

**A Geochemical Report on the ALL IN Property**

submitted as Representation Work  
on the following quartz claims

Work performed on:

ALL IN 1-36  
YE90171-YE90188

Work applied to:

ALL IN 1-36  
YE90171-YE90188

All claims in Dawson Mining District

Owner: Gordon Richards

Location

115P/02

Camp in centre of claims at

UTM 418,440E, 7,009,460N, Elev 505 m

NAD 83, UTM Zone 8

Field work performed by

Gordon Richards & Jeff Mieras

during the period June 24 to June 30, July 3, 2017

Report written by Gordon Richards

October 1, 2017

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**Table 4. xlsx file. Selected results of Silts with UTM co-ordinates.**

**VC172071.xls file of all MMI results for A1-A121.**

**VC172072.xls file of all MMI results for A122-A146, L1-L100.**

**VC172072.xlsx file of all MMI results for L101-L141.**

**WHI17000208.xlsx file of all twig sample results for all A and L series.**

## **INTRODUCTION.**

The general area of the ALL IN claims was prospected with the aid of a YMEP grants awarded to G Richards in 2016 and 2017. The property is located on a gently eastward sloping hillside from two to six km west of the Klondyke Highway about 25 km south Stewart Crossing within NTS map sheet 115P02. Access was made from the helicopter base at Mayo airport, 80 km distant.

The geology of the area has been described on Canadian Geoscience Map 7 of southwestern McQuesten and parts of northern Carmacks by Ryan, J.J., Colpron, M., and Hayward, N., 2010. Figure 3. The area is shown on that map to be underlain by volcanoclastic cover rocks of the Early Mississippian aged Reid Lakes Batholith Complex, that includes a weakly Kspar-porphyritic, medium-grained granite to quartz monzonite intruding its own volcanic pile. However it is believed that the claims are underlain mainly by the batholith with some volcanic cover rocks in the west portion of the claims. A few unaltered outcrops and angular rubble of andesite and dacite occur in the east portion of the claims. Angular cobbles and a boulder of chloritized granodiorite were found in a pit at the camp in the centre of the claims. Granodiorite float was the predominant rock type found at RGS sample sites bracketing the claims. Geochemical results also support the belief that granitic rocks underlie most of the claim block. Loess, about 25 cm thick, blankets most slopes. The claims lie entirely within Reid glaciated terrain immediately adjacent to pre-Reid glaciated terrain. Figure 4.

The McQuesten aeromagnetic survey by Kiss, F., and Cryle, M., 2009 is available as Geoscience Data Repository through Natural Resources Canada. Tilt and horizontal derivative maps were useful in showing where magnetic susceptibility is low and was used to provide prospecting targets in 2016 and 2017. The main geochemical target has a striking similarity in shape with a pronounced low of the horizontal derivative aeromagnetic map.

Regional Geochemical Data (RGS) is also published, readily available and provides geochemical data for numerous elements of stream sediments collected throughout the area including three creeks draining the general area of the claims. Figures 5-14. The RGS samples were collected in 1986 (OF 1650) and re-analyzed in 2011 using more sophisticated analytical techniques and released in Open File 2012-09. Geochemical data from 278 selected samples that are lying only within the pre-Reid glaciated area within Yukon Tanana Terrain on NTS 115P were used to recalculate thresholds for 70<sup>th</sup>, 80<sup>th</sup>, 90<sup>th</sup>, 95<sup>th</sup> and 98<sup>th</sup> percentiles for a number of elements. It was believed that this data would provide a more representative data-set on which to evaluate exploration potential for the area. The claims lie immediately east of the area of recalculated thresholds. Recalculated threshold values provided anomalous results for Cu, Mo, Ag and other elements with high (70<sup>th</sup>tile to 98<sup>th</sup>tile) threshold values from one creek draining the claim area (RGS 3287) and one creek down-ice from the claim area (RGS 3388).

There is no known previous exploration activity anywhere on or near the ALL IN claims.

In 2017 the ALL IN 1-36 claims were staked June 11 and recorded June 15 to cover known anomalous zones identified from the 2016 work and their extensions. A MMI soil and black spruce twig sampling prospecting program was undertaken on the claims June 24 to 30. Results of that work forms the basis of this report and is used to extend expiry dates of the claims. The ALL IN 37-46 claims were staked and recorded August 22, 2017. No work has been conducted on these claims.

Results of the field work were successful in defining a pronounced multi-element anomalous zone in the MMI soil results that measures 800 m to 1100 m wide by 2000 m long and corresponds remarkably well with an aeromagnetic horizontal derivative low. The large geochemically anomalous zone is defined by anomalous Cu and Au with centrally positioned anomalous Mo and Ag. Many other elements form strong anomalous zones supportive of the above patterns. The geochemical signature is interpreted to be indicative of underlying porphyry mineralization.

A second less well defined zone of anomalous metal values occurs west of the above zone and appears to be another porphyry target that is partially overlain by volcanoclastic cover rocks of the Reid Lakes Complex.

Recommended work includes a mobile auger or percussion drilling program designed to collect rock samples underlying the main geochemically anomalous zone to determine the cause of the geochemical anomalies.

## **HISTORY.**

There is no record of any exploration work ever having been conducted on the claims area or anywhere within several km of the claims prior to 2016 both in the field and in government Minfile records. There were a few old helipads found in 2017 that appear related to the fighting of a forest fire about 20 years ago. One clearing occurs beside the creek cutting across the claims and could have been a pump station. The main forest fire burn occurs north and west of the claims and extends for many km to the north. A 500 m diameter satellitic fire burn occurs in the north central portion of the claims.

Work in 2016 by the writer and funded by YMEP located two patterns of strong multi-element geochemical anomalies in MMI soil samples measuring about 800 m in diameter and open to the north in the southeast zone and 1500 m wide east-west and open to the south in the northeast zone. Work in 2017 was designed to find the limits for these anomalies and search for additional ones. Previous work funded by YMIP and YMEP over the past six years by the writer and his assistant, Jeff Mieras, within the Reid Lakes Batholith has been successful in defining about ten geochemical targets based on MMI soil samples and to a lesser degree black spruce twig samples with similar porphyry signatures.

In 2017 the ALL IN 1-36 claims were staked June 11 and recorded June 15 over the proposed sampling area. Following staking from June 24 to 30 a MMI and black spruce twig sampling program was undertaken over the claims and forms the basis of this report.

In August, the ALL IN 37-46 claims were staked over ground between the original claims and the Klondyke Highway.

## CLAIMS.

Table 1 is a list of all claims forming the property. The claims lie in the Dawson Mining District. The Registered Owner is Gordon G Richards. The work described in this report was funded largely by YMEP grant 17-002 awarded to Gord Richards. A few additional costs were paid for by Richards.

**Table 1. Claim Status**

Claim Name	Grant No.	Expiry Date
ALL IN 1-36	YE90171-YE90206	2018/06/15
ALL IN 37-40	YE90267-YE90270	2018/08/22
ALL IN 41-44	YF47067-YF47070	2018/08/22
ALL IN 45, 46	YD12692, YD12693	2018/08/22

Certificate to Work will be filed on the ALL IN 1-36 claims based on work described in this report.

## GEOLOGY.

Bedrock geology is best described on Canadian Geoscience Map 7 of *Southwestern McQuesten and Parts of Northern Carmacks* by Ryan, J.J., Colpron, M., and Hayward, N., 2010. See Figures 3 and 4. The claims occur within the Reid Lakes Batholith, an 80 km long unmetamorphosed Early Mississippian aged batholith that intrudes its own volcanic pile. The claims area is shown on Geoscience Map 7 to be underlain by volcanoclastics of the Reid Lakes Complex. However work in 2016 and 2017 has shown that the claims area is largely underlain by granodiorite of the Reid Lake Complex with dacite and andesite of the overlying volcanoclastics occurring in the western portion of the claims as shown on Figures 5 to 14. Evidence for this reinterpretation of underlying geology is the occurrence of abundant granitic float in RGS sample sites 3388, 3389, and 3287 shown on Figures 5 to 14, the occurrence of porphyry signatures in the

geochemical anomalous patterns, and the occurrence of heavily chloritized with weak limonitic staining of angular boulders and cobbles found in two one-half metre deep soil pits at the field camp in the centre of the claims.

Glaciation is described as Reid in age on several government maps. Reid glaciation began 200,000 years ago and ended about 50,000 years ago. Younger McConnell Glaciation ended about 20,000 years ago. Glaciation immediately west of the claims is pre-Reid in age, which is possibly older than 500,000 years (Jeff Bond, personal communication, 2012). Jeffrey Bond and Panya Lipovsky of the Yukon Geological Survey have recently provided a number of papers, maps and posters on the surficial geology of the pre-Reid glaciated area with descriptions related to exploration.

Uppermost soil is an organic soil from almost absent to less than one cm thick on dryer slopes and in excess of 10 cm thick over gentle poorly drained slopes. Loess occurs on all slopes, generally about 20 to 30 cm thick beneath the organic soil. This loess is believed to have formed in late stages or soon after the end of McConnell Glaciation. A few subround to round pebbles do occur in the loess and have probably worked themselves up into the loess from underlying till.

Till is commonly found beneath the loess containing well rounded cobbles and smaller rocks of foreign origin. Only in two deeper pits dug at camp were somewhat angular cobbles and boulders found. These were intensely chlorite altered granitic rocks probably part of the Reid Lakes Batholith.

## **GEOCHEMICAL SURVEY.**

### **SURVEY METHODS.**

#### **General.**

J. Mieras and G. Richards flew by helicopter from Mayo to the project area on June 11 to stake the ALL IN 1-36 quartz claims. They walked out at the end of the day to the Klondyke Highway and drove to Dawson City on June 15 to record the claims, following the staking of the nearby KRYPTOS claims. Following sampling the KRYPTOS claims they spent June 23 buying food and supplies in Mayo and organizing the helicopter for the next day. They flew from Mayo back to the ALL IN property June 24 to conduct MMI soil sampling and black spruce

		ALL IN		KRYPTOS	
		man days	post recording	man days	post recording
Date	Activity	man days	post recording	man days	post recording
Jun 8	bought supplies Whx	1		1	
Jun 9	Drove Mayo, staking plans	2			
Jun 10	wrote up 96 claim tags, bought food	1		1	
Jun 11	Dropped posts, staked ALL IN claims	2			
Jun 12	Staked KRYPTOS claims			2	
Jun 13	Staked KRYPTOS claims			2	
Jun 14	Staked KRYPTOS claims, record Mayo			1	
Jun 15	Record Dawson, bought food, drove to Kryptos camp			1	
Jun 16	Sampled Kryptos				2
Jun 17	Sampled Kryptos				2
Jun 18	Sampled Kryptos				2
Jun 19	Sampled Kryptos				2
Jun 20	Sampled Kryptos				2
Jun 21	Sampled Kryptos				2
Jun 22	Sampled Kryptos				2
Jun 23	Drove Mayo, bought food, organize helicopter		2		
Jun 24	Heli to ALL IN claims, begin sampling		2		
Jun 25	Sampled ALL IN		2		
Jun 26	Sampled ALL IN		2		
Jun 27	Sampled ALL IN		2		
Jun 28	Sampled ALL IN		2		
Jun 29	Sampled ALL IN		2		
Jun 30	Sampled ALL IN		2		
Jul 1	Demob ALL IN, Drop off for sampling on Kryptos				2
Jul 2	drove Whs, sorted samples, dried out				2
Jul 3	Ship samples, returned gear, stored camp gear.		2		
		3 days	9 days	4 days	9 days
	Of the 9 days on the ALL IN claims all 9 days were spent on the claims				
	Of the 9 days on the KRYPTOS claims, Richards spent 7 days and Mieras spent 6 days.				

**Table 1.5. Record of time spent on BENT (ALL IN claims) and KRYPTOS (KRYPTOS claims) Projects of G Richards and J Mieras in 2017.**



twig sampling across the claims. **Fourteen man days were spent on the property by Mieras and Richards from June 24 to June 30** collecting 200 MMI soil samples and 85 black spruce twig samples. 12 MMI soil samples and 14 black spruce twig samples were collected off the claims. **188 MMI soil samples and 71 black spruce twig samples were collected within the claims.** July 3 was spent in Whitehorse in demob organizing and shipping samples and storing camp gear.

Four sample series are shown on Figures 5 to 14. “C” and “T” sample series were collected in 2016, “A” and “L” sample series were collected in 2017. The 2017 sampling program was conducted across the ALL IN claims to find the limits of two zones of anomalous samples identified in 2016. Sampling was designed to provide a 100 m sample interval along east-west sample lines spaced about 300 m apart. Considerable latitude was exercised in the field to allow wandering away from selected sites in order to find sites suitable for MMI sampling as this method was considered preferable to black spruce twig sampling and shallow permafrost hindered collection of MMI samples at some sites.

All geochemical results are provided in digital form with NAD 83 Zone 8 UTM co-ordinates provided for all samples. Response ratios calculated for selected elements of all MMI samples are provided in Table 2. Values of all twig samples for selected elements are provided in Table 3. Twig samples were only collected where MMI soil samples could not be collected due to thick organic cover with underlying frost.

### **MMI Soil Sampling.**

MMI analysis uses a weak partial extraction to improve the conventional geochemical response over buried ore deposits. The process measures the mobile metal ions from mineralization, which have moved toward the surface and are loosely attached to the surfaces of soil particles. Its effectiveness has been documented in over 1000 case histories on six continents and includes numerous commercial successes. The anomalies are sharply bounded and in most cases directly overlie and define the extent of the surface projection of buried primary mineralized zones. The MMI process is a proprietary method developed by Wamtech of Australia. SGS Minerals Services in Toronto purchased all rights to the method and provides analyses in Canada.

Watch and ring were removed prior to sampling. Pits were dug by shovel to a depth of 30 cm in order to expose the soil profile for sampling. The profile was scraped clean with a plastic scoop to remove any metal effect from the digging shovel. A continuous strip of soil was collected by plastic scoop over the interval of 10 to 20 cm below the top of true soil, placed in a pre-numbered zip lock baggie and placed in an 11 inch by 20 inch 2 mil plastic bag. Loess was present at nearly all sample sites and was the sample medium for most samples with a minor contribution from underlying till in some samples. Samples were kept cool until they were shipped to SGS Minerals Services in Vancouver for analyses.

In the SGS Lab, samples are not dried or prepared in any way. The MMI process includes analyses of an unscreened 50-g sample using multi-component extractants. Metals are determined by ICP-MS in the parts per billion range.

Response Ratios were calculated for Cu, Mo, Au, Ag, Pb, Zn, Ni, U, and Ti. The average value for results of the lower quartile was calculated for each element and used as background value. One-half of detection limit was used for those samples with values reported as less than detection limit. Then each result was divided by the lower quartile average to obtain its response ratio. A response ratio of 10 or more is considered very significant for indicating underlying mineralization. Lesser values of 5 to 10 can also be important particularly where more than one element has such a value. Response ratios can best be thought of as a multiple of background in interpreting results.

### **Black Spruce Twig Sampling.**

The following description of twig sampling that was used in the present survey is taken from: *Heberlein, D.R., Dunn, C.E. and Macfarlane, W. (2013): Use of organic media in the geochemical detection of blind porphyry copper-gold mineralization in the Woodjam property area, south-central British Columbia (NTS 093A/03, /06); in Geoscience BC Summary of Activities 2012, Geoscience BC, Report 2013-1, p. 47–62.*

Samples of black spruce twigs comprising the most recent two years of growth were snipped from around the circumference of a single tree. Black spruce was easily identified and distinguished from white spruce by observing with aid of a hand lens minute red hairs on the circumference of twigs of the past few years growth. In central Yukon, this amount of growth is typically about a

hand-span in length, at which point, the twig diameter is 4–5mm. This diameter is quite critical because many trace elements concentrate in the bark part of the twig, whereas the woody tissue (the cortex) has lower concentrations of most elements. Consequently, unless there is a consistency in the diameters of the twigs that are collected, any analysis of twig tissue can result in variability among samples simply because of the differing ratios of woody tissue to twig bark. About ten to fifteen black spruce twigs with needles were placed into gusseted kraft sample bags. The use of plastic bags was avoided to minimize the chance of molds forming thereby losing sample integrity.

Analysis of the black spruce twig samples was carried out at Bureau Veritas Laboratories Ltd. (Vancouver) using their VG104-EXT method. In the laboratory, twig samples were thoroughly dried at 60°C in an oven with a forced-air fan for 24 hours to remove moisture. The needles could then be separated from the twigs for ashing. A 50 gram sample of twigs was ashed at 475 degrees Celsius yielding about 1.5 gm ash. A 0.5 gm ash split was digested in 1:1:1 aqua regia for analysis by ultratrace ICP-MS. Results for 51 elements were provided by this VG104-EXT analytic package

## **SURVEY RESULTS.**

Results of the 300 m by 100 m MMI soil and twig sample grid over the ALL IN claims is provided in Tables 2 and 3 and shown graphically on Figures 5 to 14. Results of the 2016 survey described above are also provided graphically on the figures in order to provide a complete picture of the targets.

A pit dug at the field camp in the centre of the claims uncovered a few angular boulders comprised of friable completely chloritized granodiorite that have probably not been transported a long distance by glaciers. The only outcrops found on the soil lines were of unaltered dacite and andesite of the overlying volcanics of the Reid Lakes Complex. They occur on the hill within the southwest portion of the claims as indicated on the figures by a dashed black line.

Two separate areas of geochemically anomalous samples have been identified, a well defined area in the east portion of the claims measuring two km

north-south and one km east-west and a poorly defined area in the northwest portion of the claims measuring 1500 m east west and about 500 m north-south.

The main east target remains open to the north. Black spruce twig samples were of no use in defining patterns of anomalous elements except for Ag. The target is defined by MMI samples that are at least five times background for Cu. The limit of anomalous Cu is shown as a red line on Figures 5 to 14. All MMI samples within this area have a response ratio of at least 5. Anomalous Au, Ni and U form nearly identical patterns of anomalous values with response ratios of 5 or more. Anomalous Ni and U patterns nearly identical to anomalous Cu pattern is a feature that occurs in other geochemical targets developed by the writer on the RGS, DUBLOON, and PIRATE claims 40 km northwest and on the KRYPTOS claims 5 km southeast of the ALL IN claims.

Anomalous Au up to a response ratio of 36 and Ag up to a response ratio of 6 occur within the zones of anomalous Cu-Ni-U. This relationship provides encouragement that the proposed underlying porphyry mineralization contains significant Au and Ag mineralization. There are also many anomalous Au and a few anomalous Ag values occurring sporadically across the rest of the survey area.

Anomalous values for Mo up to a response ratio of 20 and Ag up to a response ratio of 6 form similar patterns central to the anomalous Cu zone as shown on the figures. Although two separate patterns of anomalous Mo are shown on the figures they may coalesce into one complete pattern as the intervening ground between them has only been sampled by black spruce twig samples, which are not considered a reliable sampling method in the present survey. Anomalous Ag values in twigs do occur within these central Mo patterns.

Anomalous Pb and Zn are present but do not form easily interpreted targets. Almost all anomalous Ti values occur peripheral to the Cu anomalous zone. The low Ti values may be related to destruction of illmenite, common in the underlying batholith, by hydrothermal activity related to the proposed porphyry mineralizing event responsible for the anomalous metal values.

The coincident pattern of anomalous geochemistry for Cu, Au, Ni, and U is strikingly similar to the aeromagnetic horizontal derivative low shown on Figure 6. This low is believed to be indicative of magnetic susceptibility destruction related

to a porphyry mineralizing event that has introduced metals and altered the batholithic rock.

The less well defined pattern of geochemically anomalous metals in the northeast portion of the ALL IN claims may ultimately be shown to extend under the volcanoclastics if they form post mineral cover. Anomalous Cu, Au, Ni, and U occur over a 1500 m distance east west and about 500 m north south. The geochemical fingerprint is similar to the main east zone but is not as uniformly anomalous so the limit of this pattern has not been drawn.

## **CONCLUSIONS .**

Sampling in 2017 on the ALL IN claims defined the limits of the main multi-element geochemically anomalous pattern outlined in 2016. This anomaly is 2000 m long north-south, 1000 m wide east-west, and remains open to the north. It is best defined by strongly anomalous Cu RRs in MMI samples (up to 24) and supported by anomalous RRs for Mo (up to 20), Au (up to 36), Ag (up to 6), U (up to 44), and Ni (up to 21). Mg, Ca, and Mn form anomalous patterns coincident with the anomalous Cu pattern and Fe, Ti, Rb, Cs, As, Sb, and Pb form patterns of low geochemical response over the anomalous Cu pattern. Refer to Table 2. No mineralized float was present in the area that might explain the source of the anomalies although strongly chloritized angular granodiorite float found at the field camp 800 m west of the anomalous patterns could be indicative of alteration peripheral to a porphyry mineralized body. It is believed that the patterns described are indicative of a porphyry mineralizing event that has introduced metals and hydrothermally altered the granodiorite host rock. It will take trenching or drilling to explain the source.

The anomalous Cu, Mo, Ni, U, Au and Ag MMI response ratio patterns are very strong. MMI anomalies often directly overlie causative mineralization. The pattern of a central core of Mo and Ag within a larger zone of anomalous Cu-Au-Ni-U-Mg-Ca-Mn and reduced values of Fe-Ti-Rb-Cs-As-Sb-Pb is a strong indication that the targets are caused by underlying mineralization and hydrothermal alteration. The size, signature, and strength of the anomalies are most indicative of porphyry style mineralization. Peripheral anomalous Pb is classic zoning around

porphyry mineralization. The apparent Ti halo could be caused by destruction of illmenite within the unaltered monzogranite batholith by hydrothermal alteration associated with porphyry mineralization. High and low patterns for other elements could be related to hydrothermal alteration related to porphyry mineralization. This model is enhanced by the aeromagnetic horizontal derivative low that is interpreted to indicate destruction of magnetic susceptibility associated with porphyry mineralization.

A second partially defined pattern of anomalous metal values with the same metal signature as the main anomaly occurs in the northwest of the claims. It measures 1500 m east west by 500 m north-south.

This target and the nearby KRYPTOS porphyry targets were discovered by prospecting up-ice and up-drainage from RGS anomalies based on a reinterpretation of geochemical thresholds using a restricted area of similar geology and glacial history. Clustering of five porphyry targets on the RGS, Pirate and Dubloon claims in the north end of the Early Mississippian aged Reid Lakes Batholith and about four similar targets on the ALL IN and KRYPTOS claims in the south end of the batholith is similar to the clustering of the Bethlehem, JA, Highmont, Lornex and Valley Cu-Mo porphyry deposits within the Jurassic age Guichon Creek Batholith in southern BC. Both batholiths intrude their own volcanic pile and are of similar size.

## **RECOMMENDATIONS.**

It is recommended that:

- i) The main anomaly be drill tested using a relatively inexpensive auger drill. This drill could be walked in from the Klondyke Highway two km east of the main anomaly. Such drilling could supply rock samples of bedrock to confirm or deny the existence of underlying mineralization.
- ii) Diamond drilling be considered based on results of the auger drilling.
- iii) The general area has proven to be fertile ground for discovery of geochemical anomalies with porphyry signatures. Additional prospecting in the general area of the claims is recommended.

## STATEMENT OF COSTS

### Certificate of Work, ALL IN 1-36 quartz claims.

**Note:** 285 samples were collected of which 259 were on the claims  
 188 of 200 MMI samples were collected on the claims  
 71 of 85 Twig samples were collected on the claims  
 The above fractions were applied to costs as indicated.

Fireweed Helicopter portion of #13746 Jul 1. Demob Property.	\$1222.09
Helicopter #13787 Jun 24. Mob Property.	2529.45
Geochem: Bureau Veritas VAN Twigs 2640.02 x <b>71/85</b>	2205.19
SGS Labs MMI samples 8452.50 x <b>188/200</b>	7945.35
Wages: Fieldwork June 24-30; demob July 3	
G Richards 8 days @ \$500/day x <b>259/285</b>	4089.47
J Mieras 8 days @ \$350/day x <b>259/285</b>	2862.63
Living Allowance: sample bags, food, sat phone, radios, flagging, etc	
16 man days @ \$100/man day	1800.00
Generator: 8 days @ \$10/day	90.00
Freight: Air North, MMI samples Whitehorse to Vancouver	200.00
Report: 10% of above costs      (\$22,944.18)	<u>2294.42</u>
<b>TOTAL</b>	<b>\$25,238.60</b>

## **STATEMENT OF QUALIFICATIONS.**

I, Gordon G Richards, with business address at 6410 Holly Park Drive, B.C., V4K 4W6, do hereby certify that:

1. I am a Professional Engineer, registration number 11,411 with the Association of Professional Engineers and Geoscientists of British Columbia.
2. I hold a B.A.Sc. (1968) in Geology from The University of British Columbia, and an M.A.Sc. (1974) in Geology from The University of British Columbia.
3. I have been practicing my profession as a geologist for over 40 years and as a consulting geological engineer since 1985. I have work experience in western areas of the United States, Alaska, Canada, Mexico and Africa.
4. I have based this report on my own field work and supervision of field work by Jeff Mieras during the period of June 23 to 30, July 1, 2017 and on the results generated by that field work.

Respectfully submitted,

Gordon G Richards, P.Eng.



**Table 2. ALL IN Property 2017 MMI Response Ratios with UTM NAD 83 Co-ordinates.**

ID	UTM E	UTM N	Cu	Mo	Au	Ag	Pb	Zn	Ti	As	Sb	Bi	Ca	Ni	U	Mn	Fe	Mg	Rb	Cs
A1	416376	7008547	2	2	4	0	7	2	16	3	2	4	3	2	2	2	3	6	5	
A2	416479	7008538	2	2	4	1	4	2	11	4	3	3	6	1	5	2	2	4	4	4
A3	416580	7008555	2	2	2	2	4	1	20	3	1	3	4	1	1	1	2	3	5	5
A4	416673	7008547	7	2	6	2	1	3	1	1	2	1	12	3	7	3	1	2	2	2
A5	416788	7008566	2	2	1	0	4	1	9	3	3	3	4	1	5	6	2	2	8	10
A7	416967	7008553	4	3	4	1	2	1	7	4	3	3	7	2	6	1	3	4	4	3
A8	417123	7008496	2	3	4	1	1	7	5	4	4	7	4	6	2	14	3	3	7	12
A9	417213	7008515	2	5	4	1	2	6	11	8	7	14	5	5	2	3	5	3	6	10
A11	417390	7008543	3	4	6	1	1	1	3	3	3	2	10	2	7	10	2	4	2	2
A14	417717	7008550	2	4	2	0	3	20	8	7	5	9	2	2	2	18	5	1	4	10
A17	418096	7008568	2	3	1	0	2	12	10	7	5	11	2	2	2	10	4	2	6	11
A18	418205	7008548	2	2	4	1	2	8	9	3	2	10	2	2	1	7	7	2	5	8
A19	418320	7008547	3	1	6	1	3	0	1	2	0	1	8	3	31	4	0	8	2	1
A20	418414	7008560	2	1	4	1	2	1	3	2	1	1	0	1	1	0	4	0	5	5
A21	418491	7008548	2	2	4	1	7	2	20	4	3	4	0	1	2	1	2	1	4	5
A28	417989	7008991	2	3	2	0	2	4	5	4	3	8	3	1	1	10	3	2	3	6
A30	417781	7008977	1	3	1	0	1	3	3	3	2	3	5	1	5	3	1	2	1	2
A33	417433	7008990	4	5	8	1	3	5	27	10	8	13	3	2	7	10	7	2	4	7
A34	417315	7008988	2	5	1	0	2	5	12	8	5	6	4	2	2	24	5	2	5	8
A35	417208	7008980	3	4	4	1	3	2	17	6	4	10	4	2	4	1	4	2	6	6
A37	416998	7008967	1	5	2	0	1	1	4	3	2	4	7	1	1	7	3	2	5	7
A38	416736	7008979	3	17	24	1	1	5	3	3	3	3	7	2	3	21	2	2	4	4
A39	416622	7008979	2	3	2	2	3	1	9	4	3	4	3	1	4	4	2	1	6	6
A40	416420	7009190	1	2	1	1	5	2	16	3	1	3	1	2	3	1	2	2	6	5
A41	416629	7009160	8	6	10	1	3	2	13	10	9	10	5	5	7	2	5	3	4	4
A42	416724	7009185	1	2	1	1	3	3	12	3	2	3	0	1	1	1	3	1	7	7
A43	416827	7009196	1	2	1	1	6	2	14	3	1	3	2	1	1	4	2	3	5	3
A44	416929	7009185	12	1	10	3	3	1	2	2	1	1	10	6	14	1	1	7	0	1
A45	417019	7009183	1	4	4	1	2	2	7	3	2	6	6	2	1	2	3	4	6	3
A46	417147	7009201	1	2	4	1	4	3	13	3	2	5	5	2	2	1	3	3	4	7
A47	417239	7009218	4	3	8	1	3	2	16	4	4	6	6	3	7	3	3	4	2	3
A48	417337	7009180	3	4	6	1	4	8	34	10	8	13	1	2	3	5	7	2	4	10
A49	417433	7009203	1	5	1	0	2	6	18	7	5	9	1	1	2	7	6	1	9	10
A50	417525	7009197	2	3	4	0	1	2	5	3	2	3	3	1	2	6	2	2	1	2
A51	417651	7009203	1	4	2	1	3	4	22	5	2	4	2	1	1	1	3	2	6	6
A52	417756	7009196	0	2	1	2	1	1	6	2	1	1	4	1	1	8	1	3	2	1
A53	417825	7009182	1	20	1	1	1	1	2	2	1	1	7	1	17	23	1	1	4	1
A54	418010	7009196	5	9	6	1	3	15	6	9	7	10	5	4	5	9	7	3	5	8
A55	418107	7009183	2	3	6	1	2	7	4	5	6	10	3	1	2	9	3	1	2	3
A56	418206	7009187	1	4	1	2	3	6	21	6	4	7	0	1	1	11	4	1	8	10
A57	418332	7009225	11	4	2	1	8	23	2	0	2	12	5	30	29	13	6	3	1	1
A58	418856	7010308	1	2	1	1	4	2	13	3	1	4	4	2	0	1	2	2	7	4
A59	418946	7010303	5	2	6	1	1	4	2	3	2	1	7	4	3	2	1	10	1	1
A60	419036	7010290	7	3	6	1	1	2	3	3	3	4	5	4	9	3	2	5	2	2
A62	419320	7010288	41	20	8	5	2	8	0	0	14	1	11	16	11	85	0	11	1	1

ID	UTM E	UTM N	Cu	Mo	Au	Ag	Pb	Zn	Ti	As	Sb	Bi	Ca	Ni	U	Mn	Fe	Mg	Rb	Cs
A63	419422	7010302	17	16	4	5	1	2	0	0	1	1	15	7	5	28	0	5	1	0
A65	419636	7010308	28	7	2	5	6	30	1	2	7	2	8	20	4	49	1	8	0	1
A67	419916	7010252	8	3	6	2	1	2	1	2	2	1	12	9	8	19	1	9	1	1
A68	420072	7010261	1	5	1	0	1	3	5	2	2	2	7	1	1	20	2	11	3	2
A69	420170	7010284	2	5	1	1	3	7	17	6	6	15	0	2	2	43	5	1	8	5
A70	420284	7010314	1	6	1	1	3	4	12	12	6	6	0	3	3	28	5	2	6	5
A71	420245	7010027	1	4	1	0	1	4	7	3	3	6	4	1	1	2	4	7	4	6
A72	420120	7010016	2	3	1	1	1	3	4	3	3	6	4	2	2	3	2	5	4	8
A73	420019	7010045	17	18	6	3	1	3	0	0	2	1	9	8	9	64	0	19	0	0
A74	419919	7010031	19	5	8	1	1	2	0	0	3	1	12	13	7	91	2	8	1	0
A75	419797	7010053	7	10	6	6	2	5	0	0	0	1	12	4	4	21	0	7	0	0
A76	419677	7010049	18	3	6	2	1	6	1	3	6	2	10	16	8	43	2	9	1	1
A78	419459	7010034	8	2	10	2	1	2	1	0	2	1	12	6	9	8	1	11	1	1
A79	419340	7009977	11	2	6	2	1	3	1	1	3	1	11	13	7	52	2	10	0	1
A81	419089	7010001	2	3	4	0	2	2	10	3	2	4	4	2	4	12	3	3	3	4
A82	418978	7009993	2	6	4	0	1	3	6	4	4	4	5	1	1	9	3	2	3	4
A83	418892	7009983	1	3	1	1	4	3	14	3	1	2	4	2	1	24	2	3	4	4
A91	420407	7007799	5	4	8	1	2	9	8	6	5	12	4	6	3	17	5	4	5	6
A92	420508	7007814	1	7	1	0	2	36	11	9	5	8	2	3	2	44	6	2	8	13
A93	420605	7007810	1	1	1	4	1	2	2	3	1	1	2	3	1	8	3	0	8	4
A94	420691	7007810	2	6	6	1	3	11	11	10	9	16	2	3	2	47	6	2	6	12
A95	420599	7008302	1	5	1	0	3	4	14	4	3	6	2	2	1	12	4	5	5	5
A96	420487	7008329	1	5	1	1	3	19	4	5	3	4	5	1	3	5	3	3	6	5
A97	420421	7008322	1	4	1	0	3	9	9	3	3	3	0	1	1	2	3	0	8	6
A98	420298	7008322	1	4	1	1	4	7	21	4	3	6	1	1	1	5	5	1	10	8
A103	419768	7008264	5	1	4	1	2	1	1	1	1	1	11	5	15	16	1	7	1	1
A105	419548	7008270	1	2	2	0	2	6	8	3	2	2	2	2	1	24	2	1	9	6
A108	419205	7008298	2	3	4	0	2	24	8	3	3	4	6	2	3	27	3	4	2	2
A109	417702	7009861	2	2	4	2	3	2	6	3	1	3	1	2	2	4	2	1	7	7
A110	417588	7009847	9	1	6	2	1	1	0	0	1	1	16	7	11	5	1	4	0	0
A111	417487	7009887	1	2	1	1	2	7	18	2	1	6	1	2	1	1	4	2	7	15
A112	417390	7009873	2	4	1	2	3	5	18	7	5	17	1	2	2	1	6	1	5	7
A113	417291	7009853	2	3	6	1	4	4	16	4	3	8	1	2	2	2	5	1	3	6
A114	417198	7009861	6	2	14	1	4	2	10	3	3	5	7	2	13	1	3	3	2	4
A115	417097	7009845	2	2	4	3	4	5	11	3	2	7	5	2	3	5	4	3	2	4
A116	416989	7009839	1	4	1	2	5	3	20	5	3	8	1	2	2	2	6	1	5	9
A117	416893	7009835	2	2	6	2	6	2	15	3	3	4	3	1	3	1	2	1	7	8
A118	416789	7009852	4	1	6	1	3	1	1	2	1	1	11	2	29	5	0	5	1	1
A121	416615	7009928	6	1	4	1	1	0	0	0	0	1	14	3	6	2	0	6	1	0
A122	416611	7010043	13	2	6	3	2	1	0	0	4	1	16	12	20	5	2	1	1	1
A123	416613	7010099	4	1	1	1	2	0	0	0	3	1	17	9	53	6	4	2	1	1
A124	416607	7010154	5	1	2	1	3	0	0	0	1	1	11	6	9	1	2	2	1	1
A125	416614	7010208	1	4	2	0	2	2	7	4	3	7	5	1	2	2	4	1	6	8
A126	416618	7010249	4	3	6	1	2	4	6	5	4	5	5	1	4	5	3	1	4	6
A127	416653	7010272	4	2	8	1	3	1	8	3	2	2	4	1	5	4	2	2	5	6
A128	416707	7010276	2	3	4	1	4	1	14	3	1	3	2	1	3	3	1	2	9	5

ID	UTM E	UTM N	Cu	Mo	Au	Ag	Pb	Zn	Ti	As	Sb	Bi	Ca	Ni	U	Mn	Fe	Mg	Rb	Cs
A129	416750	7010290	11	2	4	1	5	7	1	0	4	5	11	13	12	8	5	2	1	1
A130	416822	7010280	2	3	1	1	3	8	3	4	4	7	3	3	5	6	1	0	4	7
A131	416875	7010276	3	2	6	0	5	2	11	5	4	4	5	1	5	6	2	4	4	5
A132	416925	7010295	1	3	1	1	6	21	14	3	2	3	1	3	1	1	4	1	11	8
A133	416977	7010295	3	2	6	2	3	2	6	3	2	3	6	2	5	3	3	2	4	4
A134	417025	7010278	7	2	10	1	3	1	13	3	3	4	5	3	21	5	2	3	2	2
A137	417274	7010297	2	3	2	0	3	1	15	5	3	2	2	1	3	3	2	3	6	3
A138	417323	7010297	1	2	4	1	5	1	17	3	1	2	3	1	1	1	2	3	6	4
A139	417392	7010285	1	1	4	1	5	1	7	2	1	1	5	1	1	3	1	4	4	2
A140	417470	7010296	2	4	4	2	4	2	11	6	4	4	1	1	1	8	3	1	11	6
A141	417519	7010296	2	4	1	3	3	5	7	3	1	1	0	2	1	6	2	0	9	7
A142	417574	7010302	8	3	8	1	1	8	4	4	4	3	6	8	5	5	2	5	2	3
A143	417635	7010302	9	2	6	1	3	6	3	3	3	4	4	9	9	30	5	2	5	4
A144	417700	7010295	2	3	6	0	2	6	4	4	4	4	8	4	3	4	4	4	3	5
A145	418453	7009452	2	2	4	0	3	3	17	5	3	3	3	1	3	3	2	3	5	3
A146	418421	7009454	2	3	2	0	4	1	23	5	3	4	2	1	2	1	2	2	7	6
L1	416302	7008779	3	2	8	4	3	2	11	3	2	3	5	1	4	2	2	3	5	5
L2	416398	7008783	3	3	6	3	3	2	13	5	4	3	2	1	5	6	2	1	5	6
L4	416610	7008781	3	1	6	1	3	1	4	2	1	1	7	1	8	4	1	2	5	3
L5	416702	7008793	1	4	1	0	6	2	13	6	4	4	1	1	2	10	2	0	15	24
L8	417003	7008782	3	3	6	2	6	2	27	4	3	4	3	1	4	1	3	3	8	7
L9	417113	7008764	1	4	1	1	3	6	24	6	3	6	0	2	1	3	8	2	8	16
L10	417202	7008792	2	4	2	1	2	2	3	3	2	1	7	1	3	6	2	3	6	4
L11	417302	7008768	9	3	4	1	3	4	2	3	4	4	7	23	17	37	6	3	2	2
L12	417390	7008796	4	3	4	1	2	5	5	5	5	6	5	2	3	2	2	3	3	4
L13	417499	7008781	4	3	2	1	2	8	2	2	2	1	11	4	7	9	2	5	2	2
L19	418069	7008792	3	4	2	1	1	4	2	3	2	1	11	2	2	3	2	5	2	2
L21	418298	7008792	2	4	1	0	2	15	6	7	5	9	2	2	2	35	3	2	3	5
L22	418420	7008767	19	3	14	2	5	3	10	4	5	8	6	9	39	7	4	3	3	6
L23	418494	7008773	3	3	8	2	6	2	17	5	5	9	4	3	12	5	4	2	3	4
L26	418022	7009471	2	20	1	1	4	5	3	17	4	14	8	1	14	1	4	3	3	4
L27	417920	7009478	1	6	1	1	4	4	18	14	5	10	3	2	1	12	4	3	2	2
L28	417805	7009466	2	4	4	2	6	2	31	7	4	4	1	2	1	8	4	2	5	5
L29	417709	7009471	11	3	8	3	6	4	18	9	15	17	4	5	20	1	6	3	4	7
L30	417603	7009484	10	1	8	4	4	2	5	3	3	5	9	7	28	2	3	7	1	1
L31	417505	7009476	3	5	4	1	4	3	23	9	6	14	3	2	6	2	7	3	4	3
L32	417402	7009484	1	2	2	2	3	1	8	5	1	4	2	2	2	1	4	1	5	5
L33	417300	7009483	4	2	6	3	4	2	23	4	3	5	2	2	9	2	4	2	3	4
L34	417197	7009482	1	1	1	1	3	1	4	1	0	1	1	2	0	1	2	1	4	3
L35	417095	7009492	1	1	1	2	5	2	11	3	1	1	1	1	1	1	2	1	8	5
L36	417000	7009489	2	1	8	1	4	1	10	3	2	2	2	1	9	1	2	2	1	2
L37	416899	7009481	1	3	1	0	5	10	18	4	2	4	0	2	1	10	5	1	8	7
L38	416804	7009495	2	1	2	2	5	2	9	2	1	1	1	1	2	1	1	1	6	4
L39	416700	7009490	2	1	4	1	10	1	3	3	1	1	11	1	10	7	1	3	3	2
L40	416602	7009485	1	2	2	2	4	1	5	1	1	1	1	1	1	1	4	1	7	4
L41	416494	7009489	2	2	4	1	4	1	13	3	2	2	3	1	6	1	2	2	4	3

ID	UTM E	UTM N	Cu	Mo	Au	Ag	Pb	Zn	Ti	As	Sb	Bi	Ca	Ni	U	Mn	Fe	Mg	Rb	Cs
L42	416405	7009509	1	2	2	1	5	2	7	2	1	3	4	1	2	2	3	2	4	5
L45	416579	7009702	10	3	6	4	1	3	1	1	2	1	13	7	17	8	1	2	1	2
L46	416690	7009714	2	1	8	1	4	1	8	1	1	1	1	1	4	1	1	1	2	3
L47	416795	7009704	2	1	4	1	3	0	9	2	1	1	2	1	4	0	1	1	1	2
L48	416895	7009710	1	1	4	3	3	0	8	2	1	1	1	0	2	0	1	1	2	2
L49	416991	7009720	1	1	2	1	6	1	6	2	1	1	0	1	1	0	1	0	4	3
L50	417095	7009706	1	1	1	1	6	1	6	2	1	1	2	2	1	2	1	2	6	6
L51	417198	7009703	2	1	1	1	3	3	3	1	0	1	0	2	2	0	1	0	4	3
L52	417292	7009698	2	2	8	1	4	2	18	3	3	5	1	1	2	1	3	1	4	5
L53	417398	7009695	3	3	6	1	2	4	12	6	4	7	3	2	5	25	5	2	3	4
L54	417495	7009704	2	1	6	2	3	3	5	2	1	1	8	4	3	1	2	6	3	2
L55	417604	7009708	5	2	6	3	3	1	3	3	2	1	8	4	13	1	1	3	2	1
L56	417703	7009706	1	5	1	0	2	6	11	6	2	7	1	1	2	7	7	1	9	8
L58	417900	7009699	4	2	4	1	1	6	6	3	2	3	5	4	3	4	3	3	3	4
L59	418009	7009697	4	2	2	1	2	7	2	2	2	2	10	6	7	5	4	4	2	3
L61	419002	7009702	1	3	1	0	2	8	8	4	4	5	4	1	1	9	4	3	4	6
L75	420276	7009510	3	4	2	0	7	30	9	6	4	6	2	6	4	3	5	7	8	9
L78	419969	7009496	11	3	14	1	1	4	1	2	2	2	10	3	8	52	3	7	2	2
L83	419492	7009497	23	3	4	1	1	2	0	0	3	1	14	21	21	34	2	10	0	0
L87	419070	7009493	2	3	6	0	3	2	13	5	4	4	2	2	3	7	2	3	1	2
L88	419083	7008701	2	2	10	1	1	4	2	3	2	3	8	2	2	3	3	3	2	3
L90	419266	7008710	2	3	2	0	2	7	5	3	3	3	5	2	2	12	2	3	3	3
L91	419369	7008711	1	2	1	0	2	4	5	2	1	1	4	3	0	5	1	2	8	5
L92	419460	7008692	3	1	8	1	1	10	2	3	2	1	7	5	2	6	1	7	2	2
L93	419577	7008712	4	2	4	1	1	6	2	2	2	1	8	6	2	25	3	5	2	3
L95	419812	7008680	8	3	6	1	2	3	1	2	3	2	9	11	10	49	4	3	1	2
L96	419929	7008714	7	3	2	2	1	4	0	2	2	1	5	7	3	15	1	3	0	1
L97	420028	7008713	14	1	10	2	1	2	0	0	1	1	15	15	12	13	1	8	1	1
L98	420116	7008698	13	3	4	1	1	7	1	0	2	1	9	14	8	95	5	5	1	1
L99	420211	7008712	24	4	4	2	2	8	0	1	5	1	11	17	7	44	1	9	1	1
L100	420300	7008690	1	3	1	3	3	5	6	3	1	2	5	1	1	9	4	3	5	3
L101	420410	7008688	1	2	1	2	2	4	9	3	2	4	0	1	1	1	5	0	10	5
L102	420498	7008706	1	3	1	0	1	8	11	3	3	8	1	1	2	4	4	1	5	6
L104	420309	7009093	1	3	2	1	3	13	12	3	3	6	2	1	1	29	6	1	12	10
L105	420212	7009113	3	2	6	1	1	2	3	1	2	3	9	3	4	7	2	8	3	3
L106	420104	7009106	8	4	36	2	0	0	0	0	2	1	12	3	14	9	0	19	1	1
L107	419998	7009094	7	3	8	2	0	0	0	0	1	1	14	2	5	2	0	11	0	0
L108	419888	7009105	3	3	8	1	0	0	0	0	1	1	14	2	7	6	0	10	1	1
L111	419613	7009095	10	4	4	1	1	2	3	3	3	4	8	4	5	54	4	5	2	3
L112	419500	7009102	9	2	4	2	2	2	0	0	2	1	13	10	27	17	2	7	0	0
L113	419405	7009110	13	2	4	2	0	1	0	0	3	1	14	16	44	61	2	9	0	0
L114	419290	7009094	4	2	4	1	2	17	2	2	2	2	6	7	2	22	4	5	2	2
L115	419201	7009123	1	4	1	0	3	6	10	7	5	16	2	1	1	5	6	1	4	5
L116	417753	7009877	1	3	1	0	3	3	13	2	1	6	1	2	1	1	4	1	3	5
L117	417795	7009863	3	3	6	1	3	2	10	5	4	8	2	2	4	1	4	1	6	4
L118	417852	7009859	3	3	6	0	1	4	6	4	4	5	3	2	2	4	3	2	4	3

ID	UTM E	UTM N	Cu	Mo	Au	Ag	Pb	Zn	Ti	As	Sb	Bi	Ca	Ni	U	Mn	Fe	Mg	Rb	Cs
L119	417902	7009856	2	3	4	0	2	6	5	3	3	6	3	2	2	7	3	2	4	4
L120	417946	7009859	4	2	6	0	1	3	3	3	3	1	5	3	5	3	1	4	2	1
L121	417997	7009851	3	4	4	0	3	8	11	5	6	8	3	2	4	12	4	2	3	4
L124	418294	7009858	2	3	2	3	3	3	12	3	2	4	3	3	1	11	3	2	4	4
L125	418357	7009856	2	1	8	1	3	0	1	1	0	1	9	2	7	0	1	8	2	1
L126	418401	7009865	2	2	8	2	5	2	18	4	3	3	4	3	5	2	2	3	3	2
L127	418447	7009871	1	2	1	2	2	9	7	2	1	3	2	2	1	24	3	1	5	4
L128	418500	7009855	3	2	1	2	3	3	9	4	3	4	3	4	2	14	4	3	9	14
L129	418482	7009936	2	5	1	2	4	4	12	8	5	14	1	1	4	18	4	1	6	6
L130	418449	7010022	2	3	6	1	3	18	9	4	4	17	3	2	1	4	3	3	3	4
L131	418436	7010112	1	4	1	0	1	6	4	3	2	4	6	1	1	17	2	3	4	2
L132	418461	7010258	1	2	1	0	6	3	23	3	2	3	0	2	1	1	3	2	5	7
L136	418257	7010295	1	5	2	0	4	5	18	7	4	5	0	1	1	2	6	1	9	9
L138	418056	7010299	1	4	1	0	1	15	5	4	3	6	4	2	1	10	5	2	6	6
L139	417999	7010297	1	4	6	0	1	6	3	5	2	4	5	1	1	5	4	2	6	3
L140	417922	7010289	6	2	4	1	2	7	1	2	3	2	10	5	5	22	5	3	2	2
L141	417821	7010297	7	4	4	1	1	11	4	3	3	4	6	4	4	13	9	3	2	3

Yellow highlights are the sample lines within the main east anomalous zone.

They all contain high Cu, Au, Ni, U, Mg, Ca, Mn, & low Fe, Ti, Rb, Cs, As, Sb, Pb,

**Table 3. ALL IN Property Twig Values 2017.**

ID	UTM E	UTM N	Cu	Mo	Au	
L3	416511	7008799	51.00	0.58	4.0	
L6	416803	7008770	36.35	0.60	1.3	
L7	416910	7008759	43.65	1.13	0.6	
L14	417610	7008781	44.40	0.55	1.2	
L15	417703	7008804	57.92	0.54	1.7	
L16	417796	7008779	47.58	0.51	1.4	
L17	417902	7008767	50.80	0.74	1.0	
L18	418003	7008777	46.51	0.63	1.5	
L20	418183	7008770	43.96	0.65	0.8	
L24	418211	7009470	45.93	0.53	2.0	
L25	418118	7009468	42.26	1.51	0.7	
L43	416394	7009706	42.19	1.38	1.8	
L44	416497	7009714	47.30	4.19	1.7	
L57	417795	7009701	49.59	1.13	1.2	
L60	418111	7009694	68.33	0.67	0.2	
L62	419112	7009704	44.28	0.52	1.5	
L63	419212	7009727	34.79	0.36	1.1	
L64	419306	7009702	35.98	0.58	1.1	
L65	419416	7009679	46.21	0.34	1.1	
L66	419503	7009726	38.64	0.39	0.5	
L67	419614	7009697	34.53	0.29	0.3	
L68	419705	7009698	55.87	0.24	0.4	
L69	419798	7009714	49.31	0.33	0.6	
L70	419926	7009701	32.31	0.27	0.6	
L71	420002	7009690	44.96	0.35	1.0	
L72	420099	7009701	51.82	0.44	0.8	
L73	420198	7009702	43.83	0.34	0.7	
L74	420296	7009699	37.93	0.30	0.7	
L76	420172	7009500	65.60	0.36	0.9	
L77	420073	7009498	47.58	0.53	0.8	
L79	419869	7009499	48.23	0.50	0.6	
L80	419778	7009474	33.93	0.43	0.9	
L81	419662	7009482	53.23	0.48	0.6	
L82	419549	7009485	42.52	0.36	0.3	
L84	419375	7009495	43.96	0.36	0.5	
L85	419277	7009502	41.73	0.49	1.4	
L86	419179	7009502	46.61	0.47	0.6	
L89	419188	7008719	56.18	0.74	1.4	
L94	419695	7008694	60.00	0.49	2.3	
L103	420389	7009099	53.43	0.58	1.4	
L109	419794	7009105	49.41	0.36	1.3	
L110	419688	7009109	43.20	0.27	1.3	
L122	418098	7009860	66.89	0.42	1.1	
L123	418224	7009848	39.82	0.48	0.8	
L133	418500	7010300	45.60	1.01	0.8	

ID	UTM E	UTM N	Cu	Mo	Au	
L134	418396	7010304	39.99	0.61	1.5	
L135	418289	7010315	39.41	0.68	1.5	
L137	418155	7010288	40.61	0.55	1.0	
A6	416875	7008528	43.40	0.57	4.0	
A10	417314	7008527	53.10	0.62	2.1	
A12	417505	7008577	53.06	0.47	1.7	
A13	417630	7008533	87.81	0.52	2.3	
A15	417879	7008538	62.54	4.61	6.2	
A16	417972	7008547	69.03	3.17	6.7	
A22	418602	7008980	57.26	8.89	9.1	
A23	418494	7008973	61.81	2.36	6.8	
A24	418395	7008988	81.54	1.76	10.0	
A25	418283	7008974	55.76	0.67	8.7	
A26	418184	7008985	47.90	0.69	7.4	
A27	418087	7008986	64.97	0.43	5.1	
A29	417893	7008975	59.48	0.50	4.5	
A31	417684	7008973	71.24	0.32	5.4	
A32	417551	7008985	85.89	5.75	7.7	
A61	419260	7010289	65.83	0.26	5.7	
A64	419540	7010280	54.35	0.33	3.3	
A66	419819	7010301	49.52	0.34	2.2	
A77	419565	7010049	65.24	0.28	2.6	
A80	419192	7009983	46.31	0.96	2.8	
A84	419701	7007800	87.34	2.74	3.7	
A85	419802	7007808	64.53	0.52	3.0	
A86	419933	7007791	55.80	0.40	3.8	
A87	420009	7007820	60.65	0.47	7.2	
A88	420111	7007804	81.24	0.70	4.0	
A89	420214	7007825	64.66	0.44	2.7	
A90	420353	7007790	54.18	0.81	3.5	
A99	420188	7008306	66.73	0.72	2.5	
A100	420057	7008294	79.25	0.79	2.4	
A101	419961	7008300	58.69	0.56	10.4	
A102	419863	7008302	50.45	0.51	7.1	
A104	419656	7008298	66.36	1.53	4.7	
A106	419427	7008286	60.08	1.01	12.2	
A107	419303	7008293	73.92	1.45	3.5	
A120	416606	7009858	50.97	6.73	29.0	
A135	417099	7010284	71.54	3.20	4.3	
A136	417199	7010294	72.54	2.73	8.8	



Figure 1. Location Map



Work Area



Klondyke Highway

Figure 2. Claim Map ALL IN Claims.

Map 115P02

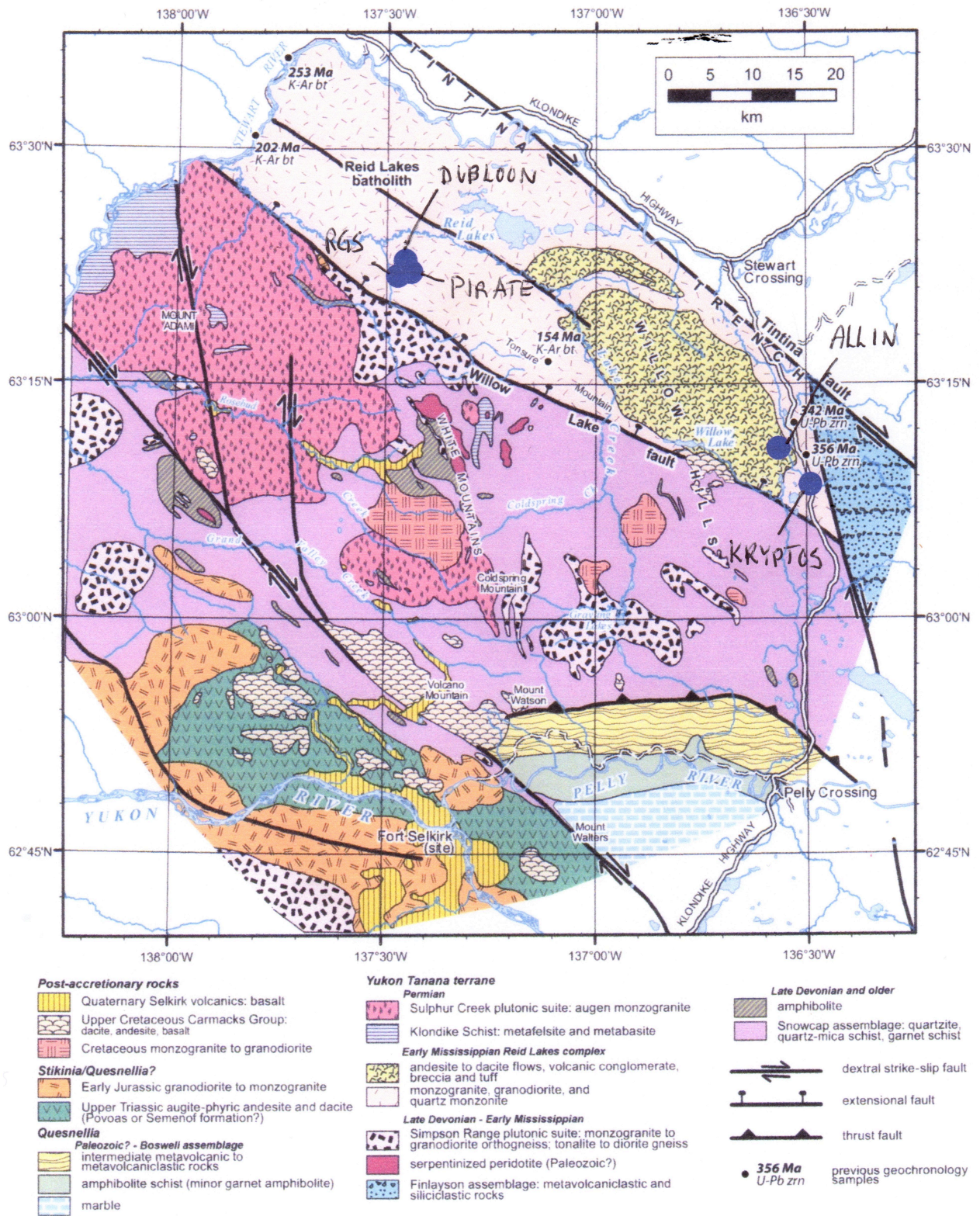


Figure 3 Simplified geological map of southwest McQuesten-northern Carmacks area (after J.J. Ryan, M. Colpron and N. Hayward, in prep.).

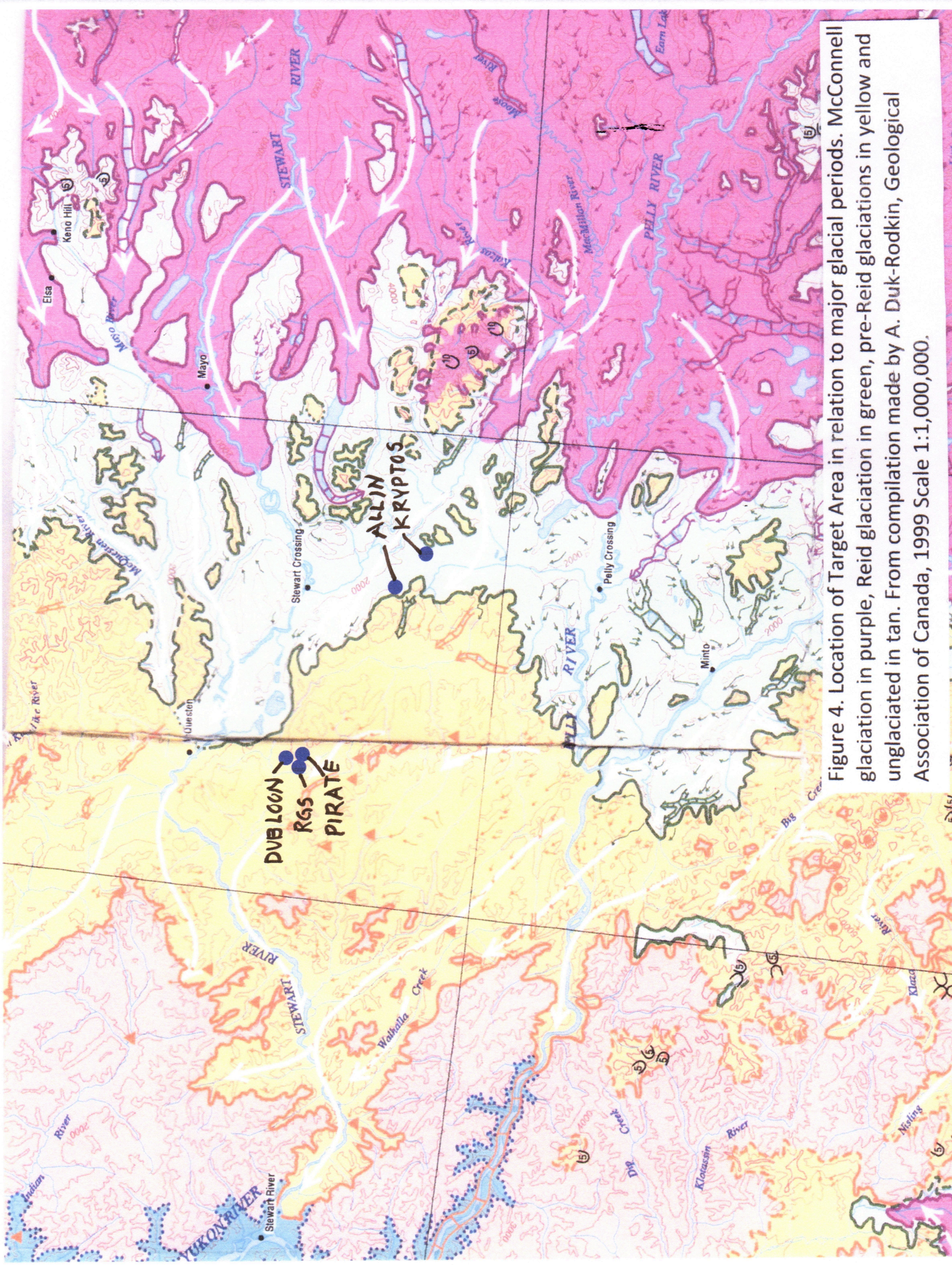
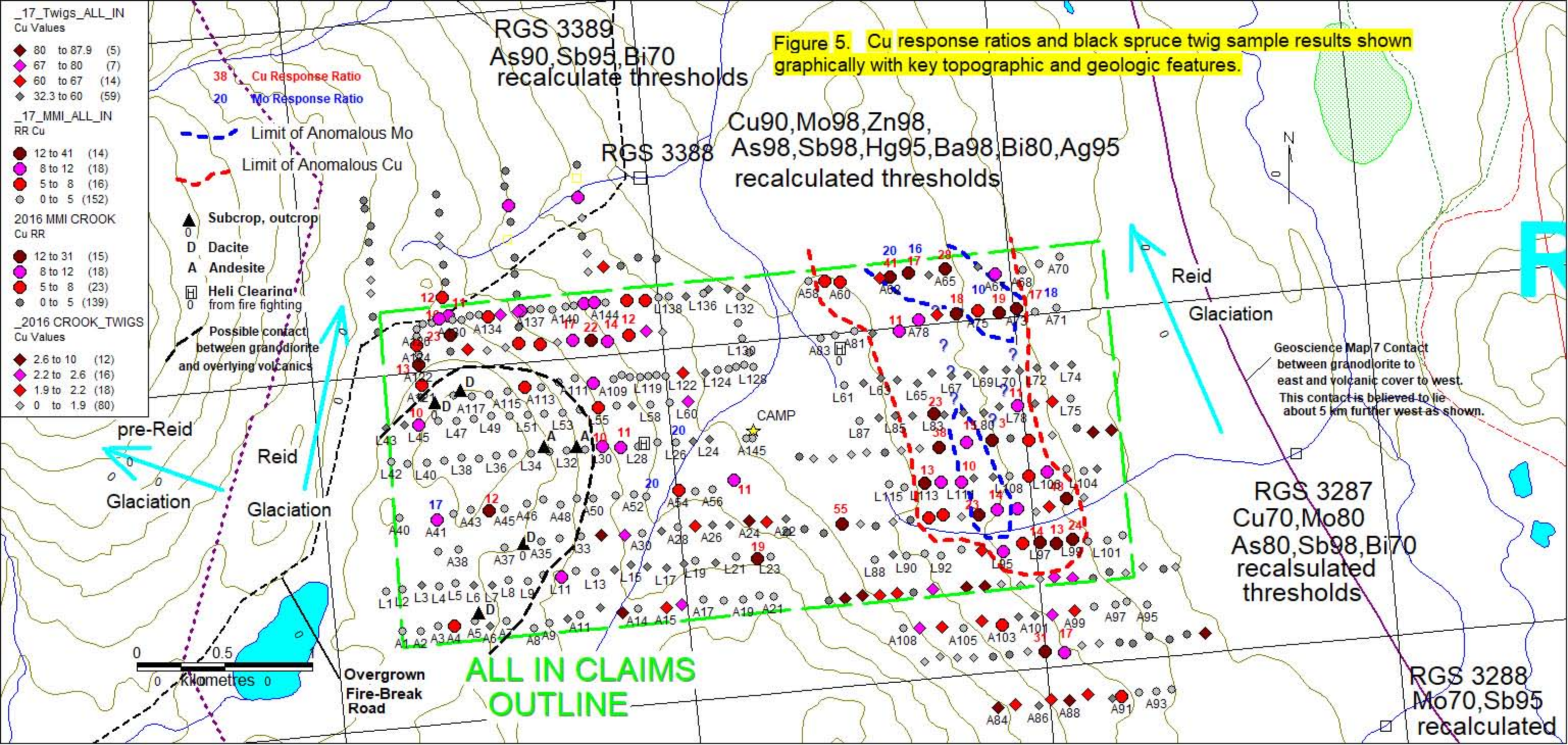
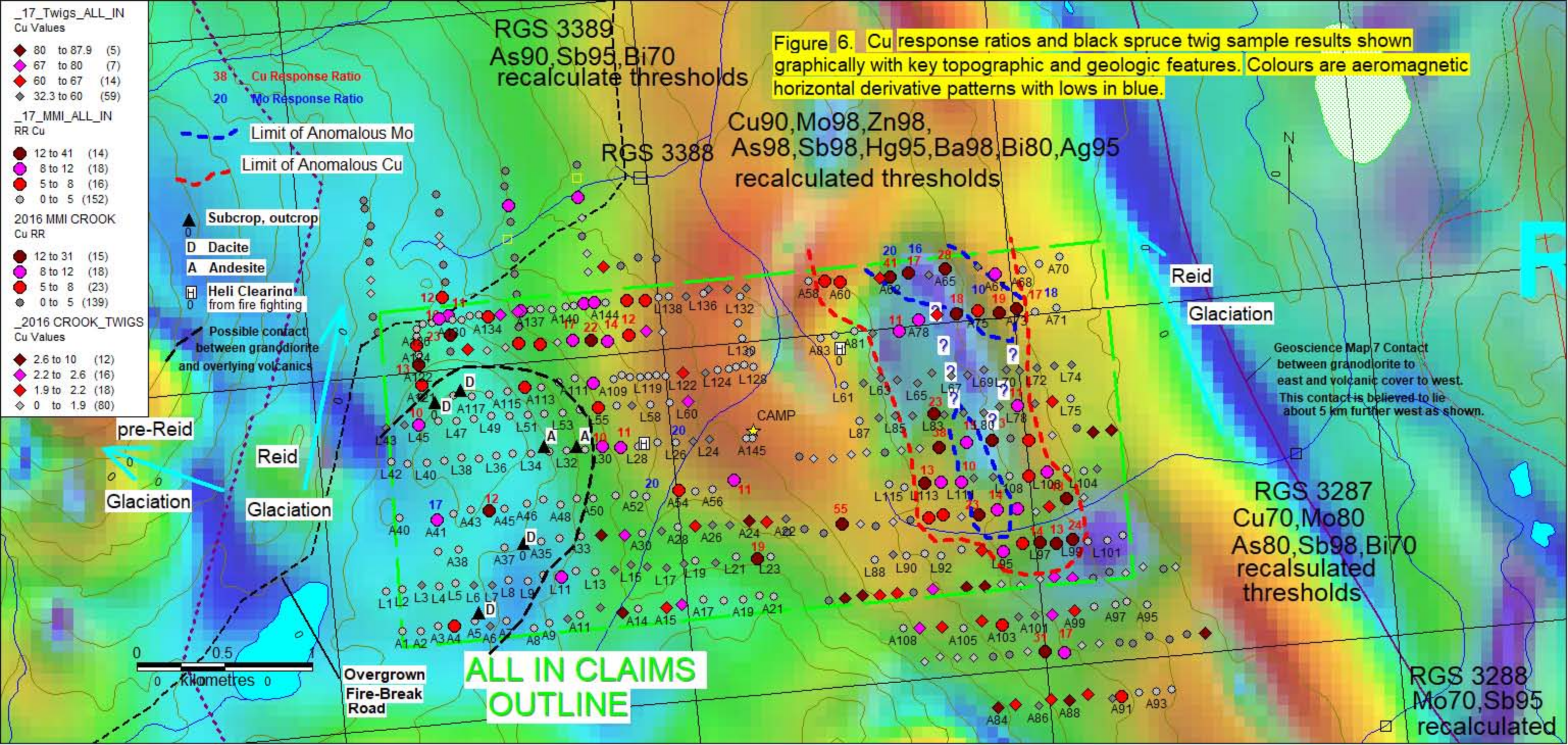
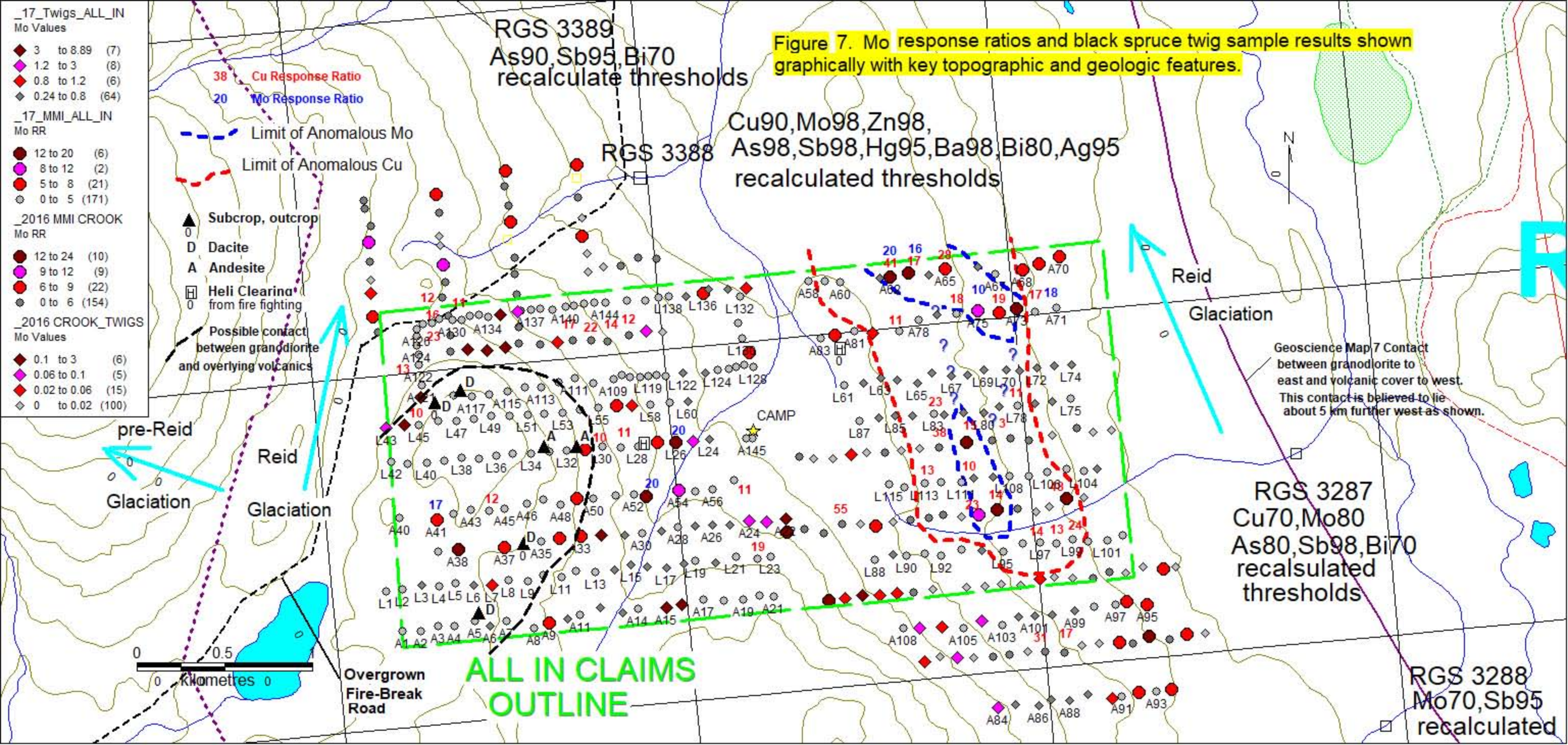


Figure 4. Location of Target Area in relation to major glacial periods. McConnell glacialiation in purple, Reid glacialiation in green, pre-Reid glacialiations in yellow and unglaciated in tan. From compilation made by A. Duk-Rodkin, Geological Association of Canada, 1999 Scale 1:1,000,000.







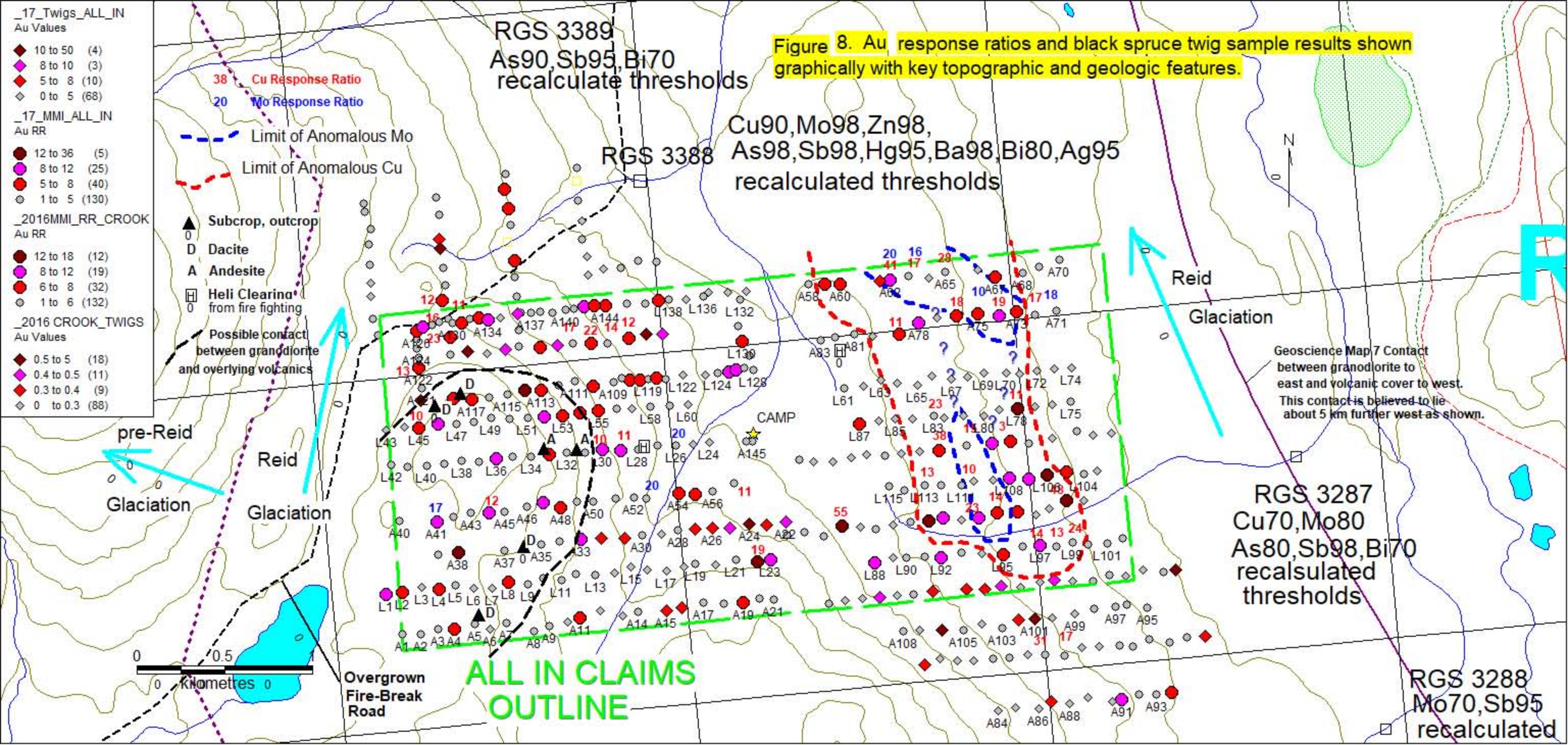


Figure 8. Au response ratios and black spruce twig sample results shown graphically with key topographic and geologic features.

- \_17\_Twigs\_ALL\_IN Au Values**
- ◆ 10 to 50 (4)
  - ◆ 8 to 10 (3)
  - ◆ 5 to 8 (10)
  - ◆ 0 to 5 (68)
- \_17\_MMI\_ALL\_IN Au RR**
- 12 to 36 (5)
  - 8 to 12 (25)
  - 5 to 8 (40)
  - 1 to 5 (130)
- \_2016MMI\_RR\_CROOK Au RR**
- 12 to 18 (12)
  - 8 to 12 (19)
  - 6 to 8 (32)
  - 1 to 6 (132)
- \_2016\_CROOK\_TWIGS Au Values**
- ◆ 0.5 to 5 (18)
  - ◆ 0.4 to 0.5 (11)
  - ◆ 0.3 to 0.4 (9)
  - ◆ 0 to 0.3 (88)

- ▲ Subcrop, outcrop
- D Dacite
- A Andesite
- ▣ Heli Clearing from fire fighting
- Possible contact between granodiorite and overlying volcanics

RGS 3389  
As90, Sb95, Bi70  
recalculate thresholds

RGS 3388  
Cu90, Mo98, Zn98,  
As98, Sb98, Hg95, Ba98, Bi80, Ag95  
recalculated thresholds

RGS 3287  
Cu70, Mo80  
As80, Sb98, Bi70  
recalculated thresholds

RGS 3288  
Mo70, Sb95  
recalculated

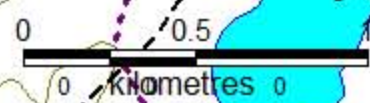
ALL IN CLAIMS  
OUTLINE

Geoscience Map 7 Contact between granodiorite to east and volcanic cover to west. This contact is believed to lie about 5 km further west as shown.

pre-Reid  
Glaciation

Reid  
Glaciation

Reid  
Glaciation



Overgrown  
Fire-Break  
Road

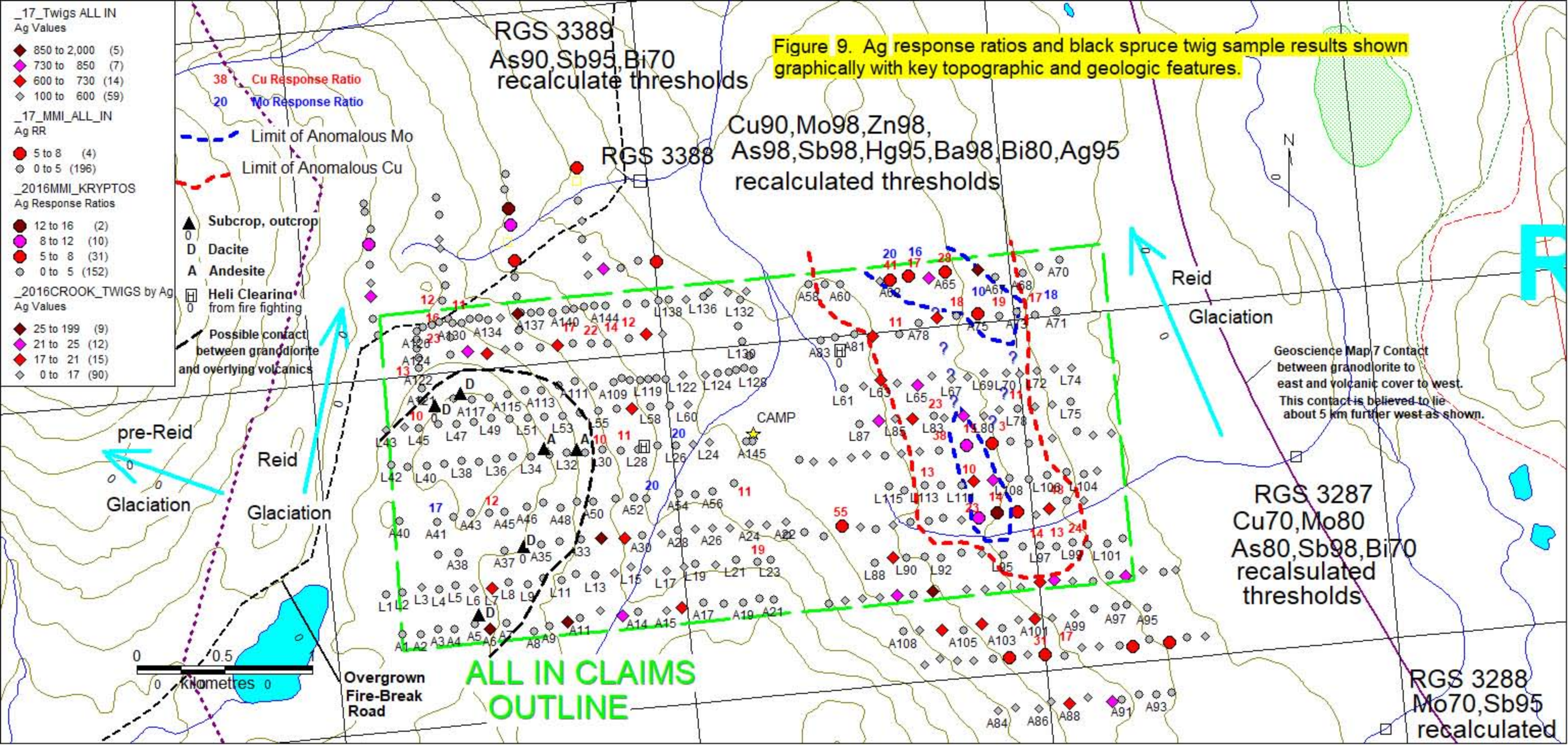
CAMP

38 Cu Response Ratio

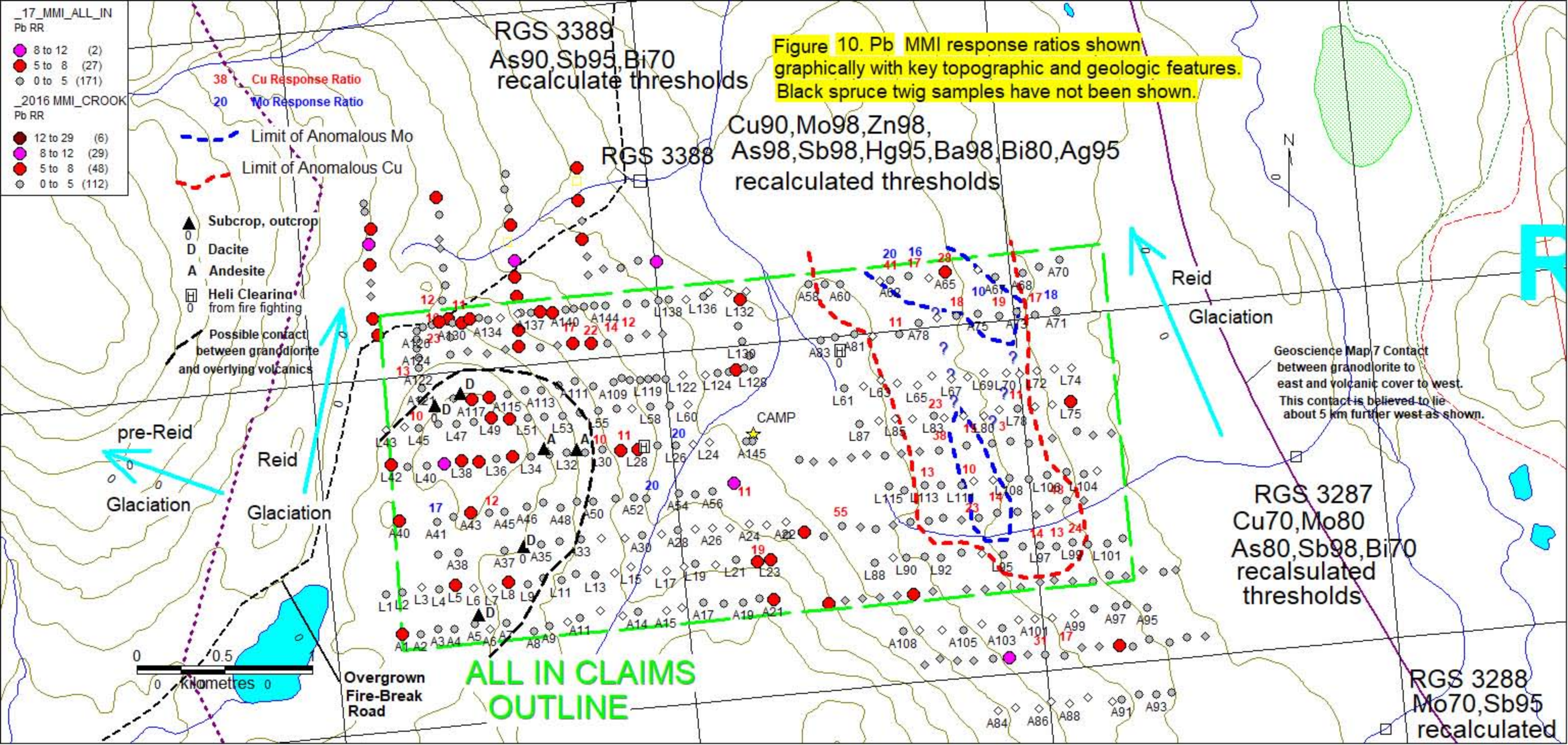
20 Mo Response Ratio

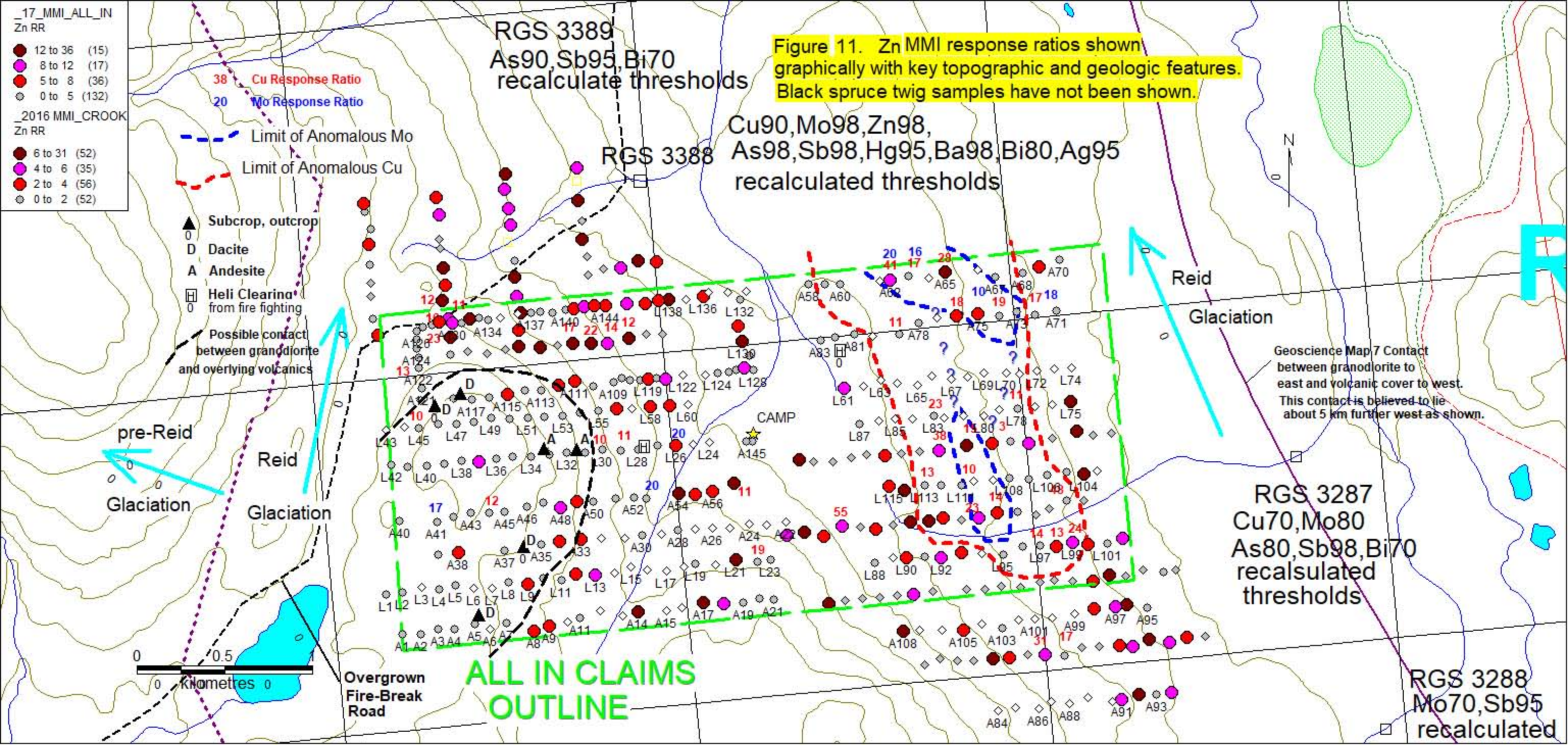
Limit of Anomalous Mo

Limit of Anomalous Cu









**\_17 MMI\_ALL\_IN Zn RR**

- 12 to 36 (15)
- 8 to 12 (17)
- 5 to 8 (36)
- 0 to 5 (132)

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**\_2016 MMI\_CROOK Zn RR**

- 6 to 31 (52)
- 4 to 6 (35)
- 2 to 4 (56)
- 0 to 2 (52)

**Figure 11. Zn MMI response ratios shown graphically with key topographic and geologic features. Black spruce twig samples have not been shown.**

**RGS 3389**  
As90, Sb95, Bi70  
recalculate thresholds

**RGS 3388**  
Cu90, Mo98, Zn98,  
As98, Sb98, Hg95, Ba98, Bi80, Ag95  
recalculated thresholds

**RGS 3287**  
Cu70, Mo80  
As80, Sb98, Bi70  
recalculated thresholds

**RGS 3288**  
Mo70, Sb95  
recalculated

38 **Cu Response Ratio**  
20 **Mo Response Ratio**

- ▲ Subcrop, outcrop
- D Dacite
- A Andesite
- Heli Clearing from fire fighting
- Possible contact between granodiorite and overlying volcanics

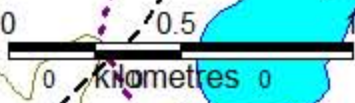
pre-Reid  
Glaciation

Reid  
Glaciation

Reid  
Glaciation

Geoscience Map 7 Contact between granodiorite to east and volcanic cover to west. This contact is believed to lie about 5 km further west as shown.

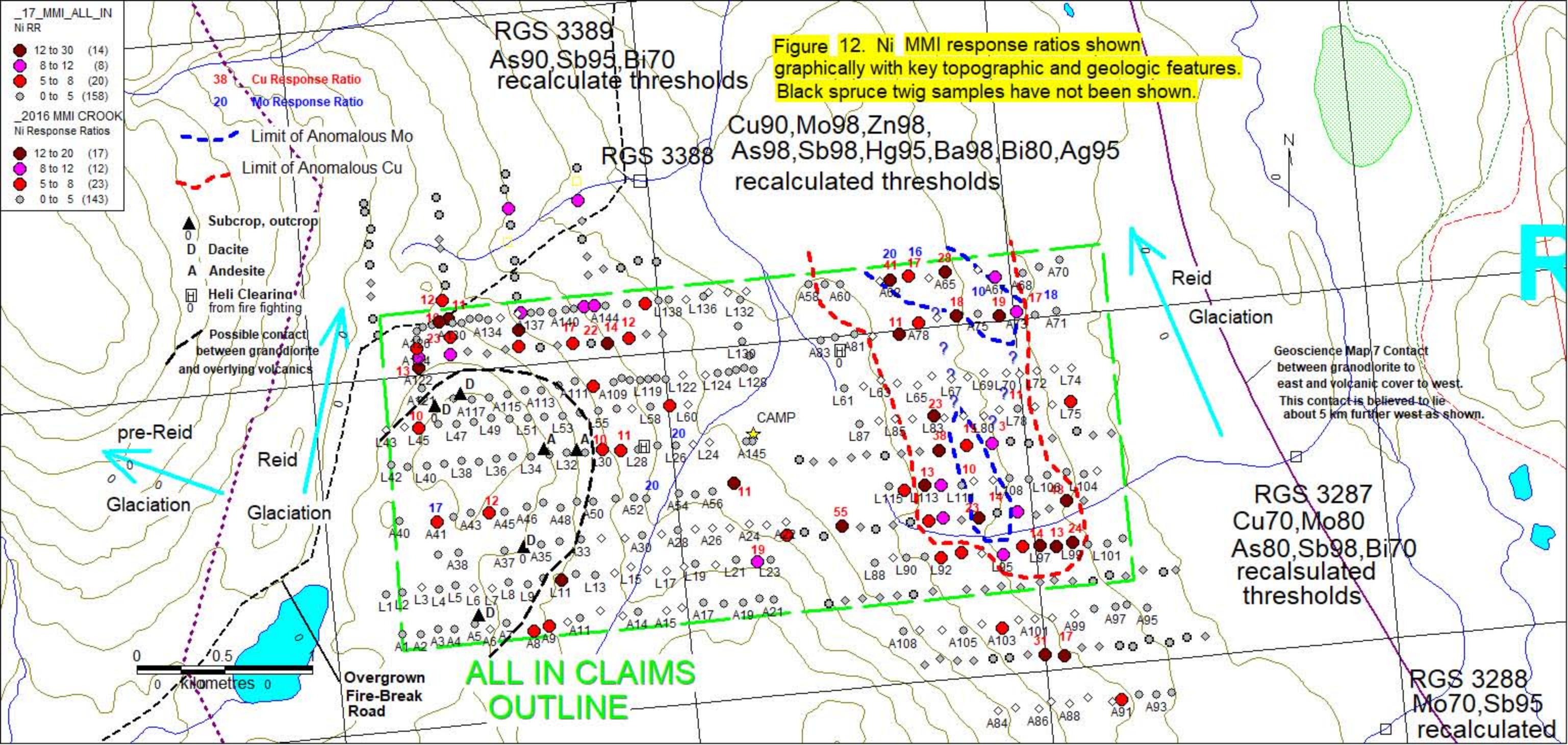
**ALL IN CLAIMS OUTLINE**



Overgrown Fire-Break Road

CAMP





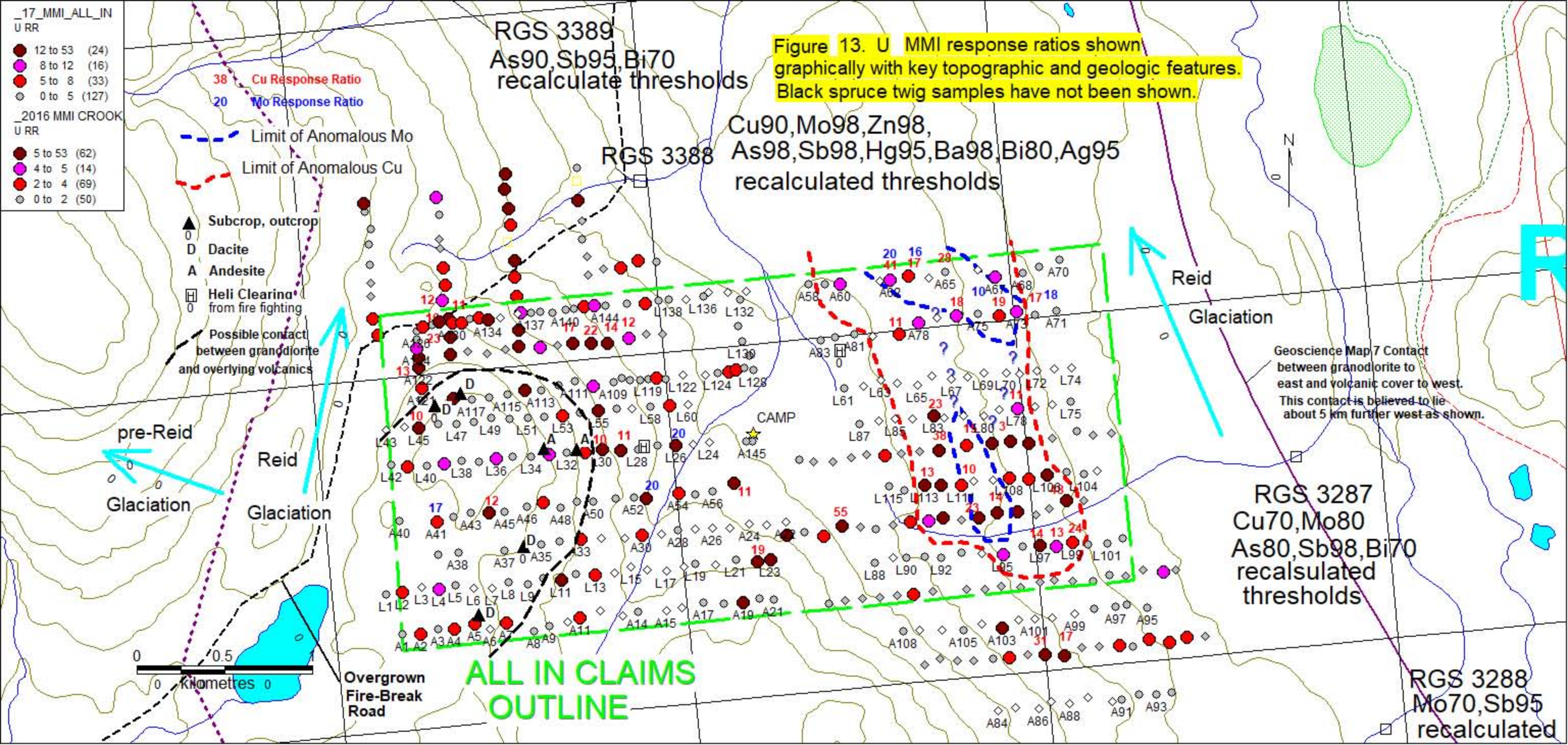


Figure 13. U MMI response ratios shown graphically with key topographic and geologic features. Black spruce twig samples have not been shown.

**\_17 MMI\_ALL\_IN U RR**

- 12 to 53 (24)
- 8 to 12 (16)
- 5 to 8 (33)
- 0 to 5 (127)

**\_2016 MMI CROOK U RR**

- 5 to 53 (62)
- 4 to 5 (14)
- 2 to 4 (69)
- 0 to 2 (50)

RGS 3389  
As90, Sb95, Bi70  
recalculate thresholds

RGS 3388  
Cu90, Mo98, Zn98,  
As98, Sb98, Hg95, Ba98, Bi80, Ag95  
recalculated thresholds

RGS 3287  
Cu70, Mo80  
As80, Sb98, Bi70  
recalculated thresholds

RGS 3288  
Mo70, Sb95  
recalculated

38 Cu Response Ratio  
20 Mo Response Ratio

--- Limit of Anomalous Mo  
--- Limit of Anomalous Cu

- ▲ Subcrop, outcrop
- D Dacite
- A Andesite
- Heli Clearing from fire fighting
- Possible contact between granodiorite and overlying volcanics

pre-Reid  
Glaciation

Reid  
Glaciation

Reid  
Glaciation

Geoscience Map 7 Contact between granodiorite to east and volcanic cover to west. This contact is believed to lie about 5 km further west as shown.

ALL IN CLAIMS  
OUTLINE

Overgrown  
Fire-Break  
Road

