. Temperatures range from 0°C to -50°C in the winter and 0°C to +30°C in the summer.

Drainages are characterized by incised valleys with steep hill slopes. The leases are draining from headwaters that are associated with the economically significant Coffee Gold deposits.

1.5 Geology

The Coffee and Excelsior Creek leases are located within the Yukon Tanana Terrane (YTT), in the Tintina Gold Belt, a region noted for its placer gold endowment. The YTT represents a mid-to late Paleozoic continental arc system and a coeval back-arc basin that separated the Yukon Tanana arc from the western margin of

Laurentia between Late Devonian and Early to Middle Triassic periods (Colpron, 2006). The YTT comprises a lower assemblage of metamorphosed sedimentary and minor volcanic rocks, unconformably overlain by three distinct sequences of predominantly arc metavolcanic rocks and associated metasedimentary rocks – the Finlayson, Klinkit and Klondike assemblages.

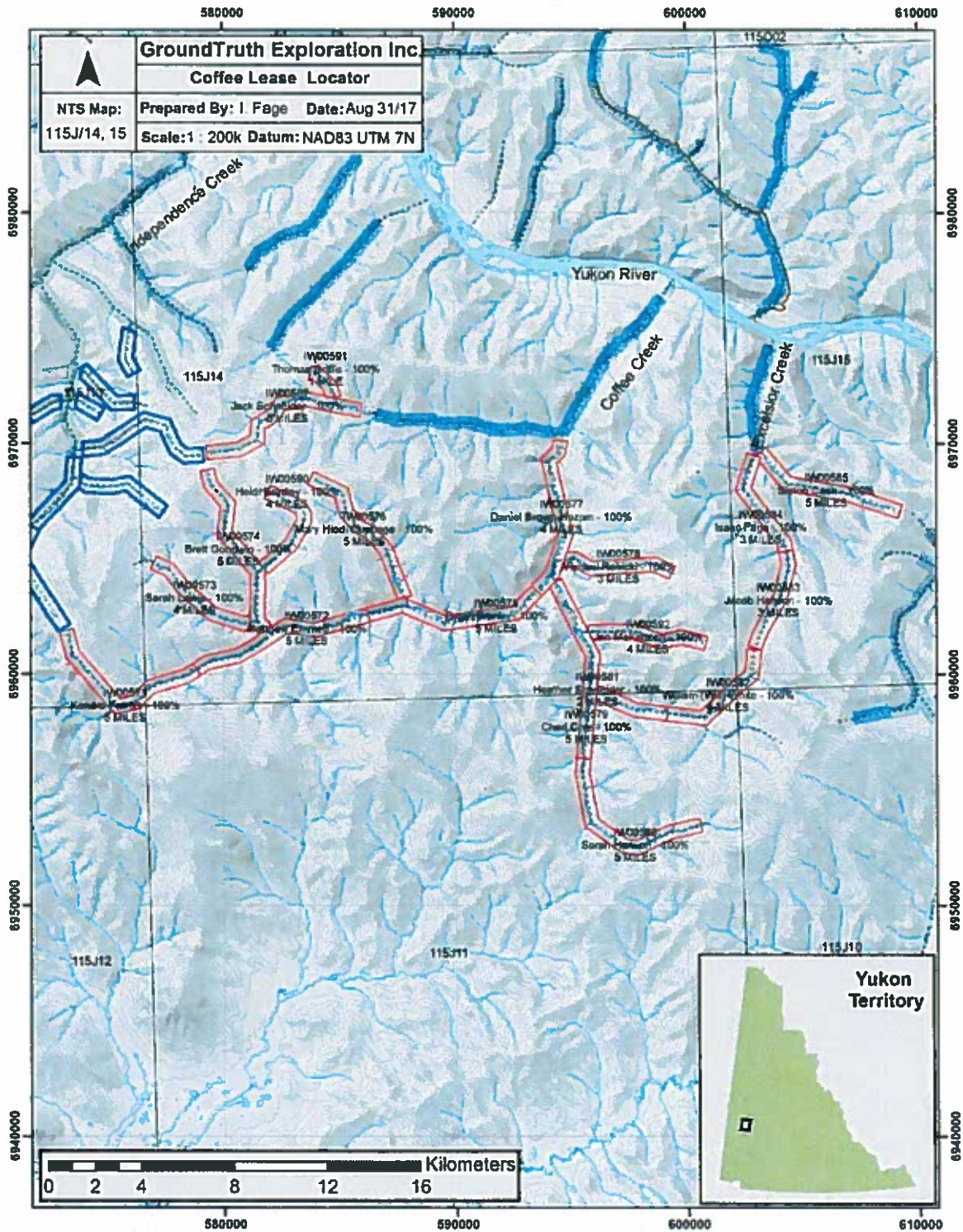


Figure 1: Location MAP

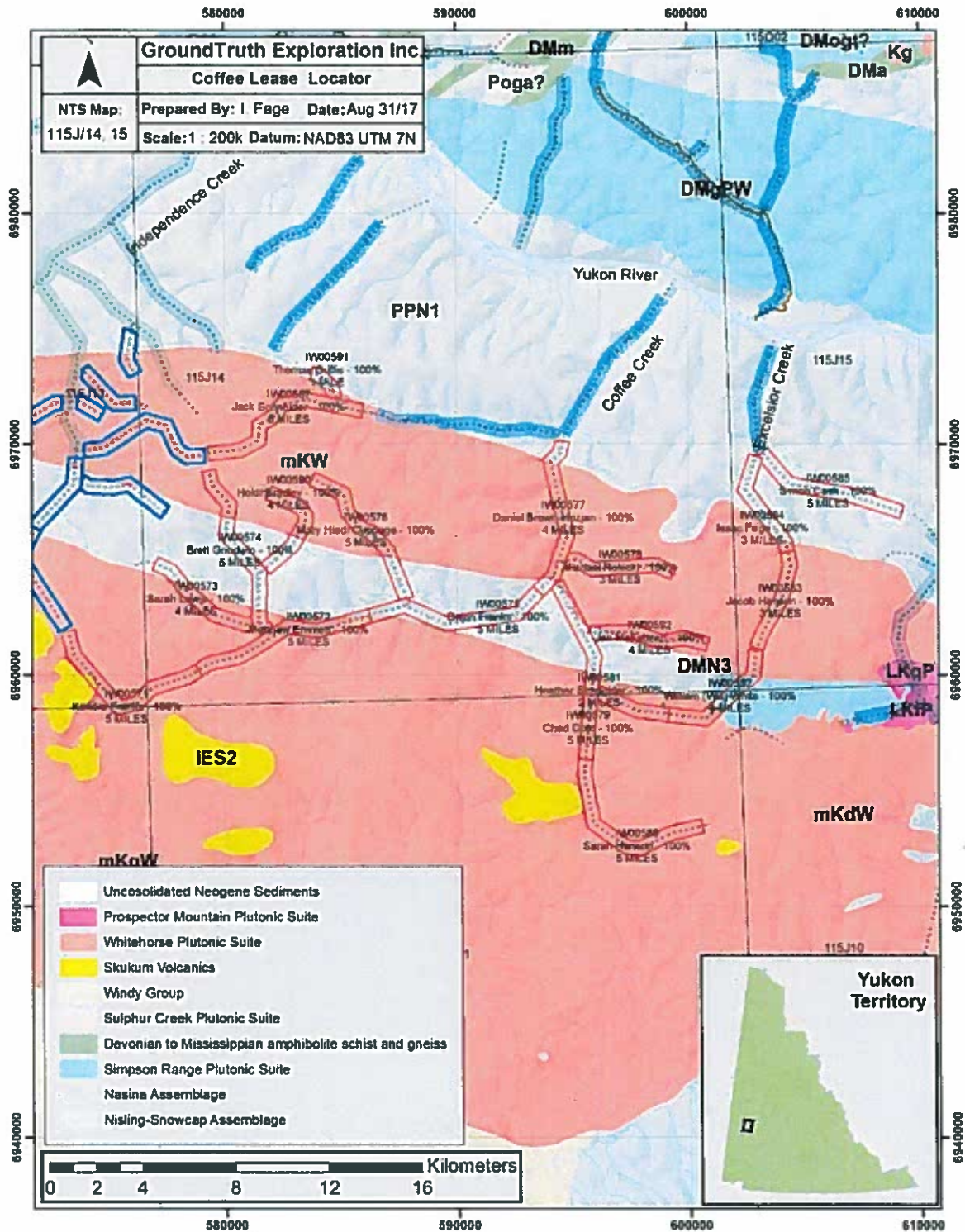


Figure 2: Regional Geology

1.6 Geological Legend (figure 2)

LOWER EOCENE



IES: SKUKUM

various felsic volcanic dykes, plugs, domes, laccoliths and flows (1) and (2)

1. flow banded rhyolite flows and breccia, andesite flows and breccia, tuff, pyroclastic and epiclastic rocks, granite conglomerate; rhyolite feldspar porphyry domes, plugs and laccoliths; feldspar +/- hornblende +/- quartz-phyric felsite dykes and plugs (Skukum Gp. including Boudette Creek, Butte Creek, Cleft Mountain, Crozier Breccia, Crozier Tuff and Lava, Gault, Jones Creek, Lemieux Creek, MacCauley Creek, Mount Reid, Partridge Lake, Vesuvius and Watson River)
2. heterogeneous intermediate to felsic, hornblende-feldspar porphyritic tuff, flow breccia; volcanoclastic mudstone, sandstone and conglomerate; aphanitic to feldspar porphyritic dacite flows and dykes; flow-banded rhyolite and felsic dykes and sills (Mount Creedon Volcanics, some strata formerly mapped as Mt. Nansen Gp.)

DEVONIAN, MISSISSIPPIAN AND(?) OLDER



DMN: NASINA

graphitic quartzite and muscovite quartz-rich schist (1), (3)-(5), and(?) (6) with interspersed marble (2) and probable correlative successions (7) - (9)

1. dark grey to black, fine grained graphitic and non-graphitic quartzite, grey micaceous quartzite and quartz muscovite (+/-chlorite; +/- feldspar augen) schist, locally garnetiferous; minor graphitic stretched metaconglomerate and metagrit (Nasina assem.)
2. marble (Nasina assem.)

3. quartzite, micaceous quartzite, quartz muscovite (+/-chlorite; +/-feldspar augen) schist, and minor metaconglomerate and metagrit as in (1), but may locally include significant Nisling Assemblage
4. quartzite, micaceous quartzite, quartz muscovite (+/-chlorite; +/-feldspar augen) schist, and minor metaconglomerate and metagrit as in (1), but may locally include significant Klondike Schist Assemblage
5. black-weathering, massive, dark grey to black strongly graphitic quartzite with lesser grey micaceous quartzite and quartz mica schist; commonly shows alternating light and dark grey colour lamination (Nasina quartzite)
6. biotite schist or gneiss; association uncertain, may belong to Nisling Assemblage
7. medium green to yellow green muscovite-chlorite-actinolite-epidote-albite +/-biotite schist to quartz-rich schist, local albite porphyroblasts; green and yellow banded biotite+/-magnetite schist (metatuff?); micaceous quartzite; minor metachert (Hazel)
8. hornblende-oligoclase-quartz+/-biotite +/-actinolite mafic gneiss and schist; hornblende amphibolite; sheared metaplutonic rock with interleaved quartzite and muscovite+/- biotite+/-oligoclase+/-garnet schist; bands of quartzofeldspathic melt (Dorsey)
9. fine grained actinolite+chlorite-muscovite+/-epidote phyllite and schist; calcareous metavolcanic rocks; quartzite; marble; sheared felsic to intermediated metaplutonic rocks; minor calcareous green metasiltstone or metatuff and sandy metacarbonate (Ram Creek)
10. eclogite

MID-CRETACEOUS



mKW: WHITEHORSE SUITE

grey, medium to coarse grained, generally equigranular granitic rocks of felsic (q), intermediate (g), locally mafic (d) and rarely syenitic (y) composition

- d. hornblende diorite, biotite-hornblende quartz diorite and mesocratic, often strongly magnetic, hypersthene-hornblende diorite, quartz diorite and gabbro (**Whitehorse Suite, Coast Intrusions**)
- g. biotite-hornblende granodiorite, hornblende quartz diorite and hornblende diorite; leucocratic, biotite hornblende granodiorite locally with sparse grey and pink potassium feldspar phenocrysts (**Whitehorse Suite, Casino granodiorite, McClintock granodiorite, Nisling Range granodiorite**)
- q. biotite quartz-monzonite, biotite granite and leucogranite, pink granophyric quartz monzonite, porphyritic biotite leucogranite, locally porphyritic (K-feldspar) hornblende monzonite to syenite, and locally porphyritic leucocratic quartz monzonite (**Mt. McIntyre Suite, Whitehorse Suite, Casino Intrusions, Mt. Ward Granite, Coffee Creek Granite**)
- y. hornblende syenite, grading to granite or granodiorite (**Whitehorse Suite**)

EARLY JURASSIC



EJgA: AISHIHIK SUITE

medium- to coarse- grained, foliated biotite-hornblende granodiorite; biotite rich screens and gneiss schlieren; foliated hornblende diorite to monzodiorite with local K-feldspar megacrysts; may include unfoliated monzonite of the Long Lake Suite (**Aishihik Suite**)

2 Xcam Orthoimagery-Topographic Survey

Equipment

The XCam pod is a plastic pod containing two cameras set to capture a panoramic shot. The pod is mounted onto bar attached a strut on the plane. The bar is parallel to the wing, which will be parallel to ground in flight, but angled slightly upwards on the ground since the plane is a tail-dragger. The pod is attached with two ring to a curved metal plate on the bar.

Inside the pod are two Canon cameras and a single usb hub. The cameras are both connected to the hub which is connected to a microcontroller to the rear ports. These ports connect cables (usb and coaxial) to the external GPS unit mounted to the top of the wing, the external batter, and the tablet: the latter two situated inside the plane. The GPS is connected to the microcontroller first to provide location data for the photo metadata.



Inside the plane is the tablet, two external camera batteries, and in inverter. The pod does not have an internal power source and can not run off power from the plane, instead custom



Figure 3. The pod secured the bar attached to the strut.



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batteries are used. The tablet itself also runs out of power fast during a survey. It is charged with the plane through an inverter.

On the tablet will be software to create and view missions live as they are being surveyed. It has software to utilize the external GPS and provide heading corrections to ensure correct coverage and overlap of photos. It is also possible to view the camera image live via the tablet and Canon software. All the mission parameters (ie. target area, elevation, flight lines) are chosen with mission creation and can not be changed during a mission. The only settings that can be altered without creating a new mission are camera settings (ie. shutter speed, f-stop, and ISO).

Notable configurations for the Yukon:



Due to the high latitude of the Yukon, there is a much lower sun angle: and exacerbated during fall and winter. Thus higher light settings than normal are recommended. The typical settings are shutter speed of 1/4000, ISO1600, and fStop 4.5. In even darker conditions the fStop can be lowered to 4.0 and the shutter increased to 1/2000. Alternatively, in high snow glare, the shutter and ISO can be lowered to 1/8000 and 800 alternatively.



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2.1 Survey Parameters

A nominal ground resolution of 10cm GSD was chosen for the survey area. Parallel flightlines were planned along each leases to collect photos with an overlap of 60% along track and 60% across track. Flight height averaged at 7500-8000 feet above mean sea level. Flight speed averaged at 60 knots.

Each flight originated from YDA in Dawson, lasting up to 4h in duration. Fixed wing would return and data downloaded.

2.2 Data Processing

All photos were tagged in exif data with XY location and camera parameters. Photos were visually quality checked and then processed in batches of 2000 photos or less.

The Orthorectification software used was Pix4D Mapper Pro. All processing was conducted by GroundTruth Exploration.

Preliminary Orthorectified imagery at full scale resolution if displayed in this report. Additional color balancing and enhancement is currently being undertaken on the imagery component. Final products for the topographic model are displayed in this report.

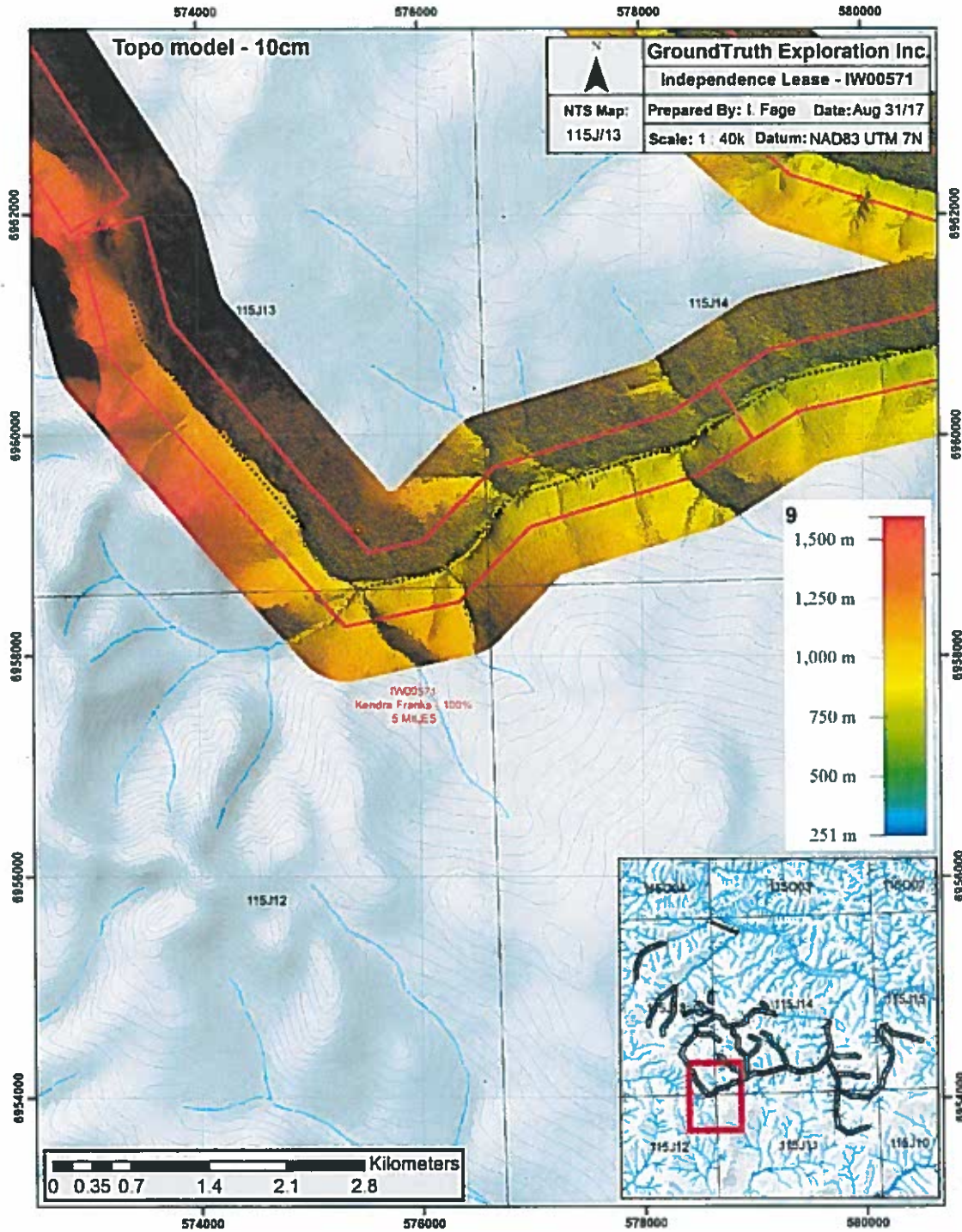
Standard data output:

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

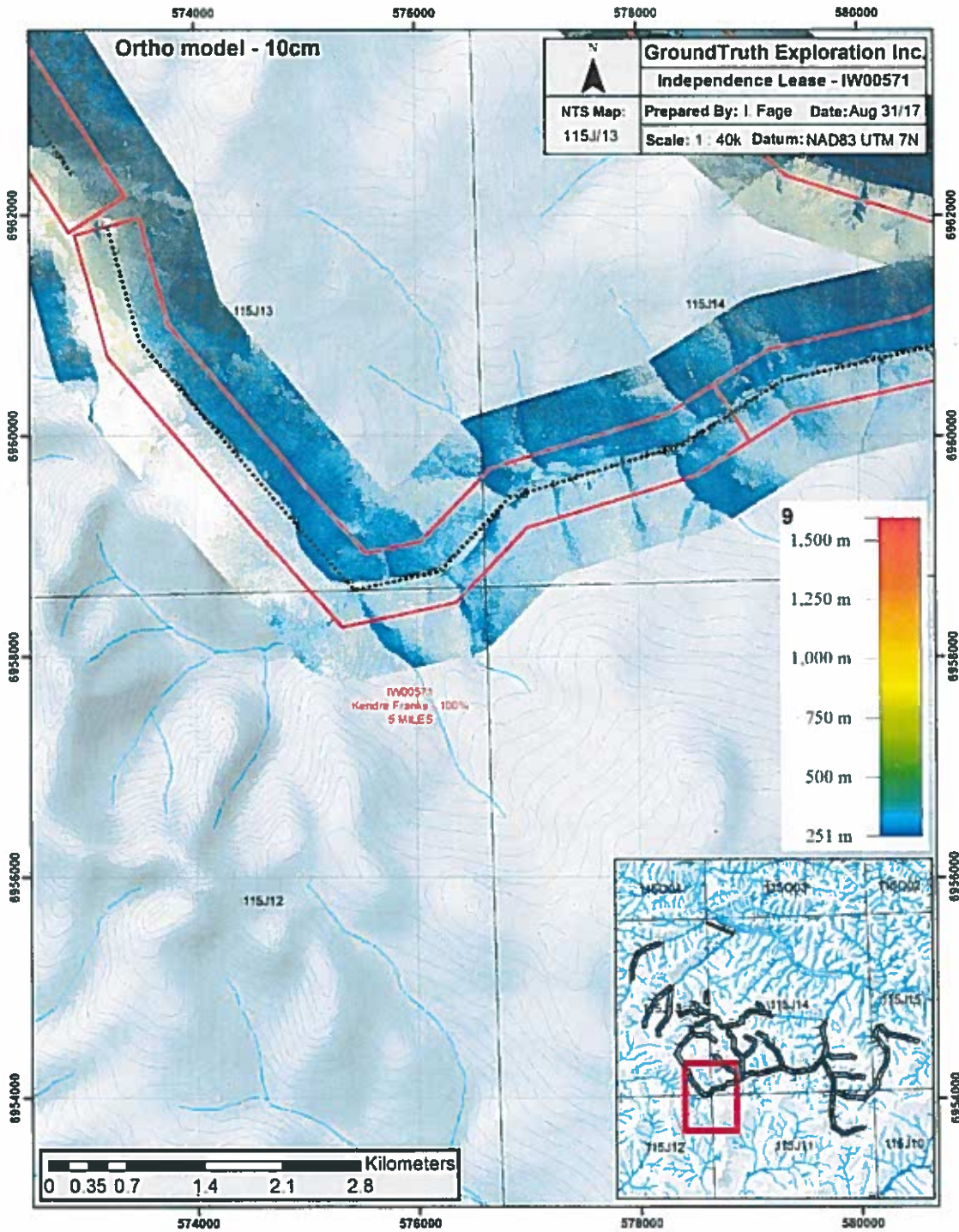
2.3 Survey Results

The following figures show the capture area on each lease. Full coverage was completed on all leases. Topography model results are very good. Additional corrections are being applied to the imagery to improve results.

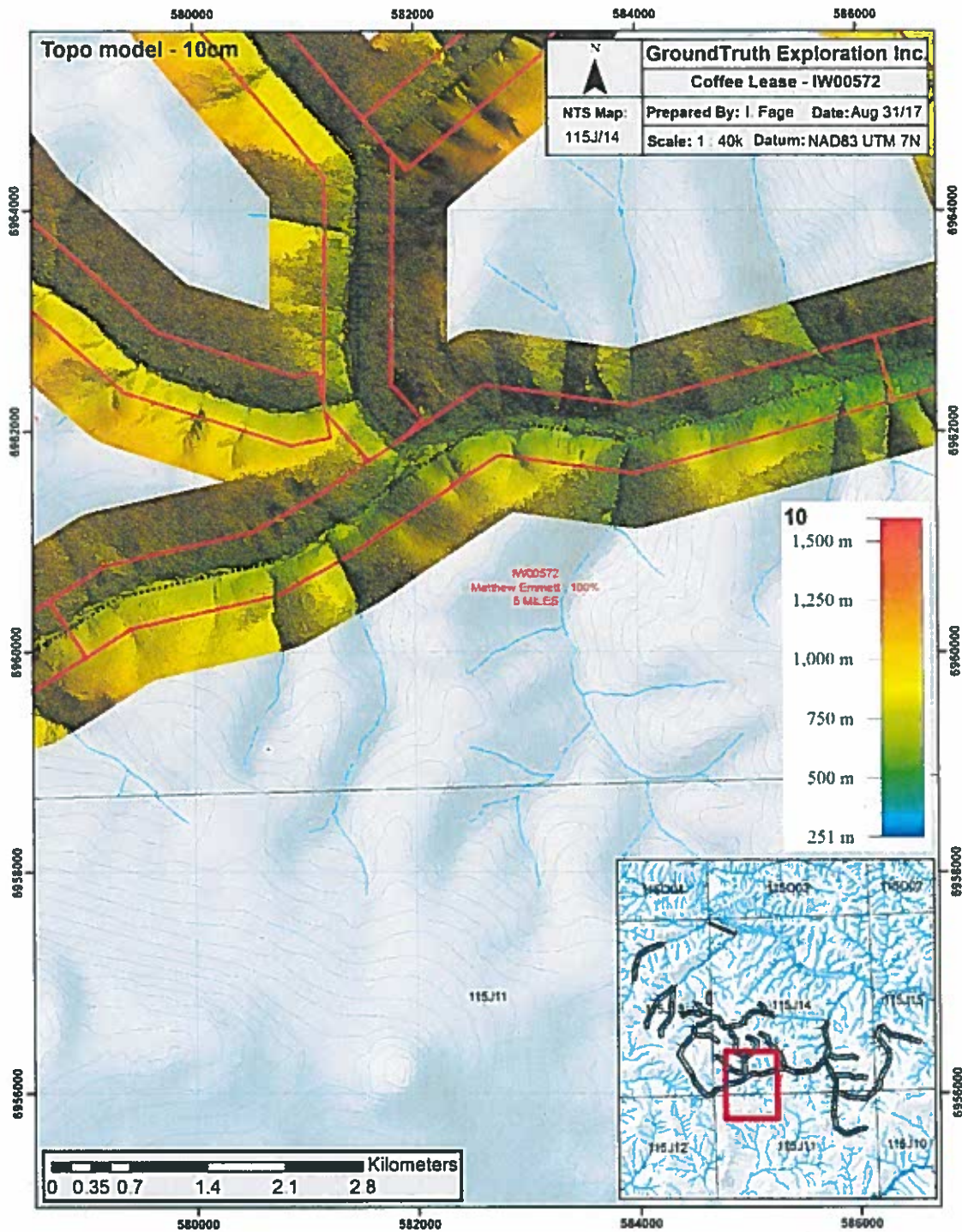
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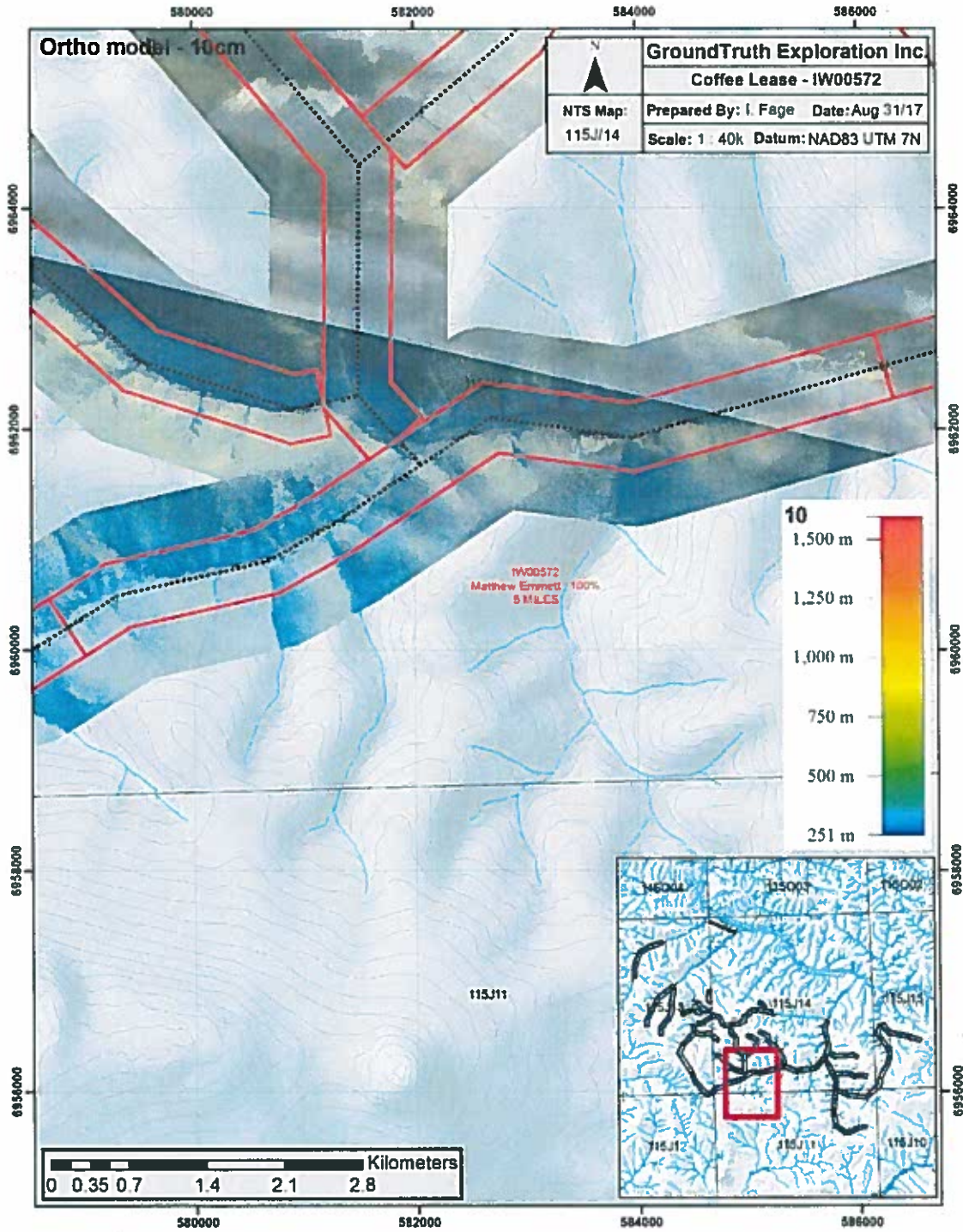


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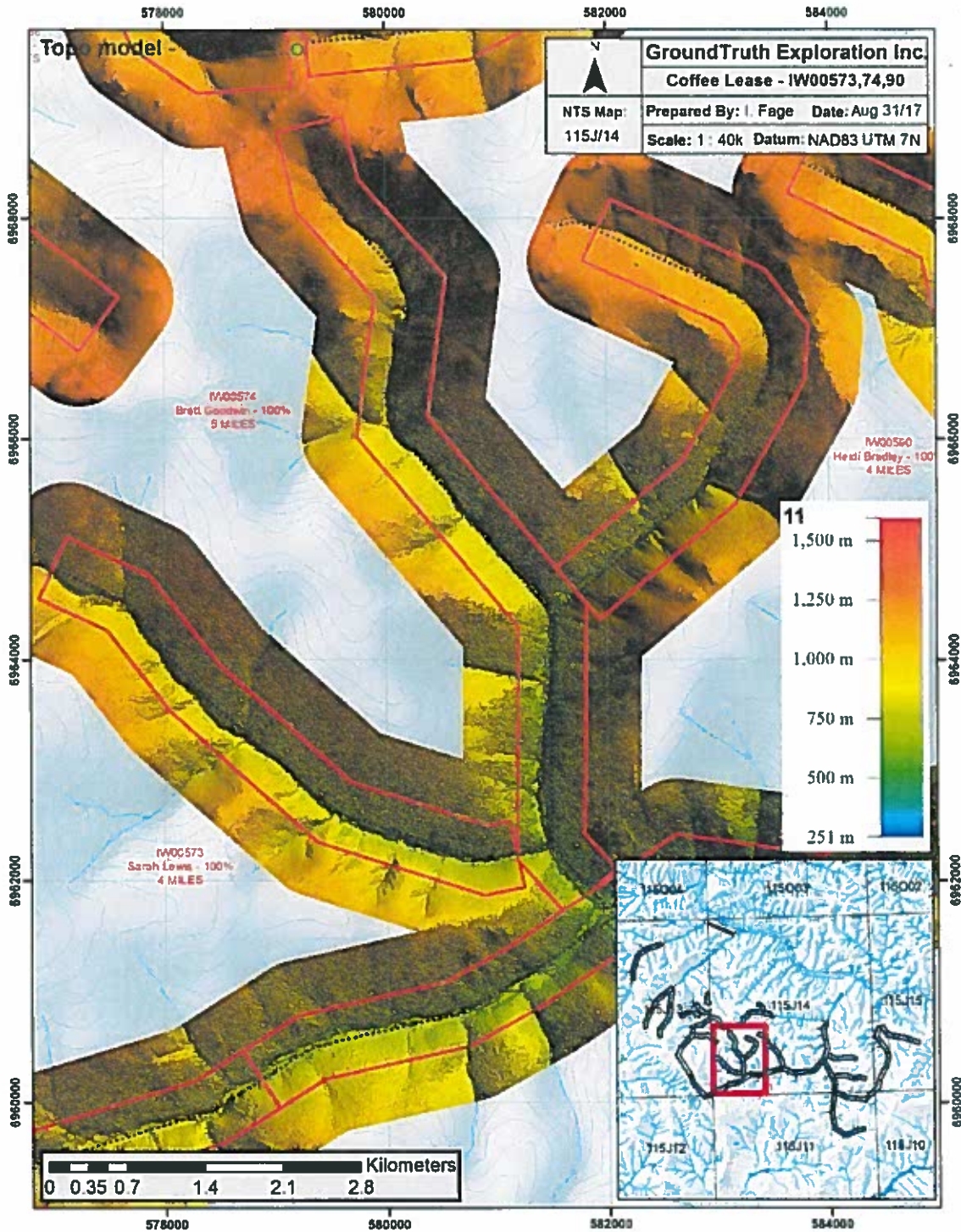


Placer Lease IW00572:

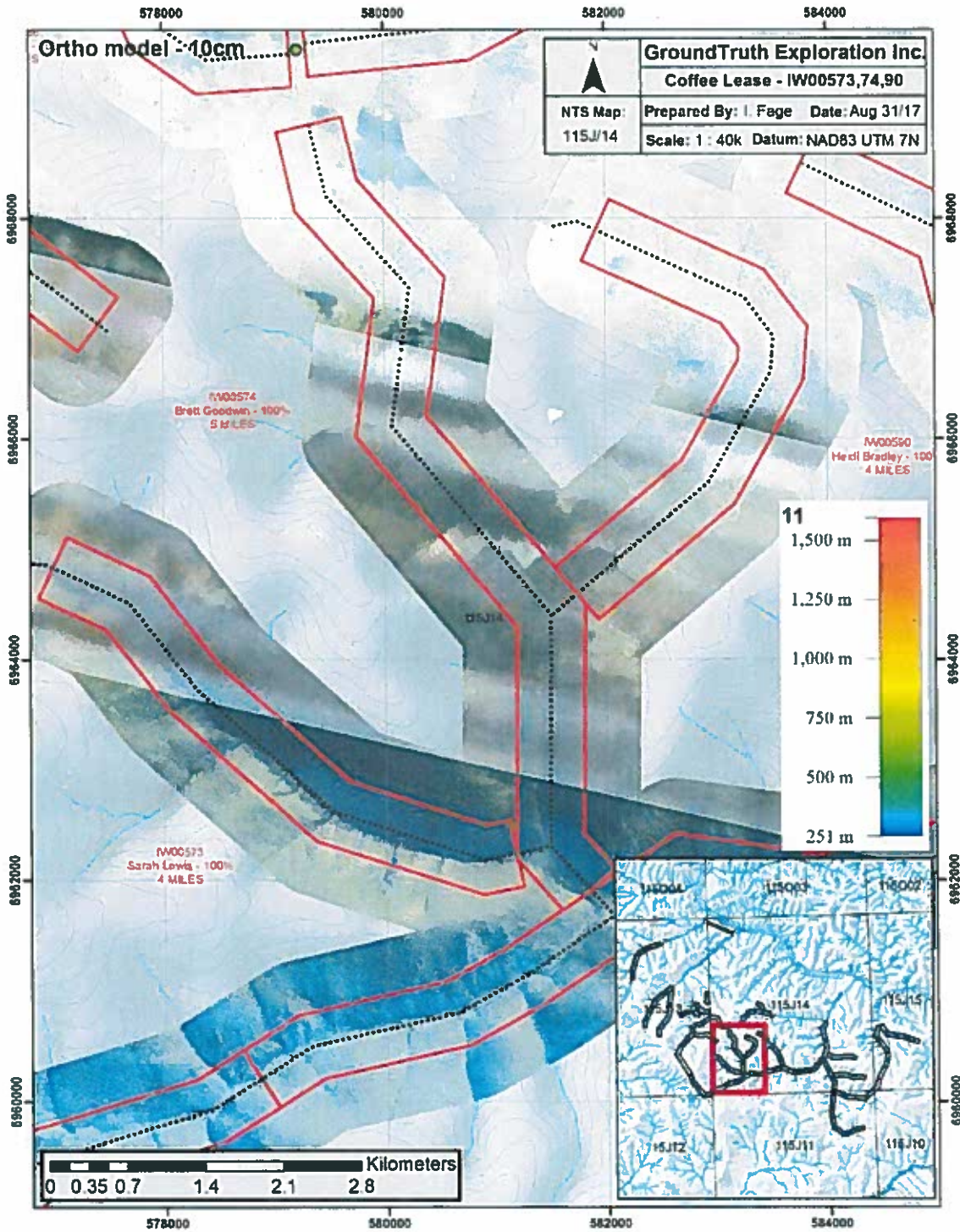




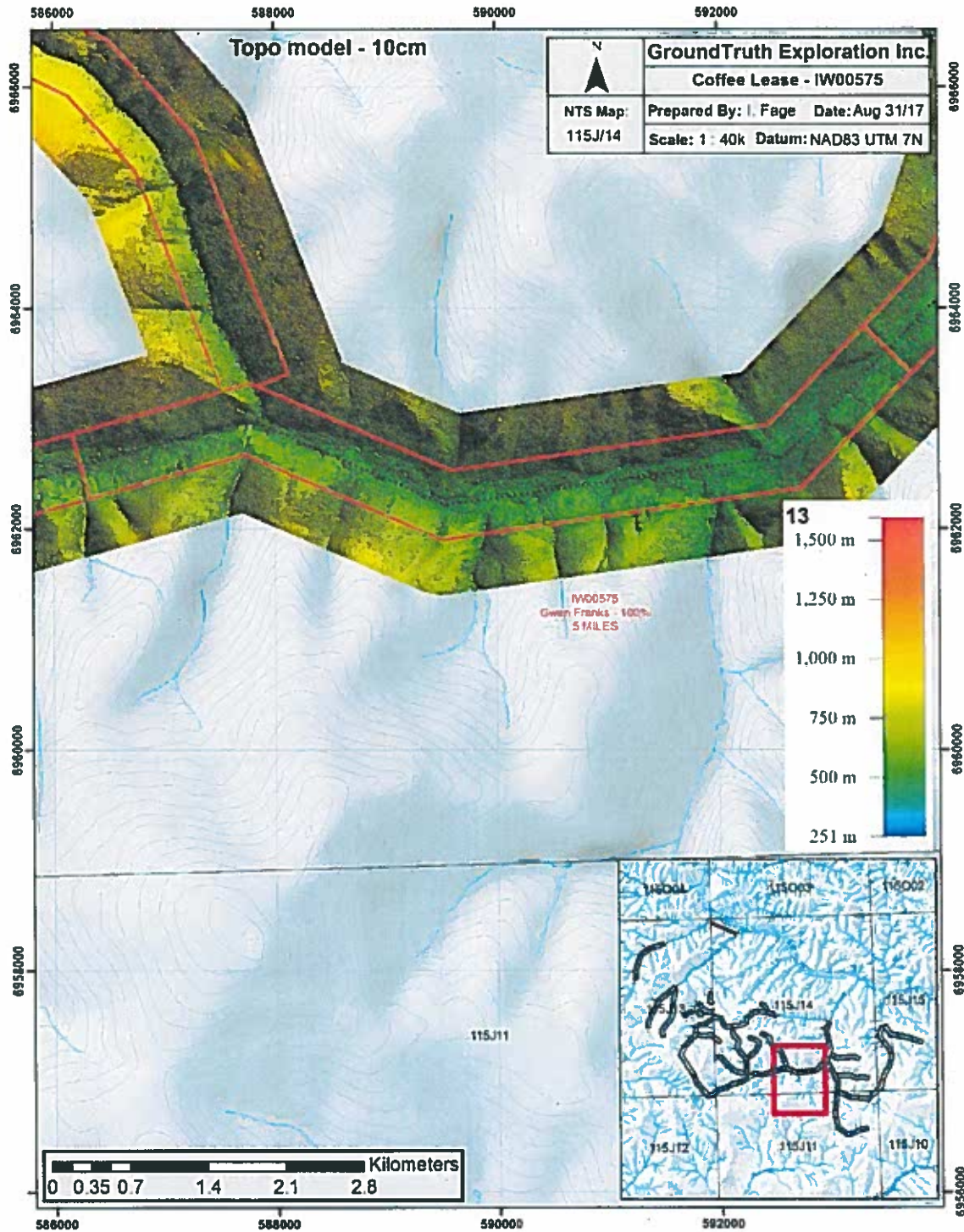
Placer Lease IW00573, 74, 90:

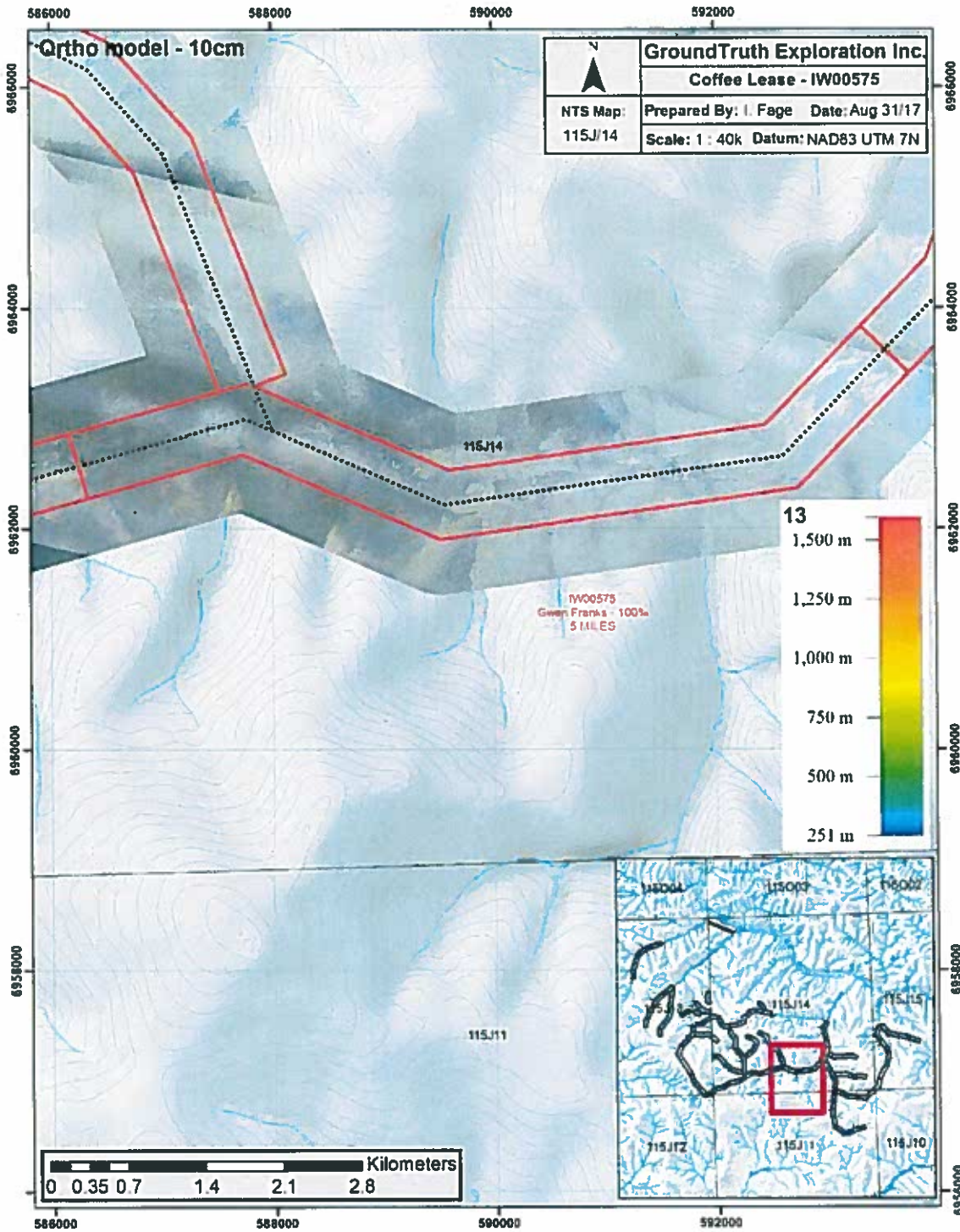


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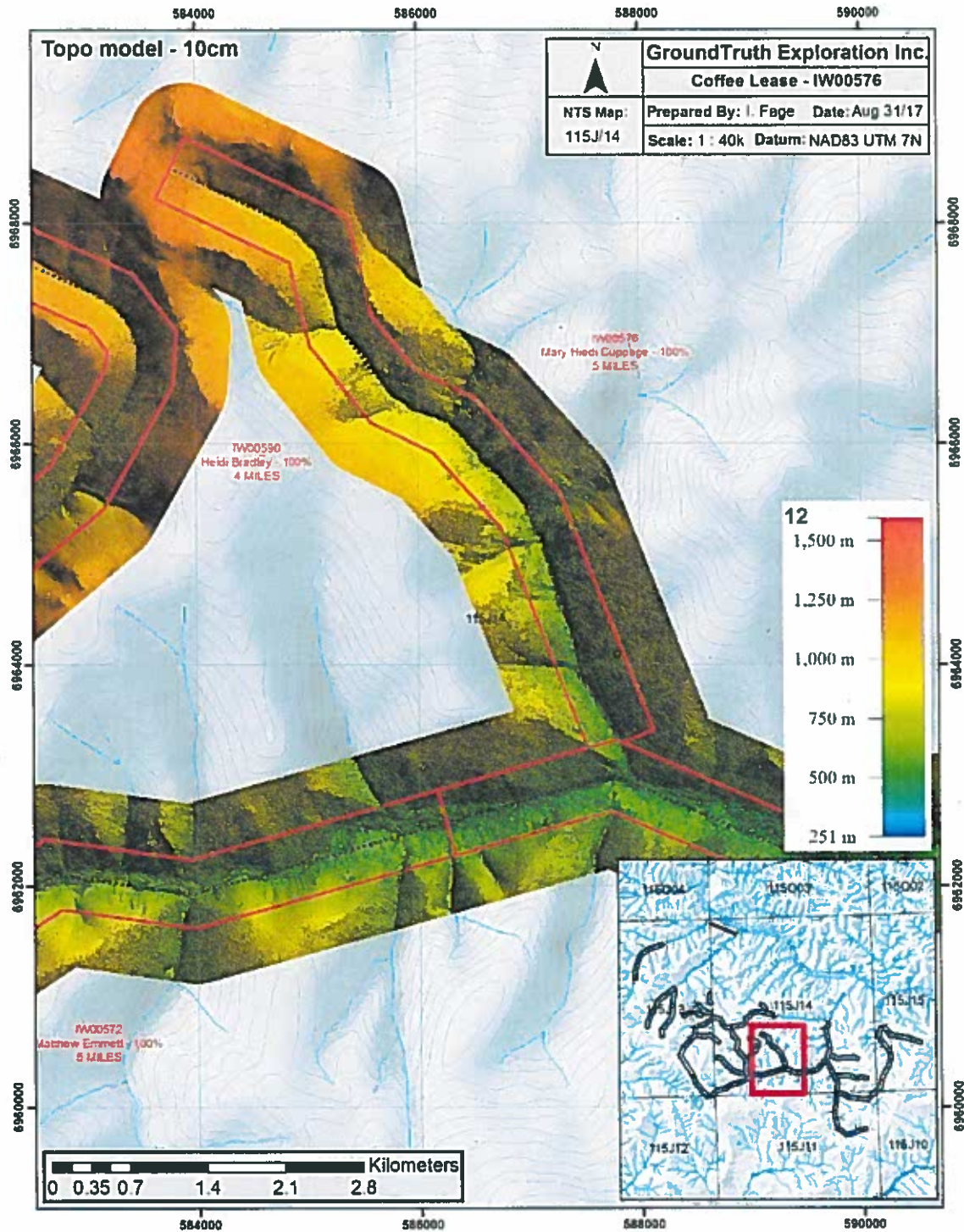


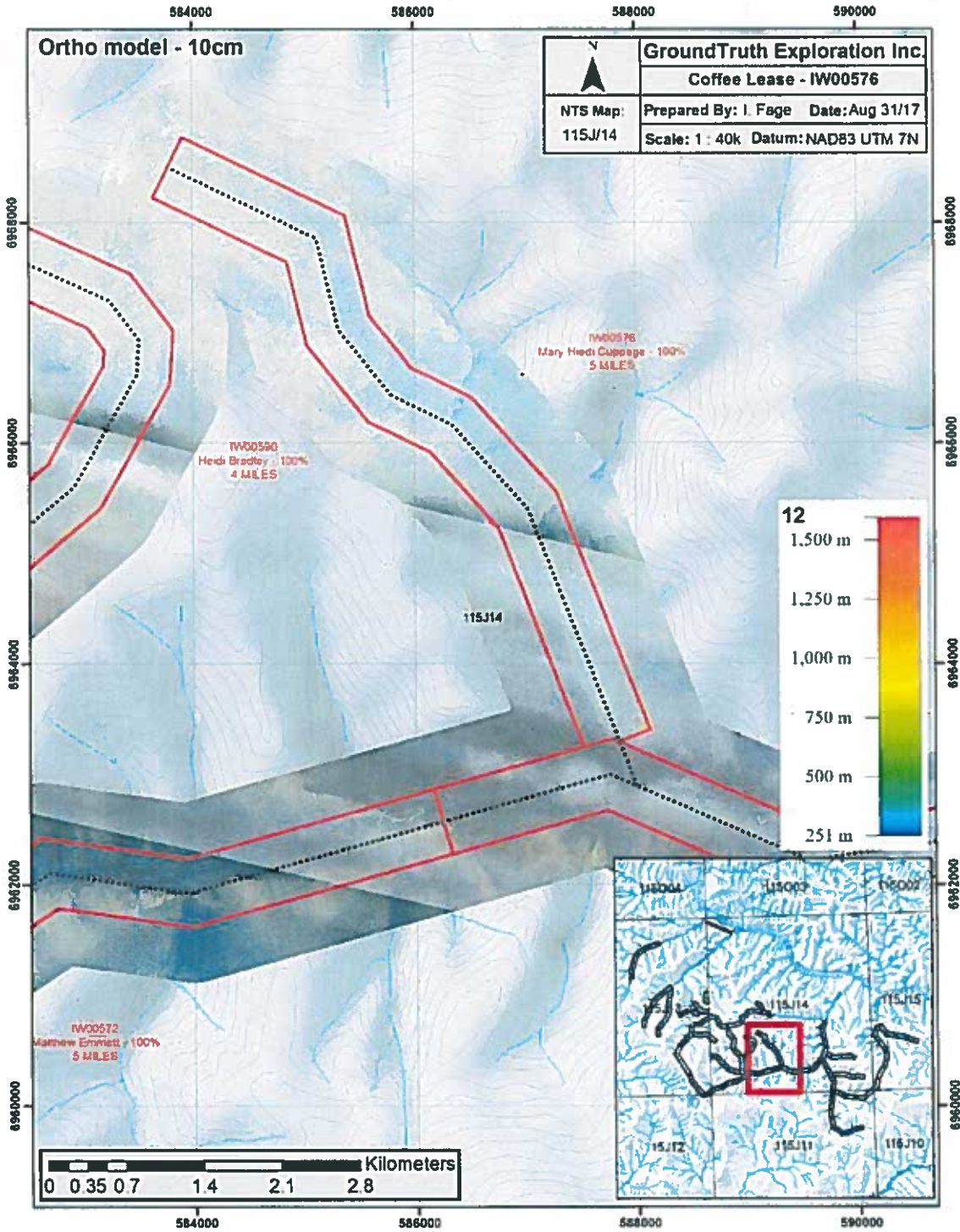
Placer Lease IW00575:



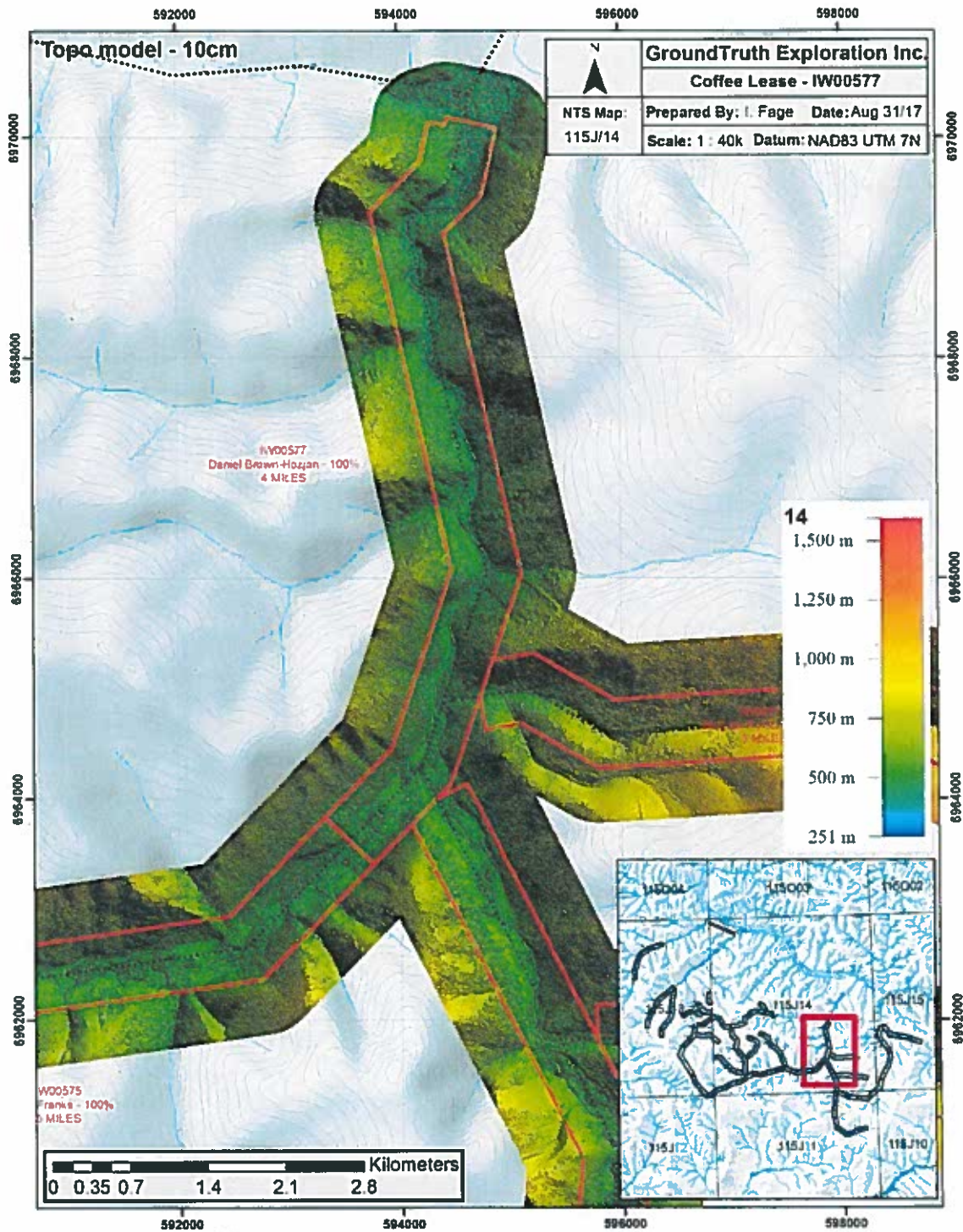


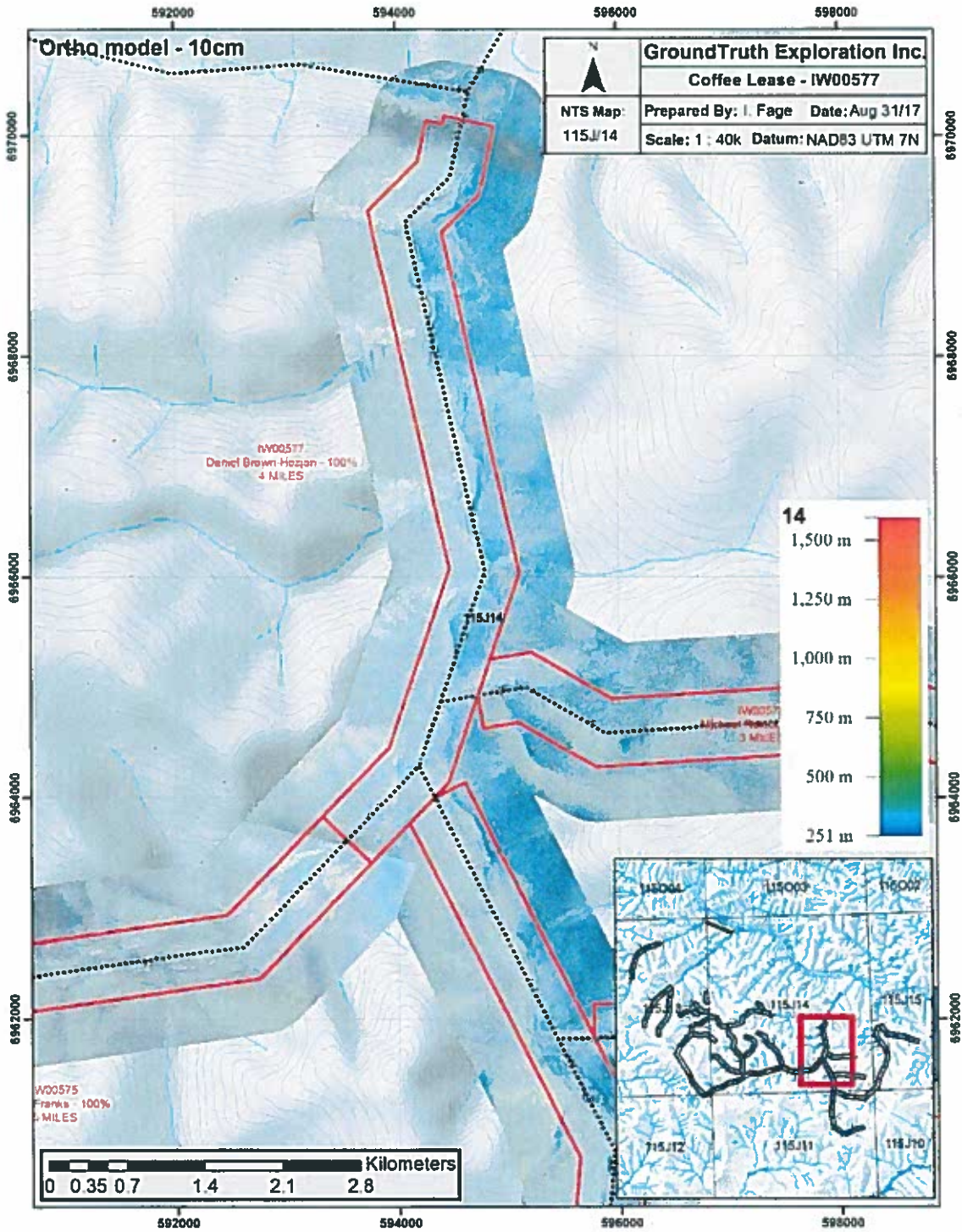
Placer Lease IW00576:



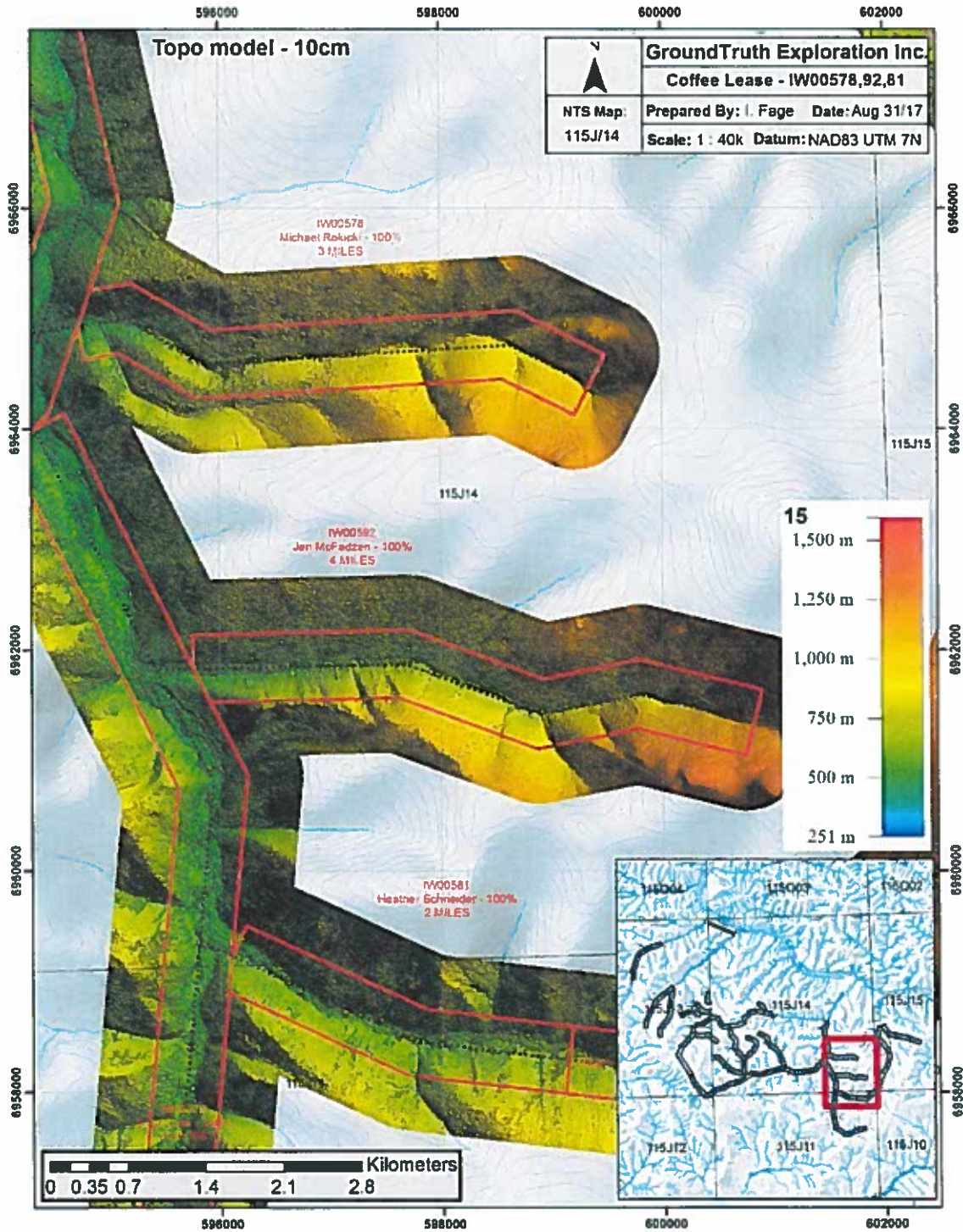


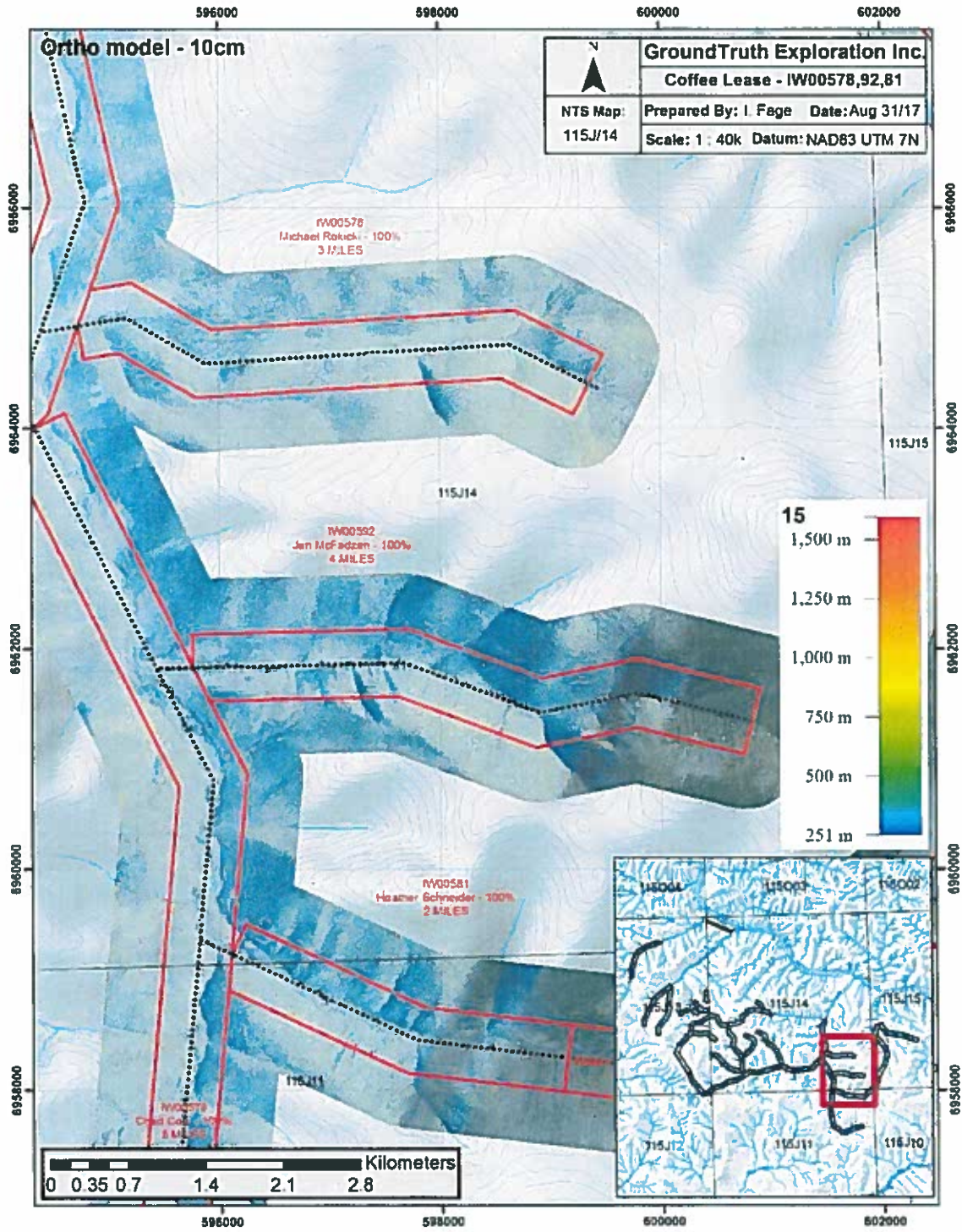
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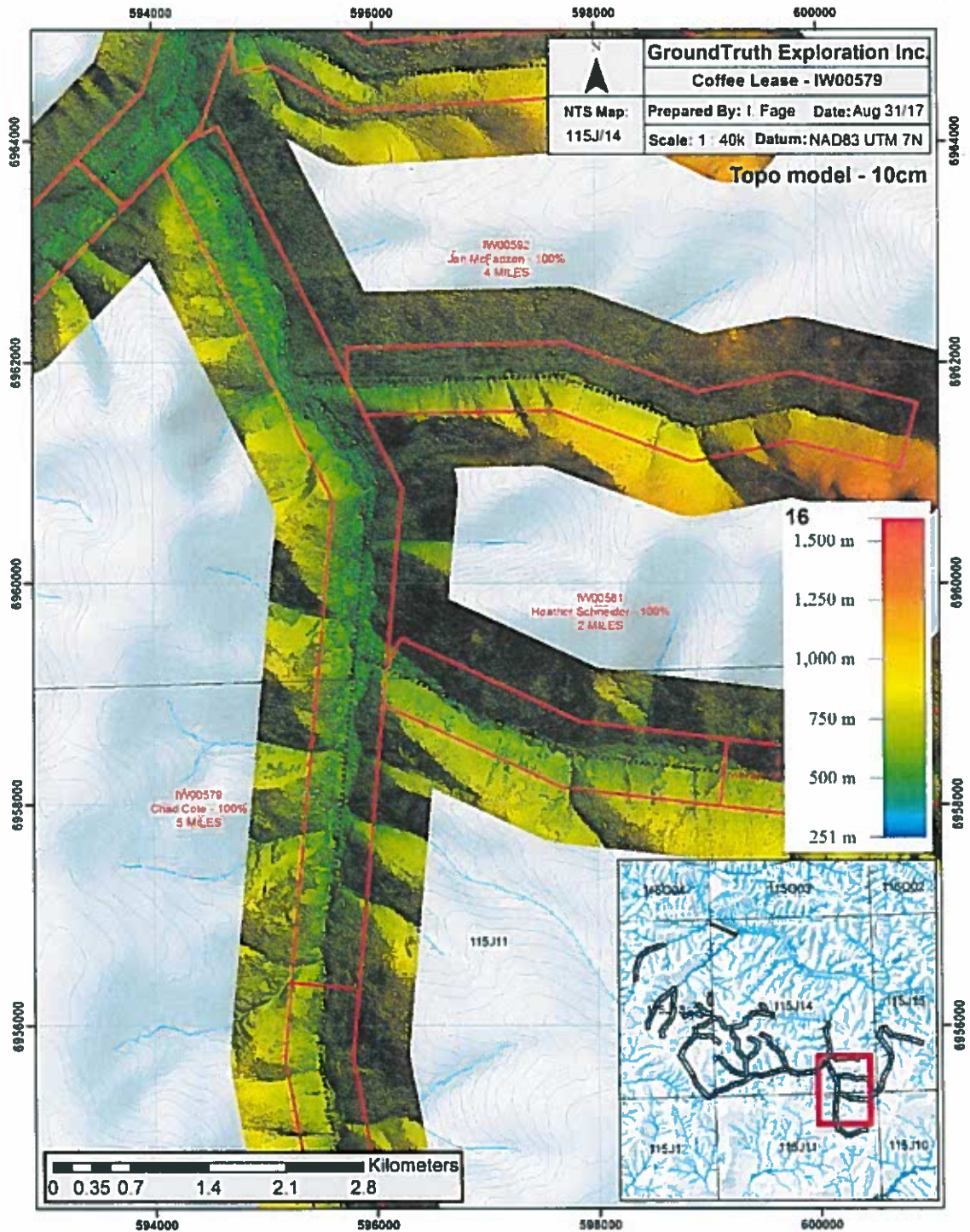


Placer Lease IW00578, 92, 81:

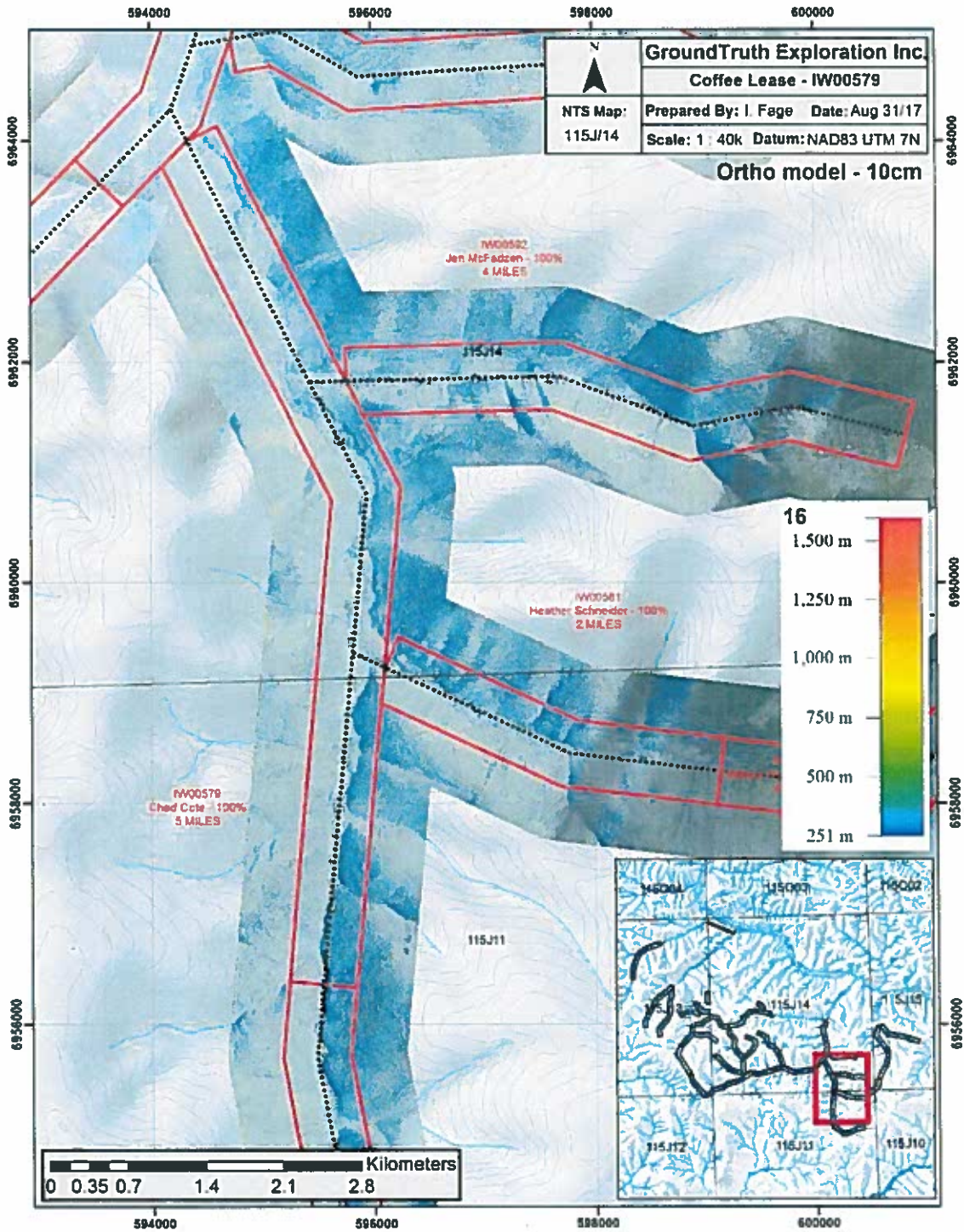




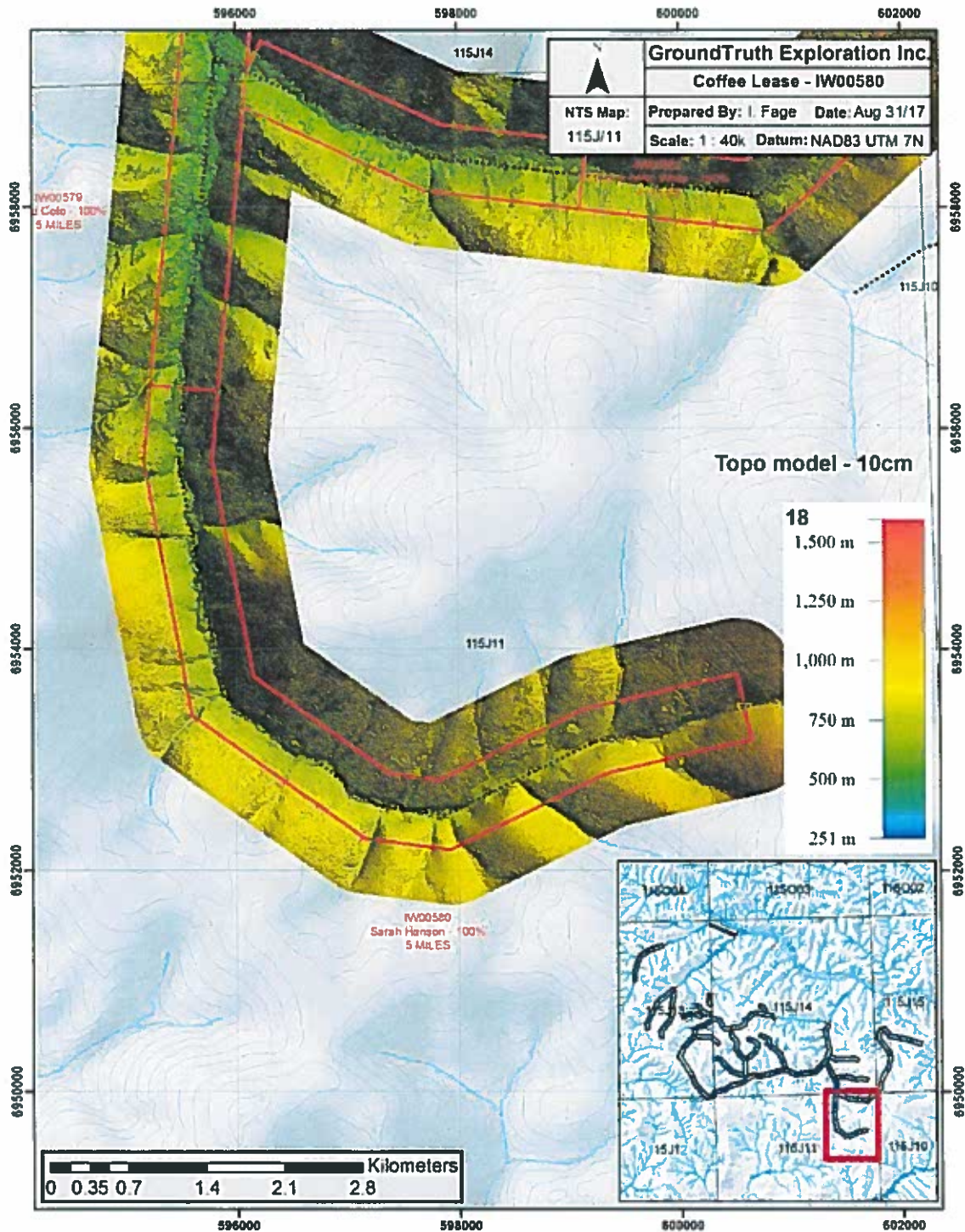
Placer Lease IW00579:



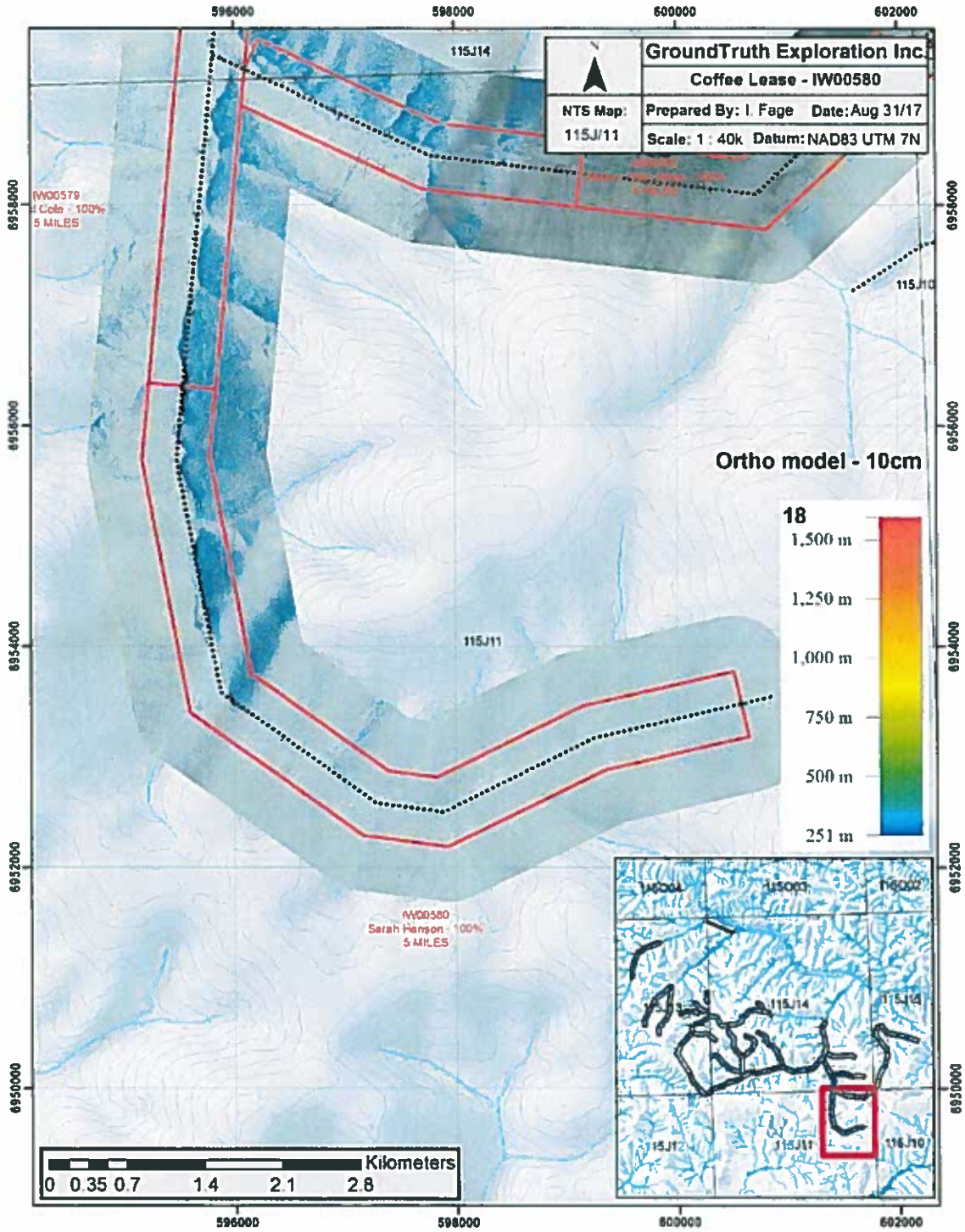
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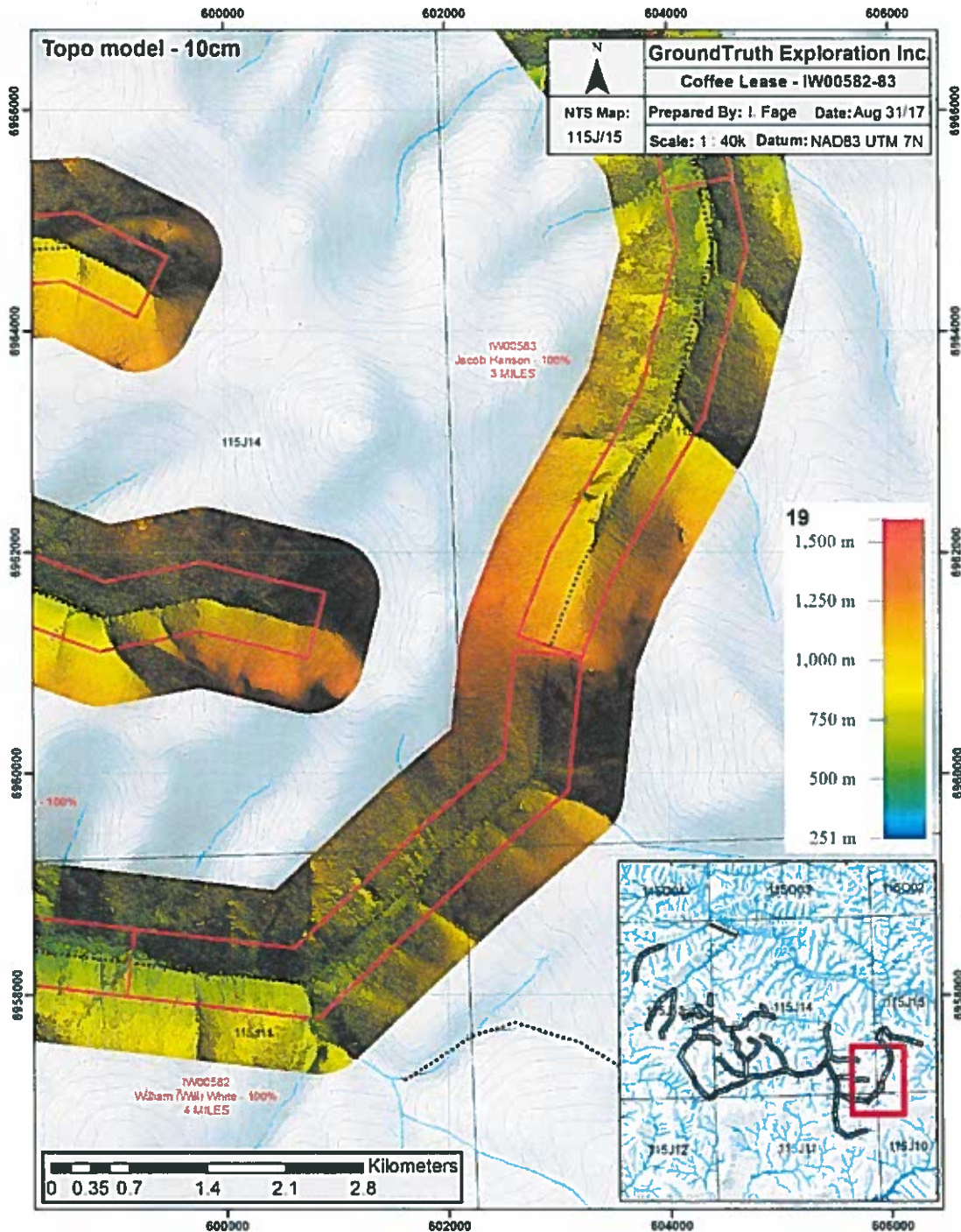
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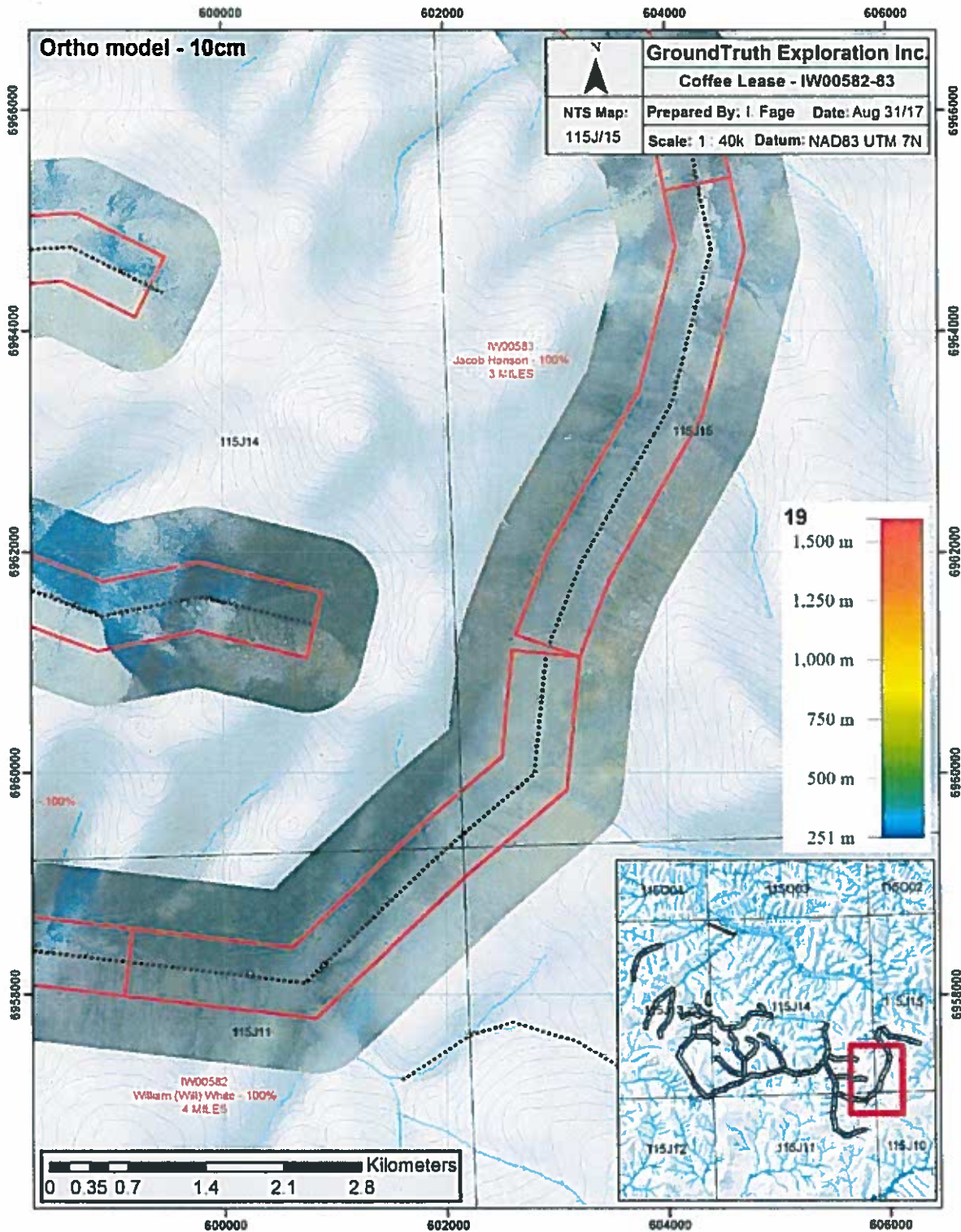


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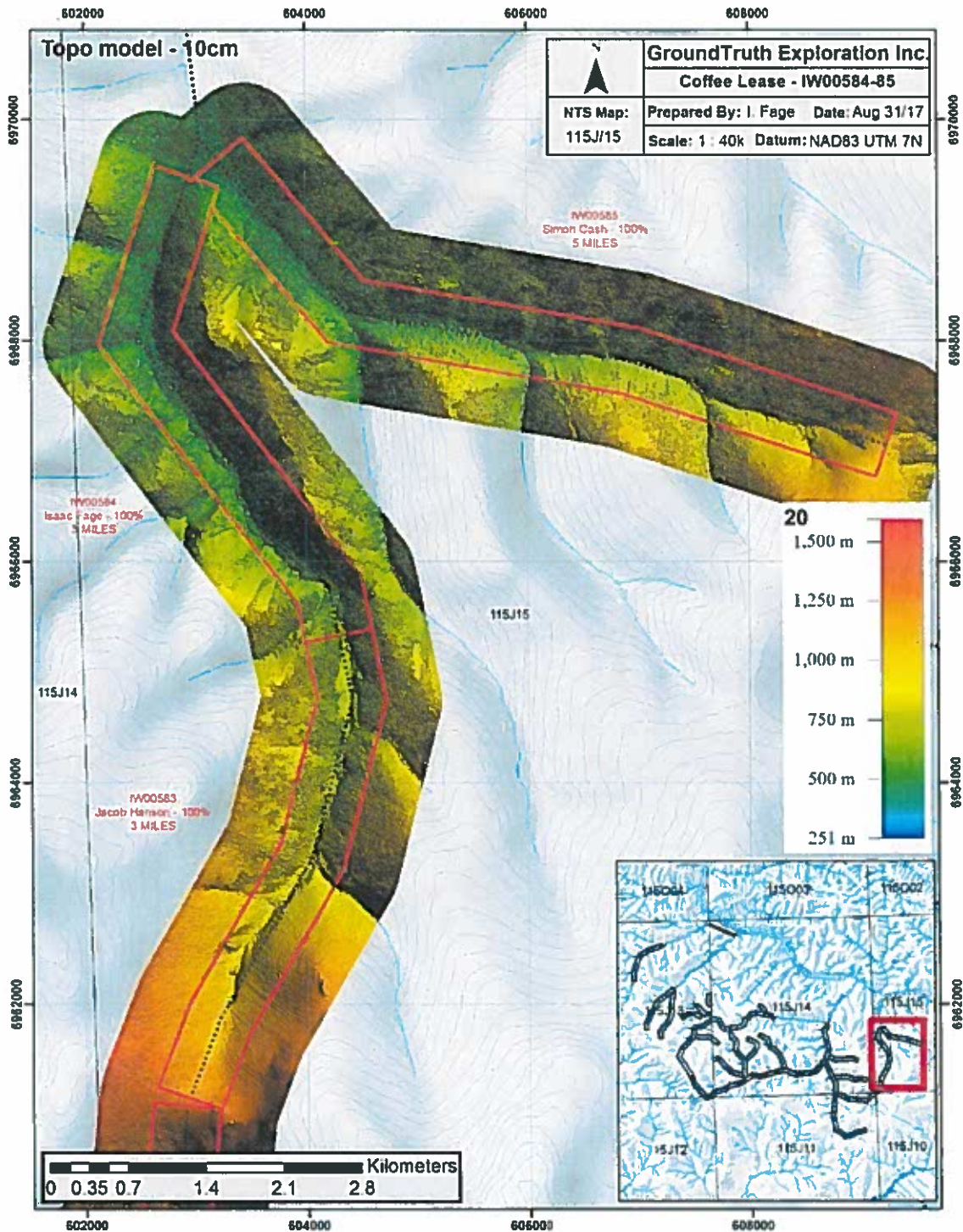


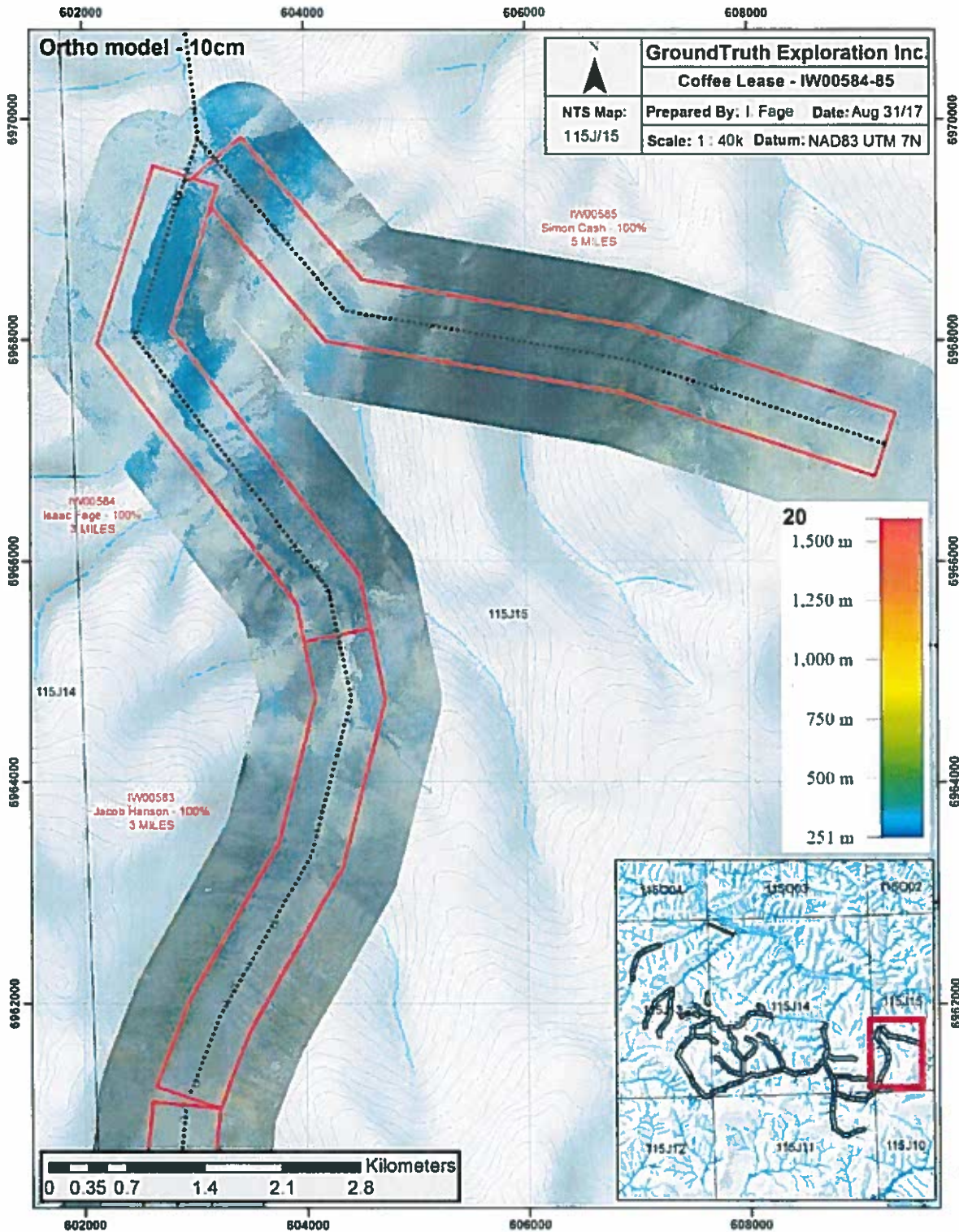
Placer Lease IW00582-83:



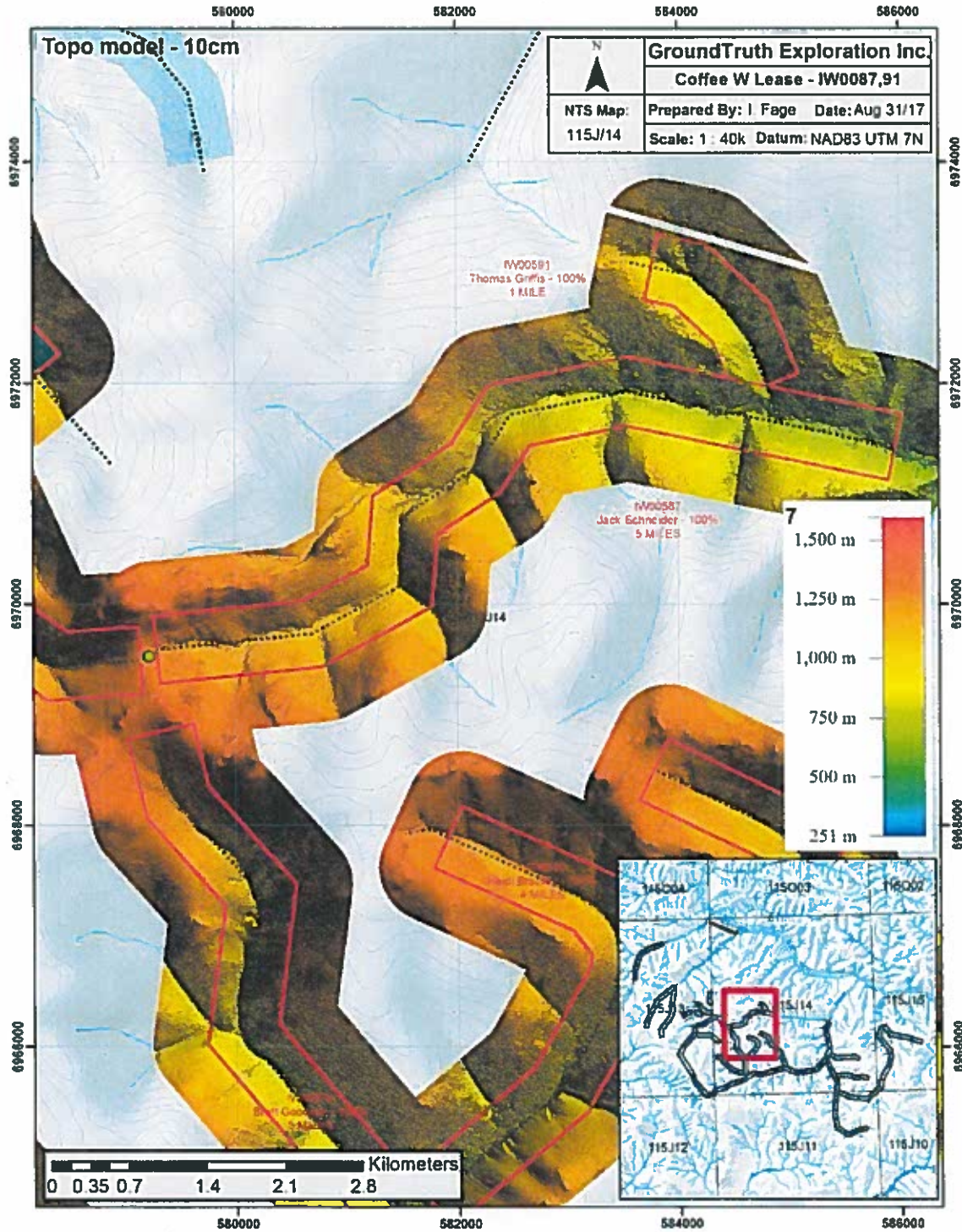


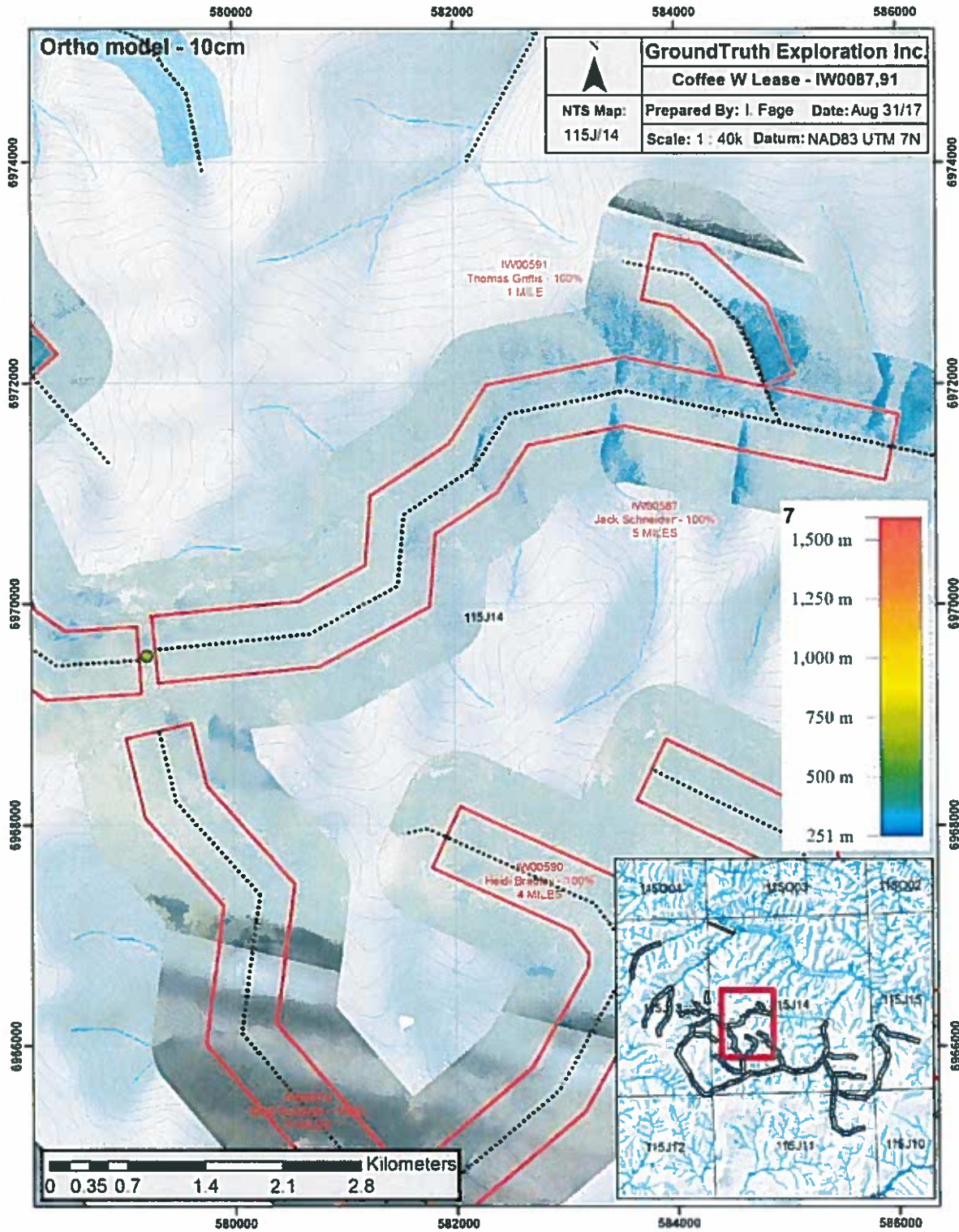
Placer Lease IW00584-85:





Placer Lease IW00587-91:

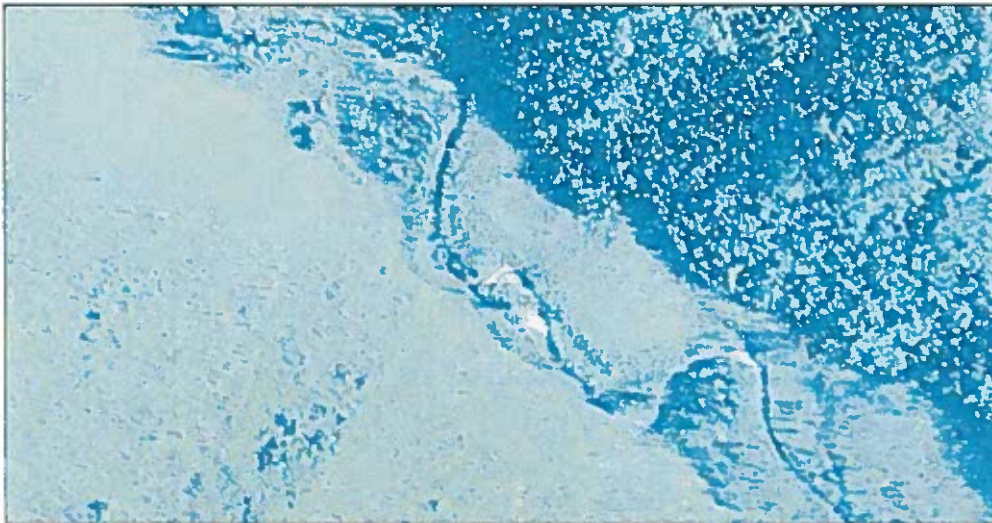




2.4 Discussion and Interpretation

The XCam survey is useful for interpreting the 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 frequency domain EM 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.

IW00579-581: Plan map and 3D map.





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3 Project Expenses

Invoice per lease below:



Invoice

Date	Invoice #
Sept 4/17	GT INP2017 02

Coffee-Excelsior Placer Leases

Invoice To:

Shawn Ryan
Box 213
Dawson, YT
Y0B 1G0

Description	Amount
Xcam 10cm GSD Imagery/Topography Survey Charged at \$1,000/mile <i>(including: Fixed Wing w Fuel and Staff, Xcam Rental, Imagery Processing, Interpretation and Final Report)</i>	
Placer Leases Surveyed	
Lease Length Owner	
W00571 5 MILES Kendra Franks - 100%	\$5,000.00
W00572 5 MILES Matthew Emmett - 100%	\$5,000.00
W00573 4 MILES Sarah Lewis - 100%	\$4,000.00
W00574 5 MILES Brett Goodwin - 100%	\$5,000.00
W00575 5 MILES Gwen Franks - 100%	\$5,000.00
W00576 5 MILES Mary Hedi Cuppage - 100%	\$5,000.00
W00577 4 MILES Daniel Brown-Hozjan - 100%	\$4,000.00
W00578 3 MILES Michael Rokicki - 100%	\$3,000.00
W00579 5 MILES Chad Cole - 100%	\$5,000.00
W00580 5 MILES Sarah Hanson - 100%	\$5,000.00
W00581 2 MILES Heather Schneider - 100%	\$2,000.00
W00582 4 MILES William (Will) White - 100%	\$4,000.00
W00583 3 MILES Jacob Hanson - 100%	\$3,000.00
W00584 3 MILES Isaac Page - 100%	\$3,000.00
W00585 5 MILES Simon Cath - 100%	\$5,000.00
W00587 5 MILES Jack Schneider - 100%	\$5,000.00
W00590 4 MILES Heidi Bradley - 100%	\$4,000.00
W00591 1 MILE Thomas Griffiths - 100%	\$1,000.00
W00592 4 MILES Jan McFarlane - 100%	\$4,000.00

GST # BB1084768

Subtotal \$77,000.00

GST 5% \$3,850.00

Total Due \$80,850.00

Make all cheques payable to:
Ground Truth Exploration Inc.

Thank you for your business!



GroundTruth Exploration Inc.

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4 Statement of Qualifications

I, Isaac Fage have been president of GroundTruth Exploration in Dawson City since May 2010. I have overseen the collection of 400,000 + soil samples, numerous geophysical, UAV drone and drill programs across numerous projects in Yukon Territory. 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 the Coffee-Excesior Creek placer leases.

Dated this 4th day of September, 2017 in Dawson, YT.

Respectfully submitted

A handwritten signature in black ink, appearing to be 'IF', is written over a light blue horizontal line.

Isaac Fage

5 Conclusions and recommendations

The Xcam imagery/topo is a valuable tool for planning the field work and the DEM it provided was useful for tying together the surveys. The imagery will also be useful for interpreting the RES/IP survey by providing surficial/topographic context to the subsurface geophysical data.

Follow-up geophysical surveys to interpret muck/gravel thickness and depth to bedrock is recommended. Drilling with a heliportable, track mounted drill is recommended to confirm overburden depths and to test for the presence/grade of placer gold.

References

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- Ryan, J.J., and Gordey, S.P.. (2001). New geological mapping in Yukon-Tanana terrane near Thistle Creek, Stewart River map area, Yukon Territory; Yukon Geological Survey.
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- **Additional review of various published scientific and reporting papers on the geology and mineral deposits of the region for indirect reference.**

