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#### 1257 GEOLOGICAL LTD.

#### SUMMARY REPORT OF JUNE 1988 PROGRAM ON MAC 10 CLAIM

#### FRASERGOLD PROPERTY

#### MACKAY RIVER AREA, CARIBOO MINING DIVISION, BRITISH COLUMBIA, CANADA



Part 1 of 2

N.T.S.: 93A/7E

LATITUDE: 52°19'N LONGITUDE: 120°37'W GEOLOGICAL BRANCH ASSESSMENT REPORT



BY: LORNE G. ROWAN

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#### 1.0 SUMMARY

In early June a geological examination was made of newly excavated trenches and rebuilt roads on the Mac 10 claim. This was conducted to determine if the same type of gold mineralization could be expected, as exists on the southern portion of the claim group. Therefore efforts were directed towards determining the presence or absence of the same lithologies with similar styles of folding and attendant quartz veining.

The physical work on the Mac 10 claim was carried out during June of 1988. This work was designed to increas the amount of exposed bedrock on the property. The program consisted of nearly a kilometre and a half of new or rebuilt road and two trenches of nearly two hundred metres length. A total of fourteen rock chip samples were taken from various quartz veins exposed in the trenches; no anomalous gold values were found in this program.

#### 2.0 INTRODUCTION

In May of 1988, 1257 Geological Ltd. was commissioned by Sirius Resource Corporation to conduct a small exploration program on the Mac 10 claim of the Frasergold property.

Prior to the work of June 1988, the Mac 10 claim had received limited exploration since 1980. A widely spaced geochemical soil sample grid had been completed and the streams were prospected and intermittently silt sampled. This work indicated the strike extension of the Frasergold property geochemical anomaly onto the Mac 10 claim.

#### 3.0 LOCATION AND ACCESS

Access to the property is by road, via paved highway 97 from 150 Mile House to Horsefly for 55km, then northeasterly along an all weather gravel road following the Horsefly River for 55 Km, past the Crooked Lake junction to about Post 145. From there a branch gravel road enters the Mackay River Valley and the property and camp are reached after 7 Km.





Topography on the property varies from moderately steep to steep, with nine well defined circues on the northeastern flank of the Eureka Peak range. Elevations over the entire property range from 1200m. at the Mackay River to 2225m. along the crest of Eureka Ridge. Elevations on the Mac 10 claim are between the river level of 1200m. and 1725m. at the southwest corner of the claim group.

Vegetation in the area consists of commercial size balsam and spruce, with thick underbrush, to an elevation of about 1600m. Tree cover then becomes increasingly sparse to approximately 1800m., after which alpine vegetation becomes predominate.

#### 4.0 PROPERTY

The Mac 10 claim is part of the Frasergold Property, which comprises 23 contiguous mineral claims and 4 claim fractions. The property is located in the Mackay River Valley of the central Cariboo region of British Columbia, Canada. It is therefore in the Cariboo Mining Division, in NTS sheet 93A/7E, at a latitude of 52°19'N and at a longitude of 120°37'W (figure 1).

CLAIM	RECORD	NUMBER	RECORDED	EXPIRY		
NAME	NUMBER	UNITS	DATE	DATE		
MAC	1286	9	79/10/19	93/10/19		
MAC 2	2078	20	80/10/22	92/10/22		
MAC 7	6249	8	84/07/27	92/07/27		
MAC 8	6250	16	84/07/27	92/07/27		
MAC 9	6251	20	84/07/27	92/07/27		
MAC 9 FR	6204	1	84/07/16	93/07/16		
MAC 12 FR	6253	1	84/07/27	92/07/27		
KAY 10	1961	6	80/09/25	93/09/25		
ALPHA 2	5159	9	83/09/23	93/09/23		
KAY 1 to 8	1182-89	8	79/09/04	92/09/04		
KAY 9	1810	20	80/08/11	93/08/11		
KAY 11	1962	2	80/08/25	96/09/25		
KAY 12	4631	20	83/01/26	92/01/26		
MAC 3	3074	6	80/12/23	93/12/23		
MAC 4	3075	2	80/12/23	93/12/23		
MAC 5	6248	4	84/07/27	93/07/27		
MAC 6	3077	9	80/12/23	93/12/23		
MAC 10 FR	6231	1	84/07/19	93/07/19		
MAC 11 FR	6252	1	84/07/27	94/07/27		
MAC 10	7838	20	86/07/31	90/07/31		
List of clai	ims with expi	ry date and	area			



#### 5.0 HISTORY OF EXPLORATION

Since 1958 the Mackay River area has received extensive exploration by such companies as Helicon, Amax, Riocanex, Umex, Eureka and lately Sirius Resource Corporation. The Frasergold property was first prospected and staked in 1979-80 by Clifford E. Gunn. The property was optioned by him in 1980 to Keron Holdings Ltd. and NCL Resources Ltd.; these companies added additional claims to the original claim group.

In 1982 the entire Frasergold property was acquired by Eureka Resources. In mid July of 1986 the Mac 10 claim block was restaked by Eureka as an addition to tie onto the northwest portion of their Frasergold property.

Prior to the June 1988 program, the work on the Mac 10 claim had been mainly a geochemical soil survey. As well, the streams had been silt sampled at irregular intervals and a heavy minerals pan sample from each stream had been taken. In total 10.5 kilometres of line were established and 210 soil samples taken. Some limited geophysical surveys were attempted, but they were not successful and information from them is not available to the present author. The soil grid produced isolated but aligned geochemical values of up to 720 ppb. Therefore it was decided that the Mac 10 claim contained the projected strike extension of the geochemical anomaly present on the Frasergold property.

#### 6.0 REGIONAL GEOLOGY

The geological map of the MacKay River area is shown by figure 4, which was modified from Bloodgood (1987). The Frasergold property straddles the MacKay River valley that constitutes the surface expression of the suture boundary between two major tectonic belts of the Canadian Cordillera: the Quesnel Trough of the Intermontane Belt on the west and the Omineca Tectonic belt on the east.

There are three tectonostratigraphic sequences in figure 4 which, from older to younger, are:

a) Snowshoe Group of Haydrynian to early Paleozoic age made up of quartz-mica schists and gneisses;

b) Crooked Amphibolite of Pennsylvanian and Permian age constituted by metavolcanic rocks (amphibolite, chlorite schist and chlorite-epidote schist);

c) Quesnel River Group of Middle to Late Triassic age composed of predominantly sedimentary rocks and the Late Triassic to Middle Jurassic volcanic Takla Group.

Bloodgood (1987) has subdivided the Quesnel River Group of the Eureka Peak area into seven units; the black phyllites predominate. The black phyllites underlie, and are in fault contact with, the Takla Group basic volcanic rocks, which occupy the core of the Eureka Peak Syncline.

Jurassic to Early Cretaceous regional dynamothermal metamorphism affected all pre-Tertiary rocks in the area, which show at least two periods of deformation (Bloodgood, 1987).

The rocks of the area have been subjected to regional metamorphism reaching the lower greenschist facies. The metamorphic grade of all units in the Eureka Syncline increases towards the Perseus Anticline. Regionally, large areas reached amphibolite facies with some rocks in the core of the anticline reaching kyanite-staurolite-fibrolite facies.

#### 7.0 PROPERTY GEOLOGY

The Mac 10 claim is underlain by the Quesnel River Group, which consists of seven units (Bloodgood, 1987). Possible gold mineralization in the property would be hosted by а porphyroblastic phyllite, equivalent to Bloodgood's unit 4. That unit is part of a thick sequence of dark grey to black, lustrous phyllites intercalated with limestone, calcareous siltite, light-grey non-calcareous siltite, and greenish-grey carbonate-quartz-sericite schist (Frasergold property, Campbell et al., 1987). The porphyroblastic phyllite occupies a 200 to 300 m-wide zone in the phyllite sequence and is locally known as the "knotted" phyllite.

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The porphyroblasts ("knots") are made up of iron-rich carbonate (probably chiastolite); their formation predates at least one period of deformation because they have been rotated and elongated by cleavage, and commonly have developed pressure shadows composed of a mosaic of fine-grained crystals of quartz and carbonate. A brief description of the lithologies found on the Mac 10 claim and the Frasergold property is given by Campbell et al. (1987).

According to those authors, the "knotted" phyllites occur on the northeastern limb of the northwest-trending Eureka Syncline. They identified four macroscopic structural features:

- So bedding: strikes 133° and dips 30° to 45° to the southwest;
- S1 penetrative, axial plane cleavage: strikes 130° and dips 35° to 85° to the southwest;
- S2 crenulation cleavage: much less developed and "dips 68° to 85° southwest:,
- S3 crenulation cleavage: observed in few places striking 165° to 170° and dipping 60° to 70° to the southwest.

Quartz veining is very common in the phyllites exposed by the trenching. The veins are bedding-parallel, cleavage-parallel, crosscutting, and folded. The observed veins in the two trenches are for the most part short and they pinch out along their longest dimensions in short distances, in accordance with observations on outcrops. There are abundant quartz veins forming disharmonic (subsidiary) folds with wavelengths from a few centimetres to 2 m. The vein material appears to have been locally derived from surrounding rocks, mobilized, and emplaced by dynometamorphic processes, this is suggested by the lack of alteration that precludes the passage of a large volume of fluids.

#### 8.0 JUNE 1988 EXPLORATION

The Mac 10 program conducted by 1257 Geological Ltd. on the behalf of Sirius Resource Corporation was completed between June 1 and June 15. The physical work portion involved the rebuilding and improvement of about one and a half kilometres of former logging road to two wheel drive vehicle accessibility. Branching from the roadwork are two trenches each approximately 100 metres long. These trenches do not expose bedrock over their entire length, but only where it could be reached with reasonable effort. As well locations suitable as pads for a diamond drill were built at each end of the two trenches. The approximate locations of these trenches are; line 35+00 NW at 8+50 SW and line 35+00 NW at 9+00 SW. A total of 14 rock chip samples were taken, with an emphasis on the sampling of quartz-veins containing sulphides. These samples were sent to Kamloops Research and Assay Laboratory Ltd. An outline of the assay procedure is contained in the appendix along with the assay results. The rock samples were taken as part of a one day reconnaissance traverse by the author L. Rowan and assistant geologist M. Morrison. A further one-half day was spent on the claim by consulting structural geologist P. Read. This was part of his analysis of the Frasergold property as a whole and the information produced by him is contained within an internal company report submitted by him to 1257 Geological Ltd.

#### 9.0 STATEMENT OF COSTS

#### MAC 10 PROGRAM JUNE 1 TO JUNE 15, 1988

Project Management Russell R. Davis, P.Eng. 2.25 days at \$400.00/day \$ 900.00 Lorne G. Rowan, B.Sc. 1 day at \$320.00/day 320.00 Mark A. Morrison, B.Sc. 240.00 1 day at \$240.00/day Peter B. Read, Ph.D. 0.5 days at \$350.00/day 175.00 \$ 1635.00 Labour Esmereldo B. Catapia, Draftsman 5 hours at \$40.00/hr \$ 200.00 Bulldozing Services Gruhs Bulldozing Ltd. Mobilization/Demobilization \$ 1870.00 Rental and fuel for roadbuilding and trenching 3180.00 \$ 5050.00 Camp Costs (24 man trailer complex) G.T.S. Remote Site Caterers 3 days at \$515.00/day \$ 1545.00

#### REFERENCES

Bloodgood, M.A., (1987a):

Geology of the Eureka Peak-MacKay River area central British Columbia; British Columbia Ministry of Energy, Mines and Petroleum Resources, Open File Map 1987-9.

Caelles, J.C. and Rowan, L.G., (1988):

Geological Report on the 1987/88 Exploration Work Frasergold Property MacKay River area, Cariboo Mining Division, B.C. Canada; unpubl. report for Sirius Resource Corporation, 1257 Geological Ltd., V.1 and 2.

Campbell, K.V., MacKean, B.E., and Leishman, D.A. (1987): Report on the geology and results of the 1987 exploration on the Frasergold property; unpubl. report for Southlands Mining Corporation, Campbell and Associates, V.1,2, and 3.

Read, P.B. (1988):

Aspects of Structure and Stratigraphy Relevant to Gold Mineralization, Frasergold property; Geotex Consultants Limited, unpubl. report for 1257 Geological Ltd., v.1 and 2.

#### Author's Statement of Qualifications

I, Lorne G. Rowan, do hereby certify:

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- 1. That I am a self-employed geologist with an office at 32595 Dalhstrom Avenue, Abbotsford, B.C.
- 2. That I graduated from the University of British Columbia in 1985 with a degree of Bachelor of Science in Geology.
- 3. That I have practiced my profession since graduation in British Columbia and the Yukon Territory.
- 4. That I am a member in good standing of the Geological Association of Canada.
- That I personally conducted or supervised the geological work program described in this report dated January , 1989.

Dated at Vancouver, British Columbia this day of January, 1989.

Lorne G. Rowan, B.Sc. Geologist

#### 1257 GEOLOGICAL LTD.

Suite 1251 - 409 Granville Street Vancouver, British Columbia Canada V6C 1T2

28 September, 1988

Records Office Geological Branch Ministry of Energy, Mines and Petroleum Resources Room 121 - 525 Superior Street Victoria, B.C. V8V 1X4

Dear Sir or Ma'am:

Re: Statement of Work and Drilling Report Mineral Claims - Cariboo Mining Division

The accompanying Drilling Report and Summary Report of Mapping are to provide further explanation and documentation of work performed on the Mac and Mac 10 claims of our Frasergold Property in the Cariboo Mining Division. These reports are submitted to fulfill the requirements given in the Mineral Act and of a notice by M. MacLachlan of the Gold Commissioner's office in Quesnel, B.C.

Yours truly,

Lorne Rowan

Lorne G. Rowan

LGR:sj

Enclosure

### APPENDIX

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ANALYTICAL PROCEDURES AND RESULTS

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Kamloops *F<sup>-</sup>Search & Assay* Laboratory Ltd.

B.C. CERTIFIED ASSAYERS

912 - 1 LAVAL CRESCENT — KAMLOOPS, B.C. V2C 5P5 PHONE: (604) 372-2784 — FAX 372-1112

#### GEOCHEMICAL ANALYSIS METHODS

#### Sample Preparation

1. Soils - The samples are dried in our geochemical drying oven and then screened through a stainless steel 80 mesh sieve. The minus 80 fraction is reserved for analysis and the plus 80 fraction is discarded (unless we have been requested to save it).

2. Rocks - The samples are dried, crushed, split then ground using a ring-grinder to approximately -100 mesh.

#### Au\_Method

Half to one assay ton of sample is weighed, silver added, along with fluxes and the sample is started as a fire assay. After cupellation the bead is dissolved and the sample is mixed to ensure homogeneity and, after settling, is read on an atomic absorption spectrophotometer using an air acetylene flame.

#### <u>Cu. Pb. Zn. Ag</u> <u>Atomic Absorption</u>

Weigh 1 gram of sample into test tube. Add .5 ml nitric acid. Place in hot water bath for 30 minutes. Add 1.5 ml hydrochloric acid and leave in hot water bath for a further 90 minutes. Bulk to 10 ml with distilled water. Mix thoroughly and read on A.A. Use background correction for Pb. Ag.

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Atomic Absorption partial extraction only.

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NOTE:

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Rejects retained three weeks.

Pulps retained three months unless otherwise arranged.

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## ROCK UNITS

# RECENT Q — ALLUVIUM

RV - OLIVINE BASALT FLOW

TERTIARY

Tv — OLIVINE BASALT

JURASSIC AND CRETACEOUS

JKg – granodiorite , Monzonite , quartz DIORITE

TRIASSIC AND JURASSIC TRJa — BASALTIC TUFF AND BRECCIA

UPPER TRIASSIC

uTRa1 — PHYLLITE , ARGILLITE , QUARTZITE , schist , minor greenstone uTRa2 - GREENSTONE, AUGITE, PORPHYRY

BRECCIA , TUFF uTRa3 - UNDIVIDED uTRa! AND uTRa2

PENNSYLVANIAN (?) AND PERMIAN (?)

PPab - ANTLER FORMATION - AMPHIBOLITE, HORNBLENDE - CHLORITE SCHIST ub — SERPENTINE

PALEOZOIC

HPsm - SNOWSHOE FORMATION - PHYLLITE, SCHIST AND GNEISS

ARCHEAN

APgn - QUESNEL LAKE GNEISS

GEOLOGIST

DRAWN CHECKED E.B.CATAPIA

J.M.ASHTON

Part 1 of 2 GEOLOGICAL BRANCH ASSESSMENT REPORT 1257 GEOLOGICAL LTD. SIRIUS RESOURCE CORPORATION FRASERGOLD PROJECT REGIONAL GEOLOGY SCALE | 50,000 M. BLOODGOOD

DATE

MARCH 1988

PLATE Nº 3