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Map: Geological Map, Sil Group 1" = 400'

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. <u>643</u> MAP

GEOLOGICAL REPORT ON THE SIL GROUP

LIARD. H.D. 57° 131° S.W., OWNER A.E. BRYANT

By

D. H. James, P. Eng., June 15-29, 1965

for Bralorne Pioneer Mines Limited.

Introduction

This report is prepared for submission as assessment work of geological mapping on the Sil claims carried out by the writer and assistant in the period June 15-29, 1965.

Location and Access

The claims are situated on the north side of Split Creek which flows west southwest into the Porcupine River about 4 miles above the junction of the latter with the Stikine River. Access is by air from Prince Rupert, Terrace, or Wrangell or by boat from Wrangell to a base at the junction of the Anuk and Stikine Rivers. In 1965 Klondyke Helicopters stationed a Bell 47G machine at this base much of the time, and the property is only a 15 minute flight from this base.

Property

The Sil claims were originally staked as a block of 36 claims, but most overlap prior Ann claims under option to Julian Mining Company Ltd. There remain all or parts of 10 claims - Sil numbers 25, 26, 27, 28, 29, 30, 31, 32, 34, 36. They are held in the name of A.E. Bryant.

Physical Features

The claims are principally on the lower slope of Mt. Scotsimpson above Split Creek. The slope is partly in accessible cliffs and partly 30-40° slope densely covered with slide alder, devil's club, nettles, etc. Above 3500 feet elevation brush terminates and alpine meadows exist. Slopes are still very steep.

Access into Split Creek itself is not difficult and Julian Mining Co. has roughed out a tractor road to their camp from the junction of the Porcupine and Stikine Rivers. There is a fair amount of good timber on the lower slopes of many valleys including Split Creek.

Wrangell, Alaska is the nearest source of supply and Prince Rupert is the nearest Canadian source.

Snowfall and snowslides are undoubtedly a problem in winter.

Work Program

Mapping was conducted from a baseline along the Julian tractor road parallel to Split Creek and from a baseline established above the

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brush elevation. Brunton compass and chain were used. The upper open areas were mapped from chained crosslines 400 feet apart. The lower slopes were mapped by traversing up water courses using chain and compass. Feasible routes were selected from air photographs.

Regional Geology

The only work on regional geology known to the writer is G.S.C. Memoir 246 by F.A. Kerr. On his maps the claim area is shown entirely as Triassic rocks, principally volcanics. On Sphaler Creek to the east he mapped an area of biotite-andesine granodiorite. A rock fitting this description occurs in Split Creek for a short distance and probably represents the western extent of this intrusion.

All other rocks seen in the area mapped fit Kerr's description of the Triassic volcanic rocks. They are mostly fragmental.

Property Geology

The geology mapped is presented on the enclosed plan at 1" = 400 feet.

Quartz Diorite

Below the wide gravel-bar section of Split Creek an increasingly deep canyon is eroded into a biotite quartz diorite. Contacts with the volcanics were observed in two places. Both are intrusive contacts with no evidence of alteration. The quartz diorite is finer grained and contains progressively less biotite in the last 100 feet or so near the contact. Dykes of the contact-type intrusive cut the volcanics for as much as 400 feet from the contact.

Volcanics

It proved impossible to subdivide the volcanics. Most of the rock is fragmental (agglomerate) but only on certain types of weathered surface is this obvious. Frequently the rock appears to be fine grained greenish diorite. Another very common rock type is a fine to medium grained horn blende porphyry with a light grey-green matrix. It occurs as the matrix in agglomerate and in considerable masses of apparently uniform composition. A few chloritic outcrops were found, and interpreted as thin flows between more massive fragmental beds.

Sediments

One bed about 100 feet thick and a few less-certain thin sedimentary layers indicate the sequence strikes west to 20° north of west and dips 20° north. Flows and possible contacts between fragmental layers agree with this attitude.

The main sediments are fine grained silty quartzites and black argillites with minor pyrite. They are consequently rusty-weathering. Other beds are dark, fine grained, and can only be seen where differential weathering has made bedding visible.

Dykes

Several dykes including feldspar porphyry, diorite, and biotite lamprophyre were noted. A great many others may exist, but are

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exceedingly difficult to distinguish from the volcanics.

Structure

All the rocks are well-jointed in at least a couple of directions, and joints are not mapped in detail.

The principal secondary structures of significance are shears striking east-west and dipping very steeply north. Along these shears there is developed a foliation and in many cases schistosity through development principally of chlorite. In wider shears there is often alteration - bleaching and formation of iron carbonate, quartz, and sericite.

The strongest shear mapped appears to cut off the one thick bed of sediments in claim Sil 30, for it cannot be traced further east. The shear itself could not be found on cliffs to the east, but a lineament on air photographs suggests it continues some distance west. Many small streams originate in this shear as springs.

Metamorphism

All rocks are in the green-schist facies, but to the east there seems to be more chlorite alteration, and biotite is reported farther east.

Economic Geology

The Sil group is of economic interest because of its proximity to the property being drilled by Julian Mining Company Ltd. The writer is not in a position to describe this showing, but it appears to be in an area of close fracturing, extensive alteration, and possibly intrusion. Nothing similar occurs on Sil claims, other than carbonate-quartz alteration in rather restricted areas.

Carbonate Alteration

On the Sil claims are many small areas both in shears and near fractures where the volcanics are altered to a mixture of iron-bearing carbonate, quartz, and pyrite. The carbonate weathers to a conspicuous brown-orange shade. Most of these exposures were dug into, but no minerals other than pyrite were found.

Quartz

Quartz veinlets occur in two associations. Sheared chloritized volcanic rock frequently contains quartz stringers and lenses, all barren. Quartz veinlets in and near carbonate alteration occasionally contain a few grains of chalcopyrite. Quartz stringers are most common in the 100-odd feet of rock below the main sediment band, and near larger carbonate alteration areas.

Rust

Much of the volcanic rock has small amounts of pyrite disseminated or on fractures, and several sizeable rusty areas occur - presumably where drainage is suitable.

Other

A seam of galena 1/8" thick was found on one side of a 2" quartz vein fragment picked up in talus.

Silt samples on the streams were negative except for a weak reaction on the westernmost one tested.

Assessment Work

Persons employed on the survey were:

D.H. James, P.Eng. Geologist	-	June 15 - 29th	- 15 days
F. H. Tuttle, Assistant geologist	-	June 15 - 29th	- 15 days

Signed:


D. H. James, P.Eng.

July 5, 1965.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of expenditures incurred in
mapping the S11 group of 10 mineral claims,
Liard Mining Division.

SUB-MINING RECORDER
RECEIVED
JUL 6 1965
M.R. #28355B 50⁰⁰
VANCOUVER, B.C.

I, D. H. James, Exploration Manager,
Bralorne Pioneer Mines Ltd.
of 320-355 Burrard St., Vancouver, B.C.

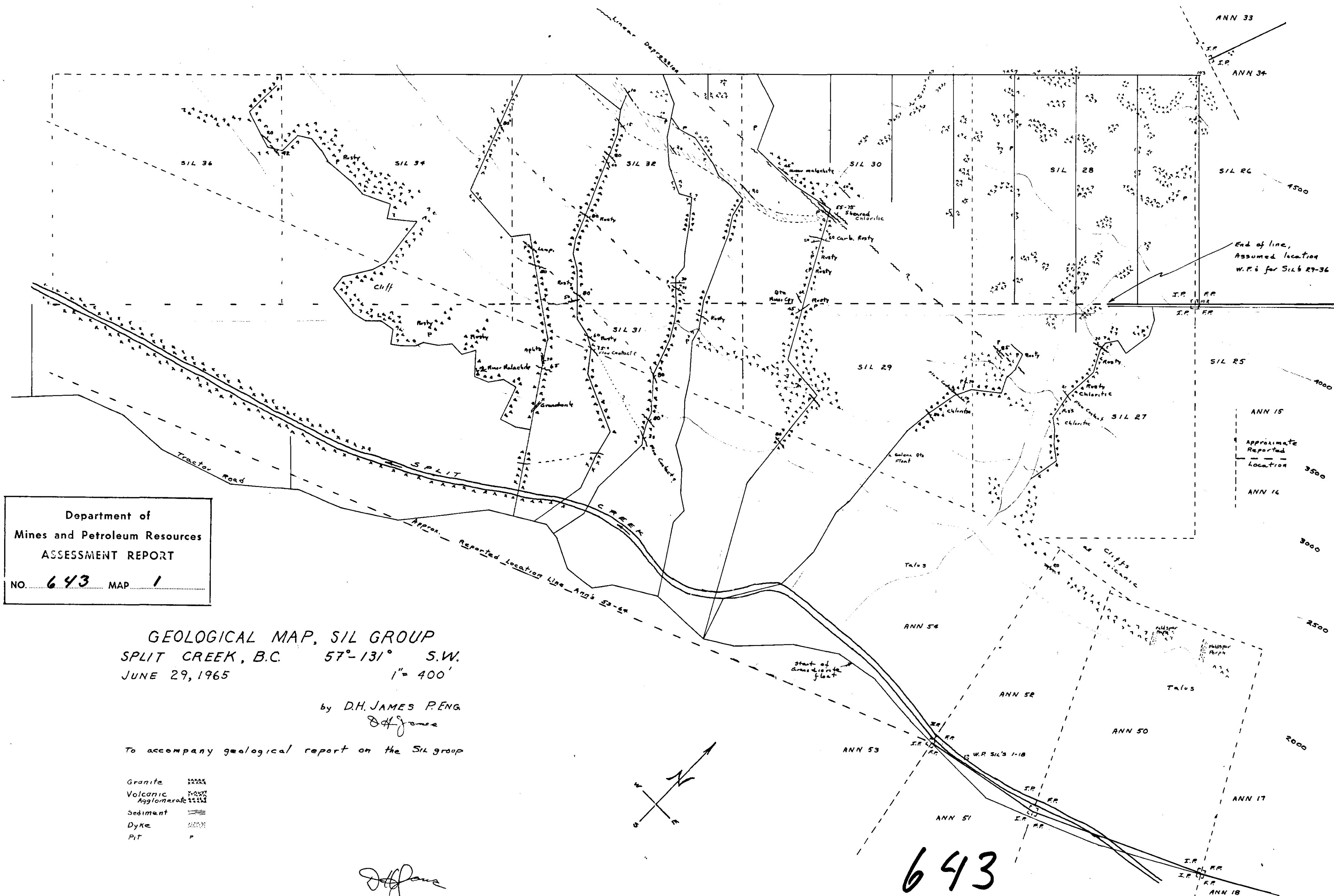
in the Province of British Columbia, do solemnly declare that in the work referred to, Bralorne Pioneer Mines Ltd. employed myself and Frederick H. Tuttle for the period June 15 to June 29, 1965. Costs based on a proportion of salary and benefits were as follows:

D. H. James	14/21 x \$1150/mo.	-	\$	760.00
F. H. Tuttle	14/21 x 476/mo.	-		380.00
Field maintenance	@ \$5/man day	-		140.00
Field transportation	- helicopter	-		300.00
Total		-	\$	1,580.00

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 sixth
day of July, 1965, A.D.

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.



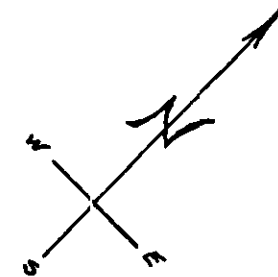
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 643 MAP 1

GEOLOGICAL MAP, SIL GROUP
SPLIT CREEK, B.C. 57°-131' S.W.
JUNE 29, 1965 1" = 400'

by D.H. JAMES PENG
D.H. James

To accompany geological report on the Sil group

- Granite [Symbol]
- Volcanic Agglomerate [Symbol]
- Sediment [Symbol]
- Dyke [Symbol]
- Pit [Symbol]



D.H. James

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