88

# GEOLOGICAL REPORT.

of

Vaughn K. Group.

Consisting of: Vaughn K. #5,
Vaughn K. #6
Vaughn K. #7
Vaughn K. #8
Bock No.1 &
Bock No.2
mineral claims.

Located 25 miles N.W.
of Stewart, B. C. in
Skeena Mining Division.

by

J.J. Crowhurst, P.Eng.(Mining).

Assisted by:

K.C. Fahrni, P.Eng. (Geology).
G.A. Wilson, M.A.Sc.

104 B/1 W

# I N D E X.



---

MINE
COPPER MOUNTAIN
B.C.

CONCENTRATOR
ALLENBY
B.C.

# THE GRANBY CONSOLIDATED MINING, SMELTING AND POWER COMPANY, LTD.

Copper Mountain, B. C.
March 17th, 1953.

Mr. K. J. Springer, President,
Helicopter Exploration Co. Ltd.,
644 West Hastings Street,
V A N C O U V E R, B. C.

Dear Sir:

I herewith submit a Geological Report on a group of six claims located on the Leduc River in British Columbia and owned by your Company. In my opinion, the work done to date clearly justifies a detailed examination of this property by means of both surface drilling and underground exploration to determine the size and metal content of the ore bodies whose existence is indicated.

Respectfully submitted,

L.T.Postle, P.Eng.(Mining) #2175.
Vice-President & General Manager.

LTP:jdb

Copper Mountain, B.C.
March 16th, 1953.

Mr. L. T. Postle, Vice-Pres. & Gen. Mgr.,
The Granby Cons. M.S. & P. Co. Ltd.,
COPPER MOUNTAIN, BRITISH COLUMBIA.

Dear Sir:

Following your instructions, a geological examination of six claims held in the name of Helicopter Exploration Company Limited, at the headwaters of the Leduc River was made under my direction between the dates September 17th and September 20th, 1952.

The locality is more precisely described as lying at latitude 56 deg. 13' north and longitude 130 deg. 21' west, lying in the Skeena Mining Division of British Columbia.

The claims examined are described on recording maps as : Vaughn K. No.5, Vaughn K. No.6, Vaughn K. No.7, Vaughn K. No.8, Bock No.1 and Bock No.2.

The party consisted of myself, Mr. K. J. Springer, President of HelicopterExploration Co. Ltd., Mr. G. A. Wilson, Geological Engineer, Mr. T. J. McQuillam, prospector and Mr. A. McCowan, helper. Access was by helicopter. The helicopter was also used to remove samples taken. The samples were then assayed at the Allenby Assay Office of the Granby Company. The following report on the claims was prepared in the engineering and geological departments of the Granby company at Copper Mountain.

## SUMMARY & CONCLUSIONS

A study of the results of the mapping and sampling indicates that there may be a sizeable mass of rock containing sufficient copper mineralization to be of economic significance. Exposures exist over a length of 2,000 feet and a maximum width of 125 feet, although these figures in no way limit the area under consideration. Similarly there is no evidence that the ore is continuous over the entire length or that the 125 feet width is characteristic. The sampling indicates that the copper content of the ore body may contain slightly over 1.5% copper with very minor amounts of gold and silver.

The property is sufficiently attractive to justify its further development by means of diamond drilling from the surface and by driving a tunnel at the 3200 foot elevation to prove vertical continuity and determine the characteristics of the ore body at depth.

## GEOLOGY

The copper mineralization occurs as part of a series of sediments which in the locality include sandstones, siltstones, shales, limestones and cherts, of which sandstones and siltstones predominate. None of the rocks are pure end members but are mixtures of the above types. All rocks are thin bedded and many are platy with one quarter to two inch parting at the surface. Some rocks such as the limestone immediately west of 1-A are quite massive.

The trend of the rocks across showings 2-A, 2-B and 2-C varies from nearly north on 2-A to fifteen or twenty degrees east of north on 2-B and 2-C. There appears to be a slight change in dip from almost vertical on showing 2-A to seventy or eighty degrees west on 2-C. Drag folds are common in the shales. The shape of the drag folds suggests that strata moved up and north relative to more easterly beds.

The variation in attitude of the strata as viewed from the Leduc Glacier suggests that all three showings 2-A, 2-B and 2-C be on the steep west limit of an anticline whose axis is probably some distance east of the showings. This theory is supported by the change in attitude from a south strike and nearly vertical dip on 2-A to a N.15.E. strike and seventy to eighty degree dip west on showing 2-B. In detail this general trend is broken by a number of drag folds and monoclines of 5 to 20 feet amplitude.

Mineralogy

Chalcopyrite is the major copper mineral occurring in each showing. Minute quantities of bornite were recognized in 2-A and 2-B. Chalcopyrite is usually but not always accompanied by magnetite. Pyrite occurs throughout the showings examined as well as in numerous other gossan. Pyrrhotite is recognizable only on showing 2-A. It is noteworthy that showing 2-A, having been covered by ice until comparatively recent times, has not been exposed to leaching agencies as long as showing 2-B and 2-C. Magnetite accompanies chalcopyrite in many mineralized zones but may not be contemporaneous with chalcopyrite at all. In fact, magnetite in some places may be primary and part

of the sediments. A band of solid magnetite, eight inches to one foot wide, crosses the lower outcrop of showing 2-B. It is conformable with beds on both sides.

Massive replacement by chalcopyrite completely masks the host rock in most of the extensively mineralized zones so that identification of the host rock is almost impossible. The host rock appears to be a siliceous variety in many disseminated zones, although all of the rocks of the series except shales carry chalcopyrite or pyrite mineralization. Mineralization ends laterally quite abruptly against shales at several points in both 2-A and 2-B.

Individual bands of massive sulphide vary in width from one inch to three feet. In places these massive bands are quite close together to give a total width of massive mineralization amounting to six or eight feet. Within the massive sulphides, replacement has masked the rock type and even obliterated bedding so that identification of host rock is impossible except where recognizable remnants remain. In two well separated gossan on 2-A the remnants of host rock are thinly bedded siliceous sediments, probably siltstone or sandstone. Some of the massively mineralized zones end abruptly against shales or other rocks. Others change sharply from massive to disseminated replacement.

The disseminated replacement bodies are as much as twenty feet wide. In these, chalcopyrite replaces the host rock, mostly siliceous, in the form of blebs on and lenticles parallel with bedding. Pyrite accompanies chalcopyrite in many of these but magnetite does not commonly accompany chalcopyrite and pyrite in the disseminated replacements.

Sparse galena mineralization occurs in one to two inch white quartz veins on showing 2-A. The veins strike east-west and dip northerly at ten to fifteen degrees. They occur on the upper part of 2-A and also on the east side of a steep gulley several hundred feet east of 2-B. The latter occurrences were not examined. As both the quartz veins and the galena are rare on the showings examined, they have no commercial importance at those places.

The massive and disseminated form of the chalcopyrite, the slight cross-cutting habit of some of the massive veins, and the absence of significant amounts of either vein quartz or carbonate are good evidence in support of a replacement theory of origin for the sulphides chalcopyrite, pyrite and pyrrhotite. Magnetite is probably indigenous to some of the sediments but may be partly hydrothermal in some of the mineralized zones.

Gossans

Several types of gossans cap the mineralized zones. The principal variation appears to be due to the degree of weathering. Gossan on showing 2-A consists of a thin dark brown to maroon shiny film, one sixteenth to one eighth of an inch thick. The non-oxide cappings on showing 2-A and 2-B are porous and are in excess of one foot thick in sheltered places. The colour of the gossan on the higher elevations varies from dark yellow through reddish orange to dark brown. In places, for example, the trench on 2-B, the spongy gossan contains considerable residual chalcopyrite.

Copper carbonate cappings on outcrops at lower elevations differ from carbonate cappings at higher elevations. Malachite is uncommon on 2-A. One

outcrop on 2-B has a thin film of smooth, enamel-like malachite over its surface. As the rocks bearing this malachite contain no visible copper minerals, it is assumed that the malachite in this case was transported from above. Several small amounts of velvety malachite are present in the thick non-oxide cappings. on showing 2-B. Enamel-like and velvety copper carbonate cappings occur on 2-C. The velvety copper carbonates are mixed with non-oxides and probably have not been transported far.

Relations between ore and strata.

Drag folds and small monoclines are common in the vicinity of many of the well mineralized areas. However, the same structure in other places does not carry ore. The minor folds superimposed on the major structure may have been an ore control but this was not established conclusively.

Two massive chalcopyrite bodies on 2-A were examined in detail. Black barren carbonaceous shales form the east margin of the ore and are conformable with it. Light gray, thin-bedded, very fine grained siliceous sediments lie west of the massive chalcopyrite-magnetite but are not conformable with the mineralization. The siliceous sediments strike into the mineralized rock. The chalcopyrite-magnetite body truncates the sediments and contains small inclusions of bedded siliceous rock. Estimations of the composition of the mineralized rock are as follows:

| | | |
|---|---|---|
| Chalcopyrite | - | 50% |
| Magnetite | - | 30% |
| Bornite | - | 5% |
| Quartz gouge | - | 15% |

Chalcopyrite, magnetite and bornite are disseminated throughout the rock. Chalcopyrite is in fine grains and in masses up to one eighth inch in diameter. Bornite and magnetite are in very fine grains just visible to the naked eye. Quartz is in glossy crystals and groups of crystals up to one eighth inch in diameter. The thin shiny gossan on the ore is a dark brown colour. There is no trace of bedding or other sedimentary structure within the mineralization.

A gossan exposed in a trench on showing 2-B is a thick spongy mass with both chalcopyrite and magnetite in considerable quantity. Assay samples along this trench included both gossan and barren shales. Copper outcrops varied from 4.05 to 5.50%. This may not be a significant figure because more rock than copper may have been leached away.

Microscopic Examination of Specimens

A study of the thin sections and polished sections of rocks and ores from the principal showings of the property was made by Mr. G.W. Wilson, geological engineer, in the geological department of the company at Copper Mountain under the direction of Mr. Keith C. Fahrni, P.Eng. (Geological) No.1885.

Thin Section 107 - (Specimen from southwest part of showing 2-A)

This rock is composed of fragments of quartz, carbonate and feldspar, accompanied by flakes of sericite and streaks of carbonaceous material. Mineral composition varies from bed to bed but considering the thin section as a whole, quartz is the predominant mineral. The feldspar grains have been altered to very fine flakes which are probably clay minerals. This rock is an Arkosic Siltstone.

Thin Section 108 - (specimen from south-east part of showing 2-A)

This thin section is composed of quartz, approximately 90%. Apatite, carbonate, sericite, magnetite, chlorite and carbonaceous material make up the remaining 10%.

Quartz, very fine throughout, varies in size from one lamina to another. Bedding is also indicated by long dimensions of grains and by streaky carbonaceous material. This rock is a quartz siltstone.

Thin Section 109 - (specimen from north part of showing 2-A)

Approximate mineral composition is as follows: quartz 70%, chlorite, carbonate sericite 28%, and chalcopyrite 2%.

Most quartz is in nearly equidimensional rounded grains but there are areas composed of large irregular strained quartz grains with serrated edges. The latter type may indicate secondary silicification or recrystallization. Carbonate grains are irregular and appear to be secondary.

Chlorite consists of irregular patches of clusters of small plates. It is yellowish green in colour, slightly pleochroic, and has a gray interference colour of low order. Chalcopyrite occupies interstices between other mineral grains and probably replaced some minerals completely. The rock is a quartzose siltstone. ~~This rock is a quartzose siltstone.~~

Thin Section 110 - (specimen from north part of showing 2-A)

Approximate mineral composition is as follows: Quartz 40%, white mica 10-15%, chlorite 10%%, carbonate 15%, clay minerals 15%, chalcopyrite 5-10%. Most quartz is in very fine grained quartz rich bands. Mica and chlorite are very fine. Mica occurs as fine plates, mostly between quartz grains, and mica

as irregular masses. The chlorite is pale green, pleochroic, and has an ultra blue interference colour.

Masses of carbonate occur in, and appear to have replaced, quartz. The clay minerals are very small smoky plates with high benefringence which occur in bands with varying amounts of carbonate and carbonaceous material.

Chalcopyrite occurs as irregular grains and groups of grains principally in the quartz rich areas. This rock is a quartzose siltstone.

Thin Section 111 - (specimen from 200 feet east of 2-A showing)

This is a hard, fine grained, bluish gray rock in hand specimen. The microscope shows that more than 90% of this rock is very fine quartz. The remainder is made up of coarser vein quartz, with carbonaceous material and carbonate.

Bedding planes are expressed both by variations in grain size and by streaks of carbonaceous material. This rock is a quartz siltstone.

Polished Section 1 (see figure 2)

This specimen was collected from part of a four foot band made up of several smaller bands of massive sulphides in the northern part of showing 2-A. The gossan developed on this rock is a thin, shiny, smooth maroon coloured film. Microscopic examination reveals the following relationships of the minerals present:

Chalcopyrite 60%:

Chalcopyrite occurs as streaked grains from .1 to 1 m.m. in diameter. Chalcopyrite replaces pyrrhotite and completely divides at least one pyrrhotite grain. Relations between chalcopyrite and pyrite are not clear but chalcopyrite appears to replace pyrite along grain boundaries and fractures.

Pyrrhotite 5-10%.

Pyrrhotite occurs as single grains and as groups of grains. Individuals do not exceed 1 m.m. in diameter and most are .1 m.m. to .3 m.m. Pyrrhotite is replaced by pyrite and chalcopyrite. Relative ages of pyrrhotite and carbonate are not clear.

Pyrite - less than 5%.

Pyrite is in the form of rounded blob shaped masses less than .55 m.m. in diameter. Relations between chalcopyrite and pyrite are not clear but pyrite appears to be replaced by chalcopyrite along grain boundaries and fractures.

Carbonate - 15%

Carbonate forms many large ragged masses with up to 50% shard shaped inclusions of quartz. Relations between carbonate and pyrrhotite are not clear. Carbonate fills a fracture which crosses several chalcopyrite veins and so in younger than chalcopyrite, which in turn is younger than pyrrhotite.

Quartz 10%

Quartz has two forms, the most common of which is masses of rounded equidimensional grains devoid of any interlocking tendency. The other form is small irregular shard shaped remnants in carbonate. Quartz does not replace any other mineral but is replaced by most.

Summary.

The host rock was probably a quartz siltstone but has not been almost entirely replaced by sulphides. The small clusters of equidimensional rounded quartz grains probably represent remnants of the original rock. Pyrrhotite, pyrite, chalcopyrite, and carbonate have replaced the host rock probably in the order named.

Polished Section 2

This polished section is from a specimen taken from a fifteen inch band of magnetite on showing 2-B. The contacts of the magnetite are conformable with beds in the adjacent sediments. The hand specimen is streaked parallel to bedding. This streaky effect is accentuated by polishing.

Microscope study reveals that it is made up of the following minerals : Magnetite 80% in the form of very small grains .1 to .55 m.m. in diameter, only a few of which are elongated. Quartz over 10% in the form of gray, translucent, moderately irregular grains. Carbonate less than 10%.

Summary

Individual grain margins in the magnetite are not distinct, but pits on the surface suggest that it has a granular texture.

The absence of distinct interlocking textures and the granular appearance of the rock in polished section, combined with the streaky appearance in hand specimens suggests that this is a sedimentary rock composed principally of magnetite. This contention is supported by the sedimentary character of the unit from which the specimen was taken. However, the possibility of complete selective replacement of a primary mineral such as quartz cannot be overlooked. In this respect see description of polished section collected from a heavily mineralized zone near the solid magnetite band described below.

Polished Section 3

This specimen was taken from a 4 foot zone of sulphide mineralization a few feet west from a band of solid magnetite represented by polished section 2. See map of showing 2-B.

In the hand specimen chalcopyrite distinctly occupies small fractures in magnetite. Gossan on this rock is a layer of shiny, smooth, dark reddish brown oxide about one sixteenth inch thick.

Microscopic Examination

Chalcopyrite - 10%

It occurs as irregular patches of small twinned grains with irregular outlines. Most chalcopyrite occurs in fractures in and between grains of magnetite but some occurs in spaces between quartz grains. Most chalcopyrite contains inclusions of quartz but not magnetite. Chalcopyrite distinctly replaces quartz but the relationship between chalcopyrite and magnetite is not clear microscopically.

Magnetite - 75%

Small sub-angular to irregular streaked grains of magnetite replace quartz, particularly along grain boundaries. Grain size of magnetite is less than one half millimeter.

Quartz - 15%

Quartz occurs as small, rounded, closely packed grains. Grain margins are quite regular.

Summary

The close packing of small regularly shaped rounded quartz grains indicates that quartz in this specimen is of sedimentary origin and that the host rock is probably a quartz siltstone. The first stage in replacement appears to have been replacement of quartz by magnetite. This was followed by minor fracturing accompanied by the introduction of chalcopyrite which filled fractures in magnetite and replaced quartz. The presence of quartz and the absence of magnetite remnants in chalcopyrite as well as the distinct replacement of quartz by chalcopyrite is considered to indicate preferential replacement of quartz to magnetite by chalcopyrite.

Specimen 4 (studied only in hand specimens)

This specimen was taken from the east contact of the high grade zone illustrated in figure 1 on the northern part of showing 2-A.

Mineral composition of the rock is approximately magnetite 50%, chalcopyrite 35%, pyrrhotite 5% and quartz 10%.

Quartz is in the form of one eighth inch rounded masses each of which appears to be composed of a number of small rounded grains. In all respects it resembles the quartz in polished sections 1 and 3. Quartz in specimen 4, as in the two above specimens, is probably a remnant of a quartz siltstone after almost complete replacement.

Magnetite is very fine grained and massive. Relations with quartz cannot be interpreted in hand specimens but presumably are identical with those in polished sections 1 and 3.

Chalcopyrite has two forms, disseminated and lenticular. The latter type consists of parallel lenticles one half inch long by one eighth inch wide. It probably indicates replacement along small fractures.

Pyrrhotite is lightly disseminated in one small area.

Topography

The topography of the area in which the Leduc River showings occur is typical of the northern part of the Coast Range of British Columbia. Net relief between the valley glaciers at slightly above 3,000 feet and the peaks at approximately 7,000 feet is about 4,000 feet. The slopes are steep and generally devoid of trees. Most slopes are not less than twenty degrees and some are considerably steeper than forty degrees. The slope on which showings 2-A, 2-B and 2-C are located is twenty degrees to a point eight hundred feet above the Leduc Glacier. Glaciers up to 4,000 feet wide and 300 feet or more thick fill the bottom of the main valleys. Snow fields, ice fields and falling glaciers lie in all of the higher valleys.

Showing No.1 lies south of the Leduc Glacier on a precipitous north slope. It was not examined during the September, 1952, visit.

Showings 2-A, 2-B and 2-C are located on a south facing slope approximately along strike but across the Leduc glacier from showing No.1. From showing 2-A the surface rises northward with a fairly constant slope of 34 degrees to 2-C but is broken by the valleys of several small south flowing streams.

Showing 2-A is 3,200 feet; 2-B is 3,800 feet and 2-C is 4,500 feet above sea level.

Summary

Chalcopyrite mineralization occurs in three zones not at the same horizon in thinly bedded siliceous sediments. The strata strike north to north-north-east and dip steeply. Change in strike from north to north-north-east and in dip from steep east or west to steep west between showings 2-A and 2-B suggest that the showings are on the steep west limb of an anticline.

Chalcopyrite is the principal sulphide in the ore zones but it is accompanied by any or all of magnetite, pyrite, pyrrhotite and bornite. Pyrrhotite and bornite occur in small quantities.

Weathering at the recently glaciated lower levels has produced a thin shiny hard narrow gossan. At the higher elevations where weathering has gone to a greater depth the gossans are spongy and thicker. The spongy gossan is a porous mass with one to three-sixteenth inch voids. The porous part is capped by a thin hard layer.

Carbonates are common but do not bear a close relation to chalcopyrite content of the rocks.

Respectfully submitted,

J. J. Crowhurst

J. J. Crowhurst, P.Eng.(Mining) No.2120.

## Professional Record of George A. Wilson

Graduated Queens University 1949 B.Sc. in Geological Engineering.

Graduated University of British Columbia 1951 M.A.Sc.

**Practical Experience:**

| | | |
|---|---|---|
| June - September, 1946 | - | Topographic Survey of Canada. |
| June - September, 1947 | - | Geological Survey of Canada. Mapping Larder Lake area, Ontario. |
| June - September, 1948 | - | Geological Survey of Canada. Mapping Yellowknife, N.W.T. |
| May - September, 1949 | - | International Nickel Co. of Canada. Exploration, northern Manitoba. |
| May - September, 1950 | - | Geological Survey of Canada. Mapping, Vancouver Island. |
| June - September, 1951 | - | British Columbia Coal Control. Investigation coal reserves, Peace River area. |
| September 1951 to present- | | Granby Cons. M. S. & P. Co. Ltd., Copper Mountain, B. C. as Geologist. |

-o-

## COST OF WORK

### Vaughn K. Group.

Consisting of: Vaughn K. No.5, Vaughn K. No.6, Vaughn K. No.7, Vaughn K. No.8 Bock No.1 and Bock No.2 mineral claims.

Located at the head of Leduc River in Skeena Mining Division.

Period: September 17th to 21st, 1952.

- - - - - - - - -

**Geological Survey Labour**

| | | | |
|---|---|---|---|
| J. J. Crowhurst, P.Eng. 3 days @ $35.00 | = | $105.00 | |
| A. McGowan, helper, 3 days @ $11.44 | = | 34.32 | |
| T. McQuillam, prospector 3 days @ $15.00 | = | 45.00 | |
| G.A.Wilson, Geologist. 3 days @ $372/mth. | = | 44.64 | $228.96 |

**Assaying Charges:** (analyses for gold, silver, copper, lead & zinc)

| | | | |
|---|---|---|---|
| Vaughn K. No.5 | 2 samples @ $5 each | 10.00 | |
| Vaughn K. No.6 | 22 samples @ $5 " | 110.00 | |
| Vaughn K. No.7 | 1 sample @ $5 | 5.00 | |
| Vaughn K. No.8 | 15 samples @ $5 | 75.00 | |
| Bock No.1 | 25 samples @ $5 | 125.00 | |
| Bock No.2 | 3 samples @ $5 | 15.00 | $340.00 |

**Microscopic Study**

| | | | |
|---|---|---|---|
| Preparation of Thin Sections at U.B.C. (5 sections @ $1.50) | = | 7.50 | |
| Preparation of Polished Section Briquettes at U.B.C. (3 sections @ $2.50) | = | 7.50 | |
| Microscopist's time - G.A.Wilson - 9 days @ $372/month. | = | 133.92 | |
| Supervision time: K.C.Fahrni, P.Eng. 1 day @ $35 | = | 35.00 | $183.42 |

Total cost of work to be applied $752.88

Cost Statement Certified by:

Keith C. Fahrni

Keith C. Fahrni, P.Eng.
(Geological).
Chief Geologist.

PLAN OF

# VAUGHN K GROUP

SHOWING LOCATION OF PRINCIPAL SHOWINGS
AND RELATION OF AREA MAPPED
TO CLAIMS.

SCALE: 1 INCH = 300 FEET



LEGEND

Limey Siltstone.

Siliceous Siltstone & Shale.

N

Lat 56° 13' North

Bock No.1 M.C.
Tag# 14645

Bock No.2 M.C.
Tag# 14646

STEEP BLUFFS OF SED'S.

2-C
SHOWING

Vaughn K No.8 M.C.
Tag 14339

Vaughn K No.7 M.C.
Tag# 14338

STEEP
BLUFFS

2-B
SHOWING

SED. TALUS

Vaughn K No.6 M.C.
Tag # 14337

Vaughn K No.5 M.C.
Tag # 14336

2-A
SHOWING

SED. TALUS

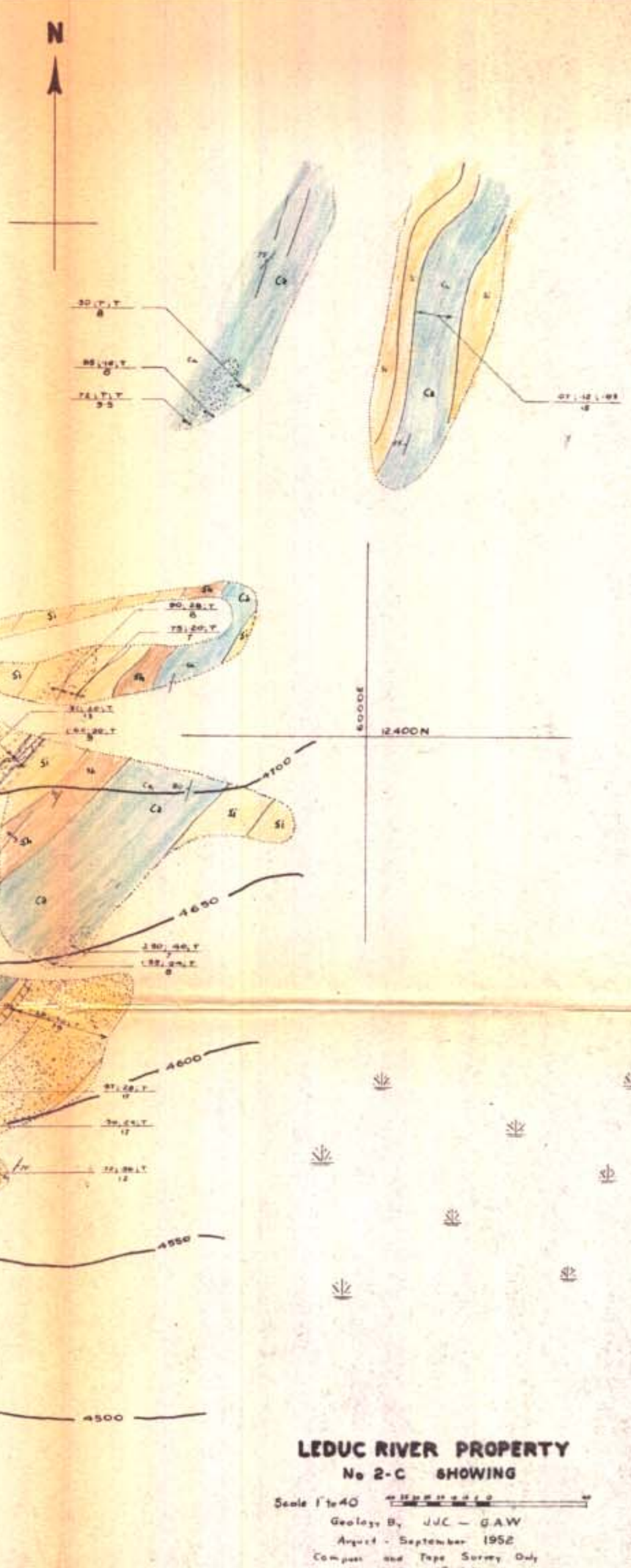
Edge of Ice

EAST ARM LEDUC GLACIER

Longitude 130° 21' West.

#88
Map 1

To Accompany Report by J.J. Crowhurst.




# LEDUC RIVER PROPERTY

## No 2-C SHOWING

Scale 1" to 40

Geology By JJC — G.A.W

August - September 1952

Compass and Tape Survey Only

Drawn By G.A.W

## LEGEND

### MINERALOGY

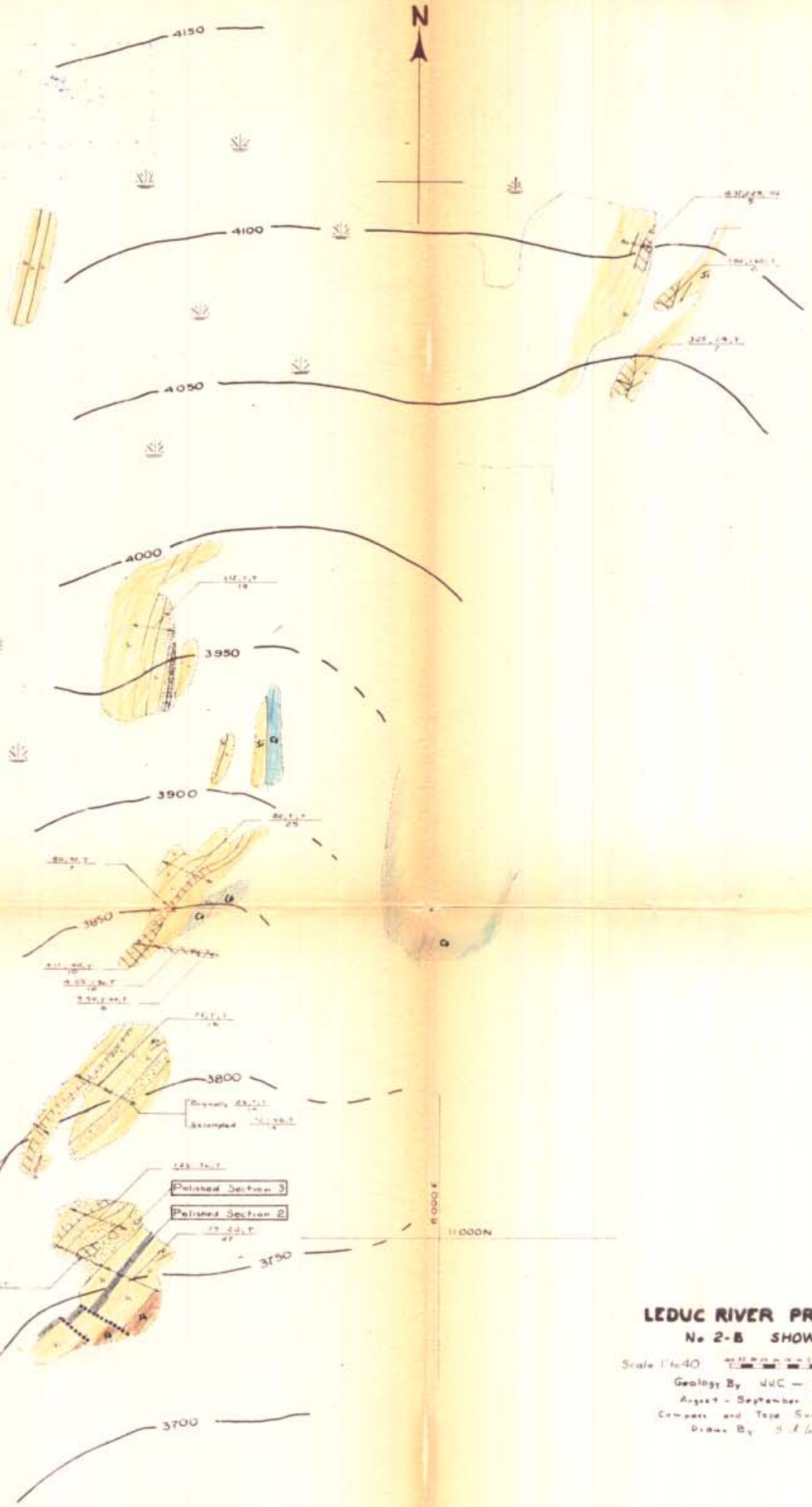
- Massive Po, Cp, Magnetite
- Disseminated Chalcopyrite
- Assay Sample — Copper % ; Silver Oz/ton ; Gold Oz/ton ; Sample width in feet

### GEOLOGY

- Ca — Calcareous Siltstone
- Si — Siliceous Siltstone
- Sh — Shaly Siltstone

### SYMBOLS

- Outcrop area
- Bedding trend
- Bedding attitude
- Drag fold axis (anticlinal)
- Contour (50 ft interval)
- Meadow




# LEDUC RIVER PROPERTY

## No. 2-B SHOWING

Scale 1"=40'

Geology By JJC — G.A.W.

August - September 1952

Compass and Tape Survey Only

Drawn By S.A.G.

## LEGEND

### MINERALOGY

- Massive Pb, Chy, Magnetite
- Disseminated Chalcopyrite
- Assay Sample — Feet / % Pb / Silver Oz/Ton / Gold Oz/Ton / Sample Width in Feet

### GEOLOGY

- Calcareous Siltstone
- Siliceous Siltstone
- Shaly Siltstone

### SYMBOLS

- Outcrop area
- Bedding trend
- Bedding attitude
- 32'0" Contour (50' interval)
- Fault
- Meadow



#88
Map 3

# LEDUC RIVER PROPERTY

## No 2-A SHOWING

Scale 1" to 20'

Geology By JJC — G.A.W.

August - September 1952

Compass and Tape Survey Only

Drawn By G.A.W.

N

5320

5300

3280

3260

3240

3220

5050 E

10,000 N

3200

Figure 2

Figure 1

## LEGEND

### MINERALOGY

- Massive Po, Cp, Magnetite
- Disseminated Chalcopyrite
- Assay Sample — Copper % | Silver Oz/Ton | Gold Oz/Ton — Width in Feet
- GEOLOGY
- Calcareous Siltstone
- Siliceous Siltstone
- Shale

### SYMBOLS

- Outcrop area
- Bedding Trend
- Bedding attitude
- Contact (Geological)



505-25

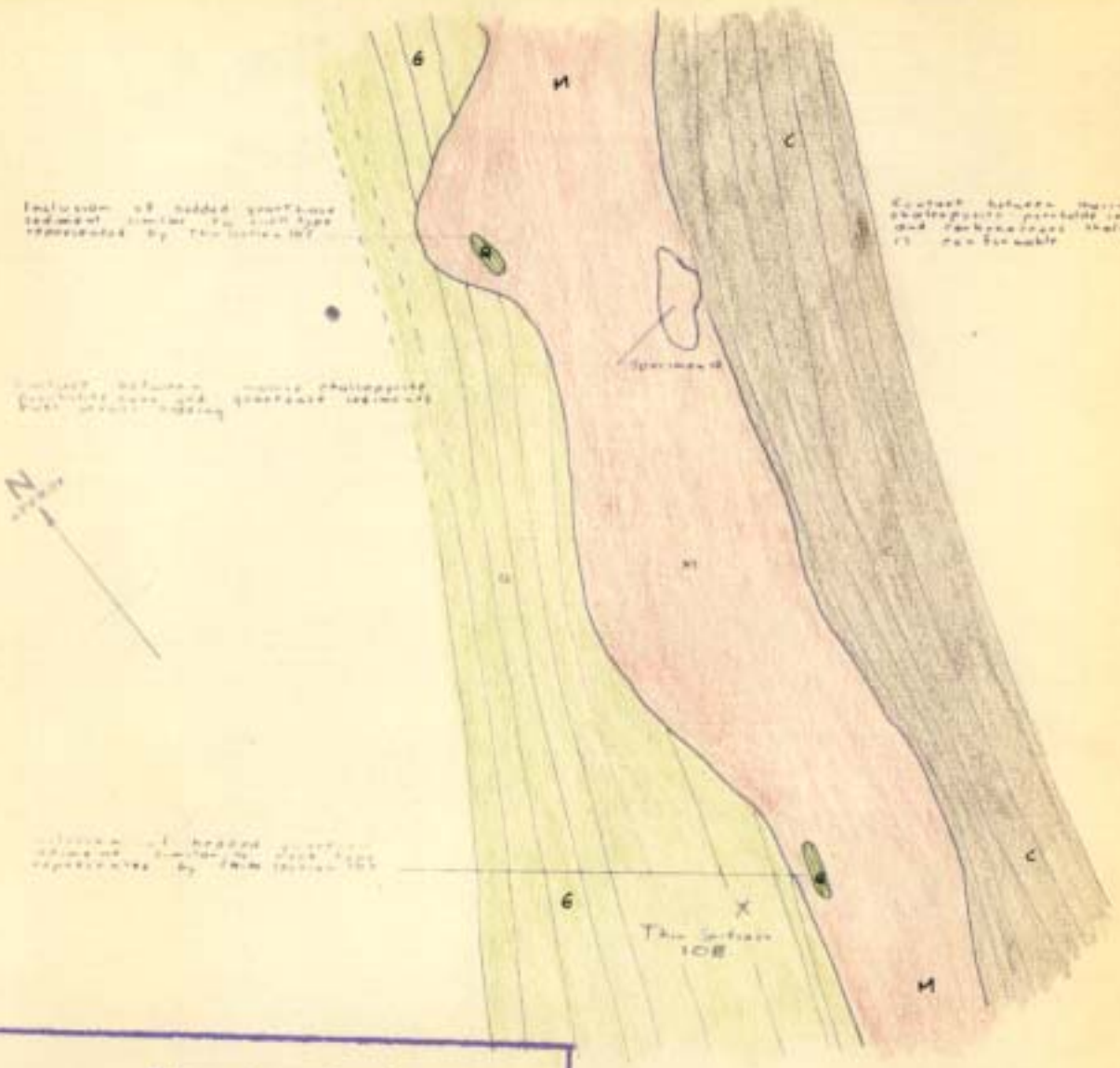





FIGURE 1

Scale 1 inch to 1 foot

Detailed drawing of a high grade zone in the south east part of Showing 2A

LEGEND

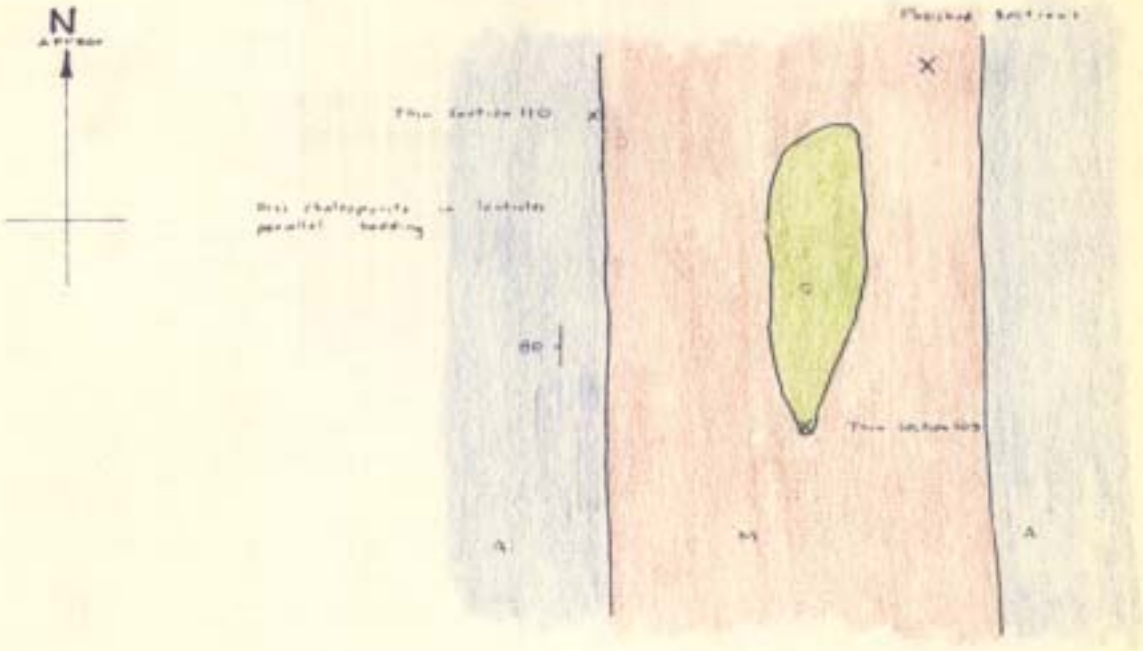
M — Mussens chalcopyrite pyrrhotite replacement quartzose siltstone

Q — Quartzose siltstone with varying amounts of sulphide mineralization

C — Dense carbonaceous shale with minor pyrite

# 88
Map 5

To Assessment Report on Kudos #1 Property






## FIGURE 2

Scale 1 inch to 1 foot

Detailed drawing of part of a high grade zone in the North part of Showing 2A

LEGEND

M — Massive chalcopyrite-pyrrhotite replacement pyrite + quartz + siltstone

A — Argillaceous siltstone with disseminated chalcopyrite mineralization

G — Quartz veinlets, stringers and inclusions in high grade zone

To Accompany Report on Cache 8 Property

Drawn By R.D.W.

#88
Map 6