

# Progress Report -Babs Property

Omineca Mining Division  
Tenure Numbers:  
709302, 709322, 709342

BC Geological Survey  
Assessment Report  
33253

NTS: 093K/13, 093L/16

UTM Zone 09, 10 (NAD 83)  
Easting 691000  
Northing 6085500

Work performed October 24 - 30, 2011  
by  
Ken Galambos

For  
Ken Galambos  
1535 Westall Ave.  
Victoria, British Columbia  
V8T 2G6

Ken Galambos, P.Eng.  
KDG Exploration Services  
1535 Westall Ave.  
Victoria, British Columbia  
V8T 2G6

August 30, 2012

## Table of Contents

### TITLE

Item 1:	Summary.....	1
Item 2:	Introduction.....	2
2.1	Qualified Person and Participating Personnel.....	2
2.2	Terms, Definitions and Units.....	2
2.3	Source Documents.....	2
2.4	Limitations, Restrictions and Assumptions.....	3
2.5	Scope.....	3
Item 3:	Reliance on Other Experts.....	3
Item 4:	Property Description and Location.....	3
Item 5:	Accessibility, Climate, Local Resources, Infrastructure and Physiography.....	5
Item 6:	History.....	7
Item 7:	Geological Setting and Mineralization.....	12
7.1	Regional Geology.....	12
7.2	Property Geology.....	17
Item 8:	Deposit Types.....	17
8.1	Calc-Alkaline Porphyry Copper-Gold Deposits.....	17
8.1.1	Babine Lake District Porphyry Copper-Gold Deposits.....	14
Item 9:	Exploration.....	19
9.1	Current Evaluation Program.....	19
9.2	Review and Interpretation of Regional Geochemical Survey Data.....	19
9.3	Review and Interpretation of Regional Magnetic Survey Data.....	19
9.5	Review and Interpretation of Quest West Airborne Survey Data.....	20
Item 10:	Drilling.....	20
Item 11:	Sample Preparation, Analyses and Security.....	20
Item 12:	Data Verification.....	21
Item 13:	Mineral Processing and Metallurgical Testing.....	21
Item 14:	Mineral Resource Estimates.....	21
Item 15:	Adjacent Properties.....	21
15.1	Bell Copper Mine (Minfile 093M 01, rev. McMillan, 1991).....	21
15.2	Granisle Mine (Minfile 093L 146, rev. Duffett, 1987).....	22
15.3	Morrison–Hearne Hill Project (From Simpson, 2007).....	24
15.4	Wolf (Minfile 093M 008, rev. McMillan, 1991).....	24
15.5	Fireweed (Minfile 093M 151, rev. Payie, 2009).....	25
15.6	Equity Silver (Minfile 093L 001, rev. Robinson, 2009).....	26
Item 16:	Other Relevant Data and Information.....	27
Item 17:	Interpretation and Conclusions.....	27
Item 18:	Recommendations.....	28
Item 19:	References.....	30
Item 20:	Date and Signature Page.....	33
Item 21:	Statement of Expenditures.....	34
Item 22:	Software used in the Program.....	34

### List of Illustrations

Figure 1:	Babs 1-3 Property Location Map.....	4
Figure 2:	Babs 1-3 Project Claim Map.....	5

Figure 3: Northern Dynasty Soil Geochemistry..... 8  
 Figure 4: 2008 survey grid on the Babs property..... 9  
 Figure 5: MMI copper (ppb)..... 10  
 Figure 6: MMI gold (ppb)..... 10  
 Figure 7: 2008 Ground Magnetic Survey..... 11  
 Figure 8: Regional Geology map..... 13  
 Figure 9: Property Geology map..... 17  
 Figure 10: RGS anomalies showing base and precious metal enrichment..... 19  
 Figure 11: 1<sup>st</sup> Vertical Derivative Magnetic data..... 20  
 Figure 12: Quest West 1<sup>st</sup> Vertical Derivative Gravity data..... 20

**List of Tables**

Table 1: Claim Data..... 4  
 Table 2: Geology Legend..... 14  
 Table 3: Resources and Production of major Babine Porphyry Deposits..... 21

**List of Photographs**

Plate 1: Satellite Image of Babs 1-3 Project..... 6

**Item 1: Summary**

The Babs property consists of 3 claims (21 cells) covering an area of 390.77ha lying approximately 74 km east of the community of Smithers, 14km southeast of the former producing Granisle mine and 20km southeast of the former producing Bell mine in west-central British Columbia. The claims are situated on map sheets NTS 93K/13 and 093L/16, and straddle UTM Zones 9 and 10. The centre of the property is situated at approximately 691000E, 6085500N, (Nad 83, Zone 9). Logging roads extend roughly 7km from the ferry landing at Nose Bay throughout of the property giving excellent access for future exploration and development activities.

The project area lies on the northwest side of the Skeena Arch within the Intermontane tectonic belt of west-central B C. The Babine Lake area is underlain principally by Mesozoic layered rocks, the most widespread in this area being volcanic and sedimentary rocks of the Jurassic Hazelton and Bowser Lake Groups. These are intruded by plutonic rocks of various ages including lower Jurassic Topley intrusions, Omineca intrusions of early Cretaceous age, late Cretaceous rhyolite and granodiorite porphyrites and Babine intrusions of early Tertiary age. Deformation consists of moderate folding, transcurrent boundary faults, thrusting and normal faulting. Younger early Cretaceous Skeena Group undivided sedimentary rocks and subvolcanic rhyolite domes are preserved in a large cauldron setting roughly 24km in diameter that sits between the West Arm and Fisheries Arm of Babine Lake to the northwest of the property.

The best known style of mineralization in the Babine Lake area is porphyry copper mineralization associated with small stocks and dyke swarms of biotite feldspar porphyry of the Babine intrusions. Eocene aged BFP hosts annular porphyry copper deposits such as the Bell Mine (296 mT of 0.46% Cu and 0.2 gpt Au) , the Granisle Mine (119 mT of 0.41% Cu and 0.15 gpt Au) (Carter et al, 1995) and the Morrison Deposit (207 mT of 0.39% Cu and 0.20 gpt Au) (Simpson, 2007).

The Babine/Takla Lakes area has been explored since the discovery of copper mineralization on McDonald Island in 1913. Extensive exploration has occurred since the mid 1960's following the recognition of the potential of porphyry copper mineralization and the Granisle and Bell deposits. Exploration for Equity Silver type massive sulphides occurred through the 1980's following the decline in copper prices and the sharp rise in precious metal values during that time. The focus returned to copper in the early 1990's with extensive exploration programs by Noranda and others.

The Babs property has been held continuously by the author since 2009. The claims that are subject to this report are 100% owned by K. Galambos.

It is the author's belief that previous exploration programs on the Babs property and surrounding area suggest a potential for significant porphyry style mineralization. These programs also failed to adequately test this potential. Additional exploration in the form of geological, geophysical and geochemical surveys and drilling is warranted to determine if one or more economic mineralized bodies are present within the existing property boundaries.

## Item 2: Introduction

This report is being prepared by the author for the purposes of filing assessment on the Babs property and to create a base from which further exploration will be completed.

### 2.1 Qualified Person and Participating Personnel

Mr. Kenneth D. Galambos P.Eng. conducted the current evaluation and interpretation of data to focus further exploration expected to be completed during the 2012 exploration season, and to make recommendations to test the economic potential of the area.

This report describes the property in accordance with the guidelines specified in National Instrument 43-101 and is based on historical information and an examination and interpretation of technical data covering the property. This evaluation was completed by the author over a time period from October 24, 2011-October 30, 2011.

### 2.2 Terms, Definitions and Units

- All costs contained in this report are denominated in Canadian dollars.
- Distances are primarily reported in metres (m) and kilometers (km) and in feet (ft) when reporting historical data.
- GPS refers to global positioning system.
- Minfile showing refers to documented mineral occurrences on file with the British Columbia Geological Survey.
- The term ppm refers to parts per million, equivalent to grams per metric tonne (g/t).
- ppb refers to parts per billion.
- The abbreviation oz/t refers to troy ounces per imperial short ton.
- The symbol % refers to weight percent unless otherwise stated. 1% is equivalent to 10,000ppm.
- Elemental and mineral abbreviations used in this report include: arsenic (As), copper (Cu), gold (Au), iron (Fe), lead (Pb), molybdenum (Mo), zinc (Zn), chalcopyrite (Cpy), molybdenite (MoS<sub>2</sub>) and pyrite (Py).

### 2.3 Source Documents

Sources of information are detailed below and include the available public domain information and private company data.

- Research of the Minfile data available for the area at <http://www.empr.gov.bc.ca/Mining/Geoscience/MINFILE/Pages/default.aspx>
- Research of mineral titles at <https://www.mtonline.gov.bc.ca/mtov/home.do>
- Review of company reports and annual assessment reports filed with the government at <http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx>
- Review of geological maps and reports completed by the British Columbia Geological Survey at <http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/MainMaps/Pages/default.aspx>.
- Published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.

**2.4 Limitations, Restrictions and Assumptions**

The author has assumed that the previous documented work in the area of the property is valid and has not encountered any information to discredit such work.

**2.5 Scope**

This report describes the geology, previous exploration history, interpretation of regional geophysical, geochemical surveys including the Quest West surveys. Research included a review of the historical work that related to the immediate and surrounding areas. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area.

**Item 3: Reliance on Other Experts**

Some data referenced in the preparation of this report was compiled by geologists employed by various companies in the mineral exploration field. These individuals would be classified as “qualified persons” today, although that designation did not exist when some of the historic work was done. The author believes the work completed and results reported historically to be accurate but assumes no responsibility for the interpretations and inferences made by these individuals prior to the inception of the “qualified person” designation.

**Item 4: Property Description and Location**

The Babs property consists of 3 claims (21 cells) covering an area of 390.77ha, located on the west shore of Babine Lake, 74 km east of the community of Smithers, 14km southeast of the former producing Granisle mine and 20km southeast of the former producing Bell mine in west-central British Columbia. The claims are situated on map sheets NTS 93K/13 and 093L/16, and straddle UTM Zones 9 and 10. The centre of the property is situated at approximately 691000E, 6085500N, (Nad 83, Zone 9). Access to the property from Highway 16 at Topley is to the barge crossing north of Topley Landing on Babine Lake. Logging roads extend from the ferry landing at Nose Bay through roughly 7km to the centre of the property.

### Babs Property Location Map

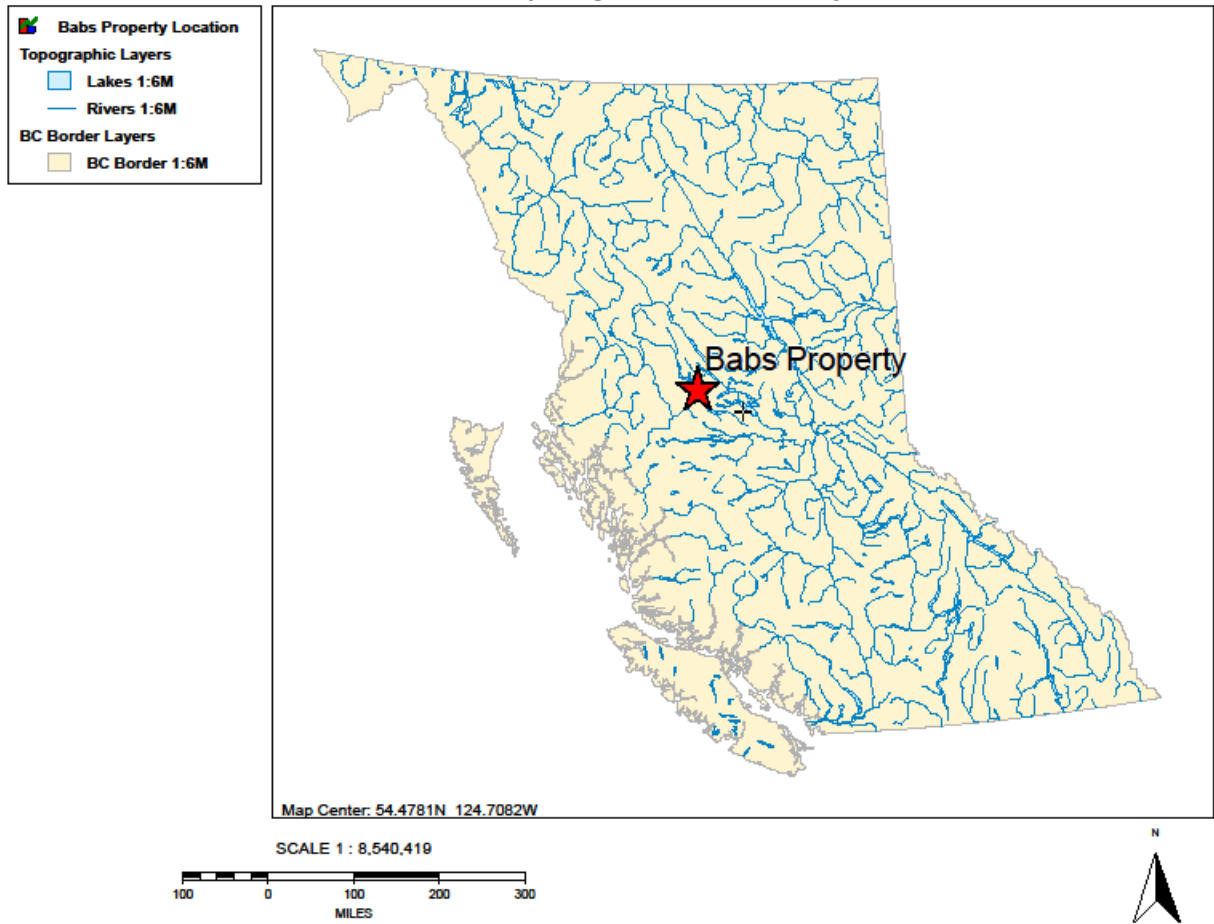


Figure 1: Babs 1-3 Property location map

Upon acceptance of this report, the highlighted mineral tenures will have their expiry dates moved to September 30, 2012.

Table 1: Claim Data

Tenure #	Claim	Issue date	Expiry date	Area (Ha)	Owner
709302	Babs 1	2010/Feb/28	2012/Sep/30	130.21	GALAMBOS, KENNETH D 100%
709322	Babs 2	2010/Feb/28	2012/Sep/30	130.27	GALAMBOS, KENNETH D 100%
709342	Babs 3	2010/Feb/28	2012/Sep/30	130.29	GALAMBOS, KENNETH D 100%
			Total	390.77	

The Claims comprising the Babs 1-3 property as listed above are being held as an exploration target for possible hardrock mining activities which may or may not be profitable. Any exploration completed will be subject to the application and receipt of necessary Mining Land Use Permits for the activities recommended in this report. There is no guarantee that this application process will be successful.

The Claims lie in the Traditional territories of a number of local First Nations and to date no dialog has been initiated with these First Nations regarding the Natlan property. There is no guarantee that approval for the proposed exploration will be received.

## Babs Property Claim Map

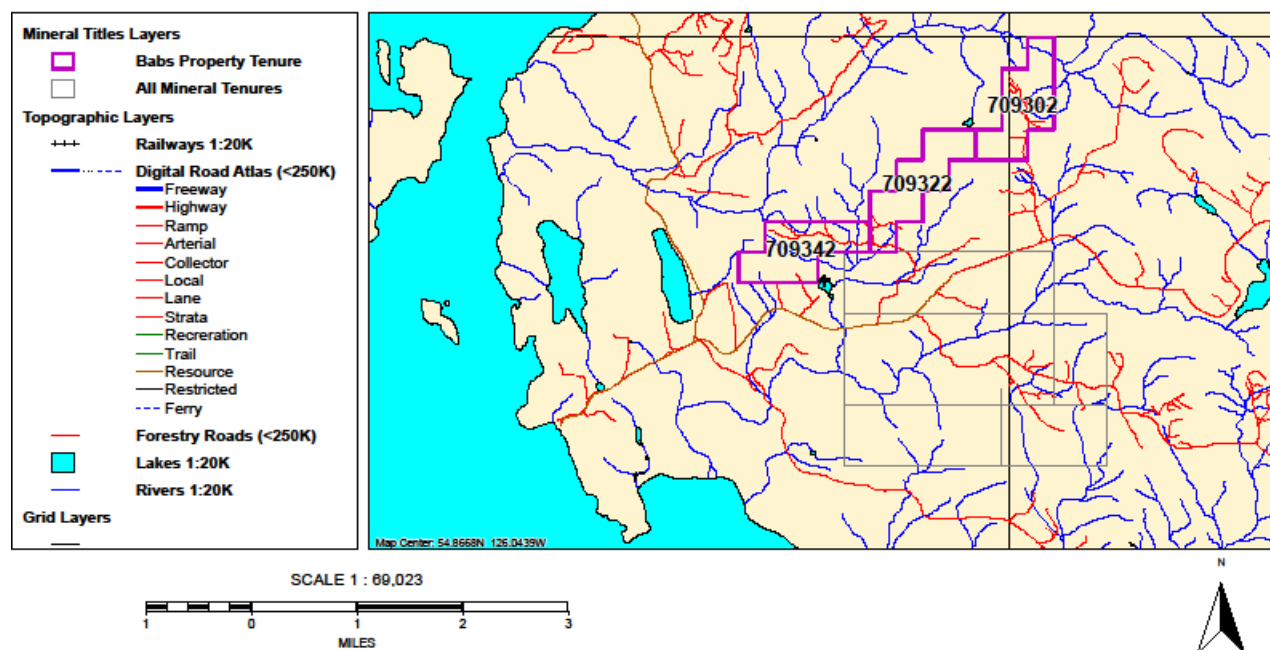


Fig. 2: Babs 1-3 Project Claim Map

### Item 5: Accessibility, Climate, Local Resources, Infrastructure and Physiography

Most parts of the Property are accessible by a network of private logging roads. These roads are usable during spring to fall, but are not reliably maintained when snow-covered. Connection from the provincial highway system can be obtained by private barge from Topley Landing to the east shore of Babine Lake. Alternatively, the Property is accessible year-round by helicopter from Smithers, Houston or Burns Lake.

Climate in the region is continental, periodically modified by maritime influences. Summers are cool and moist, and winters cold. Following climate statistics from Environment Canada are for Burns Lake, the town with climate most analogous to Babine Lake region. Mean January temperature is  $-10.5^{\circ}\text{C}$ , and for July is  $14.3^{\circ}\text{C}$ . Extreme winter temperature may fall below  $-30^{\circ}\text{C}$  for brief periods. Annual rainfall is 291.4mm and annual snowfall is 189.1mm, with mean snow accumulation of 45cm. Anecdotal evidence indicates that the Babine Lake area can retain more than a metre of snow depth. Snow-free field operations season for exploration spans May through October, dependant on elevation and aspect relative to the sun.



The Property occupies the northern part of the Nechako Plateau, within the Intermontane Belt of north-central British Columbia. Topography consists of rolling to locally steep hills, with low-relief valleys, containing many lakes and wetlands. The property is adjacent to Babine Lake, which is the longest natural lake in British Columbia, at approximately 100km length. Vegetation is dominated by boreal mixed forest of coniferous (spruce and pine) and deciduous (alder, poplar and birch) trees, with understory of willow, berry bushes and devil's club. Wetland sedges and grasses occupy parts of poorly-drained lowlands. Approximately 30% of the Property has been logged in the past two decades, and resultant clear-cuts are in the early stage of re-growth. A smaller area adjacent to the shoreline of Babine Lake has been logged in earlier decades, and now contains an established second-growth forest.

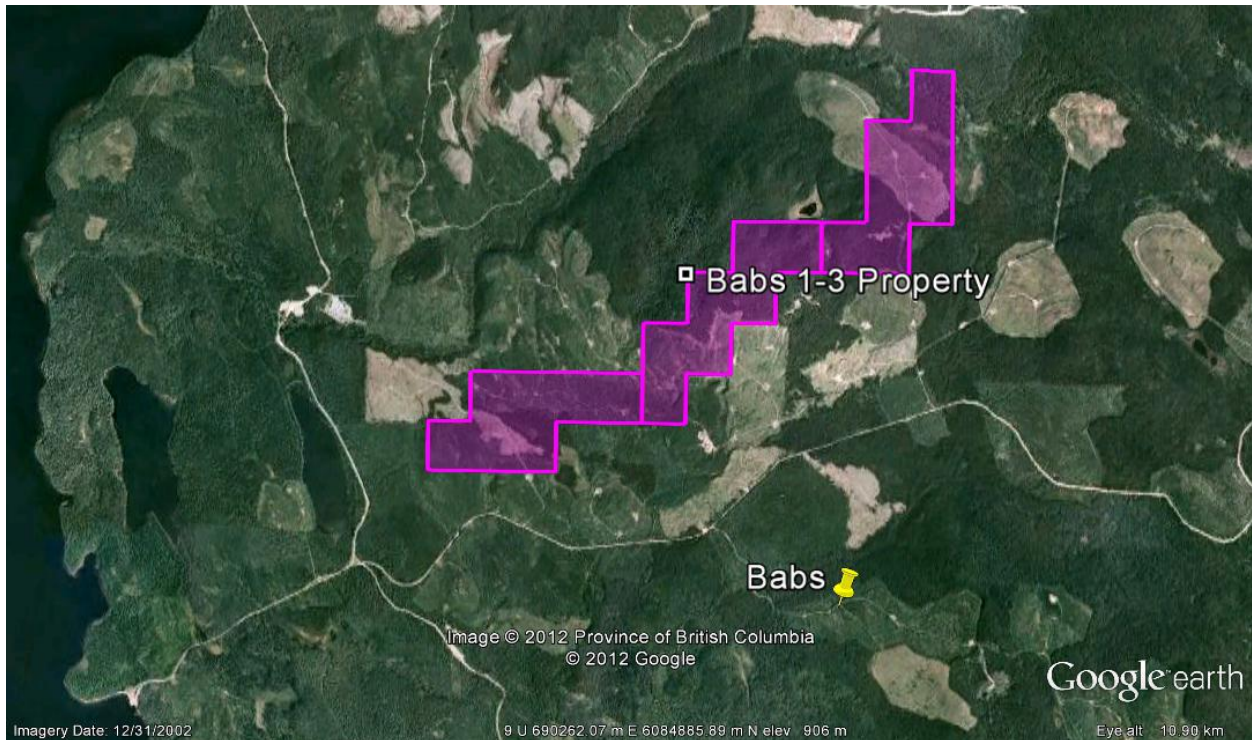


Plate 1: Satellite Image of Babs 1-3 Project

Infrastructure adequate for mine development is present in the region. A residential capacity power line exists at Topley Landing on the west shore of Babine Lake 8km southwest of the Property. During operations of the Bell Copper and Granisle open pit mines, power was conducted from the Granisle substation via lake-bottom power cables. Similar infrastructure could be installed for mine development on the Babs 1-3 property. The Property hosts a network of private logging roads. These roads are connected to the provincial highway system by private barge from Topley Landing (near Granisle village). Babine Lake is able to supply any quantity of water needed for property development. The lower-relief areas near the property contain adequate space for concentrator site, tailing ponds or waste dumps required in any contemplated mine operation. The village of Granisle, originally constructed to serve the Granisle open-pit mine, contains adequate accommodation and basic services to support a mining

operation. The communities of Northwestern British Columbia contain industrial and consumer suppliers, and a pool of labour skilled in mining trades and professions.

**Item 6: History**

The Babine/Takla Lakes area has been explored since the discovery of copper mineralization on McDonald Island in 1913. Extensive exploration has occurred since the mid 1960's following the recognition of the potential of porphyry copper mineralization and the Granisle and Bell deposits.

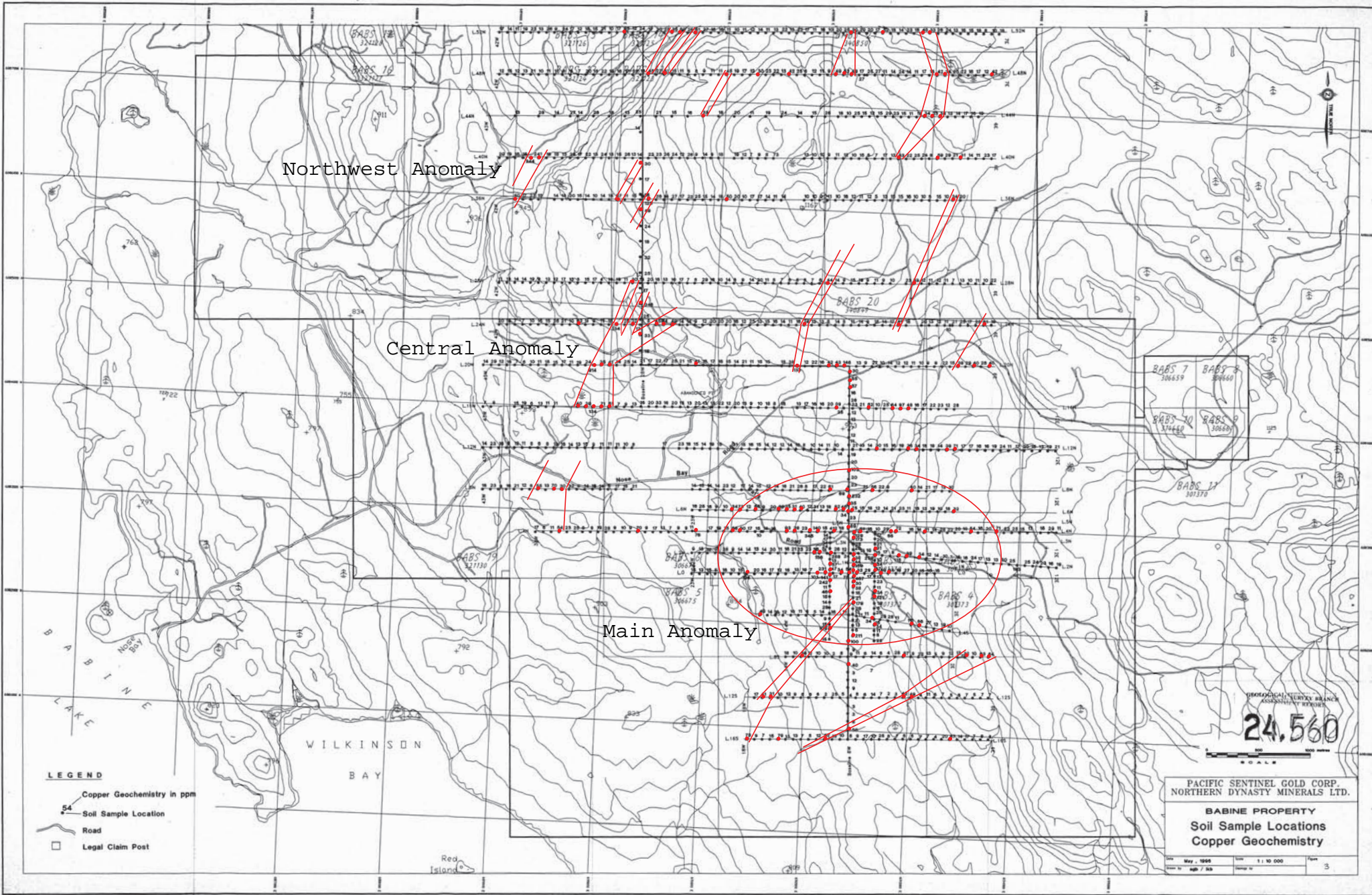
In 1991, prospector Ralph Keefe discovered numerous sub-angular mineralized Eocene biotite-feldspar-porphyry boulders over a 300m x 150m area approximately 2.5km down ice from the Property. The boulders ranged in size from 10cm-1.5m and have assayed up to 1.05% Cu and 1.3g/t Au and contained 1-4% magnetite.

The Keefe/Hidber Babs claims (Minfile 093L 325) were optioned by Equity Silver Mines in 1992. The company Conducted float prospecting, overburden trenching, soil surveys, geophysical surveys (VLF-EM, magnetometer and IP) and diamond drilled 322m in 7 NQ holes. Drilling focused on magnetic high and IP chargeability targets. Drill holes 92-05 to 07 were drilled only a few metres into bedrock and no samples were taken.

The option with Equity lapsed and the property was subsequently optioned to Noranda Exploration in 1993. Noranda completed prospecting, float sampling, soil sampling and diamond drilling of two holes totaling 200.6m. The best results from NB 93-08 were 0.21% copper over 10.4m from a depth of 9m in phyllic altered quartz-eye and lapilli tuff of the Jurassic Hazelton volcanics. In 1994, Noranda completed geological mapping, rock sampling, geochemical and geophysical (magnetometer and IP) surveys. The company re-logged and sampled Equity Silver's DDH92-06 which returned 0.34% copper over the 3m of bedrock drilled. Soil surveys identified an 800m x 900m copper-in-soils anomaly with the boulder field along the northwest margin. IP chargeability surveys identified an arcuate chargeability high underling the majority of the boulder field and extending to the east and south which was believed to be indicative of a portion of a pyrite halo. The company also found that the best copper mineralization in float was associated with magnetite and as disseminations and veinlets rather than with pyrite. In late 1994, Noranda drilled two diamond drill holes totaling 196.8m targeting chargeability high, magnetic high and magnetic low targets. Best results from NB -10 returned 77.3m grading 0.19% copper including 0.32% copper over 11.7m from tuffs containing up to 7% pyrite. Following 1994 season, Noranda returned the property to Keefe and Hidber.

Northern Dynasty optioned the property in 1995 and 1996. The company completed prospecting, geological mapping, rock sampling, geochemical and geophysical (magnetic and IP) surveys and drilled eight holes totaling 1143.3m. The limits of the mineralized boulder field was extended to 500m x 150m with the discovery of a number of large boulder containing trace magnetite and 3-4% chalcopyrite. Northern Dynasty's exploration program extended up ice a considerable distance over the area now covered by the Babs 1-3 claims owned by the author. B-horizon geochemical surveys





Northwest Anomaly

Central Anomaly

Main Anomaly

- LEGEND**
- Copper Geochemistry in ppm
  - Soil Sample Location
  - Road
  - Legal Claim Post

BABS 7  
306459

BABS 8  
306660

BABS 10  
306660

BABS 9  
306660

BABS 17  
302370

BABS 19  
327130

BABS 5  
306675

BABS 4  
302170

GEOLOGICAL SURVEY OF CANADA  
ASSISTANT BRANCH

**24.560**

SCALE

PACIFIC SENTINEL GOLD CORP.  
NORTHERN DYNASTY MINERALS LTD.

**BABINE PROPERTY**  
**Soil Sample Locations**  
**Copper Geochemistry**



outlined copper-in-soils over a 1300m x 800m area surrounding the boulder field with values up to 467ppm copper. The Central anomaly covers a northeast trending 1100m x 300m area with values up to 914ppm copper. The Northwest anomaly is a two line north-northeast trending zone with values up to 244ppm copper. The best results from the exploration program was 0.3175% copper over 13.7m from DDH 95-13.

The property lay dormant until 2008 when Kenrich Eskay optioned the property and completed till pitting, soil sampling, rock sampling and drilled seven diamond drill holes, totaling 1048.7m, all within the Main anomaly area surrounding the boulder field. Best results from the program were 0.2% copper over 85.6m from DDH08-6 in the same area as drill hole NB93-08. As part of their program the company completed MMI geochemical and magnetic geophysical surveys.

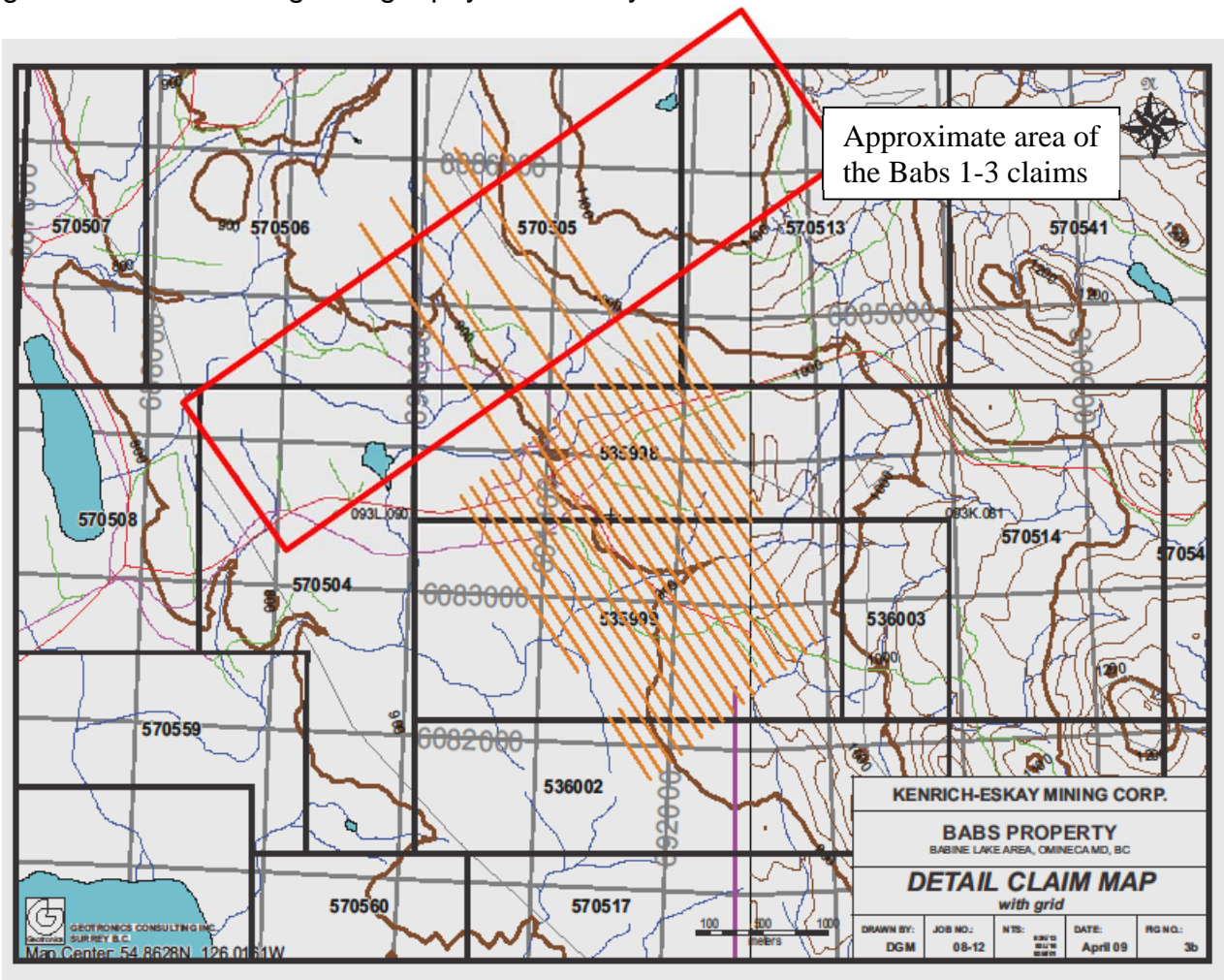


Figure 4: 2008 survey grid on the Babs property

The MMI survey outlined numerous anomalies. One target measuring 800m x 300-500m over the boulder field returned Response Ratios to >100 x background for copper, to >80 x background for gold and to >25 x background for silver and cerium. This anomaly is associated with a magnetic low area. A second area of interest was identified approximately 2500m up ice from the boulder field. Response Ratios of >10-25 x background for copper, gold, silver, zinc and cerium are associated with a 6500m long, northeast trending, 1<sup>st</sup> vertical derivative magnetic high anomaly as outlined by government airborne surveys.

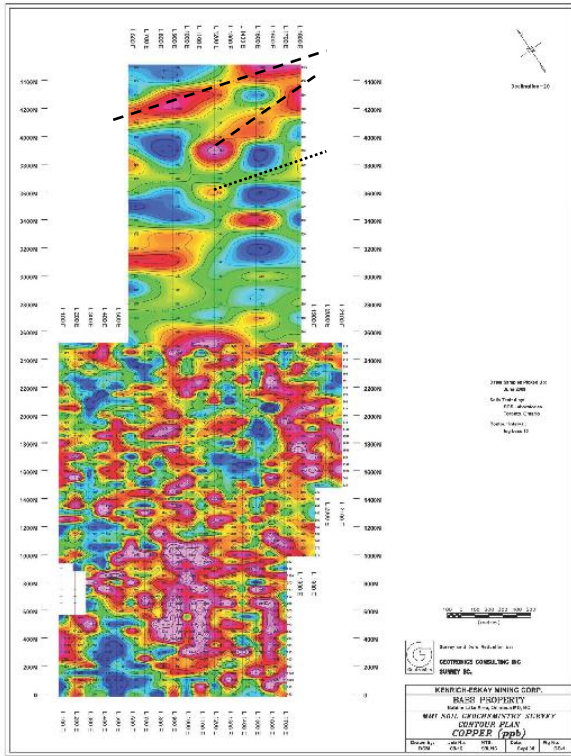


Figure 5: MMI copper (ppb)

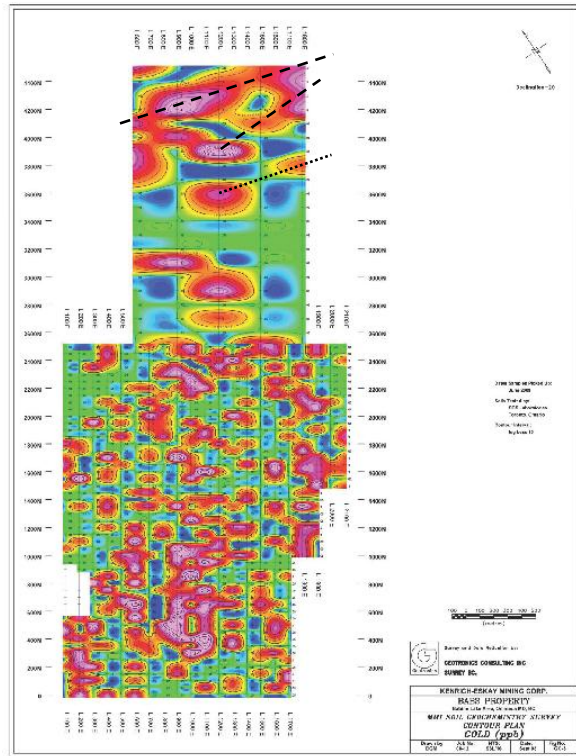


Figure 6: MMI gold (ppb)

The Kenrich ground magnetic survey has outlined numerous north-south and east-west trending narrow magnetic high targets in the vicinity of the boulder field. The survey also shows a number of east-west trending linear magnetic high anomalies in the area up ice, now covered by the Babs 1-3 claims. The line spacing to the northeast is much wider, giving less detail to the surveyed area.

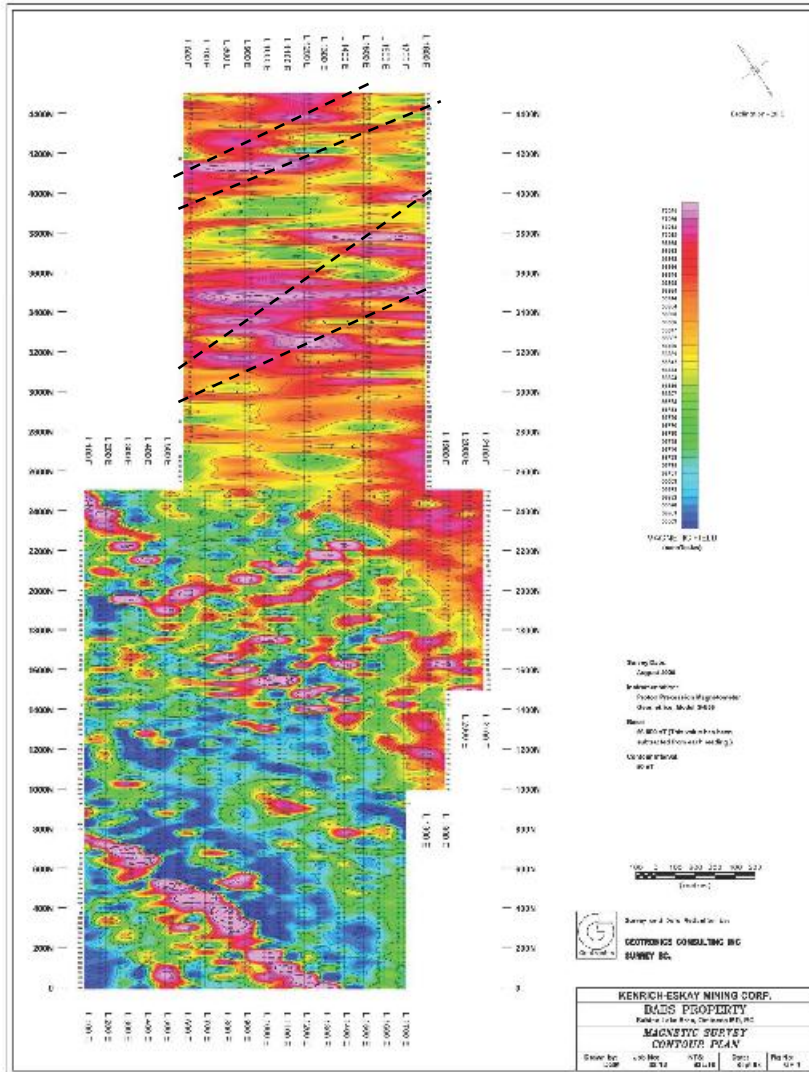


Figure 7: 2008 Ground Magnetic Survey

## Item 7: Geological Setting and Mineralization

### 7.1 Regional Geology

The project area lies on the northwest side of the Skeena Arch within the Intermontane tectonic belt of west-central B.C. The Babine Lake area is underlain principally by Mesozoic layered rocks, the most widespread in this area being volcanic and sedimentary rocks of the Jurassic Hazelton and Bowser Lake Groups. These are intruded by plutonic rocks of various ages including lower Jurassic Topley intrusions, Omineca intrusions of early Cretaceous age, late Cretaceous rhyolite and granodiorite porphyrites and Babine intrusions of early Tertiary age. Deformation consists of moderate folding, transcurrent boundary faults, thrusting and normal faulting. Younger early Cretaceous Skeena Group undivided sedimentary rocks and subvolcanic rhyolite domes are preserved in a large caldera setting roughly 24km in diameter that sits between the West Arm and Fisheries Arm of Babine Lake to the northwest of the property.

A very late structural event (possibly Eocene or later) has been noted by the author in an area that stretches from Takla Lake to the east to at least the Natlan Peak area on the west. This event is believed to be a fairly close spaced dextral shearing 800m-2km between shears with only 200-300m of right lateral offset. Evidence for this event was first noted with the Don showing, Minfile 093N 220, where a northeast-striking fault defines a 300m apparent dextral offset to the contact between the volcanic and eastern clastic units. A review of the regional 1<sup>st</sup> derivative magnetic data from MapPlace in the area of the Don showing shows a repeated dextral offset of 200-300m to a magnetic high anomaly that cuts across Takla Lake. This northeast trending late structural event is noted at many of the Minfile occurrences in the Babine and Takla Lake areas, including at the former Bell and Granisle mines and other more advanced showings in the area. In the Natlan Peak area, mineralization is hosted in northeast trending quartz veins at American Boy (Minfile 093M 047), Mohawk (Minfile 093M 051), Babine (Minfile 093M 116) and Ellen (Minfile 093M 123) and in quartz stockworks at Mt Thomlinson (093M 080). At the Ellen showing, veins and veinlets in granites occur in association with shear zones trending between 020° and 040°, dipping steeply 70° east to west. The mineralization is late in the evolution of the granitic complex, post-dating hornfelsing and post-dating the quartz-molybdenite mineralization. The mineralization process is multi-phased, as demonstrated by the distinctive banding of quartz and sulphides (Reid, 1985). This structural event is important in that it hosts high grade base metal mineralization as at the Granisle and Bell mines and is shown to carry significant precious metal values as at the Ellen showing and the Mohawk and American Boy past producing mines. At the Granisle pit, coarse-grained chalcopyrite is widespread, occurring principally in quartz filled fractures with preferred orientations of 035° to 060° and 300° to 330° with near vertical dips.

The best known style of mineralization in the Babine Lake area is porphyry copper mineralization associated with small stocks and dyke swarms of biotite feldspar porphyry of the Babine intrusions. Eocene aged BFP hosts annular porphyry copper deposits such as the Bell Mine (296 mT of 0.46% Cu and 0.2 gpt Au), the Granisle



Mine (119 mT of 0.41% Cu and 0.15 gpt Au) (Carter et al, 1995) and the Morrison Deposit (207 mT of 0.39% Cu and 0.20 gpt Au) (Simpson, 2007).

Copper molybdenum mineralization is also known to occur in late phases of the Topley intrusions and in late Cretaceous granodiorite porphyries. Other deposit types include narrow veins with base and precious metal values which commonly occur marginal to porphyry deposits and disseminated copper mineralization in Hazelton Group volcanic rocks (Carter, 1985).

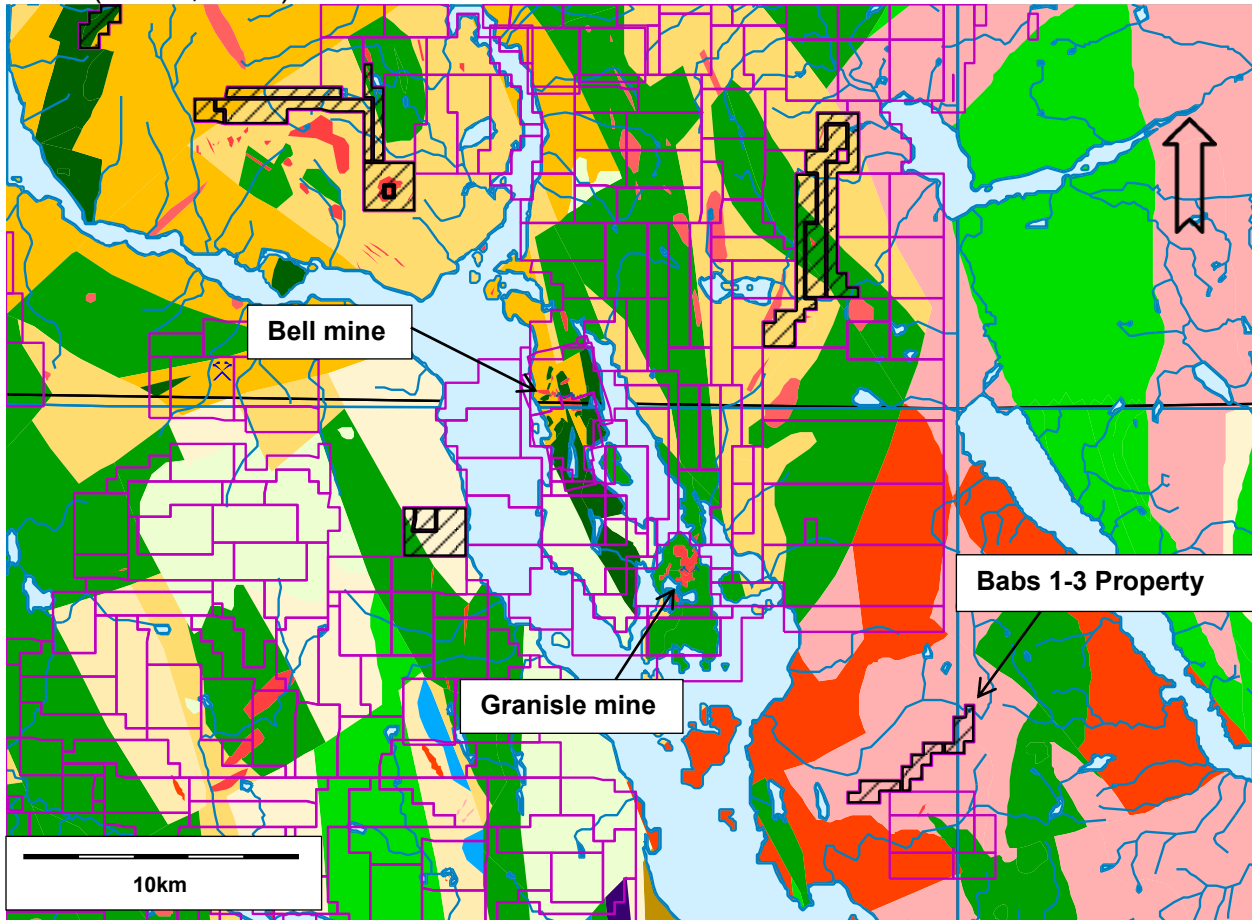


Figure 8: Regional Geology Map



Table 2

## Geology Legend

**Bounding Box:** North: 55.236 South: 54.903 West: -126.648 East: -125.878

**NTS Mapsheets:** 093L, 093K, 093N, 093M

### Eocene

#### *Babine Plutonic Suite*

- EBgd**    **Biotite-Feldspar Porphyritic Phase:** granodioritic intrusive rocks
- EBqd**    **Quartz Diorite to Granodiorite Phase:** quartz dioritic intrusive rocks

#### *Nechako Plateau Group*

- EON**    **Newman Formation:** andesitic volcanic rocks
- EONva**    **Newman Formation - Mafic Flows Member:** andesitic volcanic rocks
- EONvb**    **Newman Formation - Porphyritic Flows Member:** basaltic volcanic rocks
- EEvl**    **Endako Formation:** coarse volcanoclastic and pyroclastic volcanic rocks
- EONvl**    **Newman Formation - Breccia Member:** coarse volcanoclastic and pyroclastic volcanic rocks

### Late Cretaceous to Eocene

- LKdr**    dioritic intrusive rocks

### Late Cretaceous

#### *Bulkley Plutonic Suite*

- LKBdr**    **Diorite Phase:** dioritic intrusive rocks

### Early Cretaceous

- EKqm**    **Wedge Mountain Stock:** quartz monzonitic to monzogranitic intrusive rocks

#### *Skeena Group*

- IKSRvk**    **Rocky Ridge Formation - Subvolcanic Rhyolite Domes:** alkaline volcanic rocks
- IKSRvf**    **Rocky Ridge Formation - Subvolcanic Rhyolite Domes:** rhyolite, felsic volcanic rocks
- IKS**    undivided sedimentary rocks
- IKSKC**    **Kitsuns Creek Formation:** undivided sedimentary rocks
- IKSRs**    **Red Rose Formation:** undivided sedimentary rocks

### Middle to Late Jurassic

#### *Bowser Lake Group*

- uJBAmst** **Ashman Formation:** argillite, greywacke, wacke, conglomerate turbidites
- uJBT** **Trout Creek Formation:** conglomerate, coarse clastic sedimentary rocks

### Middle Jurassic

#### *Hazelton Group*

- mJHSms** **Smithers Formation:** marine sedimentary and volcanic rocks

#### *Spike Peak Intrusive Suite*

- MJSPgd** **Quartz Monzonite Phase:** granodioritic intrusive rocks
- MJSPsy** syenitic to monzonitic intrusive rocks

### Early to Middle Jurassic

#### *Hazelton Group*

- ImJHSHva** **Saddle Hill Formation - Megacrystic Porphyry Member:** andesitic volcanic rocks
- ImJHSHvb** **Saddle Hill Formation - Mafic Submarine Volcanic Member:** basaltic volcanic rocks
- ImJHvl** coarse volcanoclastic and pyroclastic volcanic rocks
- ImJHSHcg** **Saddle Hill Formation - Volcanoclastic-Sedimentary Member:** conglomerate, coarse clastic sedimentary rocks
- ImJHSHvf** **Saddle Hill Formation - Subvolcanic Rhyolite Domes:** rhyolite, felsic volcanic rocks
- ImJHSH** **Saddle Hill Formation:** undivided volcanic rocks
- ImJHSHvc** **Saddle Hill Formation - Intermediate Volcanic Member:** volcanoclastic rocks

#### *Spike Peak Intrusive Suite*

- EMJSPd** dioritic intrusive rocks
- EMJSPgd** granodioritic intrusive rocks

### Early Jurassic


#### *Hazelton Group*

- IJH** andesitic volcanic rocks
- IJHT** **Telkwa Formation - Felsic to Intermediate Volcanic Member:** andesitic volcanic rocks
- IJHNk** **Nilkitkwa Formation:** argillite, greywacke, wacke, conglomerate turbidites
- IJHT** **Telkwa Formation - Mafic Volcanic Member:** basaltic volcanic rocks

### Lower Jurassic

- IJHNk** **Nilkitkwa Formation:** undivided sedimentary rocks


**Late Triassic to Early Jurassic**

 **uTrJcg** conglomerate, coarse clastic sedimentary rocks

*Topley Intrusive Suite*

 **LTrJTpT** **Tochcha Lake Stock:** dioritic intrusive rocks


 **EJTppf** **Megacrystic Porphyry Dykes:** feldspar porphyritic intrusive rocks


 **LTrJTpgd** **Granodiorite to Monzonite Phase:** granodioritic intrusive rocks


 **EJTpgd** **Porphyritic Phase:** granodioritic intrusive rocks

**Late Triassic**


*Takla Group*


 **uTrTva** andesitic volcanic rocks

 **uTrTM** **Moosevale Formation:** argillite, greywacke, wacke, conglomerate turbidites

 **uTrTvb** basaltic volcanic rocks


 **uTrTsm** **Savage Mountain Formation:** basaltic volcanic rocks

 **uTrTvl** coarse volcanoclastic and pyroclastic volcanic rocks

 **uTrTv** undivided volcanic rocks

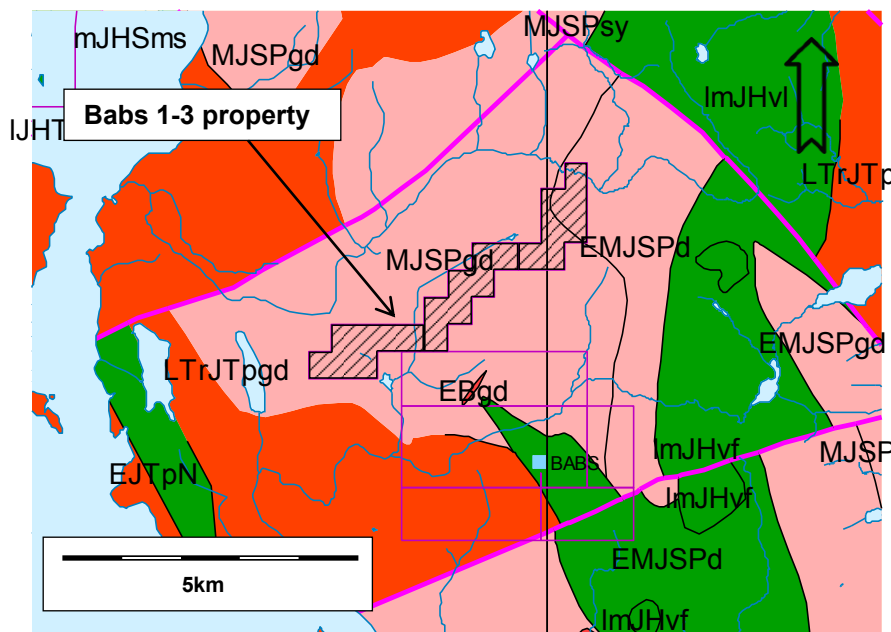
**Early Permian**

*Asitka Group*

 **PAIs** limestone, marble, calcareous sedimentary rocks

## 7.2 Property Geology

The Babs 1-3 claims are underlain by Mid-Jurassic Spike Peak Intrusive Suite Quartz Monzonite Phase- granodioritic intrusive rocks. The Spike Peak rocks have been isotopic ages between 179 to 166 Ma compared to the visually similar Late Triassic to



Early Jurassic Topley intrusions with U/Pb isotopic age dates at between 218 and 193 Ma. A few hundred metres south of the property boundary, a small northeast-trending dikelet of dark-grey biotite-feldspar-porphry was found cutting pink, pyritic, monzonite in a small drainage ditch near the junction of the Nose Bay and Pats haulage roads. East-northeast faults have been mapped both north and south of the Property.

Figure 9: Property Geology Map

## Item 8: Deposit Types

The most important mineral occurrences in the area of the Property are porphyry copper-molybdenite-gold deposits associated with the Late Cretaceous Bulkley intrusions and the Eocene Babine intrusions. There is also epithermal or high sulphidation VMS potential with silver-lead-zinc mineralization similar to that at the Fireweed prospect in Skeena Group rocks. Potential also exists for Besshi-type massive sulphides, volcanic rebed copper deposits, polymetallic veins with silver-lead-zinc and possibly gold, and intrusion related gold-pyrrhotite deposits. The most important focus for exploration on the Property is for calc-alkaline porphyry copper-molybdenum-gold deposits.

### 8.1 Calc-Alkaline Porphyry Copper-Gold Deposits

According to Panteleyev (1995), Volcanic-type calc-alkaline porphyry copper-gold deposits are characterized by stockworks of quartz veinlets and veins, closely spaced fractures, disseminations and breccias, containing pyrite and chalcopyrite with lesser molybdenite, bornite and magnetite, occurring in large zones of economically bulk mineable mineralization, in or adjoining porphyritic stocks, dikes and related breccia bodies. Intrusions compositions range from calc-alkaline quartz diorite to granodiorite and quartz monzonite. Commonly there are multiple emplacements of successive intrusive phases and a wide variety of breccias.

The mineralization is spatially, temporally and genetically associated with hydrothermal alteration of the host rock intrusions and wallrocks. Propylitic alteration is widespread and generally flanks early, centrally located potassic alteration which is commonly well mineralized. Younger mineralized phyllic alteration commonly overprints the early mineralization. Barren advanced argillic alteration is rarely present as a late, high-level hydrothermal carapace.

Ore controls include igneous contacts, both internal between intrusive phases, and external with wallrocks; dike swarms, breccias, and zones of most intense fracturing, notably where there are intersecting multiple mineralized fracture sets.

Porphyry Cu-Au deposits have been the major source of copper for British Columbia, and a significant source of gold. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37 % Cu, 0.01 % Mo, 0.3g /t Au and 1.3 g/t Ag.

### **8.1.1 Babine Lake District Porphyry Copper-Gold Deposits**

Common features shared by porphyry copper-gold deposits in the Babine Lake district include (Carter et al, 1995) porphyritic host lithology, concentric alteration, pyrite halo, polymetallic peripheral veins and coincident north to northwest trending regional faults.

Associated biotite-feldspar, hornblende-feldspar, or feldspar porphyry plugs and dikes are commonly less than one square kilometre. They are ubiquitously mineralized with magnetite. The cores of the deposits show a potassic alteration that is dominated by biotite, and commonly contains magnetite. Annular phyllic (quartz-sericite-pyrite) alteration surrounds the core sections. Pyrite halos surrounding deposits are up to 300 metres wide.

Mineralization is principally chalcopyrite and pyrite, with lesser bornite, and possibly molybdenite, occurring as disseminations, fracture coatings and in fine stockworks of quartz.

Exploration guides (Carter et al, 1995) are summarized:

1. Ubiquitous magnetite in the host intrusive, and common magnetite in the central potassic alteration zone make an excellent target for magnetic surveys.
2. Pyrite halos provide a broad target for which induced polarization (IP) technique is very effective.
3. Copper signature in soil samples ranges from 100ppm to 500ppm for individual deposits.
4. Zinc signature in soils is effective in detecting the outer margin of the pyrite halo.
5. Target grades for economic deposits are 0.45% Cu and 0.23 g/t Au.

Panteleyev (1995) indicates that central zones with Cu commonly have coincident Mo, Au and Ag with possibly Bi, W, B and Sr anomalies. Peripheral enrichment in Pb, Zn, Mn, V, Sb, As, Se, Te, Co, Ba, Rb and possibly Hg is documented.

## Item 9: Exploration

### 9.1 Current Evaluation Program

A review and interpretation was completed of all public domain data including Regional Geochemical Survey (RGS) data to determine drainages containing anomalous elements commonly associated with porphyry copper-molybdenum deposits. An interpretation of the regional geophysical surveys, including Quest West geophysical and geochemical data, was completed to assess the claim area for magnetic electromagnetic and gravity anomalies. These interpretations will be used as a basis for exploration programs planned for the 2012 exploration season.

### 9.2 Review and Interpretation of Regional Geochemical Survey Data

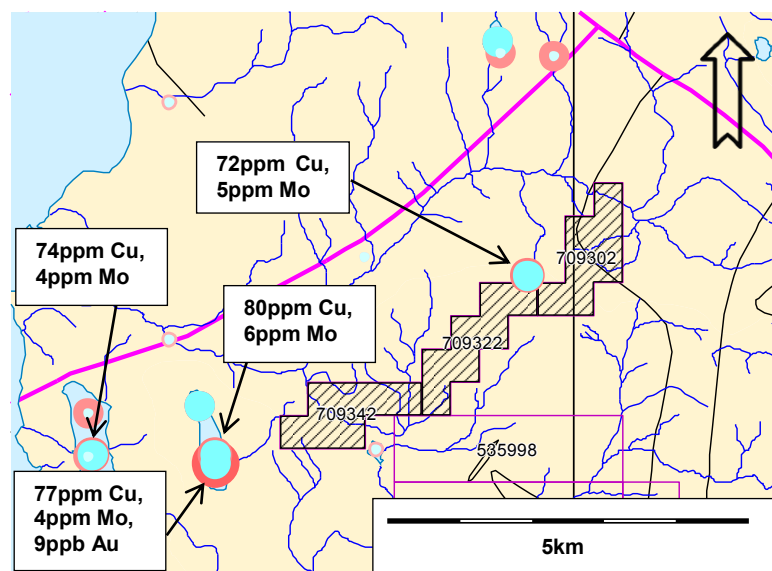


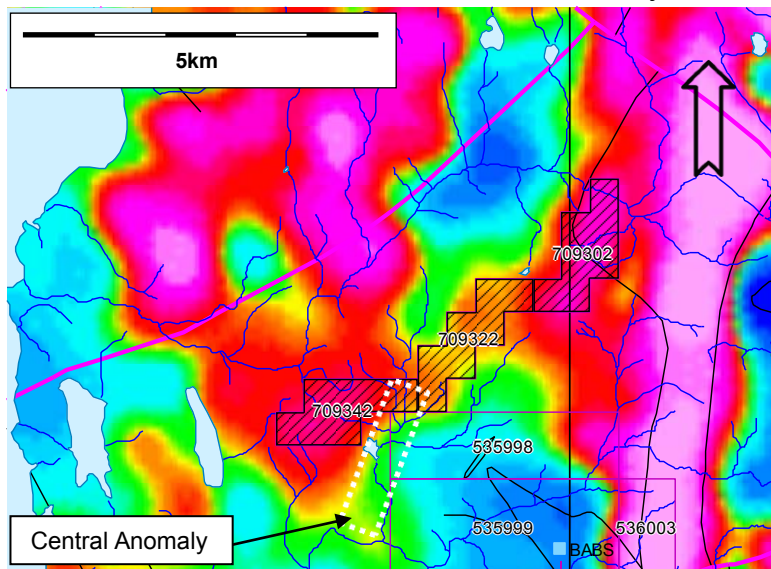
Figure 10: RGS anomalies showing base and precious metal enrichment

Review of RGS data show that lakes in the Babs 1-3 area are highly anomalous in base and precious metals. Samples collected near the southwestern end of the claims returned values of up to 80ppm copper, 6ppm molybdenum and 9ppb gold. The higher values were collected near a stream draining Babs 3 claim. A small lake immediately north of Babs 2 and west of Babs 1 returned values of 72ppm copper and 5ppm molybdenum. The small lake closest to Babine Lake also returned highly anomalous values of 74ppm copper and 4ppm molybdenum.

### 9.3 Review and Interpretation of Regional Magnetic Survey Data

The Babs 1-3 claims cover a 6500m long 1<sup>st</sup> vertical derivative mag high that trends northeast from near the shores of Babine Lake. The Babs Minfile showing, located roughly 2500m down ice to the southeast, consists of in excess of 150 angular BFP cobbles and boulders containing chalcopyrite and magnetite mineralization grading up to 1.5% copper and 1.3g/t gold. The boulder field has been located over an area of 150m x 800m and sits in a broad magnetic low area. A small northeast trending BFP dykelet has been located in a drainage ditch just north of a major haul road approximately 1000m from and paralleling the airborne magnetic high anomaly.

The central area of tenure 709322 shows a diminishing of the magnetic intensity which corresponds to the same general area that was found to be anomalous in copper, gold, silver, zinc and cerium in the 2008 MMI survey. This could be the result of alteration of

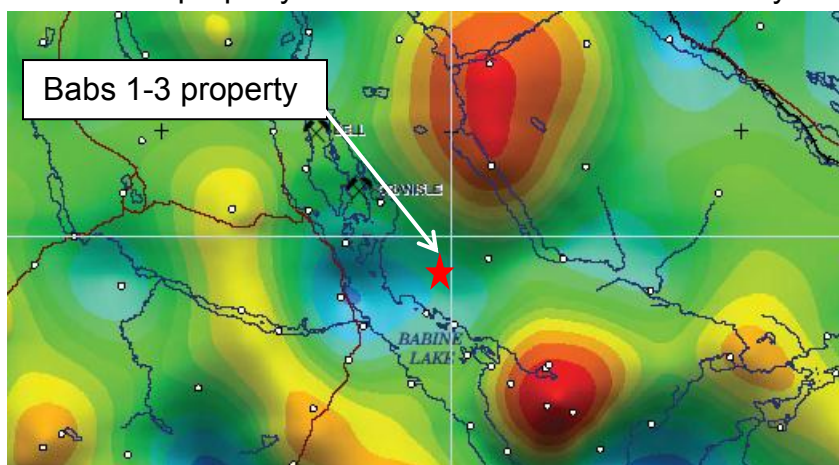


the rocks which often lowers the magnetic characteristics. The Northern Dynasty “Central” anomaly lies slightly down ice from tenure 709342 and the southwestern end of the magnetic high anomaly. This B-horizon soil anomaly covering an area 1100m x 300m, with values up to 914ppm copper, would be transported down ice from source in a glacial till environment. Distance to source would be determined in part by the thickness of the glacial cover in the area.

Figure 11: 1<sup>st</sup> Vertical Derivative Magnetic data

### 9.5 Review and Interpretation of Quest West Airborne survey data

A review of the Quest West magnetic data revealed much the same anomaly as discussed above. A second data set from the Quest survey is of interest with respects to the Babs property. The 1<sup>st</sup> Vertical Derivative Gravity map reveals a small dense



body immediately to the south of Natowite Lake and a second high density body a further 34km to the south. The Babs 1-3 claim group would lie between the two bodies in an area of gravity intensity similar to both the former Bell and Granisle mines.

Figure 12: Quest West 1<sup>st</sup> Vertical Derivative Gravity data

#### Item 10: Drilling

No drilling was completed as part of the exploration program.

#### Item 11: Sample Preparation, Analyses and Security

No samples were collected as part of the exploration program.



**Item 12: Data Verification**

No data verification was completed as part of the exploration program.

**Item 13: Mineral Processing and Metallurgical Testing**

No mineral processing or metallurgical testing was completed as part of the exploration program.

**Item 14: Mineral Resource Estimates**

No mineral resource estimates were completed as part of the exploration program

**Item 15: Adjacent Properties**

Porphyry copper-gold deposits and occurrences in the Babine district, located approximately 9km to the southwest, described below, serve as analogues to the exploration model applied to the Property. The table below lists resources and production from major deposits in the district. The values from Bell and Granisle pre-date NI 43-101 reporting standards and should not be considered reliable. They are included as geological information only.

**Table 3: Resources and Production of major Babine Porphyry Deposits**

Property	Mineral Resource			Mined			Reference	Category
	Million Tonnes	Cu %	Au g/t	Million Tonnes	Cu %	Au g/t		
Bell	296	0.46	0.20	77.2	0.47	0.26	Carter et al, 1995	non NI 43-101 compliant
Granisle	119	0.41	0.15	52.7	0.47	0.20	Carter et al, 1995	non NI 43-101 compliant
Morrison	207	0.39	0.2				Simpson, 2007	measured+ indicated
Hearne Hill	0.14	1.73	0.8				Simpson, 2008	indicated

The author has been unable to verify the information on mineral occurrences and deposits detailed below. Mineralization style and metal grades described are not necessarily representative of mineralization that may exist on the subject Property, and are included for geological illustration only. The mine and mineral occurrence descriptions described as follows are modified after the BC MINFILE occurrence descriptions and BC ARIS assessment report files.

**15.1 Bell Copper Mine (Minfile 093M 01, rev. McMillan, 1991)**

The Bell mine is a porphyry copper deposit hosted primarily in a biotite-feldspar porphyry (BFP) stock of the Eocene Babine Intrusions. The stock is crosscut by the northwest trending Newman fault which juxtaposes the two groups that host the intrusion. These groups are the Lower Jurassic Telkwa Formation (Hazelton Group) and the Lower Cretaceous Skeena Group. Telkwa Formation rocks are primarily fine grained tuffs and andesites and the younger Skeena Group rocks are mostly fine grained greywackes. The deposit overlaps onto both of these assemblages. The mineralization has been dated at 51.0 million years (Bulletin 64).



Chalcopyrite and lesser bornite occur as disseminations in the rock matrix, in irregular quartz lenses and in a stockwork of 3 to 6- millimetre quartz veinlets which cut the feldspar porphyries and the siltstones. Molybdenite is rare, and occurs in the feldspar porphyry in the northern part of the mineralized zone. Gold occurs as electrum associated with the copper mineralization. Specular hematite and magnetite are common in quartz veinlets and hairline fractures. There is also significant supergene enrichment with chalcocite coating chalcopyrite. A supergene chalcocite zone capped the deposit and extended to depths of 50 to 70 metres. Some gypsum together with copper-iron sulphate minerals and iron oxides were also present (Open File 1991-15).

The ore zone has pervasive potassic (mainly biotitization) alteration with a surrounding concentric halo of chlorite and sericite-carbonate alteration (propylitic and argillic) which corresponds to the two kilometre pyrite halo which surrounds the deposit. A late quartz-sericite-pyrite-chalcopyrite alteration has been superimposed on part of the earlier biotite-chalcopyrite ore at the western part of the ore body. A number of late-stage breccia pipes cut the central part of the ore zone near the Newman fault and alteration associated with their intrusion has apparently depleted the copper grades in the area of the pipes. Veinlets of gypsum are present in the upper part of the ore body. Anhydrite is a significant component in the biotite chalcopyrite zone but is not present in other alteration facies. Monomineralic veinlets of anhydrite are rare (Open File 1991-15).

The copper mineralization occurs in a crescent-shaped zone along the western contact of the porphyry plug. Better grades of copper mineralization are contained in a 60 by 90-metre thick flat-lying, blanket-like deposit which is connected to a central pipe-like zone, centred on the western contact of the intrusive. The pipe-like zone of copper mineralization is 150 metres in diameter and extends to a depth of at least 750 metres.

Reserves in the open pit and in the Extension zone were (in 1990) 71,752,960 tonnes grading 0.23 gram per tonne gold, 0.46 per cent copper and 0.48 gram per tonne silver (Noranda Inc. Annual Report 1990).

### **15.2 Granisle Mine (Minfile 093L 146, rev. Duffett, 1987)**

MacDonald Island is underlain by Lower-Middle Jurassic Telkwa Formation (Hazelton Group) volcanics comprised of green to purple waterlain andesite tuffs and breccias with minor intercalated chert pebble conglomerates in the central and eastern part of the island. These rocks strike northerly and dip at moderate angles to the west and are overlain in the western part of the island by massive and amygdaloidal andesitic flows and thin bedded shales.

Copper mineralization at the Granisle mine is associated with a series of Eocene Babine Intrusions which occur in the central part of the island. The oldest is an elliptical plug of dark grey quartz diorite approximately 300 by 500 metres in plan. The most important intrusions are biotite-feldspar porphyries of several distinct phases which overlap the period of mineralization. The largest and oldest is a wide north easterly trending dike which is intrusive into the western edge of the quartz diorite pluton. The contact is near vertical and several small porphyry dikes radiate from the main dike.

Several of the phases of the porphyry intrusions are recognized within the pit area. Potassium-argon age determinations on four biotite samples collected in and near the Granisle ore body yielded the mean age of 51.2 Ma plus or minus 2 Ma (Minister of Mines Annual Report 1971).

The wide porphyry dike which strikes northeast is bounded by two parallel northwest striking block faults. The westernmost crosses the island south of the mine and the eastern fault extends along the channel separating the island from the east shore of Babine Lake.

An oval zone of potassic alteration is coincident with the ore zone. The main alteration product is secondary biotite. This potassic alteration zone is gradational outward to a quartz-sericite-carbonate-pyrite zone which is roughly coaxial with the ore zone. Within this zone, the intrusive and volcanic rocks are weathered to a uniform buff colour with abundant fine-grained quartz. Mafic minerals are altered to sericite and carbonate with plagioclase clouded by sericite. Pyrite occurs as disseminations or as fracture-fillings. Beyond the pyrite halo, varying degrees of propylitic alteration occurs in the volcanics with chlorite, carbonate and epidote in the matrix and carbonate-pyrite in fractured zones. Clay mineral alteration is confined to narrow gouge in the fault zones.

The principal minerals within the ore zone are chalcopyrite, bornite and pyrite. Coarse-grained chalcopyrite is widespread, occurring principally in quartz-filled fractures with preferred orientations of 035 to 060 degrees and 300 to 330 degrees with near vertical dips. Bornite is widespread in the southern half of the ore zone with veins up to 0.3 metres wide hosting coarse-grained bornite, chalcopyrite, quartz, biotite and apatite.

Gold and silver are recovered from the copper concentrates. Molybdenite occurs within the ore zone, most commonly in drusy quartz veinlets which appear to be later than the main stage of mineralization. Magnetite and specularite are common in the north half of the ore zone where they occur in fractures with chalcopyrite and pyrite. Pyrite occurs in greatest concentrations peripheral to the orebody as blebs, stringers and disseminations.

Mining at Granisle was suspended in mid-1982. Production from 1966 to 1982 totalled 52,273,151 tonnes yielding 69,752,525 grams of silver, 6,832,716 grams of gold, 214,299,455 kilograms of copper and 6,582 kilograms molybdenum.

Unclassified reserves are 14,163,459 tonnes grading 0.442 per cent copper (Noranda Mines Ltd. Annual Report 1984).

Remaining in situ reserves, as modelled in 1992 using a 0.30 per cent copper cutoff, are estimated to be 119 million tonnes grading 0.41 per cent copper and 0.15 grams per tonne gold (CIM Special Volume 46, page 254).

### **15.3 Morrison–Hearne Hill Project (From Simpson, 2007)**

The Morrison deposit is a calc-alkaline copper-gold porphyry hosted by a multi-phase Eocene intrusive body intruding Middle to Upper Jurassic Ashman Formation siltstones and greywackes. Copper-gold mineralization consists primarily of chalcopyrite and minor bornite concentrated in a central zone of potassic alteration. A pyrite halo is developed in the chlorite-carbonate altered wall rock surrounding the copper zone.

Sulphide mineralization at Morrison shows strong spatial relationships with the underlying biotite-feldspar porphyry (BFP) plug and associated alteration zones. The central copper-rich core is hosted mainly within a potassically altered BFP plug with intercalations of older siltstone. This plug was initially intruded into the siltstone unit as a near-vertical sub-circular intrusion approximately 700 m in diameter. It was subsequently disrupted by the East and West faults and now forms an elongated body extending some 1500 metres in the northwest direction.

Chalcopyrite is the primary copper-bearing mineral and is distributed as fine grained disseminations in the BFP and siltstone, as fracture coatings or in stockworks of quartz. Minor bornite occurs within the higher grade copper zones as disseminations and associated with the quartz-sulphide stockwork style of mineralization.

Alteration is concentrically zoned with a central biotite (potassic) alteration core surrounded by a chlorite-carbonate zone. No well-developed phyllic zone has been identified.

Hearne Hill deposit lies two kilometres southeast of Morrison. The Hearne Hill Property has been extensively explored, and a comparatively small but high grade copper-gold resource has been defined in two breccia pipes within a larger porphyry system.

### **15.4 Wolf (Minfile 093M 008, rev. McMillan, 1991)**

The Wolf prospect is located on the west side of Morrison Lake, The Wolf area has been explored since 1965 when it was staked as the Bee claims.

A granodiorite stock containing phases of quartz monzonite and hornblende biotite feldspar porphyry of the Eocene Babine Intrusions cuts grey, locally graphitic siltstones of the Middle to Upper Jurassic Ashman Formation (Bowser Lake Group). A north-northwest trending block fault separates Ashman Formation rocks from volcanoclastic sandstones and tuffs of the Jurassic Smithers Formation (Hazelton Group) on the east side of the property. The Newman fault, associated with mineralization in the area, occurs just to the northeast of the claims parallel to the baseline.

At least nine copper occurrences, hosted in quartz monzonite, have been documented. Chalcopyrite occurs as disseminations and as grains and films on fracture surfaces and is occasionally accompanied by molybdenite. Minor malachite and iron-oxides have been noted.

A drill hole in biotite feldspar porphyry intersected 1.2 metres grading 4.2 per cent copper (Assessment Report 8779).

### **15.5 Fireweed (Minfile 093M 151, rev. Payie, 2009)**

The Fireweed occurrence is located on the south side of Babine Lake, approximately 54 kilometres northeast of Smithers. In the occurrence area, Upper Cretaceous marine to non-marine clastic sediments, of Skeena group are found adjacent to volcanic rocks of the Rocky Ridge Formation. Interbedded mudstones, siltstones and sandstones of a thick deltaic sequence, appear to underlie much of the area and were originally thought to belong to the Kisum Formation of the Lower Cretaceous Skeena Group. They are now assigned to the Red Rose Formation. The sediments commonly strike 070 to 080 degrees and dip sub-vertically. Locally the strike varies to 020-030 degrees at the discovery outcrop, the MN showing. Several diamond-drill holes have intersected sills of strongly altered feldspar porphyritic latite.

Skeena Group sediments are dominantly encountered in diamond drilling. The sediments are dark and medium to light grey and vary from mudstone and siltstone to fine and coarse-grained sandstone. Bedding can be massive, of variable thickness, changing gradually or abruptly to finely laminated. Bedding features such as rip-up clasts, load casts and cross-bedding are common. The beds are cut by numerous faults, many of them strongly graphitic. Drilling indicates Skeena Group sediments are in fault contact with Hazelton Group volcanic rocks. Strongly sericitized and carbonatized latite dikes cut the sediments.

Mineralization generally occurs in one of three forms: 1) breccia zones are fractured or brecciated sediments infilled with fine to coarse-grained massive pyrite-pyrrhotite and lesser amounts of sphalerite, chalcopyrite and galena 2) disseminated sulphides occur as fine to very fine grains which are lithologically controlled within coarser grained sandstones, pyrite, marcasite, sphalerite, galena and minor tetrahedrite are usually found interstitial to the sand grains and 3) massive sulphides, which are finegrained, commonly banded, containing rounded quartz-eyes and fine sedimentary fragments, occur as distinct bands within fine-grained sediments. The massive sulphides generally contain alternating bands of pyrite/ pyrrhotite and sphalerite/galena. They are associated with the breccia zones and are commonly sandwiched between altered quartz latite dikes.

Alteration in the sediments occurs in the groundmass and appears associated with the porous, coarse sandstones. Common secondary minerals are quartz, ankerite, sericite, chlorite and kaolinite.

Three main zones have been identified by geophysics (magnetics, induced polarization) and are named the West, East and South zones. Three other zones identified are the 1600, 3200 and Jan zones.

**15.6 Equity Silver (Minfile 093L 001, rev. Robinson, 2009)**

Silver, copper and gold were produced from the Equity Silver deposit, located 150km to the southeast of the Property.

The mineral deposits are located within an erosional window of uplifted Cretaceous age sedimentary, pyroclastic and volcanic rocks near the midpoint of the Buck Creek Basin. Strata within the inlier strike 015 degrees with 45 degree west dips and are in part correlative with the Lower-Upper Skeena(?) Group. Three major stratigraphic units have been recognized. A lower clastic division is composed of basal conglomerate, chert pebble conglomerate and argillite. A middle pyroclastic division consists of a heterogeneous sequence of tuff, breccia and reworked pyroclastic debris. This division hosts the main mineral deposits. An upper sedimentary-volcanic division consists of tuff, sandstone and conglomerate. The inlier is flanked by flat-lying to shallow dipping Eocene andesitic to basaltic flows and flow breccias of the Francois Lake Group (Goosly Lake and Buck Creek formations).

Intruding the inlier is a small granitic intrusive (57.2 Ma) on the west side, and Eocene Goosly Intrusions gabbro-monzonite (48 Ma) on the east side.

The chief sulphides at the Equity Silver mine are pyrite, chalcopyrite, pyrrhotite and tetrahedrite with minor amounts of galena, sphalerite, argentite, minor pyrargyrite and other silver sulphosalts. These are accompanied by advanced argillic alteration clay minerals, chlorite, specularite and locally sericite, pyrophyllite, andalusite, tourmaline and minor amounts of scorzalite, corundum and dumortierite. The three known zones of significant mineralization are referred to as the Main zone, the Southern Tail zone and the more recently discovered Waterline zone. The ore mineralization is generally restricted to tabular fracture zones roughly paralleling stratigraphy and occurs predominantly as veins and disseminations with massive, coarse-grained sulphide replacement bodies present as local patches in the Main zone. Main zone ores are fine-grained and generally occur as disseminations with a lesser abundance of veins. Southern Tail ores are coarse-grained and occur predominantly as veins with only local disseminated sulphides. The Main zone has a thickness of 60 to 120 metres while the Southern Tail zone is approximately 30 metres thick. An advanced argillic alteration suite includes andalusite, corundum, pyrite, quartz, tourmaline and scorzalite. Other zones of mineralization include a zone of copper-molybdenum mineralization in a quartz stockwork in and adjacent to the quartz monzonite stock and a large zone of tourmaline-pyrite breccia located to the west and northwest of the Main zone.

Alteration assemblages in the Goosly sequence are characterized by minerals rich in alumina, boron and phosphorous, and show a systematic spatial relationship to areas of mineral deposits. Aluminous alteration is characterized by a suite of aluminous minerals including andalusite, corundum, pyrophyllite and scorzalite. Boron-bearing minerals consisting of tourmaline and dumortierite occur within the ore zones in the hanging wall section of the Goosly sequence. Phosphorous-bearing minerals including scorzalite, apatite, augelite and svanbergite occur in the hanging wall zone, immediately above and intimately associated with sulphide minerals in the Main and Waterline zones.

Argillic alteration is characterized by weak to pervasive sericite-quartz replacement. It appears to envelope zones of intense fracturing, with or without chalcopyrite/tetrahedrite mineralization.

The copper-silver-gold mineralization is epigenetic in origin. Intrusive activity resulted in the introduction of hydrothermal metal-rich solutions into the pyroclastic division of the Goosly sequence. Sulphides introduced into the permeable tuffs of the Main and Waterline zones formed stringers and disseminations which grade randomly into zones of massive sulphide. In the Southern Tail zone, sulphides formed as veins, fracture-fillings and breccia zones in brittle, less permeable tuff. Emplacement of post-mineral dikes into the sulphide-rich pyroclastic rocks has resulted in remobilization and concentration of sulphides adjacent to the intrusive contacts. Remobilization, concentration and contact metamorphism of sulphides occurs in the Main and Waterline zones at the contact with the postmineral gabbro-monzonite complex.

The Southern Tail deposit has been mined out to the economic limit of an open pit. With its operation winding down, Equity Silver Mines does not expect to continue as an operating mine after current reserves are depleted. Formerly an open pit, Equity is mined from underground at a scaled-down rate of 1180 tonnes-per-day. Proven and probable ore reserves at the end of 1992 were about 286,643 tonnes grading 147.7 grams per tonne silver, 4.2 grams per tonne gold and 0.46 per cent copper, based on a 300 grams per tonne silver-equivalent grade. Equity has also identified a small open-pit resource at the bottom of the Waterline pit which, when combined with underground reserves, should provide mill feed through the first two months of 1994 (Northern Miner - May 10, 1993).

Equity Silver Mines Ltd. was British Columbia's largest producing silver mine and ceased milling in January 1994, after thirteen years of open pit and underground production. Production totaled 2,219,480 kilograms of silver, 15,802 kilograms of gold and 84,086 kilograms of copper, from over 33.8 Million tonnes mined at an average grade of 0.4 per cent copper, 64.9 grams per tonne silver and 0.46 gram per tonne gold.

#### **Item 16: Other Relevant Data and Information**

There is no other relevant data or information other than that included in this report.

#### **Item 17: Interpretation and Conclusions**

The area is predominantly till covered and previous attempts at exploration have proven difficult. Despite this, historical exploration highlights on the Babs property have identified a number of quality targets that have not been fully explored. The 150+ sub-angular boulders discovered on the southern Babs claims ranged in size from 10cm-1.5m and have assayed up to 1.05% Cu, 1.3g/t Au and contained 1-4% magnetite. Ground magnetic surveys show the area predominantly as a broad magnetic low with a number of narrow linear magnetic high features. Glacial till depth was quite variable in the area, from 4-40m based on the diamond drilling logs, and is believed to become much thicker towards the northern end of the boulder field.

A review of Regional Geochemical data shows that the lake sediment in the Babs 1-3 property area is highly anomalous with up to 80ppm Cu, 9ppb Au and 6ppm Mo. MMI surveys completed in 2008 have outlined a number of areas with significant anomalies in both base and precious metals. One target measuring 800m x 300-500m over the boulder field returned Response Ratios to >100 x background for copper, to >80 x background for gold and to >25 x background for silver and cerium. A second area associated with the 6500m long, northeast trending, airborne 1<sup>st</sup> vertical derivative magnetic high anomaly returned Response Ratios of >10-25 x background for copper, gold, silver, zinc and cerium.

Geophysical IP surveys and drilling have identified what is possibly a pyrite halo, with highly anomalous copper values and pyrite content up to 7%, in the area surrounding the Babs boulder field. Northern Dynasty geophysical IP surveys identified a second chargeability high, >5.0nT and up to 15.7nT, to the north and east of their Central soil anomaly. The chargeability anomaly forms a crescent shape with the area to the south as its core. The 1995-96 surveys also identified an area of Resistivity Low that trends to the northeast over the same area as the airborne 1<sup>st</sup> vertical derivative magnetic high anomaly.

Geophysical data from MapPlace and the Quest West surveys all point to possible sources on the property for the lake anomalies present in the area.

On review of the historical exploration data in conjunction with the interpretations of RGS, regional magnetic, EM and gravity data, the Babs 1-3 property presents as an intriguing exploration project with a 6500m target area worthy of further exploration. The author believes that the Babs 1-3 property is a property of merit and has the potential of hosting one or more significant mineral deposits.

#### **Item 18: Recommendations**

The Babs 1-3 property hosts a large exploration target which has received only preliminary evaluation in the past. As a result, a two phase program of exploration is proposed. Phase 1 would include establishing a picket grid over the northeast-trending magnetic target for follow-up geochemical and geophysical (magnetic and Induced Potential) surveys. The grid should be established with a 6500m long baseline oriented at 045° AZ, with 1000m long lines spaced 200m apart, resulting in 40 line-km of grid being surveyed. This line orientation will cross the trend of the historic magnetic and IP resistivity anomalies.

An orientation geochemical (MMI/Ah/pH) survey should be completed as early in the program as possible to establish the most reliable sampling media for producing the highest contrast anomalies for blind mineralization. Follow-up surveys should include either MMI or Ah sampling as well as the collection of appropriate material for pH measurements. Samples should be collected at 50m spacing on the grid resulting in approximately 800 samples of each medium. The pH measurements should be completed daily to determine if lines need to be extended.

Phase 2 would be dependent on the results obtained in the geochemical and geophysical surveys and would include the drilling of 2000m of NQ core in 10 holes over the property. Samples should be assayed in 2m intervals from surface with the entire hole being analysed.

#### Proposed budget for 2012

##### Phase 1

Project Geologist (30 days @ \$600/day)	18,000
Prospector/sampler x 2 (30 days @ \$300/day)	18,000
Grid layout (40 line km @ \$100/km)	4,000
Assaying (900 samples @ \$55/sample)	49,500
Geophysical surveys mag/IP (40 line km @ 2500/km)	100,000
Room and Board (210 person days @ \$150/day)	31,500
Mob/demob	5,000
Reporting	10,000
Contingency (15%)	35,400
Phase 1 Total	\$271,400

##### Phase 2

Project Geologist (70 days @ \$600/day)	42,000
Geologist (70 days @ \$500/day)	35,000
Core cutter (70 days @ \$200/day)	14,000
Drilling NQ (2000m @ \$220/m)	440,000
Assaying (1000 samples @ \$55/sample)	55,000
Room and Board (510 person days @\$150/day)	76,500
Mob/demob	15,000
Reporting	20,000
Contingency (15%)	<u>104,625</u>
Phase 2 Total	808,125

Respectfully submitted this 30th day of August, 2012

Ken Galambos P. Eng.  
Victoria, British Columbia



**Item 19: References**

Bacon, W. R., 1973, Geological and Geochemical Report on the Fort 1 and 2 Groups, Babine Lake Area, BC, MEMPR Assessment Report #4591.

Carter, N.C., 1967, Old Fort Mountain area in Annual Report 1966, BC Ministry of E.M.P.R., p 92-95. Carter, N C., and R.V. Kirkham, 1969, Geological Compilation Map of the Smithers, Hazelton and Terrace Areas (parts of 93L, M and 103I) by (1:250,000).

Carter, N. C., 1973; Preliminary Geology of the Northern Babine Lake Area (093L/M) (1 inch = 1 mile).

Carter, N. C., 1985, Geological Report on the Red 1 Claim, Babine Lake area, Omineca Mining Division, BC, MEMPR Assessment Report #14093

Carter, N. C., G. E. Dirom and P. L. Ogryzlo, 1995; Babine Overview, in CIM Special Volume 46, Porphyry Deposits of the Northwestern Cordillera of North America, ed T. G. Schroeter.

DeLong, R., Haslinger, R., 1995 Linecutting, Geochemical Sampling, Geological Mapping, 1995-1996 Geophysical Survey and Drill Programs Assessment Report, Omineca Mining Division, BC. MEMPR Assessment Report #24560.

Dirom, G. E., M.P. Dittrick, D.R. McArthur, P. L. Ogryzlo, A.J. Pardoe, and P. G. Stothart, 1995, Bell and Granisle, in CIM Special Volume 46, Porphyry Deposits of the Northwestern Cordillera of North America, ed T. G. Schroeter.

Hansen, D., 1992, Diamond Drilling Assessment Report on the Babs Mineral Property, Omineca Mining Division, BC., MEMPR Assessment Report #22788.

Kemp, R. 1994, Diamond Drilling Report on the Babs Claim Group, Omineca Mining Division, BC., MEMPR Assessment Report # 23261.

Kemp, R., 1994, Geological, Geochemical and Geophysical Report on the Babs Claim Group, Omineca Mining Division, BC., MEMPR Assessment Report # 23536.

Kemp, R. 1994, Diamond Drilling Report on the Babs Claim Group, Omineca Mining Division, BC., MEMPR Assessment Report # 23589.

Kraft, T., 1992, Diamond Drilling Report on the Fred Claim Group, N.L. 5, 6, 8, EM 2, 3, Fred, and New LWO Claim Group LWO 30, 31, Babine Nizik Lake Area, Omineca Mining Division, BC., MEMPR Assessment Report #22111.

Kraft, T., 1992, Geological and Geochemical Report on the Pond, Nuniz and Jinx 2 Claim Groups, Babine-Nizik Lake Area, Omineca Mining Division, BC., MEMPR Assessment Report #22156.

Levson, V., 2002, Quaternary Geology and Till Geochemistry of the Babine Porphyry Copper Belt, British Columbia (NTS 93 L/9, 16, M/1, 2, 7, 8), BCGS Bulletin 110.

Levson, V., S.J. Cook, J. Hobday, D. Huntley, E. O'Brien, A. Stumpf and G. Weary, 1997, BCGS Open File 1997-10a: Till Geochemistry of the Old Fort Mountain Map Area, Central British Columbia (NTS 93M/1).

MacIntyre, D., C. Ash and J. Britton (compilers and digital cartography), 1994; Nass-Skeena (93/E, L, M; 94/D; 103/G, H, I, J, P; 104/A, B); BC Geological Survey Open File 1994-14.

MacIntyre, D, I. Webster and P. Desjardins, 1998, Bedrock Geology of the Old Fort Mountain Map-area, North-central B.C.; 1:50,000, BC Geological Survey Open File 1997-10.

MacIntyre, D.G. and M. E. Villeneuve, 2001, Geochronology of mid-Cretaceous to Eocene magmatism, Babine porphyry copper district, central British Columbia, Can. J. Earth Sci. 38(4): 639–655 (2001).

MacIntyre, D.G., Villeneuve, M.E. and Schiarizza, P., 2001, Timing and tectonic setting of Stikine Terrane magmatism, Babine-Takla lakes area, central British Columbia, Can. J. Earth Sci. 38(4): 579–601 (2001).

MacIntyre, D., 2001a, Geological Compilation Map Babine Porphyry Copper District Central British Columbia (NTS93L/9, 93M/1, 2E, 7E, 8), BC Geological Survey Open File 2001-03.

Mark, D., 1987, Geophysical Surveys on the Danny Boy Claims, Natowite Lake, Babine Lake area, Omineca Mining Division, BC, MEMPR Assessment Report #16292.

Mark, D., 2009, Exploration Report on a Geophysical Magnetic Survey and an MMI Soil Geochemistry Survey on the Babs Property, Babine Lake Area, Omineca Mining Division, BC., MEMPR Assessment Report # 30798.

Panteleyev, A., 1995, Porphyry Cu<sup>+</sup>/<sub>-</sub>Mo<sup>+</sup>/<sub>-</sub>Au, in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Energy of Employment and Investment, Open File 1995-20, pages 87-92.

Schiarizza, P., MacIntyre, D. 1998, Geology of the Babine Lake-Takla Lake Area, Central British Columbia (93K/11, 12, 13, 14; 93N/3, 4, 5, 6), British Columbia Geological Survey, Geological Fieldwork 1998.

Simpson, R. G, 2007, Mineral Resource Update, Morrison Project, Omineca Mining Division, British Columbia.

Stix, J., Kennedy, B., Hannington, M., Gibson, H., Fiske, R., Mueller, W., and Franklin, J., 2003, Caldera-forming processes and the origin of submarine volcanogenic massive sulfide deposits, *Geology (Boulder)* (April 2003), 31(4):375-378.

Woolverton, R.W., 1987, A Geochemical Report on the Copper Claims, Omineca Mining Division, BC, MEMPR Assessment Report #16785.

**Item 20: Date and Signature Page**

1) I, Kenneth Daryl Galambos of 1535 Westall Avenue, Victoria, British Columbia am self-employed as a consultant geological engineer, authored and am responsible for this report entitled "Progress Report - Babs Project", dated August 30, 2012.

2) I am a graduate of the University of Saskatchewan in Saskatoon, Saskatchewan with a Bachelor's Degree in Geological Engineering (1982). I began working in the mining field in 1974 and have more than 28 years mineral exploration and production experience, primarily in the North American Cordillera. Highlights of this experience include the discovery and delineation of the Brewery Creek gold deposit, near Dawson City, Yukon for Noranda Exploration Ltd.

3) I am a registered member of the Association of Professional Engineers of Yukon, registration number 0916 and have been a member in good standing since 1988. I am a registered Professional Engineer with APEGBC, license 35364, since 2010.

4) This report is based upon the author's personal knowledge of the region and a review of additional pertinent data.

5) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.

6) To the best of my knowledge this report contains all scientific and technical information required to be disclosed so as not to be misleading.

7) I am the owner of the mineral rights covered by the property. My professional relationship is as a non-arm's length consultant, and I have no expectation that this relationship will change.

8) I consent to the use of this report for such assessment and/or regulatory and financing purposes deemed necessary, but if any part shall be taken as an excerpt, it shall be done only with my approval.

Dated at Francois Lake, British Columbia this 30th day of August, 2012.

"Signed and Sealed"

Ken Galambos, P.Eng. (APEY Reg. No. 0916, APEGBC license 35364)  
KDG Exploration Services  
1535 Westall Ave.  
Victoria, British Columbia V8T 2G6

**Item 21: Statement of Expenditures**

**Report**

Interpretation and Report (6.5 days @ \$600/day)

3900  
\$3900

**Item 22: Software used in the Program**

Adobe Acrobat 9

Adobe Photoshop Elements 8.0

Adobe Reader 8.1.3

Google Earth

Internet Explorer

Microsoft Windows 7

Microsoft Office 2010