BC Geological Survey
Assessment Report
41303

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: 2022 PROSPECTING, GEOLOGICAL RECONNAISSANCE AND AIRBORNE MAGNETIC/RADIOMETRIC SURVEYING ON THE KELLY CREEK PROPERTY, TERRACE AREA, BRITISH COLUMBIA

TOTAL COST:$108,395

AUTHOR(S): Tom Setterfield, PhD, PGeo

SIGNATURE(S):



STATEMENT OF WORK EVENT NUMBER(S)/DATE(S):

YEAR OF WORK:2022

PROPERTY NAME: KELLY CREEK

CLAIM NAME(S) (on which work was done): 1095238, 1095239, 1095240, 1095241, 1095242

COMMODITIES SOUGHT: COPPER, SILVER, GOLD

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN: 103.I092, 156,157,158,159,160,161, 162,214

MINING DIVISION: OMENICA
NTS / BCGS: NTS103I/08; BCGS103I.039, 040, 049, 050
LATITUDE: 54° 26’ 14"
LONGITUDE: 128° 09’ 29" (at centre of work)
UTM Zone: 09 EASTING: 554600 NORTHING: 6032500

OWNER(S): RICHARD BILLINGSLEY

MAILING ADDRESS: 11114 147A St, Surrey, BC, V3R 3W2

OPERATOR(S) [who paid for the work]: RICHARD BILLINGSLEY

MAILING ADDRESS: 11114 147A St, Surrey, BC, V3R 3W2

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Lower Jurassic Hazelton Group Telkwa Formation, Early Jurassic Kleanza Pluton, Red Bed Copper Mineralization, Kelly Creek Developed Prospect, Airborne Geophysical Survey

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 02394, 08559, 10541, 12728, 15859, 20743, 34768, 35194, 38949, 39464, 40079

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground reconnaissance		1095238, 1095239, 1095240, 1095241, 1095242	$17,895
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne		1095238, 1095239, 1095240, 1095241, 1095242	$63,873
GEOCHEMICAL (number of samples analysed for …)			
Soil			
Silt			
Rock	48 Samples	1095238, 1095239, 1095240, 1095241, 1095242	$3,077
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)		1095238, 1095239, 1095240, 1095241, 1095242	$17,895
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			

Road, local access (km)/trail		
Trench (number/metres)		
Underground development (metres)		
Compilation, Report Writing	1095238, 1095239, 1095240, 1095241, 1095242	$5,655
	TOTAL COST	$108,395

2022 PROSPECTING, GEOLOGICAL RECONNAISSANCE AND AIRBORNE MAGNETIC/RADIOMETRIC SURVEYING ON THE KELLY CREEK PROPERTY, TERRACE AREA, BRITISH COLUMBIA

Property Tenures: 1095238, 1095239, 1095240, 1095241 and 1095242

NTS Maps 103I/08
BCGS Maps 103I.039, 040, 049, 050
Latitude 54º26'14"N Longitude 128º9'29"W
UTM Zone 09 (NAD 83): 554600E/6032500N
Omenica Mining Division

British Columbia Minfiles: 103I.092, 156, 157, 158, 159, 160, 161, 162, 214

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Date: July 11, 2023

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SUMMARY

The Kelly Creek property is located approximately 30 km east-southeast of Terrace and 75 km southwest of Smithers in central British Columbia. The Property is dominated by volcanics and sediments of the Early Jurassic Telkwa Formation, part of the Hazelton Group, intruded by an outlier of the Early Jurassic Kleanza Pluton. There are nine MINFILE occurrences on the Property, the most important of which is Kelly Creek copper-silver developed prospect. The Kelly Creek Upper showing has a calculated resource (not NI 43-101 compliant) of 545,167 tonnes @ 2.24% Cu and 45.9 g/t Ag, and is open down-dip. The mineralization style is thought to be Volcanic Redbed Copper. Most other showings also demonstrate redbed affinities, although at least one (Chicken) is more porphyry-like. Copper was discovered in the area in the early 1900's, and the Property has had intermittent exploration since the early 1960's but has received only minor attention since 1990. Tenures comprising the Property were amalgamated in April 2022, and the Property now consists of five mineral tenures covering a total of ~73.9 km^2.

Access to the Property is by road or helicopter from Terrace. Driving to the Property from Terrace involves taking Highway 16 northeast for 15 km from Terrace and then turning east on the Copper River Forest Service Road immediately south of Zymoetz River. The Trapline Mountain Road is taken south from approximately km 20; it leads to the summit of Trapper Mountain in the center of the Property. Other logging roads access a portion of the southern part of the Property, but much of it is only accessible by helicopter and has seen very little work. Terrain on the Property is hilly with moderate relief. Elevation ranges from 180 m ASL beside the Zymoetz River in the northwest corner of the Property up to 1,760 m in the highest relief part of the Property. The Property is forested except where recent logging has occurred.

36 man-days were spent on the Property in August, 2022 in order to collect additional samples of mineralization, following on from programs in 2019, 2020 and 2021. A total of 48 grab samples was collected. As previously noted on the Property, copper, silver and to a lesser extent gold seem to have the most potential to contribute to an economic deposit. Thirty of the 48 samples had more than 500 ppm Cu (high value of 1.95%), 12 samples had more than 10 g/t Ag (high value 76.9 g/t), and one sample contained more than 0.1 g/t Au. Molybdenum, lead and zinc values were uniformly low. When combined with results from recent sampling, the 2022 results highlight the impressive distribution of copper and silver in the Kelly Creek/East Side area and suggestions of an extension into Goat Bluff/Native #2 area, as well as a developing story at Bill/Mountain Goat, where intermittent mineralization occurs over an area of 2.1 x 1.3 km.

Precision GeoSurveys flew a high-resolution helicopter-borne magnetic gradient and radiometric survey of the entire Property in August, 2022. The Reduced to Pole (RTP) image of magnetic data shows that the Kleanza Pluton is manifested by a magnetic high which extends to the east and south for approximately 600 m past its mapped contact, suggesting that the actual extent of the pluton is greater than its surface expression. The magnetic high is bordered to the west by a NNW trending zone of low magnetic intensity, which could correspond to a structure or an alteration zone. The magnetic data shows a NNW trending linear magnetic high corresponding to a mapped fault in the southwest part of the Property, as well as a number of NNW to NW linear magnetic highs which could be dikes or structures in the southern half of the Property. Also, an intriguing magnetic low occurs in the west-central part of the Property. Surprisingly, the Kleanza Pluton is not a potassium anomaly; this may be because of the abundance of vegetation and Quaternary cover in the northern part of the Property. The Kelly Creek prospect is located on a small potassium anomaly. More extensive potassium anomalies

occur in the south-central and southwest parts of the Property, and the image shows a number of northerly trending anomalies (dikes?). A potassium:thorium ratio map is a better tool to assess potential potassic alteration, as potassium is added and thorium typically remains immobile during this alteration, resulting in higher ratios. However, such a diagram does not show any coherent ratio anomalies on the Property. The conclusion would be that either i) no significant potassic alteration occurs; or ii) that radiometrics is ineffective because of the amount of cover on the Property.

The copper price has risen significantly in the past several years, making copper properties much more attractive. This is particularly the case for the Kelly Creek property, which contains a small to medium-sized, incompletely delineated deposit with moderate grade. Attempted expansion of this deposit would by itself justify continued work on the Property. The trail to this deposit, although brushed out in 2022, should be upgraded to allow more efficient access. The trenches should be cleaned out, remapped and resampled and an effort should be made to find as many historic drill locations as possible and to record their position with modern GPS equipment. The adit should be resurveyed, remapped and resampled (will require proper breathing apparatus). A three dimensional model of the deposit and environs should then be constructed, and the ore resource should be updated. A modern IP survey over the Kelly Creek mineralized area should be considered, in order to more efficiently target future drill holes and possibly to gain insight into the true extent of mineralization.

The remainder of the Property is also prospective. Additional detailed prospecting should be conducted from East Side to Goat Bluff to Native #2 (all one mineralized system?) and in the Bill/Mountain Goat area, which also looks like a significant area of mineralization and is mostly road accessible. The margins of the Kleanza Pluton should also be prospected to look for other Kelly Creek analogues. Reconnaissance prospecting of the entire property should be completed, as the small amount of work conducted from 2019 to 2022 has shown that new mineralization remains to be discovered. Geological work should focus on property-scale investigations with a focus on the structure, volcanology (subaerial versus subaqueous deposition) and distribution of intrusions, in order to better understand the controls on mineralization. The 2022 magnetic survey has generated additional areas of interest for field checking, particularly the magnetic low on the western side of the Kleanza Pluton, the magnetic low in the west-central part of the Property, and the margins of the magnetic high which likely reflects the true near-surface extent of the Kleanza Pluton.

The assessment-eligible work documented in this report cost $108,395.

1.0 INTRODUCTION

1.1 General

The Kelly Creek property (the "Property") is located approximately 30 km east-southeast of Terrace and 75 km southwest of Smithers in central British Columbia (Fig. 1). It contains the Kelly Creek copper-silver developed prospect/deposit, and a number of other mineral occurrences. Copper was discovered in the area in the early 1900's, and the Property has had intermittent exploration since the early 1960's, but has received only minor attention since 1990. The Property is 100% owned by Richard Billingsley ("Billingsley"). Two prospectors spent a day on the Property conducting preliminary prospecting and sampling in 2020 and in early 2021 a compilation of available information was completed. In August 2021, 64 man-days were spent on the Property undertaking additional prospecting and initial geological reconnaissance. Further prospecting and geological reconnaissance were completed in August 2022, and an airborne geophysical survey (magnetics and radiometrics) was flown in the same month. The purpose of this report is to document the fieldwork completed in 2022.

The 1983 North American Datum (NAD83) co-ordinate system is used in this report. The Property is in Universal Transverse Mercator (UTM) Zone 09N.

1.2 Abbreviations Used in the Report

Ag – silver
Au – gold
Cu – copper
Mo – molybdenum
Pb – lead
Sb - antimony
Zn – zinc
g/t – grams per tonne
cm – centimeter
m – meter
km – kilometer
Oz - ounce
cpy – chalcopyrite
bn-bornite
cc-chalcocite
py – pyrite
hem-hematite
qtz – quartz
sphal - sphalerite
ARIS – asessment reports, BCGS
BCGS – British Columbia Geological Survey
Ma (mega-annum) - a million years
PROP – property files, BCGS
QFP - quartz feldspar porphyry

2.0 PROPERTY DESCRIPTION AND LOCATION

The Property occurs 30 km east-southeast of Terrace (population 12,000) in the Omenica Mining Division (Fig. 1). Tenures comprising the Property were amalgamated in April 2022, and the Property now consists of five mineral tenures covering a total of 7,392.82 hectares (~73.9 km^2). It is centered at approximately 554600E/6032500N (UTM Co-ordinates) or 54º26'14"N/128º09'29"W (longitude /latitude), in National Topographic System (NTS) 1:50,000 map sheet 103I/08 (Table 1; Figs. 2 and 3; Map 1). All tenures comprising the Property are 100% owned by Richard Billingsley (Client #139085) of Surrey, British Columbia.



Figure 1: Location of the Kelly Creek Property in British Columbia

Table 1. Mineral Tenures Comprising the Kelly Creek Property

Title No	Claim Name	Issue Date	Good To Date	Area (ha)
1095238	KELLY CREEK 1	2022/APR/20	2025/DEC/31	1993.16
1095239	KELLY CREEK 2	2022/APR/20	2025/DEC/31	676.95
1095240	KELLY CREEK 3	2022/APR/20	2025/DEC/31	789.74
1095241	KELLY CREEK 4	2022/APR/20	2025/DEC/31	1712.27
1095242	KELLY CREEK 5	2022/APR/20	2025/DEC/31	2220.70

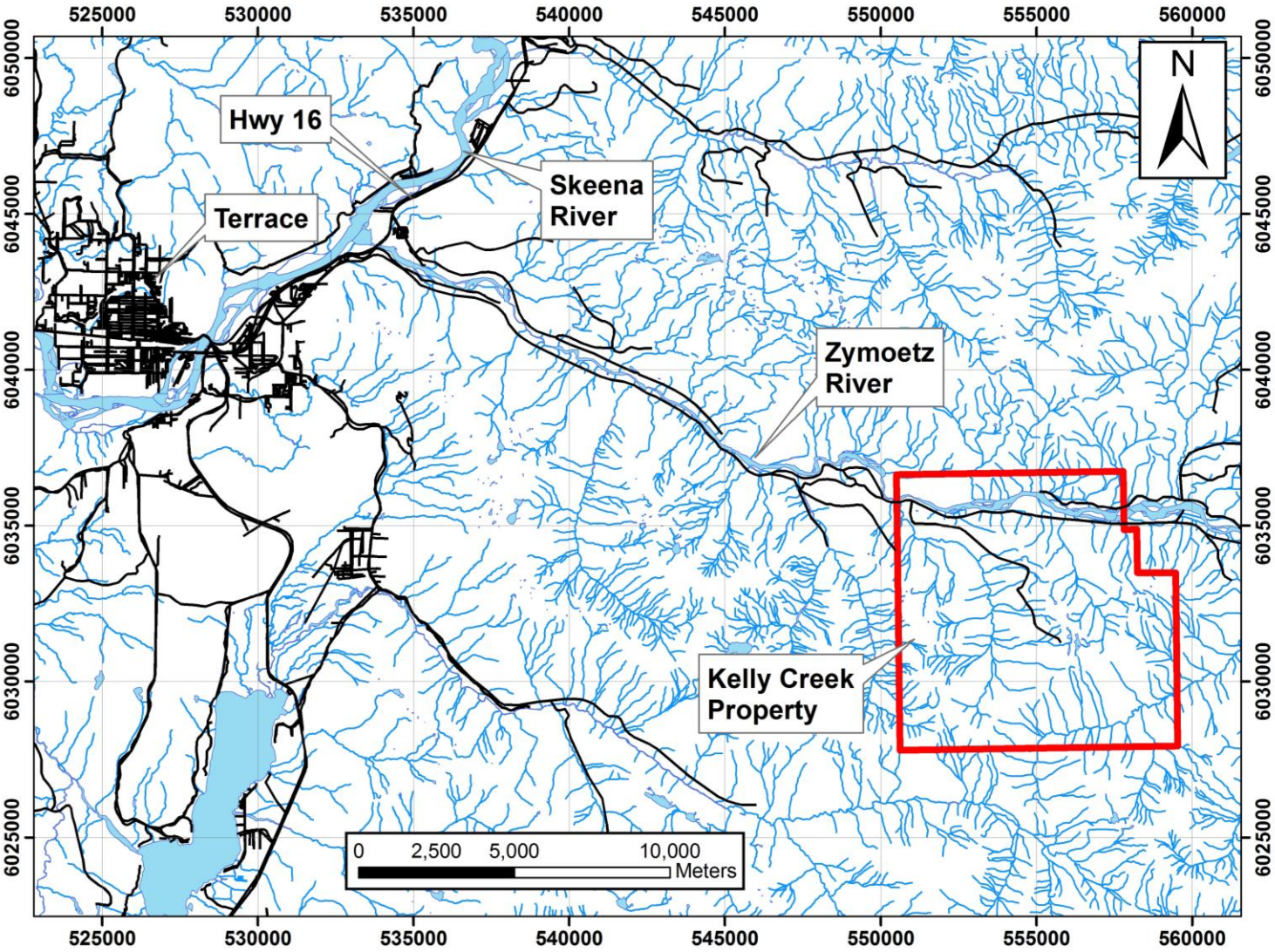


Figure 2: Location of the Kelly Creek Property

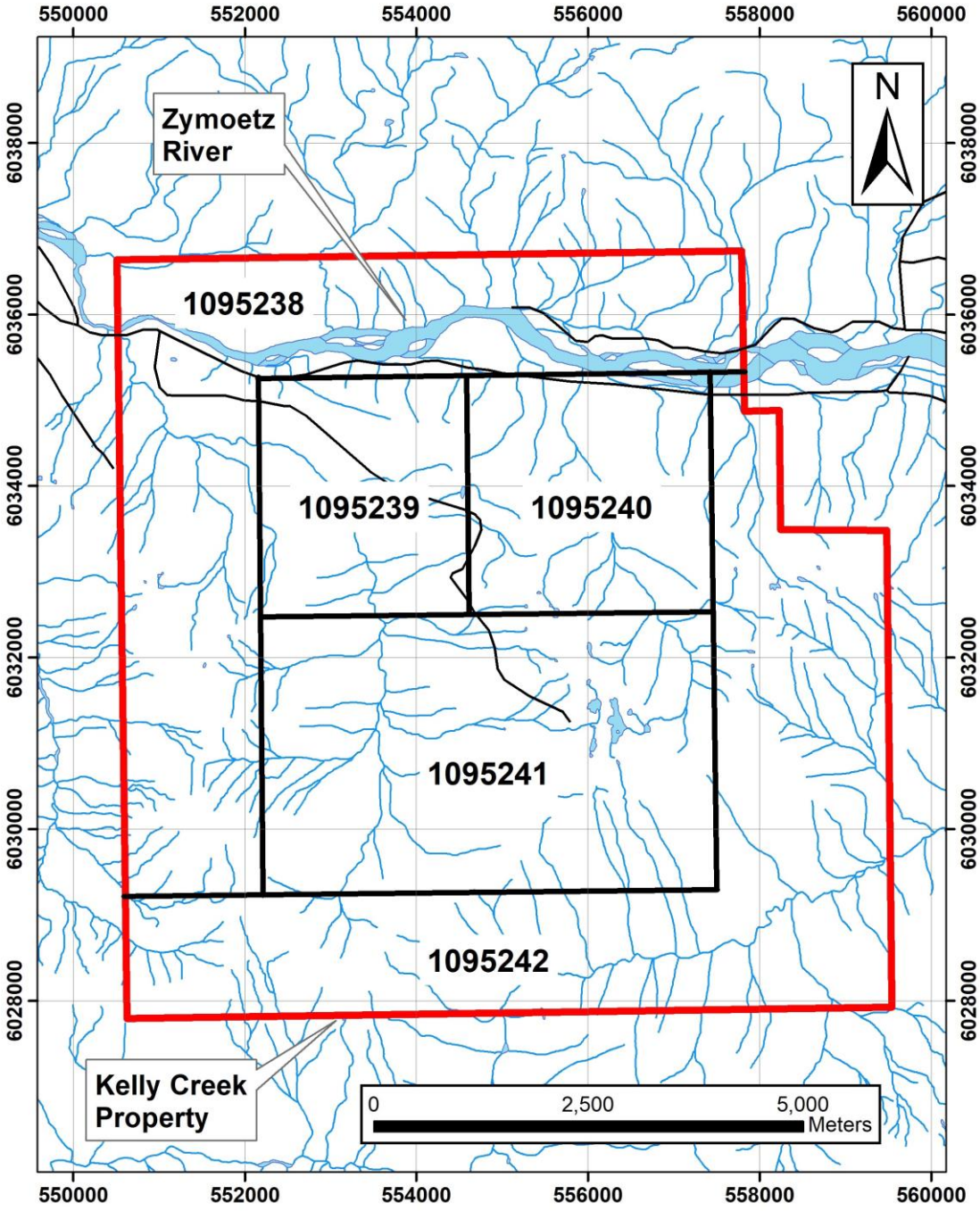


Figure 3: Mineral Tenures Comprising the Kelly Creek Property

3.0 ACCESS AND PHYSIOGRAPHY

Access to the Property is by road or helicopter from Terrace. Driving to the Property from Terrace involves taking Highway 16 northeast for 15 km from Terrace and then turning east on the Copper River (another name for the Zymoetz River) Forest Service Road immediately south of Zymoetz River (Figs. 2 and 4). The Trapline Mountain Road (green line on Figure 4) is taken south from approximately km 20; it leads to the summit of Trapper Mountain in the center of the Property. Other logging roads access a portion of the southern part of the Property, but much is only accessible by helicopter and has seen very little work. Terrain on the Property is hilly with moderate relief (Fig. 4). Elevation ranges from 180 m

ASL beside the Zymoetz River in the northwest corner of the Property up to 1,760 m in the highest part of the Property (southwest corner). The Property is rugged, and is forested except where recent logging has occurred (Plate 1).

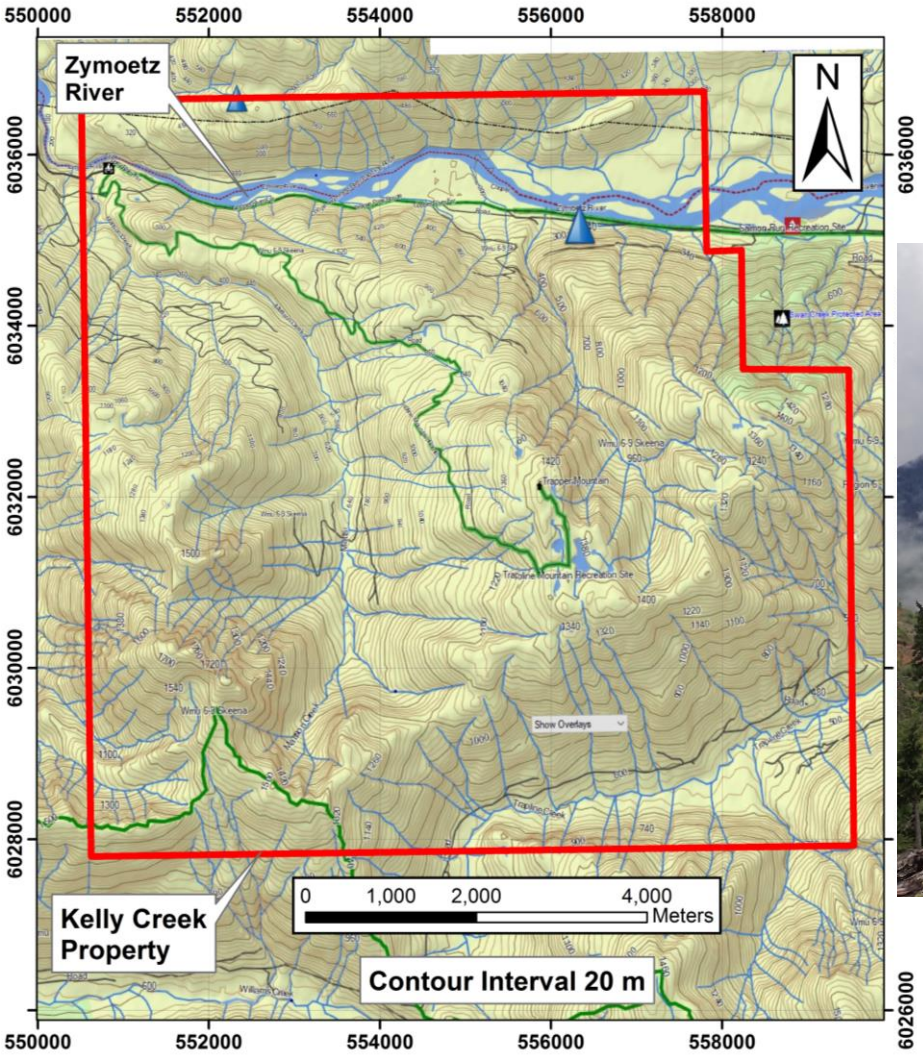


Figure 4: Physiography of the Kelly Creek Property



Plate 1: Typical Scenery, Kelly Creek Property

4.0 GEOLOGIC SETTING AND MINERALIZATION

4.1 Geology

There are five morphogeological belts in British Columbia, from east to west the Foreland, Omineca, Intermontane, Coast and Insular belts as defined by Wheeler and McFeely (1994). The Kelly Creek property occurs within the Intermontane Belt near its contact with the mostly plutonic Coast Belt (Fig. 5). More particularly, the Property is within the Stikine Terrane, one of three major terranes comprising the Intermontane Belt. This terrane formed as an intraoceanic volcanic arc during the Paleozoic to Mesozoic.

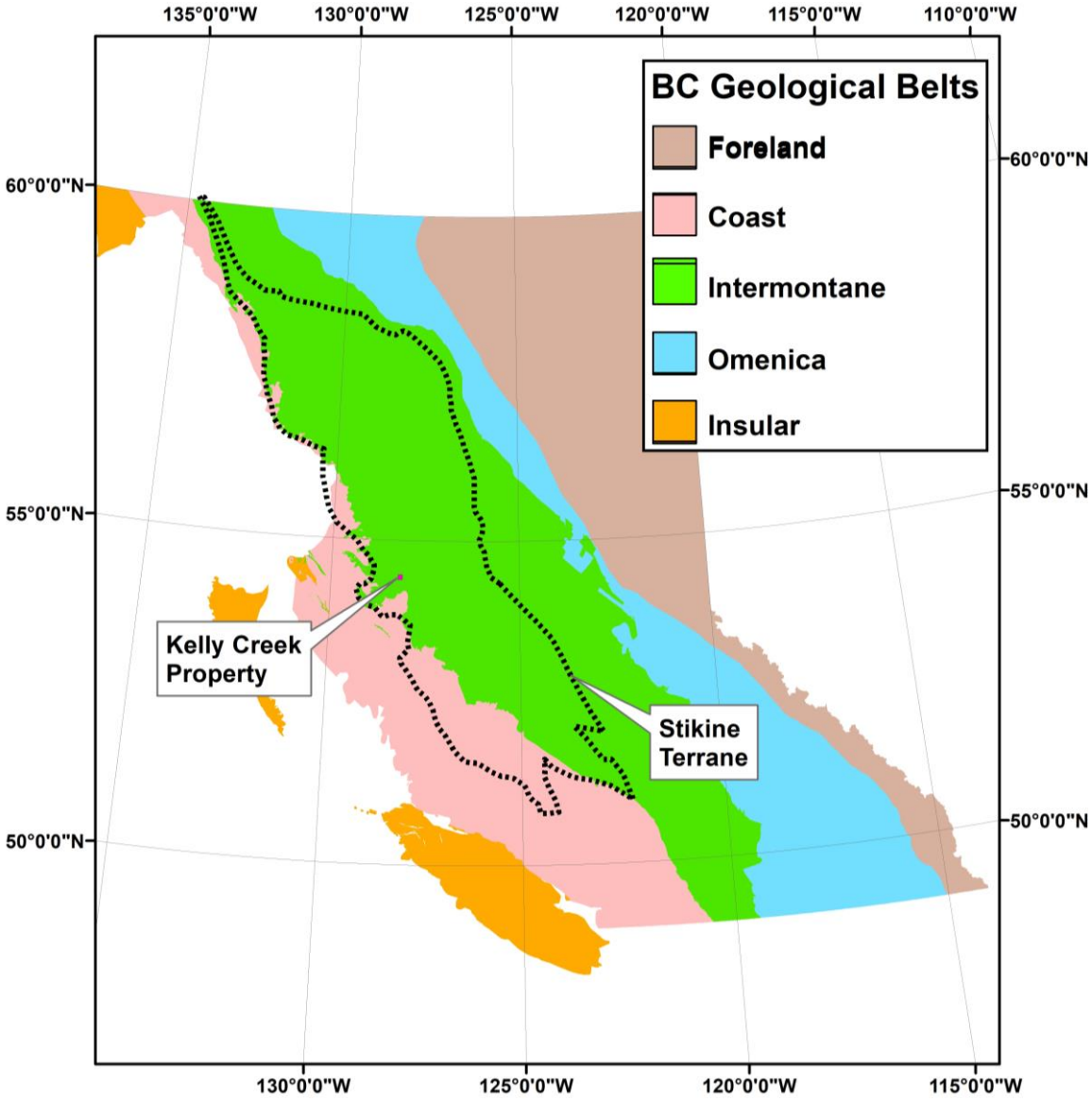


Figure 5: BC Geological Belts, Stikine Terrane, Property Location. Modified After Wheeler and McFeely (1991)

The Property falls within the Chist Creek map area, which has been mapped by Nelson et al. (2008a, b; Fig. 6). The Property is dominated by volcanics and sediments of the Early Jurassic Telkwa Formation, part of the Hazelton Group, intruded by an outlier of the Early Jurassic Kleanza Pluton. The most common rock type is intermediate flows (LJTa on Fig. 6) with lesser intermediate lapilli tuffs (LJTax). These are interbedded with felsic flows (LJTr and LJTd). A small amount of Telkwa Formation conglomerate (LJTcg) occurs in the northwest corner of the Property, adjacent to a sliver of limestone from the Permian Ambition Formation (blue, Pls on Fig. 6). The outlier of Kleanza Pluton on the Property is mostly granodiorite, whereas the main part of the intrusion varies from gabbro to granite (Nelson et al., 2008b).

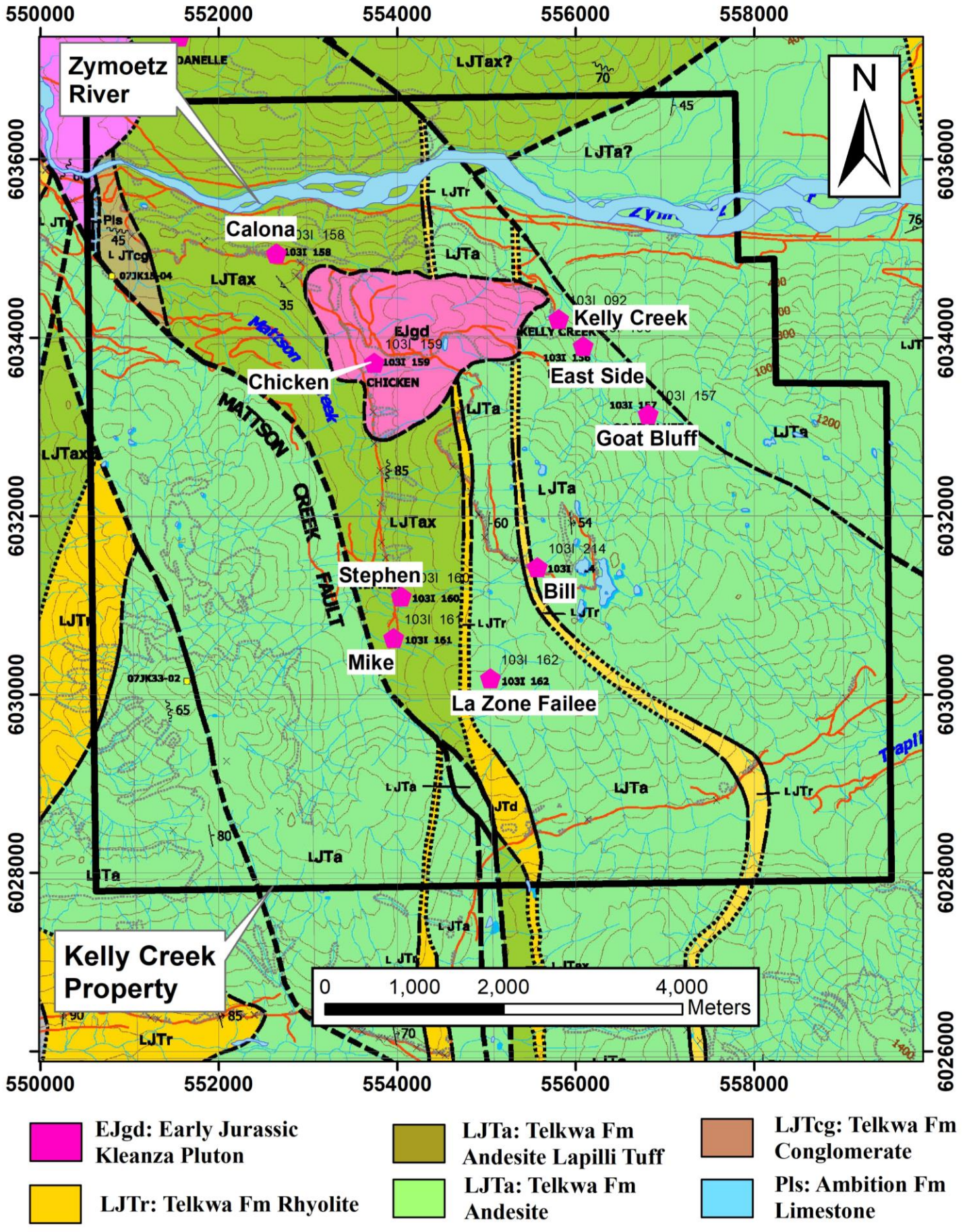


Figure 6: Geology of the Kelly Creek Property. Modified after Nelson et al. (2008a)

4.2 Mineralization (from MINFILE)

There are nine BC MINEFILE occurrences within the Property (Fig. 6). Of these, eight are showings (the lowest category), and one (Kelly Creek) is a developed prospect. Most of the occurrences consist of Cu ± Ag ± Au within volcanic rocks of the Telkwa Formation. The following descriptions are taken from the respective MINFILE documents and Carter (1970).

The Kelly Creek developed prospect occurs immediately to the east of the Kleanza Pluton (Fig. 6). The occurrence consists of an Upper and a Lower showing (Carter, 1970; MINFILE 103I 092). The Upper showing consists of "blebs and stringers of bornite and chalcopyrite" in intensely fractured felsic volcanic rocks of the Telkwa Formation and as disseminations of bornite in local felsic dikes (Carter, 1970). The Lower showing comprises chalcopyrite, bornite and minor chalcocite in fractures in granodiorite on the edge of the Kleanza Pluton. A 1000' long adit was put into the Upper showing in 1969, and seven underground holes were drilled in 1970. A non 43-101 compliant resource on the Upper showing of 2.3 Mt @ 1.03% Cu and 18.5 g/t Ag was calculated in 1980, and a resource calculation by Imperial Metals in 1985 yielded an estimate of 545,167 tonnes @ 2.24% Cu and 45.9 g/t Ag. The Lower showing is approximately 150 m long by 15 m wide; a 4 m chip sample averaged 2% Cu and 17.1 g/t Ag. The style of mineralization in this important prospect is not well described.

The East Side showing is 300 m southeast of the Kelly Creek Upper showing (Fig. 6). Chalcopyrite and bornite occur within silicified andesite proximal to a felsic dike. A 4.7 m long sample ran 0.70% Cu and 10.3 g/t Ag. The Goats Bluff showing to the southeast of East Side likewise contains copper sulphides disseminated in andesite. The Bill occurrence is a series of discrete showings occurring over approximately 1 km in intermediate to felsic volcanics. Mineralization consists of pyrite, chalcopyrite, bornite, native copper, and malachite occurring as disseminations and in quartz-carbonate veins. Several areas returned assays of greater than 1% Cu, with anomalous Ag. The style of mineralization for these showings is classified as volcanic redbed copper.

La Zone Faillee occurrence consists of chalcopyrite, bornite and malachite in a NE striking fault which cuts intermediate flows. A 2 m wide sample ran 0.82% Cu, 0.34 g/t Au and 24 g/t Ag.

The Calona showing occurs with intermediate lapilli tuff of the Telkwa Formation (Fig. 6), proximal to diorite dikes. Mineralization consists of disseminated chalcopyrite, pyrite, bornite and malachite; a 4.3 m sample ran 0.05% Cu and 3.4 g/t Ag. The Mike and Stephen showings are also described as chalcopyrite disseminated in fragmental intermediate rocks of the Telkwa Formation. A 10 cm sample from the Mike showing assayed 0.92% Cu, 0.70 g/t Au and 10.3 g/t Ag.

The Chicken showing occurs within granodiorite of the Kleanza Pluton. Chalcopyrite and bornite occur in fractures; this appears to be typical porphyry style mineralization. A 2.1 m chip sample returned 3.38% Cu, 0.34 g/t Au and 30.9 g/t Ag.

5.0 PREVIOUS EXPLORATION

Copper was discovered in the Zymoetz River Valley (also known as Copper River) in the early 1900's. the Kelly Creek occurrence was likely one of the early discoveries.

In 1965**,** Native Explorations Ltd optioned the property, and excavated five trenches in the Lower showing (Turnbull, 1966). The best assay was 18' (5.49 m) @ 1.30% Cu. The report mentions intense potassic alteration of fragmental intermediate volcanics proximal to granodiorite. It is also clear that there is earlier exploration in the area for which the documentation is not presently available.

In 1966 and 1967, Native Explorations conducted geological mapping, carried out a soil survey and drilled nine holes on the Lower showing and sixteen on the Upper showing (Campbell, 1967). Drill logs/assays for the holes are generally not available, although selected assays for nine holes from the Upper showing are provided by Native Mines Limited (1967). Three of the holes into the Lower showing were in granodiorite and were barren; the remainder intersected low grade disseminated copper mineralization. The Upper showing occurs adjacent to a porphyry intrusion; mineralization occurs partly within the intrusion, but mostly in the host volcanics. The best intersection as calculated from the assay information provided was 50' (15.24 m) @ 1.85% Cu from hole ZYM #13 (Native Mines Limited, 1967). An "Indicated Ore" resource (clearly not NI 43-101 compliant) of 1.3 million tons @ 1.0% Cu and 0.75 oz/ton (23.4 g/t) Ag was calculated (Campbell, 1967). 7.3 miles of IP surveying is reported to have been completed in 1966 (Delaney and Gorc, 1990), but this is not documented in assessment reports.

Pechiney Development Ltd. optioned the Property in 1969 (Nicolet, 1970). They undertook an extensive exploration program, including producing a property-scale detailed geology map and several detailed trench maps, prospecting, trenching and enlargement of existing trenches, localized soil surveying, and underground exploration that included a 1,000 foot adit driven into the Upper Showing. Six new showings were discovered: Mountain Goat, Stephen, Mike, "Zone Faillee," Chicken and Calona. The East Side and Goat Bluff showings, previously found by Native Exploration, were re-examined.

In 1970, Native Mines drilled seven holes from the adit and three additional holes, presumably from surface (Native Mines, 1970). Logs are provided, but no assays. Their main conclusion at the end of the drilling was that copper mineralization occurs predominantly in felsic tuffs and breccias.

In 1979 Invex Resources Ltd. and Cathedral Minerals Ltd. acquired the Property and commenced a joint venture program. In 1980 Cathedral drilled 12 underground holes (519 m) and four surface holes (365 m) on the Upper showing (McGoran, 1980). Notable results include 0.79 m @ 6.95% Cu and 3.82 oz/ton (108.3 g/t) Ag in hole UK2 and 1.68 m @ 10.68% Cu and 6.08 oz/ton (172.4 g/t) Ag in hole UK5. Subsequent to this campaign, resource estimates (not NI43-101 compliant) of 362,875 tonnes grading 3.18% Cu and 72 g/t Ag or 2,267,960 tonnes grading 1.03% Cu and 18.5 g/t Ag were reported, based on underground sampling and drilling (MINFILE).

In 1981, Placer Development Ltd. conducted geological, soil geochemical and VLF surveys for the claim owners W. Makowichuk and J. Whittaker on the Bill and Jack claims 2 km south of the Kelly Creek occurrence (Bulmer and Peters, 1982). The geochemical survey revealed high copper and silver values within a fine-grained basaltic unit with abundant disseminated bornite and native copper, and lesser values in hematitic andesite and lapilli tuffs. Soil values ranged up to 9,228 ppm Cu in basalt to

2,872 ppm in the lapilli tuff; the highest rock sample was 3.69% Cu and 24 g/t Ag. The Radem VLF survey outlined known areas of mineralization.

In 1984, Eureka Resources Inc. completed a geochemistry program on the Bill and Jack claims that delineated four weak to moderate geochemical targets, three related to known showings and the fourth with no known mineralization (Kerr, 1984). 223 samples of B horizon were collected every 50 m; however, the program was hampered by late snow melt. 21 rock chip samples were collected later in the summer. Most of the copper and silver mineralization is related to narrow and local quartz/carbonate veining and intense epidote alteration located within N-S trending structures, and occurs as pyrite, chalcopyrite, bornite, native copper malachite, and an unidentified silver bearing mineral.

In 1986 W. Makowichuk and J. Whittaker drilled three short holes each hole 7.6 m) on the Bill claims with insignificant results, using a portable gas-driven Sullivan drill (Kerr, 1987).

The area of the Kelly Creek showings did not receive any exploration attention between 1980 and 1990, but Imperial Metals calculated a resource of 545,167 tonnes @ 2.24% Cu and 45.9 g/t Ag in 1985 (MINFILE; Delaney and Gorc, 1990). They noted that the down-dip extent of the orebody had not been determined. In 1990 Imperial reviewed previous work in the Kelly Creek area and collected 35 rock samples mostly from the mineralized zones in order to look for correlations between different elements. Their work showed a moderately good correlation of Cu with Ag and Fe, and no correlation between Au and other metallic elements. They interpreted much of the volcanic sequence to be subaerial and concluded that the mineralization was a variant of the redbed copper style, with a strong structural component. The main mineralization is proximal to a NW-trending fault, and mineralization at Kelly Creek and elsewhere on the Property is in highly fractured and silicified rocks. Another mineralization episode is an epidote-silica-calcite altered volcanic with 15% specular hematite, 15% pyrite and galena that is separate from Cu-Ag mineralization of Upper and Lower Showings and is found east of the Calona Showing (Fig. 6) in float containing up to 2.7% Cu and 1.4% Pb.

UTM Exploration Services Ltd. conducted one day of prospecting on the Property for Richard Billingsley in November 2013 (Beck and Mackenzie, 2013). Work was hampered by some snow cover. Eight samples were collected; one sample assayed 0.7% Cu and 11.99 g/t Ag from an outcrop of strongly malachite stained volcanics 1 km east of La Zone Faille showing.

A structural analysis of the Property was performed in 2014 via the detailed analysis of a publicly available DEM hillside image (Sookochoff, 2015). Thirty-seven lineaments were recognized. Sookochoff (2015) suggests that mineralization at the Upper Showing may not be associated with the main north-northwest trending Kelly Creek structure as previously thought, but rather with a northwest-trending, en-echelon, related structure that is 400 m west of the Kelly Creek structure. He further postulates that the intersection of this northwest-trending structure with a major northerly trending structure within the Kleanza Pluton defines a good target for porphyry mineralization.

A small prospecting and soil geochemistry program was conducted on the Property southwest of the Kelly Creek occurrence in 2019 (Lindinger, 2020). 33 soil samples were collected from 17 sites, and analyzed both with a conventional geochemical method, and with a weak ionic leach digestion. Prospecting of the Chicken Area revealed variably altered, multiphase intrusives hosting high grade replacement and fracture hosted chalcopyrite, sphalerite, and galena mineralization associated with quartz veinlets over a 350 m by 75 m east-trending zone. Alteration and indications of mineralization strike ENE from Chicken towards the Kelly Creek prospect. Eleven rock samples were taken at the

Chicken showing and to the east; samples assayed up to 6.94% Cu, 1.79 g/t Au, 40.8 g/t Ag , 1.16% Pb, and 1.45% Zn (different samples).

6.0 2020 EXPLORATION

A two person prospecting crew spent one day on the Property in September, 2020 (Setterfield and Bjorkman, 2021). Most of the time was spent in the vicinity of the Calona showing, with a minor amount of time spent east of the Chicken showing. Twelve grab samples were collected.

The trenches comprising the Calona showing were identified and sampled. They contained minor amounts of chalcopyrite and bornite disseminated and on fractures in an intermediate volcanic rock. The highest value was 0.29% Cu. A blast pit for the logging road was noted 135 m southwest of the Calona showing; this pit contains veinlets and stockwork stringers containing chalcopyrite and lesser bornite, with malachite on fractures. The best sample had several 2-3 mm seams of chalcopyrite and a few seams of bornite. Values up to 0.69% Cu were obtained. Copper mineralization (chalcopyrite-bornite-malachite was also found 200 m east of Calona; the one sample taken from this locality ran 0.26% Cu. Sheared intrusive with pyrite stringers was noted east of Chicken; only two samples were taken, neither of which contained anomalous metal.

7.0 2021 EXPLORATION

7.1 General

64 man-days were spent on the Property in August, 2021 (Bjorkman et al., 2022). The crew was based in Terrace, and drove to the Property each day. Some helicopter access was provided by Mustang Helicopters. The objectives were to obtain well documented samples and a better understanding of known mineralization, as well as to search for new areas of mineralization. 162 grab samples were collected on the Property in 2021. The ranges of values for elements of economic interest are shown in Table 2. Copper, silver and to a lesser extent gold seem to have the most potential to contribute to an economic deposit; 101 samples had more than 500 ppm Cu (high value of 10.2%), 49 samples had more than 10 g/t Ag (high value 178 g/t), and 13 samples contained more than 0.1 g/t Au (high value 1.76 g/t). Thirteen samples had more than 500 ppm Pb (high of 0.96%), 12 samples had more than 500 ppm Zn (high of 0.58%) and only one sample had more than 50 ppm Mo; these elements may turn out to be byproducts in any deposit delineated on the Property.

Table 2: Range of Values of Elements of Potential Economic Interest in 2021 Grab Samples

Element	**Au**	**Ag**	**Cu**	**Mo**	**Pb**	**Zn**
Low Value	BD*	BD*	3 ppm	BD*	BD*	2 ppm
High Value	1.76 g/t	178 g/t	10.2%	61 ppm	9,600 ppm (0.96%)	5,775 ppm (0.58%)

*BD=below detection

Combined results from 2020 and 2021 sampling are shown in figures 7 to 9 for the elements of main interest.

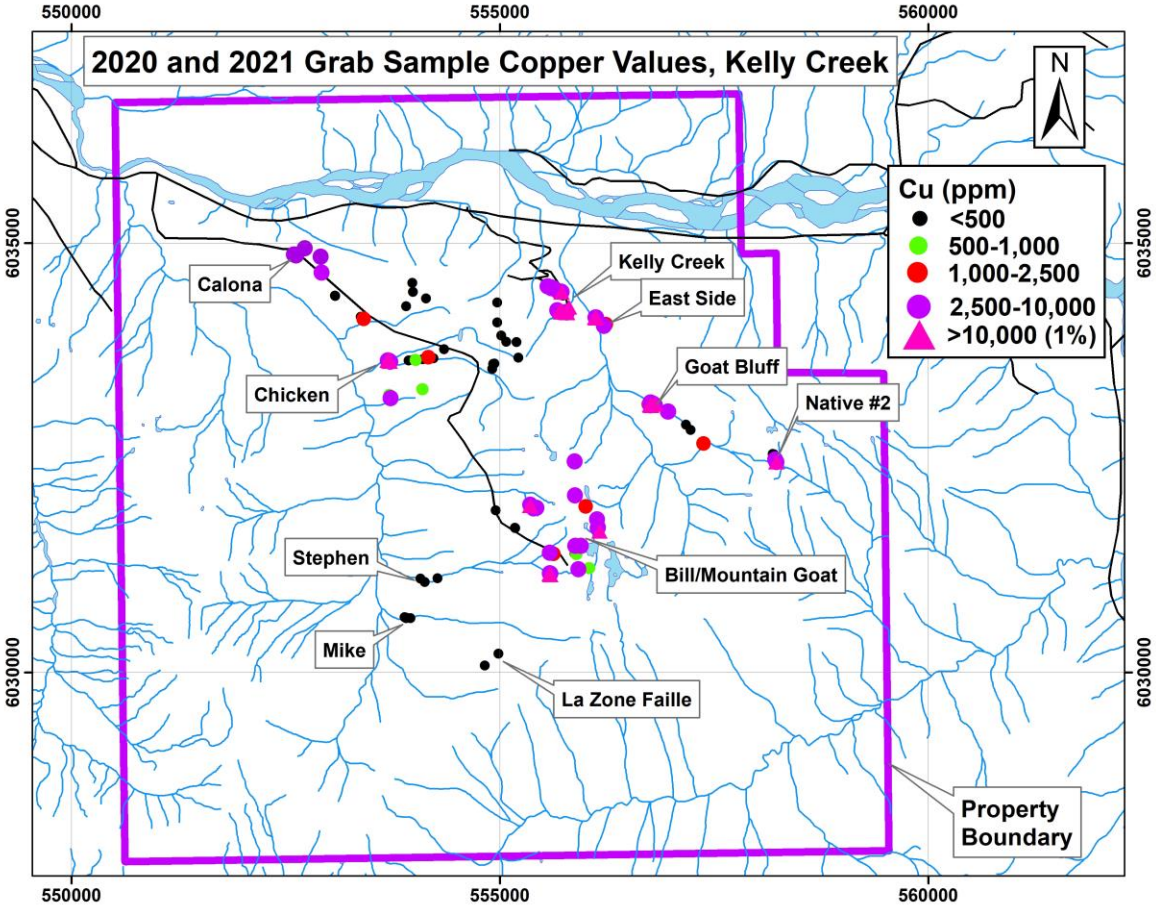


Figure 7: Copper in 2020/21 Grab Samples, Kelly Creek

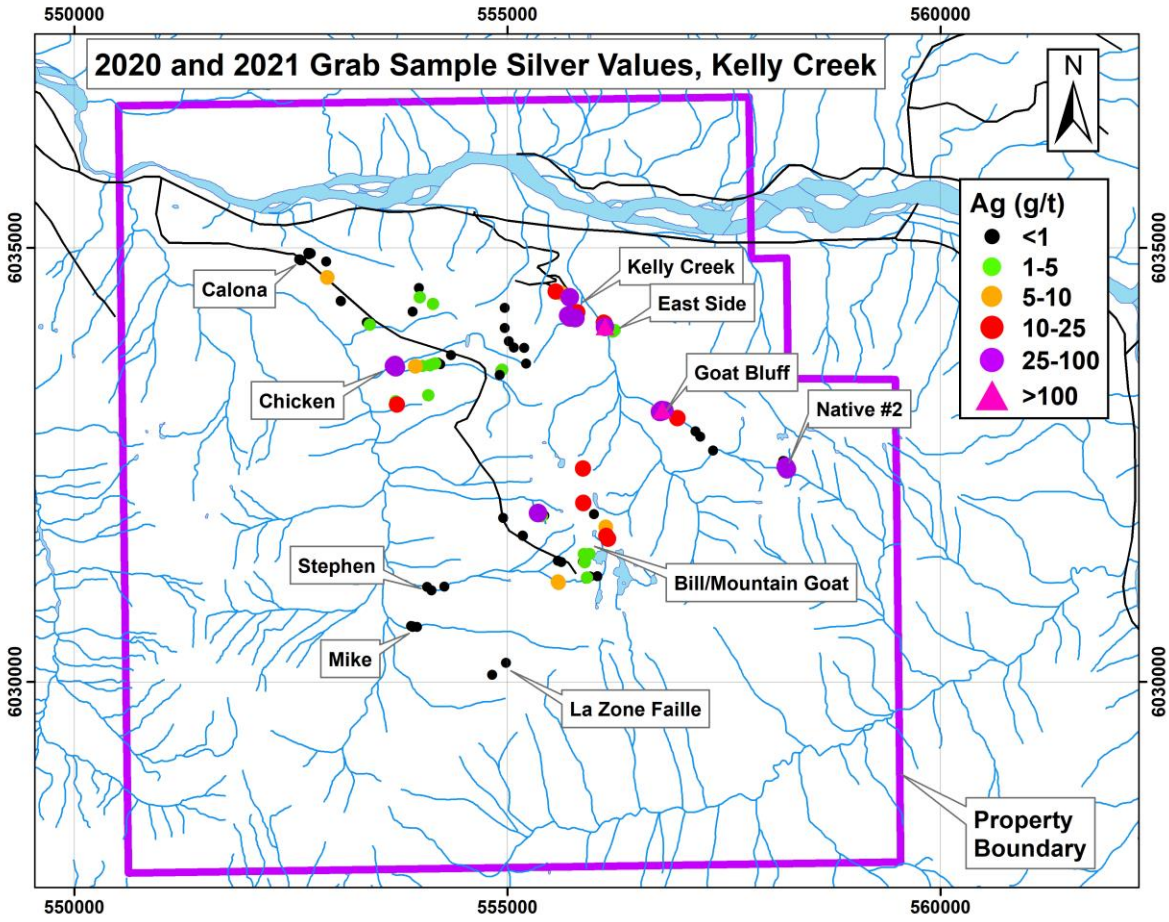


Figure 8: Silver in 2020/21 Grab Samples, Kelly Creek

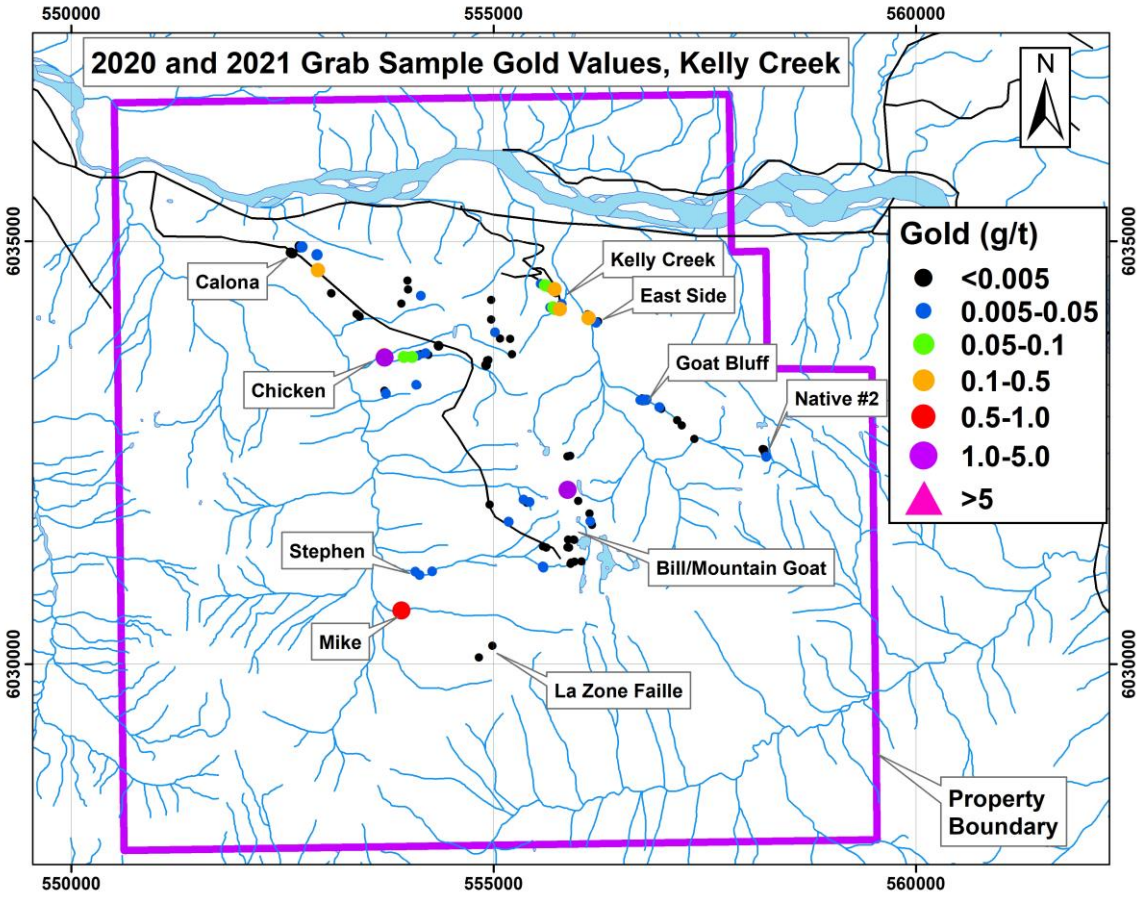


Figure 9: Gold in 2020/21 Grab Samples, Kelly Creek

7.2 Results

7.2.1 Kelly Creek Developed Prospect

Most historical trenches at the Lower Showing were found; although partly collapsed, it was still possible to obtain grab samples from them. The showing occurs on the eastern margin of the outlier of the Kleanza Pluton, the edges of which tend to form steep cliffs in this area. Although broadly mapped as being granodioritic in composition, observed outcrops were more monzonitic in nature. The chief mafic mineral was hornblende, widely chloritized. These rocks intrude trachytic flows of the Telkwa Formation. Copper mineralization was observed in both intrusive and extrusive units. Sixteen samples were collected over a length of more than 200 m along the same elevation (Fig. 10). Fifteen of these samples had more than 500 ppm Cu, with a high of 4.8% Cu. The highest silver was 86.7 g/t; five samples yielded greater than 10 g/t Ag. The highest gold value was 0.313 g/t.

At the Upper Showing, one trench and a number of outcrops were sampled over a 125 x 60 m area. Fourteen samples were taken-copper varied from 0.13% to 4.33%. The highest silver was 74 g/t, and eight samples had more than 10 g/t. The best gold value was 0.148 g/t. The adit is in excellent shape, with intact rails along the length and safety ropes along the sides. Along the adit walls, the most easily distinguishable rock is a feldspar megacrystic trachyte. Feldspar laths are mostly pink and up to 4 cm long and commonly comprise 40-50% of the rock (Plate 2). Mineralization is localized along rusty shears and faults, commonly with epidote alteration. Malachite staining is common. The area above the

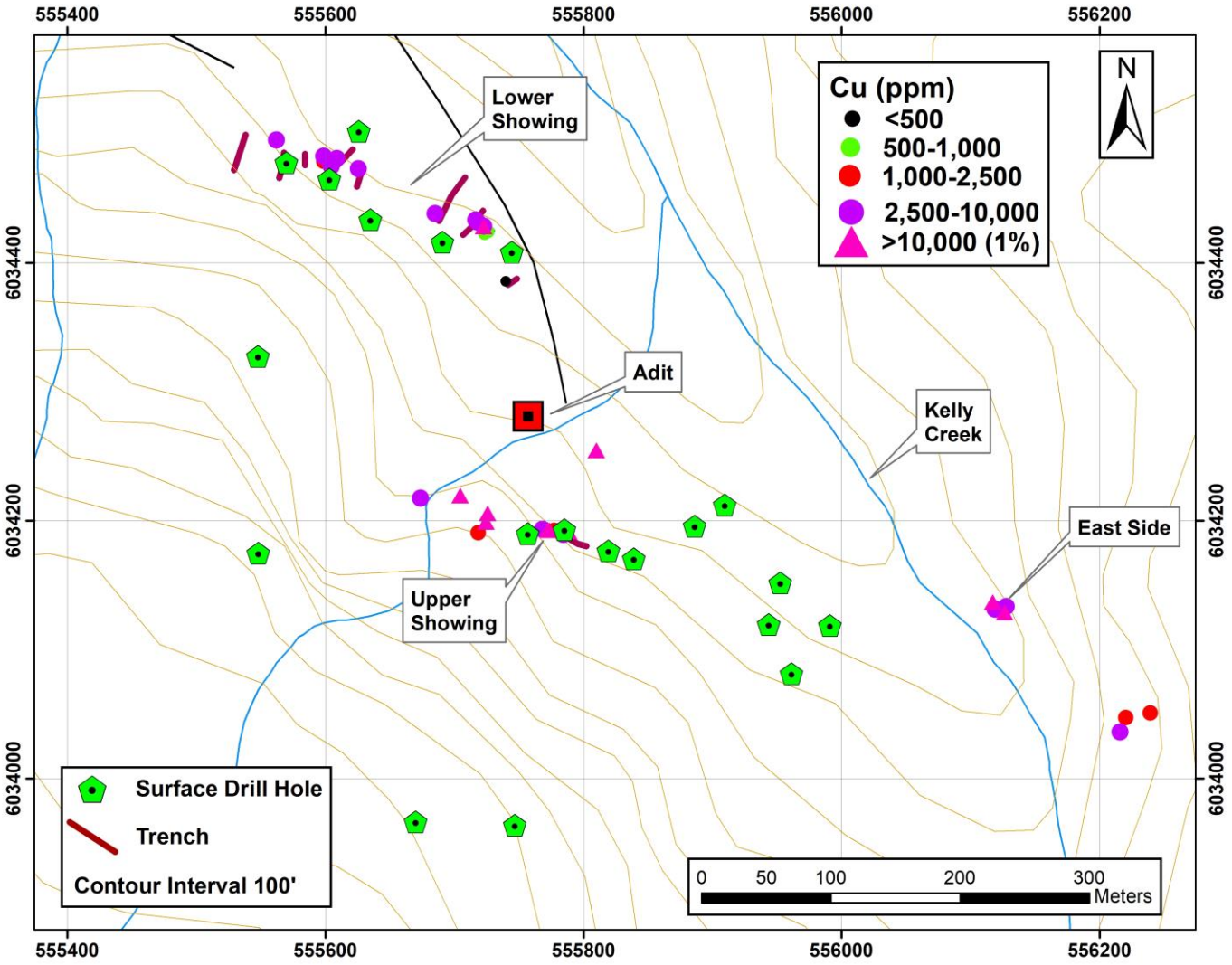


Figure 10: Historic Trenches, Drill Holes and Adits, and Samples Collected in 2021 at the Kelly Creek Developed Prospect

adit (where the samples were collected; Fig. 10) is a horizon with extensive pyrite alteration and local malachite and chalcopyrite along fractures and veinlets (Plate 3).

7.2.2 East Side

The East Side showing occurs on the east side of Kelly Creek, approximately 400 m east-southeast of the Upper showing (Fig. 10). Mafic volcanic rocks host chalcocite, chalcopyrite and malachite along fractures, in local faults and filling amygdules. Thin stringers of chalcopyrite are also present. Nine samples were collected from this area; all of them assayed >500 ppm Cu, with the highest value being 6.36%. Four samples had more than 10 g/t Ag, with a highest value of 178 g/t. Only one sample had anomalous gold (0.229 g/t).

7.2.3 Goat Bluff

Goat Bluff is a malachite-stained cliff 1 km south-southeast of East Side which contains up to 15% malachite ± 5% bornite and chalcopyrite, concentrated in narrow mm-cm chalky white veins (Plate 4). Copper minerals also occur in quartz ± calcite veins close to the cliff, the extent of which has not been fully delineated. Thirteen samples were collected in 2021; all had in excess of 500 ppm Cu. The highest copper value was 5.68%, and the highest silver value was 166 g/t. Nine samples had more than 10 g/t Ag.





Plate 3: Malachite in Volcanic Rocks, Upper Showing

Plate 2: Trachyte Near Adit, Upper Showing

7.2.4 Native #2

This showing appears in assessment reports, but has not officially been designated as a Minfile occurrence. It is 1.5 km southeast of Goat Bluff on a tributary of Kelly Creek (Figs. 7-9). The area is underlain by amygdaloidal basalt and feldspar (plagioclase>K feldspar) porphyritic basalt to andesite with an aphanitic dark mauve to grey matrix. The basalt is locally altered to hematite-calcite-chlorite. Malachite, azurite, bornite and chalcocite occur in fractures and fill amygdules. Nine samples were taken, of which three have more than 500 ppm Cu, and the highest is 1.57% Cu. The highest silver value was 60.4 g/t, and three samples had >10 g/t Ag.

7.2.5 Calona

Four samples were collected in 2021 approximately 350 m southeast of the Calona showing, where sampling was concentrated in 2020. Three samples did not contain anomalous metals, but one sample returned 0.86% Cu, 9.0 g/t Ag and 0.44 g/t Au. This was from a quartz vein with chalcopyrite and pyrite in diorite on the edge of the Kleanza Pluton outlier.



Plate 4: Left: Malachite-rich Cliff, Goat Bluff. Right: Sample 902609 from Goat Bluff, which ran 5.68% Cu and 166 g/t Ag

7.2.6 Chicken

Twenty-nine samples were taken at and proximal to the Chicken showing (up to 550 m east and 450 m south). All samples were from various phases of the Kleanza Pluton; they contained sulphides disseminated in the rock, sulphide veins up to 4 cm wide, and quartz-sulphide veins (Plate 5). Eighteen

samples had more than 500 ppm Cu, with a high value of 10.2% (highest in the program). Up to 99 g/t Ag was obtained; 11 samples had more than 10 g/t. The highest gold value was 1.18 g/t, but only six samples had more than 0.1 g/t. Not surprisingly, the highest molybdenum values from the program were from this area, but the maximum was only 61 ppm.



Plate 5: Sample 902330 from Chicken. This sample ran 0.58% Cu

7.2.7 Bill

The mineralized area variably known as Bill or Mountain Goat in the south-central part of the Property was vastly expanded to a 1.3 x 1.3 km square by 2021 prospecting (Figs. 7-9). Thirty-four samples were collected from this expanded area. Most samples were quartz veins with variable hematite, epidote, chalcopyrite, chalcocite, malachite and rare bornite cutting maroon mafic volcanics, in some places proximal to syenitic dikes. Twenty-four samples had more than 500 ppm Cu, with a high of 1.6%. The highest silver value was 27.4 g/t Ag, and seven samples had >10 g/t Ag. Gold was up to 1.76 g/t (the highest from the program), but most samples contained no appreciable gold (only two samples above 0.1 g/t). The high gold sample came from a 15 cm wide, highly altered dike, with possible tetrahedrite (Plate 6).

7.2.8 Stephen

The interpreted area of the Stephen showing was visited, but nothing of consequence was found. Three samples of rusty volcanics were collected, but they did not contain anomalous metals.



Plate 6: Sample 902589 from the Bill/Mountain Goat area. This Sample ran 1.76 g/t Au, 21.1 g/t Ag and 0.44% Cu

7.2.9 Mike

The area of the Mike showing was visited; the "official" showing may or may not have been found. The area is at the contact between a felsic intrusive and volcanic rocks, and contains up to 15% pyrite. Six samples were collected from this area; one had 0.941 g/t Au, but no other significant values were obtained**.**

7.2.10 La Zone Faillé

As at the Stephen showing, the area of La Zone Faillé showing was visited briefly, without success. Two samples of rusty volcanics were collected, but no anomalous metals were found.

8.0 2022 EXPLORATION

8.1 Geology/Prospecting

Tripoint Geological Services was contracted to perform fieldwork on the Property in 2022 (Brinton, 2022). A crew of four travelled to the Property each day for nine days in early August. The program concentrated on sampling at the Kelly Creek developed prospect, East Side to Goat Bluff, Chicken and Bill/Mountain Goat. Forty-eight rock samples were collected. Samples were placed in sample bags and secured with zip ties for transport back to Terrace. Sample locations were written on the sample tag book as well as digitally recorded in the field. Samples were put into labeled rice bags and delivered by the crew to ALS's sample preparation facility in Terrace. A sample submittal form was filled out and presented to ALS staff along with the samples. Samples were analyzed using ALS's ME-MS61 protocol, which provides results for 48 elements. Gold was analyzed by protocol Au-AA23 (fire assay), and overlimit elements of interest were analyzed by ALS's OG62 (ore grade) protocol. Analytical results were sent directly to Tripoint and the author via email. Key results are presented below; rock descriptions and Certificates of Assay are provided in Appendix A. Tripoint's field report comprises Appendix B. Sample locations are shown on Map 2, and copper and silver values are provided on maps 3 and 4 respectively. In addition to collecting samples and reconnaissance-style geological data, Tripoint brushed out the trail to the Kelly Creek prospect.

The ranges of values for elements of economic interest from the Tripoint samples are shown in Table 2. As previously noted on the Property, copper, silver and to a lesser extent gold seem to have the most potential to contribute to an economic deposit. Thirty of the 48 samples had more than 500 ppm Cu (high value of 1.95%), 12 samples had more than 10 g/t Ag (high value 76.9 g/t), and only one sample contained more than 0.1 g/t Au. Molybdenum, lead and zinc values were uniformly low.

Table 2: Range of Values of Elements of Potential Economic Interest in 2022 Grab Samples

Element	**Au (ppb)**	**Ag (g/t)**	**Cu (ppm)**	**Mo (ppm)**	**Pb (ppm)**	**Zn (ppm)**
Low Value	BD	0.01	9.4	0.23	1.3	10
High Value	209	76.9	19,450 (1.95%)	3.45	328	396

*BD=below detection

Combined results from 2020 to 2022 sampling are shown in figures 11 to 13 for the elements of main interest. These highlight the impressive distribution of copper and silver in the Kelly Creek/East Side area and suggestions of an extension into Goat Bluff/Native #2 area. Also, there is as a developing story of widespread, intermittent mineralization at Bill/Mountain Goat, where elevated copper has now been found over an area of 2.1 x 1.3 km. Figures 14 to 17 show the copper and silver values at these two important areas. More information on the geology of the areas sampled in 2022 is available in the Tripoint report (Brinton, 2022; Appendix B).

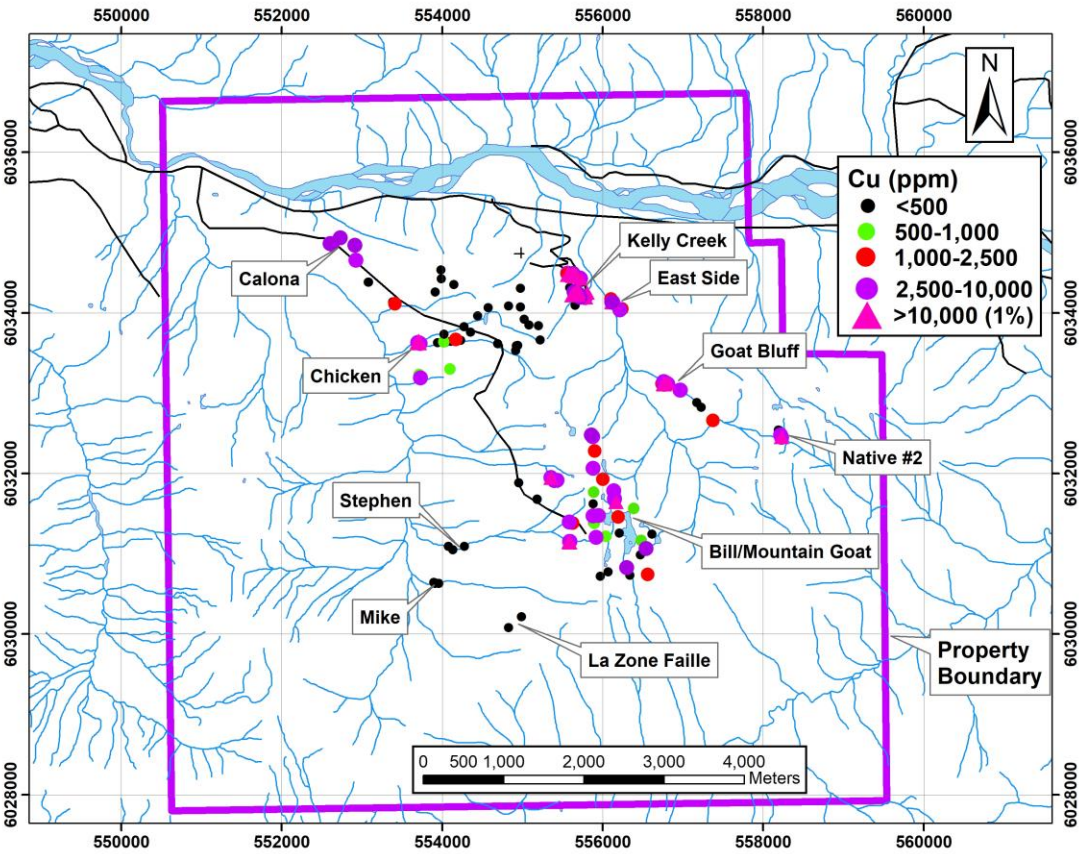


Figure 11: 2020 to 2022 Grab Sample Copper Results

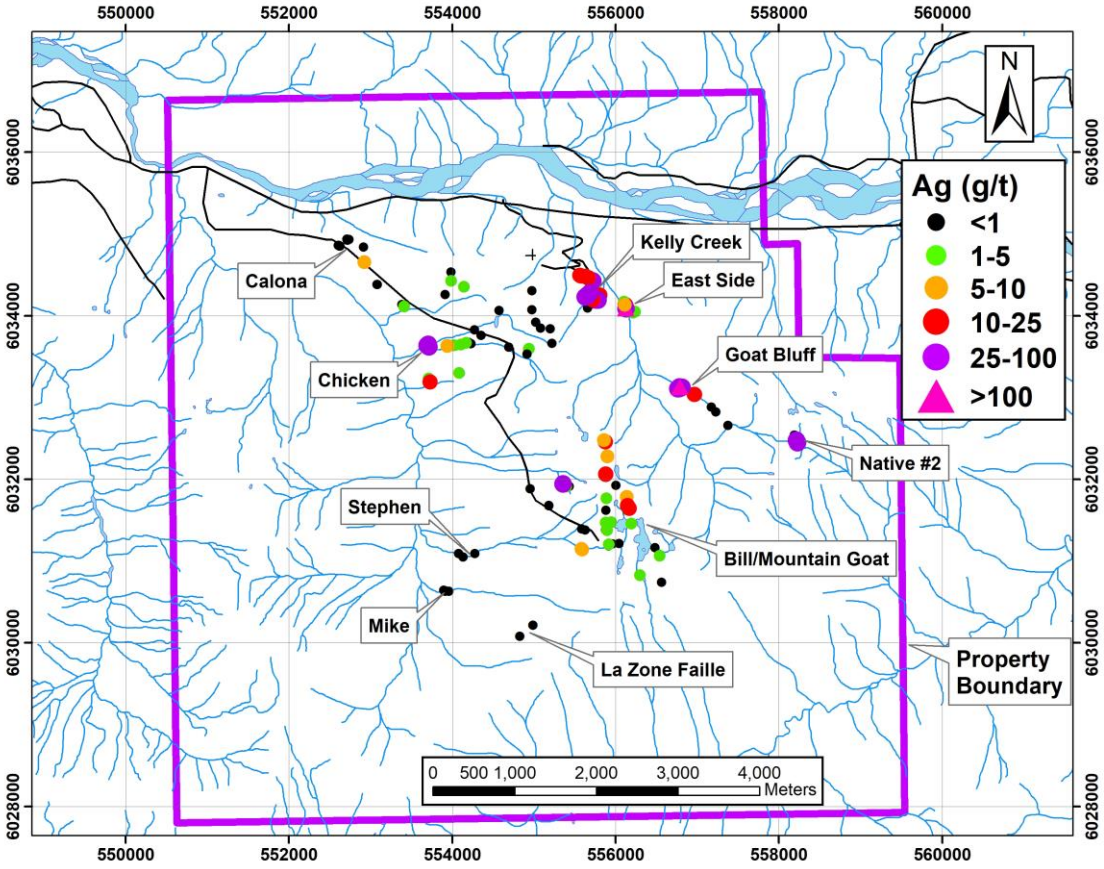


Figure 12: 2020 to 2022 Grab Sample Silver Results

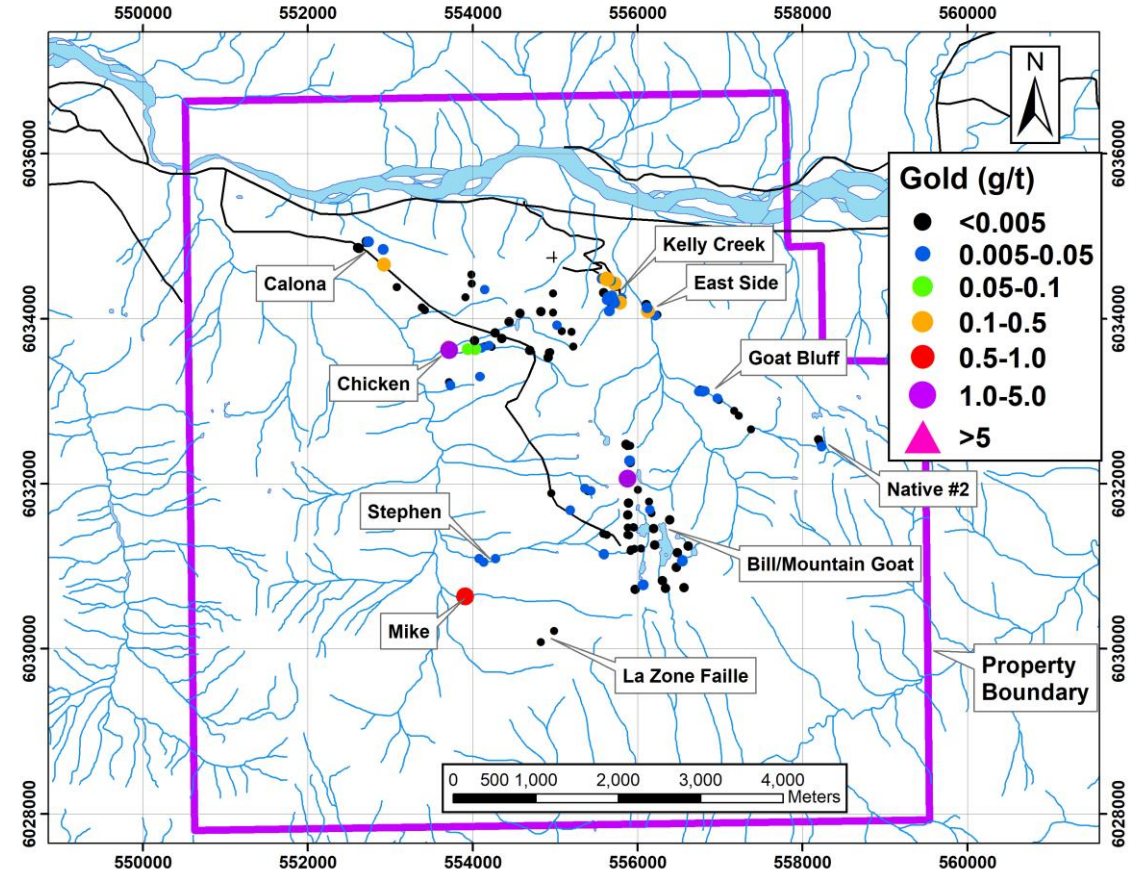


Figure 13: 2020 to 2022 Grab Sample Gold Results

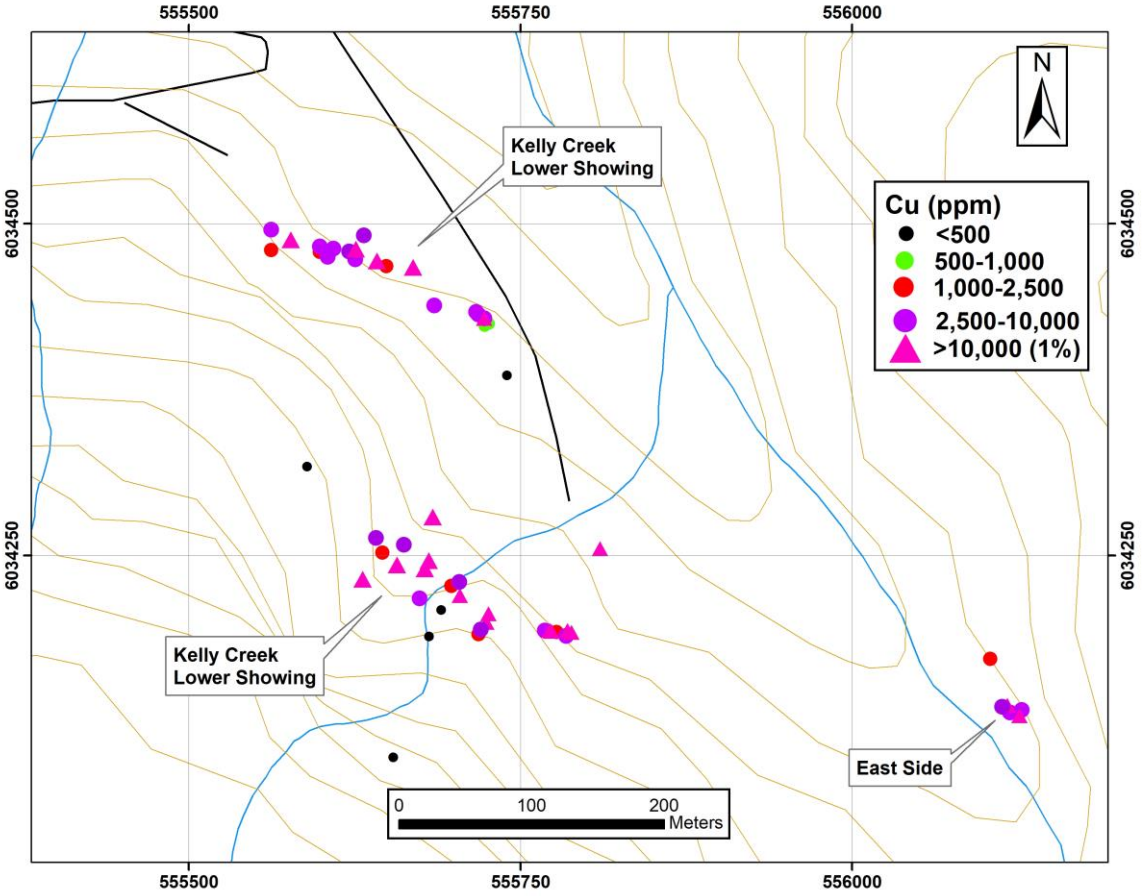


Figure 14: 2020 to 2022 Grab Sample Copper Results from Kelly Creek/East Side

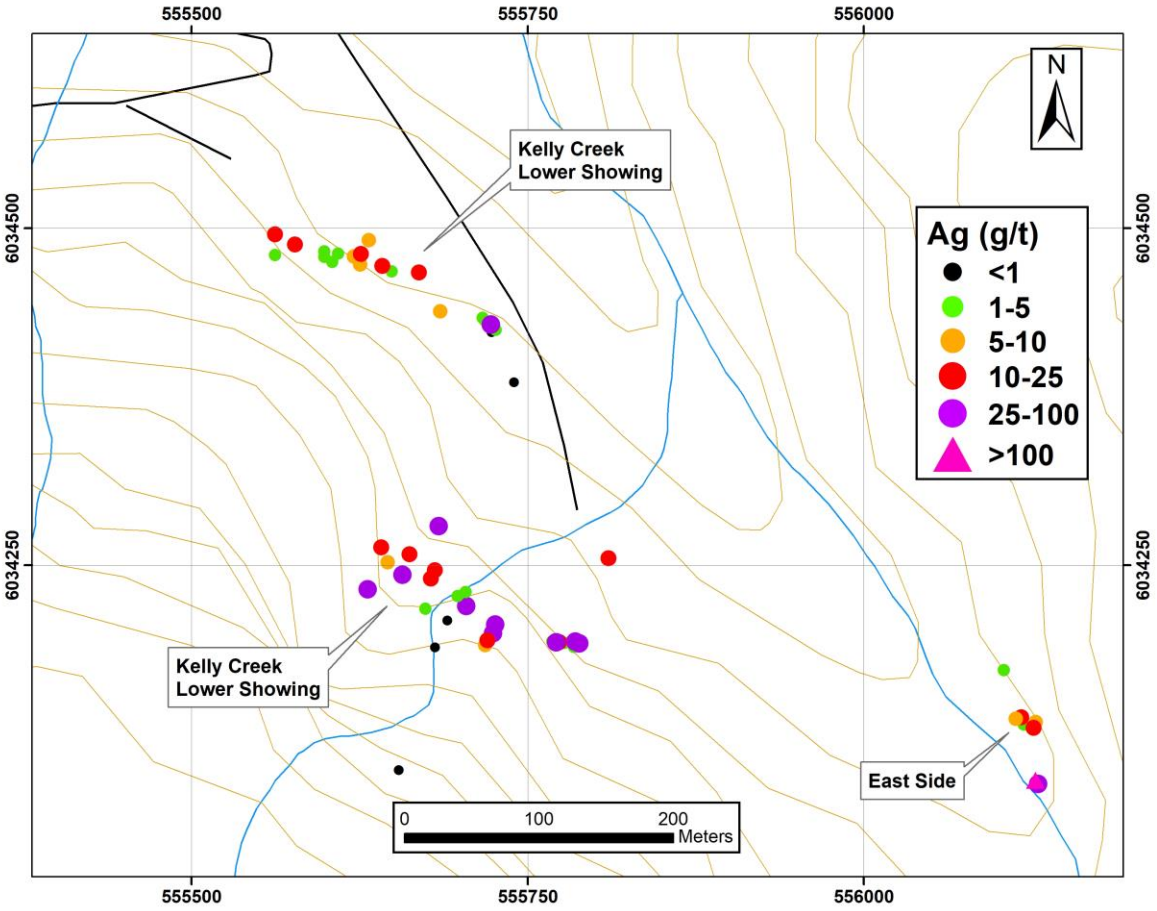


Figure 15: 2020 to 2022 Grab Sample Silver Results from Kelly Creek/East Side

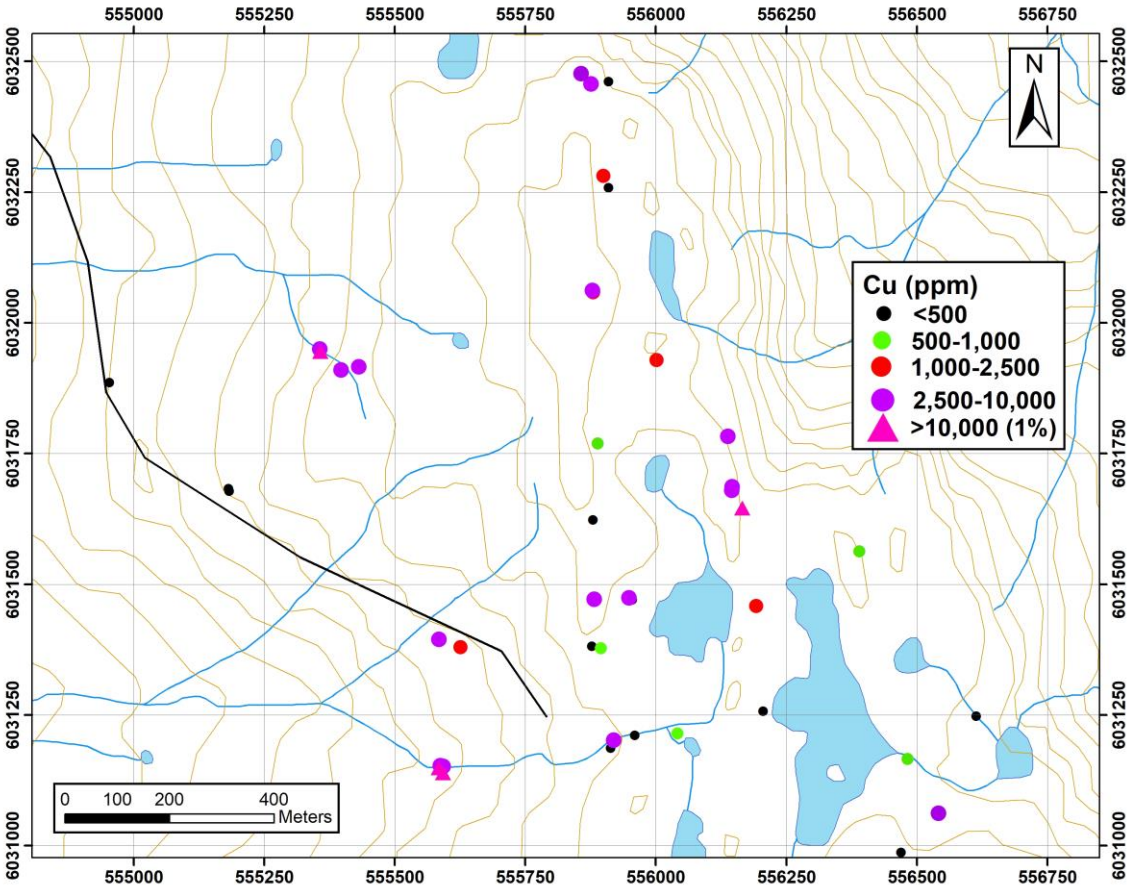


Figure 16: 2020 to 2022 Grab Sample Copper Results from Bill/Mountain Goat

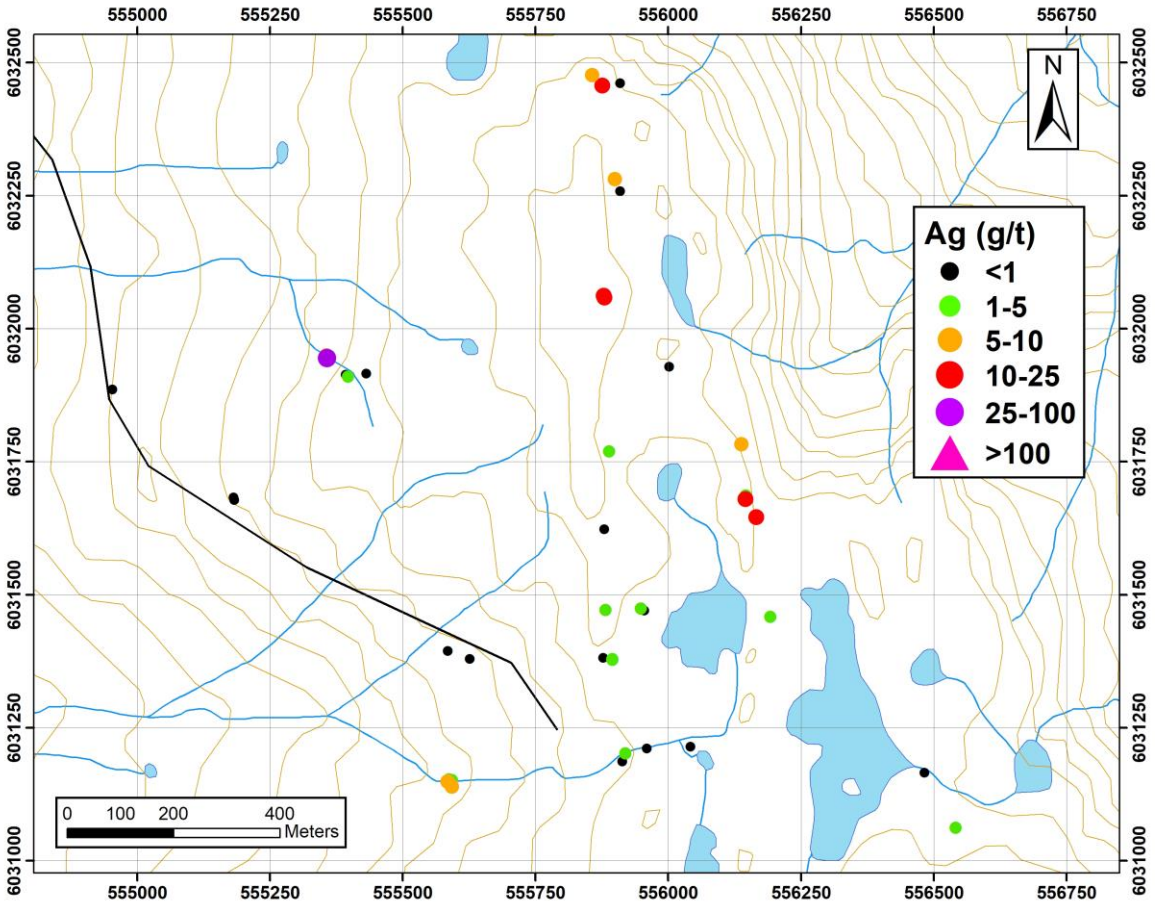


Figure 17: 2020 to 2022 Grab Sample Silver Results from Bill/Mountain Goat

8.2 Airborne Geophysical Survey

Billingsley contracted Precision GeoSurveys Inc. of Langley, British Columbia to conduct a high-resolution helicopter-borne magnetic gradient and radiometric survey of the entire Property in August, 2022 (Hanlon, 2022). The survey consisted of 88 flight lines and nine tie lines, flown at 089°/269° and 179°/359° respectively, for a total of 814 line km. Flight lines were spaced at 100 m intervals and tie lines at 1,000 m spacing (Fig. 18); nominal terrain clearance was 50 m. The survey used an Airbus AS350 helicopter, equipped with a data acquisition system, GPS navigation system, pilot guidance unit, laser altimeter, triple magnetic gradient boom system, fluxgate magnetometer, gamma ray spectrometer, barometer, and temperature/humidity probe. Two magnetic base stations were used to record temporal magnetic variations. Maps of magnetic data produced by Precision include Total Magnetic Intensity, Residual Magnetic Intensity, Reduced to Pole, Analytic Signal and various gradient-related maps. Radiometric maps produced include Potassium Percentage, Thorium Equivalent Concentration, Uranium Equivalent Concentration, Total Count and several ratio maps. Precision also produced a map of flight lines and a Digital Terrain Model. Precision's operations report and deliverable maps are provided in Appendix C.

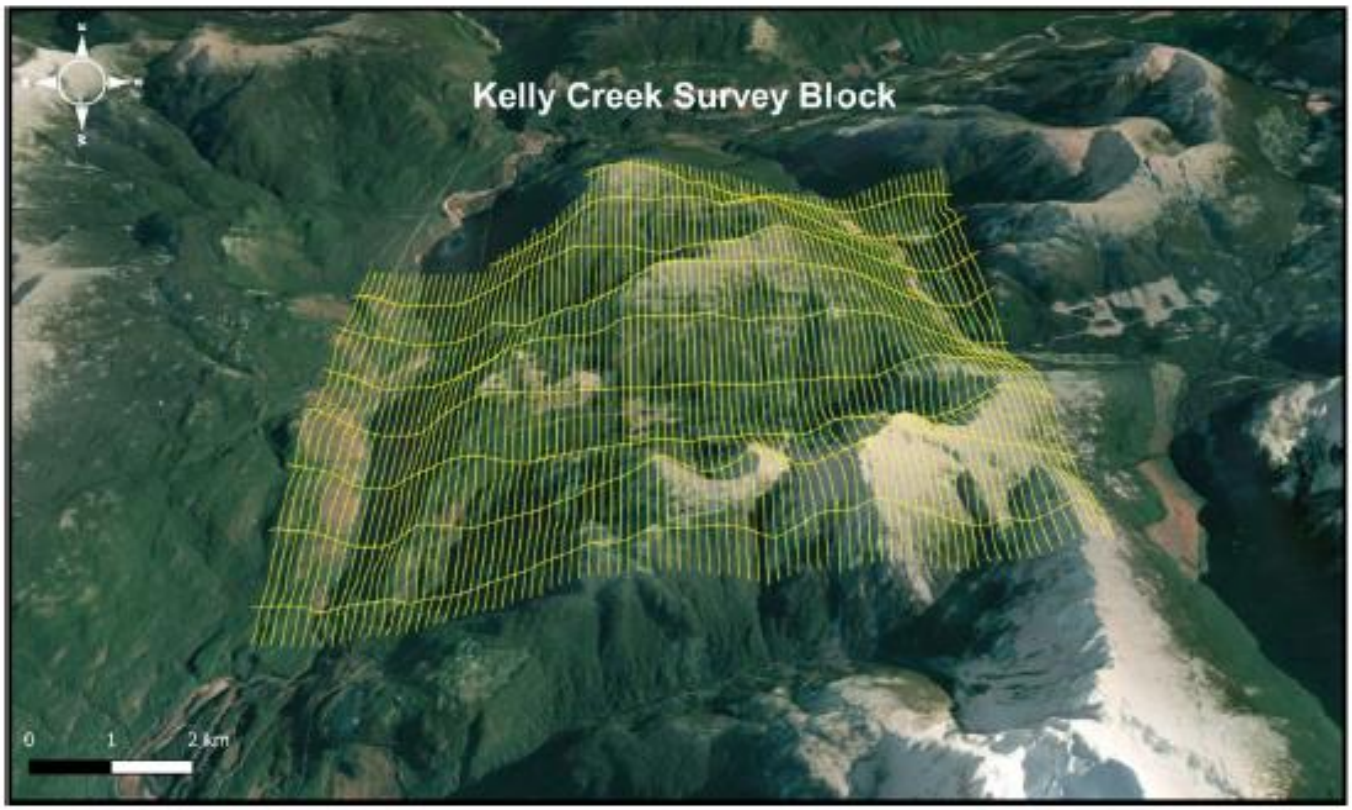


Figure 18: Flight Lines Superimposed on a 3D Google Earth Image. From Hanlon (2022).

The Reduced to Pole (RTP) image of magnetic data is shown in Figure 19; Figure 20 is an annotated version of the same image. The Kleanza Pluton is manifested by a magnetic high which extends to the east and south for approximately 600 m past its mapped contact (Fig. 20), suggesting that the actual extent of the pluton is greater than its surface expression. The magnetic high is bordered to the west by a NNW trending zone of low magnetic intensity, which could correspond to a structure or an alteration zone (Fig. 20). The magnetic data shows a NNW trending linear magnetic high corresponding to a mapped fault in the southwest part of the Property, as well as a number of NNW to NW linear magnetic highs which could be dikes or structures in the southern half of the Property (Figs. 19 and 20). Finally, an intriguing magnetic low occurs in the west-central part of the Property.

Figure 21 is an image of potassium concentration from the radiometric data, along with the mapped contact of the Kleanza Pluton. Surprisingly, the pluton is not a potassium anomaly; this may be because of the abundance of vegetation and Quaternary cover in the northern part of the Property. The Kelly Creek prospect is located on a small potassium anomaly. More extensive potassium anomalies occur in the south-central and southwest parts of the Property, and the image shows a number of northerly trending anomalies (dikes?). A potassium:thorium ratio map is a better tool to assess potential potassic alteration, as potassium is added and thorium typically remains immobile during this alteration, resulting in higher ratios. Figure 22 is such a diagram; it does not show any coherent ratio anomalies on the Property. The conclusion would be that either i) no significant potassic alteration occurs; or ii) that radiometrics is ineffective because of the amount of cover on the Property.

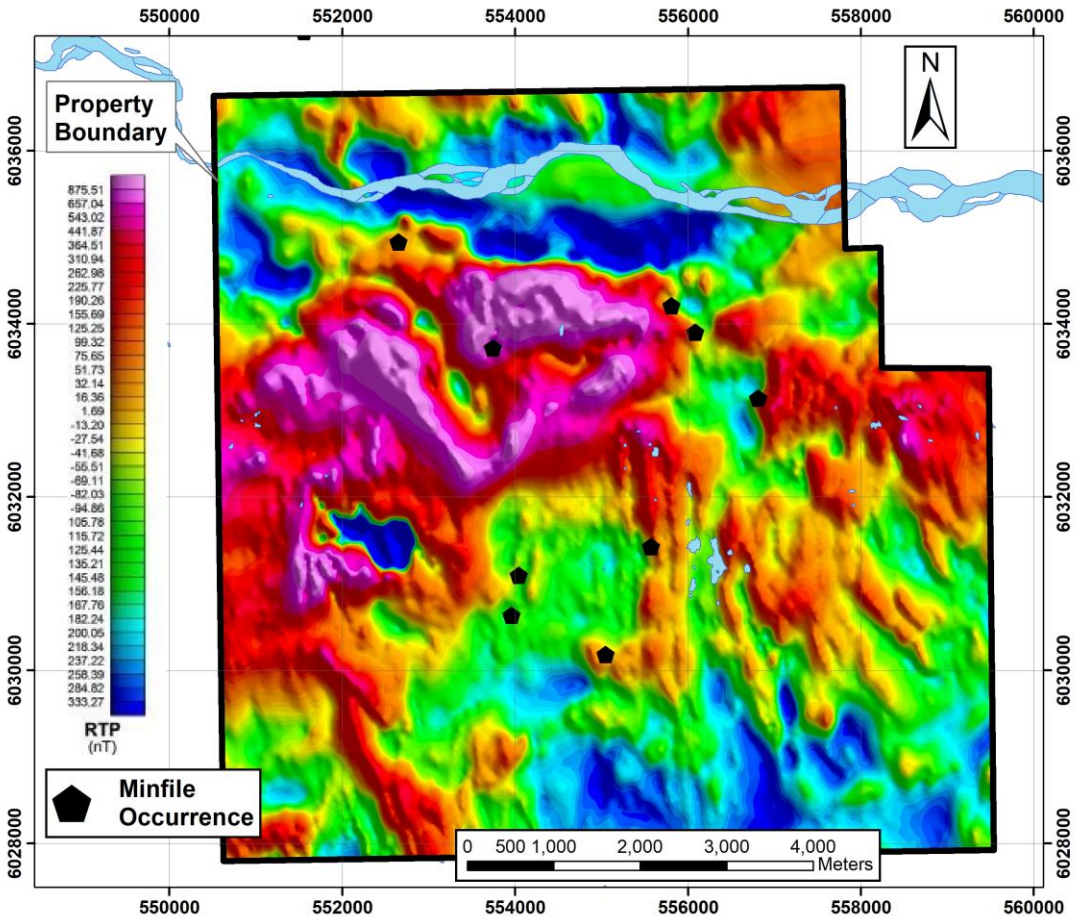


Figure 19: Reduced to Pole Magnetic Image

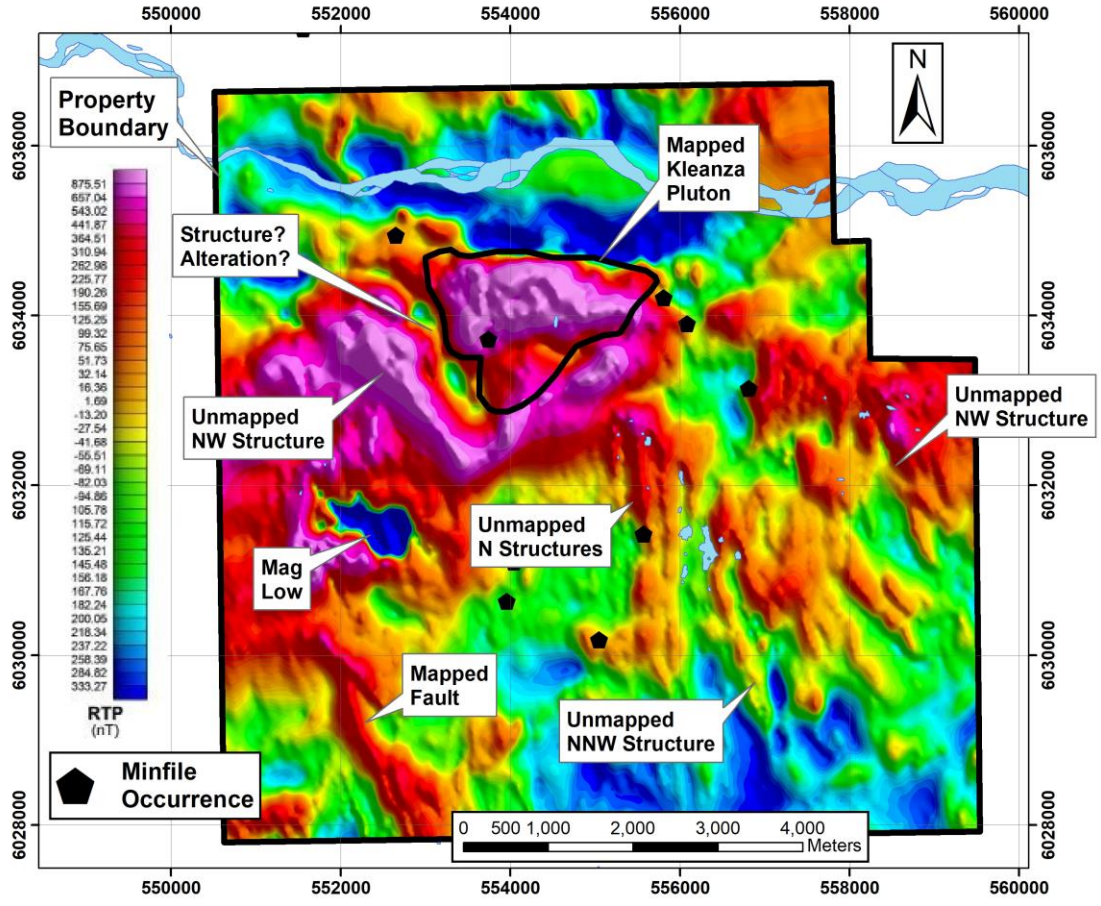


Figure 20: Annotated Reduced to Pole Magnetic Image

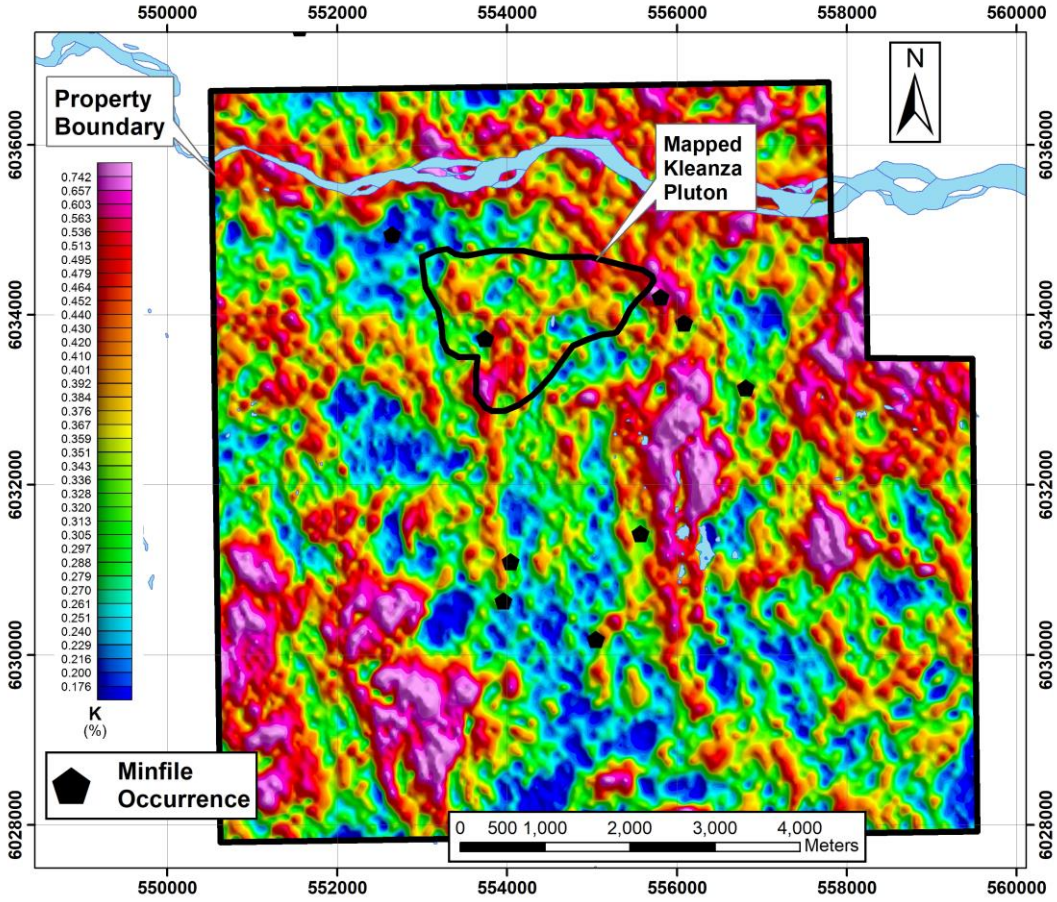


Figure 21: Potassium Percentage Radiometric Image

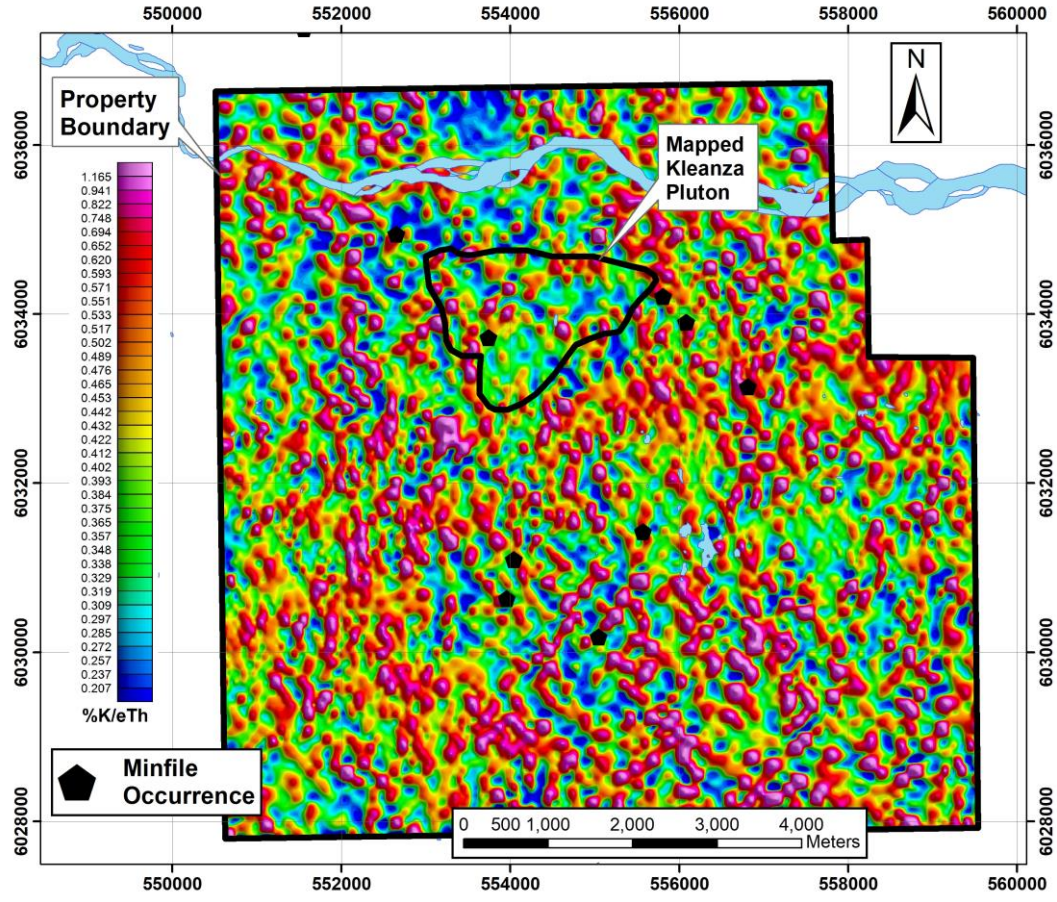


Figure 22: Potassium Over Thorium Ratio Radiometric Image

9.0 CONCLUSIONS AND RECOMMENDATIONS

The 74 km^2 Kelly Creek property occurs 30 km east-southeast of Terrace in central British Columbia, and is 100% owned by Richard Billingsley. The Property is dominated by volcanics and sediments of the Early Jurassic Telkwa Formation, part of the Hazelton Group, intruded by an outlier of the Early Jurassic Kleanza Pluton. There are nine MINFILE occurrences on the Property, the most important of which is Kelly Creek. The Kelly Creek Upper showing has a calculated resource (not NI 43-101 compliant) of 545,167 tonnes @ 2.24% Cu and 45.9 g/t Ag, and is open down-dip. The mineralization style is thought to be Volcanic Redbed Copper. Most other showings also demonstrate redbed affinities, and at least one (Chicken) is more porphyry-like.

A total of 48 grab samples was collected on the Property in 2022. As previously noted on the Property, copper, silver and to a lesser extent gold seem to have the most potential to contribute to an economic deposit. Thirty of the 48 samples had more than 500 ppm Cu (high value of 1.95%), 12 samples had more than 10 g/t Ag (high value 76.9 g/t), and one sample contained more than 0.1 g/t Au. Molybdenum, lead and zinc values were uniformly low. When combined with results from 2020 and 2021, the 2022 results highlight the impressive distribution of copper and silver in the Kelly Creek/East Side area and suggestions of an extension into Goat Bluff/Native #2 area, as well as a developing story at Bill/Mountain Goat, where intermittent mineralization occurs over an area of 2.1 x 1.3 km.

Precision GeoSurveys flew a high-resolution helicopter-borne magnetic gradient and radiometric survey of the entire Property in August, 2022. The Reduced to Pole (RTP) image of magnetic data shows that the Kleanza Pluton is manifested by a magnetic high which extends to the east and south for approximately 600 m past its mapped contact, suggesting that the actual extent of the pluton is greater than its surface expression. The magnetic high is bordered to the west by a NNW trending zone of low magnetic intensity, which could correspond to a structure or an alteration zone. The magnetic data shows a NNW trending linear magnetic high corresponding to a mapped fault in the southwest part of the Property, as well as a number of NNW to NW linear magnetic highs which could be dikes or structures in the southern half of the Property. Also, an intriguing magnetic low occurs in the west-central part of the Property. Surprisingly, the Kleanza Pluton is not a potassium anomaly; this may be because of the abundance of vegetation and Quaternary cover in the northern part of the Property. The Kelly Creek prospect is located on a small potassium anomaly. More extensive potassium anomalies occur in the south-central and southwest parts of the Property, and the image shows a number of northerly trending anomalies (dikes?). A potassium:thorium ratio map is a better tool to assess potential potassic alteration, as potassium is added and thorium typically remains immobile during this alteration, resulting in higher ratios. However, such a diagram does not show any coherent ratio anomalies on the Property. The conclusion would be that either i) no significant potassic alteration occurs; or ii) that radiometrics is ineffective because of the amount of cover on the Property.

The copper price has risen significantly in the past several years, making copper properties much more attractive. This is particularly the case for the Kelly Creek property, which contains a small to medium-sized, incompletely delineated deposit with moderate grade. Attempted expansion of this deposit would by itself justify continued work on the Property. The trail to this deposit, although brushed out in 2022, should be upgraded to allow more efficient access. The trenches should be cleaned out, remapped and resampled and an effort should be made to find as many historic drill locations as possible and to record their position with modern GPS equipment. The adit should be resurveyed, remapped and resampled (will require proper breathing apparatus). A three dimensional model of the deposit and environs should

then be constructed, and the ore resource should be updated (would still not be NI 43-101 compliant). A modern IP survey over the Kelly Creek mineralized area should be considered, in order to more efficiently target future drill holes and possibly to gain insight into the true extent of mineralization.

The remainder of the Property is also prospective. Additional detailed prospecting should be conducted from East Side to Goat Bluff to Native #2 (all one mineralized system?) and in the Bill/Mountain Goat area, which also looks like a significant area of mineralization and is mostly road accessible. The margins of the Kleanza Pluton should also be prospected to look for other Kelly Creek analogues. Reconnaissance prospecting of the entire property should be completed, as the small amount of work conducted from 2019 to 2022 has shown that new mineralization remains to be discovered. Geological work should concentrate on property-scale investigations with a focus on the structure, volcanology (subaerial versus subaqueous deposition) and distribution of intrusions, in order to better understand the controls on mineralization. The 2022 magnetic survey has generated additional areas of interest for field checking, particularly the magnetic low on the western side of the Kleanza Pluton, the magnetic low in the west-central part of the Property, and the margins of the magnetic high which likely reflects the true near-surface extent of the Kleanza Pluton.

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11.0 CERTIFICATE OF QUALIFICATIONS

I, Tom Setterfield, PhD, P.Geo. do hereby certify that:

1. I am a Principal of Geo Exploration Scouts
   5-570 Crescent Road West
   Qualicum Beach, British Columbia, V9K 1H9

2. I graduated with a BSc degree in Geology and Chemistry from Carleton University in 1980. In addition, I have obtained an MSc in Geology from the University of Western Ontario in 1984, and a PhD in Earth Sciences from the University of Cambridge in 1991.

3. I am a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Licence #47346).

4. I have worked as a geologist for a total of 43 years since my graduation from university.

5. I planned and co-supervised the fieldwork on the Kelly Creek property described in this report.

Dated this 11th Day of July, 2023.

Tom Setterfield

Tom Setterfield

12.0 STATEMENT OF COSTS

Exploration Work type	Comment	Days			Totals
Personnel (Name)* / Position	**Field Days (list actual days)**	**Days/Hrs**	**Rate**	**Subtotal***	
Georg Nussbaumer	August 2-11	95	$90.00	$8,550.00	
Julia Walker	August 4-11	80	$65.00	$5,200.00	
Michael Brinton	August 3-11	90	$90.00	$8,100.00	
Victor Pospelov	August 3-11	90	$75.00	$6,750.00	
				$28,600.00	**$28,600.00**
Office Studies	**List Personnel (note - Office only, do not include field days**				
Field Prep, Logistics, Reporting	Michael Brinton		$0.00	$667.50	
Database compilation	Samantha Dyck		$0.00	$162.08	
Field Prep, Logistics, Reporting	Victor Pospelov		$0.00	$225.00	
Program Planning	Tom Setterfield	1.0	$800.00	$800.00	
Data Interpretation	Tom Setterfield	1.5	$800.00	$1,200.00	
Report preparation	Tom Setterfield	3.3	$800.00	$2,600.00	
				$5,654.58	**$5,654.58**
Airborne Exploration Surveys	**Line Kilometres / Enter total invoiced amount**				
Aeromagnetics			$0.00	$63,873.00	
				$63,873.00	**$63,873.00**
Geochemical Surveying	**Number of Samples**	**No.**	**Rate**	**Subtotal**	
Rock	*48 samples*		$0.00	$3,076.92	
				$3,076.92	**$3,076.92**
Transportation		**No.**	**Rate**	**Subtotal**	
Airfare			$0.00	$1,626.00	
kilometers			$0.00	$115.29	
fuel			$0.00	$464.93	
Helicopter (hours)			$0.00	$0.00	
				$2,206.22	**$2,206.22**
Accommodation & Food	**Rates per day**				
Meals	day rate or actual costs-specify		$0.00	$2,887.17	
				$2,887.17	**$2,887.17**
Miscellaneous					
Miscellaneous			$0.00	$570.05	
Tripoint Mark-up				$56.52	
				$626.57	**$626.57**
Equipment Rentals					
Field Gear (Specify)	Consumables		$0.00	$501.21	
Radios				$372.65	
				$873.86	**$873.86**
Freight, rock samples					
Freight			$0.00	$323.18	
Sample Shipment			$0.00	$273.57	
				$596.75	**$596.75**

TOTAL Expenditures **$108,395.07**

APPENDIX A-GRAB SAMPLE DESCRIPTIONS AND CERTICATES OF ASSAY

Sample	Easting	Northing	Lithology	Texture	Alteration	Altn Intensity	Min* 1	Min2	Rock_Description	Au ppb	Ag g/t	Cu ppm	Mo ppm	Pb ppm	Zn ppm
F926051	555577	6034488	MNZ	MAS					Red green fine grained massive monzonite with mottled malachite 1% very fine grained anhedral disseminated chalcopyrite. K feldspar with minor chloritized pyroxene groundmass equant crystals.	48	11.45	11550.0	1.04	12.1	178
F926052	555632	6034491	MNZ						Green salmon fine grained massive Monzonite along cliff band traversing towards creek drainage. Very fine grained diss chalcopyrite and mottled malachite throughout.	23	6.97	9110.0	1.11	9.1	194
F926053	555900	6032281	RHY	APH	FEOX	3	CPY	CC	Pink purple ash tuff of felsic composition. Oxidized fractures with minor secondary malachite with very fine grained chalcopyrite disseminations trace +/- chalcocite.	9	9.40	2460.0	0.72	11.4	14
F926054	555909	6032259	AND	AMG	CHL	3	MAL		Maroon fine grained amygdaloidal andesite. Mottled chlorite throughout. Minor carbonate stringers. Plagioclase phenocrysts k feldspar alt + olivine. Trace malachite staining.	-5	0.29	121.5	0.55	7.6	254
F926055	555857	6032477	RHY	MAS					Tuffaceous rhyolite with red fe oxidation on fractures and moderate secondary malachite staining.	-5	6.58	3570.0	0.72	1.7	41
F926056	556192	6031458	AND	TUF	FEOX	3	MAL		Red andesitic lapilli tuff orange and greasy maroon oxidation on fractures. Malachite staining throughout.	-5	1.26	1105.0	1.09	4.8	22
F926057	556205	6031257	RHY	TUF	FEOX	3			Salmon lapilli tuff rhyolite composition. Moderately oxidized. No mineralization.	-5	0.12	56.7	2.41	4.2	51
F926058	555879	6031623	RHY	TUF	KSP	3	CC	BON	Pink beige ash tuff rhyolite composition moderate orange fracture oxidation. Chalcocite-bornite blebs throughout groundmass 1%.	-5	0.71	114.5	1.31	2.5	42
F926059	555889	6031769	RHY	TUF	KSP	3			Rhyolitic ash tuff with mottled k feldspar alteration moderate.	5	1.18	688.0	1.01	5.6	46
F926060	554438	6033967	DIO	MAS	EPI	4			Green pink medium grained hornblende diorite. Chloritized hornblende k feldspar throughout groundmass and epidote+chlorite+silver mica on fractures. Variably andesitic in appearance porphyritic.	5	0.10	11.1	1.67	186.5	283
F926061	555654	6034098	QMZ	MAS	FEOX	3	PYR	CPY	Medium grained massive quartz monzonite with .5% pyrite disseminations + trace chalcopyrite. Orange fe oxidation.	6	0.40	12.3	2.56	22.6	61
F926062	556068	6030775	AND		FEOX	2			Green aphanitic andesite with 5% quartz-carb veining. Weak oxidation on fracture surfaces + ep.	20	0.03	81.2	0.44	3.6	59
F926063	556482	6031166	VN	BRX	CHL	2	MAL		Malachite stained buggy brecciated quartz veining with red green aphanitic andesitic wallrock fragments.	-5	0.27	529.0	1.00	5.5	10
F926064	556613	6031248	AND	APH	HEM	3	MAL		Aphanitic andesite with hematite throughout. Vuggy quartz veining with minor malachite locally brecciated.	-5	0.01	14.6	0.53	10.5	51
F926065	556562	6030743	BRX	BRX	CHL	2	MAL	CU	Brecciated vuggy qtz veining with green maroon andesitic wallrock fragments. Vuggs contain malachite+/-native Cu.	-5	0.35	1925.0	0.48	1.4	15
F926066	555631	6034232	AND	AMG	CHL	3	CPY	CC	Green aphanitic amygdaloidal (chlorite-filled) andesite. Orange-red Fe-oxidation on fracture surfaces with malachite staining. 1-2% vfg sc disseminations cpy-py-chalcocite.	12	60.00	13700.0	0.68	43.9	396
F926067	555646	6034252	AND	APH	FEOX	4	MAL		Aphanitic andesite with Fe-oxidized fractures and malachite speckled throughout groundmass and on fractures. Vfg diss sx throughout 1-2%.	8	8.10	1530.0	0.93	26.6	160
F926068	555641	6034263	AND	APH	FEOX	4	MAL		Aphanitic andesite with malachite and Fe on fracture surfaces. Contouring away from creek along cliffy outcrop NW.	23	15.05	3040.0	2.17	68.3	117
F926069	555589	6034317	AND	APH					Aphanitic andesite with strong fe-oxidation on fracture surfaces. Contains minor qtz-cal stringers. Continuation along strike of mineralized andesite.	-5	0.21	16.9	0.92	24.5	86
F926107	556113	6034136	AND	APH					Aphanitic to amygdaloidal (chl) red bed andesite with Fe oxidation and malachite staining on fracture surfaces. Vfg Cu sx in groundmass 3% cpy-born-chalc. Host rock appears similar on the west side of creek.	10	8.18	6690.0	0.95	40.4	200
F926155	556104	6034172	AND	APH					Maroon aphaniticandesite mottled replaced by epidote chlorite. Moderate fracture controlled malachite with calcite. Minor chl replacement in groundmass. No sulfides.	-5	2.93	1250.0	1.51	7.0	82
F926101	556469	6030987	AND				MAL		Very fine grained andesitic(?) rock with calcite veining. Splotchy malachite and hematite staining found throughout calcite veins	5	0.07	139.0	0.23	1.3	76
F926102	556541	6031062	AND		EPI	2	MAL		1-2 inch calcite vein in weakly brecciated andesitic(?) rock. Vein contains weakly to moderately pervasive malachite and splotches of kspar. Vein is slightly epidote altered. Tiny copper-coloured sulphides some rimmed with malachite in vein <.5%	8	1.14	4900.0	0.92	5.0	17
F926103	556390	6031563	AND	AMG	CHL		MAL	CU	Calcite vein hosted in fine grained andesitic rock. Calcite vein contains tiny patches of malachite and blebs of hematite. Patches of host rock are heavily chlorite altered.	-5	0.08	600.0	0.91	2.9	16
F926104	555690	6034209	AND		EPI	5	PYR		Very fine grained andesitic rock. Weak epidote alteration and disseminated pyrite. Some small blebby pyrite and epidote stringers	-5	0.38	147.5	0.94	26.5	194
F926105	555704	6034230	AND				AZ	MAL	Fine grained grey andesitic rock with calcite veining. splotches of malachite and azurite throughout.	16	1.96	2550.0	3.45	45.2	72
F926001	555562	6034480	MNZ	EQG			MAL	CC	Monz(?) with intense calc-hem veining dis chalcocite mal staining of fractures and lesser disseminated; rare native copper. Potential old trench.	-5	1.86	1785.0	0.82	11.4	222
F926002	555621	6034479	MNZ		CAL	3	CPY	BON	Chloritized Monz with irregular calcite-kspar veining 5% dis cpy blebby bn and abundant amygdaloidal malachite fill	9	7.11	8790.0	1.45	11.3	177
F926003	555626	6034481	MNZ		CAL	3	MAL	CC	Chloritized monz with kpsar veining lesser quartz veining abundant malachite fracture/clotting 3% chalcocite and 3% dis chalcopyrite. Forms along 5m wide cliff.	209	12.70	11550.0	1.43	122.5	186
F926004	555642	6034472	MNZ				MAL	CPY	Chloritized monz with abundant malachite fracture/clots 3% cpy 2% bn 1% chalcocite. Calcite-kspar veining occurs irregularity throughout with lesser qtz veining (associated with cpy min)	62	11.00	12100.0	2.20	9.2	116

F926005	555649	6034468	MNZ	EQG	CAL	3	MAL	CPY	Chl monz with abundant malachite fracture/pods 2% dis cpy 1% dis chalcocite. Parallel calcite-kspar and semi-vitreous qtz veining	12	4.84	1935.0	1.54	26.5	250
F926006	555669	6034467	VOL						Mafic to intermediate volcanic with variable vuggy quartz veining (up to 5cm wide) abundant malachite fracture fill 2% dis cpy	26	24.80	19450.0	2.14	328.0	302
F926007	554688	6033617	MNZ	EQG	CHL	2	PYR		Mg equigranular intrusive (60% plag 20% kspar 20% mafics) monzonite with chloritized mafics 1% dis vfg py; moderately magnetic	-5	0.53	86.1	2.67	7.6	116
F926008	554270	6033828	BAS	POR					Dark black basalt with minor fg plag phenos minor ep-cal stringers and cal-ep/hem fracture fill. Zones of calcite-Fe-carb veining (sampled).	-5	0.30	24.8	0.92	37.9	265
F926009	554021	6033736	GRD	EQG					Mg granodiorite cut by 1cm kspar veins and basalt cut by 2cm epidote veins.	-5	0.04	10.2	1.72	33.6	163
F926010	554573	6034066	GRD	EQG	KSP	3	PYR		Fg granodiorite with 30% mafics (hornblend>mag) is cut by irregular cm -scale syenite dykes exhibits variable kspar-ep-chl alteration contains 0.05% dis fg py and coarse Fe-mica fracture coatings.	-5	0.68	15.1	1.63	49.5	291
F926011	554825	6034089	VOL				PYR		V.f.g. intermediate volcanic with 0.05% vfg dis py +/- cpy; weathers rusty along fractures	-5	0.02	9.4	1.04	21.6	42
F926012	555684	6034279	AND	CRY			PYR	CPY	F.g. andesitic flow hosts pod of strong Fe-Cu-Ox associated with py-cpy stringers and fg disseminations	47	76.90	17300.0	0.88	73.3	228
F926013	555681	6034246	AND	POR	CHL	3	PYR	CPY	Chloritized plag-phyric andesite hosts abundant malachite staining 3% dis py-cpy rare native copper and minor chalcocite fracture coating	39	15.25	14200.0	0.60	169.5	337
F926014	555657	6034243	AND	POR			MAL		Andesitic volcanic flow hosts pods of malachite-azurite	13	34.30	18650.0	0.97	46.3	334
F926015	555662	6034258	AND	APH			MAL	CC	Maroon aphanitic intermediate volcanic flow hosts abundant malachite and chalcocite fracture fill; rare fg dis cpy occurs as disseminations	11	15.85	3750.0	1.41	25.8	156
F926017	555720	6034194	VOL		CHL	2	CPY	CPY	Chloritized volcanic with epidote rep of plag phenos 1% dis cpy and fracture fill cpy-py; minor malachite staining	9	11.60	6490.0	0.55	140.0	292
F926018	555681	6034189	VN				MAL	CC	Irregular discontinuous calcite veining hosts rare mal-cc; veining cuts strongly chloritized volcanics roughly parallel to major creek-bearing fault. Likely remob of Cu within fault zone.	-5	0.61	311.0	0.24	2.6	28
F926019	555678	6034240	AND		CHL	2	MAL		Chloritized andesite with patchy malachite fracture fill	28	23.50	13250.0	1.04	182.5	329
F926151	555971	6030722	TUF	TUF					Clastic tuff maroon with 1 to 20mm lapilli	-5	0.06	43.6	0.50	8.5	103
F926152	556301	6030827	AND				MAL		Crystalline andesite with rust and malachite near fracture surfaces Minor rusty vugs	-5	1.62	2700.0	0.49	9.3	114
F926153	556336	6030733	AND						Andesite with possible malachite	-5	0.05	64.0	0.46	12.0	92
F926154	555698	6034227	AND				CPY	BON	Epidote and Kspar-phyric andesite with trace calco bornite and possibly chalcocite.	-5	4.15	1680.0	0.73	47.9	263

*Min=Mineralization

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To: TRIPOINT GEOLOGICAL SERVICES
2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
This copy reported on
18-MAY-2023
Account: TRIPGEO

KL22235370

Project: Kelly Creek

P.O. No.: KC2022-01

This report is for 54 samples of Rock submitted to our lab in Kamloops, BC, Canada on 22-AUG-2022.

The following have access to data associated with this certificate:

TRIPOINT ASSAYS TOM SETTERFIELD	WADE BARNES	SAMANTHA DYCK

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
DISP-01	Disposal of all sample fractions
LOG-23	Pulp Login - Rcvd with Barcode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	
Zn-OG62	Ore Grade Zn - Four Acid	
Au-AA23	Au 30g FA-AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number.Results apply to samples as submitted.All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, Director, North Vancouver Operations

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To: TRIPOINT GEOLOGICAL SERVICES
2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
Account: TRIPGEO

Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
F926001		0.84	<0.005	1.86	7.83	1.9	4180	0.64	0.01	1.10	0.20	26.6	13.9	5	5.35	1785
F926002		1.92	0.009	7.11	5.21	1.8	1980	0.54	0.02	1.99	0.35	24.0	11.3	12	4.11	8790
F926003		1.30	0.209	12.70	6.79	1.4	2730	0.64	0.05	2.11	0.42	27.4	13.9	9	3.56	>10000
F926004		1.62	0.062	11.00	5.14	1.2	2470	0.46	0.03	0.81	0.17	30.8	5.7	17	1.02	>10000
F926005		0.88	0.012	4.84	6.05	2.7	2530	0.60	0.02	0.66	0.21	24.7	16.8	11	1.82	1935
F926006		1.01	0.026	24.8	4.18	2.2	460	0.70	0.20	1.09	0.43	14.65	14.0	13	2.63	>10000
F926007		1.17	<0.005	0.53	8.74	21.7	1220	1.13	0.03	2.34	0.45	34.0	18.0	6	1.84	86.1
F926008		1.03	<0.005	0.30	4.99	2.7	1050	1.00	0.01	12.50	2.36	28.0	13.7	4	4.76	24.8
F926009		1.15	<0.005	0.04	8.03	2.4	730	0.95	0.02	3.91	1.24	31.8	9.7	5	0.76	10.2
F926010		1.10	<0.005	0.68	8.06	52.6	1290	1.11	0.14	0.79	4.89	46.8	12.0	3	1.90	15.1
F926011		0.95	<0.005	0.02	7.16	3.2	320	1.07	0.02	2.15	0.16	32.0	6.1	2	2.96	9.4
F926012		1.53	0.047	76.9	8.01	5.7	850	1.11	0.41	6.17	1.95	27.7	30.3	88	0.75	>10000
F926013		1.07	0.039	15.25	8.18	4.8	930	1.42	0.23	3.48	0.87	22.6	39.3	94	1.32	>10000
F926014		1.40	0.013	34.3	7.18	8.4	630	1.34	0.17	8.15	1.77	35.7	24.7	10	1.34	>10000
F926015		1.20	0.011	15.85	6.34	3.8	1940	0.50	0.04	1.47	0.32	42.5	4.6	8	0.85	3750
F926016		0.07	0.950	57.6	2.26	1460	40	0.41	22.8	2.00	81.3	13.25	47.9	54	1.03	4780
F926017		1.00	0.009	11.60	8.52	12.5	1970	1.23	0.14	2.50	0.46	28.9	33.5	111	2.49	6490
F926018		1.12	<0.005	0.61	2.80	1.1	630	0.56	0.02	28.5	0.12	5.71	4.5	10	1.64	311
F926019		0.93	0.028	23.5	7.58	3.3	1320	1.13	0.15	1.34	2.01	29.9	24.1	30	2.45	>10000
F926020		0.11	<0.005	0.05	6.96	2.7	760	1.08	0.04	1.62	0.03	28.2	4.0	17	0.38	36.7
F926051		1.12	0.048	11.45	5.96	2.4	2850	0.38	0.04	1.61	0.33	24.4	10.8	7	1.95	>10000
F926052		0.84	0.023	6.97	6.69	1.2	3710	0.45	0.03	0.51	0.10	26.9	13.1	9	2.56	9110
F926053		1.20	0.009	9.40	6.71	20.6	60	0.97	1.44	0.12	0.07	31.3	1.5	4	0.60	2460
F926054		1.12	<0.005	0.29	7.18	3.5	1960	1.33	0.06	2.41	0.16	28.1	18.4	18	3.47	121.5
F926055		0.99	<0.005	6.58	6.82	2.8	490	0.90	0.01	0.06	0.05	53.8	0.8	4	0.78	3570
F926056		1.01	<0.005	1.26	6.73	1.0	350	1.26	0.14	0.85	0.03	38.8	1.8	9	4.05	1105
F926057		0.72	<0.005	0.12	6.32	1.4	210	0.96	0.52	0.08	0.02	26.3	1.3	6	2.73	56.7
F926058		1.19	<0.005	0.71	5.31	5.7	670	1.01	0.05	0.03	<0.02	45.1	0.6	7	0.55	114.5
F926059		1.36	0.005	1.18	4.87	3.0	140	1.17	0.37	0.08	0.08	19.90	5.2	6	0.70	688
F926060		1.03	0.005	0.10	8.33	25.5	870	1.32	0.02	2.26	1.53	42.0	7.5	3	0.89	11.1
F926061		1.38	0.006	0.40	6.32	14.4	510	0.64	0.11	3.33	0.21	22.0	13.0	8	3.54	12.3
F926062		0.82	0.020	0.03	8.90	1.5	10	0.49	0.01	14.50	0.10	13.60	28.6	142	0.08	81.2
F926063		2.22	<0.005	0.27	7.70	1.3	10	0.48	0.02	14.30	0.16	11.30	15.0	51	0.06	529
F926064		1.40	<0.005	0.01	8.35	2.7	470	0.64	0.01	8.97	0.12	14.05	30.6	109	1.61	14.6
F926065		0.95	<0.005	0.35	9.17	2.7	10	0.49	0.01	16.25	0.14	6.73	12.4	22	0.05	1925
F926066		1.13	0.012	60.0	8.01	6.5	1500	0.97	0.12	2.40	2.43	24.1	39.7	107	1.40	>10000
F926067		1.33	0.008	8.10	6.48	3.9	2680	0.48	0.04	1.26	0.30	43.0	4.5	6	0.92	1530
F926068		1.43	0.023	15.05	4.22	2.0	1490	0.22	0.03	0.85	0.53	20.5	2.7	23	0.65	3040
F926069		1.47	<0.005	0.21	8.88	6.6	670	2.08	0.05	8.89	0.10	35.0	16.8	38	0.39	16.9
F926070		0.07	0.948	59.0	2.32	1485	60	0.39	26.3	2.06	89.3	13.90	46.2	57	0.98	4730

***** See Appendix Page for comments regarding this certificate *****

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To: TRIPOINT GEOLOGICAL SERVICES
2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
Account: TRIPGEO

Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
F926001		5.11	15.50	0.17	0.8	0.065	4.39	10.1	11.4	1.15	1800	0.82	0.50	2.5	3.9	1450
F926002		4.43	11.70	0.16	0.8	0.058	3.91	9.8	19.2	1.01	1845	1.45	0.05	2.4	4.6	1160
F926003		5.27	14.20	0.19	1.0	0.070	4.75	11.4	18.6	1.16	2120	1.43	0.81	3.1	4.0	1250
F926004		3.15	10.50	0.19	0.8	0.054	4.35	14.0	18.3	0.62	1355	2.20	0.08	3.3	3.2	570
F926005		5.76	13.25	0.18	0.5	0.061	4.64	10.4	32.5	1.51	2520	1.54	0.54	1.9	4.3	1970
F926006		5.71	15.50	0.11	0.4	0.069	1.28	7.9	38.9	1.67	3380	2.14	0.02	1.2	2.3	700
F926007		5.70	18.85	0.14	1.5	0.075	2.30	13.6	17.5	1.19	1415	2.67	3.82	4.2	4.9	1390
F926008		5.31	13.20	0.12	0.3	0.058	2.18	12.1	10.0	0.77	2990	0.92	0.05	2.6	2.7	1170
F926009		5.95	18.35	0.15	0.6	0.158	1.36	13.1	12.7	1.39	2380	1.72	3.42	3.2	1.0	3150
F926010		5.36	18.90	0.17	1.8	0.092	1.46	21.3	12.8	0.88	1750	1.63	4.51	4.2	1.5	2360
F926011		4.05	16.60	0.15	2.1	0.081	1.16	11.7	2.5	0.30	552	1.04	4.28	5.1	1.3	1320
F926012		6.54	19.60	0.14	0.8	0.109	1.72	10.9	42.3	2.27	1500	0.88	1.26	4.1	76.2	1420
F926013		6.41	23.4	0.17	0.5	0.064	2.45	8.2	56.3	3.09	4030	0.60	1.82	4.3	85.9	1450
F926014		7.44	19.95	0.16	1.4	0.103	1.78	15.6	32.8	1.50	2350	0.97	1.58	5.1	23.8	1830
F926015		3.23	10.75	0.19	2.2	0.091	4.20	20.4	11.2	0.57	905	1.41	0.69	5.3	2.7	640
F926016		21.7	7.79	0.43	0.8	4.04	0.50	7.2	14.2	0.95	782	8.29	0.05	2.0	29.0	310
F926017		6.86	20.5	0.16	1.3	0.106	2.75	10.6	65.5	3.39	3110	0.55	2.14	4.8	93.4	1640
F926018		1.16	5.38	0.08	0.3	0.010	1.65	3.0	7.1	0.54	1885	0.24	0.31	0.5	4.6	110
F926019		7.01	21.0	0.15	1.4	0.077	3.01	12.3	26.3	1.78	2160	1.04	0.69	4.5	18.8	1010
F926020		2.59	13.05	0.13	1.9	0.020	1.61	13.2	2.7	0.46	626	4.05	3.30	5.5	10.6	360
F926051		4.45	10.35	0.18	0.8	0.058	4.40	10.3	15.4	0.77	1820	1.04	0.09	2.3	3.7	1070
F926052		5.19	12.60	0.19	0.9	0.064	4.42	10.9	18.9	1.11	1930	1.11	0.09	2.7	3.8	1300
F926053		1.37	17.15	0.14	5.0	0.178	0.41	13.3	9.9	0.05	97	0.72	5.56	8.8	1.9	410
F926054		5.20	16.55	0.17	2.6	0.082	3.52	11.0	19.7	1.55	1525	0.55	2.35	5.1	13.5	1060
F926055		1.42	14.95	0.18	3.8	0.027	2.65	24.9	2.9	0.05	249	0.72	3.71	8.5	1.8	150
F926056		1.50	13.50	0.14	3.2	0.039	2.05	17.4	4.7	0.22	467	1.09	2.63	7.8	4.7	240
F926057		1.20	15.30	0.11	2.9	0.038	1.88	12.2	4.6	0.16	115	2.41	2.19	7.4	3.1	100
F926058		1.33	12.45	0.17	2.4	0.010	2.75	19.3	23.5	0.04	115	1.31	2.23	7.2	1.9	80
F926059		1.26	10.80	0.12	3.4	0.135	0.53	9.4	15.1	0.06	578	1.01	2.98	4.9	3.5	270
F926060		4.89	21.3	0.21	1.4	0.125	1.97	18.2	9.3	0.98	1695	1.67	4.23	4.7	1.6	2130
F926061		4.92	15.00	0.15	0.9	0.051	1.58	9.1	4.3	0.90	1115	2.56	2.00	2.6	3.2	1270
F926062		5.53	30.4	0.11	1.1	0.040	0.01	6.0	16.0	2.40	1200	0.44	0.33	1.7	87.4	580
F926063		4.47	31.3	0.10	0.8	0.035	<0.01	4.8	11.0	0.67	844	1.00	0.05	1.5	29.4	480
F926064		6.67	23.1	0.09	1.4	0.032	0.58	6.2	21.5	2.29	945	0.53	1.69	3.4	92.2	780
F926065		4.16	39.1	0.13	0.7	0.032	0.02	2.7	6.1	0.60	629	0.48	0.04	0.9	21.2	380
F926066		7.50	23.0	0.17	0.4	0.112	2.76	8.5	78.4	3.33	2630	0.68	2.09	5.0	102.5	1590
F926067		3.03	10.30	0.19	2.2	0.093	4.36	19.8	11.4	0.56	1050	0.93	0.13	5.2	1.7	670
F926068		2.00	5.99	0.08	1.2	0.123	3.78	10.0	10.2	0.34	643	2.17	0.08	2.7	2.8	430
F926069		6.45	27.4	0.09	1.3	0.128	0.59	16.3	21.2	1.66	1915	0.92	2.45	5.2	31.1	1700
F926070		22.0	7.36	0.38	0.9	4.14	0.49	7.8	10.7	0.99	816	8.08	0.05	2.0	25.8	320

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To: TRIPOINT GEOLOGICAL SERVICES
2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
Account: TRIPGEO

Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1
F926001		11.4	89.8	<0.002	0.02	0.23	21.5	<1	0.8	64.3	0.14	<0.05	1.64	0.470	1.39	0.6
F926002		11.3	95.3	<0.002	0.20	0.33	15.9	1	0.8	33.7	0.13	<0.05	1.48	0.432	0.66	0.5
F926003		122.5	111.0	0.002	0.34	0.25	21.4	2	0.9	59.2	0.18	0.68	2.17	0.500	0.92	0.8
F926004		9.2	99.3	<0.002	0.33	0.42	10.8	1	0.9	89.3	0.17	<0.05	1.85	0.251	0.90	0.6
F926005		26.5	98.9	<0.002	0.02	0.29	21.1	<1	0.7	45.5	0.11	0.09	1.26	0.533	0.78	0.7
F926006		328	39.6	<0.002	0.80	0.87	18.8	3	0.7	155.0	0.07	0.23	0.55	0.412	0.25	0.7
F926007		7.6	48.3	<0.002	0.18	0.54	21.9	<1	1.1	381	0.24	0.08	3.09	0.549	0.35	1.0
F926008		37.9	66.8	0.002	0.04	3.66	13.6	<1	0.8	324	0.15	<0.05	1.88	0.366	0.43	0.8
F926009		33.6	29.9	0.002	0.02	0.60	24.7	<1	2.2	659	0.19	<0.05	2.02	0.761	0.17	0.8
F926010		49.5	39.1	0.002	0.63	1.10	22.7	<1	1.0	136.5	0.25	0.54	3.21	0.573	0.22	1.1
F926011		21.6	24.5	0.004	0.24	0.31	16.6	<1	1.3	85.2	0.32	<0.05	3.34	0.450	0.19	1.2
F926012		73.3	30.1	0.002	1.31	0.47	23.1	7	1.0	164.0	0.21	0.48	1.04	0.622	0.33	0.5
F926013		169.5	33.5	<0.002	1.10	0.49	24.9	4	0.8	198.5	0.24	0.20	0.75	0.647	0.58	0.5
F926014		46.3	49.6	<0.002	2.03	0.80	24.8	5	1.5	320	0.25	0.06	1.12	0.750	0.35	0.8
F926015		25.8	74.2	<0.002	0.07	0.28	13.5	1	1.2	174.5	0.31	0.13	3.31	0.329	0.75	1.4
F926016		4060	17.5	0.020	>10.0	174.5	4.5	118	19.9	81.0	0.13	0.21	1.51	0.081	14.35	2.0
F926017		140.0	51.4	<0.002	0.91	0.62	27.6	1	1.0	307	0.25	0.10	0.93	0.703	0.58	0.4
F926018		2.6	39.2	<0.002	0.02	0.12	3.9	<1	<0.2	133.0	<0.05	<0.05	0.38	0.063	0.20	0.2
F926019		182.5	78.9	<0.002	1.66	1.51	24.5	4	1.1	89.8	0.24	0.07	1.32	0.547	0.60	0.9
F926020		3.9	35.1	0.003	0.02	0.34	5.9	<1	2.4	195.0	0.39	<0.05	2.98	0.184	0.17	1.2
F926051		12.1	83.5	<0.002	0.27	0.25	15.8	1	0.7	33.9	0.12	0.11	1.36	0.398	0.89	0.6
F926052		9.1	93.4	<0.002	0.40	0.21	19.6	1	0.7	45.6	0.16	0.08	1.82	0.470	1.18	0.6
F926053		11.4	9.3	0.003	<0.01	51.3	8.3	1	1.9	31.1	0.53	<0.05	5.50	0.290	0.06	2.7
F926054		7.6	97.5	<0.002	<0.01	0.51	21.4	<1	1.2	229	0.27	0.09	1.84	0.504	0.61	0.9
F926055		1.7	46.7	0.002	<0.01	2.02	6.9	<1	0.6	29.3	0.48	<0.05	5.71	0.162	0.15	2.4
F926056		4.8	41.9	<0.002	0.01	0.36	5.7	<1	1.7	46.8	0.57	<0.05	5.26	0.117	0.21	2.2
F926057		4.2	46.3	<0.002	<0.01	1.75	4.7	<1	1.5	52.6	0.56	<0.05	5.16	0.102	0.27	2.9
F926058		2.5	57.2	<0.002	<0.01	1.35	5.0	<1	0.3	32.0	0.42	<0.05	5.16	0.118	0.29	2.2
F926059		5.6	13.2	0.002	<0.01	1.21	4.9	<1	0.6	25.7	0.30	<0.05	3.85	0.150	0.08	2.0
F926060		186.5	43.6	0.002	0.04	0.89	23.2	<1	1.1	395	0.27	<0.05	3.12	0.579	0.22	1.1
F926061		22.6	40.1	0.002	2.73	0.52	19.2	<1	1.0	98.5	0.16	2.54	1.71	0.469	0.21	0.6
F926062		3.6	0.3	<0.002	<0.01	0.06	25.2	<1	0.7	54.8	0.08	<0.05	0.51	0.375	<0.02	0.3
F926063		5.5	0.1	0.002	0.01	0.14	16.6	1	0.3	21.7	0.07	<0.05	0.35	0.265	<0.02	0.4
F926064		10.5	8.7	<0.002	<0.01	0.20	29.4	<1	0.5	235	0.17	<0.05	0.63	0.507	0.10	0.3
F926065		1.4	0.1	<0.002	<0.01	0.10	17.7	1	0.3	23.8	0.05	<0.05	0.26	0.278	<0.02	0.6
F926066		43.9	33.0	0.003	1.17	0.56	21.0	4	1.1	189.5	0.25	0.06	0.77	0.705	0.58	0.5
F926067		26.6	81.6	0.002	0.01	0.22	12.6	<1	1.0	178.5	0.28	0.10	3.35	0.332	1.04	1.5
F926068		68.3	73.1	<0.002	0.01	0.15	6.5	2	0.6	97.7	0.16	0.15	1.71	0.196	0.48	0.8
F926069		24.5	13.0	<0.002	0.32	0.77	24.5	1	1.4	173.0	0.28	0.06	1.26	0.752	0.10	0.4
F926070		4140	19.8	0.018	>10.0	182.0	4.7	122	17.9	82.9	0.15	0.25	1.48	0.083	12.85	1.9

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2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
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Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Cu	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	1	0.1	0.1	2	0.5	0.001	0.001
F926001		141	0.5	23.9	222	22.9		
F926002		111	0.5	17.8	177	18.8		
F926003		133	0.5	20.4	186	31.8	1.155	
F926004		48	0.4	22.5	116	17.9	1.210	
F926005		133	0.8	24.8	250	12.9		
F926006		131	0.7	13.6	302	7.4	1.945	
F926007		148	0.5	31.8	116	41.1		
F926008		69	15.3	24.1	265	9.7		
F926009		53	0.9	31.8	163	13.5		
F926010		50	0.6	27.9	291	52.5		
F926011		25	0.5	24.4	42	62.4		
F926012		267	0.6	22.0	228	18.3	1.730	
F926013		264	0.7	19.3	337	12.3	1.420	
F926014		318	0.7	31.1	334	36.9	1.865	
F926015		54	0.3	35.3	156	66.1		
F926016		66	4.2	8.0	>10000	28.9		1.375
F926017		218	0.7	22.2	292	30.7		
F926018		84	<0.1	4.7	28	10.0		
F926019		272	0.5	20.4	329	45.3	1.325	
F926020		32	0.6	16.5	31	56.1		
F926051		112	0.5	17.6	178	19.8	1.155	
F926052		108	0.5	22.6	194	25.2		
F926053		26	1.2	17.9	14	174.5		
F926054		144	1.2	27.3	254	84.5		
F926055		22	0.3	14.0	41	129.5		
F926056		28	0.2	32.3	22	78.6		
F926057		64	0.3	22.2	51	72.0		
F926058		20	0.7	14.7	42	81.6		
F926059		20	0.6	11.4	46	113.5		
F926060		32	0.7	40.7	283	42.6		
F926061		119	0.5	16.7	61	21.8		
F926062		259	0.2	13.4	59	41.3		
F926063		493	0.1	8.8	10	31.1		
F926064		239	0.3	14.5	51	50.7		
F926065		899	0.2	9.2	15	21.9		
F926066		264	0.7	21.6	396	11.6	1.370	
F926067		54	0.3	33.2	160	71.4		
F926068		57	0.2	16.2	117	41.2		
F926069		326	0.4	30.4	86	42.3		
F926070		69	2.5	9.2	>10000	32.6		1.340

***** See Appendix Page for comments regarding this certificate *****

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To: TRIPOINT GEOLOGICAL SERVICES
2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
Account: TRIPGEO

Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	WEI-21	Au-AA23	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
F926071		0.11	<0.005	0.06	7.12	3.3	770	0.97	0.05	1.65	0.07	24.1	3.9	18	0.35	29.1
F926101		0.66	0.005	0.07	8.39	4.7	400	0.31	0.01	5.72	0.10	6.58	44.4	92	1.28	139.0
F926102		0.87	0.008	1.14	9.43	2.9	10	0.36	<0.01	14.20	0.21	5.11	6.9	29	<0.05	4900
F926103		1.17	<0.005	0.08	7.92	4.7	10	0.57	0.02	14.20	0.16	11.65	15.6	55	0.05	600
F926104		1.19	<0.005	0.38	8.04	3.8	180	0.80	0.05	2.95	0.06	18.70	24.6	3	0.79	147.5
F926105		0.76	0.016	1.96	4.33	8.3	250	0.34	0.04	3.47	0.79	11.10	6.7	80	1.16	2550
F926106		0.11	0.093	9.32	5.94	36.8	240	0.82	14.70	2.90	64.4	48.2	77.1	59	1.04	3720
F926107		0.96	0.010	8.18	6.77	2.3	1480	0.83	0.09	1.84	0.55	35.3	23.8	12	1.50	6690
F926151		1.26	<0.005	0.06	7.96	1.4	2740	1.11	0.05	0.89	0.03	39.7	7.0	8	2.20	43.6
F926152		0.87	<0.005	1.62	8.38	1.0	230	0.55	0.02	2.23	0.45	15.40	38.0	144	1.71	2700
F926153		1.55	<0.005	0.05	7.78	1.6	270	0.97	0.04	3.35	0.08	21.6	29.2	88	2.27	64.0
F926154		1.01	<0.005	4.15	8.53	5.5	1520	1.24	0.06	3.65	0.35	28.7	31.9	43	1.45	1680
F926155		0.60	<0.005	2.93	7.42	4.6	1270	1.12	0.02	1.68	0.15	58.3	5.8	15	0.61	1250
F926156		0.11	0.006	0.03	7.30	2.6	780	1.07	0.04	1.69	<0.02	26.6	4.0	18	0.37	28.9

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CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
F926071		2.65	12.25	0.09	1.7	0.030	1.61	13.3	2.1	0.46	645	4.01	3.36	5.4	9.2	370
F926101		6.91	14.70	<0.05	0.9	0.049	0.89	2.6	18.9	3.62	1125	0.23	3.24	0.8	115.0	490
F926102		2.67	38.3	<0.05	0.3	0.022	0.01	2.1	13.3	0.63	596	0.92	0.51	0.9	18.2	270
F926103		4.40	41.4	<0.05	0.9	0.052	<0.01	4.3	15.7	1.00	1235	0.91	0.15	1.6	29.4	670
F926104		7.57	17.75	0.07	0.7	0.089	0.41	8.4	18.4	2.18	2310	0.94	3.83	1.9	1.4	1290
F926105		3.33	12.30	<0.05	0.6	0.052	1.41	5.1	12.3	0.63	871	3.45	0.04	1.8	19.1	610
F926106		11.35	18.20	0.09	3.1	3.88	1.28	24.2	17.7	2.28	1230	9.96	1.12	7.9	49.9	390
F926107		6.66	14.85	0.10	2.9	0.069	2.68	16.2	21.6	1.80	1465	0.95	1.66	5.8	13.8	1870
F926151		3.27	15.35	0.14	3.5	0.064	4.78	21.7	5.3	0.74	892	0.50	2.00	6.7	4.3	720
F926152		6.62	17.70	0.09	1.4	0.053	0.17	6.1	41.5	4.36	1270	0.49	3.59	3.2	144.5	710
F926153		6.20	14.55	0.09	2.2	0.070	1.62	9.9	39.9	2.33	958	0.46	0.51	3.8	81.2	960
F926154		7.17	21.3	0.13	0.7	0.076	2.37	11.8	42.5	3.01	2280	0.73	1.74	5.6	39.9	2040
F926155		3.34	12.65	0.17	3.7	0.046	2.95	28.0	6.9	0.38	646	1.51	3.33	12.9	5.6	890
F926156		2.68	12.55	0.10	1.7	0.026	1.64	14.4	2.3	0.47	651	4.07	3.41	5.7	9.5	380

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Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1
F926071		5.2	34.5	<0.002	0.03	0.41	6.0	<1	2.2	197.5	0.39	<0.05	2.62	0.183	0.13	1.1
F926101		1.3	11.7	<0.002	<0.01	0.13	29.7	1	0.4	592	0.05	<0.05	0.36	0.423	0.09	0.3
F926102		5.0	<0.1	<0.002	<0.01	<0.05	7.5	<1	0.2	28.1	0.05	<0.05	0.18	0.145	<0.02	0.2
F926103		2.9	0.1	<0.002	<0.01	0.27	17.4	<1	0.3	27.5	0.08	<0.05	0.33	0.306	<0.02	0.4
F926104		26.5	7.9	<0.002	0.61	0.77	31.6	1	0.6	243	0.11	<0.05	0.61	0.722	0.07	0.3
F926105		45.2	49.4	<0.002	0.11	0.53	11.3	<1	0.4	364	0.10	0.07	0.52	0.278	0.33	0.2
F926106		1430	39.0	0.003	6.66	5.11	13.8	6	10.9	99.6	0.59	0.23	5.54	0.272	2.08	1.6
F926107		40.4	63.2	<0.002	0.22	0.37	25.6	2	1.1	182.5	0.36	0.05	2.10	0.751	0.42	1.1
F926151		8.5	168.0	<0.002	<0.01	0.27	15.3	<1	1.1	239	0.38	<0.05	2.67	0.410	0.63	1.2
F926152		9.3	1.2	<0.002	0.03	0.12	27.4	<1	0.5	144.0	0.16	<0.05	0.41	0.481	0.03	0.2
F926153		12.0	35.2	<0.002	<0.01	0.28	25.3	<1	0.8	101.0	0.21	0.05	0.98	0.522	0.20	0.6
F926154		47.9	34.7	<0.002	0.99	0.66	26.0	2	1.1	266	0.31	0.07	0.82	0.854	0.42	0.5
F926155		7.0	62.2	<0.002	0.02	0.30	14.4	1	1.3	221	0.70	<0.05	3.81	0.502	0.24	1.6
F926156		3.3	36.3	<0.002	0.02	0.32	6.4	<1	2.3	202	0.40	<0.05	2.64	0.184	0.13	1.1

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Finalized Date: 6-OCT-2022
Account: TRIPGEO

Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Cu	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	1	0.1	0.1	2	0.5	0.001	0.001
F926071		32	0.5	16.8	41	57.4		
F926101		293	0.4	14.5	76	33.4		
F926102		361	0.1	5.4	17	14.7		
F926103		289	0.1	11.2	16	33.9		
F926104		221	0.6	22.1	194	18.2		
F926105		185	0.2	10.7	72	22.3		
F926106		89	6.1	19.5	>10000	116.5		1.895
F926107		261	0.7	31.4	200	101.0		
F926151		79	0.3	32.5	103	125.0		
F926152		182	0.3	14.4	114	54.8		
F926153		184	0.7	25.4	92	80.2		
F926154		321	0.6	25.1	263	20.8		
F926155		94	0.7	32.8	82	132.0		
F926156		32	0.5	17.2	32	57.4		

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2770 LEIGH RD #148
VICTORIA BC V9B 4G1

Finalized Date: 6-OCT-2022
Account: TRIPGEO

Project: Kelly Creek

CERTIFICATE OF ANALYSIS KL22235370

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REEs may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada.

CRU-31	CRU-QC	DISP-01	LOG-21
LOG-23	PUL-31	PUL-QC	SPL-21
WEI-21			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA23	Cu-OG62	ME-MS61	ME-OG62
Zn-OG62			

APPENDIX B-FIELD REPORT FROM TRIPOINT GEOLOGICAL SERVICES

Post-Field Report

on the

KELLY CREEK PROPERTY

2022 SAMPLING PROGRAM

August 3-11th, 2022

for

Richard Billingsley

11114 147A St.

Surrey, BC

V3R 3W2

prepared by

Michael Brinton, GIT

Tripoint Geological Services Ltd.

148-2770 Leigh Rd

Victoria, BC, Canada

on

August 18, 2022

1. SUMMARY OF WORK COMPLETED

Between the dates of August 3rd and 11th, 2022, a crew from Tripoint Geological Services Ltd. conducted a field program of rock sampling on the Kelly Creek Property ("the Property") for Mr. Richard Billingsley. The Property is located within the Stikine Terrain, approximately 30 km east-southeast of Terrace, BC.

The 2022 Field Program consisted of rock sampling. In total, 48 rock samples were collected. Samples were sent to the ALS Prep Lab in Kamloops, BC.

The main target areas of the 2022 field program included the Upper and Lower Showings at Kelly Creek, East Side to Goat Bluff, Chicken, and Bill-Mountain Goat.

2. SUMMARY OF ON-SITE PERSONNEL

A total of four Tripoint personnel were on site throughout the program. See table 1 for a breakdown of roles and dates.

NAME	ROLE	DATES
Michael Brinton	Project Geologist (lead)	August 3 – 11, 2022
Georg Nussbaumer	Project Geologist	August 3 – 11, 2022
Victor Pospelov	Exploration Geologist	August 3 – 11, 2022
Julia Walker	Junior Geologist	August 3 – 11, 2022

Table 1. Tripoint personnel on site for Kelly Creek field program

3. SUMMARY OF TENURES

Claims worked on included the following:

547959, 1014702, 1014703, 1036539, 1037265, 1041317, 1041318, 1041323,1066596, 1066597, 1066598, 1066709, 1072167, 1072168, 1072177, 1081653

4. SUMMARY OF FIELD WORK

Between the dates of August 3rd and 11th, a total of seven days were spent in the field on the Kelly Creek property. Detailed descriptions of findings, and priority areas can be found below. See figure 1 for a property wide overview of field work conducted.

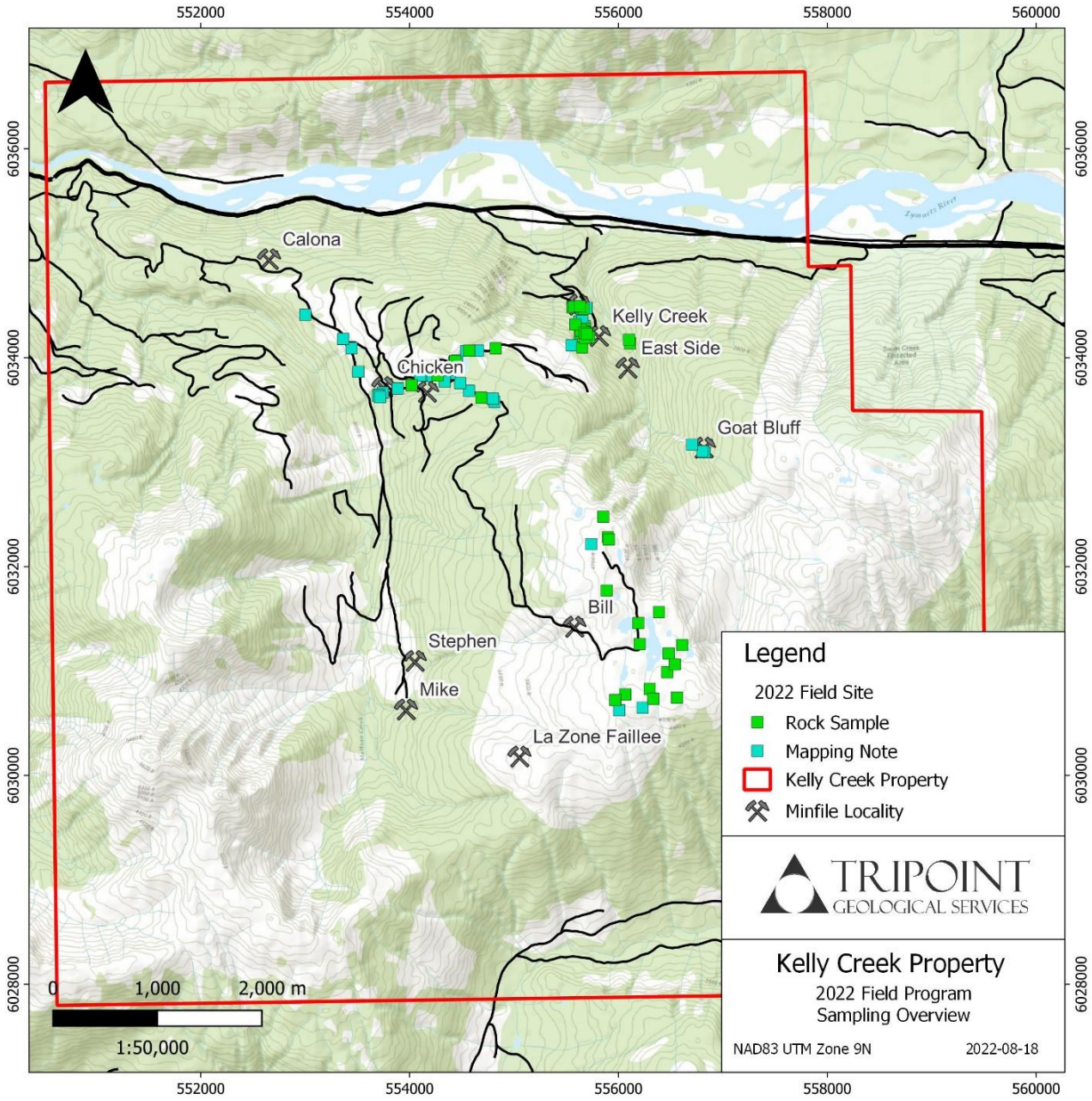


Figure 1. Kelly Creek Property overview with 2022 sample and mapping locations, and zones

4.1 ROCK SAMPLING

A total of 48 rock samples were collected during the 2022 field season. Rocks were places in poly ore bags and secured with a zip tie for transport back to camp.

Descriptions of alteration and mineralization styles of rock samples are detailed under each zone in section 4.2.

4.2 Kelly Creek Main Targets

Work during the 2022 field season focused on the following main zones: Kelly Creek (Upper and Lower Showings), East Side to Goat Bluff, Chicken, and Bill-Mountain Goat

4.2.1 Kelly Creek (Upper and Lower Showings)

The Kelly Creek area, consisting of the Upper and Lower Showings, was the main focus of the 2022 field program. In total, 23 rock samples, and 5 mapping notes were collected here (figure 2). Work also included brushing a trail along the old road up to the major washout and attempting to locate historic trenches and drill collars. Trenches were found to be heavily deteriorated and/or unrecognizable. Drill collars and pads were not found. Slope instabilities and heavy vegetation have likely reclaimed many of these sites.

Rock sampling focused on better defining the Upper Showing, with traverses testing the boundaries of previous sampling. Sampling of mineralized material, generally consisting of malachite-chalcocite fracture fill with lesser disseminated sulphides (cpy +/- py), was collected up to 56 m northwest of previous samples (figure 3). This NW extent of mineralization occurs over 70 m down slope, expanding the known footprint of the Upper Showing to roughly 70 x 160 m. This zone appears to be cut off to the southeast by a SW-NE trending fault, observed as a depression in topography.

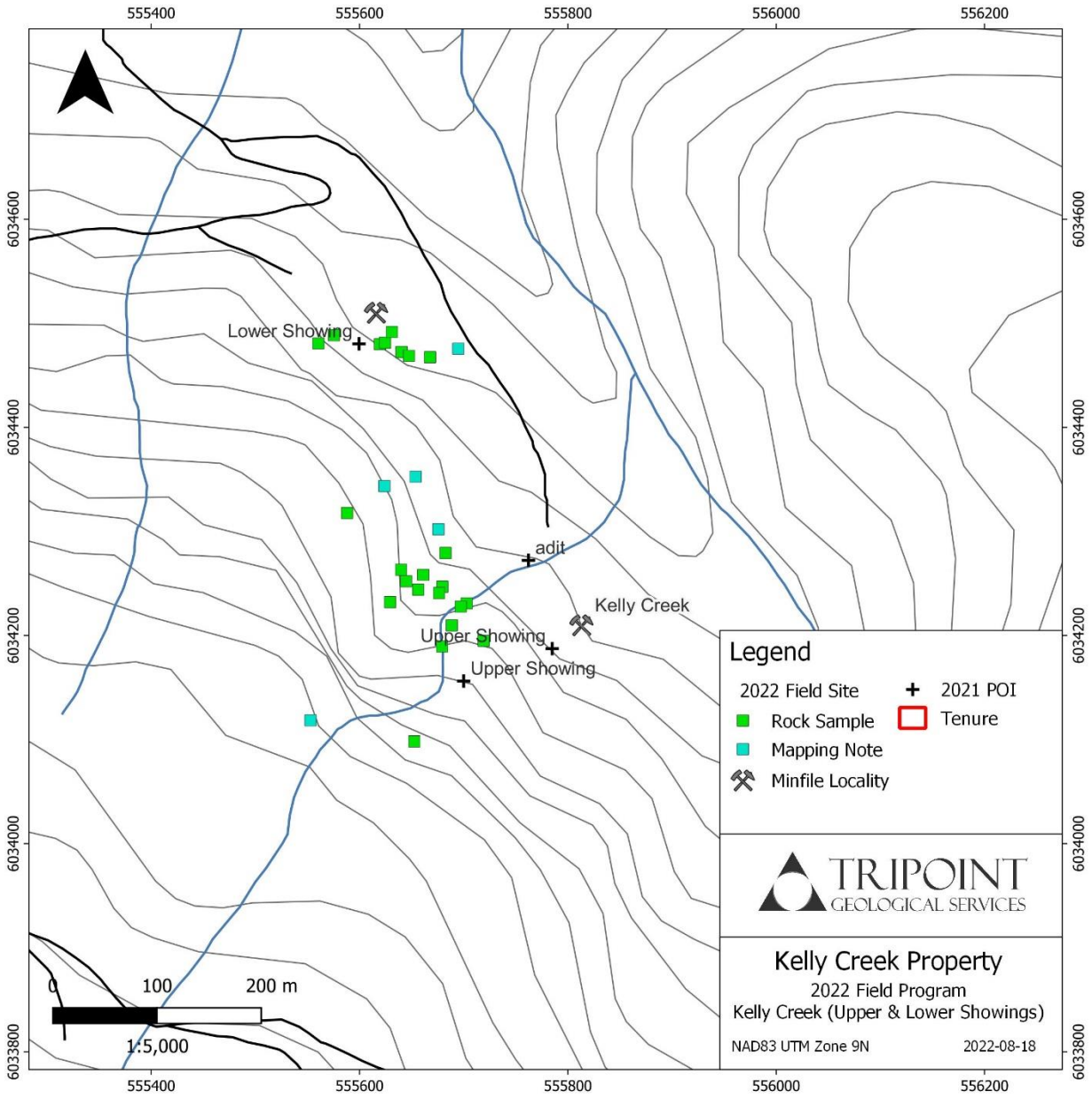


Figure 2. Overview of work conducted in the Kelly Creek Zone (Upper and Lower Showings)



Figure 3. Left: 22MB036; Fine-grained andesitic flow hosts pod of strong Fe-Cu-Ox associated with py-cpy stringers and fine-grained disseminations. Right: 22MB039; Maroon aphanitic intermediate volcanic flow hosts abundant malachite and chalcocite fracture fill with rare fine-grained cpy occurring as disseminations.

4.2.2 East Side to Goat Bluff

The structurally controlled mineralization corridor between East Side and Goat Bluff was tested via a traverse from the summit of Trapper Mountain down to the Kelly Creek Zone. Mineralization along this traverse was only observed where previous sampled had occurred in 2021, with exception to sample F926155, being collected 38 m downstream of previous sampling at East Side.

4.2.3 Chicken

Two traverses were conducted on the Kleanza Pluton with the purpose of investigating the porphyry potential of the Chicken Showing. In total, 6 rock samples and 23 mapping notes were collected.

The pluton consists of multiple intrusive phases including gabbroic, dioritic (monzo – grano), and syenitic. Transitions between these phases are irregular and mixed and are well exposed in rock cuts throughout the pluton.

Alteration observed across the pluton varies from null to propylitic (chlorite replacement of mafics (dominantly hornblende) and epidote replacement of plagioclase), and rare potassium feldspar replacement of plagioclase. Overall porphyry-related alteration appears to be weak and is likely related to later-stage syenitic and basaltic dykes.

Mineralization observed at the Chicken Showing consisted of up to 10% clotted chalcopyrite an associated malachite fracture-fill occurring along a 5 cm shear zone (figure 4). This appears to be relatively limited in scale, extending into host (medium-grained, strongly chloritized granodiorite) up to 5 cm. Other small,

isolated occurrences of disseminated chalcopyrite and malachite fracture fill occur over a roughly 35 x 35 m area but are not continuous.

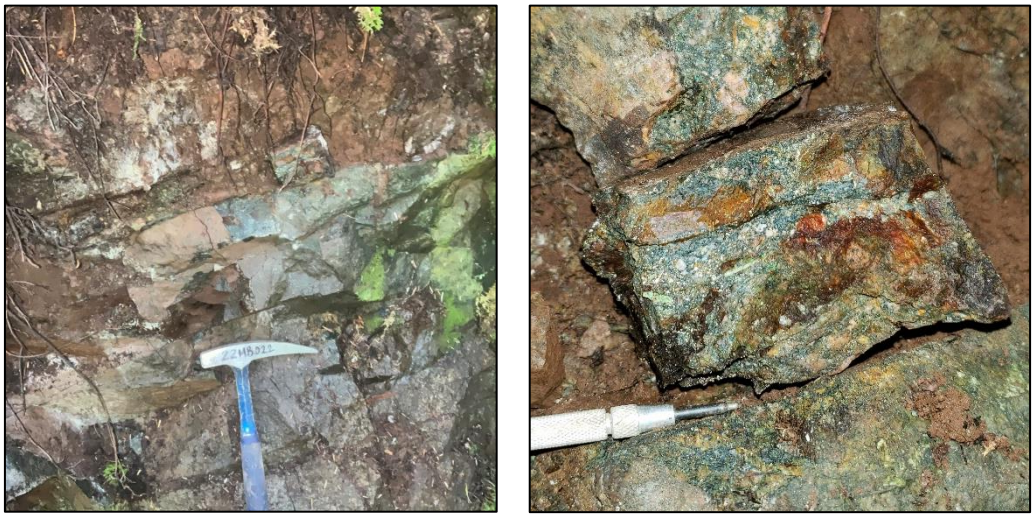


Figure 4. 22MB022: Best example of mineralization observed at the Chicken Showing.

4.2.4 Bill-Mountain Goat

Rock sampling traverses were completed on the summit of Trapper Mountain in the area of the Bill and Mountain Goat showings. In total 17 rock samples and 3 mapping notes were collected.

Sampling focused mainly on the southern portion of the summit plateau. Here, rhyolitic ash to lapilli tuffs were found to contain rare, discontinuous mineralization, consisting of quartz-calcite veins and breccias with malachite and native copper, and disseminated chalcocite ± chalcopyrite ± bornite (figure 5 & 6).



Figure 5. Left: 22GN017; Brecciated vuggy qtz veining with green-maroon andesitic wallrock fragments. Vuggs contain malachite ± native Cu. Right: 22GN010; Pink beige ash tuff rhyolite composition, moderate orange fracture oxidation. Chalcocite-bornite blebs throughout groundmass 1%.

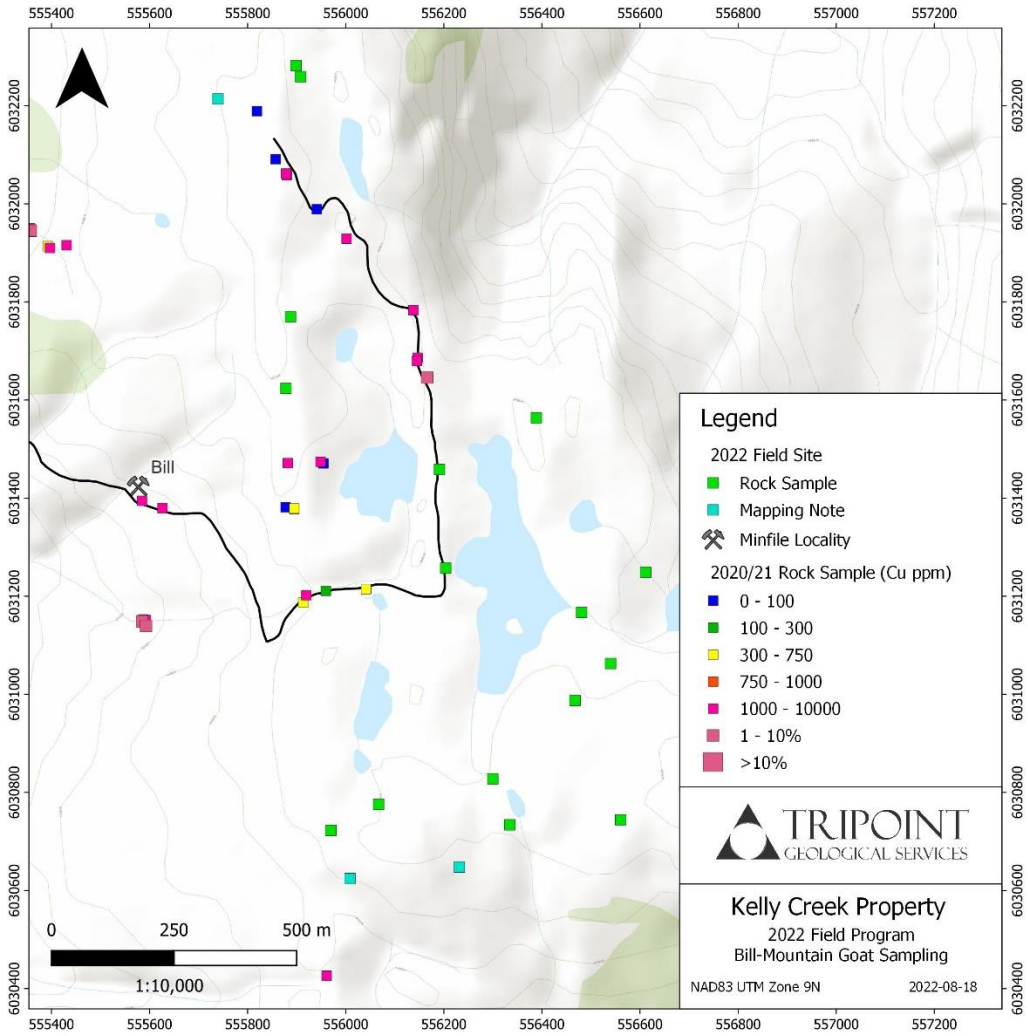


Figure 6. Overview of work conducted in the Bill-Mountain Goat area

5. Digitization of Historic Geology Maps

Historical geological maps at the Property-scale (figure 7) and of the Kelly Creek area (figure 8) found in Assessment Report 02394 were digitized during the 2022 field program. These shapefiles represent a much higher level of detail than previously obtained from regional government maps and should be used a base for future field work.

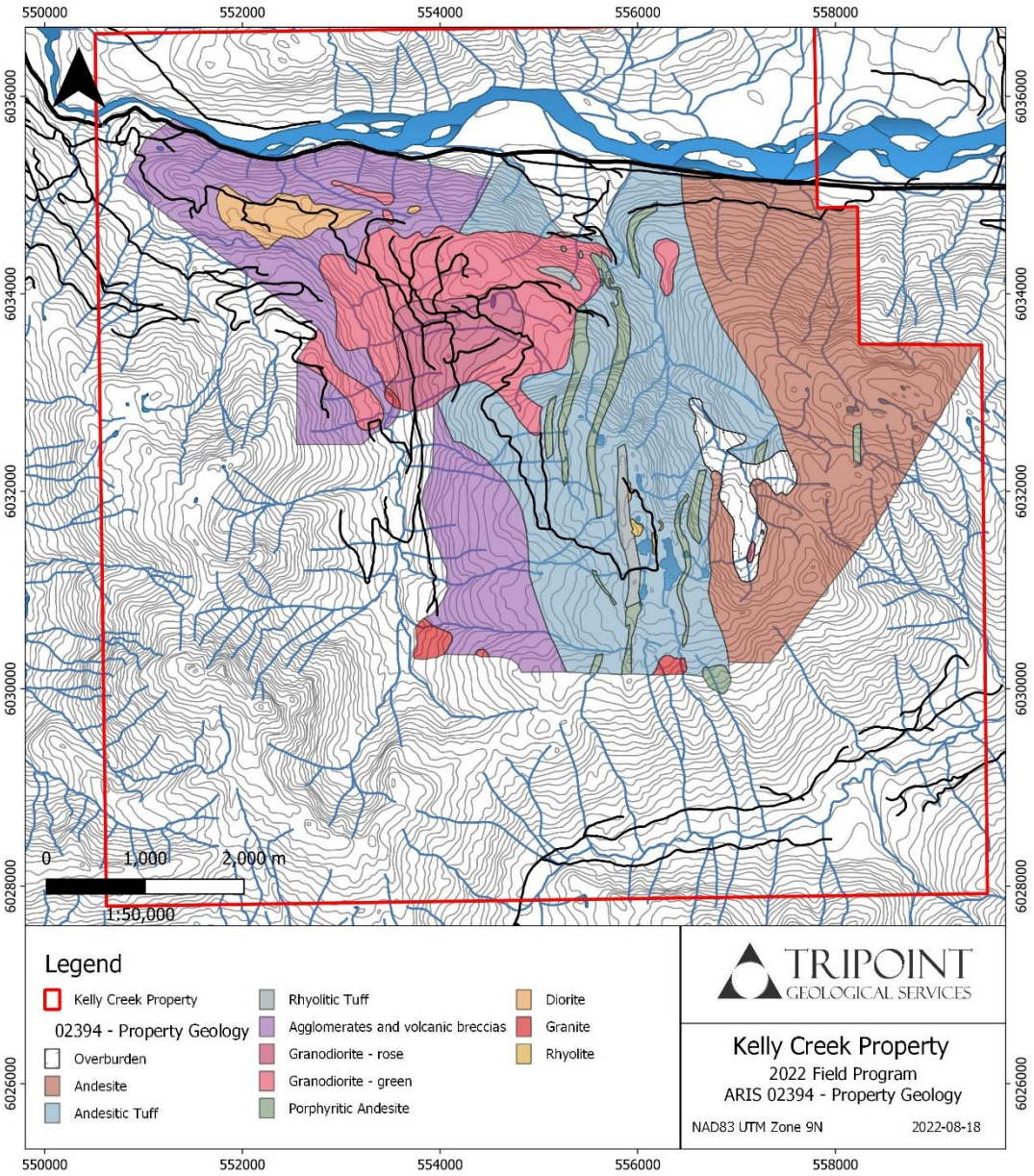


Figure 7. Property-wide geology map digitized from ARIS 02394.

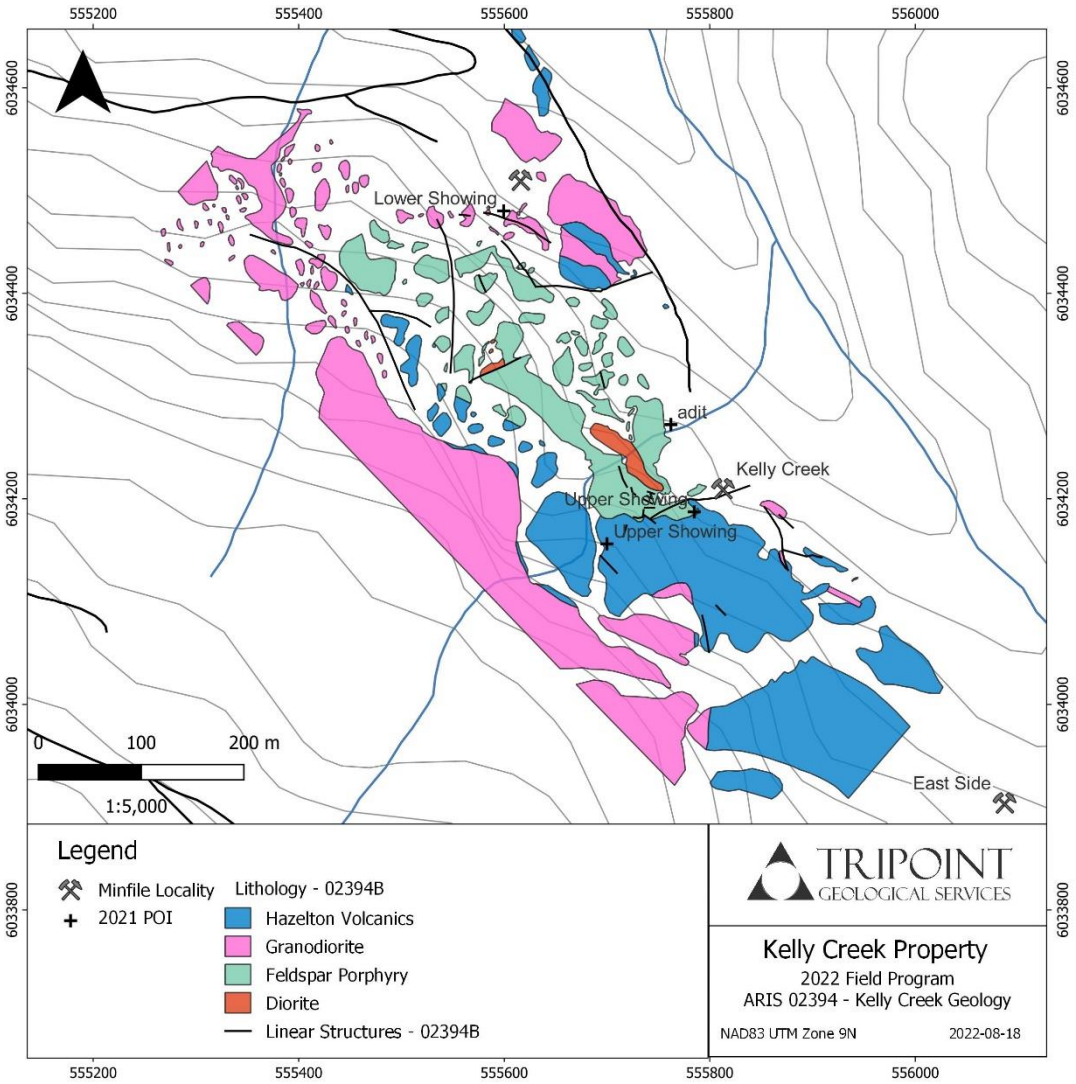


Figure 8. Kelly Creek area geology map digitized from ARIS 02394.

6. Conclusions

Rock sampling during the 2022 field season focused mainly on the expanding the Kelly Creek area. This was successful in pushing the boundary of the Upper Showing >50 m to the NW. Field observations of a volcanic redbed copper style deposit are consistent with past observations. Future work should involve expanding the geochemical footprint of this area via conventional soil samples as much of the zones of interest are covered.

The traverse along the corridor from Goat Bluff to East Side showing observed that mineralization is isolated to the two zones. Goat Bluff has been thoroughly sampled to its extent, and East Side's exposure within the creek walls has been sampled where mineralization is visible. Future work should involve follow up of Goat Bluff via rope access equipment, and testing of the entire corridor by conventional soil samples.

Alteration mapping and rock sampling on the Kleanza Pluton shows low potential for porphyry mineralization of any economical scale. Although weak porphyry-style mineralization does occur in outcrop, no appreciable alteration zoning is present, and mineralization is isolated to small shear and dyke related zones.

Rock sampling and prospecting on Trapper Mountain shows mineralization is widespread but relatively isolated and small in scale. Potential exists for mineralization to the south, but access will prove difficult.

7. Recommendations

The following recommendations are based on preliminary geological observations and will be revised once quantitative results are received from rock samples.

Abundant geochemical data, as well as high resolution scans of geological mapping exist in the available historic assessment reports:

- Conduct a data compilation of all available historic geochemical data (rocks, trenches, soils, stream sediments)
- Digitize and compile all historic geological, structural, and alteration mapping for future mapping to further define
- Digitize the detailed geology maps of the Kelly Creek adit
    - use an RTK or other high-precision GPS hardware to precisely determine the location of the adit; resurvey the adit if necessary

Much of the modern work on the Property appears to consist of prospecting and rock sampling. Soil lines and grids should be conducted over known anomalies to determine their extent beyond where outcrop is available:

- Conduct a 25 x 25 m soil sample grid over the Kelly Creek area as topography allows
- Conduct regional soil lines (50 m spacing) along the NW-SE trending corridor hosting the East Side and Goat Bluff showings

- Expand the historic soil grid over Trapper Mountain to the south (ARIS 12728)

The far west and southern areas of the property appear to have seen little prospecting and rock sampling.

- Conduct regional prospecting along the ridgeline and mountains of the far west, and down drainages on the southern slope of Trapper Mountain.
    - Access to the west will require helicopter access, where as prospecting of Trapper Mountain could be possible with two trucks.

APPENDIX C-PRECISION GEOSURVEYS OPERATIONS REPORT

Precision GeoSurveys

AIRBORNE GEOPHYSICAL SURVEY REPORT



Kelly Creek

Terrace, British Columbia

Richard Billingsley

Precision GeoSurveys Inc.

BC Permit to Practice 1002615

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September 2022

Job# 22162_KC

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1.0 Introduction

This report describes the high-resolution helicopter-borne magnetic gradient and radiometric survey completed at the Kelly Creek survey area for Richard Billingsley. The Kelly Creek survey area is in west-central British Columbia (Figure 1). It was flown on August 7, August 21, and August 22, 2022.



Figure 1: Kelly Creek survey area located in west-central British Columbia.

1.1 Survey Area

The Kelly Creek survey block is centered approximately 30 km east of Terrace, British Columbia (Figure 2).

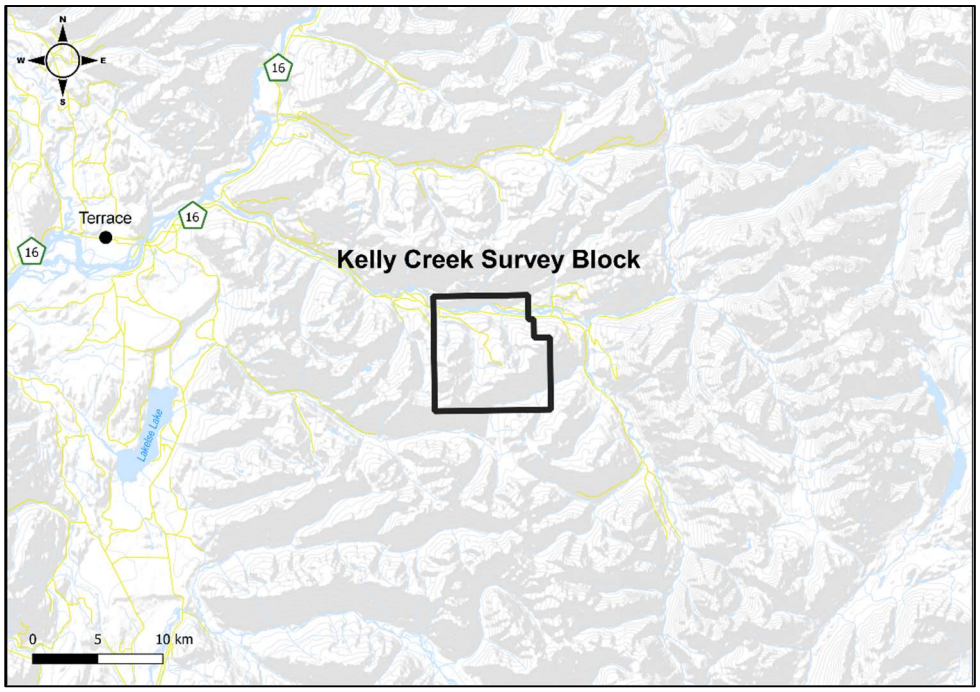


Figure 2: Kelly Creek survey block 30 km east of Terrace, British Columbia.

The Kelly Creek survey block was flown at 100 m line spacing at a heading of 089°/269°; tie lines were flown at 1000 m spacing at a heading of 179°/359° (Figures 3 and 4).

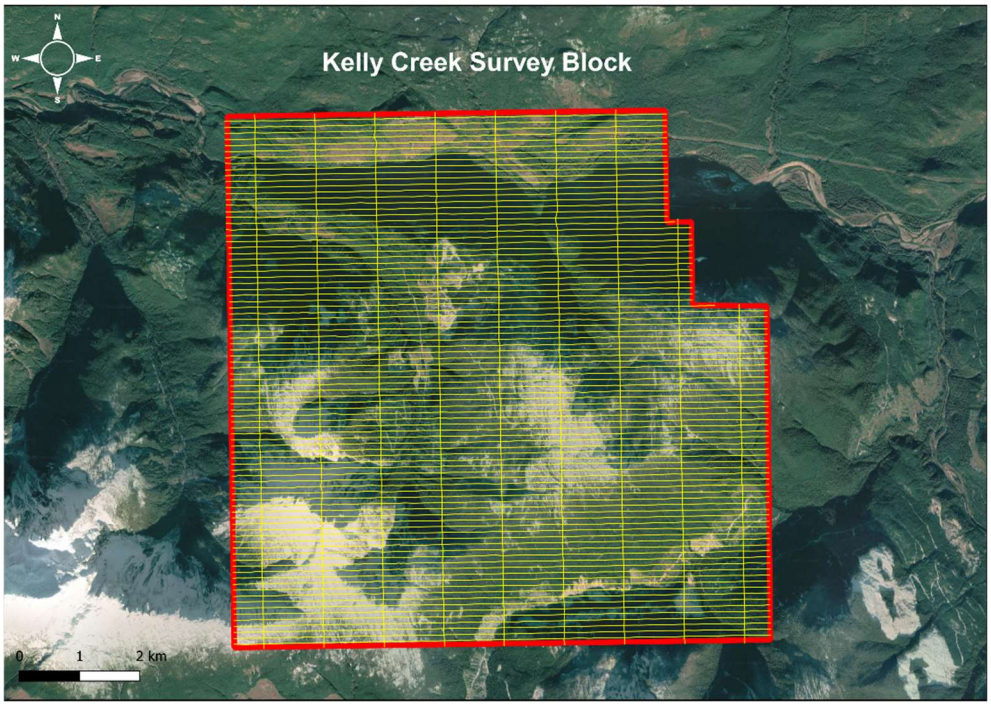


Figure 3: Plan View – Kelly Creek survey block with actual flight lines in yellow and survey block boundary in red.

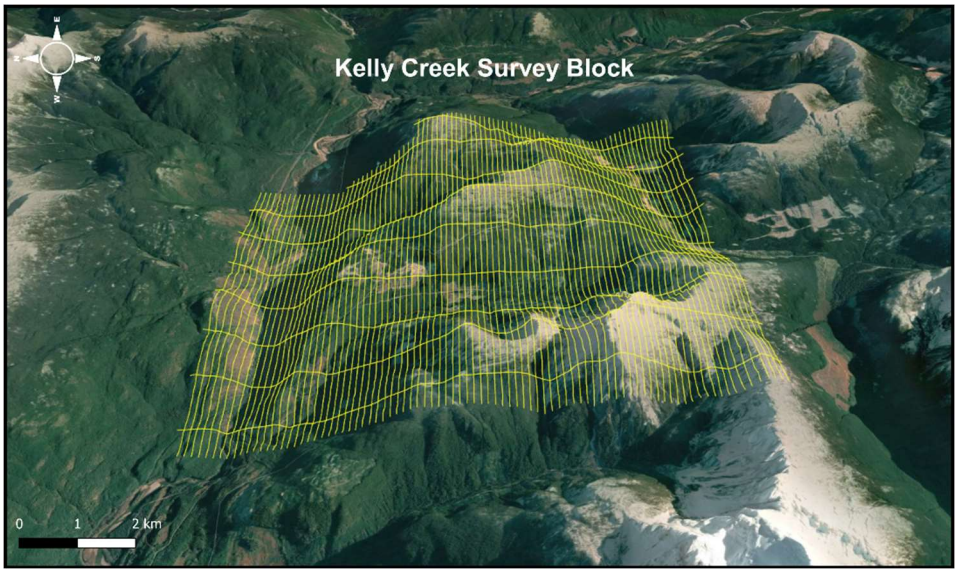


Figure 4: Terrain View – Kelly Creek survey block with actual flight lines displayed in yellow.

1.2 Survey Specifications

The geodetic system used for the Kelly Creek geophysical survey was WGS 84 in UTM Zone 9N. A total of 814 line km was flown over an area of 74.0 km^2 (Table 1). This total includes 3 km of data retained from partial flight lines flown outside the survey block margins for survey efficiency. Polygon coordinates for the Kelly Creek survey block are specified in Appendix A.

Survey Block	Area (km^2)	Line Type	Line Orientation (UTM grid)	Line Spacing (m)	No. of Lines Planned	No. of Lines Completed	Total Planned Line km	Total Actual km Flown
Kelly Creek	74.0	Survey	089°/269°	100	88	88	737	739
		Tie	179°/359°	1000	9	9	74	75
		Total:			**97**	**97**	**811**	**814**

Table 1: Survey flight line specifications.

2.0 Geophysical Data

Geophysical data are collected in a variety of ways and are used for many purposes including aiding in geological mapping, mineral exploration, oil and gas exploration, geotechnical investigations, contaminated land site studies, and UXO (unexploded ordnance) detection.

For the purposes of this survey, airborne magnetic gradient and radiometric data were collected to serve in geological mapping and exploration for mineral deposits.

2.1 Magnetic Data

Magnetic surveying is the most common airborne geophysical technology used for both mineral and hydrocarbon exploration. Aeromagnetic surveys record the intensity of the total magnetic field, measured at a magnetometer sensor that is fixed to the aircraft. The total magnetic field is comprised of the desired geomagnetic field in combination with undesired influences from varying solar wind and the aircraft's inherent magnetic field. Subtracting the undesired magnetic effects from the total field results in aeromagnetic maps that show the spatial distribution and relative abundance of magnetic minerals - most commonly the iron oxide mineral magnetite - in the upper levels of Earth's crust. These results, in turn, can then be related to geological attributes such as lithology, structure, and alteration of bedrock. Survey specifications, instrumentation, and interpretation procedures depend on the individual objectives of each survey. Magnetic surveys are typically performed for:

- Geological Mapping – to aid in mapping lithology, structure, and alteration.
- Identification of variations in ferromagnetic response directly or indirectly related to mineral deposits.
- Depth to Basement Mapping – for exploration in sedimentary basins or mineralization associated with the basement surface.

2.1.1 Gradient Magnetic Data

High-resolution total magnetic field data were collected at three independent locations using a triple boom magnetic gradient system with 3-axis compensation providing total magnetic intensity and horizontal magnetic gradient. Direct measurement of the magnetic gradient has the following benefits:

- Enhanced definition of near-surface anomalies.
- Emphasis on short wavelength spatial components of magnetic anomalies from horizontal variations of the gradients.
- Attenuation of long wavelength spatial components associated with regional trends and large-scale anomalies.
- Eliminates high frequency temporal variations in the Earth's magnetic field due to micro-pulsations.
- Immunity to diurnal fluctuations.
- Reduction of aircraft/sensor movement errors.

2.2 Radiometric Data

Radiometric surveys are used to determine the absolute or relative concentrations, or both, of the naturally occurring radioelements uranium (U), thorium (Th), and potassium (K) in surface rocks and soils using radioactive emanations. Mapping the distribution and concentration of radioelements is useful for:

- Determining different lithologies based on characteristic radioelement geochemistry, either absolute or relative. For example, natural radioactivity of igneous rocks generally increases with SiO_2 content.
- Identification of hydrothermal alteration. For example, individual radioelements follow very different pathways of evolution during alteration of rocks, particularly potassic enrichments.
- Exploration for valuable radioelements, in particular uranium.
- Providing insights into weathering. For example, clay minerals tend to fix the natural radioelements in near-surface environments.

Gamma rays are electromagnetic waves with frequencies between 10^{19} and 10^{21} Hz emitted spontaneously from an atomic nucleus during radioactive decay, in packets referred to as photons. The energy E transported by a photon is related to the wavelength λ or frequency ν by the formula:

$$E = h\nu = hc/\lambda$$

where: c is the velocity of light
h is Planck's constant (6.626×10^{-34} joule)

All detectable gamma radiation from Earth materials comes from the natural decay products of three primary radioelements: U, Th, and K. Each individual nuclear species (element) emits gamma rays at one or more specific energies, as shown in Figure 5. Of these elements, only potassium (^{40}K) emits gamma energy directly, at 1.46 MeV. Uranium (^{238}U) and thorium (^{232}Th) emit gamma rays through their respective decay series; ^{214}Bi at 1.76 MeV for uranium and ^{208}Tl at 2.61 MeV for thorium. Accordingly, the ^{214}Bi and ^{208}Tl measurements are considered equivalents for uranium (eU) and thorium (eTh), as the daughter products will be in equilibrium under most natural conditions.

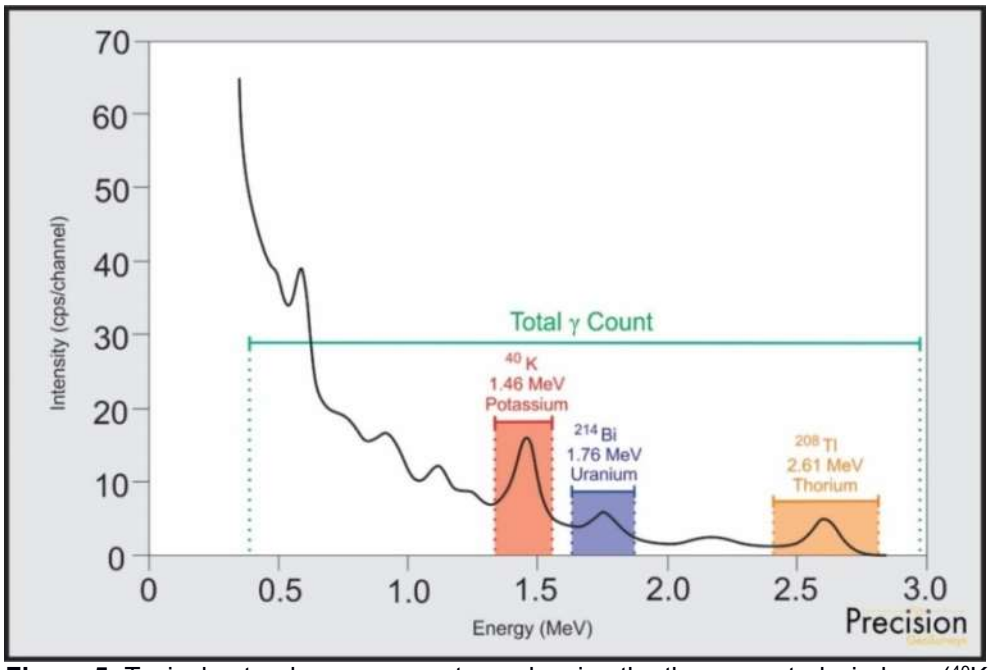


Figure 5: Typical natural gamma spectrum showing the three spectral windows (^{40}K 1.37-1.57 MeV, ^{214}Bi 1.66-1.86 MeV, ^{208}Tl 2.41-2.81 MeV) and total count (0.40-2.81 MeV) window.

Surficial debris, vegetation, standing water (lakes, marshes, swamps), ice, and snow can attenuate gamma rays originating from the underlying rocks. Therefore, surficial conditions must be evaluated before attributing variations in gamma counts to changes in the underlying geology. An increase in soil moisture can also significantly affect gamma radiation concentrations. For example, a 10% increase in soil moisture can decrease the measured gamma radiation by about the same amount. Radon isotopes are long-lived members of both the U and Th decay series and Ra mobility can influence radiometric surveys. In addition to being directly radioactive, ^{226}Ra and ^{222}Rn can attach to dust particles in the atmosphere. Precipitation of these radioactive dust particles by rain can lead to apparent increases of more than 2000% in uranium ground concentration (IAEA, 2003). Therefore, gamma data are not typically collected during a rainfall, or shortly after a rainfall.

3.0 Aircraft and Equipment

All geophysical and subsidiary equipment were carefully installed on an aircraft by Precision GeoSurveys to collect gradient magnetic and radiometric data.

3.1 Aircraft

Precision GeoSurveys flew the survey using an Airbus AS350 helicopter, registration C-GSVY.

3.2 Geophysical Equipment

The survey aircraft (Figure 6) was equipped with a data acquisition system, GPS navigation system, pilot guidance unit (PGU), laser altimeter, triple magnetic gradient boom system, fluxgate magnetometer, gamma spectrometer, barometer, and temperature/humidity probe. In addition, two magnetic base stations were used to record temporal magnetic variations. Technical specifications for the geophysical equipment are provided in Appendix B.



Figure 6: Survey helicopter equipped with three magnetic sensors for gradient magnetic data acquisition and gamma spectrometer.

3.2.1 IMPAC

The Integrated Multi-Parameter Acquisition Console (IMPAC) (Figure 7), manufactured by Nuvia Dynamics Inc. (previously Pico Envirotec Inc.), is the main computer used in integrated data recording, data synchronizing, providing real-time quality control data for the geophysical operator display, and the generation of navigation information for the pilot and operator display systems.



Figure 7: IMPAC data acquisition system.

IMPAC uses the Microsoft Windows operating system and geophysical parameters are based on Nuvia's Airborne Geophysical Information System (AGIS) software. Depending on survey specifications, information such as magnetic field, electromagnetic response, total gamma count, differentiation of natural radioelements (K, U, Th, etc.), cosmic radiation, barometric pressure, atmospheric humidity, temperature, aircraft attitude, navigation parameters, and GPS status can all be monitored on the AGIS on-board display (Figure 8).

While in flight, raw magnetic response, magnetic fourth difference, compensated and uncompensated data, radiometric spectra, EM response, aircraft position, survey altitude, cross track error, and other parameters are recorded and can be viewed by the geophysical operator for immediate QC (quality control). Additional software allows for post or real time magnetic compensation and radiometric calibration.

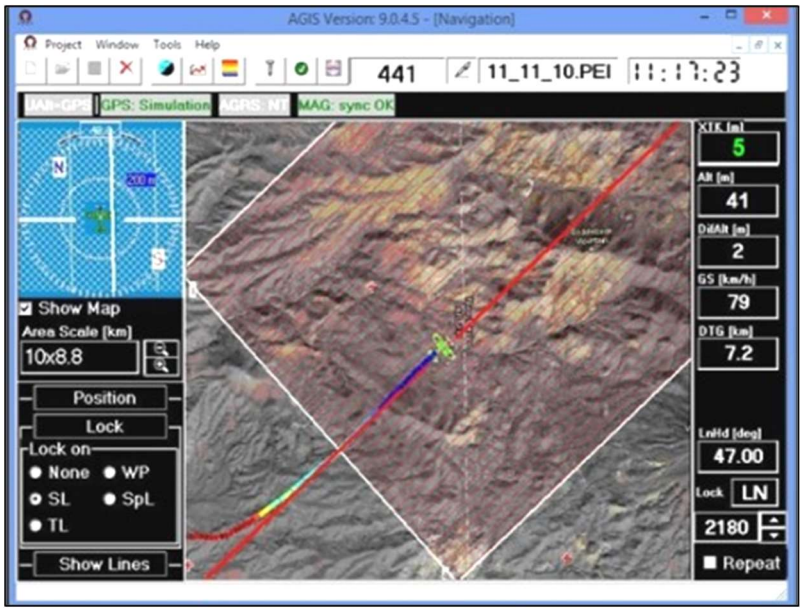


Figure 8: AGIS operator display showing real time flight line recording and navigation parameters. Additional windows display real-time geophysical data to operator.

3.2.2 GPS Navigation System

A Hemisphere R330 GPS receiver (Figure 9) and a Novatel GPS antenna on the tail of the aircraft integrated with the AGIS navigation system and pilot display (PGU) provide accurate navigational information and position control. The R330 GPS receiver supports fast updates at a rate of up to 10 Hz (10 times per second), delivering sub-meter positioning accuracy in three dimensions. It receives GNSS (GPS/GLONASS) L1 and L2 signals.

Differential correction methods including WAAS, L-Band, RTK, SBAS, and Beacon are supported by the R330. Innovative Hemisphere GPS Eclipse SureTrack technology allows the receiver to

model the phase on satellites that the airborne unit is currently tracking. With SureTrack technology, dropouts are reduced and speed of the signal reacquisitions is increased, which enhances accurate positioning when base corrections are temporarily not available.



Figure 9: Hemisphere R330 GPS receiver.

3.2.3 Pilot Guidance Unit

Steering and elevation (ground clearance) information is continuously provided to the pilot via the Pilot Guidance Unit (PGU). The graphical display is mounted on top of the aircraft's instrument panel, remotely from the data acquisition system. The PGU is the primary navigation aid (Figure 10) to assist the pilot in maintaining the aircraft on the planned flight path, heading, speed, and at the desired ground clearance.

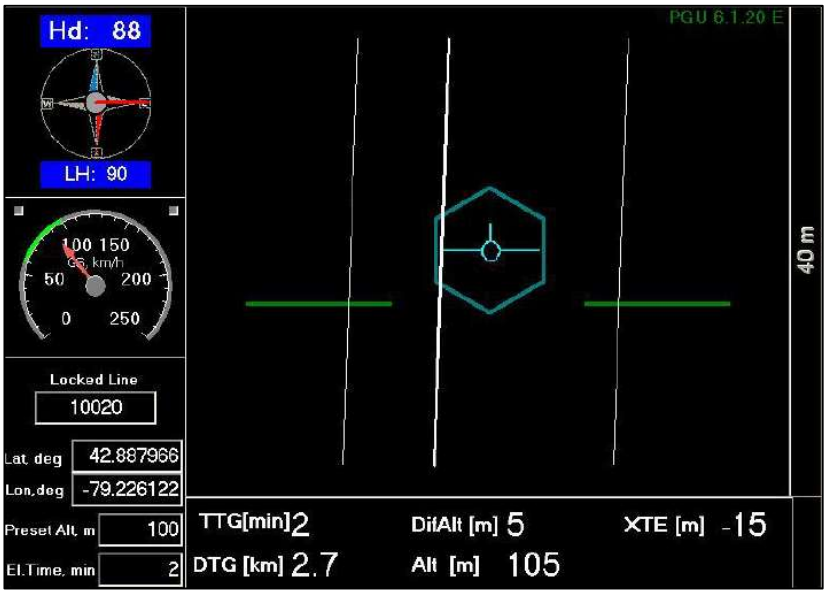


Figure 10: PGU screen displaying navigation information.

PGU information is displayed on a full VGA 600 x 800-pixel 7-inch (17.8 cm) LCD display. The CPU for the PGU is contained in a PC-104 console and uses Microsoft Windows operating system control, with input from the GPS antenna on the aircraft, laser altimeter, and AGIS.

3.2.4 Laser Altimeter

Terrain clearance is measured by an Opti-Logic RS800 Rangefinder laser altimeter (Figure 11) attached to the belly of the forward magnetometer boom. The RS800 laser is a time-of-flight sensor that measures distance by a rapidly modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 700 m off natural surfaces with accuracy of ±1 m on 1 x 1 m diffuse target with 50% (±20%) reflectivity. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and digital outputs, ground clearance data are transmitted to an RS-232 compatible port and recorded and displayed by the AGIS and PGU at 10 Hz in meters.

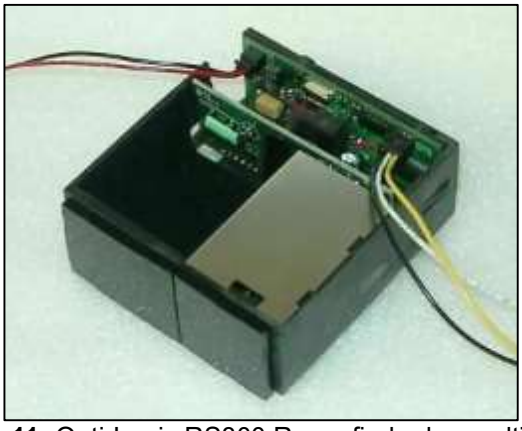


Figure 11: Opti-Logic RS800 Rangefinder laser altimeter.

3.2.5 Magnetic Gradiometer

The primary geophysical technology used on this survey was a magnetic gradiometer system (Figure 12). Three widely spaced Scintrex CS-3 split-beam cesium vapor magnetometers are mounted in a non-magnetic and non-conductive triple boom configuration to determine total magnetic intensity at each of the three positions. Magnetic gradient in the cross-line (X, or lateral, or transverse) and in-line (Y, or longitudinal) directions can be measured from the independent magnetometer positions (Table 2). The magnetometer sensors were oriented at 45° from the horizontal to couple with the local magnetic field at the Kelly Creek survey area.



Figure 12: View of triple magnetic boom system.

Magnetometer	Model	Serial No.	Gradient Direction	Separation (m)
Mag 1	Scintrex CS-3	2206667	X or Cross-line	11.5
Mag 2	Scintrex CS-3	2206666	Total Field and In-line	7.3
Mag 3	Scintrex CS-3	612211	X or Cross-line	11.5

Table 2: Magnetometer details. Cross-line gradient measured between Mag 1 and Mag 3.

3.2.6 Fluxgate Magnetometer

As the survey helicopter flies along a survey line, small attitude changes (pitch, roll, and yaw) are recorded by a triaxial fluxgate magnetometer (Figure 13). The fluxgate consists of three magnetic sensors, X, Y, and Z, operating independently and simultaneously. Each sensor has an analog output corresponding to the component of the ambient magnetic field along its axis. Response of the sensors is proportional to the cosine of the angle between the applied field and the sensor's sensitive axis.



Figure 13: Billingsley TFM100G2 triaxial fluxgate magnetometer.

3.2.7 Magnetic Base Station

Temporal variations of Earth's magnetic field, particularly diurnal, were always monitored and recorded by two GEM GSM-19T base station magnetometers during surveying. The base stations were in an area with low magnetic gradient (i.e., away from electric power transmission lines and moving ferrous objects, such as motor vehicles), for optimum survey data integrity.

The GEM GSM-19T magnetometer (Figure 14), with integrated GPS time synchronization, uses proton precession technology with absolute accuracy of ±0.20 nT and sensitivity of 0.15 nT at 1 Hz. Base station magnetic data were recorded on internal solid-state memory and downloaded onto a field laptop using a serial cable and GEMLink 5.4 software. Profile plots of the base station readings were generated, updated, and reviewed at the end of each survey day.



Figure 14: GEM GSM-19T proton precession magnetometer.

3.2.8 Spectrometer

Gamma radiation data were collected by an Advanced Gamma Ray Spectrometer (AGRS-5) manufactured by Nuvia Dynamics. The AGRS is an intelligent, self-calibrating, fully integrated gamma detection system (Figure 15) containing five thallium-activated synthetic sodium iodide crystals; 16.8 litres (four crystals of 4.2 litres each) downward-looking and 4.2 litres upward-looking (one crystal of 4.2 litres), with user-selectable 256, 512, or 1024 channel output at 1 Hz sampling rate. The downward-looking crystals are designed to measure gamma rays from below the aircraft. The upward-looking crystal is mounted directly on top of the four downward-looking crystals to measure cosmic and solar gamma radiation originating from above the survey aircraft and is shielded from terrestrial radiation by the downward-looking crystals. The AGRS system is installed in the rear passenger cabin of the helicopter away from the fuel tank to minimize variable gamma attenuation from fluctuating fuel levels.



Figure 15: AGRS-5 gamma spectrometer system with four downward and 1 upward detectors; 21 litres in total.

4.0 Survey Operations

The Kelly Creek geophysical survey was flown on August 7, 21, and 22, 2022 in summer conditions, light rain and low clouds. The experience of the pilot ensured that data quality objectives were met, and that safety of the flight crew was never compromised given the potential risks involved in airborne geophysical surveying. Field processing and quality control checks were performed daily.

4.1 Operations Base and Crew

The base of operation for the Kelly Creek survey was in Terrace, British Columbia, approximately 30 km west of the survey block.

Precision's geophysical crew consisted of eight members (Table 3):

Crew Member	Position
Bruno Prieur	Helicopter pilot
Harmen Keyser, P.Geo.	Helicopter pilot
Robert Bradley, BA.Sc., E.I.T.	Geophysical operator (on-site)
Liam Donohoe	Geophysical operator (on-site)
Puraz Shirzad, B.A.	GIS technician – mapping (off-site)
Jenny Poon, B.Sc., P.Geo.	Geophysicist – data processor (off-site)
Shawn Walker, M.Sc., P.Geo.	Geophysicist – data processor (off-site)
Jen Hanlon, M.Sc., P.Geo.	Geophysicist – reporting (off-site)

Table 3: List of survey crew members.

4.2 Magnetic Base Station Specifications

Changes in Earth's magnetic field over time, such as diurnal variations, magnetic pulsations, and geomagnetic storms, were measured and recorded by two GEM GSM-19T proton precession magnetometers. The magnetic base stations were installed west of the survey block. Due to accessibility, the base stations were installed at a new location when the crew returned to complete the survey on August 21, 2022. The base stations were in an area of low magnetic noise, away from metallic items such as ferromagnetic objects, vehicles, and power lines that could affect the base station data and ultimately the survey data (Table 4; Figures 16 and 17).

Date	Station Name	Easting/Northing	Latitude/Longitude	Datum/Projection
Aug 7, 2022	GEM 7 S/N 2069126	527240 m E 6036570 m N	54° 28' 33.76" N 128° 34' 46.65" W	WGS 84, Zone 9N
	GEM 8 S/N 2069127	527242 m E 6036561 m N	54° 28' 33.47" N 128° 34' 46.54" W	WGS 84, Zone 9N
Aug 21 and Aug 22, 2022	GEM 7 S/N 2069126	548731 m E 6036985 m N	54° 28' 41.40" N 128° 14' 52.53" W	WGS 84, Zone 9N
	GEM 8 S/N 2069127	548717 m E 6036976 m N	54° 28' 41.11" N 128° 34' 53.32" W	WGS 84, Zone 9N

Table 4: Magnetic base station locations.

Magnetic readings were reviewed at regular intervals to ensure that no airborne data were collected during periods of high magnetic activity (in excess of 10 nT from a linear chord of five minutes).

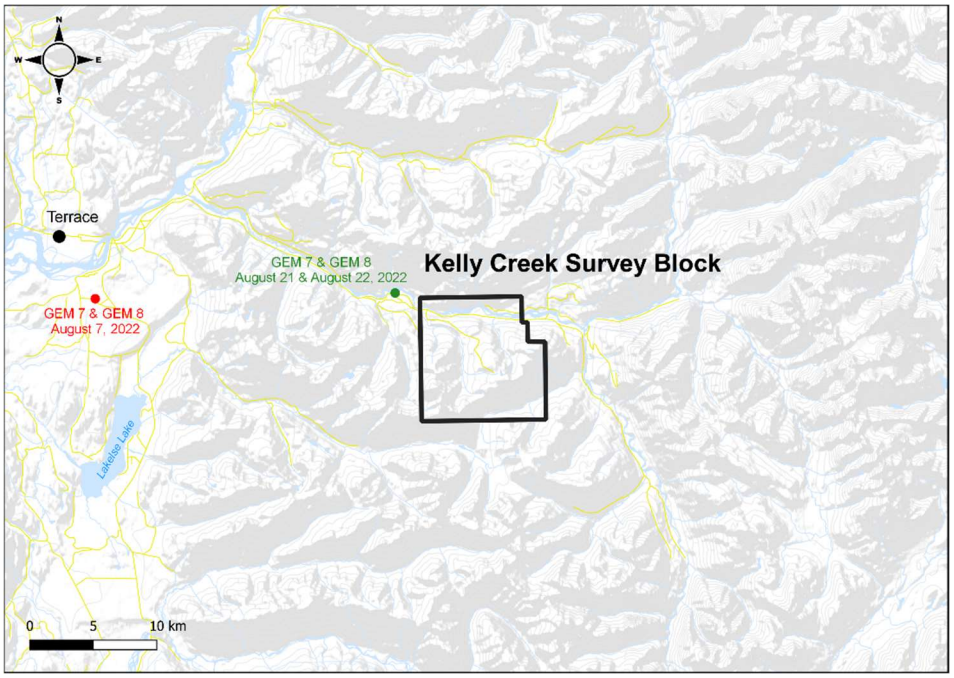


Figure 16: Location of GEM 7 and GEM 8 magnetic base stations, west of Kelly Creek survey block.

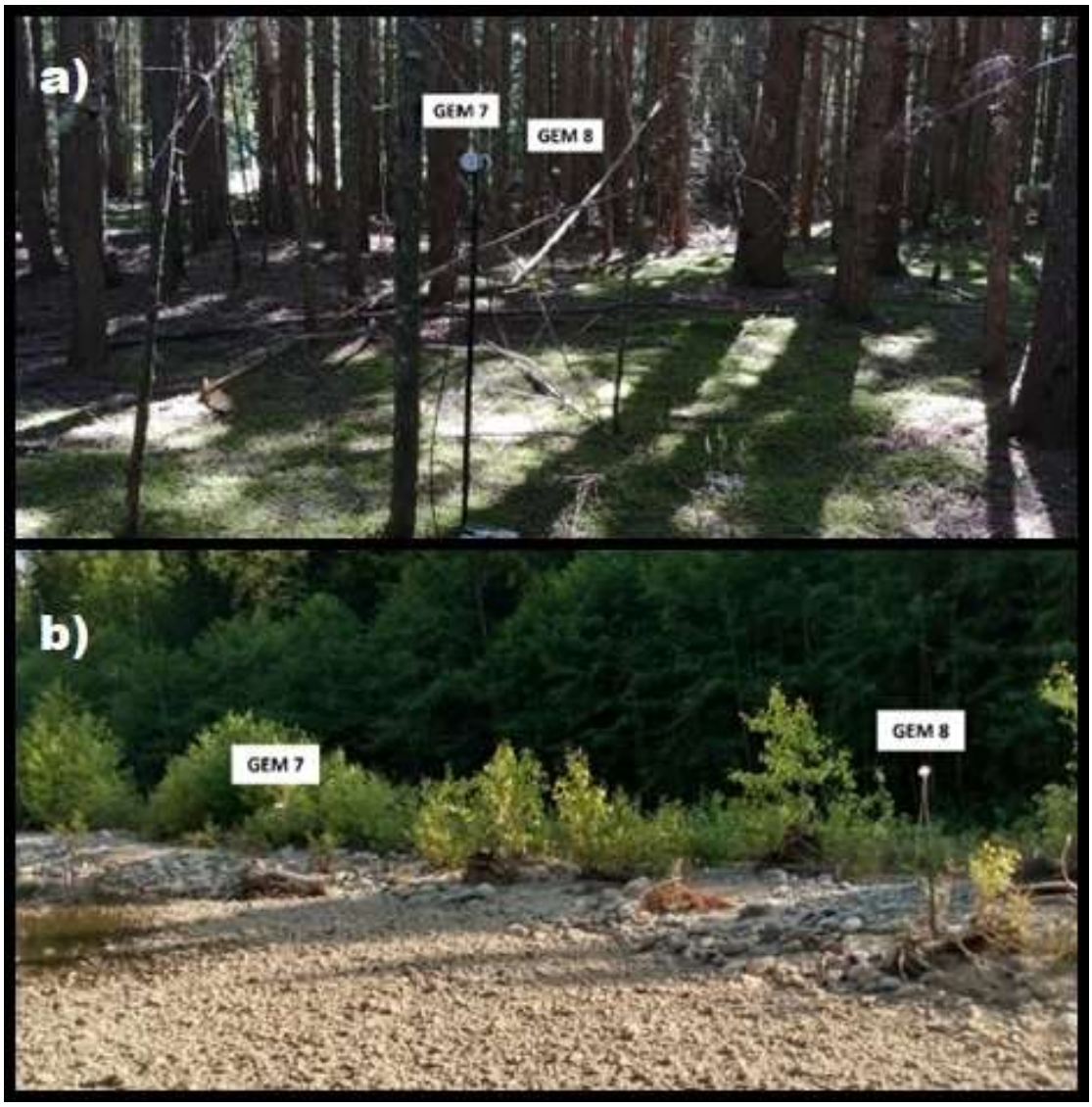


Figure 17: GEM 7 and GEM 8 magnetic base stations on a) Aug 7, 2022 and b) Aug 21 and Aug 22, 2022.

4.3 Field Processing and Quality Control

Survey data were transferred from the aircraft's data acquisition system onto a USB memory stick and copied onto a field data processing laptop on a flight-by-flight basis. The raw data files in Nuvia PEI binary data format was converted into Geosoft GDB database format. Using Geosoft Oasis Montaj 2021.2.1.11, the data were inspected to ensure compliance with contract specifications (Table 5; Figures 18 to 20).

Parameter	Specification	Tolerance
Position	Sampling	10 Hz
	Line Spacing	Flight line deviation within 8 m left/right (L/R) from ideal flight path. No exceedance for more than 1 km.
	Height	Nominal flight height of 50 m above ground level (AGL) with tolerance of ±10 m. No exceedance for more than 1 km, provided deviation is not due to tall trees, topography, mitigation of wildlife/livestock harassment, cultural features, or other obstacles beyond the pilot's control.
	GPS	GPS signals from four or more satellites must be received at all times, except where signal loss is due to topography. No exceedance for more than 1 km.
Magnetics	Sampling	20 Hz
	Temporal/Diurnal Variations	Non-linear temporal magnetic variations within 10 nT of a linear chord of length 5 minutes.
	Normalized 4th Difference	Magnetic data within 0.02 nT peak to peak. No exceedance for distances greater than 1 km or more, provided noise is not due to geological or cultural features.
Radiometrics	Sampling	1 Hz, 256 channels.
	Moisture Conditions	No delays shall be incurred due to unfavourable radiometric survey conditions.

Table 5: Contract survey specifications.

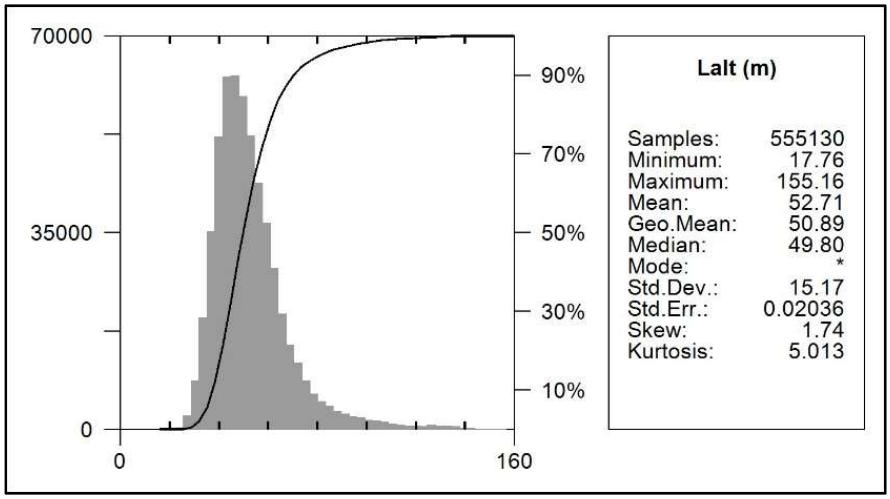


Figure 18: Histogram showing survey elevation vertically above ground.

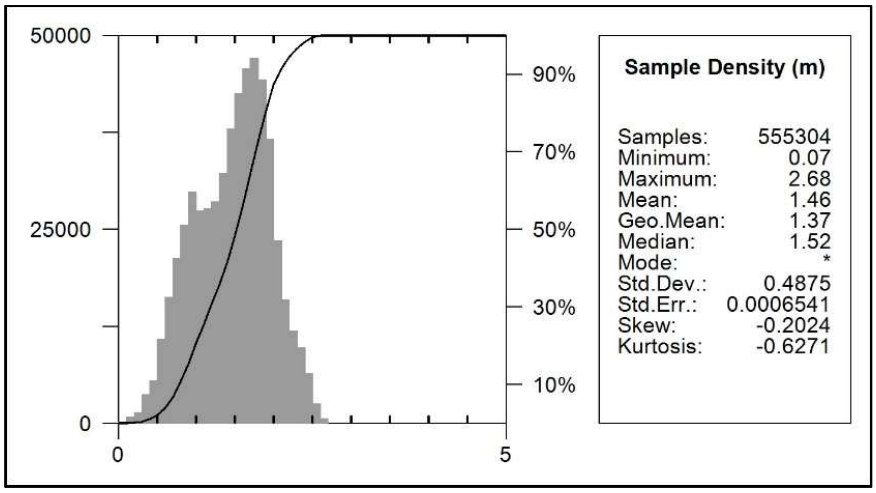


Figure 19: Histogram showing magnetic sample density. Note: Horizontal distance is given in meters between adjacent measurement locations. Magnetic sample frequency is 20 Hz.

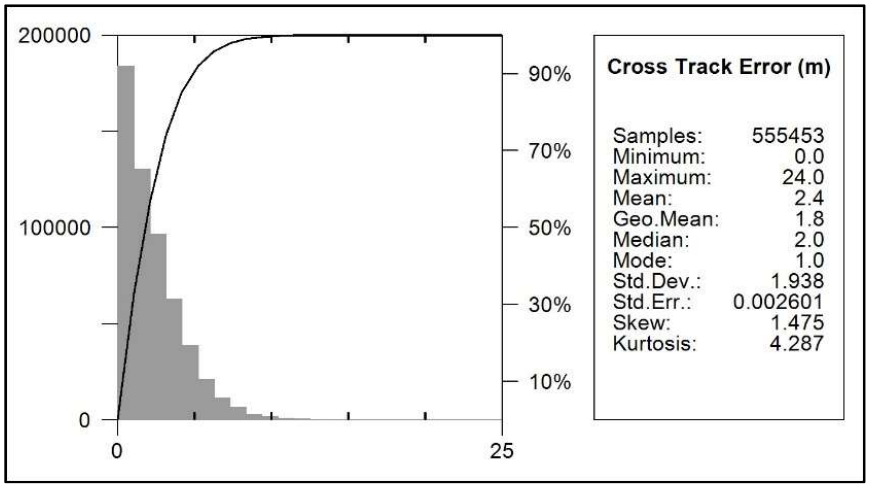


Figure 20: Histogram showing cross track error of survey helicopter.

5.0 Data Acquisition Equipment Checks

Equipment tests and calibrations were conducted for the laser altimeter, magnetometers, and spectrometer at the start of the survey to ensure compliance with contract specifications and to deliver high quality airborne geophysical data. A lag test was conducted for all sensors. For the airborne magnetometers, compensation and heading error test flights were flown. There were three tests conducted for the gamma spectrometer: calibration pad test, cosmic flight test, and altitude correction and sensitivity test.

5.1 Laser Altimeter Calibration

The Opti-Logic RS800 laser altimeter used on the survey helicopter was tested and calibrated in accordance with manufacturer's instructions prior to starting the survey. This ensured that heights reported by the laser were accurate within the normal survey operating range.

5.2 Lag Test

A lag test was performed to determine the time difference between recording the digital readings from the magnetometers, laser altimeter, spectrometer, and the fiducially marked position fix time of the readings obtained by the GPS system. Lag can result from a combination of system lag and varying distances of the sensors with respect to the GPS antenna. The test was flown in reciprocal headings over identifiable features at survey speed and height to isolate position changes. The resulting data (Table 6) were used to correct for time and position.

Instrument	Source	Lag Fiducial	Correction (sec)
Mag 1	Logging equipment	8	0.4
Mag 2	Logging equipment	12	0.6
Mag 3	Logging equipment	8	0.4
Laser	Sharp gully	18	0.90
Spectrometer	Lake edge	16	0.80

Table 6: Survey lag correction values. Laser altimeter and spectrometer were resampled to 20 Hz.

5.3 Magnetometer Tests

The magnetometers were tested and calibrated with a series of dedicated flights specifically for removing instrument offset errors and undesired effects of aircraft movement, speed, and heading direction.

5.3.1 Compensation Flight Test

The magnetometers are located within the aircraft's magnetic field and are therefore influenced by changes in the aircraft attitude and permanent magnetization of ferrous aircraft components. To remove this noise, the aircraft was first degaussed using proprietary technology prior to the survey and the remaining noise was removed by a process called magnetic compensation.

Magnetic compensation is achieved by completing a series of prescribed maneuvers in flight (±10° roll, ±10° pitch, and ±10° yaw) over each of the four orthogonal headings utilized within the survey area. The maneuvers must be completed at a sufficient altitude (typically > 2,500 m AGL) in an

area of low magnetic gradient, so that Earth's magnetic field becomes nearly uniform at the altitude of the compensation flights. In each heading direction, three instances of the roll, pitch, and yaw maneuvers (total 36) are performed at constant elevation with the maneuvers recorded by the fluxgate magnetometer relative to the ambient magnetic field. In this manner, the magnetic response at the airborne magnetometers can be attributed to aircraft movement, and the necessary parameters can be calculated to remove aircraft movement noise from the survey data. Compensation flight test results are summarized in Tables 7 to 9.

Pre-Compensation (nT)					Post-Compensation (nT)				
Heading	**Roll**	**Pitch**	**Yaw**	**Total**	**Heading**	**Roll**	**Pitch**	**Yaw**	**Total**
089°	1.2691	0.7776	0.7521	2.7988	089°	0.1701	0.1647	0.1820	0.5168
179°	0.8110	0.5913	0.4304	1.8327	179°	0.2270	0.2392	0.1900	0.6562
269°	0.9121	0.5877	0.4252	1.9250	269°	0.3001	0.3255	0.3194	0.9450
359°	1.5828	0.3602	0.3535	2.2965	359°	0.2718	0.3068	0.2745	0.8531
Figure of Merit = 8.8530					**Figure of Merit = 2.9711**				

Table 7: Results of compensation flight for Mag 1.

Pre-Compensation (nT)					Post-Compensation (nT)				
Heading	**Roll**	**Pitch**	**Yaw**	**Total**	**Heading**	**Roll**	**Pitch**	**Yaw**	**Total**
089°	0.2587	0.8528	0.4095	1.5210	089°	0.1451	0.1564	0.1839	0.4854
179°	0.2498	0.4006	0.1955	0.8459	179°	0.1504	0.1438	0.1226	0.4168
269°	0.2611	0.6819	0.3525	1.2955	269°	0.1285	0.1286	0.1272	0.3843
359°	0.3544	0.9193	0.3236	1.5973	359°	0.1405	0.1317	0.1235	0.3957
Figure of Merit = 5.2597					**Figure of Merit = 1.6822**				

Table 8: Results of compensation flight for Mag 2.

Pre-Compensation (nT)					Post-Compensation (nT)				
Heading	**Roll**	**Pitch**	**Yaw**	**Total**	**Heading**	**Roll**	**Pitch**	**Yaw**	**Total**
089°	0.8874	0.7145	0.6231	2.2250	089°	0.2038	0.1901	0.2115	0.6054
179°	0.6368	0.7181	0.3077	1.6626	179°	0.2467	0.2578	0.2161	0.7206
269°	1.1702	0.6608	0.5304	2.3614	269°	0.3434	0.3526	0.2991	0.9951
359°	2.6327	0.7073	0.4864	3.8264	359°	0.3128	0.2987	0.2373	0.8488
Figure of Merit = 10.0754					**Figure of Merit = 3.1699**				

Table 9: Results of compensation flight for Mag 3.

5.3.2 Heading Correction Test

To determine offsets resulting from instrument orientation and asymmetric aircraft response, the average magnetic value for each of the three sensors was calculated from the entire survey. The average for each of the four survey headings was then compared to the overall average to determine the heading correction and offset errors in each flight direction. Heading correction values derived from the data analysis for each of the magnetometers are summarized in Table 10.

Heading	Mag 1 Heading Correction (nT)	Mag 2 Heading Correction (nT)	Mag 3 Heading Correction (nT)
089°	17.33	7.76	18.98
179°	-1.47	-4.61	-9.17
269°	-15.23	-5.59	-16.68
359°	-0.63	2.44	6.87
Total:	**0.0000**	**0.0000**	**0.0000**

Table 10: Magnetic sensor heading corrections.

5.4 Gamma-ray Spectrometer Tests and Calibrations

Calibration and testing of the AGRS-5 airborne gamma-ray spectrometry system was carried out prior to starting the survey. Spectrometer calibration involved three tests which enabled the conversion of airborne data to ground concentration of natural radioactive elements. These tests were the calibration pad test, cosmic flight test, and the altitude correction and sensitivity test. Procedures were generally in accordance with IAEA technical report series No. 323, *Airborne Gamma Ray Spectrometer Surveying*, and AGSO Record 1995/60, *A Guide to the Technical Specifications for Airborne Gamma-Ray Surveys*.

5.4.1 Calibration Pad Test

The calibration pad test was conducted using Geological Survey of Canada (GSC) portable calibration pads. The pads are slabs of concrete containing known concentrations of the natural radioelements K, Th, and U and are used to simulate ideal geological sources of radiation. The measurements collected from the calibration pad test were used to determine Compton scattering and Grasty backscatter (spectral overlap between element windows) coefficients.

5.4.2 Cosmic Flight Test

While the background source of gamma radiation from the aircraft itself is essentially constant, the amount of signal detected from ground sources varies with ground clearance. As the height of the aircraft increases, the distance between the ground and the spectrometer crystals increases, and the proportion of cosmic radiation in each spectral window increases exponentially. The cosmic flight test is conducted to determine the aircraft's background attenuation coefficients for the detector

crystal packs and the cosmic coefficients. The pilot is required to fly over the same low gamma source location (such as a large lake) repeatedly at 4000, 5000, 6000, 7000, and 8000 feet (1220, 1520, 1830, 2130, and 2440 m) above ground, for approximately two minutes each, to collect gamma data used to determine the non-terrestrial component present in the total gamma signal.

5.4.3 Altitude Correction and Sensitivity Test

The altitude and sensitivity test is similar to the cosmic flight test but is conducted at lower elevations. The aircraft is required to fly over the same location at 30, 40, 50, 60, 70, 100, and 120 m above ground, for two minutes each. As the distance between the gamma detectors on the aircraft and the radioactive ground source increases, the source signature exponentially degrades. As a result, this test is used to determine the altitude attenuation coefficients and the radio-element sensitivity of the airborne spectrometer system.

6.0 Data Processing

After the survey was completed, several procedures were undertaken to ensure that the data met a high standard of quality. Magnetic and radiometric data were converted into Geosoft or ASCII file formats using Nuvia Dynamics software. Further processing (Figure 21) was carried out using Geosoft Oasis Montaj 2021.2.1.11 geophysical processing software along with proprietary processing algorithms.

6.1 Position Corrections

In order to collect high-resolution geophysical data, the location at which the data were collected and recorded must be accurate.

6.1.1 Lag Correction

A correction for lag error was applied to the geophysical data recorded at each individual sensor to compensate for lag caused by the physical distance between GPS antenna, the recording system, and the sensing instrument. Validity of the lag corrections was confirmed by the absence of grid corrugations in adjacent reciprocal lines.

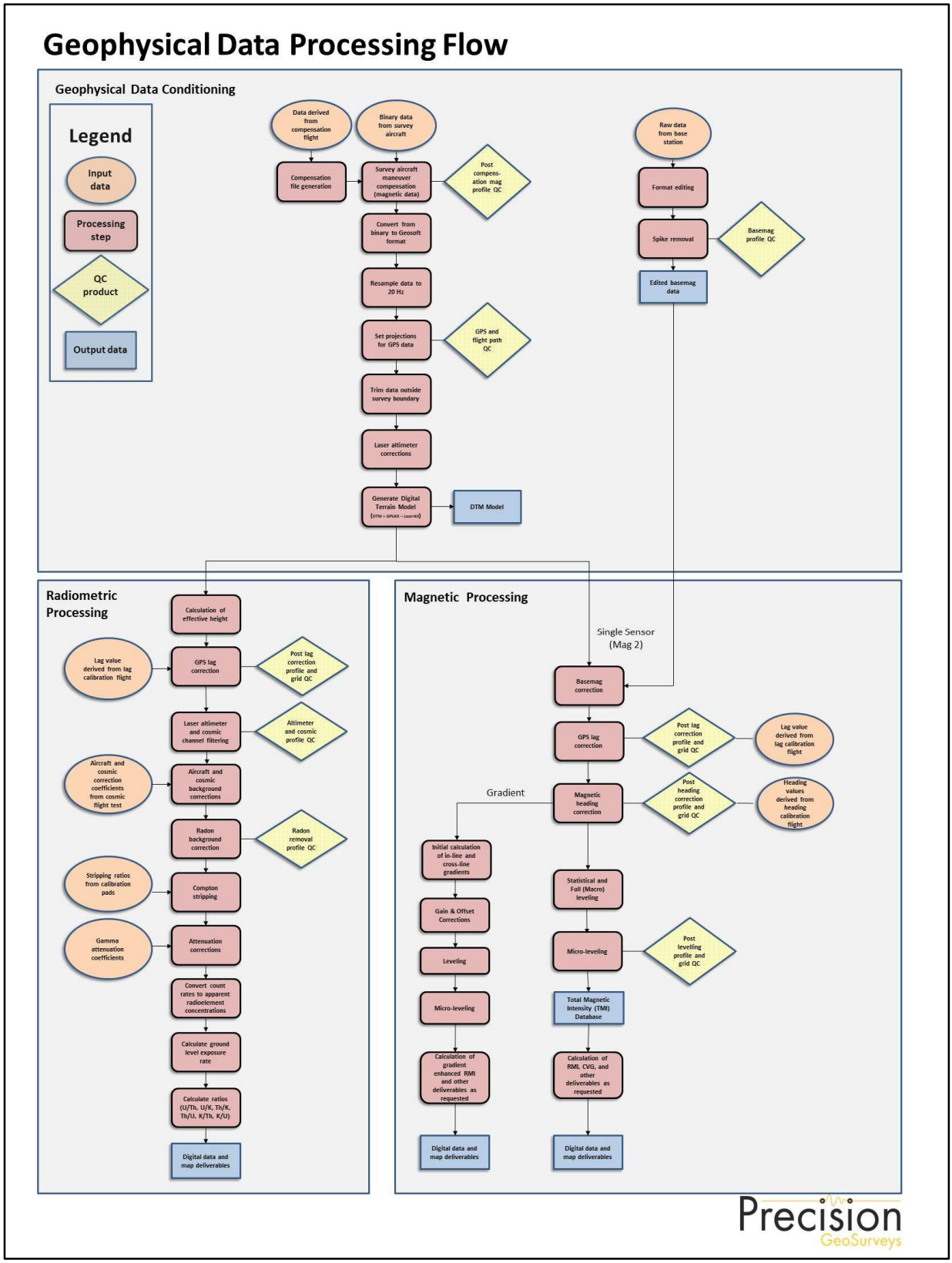


Figure 21: Gradient magnetic and radiometric data processing flow.

6.2 Flight Height and Digital Terrain Model

Laser altimeters are unable to provide valid data over glassy water or fog, as the water molecules scatter the laser so that a "zero" reading is obtained. In these cases, estimates of correct height were inserted manually. Additionally, dense vegetation generates high frequency variations from leaf and branch reflections. A Rolling Statistics filter was applied to the lag corrected laser altimeter data to remove vegetation clutter, and then a Low Pass filter was used to smooth out the laser altimeter profile. These filters eliminate the isolated high-frequency noise and generate a surface that closely corresponds to the actual ground profile.

As the GPS antenna is on the tail of the helicopter, altitude data were corrected by subtracting 3.1 m to place it in the same plane as the laser altimeter and on-board geophysical sensors. A Digital Terrain Model (DTM) was determined by subtracting the laser altimeter data from the filtered GPS altimeter data defined by the WGS 84 ellipsoidal height. DTM accuracy is affected by the attitude of the aircraft, slope of the ground, sample density, and satellite geometry. Small inconsistencies in recorded flight height at the intersection points of survey lines and tie lines result in small spatial variabilities in the digital terrain model. Conventional leveling and micro-leveling were applied to correct for these variations and a fully leveled digital terrain model was generated.

6.3 Magnetic Processing

Magnetic data from each individual sensor were corrected for temporal variations (including diurnal) and lag. The data were examined for magnetic noise and spikes, which were removed as required. Survey line and tie line data of the resulting total magnetic field were leveled and the background magnetic field, International Geomagnetic Reference Field (IGRF) of the Earth was removed to derive the residual magnetic field. Magnetic gradients in the X and Y axes were determined to provide cross-line and in-line gradients, respectively.

6.3.1 Flight Compensation

Data obtained from the compensation flight test were applied to the raw magnetic data as the first step of data processing. MAGComp software was used to create a model from the compensation flight test for each survey to remove the noise induced by the aircraft and its movement. This model was applied to data from each survey flight.

6.3.2 Temporal Variation Correction

The intensity of Earth's magnetic field varies with position and time. The time variable, known as temporal variation, is removed from the recorded airborne data to provide the desired magnetic field at a specified location. Magnetic data from base station GEM 7 were used to correct the

temporal variation in the airborne magnetic survey data, and GEM 8 data were retained for backup. The data were edited, plotted, and merged into a Geosoft database (.GDB) on a daily basis.

Base station measurements were averaged to establish a magnetic reference datum of 55019.57 nT. Magnetic deviations relative to the reference datum were used to calculate the observed variations of the Earth's magnetic field during the time it took to complete the survey. The airborne magnetic data were then corrected for temporal variations by subtracting the base station deviations from the data collected on the aircraft.

6.3.3 Heading Correction

For each survey heading, changes in instrument magnetic fields along a survey flight line are detected and these systematic shifts are recorded. These values are used to construct a heading table (.TBL) file. An intersection table was created, containing all magnetic field values where tie lines intersect the survey lines, and an overall average magnetic field value was calculated. For each of the four headings, the averages were calculated and then compared to the overall average to determine four values which were used to correct heading and offset errors in each flight direction.

6.3.4 Leveling and Micro-leveling

Small inconsistencies in flight height and line orientation result in small spatial variabilities in magnetic intensity measured at the intersection points of survey lines and tie lines. Using the initial Total Magnetic Intensity (TMI) data from Mag 2, data from survey and tie lines were leveled to each other. Two types of leveling were applied to the corrected data: conventional leveling and micro-leveling. There are two components to conventional leveling: statistical leveling to level tie lines and full leveling to level survey lines. The statistical leveling method corrected the SL/TL intersection errors that follow a specific pattern or trend. Through the error channel, an algorithm calculated a least-squares trend line and derived a trend error curve, which was then added to the channel to be leveled. The second component was full leveling. This adjusted the magnetic value of the survey lines so that all lines matched the trended tie lines at each intersection point.

Following statistical and full leveling, micro-leveling was applied to the corrected conventional leveled data. This iterative grid-based process removes low amplitude components of flight line noise that remain in the data after tie line and survey line leveling and results in fully leveled TMI data.

6.3.5 IGRF Removal

The International Geomagnetic Reference Field (IGRF) model is the empirical representation of Earth's dynamic magnetic field (main core field without external sources) collected and

disseminated from satellite data and from magnetic observatories around the world. The IGRF has historically been revised and updated every five years by a group of modellers associated with the International Association of Geomagnetism and Aeronomy (IAGA).

The leveled Residual Magnetic Intensity (RMI) was calculated by taking the difference between the 13th generation IGRF (IGRF-13, released in December 2019) and the leveled Total Magnetic Intensity (TMI) to create a more valid model of individual near-surface magnetic anomalies. This model is independent of time to allow for other magnetic data (previous or future) to be more easily incorporated into each survey database.

6.4 Magnetic Gradient

When magnetic values are obtained simultaneously from two or more sensors at a fixed separation, a gradient of the magnetic field can be measured. Dividing the difference in magnetic values between the sensors by the distance between the sensors yields the magnetic gradient. The units are commonly reported as nT/m and, by convention, positive magnetic polarity is defined as to the north and east, and negative to the south and west. For vertical gradient, positive is defined as downwards. The sensors and the separations that were used to determine the various gradients are listed in Table 11.

Direction	Sensors	Separation (m)
Lateral (X)	Mag 1 and Mag 3	11.5
Longitudinal (Y)	Sequential TMI values (Mag 2)	1.46*

Table 11: Magnetic sensor relationship used to calculate magnetic gradients. Total magnetic intensity (TMI) was determined from Mag 2, and successive values of the TMI were used to determine the longitudinal (Y axis) gradient.
*average separation between sequential TMI values for Mag 2 shown; actual value varied according to aircraft speed.

6.4.1 Horizontal Gradients

Horizontal magnetic gradients were determined in the in-line (Y axis) and cross-line (X axis) directions. Gradients were calculated with respect to the magnetometer array with units provided as nT/m.

In-line gradient (ILG) is determined from successive magnetic values of Mag 2 referenced to the distance between data points in accordance with the following formula:

$$ILG = \frac{a(i+1) - a(i-1)}{d(i+1) + d(i-1)}$$

where: a is the total magnetic intensity of Mag 2
d is the distance between measurements
i is the record number for the location

Cross-line gradient (XLG) was measured directly by dividing the difference between Mag 1 and Mag 3 by the sensor separation in accordance with the following formula:

$$XLG = \frac{\text{Mag 1} - \text{Mag 3}}{d_x}$$

where: d_x is the transverse sensor separation, 11.5 m

Gain corrections were applied to the initial cross-line gradient. If the overall ratio of the TMI, for the survey lines, between Mag 1 and Mag 3 does not equal one, a gain correction needs to be applied to account for instrument error and asymmetric magnetic fields. The mean of the ratio between the TMI values for Mag 1 and Mag 3 for each line was calculated and applied to each Mag 3 value along the line. The cross-line gradient was then re-calculated from the gain-corrected Mag 3 values.

Offset corrections were then applied to the cross-line gradient to reduce line-to-line errors (striping) in the gradient grid. The resulting data were then micro-leveled to remove any remaining striping.

Total Horizontal Gradient (HG) is the magnitude of the combined in-line and cross-line gradients. It is used to estimate contact locations of magnetic bodies at shallow depths, reveal anomalous textures, and highlight anomaly-pattern discontinuities.

Horizontal Gradient (HG) is calculated as:

$$\text{HG}(x, y) = \sqrt{ILG^2 + XLG^2}$$

where: ILG is the in-line gradient
XLG is the cross-line gradient

6.4.2 Calculation of Vertical Gradient

Calculated Vertical Gradient (CVG) is the first order vertical derivative of the leveled Residual Magnetic Intensity (RMI) data determined from Mag 2. It is the vertical rate of change in the magnetic field per unit distance (m). The vertical gradient is used to enhance shorter wavelength signals; therefore, edges of magnetic anomalies are highlighted, and deep geologic sources in the data are suppressed.

The filter, L, used to produce the nth vertical derivative is described by:

$$L(r) = r^n$$

where: r is the radial component in the wavenumber domain

6.4.3 Analytic Signal

Analytic Signal (AS) is the magnitude of the total magnetic gradient, determined as the square root of the sum of the squares of the three gradient axes. Analytic signal is useful in locating the edges of magnetic source bodies.

If M is the magnetic field, then Analytic Signal (AS) is calculated as:

$$\mathrm{AS}(x,y,z) = \sqrt{\left(\frac{\partial M}{\partial x}\right)^2 + \left(\frac{\partial M}{\partial y}\right)^2 + \left(\frac{\partial M}{\partial z}\right)^2}$$

where: $\frac{\partial M}{\partial x}$ is the measured in-line gradient
$\frac{\partial M}{\partial y}$ is the measured cross-line gradient
$\frac{\partial M}{\partial z}$ is the calculated vertical gradient

6.4.4 Gradient Enhanced Magnetic Intensity

Using the measured gradients (in-line and cross-line directions), the initial enhanced Total Magnetic Intensity was generated using 3D Hilbert transforms. A Butterworth high-pass filter was applied to this initial enhanced TMI to isolate the short wavelength signals and a low-pass filter was applied to the measured TMI to isolate the long wavelength signals. These wavelengths are then summed together to generate the final enhanced Total Magnetic Intensity (TMIge). The same method was applied to the measured RMI to generate the gradient enhanced Residual Magnetic Intensity (RMIge). This method is referred to as the Nelson method for gradient enhancement (*Nelson, J. B., 1994, Leveling total-field aeromagnetic data with measured horizontal gradients (short note): Geophysics, Soc. of Expl. Geophys., 59, 1166-1170*).

6.4.5 Gradient Enhanced Reduction to Magnetic Pole

Gradient enhanced Reduced to Magnetic Pole (RTPge) data were determined from the gradient enhanced Residual Magnetic Intensity (RMIge) data. The RTP filter was applied in the Fourier domain and rotates the observed magnetic inclination and declination field to what the field would look like at the north magnetic pole, to allow observation of magnetic trends and patterns independent of magnetic inclination and declination. Reducing the dipolar nature of magnetic

anomalies is useful for interpretation because peak RTP magnetic values can be related to the centre of magnetic rock bodies and asymmetries in the RTP imagery closely reflect true dips and plunges.

Inclination and declination were calculated by using August 22, 2022, the last day of the survey. The derived values were used in the following formula:

$$RTP\ (\theta) = \frac{[\sin(I) - I\ \cdot \cos(I) \cdot \cos(D-\theta)]^2}{[\sin^2(I_a) + \cos^2(I_a) \cdot \cos^2(D-\theta)] \cdot [\sin^2(I) + \cos^2(I) \cdot \cos^2(D-\theta)]}$$

where: I is geomagnetic inclination in ° from horizontal
D is geomagnetic declination in ° azimuth from magnetic north
I_a is the inclination for amplitude correction (never less than I). Default is ± 20°. If $|I_a|$is specified to be less than$|I|$, it is set to I

6.5 Radiometric Processing

Radiometric surveys map gamma rays from the concentration of radioelements present at or near the Earth surface; typically within 1 m of the surface. Before airborne radiometric data are processed, the spectrometer system is calibrated with the calibration pad test, cosmic flight test, and altitude correction and sensitivity test. Once calibration of the system was completed, radiometric data were processed by windowing the full 256 channel spectrum to create individual channels for U, Th, K, and total count (TC).

Potassium (^{40}K) is measured directly at 1.461 MeV and is reported as %K. Secular equilibrium in the decay chains of uranium (^{238}U determined from the radon daughter ^{214}Bi) and thorium (^{232}Th determined from ^{208}Tl) is assumed and the ground concentration results are reported as equivalent uranium (eU, ppm) and equivalent thorium (eTh, ppm). Total gamma count (TC) data (energy range from 0.41 to 2.81 MeV) is reported in dose rate (nGy/hr).

Radiometric processing generally followed the procedures provided by the International Atomic Energy Agency (IAEA) report 1363, *Guidelines for Radioelement Mapping using Gamma Ray Spectrometry Data*.

6.5.1 Calculation of Effective Height

Effective height (h_{ef}) in meters was determined using laser/radar altimeter, temperature, and pressure data, according to the formula below:

$$h_{ef} = h * \frac{273.15}{T + 273.15} * \frac{P}{1013.25}$$

where: h is measured laser/radar altitude in meters
T is measured air temperature in degrees Celsius
P is barometric pressure in millibars

6.5.2 Aircraft and Cosmic Background Corrections

Aircraft background and cosmic stripping corrections are applied to total gamma count and all three individual radioelements using the following formula:

$$C_{ac} = \mathrm{a}_c + b_c * Cos_f$$

where: C_{ac} is the background and cosmic corrected channel
a_c is the aircraft background for this channel
b_c is the cosmic stripping coefficient for this channel
Cos_f is the filtered cosmic channel

6.5.3 Radon Background Correction

Atmospheric radon can influence the gamma response of airborne radiometric data. The upward-looking detector provides directional sensitivity and the ability to discriminate between radiation from the atmosphere and radiation from the ground, to allow the removal of atmospheric radon effects from the downward-looking detectors.

Radon contribution to the uranium window of the "downward" uranium window is given by:

$$U_r = \frac{u - a_1 U - a_2 T + a_2 b_t - b_u}{a_u - a_1 - a_2 a_t}$$

where: U_r is radon background in the "downward" U window
u is count rate in the "upward" U window
U is count rate in the "downward" U window
T is count rate in the "downward" Th window
a_1, a_2, a_u, a_t, b_u, and b_t are constants derived by calibration

6.5.4 Compton Stripping

Spectral overlap corrections are applied to potassium, uranium, and thorium as part of the Compton stripping process. This is done by using the stripping ratios that have been calculated for the spectrometer by prior calibration.

For each of the stripping ratios α, β, and γ, height corrections at STP are made by using the following formulas:

$$\alpha_h = \alpha + h_{ef} * 0.00049$$

$$\beta_h = \beta + h_{ef} * 0.00065$$

$$\gamma_h = \gamma + h_{ef} * 0.00069$$

where: α, β, and γ are the Compton stripping coefficients
α_h, β_h, and γ_h are the height-corrected Compton stripping coefficients
h_{ef} is the effective height above ground in metres at STP

Stripping corrections are then carried out using the following formulas:

$$Th_c = Th_{bc}(1 - g\beta_h) + U_{bc}(b\gamma_h - a) + K_{bc}(ag - b)/A$$

$$U_c = Th_{bc}(g\beta_h - \alpha_h) + U_{bc}(1 - b\beta_h) + K_{bc}(b\alpha_h - g)/A$$

$$K_c = [Th_{bc}(\alpha_h\gamma_h - \beta_h) + U_{bc}(a\beta_h - \gamma_h) + K_{bc}(1 - a\alpha_h)]/A$$

where: U_c, Th_c, and K_c are stripping-corrected uranium, thorium, and potassium
α_h, β_h, and γ_h are height-corrected Compton stripping coefficients
U_{bc}, Th_{bc}, and K_{bc} are background corrected uranium, thorium, and potassium
a is the spectral ratio Th/U
b is the spectral ratio Th/K
g is the spectral ratio U/K
$A = 1 - g\gamma_h - (\alpha_h - g\beta_h) - b(\beta_h - \alpha_h\gamma_h)$ is the backscatter correction

6.5.5 Attenuation Corrections

Total count, potassium, uranium, and thorium data are then corrected to a nominal survey altitude (corrected to remove vegetation clutter from radar/laser altimeter data); in this case the nominal survey height was 50 m AGL. This is done according to the equation:

$$C_a = C * e^{\mu(h_{ef} - h_0)}$$

where: C_a is the output altitude-corrected channel
C is the input channel
μ is the attenuation correction for that channel
h_{ef} is the effective altitude
h_0 is the nominal survey altitude used as datum

6.5.6 Conversion to Apparent Radioelement Concentrations

With all corrections applied to the radiometric data, the final step is to convert the corrected potassium (^{40}K), uranium (from ^{214}Bi), and thorium (from ^{212}Tl) to apparent radioelement concentrations using the following formula:

$$eE = C_{cor}/S$$

where: eE is the element concentration of K (%) and equivalent element concentrations of U (ppm) & Th (ppm)
S is the experimentally determined sensitivity
C_{cor} is the fully corrected channel

Conversion of total count to natural exposure rate (Grasty et al, 1984) is determined by using the following formula:

$$\text{Natural Exposure} = [(1.505 * K) + (0.625 * eU) + (0.31 * eTh)]$$

where: Natural Exposure is in µR/hr
K is the concentration of potassium (%)
eU is the equivalent concentration of uranium (ppm)
eTh is the equivalent concentration of thorium (ppm)

6.5.7 Radiometric Ratios

Common radiometric ratios (U/Th, Th/K, U/K, and their inverses) were calculated using the guidelines of the IAEA. Due to statistical uncertainties in the individual radioelement measurements, care was taken during ratio calculation in order to obtain statistically significant values. The following guidelines were used to determine the ratios:

1. For each concentration, the lowest corrected count rate is determined.
2. Element concentrations of adjacent points on either side of each data point are summed until they exceed a pre-determined threshold value.
3. The ratios are calculated using the accumulated sums.

With these guidelines, errors associated with the calculated ratios are minimized and comparable for all data points.

6.5.8 Ternary Radioelement Image Map

Ternary images are a graphic representation of the relative proportion of the radioelement concentrations of %K, eTh, and eU components in proportion to the respective colours blue (cyan), red (magenta), and yellow. Since each distinct colour is used to represent each ternary ratio on the map, zones with similar ratios will be represented by a unique colour. This distinct relationship between colour and ternary ratio allows the map to show surficial radioelement concentration and distribution. Dark and light colours indicate high and low values for all three radionuclides, respectively. Areas of low radioactivity, and consequently low signal to noise ratios, can be masked and are shaded in white. Because the ternary image is a three-way ratio, topographic and physiographic effects are suppressed and a visualization of the relative concentrations of the individual radioelements are presented to help discriminate between different zones of lithology and alteration.

7.0 Deliverables

Kelly Creek survey data are presented as digital databases, grids, maps, and a logistics report.

7.1 Digital Data

Digital files have been provided in three formats:

- GDB file for use in Geosoft Oasis Montaj
- XYZ file
- CSV Excel comma separated file.

Full descriptions of the digital data and contents are included in Appendix D.

7.1.1 Grids

The digital data were represented as grids as listed below:

- Digital Terrain Model (DTM)
- Total Magnetic Intensity (TMI)
- Residual Magnetic Intensity (RMI) – removal of IGRF from TMI
- Reduced to Magnetic Pole (RTP) – reduced to magnetic pole of RMI
- In-Line Gradient (ILG)
- Cross-Line Gradient (XLG)
- Horizontal Gradient (HG) – total magnitude of the measured horizontal gradients (in-line and cross-line)
- Calculated Vertical Gradient (CVG)

- Analytic Signal (AS) – total magnitude of the measured horizontal gradients (in-line and cross-line) and calculated vertical gradient
- Gradient enhanced Total Magnetic Intensity (TMIge)
- Gradient enhanced Residual Magnetic Intensity (RMIge) – subtraction of IGRF
- Gradient enhanced Reduced to Magnetic Pole (RTPge) – reduced to magnetic pole of RMIge
- Potassium – Percentage (%K)
- Thorium – Equivalent Concentration (eTh)
- Uranium – Equivalent Concentration (eU)
- Total Count (TC)
- Total Count – Exposure Rate (TCexp)
- Potassium over Thorium Ratio (%K/eTh)
- Potassium over Uranium Ratio (%K/eU)
- Uranium over Thorium Ratio (eU/eTh)
- Uranium over Potassium Ratio (eU/%K)
- Thorium over Potassium Ratio (eTh/%K)
- Thorium over Uranium Ratio (eTh/eU)
- Ternary Image (TI)

Digital magnetic and radiometric data were gridded and displayed using the following Geosoft parameters:

- Gridding method: minimum curvature
- Grid cell size: 25 m
- Low-pass desampling factor: 2
- Tolerance: 0.001
- % pass tolerance: 99.99
- Maximum iterations: 100
- Shading effect: sun inclination at 45° and declination at 045°

Descriptions of colour scales used to display the grids are presented in Appendix D.

7.2 KMZ

Gridded digital data were exported into .KMZ files which can be displayed using Google Earth. The grids can be draped onto topography and rendered to give a 3D view.

7.3 Maps

The following digital map products were prepared for Kelly Creek:

Overview Maps (colour images with elevation contour lines):

- Actual flight lines, with topographic features
- DTM

Magnetic Maps (colour images with elevation contour lines):

- TMI, with actual flight lines and topographic features
- TMI
- RMI
- RTP
- ILG
- XLG
- HG
- CVG
- AS

Gradient Enhanced Magnetic Maps (colour images with elevation contour lines):

- TMIge
- RMIge
- RTPge

Radiometric Maps (colour images with elevation contour lines):

- %K – Percentage
- eTh – Equivalent Concentration
- eU – Equivalent Concentration
- TC
- TCexp – Exposure Rate
- %K/eTh Ratio
- %K/eU Ratio
- eTh/eU Ratio
- Ternary Image

All survey maps were prepared in WGS 84 in UTM Zone 9N.

7.4 Report

A .PDF copy of the logistics report is included along with digital data and maps. The report provides information on acquisition, processing, and presentation of the Kelly Creek survey data.

8.0 Conclusions and Recommendations

The Kelly Creek survey collected 814 line km of high-resolution magnetic gradient and radiometric data over one survey block. The data have been processed and plotted on maps as a representation of the magnetic and radiometric features of the survey area.

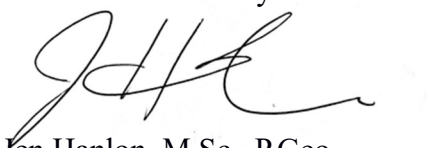
When magnetic and radiometric data are integrated into a single-pass airborne survey, they provide complementary information that serves as a durable geophysical/geochemical framework. Therefore, the geophysical data will be useful in mapping lithology, structure, and alteration, which will benefit mineral exploration initiatives and geological studies.

Geophysical data processing, particularly leveling and data interpolation routines, tend to smooth the original data so that resolution is reduced. In addition, gridding algorithms are not always able to properly calculate grids where flight height between adjacent flight lines varied due to cultural obstacles or steep terrain, where geological structures are acute to flight lines, where line spacing exceeds the size of the causative anomaly, or near grid margins as in "edge effects." Therefore, subtle geophysical features observed near survey margins or in gridded and derivative-enhanced products must be evaluated with discretion.

The airborne geophysical data were acquired to map the geophysical characteristics of the survey area, which are in turn related to the distribution of magnetic minerals, radioactive elements, and shallow conductors in the Earth. Magnetic patterns correspond to the concentration and distribution of magnetite and other magnetic minerals in Earth's subsurface. Radiometric data are influenced by topographic features and surficial effects, and ratios can be used to evaluate the near-surface radioelement geochemistry of the survey area.

Geophysical data are rarely a direct indication of mineral deposits and therefore interpretation and careful integration with existing and new geological, geochemical, and other geophysical data are recommended to maximize value from the survey investment.

Respectfully submitted,
Precision GeoSurveys Inc.



Jen Hanlon, M.Sc., P.Geo.
September 2022

Appendix A

Polygon Coordinates

Kelly Creek Survey Block – WGS 84 Zone 9N

Latitude (deg N)	Longitude (deg W)	Easting (m)	Northing (m)
54.45829	128.10183	558225	6034884
54.44579	128.10183	558243	6033494
54.44556	128.08276	559480	6033484
54.39561	128.08297	559539	6027926
54.39541	128.22028	550624	6027797
54.47486	128.22053	550510	6036636
54.47500	128.10823	557787	6036738
54.45821	128.10810	557819	6034871

Appendix B

Equipment Specifications

- GEM GSM-19T Proton Precession Magnetometer (Magnetic Base Station)
- Hemisphere R330 GPS Receiver
- Opti-Logic RS800 Rangefinder Laser Altimeter
- Scintrex CS-3 Magnetometer
- Billingsley TFM100G2 Ultra Miniature Triaxial Fluxgate Magnetometer
- Setra Model 276 Barometer
- Rotronic HygroClip HC-S3 Relative Humidity and Temperature Probe
- Nuvia Dynamics Advanced Gamma-Ray Spectrometer (AGRS-5)
- Nuvia Dynamics IMPAC data recorder system (for navigation and geophysical data acquisition)

GEM GSM-19T Proton Precession Magnetometer (Magnetic Base Station)

Sensitivity	0.15 nT @ 1 Hz
Resolution	0.01 nT (gamma), magnetic field and gradient
Absolute Accuracy	±0.2 nT @ 1 Hz
Operating Range	20,000 nT to 120,000 nT
Gradient Tolerance	Over 7,000 nT/m
Operating Ranges	Temperature: -40°C to +50°C Battery Voltage: 10.0 V minimum to 15 V maximum Humidity: up to 90% relative, non-condensing
Storage Temperature	-50°C to +50°C
Dimensions	Console: 223 x 69 x 40 mm Sensor Staff: 4 x 450 mm sections Sensor: 170 x 71 mm dia. Weight: console 2.1 kg, sensor and staff assembly 2.2 kg
Integrated GPS	Yes

Hemisphere R330 GPS Receiver

GPS Sensor	Receiver Type	L1 and L2 RTK with carrier phase	
	Channels	12 L1CA GPS 12 L1P GPS 12 L2P GPS 12 L2C GPS 12 L1 GLONASS (with subscription code) 12 L2 GLONASS (with subscription code) 3 SBAS or 3 additional L1CA GPS	
	Update Rate	10 Hz standard, 20 Hz available	
	Cold Start Time	<60 s	
	Warm Start Time 1	30 s (valid ephemeris)	
	Warm Start Time 2	30 s (almanac and RTC)	
	Hot Start Time	10 s typical (valid ephemeris and RTC)	
	Reacquisition	<1 s	
	Differential Options	SBAS, Autonomous, External RTCM, RTK, OmniSTAR (HP/XP)	
Horizontal Accuracy		RMS (67%)	2DRMS (95%)
	RTK [1, 2]	10 mm + 1 ppm	20 mm + 2 ppm
	OmniSTAR HP [1, 3]	0.1 m	0.2 m
	SBAS (WAAS) [1]	0.3 m	0.6 m
	Autonomous, no SA [1]	1.2 m	2.5 m
L-Band Sensor	Channel	Single channel	
	Frequency Range	1530 MHz to 1560 MHz	
	Satellite Selection	Manual or Automatic (based on location)	
	Startup and Satellite Reacquisition Time	15 seconds typical	
Communications	Serial Ports	2 full duplex RS232	
	Baud Rates	4800 – 115200	
	USB Ports	1 Communications, 1 Flash Drive data storage	
	Correction I/O Protocol	Hemisphere GPS proprietary, RTCM v2.3 (DGPS), RTCM v3 (RTK), CMR, CMR+NMEA 0183, Hemisphere GPS binary	
	Timing Output	1 PPS (HCMOS, active high, rising edge sync, 10 kΩ, 10 pF load)	
	Event Marker Input	HCMOS, active low, falling edge sync, 10 kΩ	
Environmental	Operating Temperature	-40°C to +70°C	
	Storage Temperature	-40°C to +85°C	
	Humidity	95% non-condensing	
Power GPS Sensor	Input Voltage Range	8 to 36 VDC	
	Consumption, RTK	<3.5 W (0.30 A @ 12 VDC typical)	
	Consumption, OmniSTAR	<4.3 W (0.36 A @ 12 VDC typical)	

[1]Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activity.
[2] Depends also on baseline length.
[3] Requires a subscription from OmniSTAR.

Opti-Logic RS800 Rangefinder Laser Altimeter

Accuracy	±1 m on 1x1 m^2 diffuse target with 50% reflectivity, up to 700 m
Resolution	0.2 m
Communication Protocol	RS232-8, N, 1 ASCII characters
Baud Rate	19200
Data Raw Counts	~200 Hz
Data Calibrated Range	~10 Hz
Data Rate	~200 Hz raw counts for un-calibrated operation; ~10 Hz for calibrated operation (averaging algorithm seeks 8 good readings)
Calibrated Range Units	Feet, Meters, Yards
Laser	Class I (eye-safe), 905 nm ± 10 nm
Power	7 - 9 VDC conditioned required, current draw at full power (~ 1.8 W)
Laser Wavelength	RS100 905 nm ± 10 nm
Laser Divergence	Vertical axis – 3.5 mrad half-angle divergence; Horizontal axis – 1 mrad half-angle divergence; (approximate beam “footprint” at 100 m is 35 cm x 5 cm)
Dimensions	32 x 78 x 84 mm (lens face cross section is 32 x 78 mm)
Weight	<227 g (8 oz)

Scintrex CS-3 Magnetometer

Operating Principal	Self-oscillating split-beam Cesium Vapor (non-radioactive ^{133}Cs)
Operating Range	15,000 nT to 105,000 nT
Gradient Tolerance	40,000 nT/m
Operating Zones	15° to 75° and 105° to 165°
Hemisphere Switching	a) Automatic b) Electronic control actuated by the control voltage levels (TTL/CMOS) c) Manual
Sensitivity	0.0006 nT / √Hz rms
Noise Envelope	Typically 0.002 nT peak to peak, 0.1 to 1 Hz bandwidth
Heading Error	±0.20 nT (inside the optical axis to the field direction angle range 15° to 75° and 105° to 165°)
Absolute Accuracy	<2.5 nT throughout range
Output	a) Continuous signal at the Larmor frequency which is proportional to the magnetic field (proportionality constant 3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage b) Square wave signal at the I/O connector, TTL/CMOS compatible
Information Bandwidth	Only limited by the magnetometer processor used
Sensor Head	Diameter: 63 mm (2.5”) Length: 160 mm (6.3”) Weight: 1.15 kg (2.6 lb)
Sensor Electronics	Diameter: 63 mm (2.5”) Length: 350 mm (13.8”) Weight: 1.5 kg (3.3 lb)
Cable, Sensor to Sensor Electronics	3 m (9’ 8”), lengths up to 5 m (16’ 4”) available
Operating Temperature	-40°C to +50°C
Humidity	Up to 100%, splash proof
Supply Power	24 to 35 VDC
Supply Current	Approx. 1.5 A at start up, decreasing to 0.5 A at 20°C
Power Up Time	Less than 15 minutes at -30°C

Billingsley TFM100G2 Ultra Miniature Triaxial Fluxgate Magnetometer

Axial Alignment	Orthogonality better than ±1°
Input Voltage Options	15 to 34 VDC @ 30 mA
Field Measurement Range Options	±100 µT = ±10 V
Accuracy	±0.75% of full scale (0.5% typical)
Linearity	±0.015% of full scale
Sensitivity	100 µV/nT
Scale Factor Temperature Shift	0.007% full scale/°C
Noise	≤12 pT rms/√Hz @ 1 Hz
Output Ripple	3 mV peak to peak @ 2nd harmonic
Analog Output at Zero Field	±0.025 V
Zero Shift with Temperature	±0.6 nT/°C
Susceptibility to Perming	±8 nT shift with ± 5 Gs applied
Output Impedance	332 Ω ± 5%
Frequency Response	3 dB @ >500 Hz (to >4 kHz wide band)
Over Load Recovery	±5 Gs slew <2 ms
Random Vibration	>20 G rms 20 Hz to 2 kHz
Temperature Range	-55°C to +85°C
Acceleration	>60 G
Weight	100 g
Size	3.51 cm x 3.23 cm x 8.26 cm
Connector	Chassis mounted 9 pin male "D" type

Setra Model 276 Barometer

Performance	Accuracy RSS[1] (at constant temp)	±0.25% FS[2]
	Non-Linearity (BSFL)	±0.22% FS
	Hysteresis	0.05% FS
	Non-Repeatability	0.05% FS
	Thermal Effects[3]	Compensated range: 0°C to +55°C (+30°F to +130°F) Zero shift (over compensated range): 1% FS Span shift (over compensated range): 1% FS
	Resolution	Infinite, limited only by output noise level (0.0005% FS)
	Time Constant	10 msecs to reach 90% final output with step function pressure input
	Long Term Stability	0.25% FS / 6 months
Environmental	Temperature	Operating[4]: -18°C to +79°C (0°F to +175°F) Storage: -55°C to +121°C (-65°F to +250°F)
	Vibration	2 g from 5 Hz to 500 Hz
	Shock	50 g (Operating, 1/2 sine 10 ms)
	Acceleration	10 g
Electrical	Circuit	3-Wire[5] (Exc, Out, Com)
	Power Consumption	0.20 W (24 VDC)
	Output Impedance	5 Ω
	Output Noise	<200 µV RMS (0 to 100 Hz)

[1] RSS of non-linearity, hysteresis, and non-repeatability.
[2] FS = 300 mb for 800 – 1100 mb range; 500 for 600 – 1100 mb range; and 20 PSI for 0 to 20 PSIA.
[3] Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.
[4] Operating temperature limits of the electronics only. Pressure media temperatures may be considerable higher or lower.
[5] The separate leads for +EXC, -EXC, +Out, -Out are commoned internally. The shield is connected to the case. For best performance, either the -Exc or -Out should be connected to the case. Unit is calibrated at the factory with -Exc connected to the case. The insulation resistance between all signal leads are tied together and case ground is 100 Ω minimum at 25 VDC.

Rotronic HygroClip HC-S3 Relative Humidity and Temperature Probe

Relative Humidity	Operating Range	0 to 100% RH
	Accuracy at 23°C	±1.5% RH
	Output	0 – 1 VDC
	Typical Long-Term Stability	Better than ±1% RH per year
Temperature	Measurement Range	-40°C to +60°C
	Temperature Accuracy	-30°C to +60°C ±0.2°C -50°C to +60°C ±0.6°C (worst case)
	Output	0 – 1 VDC
Power	Supply Voltage	3.5 to 50 VDC (typically powered by data logger's 12 VDC supply)
	Current Consumption	<4 mA
Dimensions	Diameter	1.53 cm (0.60")
	Length	16.8 cm (6.6")
	Housing Material	Polycarbonate

Nuvia Dynamics Advanced Gamma-Ray Spectrometer (AGRS-5)

Crystal Volume	Four 4.2 L NaI(Tl) synthetic downward-looking and one 4.2 L NaI(Tl) upward-looking crystals. Total volume of 21 L
Resolution	256/512/1024 channels
Data Handling	Individual detector processing and calibration
Energy Resolution	< 9% (@ 662 keV)
Differential Non-linearity	< 0.1%
Integral Non-linearity	< 0.01%
Gain Stabilization	Automatic multi-peak on natural radioisotopes
Calibration	Automatic using natural background radiation
Dynamic Input Range	250,000 cps (counts/sec) per detector
Baseline Restoration	Digital Individual Pulse Baseline Restoration (IPBR). The baseline is established for each individual pulse for maximum pulse height accuracy
Sampling Rate	0.1 – 10 secs user defined
Pulse Shaping	Digital Pulse Shaping
Power	9 to 40 VDC, 15 W
Detector Power	3 W per detector
Operating Temperature	-20°C up to +50°C
Downward Shielding	6 mm thick lead plate is used for downward-shielding
Upward Shielding	RayShield® non-radioactive shielding on downward-looking crystals
Spectra	20 keV to 3 MeV (plus cosmic)
System Stabilization	Cold start-up: less than 40 secs on the ground
GPS Connectivity	Time and position synchronization; additional add-on
Weight	~115 kg

Nuvia Dynamics IMPAC data recorder system

(for navigation and geophysical data acquisition)

Functions	Integrated Multi-Parameter Airborne Console (IMPAC) with integrated dual Global Positioning System Receiver (GPS) and all necessary navigation guidance software. Inputs for geophysical sensors - portable gamma ray spectrometer GRS-10/AGRS, MMS4/MMS8 Magnetometer, Herz Totem-2A EM, A/D converter, temperature/humidity probe, barometric pressure probe, and laser/radar altimeter. Output for the multi-parameter PGU (Pilot Guidance Unit)
Display	Monitor display 600 x 800 pixels; customized keypad and operator keyboard. Multi-screen options for real-time viewing of all data inputs, fiducial points, flight line tracking, and GPS channels by operator
Navigation	Pilot/operator navigation guidance. Software supports preplanned survey flight plan, along survey lines, way-points, preplanned drape profile surfaces
Data Sampling	Sensor dependent
Data Synchronization	Synchronized to GPS position. Supports dual GPS
Data File	PEI Binary data format
Storage	80 GB
Software	DataView: Allows fast data verification and conversion of PEI binary data to Geosoft GBN or ASCII formats MAGConv: For survey preparation, calibration and conversion of maps, and survey plot after data acquisition MAGComp: For calculation of magnetic compensation coefficients AGRS/GRS10 Calibration: High voltage adjustment, linearity correction coefficients calculation, and communication test support AGIS: Real time data acquisition and navigation system. Displays chart/spectrum view in real-time for fast data Quality Control (QC)
Electrical	Multiple ethernet connections, RS232 serial ports, USB ports, and 16-bit differential analog input channels. It can support up to 4 magnetometer sensors
Power Requirement	24 VDC

Appendix C

Radiometric Correction Coefficients

Radiometric Correction Coefficients:

Cosmic Correction Coefficients		
	Cosmic Stripping	**Aircraft Background**
TC	1.0591	62.076
K	0.0879	7.706
U	0.0386	1.9192
Th	0.055	0.3513

Altitude Attenuation Coefficients	
TC	-0.00573
K	-0.00700
U	-0.00498
Th	-0.00584

Compton Stripping	
Alpha	0.3099
Beta	0.4412
Gamma	0.8366
a	0.0489
b	0.0035
g	0.0013

Sensitivities	
TC	39.2
K	132.42
U	10.97
Th	5.86

Appendix D

Digital File Descriptions

- Magnetic Database
- Radiometric Database
- Geosoft Grids
- Maps

Magnetic Database:

Abbreviations used in the GDB/XYZ/CSV files listed below:

CHANNEL	UNITS	DESCRIPTION
X_WGS84	m	UTM Easting – WGS84 Zone 9N
Y_WGS84	m	UTM Northing – WGS84 Zone 9N
Lat_deg	Decimal degree	Latitude – WGS84
Lon_deg	Decimal degree	Longitude – WGS84
Date	yyyy/mm/dd	Dates of the survey flight(s) – Local
FLT		Flight Line numbers
LineNo		Line numbers
STL		Number of satellite(s)
GPSfix		1 = non-differential 2 = WAAS/SBAS differential
Heading	degree	Heading of the aircraft
GPStime	HH:MM:SS	GPS time (UTC)
Geos_m	m	Geoidal separation
XTE_m	m	Cross track error
Galt	m	GPS height – WGS84 Zone 9N (ASL)
Lalt	m	Laser altimeter readings (AGL)
DTM	m	Digital Terrain Model
Sample_Density	m	Horizontal distance in meters between adjacent measurement locations; sample frequency is 20 Hz
Speed_km_hr	km/hr	Ground speed of aircraft in km/hr
basemag	nT	Base station temporal variation data
IGRF	nT	International Geomagnetic Reference Field, IGRF-13
Declin	Decimal degree	Calculated declination of magnetic field
Inclin	Decimal degree	Calculated inclination of magnetic field
XFg_Step	step	X - fluxgate
YFg_Step	step	Y - fluxgate
ZFg_Step	step	Z - fluxgate
Mag1_Head	nT	Mag 1 – Diurnal, lag, and heading corrected
Mag2_Head	nT	Mag 2 – Diurnal, lag, and heading corrected
Mag3_Head	nT	Mag 3 – Diurnal, lag, and heading corrected
TMI	nT	Total Magnetic Intensity (Mag 2)
RMI	nT	Residual Magnetic Intensity (Mag 2)
ILG	nT/m	In-Line Gradient (Mag 2)
XLG	nT/m	Cross-Line Gradient (Mag 1 and Mag 3)
CVG	nT/m	Calculated Vertical Gradient
HG	nT/m	Total horizontal gradient (in-line and cross-line)
AS	nT/m	Analytic Signal (in-line, cross-line, and CVG)
TMIge	nT	Gradient enhanced Total Magnetic Intensity
RMIge	nT	Gradient enhanced Residual Magnetic Intensity

Radiometric Database:

Abbreviations used in the GDB/XYZ/CSV files listed below:

CHANNEL	UNITS	DESCRIPTION
X_WGS84	m	UTM Easting – WGS84 Zone 9N
Y_WGS84	m	UTM Northing – WGS84 Zone 9N
Lat_deg	Decimal degree	Latitude – WGS84
Lon_deg	Decimal degree	Longitude – WGS84
Date	yyyy/mm/dd	Date of the survey flight(s) – Local
FLT		Flight Line numbers
LineNo		Line numbers
STL		Number of satellite(s)
GPStime	HH:MM:SS	GPS time (UTC)
Geos_m	m	Geoidal separation
GPSFix		1 = non-differential 2 = WAAS/SBAS differential
Heading	degree	Heading of the aircraft
XTE_m	m	Cross track error
Galt	m	GPS height – WGS84 Zone 9N (ASL)
Lalt	m	Laser altimeter height (AGL)
DTM	m	Digital Terrain Model
Sample_Density	m	Horizontal distance in metres between adjacent measurement locations; sample frequency is 20 Hz
Speed_km_hr	km/hr	Ground speed of aircraft in km/hr
BaroSTP_kPa	kPa	Barometric altitude (pressure and temperature corrected)
Temp_degC	°C	Air temperature
COSFILT	counts/sec	Spectrometer – Filtered Cosmic
UPUFILT	counts/sec	Spectrometer – Filtered Upward Uranium
Kcor	%	Concentration in Percentage - Potassium
Thcor	ppm	Equivalent Concentration - Thorium
Ucor	ppm	Equivalent Concentration - Uranium
TCcor	nGy/hour	Total Count
TCexp	µR/hour	Exposure Rate
KThratio		Spectrometer –%K/eTh ratio
KUratio		Spectrometer –%K/eU ratio
ThKratio		Spectrometer – eTh/%K ratio
ThUratio		Spectrometer – eTh/eU ratio
UKratio		Spectrometer – eU/%K ratio

Grids:

Kelly Creek, WGS 84 Zone 9N, sun inclination at 45° and declination at 045°.
All grids generated using minimum curvature gridding method.

File Name	Description	Cell Size (m)
22162_KellyCreek_DTM_25m.grd	Digital Terrain Model	25
22162_ KellyCreek_TMI_25m.grd	Total Magnetic Intensity	25
22162_KellyCreek_RMI_25m.grd	Residual Magnetic Intensity	25
22162_KellyCreek_RTP_25m.grd	Reduced to Magnetic Pole of RMI	25
22162_KellyCreek_ILG_25m.grd	Measured In-Line Gradient (Mag 1 and Mag 2)	25
22162_KellyCreek_XLG_25m.grd	Measured Cross-Line Gradient (Mag 1 and Mag 2)	25
22162_KellyCreek_HG_25m.grd	Total Horizontal Gradient (in-line and cross-line)	25
22162_KellyCreek_CVG_25m.grd	Calculated Vertical Gradient of RMI	25
22162_KellyCreek_AS_25m.grd	Analytic Signal (in-line, cross-line, and CVG)	25
22162_KellyCreek_TMIge_25m.grd	Gradient enhanced Total Magnetic Intensity (in-line and cross-line)	25
22162_KellyCreek_RMIge_25m.grd	Gradient enhanced Residual Magnetic Intensity (in-line and cross-line)	25
22162_KellyCreek_RTPge_25m.grd	Gradient enhanced Reduced to Magnetic Pole of RMIge	25
22162_KellyCreek_K_25m.grd	Potassium (%K) – in percentage	25
22162_KellyCreek_eTh_25m.grd	Thorium (eTh) – equivalent concentration	25
22162_KellyCreek_eU_25m.grd	Uranium (eU) – equivalent concentration	25
22162_KellyCreek_TC_25m.grd	Total Count (TC)	25
22162_KellyCreek_TCexp_25m.grd	Total Count (TCexp) – exposure rate	25
22162_KellyCreek_KThRatio_25m.grd	Potassium over Thorium ratio (%K/eTh)	25
22162_KellyCreek_KURatio_25m.grd	Potassium over Uranium ratio (%K/eU)	25
22162_KellyCreek_UThRatio_25m.grd	Uranium over Thorium ratio (eU/eTh)	25
22162_KellyCreek_UKRatio_25m.grd	Uranium over Potassium ratio (eU/%K)	25
22162_KellyCreek_ThKRatio_25m.grd	Thorium over Potassium ratio (eTh/%K)	25
22162_KellyCreek_ThURatio_25m.grd	Thorium over Uranium ratio (eTh/eU)	25

Maps:

Kelly Creek, WGS 84 Zone 9N, sun inclination at 45° and declination at 045° (JPEG, PDF, and georeferenced PDF).

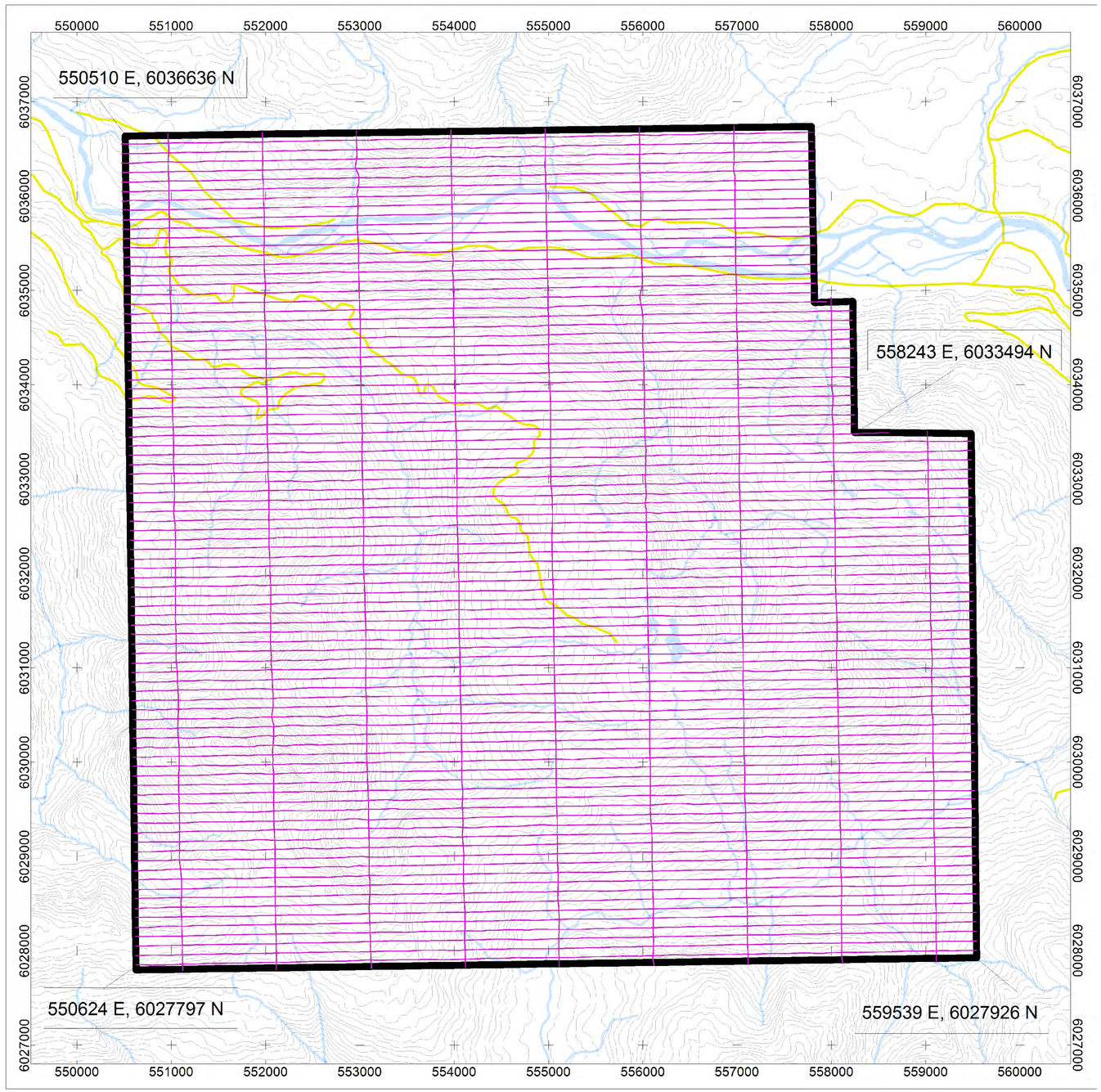
Plate Num	Plate Name	File Name	Description	Cell Size (m)	Colour Scale	Colour Shade
1	FL	22162_KellyCreek_ActualFlightLines	Plotted actual flown flight lines	NA	NA	NA
2	DTM	22162_KellyCreek_DTM_25m	Digital Terrain Model	25	Linear	NA
3	TMI_wFL	22162_KellyCreek_TMI_wFL_25m	Total Magnetic Intensity with actual flown flight lines	25	Histogram-equalized	RGB
4	TMI	22162_KellyCreek_TMI_25m	Total Magnetic Intensity	25	Histogram-equalized	RGB
5	RMI	22162_KellyCreek_RMI_25m	Residual Magnetic Intensity	25	Histogram-equalized	RGB
6	RTP	22162_KellyCreek_RTP_25m	Reduced to Magnetic Pole of RMI	25	Histogram-equalized	RGB
7	ILG	22162_KellyCreek_ILG_25m	Measured In-Line Gradient (Mag 1 and Mag 2)	25	Histogram-equalized	Wet-look
8	XLG	22162_KellyCreek_XLG_25m	Measured Cross-Line Gradient (Mag 1 and Mag 2)	25	Histogram-equalized	Wet-look
9	HG	22162_KellyCreek_HG_25m	Total Horizontal Gradient (in-line and cross-line)	25	Histogram-equalized	Wet-look
10	CVG	22162_KellyCreek_CVG_25m	Calculated Vertical Gradient of RMI	25	Histogram-equalized	Wet-look
11	AS	22162_KellyCreek_AS_25m	Analytic Signal (in-line, cross-line, and CVG)	25	Histogram-equalized	Wet-look
12	TMIge	22162_KellyCreek_TMIge_25m	Gradient enhanced Total Magnetic Intensity (in-line, and cross-line)	25	Histogram-equalized	RGB
13	RMIge	22162_KellyCreek_RMIge_25m	Gradient enhanced Residual Magnetic Intensity (in-line and cross-line)	25	Histogram-equalized	RGB
14	RTPge	22162_KellyCreek_RTPge_25m	Gradient enhanced Reduced to Magnetic Pole of RMIge	25	Histogram-equalized	RGB
15	%K	22162_KellyCreek_K_25m	Potassium (%K) – in percentage	25	Histogram-equalized	RGB
16	eTh	22162_KellyCreek_eTh_25m	Thorium (eTh) – equivalent concentration	25	Histogram-equalized	RGB
17	eU	22162_KellyCreek_eU_25m	Uranium (eU) – equivalent concentration	25	Histogram-equalized	RGB
18	TC	22162_KellyCreek_TC_25m	Total Count (TC)	25	Histogram-equalized	RGB
19	TCexp	22162_KellyCreek_TCexp_25m	Total Count (TCexp) – exposure rate	25	Histogram-equalized	RGB
20	%K/eTh	22162_KellyCreek_KThRatio_25m	Potassium over Thorium ratio (%K/eTh)	25	Histogram-equalized	RGB
21	%K/eU	22162_KellyCreek_KURatio_25m	Potassium over Uranium ratio (%K/eU)	25	Histogram-equalized	RGB
22	eTh/eU	22162_KellyCreek_ThURatio_25m	Thorium over Uranium ratio (eTh/eU)	25	Histogram-equalized	RGB
23	TI	22162_KellyCreek_TernaryImage_25m	Ternary ratio of all three elements (%K, eTh, eU)	25	Histogram-equalized	RGB inverted

*Grids displayed on the maps are exported as GeoTIFFs (.tiff) and KMZs.

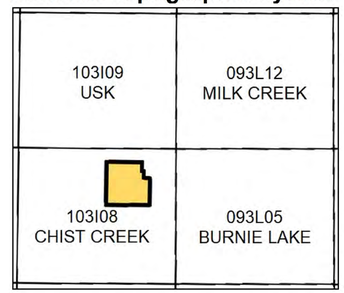
Plates

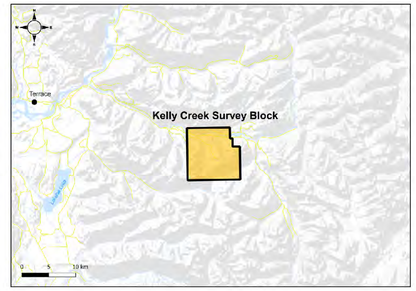
Kelly Creek Survey Block

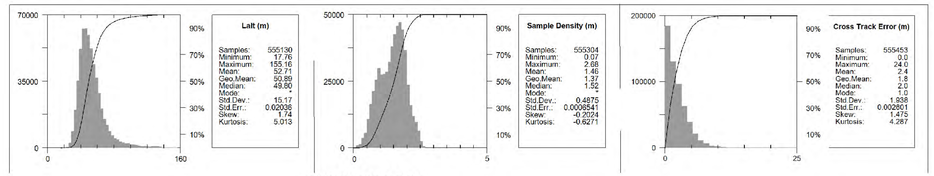
- Plate 1: Kelly Creek – Actual Flight Lines (FL)
- Plate 2: Kelly Creek – Digital Terrain Model (DTM)
- Plate 3: Kelly Creek – Total Magnetic Intensity with Actual Flight Lines (TMI_wFL)
- Plate 4: Kelly Creek – Total Magnetic Intensity (TMI)
- Plate 5: Kelly Creek – Residual Magnetic Intensity (RMI)
- Plate 6: Kelly Creek – Reduced to Magnetic Pole (RTP) of RMI
- Plate 7: Kelly Creek – In-Line Gradient (ILG)
- Plate 8: Kelly Creek – Cross-Line Gradient (XLG)
- Plate 9: Kelly Creek – Horizontal Gradient (HG)
- Plate 10: Kelly Creek – Calculated Vertical Gradient (CVG) of RMI
- Plate 11: Kelly Creek – Analytic Signal (AS)
- Plate 12: Kelly Creek – Gradient Enhanced Total Magnetic Intensity (TMIge)
- Plate 13: Kelly Creek – Gradient Enhanced Residual Magnetic Intensity (RMIge)
- Plate 14: Kelly Creek – Gradient Enhanced Reduced to Magnetic Pole (RTPge) of RMIge
- Plate 15: Kelly Creek – Potassium - Percentage (%K)
- Plate 16: Kelly Creek – Thorium - Equivalent Concentration (eTh)
- Plate 17: Kelly Creek – Uranium - Equivalent Concentration (eU)
- Plate 18: Kelly Creek – Total Count (TC)
- Plate 19: Kelly Creek – Total Count - Exposure Rate (TCexp)
- Plate 20: Kelly Creek – Potassium over Thorium Ratio (%K/eTh)
- Plate 21: Kelly Creek – Potassium over Uranium Ratio (%K/eU)
- Plate 22: Kelly Creek – Thorium over Uranium Ratio (eTh/eU)
- Plate 23: Kelly Creek – Ternary Image (TI)



National Topographic System







MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22 and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

- Water Bodies
- Roads
- Elevation Contours, 100 ft Intervals
- Kelly Creek Survey Block Boundary
- Actual Flight Lines

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

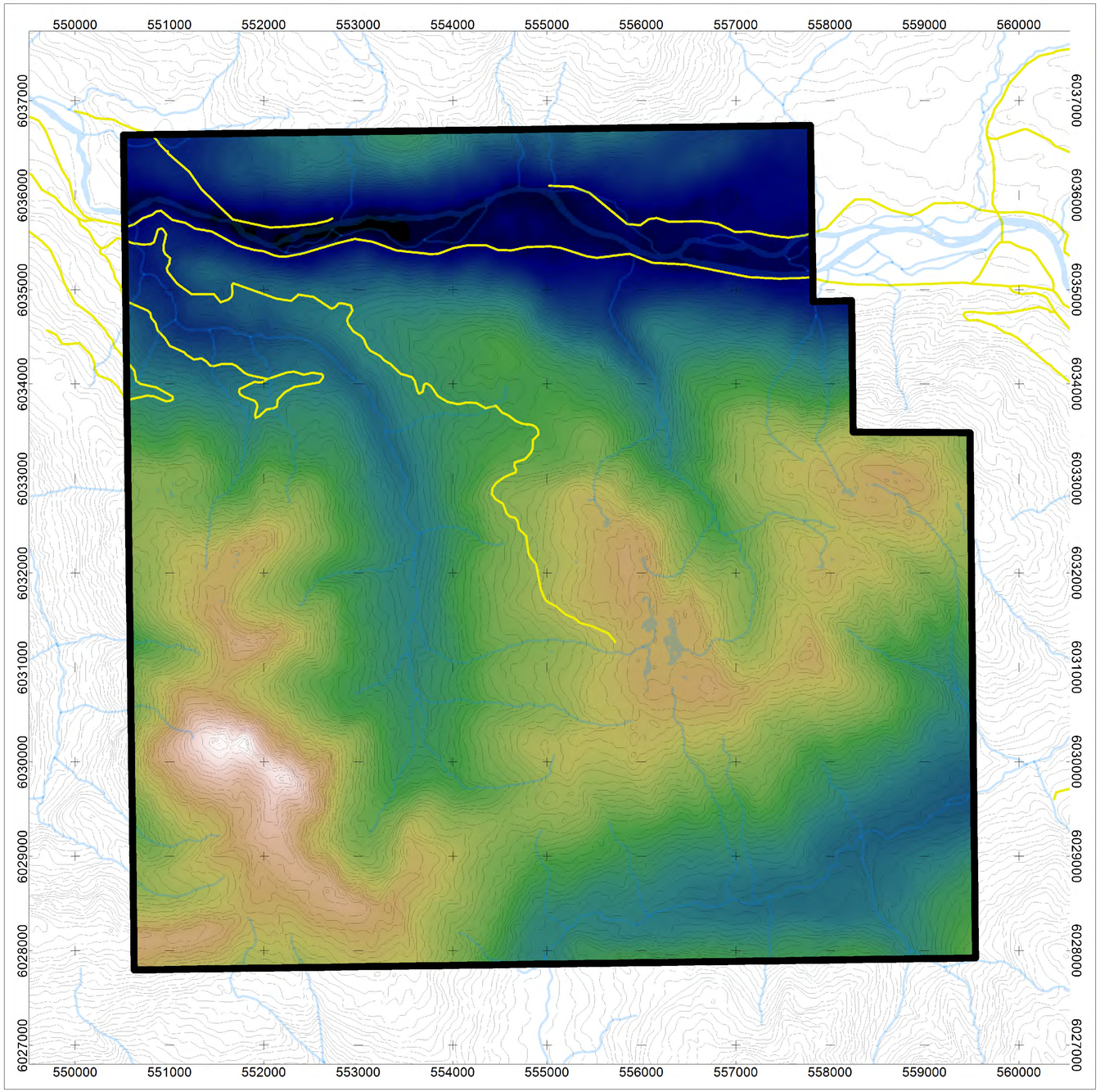
Kelly Creek

Overview Map
Actual Flight Lines

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 1
FL



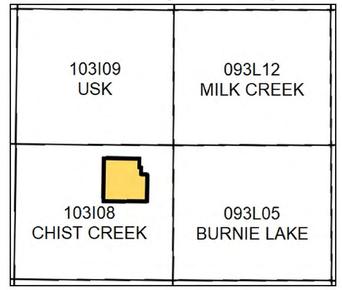
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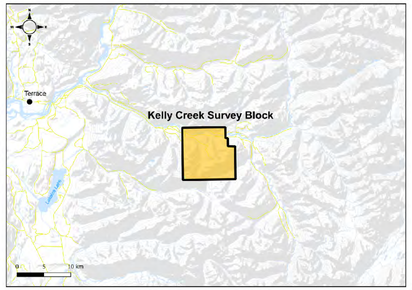
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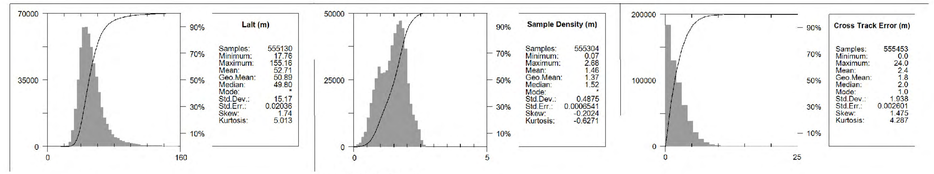
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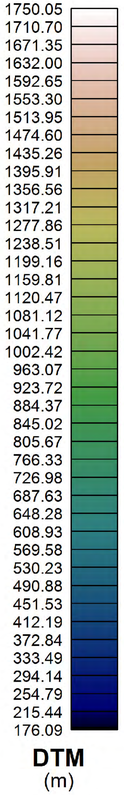
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22 and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Water Bodies.....
Roads.....
Elevation Contours, 100 ft Intervals.....
Kelly Creek Survey Block Boundary.....

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

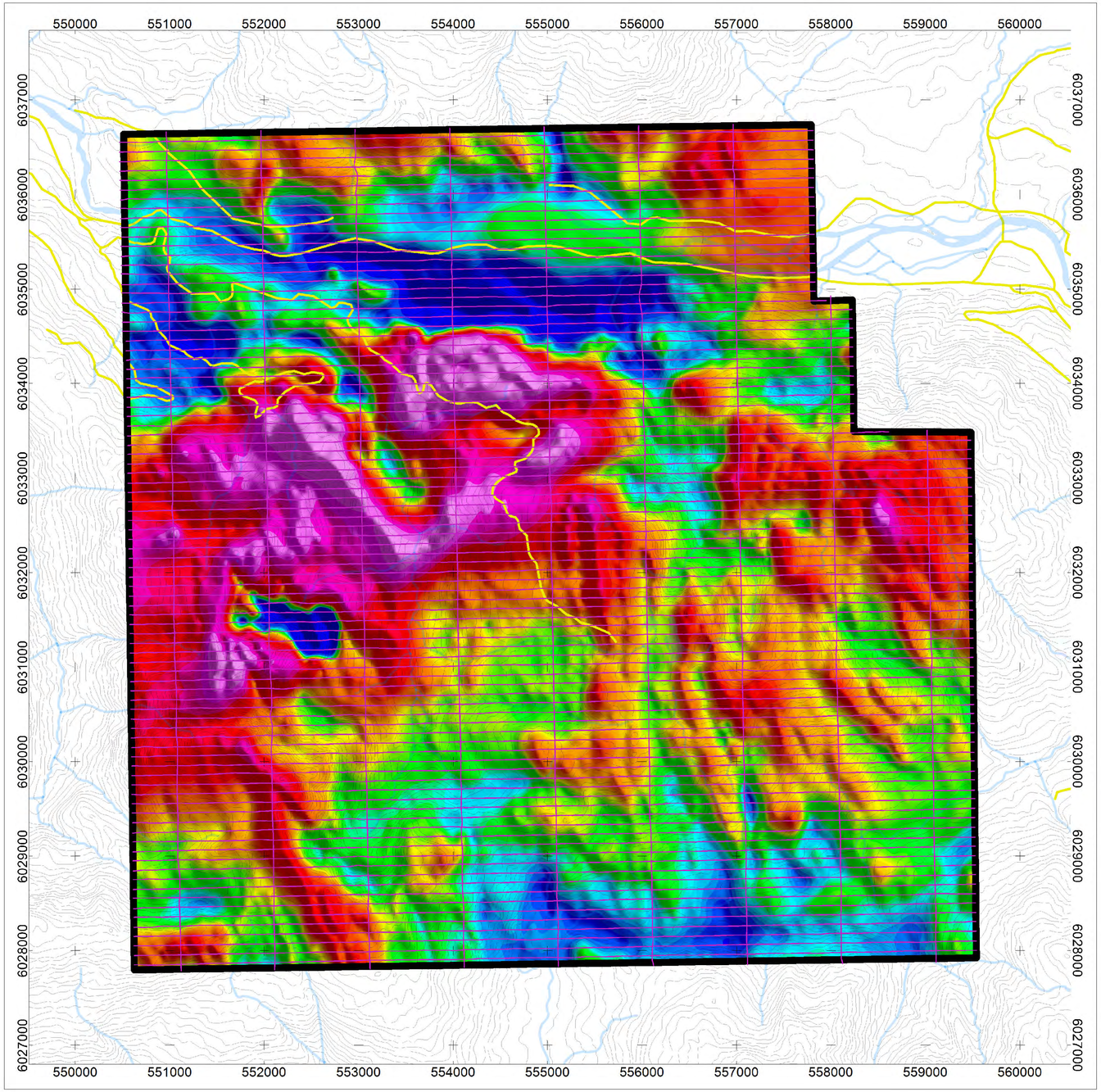
Kelly Creek

Overview Map
Digital Terrain Model

Precision GeoSurveys

Job #22162_KC
September 13, 2022

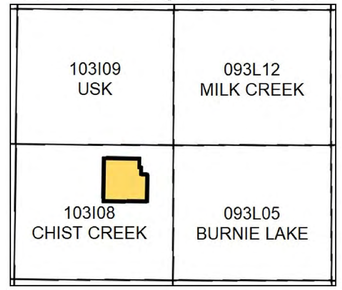
Plate 2
DTM

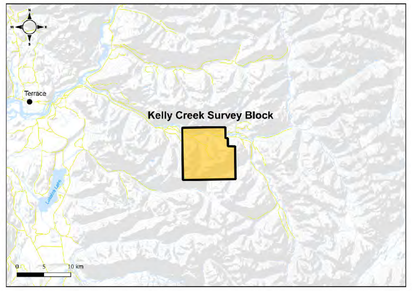


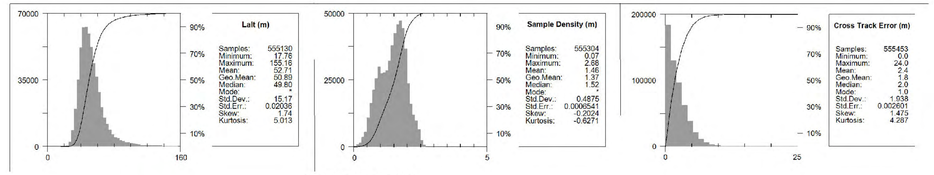
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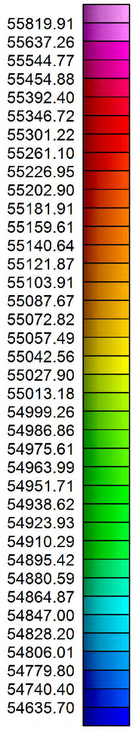
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(meters)
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

- Water Bodies
- Roads
- Elevation Contours, 100 ft Intervals
- Kelly Creek Survey Block Boundary
- Actual Flight Lines

DATA REFERENCE
Magnetic data from Mag 2 have been compensated and corrected for temporal variations, lag, and heading; then leveled to generate the Total Magnetic Intensity (TMI) grid. Refer to report for details. TMI is represented as a grid and drawn with a histogram-equalized color shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

Kelly Creek

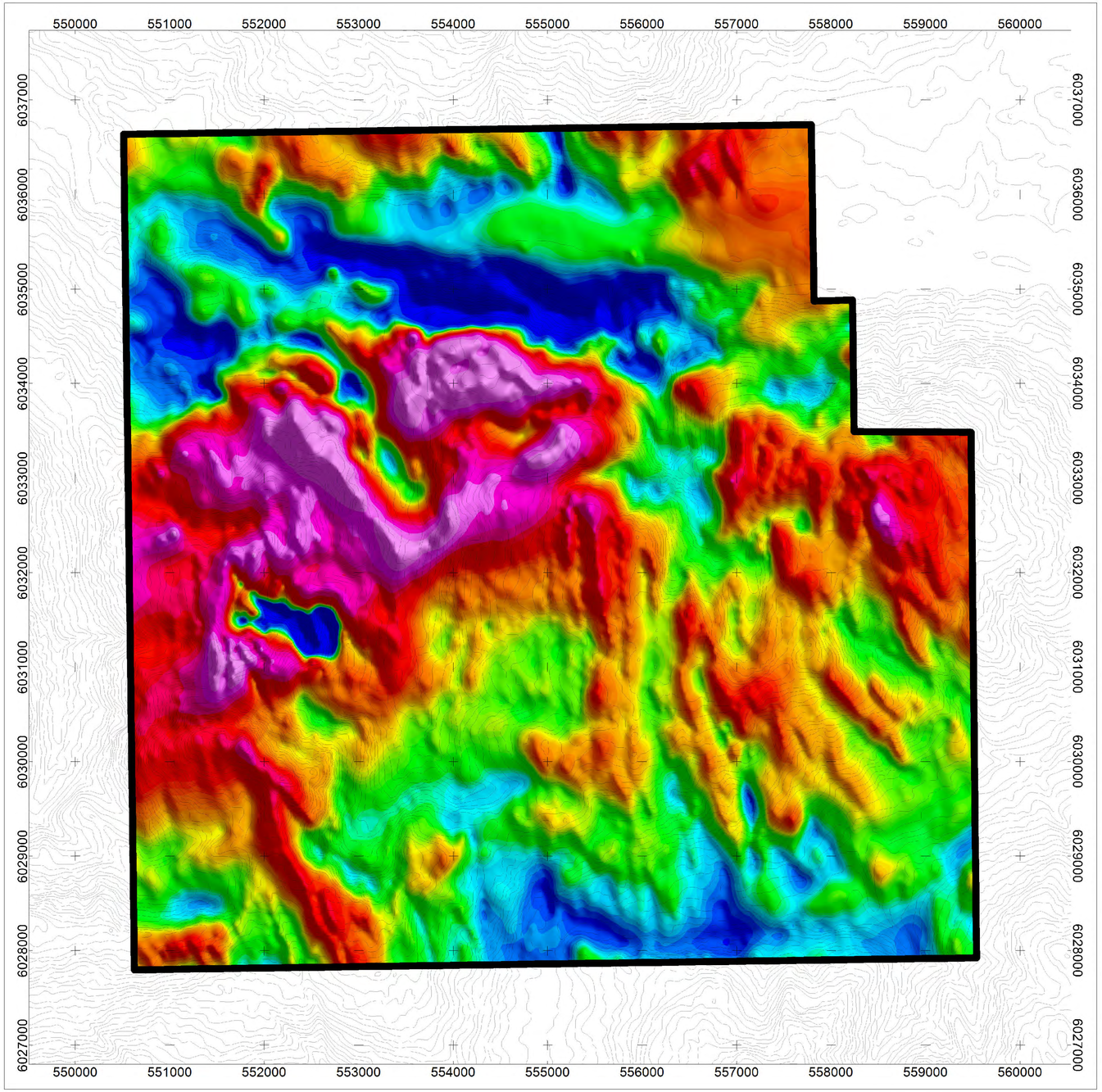
Magnetic Map

Total Magnetic Intensity with Actual Flight Lines

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 3
TMI_wFL



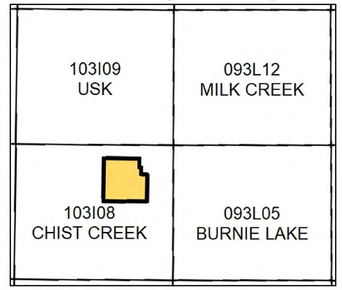
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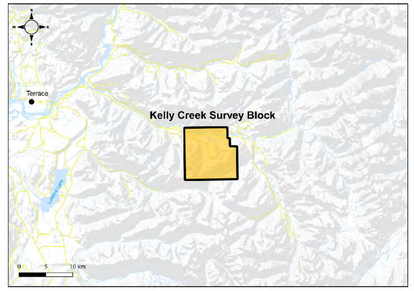
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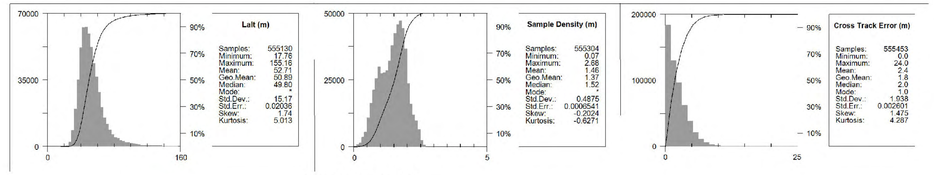
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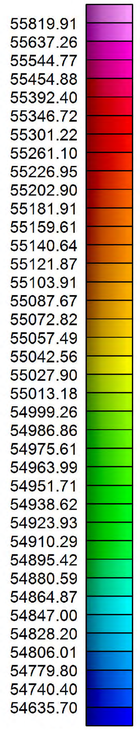
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Magnetic data from Mag 2 have been compensated and corrected for temporal variations, lag, and heading; then leveled to generate the Total Magnetic Intensity (TMI) grid. Refer to report for details. TMI is represented as a grid and drawn with a histogram-equalized color shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

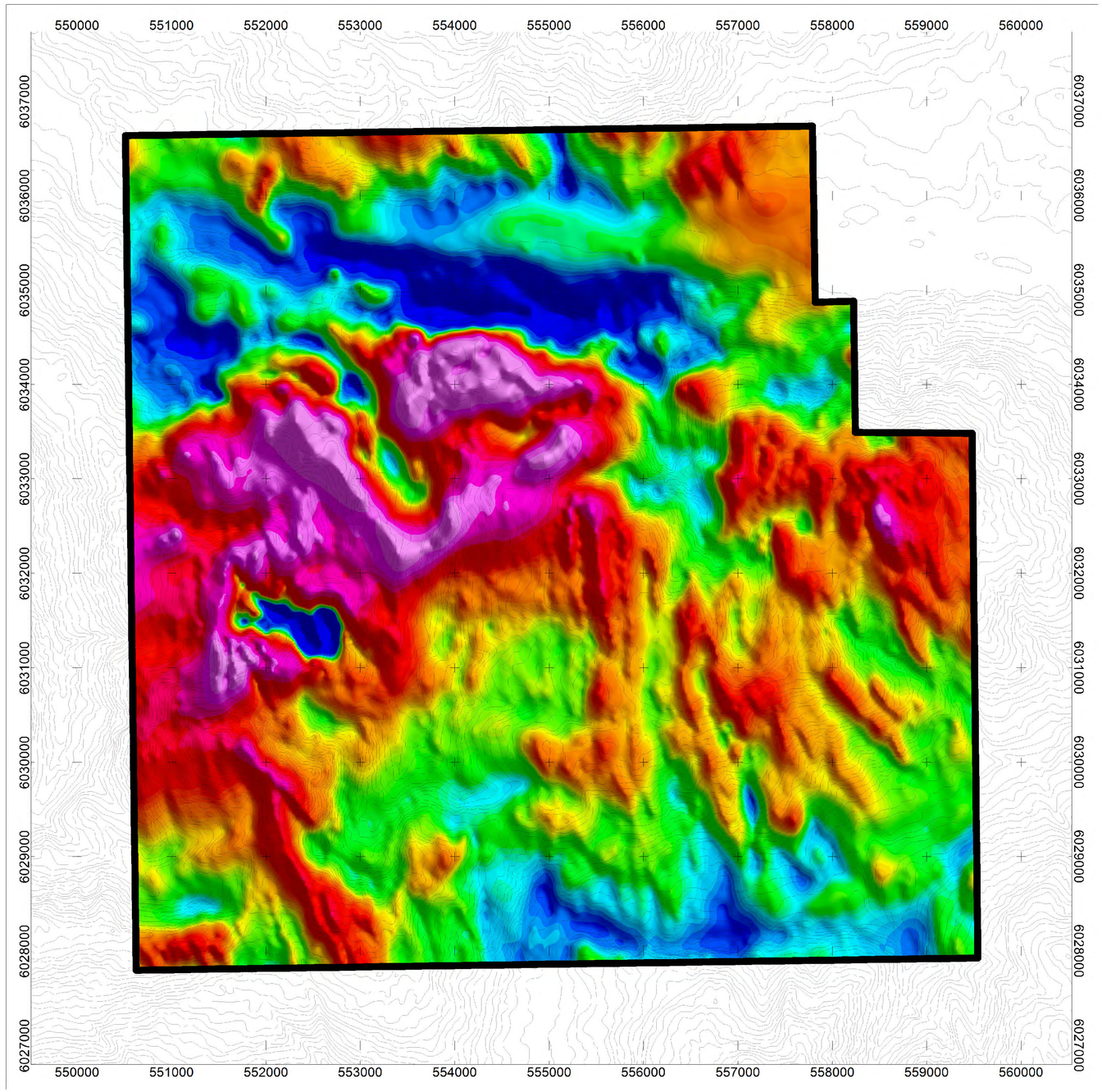
Kelly Creek

Magnetic Map
Total Magnetic Intensity

Precision GeoSurveys

Job #22162_KC
September 13, 2022

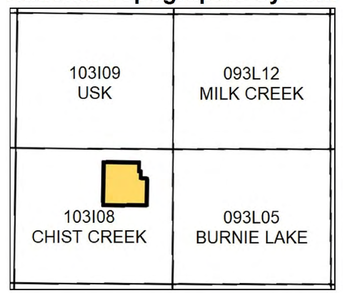
Plate 4
TMI

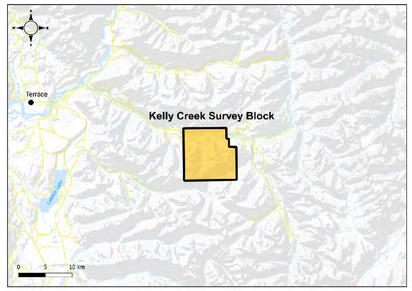


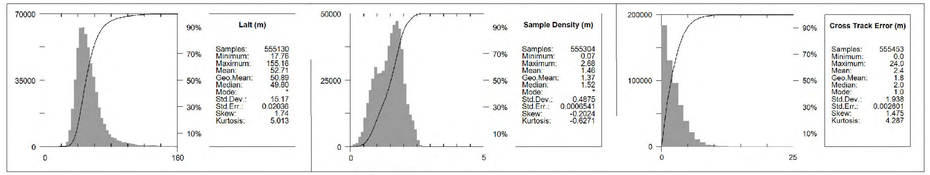
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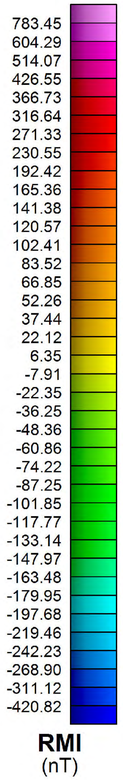
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(meters)
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....
Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Residual Magnetic Intensity (RMI) is derived by taking the difference between Total Magnetic Intensity (TMI) and IGRF. Refer to report for details. RMI is represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

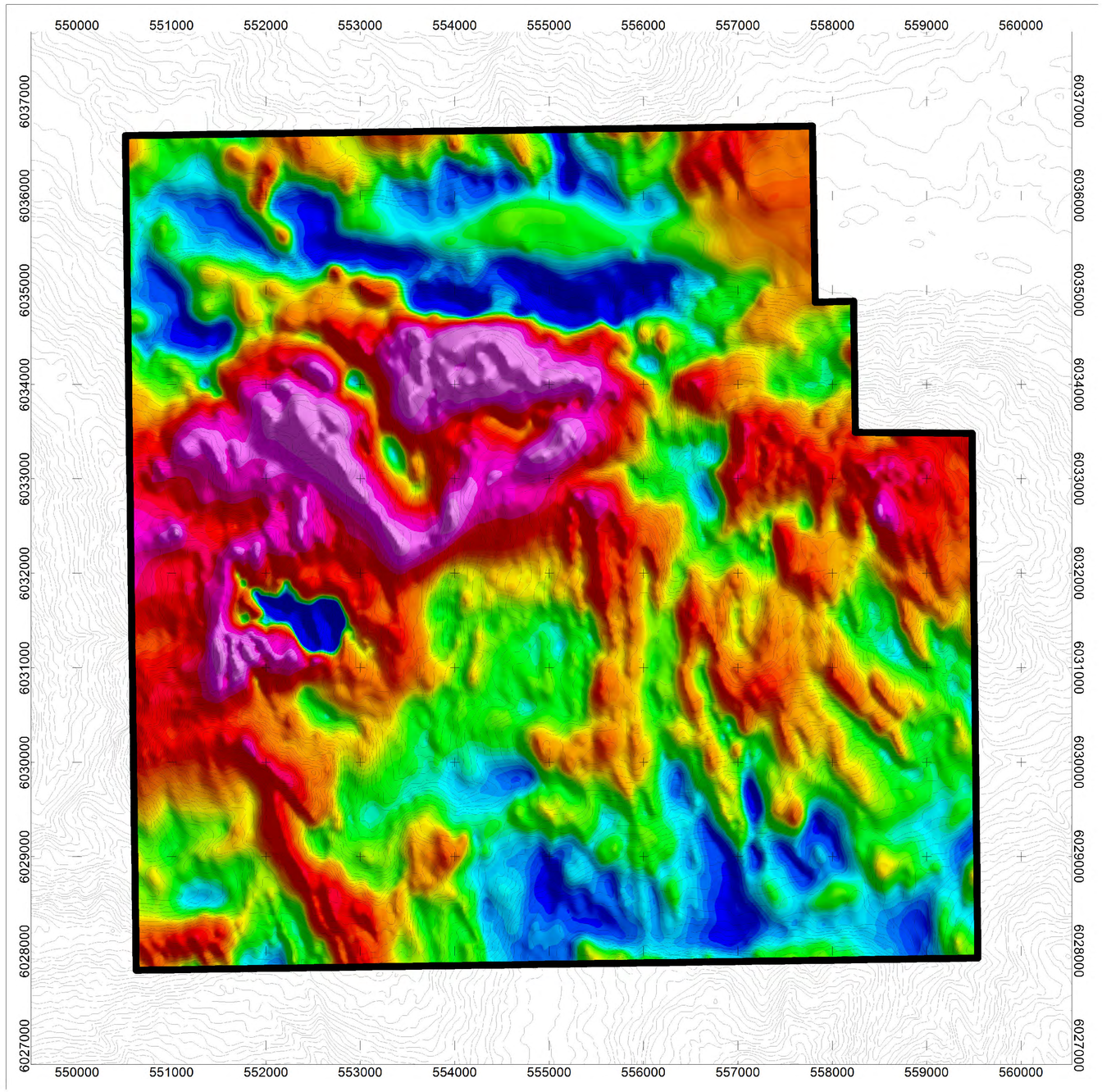
Kelly Creek

Magnetic Map
Residual Magnetic Intensity

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 5
RMI



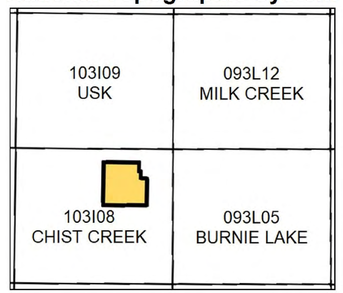
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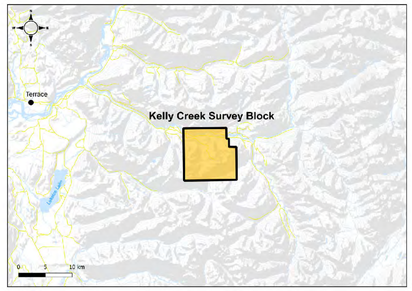
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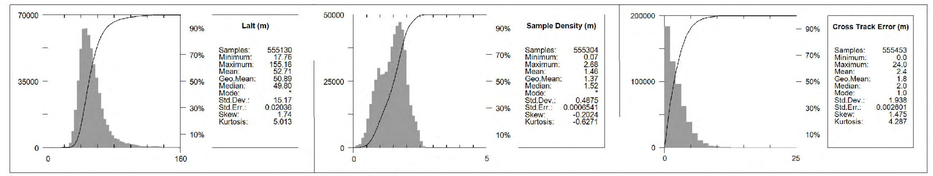
(meters)

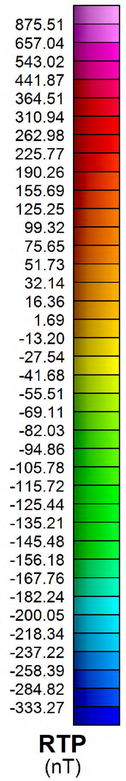
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION

Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE

Reduced to Magnetic Pole (RTP) is computed from Residual Magnetic Intensity (RMI). Refer to report for details. RTP is represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE

National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

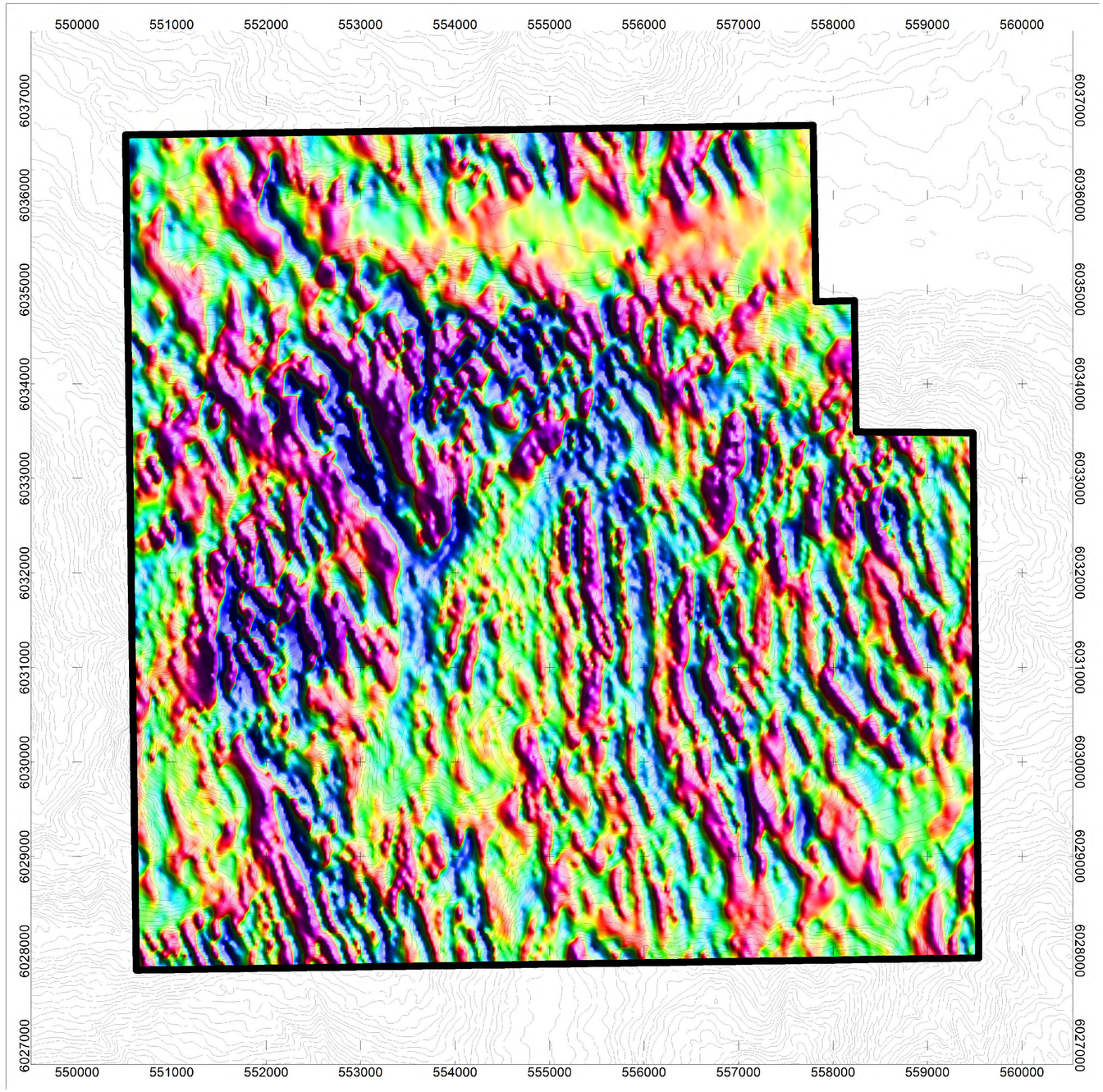
Kelly Creek

Magnetic Map
Reduced to Magnetic Pole

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 6
RTP



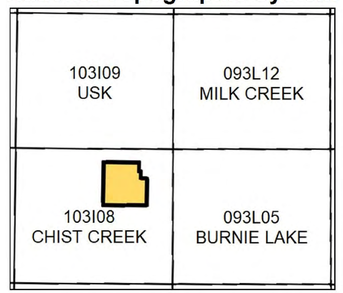
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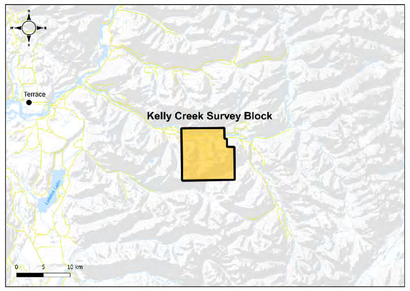
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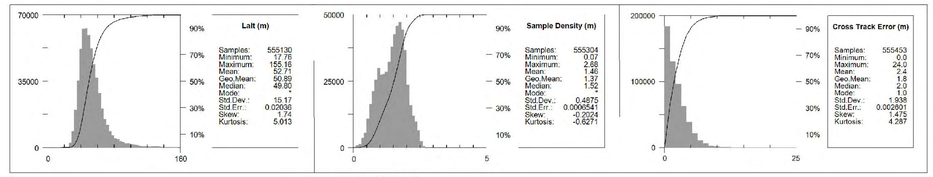
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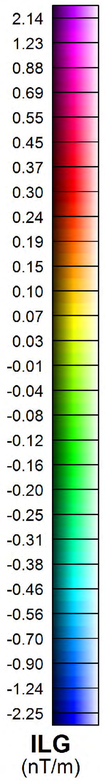
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
In-Line Gradient (ILG) is determined from successive measurements of Mag 2 along a flight line. Refer to report for details. ILG is represented as a grid and drawn with a histogram-equalized wet-look colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

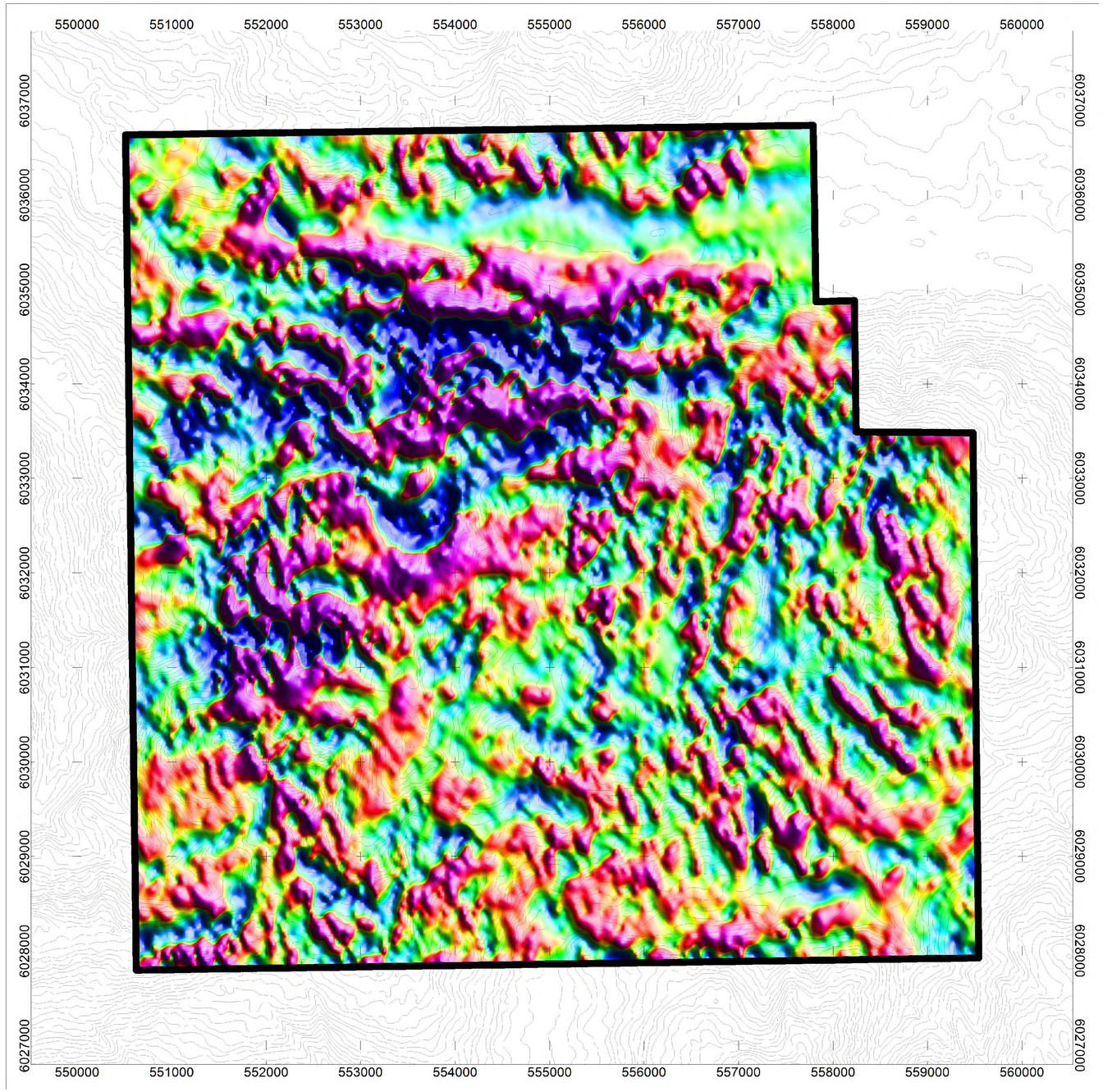
Kelly Creek

Magnetic Map
In-Line Gradient

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 7
ILG



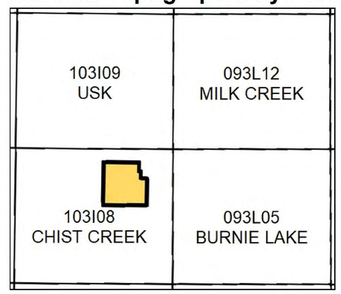
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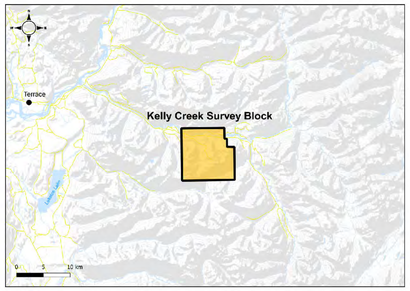
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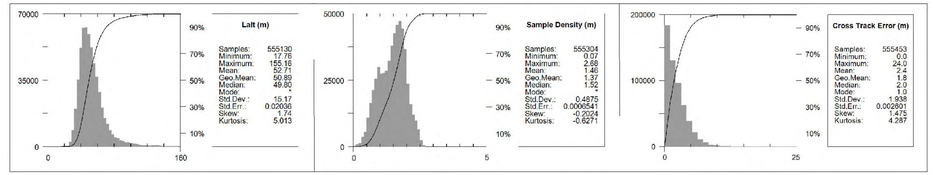
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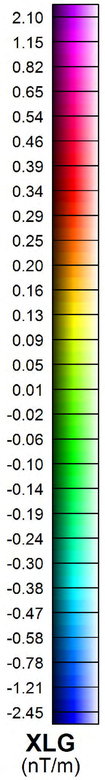
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION

Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE

Cross-Line Gradient (XLG) is the difference between Mag 1 and Mag 3 divided by the sensor separation. Refer to report for details. XLG is represented as a grid and drawn with a histogram-equalized wet-look colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE

National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

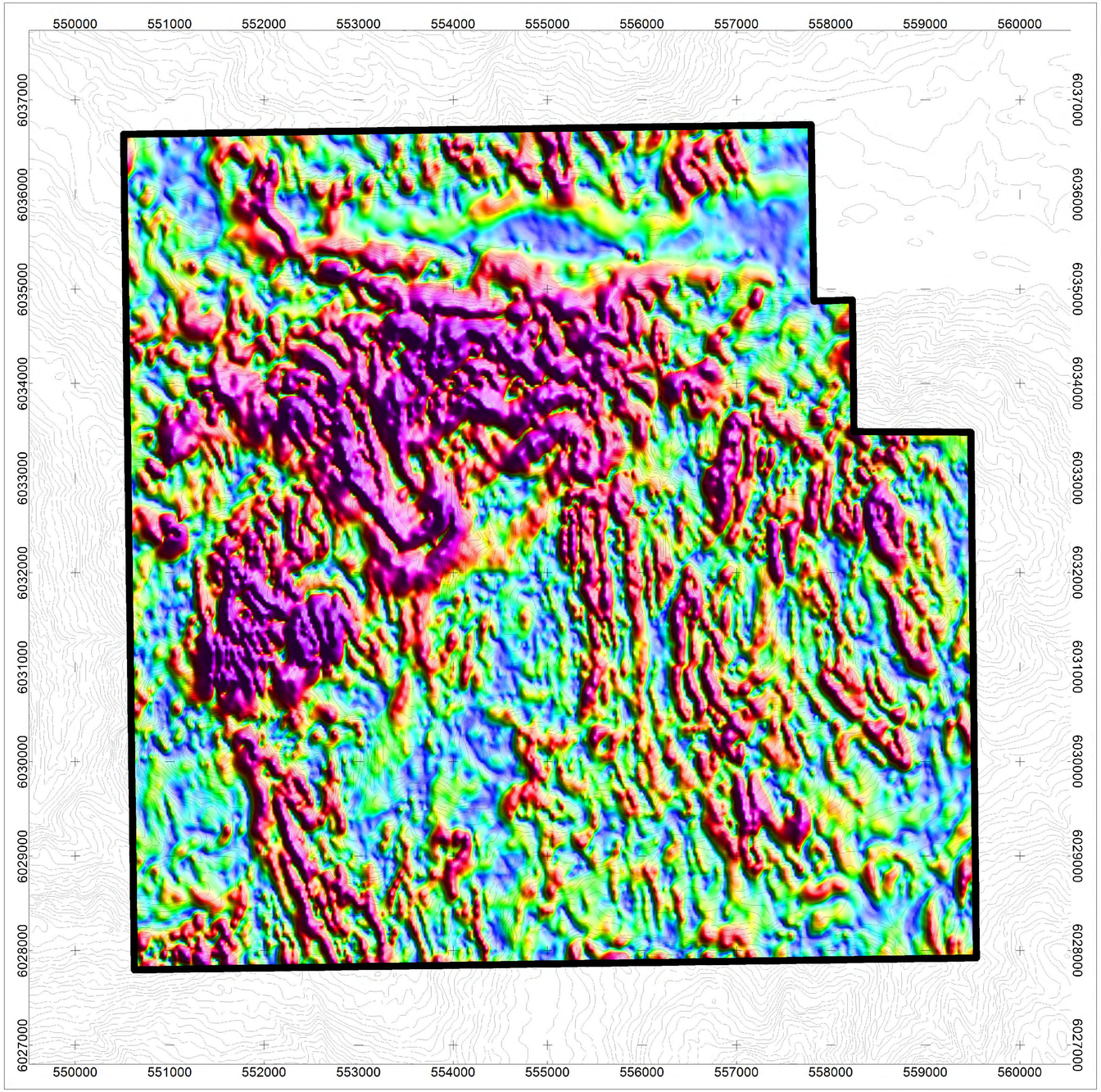
Kelly Creek

Magnetic Map
Cross-Line Gradient

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 8
XLG



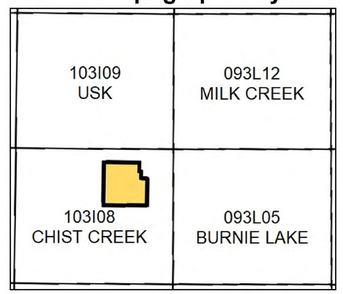
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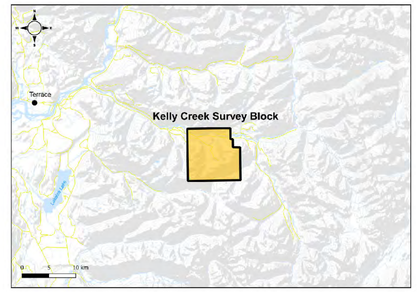
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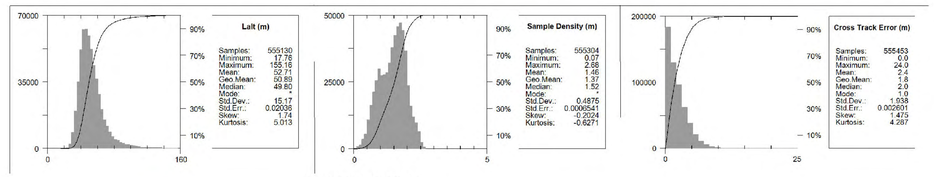
(meters)

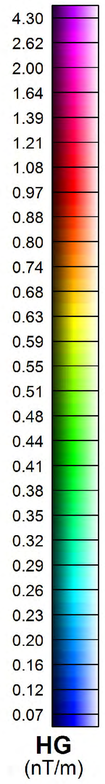
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Horizontal Gradient (HG) is the magnitude of the measured in-line and cross-line gradients. Refer to report for details. HG is represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

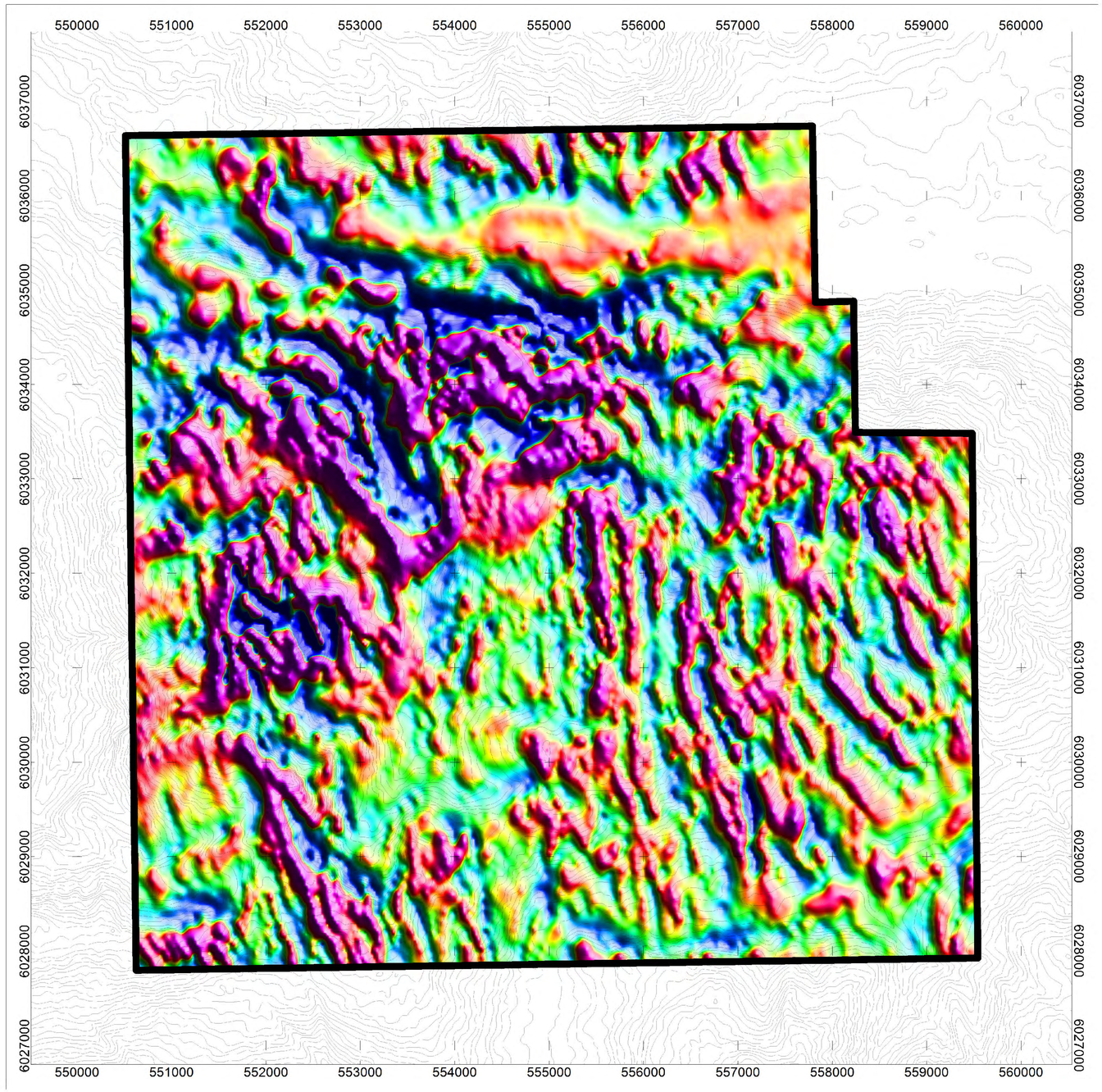
Kelly Creek

Magnetic Map
Horizontal Gradient

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 9
HG



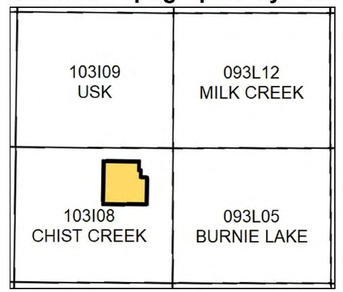
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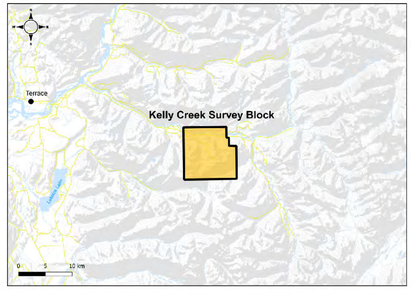
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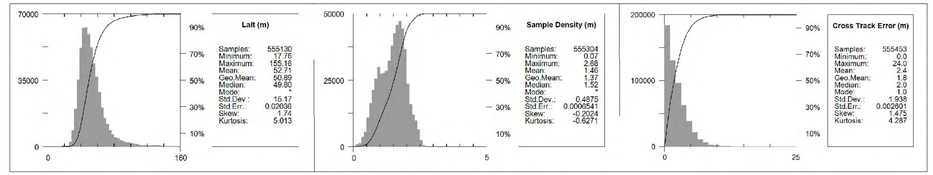
(meters)

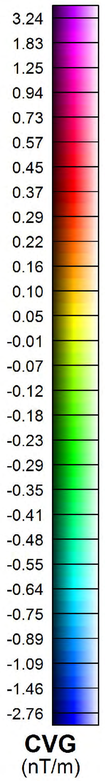
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Calculated Vertical Gradient (CVG) is the first order vertical component of Residual Magnetic Intensity (RMI). Refer to report for details. CVG is represented as a grid and drawn with a histogram-equalized wet-look colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

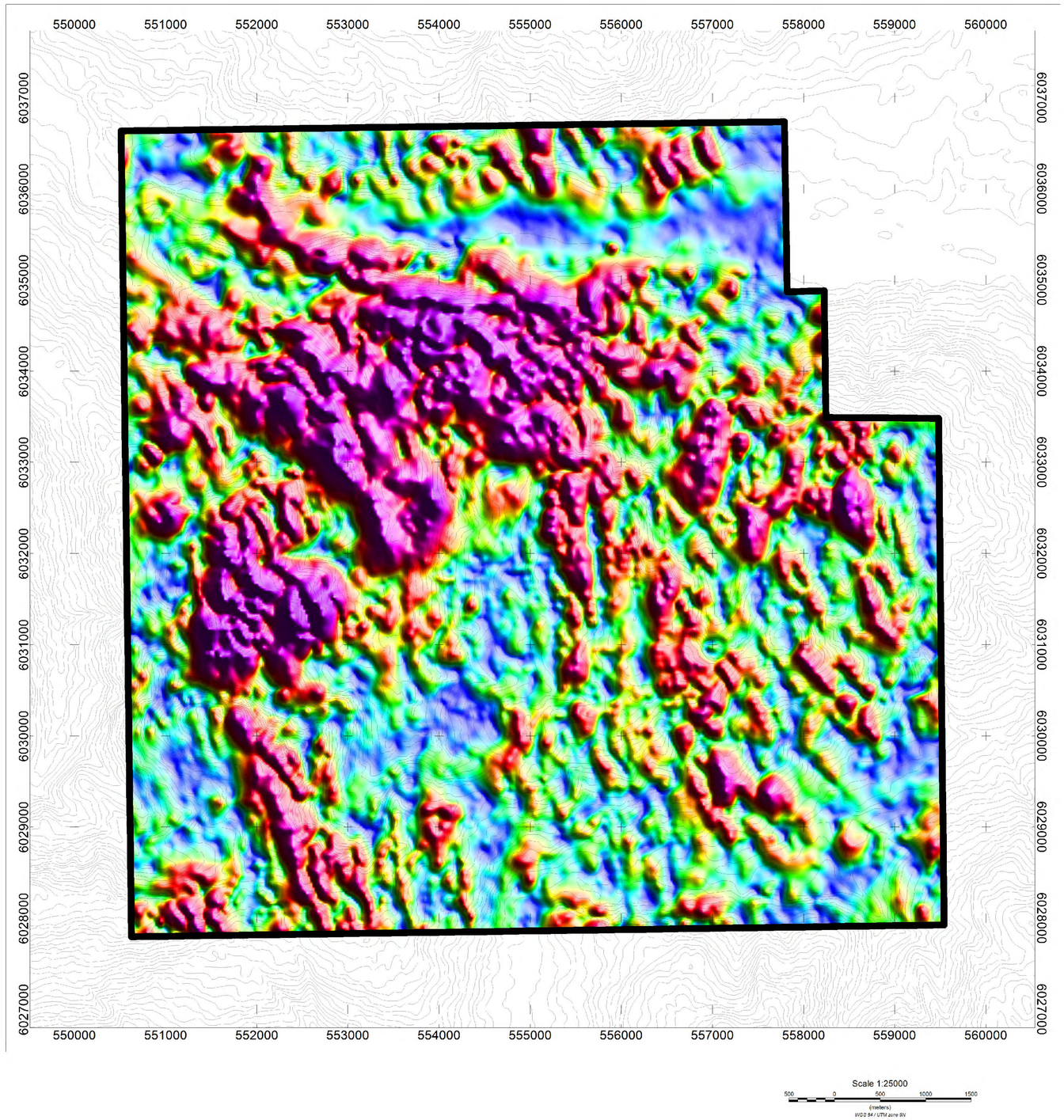
Richard Billingsley

Kelly Creek

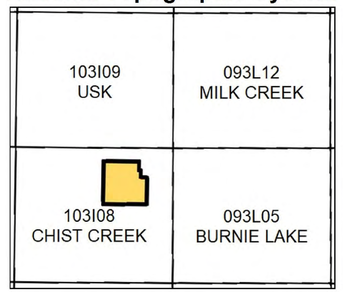
Magnetic Map
Calculated Vertical Gradient

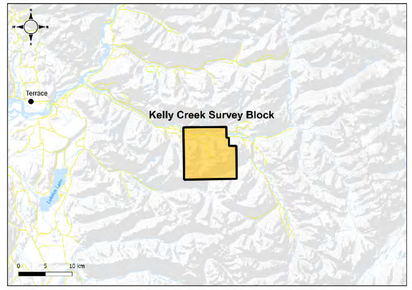
Precision GeoSurveys

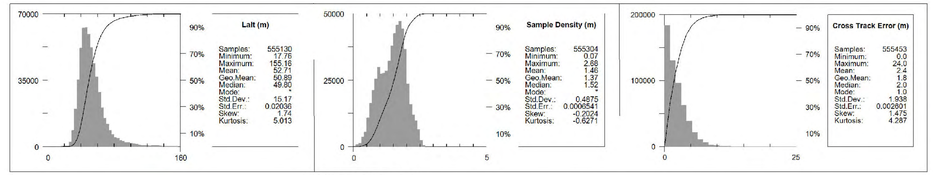
Job #22162_KC
September 13, 2022

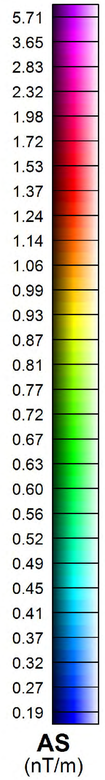


National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Analytic signal (AS) is the square root of the sum of the squares of the vertical and measured horizontal gradients. Refer to report for details. AS is represented as a grid and drawn with a histogram-equalized wet-look colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

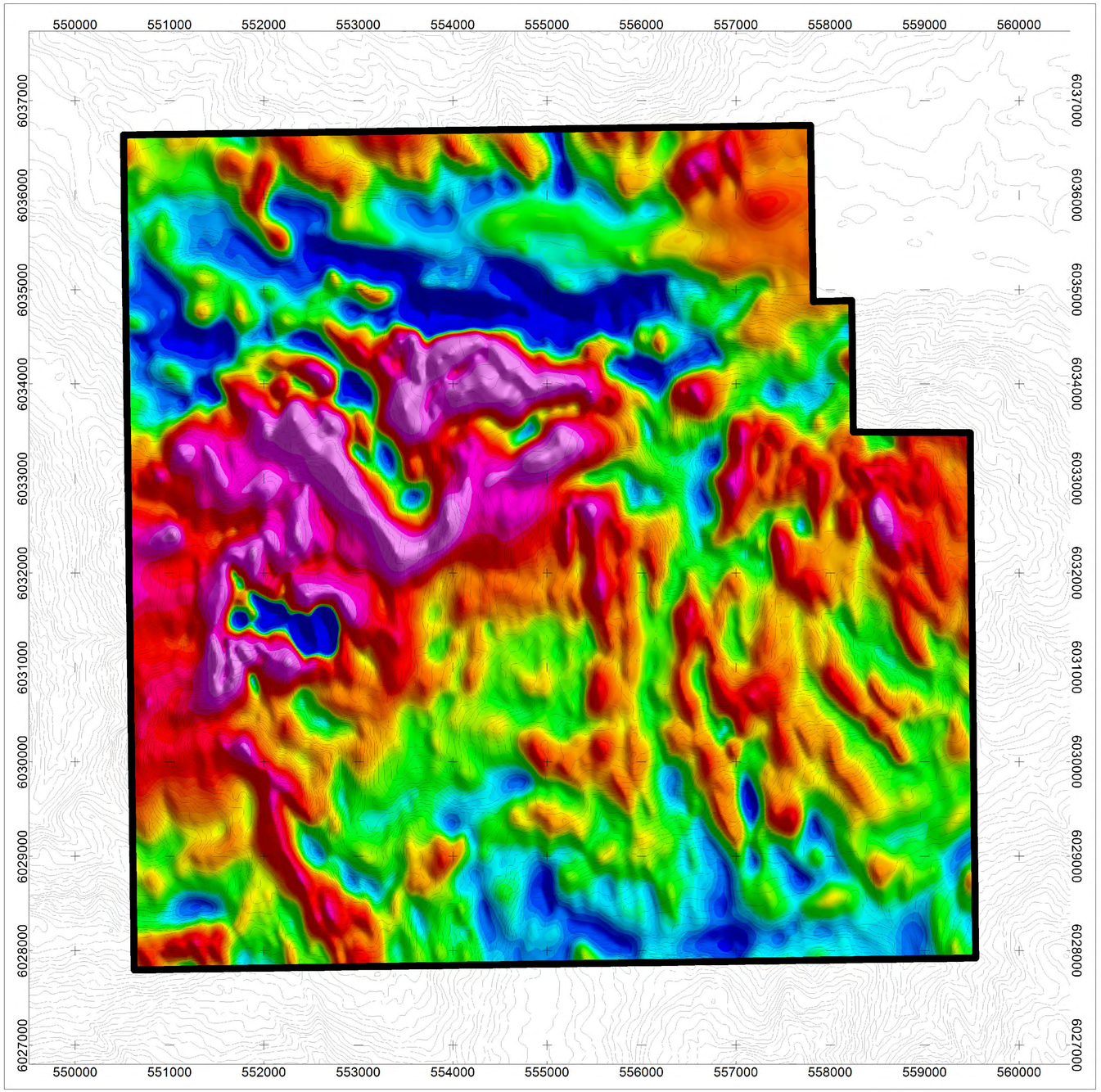
Kelly Creek

Magnetic Map
Analytic Signal

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 11
AS



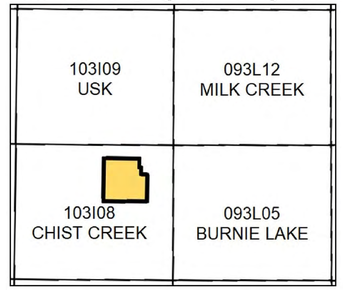
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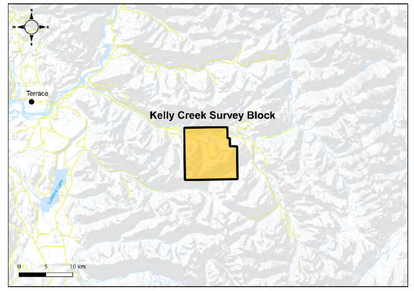
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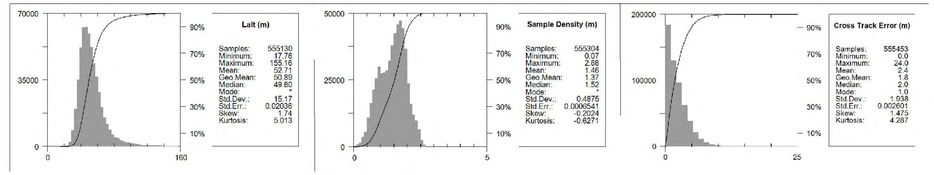
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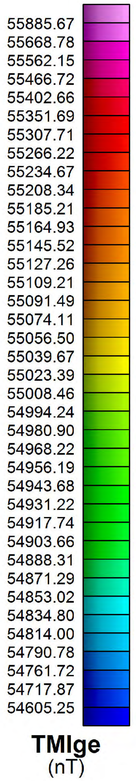
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Gradient enhanced Total Magnetic Intensity (TMIge) is derived by adding the IGRF to the gradient enhanced Residual Magnetic Intensity (RMIge). Refer to report for details. TMIge is represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

Kelly Creek

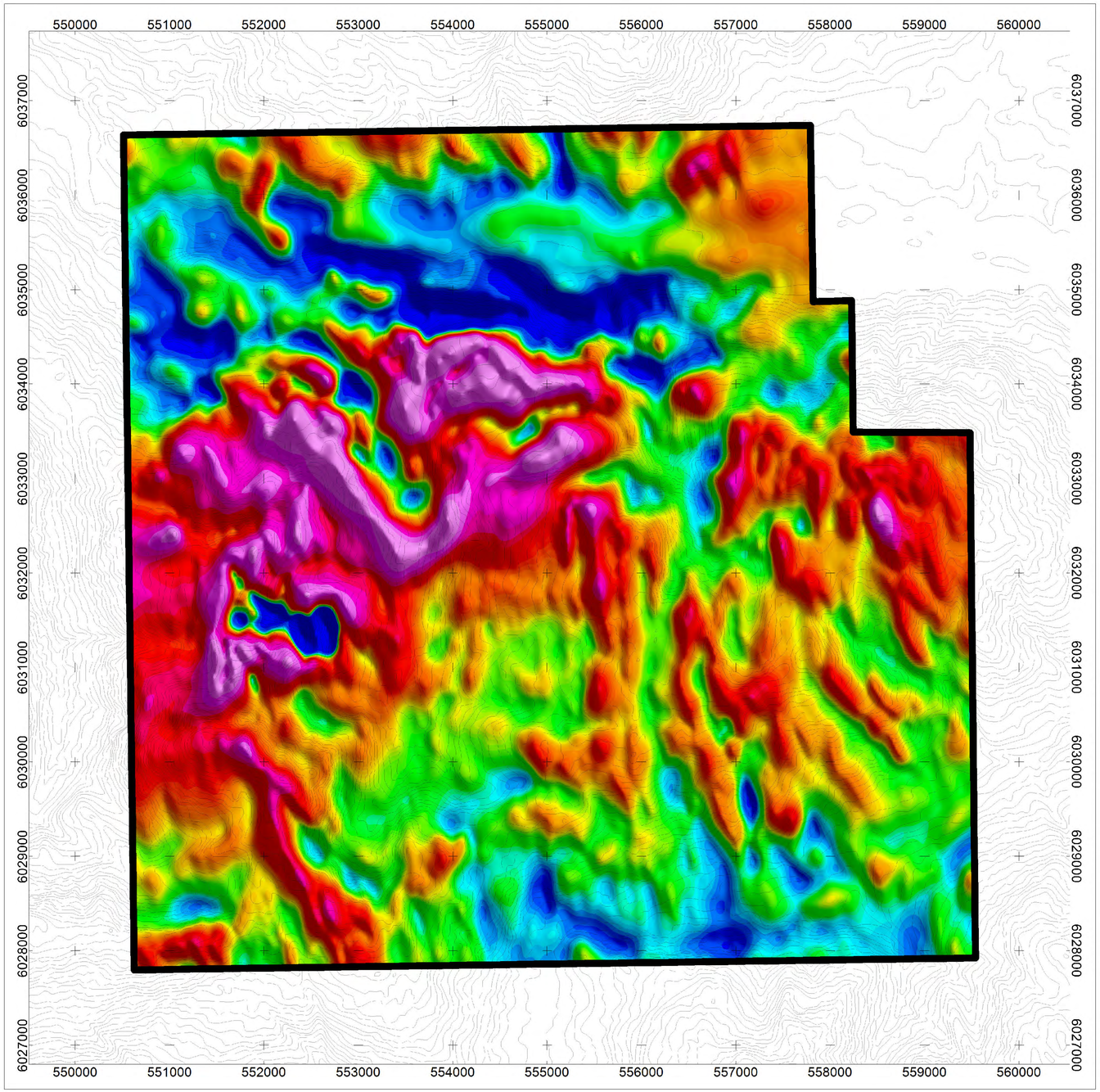
Magnetic Map

Gradient Enhanced Total Magnetic Intensity

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 12
TMIge



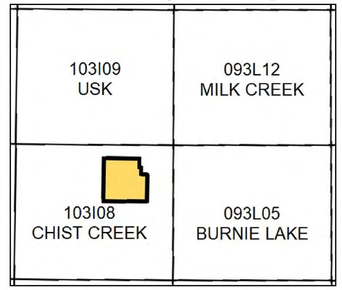
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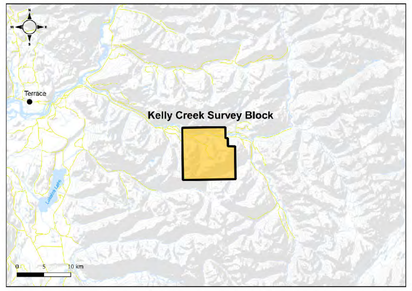
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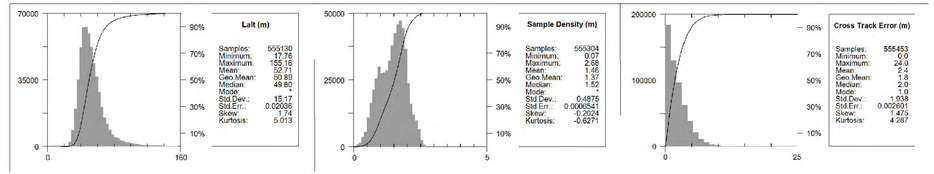
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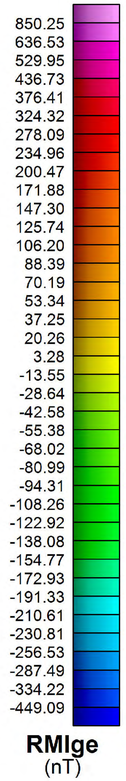
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Gradient enhanced Residual Magnetic Intensity (RMIge) is calculated from the measured in-line and cross-line gradients. Refer to report for details. RMIge is represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

Kelly Creek

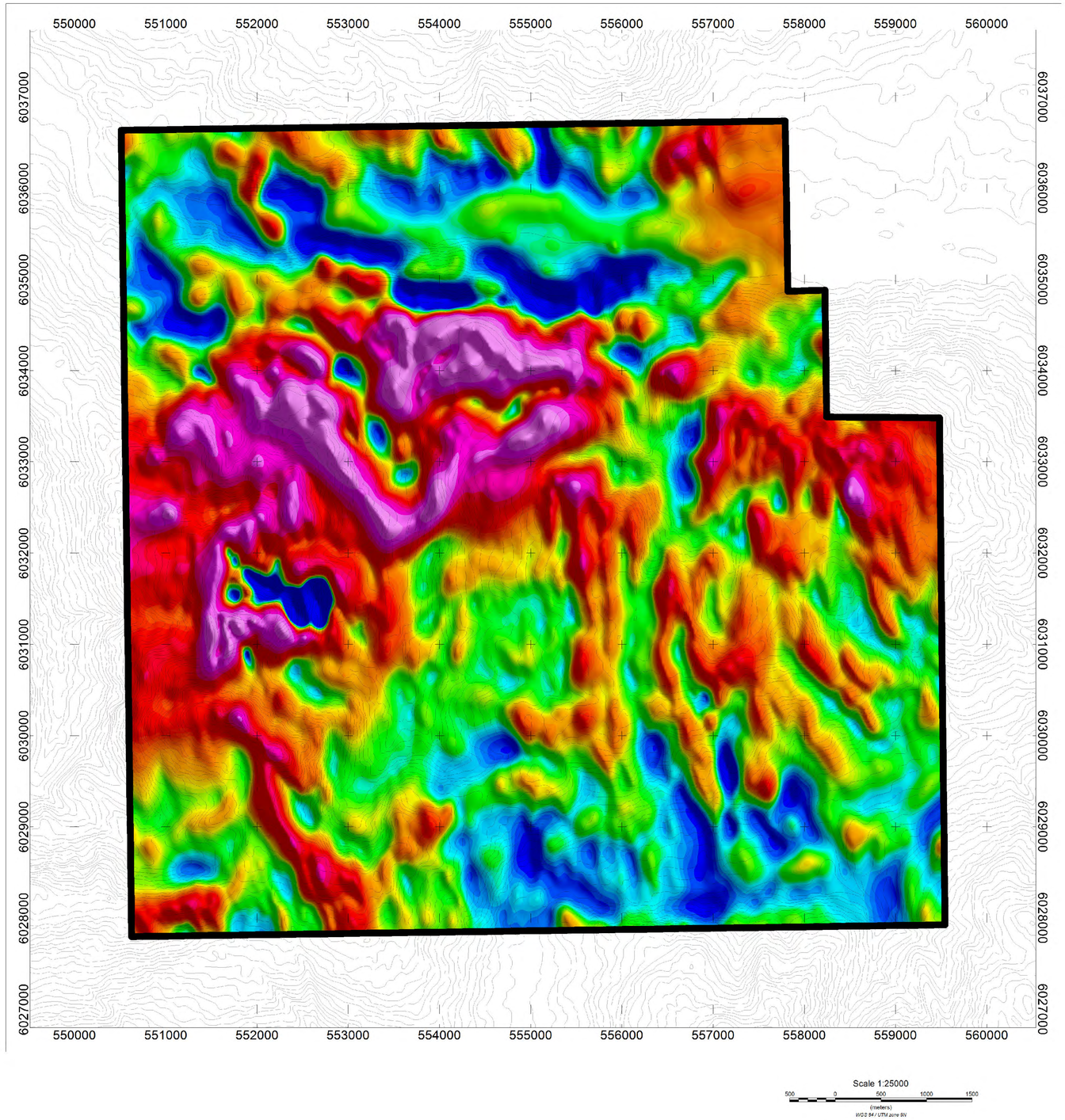
Magnetic Map

Gradient Enhanced Residual Magnetic Intensity

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 13
RMIge



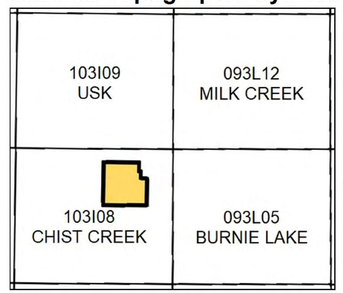
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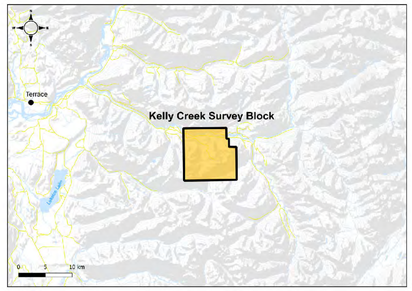
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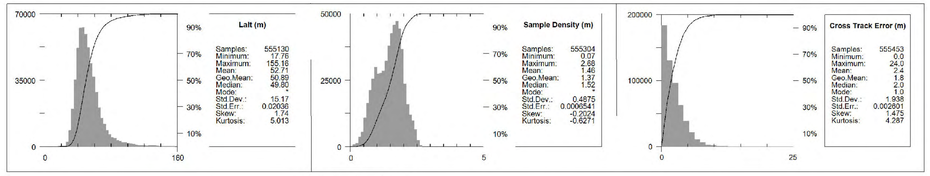
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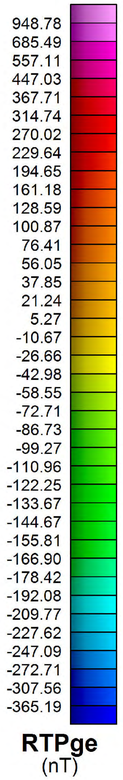
WGS 84 / UTM zone 9N

National Topographic System









RTPge
(nT)

MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Gradient enhanced Reduced to Magnetic Pole (RTPge) is derived from the gradient enhanced Residual Magnetic Intensity (RMIge). Refer to report for details. RTPge is represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

Kelly Creek

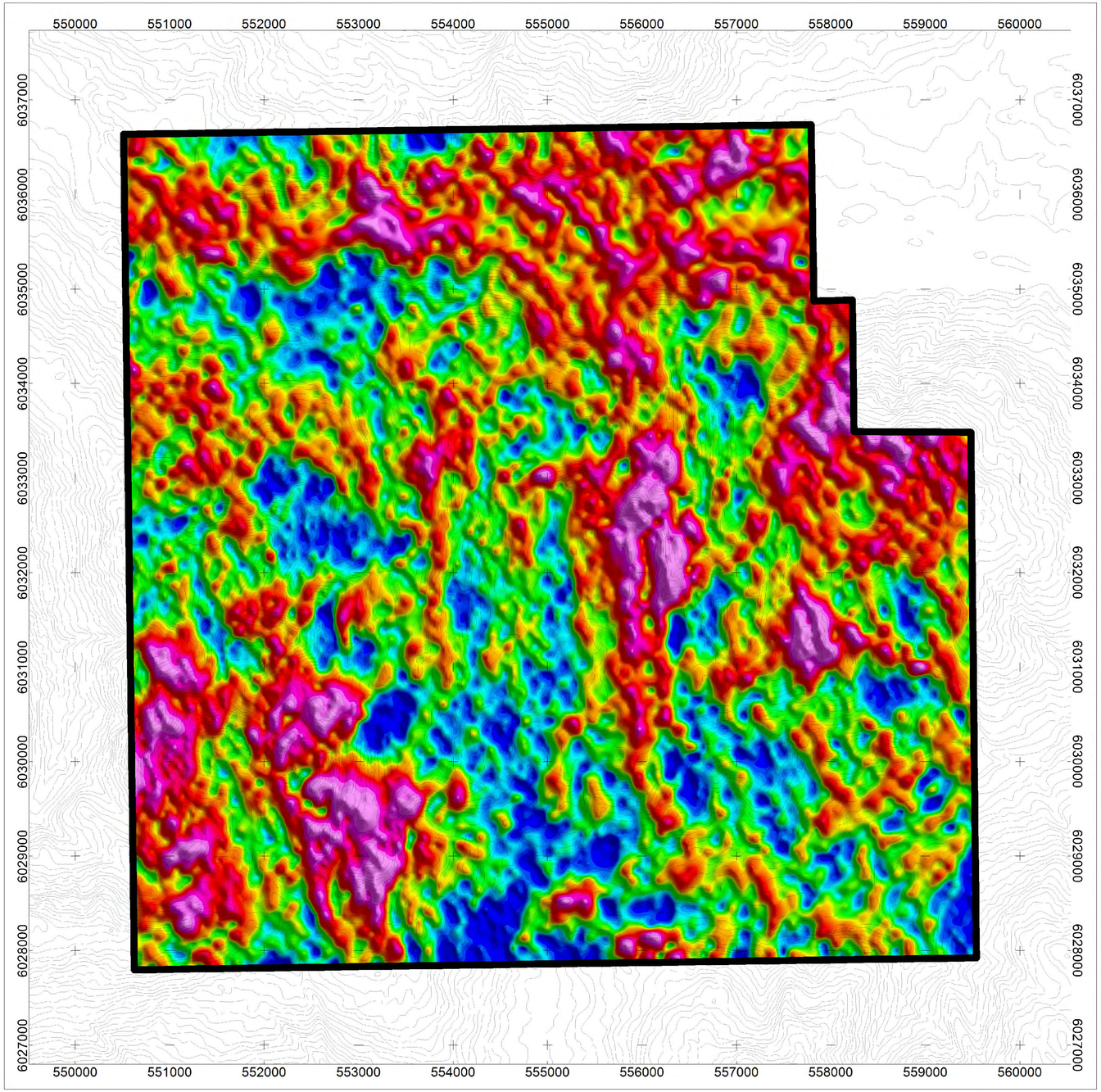
Magnetic Map

Gradient Enhanced Reduced to Magnetic Pole

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 14
RTPge



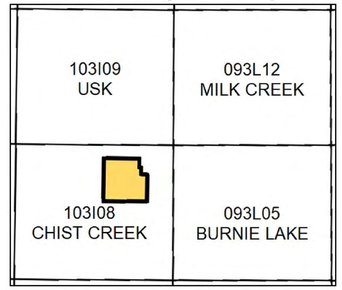
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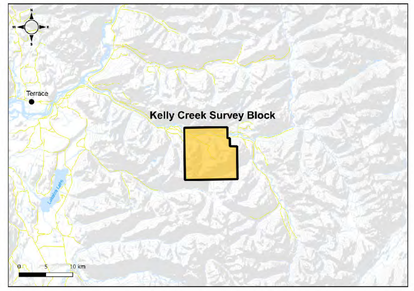
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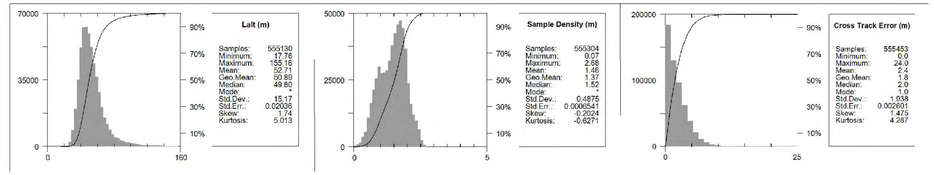
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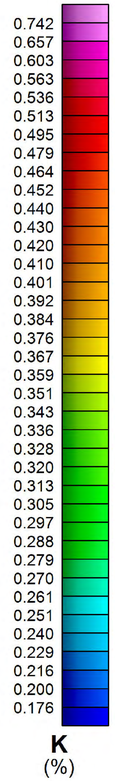
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Radiometric data have been corrected for effective height, lag, aircraft, cosmic, radon, stripped ratios, and attenuations, and then converted to apparent radioelement concentrations. Refer to report for details. Radiometric data are represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

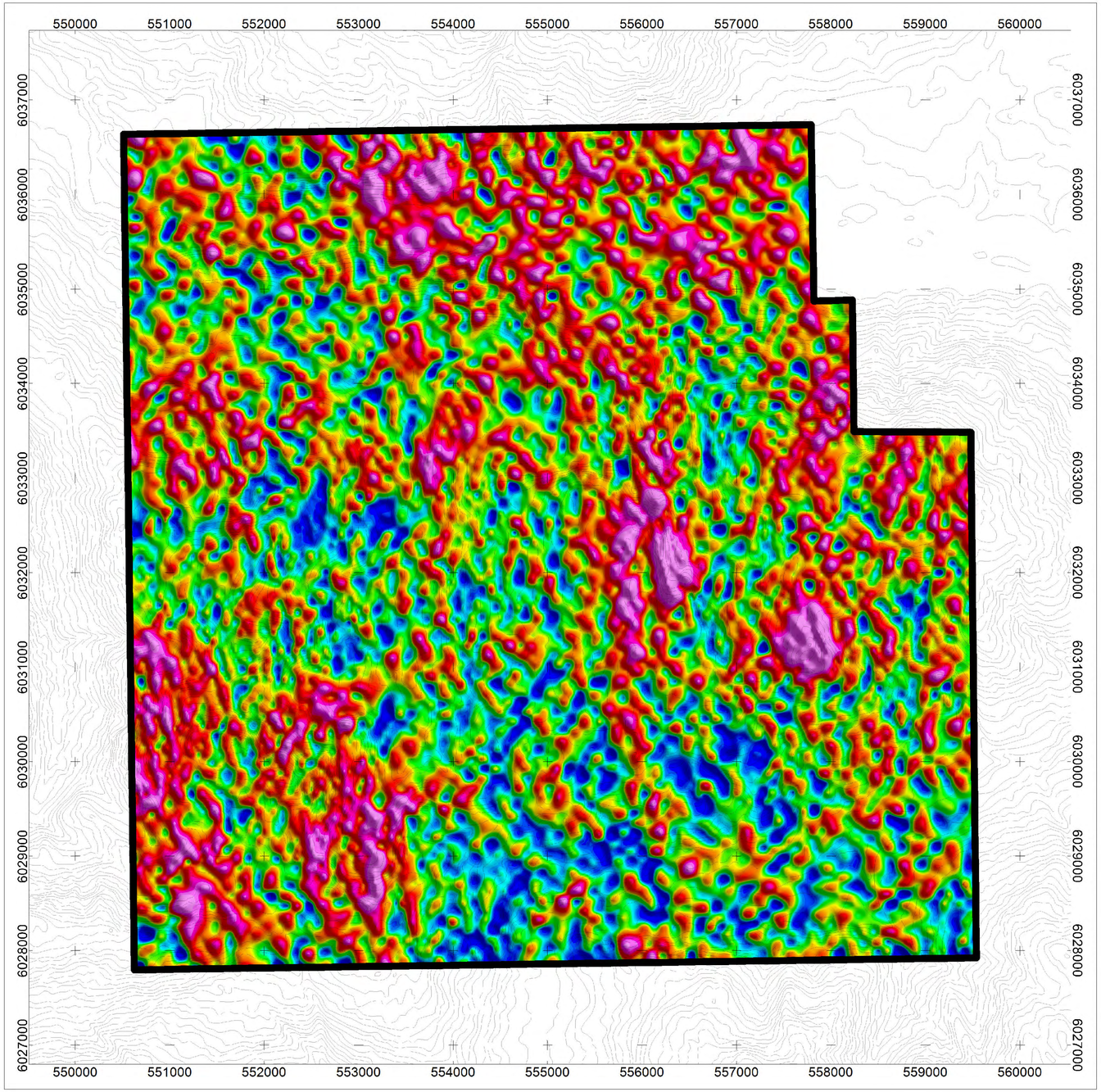
Kelly Creek

Radiometric Map
Potassium - Percentage

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 15
%K



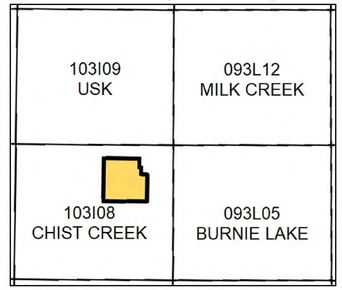
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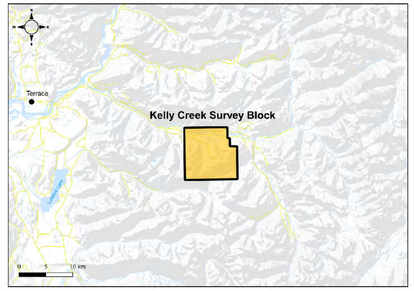
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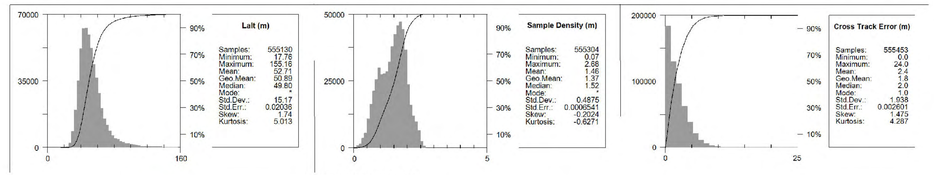
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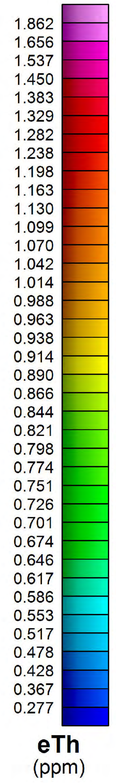
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Radiometric data have been corrected for effective height, lag, aircraft, cosmic, radon, stripped ratios, and attenuations, and then converted to apparent radioelement concentrations. Refer to report for details. Radiometric data are represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

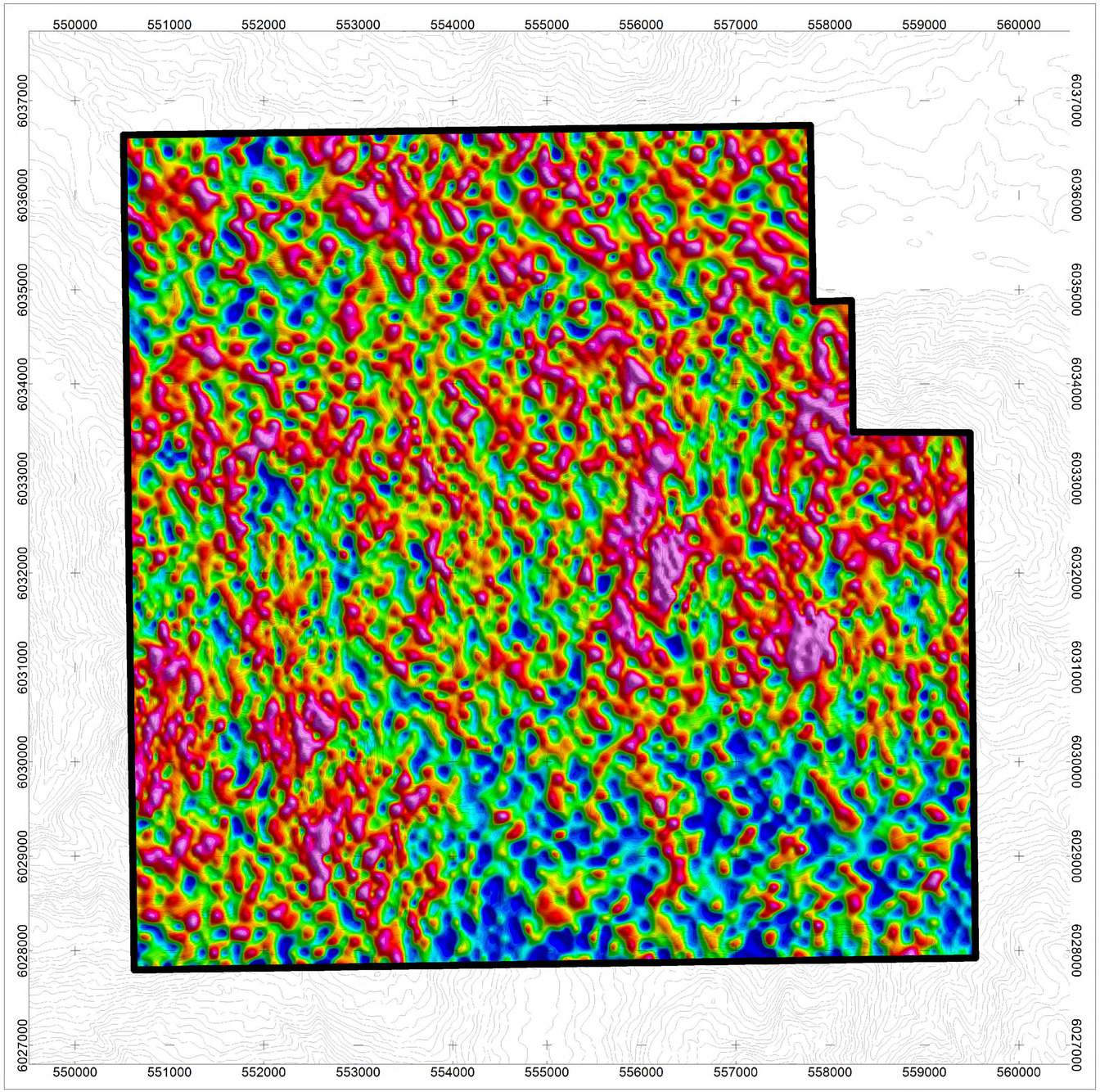
Kelly Creek

Radiometric Map
Thorium - Equivalent Concentration

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 16
eTh



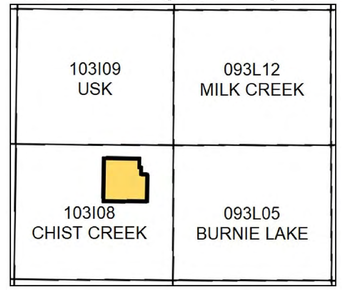
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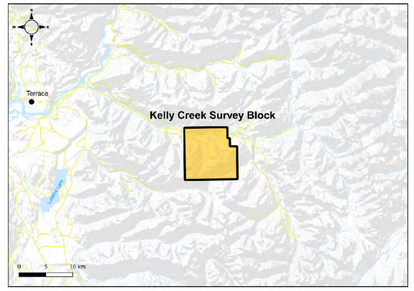
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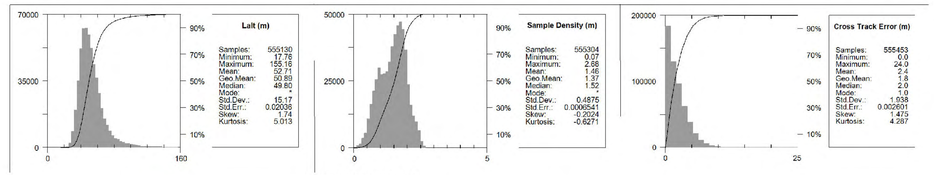
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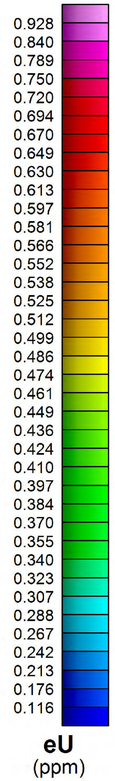
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Radiometric data have been corrected for effective height, lag, aircraft, cosmic, radon, stripped ratios, and attenuations, and then converted to apparent radioelement concentrations. Refer to report for details. Radiometric data are represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

Kelly Creek

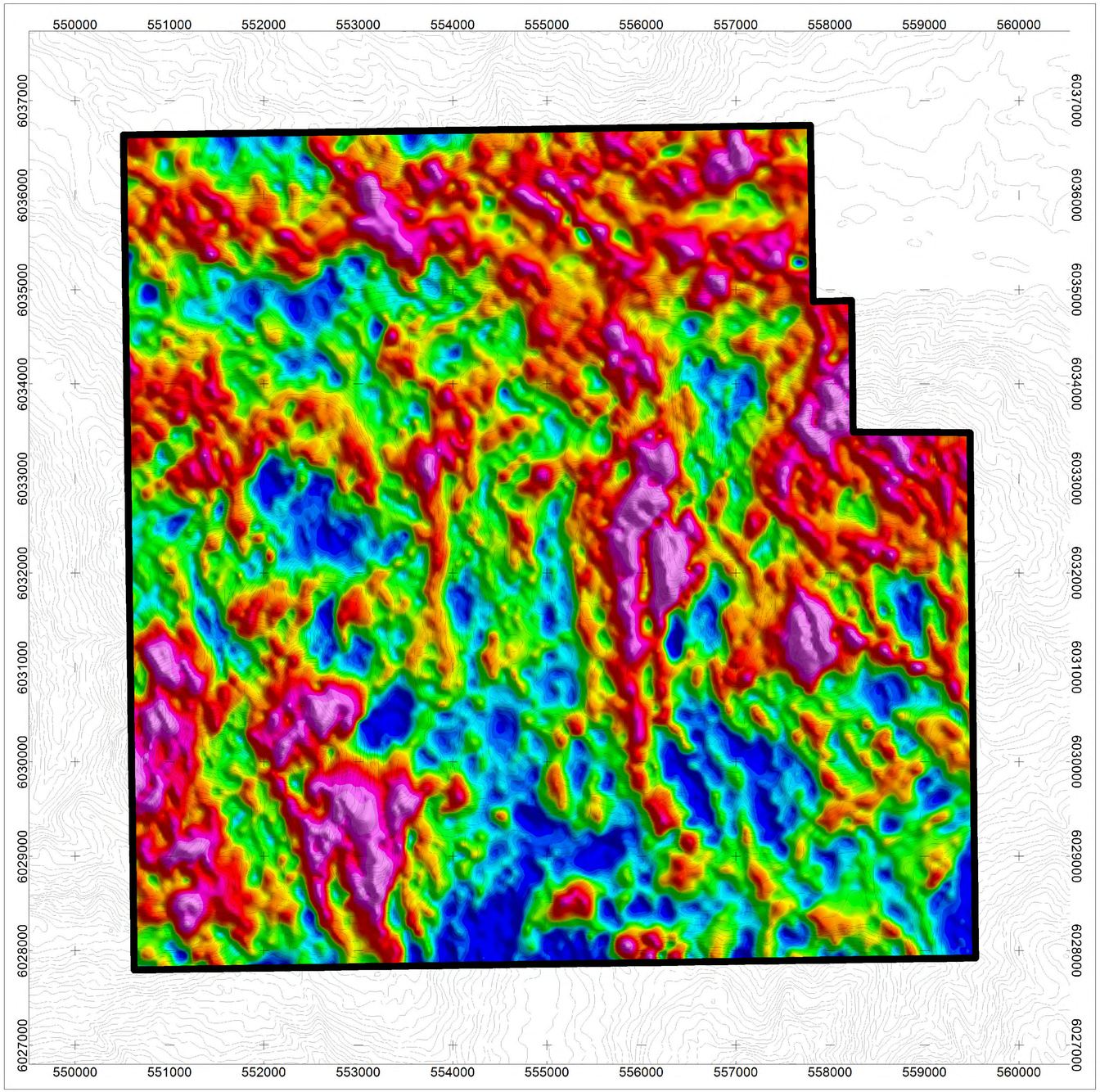
Radiometric Map

Uranium - Equivalent Concentration

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 17
eU



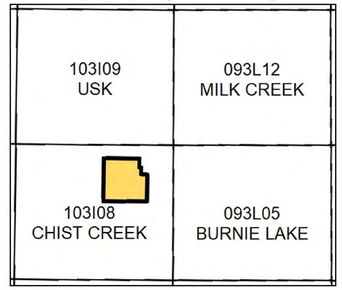
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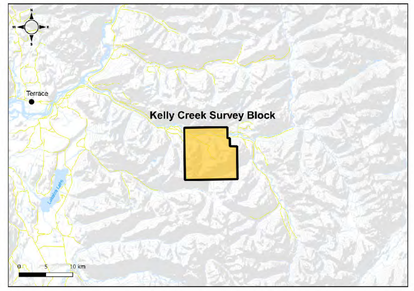
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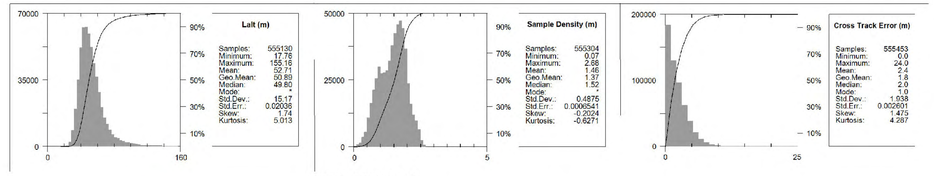
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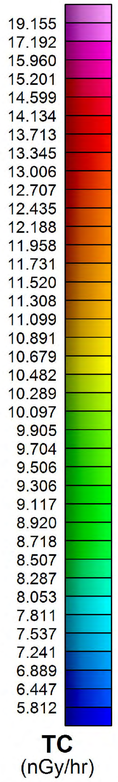
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
Radiometric data have been corrected for effective height, lag, aircraft, cosmic, radon, stripped ratios, and attenuations, and then converted to apparent radioelement concentrations. Refer to report for details. Radiometric data are represented as a grid and drawn with a histogram-equalized colour shade; sun illumination inclination at 45° and declination at 045°.

TOPOGRAPHIC REFERENCE
National Topographic Data Base (NTDB), Canada. Ottawa, ON: Government of Canada, Natural Resources Canada, Center for Topographic Information.
URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

Richard Billingsley

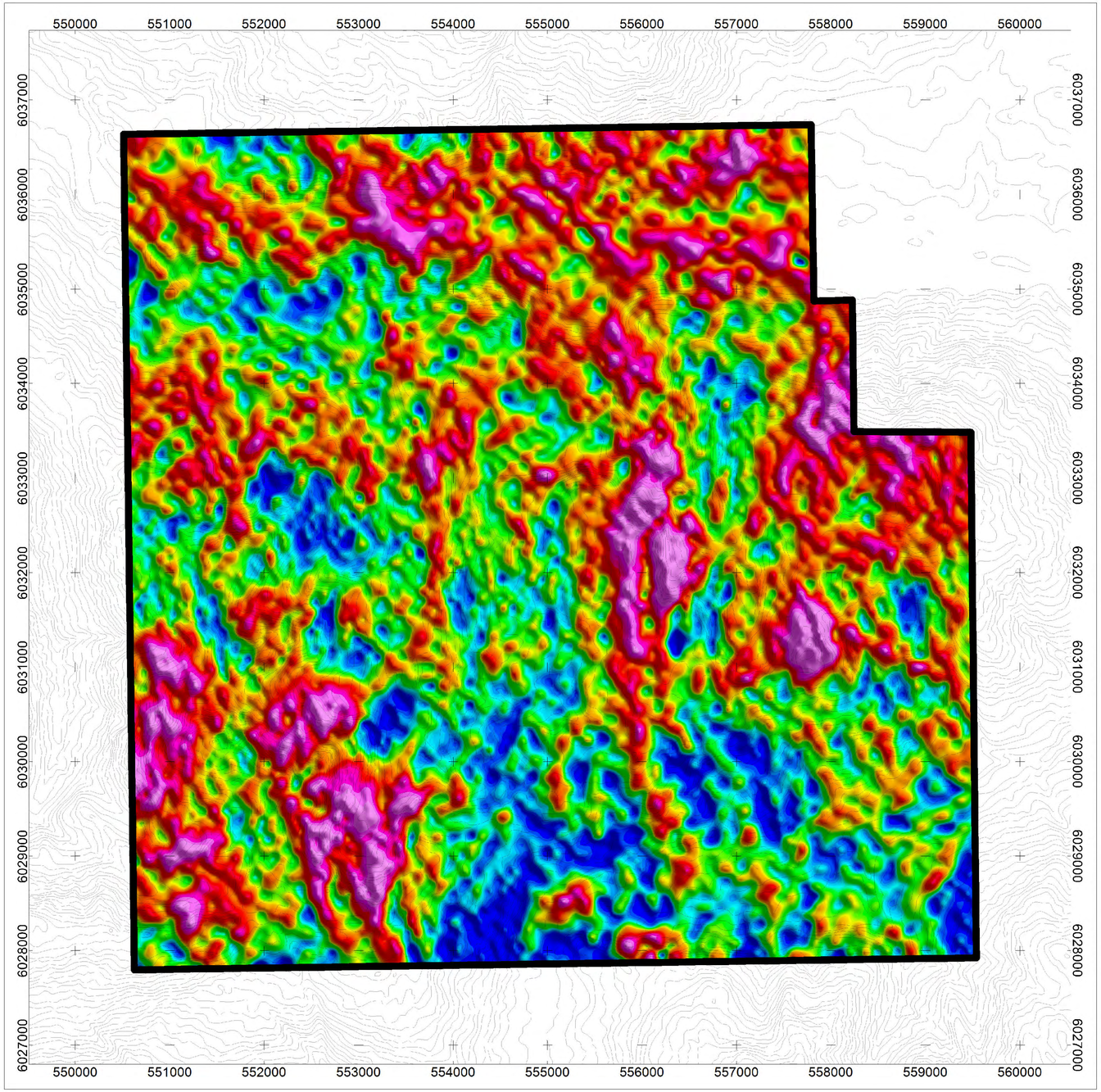
Kelly Creek

Radiometric Map
Total Count

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 18
TC



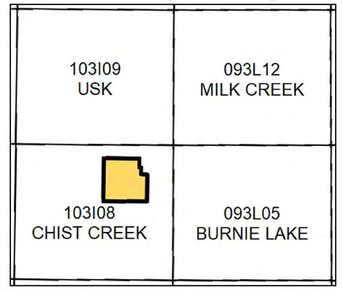
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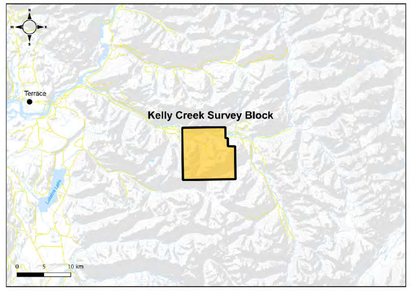
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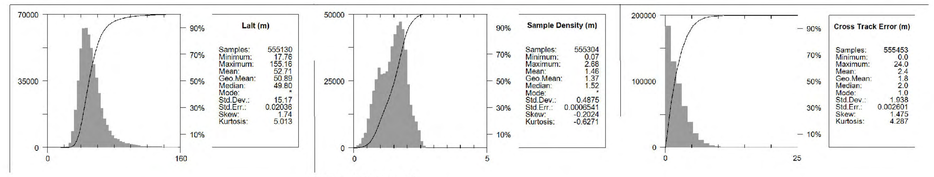
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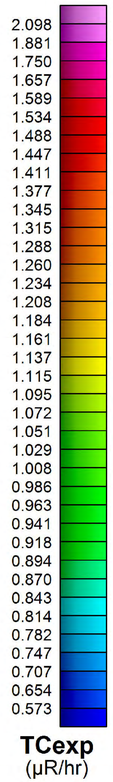
WGS 84 / UTM zone 9N

National Topographic System









TCexp
(µR/hr)

MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
Total Line km:	814 km
Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

Magnetometer Sensors:	Scintrex CS-3 Cesium
Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
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URL <http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/ntdb_bndt/>[2007]

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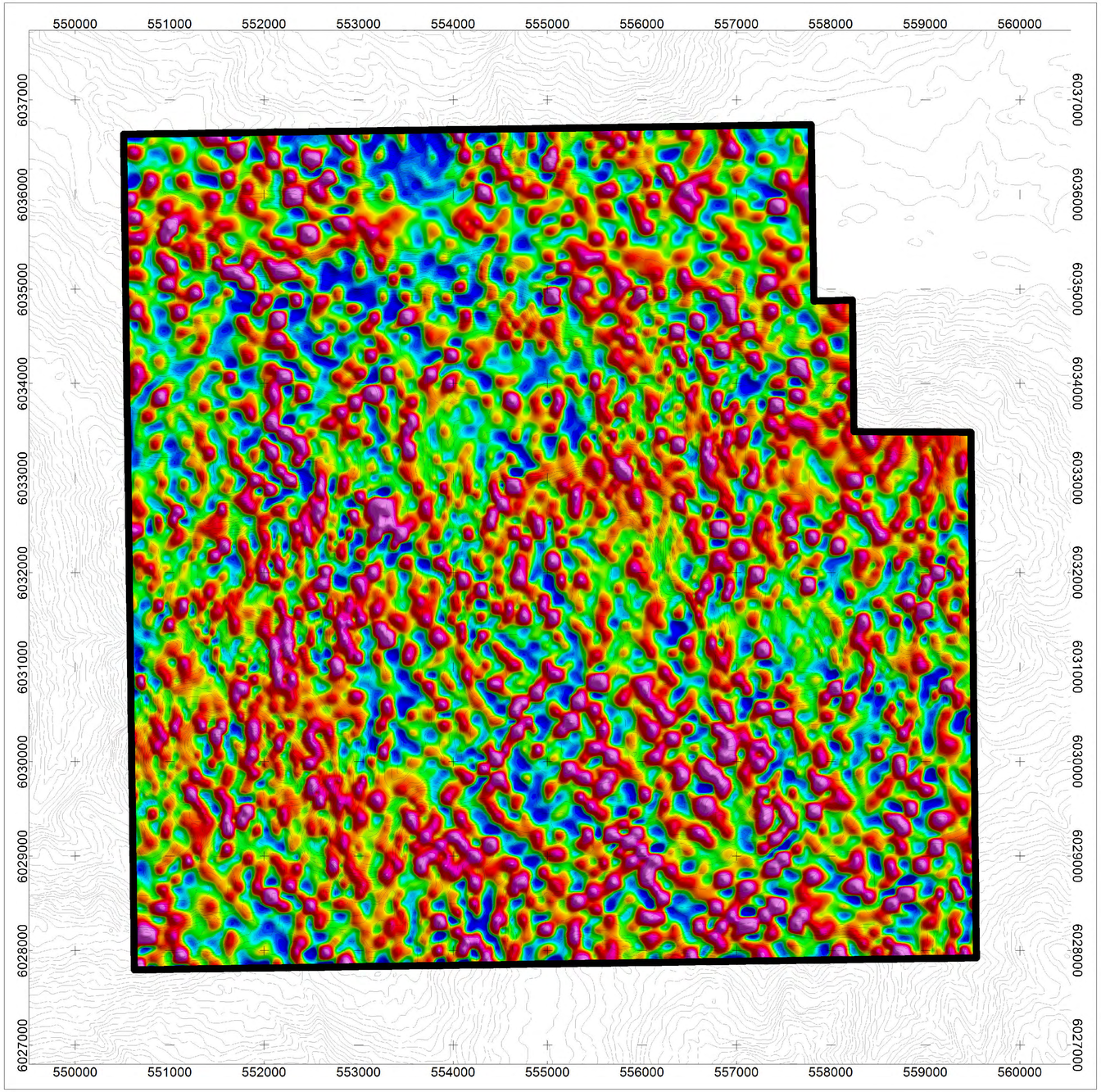
Kelly Creek

Radiometric Map
Total Count - Exposure Rate

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 19
TCexp



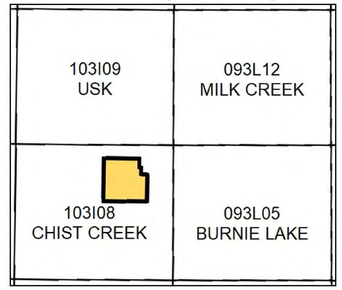
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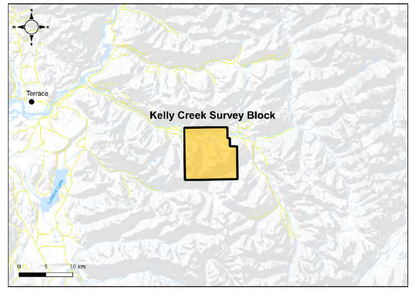
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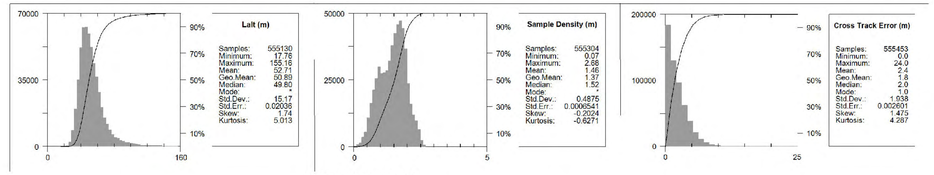
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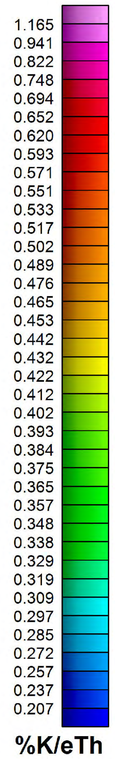
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
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Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

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Configuration:	Triple gradient boom with 3 axis compensation
Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
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Kelly Creek

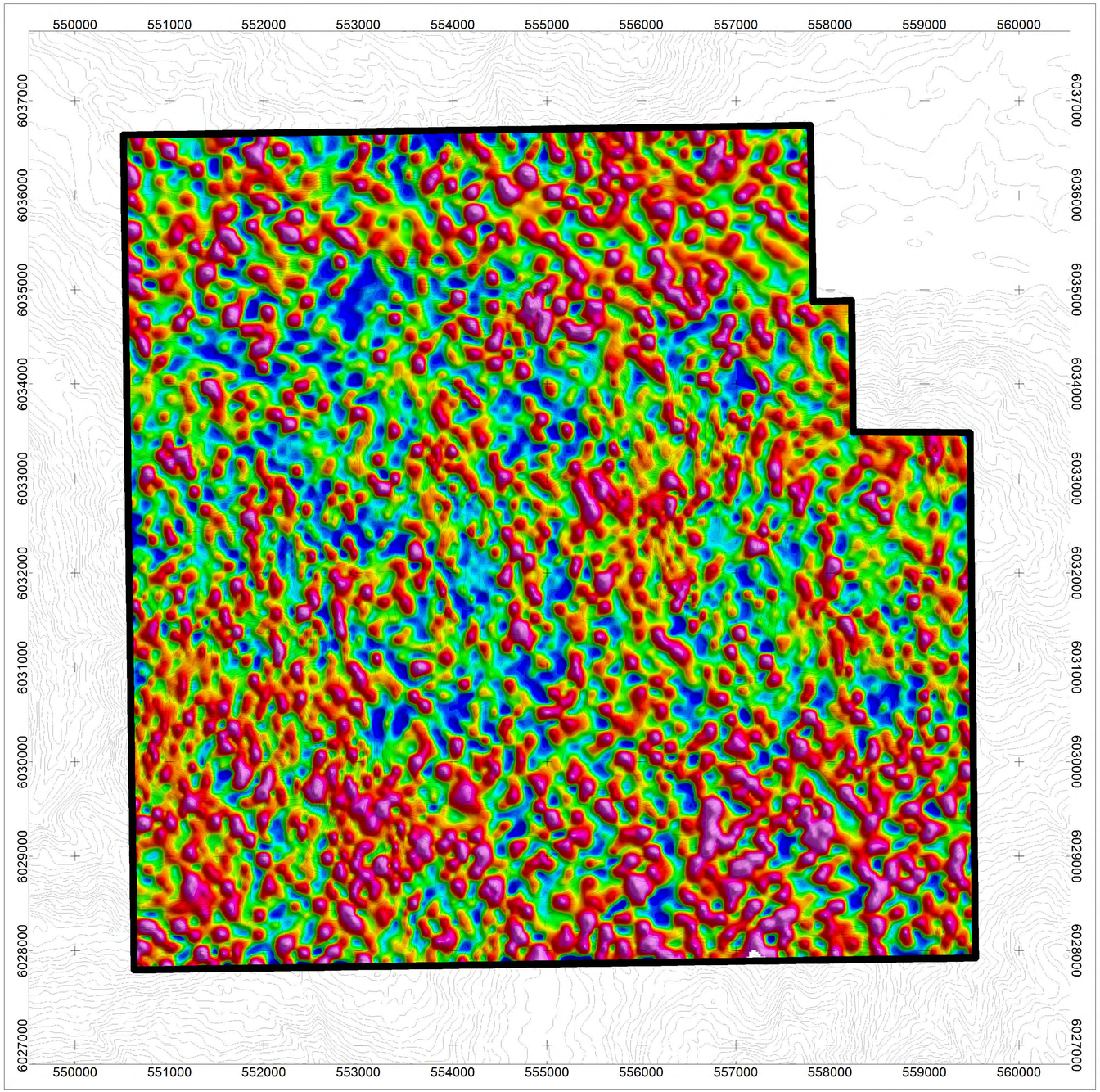
Radiometric Map

Potassium over Thorium Ratio

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 20
%K/eTh



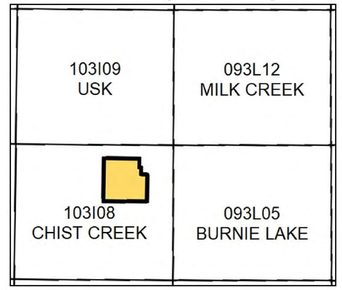
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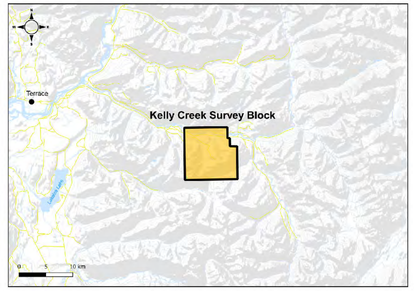
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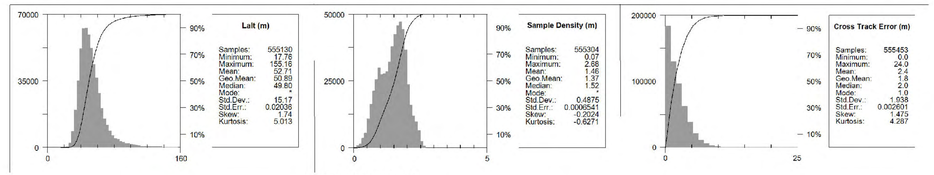
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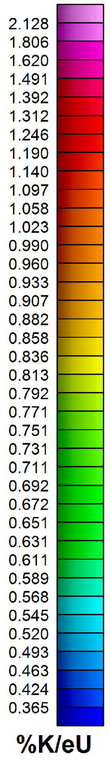
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
Survey Base:	Terrace, BC
Aircraft Type:	Airbus AS350 helicopter
Registration:	C-GSVY
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Mean Survey Height:	52.7 meters
Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
Tie Line Direction:	179°/359°

AIRBORNE SURVEY SYSTEM

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Sample Rate:	20 Hz
Sensitivity:	0.0006 nT √Hz rms
Gamma Ray Spectrometer:	Pico Envirotec AGRS-5
Downward-Looking Crystals:	16.8 litres of NaI(Tl)
Upward-Looking Crystals:	4.2 litres of NaI(Tl)
Sample Rate:	1 Hz (resampled to 20Hz)

Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
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Kelly Creek

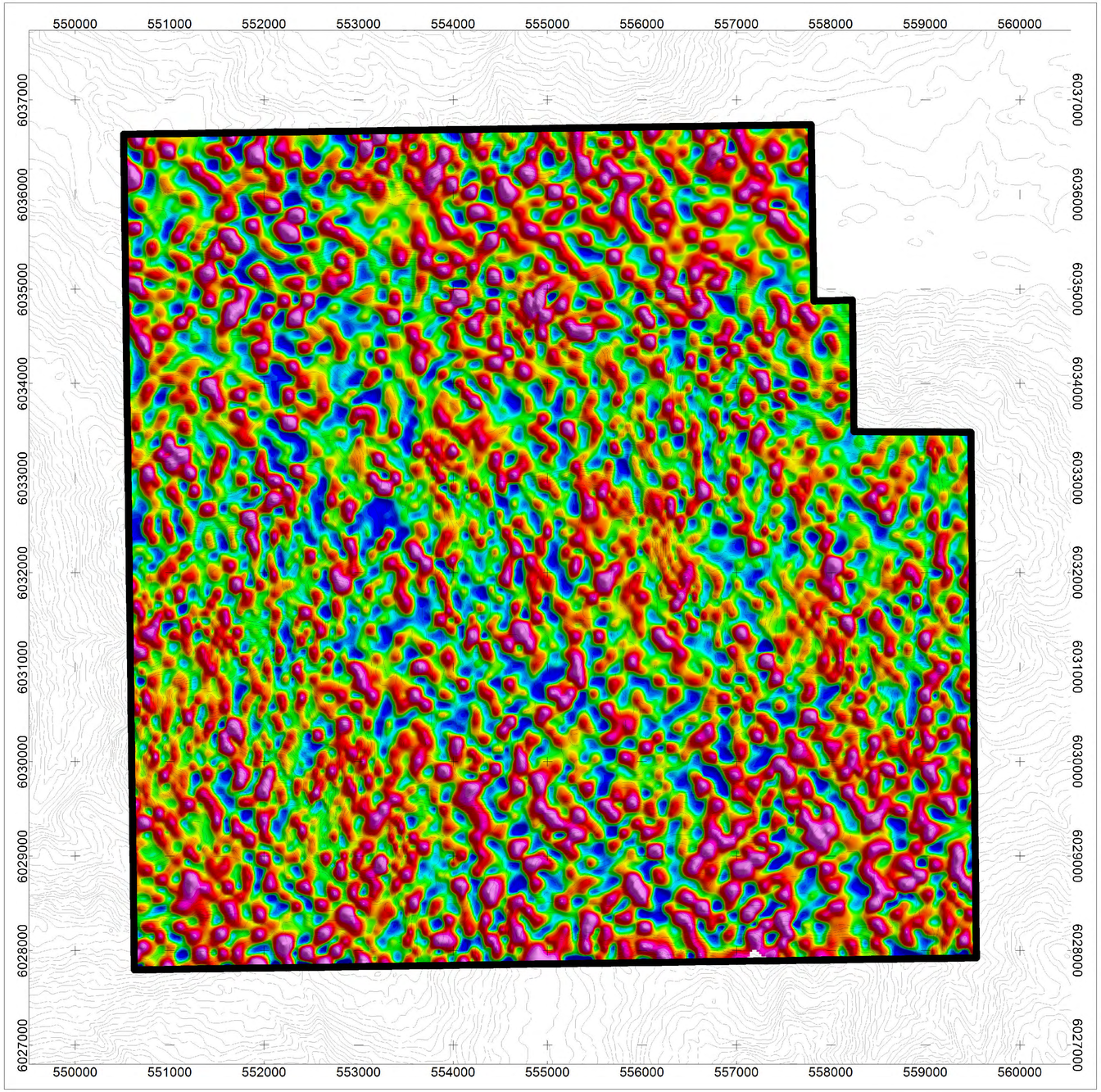
Radiometric Map

Potassium over Uranium Ratio

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 21
%K/eU



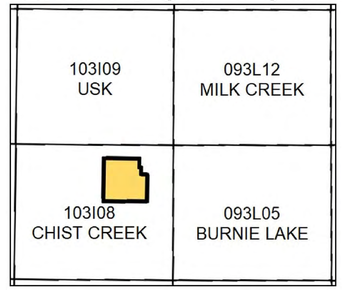
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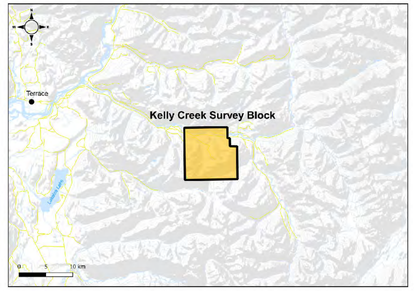
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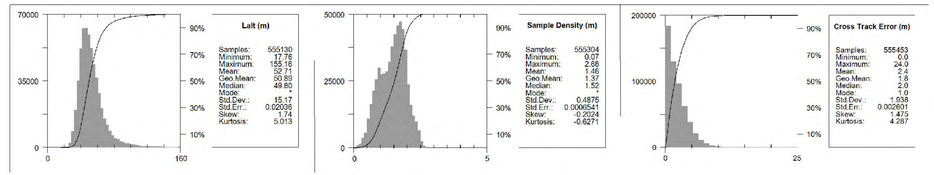
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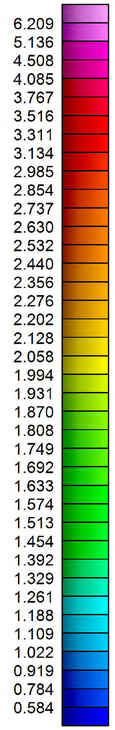
WGS 84 / UTM zone 9N

National Topographic System









MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
Survey Dates:	August 8, 22, and 23, 2022
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Registration:	C-GSVY
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Survey Line Spacing:	100 meters
Survey Line Direction:	089°/269°
Tie Line Spacing:	1000 meters
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AIRBORNE SURVEY SYSTEM

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Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

DATA REFERENCE
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Richard Billingsley

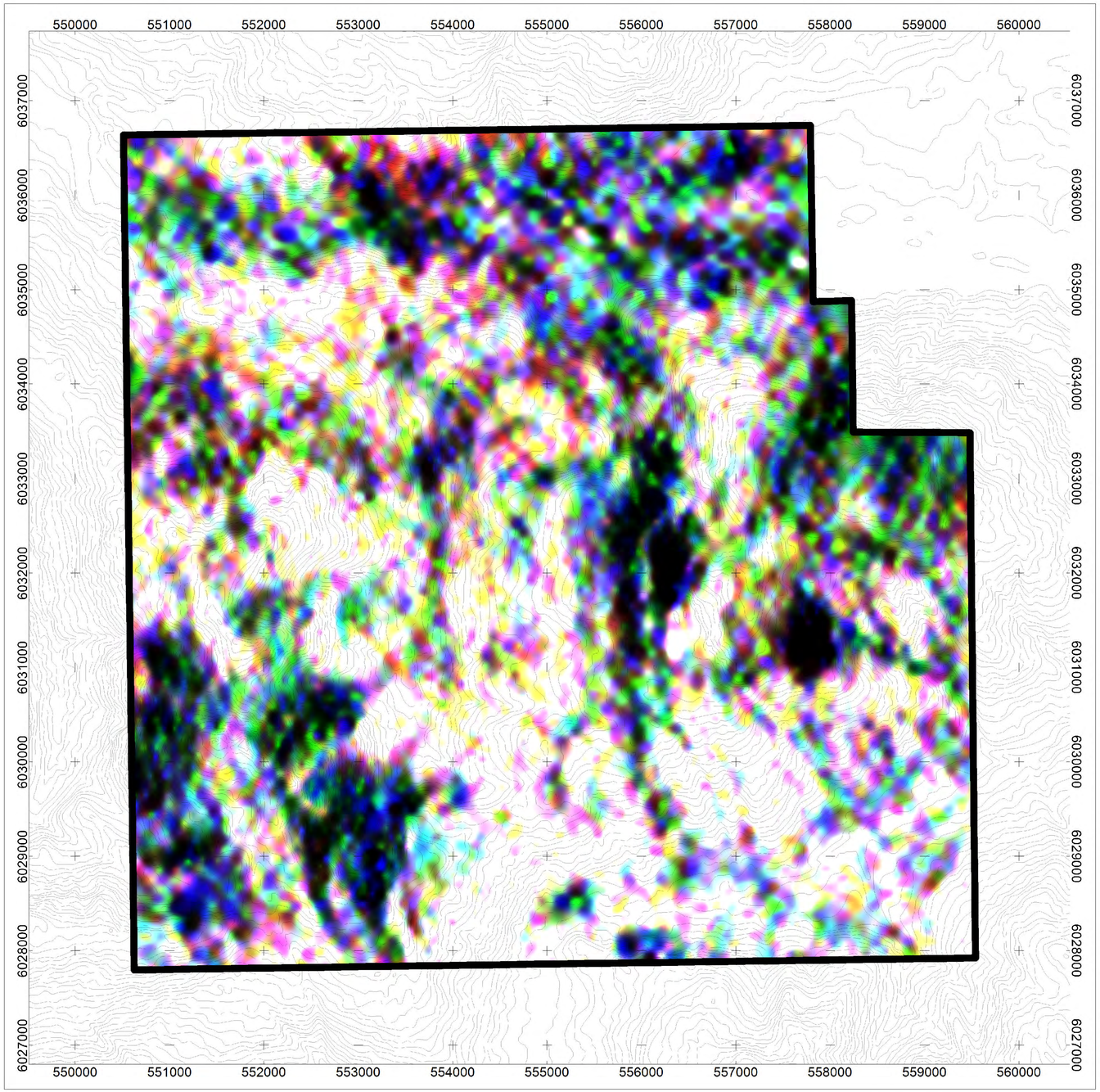
Kelly Creek

Radiometric Map
Thorium over Uranium Ratio

Precision GeoSurveys

Job #22162_KC
September 13, 2022

Plate 22
eTh/eU



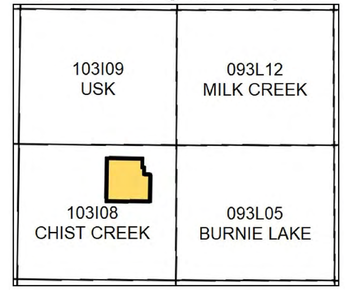
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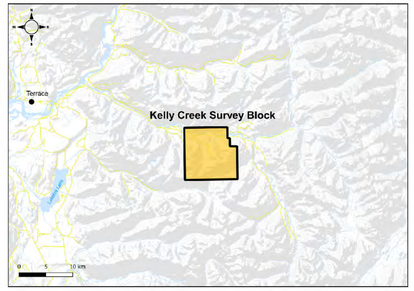
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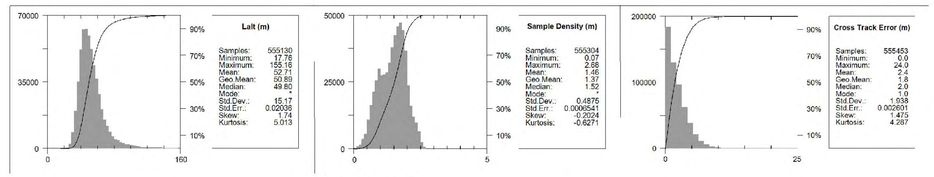
(meters)

WGS 84 / UTM zone 9N

National Topographic System







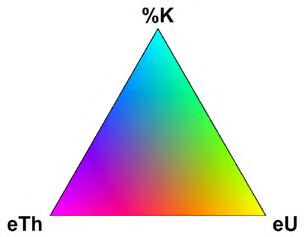
MAP PROJECTION
Projection: Universal Transverse Mercator Zone 9N
Datum: WGS 84
Local Datum Transform: World

KELLY CREEK SURVEY SPECIFICATIONS

Survey Technology:	Magnetic Gradient and Radiometric Survey
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AIRBORNE SURVEY SYSTEM

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Legend

Elevation Contours, 100 ft Intervals.....

Kelly Creek Survey Block Boundary.....

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Kelly Creek

Radiometric Map
Ternary Image

Precision GeoSurveys

Job #22162_KC
September 13, 2022

APPENDIX D-MAPS

Map 1: Mineral Tenures Comprising the Kelly Creek Property

Zymoetz River

1095238

1095239

1095240

1095241

1095242

Kelly Creek Property

N

0 500 1,000 2,000 3,000 Meters

NAD 83, Zone 9

Scale 1:25,000

Contour Interval 100'

550000 552000 554000 556000 558000

6038000 6036000 6034000 6032000 6030000 6028000 6026000

Map 2: 2022 Grab Sample Locations, Kelly Creek Property

N

552000 554000 556000 558000

6038000 6036000 6034000 6032000 6030000 6028000 6026000

001-006,051,052

012-15,017-19,
066-68,104,105,154

069

107,155

061

010

011

060

009

008

007

055

053,54

059

058

103

056

064

057

063

152

101

062

102

065

151

153

Kelly Creek
Property

xxx Sample Location and Number
(all numbers prefixed by "F926")

0 2,500 5,000
Meters

NAD 83, Zone 9
Scale 1:25,000

Map 3: 2022 Grab Sample Copper Values, Kelly Creek Property

N

552000 554000 556000 558000

6038000 6036000 6034000 6032000 6030000 6028000 6026000

1785,8790,11550,12100,
1935,19450,11550,9110

17300,14200,18650,3750,6490,311,
13250,13700,1530,3040,148,2550,1680

17

6690,1250

12

15

11

9

10

25

86

3570

2460,122

688

115

600

1105

15

57

529

2700

139

4900

81

1925

44

64

Kelly Creek
Property

xxx
Copper Value (ppm)

0 2,500 5,000
Meters

NAD 83, Zone 9
Scale 1:25,000

Map 4: 2022 Grab Sample Silver Values, Kelly Creek Property

N

552000 554000 556000 558000

6038000 6036000 6034000 6032000 6030000 6028000 6026000

1.86,7.11,12.70,11.00,
4.84,24.80,11.45,6.97

76.90,15.25,34.30,15.85,11.60,0.61,
23.50,60.00,8.10,15.05,0.38,1.96,4.15

0.21

8.18,2.93

0.40

0.68

0.02

0.10

0.04

0.30

0.53

6.58

9.40,0.29

1.18

0.71

0.08

1.26

0.01

0.12

0.27

1.62

0.07

0.03

1.14

0.35

0.06

0.05

Kelly Creek
Property

xxx
Silver Value (g/t)

0 2,500 5,000
Meters

NAD 83, Zone 9
Scale 1:25,000