Box 7

Whipsaw Creek Property
Similkameen Mining Division
92 H 7

Amax Vancouver Office
May 1969 DK Mustard

1968 PROPERTY EXAMINATION

WHIPSAW CREEK PROPERTY

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SUMMARY

In June and July 1968 geological mapping, geochemistry and sampling was carried out on the Whipsaw Creek Property of Texas Gulf Sulphur Company under the terms of a letter of intent. The property which consists of the Whip, Saw, Axe and Pick groups totalling 28 claims was previously prospected by Texas Gulf Sulphur (1959 - 1962) and Dome Exploration (1962 - 1964).

The property is situated 18 miles southwest of Princeton in the Similkameen Mining Division, southern British Columbia, (N.T.S. 92 H 7, approximate coordinates 49°15'N and 120°45'W) at elevations between 5,000 and 5,700 feet on the east slope of Skaist Mountain, part of the Cascade Range. Road access to the property is good.

A complex property situation was resolved by ground survey.

In the Princeton area, Upper Triassic, eugeosynclinal, Nicola Group rocks are intruded by a variety of Mesozoic and Lower Tertiary Intrusions. The intrusive rocks are overlain by sedimentary and volcanic rocks, mainly post Oligocene in age. Northwest trending structures and younger block faults characterize the region. Major copper deposits in Nicola rocks occur at Copper Mountain and Ingerbelle, eight miles east of the Whipsaw Property.

Outcrop on the Whipsaw Property is generally poor. A porphyry stock and associated dykes occur at the contact of the Eagle batholith and Nicola Group rocks. The former is mainly

granodiorite and the latter chlorite schist, both of which are strongly foliated.

Four main porphyry types were recognized. These are feldspar-biotite porphyry, feldspar porphyry, quartz feldspar biotite porphyry, and quartz feldspar porphyry. A zone of breccia was observed at the margin of the stock.

Moderate propylitic, argillic, quartz-sericite, pyrite and silica alteration is observed but only locally are rocks intensely altered. It was noted that mineral occurrences are most common in silicified rocks. Pyrite is widespread and is most abundant near the edge of the stock.

Some indication of mineral zoning in copper/molybdenum, zinc and lead centered on the stock is noted.

Copper, mainly as chalcopyrite, occurs as disseminations and fracture fillings and appears to favour Nicola Group rocks and the margins of the porphyry. Tenor of samples from fresh Nicola rock is generally 0.15 - 0.3% Cu.

Molybdenum occurs marginal to the stock and most occurrences were seen in aplitic Eagle granodiorite. Molybdenite, occurs on dry fractures or associated with thin quartz veins. Low assays of surface character samples ranged from 0.005 to 0.2% MoS_2, and higher assays up to 0.1% MoS_2, were obtained from short lengths of core from drill holes.

A grid of soil samples over the property indicates that copper and molybdenum anomalies are mainly related to the margins

of the stock, porphyry dykes and swamp areas. High concentrations of copper in swamps (up to 2% Cu) appear due to leaching of copper from rock on ridges and concentration downslope in organic rich layers.

Geophysical work carried out by Texas Gulf and Dome Exploration (during 1960 - 1964) was used to indicate geology in areas of no outcrop. Strong I.P. anomalies are considered due to pyrite concentration. Low order anomalies are untested.

Diamond drilling by Dome and Texas Gulf was restricted to testing an area of high I.P. anomaly.

Eight bulldozer trenches were excavated by AMAX during 1968 to meet work commitments.

The potential for ore grade molybdenum occurrence is not considered great and it is concluded on geological evidence that the best target for copper lies beneath swamps at the margin of the porphyry stock.

INTRODUCTION

This report is based on a compilation of work including work carried out by AMAX on the Whip, Saw, Axe and Pick groups of claims (totalling 28 claims) of Texas Gulf Sulphur Company, near Princeton, British Columbia.

The adjoining Whipsaw Mines Limited (NPL) property was briefly visited by the author in September 1967 and reconnaissance geological mapping and soil sampling was carried out in the area by AMAX for four days in the fall on 1967.

During June and July 1968, AMAX completed a program of geological mapping, geochemical sampling and trenching on the Whip, Saw, Axe and Pick groups of claims (hereafter referred to as the Whipsaw property).

The work was done under the provisions of a letter of intent dated February 16th, 1968 (Appendix I). The objectives of the program were as follows:

1) To determine on the ground the precise location of the Texas Gulf mineral claims and contiguous mineral claims and Crown Granted mineral claims owned by others.

2) To evaluate the distribution of mineral occurrences relative to mineral claim group boundaries.

3) To complete one year's assessment work on the Whipsaw property in the form of bulldozer trenches.

Location and Access

The Whipsaw property lies about 18 miles southwest of Princeton in the Similkameen Mining Divsion, southern British

Columbia (See Figure 1). The claims are located within the National Topographic Reference 92 H 7 and the approximate coordinates are 49°15'N and 120°45'W.

The property is reached by 12 miles of dirt road which branches west from the Hope-Princeton Highway (Highway #3) about nine miles south of Princeton. From the main highway to Jonson's cabin, a distance of ten miles the road is used as a logging road. A steep, rough four wheel drive road provides access to the property from Jonson's cabin.

Description of Area

The property lies within the Cascade Mountain Range on the eastern slope of Skaist Mountain. Elevations range from 4300 feet at the floor of the valley of Whipsaw Creek to 5700 feet at the higher parts of the property.

Topographically the area is glaciated; hills are rounded with moderate to steep slopes and are mantled by glacial till. Major streams are deeply incised with high level terraces of fluvio-glacial material but in the interfluves, drainage is stagnant with development of extensive swamp areas. Seepages occur at the break of slopes.

The property has an extensive cover of forest, mostly jackpine at higher elevations but with good stands of spruce, balsam and cedar and alder thickets on the lower slopes.

Water is available at most parts of the property from streamlets, ponds and swamps. Whipsaw Creek is a perennial stream

with a good flow but disposition of its waters is subject to the Columbia Treaty.

Property Situation

The location of claims as outlined on claim maps available from offices of the B.C. Mines Division is not correct.

The Crown Grant claims have cut lines on their boundaries which were identified on the ground. The legally surveyed corner posts of the Crown Grant claims were also located. These claims have priority in the area.

Brunton and chain surveys were run on the location lines of the Whip, Saw, Axe and Pick groups of claims of Texas Gulf Sulphur, and these groups were tied into the Crown Grant posts. Texas Gulf claims have second priority in the area.

Some claim posts of Whipsaw Mines, Magnet and Jorgenson (Whipsaw Mines?) were found during the claim survey. The locations of these posts were used as a control for plotting these claim groups as shown in Figure 2.

It must be noted that no work had been recorded on the Magnet Mines, Spencer and Fritz Groups by their due dates and that no payment in lieu had been made on these claims prior to August 1st, 1968. M. Jorgenson recorded a group of claims on June 17th, 1968 which in part overlap the Fritz claim group of Magnet Mines.

Since the Fritz group did not expire until July 18, 1968 the overlapping Jorgenson claims should be in contravention.

Should further work be contemplated on the Whipsaw property consideration should be given to establishing the property situation by legal survey.

History

Two old trails from the interior to the coast pass near to the Whipsaw property, the Fur Brigade trail of the 1820's and the Dewdney Trail of the 1860's.

Early mining activity in the area dates back to the start of the century, at which time placer gold was found in the Similkameen River and Whipsaw Creek. During 1910 - 1930 work was carried out on a number of narrow veins carrying galena and sphalerite with erratic values in gold and silver. Some of this work is briefly described in Minister of Mines reports of the period.

In 1959, regional geochemical sampling by Texas Gulf Sulphur revealed an abnormally high content of copper in stream sediments of the Whipsaw area and 28 claims were staked.

Geological, geochemical and geophysical work and some diamond drilling were carried out by Texas Gulf during 1960-1962. Work was discontinued when Texas Gulf terminated their operations in British Columbia.

The property was optioned to Moneta Porcupine Mines Ltd. in 1963. A syndicate consisting of Moneta, Dome Exploration and

Tennessee Corporation explored the claims during 1963 - 1964. Further geophysical and geochemical work was done and two diamond drill holes were drilled to test a large I.P. anomaly.

In 1968, a mill with a possible capacity of 200 t.p.d. was erected by the Huff Brothers on a Crown Grant near Whipsaw Creek although no reserves are proved in the area.

Desultory work has been carried out on some of the Whipsaw Mines Limited claims during the past two years.

However, discoveries at Ingerbelle and the acquisition by Newmont of Granby's Copper Mountain Property made Princeton one of the most active prospecting areas in British Columbia during 1968.

REGIONAL GEOLOGY

The most recent published regional mapping of the Princeton region was by Rice, G.S.C. Map 888A. The outline of the regional geology is shown in Figure 3.

Formations

Nicola Group

The oldest rocks reported in the area, the Nicola Group, consist of metamorphosed volcanic and sedimentary rocks including andesites, augite and feldspar porphyries, argillite and minor limestone and quartzite. However, the group is essentially undivided as attempts to subdivide and correlate the formations have proved abortive. The age of the Nicola Groups on fossil evidence

is Upper Triassic.

During early Lower Cretaceous times, the Dewdney Creek Group was deposited in a basin situated west of Princeton. The lowest members of this group are essentially volcanic in origin and are followed by argillites and greywackes and later by thick conglomerates with many granite cobbles. This would indicate the infilling of the basin with a corresponding epeirogenic uplift and unroofing of granitic rocks to the east.

Late Lower Cretaceous sedimentation is represented by the Pasayten Group which occupies a belt parallel to the Dewdney Creek Group to the west and overlaps unconformably on to the Eagle granodiorite to the east. The Pasayten Group is non marine and consists of grits, argillites, volcanic rocks and conglomerates.

The Oligocene Princeton group consists of sediments, ranging in size from coarse conglomerates to fine shales and including coals, and volcanics, mainly andesites and basalts. The sediments are laid down in discrete basin which may be fault controlled.

Small areas of olivine basalt possibly post Miocene in age, lie to the north of Princeton.

Deposits of till and glacial silt are widespread and in places these mask most of the bedrock.

Intrusive Rocks

Probably the oldest intrusive rocks represented in the area are the basic and ultrabasic rocks which occur as stocks and

small bodies. The largest is the Olivine Mountain body which lies west of Princeton.

A number of stocks, dykes and irregular bodies form the Copper Mountain Intrusions, south of Princeton. These are syenitic in composition and appear to form a single petrographic suite. Major mineral occurrence is associated spatially with this suite of rocks. The Copper Mountain Intrusions have been dated by K-Ar methods as 198 m.y.

The Eagle granodiorite is exposed in a long narrow belt elongated in a northwest-southeast direction. Rice includes the Eagle with the Coast Intrusions and two K-Ar age dates give ages of 96 m.y. and 143 m.y. The granodiorite is well foliated, the foliation being parallel to the elongation of the batholith and conforming with that in the Nicola rocks.

The Lightning Creek Intrusions occur as stocks and as a great number of sills and dykes. They vary in composition but are generally diorite to quartz diorite. As they cut the Pasayten Group and are overlain by Princeton Group their age is Upper Cretaceous to Lower Tertiary.

The Otter Intrusions, similarly, are bracketed in age between the Upper Cretaceous and Lower Tertiary. These intrusions occur as stocks and a profusion of dykes and sills and range in composition from gabbro to granite. Varieties of feldspar porphyry are common.

A wide variety of unrelated dykes and sills occur in the

Princeton area. The Whipsaw porphyry which lies at the margin of the Eagle granodiorite batholith and a similar intrusion with a latite-dacite composition near Princeton are examples.

Structure

Major faults intersect all formations older than the Princeton group and there is evidence that movement along them occurred during more than one period.

An early period of faulting is represented by northwest striking structures. It is possible that the northwest striking Eagle batholith was emplaced along a zone of major thrusts.

Younger normal faults trend northsouth, northwest-southeast, and northeast-southwest.

Fold structures are complex and difficult to determine. However more than one period of folding may be represented.

Mineralization

Mineral occurrences are widespread.

The Nicola Group has provided a good host for copper occurrences in southern British Columbia. Copper Mountain, in a lime tuff horizon of the Nicola, is a major copper producer. Ingerbelle, mainly associated with Nicola fragmentals, has large potential as a copper producer and has reached the planning stage.

PROPERTY GEOLOGY

In general, rock exposure is poor as most of the property is mantled by glacial till on the hillsides and swamps in the valleys or topographic depressions.

Within the property three main rock units are represented. These are:

Upper Cretaceous-Tertiary	3 - Whipsaw Porphyry
Jurassic-Cretaceous	2 - Eagle Granodiorite
Upper Triassic	1 - Nicola

Nicola Group rocks, underlie most of the property. The Eagle granodiorite outcrops on the western side of the property and the Whipsaw porphyry lying at the Nicola/Eagle contact, occupies the centre of the claim groups (See Figure 4).

1. Nicola Group

The Nicola rocks on the property are light to dark green, light to dark grey, often banded, schistose rocks which generally weather a rusty brown color. Chlorite and amphibole schists are most commonly represented but some occurrences of quartzite, grit, limey rocks and chloritoid schist were noted. The rocks belong to the greenschist facies and are strongly foliated. Foliation strikes 150-160° and dips moderately to steeply to the west. Pyrite, a common constituent of the schist, is found as elongate blebs and grains within and parallel to the foliation and as narrow veins and disseminations in fractures.

Skarn

Outcrops of skarn occur within the Eagle granodiorite near the Eagle-Nicola contact. The two types of skarn noted were:

a) Epidote/magnetite skarn with associated pyrite, chalcopyrite and molybdenite.

b) Epidote/grossularite/pyrite skarn with associated

sphalerite, galena and minor chalcopyrite and molybdenite.

Exposures of skarn are patchy and discontinuous. Skarn is believed to be derived from lime rich beds of the Nicola Group metamorphosed by the intrusion of the Eagle granodiorite.

2. Eagle Granodiorite

On the Whipsaw property the Eagle is a light grey, coarse grained, biotite granodiorite with aplite and pegmatite phases at its margin. In hand specimens the rock is well foliated with alternating quartz-feldspar and biotite rich bands. A typical specimen has the following mineral composition.

Plagioclase	60-65%
K-feldspar	5-7 %
Quartz	15-17%
Biotite	15-20%

The plagioclase is light colored, possibly oligoclase to andesine in composition and has lamellar twinning. The K-feldspar is white and shows Carlsbad twins. Quartz is anhedral and slightly smoky in appearance. Biotite occurs as black, fresh looking flakes characteristically aligned in thin bands.

The aplites are fine grained, light colored rocks consisting essentially of quartz and feldspar. The rock has a foliation due to the alignment of stretched quartz grains. Quartz forms 40-45% and pink feldspar 55-60% of the rock. Occasionally fine flakes of chlorite and small red garnets are present. The aplites cut the foliated granodiorite which is altered near the contact. Aplite is often well fractured in the vicinity of the

Whipsaw stock and in places, contains stockworks of thin quartz veins. Aplite is silicified adjacent to the quartz veins. Pyrite, some epidote and minor amounts of hematite, chalcopyrite and molybdenite are also associated with the quartz veins.

The Eagle pegmatite is composed, predominatly, of very coarse orthoclase/albite feldspars and quartz, with occasional patches of coarse black biotite. Only a few small exposures were seen, and these are generally associated with aplitic Eagle. In one exposure of pegmatite, coarse rosettes of molybdenite are associated with the quartz grains.

2A. Interbanded Series

The Eagle granodiorite and the Nicola Group are separated by a transition zone of mixed Eagle and Nicola rocks several hundreds of feet wide. The transition or mixed zone has been named the "Interbanded Series".

A typical section from east to west is:

a) Nicola chlorite schist

b) Chlorite schist with occasional stringers of aplitic Eagle on foliation planes

c) Injection gneiss; lit-par-lit injection of aplitic Eagle on foliation planes of Nicola schist. The partings of aplitic Eagle generally increase in width to the west

d) Alternating bands of Eagle and Nicola up to 200 feet in width

e) Rafts of Nicola in Eagle

f) Eagle granodiorite

3. Whipsaw Porphyry

The Whipsaw group of porphyry intrusions occurs at the contact of the Nicola group and the Eagle granodiorite. The main porphyry intrusion has a narrow and possibly discontinuous marginal breccia zone (3A). Dykes of porphyry from the main stock strike northwest.

Four main types of porphyry have been recognized however due to lack of exposure, contact relationships between phases of the stock are not firmly established. The main porphyry types are:

3B Feldspar-biotite porphyry
3C Feldspar porphyry
3D Quartz-feldspar-biotite porphyry
3E Quartz-feldspar porphyry

3A Breccias

The margin of the main porphyry body is marked by a zone of breccia. The breccia exposed in Trench #4 is about 150 feet wide.

The breccias consist of a mixture of fragments of Nicola group rocks and Eagle granodiorite and possibly altered porphyry fragments in a matrix that appears to be mainly comminuted fragments of crowded (biotite)-feldspar porphyry. Fragments are angular to rounded and are up to two feet in diameter but in general they range from a few inches to 1/8 inch. Eagle fragments predominate at the western margin of the porphyry stock although Nicola fragments are also common. The Eagle fragments are highly

altered. Feldspar is almost completely altered to sericite and the fragments are surrounded by a halo of quartz. Stringers of crushed rock occur within the fragments. To the north and east, fragments are essentially of Nicola schist. The fragments of Nicola schist are bleached but color bands are usually recognized. Fragments contain disseminated pyrite and magnetite and some fragments have euhedral pyrite cyrstals developed at their margins.

The breccia in Trench #5 contains the best mineralized section seen to date at surface on the property. Here the breccia is cut by quartz veins and the matrix is silicified.

3B Feldspar Biotite Porphyry

Feldspar-biotite porphyry was observed as small patches within the main porphyry body. It is a mesocratic holocrystalline rock with feldspar and biotite phenocrysts set in a dark matrix of fine grained feldspar and mafics. The matrix comprises 75% of the rock. Zoned feldspar phenocrysts from 1 mm to 3 mm in size and euhedral biotite phenocrysts averaging 1 - 2 mm in size each form about 10% of the rock. Most of the biotite is altered to chlorite. The feldspar phenocrysts often have a greenish color and are indistinct. No disseminated sulphides have been seen in this unit although pyrite occurs in fine fractures. Hematite blebs form up to 1% of the rock.

3C Feldspar Porphyry

The feldspar porphyry occurs as a large outcrop area in the west side of the main stock and as northwest trending dykes

which cut Nicola Group rocks as evidenced in Trenches #1, 3 and 6.

This unit is a mesocratic porphyritic rock with feldspar phenocrysts set in a fine medium grained matrix of feldspar with minor amounts of epidote, hematite and pyrite.

The feldspar phenocrysts are euhedral to subhedral, are up to 3 mm long and comprise from 5 - 10% of the rock. The phenocrysts are zoned and have a greenish color. The matrix is light colored, and has no visible mafics or quartz. Epidote, hematite and pyrite together form about 5% of the matrix.

Sulphides, mainly fine grained pyrite and occasional specks of chalcopyrite are disseminated in the rock. Thin manganese stain occurs on some fractures.

3D Quartz Feldspar Biotite Porphyry

This porphyry forms the greatest outcrop area of the stock. The rock is a leucocratic porphyry with phenocrysts of quartz, feldspar and biotite in a fine grained matrix composed mainly of feldspar, quartz and biotite.

Subhedral to anhedral quartz phenocrysts form 15 - 20% of the rock type and range up to 2 mm in size. Subhedral feldspar phenocrysts form about 15% of the rock type and range in size from 2 - 4.5 mm. The feldspars show good cleavage but no apparent twinning. Euhedral biotite books form about 5% and range from 1.5 mm - 3 mm in size. The matrix is fine grained quartz and feldspar with occasional small flakes of biotite. Some biotite has been altered to chlorite and feldspars to kaolin but

the rock generally has a fresh appearance.

3E Quartz-Feldspar Porphyry

This unit occurs in the main stock. The porphyry is leucocratic with quartz and feldspar phenocrysts in a quartz-feldspar matrix. Clear,vitreous quartz phenocrysts 1 - 2 mm in size form about 10% of the rock. The large crystals are subhedral and the smaller anhedral in shape. Feldspars range up to 4 mm in size and form 15-20% of the rock. They are generally subhedral and rarely exhibit twinning.

The matrix is leucocratic, relatively coarse grained, and forms about 70 - 75% of the rock. It is composed essentially of feldspar and quartz with indistinct crystal boundaries and, on average, about 1% fine grained disseminated sulphides and $<$ 1% magnetite. Very fine grained sulphides also occur within the quartz and feldspar phenocrysts. Some fine chalcopyrite occurs disseminated in the rock. Epidote is present as cores to feldspar phenocrysts. There is some kaolinization of feldspar and often a loss of porphyritic texture due to alteration.

Other Porphyries

In some feldspar porphyry dykes and near the margins of the main porphyry body, the feldspar phenocrysts are more numerous and closely packed forming crowded feldspar porphyries.

A number of grey feldspar porphyry dykes (3F), which strike northwest, have been seen in the vicinity of lead and zinc mineral showings on properties lying to the south of the Whipsaw

property (eg. Nite and Day, Metastoffer Zone, Mae etc.). These dykes are often heavily iron stained and show plagioclase phenocrysts (up to 6 mm) embedded in a grey aphanitic matrix in which biotite is sometimes recognized.

A small exposure of a striking porphyry dyke was observed in the southwest of the property. This is characterized by large phenocrysts of epidote which appear to have completely replaced calcic feldspars.

STRUCTURE

The dominant structural features are:

1) The strongly developed foliation in the Nicola Group and Eagle rocks

2) Large normal faults and shears, that expose different levels of the porphyry intrusion

3) Strongly brecciated and fractured rock associated with porphyry contacts.

Foliation

Both Nicola Group rocks and Eagle granodiorite are well foliated. Foliation in both rocks generally strikes 160° and dips at moderate to steep angles to the west. On close examination the schists show ptygmatic folds with development of "kink" bands.

No bedded structures were recognized in the Nicola Group.

Faulting

Major fault and shear zones were seen in trenches. In Trenches #4 and 4a, a fault zone some hundreds of feet in width

occupies an infilled topographic depression. Strong shears and faults are apparent in Trenches #1 and 8 and in Trech #3 the quartz-feldspar-biotite porphyry/schist contact is marked by a shear.

Porphyry dykes in Trench #1 appear to be less disturbed by shears than adjacent Nicola rocks.

Since large fault zones were related to drift filled depressions in trench sections, expressions of these zones were sought for on air photographs. On the basis of agreement with known fault zones and on some evidence from drill information and geophysical surveys, photo linears were plotted on the geological plan (See Figure 4). However, many more faults and shear zones are probably represented in the area.

Most major faults appear to be steep, normal faults and may be related to pre-Oligocene (post mineral) block faulting in the Princeton area.

There appears to be some convergence of faults in the swamp area of Claims Saw #4 and 6.

Amount of displacement on faults is not known.

Lodder, on the basis of displacement at the contact of the Eagle and Nicola, has postulated a large eastwest tear fault of some 2000 feet displacement lying along Whipsaw Creek. Given the dip of this contact to the west at a moderate angle, the displacement could equally be explained by a normal fault with a large down throw to the south.

Minor Fractures and Brecciation

Fracturing is often intense at the margins of porphyry intrusion. In Trench #3 the Nicola schist crumbles along small fracture planes to fragments < 1/4 inch in size. Fractures are limonite stained.

Local stockworks of fine fractures occupied by quartz veins occur in aplitic Eagle rocks.

A stockwork of quartz veins and limonite stained fractures occur in the feldspar porphyry exposed in Trench #6.

Breccias are directly associated with the margin of the main porphyry body.

ALTERATION

Hydrothermal alteration on the Whipsaw property is generally moderate with occasionally more intense effects at the margins of the porphyry and within certain porphyry units.

The types of alteration minerals seen on the Whipsaw property in relative order of abundance are:

Epidote and chlorite - most abundant

Sericite

Kaolinite and pyrite

Silica - least abundant

Propylitic - Epidote and chlorite

This appears to be ubiquitous (within the porphyry environment).

Argillic - Kaolin and (chlorite)

Argillic alteration is best developed in the contact area of the porphyry stock and especially in the feldspar porphyry. Argillic alteration is less well developed on the quartz feldspar and quartz feldspar biotite porphyry and is absent in the feldspar biotite porphyry.

(Quartz) - Sericite

Quartz sericite appears to be absent in feldspar-biotite porphyry, is seen occasionally in quartz-feldspar porphyry but is more abundant in the feldspar porphyry. It occurs in the quartz-feldspar-biotite porphyry (as does argillic alteration) in the dyke area south of Trench #8.

Quartz-sericite and argillic alteration appear to be spatially related on the Whipsaw property.

Pyrite

Pyrite is generally marginal to the stock.

In places the Nicola schists carry an average of 3% pyrite although in places they are intensely pyritized and contain up to 20% pyrite.

Within the porphyry the quantity of pyrite is related to intensity of alteration, eg. fresh quartz-feldspar-biotite porphyry carries negligible pyrite but when altered it carries significant amounts of finely disseminated pyrite.

Silica Alteration

The majority of occurrences of siliceous alteration have been noted outside the main porphyry stock.

Introduced silica, sometimes locally intense is present in aplitic Eagle, the breccias at the margin of the stock, in Nicola volcanics particularly south of Trench #8 and in Trench #5, in feldspar porphyry dykes in Trench #6 and in feldspar porphyry in Trench #4a. Silicified rocks appear to be closely associated with mineral occurrences.

MINERALIZATION

Metallic minerals on the property in order of abundance are -

Pyrite - most abundant
Chalcopyrite
Hematite
Magnetite, pyrolusite
Malachite
Molybdenite
Bornite, covellite, chalcocite
Chrysocolla
Sphalerite

Sphalerite, galena, pyrite, chalcopyrite and molybdenite occur with the skarn inclusions in Eagle intrusive rocks.

Massive galena, sphalerite, pyrite and chalcopyrite occur in shears and as fissure fillings in Nicola rocks south of the property.

Distribution of Metallic Minerals

Pyrite

Pyrite is very abundant within the Whipsaw property and is associated with all lithological units. It occurs as fine and coarse disseminations in porphyry and Nicola rocks, as fracture fillings in Nicola rocks, breccia, Eagle aplite and marginal porphyry and as massive segregations in skarns.

Pyrite is common in rocks exposed at surface on the ridges; however in trenches excavated through thick glacial overburden on lower slopes iron stain is often intense and fractures in the rocks are filled with limonite.

It appears that concentrations of pyrite have been responsible for the highest I.P. anomalies (See section on Geophysics) on the property and for the low pH of circulating ground waters.

Chalcopyrite

Chalcopyrite is abundant in some breccia. It occurs as disseminations in porphyry and as fracture fillings in Nicola schist, aplitic Eagle and porphyry. It is massive in skarns.

The chalcopyrite is closely associated with pyrite and the pyrite to chalcopyrite ratio is high.

Character samples were collected from various environments. Some of the copper assay values are listed in Table III.

Some generalizations may be made from these results:

1) Highest copper values are found in breccia and in Nicola schist adjacent to the porphyry

2) Eagle granodiorite and interbanded series rocks are unfavourable host rocks

3) Some indication of copper is found in all porphyry units tested. Greater amounts occur in the feldspar porphyry

4) Low values in oxidized fractures in Nicola schist, eg. of Trench #3, combined with the occurrence of strong concentration

TABLE III

CHARACTER SAMPLES - COPPER

Location	Rock Unit	Nature of Sample	Length (feet)	% Cu
1. Trench #1	Nicola schist	Discontinuous chip	598	0.12
2. Trench #1	Feldspar porphyry	Continuous chip	22	0.19
3. Trench #1	Crowded feldspar porphyry	Continuous chip	20	0.07
4. Trench #3	Banded Nicola schist against altered quartz-feldspar-biotite porphyry	Channel floor of trench	30	0.31
5. Trench #3	Fractured, stained, oxidized Nicola schist	Channel floor of trench	110	0.05
6. Trench #4	Porphyry/breccia contact zone	Chip	100	0.08
7. Trench #5	Brecciated Nicola schist adjacent to feldspar porphyry	Chip	50	0.36
8. Trench #5	Breccia 4' deeper than #7	Chip	20	1.0
9. Trench #6	Porphyry 3b, 3c, 3e, stained, oxidized and quartz veined	Chip	100	0.02
10. Trench #6	Porphyry 3b, 3c, 3' deeper than #9	Chip	12	0.05
11. Trench #8	Interbanded Eagle granodiorite. Eagle aplite and Nicola Schist	Chip	162	0.05
12. Trench #8	Altered quartz feldspar biotite porphyry	Chip	319	0.10
13. Trench #8	Nicola schist, altered fractured oxidized	Chip	25	0.22

of copper in swamps indicates surface leaching of copper.

Hematite

Hematite is not ubiquitous. Distribution of hematite within rock units is as follows:

1) Feldspar porphyry - hematite occurs as disseminations in association with magnetite, pyrolusite and clay minerals

2) Feldspar-biotite porphyry - hematite disseminations but no magnetite

3) Eagle aplite - sporadic occurrence associated with quartz veining.

Hematite was not observed in the breccias.

Magnetite

Magnetite is concentrated around the contacts of the Whipsaw prophyry in the Nicola rocks and as fracture fillings in the breccias. It is also disseminated in the feldspar porphyry phase of the Whipsaw porphyry. A strong magnetic anomaly is located over the contact area on the east side of the quartz-feldspar-biotite porphyry "tail" south of drill hole # W5.

Magnetite is also found locally as massive lenses in skarn.

Pyrolusite

Manganese stain is weak throughout the property. Dendritic coatings were noted on joint planes within the feldspar porphyry and within dykes of feldspar-biotite porphyry.

Malachite

Malachite tends to occur in the marginal areas of the stock and with the dykes to the south. Malachite occurs as surface coatings in breccias, Nicola schists and aplite. In porphyry malachite is seen as small stain areas around copper sulphides, as stain on feldspars and biotite phenocrysts, and as normal coatings on joint surfaces.

Molybdenite

Molybdenite occurs in close association with the margin of the porphyry stock and dykes to the south but was not seen within the porphyries of the stock.

Molybdenite occurs in brecciated Nicola schists of Trench #5, in the interlayered series in Trench #8, in breccia of Trench #4 and in aplitic Eagle. It was also observed in two skarns at Y2N/40W and B6N/30W.

Molybdenite occurs as fine grained coatings on fractures and along the margins of the quartz veins. Coarse rosettes of molybdenum were observed in an Eagle pegmatite at approximately E4N/44W. From the drill core it appears that the grade of molybdenite is very low (0.01 - 0.02% range) and that significant molybdenite occurrence ($\geq$ 0.05%) is confined to small discrete zones.

It is believed that the geochemical anomalies represented on Figure 10 indicate closely the actual molybdenum distribution in the underlying rocks.

Bornite

Where observed bornite is subordinate to chalcopyrite in quantity.

Bornite is closely associated with pyrite. It occurs as fine disseminations in porphyry but not as fracture fillings in Nicola schists as does chalcopyrite. Bornite is found however in the breccia of Trench #5.

Chalcocite and Covellite

To the south of the property covellite and chalcocite occur with porphyry dykes, in Trench #6 in feldspar porphyry, in Trench #1 in feldspar biotite porphyry and in Trench #8 in quartz-feldspar biotite porphyry. The minerals occur as thin blebs or rounded coatings in association with malachite, pyrite and chalcopyrite.

Chrysocolla

Thin veins of chrysocolla were seen cutting brecciated Nicola schist in Trench #5.

Mineral Zoning

South of Whipsaw Creek the main mineral occurrence appears to be galena. Sphalerite predominates in observed prospects just north of Whipsaw Creek.

Thus, on a broad scale, mineral zones appear to be concentric around the Whipsaw stock. Outwards from the porphyry the mineral zones would be represented by copper/molybdenum, zinc and lead.

PHYSICAL WORK

In early June 1968 a tent camp was established near Trench #1 on the Whipsaw property. From this camp geological mapping, geochemical sampling and some bulldozer stripping and road building was carried out during June and July. A ground magnetometer survey carried out during the latter part of July was found to be ineffective due to severe magnetic storms. Work commenced at the southern margin of the property and proceeded north as the snow conditions allowed.

Mapping and sampling was controlled by an existing grid which was resurveyed by brunton and tape, cleaned, reflagged and extended to the margins of the property. The grid is idealized in Figure 7 but otherwise is shown as surveyed.

Trenching for assessment purposes was required to be completed at an early stage to meet the due date of claims.

Geochemistry

Introduction

The Whipsaw property was discovered by Texas Gulf Sulphur Limited in 1959 as a result of a regional drainage reconnaissance of the east flank of the Eagle batholith.

During 1960 Texas Gulf carried out a grid soil sampling program over a portion of the Whipsaw property. This program was incomplete for our purposes because:

a) Sampling was carried out essentially in the A horizon

b) The grid was not extended to the limits of the

property

c) Samples were analysed only for copper and the molybdenum distribution was not investigated.

In 1963 Dome restricted geochemical exploration to an examination of copper content of stream and seep sediments. Extremely high copper concentrations were obtained from some of these samples (up to about 2% copper) but neither the source of the copper nor reasons for high concentration were adequately defined.

In 1968 it was decided that geochemical sampling offered the best tool to quickly evaluate the distribution of mineral occurrence in relation to the property interest. Permission was obtained to sample the Huff Crown grants but permission to sample on to Whipsaw Mines ground was refused.

The geochemical program took two forms:

1) Soil sampling on a grid of generally 200 foot spacing

2) Sampling of stream waters and silts and seeps where encountered during grid traverses

Soil Sampling

Soil samples were collected in the B horizon where

possible. However, glacial till in excess of 30 feet thick was encountered on hillsides and marshy areas with high organic content were common.

A total of about 1400 soil samples were collected and analysed for copper and molybdenum at the AMAX Geochemical Laboratory in Burnaby by standard methods.

Soil Sampling Results

On the basis of plots of frequency of values (See Appendices IV and V) the following breakdown was made.

	Copper ppm	Molybdenum ppm
a Background	0-350	0-8
b Positive 1	351-525	9-12
c Positive 2	526-700	13-16
d Anomalous	>700	>16

The threshold value for copper appears high and may reflect two populations. However a lower threshold would probably only enhance existing anomalous areas.

TABLE IV

WHIPSAW MINES AREA

Extract from Dome Exploration Drill Holes on Texas Gulf Ground

DDH # W 4

		Cu	MoS_2
52-59'	Volcanics, silicified, minor native Cu and chalcopyrite on fractures. 5% pyrite	0.115	0.053
69-79	Silicified rock - probably altered and silicified granodiorite. MoS_2 as minor	0.06	0.074
79-89	disseminations and on fractures. 2% pyrite	0.05	0.074
93-97	Volcanics as above (52-59') Increase in epidote and pyrite 95-96'	0.095	0.031
107-112	Volcanics as above. 5% pyrite. Silicified	0.160	0.074
112-117	sections with epdiote up to 10-15% pyrite	0.130	0.021
140-145	140-142 silicified rock. 1% pryite 142-1448 volcanics, silicified, pyrite and minor molybdenite	0.08	0.095
155-161	Silicified granodiorite-mafics replaced. Fractures with native Cu. Moly on fractures 157-161	0.05	0.053
175-181	Silicified zone - Mo on fractures (177-178 volcanics 3% pyrite)	0.11	0.053
181-188		0.045	0.074
250-255	Volcanics - highly silicified 5% pyrite silicified zone 2% pyrite trace MoS_2 as blebs on fractures and disseminations Trace chalcopyrite epidote. Minor alteration	0.23	0.064
260-265	Granodiorite highly silicified 2% pyrite Trace chalcopyrite 260-262 Mo on fractures at 45° to core. Minor epidote and magnetite	0.01	0.106
310-315	Silicified zone 2% pyrite. Mo throughout in bleached granodiorite-largely on narrow, late quartz filled fractures	0.03	0.032
386-389	Volcanics 6-8% pyrite. Mo in narrow tight fractures, some calcite and limonite	0.09	0.106
449-454	Silicified altered volcanics 2-5% pyrite Sparse Mo throughout. Trace chalcopyrite	0.115	0.053

		Cu	MoS_2
558-560	Granodiorite - well silicified. Chalcopyrite on fracturesparallel to core	0.14	0.037
644-646	Volcanics 5-15% pyrite, chalcopyrite as rare specs. only,	0.235	0.095
651-655		0.085	0.085
660-664	at 663' occasional pink feldspar	0.215	0.095

Moly mentioned in drill log - no assays.

61-69
290-291
303-310
315-329
331-386
389-449

DDH # W 5

		Cu	MoS_2
83-87	Grnnodiorite - dark grey, medium grained with slightly porphyritic feldspar. 3% Pyrite	0.06	0.032
280-284	Volcanics 5% pyrite minor silica. Trace hematite, calcite, epidote. Blebs chalcopyrite	0.195	0.021
330-338	Volcanics as above. 5% Pyrite, Trace MoS_2. Poor core recovery (5%).	0.25	0.053
440-445	Volcanics. 5% pyrite	0.095	0.032

Moly mentioned in drill log - no assays.

23-83
87-251
292-330
338-347

Geophysical Prospecting

Apart from magnetometer traverses to attempt to locate the margins of the stock no geophysical prospecting was carried out in 1968.

However a considerable amount of magnetic, E.M. and I.P. surveying was done by Texas Gulf and Dome during the period 1960 - 1964.

B.K. McKnight briefly reviewed this material on January 9th, 1968 and suggested -

1) Texas Gulf drilling (W1, W2 and W3) was too shallow to adequately sample I.P. anomalies

2) Dome Exploration drilling (W4 and W5) was deep enough and contained enough sulphides to explain the I.P. anomaly

3) I.P. might serve as an aid to geological mapping

4) If pyrite-chalcopyrite-molybdenite zoning was present, careful correlation of geological and geochemical mapping with I.P. results might make possible the relating of smaller order anomalies to Cu-Mo zones adjacent to pyrite zones

5) The only geophysics he would recommend would be (a) to extend I.P. coverage north and south to cover the entire intrusive, (b) to run a magnetic survey (50 foot stations) to investigate shear zones, alteration zones and different phases of the intrusive.

An induced polarization survey was not considered for this stage of the investigation due to the property situation. A magnetic survey was discontinued because of severe magnetic storms in July.

DRILLING

In 1961 Texas Gulf diamond drilled a total of 683.5 feet in three AX holes W1, W2, and W3. These holes were intended to test I.P. anomalies. No assays are available for the holes.

DDH W1 - Was drilled on Line A+00N, 24+00W at -90° for a length of 217 feet. Core from this hole had been tipped out and core boxes removed.

Texas Gulf reported that the drill penetrated fractured impure quartzite and two 2 foot feldspar-quartz porphyry sills. However, examination of the disturbed core showed mainly altered Nicola chlorite schists.

Pyrite was reported in the order of 5% with occasionally one inch quartz veins with heavy pyrite associated. Only a trace of chalcopyrite was noted.

DDH W2 - was drilled on Line B+00N, 26+60W on a collar bearing grid east at -50° for a length of 278.5 feet.

The drill was reported as penetrating feldspar-quartz

porphyry and impure meta-quartzite. Pyrite varied between 5-10% and only traces of copper and molybdenite were noted.

Sufficient core remained to enable relogging of this hole (See section Figure 6). The dykes were identified as quartz-feldspar-biotite-porphyry cutting banded Nicola chlorite schist.

The sections of core remaining were split and sampled. Samples indicate a tendency for copper to increase with depth from 0.04% to 0.16% Cu.

DDH W3 - was drilled at location A6+00N, 36+18W on a collar bearing of grid east at -50° for 188 feet. This drill hole was apparently directed at a strong magnetic anomaly associated with skarn. The drill was reported as penetrating granite gneiss, sheared and altered metasediments and brecciated zones. Up to 50% pyrite and +1% copper over short intervals were logged. Core was not available for relogging.

In 1963 Dome Exploration drilled 1259 feet of BX wireline in two holes. These holes were directed to intersect a large I.P. anomaly from opposite sides (See Figure 6).

DDH W4 - was drilled at B+200N, 33+00W, bearing grid east at an inclination of -45° for 754 feet.

The drill was reported as intersecting granodiorite, silicified rock and volcanics. Pyrite generally occurred throughout in amounts varying from 2 - 5% as disseminations and fracture fillings. Chalcopyrite and molybdenite were noted as accessory on fractures. Table IV is an extract of the logs describing

drill sections which were assayed.

DDH W5 - was drilled at B+200N, 23+50W, bearing grid west at an inclination of -45° for a length of 505 feet. The hole was reported to intersect granodiorite, silicified rocks and volcanics similar to DDH W4. Pyrite was reported generally more abundant in the volcanics (5-10%) than in the granodiorite (2-3%) and chalcopyrite and molybdenite were observed throughout as disseminations and as fine coatings on fractures, generally associated with siliceous zones (See Table IV).

Core from W4 and part of the core from W5 were available for relogging and sampling. Results are illustrated in section Figure 6.

The section shows a large quartz-feldspar-biotite porphyry dyke at the contact of Eagle granodiorite and associated Interbanded series rocks with Nicola chlorite schist.

Drill hole W5 is parallel to the dip of the foliation and of the dykes.

Character samples were taken of sections of core where relatively complete and are illustrated in Figure 6.

Trenching

For assessment purposes it was agreed that cat work, in the form of trenching, would be carried out prior to the due date of the claims (July 21, 1968).

Thus trenches were excavated before geochemical sample

results become available.

Eight trenches were dug using an International Harvester TD-15. Trench locations are shown in all plans of the Whipsaw property. A summary of the trenches are included in Appendix VII.

The geology of the trenches is illustrated in Figure 5 and assay values of character samples are included.

Assessment work was forwarded to Texas Gulf Sulphur before July 18, 1968 and duly filed.

REFERENCES

1. I.P. and Resistivity Survey Whipsaw Claim Group by McPhar Geophysics Limited. July 11, 1960

2. Geophysical, Geological and Geochemical Report on the Whip and Saw Groups by W.R. Bacon, Texas Gulf Sulphur Company. July 15, 1960

3. Geophysical Report on the Whip and Saw Groups by W.R. Bacon, Texas Gulf Sulphur Company. May 10, 1961

4. Whipsaw Creek - Geological and Geochemical Report by W. Holyk, Texas Gulf Sulphur Company. February 23, 1962

5. Geophysics, Geochemistry and Diamond Drilling on the Whip, Axe, Pick, Saw, Bill and Pete Groups Whipsaw Creek by Robert Seraphim. July 21 - October 26, 1963

6. Report on the Induced Polarization and Resistivity Survey on the Whipsaw Claim Group by Philip G. Hallof. September 6, 1963

7. I.P. and Resistivity Survey Whipsaw Claim Group by McPhar Geophysics Limited. September 6, 1963

8. Report on Induced Polarization Survey Whipsaw Claim Group on Behalf of Dome Exploration (Canada) Limited by Harold O. Seigal September 28, 1964

APPENDIX I

February 16, 1968.

Dr. J. Russell Loudon,
Texas Gulf Sulphur,
1033 Davie Street,
Vancouver, B.C.

Dear Russ:

This is to summarize our discussions and intent regarding our exploration of your Whipsaw Creek property consisting of 28 mineral claims located about 10 miles west of Princeton in southern B.C.

Amax will firmly undertake to complete one year's assessment work on the Texas Gulf claims (at least $2800 on the basis of $100/claim) most probably in the form of bulldozer trenching. This work will be handed to Texas Gulf in a form suitable for filing with the Mining Recorder and will be applied on those claims designated by Texas Gulf.

In return for this work performance, Amax will have until July 31, 1968 to examine the Texas Gulf property and contiguous areas. The principal purpose of this work will be to determine on the ground the precise location of the Texas Gulf mineral claims and contiguous mineral claims and Crown Granted mineral claims owned by others. The mineral claim locations will be related, so far as possible, to "favourable" geology, the purpose being to establish which claims, other than the Texas Gulf Claims (which are agreed to be "key" claims for any further exploration in the area), might be required if Amax decides to proceed with exploration in the area. It is understood, therefore, that Amax will conduct surface work, including trenching, during the period up to July 31, 1968, and that all factual data developed by Amax on the Texas Gulf property will be made available to Texas Gulf. Personnel of Texas Gulf will have right of access to the property at all reasonable times.

In the course of these investigations, Amax may discover unstaked fractional mineral claims within the outside boundaries of the existing Texas Gulf claim group. Any such fractional claims will be staked by Amax and either will be included in the joint venture if Amax elects to proceed with further exploration and if a mutually agreeable joint venture agreement can be negotiated, or will be transferred to Texas Gulf if Amax elects not to proceed.

We have agreed not to attempt to define in detail the terms of a possible joint venture agreement between Texas Gulf and Amax until Amax has decided whether or not to proceed. In any event, it is agreed that negotiations must begin not later than August 1, 1968 if Amax does desire to proceed.

/2

However, certain general principles have been discussed and it is our present mutual intent to incorporate these in a joint venture agreement:

1) Amax will conduct and pay for all exploration on the property over a period of years and with annual expenditure requirements that are mutually agreeable.

2) Amax will earn a substantial majority interest in any eventual mining operation.

3) TGS desires to contribute its share of the capital required for any eventual mining operation according to its percentage interest in the joint venture.

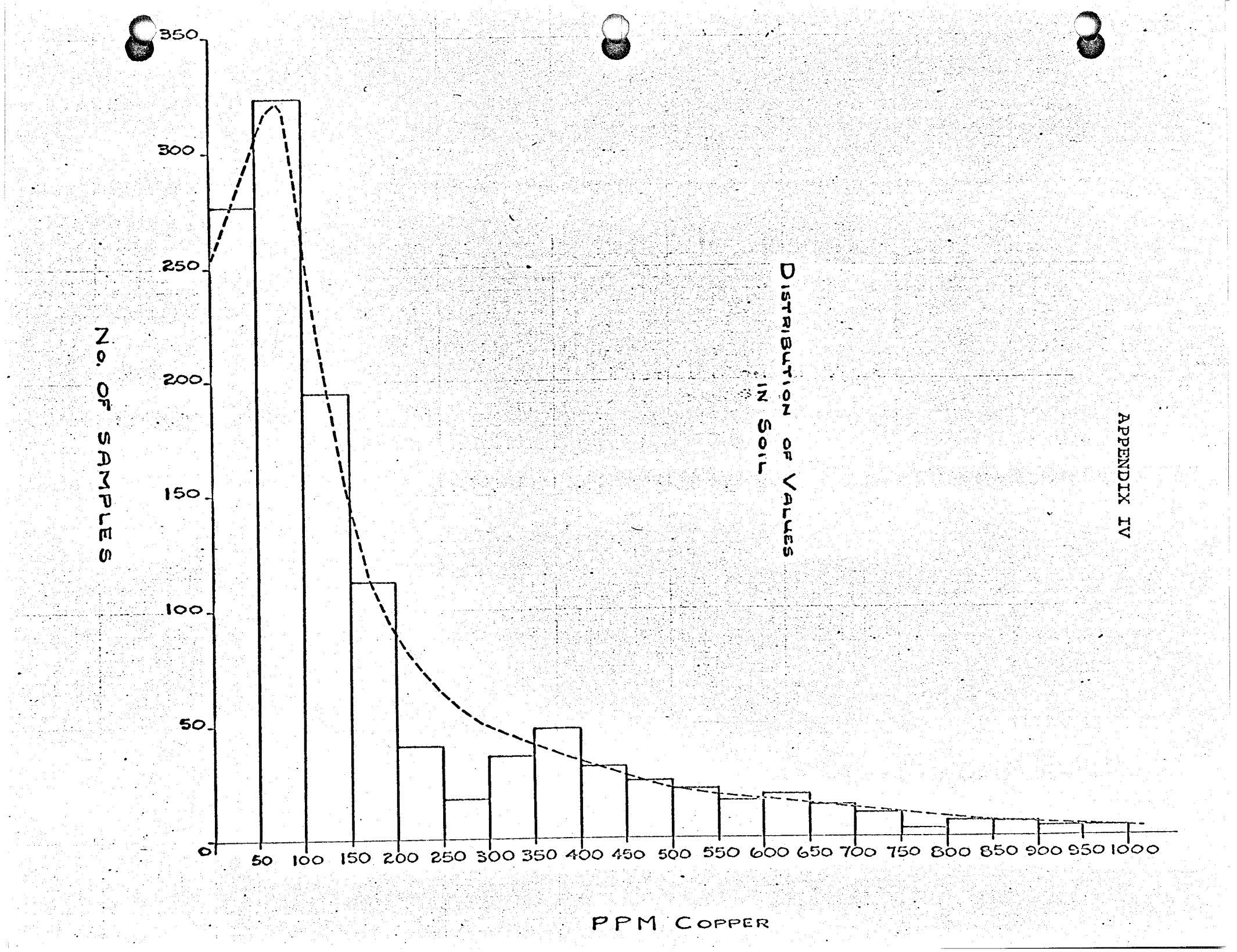
If this is your understanding of our discussions to date, I would appreciate your so signifying by signing the enclosed copy of this letter provided for that purpose and returning it to this office.

Yours sincerely,

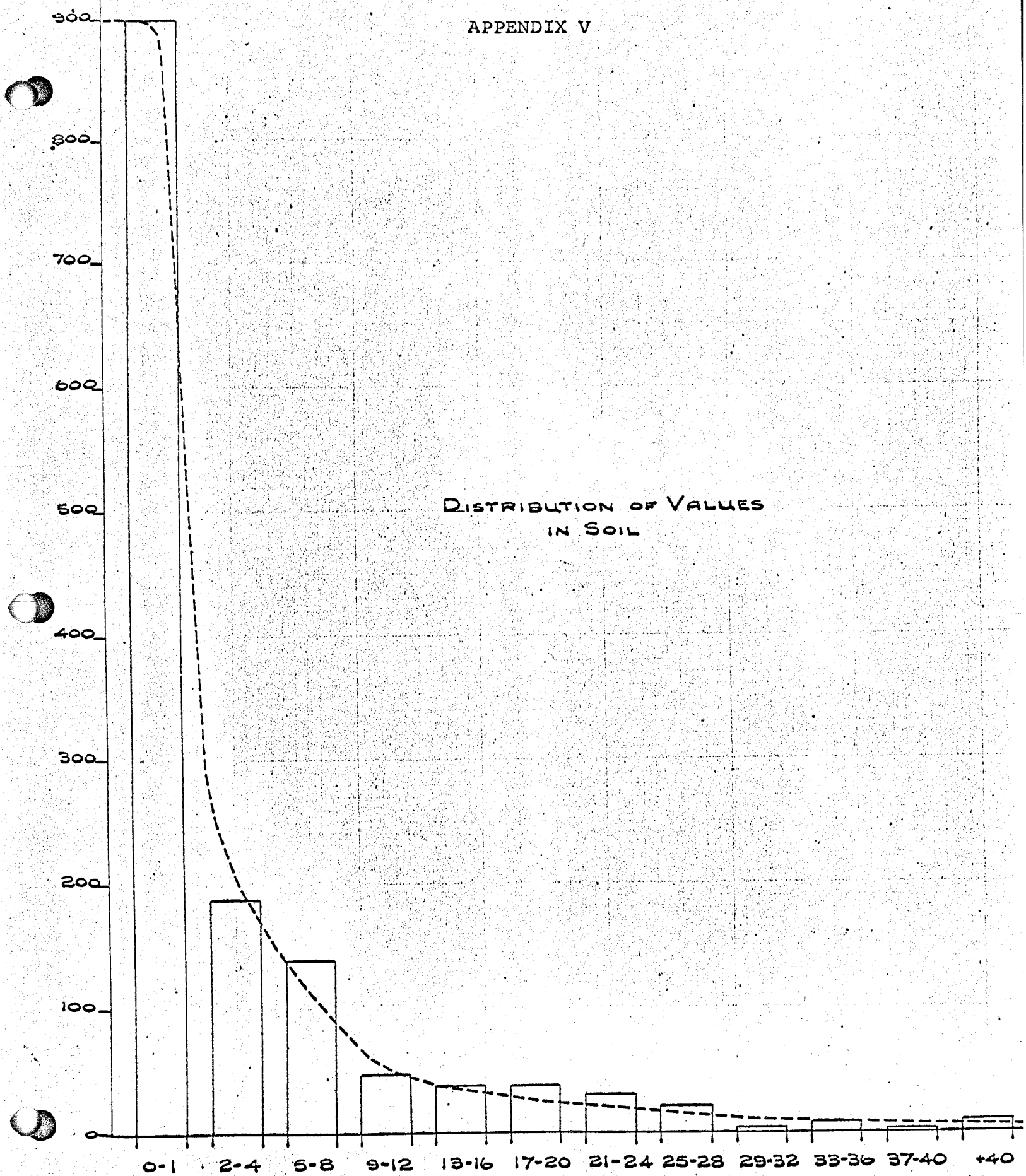
AMAX EXPLORATION, INC.

RAB/eb

R. A. Barker


APPENDIX IV
DISTRIBUTION OF VALUES IN SOIL
No. OF SAMPLES
0
50
100
150
200
250
300
350
50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000
PPM COPPER

APPENDIX V



Distribution of Values in Soil

APPENDIX VII

Summary of Trenches - Whipsaw Property

Trench #1 - Location Line Y6+00N; from road to boundary of Crown Grant
- Direction - grid east
- Objective - geochemical anomaly
- Result - Trench exposed mineralized Nicola schist cut by porphyry dykes.

Trench #2 - Location Line 10+00W at road
- Direction - generally grid north
- Objective - Nicola/porphyry contact
- Result - Did not penetrate overburden. Later interpretation indicated the contact of the Nicola Group with the porphyry stock lies to the north.

Trench #3 - Location Line A8+00N; crossing road
- Direction - grid east
- Objective to expose contact quartz-feldspar-biotite porphyry dyke with Nicola rocks and give geochemical section down hill
- Result - Contact porphyry and Nicola rocks exposed; geochemical section obtained (See Appendix III). Feldspar porphyry dykes exposed at eastern extremity of trenches. Trench abandoned due to deep overburden and collapse due to water seep.

Trench #4 and 4a - Location Line D+00N; western margin of property
- Direction - grid east and southeast
- Objective - to expose the contact of the porphyry stock and Eagle granodiorite and contact breccia
- Result - Contact and breccia exposed. Trench 4 encountered thick overburden in fault zone and was continued to southeast as Trench 4a.

Trench #5 - Location Line D2+00N, 22+00W
- Direction - generally grid north
- Objective - to expose northern contact of porphyry stock and Nicola rocks
- Result - Overburden deep (+20 feet). Porphyry (Feldspar-biotite porphyry, quartz-feldspar-biotite porphyry and feldspar porphyry) in contact with Nicola schist with intervening mineralized breccia. Trench abandoned due to deep overburden conditions and swamp.

Trench #6 - Location Line A2+00N
- Direction - grid east
- Objective - to expose contact of porphyry or porphyry dykes with Nicola schist
- Result - Feldspar porphyry, feldspar-biotite porphyry and quartz-feldspar porphyry exposed at east of Trench in contact with Nicola schist. Porphyry altered, stained and contains quartz vein stockwork.

Trench #7 - Location Line 26+00N
- Direction - grid east
- Objective - to further expose zone of porphyry intrusives in Nicola rocks.
- Result - Overburden was not penetrated (+30 feet in thickness.

Trench #8 - Location Line B2+00N between DDH W4 and W5
- Objective - to complete section A-A'
- Result - Illustrated in Figure 6

Trench #6 - Location Line A2+00N
- Direction - grid east
- Objective - to expose contact of porphyry or porphyry dykes with Nicola schist
- Result - Feldspar porphyry, feldspar-biotite porphyry and quartz-feldspar porphyry exposed at east of Trench, in contact with Nicola schist. Porphyry altered, stained and contains quartz vein stockwork.

Trench #7 - Location Line 26+00N
- Direction - grid east
- Objective - to further expose zone of porphyry intrusives in Nicola rocks.
- Result - Overburden was not penetrated (+30 feet in thickness.

Trench #8 - Location Line B2+00N between DDH W4 and W5
- Objective - to complete section A-A'
- Result - Illustrated in Figure 6

SYMBOLS

- Form lines
- Road
- Stream
- Seepage
- Swamp
- Trench
- Diamond drill hole
- Claim post, claim location line
- Claim boundary line
- Survey pegs (Crown Grant Claims)
- Grid
- Geological contact, observed
- Geological contact, inferred
- Geological contact, inferred from geophysics
- Faults, inferred

LEGEND

1 Nicola, 1a Skarn.

2 Eagle, 2a Interbanded series.

3 Whipsaw porphyry, 3a Breccia.

LEGEND

p. p. m. Mo

a	0 - 8	Background.
b	9 - 12	Positive 1
c	13 - 16	Positive 2
d	> 16	Anomalous

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

GEOCHEMICAL MAP

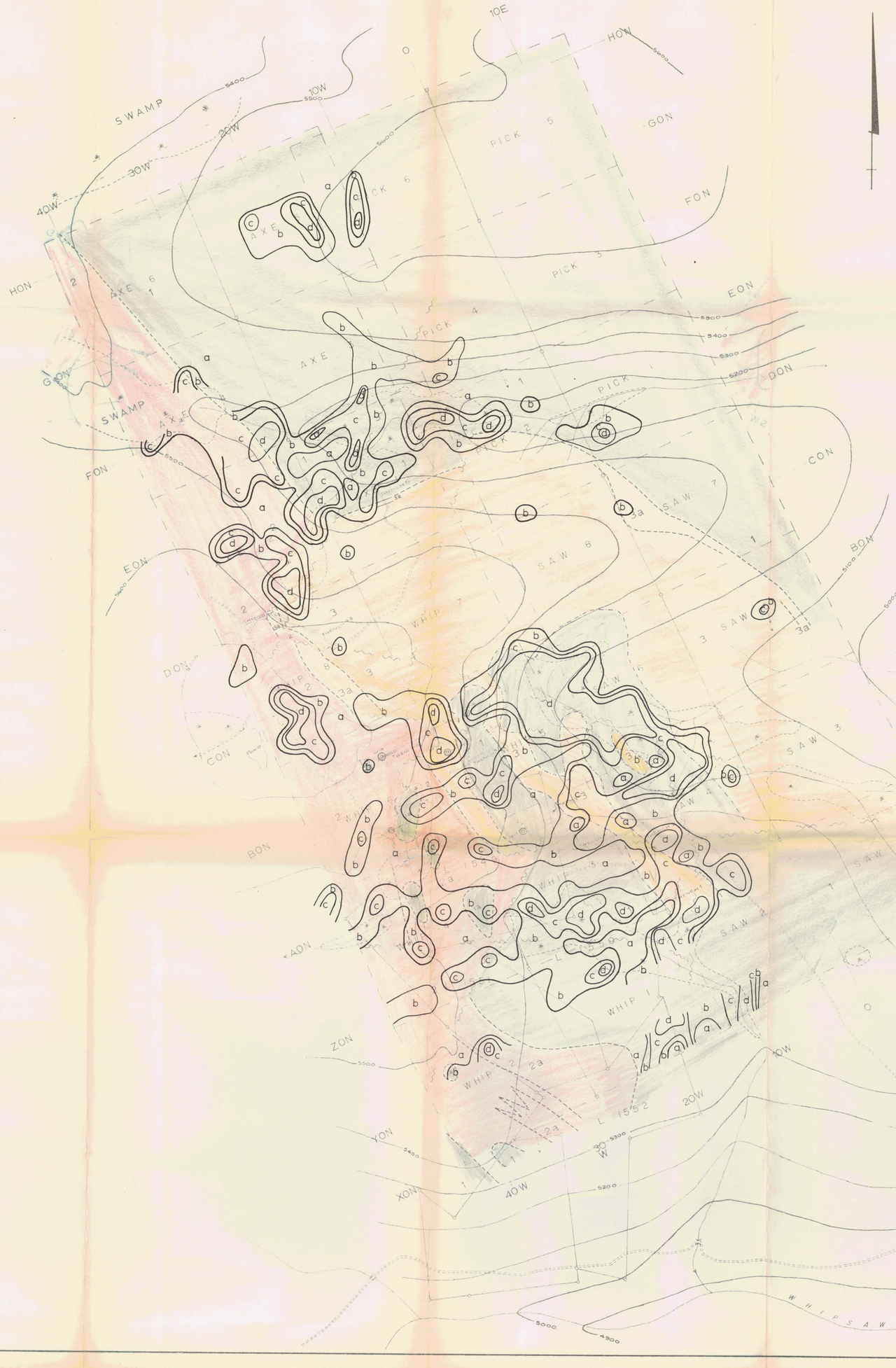
(MOLYBDENUM DISTRIBUTION IN SOIL)

SCALE 1" = 500'

DATE REVISED		DATE PRINTED	Drawn by Date N.T.S. File 92 H 7

FIG. 10

To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D. K. Mustard



S Y M B O L S

- Form lines.
- Road.
- Stream.
- Seepage.
- Swamp.
- Trench.
- Diamond drill hole.
- Claim post, claim location line.
- Claim boundary line.
- Survey pegs (Crown Grant Claims).
- Grid.
- Geological contact, observed.
- Geological contact, inferred.
- Geological contact, inferred from geophysics.
- Faults, inferred.

L E G E N D

- 1 Nicola, 1a Skarn.
- 2 Eagle, 2a Interbanded series.
- 3 Whipsaw porphyry, 3a Breccia.

L E G E N D

p. p. m. Cu

a	0 - 350	Background.
b	351 - 525	Positive 1
c	526 - 700	Positive 2
d	> 700	Anomalous.

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

GEOCHEMICAL MAP

(COPPER DISTRIBUTION IN SOIL)

SCALE 1" = 500'

DATE REVISED		DATE PRINTED		Drawn by	FIG. 9
				Date	
				N.T.S. File 92 H 7	

To accompany "REPORT ON THE WHIPSAW PROPERTY" by D. K. Mustard

L E G E N D

AMAX EXPLORATION INC. SAMPLES

△ OWW 67 — Water Sample, sample number — p.p.b. Mo, pH

□ OWW 65 — Silt Sample, sample number — p.p.m. Mo, Cu, pH

DOME EXPLORATION LTD. SAMPLES

■ 76, 1800 — Silt Sample, sample number, p.p.m. Cu (spectographic).

5000 — Form lines.

Swamp.

Stream

Seepage.

Claim post, claim location line.

Survey peg (Crown Grant Claims).

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

GEOCHEMICAL MAP
(SILT AND WATER SAMPLES)

SCALE 1" = 500'

DATE REVISED		DATE PRINTED		Drawn by:	FIG. 8
				Date	
				N.T.S. File 92 H 7	

To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D. K. Mustard

L E G E N D

68 ORS 649
2-100
4.9
Soil sample — Sample number / ppm Mo, Cu / pH

68 ORW 550
6
6.5
Water sample — Sample number / ppb Mo / pH

68 ORL 514
28+ - 4000
5.9
Silt sample — Sample number / ppm Mo (interference), Cu

68 OFT 955
0-350
Rock chip sample — Sample number / ppm Mo, Cu

5000 — Form lines.

20 W / BON — Grid lines.

Streams.

Seeps.

Swamps.

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

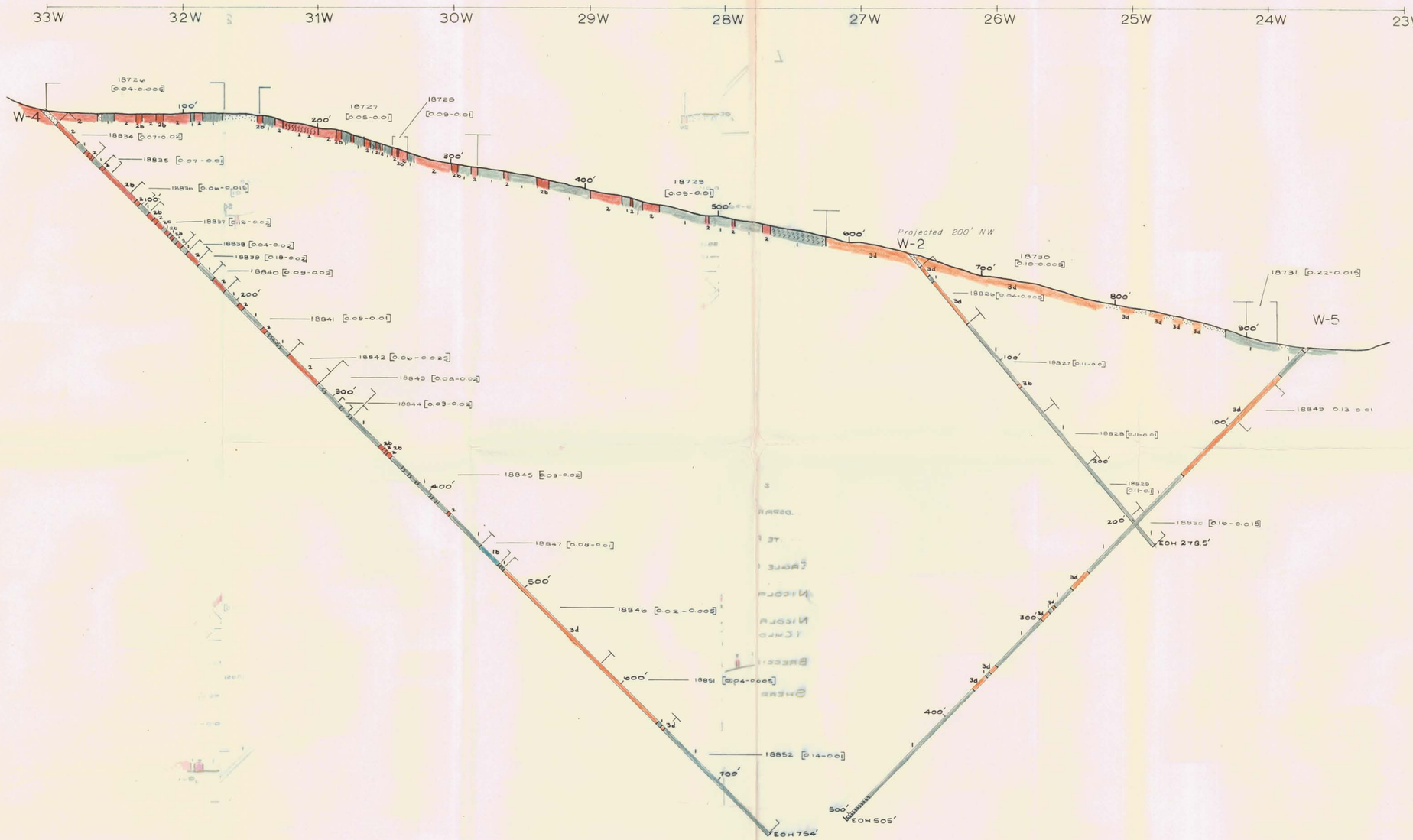
SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

GEOCHEMICAL MAP

SCALE 1" = 500'

DATE REVISED		DATE PRINTED		Drawn by	FIG. 7
				Date	
				N.T.S. File 92H7	

To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D. K. Mustard.



LEGEND

- 4a Quartz Feldspar Biotite Porphyry
- 3b Feldspar Biotite Porphyry & Feldspar Porphyry
- 2b Aplite Phase of Eagle Granodiorite
- 2 Eagle Granodiorite Complex
- 1b Nicola Schist Silicified
- 1 Nicola Schist Feldspathic Biotite (Chlorite) Amphibole Schist
- ΔΔ Breccia
- ≈≈ Shear Zone

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

SIMILKAMEEN M.D. — B.C.

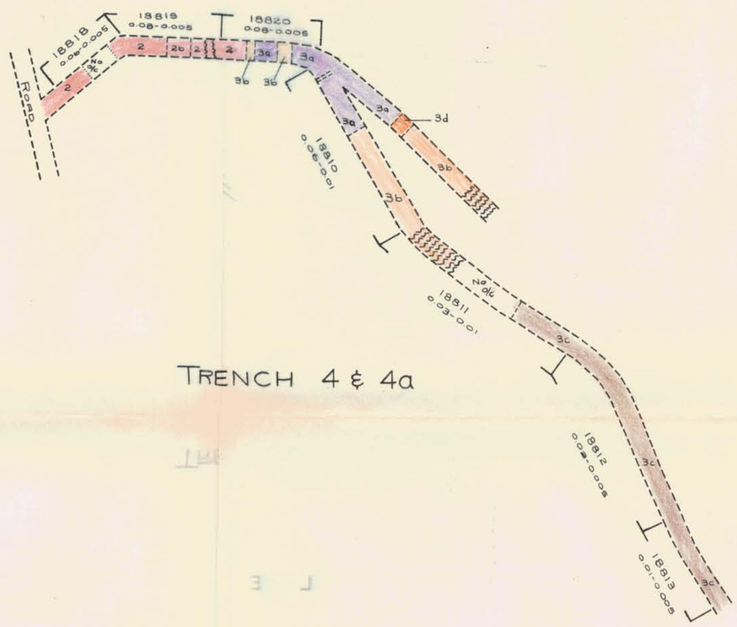
SECTION A-A'

ALONG LINE B 2+00 N

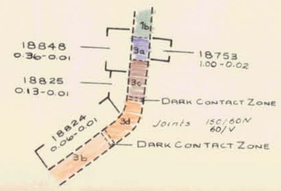
SCALE 1" = 50'

DATE REVISED	DATE PRINTED	Drawn by	FIG. 6
		Date	
		N.T.S. File 92 H 7	

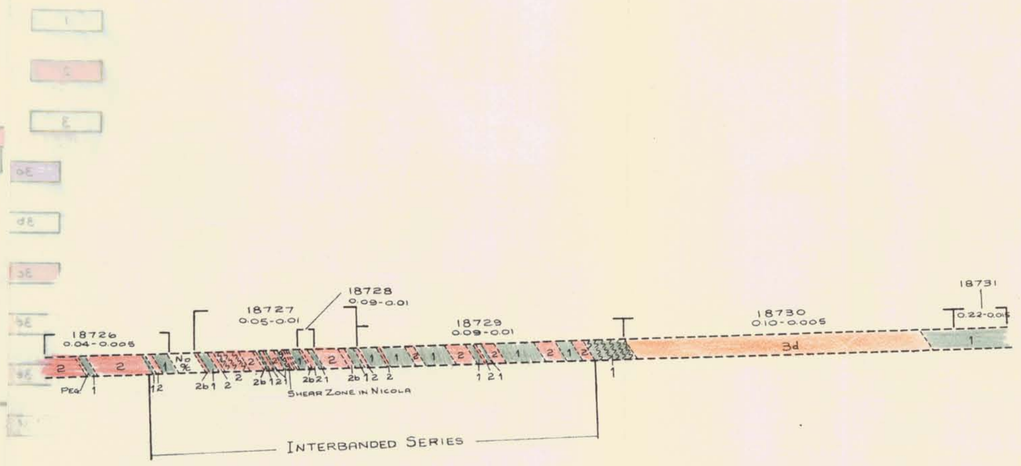
To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D.K. Mustard.



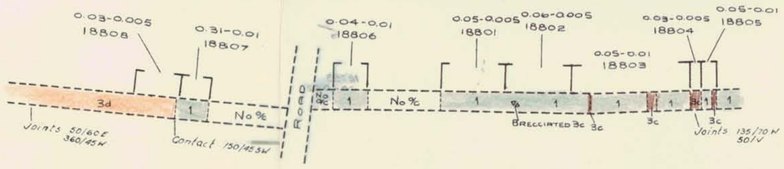
TRENCH 4 & 4a



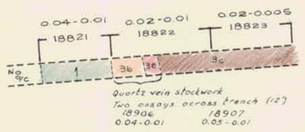
TRENCH 5



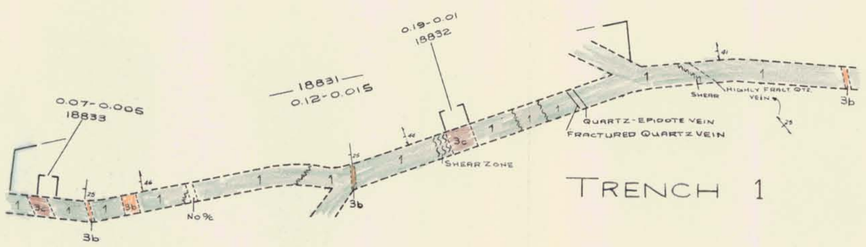
TRENCH 8



TRENCH 3



TRENCH 6



TRENCH 1

LEGEND

- 1 — Nicola 1a Skarn 1b Silicified.
- 2 — Eagle 2a Interbanded 2b Aplitic.
- 3 — Whipsaw porphyry (undifferentiated).
- 3a — Breccia.
- 3b — Feldspar - biotite porphyry.
- 3c — Feldspar porphyry.
- 3d — Quartz - feldspar - biotite porphyry.
- 3e — Quartz - feldspar porphyry.
- 3f — Grey feldspar porphyry.

---- Geological contact.

NNNNN Fault or shear.

Foliation.

Strike and dip of dyke

18753 1.00-0.020 Assay sample sample number % Cu - % MoS_2

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

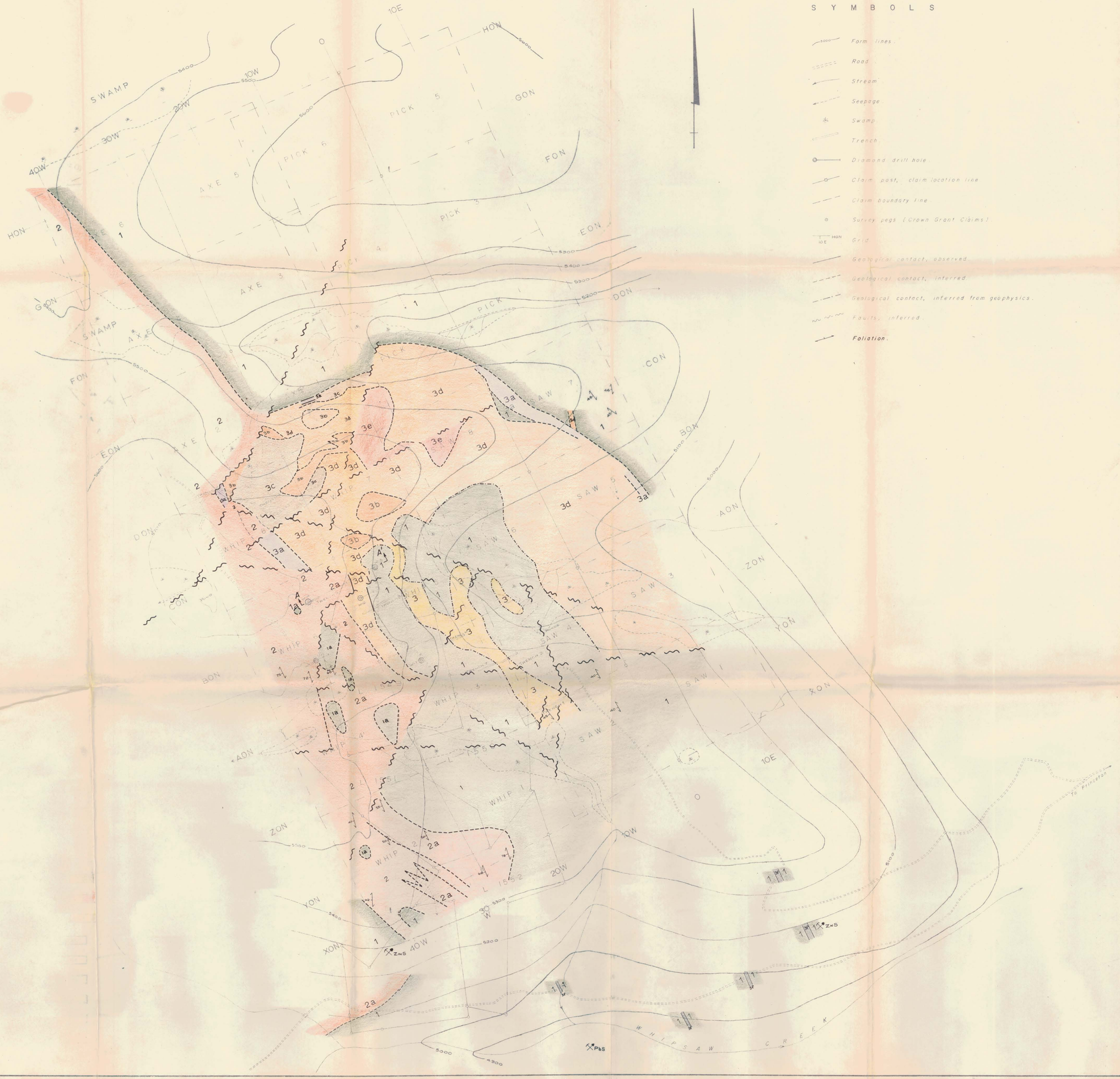
SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

TRENCH PLAN

SCALE 1" = 100'

DATE REVISED	DATE PRINTED	Drawn by	FIG 5
		Date	
		N. T. S. File 92H 7	

To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D. K. Mustard



SYMBOLS

- Form lines.
- Road.
- Stream.
- Seepage.
- Swamp.
- Trench.
- Diamond drill hole.
- Claim post, claim location line.
- Claim boundary line.
- Survey pegs (Crown Grant Claims).
- Grid.
- Geological contact, observed.
- Geological contact, inferred.
- Geological contact, inferred from geophysics.
- Faults, inferred.
- Foliation.

LEGEND

- 1 Nicola, 1a Skarn.
- 2 Eagle, 2a Interbanded series.
- 3 Whipsaw porphyry, (undifferentiated).
- 3a Breccia.
- 3b Feldspar - biotite porphyry.
- 3c Feldspar porphyry.
- 3d Quartz - feldspar - biotite porphyry.
- 3e Quartz - feldspar porphyry.
- 3f Grey feldspar porphyry.

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

GEOLOGICAL MAP

SCALE 1" = 500'

DATE REVISED	DATE PLOTTED	Drawn by: R.T.Elliott	FIG. 4
		Date	
		N.T.S. File 92 H 7	

To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D.K. Mustard

SYMBOLS

- Form lines.
- Road.
- Stream.
- Seepage.
- Swamp.
- Trench.
- Diamond drill hole.
- Claim post, claim location line.
- Claim boundary line.
- Survey pegs (Crown Grant Claims).
- Grid.
- Geological contact, observed.
- Geological contact, inferred.
- Geological contact, inferred from geophysics.
- Faults, inferred.

LEGEND

1. Nicola, 1a Skarn.
2. Eagle, 2a Interbanded series.
3. Whipsaw porphyry, 3a Breccia.

LEGEND

- Claim post, claim location line.
- Claim post, claim location line. (inferred).
- Claim boundary line.
- Claim boundary line (inferred).
- Crown grant claims (Huff).
- Texas Gulf Sulphur.
- Whipsaw Mines Ltd.
- Magnet.
- Jorgensen.

AMAX EXPLORATION INC.

WHIPSAW PROPERTY

SIMILKAMEEN MINING DIVISION — BRITISH COLUMBIA

CLAIM MAP

(AT AUGUST 1st, 1968)

SCALE 1" = 500'

DATE REVISED		DATE PRINTED		Drawn by: R.J.ELLIOTT
				Date :
				N.T.S.-File 92 H 7

FIG. 2

To accompany "REPORT ON THE WHIPSAW PROPERTY" by: D.K. Mustard