

GEOLOGICAL REPORT

on the

INDIAN RIVER CROWN-GRANTED MINERAL CLAIMS

Myrtle B No. 1 and 2, Pearl, Princess No. 2 and 3, London No. 4

Squamish Area, Vancouver Mining Division

92 F-11E, Lat. 49°36'N, Long. 122°58'E

92 G-10W

by

H. Rolf Schmitt, B.Sc.

Owner: Texasgulf Canada Ltd.

Operator: Texasgulf Inc.

Vancouver, B.C.

November, 1978.



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INTRODUCTION:

SUMMARY

Indian River Crown-Granted mineral claims are comprised of the Myrtle B No. 1 and 2, Pearl, Princess No. 2 and 3, and London No. 4 claims. These claims lie within the northwest trending Indian River Pendant. The property was mapped at a scale of 1:12,500 and the Princess 2 Showing was located. Underlying rocks are composed of a complex intermediate to felsic, moderately deformed volcanic sequence. Base metal mineralization occurs in narrow silicified zones related to hydrothermal activity.

LOCATION, ACCESS AND TERRAIN

The property is located 17 kilometres southeast of Squamish in the Indian River valley (see Fig. 1). Access is easily attained by four-wheel drive truck via logging road from Squamish along the Stawamus River and then across a divide into the Indian River valley. The property extends across the valley floor and up to an elevation of 600 metres on either side. Steep valley sides are deeply incised by numerous streams and gulleys. The claims have almost entirely been logged.

HISTORICAL OUTLINE

Six Crown-Granted claims comprising this group were originally staked in the early 1900's. During the ensuing years, through various operators, a tunnel (now caved) and several small open cuts were excavated.

Texasgulf obtained ownership in 1977 through application for rights to reverted Crown-Granted mineral claims.

GEOLOGICAL SURVEYS:

The Indian River Crown Grants were mapped at a scale of 1:12,500 (see Fig. 2). Detailed geochemical silt surveys were conducted in the previous year.

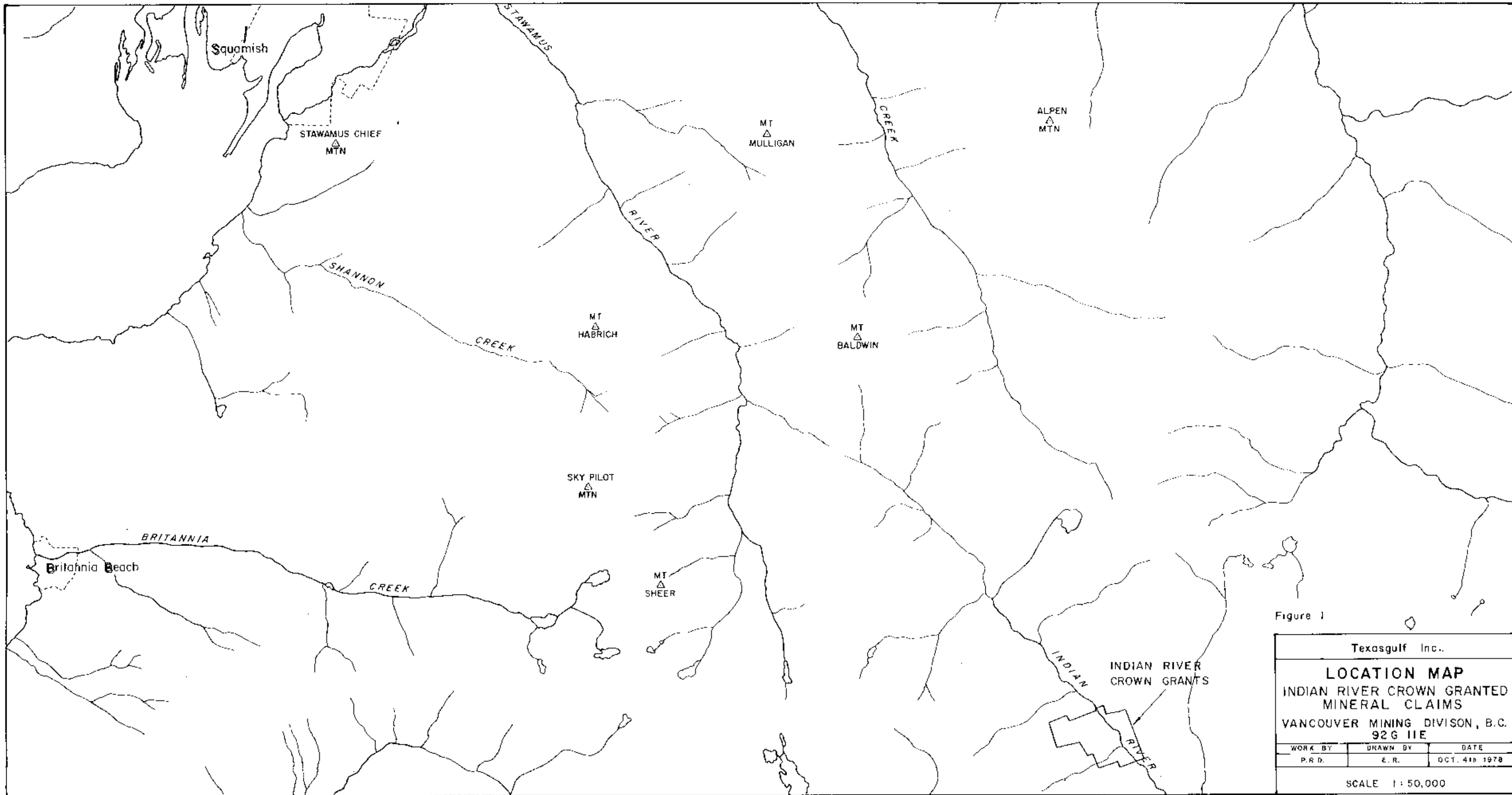


Figure 1

| | | |
|--|----------|---------------|
| Texasgulf Inc. | | |
| LOCATION MAP | | |
| INDIAN RIVER CROWN GRANTED MINERAL CLAIMS | | |
| VANCOUVER MINING DIVISION, B.C. 92G IIE | | |
| WORK BY | DRAWN BY | DATE |
| P.R.D. | E.R. | OCT. 4th 1978 |
| SCALE 1:50,000 | | |

REGIONAL SETTING

The Indian River Crown-Granted mineral claims lie within a northwest trending belt of volcanic rocks referred to as the Indian River Pendant. These rocks are thought to be correlative with the upper part of the Gambier Group of Upper Jurassic or Lower Cretaceous age (G.S.C. Memoir 335, Vancouver North, Coquitlam and Pitt Lake Map-Area, B.C., J.A. Roddick 1965). This belt, which is mostly surrounded by granitic rocks of the Coast Range Complex, is connected to the Britannia Belt by a narrow bridge of volcanic rock.

The Indian River Pendant tapers to the southeast and is in contact with younger Garibaldi volcanics to the north. The Pendant can be roughly divided into a western belt, composed largely of felsic pyroclastic rocks, and an eastern belt dominated by andesitic rocks.

PROPERTY GEOLOGY

Property geology was mapped at a scale of 1:12,500 and is shown on figure 2. Individual lithologies are described below.

Lithologies

Intrusive Rocks - Fine-grained dioritic intrusive rocks manifest themselves as narrow dykes usually less than two metres wide which crosscut the general strike of foliation and/or stratigraphy.

Cherty Rhyolite - This rock is dominantly whitish grey to light green and contains quartz-eyes and feldspar phenocrysts in a cherty matrix. Local variations include a minor tuffaceous content, lapilli bearing lenses, and banded chert beds. This rock is very resistant and weathers to form whitish-grey colored cliffs. On the east side of the Indian River massive cherty rhyolite sills intrude andesitic rocks.

Rhyodacite Agglomerate - Siliceous agglomerates range from coarse, chaotic phases through to well sorted phases. Although locally massive in texture, this rock type invariably contains whitish to green "stretched" porphyritic, tuffaceous matrix. Fragments are a mixture of rhyodacite porphyry and cherty rhyolite rock types. Intense silicification and foliation may destroy fragment outlines. Chill zones adjacent to cross-cutting rhyodacite porphyry dykes also show destruction of original textures.

Rhyodacite Tuff - rhyodacite tuff is present as a greenish unit. Feldspar and rarely quartz phenocrysts are usually present in the foliated chloritic tuff matrix. Locally, cherty beds and agglomeratic units up to a few tens of metres long and less than 2 metres thick are interbedded with the rhyodacite tuff. Narrow, wispy, discontinuous argillaceous units were noted locally. In areas of moderate to intense silicification and shearing this rock may appear as a quartz-sericite-chlorite schist.

Rhyodacite Porphyry - Rhyodacite porphyry invariably occurs as a massive light to medium green-grey rock. Abundant feldspar phenocrysts occur in a fine-grained, siliceous chloritic matrix. Locally a minor tuffaceous component may be present. Intense silicification and shearing may also occur. Fine-grained phases of this rock occur as dykes cross-cutting rhyodacite agglomerate.

Andesitic Rocks - Andesitic units are present as massive feldspar porphyry flows pervasively altered to epidote and chlorite. Tuffaceous units and minor fragmented flow tops (?) are also present. Regional metamorphism has deformed some of the tuffaceous units into rock better described as chlorite schist. Locally, andesitic rocks were intruded by rhyolitic sills.

Structure

Although regional structural geology is complex and not fully understood, within the claim group structure appears less complex. The area is underlain by a steep westward dipping sequence of volcanic flows and volcaniclastics.

Bedding attitudes have a general northwest trend with dips averaging 60° to the southwest. Although local flow directions are variable they are generally parallel to this regional trend. A regional foliation, probably developed during the emplacement of the Coast Range Intrusives, is parallel to sub-parallel to the bedding. The Indian River drainage may be controlled by a large fault structure; smaller creeks also appear fault controlled. Shear zones, accompanied by the development of strong schistosity and alteration, generally occur at small angles to the regional stratigraphic trend.

Mineralization

Base metal mineralization on the property is confined to the Princess 2 showing on the Indian River. Granular pyrite and erratic blebs of chalcopyrite occur in a narrow siliceous zone up to 1 metre wide. The host rock appears to be a silicified rhyodacite tuff. Laterally and along strike from the showing, the rock is locally sheared to a schistose texture.

Other occurrences of mineralization on the property are confined to narrow siliceous zones containing up to 15% disseminated pyrite.

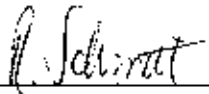
Interpretation

Rocks underlying the Indian River Crown Grants are part of a steeply dipping volcanic sequence with a large felsic component. The area is interpreted to be adjacent to a volcanic center. The presence of several crudely stratified agglomerate units indicates several periods of eruption. Traces of sedimentary material within the agglomerate suggest that brief pauses in volcanic activity occurred.

Base metal mineralization within the pile is associated with silicification of rocks and represent volcanic hydrothermal activity.

Subsequent tectonic activity and intrusion of the Coast Plutonic Complex caused deformation of the volcanic rocks, resulting in a general northwest-

southeast foliation and a steep westerly dip. Minor faults and shear zones may be related to this or subsequent tectonic activity.



H.R. Schmitt

APPENDIX A
AUTHOR'S QUALIFICATIONS

H.R. Schmitt, B.Sc.

H.R. Schmitt obtained his B.Sc., Honours Geology, from the University of British Columbia in 1977. While attending university, he was employed by Texasgulf during the 1975-76 summer field seasons. Since graduation he has again been employed by Texasgulf during the 1977-78 field season.

APPENDIX B
ITEMIZED COST STATEMENT
STATEMENT OF EXPENDITURES
INDIAN RIVER CROWN GRANTED MINERAL CLAIMS
(Myrtle B No. 1 and 2, Pearl, Princess No. 2 and 3, London No. 4)

SALARIES AND FRINGE BENEFITS - TEXASGULF INC.

| | |
|--|----------|
| P.R. DeLancey, P.Eng. - geological mapping and supervision | |
| 1 day at \$115/day | \$115.00 |
| H.R. Schmitt, Geologist - geological mapping | |
| 3 1/2 days @ \$50/day | 150.00 |

ROOM AND BOARD

| | |
|----------------------------|-------|
| Texasgulf personnel | |
| 4 1/2 man-days at \$20/day | 90.00 |

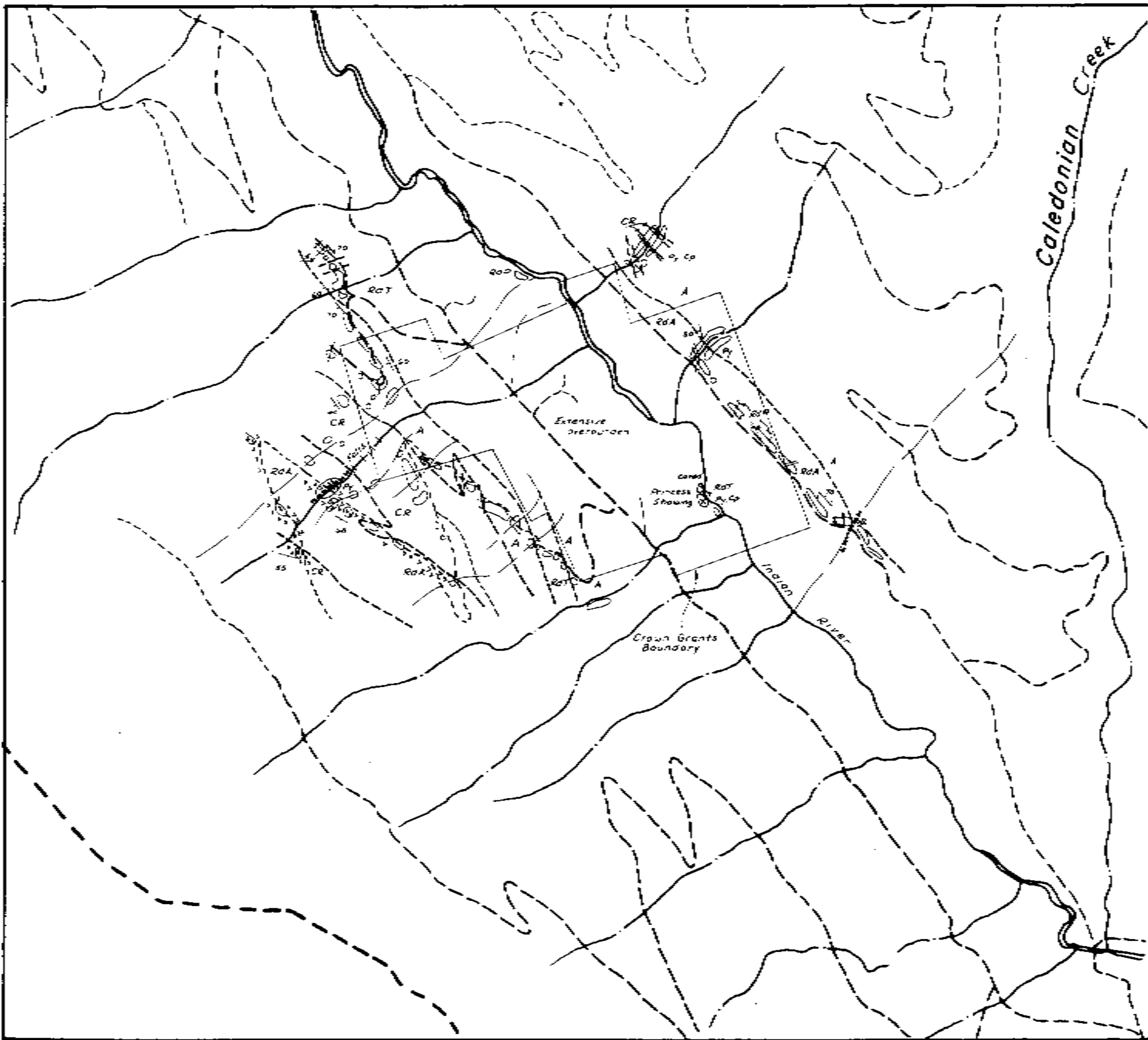
TRANSPORTATION

| | |
|-------------------------------|-------|
| 4-wheel drive Blazer (rental) | |
| 3 days @ \$30/day | 90.00 |

| | |
|-----------------------|---------------|
| <u>PAC WITHDRAWAL</u> | <u>130.00</u> |
|-----------------------|---------------|

| | |
|-------|--------|
| TOTAL | 600.00 |
|-------|--------|

6966



LEGEND

- Suphides: Py - pyrite, Sp - sphalerite, Cd - chalcopyrite, Gm - galena
- Intrusive rocks
- Cherty rhyolite
- Rhyodacite agglomerate
- Rhyodacite tuff
- Rhyodacite porphyry
- Andesitic rocks

SYMBOLS

- geological contact
- bedding
- bedding and/or foliation
- fault or shear zone
- scarp
- adit
- trench or cut
- road

To accompany report on
 Geology of Indian River Crown Grants
 by H.R. Schmitt
 November, 1978

Fig. 2

| | | |
|--|----------|------------------|
| Texasgulf Inc. | | |
| INDIAN RIVER CROWN GRANTS GEOLOGY | | |
| WORK BY | DRAWN BY | DATE |
| HRS | ER | 5 NOVEMBER, 1978 |
| SCALE 1:2,500 | | |