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GEOLOGICAL REPORT

on the

MOUNT SICKER MINES LTD. PROPERTY

MOUNT SICKER

DUNCAN AREA: VANCOUVER ISLAND, B.C.

VICTORIA M.D.

N.T.S. Ref. 92 B/13 48° 123°NW

<u>CLAIMS</u> CF Group 1-8; 13-18; 25-31; 33; incl.

CF Group Fr.

Dawn 1 and 2

Mineral Leases: 13 - Lot Nos 33G,34G,55G,56G,64G 65G and 100G

17 Lot Nos 5G, 6G, 7G and 89G

18 Lot Nos 59G

Crown Grants:

53-G Estelle — 54-G Westholme
51-G Blue Bell — 50-G Moline Fraction
4-G Acme — 18-G Tony
47-G Nellena — 59-G Westholme Fraction
21-G Dixie Fraction
44-G Golden Rod — 18-G Donagan
19-G XL — 63-G Donald
108-G Muriel Fraction
87-G Doubtful Fraction
85-G Thelma Fraction
86-G Imperial Fraction
20-G Herbert — 110-G Phil Fraction
43-G NT Fraction — 41-G Magic Fraction
39-G Richard III — 37-G Key City
35-G Lenora — 36-G Tyee
60-G International Fraction

by: I.M. Watson, P.Eng.,
for: DUCANEX RESOURCES LTD
October 18, 1972

Work completed between June 6th and July 16th, 1972

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

The writer was contracted by Ducanex Resources Ltd in June, 1972 to make a geological survey of the Mount Sicker Mines Ltd property, Mount Sicker, Vancouver Island, B.C.

The objects of the mapping programme were:

a) To determine, if possible, whether there was any repetition of the geological environment which hosts the Lenora-Tyee ore bodies.

b) To delimit the most favourable areas for a subsequent E.M. survey.

At Ducanex's request this report deals only with the results of this geological survey and the writer's recommendations for future work.

For background data regarding previous work on the property, reference should be made to reports by Sharp (1972) and Stevenson (1945).

CONCLUSIONS

1. The Lenora-Tyee ore bodies are lithologically and structurally controlled. They occur in metasediments of the Sicker Group. They lie within a major shear zone and are believed to be controlled also by drag folding in the schists.

Other factors which may exert control on sulphide emplacement are bulges in shear zone walls, cross faulting and isolated horses of unsheared rock within shear zones.

It is suggested that the gabbro intrusives may be responsible for local remobilization and concentration of sulphides.

2. The mapping programme failed to reveal any massive banded sulphide deposits of the Lenora-Tyee type. However, two areas are considered to be of interest, primarily on the basis of their lithological and structural setting.

Area 'A' - centred on L60E ; 30N

Extreme deformation (shearing and drag folding) of schists and gabbro intrusive; heavy development of limonite in bedrock and soil; strong drainage anomaly (copper.)

Area 'B' - centred on L4W; 32N

Faulting, brecciation, hydrothermal alteration; and probable drag folding of quartz sericite schists, diorite, and quartz feldspar porphyry. Pyrite erratically distributed in all rock types throughout the area.

Both these areas are considered worthy of further investigation.

3. There is a possibility of there being further ore at depth below the Lenora-Tyee workings, or on strike 'along the structure ' to the east and west. Unfortunately, due to the incomplete nature of mine records, it is not known how much exploration of these areas has been done. Although the Tyee Shaft was sunk 1450 feet, most of the underground work extended to only 400 feet. Exploration should be directed at finding a repetition of 'ore-bearing' structures below this depth. Ideally this would be done by drilling from underground stations, as suggested by Sharp, with target depths of 1000 feet (i.e. 1000' below surface level).

4. The lack of response from the Walcott E.M. survey, even over the Lenora-Tyee zones, does not necessarily indicate the absence of a massive sulphide deposit. E.M.

surveys over Anvil Mining's Faro # 1 orebody also failed to give anomalies of significance - the deposit is rather similar to the Lenora-Tyee ore zones; both are banded massive sulphide deposits in a similar lithological and structural environment.

RECOMMENDATIONS

Areas 'A' and 'B' - It is understood that it is Ducanex's intention to drill these areas. It is the writer's opinion that drill targets may be more advantageously defined if both areas are detail soil sampled, with follow-up bulldozer trenching, if and as required.

It is therefore recommended that:

1) Areas 'A' and 'B' be soil sampled on a 200' x 100' grid. While sampling is in progress the opportunity could be taken to do 'fill in' geological mapping/ prospecting of each area.

2) Any anomalies detected should be trenched by bulldozer

3) Final choice of drill hole sites should be made on the basis of the results obtained.

If it is decided to drill without the benefit of this additional exploration, sections should be drilled across the strike of the structures. Suggested drill hole locations are shown on the accompanying overlay.

Lenora-Tyee Zone - Proposed sites of drill holes to test the Lenora-Tyee Zone at depth and along strike are shown on the accompanying overlay.

LOCATION AND ACCESS

The property is situated approximately five air miles north of Duncan, Vancouver Island, and straddles the northern and western slopes of Big Sicker Mountain.

Easy access is obtained by the Mount Sicker road which branches west from the Trans Canada Highway at a point about seven miles north of Duncan. Eight miles of paved and gravel road lead to the Lenora workings. A network of logging and exploration roads, most passable by four-wheel drive vehicle, provide access to much of the southern half of the map area. The northern half of the area, corresponding to the steep northern slopes of Mount Sicker, is not as accessible. (see plan).

PROPERTY AND OWNERSHIP

The property consists of 47 mineral claims, 26 Crown Grants, and 3 Mineral Leases, owned and/or held by Mount Sicker Mines Ltd. Ground is also held by Mount Sicker in accordance with Mining Agreements between Canadian Pacific Oil and Gas Ltd and Mount Sicker Mines Ltd, (see plan).

The claims, Crown Grants, and Mineral Leases are listed below:

MINERAL CLAIMS

Name	Record Numbers	Record Dates
C.F. Group #1-8	14150-14157 incl.	October 25, 1966
C.F. Group #13-18	14162-14167 incl.	October 25, 1966
C.F. Group #25-28	14185-14188 incl.	December 8, 1966
C.F. Group #29-31	14197-14199 incl.	December 20, 1966
C.F. Group #33	14201	December 20, 1966
C.F. Group Fraction	14174	October 25, 1966
Dawn #1 and 2	16448-16449 incl.	April 30, 1970
B #1-4	16372-16375 incl.	April 13, 1970
B #5	16446	April 21, 1970
B #6-22	16376-16392 incl.	April 13, 1970

CROWN GRANTS

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

MINERAL LEASES

Mineral Lease No.	Lot No.	Date of Lease
13	33G,34G, 55G, 56G	December 9, 1969
17	5G, 6G, 7G, and 89G	August 3, 1970
18	59G	August 3, 1970

LOCATION AND ACCESS

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TOPOGRAPHY

Elevations on the property range from 300 feet along the Chemainus River to 2,300 feet at the summit of Big Sicker Mountain in the south-eastern part of the property.

One of the notable characteristics of the area is the rapidly varying nature of the topography. In the south-central and south-eastern parts of the map area relief is moderate, while to the west the ground drops off steeply to the Chemainus River in a series of north-south trending scarps and benches. The northern half of the map area covers the steep northern slope of Mount Sicker.

In general, the topography reflects the nature of the lithology and structure. Prominent easterly trending ridgesare formed by resistant gabbro/diorite intrusives and by the more siliceous members of the meta-sedimentary/volcanic series. Flats and valleys are coincident with the more recessive schists, and major faults are expressed as steep sided, narrow, valleys and gorges.

Vegetation too, is remarkably variable within the map area. Dense second growth balsam covers some logged over or burn areas, as in the south-eastern part of the map area, and the north and eastern slopes of Mount Sicker. There are also stands of fairly mature timber relatively clear of underbrush.

The prominent ridges formed by gabbro/diorite tend to be sparsely wooded, but host dense underbrush of salal. The northern and western slopes of the mountain support a denser more lush growth.

PROCEDURE

The geological mapping of the property was carried out during the periods June 6th to June 23rd (inclusive) and July 4th to July 16th (inclusive) 1972.

Existing geological/topographic maps of the property were found to be too inaccurate to use as a base for mapping. The grid over the southern half of the property was rechained by Ducanex crews to provide control for the mapping and later the E.M. survey. The grid over the northern half of the property was inadequate and a new grid was cut by W. Meyer & Associates Ltd in the latter part of June. Provincial government air photos of the area were also used for mapping and interpretation.

Initially mapping was carried out along the property access roads and numerous logging roads throughout the southern half of the property. Thereafter, grid lines were used as mapping control. The steepness of terrain and the density of brush, especially over the northern half of the map area slowed progress to such an extent that it was decided to traverse grid lines at 800-foot intervals, thus retaining a reasonable degree of control and at the same time effectively reducing time spent. It is obvious, however, that more precise delimitation and correlation be made by further fill-in mapping, and for this reason the title Reconnaissance Geology has been used on the map.

REGIONAL GEOLOGY

The property is underlain by rocks of the Sicker Group, (probably the lower volcanic members of the group). The Sicker Group rocks are believed to be of Pennsylvanian or earlier age, and form a north-west trending belt extending from Saltspring Island to Horne Lake. (Sicker Group rocks are also exposed in the area south and west of Buttle Lake, where they host the Western Mines zinc-lead-copper, massive banded sulphide ore body, a deposit considered to be the same type as the Lenora-Tyee ore zones. (Muller and Carson, 1968)).

Generally the Sicker Group rocks in the property area consist of andesitic flows, and tuffs with minor sediments. In most cases these rocks have been metamorphosed to quartz-sericite, quartz-chlorite, and chlorite schists. They have been intruded by sills and/or dykes of gabbro/diorite which form large, generally concordant bodies.

The Sicker Group rocks are usually steeply dipping, possibly isoclinally folded with development of strong foliation. There has also been considerable faulting, particularly strike faults, accompanied by much shearing. The Lenora-Tyee ore bodies occur within one such shear system, which Stevenson (1945) states is a regional structure extending from Mount Brenton in the west, through Mount Sicker to Mount Richards in the east, a distance of eight miles. There is also evidence of later? transverse faulting.

PROPERTY GEOLOGY

I. LITHOLOGY

Metasediments and metavolcanics - These rocks consist predominantly of schists which have been derived from volcanics and sediments. They are, in order of abundance, quartz-sericite schists, quartz-chlorite schists, and chlorite schists. Less abundant are graphitic schists, shales and cherts. Extreme dynamic metamorphism produces talc schists, phyllites, and mylonites, but they do not occur in sufficient abundance to be shown as separate formational units on the map.

Contacts between the quartz-sericite, quartz-chlorite and chlorite schists tend to be transitional and in many areas separation into distinct units has not been possible.

Quartz-sericite schists (1a)

This rock type probably derived from acid volcanics or intrusives (in the south-western corner of the property quartz-sericite schist appears to be laterally transitional with tuffs). The rock is more resistant to weathering than the other 'metasediments' and forms low rounded ridges.

Typically the schists are creamy weathering, frequently rust-stained, due to finely disseminated pyrite, and contain conspicuous quartz eyes in a pale creamy-grey siliceous ground-mass with sericitic partings.

Quartz-chlorite schists (1b)

These rocks are closely associated with the quartz sericite schists, and differ only in chlorite content, which imparts a pale greenish hue to the fresh surface.

Chlorite schist (1c)

The chlorite schists may be derived from andesites, andesitic tuffs, or intermediate to basic intrusives. They are typically grey brown weathering, grey to dark green on fresh surfaces, and are most abundant in the north-central part of the map area, just east of the main access road.

Graphitic schists (ld)

Only minor amounts of this rock have been noted, perhaps because of its soft recessive nature. Outcrops have been observed at only a few locations; in a shallow trench just west of the portal of the Lenora # 2 adit. (10W; 1+20N); associated with quartz sericite schists in the open cut on the "South ore zone", immediately south of the Lenora # 1 adit. (00 Base line; 9W); in a series of road-side outcrops, probably representing a narrow continuous band within quartz sericite schists, two to three hundred feet north of the 00 Base line, between 12E and 4E.

Isolated outcrops of rather carbonaceous shale were noted on the access road to the'north-east copper zone' where it crosses line 44E, and on the 'old' access road about 150 feet west of line 4W at 42N.

The graphitic schists may be of significance in that they are closely associated with the sulphides of the Lenora-Tyee ore zones.

Shale (le)

Shales have been noted at only two places within the map area; a small roadside outcrop about 200 feet north-east of the Tyee Shaft and several small outcrops along the 'north east copper zone' access road between lines 44E and 52E.

Chert (1f)

It is possible that some of the more siliceous bands within the quartz-sericite sub-unit are actually cherts. However the only readily recognisable cherts are those outcropping in a narrow band which hosts the copper mineralization of the 'north-east copper zone.'

Volcanics -

Tuffs (2)

Much of the quartz sericite schist may be derived from this unit, but it is only in the south-western corner of the map area that the tuffaceous/fragmental nature of the rock is really obvious. The best exposure is some 1000' west of the map area on the north side of the road leading to the Chemainus River. Here quite coarsely fragmental material is intimately associated with discontinuous bands, lenses and blocks of fine grained, finely bedded green volcanic sediment. East of this outcrop, on line 44W, south of the 00 Base line, tuffs are again exposed in bulldozer trenches. The rock here is coarsely granular, rather soft and crumbly, and displays weak bedding. East of these outcrops there appears to be a marked increase in the degree of metamorphism and deformation, and the 'tuff' is not as readily recognisable; there is a lateral transition to quartz-chlorite schist and quartz sericite schist.

Most of the rocks shown as tuffs on the map occur within the western half of the property, mainly in the area west and south of the Lenora-Tyee workings. The tuffs contain minor amounts of sulphide, mainly pyrite, although minor chalcopyrite has been noted at several places.

Andesites (3)

The andesites appear to have a close spatial relationship with the gabbro/diorite intrusives(5) However their distribution is limited to the western half of the property. It is not clear why they are apparently restricted to this area but it is possible that, like the tuffs, they become more highly metamorphosed to the east and are represented as quartz chlorite schist and chlorite schists. In general, however, they do not appear to have been subjected to as intense deformation and metamorphism as the schists, and may be the same age as the gabbro/diorite intrusives (5). The relationship may be that of flow and feeder sill.

Typically the andesites have a mottled grey, green to brown appearance on the weathered surface. The fresh rock is dark grey-green, occasionally red-brown. The flow nature of the rock is suggested by slaggy flow surfaces, and by the presence of amygdules and vesicles.

Intrusives

Quartz-feldspar porphyry (4)

This rock type is probably more abundant than is indicated by the distribution on the map, and may be represented by its metamorphic equivalent, quartz-sericite schist. The rock is best seen in the northern half of the property. In the area 12E; 39N there is outcrop of relatively undeformed quartz-feldspar porphyry which, however,shows lateral transition to quartz sericite schist. The undeformed quartz-feldspar porphyry is massive, creamy weathering, pale grey on the fresh surface, with only incipient foliation developed. The rock is coarsely crystalline, consisting dominantly of grey, occasionally pale pink, feldspar phenocrysts, with somewhat less quartz as glassy subhedral crystals. Contact relationships are not exposed, but outcrop distribution suggests the porphyry occurs as a conformable sill?

Gabbro (5)

The unit has been given the field name gabbro, although there is in fact considerable variation of composition and texture, ranging from coarse grained hornblende gabbro, through medium grained diorite to a marginal phase fine grained, dark green rock, weakly porphyritic in feldspar. Magnetite is found in all varieties, frequently in sufficient quantity to deflect a hand magnet.

These variations are well illustrated in the bulldozer trench on line 76E, between 14N and 19N. Here the whole range of texture and composition is seen in a continuous exposure.

The 'gabbro' is usually massive, occurring as sills ranging from a few feet up to 1800 feet in width, and 10,000 feet in length. (e.g. 'gabbro' underlying the central part of the property.)

Contact relationships between the gabbro/diorite and enclosing sediments are not often obvious, however, evidence of low grade contact thermal metamorphism was noted at two locations - quartz sericite schists have been 'dioritised' for a few feet from the contact. (e.g. trench exposure at 39E/5S and open cut on 00 Base Line at 7+00 W).

The gabbros tend to be massive and are less affected by shearing than the metasediments. This, along with the evidence of contact metamorphism, indicates that the gabbros are younger than the sediments/volcanics, in contrast with Stevenson's opinion that the intrusives are older.

Diorite (6)

These rocks are very similar to the andesites. However, in outcrop they are characterised by their more massive appearance and lack the textures typical of the flow rocks.

The diorites are dark green or grey green, very fine grained, and weather pale creamy grey or grey. They are best exposed in a series of outcrops just north of the large gabbro intrusive which underlies the central part of the map area, and also in a steep bluff in the south-western corner of the property (Line 40 W; between 8 S and 12 S) They are probably sills, although a small body of diorite exposed on the access road about 250 feet south of the 56+00 base line between lines 00 and 4 E cuts across the dip of enclosing schists at a small angle (15^{o})

Feldspar porphyry (minor intrusives) (7)

These rocks are believed to be the youngest within the map area, by virtue of their freshness and lack of deformation. They occur as small sills, a few feet wide. Outcrops have been noted at 28 E; 13 N and on the road crossing line 24 E (a) at about 6 N. Two other exposures, tentatively identified as feldspar porphyry are in the south western part of the property at 32 W; 10 S and at 16 W; 3 S.

The rock is buff weathering, pale grey on the fresh surface. Small phenocrysts of feldspar, and fine hornblende lie within a fine grained matrix.

Mylonite

The field name mylonite has been applied to rocks in which the original texture has been destroyed by extreme cataclasis, resulting in a highly sheared rock with a banded appearance due to the elongation of mineral constituents along the plane of shearing. Outcrops of mylonite are found along most of the major shear zones. There are also several outcrops throughout the property which could not be related to any recognizable shear or fault.

II. STRUCTURE

Almost all the attitudes recorded on the map are those of foliations. The strong imposed schistosity has obscured all but a few traces of bedding, and in the rare cases where bedding is preserved it is coincident with the schistosity. Formational strikes, as shown by the mapping, trend just south of east over the western half of the property, swinging gradually to the south in the eastern and southern parts of the map area. Dips are steep, the majority ranging between 70° north and 70° south. In many instances it was impossible to show a single attitude for particular outcrops because of the tight undulations of dip. Dips recorded are in some cases therefore quite local. It is possible that tight isoclinal folding exists throughout much of the property. None of the sections seen however, showed any fold axes other than tight crumpling and drag foldings in the vicinity of strong fractures and shears.

Significant variations in strike are rare, and major folds have been interpreted in two locations only; in both cases it is possible that the 'folds' are the result of drag along major faults. One fold (or displacement) is situated immediately north of the Tyee Shaft. The schists north of the gabbro contact here show a sharp change in attitude.

The other fold is between lines 4 W and 4 E and between 30 N and 34 N.

Numerous major faults and many lesser fracture zones occur throughout the property, and there is doubtless far greater structural complexity than the mapping indicates. It is probable that many of the formational contacts lie along strike faults of varying intensity. However, only the faults for which there is good evidence are recorded on the map. These faults have been interpreted from a combination of field evidence, air photo interpretation and correlation with the magnetometer survey (see Mount Sicker magnetometer map).

Faults fall into two general categories - strike faults and transcurrent faults.

a) A strike fault provides the structural setting for the Tyee-Lenora ore zones. It is suspected that the fault is a complex system of feathering fractures, rather than one continuous break. The fault has been traced from the western limit of the map area through the Lenora-Tyee surface workings, and appears to feather out just east of the Tyee Shaft. Another branch fault, presumably part of the same system, extends from just west of the Richard III Shaft and curves south east through the Westholme Shaft. A second major strike fault is readily recognisable along the course of Nugget Creek. This northerly dipping fault is well exposed in the bed of the creek where it crosses the "old access road"; a 1' gouge zone is flanked by three to four feet of mylonitised rock.

Another east-west fault has been interpreted in the northern part of the map area just south of the 56+00 N base line.

b) The transcurrent, north-easterly striking faults appear to cause lateral displacements, up to 600 feet in magnitude. In most cases they have a strong topographic expression, and are also recognisable by their displacement of formations. The relative ages of the two sets of faulting are not clear but it appears that at least one of the north-east trending faults is truncated by the Lenora-Tyee shear zone. Of possible significance is the apparent cut-off of the ore bodies to the west, by the interpreted north-west trending major fault.

In the south and western part of the property there are many sudden lateral breaks in continuity of lithology. These breaks correspond with marked north-south trending scarps, which are probably fault-formed.

A rather more tentative fault is that trending north-west from the Westholme Shaft. Evidence for this fault is a well marked air photo lineament and apparent discontinuity of lithology in the area 500 feet north and east of the Richard III Shaft.

III. MINERALIZATION

The Tyee-Lenora ore bodies are similar to the Western Mines Buttle Lake deposits. Both are zinc-copper-lead banded massive sulphide bodies occurring in schists of the Sicker Group. Both lie within shear zones and drag folds appear to be controlling structures.

Several explanations for the origin of the deposits have been postulated, e.g. hydrothermal replacement of crumpled schists in a shear zone (Jeffreys 1964); mineralisation by intrusive-derived solutions, via a fracture zone, in drag folded sediments (Stevenson 1945); or syngenetic deposition with subsequent remobilisation and concentration during later deformation (Carson 1968).

The Mount Sicker* north and south ore bodies lie within a major east-west shear. The sulphide zones occur as lenses, irregular masses, and stringers. The two zones are separated by a band of highly deformed schist and a major fault which displaces the south ore body upwards 100 feet relative to the north ore body. The north ore body

*The writer did not examine any of the underground workings and the description is gleaned from the reports by Stevenson (1945) and Sharp (1972) is 1700' long and 120' in depth; the south zone is 2100' long and 150' in depth. Thicknesses range up to 20 feet, locally 40 feet. Underground mapping has shown an apparent relationship between mineralization and drag folding of the schist host rock.

Showings - Apart from two small outcroppings adjacent to the Lenora No. 1 and No. 2 adits there are no surface exposures of the Lenora-Tyee ore zones, and the mapping programme failed to reveal any other showings of this type of mineralisation.

Early prospectors were very active in the Mount Sicker area and there are many old trenches, adits and shafts scattered throughout the map area. Most of this early work was done on pyritic fracture zones in andesites, quartz sericite and quartz chlorite schists. There are also workings on small pyrite-chalcopyrite showings along the contacts of the gabbro intrusives, and in the tuffs.

The showings of most interest are listed below, (not necessarily in order of merit).

1. "North-east Copper Zone - Approximately 72 E; 23 N;" a fractured and faulted, 10-20 foot wide chert band is mineralised with pervasive pyrite and erratic patchy chalcopyrite. The copper mineralization is associated with irregular patches of dark chloritic?, mineral within the chert. The mineralised area measures approximately 40' x 15'. The chert band is exposed in the bulldozer trench, 400' to the south-east, but contains no chalcopyrite, and appears to be faulted off to the north-west. Pyritised cherty float found on the 26 N base line at 72 E may originate from a northerly displaced portion of the chert band.

Three short drill holes 150 feet east of the showing intersected only minor copper mineralisation.

An old adit, 150 feet north-west of the showing, was driven into heavily pyritised quartz-sericite schists. It is of interest that the pyrite here has been sheared and 'smeared', evidence of at least one stage of movement during or after mineralisation.

2. "Area 'A' (61E 30N)"- this showing is notable for the intensity of shearing and deformation of the schists, and for the heavy limonite development in bedrock and soil. Visible sulphide mineralisation is sparse, probably because of the intense oxidation, and consists of minor pyrite along shear zones.

An attempt to reopen the old adit by Scurry Rainbow was unsuccessful. The adit has apparently intercepted a water-course which issues from the portal. The water is clear, but precipitates limonite heavily along the course of the stream, and a strong copper anomaly was obtained from the stream silts by Mount Sicker Mines Ltd.

This area lies 'on strike' with the 'north-east copper zone' described above, and there may be continuity of structure, or lithology between the two zones.

3. "Area 'B' 4W; 30N-36N (approx)" - This is in fact an area of structural disturbance, throughout which there is scattered pyrite hosted by quartz feldspar porphyry, quartz sericite schist and diorite. Pyrite/fracture zones in the porphyry and diorite have been the object of work by prospectors in the past. Several small exposures of brecciated and hydrothermally altered diorite were found at 4W; 25+50N.

No copper mineralisation was found within this area, but the structural and lithological cetting is considered to be attractive enough to warrant closer investigation.

Other showings worthy of note include a 50 foot zone of silicification and pyritisation adjacent to a gabbro-tuff contact (L20W; 43N). A short adit has been driven on this zone and very minor chalcopyrite was noted in the rather erratically disseminated pyrite.

Several minor occurrences of chalcopyrite and pyrite, as narrow lenses and discontinuous veins, have been found along gabbro/schist contacts, e.g. (17E; 30+50N); (00 Base Line at approximately 31E); (L24W; 50N).

A small exposure at the road junction near L8W; 14N is unusual in that the chalcopyrite is associated with magnetite.

The tuffs in the south-western part of the map area contain minor pyrite and rare flecks of chalcopyrite. Pyrite, chalcopyrite and magnetite mineralization in a narrow quartz healed fracture zone has been explored by trenching and an adit (caved) (L22W; 10S).

I. M. Watson, P.Eng.,

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