

HESS AREA PROJECT

Proposed Property Follow-Up
1968 Field Season

By:

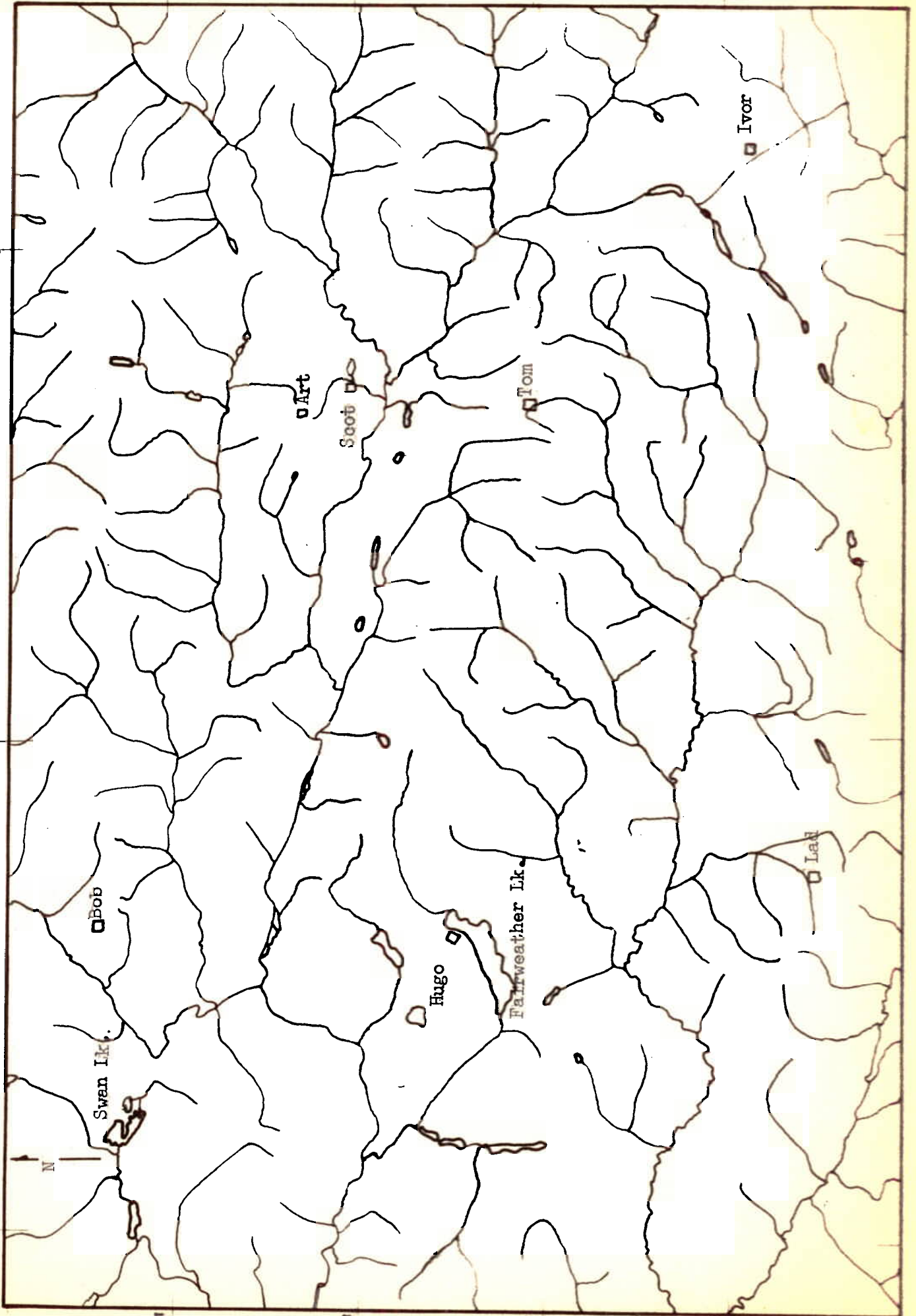
John S. Brock
Atlas Explorations Limited

June 15, 1968

133°

132°

131°



30°

20°

10°

63°

30°

20°

10°

63°

HESS PROJECT

INTRODUCTION

During the latter part of the 1967 field season a reconnaissance exploration program using grass-roots prospecting, geochemical and regional geologic mapping saturation techniques was carried out in the Hess Mountains area. The Project Area is bounded approximately by 131° to 133° West longitude and $62^{\circ} 50'$ to $63^{\circ} 40'$ North latitude. The area has received little exploration attention in the past due to its remoteness and accessibility only by helicopter and aircraft equipped with floats. Little or no published work on its geology has been made available from the Geologic Survey of Canada to this date.

Aerial reconnaissance and photo-geologic studies conducted by Atlas Explorations prior to the starting of field work, revealed that the southeast trending Pre-Cambrian and Paleozoic belts, probably continued south of the Mayo area through Fairweather Lake in the Hess Area. The western Pre-Cambrian and eastern Paleozoic formations are intruded by numerous small batholiths and stocks of probable Mesozoic age, thus providing favourable prospecting potential.

The 1967 reconnaissance program was designed to investigate reported mineral occurrences, prospect gossan occurrences and intrusive areas, test geochemically through soil and silt sampling all geologic formations and structural trends and extend regional mapping on a 4 mile scale from the Sheldon Sheet northwest to the Mayo Sheet. Through this work, 7 claim groups were staked involving a total expenditure of \$92,000.00.

Follow-up work consisting of linecutting, geochemical surveys, geophysical surveys, geologic mapping, prospecting and diamond drilling if warranted has been designed for each of the claim groups. This program is to be carried out during the 1968 field season and a maximum expenditure, including contingencies, of approximately \$300,000.00 is planned for.

This report will describe the reasons for staking of each property and the type of work planned for subsequent evaluation.

IVOR MINERAL CLAIMS

(Ivor 1 - Ivor 48 - Grant Nos. Y14172-Y14203)

Through airborne reconnaissance two gossans were located in the vicinity of 62°45' North and 131°00' West. Geochemical sampling of the gossans gave high values in zinc, in excess of 4000 parts per million. No significant copper or lead values were obtained. A preliminary soil sampling survey consisting of several lines over the gossan areas revealed an area high in zinc over about 4 square miles. Minor copper values were also obtained in the soils collected. At the end of the season geologic mapping and prospecting data was incomplete and no mineralization had been encountered in the area. Within the claim group rock units consisted of black graphitic shales and slates as well as chert. A small granitic intrusive plug was located about 2 miles west of the claims.

The 1968 program will include detailed prospecting and geologic mapping concentrating in the areas of high geochemical values. Relationships of the geochemistry in soils to rock geochemistry will also be established. Prospecting and mapping of the intrusive area will be carried out to determine the extent of its contact zones and possible relation to the Ivor Group geochemistry.

Detailed geochemical soil sampling surveys over a cut grid are proposed as well as magnetic and electromagnetic surveys to aid in geologic mapping in areas of overburden cover. The grid will consist of 2.5 line miles of central baseline and 20 line miles of cross line of 800 foot line spacing, approximately 1200 soil samples will be collected. If geochemical results prove encouraging, another reported gossan zone located 2 miles southeast of the present claim group will be investigated and tied into the present work.

Costs of supplying, mobilization and demobilization for this operation will be high due to rotary wing aircraft being used from either Ross River, 88 miles to the southwest or Swan Lake, 70 miles to the northwest. There are no lakes suitable for float-equipped aircraft close to the property.

ART MINERAL CLAIMS

(Art 1 - Art 12 - Grant Nos. Y14156-Y14163 and Y14214-Y14217)

The Art Mineral Claims cover a 1½ mile long geochemical anomaly of high copper, lead and zinc values north of Niddery Lake, approximate location 63°25' North and 131°20' West. No geology or prospecting has been done on the property. Projections of known geology would suggest that the claims are underlain by black slates and cherts. The western margin of the group contacts a small granitic intrusion.

One reconnaissance soil sample line run along the base of the south facing topographic slope gave high zinc values (maximum 42,000 ppm Zinc), moderately high copper (890 ppm) and 1 high lead value of 1940 ppm.

During 1968 a program of detailed geologic mapping and prospecting will be carried out. Outcrop exposure on the

property is good and it is felt that prospecting should reveal the source of geochemical results. Contingent linecutting and geophysical surveys are planned dependent on results.

BOB MINERAL CLAIMS

(Bob 1 - Bob 4 - Grant Nos. Y14204-Y14207)

The Bob Mineral Claims were staked over 3 large gossans spotted by aerial reconnaissance, approximate location 63°35' North and 132°25' West. Ground follow-up in 1967 consisted mainly of geochemical sampling of the gossans and immediate surrounding area. Anomalous zinc values were obtained over the gossans.

As little is known of the geology of the property and area, mapping is planned for the 1968 field season as well as detailed follow-up with geochemical soil sampling on a grid pattern. Prospecting and determination of the gossan source will also be done. Geophysical surveys are dependent on results obtained through geochemistry and prospecting.

HUGO MINERAL CLAIMS

(Hugo 1 - Hugo 16 - Grant Nos. Y14120-Y14135)

The Hugo Mineral Claims were staked over a gossan located along the northeast shore of Fairweather Lake, approximate location 63°15' North and 132°30' West. The gossan area was located during reconnaissance work carried out around the Fairweather Lake area in 1967.

A geochemical soil sampling survey was carried out over a grid pattern over and around the gossan. High values in zinc were obtained (in excess of 2000 parts per million).

There is no outcrop in the immediate area of the property and there is no apparent cause for the gossan occurrence and its related high zinc geochemistry. Follow-up work planned for the 1968 season will consist of detailed geochemical soil sampling and silt sampling of related drainage systems as well as prospecting for float occurrences. Magnetic and electromagnetic surveys will also be done over the grid area.

LAD MINERAL CLAIMS

(Lad 3 - Lad 12 - Grant Nos. Y14068-Y14077
Lad 19 - Lad 24 " " Y14136-Y14141
Lad 25 - Lad 34 " " Y14078-Y14087
Lad 45 - Lad 48 " " Y14218-Y14221
Lad 49 - Lad 62 " " Y14142-Y14155)

The Lad Mineral Claims, located on the east slopes of Mount Selous, approximate location $63^{\circ}37'$ North and $132^{\circ}20'$ West. The property covers an area of several copper-silver and lead-zinc occurrences as well as a gossan carrying lead values. Copper-silver mineralization occurs as dissemination in quartzite. Assays from specimens located in 1967: 13 oz/ton Ag and 5% cu, float from the gossan area assayed 24.4% Pb and 29.6 oz/ton Ag.

This property appears to be the most promising for detailed follow-up and investigation within the Hess Project area. The location of several sulphide-type occurrences as well as float would warrant further detailed prospecting. Outcrop exposure in creek walls as well as above timberline will assist in geologic mapping of the area. A grid will be established by linecutting over the property and soil sampling surveys will be planned as well as magnetic surveys. Diamond drilling of known mineral occurrences is dependent on detailing of target areas which should be completed by the end of August, 1968.

SCOT MINERAL CLAIMS

(Scot 1 - Scot 24 - Grant Nos. Y14044-Y14067)

The Scot Mineral Claims, located north of Niddery Lake, approximately 63°20' North and 131°20' West. The property covers a 1½ by ½ mile wide geochemical anomaly of zinc values ranging in excess of 5000 parts per million.

Little work other than geochemical sampling on a reconnaissance basis was done in 1967. There is limited outcrop in the area of the property, however, Ordovician-Devonian black shales, black shales and cherts predominate. Some narrow black fine-grained limestone units have been noted and limestone float discovered in the anomalous zinc area. No evidence of mineralization was found.

The 1968 follow-up program will consist of detailing the presently known geochemical anomaly and prospecting related areas. Geologic mapping will be done to aid in determining the cause of high-zinc areas. Electromagnetic surveys are recommended to aid in mapping of overburden-covered areas.

TOM MINERAL CLAIMS

(Tom 1 - Tom 14 - Grant Nos. Y14164-Y14171 and Y14208-Y14213)

The Tom Mineral Claims, located near the headwaters of the North Macmillan River, at approximately 63°15' North and 131°20' West, were staked to cover a gossan zone discovered by aerial reconnaissance. The gossan is over ½ mile in length and has associated geochemical values high in copper and zinc values. Tetrahedrite float found on the property assayed 66.8 oz/ton silver.

The claims are located above timberline and outcrop exposure is close to 100 percent. It is therefore recommended that the initial stages of follow-up consist of prospecting

and geologic mapping as well as some rock geochemistry. Further work would be scheduled dependent on results.

CONCLUSION AND RECOMMENDATIONS

The basis for selecting areas of possible mineral potential for follow-up during the 1968 field season was mainly aerial reconnaissance, geochemical sampling in areas of favourable geology and prospecting. Grass-roots, saturation type techniques are readily applicable to the Hess Area where little prospecting has been done to date.

Targets of high geochemistry in copper, lead and zinc as well as areas of mineralization (float and in-place occurrences) were selected and have been described in the preceding pages.

As little is known of the geochemistry of the area and its relation to rock types, an effort will be made to establish the cause of each anomaly and its anomalous characteristics through geologic mapping, prospecting and rock geochemistry. Where it appears that anomalies are due to sulphide mineralization, geophysical techniques will be employed and subsequent testing of targets by diamond drilling would follow at the completion of follow-up surveys.

The Hess Area is not readily accessible by conventional transportation methods and a high cost of exploration must be realized due to dependence on rotary-wing aircraft for camp supply and transportation.

Respectfully submitted,

John S. Brock,
Operations Manager-Yukon
Atlas Explorations Limited

June 15, 1968