827164

MOUNT SICKER PROJECT

1979

SUMMARY REPORT

Location:	Victoria Mining Division Vancouver Island, British Columbia NTS 92 B 13, E & W Latitude $48^{\circ}52'$ N Longitude $123^{\circ}46'$ W
Claim Names:	C.F. Group #1 - 8 inclusive C.F. Group #13 - 18 inclusive Rocky #1 - 5 inclusive Rocky #6 Fraction Acme Fraction Margaret Fraction 26 Crown Granted Claims (see Appendix 1)
Owners:	S.E.R.E.M. Ltd. B.P. Minerals
Report by:	Peter Ronning
Date:	January, 1980

TABLE OF CONTENTS

APPENDICES

LIST OF MAPS

LIST OF FIGURES

ABSTRACT AND CONCLUSION

S.E.R.E.M.'s Mt. Sicker property is 10 km northwest of the town of Duncan, B.C. It centers on an old mine where about 300,000 tons of copper-zinc ore have been produced. The ore-bodies were massive sulphides, occurring in metavolcanic rocks of the mid to upper Paleozoic Sicker Group.

Work completed by S.E.R.E.M. includes geological mapping, geo-chemical surveys, IP, VLF EM, and Vector Pulse EM surveys and diamond drilling.

Mt. Sicker is underlain by sericite schist, chlorite schist, siliceous schist, rhyolite, dacite, andesite and associated tuffs, all of which were intruded by gabbroic dykes. The volcanics and volcano-sediments have been intensely folded and sheared, while the same tectonism bent the more competent gabbro into a series of normal to open folds. Details of the stratigraphy and structure remain poorly understood. The ore-bearing horizon is graphitic schist.

S.E.R.E.M.'s drilling was concentrated within a few hundred meters east of and on strike with the mine. Geophysical anomalies indicated the presence of some structure trending east from the mine, but the ore horizon was never found.

At least one drill hole is still required immediately east of the mine to search for the ore horizon at greater depth than has been done so far. In addition, a strong geophysical anomaly 1 1/2 km northeast of the mine, in the C Zone, has not yet been drilled.

A geochemical anomaly on the old Herbert claim south of the mine should be tested geophysically and could become a drill target for 1980. Structural interpretations suggest that the ore horizon could re-appear on the Herbert.

In the Northeast Copper Zone / Fortuna area there is widespread though low grade copper mineralization, with good copper, zinc and silver anomalies in the soil near the Fortuna adit. This area should be covered by VLF, EM and Vector Pulse EM surveys. If the results of these surveys are encouraging, it could be useful to verify old reports of mineralization in the Fortuna adit by re-opening it. If any drill targets are found here they should be drilled in 1980.

Adjoining S.E.R.E.M.'s property on the northwest is an area, the Postuk-Fulton option, where S.E.R.E.M. is in the process of optioning mineral rights. This area is structurally similar to the Northeast Copper Zone. As yet only scattered copper occurrences and one narrow zinc occurrence are known here, but there are some geochemical anomalies and the geology is interesting. A VLF survey, possibly followed by some Vector Pulse EM, should be done, aimed at finding drill targets.

All of S.E.R.E.M.'s claims which have not been covered by VLF survey should be. As well, some line cutting and geological mapping must be done on the northeasternmost 150 hectares for assessment purposes.

There remain some questions concerning mineral rights in the C Zone, Fortuna area, and the northern part of S.E.R.E.M.'s property in general, which must be resolved before more work is done in these areas.

1. INTRODUCTION

S.E.R.E.M. is currently exploring a group of mineral claims, the Mount Sicker Property, on southeastern Vancouver Island, British Columbia. S.E.R.E.M.'s work commenced in June 1978 and continues, though as this is being written field work is temporarily suspended. Work completed to date includes:

- Geological mapping of 1200 hectares at a scale of 1:2,500
- Re-habilitation or creation of 106 kilometers of grid lines
- Geochemical analysis of 772 rock specimens
- Survey of soil geochemistry, with 2860 samples covering 92 kilometers at 30 meter intervals
- 15 kilometers of VLF EM Survey
- 20 kilometers of Vector Pulse EM Survey
- 3.5 kilometers of Max-Min EM Testing
- 16.5 kilometers of IP Survey
- 29 kilometers of magnetometer survey
- Diamond drilling 1397 meters
- Re-logging 1630 meters of core drilled by earlier workers

Most of this work has been discussed in some detail in earlier reports (see bibliography). This report is an attempt to distill the results of all the work into a brief, comprehensible form. Many details are necessarily omitted. Those wishing more detailed information may refer to the earlier reports.

This report ends by describing targets for further exploration.

1.1. Claims

The property includes 26 Crown granted mineral claims and 14 ordinary two-post claims held by S.E.R.E.M. under option from Mt. Sicker Mines Ltd. S.E.R.E.M. has staked 5 modified grid claims covering 34 units and 3 fractional claims. Discussions are underway with two Duncan residents, aimed at optioning 13 more claims covering 14 units. A detailed list of claims is in Appendix 1.

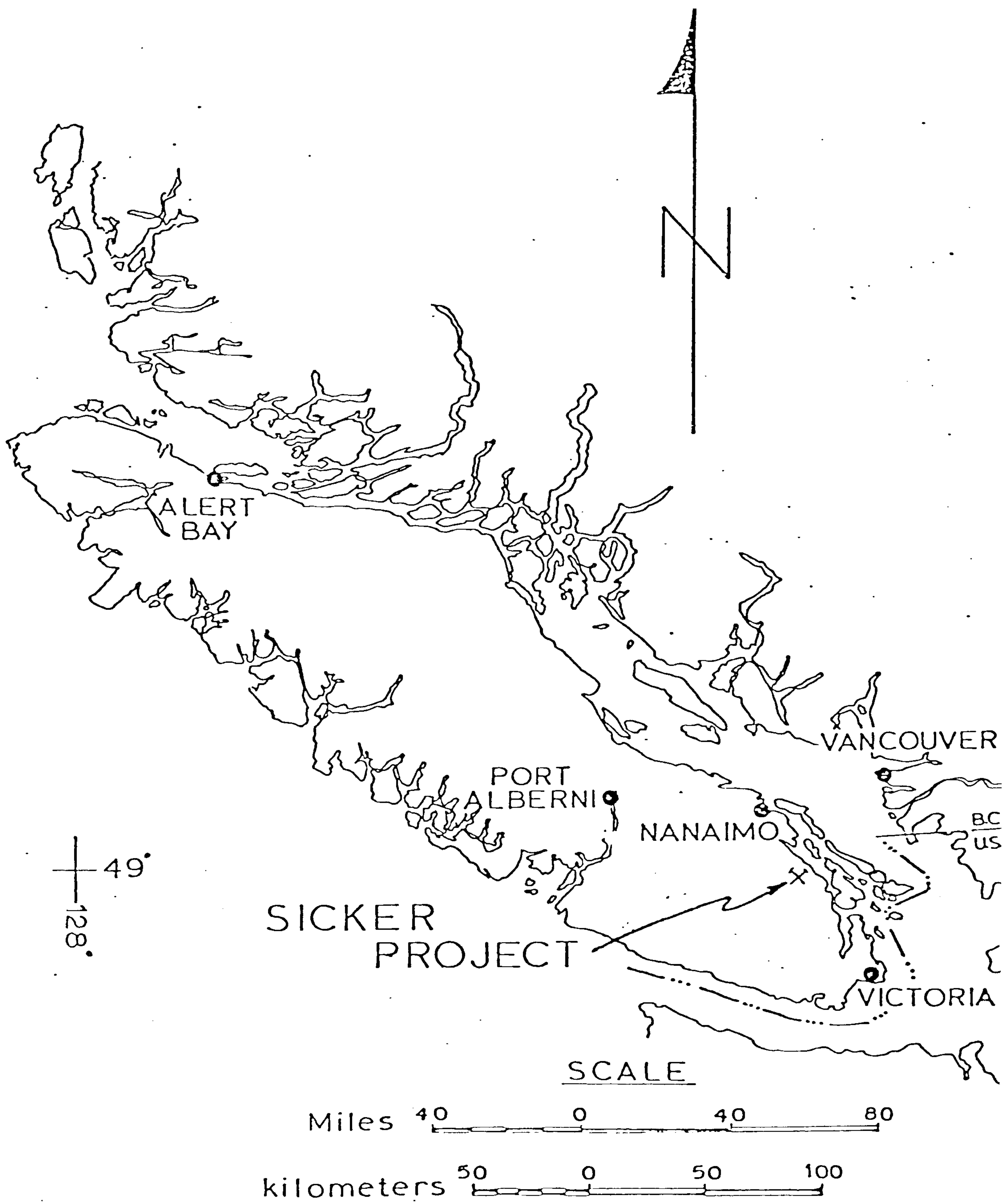
1.2. Location, Access, and Topography

The Mount Sicker Property straddles Big Sicker Mountain and parts of Little Sicker Mountain in the Chemainus, Seymour, and Somenos Land Districts, Vancouver Island, British Columbia. It is 10 km northwest of the town of Duncan. Public roads, passable most of the year, lead to the property, and a network of old mining and logging roads, passable to four-wheel drives, gives access to many parts of it.

Big Sicker Mountain is a little over 700 meters high. For the most part its flanks slope between 10 and 30 degrees and it is densely treed, except for some steep bare cliffs on the east side facing Highway 1. The mountain has been glaciated and much of it is covered with drifts. The flatter parts of the top and flanks are swampy.

Location Map

Fig. 1



1.3. History

The property centers on an old underground mine which has been worked sporadically by various companies since the turn of the century. Total recorded production has been 305,787 tons or ore yielding 20,265,763 lb. of copper, 47,960,252 lb. of zinc, 40,052 ounces of gold, and 841,276 ounces of silver. The most recent mining of any consequence ended in 1947.

305,787 3.31% Cu., 7.84% Zn, 0.13 oz/t Au 2.75 oz/t Ag

2. REGIONAL GEOLOGICAL SETTING

Mount Sicker is underlain by rocks of the Sicker Group, which "comprises all known Paleozoic Rocks of Vancouver Island ... The group is exposed in narrow, fault-bounded uplifts" (Muller, 1977). Mount Sicker is near the southeastern end of the largest of these, the Horne Lake-Cowichan Lake uplift. It extends from Maple Bay in the southeast 110 km northwest to Horne Lake, and is about 20 km wide.

Muller divides the Sicker Group into a lower volcanic formation, a middle greywacke-argillite formation, and an upper limestone formation. Within the Horne Lake-Cowichan Lake uplift the volcanics and greywacke-argillites vastly predominate with minor limestone on the southern and western fringes. On Mt. Sicker itself one sees mostly volcanics with minor amounts of sediments mixed with pyroclastics.

Regionally the volcanics range from fine grained banded tuffs to coarse breccias to agglomeratic flows with basaltic to rhyolitic compositions. They are "mostly of low greenschist chlorite-actinolite metamorphic rank" and "locally they are shear-folded and converted to well foliated chlorite-actinolite schist."

Shear folding has certainly taken place on Mt. Sicker, which is a graben-like structure bounded by faults on four sides.

The Buttle Lake uplift, smaller but analogous to the Horne Lake-Cowichan Lake uplift lies about 150 km northwest of Mt. Sicker. At Buttle Lake, Western Mines exploits a massive sulphide type orebody within the volcanics of the Sicker Group.

3. GEOLOGY OF MOUNT SICKER (Refer to Map 3)

3.1. Lithologies

Unit 1 - Quartz Schist includes most rocks in the central part of the property. In its usual form, thin laminae of very fine grained siliceous appearing material are separated from each other by micaceous foliations consisting of sericite with variable but lesser chlorite. The siliceous material is seen in thin section to consist of a very finely crystalline mixture of quartz and intermediate to sodic plagioclase feldspar.

A few percent of white phenocrysts, up to 3mm across, often shaped like subhedral feldspar, usually occur in Unit 1. They are plagioclase in the oligocene-andesine range, often partly to completely replaced by quartz.

Unit 1 is broken into four sub-units depending on the amount of chlorite visible and whether or not augen are present.

These schists are believed to have originated as felsic to intermediate volcanics, mostly flows but probably including some pyroclastic material.

Unit 2 - Schist comprises those rocks in which sericite dominates and quartz or feldspar does not form an important part of the groundmass. Subsidiary amounts of chlorite may be present (sub-Units 2c, 2d) and quartz augen sometimes occur (sub-Units 2b, 2d). In some sericite schist, very fine sandy or silty quartz is present in small amounts.

These rocks are usually soft, light coloured and very fissile. Iron and manganese oxides occur on cleavage surfaces in even the freshest specimens.

Unit 2 probably originated as silty and/or tuffaceous mudstone.

Unit 3 - Chlorite Schist is made up almost entirely of chlorite (sub-Unit 3a) or contains subsidiary sericite (sub-Unit 3b). Chlorite schist of sub-Unit 3a is soft, dark green, frequently slightly calcareous and often contains a few percent silty quartz grains. Much of it is probably a metamorphosed silty mudstone or very finely tuffaceous mudstone. It is usually spacially associated with andesitic rocks of Unit 5b and 15, and may be partly equivalent.

Sericite chlorite schist of sub-Unit 3b is soft streaky looking, shiny, silvery grey rock, often calcareous. Though chlorite is the dominant phyllosicate, this schist occurs more often amongst sericitic schists than does 3a and is less likely to be associated with andesites. It also probably originated as a mudstone or tuffaceous mudstone.

Unit 4 - Graphitic Schist is divided into two subunits, black graphite schist (4a) and light grey graphitic sericite schist (4b). The black graphite schist is very fine grained and varies in composition from soft in nearly pure graphite schist (rare and only seen underground) to the more resistant, less pure but still black graphite schist which occasionally crops out on the surface. This rock occurs (with rare exceptions) only near the mine, where it was used as a marker horizon.

The graphitic sericite schist (4b) contains small amounts of graphite, either distributed throughout the schist, imparting a grey colour, or occurring as thin dark seams and pods within the schist. It occurs with the black graphite schist, where it is believed to be transitional between the graphite schist and non-graphitic rocks. It is,however, more widespread than the black schists,occurring in the Northeast Copper Zone (see 3.2.) and elsewhere.

Unit 5 - Tuff covers a multitude of pyroclastic rock types occurring on the property. In most cases tuffs have been assigned to either the felsic sub-Unit 5a or the more common andesitic sub-unit 5b). However, southwest of the mine many rocks are recognizably pyroclastic but their compositions are not clear. These have been assigned to undifferentiated Unit 5.

Sub-Unit 5a contains rhyolitic to dacitic pyroclastics, mostly light greenish grey but varying from white to dark greenish grey. They usually have a hard, siliceous crypto-crystalline groundmass, probably containing quartz, feldspar, and some epidote. Plagioclase feldspar crystals, averaging 1 to 2 mm but ranging to 8 mm in diameter, with rounded anhedral to subhedral shapes make up from less than 5% to more than 60% of the rock. Macroscopic quartz grains are rare, apparently restricted to small amounts in the more schistose parts of the unit. Submillimetric rounded specks of chlorite form a few percent of some of the darker green rocks.

Rarely, recognizable dacitic rock fragments occur as clasts in the tuff. They are up to a centimeter in size, with sub-rounded to sub-angular shapes. Variations in the concentrations of macroscopic grains sometimes produce centimetric layering in the tuffs. All the felsic tuffs are schistose, though the schistosity may only be readily apparent on weathered surfaces.

Most rocks of sub-Unit 5a lack diagnostic textures. Some do, however, have distinct clastic textures, and they often grade into sediments. These bits of evidence indicate that they are probably pyroclastic.

Sub-Unit 5b forms broad east to southeast trending belts in the northwest and southwest parts of the property. Because there are distinct textural differences between the andesitic tuffs in the south and those in the north, they will be described separately.

Southwest

The southernmost part of sub-Unit 5b appears to be interlayered with andesitic flows, grading northward to an andesitic tuff-sediment sequence, bounded on the north by sub-Unit 5a. There is some interlayering of 5b and 5a near the contact, with interbedded sediments common on both sides of it.

The andesitic tuff is generally dark greenish with the groundmass a finely crystalline aggregate of feldspar, epidote, chlorite (+ biotite and hornblende) and quartz. One to two millimeter feldspar phenocrysts form 20 to 50% of the rock. They are equidimensional, and well rounded to subhedral. Macroscopic grains of chlorite, 1 - 2 mm in diameter, occur as both sub-rounded lithic fragments and as pseudomorphs after hornblende. Some rocks contain isolated larger,chloritic, chip-shaped, lithic fragments, up to 1 cm in diameter.

Lapilli tuffs and agglomerates form discontinuous belts several tens of meters wide. Sub-rounded to sub-angular andesitic to rhyolitic rock fragments form up to 50% of the total rock. Felsic fragments become more common near the contact between sub-Unit 5b and the more felsic 5a.

Schistosity is generally weaker in sub-Unit 5b than in most of the other volcanics, often being completely absent.

Northwest

Andesitic tuffs of the northwest are generally finer grained than those of the southwest. Macroscopic feldspar grains form zero to 30% of the rock, being about 1 mm in diameter, sub-rounded to sub-angular, and often partly epidotized. Indistinct, millimetric, rounded chlorite grains, forming up to 80% of the rock, are commonly smeared out along the schistosity

The northwestern andesitic tuffs often have centimetric colour banding in shades of grey, and in a few places strings of small siliceous pebbles mark layering. Epidote "nodules", ellipsoidal bodies of silicified and epidotized rock, are common in the northwest. They are up to several centimeters long and may be strung out along certain horizons in the rock. Epidotized feldspar crystals sometimes form up to 30% of the "nodules", which may be blocks or bombs within the tuffs.

Andesitic tuffs in the northwest are generally schistose and grade laterally and vertically into chlorite schists. Interlayering of the andesitic tuffs with more felsic rocks, uncommon in the southwest, is frequent in the northwest.

Unit 6 - Meta-Quartzite includes scattered occurrences of rocks consisting almost entirely of fine to coarse grains of clear grey-white quartz. The grains interlock or are cemented by silica. A few sericitic partings may be present but they are not frequent or strong enough to make the rock a schist. Specks of chlorite may be present.

The occurrence of these rocks is scattered and they are not necessarily related to each other. They could be metamorphosed or silicified versions of any of the felsic or siliceous rocks on the property.

Unit 7 - Slate/Phyllite is rare, occurring in a few outcrops near the 56N base line and once near the Yankee fault. They are most often found interlayered with sericite schist. The phyllite is dark bluish grey with a lustrous sheen on the schistosity planes.

Unit 8 - Dacite is a porphyritic rock containing 15 - 30% plagioclase phenocrysts up to 5 mm in diameter in an aphanitic groundmass that is probably a cryptocrystalline mixture of quartz and feldspar. Irregularly shaped quartz phenocrysts, similar in size to the feldspars, form less than 15% of the rock. Specks and streaks of chlorite, sometimes altered or metamorphosed to form biotite, occur in the groundmass. Feldspar phenocrysts sometimes contain intracrystalline epidote, chlorite and/or biotite.

The dacite is variably schistose and some equivalent rocks have probably been mapped as Unit 1. Unit 5a is probably partly equivalent to Unit 8, and vice versa, since the differentiation of pyroclastic from flow textures is often inconclusive.

Unit 9 - Rhyolite is texturally very similar to the dacite of Unit 8, characterized by about 25% feldspar phenocrysts, in an aphanitic matrix that is probably mostly composed of cryptocrystalline quartz and feldspar. Specks and streaks of chlorite are usually present but in lesser amounts than in Unit 8.

The distinction between Units 8 and 9 is based largely upon the colour index, 9 being the more leucocratic. This is an overly simplistic criterion, particularly in an area such as this which has seen considerable metamorphism and some alteration. Nevertheless, the distinction is made, and Unit 9 contains those siliceous meta-volcanics with low colour indices. Parts of Units 1 and 5 are probably equivalent to Unit 9.

Unit 10 - Cryptocrystalline Quartz makes up at least 3 bands of rock, 2 or more meters wide, trending northwest in the northeast part of the property. The rock is light to medium grey in colour and very hard, composed almost entirely of fine to cryptocrystalline quartz. Very irregular seams of sericite and/or chlorite occur but are too randomly shaped and oriented to impart a schistosity. Finely disseminated pyrite forms 1% to 5% of the rock and locally decimetric pods and seams of coarse grained pyrite form up to 50%. Chalcopyrite, chalcocite, and less covellite sometimes occur as fine to coarse disseminations.

Though this rock in part resembles chert, that term, with its sedimentary implications, is avoided here. The origin of this rock is disputed, but it may be hydrothermal.

Unit 11 - Hornfels. The gabbroic intrusions of Unit 14 produced very little thermal metamorphism in the intruded volcanics. Occasionally, however, a hard pale green, grey or beige rock, fine or very fine grained and speckled with green chlorite and/or actinolite occurs near the gabbro/volcanic contact. Significant quantities of epidote sometimes appear.

Unit 12 - Quartz Feldspar Porphyry forms a narrow band about 40 meters wide and 900 meters long in the north-central part of the property. It contains about 25% quartz phenocrysts and 25% white feldspar phenocrysts, both medium to coarse in size. Quartz crystals are oval to prismatic, showing 1 or more crystal faces. Feldspars are oval to subhedral. The matrix is very fine grained, and appears to consist mostly of streaky, siliceous sericite, locally containing patches and streaks of chlorite. The rock is light coloured, creamy white, light grey or greenish grey.

Unit 13 - Granitoid Intrusion. This resembles many of the other felsic rocks in composition but has the aspect of an intrusive rather than an extrusive rock. The texture is orthophyric with ovoid, angular or sub-idiomorphic crystals of quartz and feldspar in approximately equal amounts, making up 30% to 40% of the rock. The groundmass is very finely crystalline, yellowish white, hard and probably very siliceous. Mafics, less than 5% of the rock, occur as millimetric specks and streaks parallel to the foliation. They consist of fine chlorite, possibly with actinolite. Streaking of the mafics, sub-parallelism of some prismatic feldspars and faint colour lamellae give the rock a gneissic foliation.

Unit 14 - Gabbroic Intrusions occupy nearly 50% of the mapped area. They are probably dikes, ranging in thickness from a few meters to a hundred or more. As a rule, gabbros are the most resistant and best exposed rocks on the property.

The common primary minerals of the gabbro are plagioclase (25 - 60%), dark green pyroxene (40 - 60%), magnetite or ilmenite (up to 15%) and minor pyrite. Secondary minerals include chlorite, actinolite, epidote, quartz, calcite, and hematite. Chlorite and actinolite replace the pyroxenes in some places. Epidote replaces plagioclase or occurs in patches and veinlets. Calcite occurs in veins with quartz or interstitially between crystals of other minerals. Occasionally specular hematite replaces magnetite.

Grain sizes range from fine (sub-Unit 14b) through medium to coarse (sub-Unit 14a), with textures from hypidiomorphic granular to porphyritic with feldspar phenocrysts. Locally and uncommonly mafics form less than 25% of a dyke and the composition appears to be almost intermediate. These rocks are assigned to sub-Unit 14c, Diorite.

In Unit 14 schistosity varies from absent to very strong. If the schistosity is well developed the rocks are assigned to sub-Unit 14d.

Unit 15 - Andesite probably includes two types of rocks which were not properly differentiated in the field. Dykes of andesitic composition cut the gabbro in several locations near the 26N base line. They are fresh-looking, with a hypidiomorphic granular texture, composed 80% or more of plagioclase, 15 - 20% of amphiboles with small amounts of quartz and minor pyrite. Chilled margins often appear, and these andesites are usually less fractured than the country rocks. They are clearly younger.

Probably the vast majority of andesites predate the gabbro and are extrusive. They also are usually a hypidiomorphic granular mixture of plagioclase and amphiboles (or chloritic pseudomorphs of amphiboles). Some porphyries exist, with approximately 20% millimetric feldspar phenocrysts and 20% amphiboles in a chloritic, sometimes epidote-bearing matrix. Epidote usually occurs as a diffuse alteration of plagioclase and the groundmass. However, particularly in the southeast epidote "nodules" similar in appearance to those in sub-Unit 5b may occur.

The amount of quartz in the andesite is extremely variable. It usually occurs as a cryptocrystalline part of the groundmass and is at least partly a result of silicification. Calcite may be present in the groundmass or coating fractures.

The andesite is associated with and at least partly equivalent to andesite tuffs of sub-Unit 5b and chlorite schist of sub-Unit 3a.

Unit 16 - Late Rhyolite/Latite occurs as dykes or small plugs within gabbro or occasionally in schist. It consists of up to 10% fine to medium feldspar phenocrysts and up to 10% fine green hornblende phenocrysts in a light coloured sucrosic, felsic groundmass. This rock is usually non-schistose though weak schistosities have been found near its contacts with older schist.

Unit 17 - Sicker Group Sediments

Sub-Unit 17a - Fine Grained Siliceous Tuffaceous Sediments form discontinuous bands within felsic tuffs of sub-Unit 5a. They are fine grained to cryptocrystalline, probably composed of a mixture of quartz, feldspar and epidote, with minor lamellae of sericite and chlorite. Their colour is light to dark grey showing a thin colour banding. This sediment could be a partly re-worked tuff.

Sub-Unit 17b - Andesitic Tuffaceous Sediments consist of narrow belts of siltstone and greywacke within sub-Unit 5b. The siltstone is light to dark greenish grey, soft to medium hard. The more common sandstone and greywacke contain up to 50% macroscopic chloritic lithic fragments and feldspar crystals in a fine grained, variably siliceous matrix of feldspar, epidote, quartz, and chlorite. Thin to medium bedding is characteristic, and graded beds exist. These sediments are at most weakly schistose, but where bedding and schistosity are comparable they are parallel. The tuffaceous sediments are compositionally similar to the enveloping andesitic tuffs and are probably nothing more than re-worked tuff.

Sub-Units 17c and 17d - Siliceous Argillite and Banded Chert are closely associated in thin discontinuous bands or lenses occurring in a few places near the contact between felsic tuffs and andesitic tuffs in the south. The siliceous argillite is black, fine to cryptocrystalline, and very siliceous, with weak schistosity and indistinct millimetric banding. The cryptocrystalline chert shows millimetric to centimetric black to light grey banding, assumed to be bedding. It contains zones a few millimeters wide of syn-sedimentary brecciation.

Sub-Unit 17 - Pebble to Cobble Conglomerate occurs in a few locations in the northwest and southwest parts of the property, closely associated with andesitic tuffs. Rounded to sub-angular pebbles and cobbles of andesite tuff, schist, volcanics and an occasional plutonic rock are enveloped in a matrix of sandy re-worked tuffaceous material.

Unit 18 - Nanaimo Group Sediments, upper Cretaceous conglomerates, sandstones and shales, unconformably overlie the Sicker Group and bound it along faults.

Unit 19 - Intermediate to Felsic Prophyritic Intrusive rock intrudes andesitic tuffs as an east to southeast trending sill like body up to 75 m wide, in the southwest part of the map area. It is a greenish grey feldspar porphyry. Euhedral to sub-rounded laths and prisms of feldspar 1 to 4 mm long make up 20% to 40% of the rock. They have a waxy appearance and many have carlsbad twinning. Chloritic pseudomorphs of mafic phenocrysts sometimes form up to 5% of the rock. The groundmass is a weakly to moderately siliceous fine-grained crystalline aggregate of biotite, chlorite, feldspar, epidote, and quartz. The colour index is 10 to 15.

3.2. Structural Geology

In report 79-MON-19 a structural history of Mt. Sicker was proposed. Here a modified and abridged version of that history is presented:

1. Volcano-sedimentary Sicker Group rocks deposited (Units 1,2,3,4,5,6,7,8,9,10,13?,15,17).

2. Gabbroic sills (Unit 14) intrude volcano-sedimentary sequence at low angle.

3. All existing rocks folded with development of near vertical northwest-southeast trending schistosity.

4. Minor episode of folding with existing structures slightly bent. Near vertical, northeast trending axial plane; near vertical axis.

This leaves unresolved the ages of Units 13, 16 and 19 and of the faults. The major change from the history proposed previously is that Unit 14 is now thought to be older than the schistosity and folding.

Figures 1 and 2 are attempts at drawing structural cross-sections. They are unsatisfactory, leaving old problems unexplained and raising new ones. However, they serve as a starting point. See Map 3 for locations of the cross-sections.

Section D-D' is drawn using the mapped geology from the line of section west as a basis. It shows the gabbro dykes, of which two major ones and several minor ones exist, folded into normal to tight, occasionally isoclinal folds whose axes trend northwest. The enveloping volcanics and sediments presumably follow the same structures, but with them a lack of marker horizons makes interpretation difficult.

Section E-E' is drawn across the east end of the mapped area. Structures appear to carry through from Section D-D', but most of the folds are apparently much more open in the east.

Structure as it relates to mineralization will be discussed in more detail in the following section.

4. MINERALIZATION

4.1. The Mine

The orebodies at the mine contained massive sulphides, with two main types of ore. These are barite ore, with fine grained pyrite, chalcopyrite, sphalerite and minor galena in a barite-quartz-calcite gangue, and quartz ore, consisting of pyrite and chalcopyrite with minor sphalerite and barite and traces of galena in a quartz gangue with some calcite. Old mine plans suggest a zonation in the orebodies with barite cores enveloped by quartz ore.

There were two orebodies, one north and one south of the mine fault. Both were irregular cylindroids, up to 10 meters thick, 30 meters high, and extending discontinuously over 500 meters. They ran more or less horizontally from east to west.

Old drawings of stopes suggest that the orebodies were by no means continuous, pinching and swelling quite rapidly along their lengths. Two recent drill holes, SRM 1 and SRM 2, were aimed to intersect the ore "horizon" near but not in stopes. SRM 1, aimed at the north orebody, intersected the "horizon", recognizable by its graphite bearing schists but containing only about 0.4% copper and 1.4% zinc over 4 meters. SRM 2 intersected the south orebody "horizon" but at the wrong elevation (25 meters too low) and contained only traces of mineralization.

The results of these holes demonstrate the discontinuous, pod-like nature of the mineralization.

The easternmost exploratory workings at the mine are those of the Richard III shaft, near line 16E. Mineralization has been reported at the 500 foot level and a few pieces of barite ore were found on the dump near the shaft, but no continuations of either the north or south orebodies have been found in the Richard III or east of it. Drilling by S.E.R.E.M., though admittedly going no deeper than about 110 meters, or the 360 foot level, failed to intersect even the ore horizon, encountering instead a series of andesitic and dacite tuffs and flows. One possibility is that the north-south fault just west of the Richard III shaft displaced the ore horizon up or down out of the zone tested by drilling. Another, more complex possibility, involving the Mine Fault, the north-south fault and the antiform shown on Figure 1 is illustrated in Figure 3.

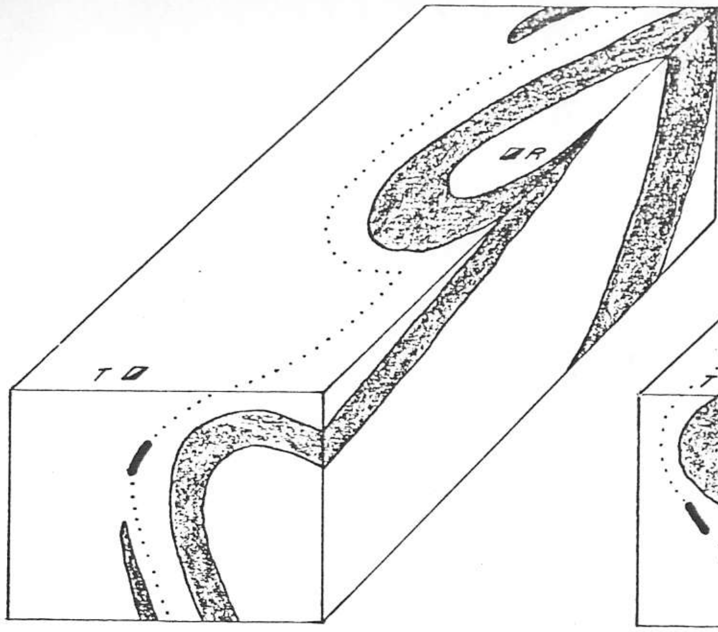
The interpretation on Figure 3 is interesting, showing as it does the ore occurring near (though not at) the hinge of the antiform outside of the core area of the fold and placing the Richard III shaft in the core. The mine fault has displaced the north orebody relative to the south one, and it is even possible the north orebody was once the eastern extension of the south.

Since the gabbro outlining the structure in Figure 3 would probably cross-cut the original stratigraphy, the ore "horizon" would not be parallel to the folded gabbro but should be folded into an analogous shape. It may be possible to predict roughly where the "horizon" should re-occur and test ideas using geophysical methods. Map 6 sketches possible target areas.

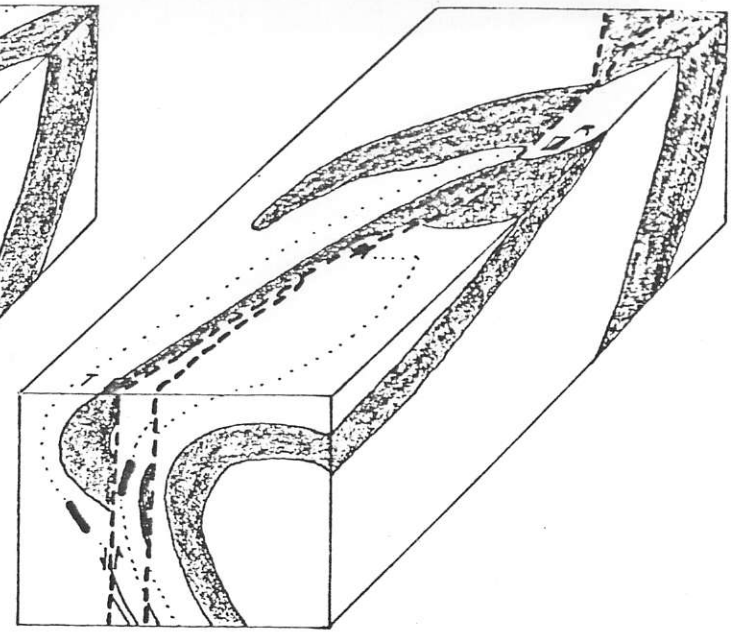
Caution is necessary as the structure in Figure 3 is oversimplified and some of the available information is contradictory.

4.2. Northeast Copper Zone / Fortuna

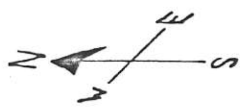
The Northeast Copper Zone lies east of line 64E near the 26N base line, north of a large body of gabbro. At least three irregular bands of very siliceous rock (Unit 10) trend northwest-southeast across the zone. This rock contains 1% to 5% pyrite, finely disseminated or concentrated in decimetric pods.

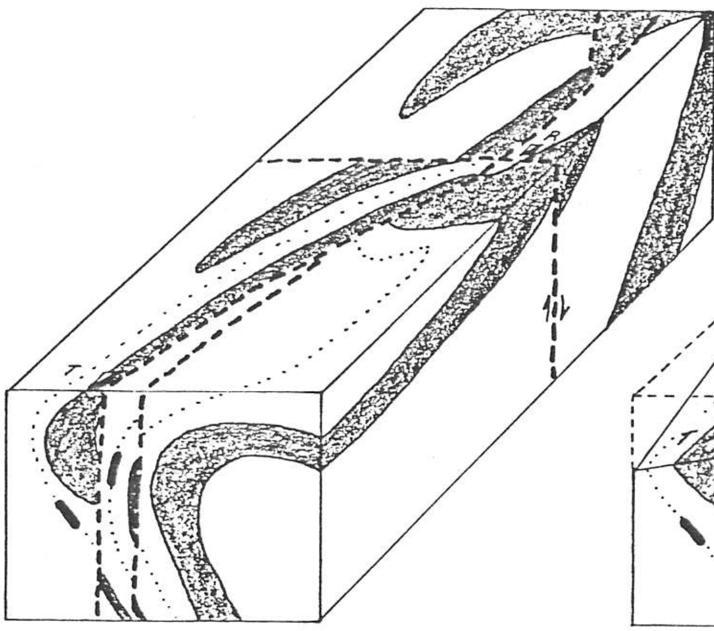


Before Faults

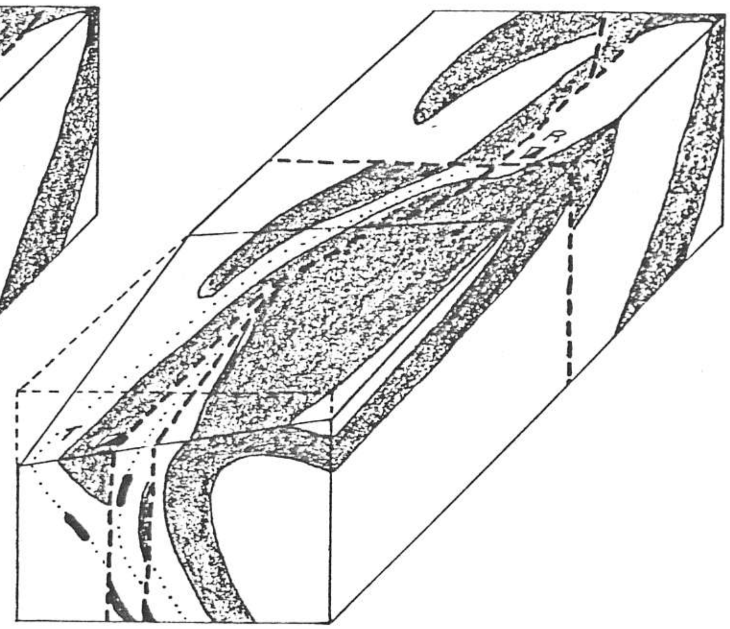


After Mine Fault





After Final Fault



After Erosion

LEGEND

- Gabbro
- Ore Horizon
- Ore Body
- Fault showing sense of movement
- T *Tyee Shaft*
- R *Richard III Shaft*

S.E.R.E.M. LTD.

MOUNT SICKER

HYPOTHETICAL STRUCTURAL HISTORY OF MINE AREA

NTS:	SCALE:		FIGURE:
92B 13	NOT TO SCALE	DATA P. RONNING DRAWN PAR, dgd DATE: DEC. 79	3

Small amounts of chalcopyrite occur as disseminations, with or without pyrite. Selected specimens assay as high as 2% copper and 0.3 oz/ton silver, though on the average only trace amounts of copper are present.

Northwest of and diagonally downhill from the Northeast Copper Zone, near 9+00N on line 60E, is what was originally thought to be a trench but is now believed to be the caved portal of the Fortuna Adit. An engineer's report written in 1899 cites 3 "workable veins" of copper ore 5 feet, 8 feet and 20 feet wide assaying $7.20, $9.35 and $12.40 per ton. No great reliance should be placed on these figures but presumably some copper is present in the Fortuna Adit.

Hole S-72-3, drilled near the adit for Ducanex Resources in 1973, encountered scattered copper mineralization and some "chert" which may be the quartz-rich rock of the Northeast Copper Zone. S-72-4 between the Fortuna and the Northeast Copper Zone also cut scattered copper and some "chert". Mineralization in the Fortuna is probably related somehow to that in the Zone.

4.3. Postuk-Fulton Option

Near the west end of the map area, between line 4W and 8W at about 9+30N, a small amount of bulldozer trenching was done by previous operators. This area is not at the moment part of the Mt. Sicker property but an option is pending.

The 50 meter trench contains about 30% exposed bedrock consisting mostly of sericite schist and of sericite quartz augen schist. Boulders of grey cryptocrystalline quartz resembling Unit 10 are also present. The only visible mineralization is pyrite in sericite schist, usually 2% to 5% but as high as 10%. However, a grab sample of flaky limonitic sericite augen schist from a small sheared exposure at the southwest end of the trench returned an assay of 7% zinc.

Drill hole S-72-1 in the same area cut similar pyritiferous schist from 16 to 84 meters, below which are 17 meters of "graphite sericite schist" which may correspond to sub-unit 4b on the map. This contains an average of 10% to 15% pyrite but zones of unrecorded thickness contain up to 50%. Small amounts of chalcopyrite are present, the highest assay being 0.41% over 3.4 meters.

4.4. Central Schist Panel

Roughly in the central part of the map area, entirely south of the 26N base line and almost entirely north of the 0N base line, ranging from about 24W to 84E is a large area underlain by schists of Unit 1 called the Central Schist Panel. Throughout this area are numerous small pyrite occurrences, usually consisting of bands or lenses parallel to the schistosity, a few centimeters wide and a few decimeters or meters long, containing 10% to 50% pyrite in quartz gangue. The pyrite often contains traces and occasionally 1% or 2% chalcopyrite.

Drill holes SRM 10 and SRM 11, near the southern edge of the Central Schist panel, contain pyrite throughout and usually some chalcopyrite, but the best assay was only 0.6% copper over half a meter.

Mineralization similar to that in the Central Schist Panel occurs in Nugget Creek to the west.

It is unlikely that the mineralization of the Central Schist Panel has of itself any potential for exploitation. It resembles stringer zone mineralization that often occurs below massive sulphide horizons.

4.5. Chemainus River

Along the Chemainus River at the west end of the map area a number of silicified shear zones contain chalcopyrite mineralization. Grab samples assaying as high as 4.4% copper have been collected from these but they are small occurrences with little potential. They occur in several different rock types and are probably not genetically related to the wall rocks.

Similar mineralized shears are scattered throughout the property, and their apparent abundance in the Chemainus River may only be a result of the good rock exposure there.

5. SOIL GEOCHEMISTRY

Soil samples were systematically collected over most of the property, except for a block of ground between ON and 26N west of 16E. In that area mining activity, several old townsites, and an extensive road network have resulted in considerable disruption of the soil and a survey would be relatively meaningless.

Most of the property is covered by glacial till and residual soil is rare. This reduces the value of soil geochemistry. Nevertheless, results at the Northeast Copper Zone demonstrate that mineralization in the bedrock is reflected in soil geochemistry.

Samples were collected from the "B" soil horizon, which usually occurs between 10 and 25 cm below the surface. This horizon is almost always present and recognizable, but where it is absent "A" horizon soil was substituted. In areas where soil was obviously disturbed (roads, trenches, etc.) no samples were obtained.

Results were analysed statistically using the method described by Lepeltier (1969). The table below shows the threshold levels determined. The graphs used to determine them appear in Appendix 4.

	Break in Slope	Upper 2½ Percentile
Cu	86 ppm	270 ppm
Pb	42 ppm	42 ppm
Zn	125 ppm	410 ppm
Ag		1.8 ppm

The break in slope is significant in that it marks a dividing line between two statistically distinct populations of values. In the case of copper, for example, the change in slope on the graph indicates that more high values occur than one would expect from a single lognormally distributed population.

The upper 2½ percentile is simply the value above which lie 2½ percent of the results. It is an arbitrary point above which results are considered anomalous. That it lies at the break in slope on the lead graph is fortuitous. There is no break in slope on the silver graph.

On Maps 4a and 4b anomalous areas are outlined. Isolated high values have been deleted, but copper and zinc anomalies are still widespread.

Many, however, can be discounted based on other information; for example the area near the ON base line from 24E to 36E has been tested through drilling by S.E.R.E.M. and others and low grade stringer type copper mineralization, unexploitable but sufficient to explain the anomaly is known to exist.

The best geochemical targets lie in two areas, and there are lesser targets which should be examined further in two other areas.

5.1. Herbert

South of the mine a copper anomaly centers on line 8W between 2+70S and 6+60S. It extends west to 12W and east to 4W. This is near the west end of a broad area of high zinc values, but the highest zinc values correspond quite well with the copper, lying between about 1+50S and 4+20S on lines 8W and 12W. This same area has the only large lead anomaly on the property, with high values on line 8W from 2+40S to 6+60S and scattered highs on 12W and 4W. High silver values appear from 2+70S to 3+90S and at 5+40S and 5+70S on 8W.

This area is called the Herbert for the crown-granted claim in which it lies. It is one of only two places on the property where all four elements are concentrated in the soils. Careful prospecting here has failed to find anything to explain the anomaly. It is close to the mine but there is no evidence of mining, waste dumping or construction. A suggestion has been made that wind-blown dust from an old tailings pond 450 meters west of the anomaly could have contaminated the area. This is conceivable, though the writer would expect such contamination to produce an anomaly contiguous with the dump, which this is not.

Intriguingly, the strongest part of the anomaly, the northern part, lies across a body of gabbro (compare Maps 3, 4a, and 4b). If the structural interpretation of Figures 1 and 2 is correct, this gabbro makes an antiform and the anomaly straddles the south limb of the fold. The stratigraphic equivalent of the mine horizon should lie somewhere on the south limb.

If the mine horizon exists on the Herbert it has not been recognized on the surface, and the anomaly remains unexplained. A magnetometer survey on lines 4W and 8W showed no unusual features and no other geophysics has been done there.

5.2. Northeast Copper Zone / Fortuna

It was no surprise that a copper anomaly in soils surrounds the Northeast Copper Zone, appearing on lines 72E, 76E, 80E and 84E straddling the 26N base line. There are no contiguous silver or lead anomalies, but a weak, erratic zinc anomaly shows up slightly north of and downslope from the copper anomaly.

Less expected were the overlapping copper, zinc and silver anomalies near the Fortuna Adit (vicinity of line 60E, 1+20N). Small lead anomalies appear nearby on lines 60 and 64E.

No doubt the Fortuna anomalies are partly attributable to contamination from the mining work. They are mainly interesting as evidence that mineralization of all four elements tested probably exists near or in the adit.

Strong copper and zinc anomalies, with a small lead anomaly occur downhill from the Fortuna on line 64E centered at 12+60N. A silver anomaly appears nearby on lines 56E and 60E. This is an area where the hillside levels off after dropping steeply from the Fortuna and these anomalies could well have been transported from the Fortuna.

A small creek drains from the caved Fortuna Portal, and four stream sediment samples collected at about 100 meter intervals starting just below the dump contained between 205 and 860 ppm copper, 20 and 43 ppm lead, 415 and 960 ppm zinc and 1.0 and 2.5 ppm silver. No statistical background information is available for stream sediments but these values are probably high.

Careful prospecting near the Fortuna and on its dump failed to discover any mineralization. An IP survey done in 1973 on lines 56E to 76E showed up the Northeast Copper Zone quite well, as a chargeability/resistivity anomaly but showed little near the Fortuna. No other geophysics has been done there.

5.3. Rocky # 1

On lines 84E, 88E and 92E between about 3+00S and 8+10S is an erratically shaped copper anomaly. The results for other elements do not corroborate those for copper but the anomaly is of some interest because there is no ready explanation for it. The anomaly is immediately downslope of a gabbro-andesite contact but no visible copper was found in the sparse outcrops near the contact.

Magnetometer profiles on lines 84E, 88E and 92E are quite featureless. No other geophysics has been done there.

Two weaker anomalies west of this one are underlain by gabbro and are probably not important. Another weaker anomaly southwest of it crosses the gabbro-andesite contact at almost right angles in an area of very little outcrop and may bear further investigation.

5.4. Postuk - Fulton Option

Zinc found in rocks in the trench described in section 4.3. is reflected in soil samples from the same area. There is a moderately strong zinc anomaly just north of the trench between 4W and 8W, which trends northeast from there and broadens between lines 4W and OE, extending from about 3+OON to about 5+10N.

As previously mentioned, drill hole S-72-1 intersected some very pyritiferous rock and a "graphitic-sericite schist". Otherwise little is known about this area. No geophysics has been done there.

6. GEOPHYSICS

The amount of geophysics done so far has been summed up in the introduction. Most of it has concentrated on an area between the Lenora Adit (at 12W), and 84E, staying south of the 26N base line and going no farther than 240 meters south of the ON base line. Some VLF work and Vector Pulse EM extends to 40W, going as far as 380 meters south of the ON base line.

Map 5, drawn by Glen White, summarizes all the geophysical information.

6.1. Mine Area

A VLF anomaly traces the Mine Fault from about 24W to 16E, where the anomaly begins to angle southeast away from the fault, disappearing near 32E. Near 8W, a pronounced VLF anomaly splits from the Mine Fault and does a loop to the north, re-joining the fault near 12E. Weak vector pulse anomalies follow part of this loop. This VLF vector-pulse trend probably traces the ore horizon around the north orebody.

A series of strong vector pulse anomalies along the ON base line at OE, 4E and 8E may be caused by the south orebody, although mine plans indicate the orebody should be 15 to 30 meters farther south at 4E and 8E.

Running east from just north of the Richard III Shaft to about 24(a)E, a strong vector pulse response appears to follow the mine fault. Two strong conductors just south of the base line at 20E remain unexplained; gabbro was found in drill holes there.

No IP work was done west of the Tyee Shaft. From there to the Richard III a broad resistivity low centers on the schists enveloping the north orebody. Strangely, east of the Richard III this resistivity low appears to follow a body of gabbro to about 24(a)E where the low disappears. Moderately high frequency effects occur in parts of the resistivity low.

6.2. "B" Zone

Part of White's B zone has already been covered in 6.1. The rest of it is the area near the ON base line from about 32E to 40E.

A VLF anomaly begins on line 32(a)E at about 0+30N, running southeast to cross the base line at 36E and continuing to 44E. A vector pulse anomaly is coincident at 36E, possibly continuing to 40E. These EM anomalies lie within a zone about 100 meters wide of low resistivity and moderately high frequency effect.

Drill holes SRM 10 and 11 were drilled to test the EM/IP anomalies at 36E, ON. Disseminated and stringer type pyrite and minor chalcopyrite, sufficient to explain the IP responses, were found, but the EM anomalies remain unexplained.

The resistivity low extends about 500 meters northwest-southeast, with a lobe extending 100 meters or so southwest along a fault. Its northwest and southeast ends are the IP survey boundaries. The frequency effect coincides with the resistivity low except at the fault, and both are likely attributable to disseminated mineralization as seen in SRM 10 and SRM 11.

Vector pulse anomalies on line 32E and 28(a)E, scattered over 200 meters on either side of the base line are untested. The underlying rocks are probably gabbro. Anomalies on 32(a)E and 40E, also untested, are underlain by schists which are pyritiferous.

6.3. "C" Zone

From about 44E to 68E between 1+50N and 5+10N is a wide area of low resistivity. Frequency effects are not strong in this area except at the northwest end of the limit of the survey. However, a pronounced vector pulse anomaly trends from about 3+60N on line 68E west to line 52E and thence southwest to about 2+40N on line 44E. This anomaly is strongest on line 60E at about 3+90N, where a strong vector pulse EM anomaly corresponds with a good resistivity low and a weak frequency effect high (figure 5).

No bedrock crops out in most of the "C" Zone but it is presumed to be underlain by Unit 1 schist. The Nugget Creek Fault probably traverses its south edge.

6.4. "D" Zone

Scattered weak vector pulse anomalies were found between OE and 24E, north of 3+60N and south of the Nugget Creek Fault. Stronger anomalies near the fault on lines OE, 4E and 8E may represent the fault itself. Because of the vector pulse responses three lines were tested with IP. Though resistivity lows and frequency effect highs are present, there is no particular correspondence between the EM and IP results. Unit 1 schists underlie the area, with a few isolated exposures of gabbro, but there is no ready geological explanation for the anomalies, except those near the fault.

7. DIAMOND DRILLING

1397 m

The results of S.E.R.E.M.'s 4584 feet of diamond drilling were discussed hole by hole in a summary report dated October 5, 1979. Graphic logs for the holes appear in Appendix 2 of this report. Some mention of individual holes has been made in discussing geology and mineralization. A very brief summary of the results will be made here.

Hole SRM 1 about 50 m west of the Tyee Shaft and SRM 2 100 meters or so west of the Richard III were drilled to intersect the ore horizon near the north and south orebodies, respectively. Both holes intersected the horizon, though the intersection in SRM 2 was 30 m lower than intended. Very little mineralization was encountered, but the main purpose of the holes, which was to obtain litho-stratigraphic information about the ore horizon was accomplished. The horizon is a sequence of graphite schist and graphitic sericite schist interlayered with chlorite and/or sericite quartz schist.

Holes SRM 3, 4, 5 and 7 were intended to test the possibility that orebodies might extend from the mine east beyond the Richard III shaft. As well a number of vector pulse EM anomalies were tested with these holes.

SRM 3, 4 and 5 were all drilled south at a 45° plunge; SRM 7 was drilled south at 60°. All began in gabbro, crossing the Mine Fault at the south edge. Typically there are a few centimeters of mylonitized graphitic material in the fault and a few decimeters of silicified schist near it. South of the fault, however, are dacitic and andesitic tuffs and flows which do not resemble rocks seen near the ore horizon in the mine. These rocks have a very low sulphide content and are probably either stratigraphically some distance above or some distance below the ore horizon. The lack of sulphides suggests they are above it.

SRM 6 tested an IP anomaly beneath the ON base line at 20E. The anomaly is due to disseminated and stringer type pyrite-chalcopyrite mineralization in rhyolitic or dacitic schist, with the best grade about 0.5% copper over 1 meter and a characteristic grade of about 0.1% .

The eighth drill hole was intended to test a zone of moderately low resistivity and moderately high frequency effect between ON and 90S under line 28E. Found underlying the anomaly were gabbro, diabase and their schistose derivatives. It remains unclear why these rocks should produce an IP anomaly. A small amount of chalcopyrite was found near the bottom of the hole in chlorite sericite quartz schist.

SRM 9 was the last hole of the series east of the Richard III drilled in a low-lying area where no bedrock exposures exist. It was initially believed that no gabbro existed in that area but the drill hole disproved this. It began in variably brecciated and mylonitized schist similar to that of SRM 6, though in SRM 9 it is less mineralized. Below that are 145 feet of gabbro, ending at the Mine Fault. As usual the Mine Fault contains a few centimeters of mylonitized graphite. South of the mine fault are 84 feet of chlorite sericite quartz schist, and the hole ends with 42 feet of andesite similar to that seen south of the Mine Fault in SRM 3, 4, 5 and 7. No significant mineralization was seen.

As mentioned in section 6.2., SRM 10 and 11 were drilled to test coincident IP, VLF and vector pulse anomalies at 36E on the ON base line. Disseminated and stringer type pyrite-chalcopyrite mineralization explains the IP anomaly; no satisfactory explanation for the EM results was obtained. Chalcopyrite occurs almost throughout both holes but the best grade is only 0.6% copper over half a meter.

8. EXPLORATION TARGETS

8.1. The Mine

The 1979 drilling program was based partly on geophysical and geological information and partly on the simple assumption that the ore horizon of the mine should continue through the Richard III area and eastward. It was assumed that finding the ore horizon would be relatively simple and that most of the drilling budget would be spent looking for orebodies within it. This proved to be far too optimistic; the ore horizon was never found east of the Richard III.

Map 6 shows where the ore horizon might occur east of the Richard III. Note that from about 18E to 22E it could be 15 to 20 meters south of the ON base line (section G-G' on Figure 4), at a depth of 60 m to 120 m.

A suggested drill hole to test this area is shown on Map 6 and Figure 4. If this hole is drilled it should be continued south, possibly as deep as 450 meters, to test the area south of the Mine Fault at depth.

East of 22E, the area within which the ore horizon might be found widens out until, approaching the "C" Zone it includes the entire central schist panel.

8.2. "C" Zone

The "C" Zone is the best geophysical target found on the property. Though other geophysical targets have proven disappointing, the "C" Zone remains a priority. Although it was earlier thought to be unlikely that the ore horizon of the mine would be present in that area, our present thinking concerning structure indicates that it could be there.

Figure 5 shows about 400 m of proposed drilling in 2 holes that would test the "C" Zone. They would serve the dual purpose of testing for mineralization and of testing the structural interpretation of Section E-E' (Figure 2). Two holes are suggested because so little is known of the structure here; one hole might inadvertently be drilled down dip. The results of the first hole could make the second unnecessary.

Problems exist concerning mineral rights in the "C" Zone. These should be resolved before any work is done.

8.3. Herbert

The geochemical anomaly on the Herbert claim is described in Section 5.1. As mentioned, if the structural interpretation of Figure 1 is correct, this anomaly straddles the south limb of an antiform traced by a body of gabbro. If the ore horizon follows the same antiform it should be present somewhere in the Herbert area, north of the Yankee Fault.

The next step in this area should consist of geophysical surveys. VFL EM should be run over the entire property south of the ON base line, including the Herbert claim. Anomalous VLF targets should be followed up in areas, such as the Herbert, by a more powerful EM method, for example Vector Pulse. Vector Pulse EM is not as definitive a tool as was originally hoped but is probably still the best method available.

Map 6 shows a suggested drill hole in the Herbert area, about 250 meters long. However, drilling should be postponed until some geophysical work is done.

8.4. Northeast Copper Zone / Fortuna

This area is described in Sections 4.2. and 5.2. Some drilling has already been done there by earlier workers, and although most of the core is not available the records indicate that small amounts of copper are everywhere but no good sized bodies of high grade were ever found.

Geophysics is the next logical step in this area. IP has been tried by earlier workers, outlining the Northeast Copper Zone but showing nothing in the Fortuna area. VLF EM should be run over the whole area, followed by Vector Pulse EM in selected areas.

In 1899 the Fortuna adit was reported as being 82 meters long. The entrance has caved and nothing is known about the condition of the adit underground. Re-opening it could be one way to check for the mineralization reported in 1899.

Drilling is tentatively proposed for this area after geophysical work has been done.

In the Northeast Copper Zone / Fortuna area there may be problems with the mineral rights similar to those concerning the "C" Zone. These problems must be resolved before any work is done here.

8.5. Postuk - Fulton Option

There are scattered mineral occurrences throughout this area, but none are yet known to have economic potential (see Sections 4.3. and 5.4.). The next step here should be geophysical coverage, beginning with VLF EM, which should be carried through from the Northeast Copper Zone to the west end of the property.

It will probably be necessary to use more sophisticated EM techniques, such as Vector Pulse, on selected areas, particularly near the trench and drill holes between line OE and 8W. However, the grid lines west of OE and north of 26N have only been marked, not cut, and it will be necessary to cut them before any geophysics other than VLF is attempted.

8.6. General

We now have a reasonably good general understanding of the structural geology and lithologies of Mt. Sicker. However, we lack a clear understanding of the stratigraphy and the structural details that would make it possible to predict the location of the ore horizon away from the mine.

Blanket geophysical coverage of the entire property could help ameliorate the problem, since the ore horizon does respond, if unpredictably, to both EM and IP methods. However, covering the entire property using complex surface methods such as Vector Pulse EM or IP would probably be prohibitively difficult and expensive.

A good approach would be to do one or both of the following: extend the VLF EM coverage over the entire property and/or obtain airborne geophysical information as suggested by British Petroleum. More complex geophysical methods could then be used in selected areas.

8.7. Rocky # 5

In July 1979 S.E.R.E.M. staked a 6 unit claim, the Rocky # 5 at the northeast corner of the property. No work has yet been done on this claim but a minimum of $600 worth of assessment must be done before July 1980. The first work to be done on this claim should be line cutting and geological mapping.

8.3. Summary of Recommended Exploration Work

	Line Cutting	Vector Pulse EM	VLF EM	Air-borne	Drilling	Re-Open Adit	Geol. Mapping
Mine					450 m		
C Zone					400 m		
Herbert		3 km	4 km		250 m **		
Northeast Cu/Fortuna		5 km	7.5 km		350 m **	82 m **	
Postuk-Fulton	7.5 km	3 km	7.5 km		350 m **		
Property-wide			80 km	?			
Rocky #5	13 km						150 hect.
Total	20.5 km	11 km	19 km * or 80 km *	?	1800 m **	82 m **	150 hect.

* will depend on whether it is decided to extend coverage over all of the property

** dependent on results of geophysical surveys

The work tabulated on the previous page should be enough to evaluate all those areas on Mt. Sicker which, at this time, are considered to be practical targets for exploration.

REFERENCES

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Ronning, P.A., van Houten, C., Tegart, P., Ralfs, K.; Mount Sicker Project, 1978 Summary Report and Recommendations; Serem Ltd.,79-MON-19, April 1979

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APPENDIX 1

LIST OF CLAIMS

Crown-Granted Mineral Claims

Name	Lot No.	Owner
Estelle	53-G	SEREM LTD.
Westholme	54-G	"
Blue Bell	51-G	"
Moline Fraction	50-G	"
Acme	4-G	"
Tony	18-G	"
Hellena	47-G	"
Westholme Fraction	59-G	"
Dixie Fraction	21-G	"
Golden Rod	44-G	"
Donagan	18-G	"
XL	19-G	"
Donald	63-G	"
Muriel Fraction	108-G	"
Doubtful Fraction	87-G	"
Thelma Fraction	85-G	"
Imperial Fraction	86-G	"
Herbert Fraction	20-G	"
Phil Fraction	110-G	"
NT Fraction	43-G	"
Magic Fraction	41-G	"
Richard III	39-G	"
Key City	37-G	"
Lenora	35-G	"
Tyee	36-G	"
International Fraction	60-G	"

Recorded Mineral Claims

Name	Record No.	Owner
C.F. Group #1-8 inclusive	N14150-N14157	SEREM LTD.
C.F. Group #13-18 inclusive	N14162-N14167	"
Rocky #1-4 inclusive	155 (4) - 158(4)	"
Rocky #5	247 (7)	"
Rocky #6 Fraction	248 (7)	"
Acme Fraction	254 (8)	"

Postuk - Fulton Option (all recorded mineral claims)

Name	Record No.	Owner
Little Nugget	13 (1)	Dr. Postuk
Chemainus	14 (1)	"
Belle	15 (1)	"
Dunsmuir	16 (1)	"
Seattle	17 (1)	"
Copper King	18 (1)	"
Copper Queen	19 (1)	"
Queen Bee	22 (1)	"
Patricia-Jane	83 (5)	"
Morley-Jayne	84 (5)	"
Peggy Fr.	119 (9)	"
Alliance Fr.	120 (9)	"
Beatrice	121 (9)	"

APPENDIX 2

GRAPHIC LOGS