

YUKON

CARCROSS

TAGISH LAKE

60°  
BRITISH COLUMBIA

SKAGWAY

CANADA  
U.S.A.

59°

136°

134°

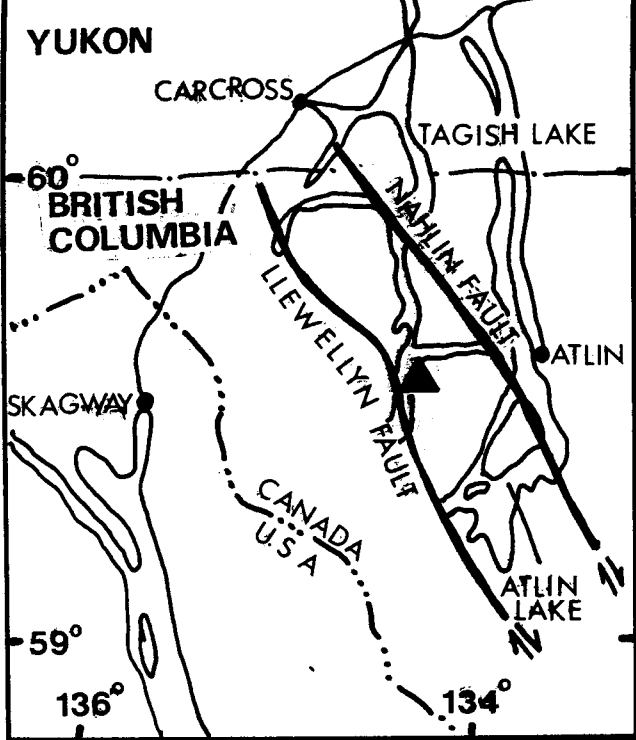


GB1 CLAIM GROUP

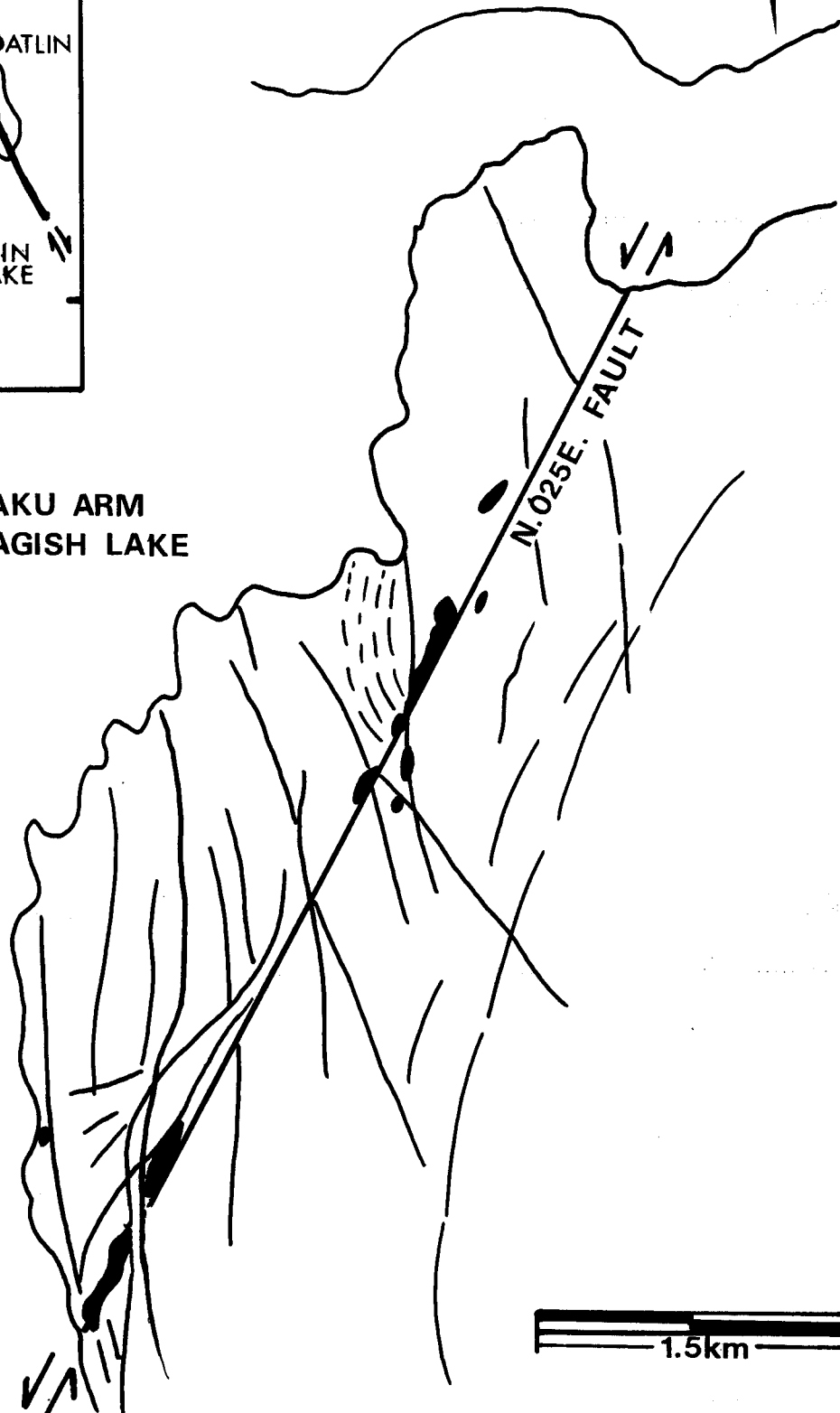
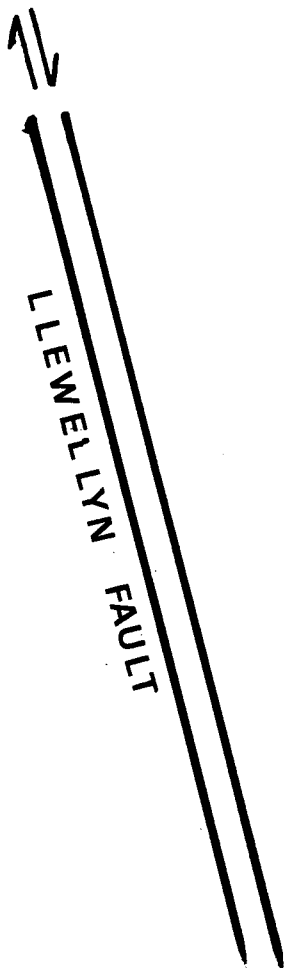


EPITHERMAL  
AU, AG, AS, SB, HG.

JUNE, 1992



TAKU ARM  
TAGISH LAKE



N.025E. FAULT



**GOLDEN BEE MINERALS INC.**

104M/9E 520973

Mineral Inventory • Management and Development

**REPORT ON GEOLOGICAL, GEOCHEMICAL  
AND PROSPECTING SURVEYS**

**PERFORMED BY**

**GOLDEN BEE MINERALS INC.**

**ON THE**

**GB 1 CLAIM GROUP - 82 UNITS  
ATLIN MINING DIVISION**

**NTS 104M\9E**

**LATITUDE - 59 DEGREES 34' 10"  
LONGITUDE - 134 DEGREES 14' 00"**

**100 % OWNED BY GOLDEN BEE MINERALS INC.**

**TAKEN FROM REPORTS BY: DAVID M. STRAIN  
GARY R. THOMPSON AND M.C.W. LUNN**



Mineral Inventory • Management and Development

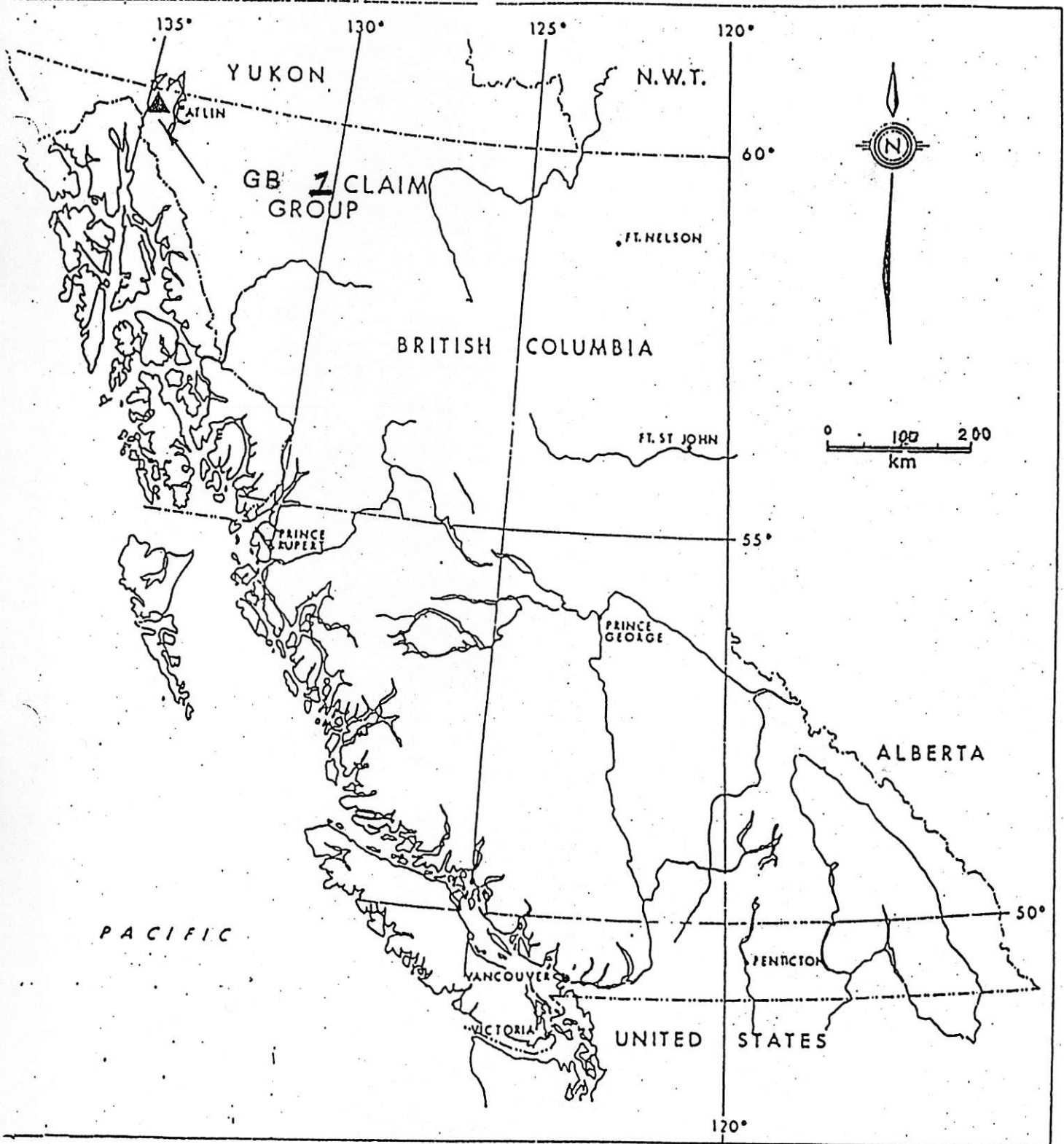
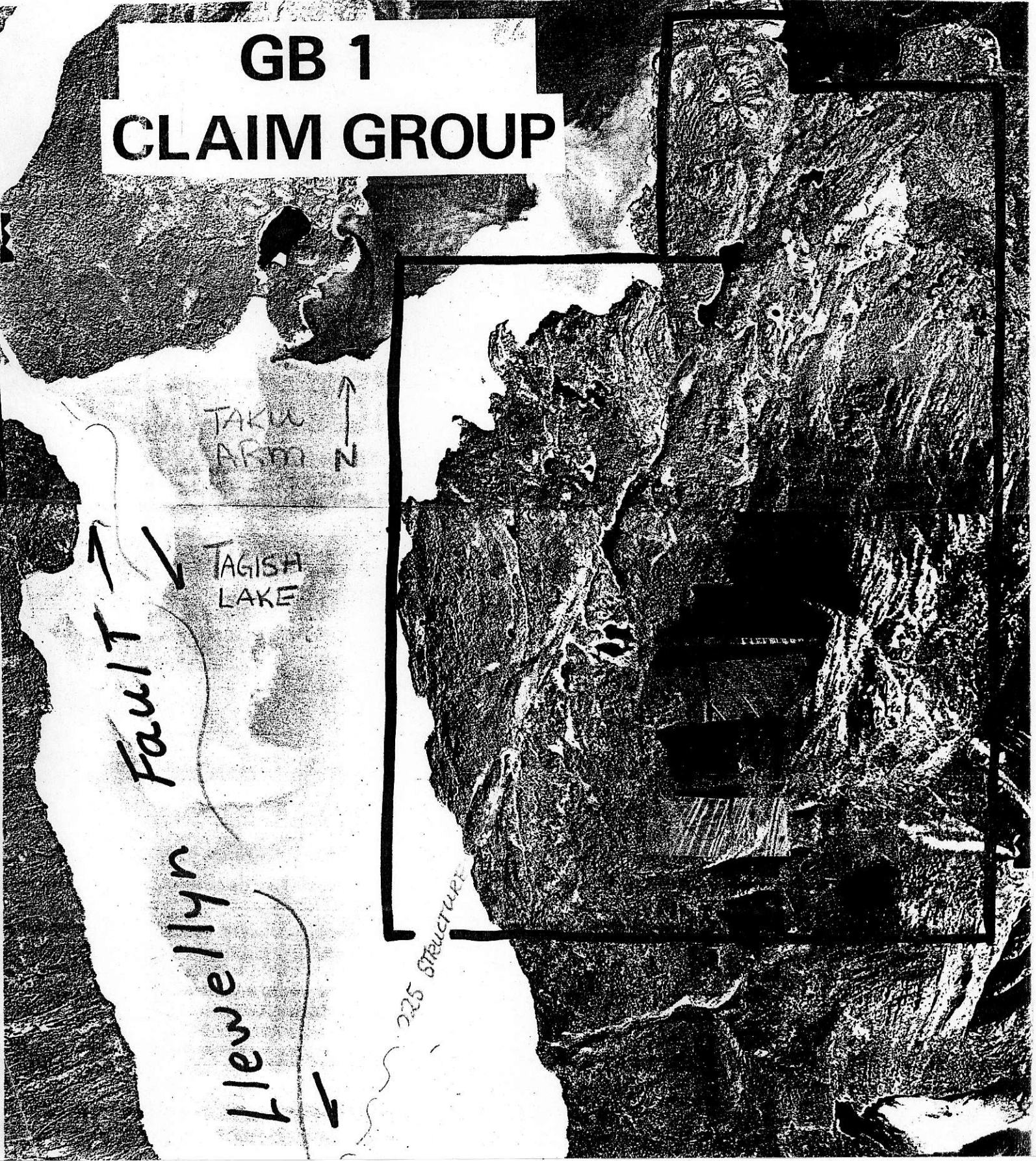


FIG. No. 1



Mineral Inventory • Management and Development

# GB 1 CLAIM GROUP



Summary

From July 8, 1989 to July 22, 1989 the initial exploration program was carried out on the GB 1 claim group, located in the Atlin Mining Division, approximately 30 km west of Atlin, B.C. The GB 1 claim group is comprised of 82 claim units, all acquired by staking, and is owned by Golden Bee Minerals Inc. of Kamloops, B.C.

The GB 1 claim group lies within the western-most margin of the Intermontane geological province of the Canadian cordillera, and is comprised at surface by lower and middle Jurassic Laberge Group argillites, graywackes and conglomerates. BCDM Open File of mapsheet 104M9 done by Mitch Mihalynuk in 1989 infers that the Laberge group is underlain at depth (800m+) by Stuhini group volcanics.

The 1989 exploration program consisted of grid establishment, 1:250 scale geological mapping, rock, soil and silt sampling, trench blasting and prospecting. A total of 49 rock, 82 soil, and 8 silt samples were collected from the claim group and submitted to Northern Analytical Laboratories of Whitehorse, Yukon for geochemical analysis. Au 15 gm Fire Assay/AAS, AAS 6 element, Surcharge Dilution analytical method was used. The main field effort focused on a mineralized breccia/stockwork zone (main zone) in the southwest corner of the Mass claim.

The mineralization occurs along a 025 degree -trend, subvertical fault which forms a 6.0 km long lineament. Geological mapping and chip sampling in 1989 established that the zone had a minimum strike length of 340 m, average width of 3.0 m, and highly variable gold and silver grades, on surface. These range up to 11.5 gr/t of gold and over 1350 gr/t of silver.

Arsenopyrite was determined to be the main sulphide, and along with pyrite, occurs in concentrations of up to 10% but averages approximately 4%.

The remainder of the 6km lineament was identified as having zones of quartz-carbonate alteration. Silt and soil sampling programs were also conducted.

1989's program employed geologist Dave Strain, an Atlin resident, three prospectors and three field technicians. Strain made the following recommendations.

- (1) Diamond drill testing of the main mineralized zone with 5 holes from 2 setups totally 560 m (1,837') footage indicated based on -45 degree holes, 50 m NW of zone. Assuming a vertical dip of the zone, on section holes would intersect 50 m below surface (collar elev.), off section holes at 62 m below surface. Penetrations would be at approximately 25 m centres over 100 m. Visual results obtained, a second, steeper on section hole could be drilled from each of the two proposed set-ups.

- (2) A new baseline should be established, 100 to 200 m NW of, and parallel to, the fault zone/lineament (025 degrees), and extended the entire length of the lineament (6.0 km). Tight (25 m) cross lines should be run to the SE over the mineralized portion and 400 m NE of the last mineralized outcrop.
- (3) Further tight soil sampling and geological mapping should be carried out on the newly established grid lines NE of the last mineralized outcrop.
- (4) The mineralized zone should be remapped using the geological control.
- (5) Two cross lines of the new grid should be picked as test lines over know mineralization and orientation surveys ie: mag, VLF-EM and IP should be run.
- (6) Further prospecting and airphoto analysis of the 025 degree lineament should be carried out, and based on this work, additional cross-lines should be run over interesting areas and tested with soil sampling, VLF-EM, Mag and induced polarization (Pole dipole array,  $a=25$  m,  $n=4$ ).
- (7) A detailed grid should be established off the new baseline, in the area of samples 1St08 & 09, 1Sol and 1R31, and soil sampled.
- (8) Further prospecting should be done to evaluate other areas of the claim group.



Efforts to secure sufficient funding to conduct this program were unsuccessful. Consequently, from July 20 to October 05, 1990 a geological mapping, rock chip and grab sample program was performed. Fifty-two rock samples were submitted to Eco-tech Laboratories in Kamloops, B.C. Thirteen additional samples were taken by geologist Glenn Shevchenko and submitted for analysis to Northern Analytical Laboratories in Whitehorse, Yukon.

The field crew was stationed at Brooklands Wilderness Camp. (NE corner of GB 1 group on Graham Inlet) Traverses were made by accessing various areas of the property by boat. Other traverses were made directly from the camp. Control for mapping was assisted by using a combination of air photos and small lakes within the structure.

The 1990 field program extended the mineralization trace along the 6km. N025E from the 350 metres of strike mapped in 1989. Three gold-silver zones were now identified. The Main zone (350m strike), the Bear zone (180m strike) and the Barney zone (233m strike). There were also several smaller zones discovered within the structure. In addition, numerous old trenches were found in the Bear zone. Material from these was sampled and did return Gold values of note. This seasons work also provided information indicating an increase in calcium content resulted in decreased Au-Ag values.

1991's work was conducted in August, and consisted of geological mapping, prospecting, trenching, recon blast pits, and establishment of a control grid, and soil sampling over the Bear zone. New mineralized breccia's were uncovered, extending the Bear zone and the Barney zone. (see maps enclosed) With widths up to 30 m, for an average of 5 m. and strike uncovered to date of approximately 1.5 km., leaving much of the 6 km structure open. Several old trenches found cutting the Bear zone were mucked out and sampled. Samples GT0991 to GT1491 were taken as 1 meter chip samples. Analytical results from this trench returned an average of 2.5 g/t Au. over a true width of 6m. The control grid was established within the N.025 E structure at the north end of first lake. The base line starts at 5000 E trending N.025 E and runs to 5400 N with cross lines at 100m intervals and sample stations at every 10m. To date these samples have not been submitted for analysis. An independent geologist sampled rusty red soil within the Bear zone # P162704 returned 11.6 g/t Au. 17 ppm Ag. 17443 ppm As. and 162 ppm Sb. Mineralization occurs as fine disseminations, blebs and sulphide veinlets as pyrite and arsenopyrite, with minor Sb, Hg. Alterations are silicification, sericite, argillic, and Fe carbonate. The cross faults along the main structure may provide good exploration targets for buried mineralization.

Location and Access

The GB 1 claim group is located in northern B.C. (NTS 104M/9E) on the east side of Taku Arm (Tagish Lake), extending south from Golden Gate to 1.5 km south of Golden Mountain, centred on 59 degrees 34' 10" north latitude and 134 degrees 14' 00" east longitude.

Access to the property was first gained by freighter canoe from Carcross Yukon. This involved a 95km journey southward on Tagish Lake. This route would provide the most cost-effective way to transport heavy goods.

Access for the 1989 projects was by water with a 16 foot Zodiac powered with a 25 horsepower outboard, from the village of Atlin, B.C., some 30.5 air km to the east (40.0 km by water). On a calm day this trip is achieved in approximately 1.75 hours, however the trip can take much longer depending on wave conditions on Atlin Lake, Graham Inlet and Taku Arm.

1990 and 1991 project access was be gained by a combination of helicopter, float plane and small barge, all available in Atlin.

Claim Information

The GB 1 claim group is comprised of five metric claim blocks (Quantity, Mass, Golden Bee 1, GM 2 and GM 3) and four two post claims (GG1-4) totalling 82 units, located in the Atlin Mining Division. Ownership of the claims, and other

pertinent data is shown in Figure #II; Golden Bee Minerals Inc. of Kamloops, B.C. is the owner, Mr. G.R. Thompson was the project operator.

### Physiography, Climate, and Glaciation

Taku Arm acts as one of the main drainage channel for the district.

Two contrasting types of topography occur in the region; that of the Teslin Plateau (part of the larger physiographic region - the Yukon Plateau, and roughly comparable to the Intermontane geological province), and that of the Tagish Highlands (part of the Boundary Ranges physiographic region, and given character from the Coast Plutonic Complex). The Teslin Plateau is an extensively dissected and eroded plateau, and topography consists of irregularly distributed, rounded hills with variable elevations (local areas with flat-topped, uniform elevations). The valleys are wide, deep, steep-walled and typically U-shaped. The Tagish Highlands are rugged, consisting mainly of knife-like ridges, needle summits, and abruptly incised valleys, where considerable ice and snow are seen throughout the entire year.

The rivers and creeks generally open in May, but on some lakes, ice remains until the first of June. Warm summer weather is experienced for about four months with June and July receiving almost continuous daylight. The mean daily temperature in July is no less than 14 degrees Celsius. The month of July receives 10 to 13 days with measurable precipitation; mean annual precipitation is around 60 cm. In January the mean daily temperature is -15 degrees Celsius with 14 to 17 days with measurable precipitation.

#### Claim Topography and Vegetation

The claims lie within the Tagish Highlands. The topography is dominated by shoreline of Taku Arm (655.62 m, 2151 feet +/-); and low lying (760 m, 2500 feet) undulating surface inland with abundant small swampy lakes with intermittent creeks and limited bedrock exposure. However, the southeast part of the group is occupied by steep mountain walls with the summit of Golden Mountain the high point on the claims (1655 m, 5430 feet). Good bedrock exposure, and talus is abundant in these areas.

The low-lying area of the claim group is covered by mature stands of balsam, spruce, pine and poplar, and shrubs of willow and alder. The mountain slopes are thickly covered by stunted balsam and spruce with local buckbrush and willow patches. Tree line is at approximately 1400 m (4500'), above which vegetation is less diverse, consisting of mosses, lichens, berries, alpine flowers, patches of buckbrush and occasional stunted balsam.

### History

Activity in the area dates back to 1898 as men made their way to the Atlin creeks. The past producing Engineer Mine is located approximately 8.5 km south of the centre of the GB 1 group. Mining claims were first located over this deposit in 1899. Production was intermittent from 1913 to 1952 during which 17,150 tons of ore were milled and 18,058 ounces of gold and 8,950 ounces of silver were recovered. (See Minfile No. 104M 014 in Appendix III). The deposit is classified as consisting of epithermal veins. Work on the Happy Sullivan gold-silver prospect consisted of a 10 ton bulk sample taken from QT 2, material assayed 8 1/2 - 9 1/2 ounces per ton Au (6.0 km south of the centre of the GB 1 claim group), dates back to before 1933 ( Minfile No. 104M 013)

Golden Bee Minerals Inc. staked the Mass and Quantity claims in August, 1988 to cover the Breccia Zone. GM 2 and 3 and G.G. 1 to 4 were staked in July, 1989.



### Regional Geology

The claims lie within the Intermontane belt at the boundary with the Coast Plutonic Complex. All main tectonic elements have northwest trending contacts, which are generally complex fault systems. In the area of the claims, the Llewellyn Fault separates Carboniferous and Permian (and possibly older) schists and gneisses (Nisling Assemblage) to the west from upper Triassic Stuhini Group andesites and basalts, and/or lower and middle Jurassic Laberge Group argillites, graywackes, and conglomerates. The GB 1 claim group is underlain entirely by Laberge Group sediments, and although the trace of the Llewellyn Fault lies less than 1.0 km to the west. In the area of Graham Inlet, southeast to south Atlin Lake, the Laberge Group occurs as a northwest trending, 20 km wide belt with parallel contacts uncomplicated by intrusions or large deposits of Eocene volcanics. The Laberge group is bounded to the east by the Nahlin Fault which separates it from Permian and Carboniferous age rocks of the Cache Creek Group (Atlin Terrane). The Nahlin Fault is for the most part a northeast-facing thrust, but in the area of Atlin Mountain may be vertical. The Cache Creek Group, in the Atlin area, is comprised mainly of cherts and argillites (Kedahda Fm.), and basaltic andesite (Nakina Fm). Associated with basaltic andesites are irregular bodies of serpentized and carbonatized ultramafic rocks. North of Graham Inlet the contact between the Laberge Group and the Atlin Terrane is covered by Eocene Sloko Group volcanics.

Large and small belts and patches of these young volcanics (felsic to mafic pyroclastics and lesser flows) occur in contact with all of the above mentioned older groups. Plugs of Tertiary leucogranite, probable feeders to the Sloko Group volcanics, commonly crop out near these volcanic patches.

### Claim Geology

#### i) Lithology

The claims of the GB 1 group are underlain by the Jurassic Laberge Group. On the claims, these sediments consist mainly of interbedded argillaceous siltstone and feldspathic gray-wacke. Locally feldspathic wacke occurs as thick beds without interbeds of argillaceous siltstone, whereas other areas are occupied by thinly bedded argillaceous siltstone without wacke interbeds. Minor conglomerate was noted on the lakeshore in the northwest corner of the Quantity Claim.

The argillaceous siltstones are brown to rusty weathering, black, well indurated, and although these rocks look like true argillites, they contain significant silt size components. The wackes are arenites, and are light gray, to brownish, to very rusty weathering. The fresh surface is light gray in color with black angular clasts of argillite comprising 1 to 5% of the rock. Plagioclase clast comprise a substantial proportion of this lithology and is most evident on the weathered surface where it is somewhat less resistant than the other constituents.

ii) Structure

Bedding attitudes are quite variable from 050 degrees to 170 degrees with dips from 10 degrees to vertical. The majority of measurements taken gave orientations in the area of 120 degrees to 160 degrees with northeast dips of 10 degrees to 45 degrees. Folding is evidenced by variation in strikes and dips and can locally be observed, especially along the shoreline of Taku Arm.

A strong airphoto lineament cross cuts the Mass and Quantity Claims with a trend of 025 degrees and observable strike length of 6.0 km; its expression is lost to the northeast where it extends into Graham Inlet, and to the southwest where it enters Tagish Lake. Over most of its length the fault cannot be directly observed on the ground due to lack of exposure. The fault can be observed for approximately 500 m in a prominent gully at its southwestern extent. Here the fault zone is 1 to 5 m wide and is reflected as a vertically dipping breccia zone/fractured argillite/zone of weakness. Horizontal slickensides were noted periodically and indicate purely strike-slip movement. Geological mapping of the portion of the fault was undertaken but did not reveal relative movement. A parallel fracture pattern appears to have developed in the sediments outside the fault zone. However, local dense fracturing/cleavage development, oriented at 150 degrees / 75 degrees SW to vertical occurs in the area mapped, and appears to predate the fault.

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- Cameron, E.M. (1989): Geological Survey of Canada "Scouring of Gold from the Lower Crust", Geology. V. 17, p. 26 - 29.
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- National Topographic Survey Map 104 M/8, scale 1:50,000.
- Strain, D.L. and Thompson, G.R.(1989) Geological, Geochemical and Prospecting Surveys on the GB 1 Claim Group, Atlin Mining Division
- Thompson, G.R. and Lunn, M.W.C.(1990) Geological and Geochemical Assessment Report on the GB 1 Claim Group, Atlin Mining Division

Aerial Photographic Prints

- B.C. 5676 No. 262  
B.C. 5677 No. 049  
B.C. 5677 No. 050