C C H R E S O U R C E S L T D.

G E O C H E M I C A L R E P O R T.

JOUMBIRA GROUP

105 - M - 13

LAT. 63° 51' LONG. 135° 49'

JUNE AND JULY, 1977

A. WOODSEND.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$ 1600.00

J. A. Mann

Acting Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

B. R. BAXTER

Supervising Mining Recorder

for Commissioner of Yukon Territory

C O N T E N T S

ATTACHED TO THIS REPORT:

~~GROUPING CERTIFICATE~~ MA - 317

CLAIM LOCATION MAP 1:50,000.

MAP TY-1a. - GEOCHEMICAL RESULTS 1:10,000.

~~FORM C - APPLICATION FOR A CERTIFICATE OF WORK.~~

LOCATION.

The claims are located on the south-east slopes of Mount Haldane, thirty kilometres north of Mayo, eighteen kilometres south-west of Elsa. A claim location map is attached.

GROUPING.

The claims named Joumbira 1 to 6, Grant Nos. YA 15151 to 15156 have an anniversary date of 9th June. The claims named Joumbira 7 to 16, Grant Nos. YA 15566 to YA 15575 have an anniversary date of 18th July. All claims have been grouped by Grouping Cert. No. MA - 317 which is attached. All claims are held by CCH Resources Ltd., a wholly-owned subsidiary of Campbell Chibougamau Mines Ltd.

GENERAL GEOLOGY.

Most of the mountain is underlain by the sediments of the Keno Hill Quartzite (or Central Quartzite) Formation. Various ages have been assigned to these rocks, the most recent being Lower Cretaceous.

These sediments lie on the south limb of the east-west trending McQuesten Anticline that runs down the McQuesten Valley.

The massive quartzites are light to dark grey, with a gneissoid texture, and vary in thickness. Interbedded are narrower bands of thin-bedded quartzites, graphitic schists, and sericitic schists. All these units dip uniformally south-west at 20^{o} to 30^{o}. Within these, lenses and sills of "greenstones" have been intruded, probably during Cretaceous times.

A medium-size granite dyke or sill was mapped by the G.S.C. to the south of the summit. The precise shape and extent of this intrusive has yet to be ascertained.

During the 1977 field season, two biotite-quartz porphyry dykes were found cutting the head of Fortune Creek. These may well be of Tertiary age, and of particular interest with regards to tin-tungsten mineralization.

GEOCHEMICAL SURVEY METHODS

Stream sediment samples were collected at the localities shown on the attached map TY-1a.

Each sample was dried, and the -80 mesh fraction was analysed as follows by Bondar- Clegg -:

Cu, Pb, Mo, Ag, Zn by Atomic Absorption.
As, W, by specific techniques.
Sn by X-Ray Fluorescence.

Rock grab samples of gossans, vein material and dyke material were crushed and analysed for the same elements by Bondar-Clegg.

PERSONNEL

The following personnel were involved in the field work:

A. Woodsend, Project Geologist; Toronto, Ontario.
C. Blacksmith, Field Assistant ; Chibougamau, Quebec.

GEOCHEMICAL RESULTS

In 1964 a G.S.C. geochemical sampling program covered Mount Haldane (Gleeson, 1965). The results showed that anomalous Cu, Pb, Zn, Mo, W and As zones centred around two Sn highs in Fortune Creek. Although several individuals and companies had investigated the Ag-Pb possibilities, it appeared that the Sn-W potential had not been fully appreciated. Due to the close association of elements of similar genetic characteristics, it was decided that claims be staked over the Sn highs even before sampling began.

CCH's geochemical stream sediment sampling endorsed Gleeson's results. Not only do Sn and W respond well, but high Cu, Pb, Zn, Ag, Mo and As values are coincident.

Initial prospecting on Fortune Creek revealed that arsenopyrite in blebs and on fracture surfaces is widespread. Brecciation with a quartz stockwork is also common in the quartzites, indicating the possibility of igneous or active hydrothermal emplacement nearby.

Rock samples gathered from the head of the creek give geochemically anomalous W and Sn values, while several coatings and veinlets of scheelite can be seen with the aid of an ultraviolet lamp. However, no obvious source for the high stream sediment values could be found.

Further prospecting on the northwest slope of Fortune Creek, in the apparent source area of the Sn and W mineralization, revealed two quartz-biotite porphyry dykes, striking 040^{o} and dipping steeply west. These dykes do not outcrop, but can be traced by eye across the mountain. The dyke nearest the head of the gulch (dyke No. 1), is 4.6 m. wide, and

the other (dyke No.2), 13.7 m. wide. A grab sample from dyke No. 1 ran 1.56% Zn. A sample from the contact zone of the same dyke carried a small cassiterite crystal in an open fracture about 1 mm. wide. This sample ran 0.62% Sn. Also in the contact zone a narrow greisen vein was discovered, and this material ran 210 ppm Sn, and 0.45% Zn.

The second dyke did not return such encouraging assays, nor could any greisen veins be found. In all other respects, however, the two dykes appear to be petrologically identical. Samples from both dykes contained little or no W.

DISCUSSION OF RESULTS

Sn stream sediment values up to 107 ppm and W values up to 240 ppm were found in Fortune Creek. Weasel Creek, to the North, also carries enhanced W values. Cu, Pb, Zn, Ag, Mo and As are nearly always anomalous, at times highly anomalous.

It is proposed that the two quartz-biotite porphyry dykes are responsible for the introduction of the Sn and W mineralization. The continuation of these dykes along strike must be explored, while every effort should be made to ascertain the relationship between these dykes and the polymetallic mineralization.

The evidence at hand is limited, but even so, a few tentative remarks may be made concerning the source, type and extent of mineralization.

a) A high temperature environment is likely, due to the arsenopyrite, exceptionally clear quartz veins and the intrusion of the porphyritic dykes. Such an environment would favour Sn and W mineralization.

b) Whether the Cu, Pb, Zn, Ag and Mo are included with the Sn and W as cohabitant ore minerals, or whether they form geochemically enhanced haloes cannot be determined as yet. However, the fact that the dyke No. 1 carries 1.56% Zn would appear to indicate that a polymetallic ore is probable.

RECOMMENDATIONS

Work to date indicates the presence of Sn-W mineralization, probably with a sulphide association. Further stream sediment sampling has but limited value due to the precipitous nature of the terrain, however, scree-fine sampling on a detailed scale may further define target areas.

It is unfortunate that the two dykes do not generally outcrop. Trenching and rock chip sampling will be necessary.

The geochemical work together with detailed geological mapping should enable the location of mineralized zones. Should the sulphide association be strong enough, geophysical methods may also be of use.

It is recommended that every effort be made in the 1978 season to locate and evaluate the source of the tin-tungsten mineralization.

Angus Woodsend
Project Geologist

Toronto, Ont.
May 23rd, 1978.

SELECTED BIBLIOGRAPHY

Archer A.R., 1967. Assessment Report for Haldane Silver Mines Ltd., 105-M-13.

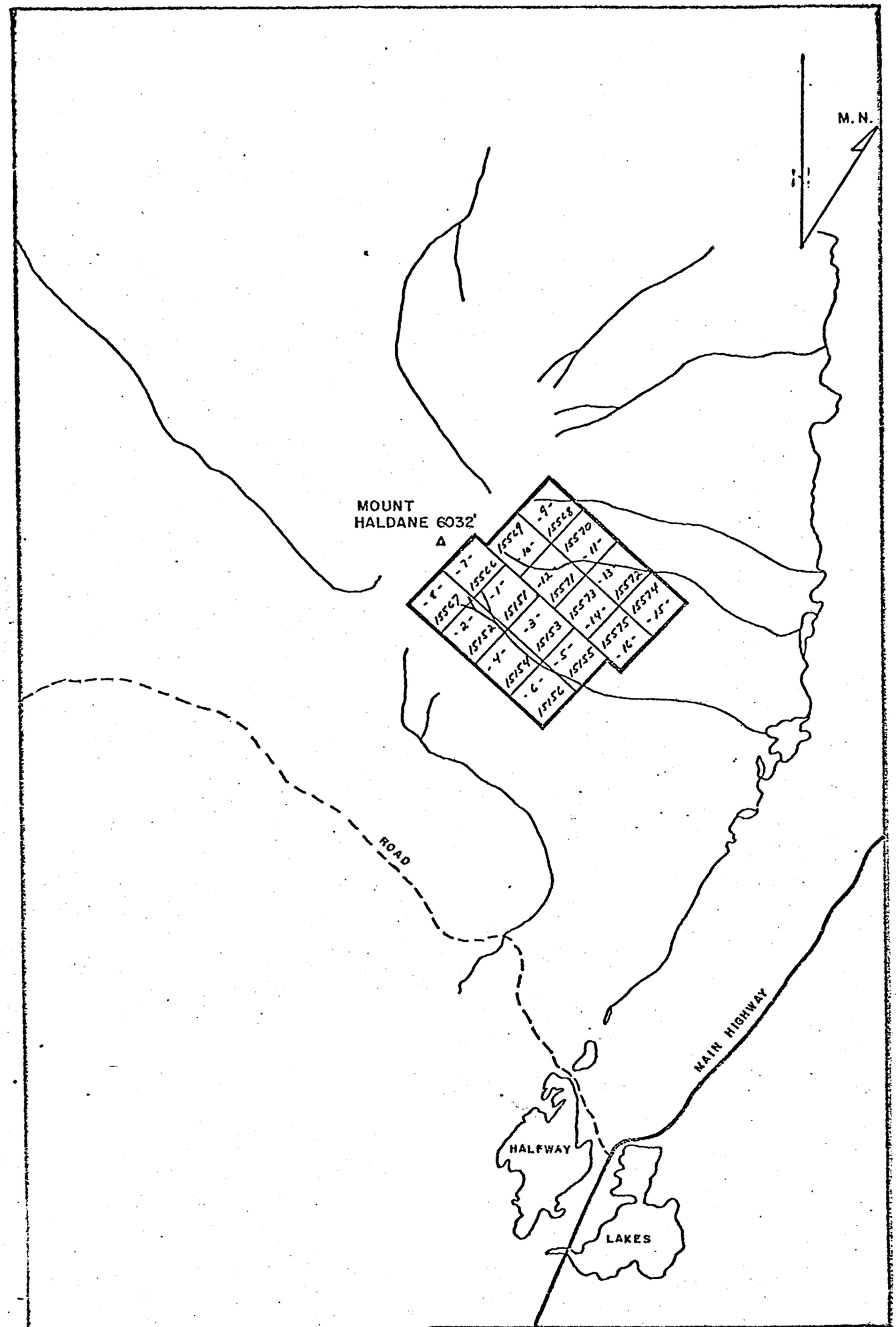
Bostock H.S., 1957, Yukon Territory, Selected Field Report of the Geological Survey of Canada 1898 to 1933; G.S.C. Memoir 284.

Gleeson C.F., et al., 1965, the Pb, Ag, Zn, As, Sb, Cu, Mo, W, Sn, Ni, Co, Mn, and B Content of Stream and Spring Sediments, Keno Hill Area, Yukon Territory; G.S.C. Maps 45-1965 to 56-1965.

Heard T., 1966, Assessment Geological and Geochemical Report on the H Mineral Claims, United Keno Hill Mines Ltd., 105-M-13.

Sinclair W.D. et al., DIAND North of 60 Mineral Industry Reports.

Wilson E.J. and Stemp R.W., 1972, Assessment Geophysical Report on the North and Star Claims, Canadian Reserve Oil and Gas Ltd., 105-M-13.



C.C.H. RESOURCES LTD.		
JOUMBIRA - GROUP 16 CLAIMS .		
MAYO DISTRICT . YUKON TERRITORY		105-M-13
DRAWN BY: A.W. R.T.	SCALE: 1:50,000	DATE: SEPT, 77