521178

GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SUMMARY REPORT AND EXPLORATION RECOMMENDATIONS

VMS 1-6 CLAIMS

NORTH BARRIERE LAKE AREA
KAMLOOPS MINING DIVISION, BRITISH COLUMBIA

N.T.S. MAP SHEET 82-M-5W
LAT. 51°17' N LONG. 119°49° W

FOR

ARI CAPITAL CORP.

BY

MICHAEL FOX, P.Geol.
CALGARY, ALBERTA

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CERTIFICATE

I, Michael Fox, of 120 Hawkwood Hill N.W., Calgary, Alberta certify that:

1. I am a member in good standing of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

2. I am a graduate of the University of British Columbia and hold a Bachelor of Science Degree in Geology (1974).

3. I have practiced my profession continuously since 1974 and I have worked in the field of mineral exploration since 1965.

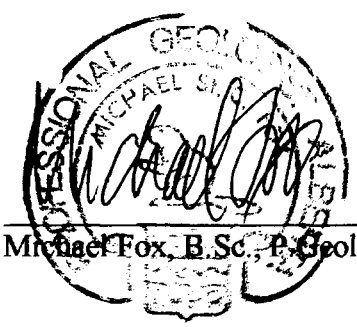
4. I do not have nor have I ever had any interest, direct, indirect or contingent, in the shares of Ari Capital Corp. or in the VMS 1-6 claims, or in any other prospect within ten kilometres of the VMS claims, and I am not an Insider of any company having an interest in the VMS 1-6 claims, or any other mining property within a ten kilometre radius of the VMS 1-6 claims.

5. I have conducted a completely independent analysis of data available for this property.

6. I have spent two days examining the original mineral occurrences at the VMS 1-6 claims described in this report.

7. I hereby consent to the use of this report, in it's entirety, by ARI CAPITAL CORP., for the purposes of filing a prospectus, or for other legitimate and legal purposes.

DATED at Calgary, Alberta this 19th day of March, 2001.



Michael Fox, B.Sc., P.Geol.

SUMMARY

The VMS 1-6 claims are a contiguous block of two-post mineral claims located in the Adams Plateau region in the Kamloops Mining Division of central British Columbia on the south side of North Barriere Lake in N.T.S. map-area 82-M-5W. The claims are accessible by logging roads branching from the main road between the town of Barriere and the community of East Barriere Lake. The claims are underlain by Unit "EBG" and its subunits of the Eagle Bay Formation (see legend accompanying Figure 3), which are Devonian or older, and apparently form the lower, oldest part of the Eagle Bay Formation. In the Adams Plateau region, Eagle Bay Formation rocks host numerous volcanogenic massive sulphides type and other types of mineral deposits; many of these have produced small tonnages of ore.

The claims cover an occurrence of volcanogenic type massive sulphides mineralization consisting of boulders of massive sulphides, containing pyrrhotite, pyrite, chalcopyrite, and gold, discovered late in 1992. During September and October, 1993, Agate Bay Resources Ltd. conducted geological mapping and a Genie EM and ground magnetic survey over a 13.3 km grid positioned to cover the mineralized trend. Agate Bay Resources Ltd. subsequently excavated four trenches across EM conductors identified by the Genie EM survey, and discovered massive sulphides type pyrite-pyrrhotite-magnetite-chalcopyrite mineralization hosted by rocks of the Eagle Bay Formation.

The VMS claims cover the west end of the 1994 grid and are situated along the strike trend of massive sulphides type mineralization similar to that which occurs at the EBL prospect two kilometres to the east, and to that which occurs at the Harper Creek prospect approximately 20 km to the north, which is estimated to contain reserves of 90 million tonnes. These deposits occur within a stratigraphic zone that is transitional between a lower, predominantly mafic volcanic or metavolcanic sequence and an upper, predominantly sedimentary or metasedimentary sequence in a differentiated volcanic pile. Felsic volcanic and felsic metavolcanic rocks occur at about the same stratigraphic level. Regionally, many of the volcanogenic massive sulphides type deposits in the Adams Plateau area (including the Rea and Homestake deposits) occur in felsic volcanic rocks associated with similar transitional contacts within the Eagle Bay Formation.

Exploration done to date at the VMS claims is at a preliminary stage. The discovery of massive pyrite-pyrrhotite-chalcopyrite (by trenching) is a positive result that validates the geophysical methods used to explore the property. Similar mineralization at the EBL and Harper Creek deposits is very extensive down dip and along strike, with considerable variations in grade. The VMS claims should be carefully remapped to better evaluate the distribution of felsic volcanic and metavolcanic lithologies in the stratigraphic sequence. These units are typically thin relative to the overall thickness of the Eagle Bay Formation, but have great economic importance.

The recommended budget provides for a two phase program consisting of a first phase of grid emplacement, geological mapping, geophysical surveying, and trenching. Provision is made for a second stage consisting of reconnaissance diamond drilling.

INTRODUCTION

LOCATION AND ACCESS

The VMS 1-6 claims are a contiguous block of two-post mineral claims located in the Adams Plateau region in the Kamloops Mining Division of central British Columbia (Figure 1). The claims are situated on the south side of North Barriere Lake in N.T.S. map-area 82-M-5W. The centre of the claim block is located at approximately LAT. 51°18' N and LONG 119°49'W (Figure 2). The claims are accessible by logging roads branching from the main road between the town of Barriere and the community of East Barriere Lake.

PROPERTY AND OWNERSHIP

The property consists of six contiguous two post mineral claims described as follows:

Claim	No of Units	Tenure No.	Record Date
VMS 1	1	381581	October 6, 2000
VMS 2	1	381582	October 6, 2000
VMS 3	1	381583	October 6, 2000
VMS 4	1	381584	October 6, 2000
VMS 5	1	381585	October 6, 2000
VMS 6	1	381586	October 6, 2000

The recorded title holder of the claims is Andrew G. Harman of Vancouver, B.C.

PHYSIOGRAPHY AND GLACIATION

The Adams Plateau region is part of the Shuswap Highland division of the Interior Plateau physiographic province of British Columbia. The Shuswap Highland is characterized by plateau areas of moderate relief rising from 5,000' to 7,000' above sea level, dissected by the Clearwater, North Thompson, Barriere, Adams, and Shuswap Rivers and their tributaries. Some of the peaks in the Shuswap Highland reach elevations of 9,000' and although the region has been glaciated, most ridges and mountain tops are rounded, and except for the highest elevations, do not exhibit the classic landforms of alpine glaciation. During the Pleistocene, the Interior Plateau was covered by an ice sheet, the upper surface of which reached elevations of 8,000'. Valleys were generally deepened and valley walls were steepened by glacial erosion, and the relief of upland plateau areas was diminished.

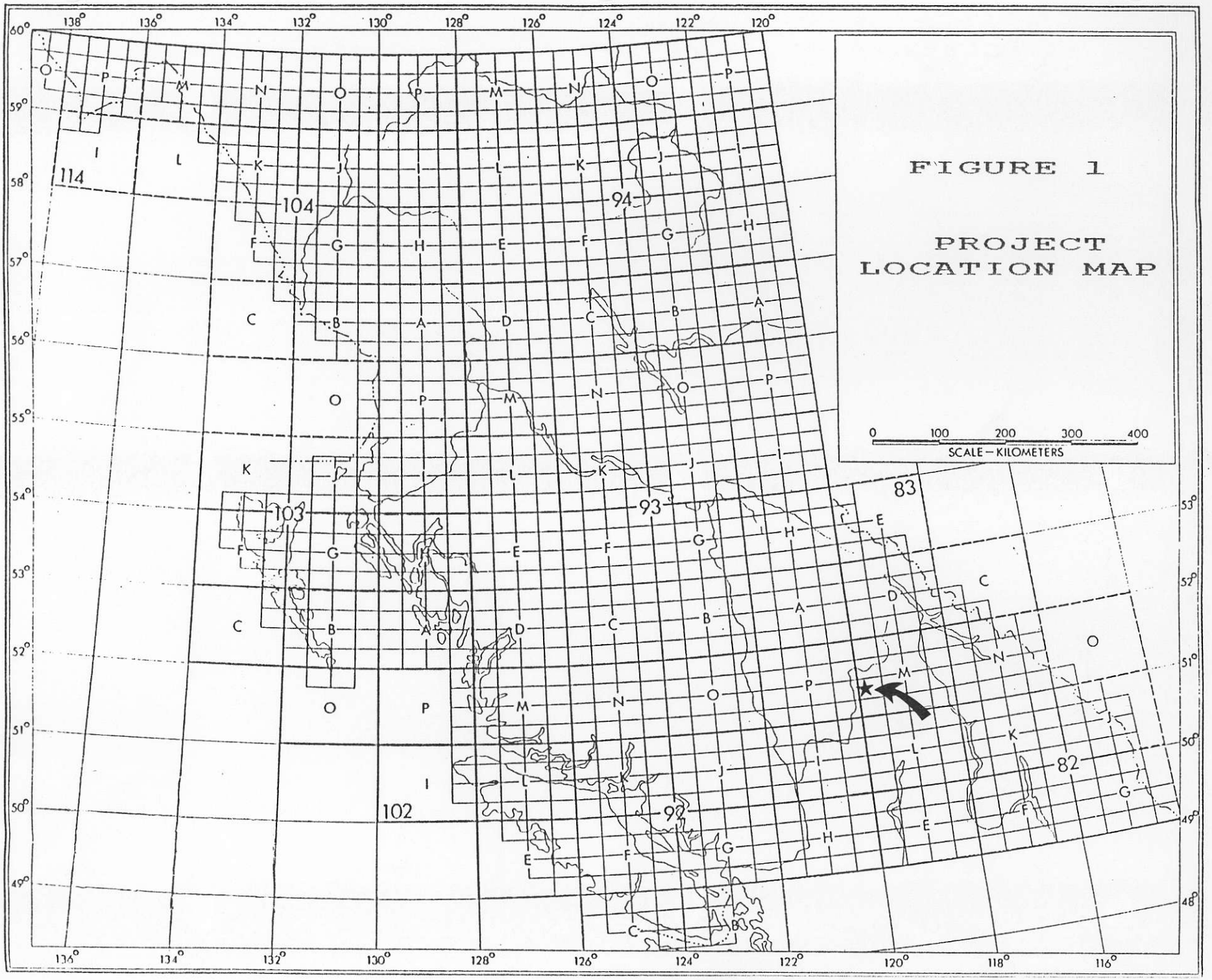


FIGURE 1
PROJECT LOCATION MAP
0 100 200 300 400
SCALE – KILOMETERS
114
104
94
103
93
83
102
92
82

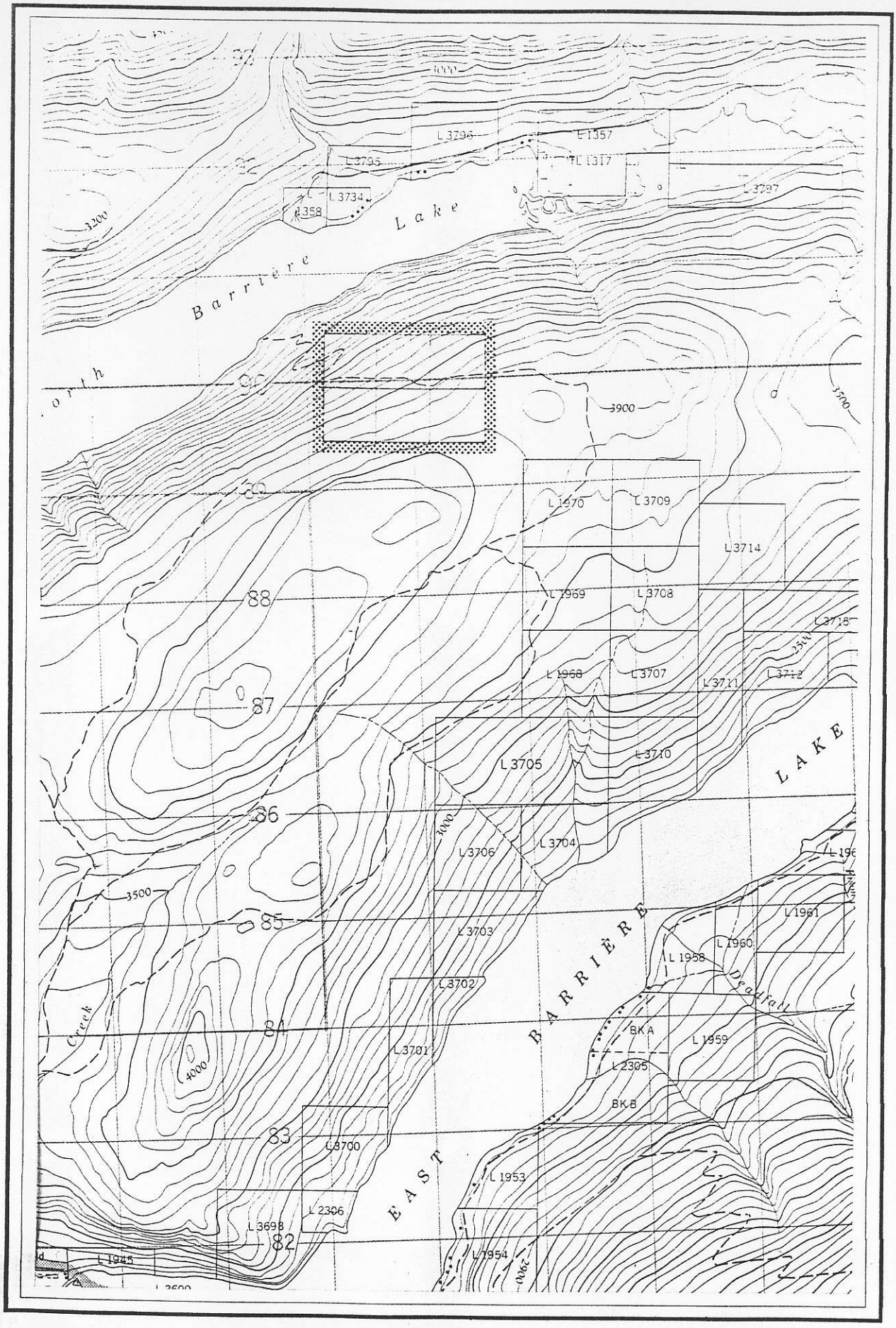


Figure 2. Claim Location Map

The VMS 1-6 claims are situated towards the northeast end of a twelve kilometre long, southwest-northeast trending height of land which separates North Barriere Lake and East Barriere Lake. This upland is about six kilometres wide and at higher elevations it exhibits a plateau-like surface of subdued relief ranging from 3,500' to 4,500' above sea level. Ridge tops are rounded and gently sloping. The northwest facing side of the upland, which overlooks North Barriere Lake, is very steeply sloping and forms part of the south wall of Barriere River valley, which was deepened by glacial erosion. The southeast facing side of the height of land, which overlooks East Barriere Lake, displays similar geomorphic features, but is not as steeply sloping.

Overburden thickness is probably only 5 m to 10 m over most of the upland parts of the height of land separating the two lakes. Glacial deposits are generally absent along the ridge and overburden mainly consists of a disorganized colluvium of bedrock fragments, decomposed organic material and poorly developed soil. Some morainal deposits may be present in low lying areas of the height of land and along the north facing valley wall overlooking North Barriere Lake.

PREVIOUS WORK

The claims eover an occurrence of voleanogenic type massive sulphides mineralization consisting of boulders of massive sulphides, containing pyrrhotite, pyrite, chalcopyrite, and gold, discovered late in 1992 along new logging road cuts. In early 1993 the property was optioned to Agate Bay Resources Ltd. During September and October, 1993, Agate Bay Resources Ltd. conducted geological mapping and a Genie EM and ground magnetic survey over a 13.3 km grid established over the Norr 1-4 and Barr 1-4 claims which had been staked to cover the mineralized trend. Agate Bay resources Ltd. subsequently excavated four trenches across EM conductors identified by the Genie EM survey, and discovered massive sulphides type pyrite-pyrrhotite-magnetite-chalcopyrite mineralization hosted by rocks of the Eagle Bay Formation.

Other work carried out near the claims includes the drilling of five shallow drill holes into sulphide occurrences exposed along the steep slopes above North Barriere Lake, north of the Norr and Barr elaims and the current VMS 1-6 claims. Some grid-controlled geophysical surveying was carried out to the south of the VMS claims, and three anomalous zones were delineated but no follow up work was reported. A considerable amount of work has been done on the EBL property two kilometres to the east, including geological mapping, geophysical and geochemical surveying, and diamond drilling.

GEOLOGY

REGIONAL GEOLOGY

The geology of the Shuswap Highland area extending southeastwards from the vicinity of the town of Clearwater to the southeast side of Adams Lake has been mapped in detail by personnel of the B.C. Ministry of Energy and Mines, Geological Survey Branch. This work was carried out from 1977 to 1980 and the results were published at a scale of 1:100,000 in 1984 as Preliminary Map No. 56, covering portions of N.T.S. map-areas 82-L-13, 82-M-3, 4, 5, 6, 12, and 92-P-1, 8, and 9. An excerpt from this map covering the area around the VMS 1-6 claims is included with this report as Figure 3.

The geological mapping elucidated the stratigraphy and structure of rocks of the Fennell and Eagle Bay Formations adjacent to the western and southern margins of the Baldy batholith. Both the Fennell Formation and the Eagle Bay Formation consist of successions of mafic and felsic volcanic rocks, related volcaniclastic and volcanisedimentary rocks, turbiditic and fine-grained clastic sediments, cherts, and carbonate rocks. The Fennell Formation has been regionally metamorphosed to lower greenschist facies. Metamorphic grade is slightly higher in Eagle Bay Formation rocks, which are now composed predominantly of phyllites and schists. Fennell Formation rocks outcrop several kilometres west of the VMS claim group in a steeply dipping, north-northwesterly striking belt which is in (thrust) fault contact with Eagle Bay Formation rocks to the east. In the vicinity of the VMS 1-6 claims, Eagle Bay Formation rocks are complexly deformed, but the dominant structure appears to be a faulted, northwesterly trending, synformal fold. The different divisions and units of the Fennell Formation and the Eagle Bay Formation are described in the legend accompanying Figure 3.

PROPERTY GEOLOGY

The VMS 1-6 claims cover and extend westwards beyond the western sector of the 13.3 line kilometre grid established by Agate Bay Resources Ltd. in 1993 over the now lapsed Norr and Barr claims. The claims are underlain by Unit "EBG" and its subunits of the Eagle Bay Formation (see legend accompanying Figure 3), which are Devonian or older, and apparently form the lower, oldest part of the Eagle Bay Formation.

Geological mapping carried out over the grid area identified a few outcrops of chlorite-sericite schist along road cuts in the area of the VMS 5 claim, but most of the bedrock exposures occur at the east end of the grid, a few hundred metres beyond the eastern boundary of the VMS 1-6 claim block. There, bedrock exposures consist of volcanic and volcanisedimentary rocks with shallow dips (20°) to the southwest, metamorphosed to chlorite-sericite schist, chlorite-quartz-sericite schist, and sericite-quartz-biotite schist, in places altered to skarn. The exposures of sericite-quartz-biotite schist are variably mineralized with disseminated to semi-massive lenses of pyrite and chalcopyrite with minor pyrrhotite, subparallel to foliation. More massive pods,

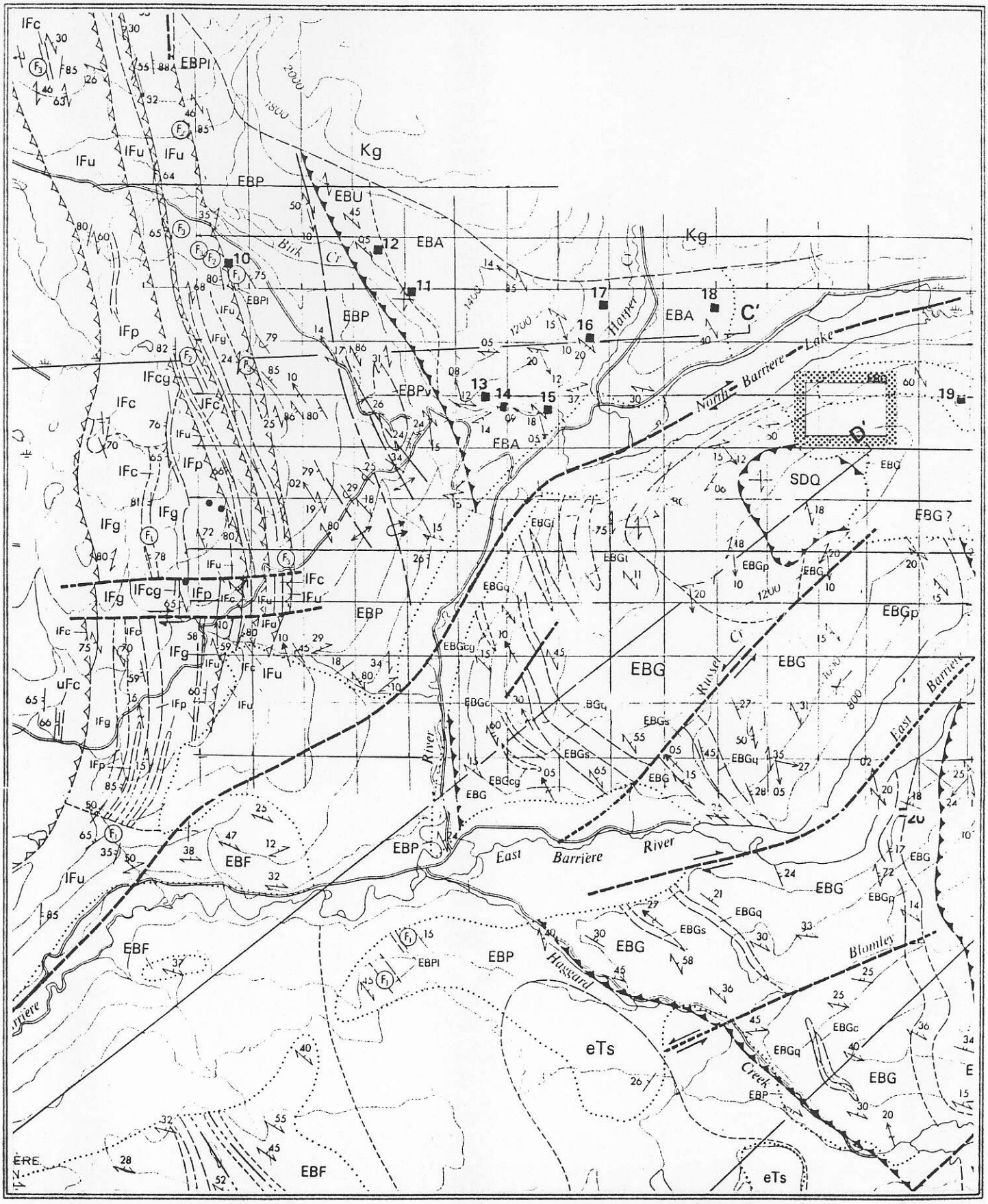


FIGURE 3 REGIONAL GEOLOGY

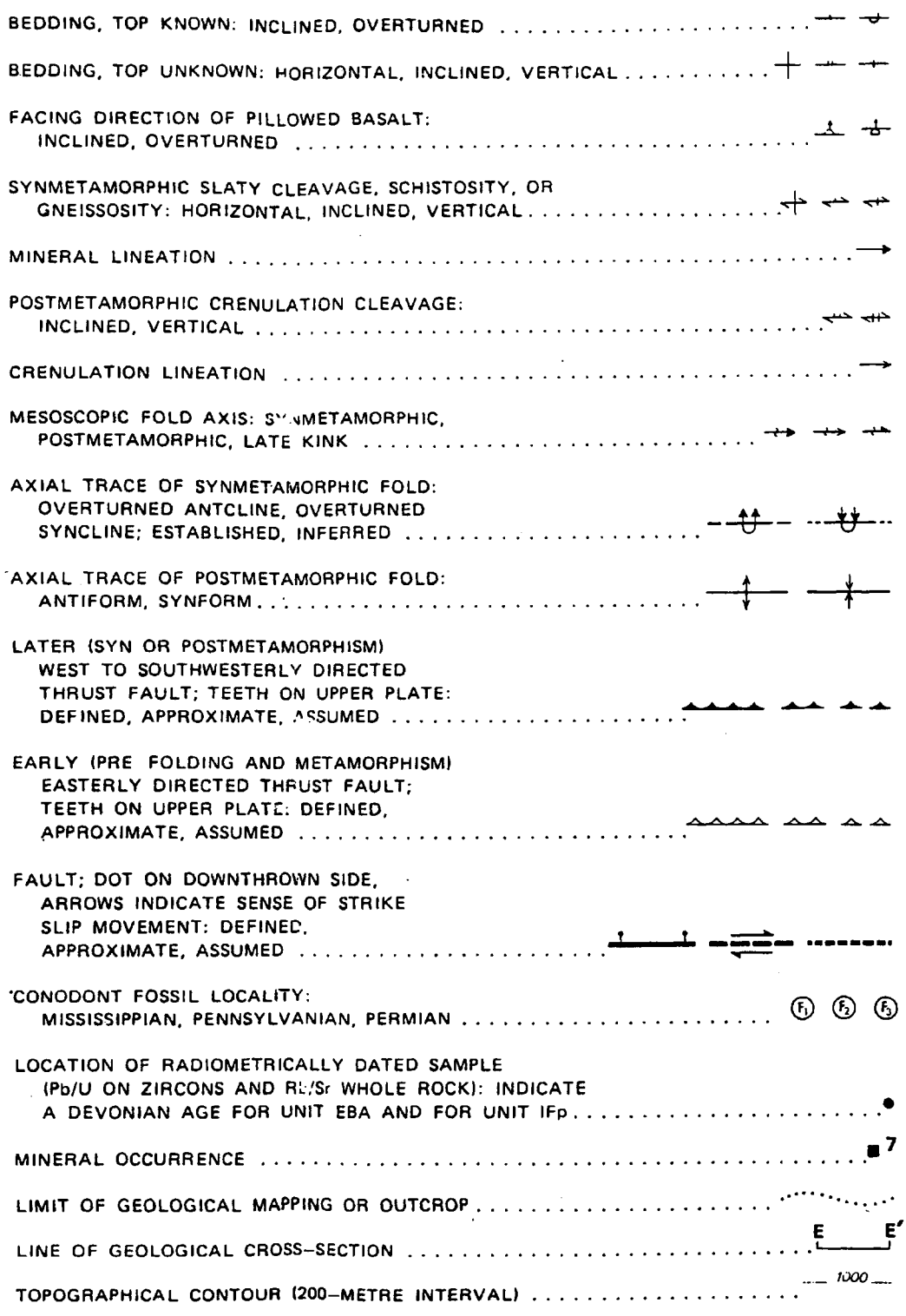


FIGURE 3. (continued)
LEGEND TO ACCOMPANY GEOLOGIC MAP

MIOCENE OR PLIOCENE

mTb PLATEAU LAVA: OLIVINE BASALT

EOCENE

KAMLOOPS GROUP

eTs **SKULL HILL FORMATION AND RELATED ROCKS:** ANDESITE AND BASALT; INCLUDES MINOR AMOUNTS OF MUDSTONE AND SHALE IN THE VICINITY OF ALEX AND HAGGARD CREEKS

eTc **CHU CHUA FORMATION:** SANDSTONE, SHALE, CONGLOMERATE, COAL

CRETACEOUS OR TERTIARY

qp QUARTZ–FELDSPAR PORPHYRY

CRETACEOUS

BALDY BATHOLITH, RAFT BATHOLITH, AND RELATED ROCKS

Kg GRANITE AND GRANODIORITE

AGE UNKNOWN

di FOLIATED DIORITE, QUARTZ DIORITE, AND GABBRO

ub SERPENTINITE

LATE DEVONIAN

Dgn GRANITE AND GRANODIORITE ORTHOGNEISS; Dgnp INCLUDES SILLIMANITE–BEARING PARAGNEISS

FENNELL FORMATION

UPPER STRUCTURAL DIVISION

uFb GREY AND GREEN PILLOWED AND MASSIVE META–BASALT; MINOR AMOUNTS OF BASALTIC BRECCIA, TUFF, DIABASE, GABBRO, AND CHERT

uFc GREY AND GREEN BEDDED CHERT

LOWER STRUCTURAL DIVISION

lFc GREY AND GREEN BEDDED CHERT, CHERTY ARGILLITE, SLATE, AND PHYLLITE

lFb GREY AND GREEN PILLOWED AND MASSIVE META–BASALT; MINOR AMOUNTS OF BASALTIC BRECCIA AND TUFF

lFg GABBRO, DIORITE, DIABASE

lFp LIGHT TO MEDIUM GREY QUARTZ–FELDSPAR PORPHYRY RHYOLITE

lFs LIGHT TO DARK GREY SANDSTONE, SILTSTONE, SLATE, PHYLLITE, AND QUARTZITE; MINOR AMOUNTS OF LIMESTONE AND CHERT; IN PLACES INCLUDES GREY TO GREEN QUARTZOSE AND FELDSPATHIC PHYLLITE (METATUFF)

lFcg INTRAFORMATIONAL CONGLOMERATE; CLASTS DERIVED EXCLUSIVELY FROM FENNELL FORMATION LITHOLOGIES

lFu UNDIVIDED; MAINLY lFc, lFg, and lFb, BUT MAY INCLUDE ANY OR ALL OF ABOVE ROCK TYPES

FIGURE 3. (continued)
LEGEND TO ACCOMPANY GEOLOGIC MAP

EAGLE BAY FORMATION (EBP TO EBG)

MISSISSIPPIAN

EBP — DARK GREY PHYLLITE AND SLATE WITH INTERBEDDED SILTSTONE, SANDSTONE, AND GRIT; MINOR AMOUNTS OF CONGLOMERATE, LIMESTONE, AND METATUFF; EBPl–LIMESTONE; EBPv–METAVOLCANIC BRECCIA AND TUFF

DEVONIAN AND/OR MISSISSIPPIAN

EBF — LIGHT TO MEDIUM GREY, RUSTY WEATHERING FELDSPATHIC PHYLLITE AND FRAGMENTAL PHYLLITE DERIVED FROM INTERMEDIATE TO FELSIC TUFF AND VOLCANIC BRECCIA; MINOR AMOUNTS OF DARK GREY PHYLLITE AND SILTSTONE; EBFq–LIGHT GREY MASSIVE "CHERTY QUARTZITE" (SILICEOUS EXHALITE ?)

DEVONIAN

EBA — LIGHT SILVERY GREY TO MEDIUM GREENISH GREY SERICITE–QUARTZ PHYLLITE AND SERICITE–CHLORITE–QUARTZ PHYLLITE DERIVED FROM FELSIC TO INTERMEDIATE VOLCANIC AND VOLCANICLASTIC ROCKS INCLUDING PYRITIC, FELDSPATHIC, AND COARSELY FRAGMENTAL VARIETIES; LESSER AMOUNTS OF DARK GREY PHYLLITE, SILTSTONE, AND GREEN CHLORITIC PHYLLITE; INCLUDES BIOTITE–FELDSPAR–QUARTZ SCHIST AND GNEISS, BIOTITE–QUARTZ HORNFELS AND AMPHIBOLITE ADJACENT TO BALDY BATHOLITH; EBAf–FELDSPAR PORPHYRY, FELDSPATHIC PHYLLITE, PYRITIC SERICITE–FELDSPAR–QUARTZ PHYLLITE, METAVOLCANIC BRECCIA; EBAi–SERICITIC QUARTZO–FELDSPATHIC SCHIST AND GNEISS DERIVED FROM FELSIC INTRUSIVE ROCKS; EBAu–UNDIVIDED EBA and EBAi

DEVONIAN (?) AND/OR OLDER (?) (UNITS EBU TO EBG)

EBU — LIGHT TO DARK GREEN CHLORITIC PHYLLITE, DARK GREY PHYLLITE AND SILTSTONE, LIMESTONE, QUARTZITE

EBM — GREY AND GREEN VESICULAR AND PILLOWED METABASALT, GREENSTONE, CHLORITE SCHIST; MINOR AMOUNTS OF BEDDED CHERT, SILICEOUS PHYLLITE AND FINE–GRAINED QUARTZITE

EBK — BANDED LIGHT GREY AND GREEN ACTINOLITE–QUARTZ SCHIST AND EPIDOTE–ACTINOLITE–QUARTZ ROCK; LESSER AMOUNTS OF GARNET–EPIDOTE SKARN, CHLORITIC SCHIST, AND SERICITE–QUARTZ SCHIST

DEVONIAN (?) AND/OR OLDER (?) (UNITS EBU TO EBG) *(CONTINUED)*

EBL — CALCAREOUS BLACK PHYLLITE, DARK GREY LIMESTONE AND ARGILLACEOUS LIMESTONE

EBS — GREY AND GREEN PHYLLITIC SANDSTONE AND GRIT, PHYLLITE, AND QUARTZITE; LESSER AMOUNTS OF LIMESTONE, DOLOSTONE, GREEN CHLORITIC PHYLLITE, SERICITE–QUARTZ PHYLLITE, AND FELDSPATHIC SERICITE–QUARTZ PHYLLITE; EBSq–LIGHT GREY TO WHITE QUARTZITE; EBSc–LIMESTONE, DOLOSTONE, MARBLE; EBSb–GREENSTONE, PILLOWED METABASALT, CHLORITIC PHYLLITE; EBScg–CONGLOMERATE; EBSp–GREY PHYLLITE AND SILTSTONE; EBSt–SIDERITE–SERICITE–QUARTZ PHYLLITE AND FELDSPATHIC PHYLLITE (METATUFF); EBSy–PYRITIC SERICITE–QUARTZ PHYLLITE AND CHLORITOID–SERICITE–QUARTZ PHYLLITE

EBG — MEDIUM TO DARK GREEN CALCAREOUS CHLORITE SCHIST AND FRAGMENTAL SCHIST DERIVED LARGELY FROM MAFIC TO INTERMEDIATE VOLCANIC AND VOLCANICLASTIC ROCKS; LESSER AMOUNTS OF LIMESTONE AND DOLOSTONE; MINOR AMOUNTS OF QUARTZITE, GREY PHYLLITE, AND SERICITE–QUARTZ PHYLLITE; EBGc–LIMESTONE, DOLOSTONE, MARBLE; EBGt–TSHINAKIN LIMESTONE MEMBER–MASSIVE, LIGHT GREY FINELY CRYSTALLINE LIMESTONE AND DOLOSTONE; EBGs–DARK TO LIGHT GREY SILICEOUS AND/OR GRAPHITIC PHYLLITE, CALCAREOUS PHYLLITE, LIMESTONE, CALC–SILICATE, CHERTY QUARTZITE; MINOR AMOUNTS OF GREEN CHLORITIC PHYLLITE AND SERICITE–QUARTZ PHYLLITE; EBGq–LIGHT TO MEDIUM GREY QUARTZITE; EBGp–DARK GREY PHYLLITE, CALCAREOUS PHYLLITE AND LIMESTONE; MINOR AMOUNTS OF RUSTY WEATHERING CARBONATE–SERICITE–QUARTZ PHYLLITE (METATUFF ?); EBGcg–POLYMICTIC CONGLOMERATE

SPAPILEM CREEK–DEADFALL CREEK SUCCESSION (SDQ)

LOWER CAMBRIAN (?) AND/OR HADRYNIAN (?)

SDQ — LIGHT TO DARK GREY QUARTZITE, MICACEOUS QUARTZITE, GRIT, AND PHYLLITE; LESSER AMOUNTS OF CALCAREOUS PHYLLITE, CARBONATE, AND GREEN CHLORITIC SCHIST; NORTHEASTERN EXPOSURES INCLUDE STAUROLITE–GARNET–MICA SCHIST, CALC–SILICATE SCHIST, AND AMPHIBOLITE

FIGURE 3. (continued)
LEGEND TO ACCOMPANY GEOLOGIC MAP

lenses, irregular clots, and veins of pyrite, chalcopyrite, and magnetite occur in chlorite rich metavolcanics and calc-silicate skarn.

Structurally, the above-described rocks form a complexly folded, southwesterly dipping sequence in the northeast limb of a northwesterly trending synformal fold.

ECONOMIC GEOLOGY

Fennell Formation and Eagle Bay Formation rocks host numerous volcanogenic massive sulphides type and other types of mineral deposits; many of these have produced small tonnages of ore. These mineral deposits may be categorized as follows:

Table 1. Mineral deposit types and geological environments, Adams Plateau – Clearwater - Vavenby area. (after B.C. MEMPR Geological Survey Branch Paper 1987-2)

Deposit Type	Commodities	Rock Association	Examples
1. Stratabound massive to semi-massive sulphides in metasedimentary rocks	Ag, Pb, Zn	Early Cambrian graphitic and siliceous phyllite, limestone, quartzite, calc-silicate schist and ch;lorite schist of Units EBGs (Adams Plateau) and EBQ (Mt. McClennan)	Lucky Coon, Elsie, King Tut, Mosquito King, Spar, Pet, Red Top, Snow, Sunrise
2. Disseminated sulphides associated with Devonian intrusive rocks	Cu, Mo	Units EBQ and EBA adjacent to Devonian orthogneiss Unit Dgn	Harper Creek, EBL, Lydia, VM, VAV, CW?
3. Volcanogenic massive sulphides	Au, Ag, Zn, Pb, Cu, barite	Devono-Mississippian intermediate to felsic metavolcanic rocks of Units EBA and EBF	Homestake, Rea, Beca, Joe, Birk Creek showings
4. Pyrite-fluorite replacement	U, flourspar	Devono-Mississippian trachytic volcanic and intrusive rocks of Unit EBFt	Rexspar, Bullion
5. Volcanogenic massive sulphides	Cu, Zn, Co	Pennsylvanian-Permian oceanic basalt of the Fennell Formation	CC (Chu Chua)

Deposit type 2 (disseminated sulphides associated with volcanic rocks) and type 3 (volcanogenic massive sulphides) are the most relevant to the VMS claims. The most economically significant of these types of deposits known in the project area are described below to provide a comparative evaluation of the mineralization at the VMS claims and place it in a regional framework.

Type 2 Deposits

Harper Creek

The Harper Creek deposit is located at the headwaters of Harper Creek, about 10 km southwest of Vavenby, some 20 km northerly from the VMS claims, and contains about 90 million tonnes of drill indicated and inferred ore grading 0.4% Cu. The mineralization is hosted by Unit EBA of the Eagle Bay Formation, which consists of a succession of light silvery-grey quartz-sericite phyllites interbedded with subordinate green chloritic phyllites, dark grey carbonaceous phyllites, and light grey sericitic quartzite, all locally intruded by Devonian quartzofeldspathic orthogneiss. Mineralization consists predominantly of pyrite with lesser percentages of chalcopyrite and pyrrhotite, minor amounts of sphalerite, galena, arsenopyrite, molybdenite, tetrahedrite-tennantite, and traces of bornite and cubanite. The sulphide minerals occur as bands of disseminated sulphides, as disseminations along foliation planes and schistosity surfaces, as disseminations and patches in quartz and quartz-carbonate veins, and as thin coatings on northerly striking, steeply dipping fracture planes. In places, massive lenses of pyrite-pyrrhotite with local concentrations of chalcopyrite up to several metres thick occur in quartz-sericite phyllite, sometimes accompanied by less common massive lenses of magnetite, which sometimes also occurs as separate massive lenses with minor amounts of chalcopyrite. The mineralization occurs in tabular zones that dip northwards more or less conformably with the lithological contacts and schistosity of the host rocks, but in detail appear to cut across lithology and may not be stratigraphically controlled. (This relationship might be expected in a geological environment in close proximity to an intrusive contact – the Devonian orthogneiss is presumed to underlie the deposit at shallow depths – where some remobilization of the sulphides has probably occurred.) Mineralization occurs predominantly in light silvery-grey phyllites of Unit EBA. The largest zone has a strike length of more than 1800 m, is locally in excess of 100 m thick and has been delineated down dip for approximately 600 m. The stratigraphic relationship of Unit EBA and Unit EBG (which underlies the VMS claims) of the Eagle Bay Formation is not clear, since mapping indicates that everywhere in the map-area, the two units only occur in structural contact. The predominance of felsic lithologies in Unit EBA suggests that it may be higher in the stratigraphic succession than Unit EBG. The two units might have been at least partly intercalated in their original depositional positions and felsic subunits in Unit EBG may be lateral facies equivalents or even pass transitionally into similar lithologic subunits in Unit EBA in a differentiated volcanic sequence. The implication is that more felsic subunits at the VMS claims which have not been explored to date are valid exploration targets, as well as the mineralized zones which have so far been identified.

EBL

The EBL deposit is located approximately 2 km to the east and southeast of the VMS claims, more or less along strike on the mineralized trend, and is considered to be similar, in some respects, to the Harper Creek deposit. A "large tonnage" of sulphide mineralization has been delineated by diamond drilling, with grades ranging or averaging 0.2 % to 0.4 % Cu. The host lithologies consist of a succession of biotite-chlorite schists (with variably developed biotite), and fine to medium-grained schists consisting of varying percentages of quartz, feldspar, sericite, biotite, and ehlorite, and subordinate intervals of grey phyllite and limestone. These subunits are tentatively included in Unit EBQ of the Eagle Bay Formation. The property lies just to the west of the contact between Eagle Bay Formation rocks and a batholithic mass of Devonian quartzofeldspathic orthogneiss. A number of drill holes encountered the orthogneiss and the Devonian intrusive mass probably underlies the mineralization at a shallow depth. The sulphide mineralization consists of pyrite-pyrrhotite±chalcopyrite occurring as sparse to abundant and semi-massive disseminations concentrated along foliation planes, as fracture fillings, as stringers, and in quartz-carbonate veins. Chloritic schist (derived from mafic volcanics lithologies?) is the most common host rock, but mineralization also occurs in the other lithologies. In addition, zones of pyrrhotite-pyrite-chalcopyrite-magnetite occur in garnet-epidote-chlorite-quartz skarn, in association with amphibolite and limestone. This mineralization might in part be skarn type, or it could be derived from the original volcanogenic sulphide mineralization and remobilized, with the skarn host assemblage simply reflecting proximity to the intrusive contact or selective metasomatic replacement in more chemically susceptible beds.

Type 3 Deposits

Homestake

The Homestake mine (located approximately 23 km south of the VMS claims) was discovered in 1893 and produced only small shipments of ore intermittently until 1927. In 1935, Kamloops Homestake Mines Ltd. installed a 50 ton per day flotation mill at the mine. Recorded production from 1935 to 1941 totaled 6,965 tonnes of ore which yielded 11,080 kg of Cu, 171,325 kg Pb, 246,520 kg Zn, 12,400 g Au, and 9,565,900 g Ag, corresponding to grades of 0.159% Cu, 2.46% Pb, 3.54% Zn, 1.78 g/tonne (0.0572 oz/tonne) Au, and 1373.42 g/tonne (44.16 oz/tonne) Ag. In the early 1970's reserves were estimated to be 1,018,800 tonnes grading 240 g/tonne Ag, 2.5% Pb, 4.0% Zn, 0.55% Cu, and 28% barite.

The Homestake deposit is a polymetallic volcanogenic barite-sulphide deposit hosted by intensely altered and sheared sericitic schists of Unit EBA of the Eagle Bay Formation, which here dip at shallow angles to the northeast. At surface, the mineralization occurs in two sheet-like lenses of barite, separated by 4 to 5 m of pyritic sericite-quartz schist, near the top of a thick section of yellowish, rusty-weathering, bleached, pyritic sericite-quartz schist, stained by coatings

of yellow ferric sulphate. This schist occurs at the top of a succession of predominantly mafic to intermediate volcanic metatuffs. Most of the sulphides occur in the upper 5 to 6 m thick barite horizon, sparsely distributed through massive and banded barite, or in bands of massive sulphides interbedded with barite and schist. The 1 to 2 m thick lower barite horizon only contains minor amounts of sulphides. Underground, at least three barite horizons have been recognized and traced for several hundred metres along strike. The barite lenses are overlain by siderite phyllite with interbedded argillite, and by a tuffaceous chlorite schist.

Rea

In 1983, the Rea massive sulphide deposit was discovered on the west slope of Samatosum Mountain, approximately 25 km south-southwest of the VMS claims. Drill indicated reserves are 120,000 tonnes containing 18.2 g/tonne Au, 141.2 g/tonne Ag, 0.85% Cu, 4.11% Zn, and 3.67% Pb. The deposit occurs in Unit EBF of the Eagle Bay Formation, in a northwest trending, northeast dipping succession of metavolcanic and metasedimentary rocks, which form the northeast, overturned limb of a recumbent synformal fold. In the vicinity of the deposit, the stratigraphic sequence is structurally inverted. (The Homestake deposit described above occurs on the southwest, upright limb of the fold.) The lithologic succession in the vicinity of the Rea gold deposit is similar, but not identical to that in the area of the Homestake mine. The rocks have been metamorphosed to lower greenschist facies. Mafic tuffs are now represented by green, chloritic schists and phyllites; felsic (dacitic?) tuffs are metamorphosed to pale tan to pale green siliceous schists and phyllites interbedded with sericitic chert and chert, and argillites are metamorphosed to siliceous and graphitic schists and phyllites.

The deposit consists of two thin sulphide lenses, about 200 m apart along strike, that lie stratigraphically above an altered sequence of mafic tuffs with associated minor more felsic (dacitic) strata. The lenses contain pyrite, arsenopyrite, sphalerite, galena, chalcopyrite, and tetrahedrite-tennantite. The sulphides are fine-grained and massive to crudely banded and brecciated; gold is associated mainly with the sulphides but also occurs in barite, in the footwall stockwork, and in fault gouge; silver occurs both in the sulphides and in barite. The more southerly of the two lenses, the RG8 lens, grades stratigraphically upwards into a thin horizon of faintly banded, massive barite, up to 4 m in thickness, containing variable amounts of disseminated sulphides. It is apparently slightly higher, stratigraphically, than the more northerly, or L100 lens, which does not have a barite cap. The RG8 lens is exposed at surface along a strike length of about 75 m, and has been traced down dip for about 80 m. At its fringes, where the barite cap is absent, it is in sharp contact with stratigraphically overlying tuffaceous muds or mafic tuffs, as is the L100 lens. The L100 lens has been traced along strike at surface

for about 50 m and down dip for 120 m. The stratigraphic footwall alteration / stockwork feeder zone lies in the structural hanging wall of the two massive sulphide lenses due to the structural inversion of the strata. It is quite extensive in the area of the L100 lens, but only a few metres in thickness below the RG8 lens. Altered lithologies occurring stratigraphically below the sulphide lenses includes mafic tuffs, thin chert layers, and felsic (dacitic ash?) layers, which occur as pale tan to pale green siliceous phyllites or schists interlaminated with chert and sericitic chert. Silicification increases markedly towards the sulphide lenses and is characterized by the introduction of silica as chert layers and discontinuous chert lamellae, quartz veins, and so-called fragmental chert. Silicification is accompanied by an increase in pyrite content from 1-2% to 10-20%, and by an increase in the abundance of sericite. Locally, enrichment in Na is represented by the occurrence of massive albite and paragonite, and carbonatization is evidenced by the presence of dolomite, iron-rich magnesite, and calcite

VMS Claims

The VMS claims are underlain by Unit "EBG" and its subunits of the Eagle Bay Formation (see legend accompanying Figure 3), which are Devonian or older, and apparently form the lower, oldest part of the Eagle Bay Formation. Included within Unit EBG are undifferentiated, medium to dark green, calcareous chlorite schists and fragmental schists derived from mafic to intermediate volcanic and volcaniclastic rocks. Also present, but not subdivided on regional geology maps, are intercalated, more felsic units composed of chlorite-sericite schist and sericite-graphite schist, and minor amounts of quartzite, grey phyllite and sericite-quartz phyllite. Subunit EBGp underlies a sizeable area of the ridge where the VMS claims are located and consists of dark grey phyllite, calcareous phyllite, limestone, and minor amounts of rusty weathering carbonate-sericite-quartz phyllite. The transitional zone from dominantly mafic to intermediate volcanic and volcaniclastic lithologies in the lower part of Unit EBG to dominantly metasedimentary lithologies in subunit EBGp is a favourable environment for Rea and Homestake type massive sulphide deposits.

The VMS 1-6 claims cover and extend westwards beyond the western sector of the 13.3 line kilometre grid established by Agate Bay Resources Ltd. in 1993 over the now lapsed Norr and Barr claims. Geological mapping carried out over the grid area identified a few outcrops of chlorite-sericite schist along road cuts in the area of the VMS 5 claim, but most of the bedrock exposures occur at the east end of the grid, a few hundred metres beyond the eastern boundary of the VMS 1-6 claim block. There, bedrock exposures consist of volcanic and volcanisedimentary rocks with shallow dips (20°) to the southwest, metamorphosed to chlorite-sericite schist, chlorite-quartz-sericite schist, and sericite-quartz-biotite schist, in places altered to skarn. The exposures of sericite-quartz-biotite schist are variably mineralized with disseminated to semi-massive lenses of pyrite and chalcopyrite with minor pyrrhotite, subparallel to foliation. More massive pods, lenses, irregular clots, and veins of pyrite, chalcopyrite, and magnetite occur in

VMS 6
VMS 5
VMS 4
VMS 3
VMS 4
VMS 3
VMS 1
VMS 2
VMS 1
VMS 2
T-1
T-2
T-3
T-4
2
1

59500 57500 55500
MAG. PROFILES (nTs)

2 Metasediments
1 Metavolcanics
outcrop
trench
EM Conductor

ARI CAPITAL CORP.

VMS CLAIMS

GEOCOMPOSITE

MARCH, 2001	1:5000
Figure 4	

chlorite rich metavolcanics and calc-silicate skarn. This type of mineralization is similar to that which occurs in the EBL zone two kilometres to the east and southeast, along strike. The bedrock source of the boulders of massive sulphides that were discovered in late 1992 has not yet been found. The mineralization in these boulders consists of massive and disseminated pyrite-pyrrhotite-chalcopyrite, in part disseminated through a dark to medium green, chloritic and siliceous metavolcanic host, and in part, forming the matrix to irregular fragments of metamorphosed volcanic rocks, and quartz lenses and "fragmental" quartz. This texture (fragmental quartz) is considered to be more typically associated with the immediate vent area or footwall alteration / stockwork feeder zone of a volcanogenic massive sulphides deposit. Gold values contained in the boulders ranged from 0.75 to 2.1 g/tonne, whereas "EBL" type mineralization associated with the electromagnetic conductive zones trenched by Agate Bay contained only geochemically anomalous values for gold and copper. Further exploration efforts should be directed towards locating the source of these boulders. A stockwork type mineralized zone would probably not give a particularly strong EM response, so the most obvious EM conductors might not necessarily be the best exploration targets.

GEOPHYSICS

During September and October, 1993, Agate Bay Resources Ltd. performed a Genie EM and ground magnetic survey over a 13.3 km grid established over the Norr 1-4 and Barr 1-4 claims, which had been staked to cover the area around the massive sulphides boulders discovered late in 1992. The grid area established by Agate Bay covers all of the VMS 2 and VMS 3 claims, and the southern half of the VMS 1 and VMS 4 claims. The geophysical survey delineated two strong, subparallel, multi-frequency, EM conductive trends with discontinuous strike lengths of 800 m to 1000 m, open along strike to the east. Ground magnetic surveying delineated accompanying discontinuous anomalous trends. (Geological mapping located a number of outcrops in the eastern sector of the grid, but the cause of the geophysical anomalies could not be determined from the existing outcrop.) Total field magnetic data is shown in stacked profile format on the accompanying Geocomposite. EM conductors are plotted as mostly short discontinuous line segments on the same map, cutting the survey lines at azimuths subparallel to strike.

Agate Bay resources Ltd. subsequently excavated four trenches across EM conductors identified by the Genie EM survey at the eastern end of the grid, and discovered "EBL" type massive and disseminated sulphide mineralization consisting of pyrite-pyrrhotite-magnetite-chalcopyrite hosted by metamorphosed volcanic rocks of the Eagle Bay Formation. Geophysical anomalies at the western end of the grid, in the area covered by the present VMS claims, were not trenched and present attractive exploration targets because of their position at a higher stratigraphic level associated with more felsic volcanic rocks.

CONCLUSIONS AND RECOMMENDATIONS

The VMS claims are situated along the strike trend of massive sulphides type mineralization similar to that which occurs at the EBL prospect two kilometres to the east, and to that which occurs at the Harper Creek prospect approximately 20 km to the north. The VMS claims, the EBL prospect, and the Harper Creek prospect all occur in the "third" or most easterly fault bounded panel of Eagle Bay Formation rocks. These deposits are characterized by proximity to a stratigraphic zone that is transitional between a lower, predominantly mafic volcanic or metavolcanic sequence and an upper, predominantly sedimentary or metasedimentary sequence in a differentiated volcanic pile. Felsic volcanic and felsic metavolcanic rocks occur at about the same stratigraphic level. Regionally, many of the volcanogenic massive sulphides type deposits in the Adams Plateau area (including the Rea and Homestake deposits) are associated with similar transitional contacts within other fault bounded panels of the Eagle Bay Formation. The VMS claim group is therefore positioned in an area that has high geologic potential for both EBL- Harper Creek type and Rea and Homestake type mineralization.

Exploration done to date at the VMS claims is at a preliminary stage. The discovery of massive pyrite-pyrrhotite-chalcopyrite (by trenching) is a positive result that validates the geophysical methods used to explore the property. Similar mineralization at the EBL and Harper Creek deposits is very extensive down dip and along strike, with considerable variations in grade. The mineralization discovered in the area of the VMS claims at the east end of the 1994 grid could also be extensive along strike and down dip and constitutes a valid exploration target for follow up work. The strongest EM and magnetic response occurs at the subcrop edge of the mineralized zones, and indicates only the locus of strongest geophysical response, which may primarily be a function of depth to source. It does not necessarily indicate the greatest concentration or highest grades of mineralization, which might occur down dip in the mineralized horizon. Detailed gravimetric surveying, in conjunction with EM and magnetic surveying, would be an appropriate tool for evaluating the down dip planes of the mineralized zones.

Although outcrop is scarce, the VMS claims should be carefully remapped to better evaluate the distribution of felsic volcanic and metavolcanic lithologies in the stratigraphic sequence. These units are typically thin relative to the overall thickness of the Eagle Bay Formation, but have great economic importance. Their subcrop position relative to untested geophysical targets at the west end of the VMS claims is not known. A successful approach to the discovery of massive sulphides type deposits requires a systematic ranking and checking of targets, even the less obvious geophysical targets. The anomalous conductive and magnetic zones on the west side of the claims are viable targets for further evaluation, and if additional detailed geological mapping associates them with felsic metavolcanics, they would become high priority targets.

The following budget provides for a two phase program consisting of a first phase of grid emplacement, geological mapping, geophysical surveying, and trenching. Provision is made for a second stage consisting of reconnaissance diamond drilling.

BUDGET

PHASE 1 Grid Emplacement, Geophysics, Geology, Trenching

Grid emplacement			
1000 m x 1000 m grid, 100 m line separation, 25 m stations,			
1000 m x 250 m detailed grid, 50 m line separation, 10 m stations			
cut & surveyed baseline, cut & chained cross lines			
12.5 line km @ 250/km, 1 line km @ 500		3,625.00	
Geophysical surveying			
12.5 line-km EM & ground magnetic survey @ 400/km		5,000.00	
12.5 line km gravimetric surveying @ 400/km		5,000.00	
Geological mapping, prospecting			
Geologist	7 days @ 425	3,150.00	
Prospector / supervisor	30 days @ 300	9,000.00	
Trenching			
Bulldozer	35 hours @ 125	4,375.00	
Excavator	35 hours @ 125	4,375.00	
Reclamation		2,500.00	
Miscellaneous			
Field accommodation and meals	53 man days x 75	3,975.00	
4 x 4 truck (incl. mileage, gas)	30 days @ 125	3,750.00	
Rock assays, geochem & petrographic analyses:	allowance	1,250.00	
Misc. grid supplies, freight, transportation, etc.	allowance	1,000.00	
Final report prep, drafting, repro, etc.	allowance	2,500.00	
	Phase 1 Subtotal		$ 49,500.00

PHASE 2 Diamond Drilling

BQ diamond drilling, 10 holes x 75 m, 750 m @ 150/m	112,500	
Supervision, geology, 4x4 rental, accomm, meals 20 days	20,000	
Assays, petrographic analyses	7,500	
Final report, drafting, repro, etc.	5,000	
Phase 2 Subtotal		$ 145,000.00
Phase 1 & 2 Total		$ 194,500.00

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