



GEOLOGICAL ASSESSMENT REPORT  
GOAT CLAIMS  
(GOAT 1-4, YA 41020-41023)  
MAYO MINING DISTRICT  
NTS 1050/10  
LATITUDE  $63^{\circ} 37'$  LONGITUDE  $130^{\circ} 54'$   
AUGUST 7, 1980

090694

By. D.A. Beauchamp

This report has been examined by Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 400.00

*[Handwritten Signature]*

Resident Geologist or  
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

**E. R. BAXTER**  
Supervising Mining Recorder

*[Handwritten Signature]*  
Commissioner of Yukon Territory

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## 1. SUMMARY AND CONCLUSIONS

The GOAT 1-4 claims are underlain by Cretaceous medium-grained equigranular biotite-hornblende diorite and hornblende granodiorite which intrudes argillite and quartzite of Paleozoic age. Minor molybdenite and pyrite have been observed in quartz-feldspar veins which appear to widen at depth.

The mineralization is erratic and few sections would contain up to 1% MoS<sub>2</sub> estimated. Hydrothermal alteration is weak and of limited extent at surface. Vein density is weakly developed but improves at the base of the cliff.

## 2. INTRODUCTION

### 2.1 Location and Access

The GOAT 1-4 claims are located 11.5 km northeast of Horn Peak and 56.5 km northwest of Macmillan Pass in east-central Yukon. Access is by road to Macmillan Pass and by helicopter to the property. Food and supplies can be obtained in Ross River 180 km by road southwest of Macmillan Pass.

### 2.2 Previous Work

Claims have not previously been held in this area and there are no indications of previous exploration by other companies. AGIP Canada Ltd., conducted reconnaissance prospecting and mapping in the area in 1979 and staked the GOAT 1-4 claims on 20 August, 1980.

### 2.3 Topography

The topography of the GOAT Claims is extremely rugged and much of the area is inaccessible by normal traversing.

A broad glacier covers the eastern side of the claims and vertical cliffs mark the western boundary of the claims.

### 3. REGIONAL GEOLOGY

#### 3.1 Lithology

The claims are located in the Selwyn Basin which is underlain by Paleozoic shale, conglomerate, argillite and chert of the Black Clastic Group and Road River Formation and by Proterozoic carbonate, shale, argillite and volcanic rocks. (G.S.C. 1974)

The units are intruded by Cretaceous granodiorite to quartz monzonite plutons and batholiths.

#### 3.2 Structural Geology and Metamorphism

The sedimentary and intrusive rocks of the area have not been regionally metamorphosed. Contact metamorphism has occurred in sedimentary rocks adjacent to intrusions and is manifested as aureoles several hundred meters wide of incipient recrystallization of silicate minerals and pyrrhotite developments.

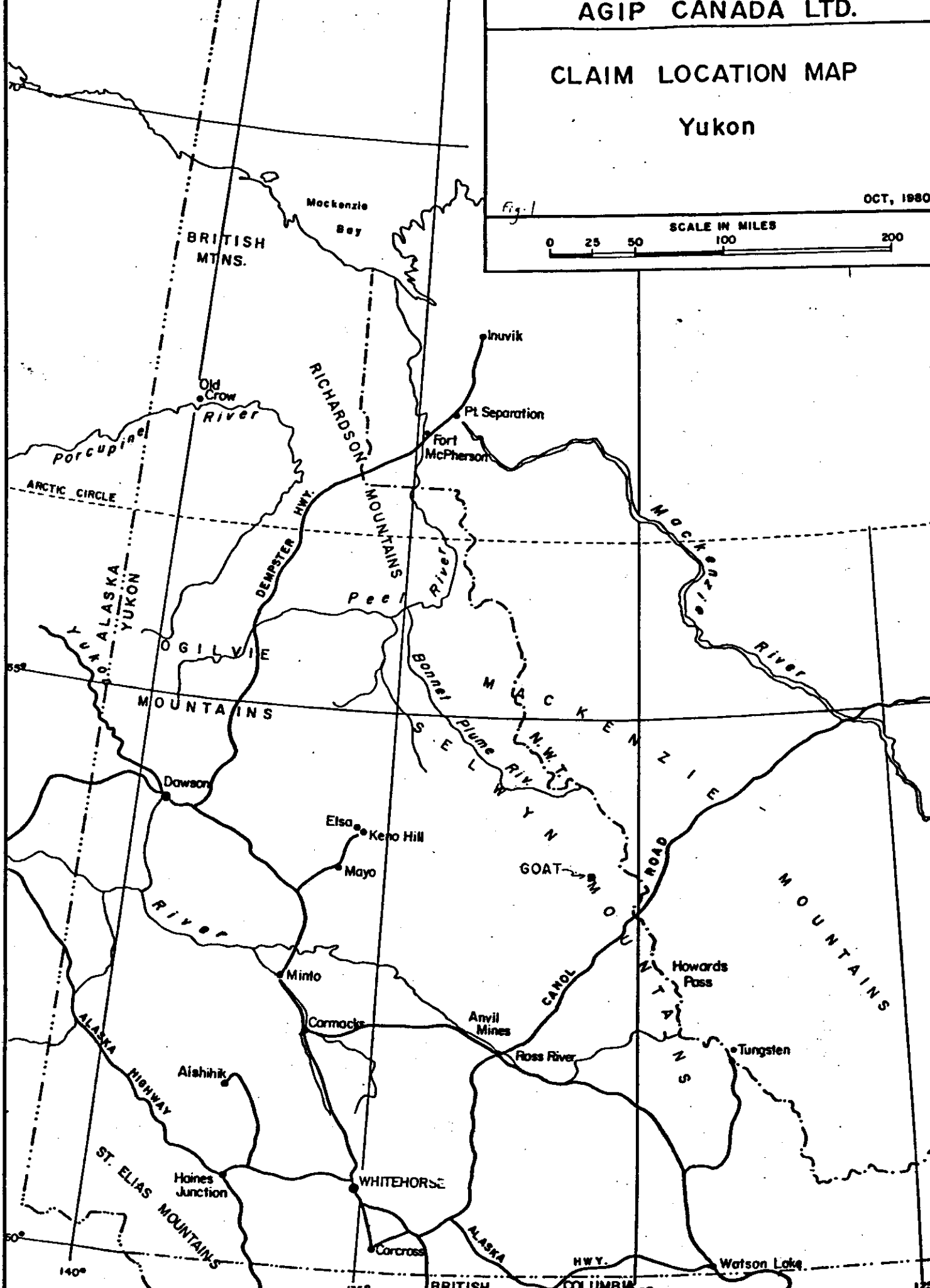
Deformation of the sedimentary rocks accompanied pluton emplacement. This deformation resulted in the development of disharmonic folding and, in more argillaceous rocks, the formation of a penetrative fabric. This fabric has been subsequently refolded in places, causing the development of kink folds.

CLAIM LOCATION MAP

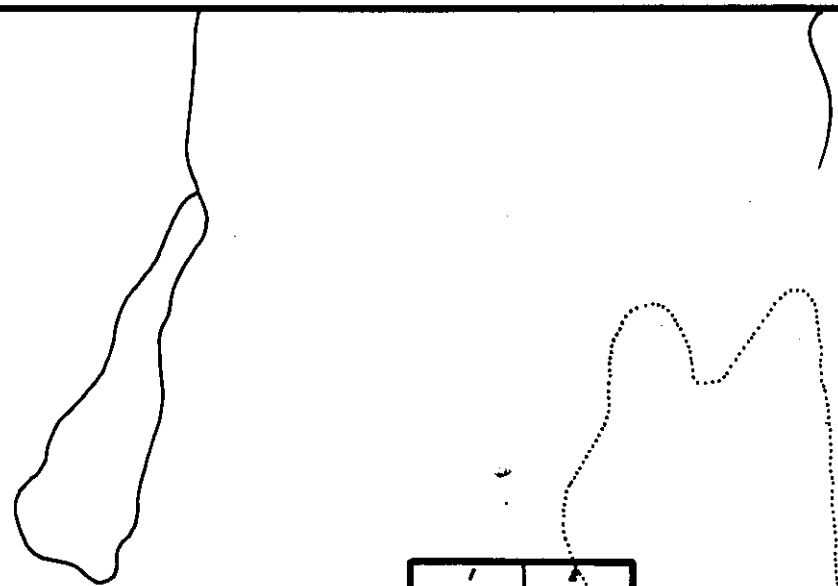
Yukon

OCT, 1980

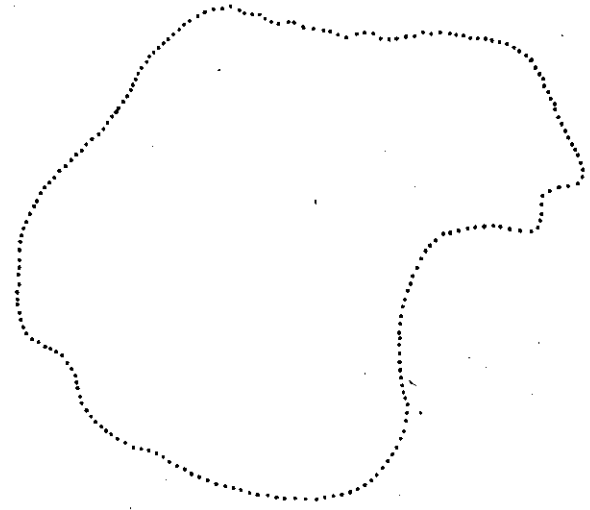
Fig. 1



131°00'



1	2
YA 41020	YA 41021
3	4
YA 41022	YA 41025



AGIP CANADA LTD.		
YUKON		
DISTRIBUTION OF GOAT CLAIM		
SCALE: 1:31,680	NYS: 105 0/11	DATE: Sept. 1980
AUTHOR: T.G.	DRAWN BY: J.S.	FIGURE: 2

63° 35'

### 3.3 Mineralization

Two types of mineralization are present in the area. Mineralization associated with the sedimentary rocks include shale-hosted Ba-Pb-Zn deposits and mineralization associated with the intrusions is represented by a W-Cu skarn near Mount Allen.

## 4. GEOLOGY OF THE CLAIMS

### 4.1 Lithology

#### 4.1.1 Sedimentary Rocks

The sedimentary rocks present on the claim group are represented by thinly-bedded argillites and quartzites. These are regularly interbedded. However, stratigraphic succession cannot be established because of the ruggedness of the terrain.

#### 4.1.2 Plutonic Rocks

The GOAT Claims are located in the northern portion of the Roque intrusion. The claims are underlain by several phases of medium-grained equigranular biotite-hornblende diorite and hornblende granodiorite.

The intrusion contains many angular to sub-rounded hornblende-biotite diorite inclusions up to 20 m long.

Many types of quartz-feldspar veins cut the diorite, granodiorite and hornblende-biotite inclusions. These veins vary in width from 5 - 50 cm and may contain medium to coarse-grained white and grey quartz, biotite, tourmaline and sulphides. Several of these veins are

zoned with quartz on the outside and K-feldspar toward the centre. Succession of vein types has not been established because of difficulty of access to outcrop. The veins show cross-cutting relationships and were formed as a result of open-space fillings, since all vein contacts are very sharp. The vein density is at a meter scale in the area containing most veins.

One aplite dyke was observed in the quartzite 100 m away from the intrusive-sedimentary contact. This dyke is wedge-shaped and decreases in width from 3 m at the bottom of the cliff to 1 cm at the top of the cliff over a height of about 30 m. The dyke consists of fine-grained quartz and feldspar and has sharp contacts with the surrounding quartzite.

Chilled margins were not observed along the vein contacts.

#### 4.2 Structure and Metamorphism

The sedimentary units near the intrusion are intensely folded and strike at  $090^{\circ}$ . Further north of the claims, the sediments have strikes of  $090^{\circ}$  to  $145^{\circ}$  and dips from  $70^{\circ}\text{N}$  to vertical. The aplite dyke has an orientation of  $090^{\circ}/80^{\circ}\text{N}$ .

In the intrusion, the quartz-feldspar veins have very variable orientations, of which the most common are  $360^{\circ}/40^{\circ}\text{W}$  and  $110^{\circ}/30^{\circ}\text{S}$ .

The biotite-hornblende diorite inclusions within the granodiorite show a weak alignment at  $050^{\circ}/70^{\circ}\text{N}$ .

#### 4.3 Mineralization-Alteration

Pyrite and molybdenite mineralization have been observed in the quartz-feldspar veins. Both occur as sparsely distributed grains up to 1 cm in diameter.

Hydrothermal alteration is of very limited extent. Minor chloritization can be observed along fracture planes and very weak sericitization has developed to a maximum of 1 cm along the margins of quartz-feldspar veins. Most of the intrusion is unaltered.

#### 5. CONCLUSION

Quartz-feldspar veining was a late-stage event in the development of the intrusion and was accompanied by only minor mineralization. Indications of porphyry-style sulphide mineralization are lacking and it appears as if potential for this type of mineralization is low.

REFERENCE

G.S.C., 1974, Geological map of Niddery Lake map area  
G.S.C. Open File 205.

## APPENDIX A

EXPENSES

1.	Helicopter	
	1 hour @ \$375/hour	\$375.00
2.	Geology and mapping	
	1 manday @ \$200/day	\$200.00
3.	Report writing	
	1 manday @ \$200/day	\$200.00
		<hr/>
		\$775.00

APPENDIX B

CLAIM NAMES & TAG NUMBERS

<u>CLAIM NAME</u>	<u>TAG NUMBER</u>
GOAT 1	YA41020
GOAT 2	YA41021
GOAT 3	YA41022
GOAT 4	YA41023

APPENDIX C

AGIP PERSONNEL EMPLOYED ON GOAT CLAIMS

<u>NAME &amp; ADDRESS</u>	<u>POSITION</u>	<u>DATES</u>	<u>NO. OF DAYS</u>	<u>FUNCTION</u>
Beauchamp, Daniel 24 Malibou Rd. S.W Calgary, Alberta T2V 1W6	Area Geologist	Aug. 8	1	Mapping

## APPENDIX D

STATEMENT OF QUALIFICATIONS

I, DANIEL A. BEAUCHAMP, of the City of Calgary, in the Province of Alberta, hereby certify:

- . That I am a geologist employed by AGIP Canada Ltd., and that I performed or caused to be performed the work described in this report.
- . That I have six years of full-time employment, three of which have been on programs in the Yukon.
- . That I obtained a B.Sc. in Geology in 1974.
- . That I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta and of the Canadian Institute of Mining and Metallurgy.

I hereby certify that the above statements are true.

D.A. Beauchamp



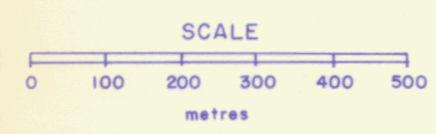
**LEGEND**

- 2 Cretaceous biotite-hornblende diorite, hornblende granodiorite
- 1 Paleozoic Black Clastic Group: argillite, quartzite
- 70 Strike and dip
- Geological contact observed, assumed
- Limit of Glaciers
- Claim Group

**AGIP CANADA LTD.**

**GOAT CLAIMS  
GEOLOGY**

YUKON



SCALE: 1:10,000	NTS 105/0/10	DATE:
AUTHOR: D.A.B.	DRAWN BY: J.S.	FIGURE: