# GILLIAN MINES LTD.

GOOSLY LAKE PROPERTY

OMINECA MINING DIVISION 93 L/1 W

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### **PROPERTY FILE**

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R. R. CULBERT, PhD, P.Eng.

12 November, 1976.

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Geochemical, Geophysical and Geological Data (includes Map in Pocket) Compiled by John Barakso

APPENDIX "B"

Note Regarding Reconnaissance E-M Survey Gillian East and West Claims by Corby H. Stanley, Geophysicist

#### Introduction

Examination and evaluation of Gillian Mines Ltd. property located near Goosly Lake, British Columbia, was authorized by J.P. Stevenson. The area was visited by the writer in early November of 1976 at which time available outcrop was examined. In addition to the field examination, reports of previous work were reviewed and valuable information was obtained through discussions with John Barakso and Dr. K.I. Lu, who had worked on the property previously.

#### Claims Location and Access

Gillian Mines Ltd. property consists of five contiguous claims comprising sixty units. This claim block is located about two miles southwest of Goosly Lake and twenty-five miles southeast of Houston, British Columbia. Access is by way of Buck Creek Road from Houston. A map showing the claims relative to local topographic features follows this page. The Gillian property includes:

CLAIM	RECORD NO.	NO. OF UNITS
DOUGLAS 1		12
LOYD	238(2)	8
LOYD NORTH	239(2)	14
DIANE	249(3)	6
GILLIAN WEST	205(1)	12
GILLIAN EAST	204(1)	8

#### Geology

Geology of the Owen Lake, Parrott Lakes and Goosly Lake area has been described in a recent publication by Church \*. He shows the region underlain by "... a diverse suite of Mesozoic and Tertiary volcanic rocks and a number of small intrusions...".

Drill cuttings and what little outcrop is available from the Gillian property show the claims to be underlain by tuffs and flows intruded on the west by a moderately basic stock. This intrusive apparently contains K-feldspar in sufficient amounts to be classified, at least in part, as a syenogabbro.

In the vicinity of this stock some "green patch tuffs" outcrop (cf. green tuffs of Kuroko districts in Japan) which attests to the submarine character of at least some of the volcanics. These tuffs become courses to the south. West and northwest of the intrusive the terrain drops into a broad, swampy valley without outcrop. Beyond this is a low, circular hill on whose east flank shallow trenching exposes brecciated "rhyolite". The brecciated material consists of angular

\* Church (1970); Geology of the Owen Lake, Parrott Lakes and Goosly Lake Area, G.E.M., pp. 119 - 125.



white clasts surrounded by a matrix of quartz and a dark clayey substance which likely includes fine pyrite. The breccia grades into massive and flow laminated rhyolite to the east.

Since the rhyolite and particularly the breccia are of central interest, a few comments are warranted. The rhyolite coincides with part of a larger positive geographic feature, circular in form, which suggests a volcanic dome. This could be proven, or otherwise, by a series of shallow hand or bulldozer trenches.

The breecie is composed of angular clasts of relatively intensely altered material - especially through sericitization - and is therefore a true "white pryolite breccia". It is unlikely to have formed by steam explosion but rather by some autogeneous process. Gravity collapse during dome growth, flow top brecciation or intrusion brecciation are three possibilities.

Float in the western part of the property is dominately pyroclastic, often acidic and with pyrite. Such rock is not seen in the eastern property float. Some of the tuffs show strong alteration.

#### Previous Work

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The Gillian Property has been tested by soil geochemistry, an I.P. survey, two VLF-EM surveys and II drill holes with multielement geochemistry.

Three of the holes lie adjacent to the basic intrusive stock on east side of the property, and the others are clustered in the valley immediately northeast of what may be a rhyolite dome. Swampy conditions here apparently did not allow stepping out of these holes, and a winter program should be considered for any further drilling. As a possible guide to nearby mineralization, the holes were sampled at 10 ft. intervals and analysed for Cu, Pb, Zn, Ag, As, Hg and Mn. The results, and cumulative frequency diagrams as compiled by J. Barakso, are given as an appendix. The anomalies, while of no great intensity or clear patterns, are considered significant for rock geochemistry within rhyolites adjacent to a possible dome. Alteration and pyritization was also encountered in this drilling. The three drill holes near the basic stock were short and did not explain an I.P. anomaly in this area. They did encounter lapilli tuffs, however, with fairly high rock - geochemistry values. This tuff and the intrusive are clearly similar to lithologies at the Sam Goosly deposit.

Three of the VLF-EM lines in a survey by G. Stanley (see appendix) show interesting cross-overs in the area immediately east of the possible dome, which is geologically a favorable setting for a Kuroko deposit. This should be given attention, but in view of the deep overburden (including pyritic clays) encountered in drilling and the likelihood of fracture systems in this area, VLF-Em is difficult to interpret. In searching for massive sulphide bodies here, a more discriminating EM system is recommended - at least "shootback" and preferably TURAM.

#### Conclusions and Recommendations

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The Gillian Property lies within a metalliferous belt and has potential for volcanogenic massive sulphide ore. The area of main interest coincides with the exposure of massive and brecciated rhyolite located near the centre of the property. Rock and soil geochemical anomalies and VLF-EM cross-overs occur here and the geological environment seems right for a Kuroko type deposit. Economic mineralization might occur within rhyolite breccia or on the flanks of the inferred dome.

The following program with estimated costs is recommended:

(1)	Systematic mapping of float by a geologist familiar with Kuroko geology	\$ 2,000.00
(2)	Trenching of shallow overburden over the central hill to obtain more geological information about the rhyolite	5,000.00
(3)	An E.M. survey using a relatively large unit, a shootback or TURAM system	9,000.00
(4)	In the area around the "rhyolite dome" 30 - 40 drill holes for overburden and rock geochemistry	
	35 x 200 feet @ \$6.00/foot	42,000.00
	Contingencies 10%	5,000.00
	TOTAL	\$63,000.00

ly submitted, 07 R. R. CUL 1EK Đi ørt, Pho, P.Eng

November 12, 1976

HOLE SUMMARIES REPORT of PERCUSSION DRILLING PROGRAM October 2 - 15, 1976 for GILLIAN MINES LTD.

- PG1 Collared in breccia on acidic volcanic outcrop -90° alternating green and grey-green and cream rocks with micro brecciation features common in chips: chert common: minor pyrite. Chloritic, saussuritization alteration.
- PG2 East of PG1 -45° southerly (approximately 170°) on breccia similar to rocks of PG1 with less cream coloured minor pyrite.
- PG3 West of PG1 -45° southerly (210°) overburden eighteen feet. Similar to PG1 rocks, slightly more pyrite than PG1.
- PG 4 North of outcrop PG1 3, fifty-eight feet of overburden -45° (205°) creamy white rock chips of acidic volcanics almost throughout hole. Significantly more pyrite than previous holes - rock highly altered (argillic) locally and mildly pervasive argillic alteration throughout.
- PG 5 Drilled from same set-up as PG 4 -90° top of hole similar to hole PG4 but remainder similar to PG1 - 3. Pyrite stronger in this hole than any previous (up to 2% rock-chip volume).
- PG 6 Approximately 50 feet north PG5 -90° overburden approximately sixty-five feet alternating creamy and green acidic volcanics, rare pyrite.
- PG 7 Approximately 150 feet at 120° from PG4 and 5 -45° (225°). Similar to hole PG5 (in lower part). Pyrite.
- PG 8 Same set up as PG7 similar to hole PG4. Pyrite common some very altered sections "clay balls" common.

