

GEOLOGICAL  
AND  
GEOCHEMICAL ASSESSMENT  
OF THE KM 9, KM 10 and DRUM  
MINERAL CLAIMS

Skeena Mining Division

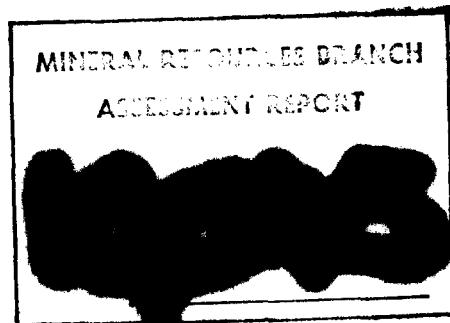
NTS 103 I 15 W

Lat. 54° 48'

Long. 129° 59'

Owners: Don Young and Peter Ogryzlo

Operators; Don Young and Peter Ogryzlo



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INTRODUCTION:

i. LOCATION:

The property is composed of the KM 9 and KM 10 claims totalling 29 modified grid units and the DRUM two post claim..These claims are located 45 Km. N 37<sup>o</sup> W of the Terrace Municipal airport NTS 103 I. Record numbers are 2510, 2511 and 2610.

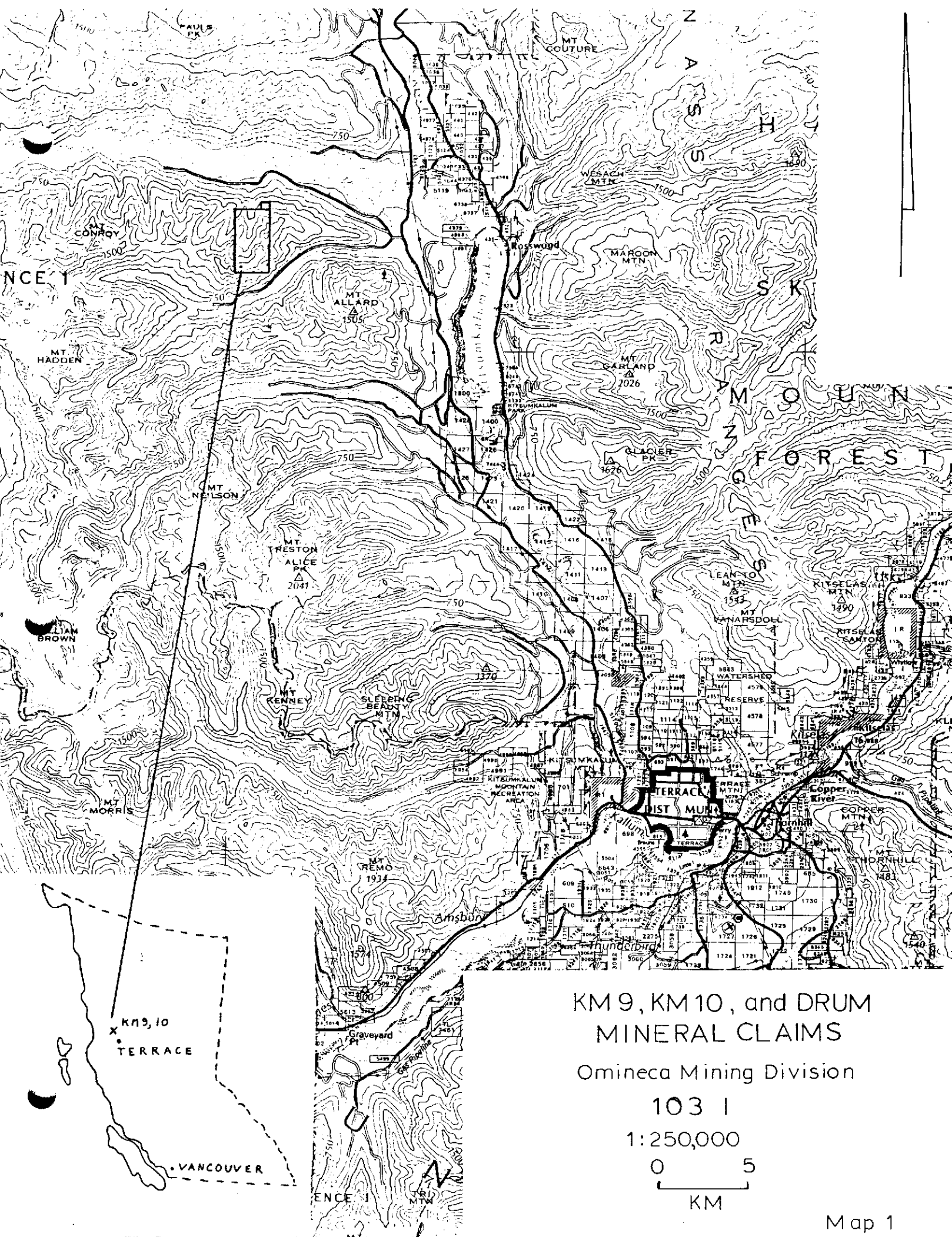
The property straddles a hog's back ridge which forms the divide between Mayo Creek and the Kitsumkalum River.

Topography in the area is generally mountainous with moderate to steep forested ridges and truncated spurs where the ridges abut the major glacial valleys. A notable flat area is the valley of the Kitsumkalum River, in which the river meanders through quaternary alluvium filling the valley floor. Tributary streams are deeply incised where they enter the larger U-shaped valleys and rise with numerous waterfalls to a series of cirques.

Local topography on the property is a gentle rounded ridge which trends east-west and forms the divide between Mayo Creek and the Kitsumkalum River. This ridge is usually bordered to the north and south by a series

of steep cirques separated by arêtes. The cirques are usually filled with fresh talus, and in one case with small lakes. Elevations range from 1500 feet to 5000 feet ASL. Vegetation is characteristic of a coastal rain forest. Ridges are covered with cedar, hemlock and balsam fir. Slide and talus areas are covered with thickets of alder and salmonberry. Alpine areas range from bare rock to heather and sparse dwarf balsam fir. Tree line is around 4200 feet.

Climate is characterised by a cool wet season from spring to fall, with snow remaining on most slopes til mid-June. There is little permanent snow on the property.

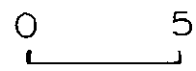


KM 9, KM 10, and DRUM  
MINERAL CLAIMS

Omineca Mining Division

103 I

1:250,000



KM

ii. ACCESS:

Access is by helicopter from Terrace Municipal airport. Round trip aircraft time is approximately one hour by Bell 206 helicopter.

Ground access is by Highway 16 west to the Nass road, then northward to Km 38 on the Nass road, then westward on the Beaver road to Km 10 , or on the Mayo road to Km 7. These latter roads are private logging roads with gates controlled by B.C. Timber. Access is then by foot from 1000 feet elevation to 5000 feet elevation.

A good pack trail may be found leading to old workings on Mayo Creek ridge, by going up through slash to 2500 feet elevation from around Km 5 of the Mayo road.

iii. HISTORY:

Precious metal showings have been known for many years on the Mayo Creek ridge. Duffell and Souther refer to The Martin Group in which gold was found in narrow veins with arsenopyrite.

Since the 1950's , sporadic exploration has occurred on the ORO showing, in which gold occurs in quartz with arsenopyrite and stibnite. The vein is up to 1.5 M wide and has been traced for some 300 M. These showings adjoin the KM 9 claim to the west and are partially surrounded by this claim.

A reconnaissance geochemical survey sponsored by the B.C. Dept. of Mines and Petroleum Resources and released in 1979 revealed that the Mayo Creek ridge was anomalous in arsenic and silver, and the claims discussed in this report were acquired.

iv. SUMMARY OF WORK:

The property was explored during the 1980 and 1981 field seasons. Two men spent approximately twenty days on the property. Work was frequently hampered by weather.

The main goal of work was to do general reconnaissance of the property, to establish geological and geochemical parameters for detailed exploration.

Stream sediment survey was done on the major streams and geological mapping was done to supplement this.

More detailed sampling was conducted on the projection of the ORO vein onto the KM 9 claim, and also on an arsenopyrite showing on the DRUM claim.

A number of quartz veins were discovered, mapped and sampled.



## DETAILED TECHNICAL DATA - GEOCHEMICAL

### I. METHOD

Stream sediment sampling was conducted to establish the general geochemistry of the property and to look for dispersion trains downstream from buried veins. The expected target was to be poly-metallic precious metal quartz-sulphide veins, so the elements of greatest interest were As, Co, and Ag, although analysis was done for Cu, Pb, Zn, Hg, and Sb as well. As was chosen as the element of greatest interest due to existing precious metal -arsenopyrite showings nearby, as well as the presence of arsenopyrite in quartz vein float found in the stream beds.

Sediment samples were taken every 100 meters where possible on running and dry stream beds. This was frequently hampered by lack of a suitable size fraction for sampling due to fast running water, and by topography.

Samples of mineralized quartz float were taken for analysis to assist in prospecting for new veins.

Where in situ veins were discovered, more detailed soil sampling of B horizon was done to look for extensions. This was primarily done on the arseno-pyrite showing on the DRUM claim and on the westward projection of the OR vein onto the KM 9 claim.

Samples were analysed courtesy of the Cominco research laboratory.

Fourty four stream sediment samples, fifteen soil samples and ten rock chip samples were taken.

For the soil and silt samples, the minus 80 mesh fraction was analysed.

Analytical methods were Au - Aqua Regia Digestion/ Solvent extraction/ AA ,  
As - Pyrosulphate Fusion/ colorimetric,  
Cu Pb Zn As Co - Aqua Regia Digestion/ AA.

## DETAILED TECHNICAL DATA- GEOLOGICAL

### i. GENERAL:

Geological mapping was carried out coincidental with the geochemical survey. Control was provided by 1:50,000 topography, compass, Thommen altimeter and air photographs.

Regional geology is described by Duffell and Souther (1964). The property lies on the southern margin of the upper Jurassic - lower Cretaceous Bowser Basin near the southern contact with the Coast Range plutonic complex. This contact extends east-west some 40 Km from Dorreen on the Skeena River to Kitsumkalum Lake, although lateral displacement along the Kalum Valley is possible. The sediments directly north of this contact contain an east-west belt of numerous precious metal showings.

Lorne Creek and Douglas Creek were notable placer producers, with lode production from Mt. Knauss and numerous precious metal veins on Maroon Mountain and the Mayo Creek ridge.

In the vicinity of the property, precious metal showings appear to be clustered

along the northern margin of an apophysis of the Coast Range complex. This apophysis is primarily a medium grained light grey granodiorite which forms the peak of Mount Allard immediately south of Mayo Creek.

## ii. DESCRIPTIONS

### 1. Intrusive rocks

Intrusive rocks outcrop on the crest and on the southern side of the Mayo Creek ridge. These are primarily a medium grained light to medium grey quartz-plagioclase- biotite quartz diorite, and plagioclase- hornblende diorite. Contacts with the sediments are locally well exposed. A dark, coarse grained gabbro outcrops on the Mayo Creek side of the ridge. Porphyritic biotite plagioclase dykes also cut sedimentary rocks.

### 2. Sedimentary rocks

Sedimentary rocks underlie most of the property and form a monotonous sequence of banded siltstone and shale as well as a massive dark argillite. Some conglomerate was noted, as well as minor sandstone and tuffaceous rocks. These rocks are attributed to the upper

Jurassic - lower Cretaceous Bowser Group by Duffell and Souther. Bedding appears to be consistently striking north-east and dipping south-east.

iii STRUCTURE:

Bedding appears to be the most obvious structure on the property. Bedding provides the structural control for the northeasterly trend of the ridge. Dips are to the southeast.

A major north-south fault crosses the property coincident with the boundary between the KM 9 and KM 10 claims. The fault zone has been deeply eroded and forms the major drainage from the property. Shear and gouge zones are mineralized with carbonate veins and veinlets, and rarely with large quartz veins .

#### iv. MINERALIZATION

Quartz vein float is present in most stream beds on the property. Sulphide mineralization frequently accompanies the quartz and includes pyrite, arsenopyrite, chalcopyrite, and sphalerite. Precious metal values appear to accompany these samples containing arsenopyrite and/or chalcopyrite. Cobalt is present in some veins, although no cobalt minerals were observed.

Vein float was traced to probable sources where topography permitted. Veins range from 2 cm. to 1 m. in width and are usually found cutting sedimentary rocks, although one vein was found cutting diorite. No preferred orientation is evident. Gangue minerals are quartz, carbonates and fluorite.

The largest and best exposed vein, 1 m wide, was found trending N-S along the fault near the boundary between KM9 and KM 10. Fine gold was panned upstream from this vein. A vein of similar width may be seen on the crest of the ridge near the eastern boundary of KM 9 . Smaller veins occur on the south side of the ridge, and near the southwestern boundary of KM 10.

An arsenopyrite showing on the DRUM claim was trenched by hand tools, but attitude and width were not apparent.

Apart from vein mineralization, a broad zone of hematite and limonite staining in sediments appears to mantle the diorite intrusion on the crest of the ridge. The staining appears to be due to the 1 to 5 % pyrite weathering in these rocks.

Carbonate veinlets are ubiquitous and do not appear to carry mineralization.

A curious outcrop of porous brecciated shale and gouge cemented with hematite outcrops for several decameters in the bedrock of Mayo Creek. No structures were visible to account for this.

## DISCUSSION OF RESULTS

Precious metals appear to be associated with quartz- arsenopyrite veins. These veins appear to be associated with a diorite intrusion, or with major faults.

Cobalt, mercury and arsenic form haloes and dispersion trains around and below these veins.



## RECOMMENDATIONS AND CONCLUSIONS

Exploration should continue to search for extension of known veins. Detailed prospecting assisted by geochemistry should continue to search for new veins.

The DRUM arsenopyrite showing appears associated with a sizeable Hg anomaly. As outcrop on this showing is negligible, a detailed soil geochemical survey should be done.

Trenching and small scale diamond drilling should test the larger known veins.

## AUTHOR'S QUALIFICATIONS

I, Peter Lawrence Ogryzlo, certify that I received The Bachelor of Science degree from McGill University in 1969.

I have been continuously employed in mineral exploration and mining geology from 1969 to 1977. I have been an independent prospector from 1977 to 1981.

Period	Employer	Position
1969 -1972	Patino Mines Ltd.	Junior Exploration Geologist
1972-1977	Noranda Mines Ltd.	Mine Geologist Noranda Mines Ltd., Bell Copper Div.
1977- 1981	Prospector and consulting geologist	

STATEMENT OF QUALIFICATIONS

I, Don Young, certify that the following summarizes my education and experience.

Date:

1965	Induced Polarization Survey- McPhar Geophysics
1977	Prospecting Course, Granisle, B.C. Louis T'san instructor
1977	Prospecting and claimstaking, partnered by Peter Ogryzlo
1978	Prospected under Prospector's Assistance Act
1979	Completed B.C. Department of Mines Advanced Prospecting Course, Castlegar, B.C.
1979-1981	Prospected under Prospector's Assistance Act.

Itemized Cost Statement

i. Allocation for wages

P. Ogryzlo

Fieldwork

25/7/80, 26/7/80- 27/7/80

29/8/80 - 30/8/80

1/9/81 - 16/8/81

18/8/81 162 hrs. @ \$12.00 \$1944.00

Preparation of reports, drafting

40 hours @ \$12.00 \$ 480.00

Travel

3 days Topley Landing - Terrace

return 24 hrs. @ \$12.00 \$ 288.00

D. Young

Fieldwork

26/7/80, 29/8/80 - 2/9/80, 16/9/80

26/6/81, 27/7/81, 8/8/81 - 16/8/81

18/8/81 - 19/8/81 220 hrs. @ \$10.00 \$2200.00

Travel

5 days Topley Landing to Terrace

40 hrs. @ \$10.00 \$ 400.00

ii Camp expenses

28 man days @ \$25.00 \$ 700.00

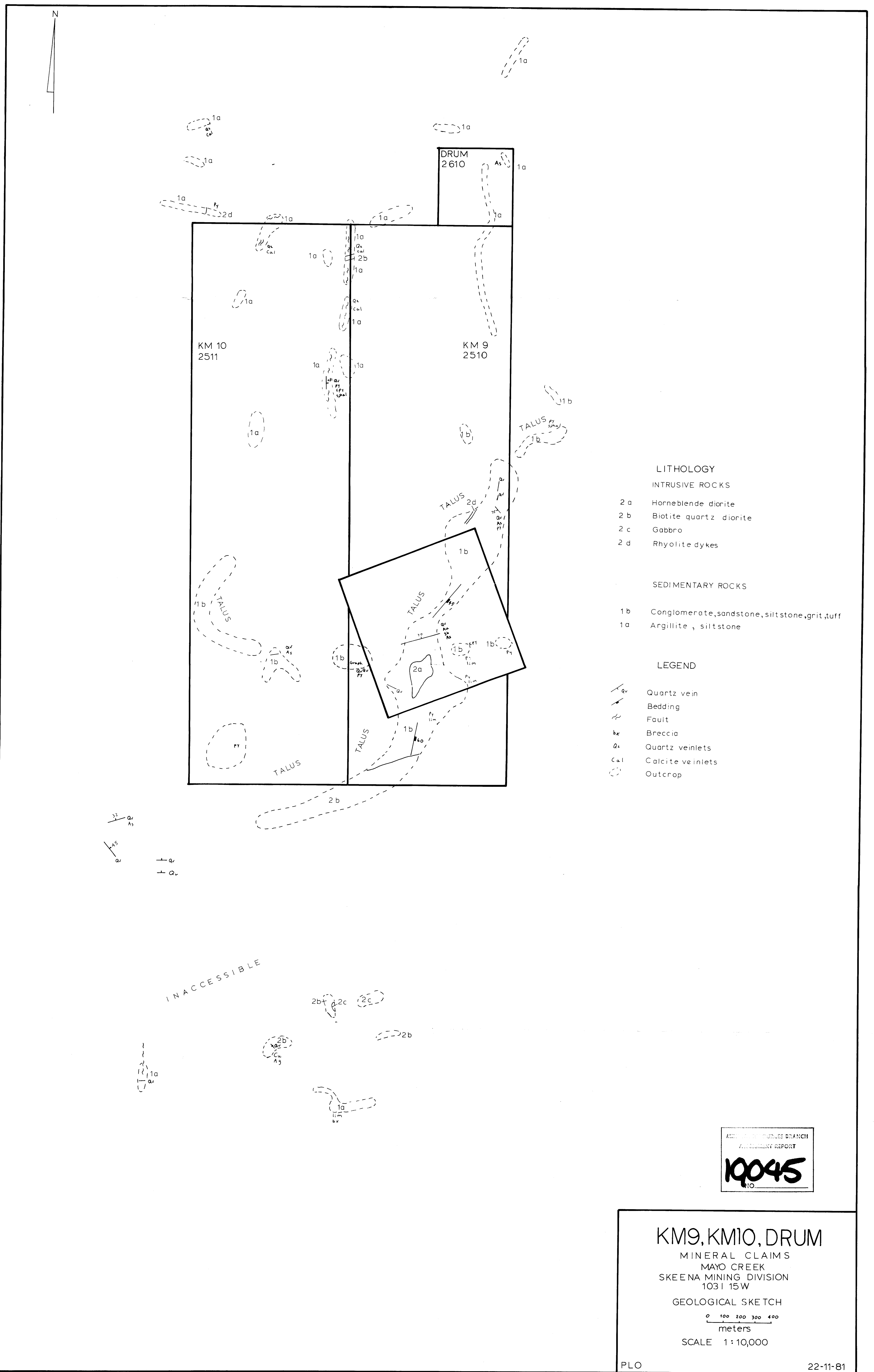
iii Board

36 man days @ \$12.00 \$ 480.00

iv. Special Living Allowance

36 man days @ \$2.50 \$ 90.00

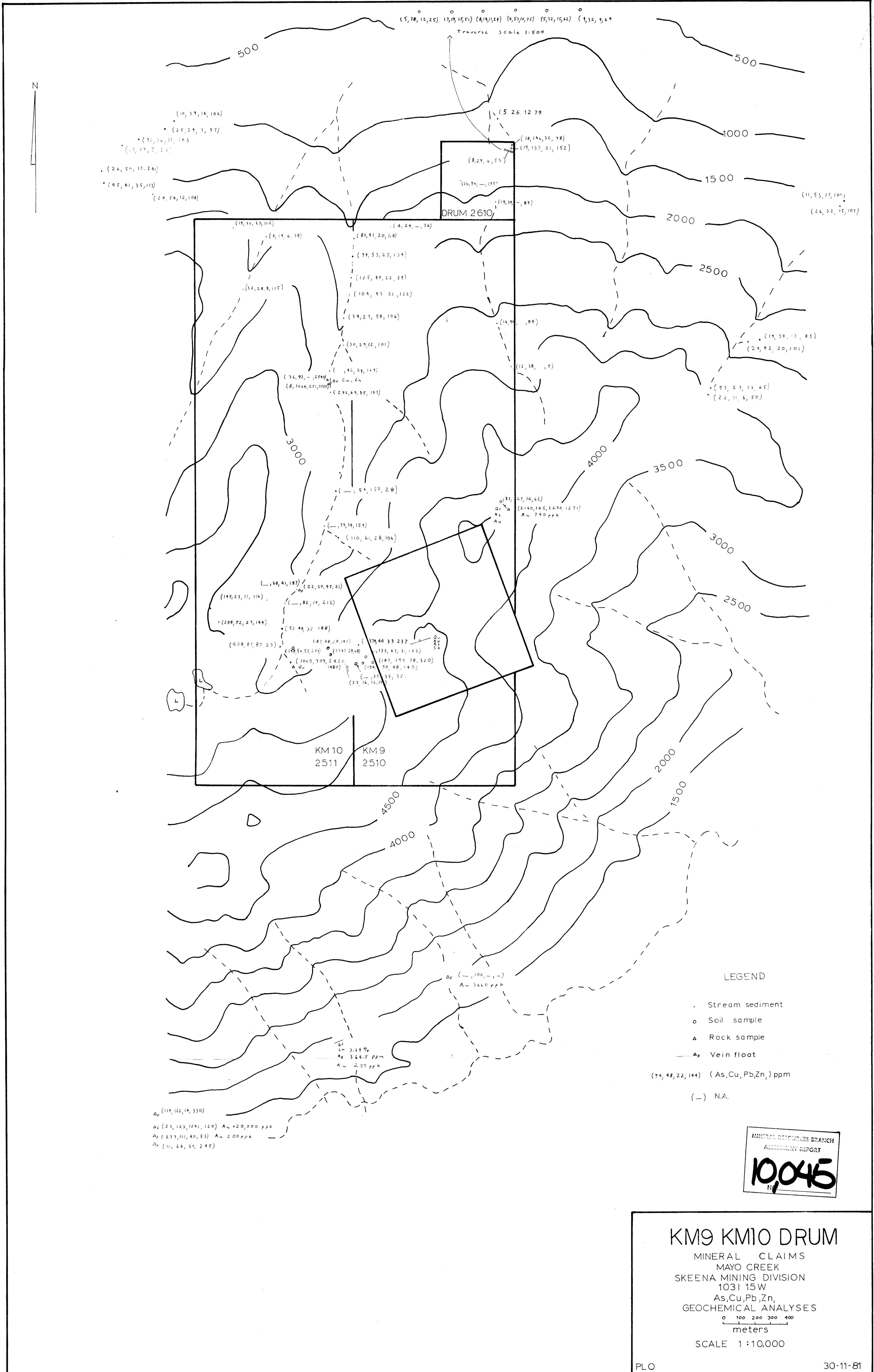
v. Travel	
Mileage 3840 miles x \$.30 x 20%	\$ 230.00
2 pick-ups 16 days @ \$15.00	\$ 240.00
18 days @ \$15.00	\$ 270.00
vi. Assaying	\$ 240.00
vii. Secretarial, Photocopy, Office	\$ 120.00
	<hr/>
	\$7682.00



- LITHOLOGY**
- INTRUSIVE ROCKS**
- 2 a Hornblende diorite
  - 2 b Biotite quartz diorite
  - 2 c Gabbro
  - 2 d Rhyolite dykes
- SEDIMENTARY ROCKS**
- 1 b Conglomerate, sandstone, siltstone, grit, tuff
  - 1 a Argillite, siltstone
- LEGEND**
- Quartz vein
  - Bedding
  - Fault
  - Breccia
  - Quartz veinlets
  - Calcite veinlets
  - Outcrop

MINERAL CLAIMS BRANCH  
 REGISTRATION REPORT  
**10045**  
 NO.

**KM9, KM10, DRUM**  
 MINERAL CLAIMS  
 MAYO CREEK  
 SKEENA MINING DIVISION  
 1031 15W  
 GEOLOGICAL SKETCH  
 0 100 200 300 400  
 meters  
 SCALE 1:10,000



Traverse scale 1:500

DRUM 2610

KM 10  
2511

KM 9  
2510

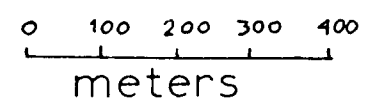
LEGEND

- Stream sediment
  - Soil sample
  - ▲ Rock sample
  - ▲ Vein float
- (74, 48, 22, 144) (As, Cu, Pb, Zn) ppm  
 (-) N.A.

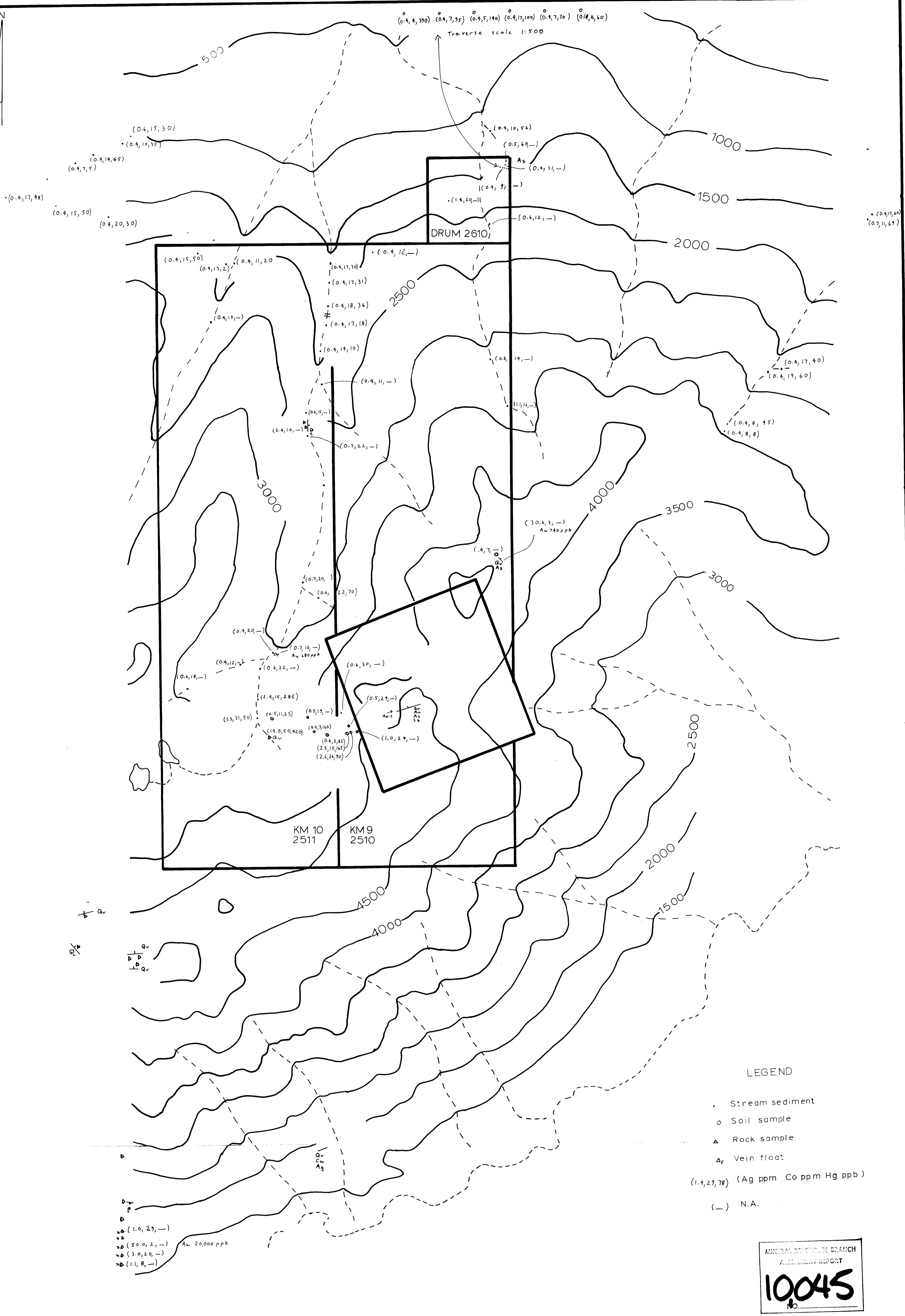
MINERAL RESOURCES BRANCH  
 GEOCHEMISTRY REPORT  
**10045**  
 No.

**KM9 KM10 DRUM**

MINERAL CLAIMS  
 MAYO CREEK  
 SKEENA MINING DIVISION  
 1031 15W  
 As, Cu, Pb, Zn,  
 GEOCHEMICAL ANALYSES



SCALE 1:10,000



- LEGEND
- Stream sediment
  - Soil sample
  - ▲ Rock sample
  - △ Vein float
  - (1.4, 29, 78) (Ag ppm Co ppm Hg ppb)
  - (-) N.A.

MINERAL REVENUE BRANCH  
 ACCOUNT REPORT  
**10045**

**KM9, KM10, DRUM**  
 MINERAL CLAIMS  
 MAYO CREEK  
 SKEENA MINING DIVISION  
 1031 15W  
 GEOCHEMICAL ANALYSES

