

842189

COMPILATION REPORT
GEOLOGY AND GEOCHEMISTRY
ROD CLAIMS
TATSAMENIE LAKE AREA, B.C.
ATLIN MINING DIVISION

Latitude 58°22'N

Longitude 132°31'W

N.T.S 104K/8W

OWNER: CHEVRON MINERALS LTD.

AUTHOR: GODFREY WALTON

March 1985

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LOCATION AND ACCESS

THE ROD claims (Fig. 1) are located at latitude 58°22'N and longitude 132°31'W northwest of Tatsamenie Lake, in Northwestern British Columbia. These claim blocks are located in the southeastern corner of the Tulsequah mapsheet (104K/8W).

Access to the claims has to date been by helicopter from an exploration base camp at Trapper Lake (from 1981 to 1983) or from an exploration base camp at Tatsamenie Lake (1984). Provisions were flown into the base camps either from Atlin 140 kilometers to the north or from Dease Lake 150 kilometers to the east. Float equipped fixed wing aircraft are available in either location for charter.

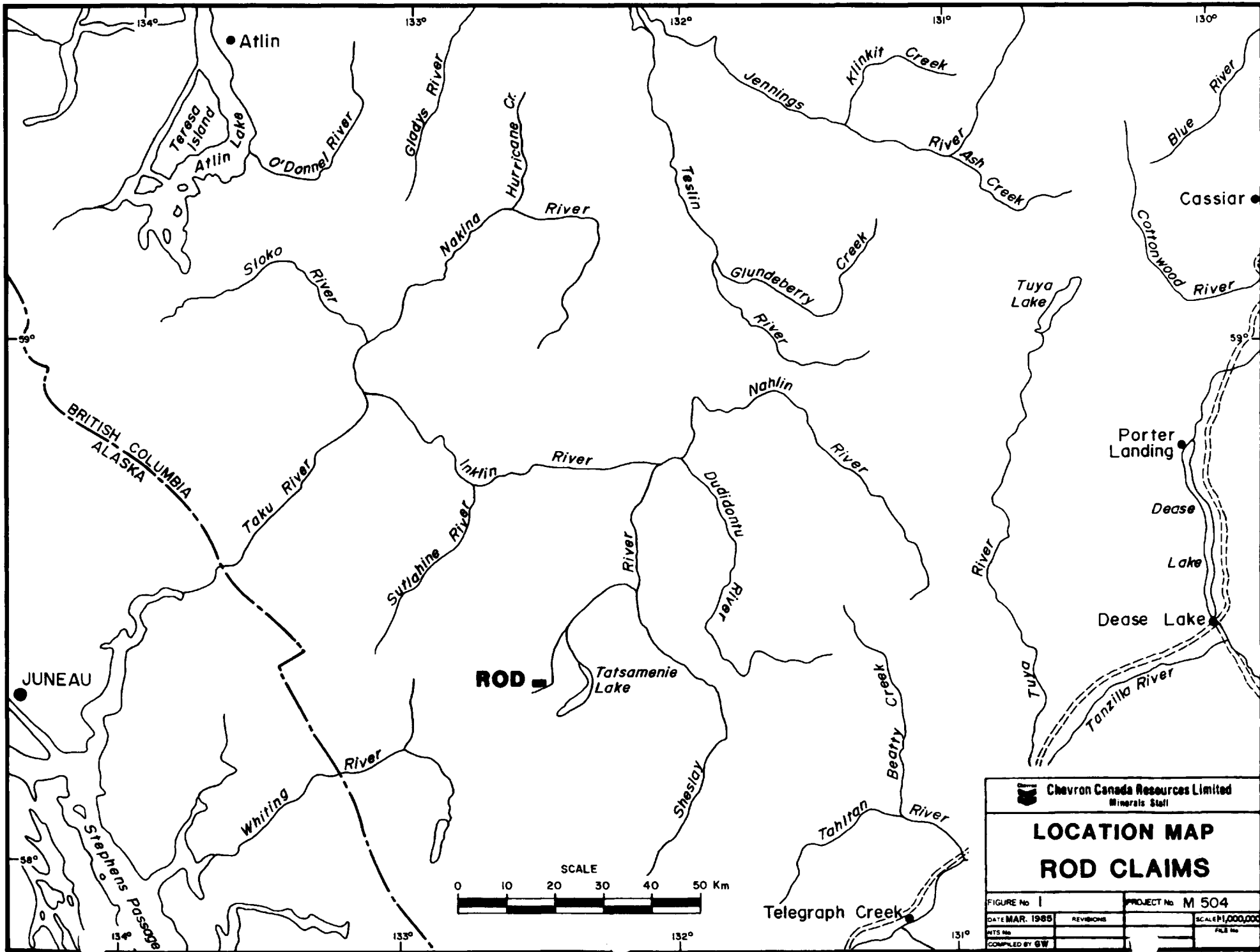
The provisions brought in by the Atlin supply route were purchased in Atlin or Whitehorse. Provisions brought in via Dease Lake were purchased in Vancouver or Terrace.

CLAIM STATUS

The claims which comprise the ROD claim block are listed below with the pertinent information.

| <u>Claim Name</u> | <u>Record No.</u> | <u>Record Date</u> | <u>Expiry Date</u> | <u>No. of Units</u> |
|-------------------|-------------------|--------------------|--------------------|---------------------|
| ROD 1 | 1956 | July 4, 1983 | July 4, 1985 | 20 |
| ROD 2 | 1957 | July 4, 1983 | July 4, 1985 | 20 |

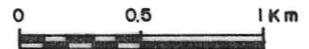
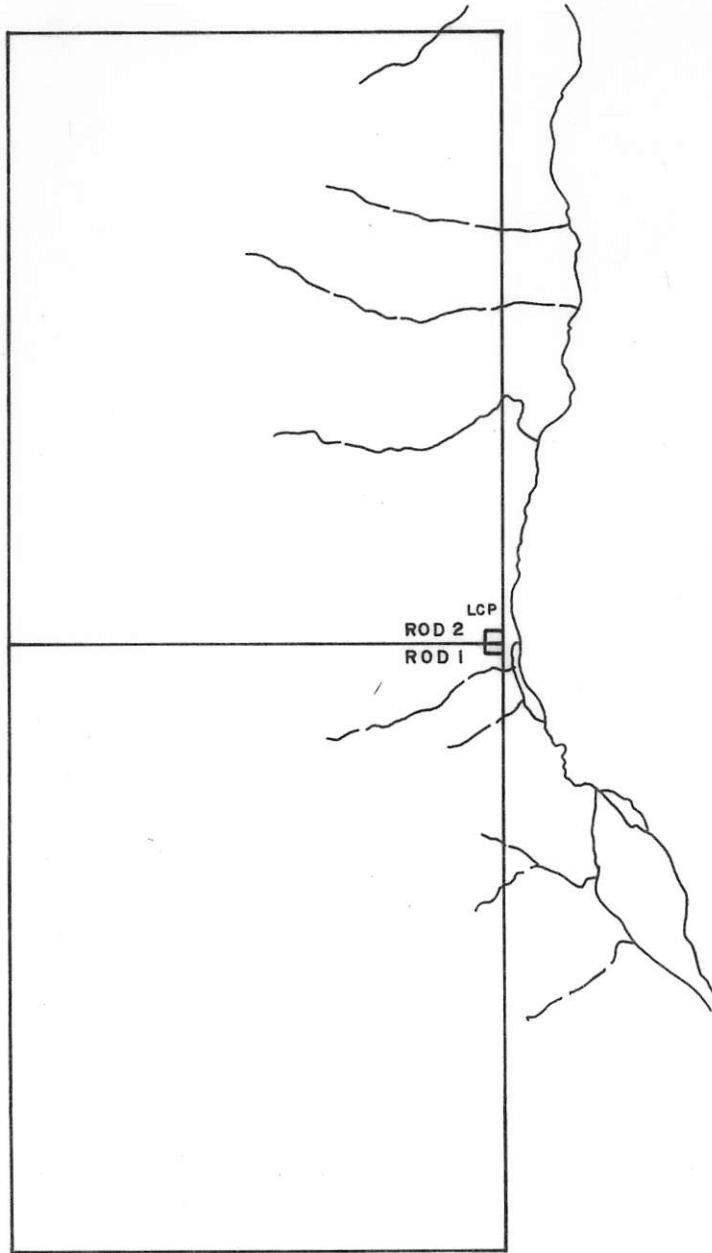
The claims configuration is outlined on Figure 2. The ROD claims cover an area of 2471.2 acres.



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LOCATION MAP
ROD CLAIMS

| | |
|----------------|-------------------|
| FIGURE No. 1 | PROJECT No. M 504 |
| DATE MAR. 1985 | REVISIONS |
| SITS No. | SCALE 1:1,000,000 |
| COMPILED BY GW | FILE No. |



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ROD GROUP CLAIM MAP

| | | | |
|-------------------------|-----------|-------------------------|--|
| FIGURE No 2 | | PROJECT No M-504 | |
| DATE MAR. 1985 | REVISIONS | SCALE 1:31,250 | |
| NTS No 104 K | | FILE No | |
| COMPILED BY G.W. | | | |

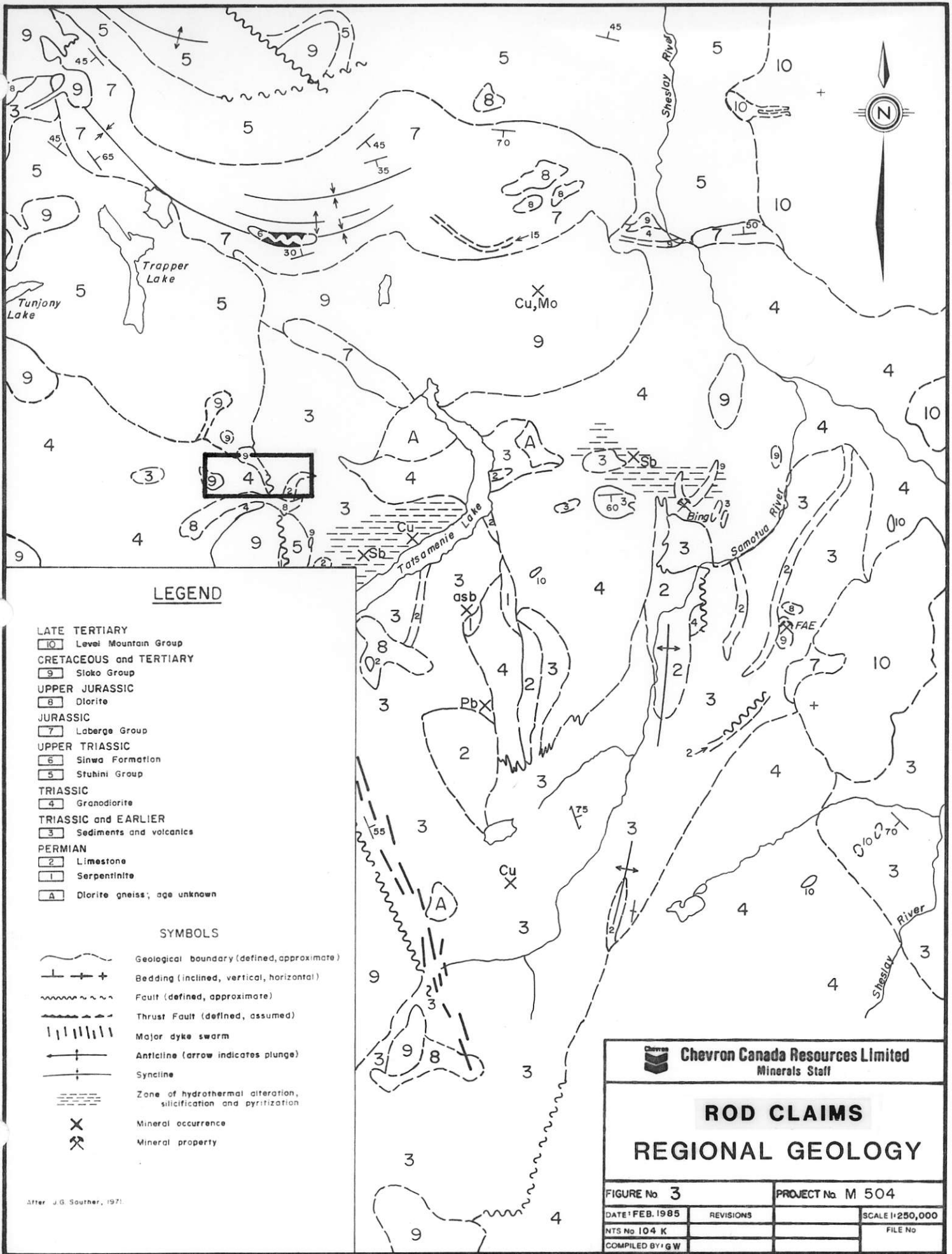
GENERAL GEOLOGY

The area covered by the ROD claim block is part of Souther's (1971) geological map of the Tulsequah mapsheet. A reproduction of the Souther's 1971 geological map around the ROD area is shown on Figure 3. The main units displayed on this figure are:

| | |
|--------------------------|--|
| Cretaceous-Tertiary: | Sloko Group |
| Jurassic: | Diorite |
| Triassic: | Granodiorite-foliated |
| Pre-Upper Triassic unit: | Greenstone, limestone, phyllite (Stikine Terrane) |

The main unit in the ROD claim area is the Pre-Upper Triassic assemblage which consists of greenstones, phyllites and limestones. The largest aerial extent of Pre-Upper Triassic assemblage on the Tulsequah mapsheet occurs on and adjacent to the ROD claims. The Pre-Upper Triassic assemblage is the basement unit in the area and is known as the Stikine Terrane. This terrane is allochthonous and was accreted to the North American craton in late Triassic or early Jurassic time (Souther, Coney et al). After accretion Jurassic sedimentary, volcanic and volcanoclastic rocks were deposited on the Stikine Terrane. On the mapsheet, these rocks have been intruded by four distinct igneous events; one in the Triassic, one in the Jurassic, one in the Cretaceous Tertiary and finally one in the Pleistocene period .

In the ROD area there are no rock units overlying the Stikine Terrane assemblage but it has been intruded by three igneous events. The oldest is a Triassic granodiorite to diorite. This rock is easily identified in the field because it is well foliated unlike the other intrusive events. The next intrusive event is the Jurassic diorite which is unfoliated, massive equigranular and coarse grained. These two intrusive rock types are quite easily distinguishable.



LEGEND

- LATE TERTIARY
 - 10 Level Mountain Group
- CRETACEOUS and TERTIARY
 - 9 Sloko Group
- UPPER JURASSIC
 - 8 Dlorite
- JURASSIC
 - 7 Laberge Group
- UPPER TRIASSIC
 - 6 Sinwa Formation
 - 5 Stuhini Group
- TRIASSIC
 - 4 Granodiorite
- TRIASSIC and EARLIER
 - 3 Sediments and volcanics
- PERMIAN
 - 2 Limestone
 - 1 Serpentinite
 - A Dlorite gneiss; age unknown

SYMBOLS

- Geological boundary (defined, approximate)
- Bedding (inclined, vertical, horizontal)
- Fault (defined, approximate)
- Thrust Fault (defined, assumed)
- Major dyke swarm
- Anticline (arrow indicates plunge)
- Syncline
- Zone of hydrothermal alteration, silicification and pyritization
- Mineral occurrence
- Mineral property

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ROD CLAIMS
REGIONAL GEOLOGY

| | | | |
|-----------------|-----------|------------------|--|
| FIGURE No 3 | | PROJECT No M 504 | |
| DATE: FEB. 1985 | REVISIONS | SCALE 1:250,000 | |
| NTS No 104 K | | FILE No | |
| COMPILED BY: GW | | | |

After J.G. Souther, 1971.

The third igneous event is the Cretaceous to Tertiary Sloko group which consists of a series of felsic volcanoclastic and intrusive rocks. There is no indication of any volcanic centre in the area.

The main structure visible on the Landsat images is the northeasterly trending lineament that contains Tatsamenie Lake. Just south of Tatsamenie Lake some north-south structures are visible, but they appear to have been truncated by the northeasterly orientation. Recent mapping by the Geological Survey in the Rainy Lake area, near Dease Lake suggests that the northeasterly structures are very late.

The large alteration zone on the northwestern side of Tatsamenie Lake has been staked on several occasions and has been heavily prospected for a number of years especially during the height of the porphyry copper exploration. There are a number of copper showings in the area; two of which have been classified as porphyry copper style. One is just east of the big bend in Tatsamenie Lake and the other is on the eastern edge of the Tulsequah map. Both showings appear to be small. Some drilling was carried out on the southeastern shore of Tatsamenie Lake which is also supposed to have intersected some porphyry style copper mineralization, but this is not evident in the core left at the drill sites.

LOCAL GEOLOGY

A geological map of the ROD claims is shown on Figure 4. This map is a compilation of the geological mapping completed since the claims were staked.

The geological units shown on the map are:

Sloko Group-rhyolite, trachytes
Diorite
Pre-Upper Triassic - Stikine Terrane-limestone, phyllite.



LEGEND

TERTIARY

- 3** SLOKO
 - a BASALT
 - b RHYOLITE

JURASSIC

- 2** DIORITE

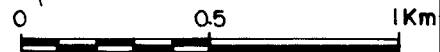
PRE-UPPER TRIASSIC

- 1** STIKINE
 - a SILTSTONE
 - b PHYLLITE
 - c BRECCIA

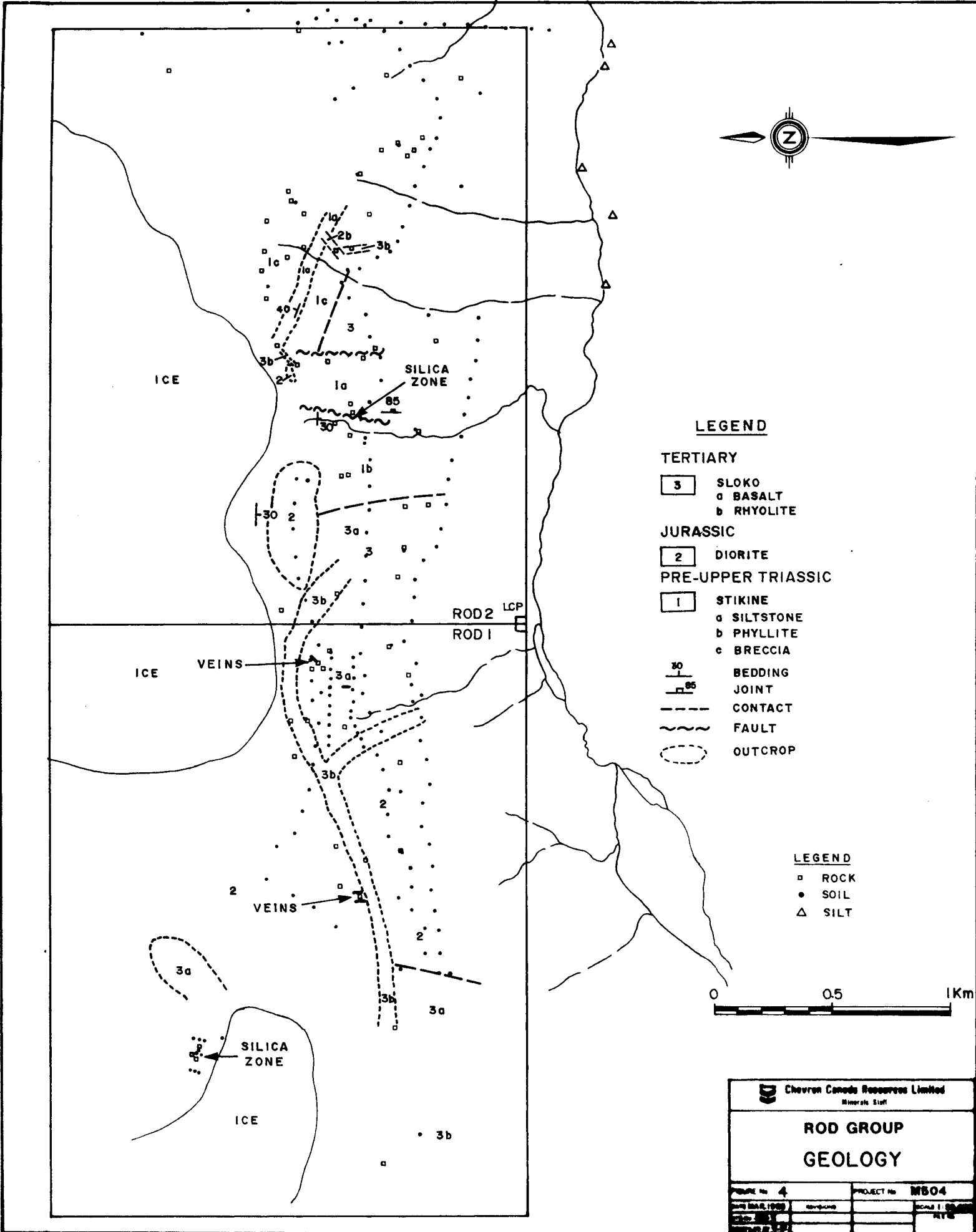
- BEDDING JOINT
- CONTACT
- FAULT
- OUTCROP

LEGEND

- ROCK
- SOIL
- SILT



| | | | |
|--|------------------|-------|-----|
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| ROD GROUP GEOLOGY | | | |
| FIGURE No. 4 | PROJECT No. M504 | | |
| DATE PREPARED | BY | SCALE | RTG |
| APPROVED BY | | | |



Pre Upper Triassic

This unit is comprised of three mappable units, a siltstone (unit 1a), a phyllite (unit 1b) and a breccia/conglomerate (unit 1c).

The siltstone sub-unit is well bedded and consists of siltstone, mudstone and sandstone layers. The rock is locally siliceous, and layering varies in thickness from 10 to 30 centimeters. Minor sulphides (up to 6%) are present in some of the siltstone layers. The siltstone, because of its bedded nature, is the only sub-unit which outlines the structural complexity in the area. A number of faults have dissected the unit, so that it is no longer continuous. No major or minor folding has been recognized in the outcrops.

The phyllite sub-unit is a pale green micaceous rock. The only alteration visible in this subunit is local silicification with some quartz veining. The rock is well foliated but no primary layering was observed. This rock is probably a foliated volcanic, but the only evidence is the greenish tinge.

The breccia/conglomerate sub-unit is primarily located at the north east corner of ROD 2. This is a very massive unit and has some interbedded siltstone and sandstone layers. The unit is typically dark green in colour with large rounded and angular fragments or boulders. No bedding is visible in the major portion of the unit. Bedding altitudes are only obtainable whenever the siltstone or sandstone layers are encountered.

The relative stratigraphy of the Stikine Terrane on the ROD claims has not been unravelled.

Diorite (Unit 2)

The diorite is termed by Souther (1971) to be Jurassic and/or Cretaceous in age. It is typically medium to coarse grained, equigranular, massive to locally weakly foliated. Weak biotite hornfels has occurred around the intrusion.

Sloko Group (Unit 3)

The Sloko is primarily a felsic volcanic suite varying in composition from rhyolite to dacite. The ROD claims also have some basalts which have been interpreted to belong to the Sloko because they are not altered. The rhyolite occurs normally as dykes which are white to cream in colour with small quartz eyes and dissect all of the previously mentioned units. This group tends to be unaltered throughout the Tulsequah mapsheet and this is also true on the ROD claims. There is one location where a quartz vein has intruded some basalt and there is some bleaching at the contact.

MINERALIZATION

The mineralization on the claims occurs in two types; one in quartz veins, the other is massive arsenopyrite (tetrahedrite?) veins. There are two quartz veins or intense zones of silicification. One is clearly associated with a fault zone in the siltstone on ROD 2. No anomalous gold values were obtained from rock samples taken from this zone. The other intense silicification is in some Sloko basalt on the northwestern side of the ROD 1 claim. Samples from this zone had some anomalous values of gold (up to 3000 ppb Au). These samples were chipped over widths of 1.5 meters. The zone is traceable for 50 meters.

The second type of mineralization is in the form of massive arsenopyrite (tetrahedrite) veins which have yielded grab samples assaying up to 0.3 oz/ton. These veins are typically orientated north-south. One vein of ROD 1 strikes northeast but cannot be

traced more than 2 meters. Five veins have been located which cut Sloko volcanics suggesting the mineralization may be Tertiary or younger. The veins are 5-20 centimeters wide and have values up to 0.3 oz/ton. In the vicinity of one vein on ROD 1 there is a geochemical anomaly (100 ppb Au) which is 400 meters along the contour. This anomaly is larger than the vein but so far no other veins have been located in this one locality.

WORK TO DATE

Work to date consisted of geological mapping and prospecting, geochemical surveys of soils, silts and rocks and hand trenching.

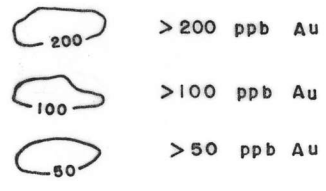
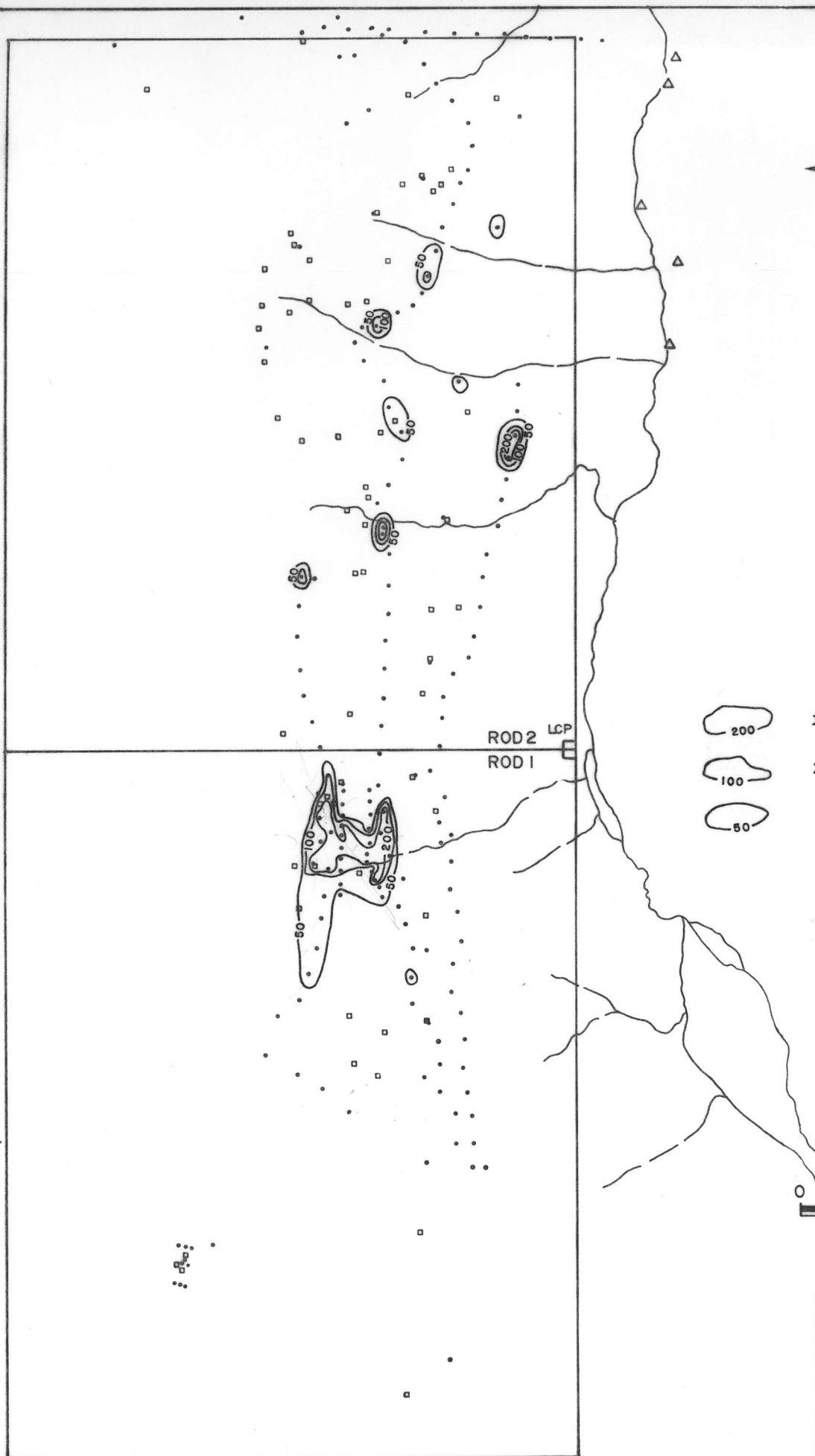
Geological Survey

The geology is shown on Figure 4. The data was collected by making traverses throughout the property and recording locations on an enlargement of an airphotograph. The airphotographs were enlarged to a scale of 1:10,000 from the provincial 1:30,000 scale photograph. The daily traverse sheets along with the field notes are kept as a permanent record.

Geochemical Survey

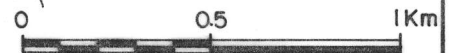
The geochemical surveys consist of rock, soil, silt and bulk silt sampling. B-horizon soil and talus fines samples were collected on contour soil lines. Sample spacing on the lines was 100 meters measured by hip chain. The rock samples are typically grab samples weighing 1 - 2 kg. which represent the rock types in the outcrop.


Sample sites in all cases are marked by pickets with metal tags attached.

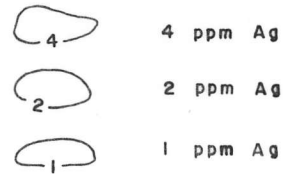
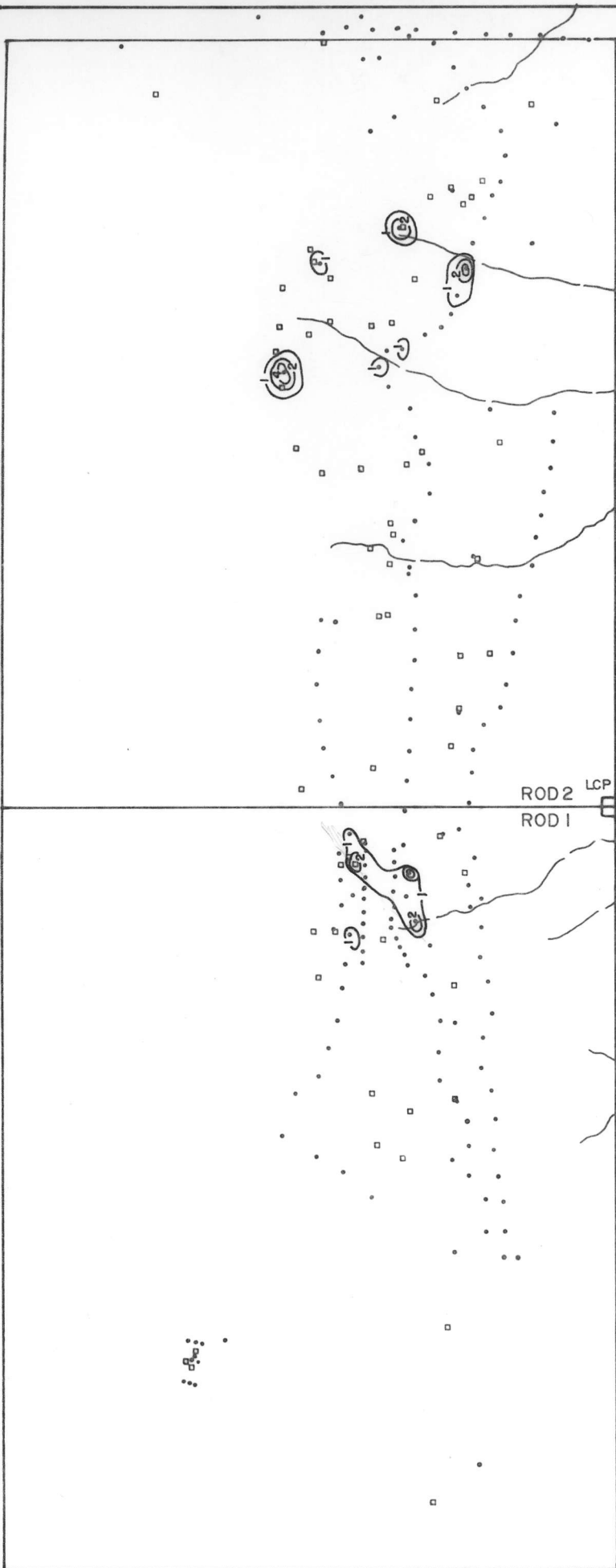


LEGEND

- ROCK
- SOIL
- △ SILT




| | | | |
|--|------------------------|-----------------------|--|
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| ROD GROUP GOLD GEOCHEMISTRY | | | |
| FIGURE No 5 | PROJECT No M504 | | |
| DATE MAR 1988 | REVISIONS | SCALE 1:50,000 | |
| NTS No 104 R | | PLT No | |
| COMPILED BY S.W. | | | |

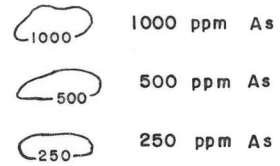
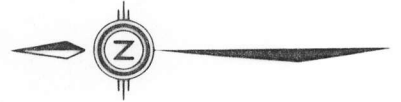
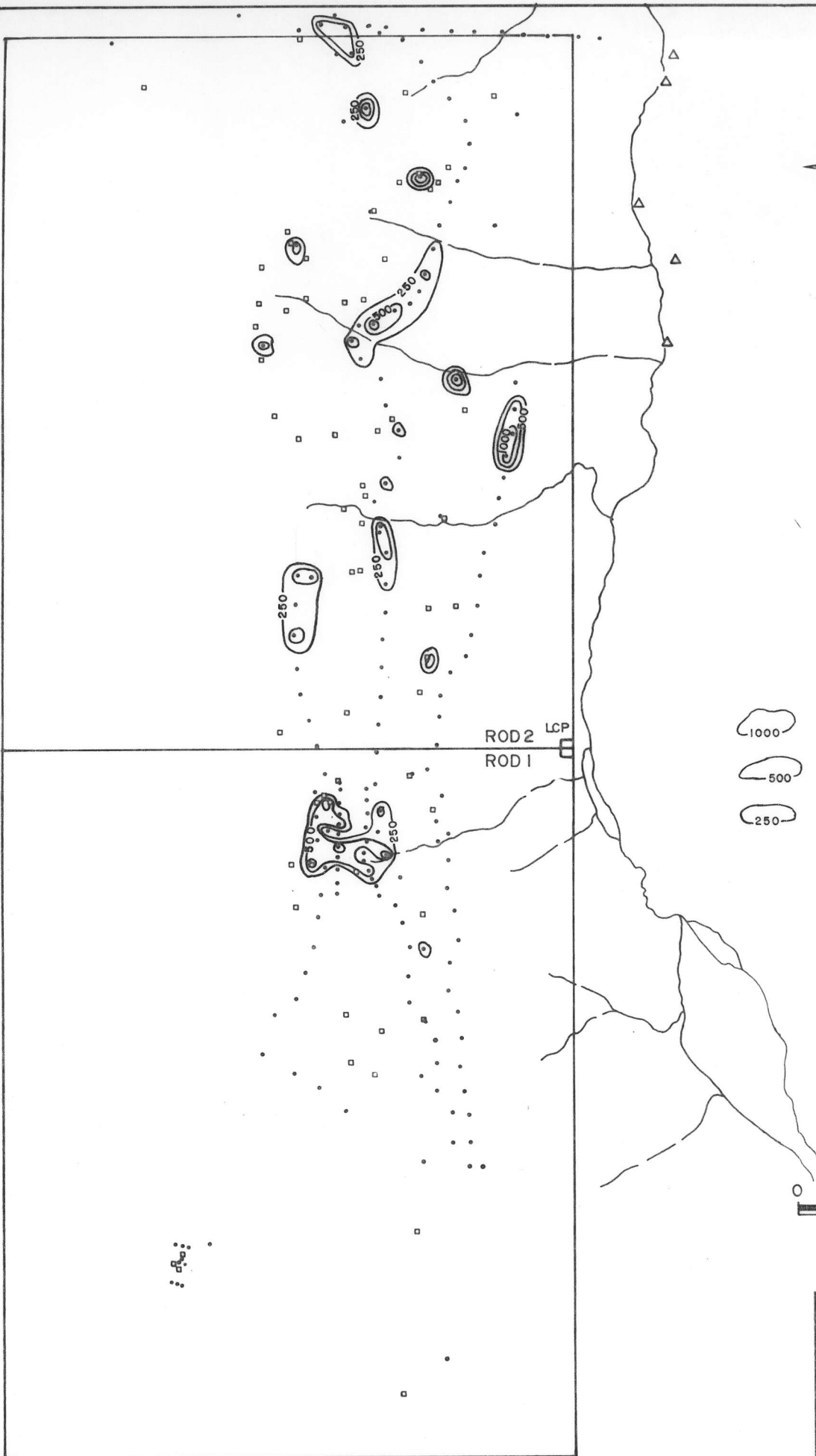


LEGEND

- ROCK
- SOIL
- △ SILT

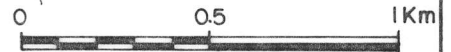


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|  Chevron Canada Resources Limited Minerals Staff | | | |
| ROD GROUP SILVER GEOCHEMISTRY | | | |
| FIGURE No. 6 | PROJECT No. M504 | | |
| DATE MAR 1985 | REVISIONS | SCALE 1:20,000 | |
| WTS No. 204 K | | | FILE No. |
| COMPILED BY G.W. | | | |

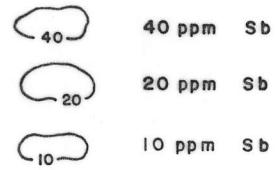
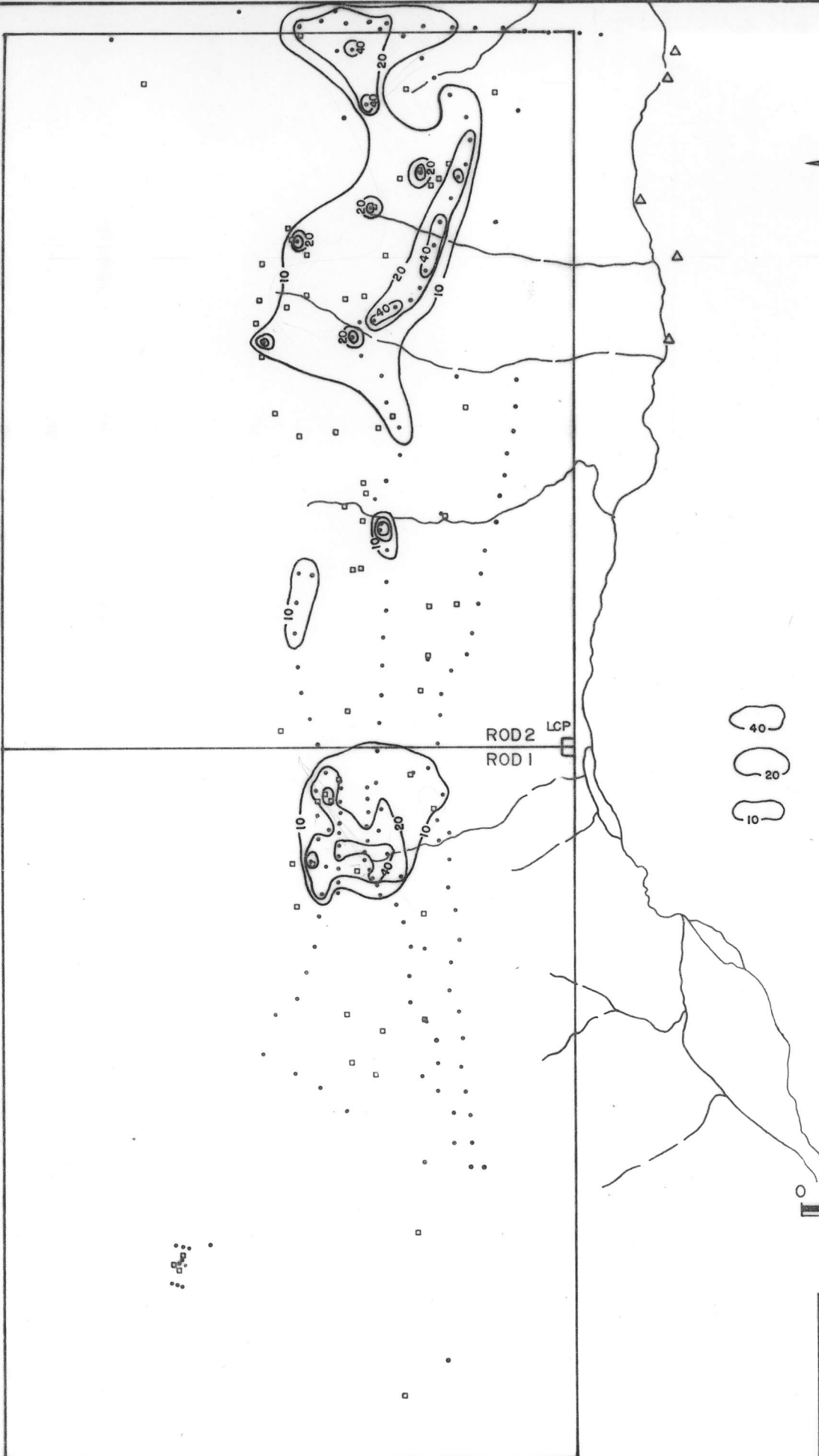


LEGEND

- ROCK
- SOIL
- △ SILT

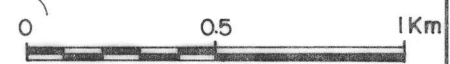



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| ROD GROUP ARSENIC GEOCHEMISTRY | | | |
| FIGURE No | 7 | PROJECT No | M504 |
| DATE | MAR 1983 | REVISION | |
| SITE No | ROD G | SCALE | 1:25,000 |
| COMPILED BY | S.W. | | RTG |



LEGEND

- ROCK
- SOIL
- △ SILT



| | | | |
|---|------------------------|-----------------------|---------|
|  Chevron Canada Resources Limited Minerals Staff | | | |
| ROD GROUP ANTIMONY GEOCHEMISTRY | | | |
| FIGURE No 8 | PROJECT No M504 | | |
| DATE MAR 1985 | REVISIONS | SCALE 1:25,000 | FILE No |
| DATE No 104 E | | | |
| COMPILED BY B.W. | | | |

Some of the streams have been sampled but not on a continuous basis since our experience in the Tulsequah mapsheet suggests it is not the best medium to sample.

All rock, soil and regular silt samples are analyzed for gold, silver, arsenic and antimony by Chemex Laboratories in North Vancouver. The soil samples were air dried in camp and then prepared and analyzed by the Chemex. Geochemical analysis for gold and silver was done by fire assay fusion followed by atomic absorption spectrometry. Rock samples taken over measured widths were assayed quantitatively by fire assaying.

The background values for the soil geochemistry are listed below:

| | <u>Lowest Contour</u> | <u>Range of Average Background Values</u> |
|----------|-----------------------|---|
| Gold | 50 ppb | 5 to 20 ppb |
| Silver | 1 ppm | 0.1 to 0.5 ppm |
| Arsenic | 250 ppm | most less than 100 ppm |
| Antimony | 10 ppm | 1 to 5 ppm |

The majority of samples below the lowest contour have values in the range of the average background values. There are a few samples which have values just below the lowest contour values.

INTERPRETATION AND SUMMARY

The gold, silver, arsenic and antimony geochemical anomalies on the ROD claims are generally lower and limited in aerial extent when compared to some of other properties. All four elements are coincident in two areas, one on the eastern side of ROD 1 and the other on the eastern portion of ROD 2.

The anomaly on ROD 1 has the highest gold values (10,000 ppb Au) and they are related to a vein. In addition to the one high gold value, there are anomalous values over 400 meters along the contour which suggests either more veins or an additional source for the anomaly. Despite careful prospecting in this area, no other veins were located. This area is near the intersection of some large rhyolite dykes.

The other anomaly on ROD 2 is within the Stikine assemblage rocks and again there are a number of Sloko rhyolite dykes. Although there are a number of interesting rock types such as the rhyolites and the presence of limestone, there is no alteration and no rocks in the area gave anomalous values. The source of this anomaly is, therefore, not known.

The anomalies are generally lower in comparison to some of our other properties. At the present time, one explanation for the anomalies is that there are a number of veins in the area of the coincident geochemical anomalies on ROD 1 and ROD 2. Only two veins have been located during the limited exploration on the property, however more detailed work could discover other veins. This property is ranked with a lower priority than other properties because of the lack of extensive mineralization. This lower ranking may not be justified if more veins were located during detailed exploration.

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Coney, P.J.; Jones, D.L.; Monger J.W.H., Cordilleran Suspect Terranes, Nature, Vol. 288, pp 329-333.

Souther, J.G.; Volcanism and Tectonic Environments in the Canadian Cordillera- a second look, Geol. Ass. of Canada Special Paper No 16. 24p.

Souther, J.G. (1971). Geology and mineral deposits of Tulsequah map area, British Columbia. Geological Survey of Canada Memoir 362, 84p.

Walton, G. (1983). Geological and Geochemical Survey. ROD Claims Assessment Report, 12 p.