

713

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#1 Geological map 1" = 400' pocket
#2 Geochemical map 1" = 400' "

GEOLOGICAL AND GEOCHEMICAL REPORT ON THE S.C. GROUP

LIARD M.D. 57° 131° S.W. OWNER - A.E. BRYANT

by

D. H. James, P.Eng. December, 1965

for Bralorne Pioneer Mines Limited.

Introduction

This report is prepared for submission as assessment work of geological mapping and a geochemical survey of the S.C. Group carried out under the writer's direction June 30 - July 14, 1965.

Location and Access

The claims are situated in the Stikine River area, north of Porcupine River. The easternmost two claims of the group include the canyon mouth of Split Creek where it flows into the wide braided channel of Porcupine River.

Access is by air from Prince Rupert, Terrace, or Wrangell or by river boat from Wrangell to the Porcupine River. The most convenient access in the 1965 season was by airplane to a base at the mouth of the Anuk River, and from there a 10 minute flight by helicopter.

Property

The claims are S.C. 13 and 15-24. They are owned by Mr. A. E. Bryant of London.

Physical Features

The claim group starts at the north side of the Porcupine River flat and extends up the timbered slopes to the north. Most of the claims are covered by overburden and moss, but outcrops are adequate for mapping.

They occur as a series of ridges sub-parallel to the contours and controlled by the strike of the steeply-dipping foliation. There is good exposure in the canyon which Split Creek has eroded through the old lip of its hanging valley, but the canyon walls are so steep as to be inaccessible.

Access from the Stikine river could easily be made by means of a road along the north side of the Porcupine River. A tractor trail exists to the property along the gravel flats of the river on the south side, but the river is not easily forded.

Wrangell is the nearest supply point, and Prince Rupert the nearest Canadian point.

The claims are at a low elevation and snow should not pose any particularly unusual problems.

Work Program

A grid of lines was cut and chained at 400' intervals over the claims west of Split Creek canyon, and a single line cut through the portion of two claims east of the canyon. This work, together with cutting an access trail and several trenches was previously recorded.

Mapping and soil sampling were done from and along this grid system.

Regional Geology

G.S.C. Memoir 246 by F. A. Kerr is the only reference on the geology of the area known to the writer. The map shows the claims lie on Triassic volcanic and sedimentary rocks.

On claims mapped to the north and west, the predominant rock types by far are massive fragmental volcanic layers. On the S.C. claims, however, only sediments and metamorphosed sediments occur.

Property Geology

Geology is indicated on the accompanying plan at 1" = 400'. This map shows most of the outcrops on the property except those on the inaccessible cliffs in Split Creek canyon. Viewed from the canyon rims, these rocks appear to be the same as those mapped.

Rock Units

Two rock types have been distinguished on the map, but they are not very distinctly different in the contact zone. The northeast portion of the property is underlain by sediments - siltstone, dirty sandstone, and grey to black argillite. The sandy beds are very likely tuffaceous. Recognizable volcanic rocks outcrop within 2000 feet north of the claims.

The southwest part of the claim group is underlain by metamorphosed sediments which have been termed gneisses. The silty and sandy layers which predominate in outcrop have developed muscovite and acicular amphibole which create a distinct foliation and fissility. This is apparently parallel to bedding, but this point could not be resolved for certain because most of the outcrops are tightly plastered with moss and lichen. Time did not permit hammering large areas clear for study. The argillite beds are metamorphosed to phyllitic argillite.

Structure

Foliation in the gneiss strikes N.W. and dips steeply S.W. The outcrops are conspicuously elongated on strike and are bordered by depressions which are a conspicuous feature of the topography.

In the centre of the property, outcrops and foliation strike somewhat more W.N.W. This may be the original bedding direction in which the metamorphic foliation is not developed, although the re-crystallization is well advanced.

The sedimentary beds in the northeast corner of the claim group strike almost N.E. in several outcrops where map symbols indicate exceptions to the usual condition that the strike is parallel to the long dimension of the outcrop. There appears to be folding in this area.

Beds mapped elsewhere in the area dip 45° or flatter, whereas those on the S.C. claims dip 60° or steeper. It seems likely some structural feature in the adjacent Porcupine River valley caused the increased dips and is related to the metamorphism.

Geochemical Survey

Results of the soil survey are indicated on the accompanying map at 1" = 400'. With one exception on the south boundary of claim S.C. 24, results were negative. This one positive result was not supported by silt samples in the adjacent stream.

The same operator and equipment obtained definite positive results from soil and silt samples in the Julian Mining Co. area farther up Split Creek.

Survey procedure was as follows: -

Samples were taken at 200 - foot intervals. Mattock holes were dug at the sample sites and an ounce or two of soil from the "B" horizon was taken and placed in an envelope. Samples were analysed in camp. They were dried and the coarse material sorted out. A measure of $\frac{1}{4}$ teaspoon of the finest soil was placed in a small pyrex test tube. To this was added 2 ml of acetic acid - acetate solution supplied by Eldrico Geophysical Sales Ltd. The test tube was stoppered and shaken 70 times.

The wet soil was emptied into a filter paper folded into a sharp cone, the point of which rested on a strip of rubeanic acid test paper supplied by Eldrico Geophysical Sales Ltd. On this paper the

sample number was written. The amount of copper present was judged as nil, weak, medium, or strong according to the intensity of the dark spot formed on the test paper.

Silt samples were taken and run in the same manner from all drainage crossing the survey lines.

Economic Geology

The claims were staked following discoveries of copper showings in the area, particularly those of Julian Mining Co. Ltd. near the head of Split Creek.

The deposits found are reported to be related to acidic intrusive rocks or alteration which produces a similar - looking outcrop. Nothing of this sort was seen on the S.C. claims nor was any mineralization seen except minor amounts of pyrite.

The claims have no apparent economic value.

Assessment Work

Mapping was carried out by Mr. F. H. Tuttle, a third year student in Geology at the University of Washington. Mr. Tuttle assisted the writer in mapping the Sil group of claims to the north up Split Creek, and is competent to do the work. The writer spent most of June 30th with Mr. Tuttle on the ground and checked the work on August 14th.

Geochemical soil sampling for copper was carried out by Mr. Paul Weishaupt, an exploration technician employed by Bralorne Pioneer Mines Limited.

Maps have been prepared by Mr. Weishaupt under the writer's supervision.

Persons employed on the field work were:

| | | |
|---------------------|--------------------|----------------------|
| F. H. Tuttle | - junior geologist | - June 30 - July 15. |
| P. Weishaupt | - technician | " " |
| D. H. James, P.Eng. | - supervision | June 30, August 14. |

Costs of Work

Salaries and fringe benefits, 16 working days -

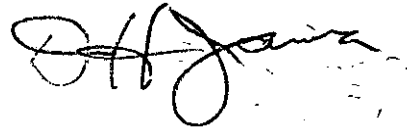
| | | | |
|---|--|-------|----------------|
| F. H. Tuttle - monthly rate | - | \$486 | |
| P. Weishaupt - " " | - | 575 | |
| | $\frac{16}{31} \times 1061 \times \frac{7}{5}$ | = | \$ 765 |
| Field maintenance - 34 man days @ \$5 | - | | 170 |
| Chemicals estimated | | | 50 |
| Supervision and report D. H. James, 4 days @ \$80 | | | 320 |
| Plotting and drafting P. Weishaupt | | | 140 |
| Total | | | <u>\$ 1445</u> |

Application

Work is to be applied to the 11 S.C. claims (13 and 15 to 24) for 1 year each.

Signed


D. H. James, M.Sc. P.Eng.
December 16, 1965.



Statutory Declaration

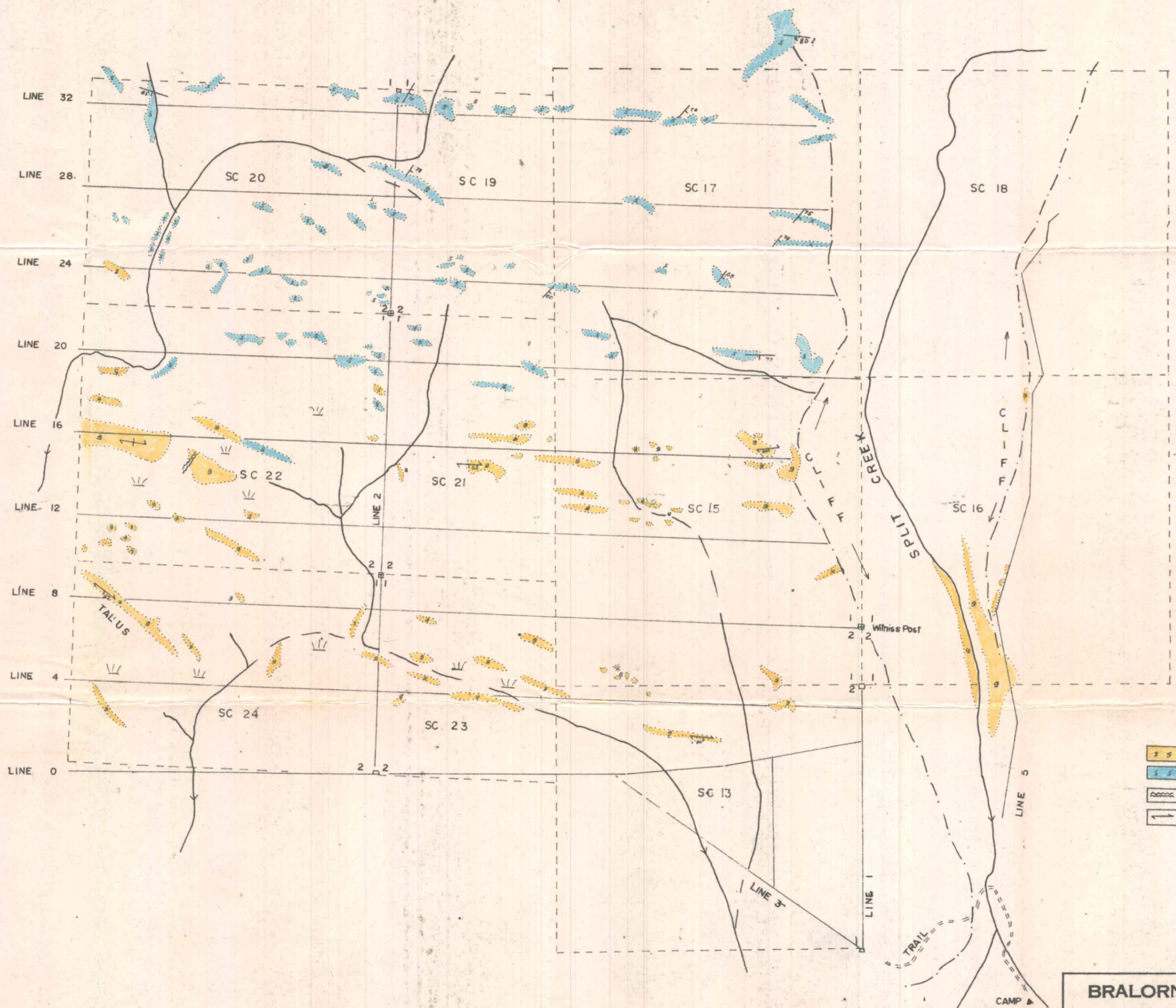
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *CITY*)
of *VANCOUVER* , in the)
Province of British Columbia, this)
19 day of *JAN.* 1966 A.D.)



Susan Matty

Sub-mining Recorder

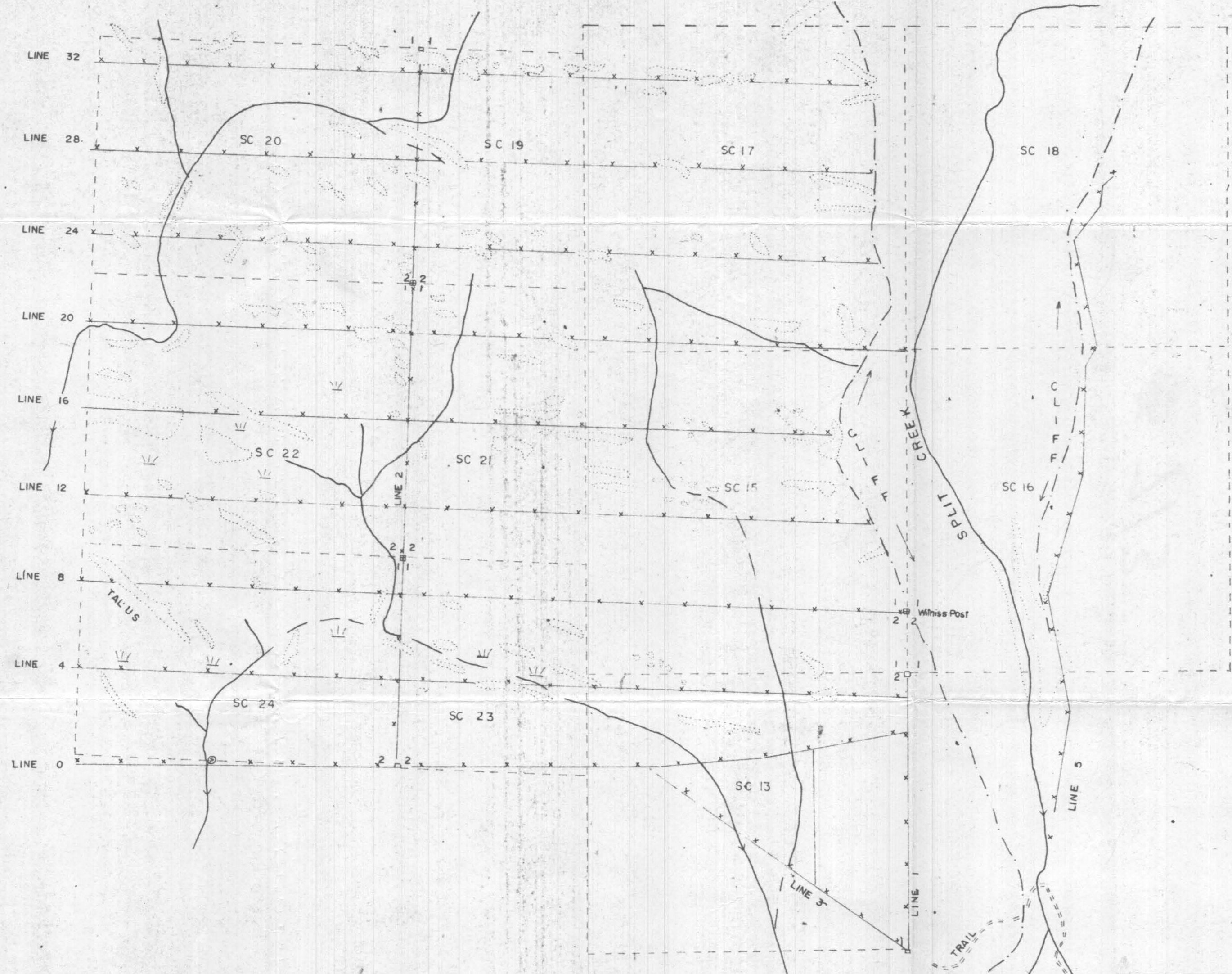


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 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 713 MAP #1

- LEGEND**
- GNEISS
 - SEDIMENTS
 - Shear
 - Foliation

713

| | |
|--|------------------------|
| BRALORNE PIONEER MINES LTD. | |
| GEOLOGICAL MAP | |
| SC MINERAL CLAIMS | LIARD MINING DIVISION |
| TO ACCOMPANY REPORT BY D.H. JAMES P. Eng | |
| SCALE 1" = 400' | REF. <i>D.H. James</i> |
| DRAWN BY <i>R.W.</i> | DATE NOV. 22. 1965 |
| No. | <i>D.H. James</i> |



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 713 MAP #2

LEGEND
 x Negative
 ⊕ Positive

| | | |
|------------------------------------|------------------|-----------------------|
| BRALORNE PIONEER MINES LTD. | | |
| GEOCHEMICAL SURVEY | | |
| SC MINERAL CLAIMS | | LIARD MINING DIVISION |
| TO ACCOMPANY REPORT | | By D.H. JAMES P. Eng. |
| SCALE 1" = 400' | REF. | D.H. James |
| DRAWN BY P.W. | DATE NOV 22 1965 | No. |