Report on 2012 Satellite Imagery, Topographic and Regional Geological and Geochemical Studies

on the

Bear Lake Properties

BC Geological Survey
Assessment Report
33276

(Claims listed in: 1.3 Property Status and Ownership)

Omineca Mining Division, British Columbia

NTS 94D /3

UTM : 620,000E, 6,220,000N (Zone 10, NAD 83)

Owner:

Electrum Resource Corporation

912- 510 West Hastings Street,

Vancouver, BC. V6B 1L8

Operator:

Copper Mountain Mining Corp.

1700-700 West Pender Street,

Vancouver, B.C. V6C 1G8

Authors:

Peter Holbek, Richard Joyes

September, 2012

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1. Introduction

Copper Mountain Mining Corp., optioned seven properties in the Bear Lake area from Electrum Resource Corporation. Prior to initiating a field based exploration program, Copper Mountain commissioned Photo Sat. to obtain 'Spot' Satellite imagery of the claim areas and also obtained TRIM topographic data from the Government of BC in order to provide base maps and to assist with a regional geological study. This report contains the imagery, topography and results of the related geological studies.

1.1 Location and Access

The seven properties consist of a total of 117 claims covering 19,537.41hectares and are approximately centered at UTM (Zone 9 Nad 83) 620,000E and 6,220,000N, on the western side of Bear Lake, on the NTS map sheet 94D/3, approximately 150km due north of the town of Smithers, British Columbia. Currently, none of the properties are road accessible and all require helicopter access. However, logging operations are being carried out just to the south of Bear Lake via road networks extending south to the Babine Lake area. Remote logging is also taking place to the north of the Jake and Pat Groups whereby the logs are transported south via the old BC rail line. The geographical center of the claim groups is approximately 100 km south-southwest of the Kemess mine site and 150km north-northwest of the porphyry deposits on Babine Lake. The property outlines are shown on the topographic map in Figure 1.1 and UTM centre points for each property group are listed below:

Sustut Group - 607,500E; 6,230,000N

Pat Group - 620,000E; 6,234,000N

Say Group - 634,500E; 6,213,000N

IFT Group - 628,000E; 6,213,000N

Mot Group - 617,500E; 6,215,000N

Kik Claim - 610,500E; 6,216,000N

Off Claim – 603,000E; 6, 104,500N

Figure 1.1 Bear Lake Project Area

1.2 Physiography and Climate

The properties cover a wide variety of terrain, but are generally centered on ridges or mountain tops and are large enough to incorporate adjacent valley bottoms. Elevations on the properties range from 2,300m to 1,100m. Tree-line is generally at, or around the 1,500m elevation. The properties to the west have higher elevations and more rugged terrain whereas the eastern properties are lower with slightly more subdued terrain in the form of rounded-off ridges smoothed by large ice-sheet type glaciation. More recent alpine glaciation has created numerous small cirques. A strong northwest-southeast orientation of the drainages and ridges on the eastern part of the study area is a function of structural control and enhanced by continental glaciation.

Forest cover at lower elevations consists of relatively mature stands of pine and spruce, although tree size is limited due to the relatively high average elevation and northern climate. Swamps are common in the rounded valley bottoms and large numbers of avalanche chutes, filled with slide alder and devil's club, attest to relatively high snow loads during the winter. Proximity of the area to the Skeena River valley, to the north, allows an influence of coastal climate to sneak into the area, resulting in higher precipitation than one would normally expect at this easting.

1.3 Property Status and Ownership

There are 7 properties within the study area, most made up of multiple claims as outlined below. All claims are owned by Electrum Resource Corporation of Vancouver. Claim locations are shown in Figure 1.2 and relevant claim data are listed in Table 1.1, below.

Tenure Number	Claim Name / Property	Issue Date	Good To Date	New Good To Date	Area in Ha
831844	MOT 12	2010/aug/19	2012/aug/19	2012/dec/15	18.05
517965		2005/jul/18	2012/aug/26	2012/dec/15	18.05
751103	IFT 4	2010/apr/17	2012/jul/10	2012/oct/31	18.07
865388	MOT 2B	2011/jul/10	2012/jul/10	2012/oct/31	144.42
865390	MOT 2A	2011/jul/10	2012/jul/10	2012/oct/31	144.39
865440	IFT 6	2011/jul/11	2012/jul/11	2012/oct/31	126.52
865681	PAT 7	2011/jul/12	2012/jul/12	2012/oct/31	161.89
865861	PAT 8	2011/jul/13	2012/jul/13	2012/oct/31	107.93
563877	JAKE NORTH	2007/jul/30	2012/jul/31	2012/dec/31	916.87
533778		2006/may/08	2012/jun/15	2012/dec/31	449.61
600132	MOT 11	2009/feb/28	2012/jun/15	2012/oct/31	108.35
755904	SUSTUT PORPHYRY 18	2010/apr/24	2012/jun/15	2012/oct/31	323.98
756663	SUSTUT PORPHYRY 23	2010/apr/25	2012/jun/15	2012/oct/31	72.04
759202	SUSTUT PORPHYRY 19	2010/apr/27	2012/jun/15	2012/oct/31	143.96
767866	MOT 1	2010/may/05	2012/jun/15	2012/dec/15	90.26
833828	SAY 10	2010/sep/18	2012/jun/15	2012/oct/31	54.22
834539	MOT 13	2010/sep/29	2012/jun/15	2012/dec/17	162.52
836095	SUSTUT PORPHYRY 2	2010/oct/17	2012/jun/15	2012/oct/31	108.05
836454	SUSTUT PORPHYRY 7	2010/oct/22	2012/jun/15	2012/oct/31	432.01
836541	SUSTUT PORPHYRY 8	2010/oct/24	2012/jun/15	2012/oct/31	431.83
836992	SUSTUT PORPHYRY 11	2010/oct/30	2012/jun/15	2012/oct/31	324.04
837032	MOT 4	2010/oct/31	2012/jun/15	2012/oct/31	108.31
837149	SUSTUT PORPHYRY 6	2010/nov/02	2012/jun/15	2012/oct/31	197.83
837592	SUSTUT PORPHYRY 15	2010/nov/05	2012/jun/15	2012/oct/31	180.14
837785	MOT 5	2010/nov/06	2012/jun/15	2012/dec/19	90.29

837806	SUSTUT PORPHYRY 5	2010/nov/07	2012/jun/15	2012/oct/31	431.78
839044	SUSTUT PORPHYRY 12	2010/nov/27	2012/jun/15	2012/oct/31	359.87
839066	OFF	2010/nov/28	2012/jun/15	2012/oct/31	288.97
839114	MOT 15	2010/nov/29	2012/jun/15	2012/oct/31	234.70
840969	KIK	2010/dec/16	2012/jun/15	2012/oct/31	162.48
843388	MOT 16	2011/jan/18	2012/jun/15	2012/oct/31	36.11
844115	MOT 6	2011/jan/23	2012/jun/15	2012/oct/31	36.13
845748	MOT 7	2011/feb/08	2012/jun/15	2012/oct/31	180.63
846142	MOT 8	2011/feb/11	2012/jun/15	2012/oct/31	198.56
846350	SUSTUT PORPHYRY 16	2011/feb/13	2012/jun/15	2012/oct/31	144.13
850015	MOT 17	2011/mar/29	2012/jun/15	2012/oct/31	379.53
850100	MOT 10	2011/mar/30	2012/jun/15	2012/oct/31	379.41
850213	MOT 18	2011/mar/31	2012/jun/15	2012/oct/31	162.52
850420	PAT 1	2011/apr/01	2012/jun/15	2012/oct/31	179.83
850635	PAT 2	2011/apr/03	2012/jun/15	2012/oct/31	287.64
851094	PAT 3	2011/apr/08	2012/jun/15	2012/oct/31	287.76
851329	PAT 5	2011/apr/10	2012/jun/15	2012/oct/31	431.50
851483	PAT 12	2011/apr/12	2012/jun/15	2012/oct/31	143.91
851485	PAT 12A	2011/apr/12	2012/jun/15	2012/oct/31	71.93
851690	PAT 4	2011/apr/14	2012/jun/15	2012/oct/31	107.87
851694	PAT 13	2011/apr/14	2012/jun/15	2012/oct/31	107.84
851844	PAT 14	2011/apr/16	2012/jun/15	2012/oct/31	71.97
851846	PAT 15	2011/apr/16	2012/jun/15	2012/oct/31	72.00
851888	PAT 16	2011/apr/17	2012/jun/15	2012/oct/31	125.96
851891	PAT 17	2011/apr/17	2012/jun/15	2012/oct/31	107.96
852010	PAT 18	2011/apr/19	2012/jun/15	2012/oct/31	53.96
852015	PAT 19	2011/apr/19	2012/jun/15	2012/oct/31	107.86
852269	PAT 9A	2011/apr/22	2012/jun/15	2012/oct/31	72.25
852274	MOT 9B	2011/apr/22	2012/jun/15	2012/oct/31	72.25
852323	PAT 20	2011/apr/23	2012/jun/15	2012/oct/31	125.95
852235	PAT 19	2011/apr/23	2012/jun/15	2012/oct/31	107.93
852384	PAT 10	2011/apr/24	2012/jun/15	2012/oct/31	89.99
852385	PAT 10B	2011/apr/24	2012/jun/15	2012/oct/31	125.99
852464	PAT 11A	2011/apr/25	2012/jun/15	2012/oct/31	72.01
852466	PAT 11B	2011/apr/25	2012/jun/15	2012/oct/31	108.02
852862	PAT 21	2011/apr/26	2012/jun/15	2012/oct/31	89.99
852563	PAT 22	2011/apr/26	2012/jun/15	2012/oct/31	108.00
853360	SAY 9	2011/may/03	2012/jun/15	2012/oct/31	144.59
853659	SAY 2B	2011/may/06	2012/jun/15	2012/oct/31	162.62
853661	SAY 2A	2011/may/06	2012/jun/15	2012/oct/31	162.57
854308	IFT 5B	2011/may/10	2012/jun/15	2012/oct/31	216.82
854473	SAY 1B	2011/may/13	2012/jun/15	2012/oct/31	162.62
854481	SAY 1A	2011/may/13	2012/jun/15	2012/oct/31	144.51
854516	SAY 3A	2011/may/14	2012/jun/15	2012/oct/31	108.42
854522	SAY 3B	2011/may/14	2012/jun/15	2012/oct/31	216.77
854575	IFT 5B	2011/may/16	2012/jun/15	2012/oct/31	36.13

854578	IFT 5C	2011/may/16	2012/jun/15	2012/oct/31	180.69
855131	SAY 8A	2011/may/17	2012/jun/15	2012/oct/31	72.31
855135	SAY 8B	2011/may/17	2012/jun/15	2012/oct/31	144.62
855178	IFT 1B	2011/may/18	2012/jun/15	2012/oct/31	289.28
855185	IFT 1A	2011/may/18	2012/jun/15	2012/oct/31	144.62
855238	SUSTUT PORPHYRY 26	2011/may/19	2012/jun/15	2012/oct/31	180.14
855243	SUSTUT PORPHYRY 25	2011/may/19	2012/jun/15	2012/oct/31	216.17
855291	IFT 2B	2011/may/20	2012/jun/15	2012/oct/31	216.98
855292	IFT 2A	2011/may/20	2012/jun/15	2012/oct/31	216.93
855354	SUSTUT PORPHYRY 22	2011/may/21	2012/jun/15	2012/oct/31	216.10
855357	SUSTUT PORPHYRY 28	2011/may/21	2012/jun/15	2012/oct/31	216.10
855395	SUSTUT PORPHYRY 20	2011/may/22	2012/jun/15	2012/oct/31	216.02
855396	SUSTUT PORPHYRY 29	2011/may/22	2012/jun/15	2012/oct/31	215.95
855416	SAY 6A	2011/may/23	2012/jun/15	2012/oct/31	108.44
855417	SAY 6B	2011/may/23	2012/jun/15	2012/oct/31	216.96
855452	SAY 5A	2011/may/24	2012/jun/15	2012/oct/31	162.68
855454	SAY 5B	2011/may/24	2012/jun/15	2012/oct/31	144.65
855635	SAY 7	2011/may/25	2012/jun/15	2012/oct/31	216.98
855738	SAY 4	2011/may/26	2012/jun/15	2012/oct/31	108.42
855739	SAY 4B	2011/may/26	2012/jun/15	2012/oct/31	54.18
855740	SAY 4C	2011/may/26	2012/jun/15	2012/oct/31	162.59
855811	SUSTUT PORPHYRY 30	2011/may/27	2012/jun/15	2012/oct/31	162.03
855814	SUSTUT PORPHYRY 31	2011/may/27	2012/jun/15	2012/oct/31	162.11
856372	IFT 3	2011/jun/07	2012/jun/15	2012/oct/31	54.22
856490	SUSTUT PORPHYRY 21	2011/jun/09	2012/jun/15	2012/oct/31	107.97
856627	IFT 4B	2011/jun/10	2012/jun/15	2012/oct/31	126.48
856633	IFT 4C	2011/jun/10	2012/jun/15	2012/oct/31	108.42
857017	SUSTUT PORPHYRY 19A	2011/jun/16	2012/jun/15	2012/oct/31	143.99
857018	SUSTUT PORPHYRY 19B	2011/jun/16	2012/jun/15	2012/oct/31	144.02
857094	SUSTUT PORPHYRY 23A	2011/jun/17	2012/jun/15	2012/oct/31	144.07
857097	SUSTUT PORPHYRY 23	2011/jun/17	2012/jun/15	2012/oct/31	144.06
659588	SUSTUT 3	2011/jun/26	2012/jun/15	2012/oct/31	35.97
857282	MOT 1A	2009/oct/26	2012/jun/15	2012/oct/31	108.33
857284	MOT 1B	2011/jun/19	2012/jun/15	2012/oct/31	108.3
905621	MOT 14	2011/jun/19	2012/jun/15	2012/oct/31	144.50
916949	SUSTUT PORPHYRY 1A	2011/oct/17	2012/jun/15	2012/oct/31	216.05
917649	SUSTUT PORPHYRY 2A	2011/oct/18	2012/jun/15	2012/oct/31	216.03
921289	SUSTUT PORPHYRY 10A	2011/oct/22	2012/oct/22	2012/oct/31	216.07
922389	SUSTUT PORPHYRY 10B	2011/oct/24	2012/oct/24	2012/oct/31	216.12
923869	SUSTUT PORPHYRY 9A	2011/oct/26	2012/oct/26	2012/oct/31	215.95
924789	SUSTUT PORPHYRY 1B	2011/oct/27	2012/oct/27	2012/oct/31	216.05
926316	SUSTUT PORPHYRY 9B	2011/oct/28	2012/oct/28	2012/oct/31	53.97
926323	SUSTUT PORPHYRY	2011/oct/28	2012/oct/28	2012/oct/31	71.96
926324	SUSTUT PORPHYRY 9BW	2011/oct/28	2012/oct/28	2012/oct/31	89.95
926616	SUSTUT PORPHYRY 2B	2011/oct/30	2012/oct/30	2012/oct/31	108.07
926638	SUSTUT PORPHYRY 11B	2011/oct/31	2012/oct/31	2012/nov/04	108.06

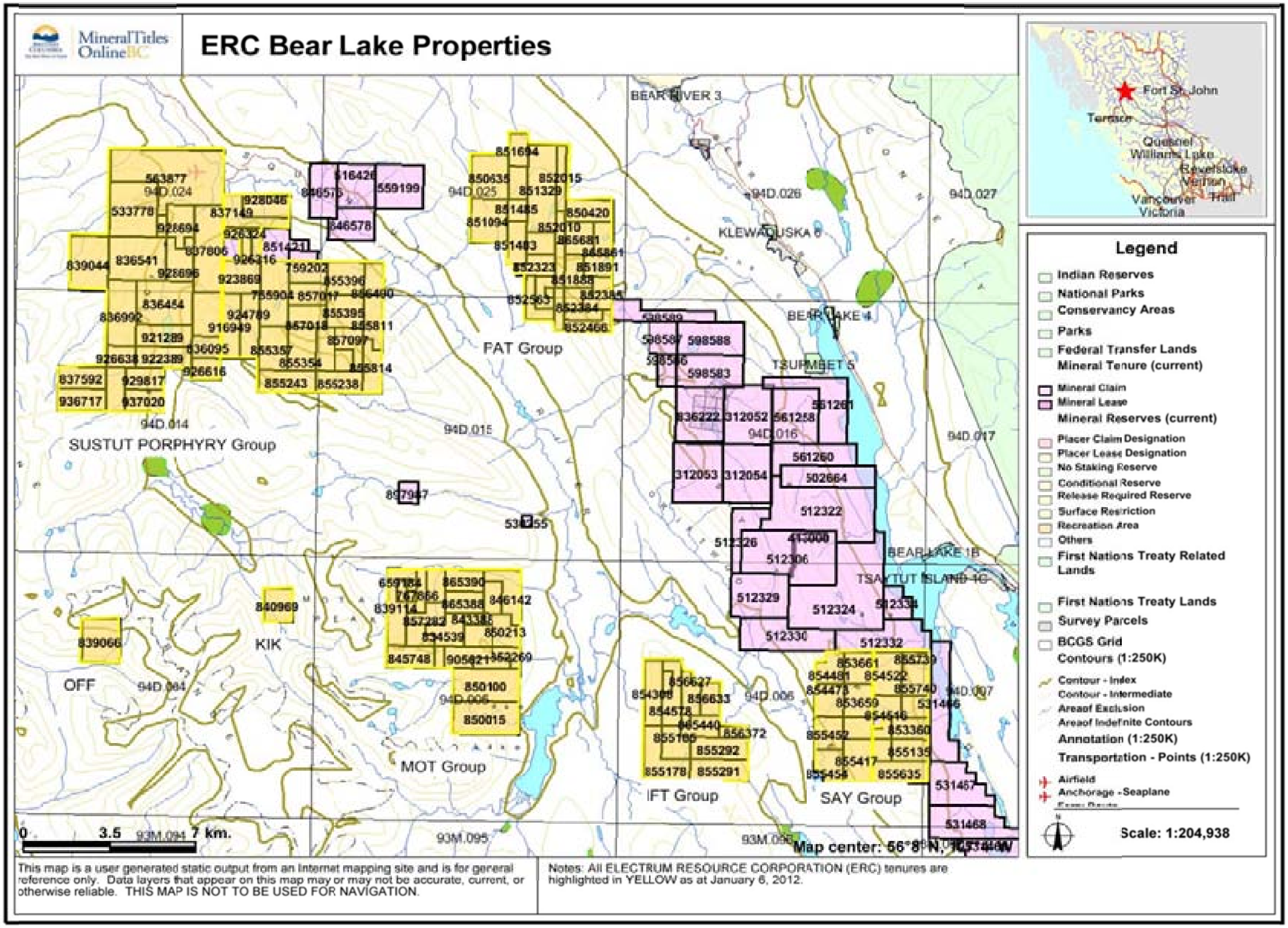

Figure 1.2 Location of Claims making up the Bear Lake Properties (yellow).

1.4 Exploration History

Documented exploration begins with work that Kennco carried out in 1965. Kennco conducted the initial helicopter reconnaissance in the area and examined many of the prominent gossans, carrying out prospecting, soil and stream geochemistry and in some cases, diamond drilling. In the years following a number of companies continued work in the region with some properties seeing repeated exploration programs every few years. A total of 62 British Columbia Assessment Reports are listed within the study area, dating between 1976 and 2009.

1.5 Current Program

The current program consists of satellite imagery, photo-lineament, and regional geological and geochemical compilation. The purpose of this program was to gather more modern information on relatively inaccessible properties to assist with interpretation of historical data and to facilitate upcoming field work.

Initial review of the area was carried out using Google Earth, however the imagery of the central part of the area of interest was of insufficient quality for the purposes stated above and therefore PhotoSat Information Ltd. was contracted to provide current satellite imagery. QuickBird 60cm resolution, or Worldview -2 (spot), 50cm resolution satellite imagery was obtained and blended into orthophotos for each property area. Multi-spectral data for each scene was also purchased and colour bands for FeO and clay alteration were produced for each property. Regional geology was obtained from both old and new government maps and digitized such that it could be overlain with imagery in a GIS system. Regional RGS data was also compiled into the GIS database. Regional mapping was compared to information from assessment reports and modified accordingly.

2.0 Geology

2.1 Regional Geological Setting

The project area is situated near the central-eastern edge of the Bowser Basin, a large sedimentary basin that was deposited on Jurassic volcanic rocks of the Stikine terrane. The basin was uplifted and

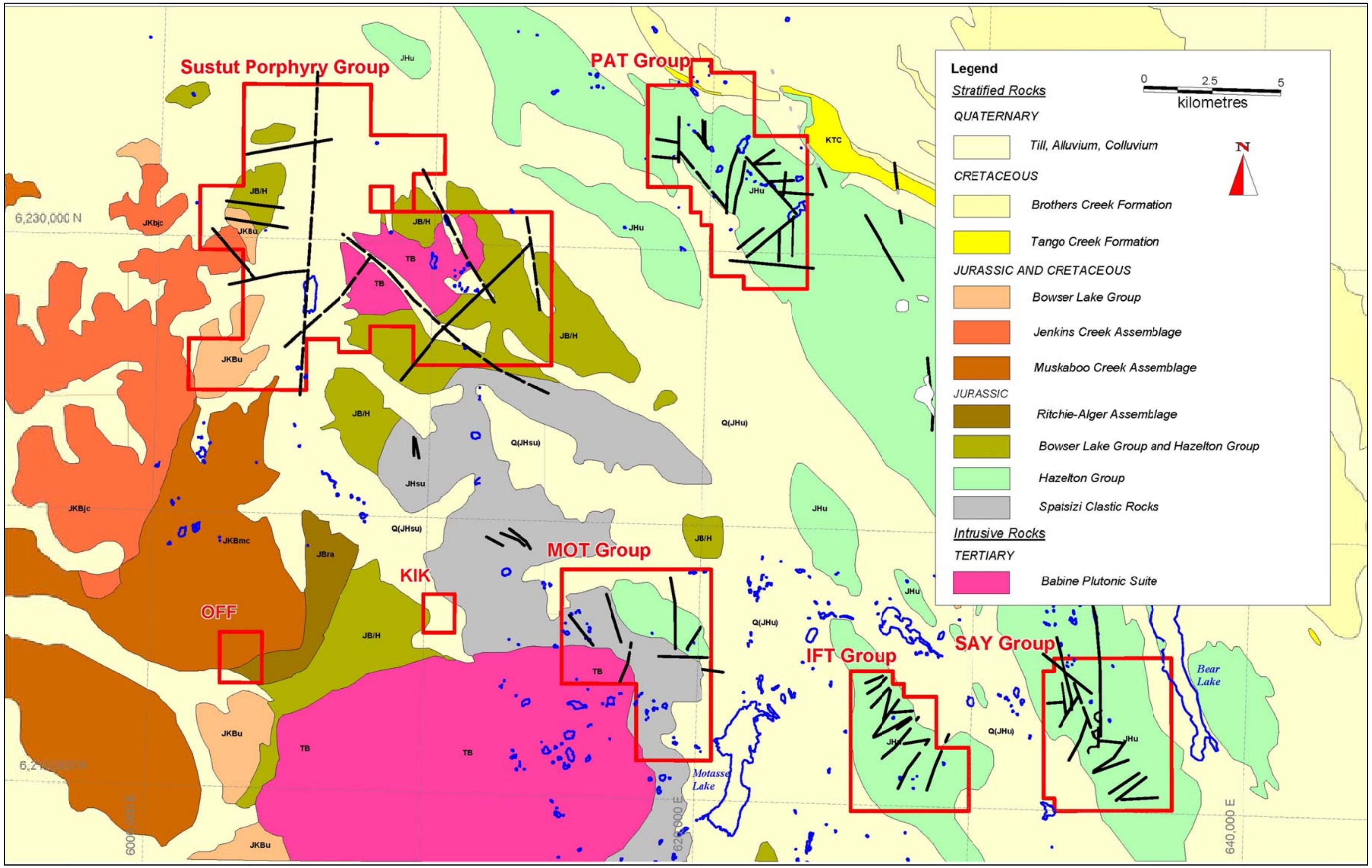

Figure 2.1 Simplified Regional Geology Compilation with Property Locations

deformed to form the Skeena Fold Belt in Cretaceous time and, within the project area is intruded by Tertiary intrusive rocks of the Katsberg and Babine plutonic suites. Source of the sediments within the Bowser stratigraphy is believed to from the obduction of the Cache Creek terrane over Stikinia in the early middle Jurassic (Gagnon, 2010).

Rocks of the Bowser Basin are primarily middle Jurassic to mid-Cretaceous sediments deposited in wide range of environments ranging from deep-water marine to deltaic and lacustrine. Shale and argillite with interbedded sandstone form a thick succession in the western part of the project area and overlie coarse sandstone, minor conglomerate and possibly some tuffaceous rocks that may be transitional into the underlying Hazelton Group volcanic rocks, in the eastern project area. The Hazelton Group rocks within the project area are probably part of the upper Hazelton Group which is dominated by fine grained clastic rocks and lesser bi-modal rift-related volcanic rocks.

Structurally, the Bowser Basin is dominated by contractional folding and faulting (Evanchick et. Al., 2009). Within the project area, folds generally have a northwesterly orientation, and may be accompanied by similarly oriented thrust faults.

2.2 Project Area Geology

The project area geology was determined by compiling information from published maps and digitizing it onto a GIS. The most current source of geology is GSC open file 5571 (Evenchick, 2007). Simplified geology is shown on Figure 2.x. The three easternmost properties are entirely underlain by undivided, lower to lower-middle Jurassic Hazelton Group rocks, consisting of: subaerial and marine mafic volcanic and epiclastic rocks; felsic volcanic rocks include sills, dykes and welded and non-welded ignimbrite, airfall tuff breccias; epiclastic and bioclastic rocks, including volcanic debris flow, breccias, conglomerate, siltstone, shale and limestone. The western properties are more complex with rocks of both the Hazelton and Bowser Lake Groups and intrusions of the Babine Plutonic Suite. Less informative is a blended unit of undivided rocks of the Bowser Lake and Upper Hazelton Groups.

The Bowser Lake Group has been subdivided into eight Assemblages, four each in the upper Jurassic to lower Cretaceous and Upper Middle to Upper Jurassic age ranges. In the vicinity of the project area it is the older part of the Bowser Lake Group that we would expect to encounter, which consists of the one Formation and three Assemblages containing rocks as follows:

Netalzul Formation: feldspar-hornblende-porphyritic andesite flow, breccia and tuff, intercalated volcaniclastic sedimentary rocks, including volcanic debris flow.

Eaglenest Assemblage (deltaic assemblage): conglomerate, sandstone, siltstone, mudstone, and rare coal, arranged in a coarsening- and fining-upward cycles of mudstone to pebble or cobble conglomerate, prominently rusty weathering: 30 to 80% conglomerate; sheets of conglomerate up to 50m thick.

Todagin Assemblage (slope assemblage): siltstone, fine-grained sandstone, and conglomerate; mainly laminated siltstone and/or fine-grained sandstone which is dark grey to black weathering and includes thin, orange weathering claystone beds and syndepositional faults and folds; chert pebble conglomerate occurs as lenses.

Ritchie-Alger Assemblage (submarine fan assemblage): sandstone, siltstone, and rare conglomerate; approximately equal proportions of sheet-like intervals up to 50m thick, dominated either by siltstone, shale or very fine grained sandstone, or by medium-grained sandstone; siltstone and/or fine grained sandstone is dark grey and black weathering, sandstone is medium and light grey weathering: abundant turbidite features.

The overall similarity of rocks within the Bowser Group makes it difficult to impossible to assign Assemblages based on rock descriptions within Assessment reports, and requires detailed mapping of significantly thick stratigraphic sections. Limited bedrock exposure, particularly at lower elevations of the project area, is probably the main reason that this information is unavailable. In general the actual assemblage of the Bowser Group is likely irrelevant to the potential for mineralization, however, as one of the Assemblages is noted to have rusty weathering, this may well impact selection of areas for investigation through the use of both colour and FeO spectral imagery.

2.3 Alteration and Mineralization

The Babine Intrusions are associated with porphyry copper deposits 100km to the southeast along the main structural trend. The outcrop pattern as shown on the geological map suggests that the Babine intrusions in project area are early in the erosional process of being “unfoofed” and therefore there may additional areas that are underlain by intrusive rocks at relatively shallow depths. The Jake property (Smith, 1999) is local evidence of the potential for copper-gold porphyry style mineralization.

The objective of this study is to assist in the evaluation of the potential for the area to host porphyry copper (+/- gold) deposits that, although proximal to surface, may in fact be blind. The dominant alteration features would be a combination of pyrtization and propylitic (chlorite-carbonate (sulphate)-pyrtie) or argillic (sericite-clay-pyrite) alteration. Any such features that occur above or proximal to treeline would likely be detectable using the FeO spectrum of multi-spectral satellite imagery. Additionally, concentric or radial fracture patterns as revealed in high resolution visible imagery would also be of assistance. These techniques would be used in conjunction with potential zoning indicated by silver +/- base metal veins and regional stream sediment geochemistry.

3.0 Satellite Imagery

3.1 Data and Methods

There are four types of resolution to consider when purchasing satellite imagery: spatial, spectral, temporal, and radiometric. Spatial resolution refers to the pixel size of an image, and represents the size of the surface area in square metres, being measured on the ground. Spatial resolution is determined by the satellite's field of view – in aerial photography this would be referred to as focal length, and depends on the instrument used and the altitude of the satellite's orbit. Spectral resolution is defined by the wavelength interval size (discreet segment of the Electromagnetic Spectrum) and number intervals that the sensor is measuring. Temporal resolution is defined by the amount of time, usually in days, that passes between image collection periods, for a given surface location. Radiometric resolution is the ability of an imaging system to record many levels of brightness, and is typically expressed as 8-bit (0-255), 11-bit (0-2047), 12-bit (0-4095) or 16-bit (0-65,535). Geometric resolution refers to the satellite sensor's ability to effectively image a portion of the earth's surface in a single pixel and is typically expressed in terms of ground sample distance (GSD), a term containing the overall optical and systemic noise sources and is useful for comparing how well one sensor can "see" an object on the ground within a single pixel. For example, the GSD of Landsat is ~30m, which means the smallest unit that maps to a single pixel within an image is ~30m x 30m. Currently commercial satellites can provide a GSD of 0.41 m (effectively 0.5 m due to United States Government restrictions on civilian imaging). Although satellite resolution is still not as high as aerial photography, it is vastly less expensive to obtain and is generally more current than government supplied aerial photography (which is being phased out due to significant improvements in Satellite imagery.

GeoEye's satellite was launched September 6, 2008. The GeoEye-1 satellite has the highest resolution of any commercial imaging system and is able to collect images, for commercial sale, with a ground resolution of 0.50 meters in the panchromatic or black and white mode. It collects multispectral or color imagery at 1.65-meter resolution or about 64 inches, a factor of two better than existing commercial satellites with four-band multistage imaging capabilities.

Currently, DigitalGlobe Worldview satellite provides the highest resolution commercial satellite imagery with 0.46 m spatial resolution (panchromatic only). The 0.46 meters resolution of WorldView-2's panchromatic images allows the satellite to distinguish between objects on the ground that are at least 46 cm apart. Similarly DigitalGlobe's Quickbird satellite provides 0.6 meter resolution (at NADIR) panchromatic images.

The 3 Spot satellites in orbit (Spot 2, 4 and 5) provide images with a large choice of resolutions – from 2.5 m to 1 km. Spot Image also distributes multi-resolution data from other optical satellites, in particular from Formosat-2 (Taiwan) and Kompsat-2 (South Korea) and from radar satellites (TerraSar-X, ERS, Envisat, Radarsat). Spot Image is also the exclusive distributor of data from the very-high resolution, Plieades Satellite, with a resolution of 0.50 meter or about 20 inches.

Based on coverage availability a combination of Quickbird 60cm and WorldView-2 50cm panchromatic and multispectral images were purchased and compiled by PhotoSat, of Vancouver, B.C.

The GIS used for data compilation was MapInfo.

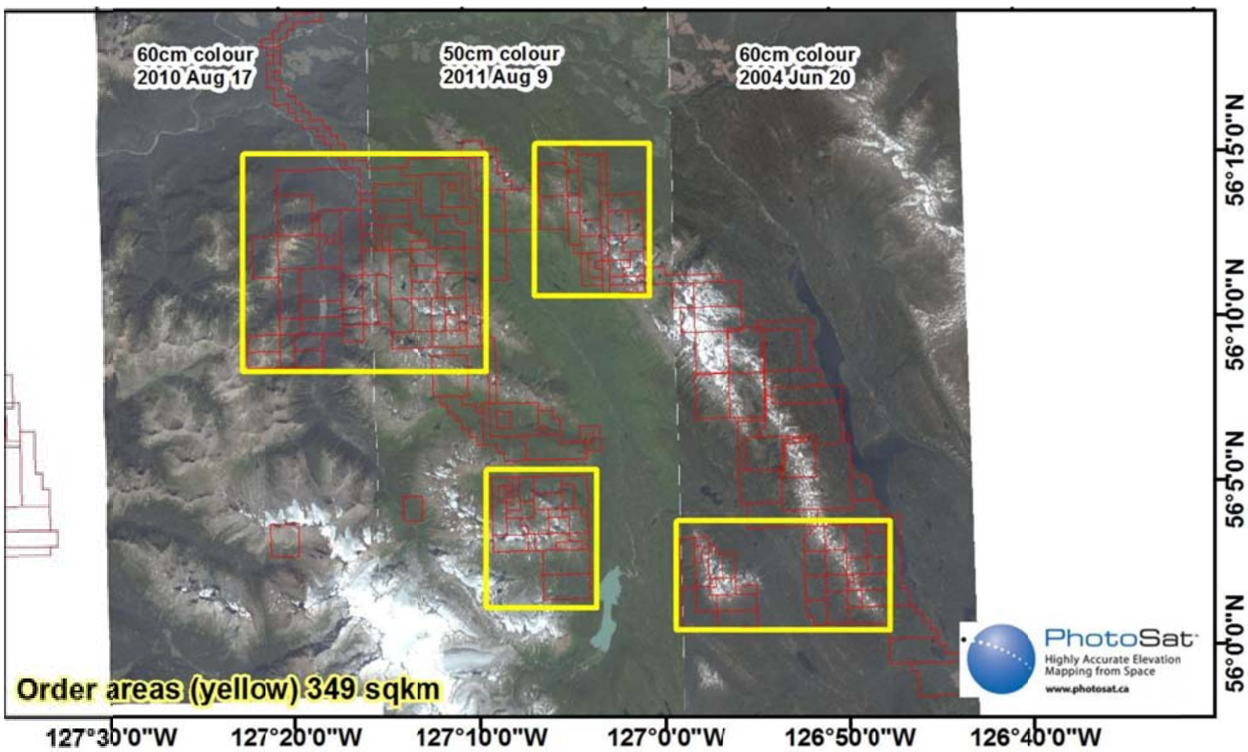

Figure 3.1 Location of data selection for Satellite Imagery.

3.2 Panchromatic Images

Initial evaluation of the study area was made on the panchromatic images which were used to determine amount of outcrop and for lineament studies. Additionally, and assessment of documented mineralization relative to outcrop exposure and regional geochemistry was also performed to determine potential for undetected mineralization within areas of poor exposure. Panchromatic images with coarse linears overlaid for the five larger property areas are shown in Figures 3.2A through 3.2E, full size images can be found in Appendix III. Implications of these images for exploration will be discussed at the end of this chapter.

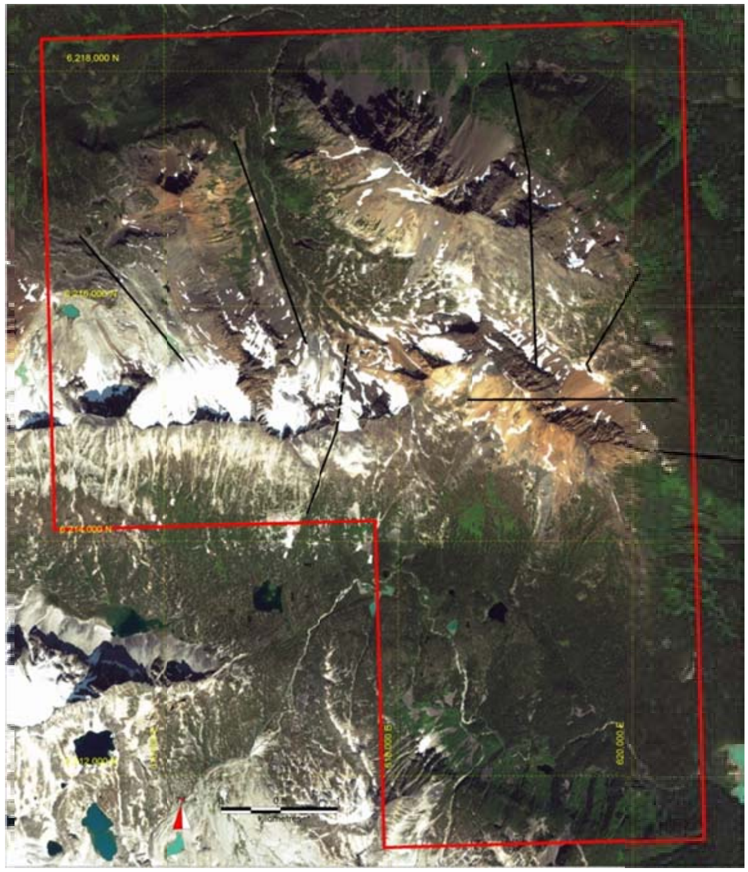

Figure 3.2A Mot Group Image with major Lineaments

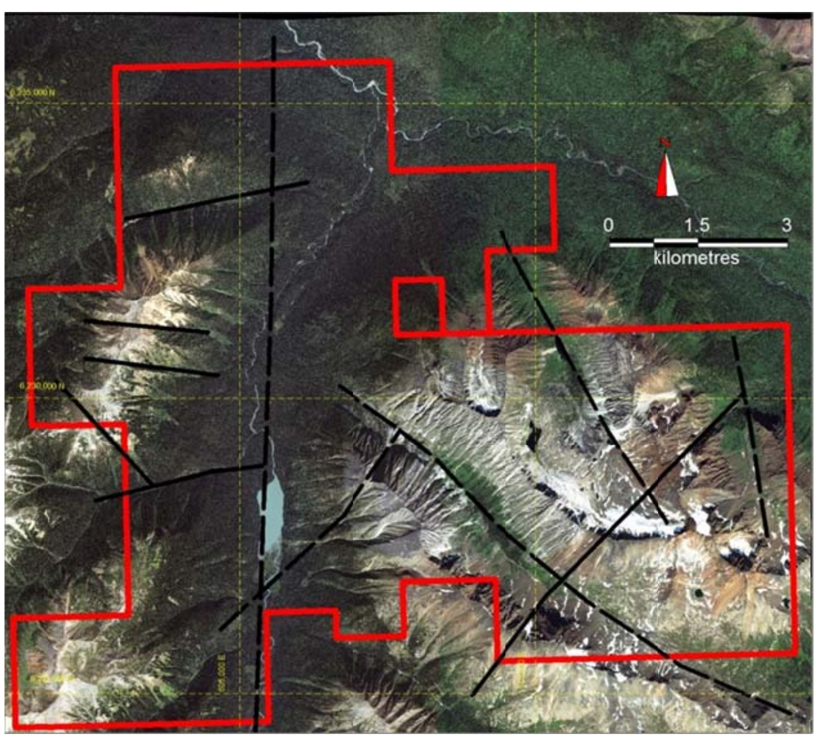

Figure 3.2B Sustut Group Image with major lineaments

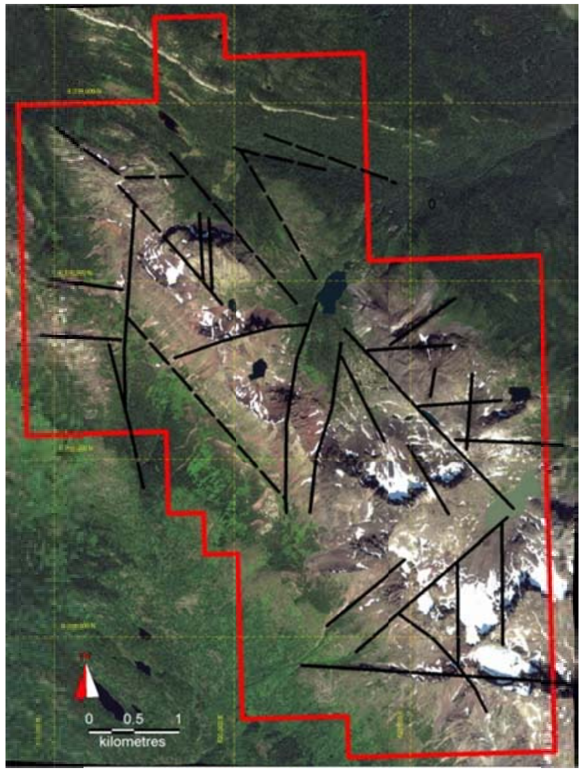

Figure 3.2C Pat Group Image with major lineaments

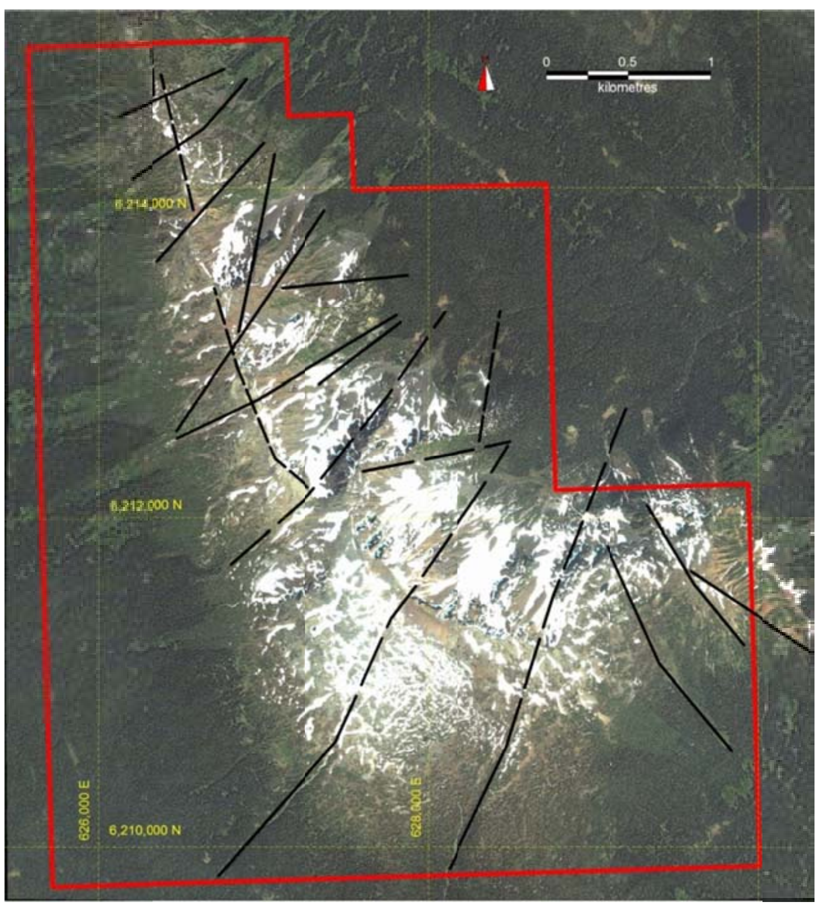

Figure 3.2D IFT Group image with major lineaments

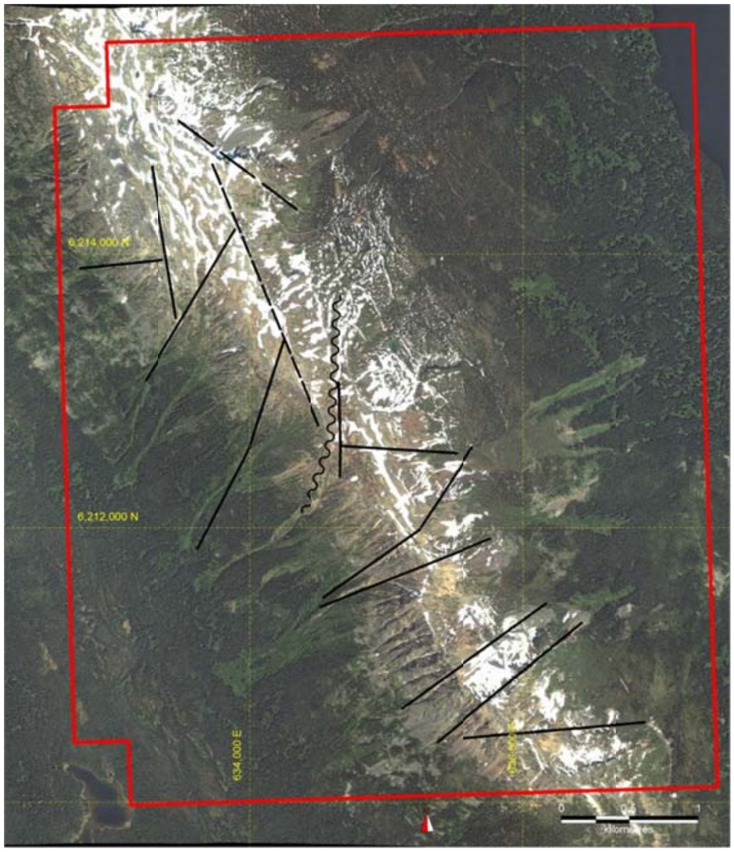

Figure 3.2E Say Group Image with Lineaments

3.3 Iron Oxide Alteration Images

The areas of blue to red colour on the Iron Oxide Alteration images are areas which, on the balance of probabilities have Iron Oxide at surface. The red areas are more likely to be iron oxide zones than the blue areas. Often zones of iron oxide alteration are due to the weathering or rusting of metallic sulphide minerals. These metallic sulphides may be ore minerals themselves such as copper or nickel sulphides or minerals such as iron-sulphides that are often associated with other economic metals such as gold. Many zones of iron oxide alteration have no economic significance, however, in other cases, such as at Red Mountain in northern BC or Voisey's Bay in Labrador, the iron oxide zones are directly related to valuable ore deposits.

From the images following (Figures 3.3A through 3.3E), it is clear that elevation, or exposure, is correlated with higher incidences of iron oxide concentration, as well as the distribution of high iron oxides commonly appears to be formational, or related to specific rock types, and therefore these images should be compared to the regional geology map, when making interpretations. Full size images with legend are located in Appendix IV.

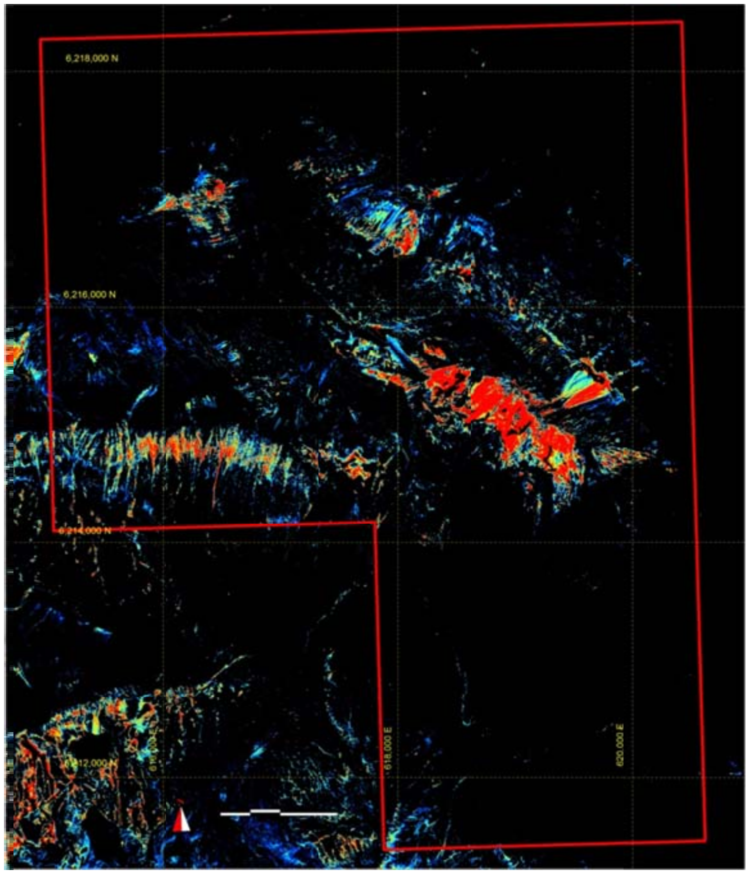

Figure 3.3A FeO multispectral data Image for the Mot Group

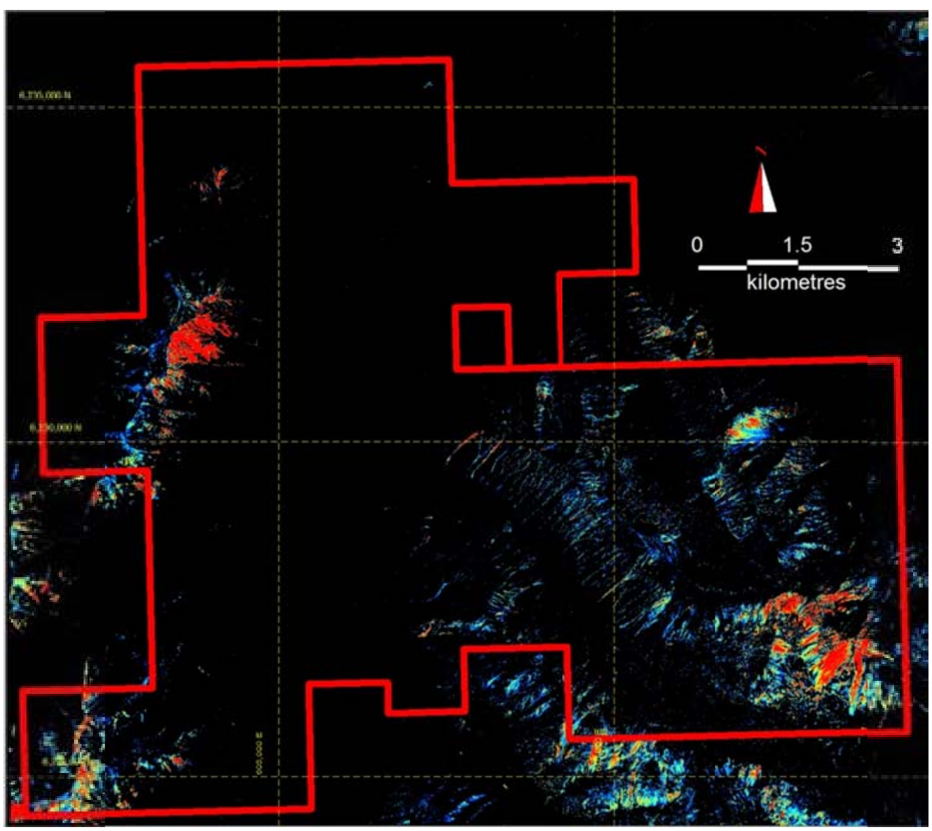

Figure 3.3B FeO multispectral data image for the Sustut Group

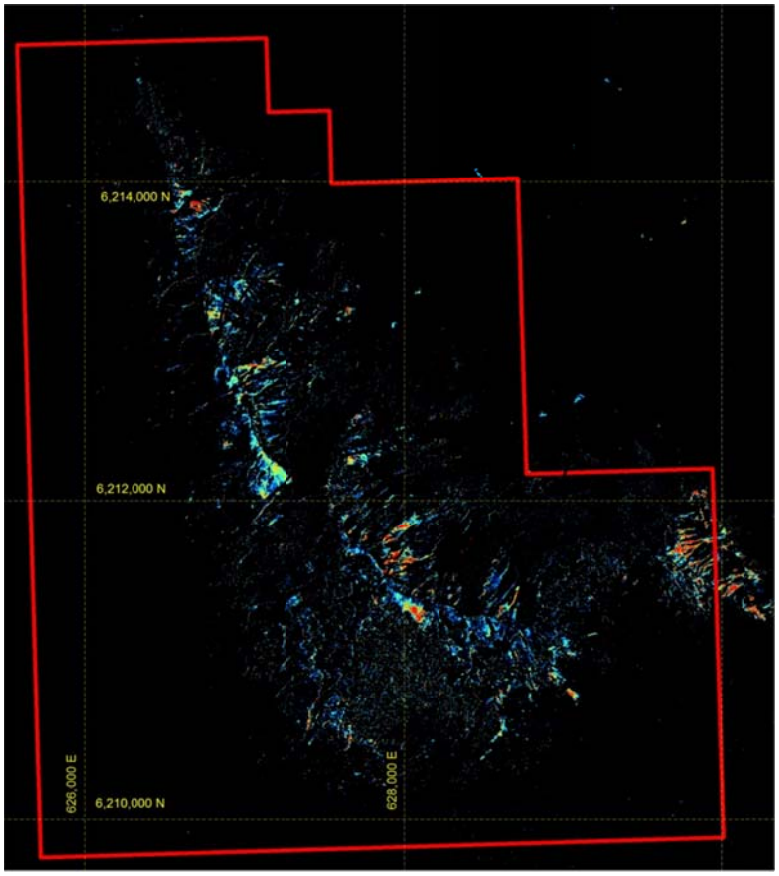

Figure 3.3C FeO multispectral image for the IFT Group.

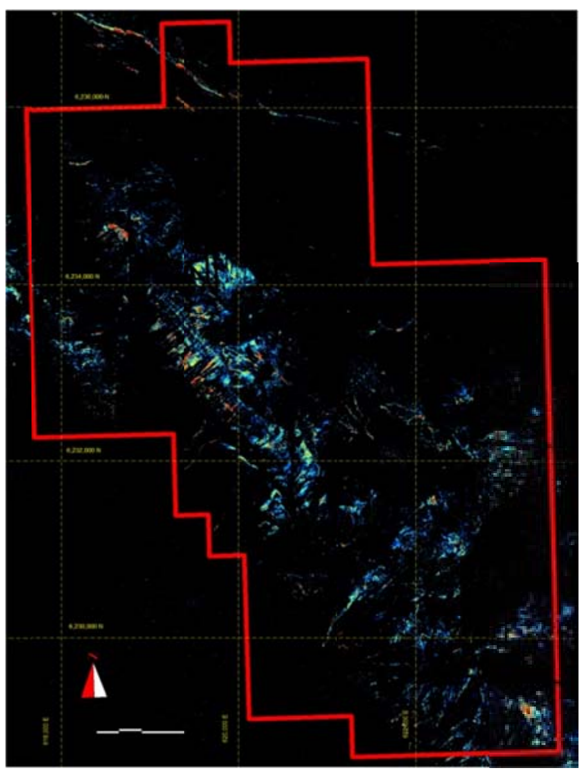

Figure 3.3D FeO multispectral data for the Pat Group

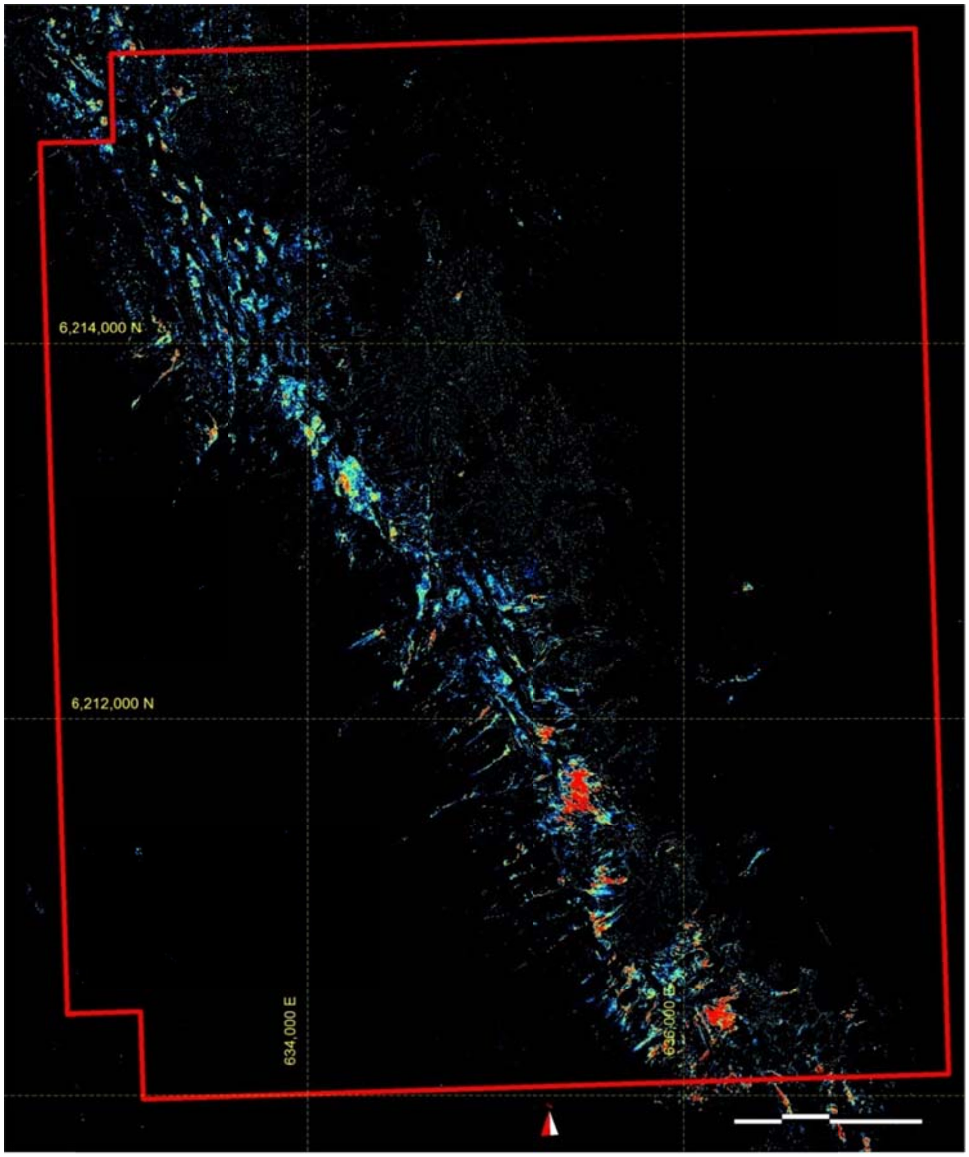

Figure 3.3E FeO multispectral data image for the Say Group

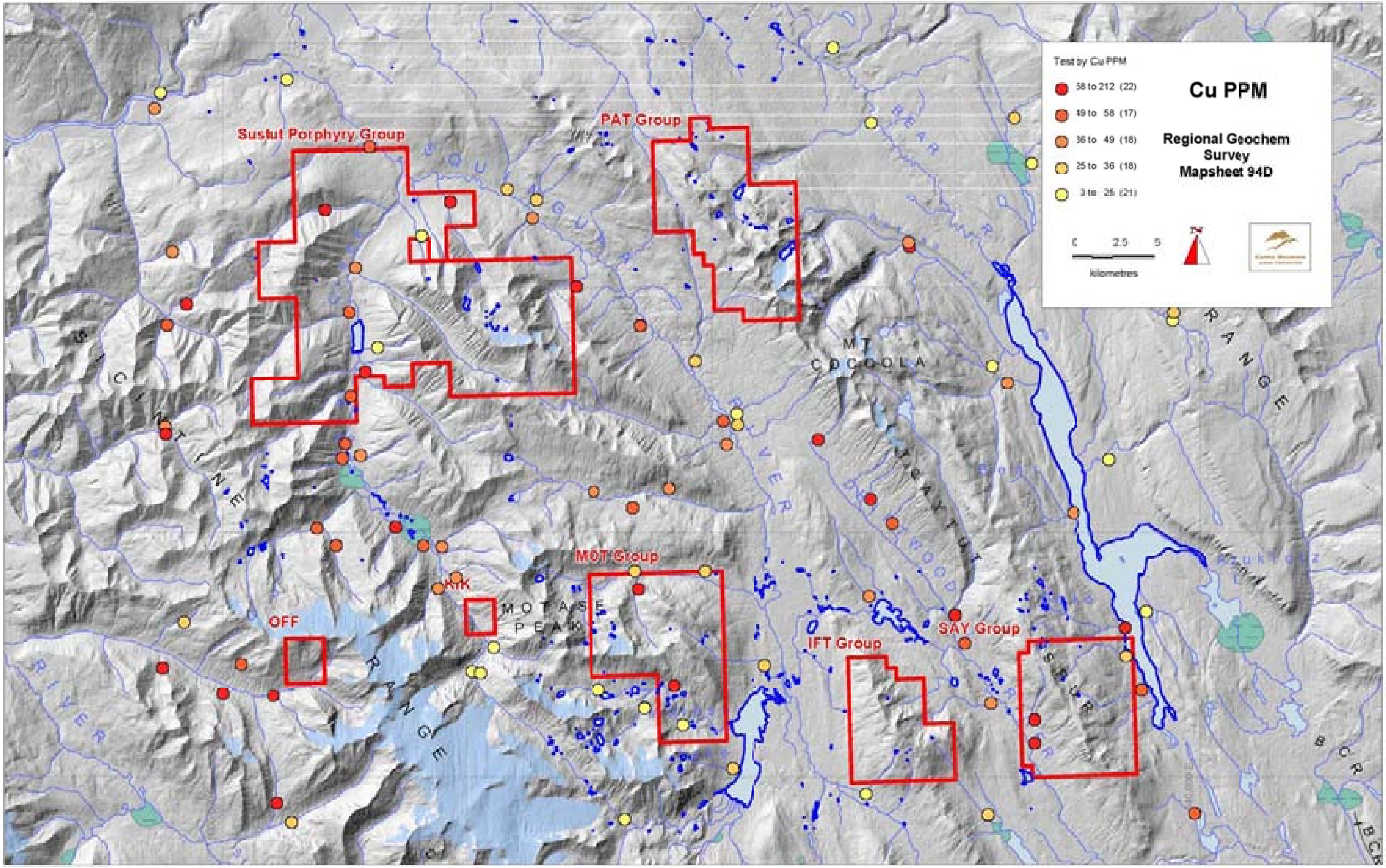

Figure 3.4A Regional Stream Geochemistry: Copper

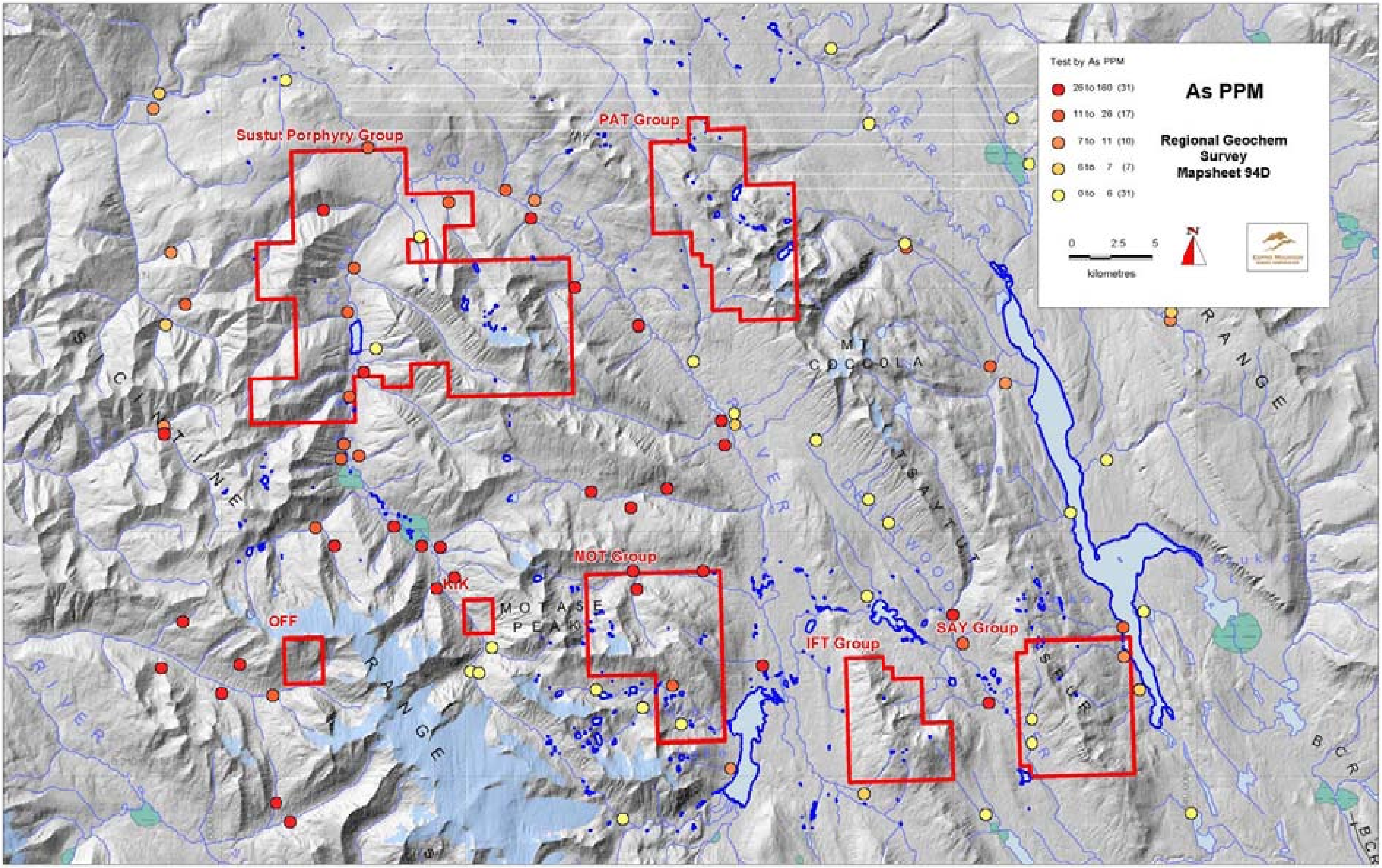

Figure 3.4B Regional Stream Geochemistry: As

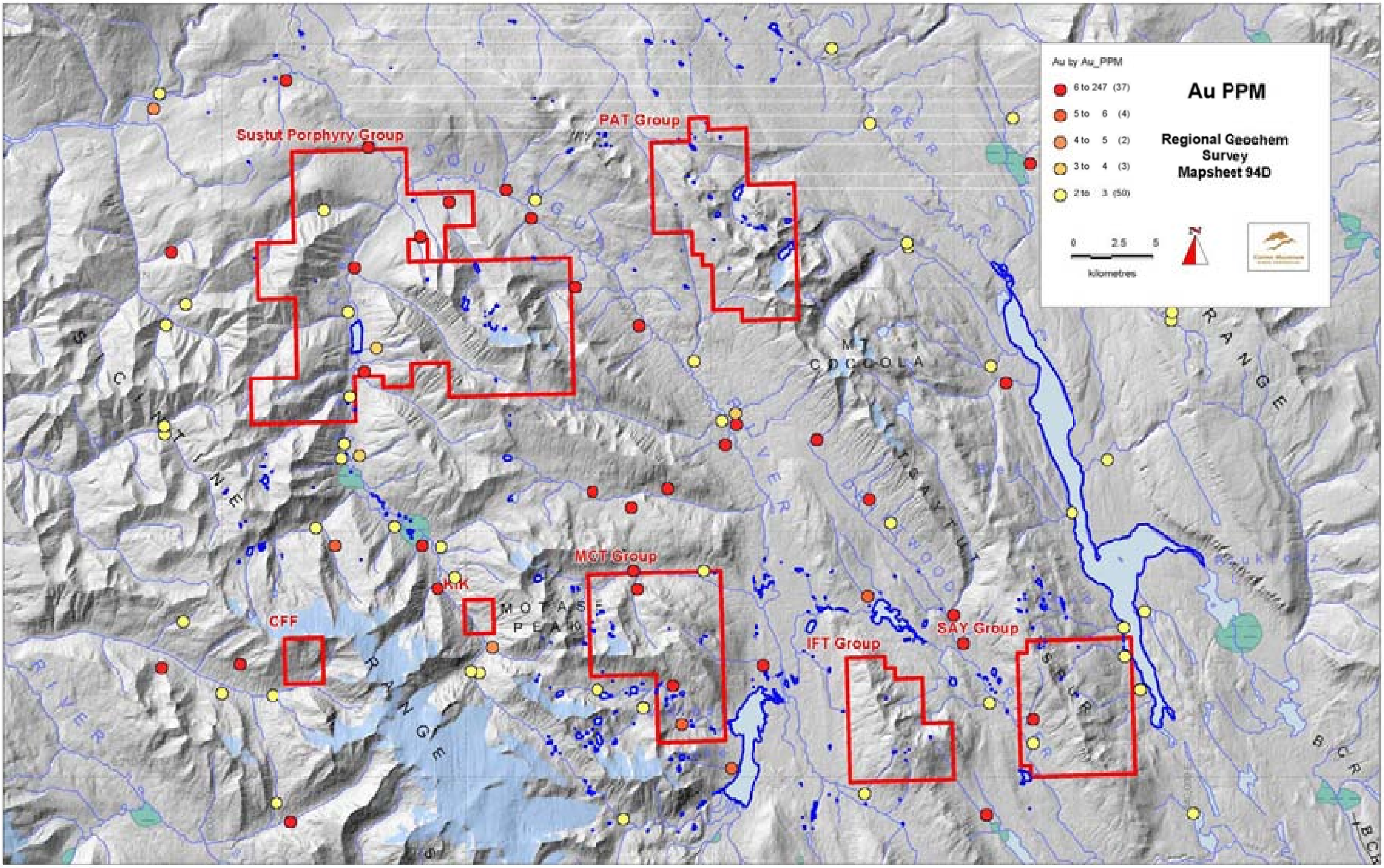

Figure 3.4C Regional stream geochemistry: Au

3.4 Regional Stream Geochemistry

Regional stream geochemical data from government surveys for Cu, As and Au are plotted on terrain images (figures 3.4A, B and C). Stream data is remarkably subdued when compared to descriptions of mineralization in assessment reports, which may reflect an issue with sampling in relatively large drainages. Examination of the panchromatic images indicates that access to stream by helicopter is likely to be problematic in many locations. Additionally potential for high snow loads may result in very high sediment loads during the spring and early summer run-off which may result in both coarse sample media and dilution of any mineralized material. However all of the properties with the exception of the Pat and IFT groups do cover some or all of the source areas for higher values in most elements.

Sample spacing or locations of stream geochemical samples are too infrequent, and values are too similar to infer any kind of correlation of stream geochemistry with FeO concentrations as revealed in the spectral imagery.

4.0 Results and Conclusions

Satellite imagery has identified extensive areas with strong iron oxide signatures, only some of which are associated with known mineralization. However, there is not a significant correlation of iron oxide zones with characteristic intrusive fracture patterns and there are only limited occurrences of anomalous stream geochemistry with favourable geology, fracture patterns and possible alteration. Correlation iron oxide zones and/or significant lineament patterns with showings and/or indications of significant mineralization documented assessment reports is moderate to poor. This study does, however, provide an excellent platform for planned field work, and will likely pay dividends in much better helicopter usage for during regional reconnaissance. Additionally, detailed stream geochemistry may be a significant tool in located additional areas of mineralization and may provide a better correlation with FeO spectral imagery. Government magnetic data would also assist in this type of study.

References

Carter, N.C. and Kirkham, R.V. 1969. BC Dept. of Mines and Pet. Res. Map 69-1 Geological Compilation Map of the Smithers, Hazelton and Terrace Areas.

Evenchick, C. A., 2009. GSC Open File 5794. Geological Compilation of the Bowser and Sustut Basins Draped on shaded relief map, North Central British Columbia. Scale 1:500,000

Evenchick, C. A., Mustard, P.S., McMachan, M., Ferri, F., Porter, S., Hadlari, T., and Jakobs, G., 2007. GSC Open File 5571. Geology, McConnell Creek, British Columbia. Scale 1:125,000

Smith, S.W., 1999. BCAR 25931. Geological and Geochemical Report on the 1998 Program; Jake Property.

Appendix I: Statement of Costs

Satellite Imagery and Trim data:

PhotoSat ……………………………………………………………………………….$12,125.60

Trim Data (invoice #'s 54320, 54416)…………………………………..$ 1,344.00

Personnel (includes report preparation)

GIS –Sr Geologist – Richard Joyes …………….9 days@ $ 750/day……….. $ 6,750.00

Research Geologist – Sonya Croker ………… 7 days@ $ 350/day………. $ 2,450.00

Project Manager/researcher – Peter Holbek..6 days@ $1100/day………$ 6,600.00

GIS Software, Printing, Secretarial ………………………………………………... $ 1,875.00

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Total…………………………………………………………………………………………… $31,144.60

Appendix II: Certificates of the Authors

Certificate of Qualifications

I, Peter M. Holbek with a business address of 1700 – 700 West Pender Street, Vancouver, British Columbia, V6C 1G8, do hereby certify that:

1. I am a professional geologist registered under the Professional Engineers and Geoscientists Act of the Province of British Columbia and a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
2. I am a graduate of The University of British Columbia with a B.Sc. in geology 1980 and an M.Sc. in geology, 1988.
3. I have practiced my profession continuously since 1980.
4. I am Vice President, Exploration for Copper Mountain Mining Corp. having a business address as given above.
5. I supervised the work program on the Bear Lake properties, and prepared this report.

_______Signed______
Peter Holbek, M.Sc., P.Geo.

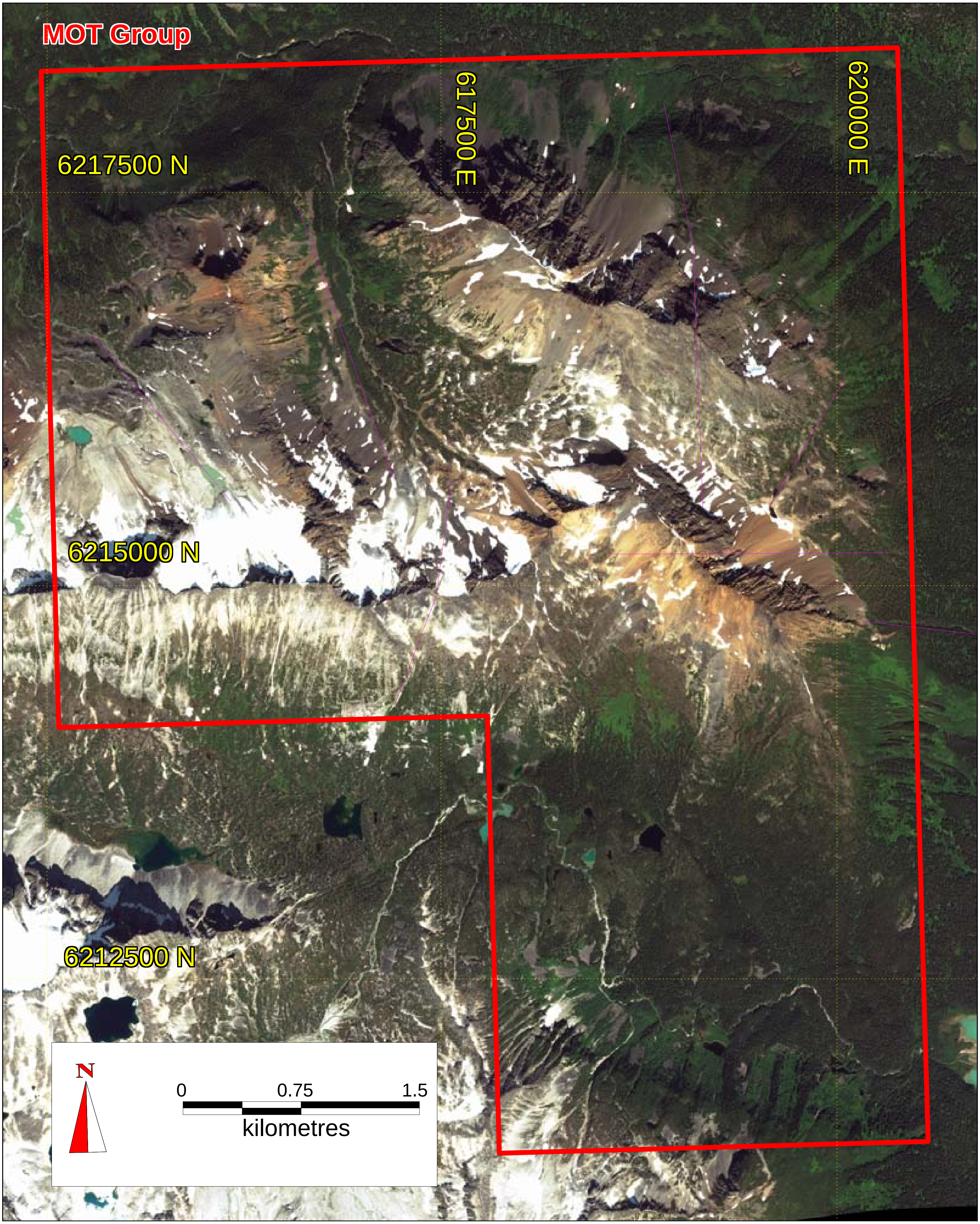
Certificate of Qualifications

I, Richard J Joyes with a business address of 1700 – 700 West Pender Street, Vancouver, British Columbia, V6C 1G8, do hereby certify that:

1. I am a graduate of The University of Tasmania with a B.Sc. in geology 2000
2. I have practiced my profession continuously since 2000.
3. I am an exploration geologist, for Copper Mountain Mining Corp. having a business address as given above.
4. I assisted in supervising the work program on the Bear Lake properties, and assisted in preparing this report.

_____Signed_______
Richard J Joyes B.Sc Geo.

APPENDIX III: Panchromatic Satellite Images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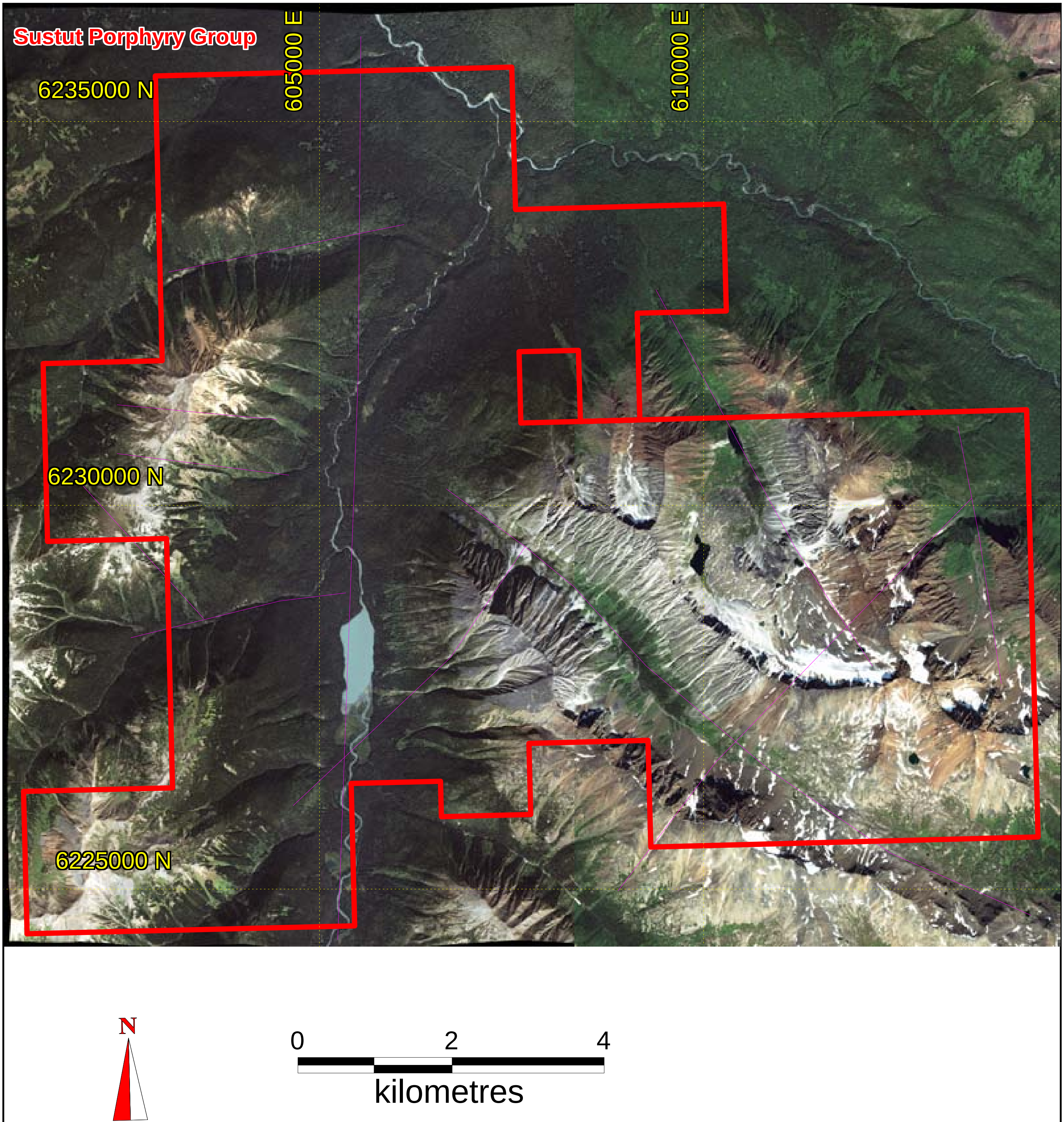
6212500 N
617500 E
620000 E
N
0
0.75
1.5
kilometres


Sustut Porphyry Group
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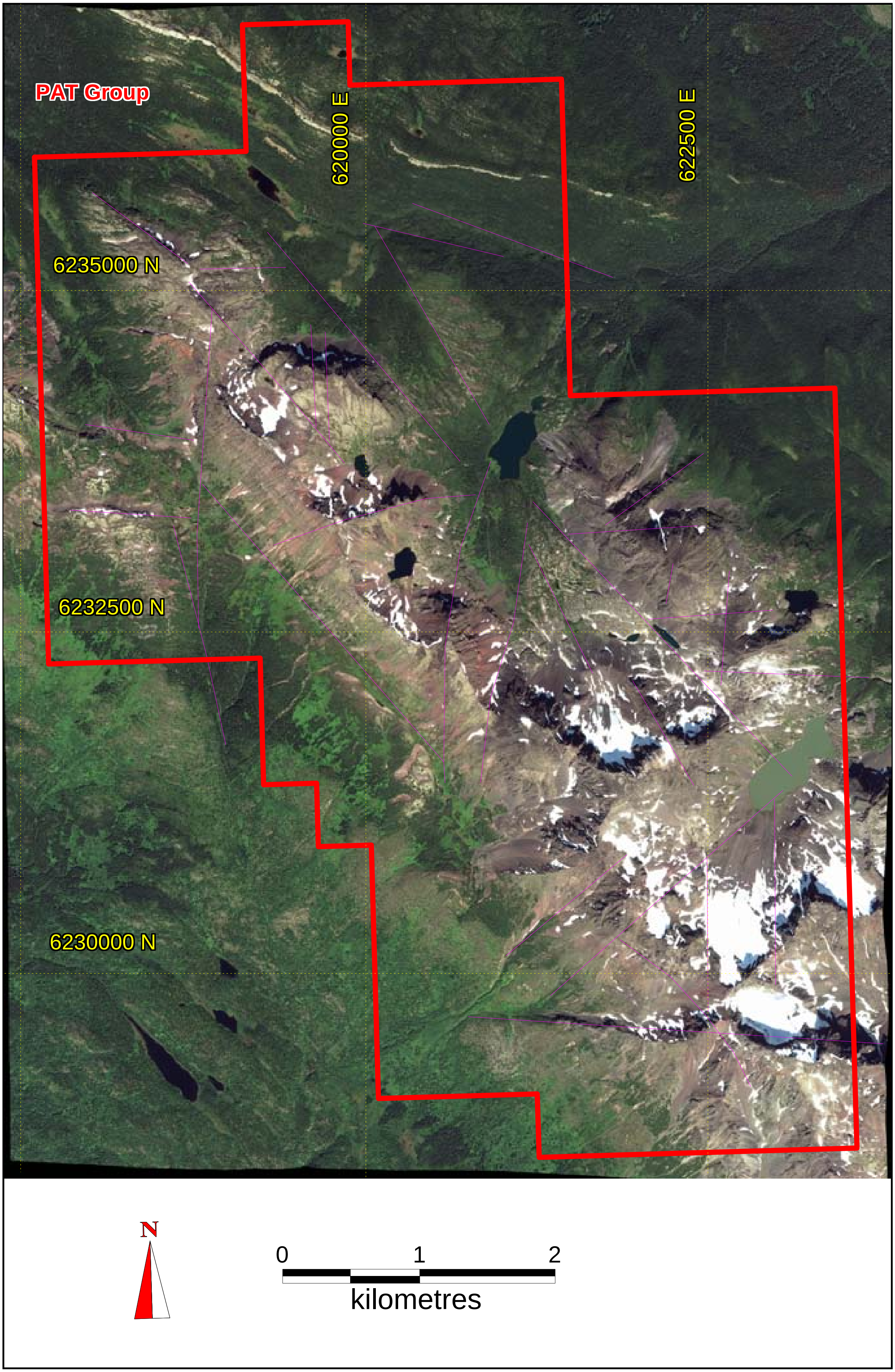
610000 E
6235000 N
6230000 N
6225000 N
N
0
2
4
kilometres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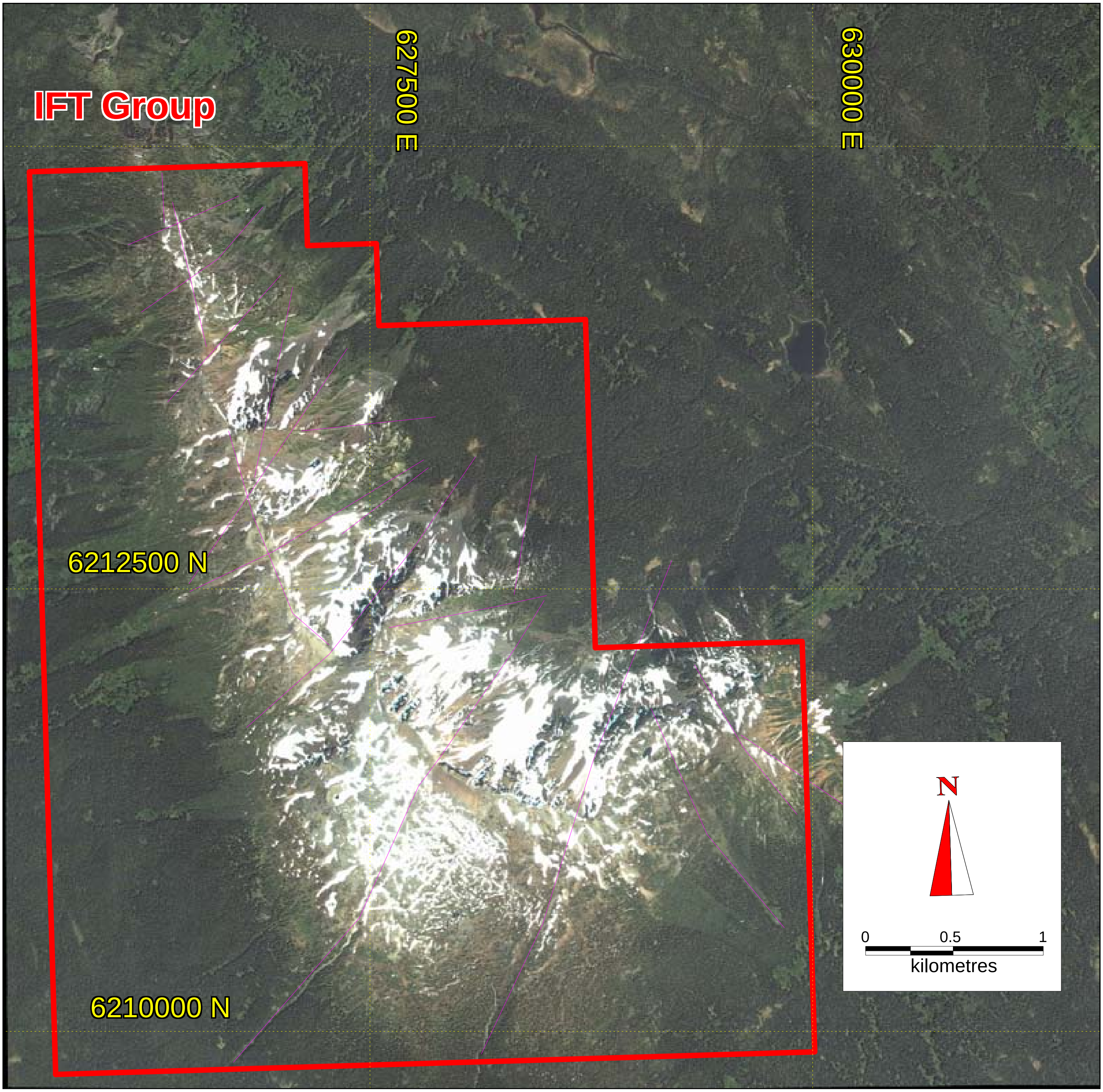
1
2
kilometres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6212500 N
6210000 N
N
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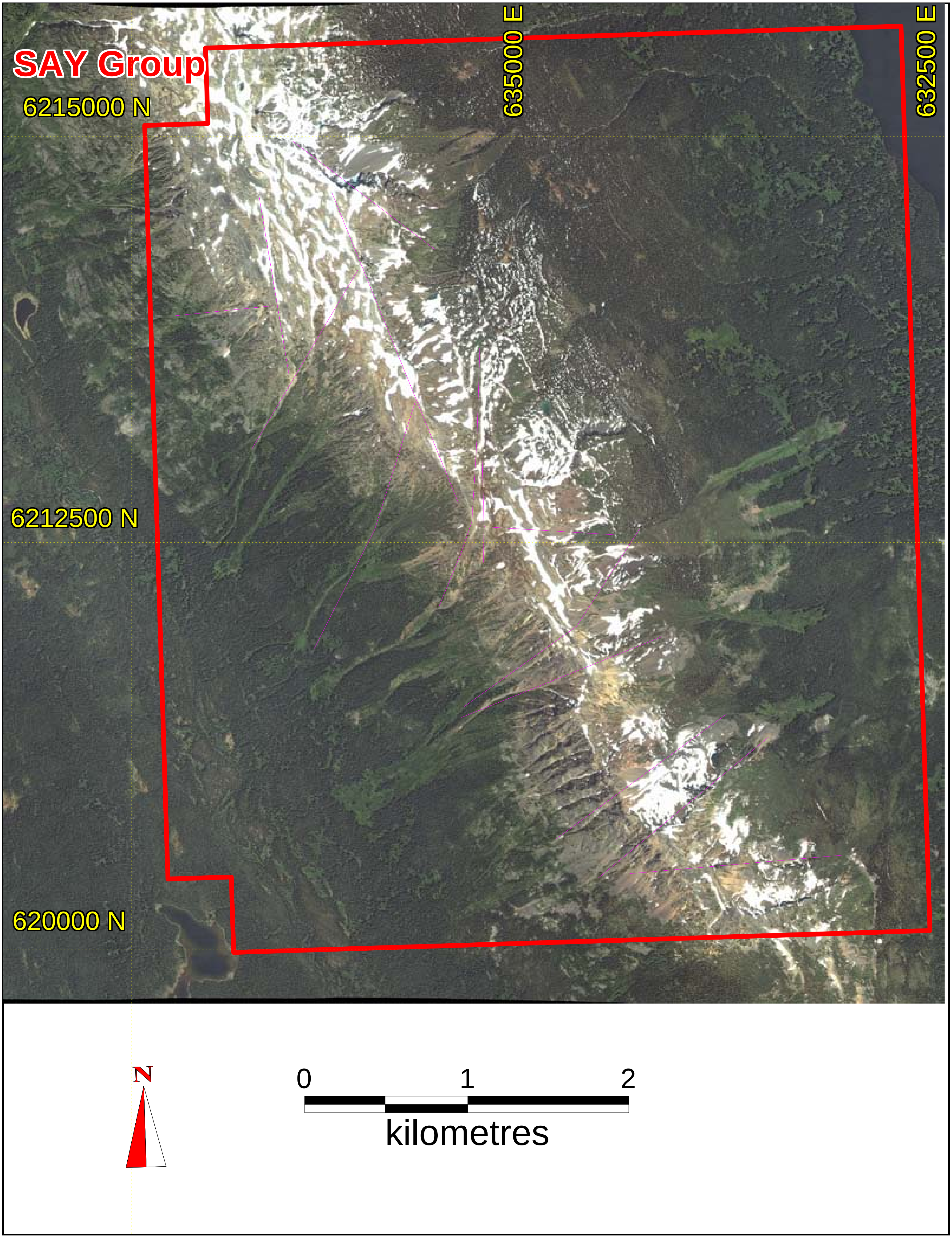
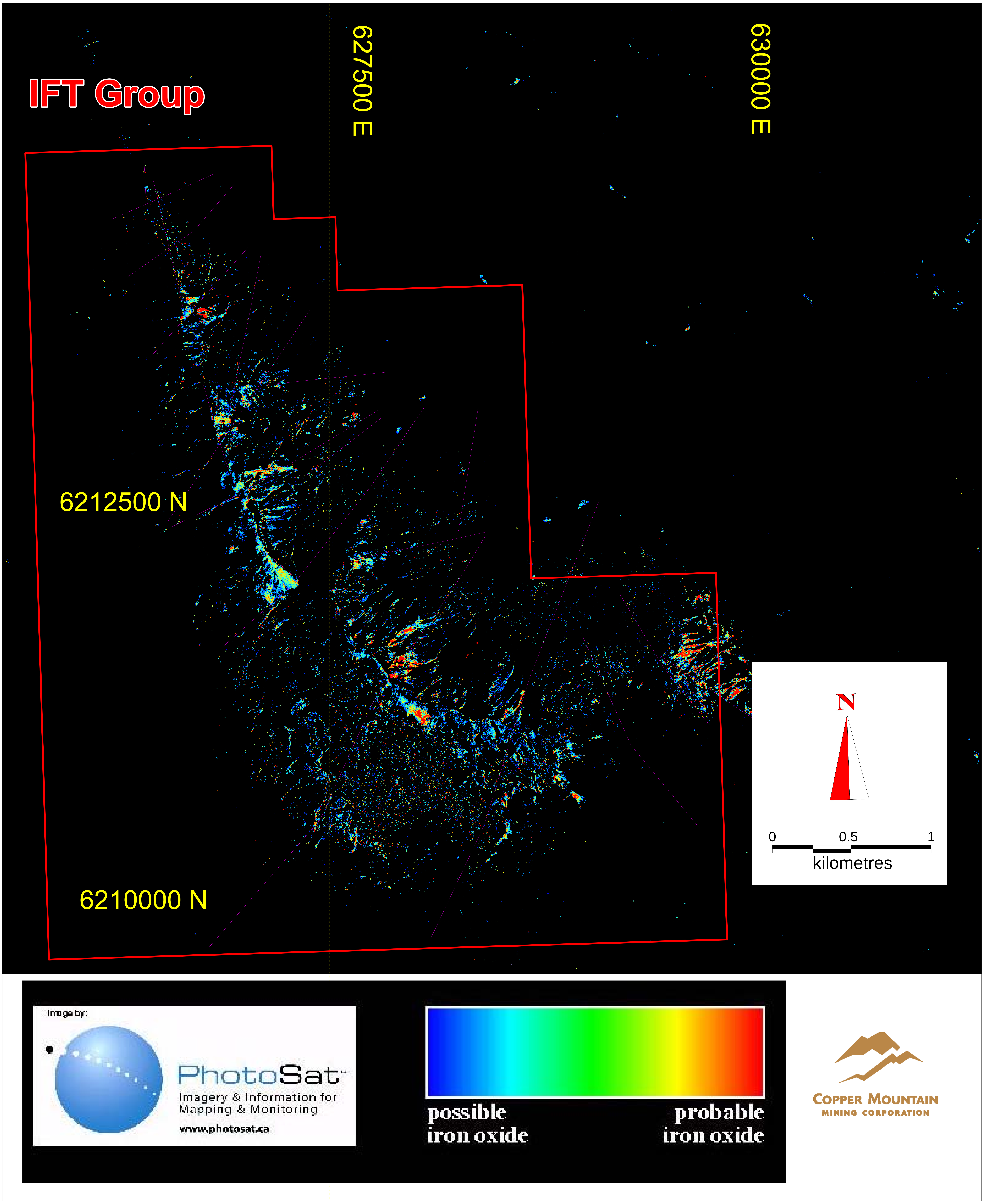
0.5
1
kilometres



SAY Group
6215000 N
6212500 N
620000 N
635000 E
632500 E
N
0
1
2
kilometres

Appendix IV: Multi-spectral (Iron-Oxide) Satellite Images


IFT Group
627500 E
630000 E
6212500 N
6210000 N
N
0
0.5
1
kilometres
Image by:
PhotoSat
Imagery & Information for Mapping & Monitoring
www.photosat.ca
possible iron oxide
probable iron oxide
Copper Mountain
Mining Corporation

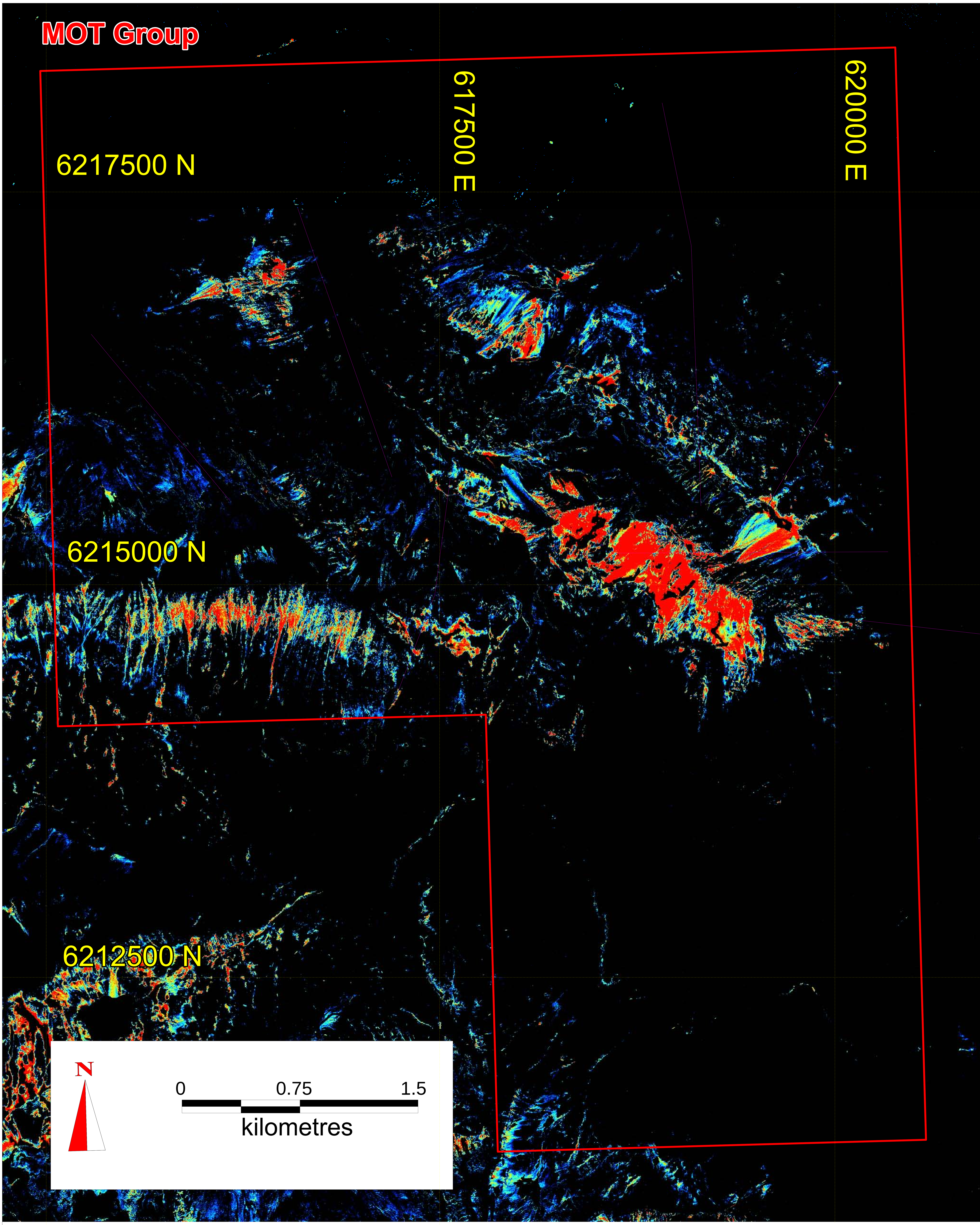
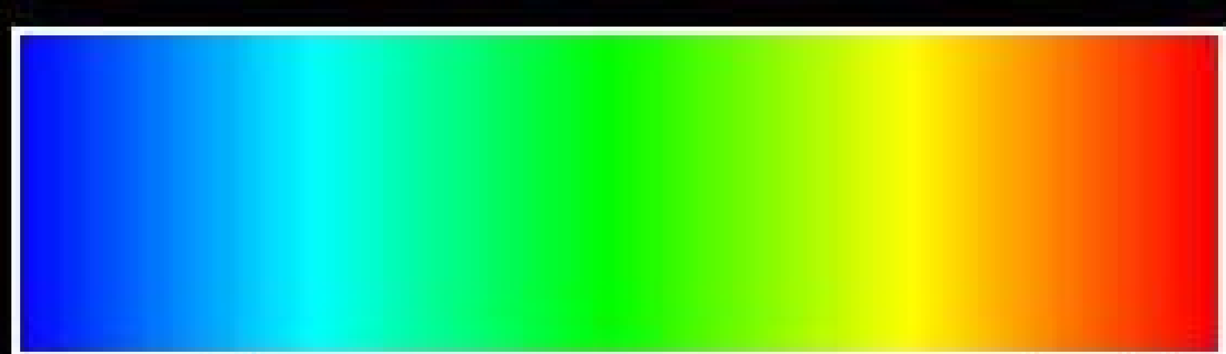
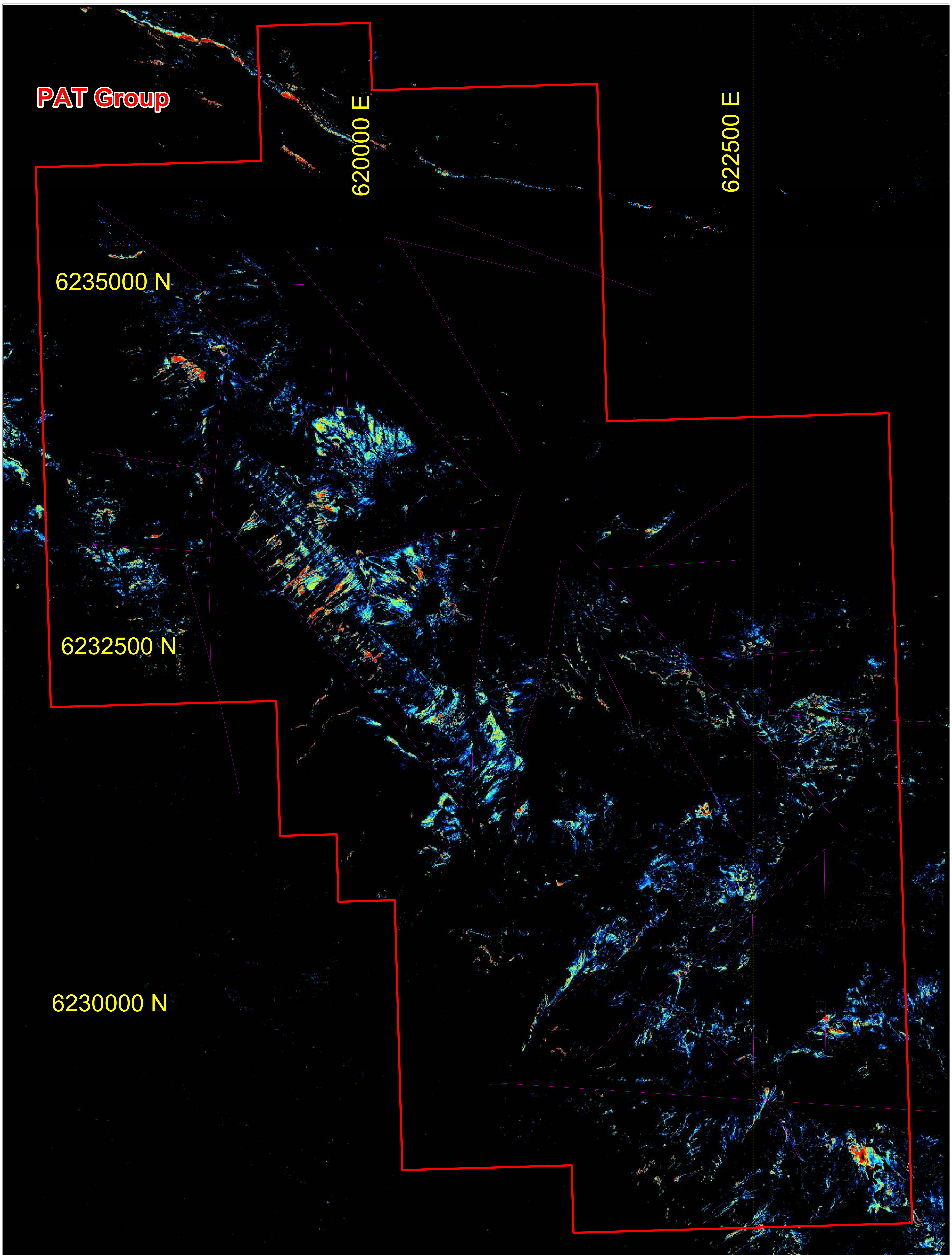


Image by:
PhotoSat
Imagery & Information for Mapping & Monitoring
www.photosat.ca



COPPER MOUNTAIN MINING CORPORATION



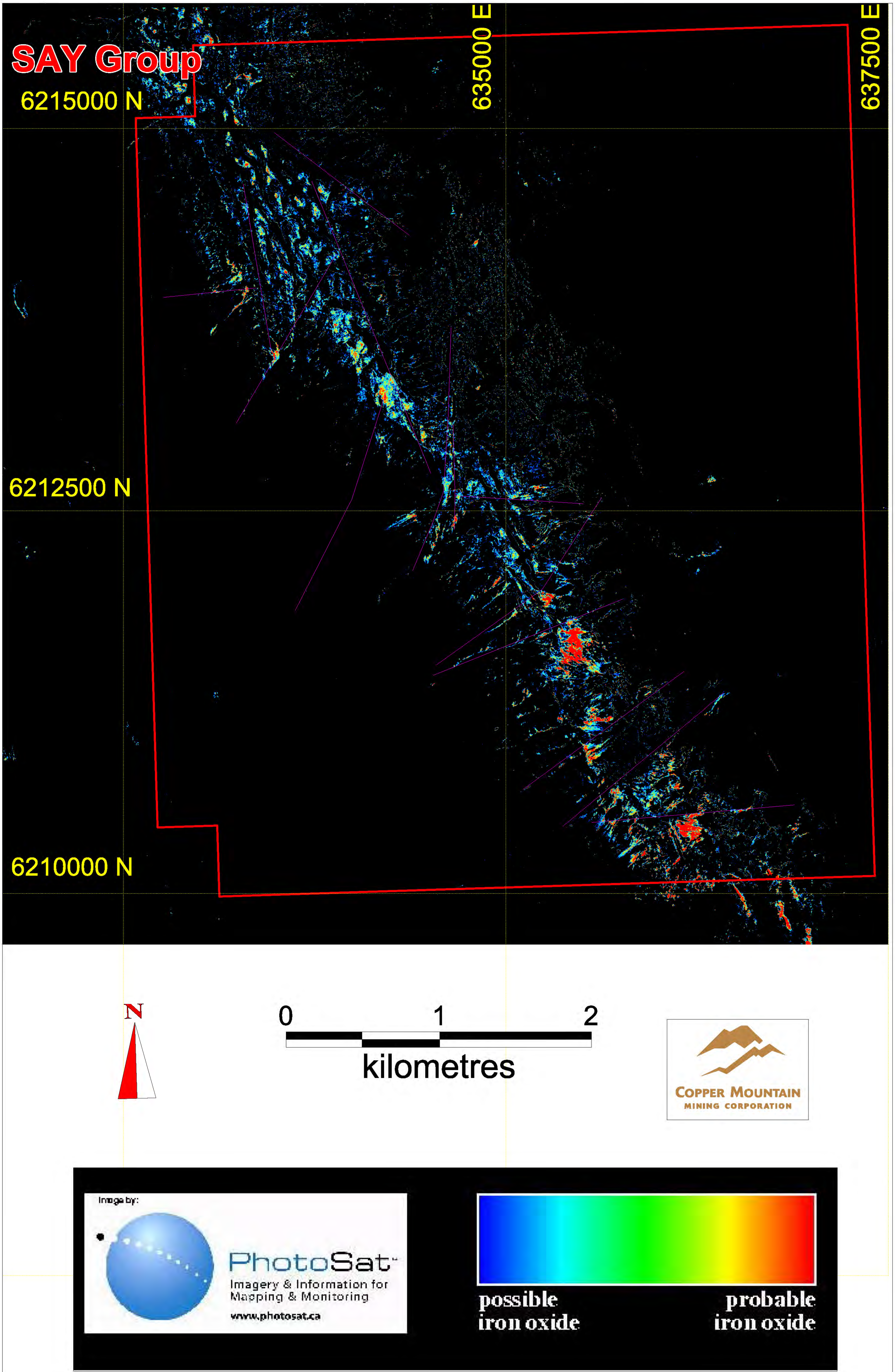
N

0 1 2
kilometres

COPPER MOUNTAIN
MINING CORPORATION

Image by:
PhotoSat
Imagery & Information for Mapping & Monitoring
www.photosat.ca

possible iron oxide
probable iron oxide


SAY Group
6215000 N
6212500 N
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N
0
1
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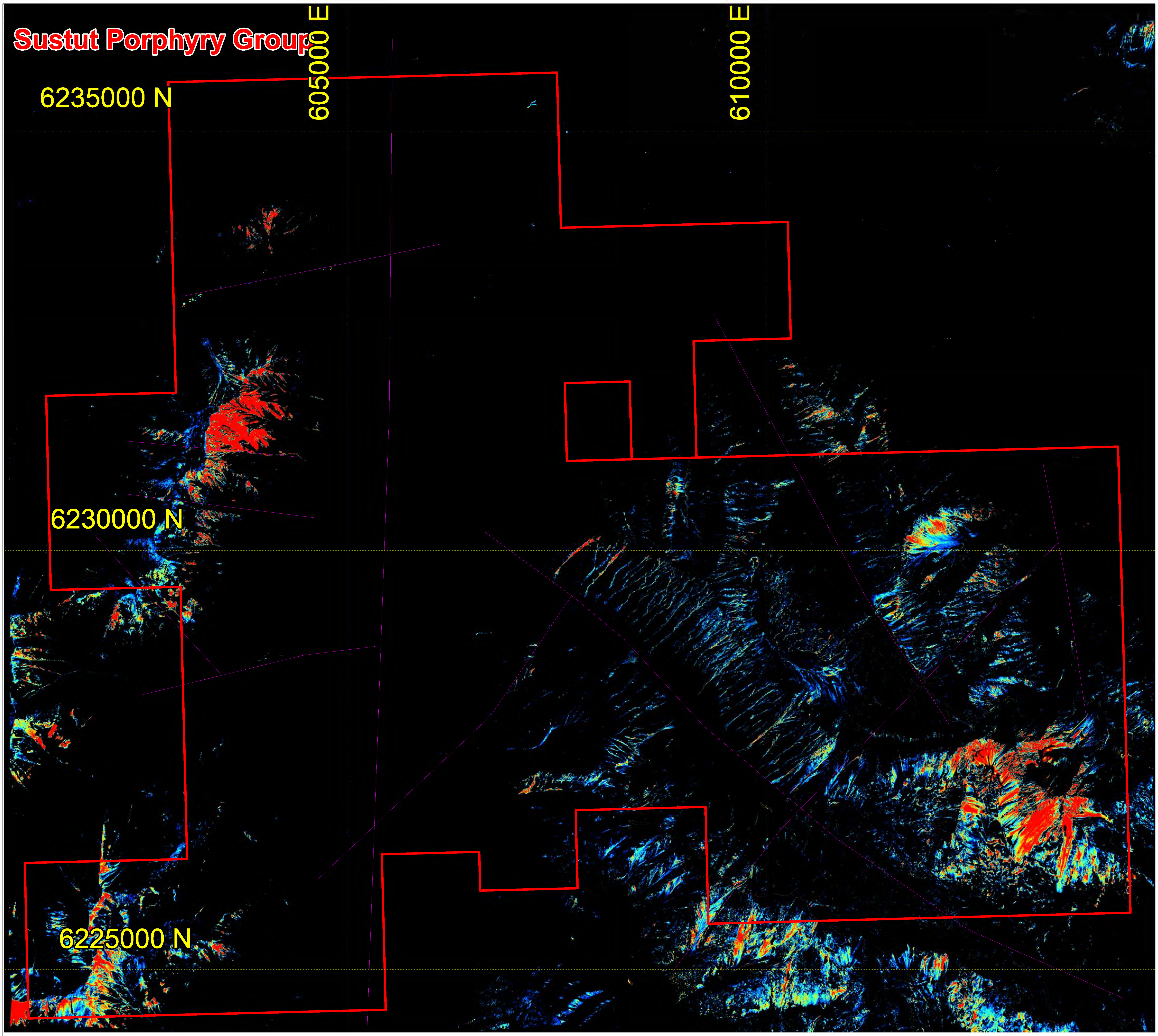
Copper Mountain
Mining Corporation
Image by:
PhotoSat
Imagery & Information for Mapping & Monitoring
www.photosat.ca
possible iron oxide
probable iron oxide



N

0 2 4
kilometres

COPPER MOUNTAIN
MINING CORPORATION

Image by:
PhotoSat
Imagery & Information for Mapping & Monitoring
www.photosat.ca

possible iron oxide
probable iron oxide