

BID MINERAL CLAIMS GROUP
REPORT ON GEOLOGICAL MAPPING



Whitehorse Mining District
Yukon Territory

Latitude : 62°45'N

Longitude: 139°45'W



N.T.S. 115-J-12, 13

Field work done in the periods
Sept.-Nov, 1969, May 28-June 28, 1970

This report has been examined by the Geological Evaluation Unit and is recommended to the Commission to be considered as representation work in the amount of \$ 79,626.68

[Handwritten Signature]

Resident Mining Engineer

By:

KENNETH M. DAWSON

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

ATLAS EXPLORATIONS LIMITED

September, 1970

[Handwritten Signature]
Commissioner of Yukon Territory

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LIST OF CLAIMS

<u>CLAIM NO.</u>	<u>GRANT NO.</u>	<u>RECORDING DATE</u>
BID 1-8	Y39119-Y39126	Oct. 27, 1969
9-16	Y39127-Y39134	Oct. 27, 1969
17-24	Y39135-Y39142	Oct. 27, 1969
25-32	Y39143-Y39150	Oct. 27, 1969
33-40	Y39151-Y39158	Oct. 27, 1969
41-48	Y39159-Y39166	Oct. 27, 1969
49-56	Y39167-Y31974	Oct. 27, 1969
57-64	Y39175-Y39182	Oct. 27, 1969
65-72	Y39183-Y39190	Oct. 27, 1969
73-80	Y39191-Y39198	Oct. 27, 1969
81-88	Y40431-Y40438	Nov. 26, 1969
89-96	Y40439-Y40446	Nov. 26, 1969
97-104	Y40447-Y40454	Nov. 26, 1969
105-112	Y40455-Y40462	Nov. 26, 1969
113-120	Y40463-Y40470	Nov. 26, 1969
121-128	Y40471-Y40478	Nov. 26, 1969
129-136	Y40479-Y40486	Nov. 26, 1969
137-144	Y40487-Y40494	Nov. 26, 1969
145-152	Y40495-Y40502	Nov. 26, 1969
153-160	Y40503-Y40510	Nov. 26, 1969
161-168	Y40511-Y40518	Nov. 26, 1969
169-176	Y40519-Y40526	Nov. 26, 1969
177-184	Y40527-Y40534	Nov. 26, 1969
185-192	Y40535-Y40542	Nov. 26, 1969
193-200	Y40543-Y40550	Nov. 26, 1969
201-208	Y40551-Y40558	Nov. 26, 1969
209-216	Y40559-Y40566	Nov. 26, 1969
217-220	Y40567-Y40570	Nov. 26, 1969
221-228	Y53638-Y53645	July 22, 1970
229-236	Y53646-Y53653	July 22, 1970

ATLAS EXPLORATIONS LIMITED

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

BID MINERAL CLAIMS GROUP REPORT ON GEOLOGICAL MAPPING

INTRODUCTION

The Home Creek area was examined by Atlas geologists Kenneth Dawson and Colin Godwin in the course of a reconnaissance of the Dawson Range in July, 1969. The granodiorite batholith was seen to be intruded by fine-grained leucocratic granite stocks, often with miarolitic cavities and limonitic stains. Rhyolitic flows and dykes were noted in the area. Favourable geology led to reconnaissance mapping and geochemical sampling of the Home Creek area in August, 1969. Systematic mapping and geochemical sampling was undertaken in September and October, 1969. The first block of 80 BID mineral claims was staked in September, 1969, and the second block of 140 BID claims was staked in November, 1969, and the third block of 16 BID claims was staked in July, 1970, bringing the total to 236 claims.

Two grid areas were located on the basis of 1969 field work. Detailed work on the BID North (No. 1) Grid and South (No. 2) Grid including linecutting, geochemical sampling, magnetometer survey and geological mapping was done in the period May 28 - June 28, 1970.

The North grid was located on the basis of Mo. soil anomalies detected along both sides of Home Creek adjacent to a Home granite-Klotassin granodiorite contact. Silt and water geochemical anomalies were also detected in the area. Molybdenite veinlets in float were found on slopes south of Home Creek. Weak argillic alteration is developed locally in Home granite, and granodiorite shows propylitic alteration adjacent to Home granite contacts. An aeromagnetic high corresponds roughly with the area of interest.

The South Grid was located principally to cover a zone of pyrite-chalcopyrite-molybdenite veinlets in granodiorite along an east-west ridge south of Home Creek. The South Grid also extends eastward to include an altered contact zone between granodiorite and granite, with a few associated sulfide occurrences and soil geochemical anomalies.

Detailed geologic mapping, soil and rock chip sampling was done on both grids. The intervening area was mapped at 1" = 1000 ft.

An aeromagnetic anomaly on the western part of North Grid was surveyed with the Sharpe MF-1 magnetometer.

LOCATION AND ACCESS

The BID claims are in the Dawson Range in western Yukon, 10 miles northeast of the abandoned settlement of Donjek on the White River. Location of the claim group is given on Location Map, Appendix I. The claims are situated mainly in the southern headwaters of Home Creek, but also occupy headwaters of Hungry Creek and Tom Creek. About half the claims fall within the southern part of claim sheet 115-J-13 and the other half in the northern part of claim sheet 115-J-12. The claim group is depicted on Key Map, Appendix II.

Access to the claims was attained by helicopter during 1969 and 1970. Men and supplies were flown by fixed-wing aircraft to the Yukon River, Uranus, Polaris and Casino airstrips, and then to the property by helicopter. An access road connecting Uranus and Polaris strips to Casino was used for servicing the airstrips.

REGIONAL GEOLOGY

The BID claims are located in the western Dawson Range, a northwest-trending belt of mountains 6000 ft. or more high, standing above the undulating surface of the Yukon Plateau.

Rocks underlying the claims include Klotassin granodiorite, Home granite, and related Tertiary flows and dykes.

The granitic to granodioritic Klotassin batholith constitutes the core of the Dawson Range in this area. South of BID group these Cretaceous and older intrusive rocks are covered by basic flows of the Early Tertiary Carmacks Volcanics, and intruded by related basic and ultrabasic plutons. Tertiary intrusive bodies, including Home granite, occur as small stocks, sills and dykes flanking and intruding the Klotassin batholith. Younger related rhyolitic and andesitic flows cap the older units in small disconnected patches.

Copper, molybdenum, lead and zinc mineralization is associated with both Tertiary and Cretaceous intrusive rocks in the vicinity of BID claims.

Regional geologic data is drawn, in part, from Geological Survey of Canada Preliminary Map 44-34 and Map 340A.

GEOLOGY OF BID CLAIMS

A geologic map of BID claims, based upon mapping by Atlas geologists Kenneth Dawson, Donald Hersak and Gary Pearse, is given in Appendix III. Rock units in the area are given in Table of Geological Formations, page 4A.

TABLE OF GEOLOGICAL FORMATIONS

TERTIARY

3 Flows and Dykes

Buff, pink or brown felsite, related porphyry and fine-grained granite dykes. Flow and dyke textures may be aphanitic, banded, porphyritic and/or spherulitic.

2 Home Granite

Fine to medium-grained equigranular pink biotite granite, biotite quartz monzonite and alaskite. Commonly porphyritic and/or miarolytic. Minor argillic alteration.

LATE CRETACEOUS

1 Klotassin Intrusions

Medium to coarse-grained hypidiomorphic and/or porphyritic grey hornblende (minor biotite) granodiorite, quartz diorite and quartz monzonite. Foliated and gneissic, in part. Shearing and propylitic alteration at intrusive contacts.

Geologic mapping in 1969 was done using 1" = $\frac{1}{2}$ mile claim sheets as base maps. Base map for most 1970 BID mapping was a 1" = 1000 ft. topographic map, 50-ft. contour interval, prepared for Atlas by Northwest Survey Corp. Ltd. Survey control for detailed mapping was attained by two grids. The 11,200 ft. base line for the North (No. 1) Grid was chained off at Azimuth 045° , and grid lines run with chain and compass at 800 ft. intervals normal to the base line. The South Grid comprises seven parallel lines at Azimuth 160° , chained off at 1000 ft. intervals. A total of 146,200 ft. of line were cut. The grid was established for geochemical and geophysical surveys, as well as survey control for mapping.

The BID claims are underlain predominantly by an irregularly-shaped body of fine-to medium-grained biotite granite that intrudes coarse-grained hornblende granodiorite of the Klotassin batholith. The unit is assigned the name "Home granite" for its type occurrence in Home Creek. An irregular northwest-trending contact with granodiorite crosses Home Creek at the northwest end of North Grid. An inlier of altered granodiorite is partially covered by the southwest end of North Grid. Home granite comprises a body 2 miles by 3 miles in plan, elongated north-south, and apparently forming the stock-like eastern extremity of a narrower eastward-trending body of the granite.

This pluton is the southernmost of a family of large, sub-parallel sills that crop out on VINA claims to the north.

East of the North Grid a narrow, probably tabular body of Home granite crops out on the north bank of Home Creek, where it is capped by a rhyolite flow. This pluton has an east-west orientation and may be an extension of the larger granite body immediately to the west.

North of the North Grid, Klotassin granodiorite crops out in a northwest-trending belt four miles wide. Granodiorite is capped by several rhyolite and felsite flows northeast of BID claims and intruded by numerous small related dykes. Rhyolite, dacite and andesite flows and pyroclastics crop out in a discontinuous northwest-trending belt immediately east and north of the claims. Two areas of rhyolite occur to the west.

The South Grid covers the southwestern contact of the Home granite pluton with granodiorite. The actual contact is not exposed, but granodiorite in the area is sheared, brecciated, altered and mineralized. Here, as well as at the North Grid, Home granite is less altered than the granodiorite it intrudes. An outcropping of breccia marks the southern contact of the Home granite pluton. The breccia is composed of angular

fragments of granite and felsite cemented with a chalcedonic quartz-fluorite matrix. Minor cavities in the rock appear to be of solution origin.

The Home granite pluton east of the South Grid contains a very fine-grained, often sub-porphyrific core, with a fine-to medium-grained border phase up to 1 mile wide.

Mineralization and Alteration

Several molybdenite occurrences were discovered on and around the North Grid. Small quartz-pyrite-molybdenite veins occur at the southern, chloritized contact zone of a granodiorite inlier on the western part of the grid. A few flakes of molybdenite were found in an argillically-altered rhyolite dyke, from a slide on Home Creek on the northeast part of the grid. Molybdenite fracture-fillings and quartz-molybdenite veins were found in chloritic granodiorite float south of the grid.

Weak argillic alteration of feldspars is developed in Home granite along the granite-granodiorite contact at the northeast end of the North Grid. Granodiorite at this locality exhibits weak, pervasive propylitic alteration, with partial replacement of mafics and plagioclase by chlorite-epidote. Minor amounts of disseminated pyrite and magnetite occur in the altered

granodiorite at the contact. Granodiorite contact zones exposed elsewhere in the North Grid area show varying degrees of shearing and propylitic alteration. Sporadic development of argillic alteration in Home granite in the grid area bears no apparent relationship to sulfide mineralization, but rather to intrusive contacts with Klotassin granodiorite.

Numerous small quartz-pyrite-chalcopyrite-molybdenite veins were found in fresh granodiorite along an east-west ridge at the southern limit of the BID claims. Traces of pyrite occur in altered granodiorite contact rocks along the length of the southern granitic-granodiorite contact. Minor amounts of disseminated magnetite were noted in granodiorite on the South Grid. Quartz-molybdenite veins were noted in float below the magnetite occurrence.

Small chalcopyrite-pyrite veins were found in fresh to weakly chloritized granodiorite on the eastern part of BID claims, and on unstaked ground east of the claims.

Traces of galena were found in silicified Klotassin granodiorite and quartz monzonite along a ridge two miles south of the claim boundary.

Varying degrees of propylitic alteration are developed in granodiorite along the length of its contact with the southern

lobe of the Home granite pluton. Intensely sheared zones are the most intensely altered, and often carry disseminated pyrite. Home granite along the southern contacts of the pluton rarely exhibits development of hydrothermal alteration. The granite commonly shows rusty weathering and miarolytic cavities in contact zones.

Geochemistry and Mineralization

The results of a geochemical survey of the BID claims are given in the accompanying "Geochemical Report on the BID Group".

Copper in soils from the North Grid is generally low, with most values below the threshold of 50 ppm. The few anomalies detected correspond to no known geological control, and may reflect topographic controls. Copper rock geochemistry from North Grid is generally very low. The general lack of pyrite, limonitic minerals, and other evidence of supergene leaching eliminates the possibility of low copper values at surface due to leaching.

Copper is higher in soils from South Grid, particularly in the area of observed copper mineralization. Copper anomalies correlate well with molybdenum anomalies, mainly due to the coexistence of the two vein minerals.

Molybdenum soil and rock geochemical results from North Grid are generally low. Two Mo soil anomalies correspond with visible molybdenite in float indicating that these quartz-molybdenite veinlets have given rise to the geochemical anomalies.

A group of Mo soil anomalies in the range of 10-60 ppm is the most significant geochemical feature of the South Grid. The anomalies occur in an area of copper-moly veins in granodiorite that extends westward beyond the grid and claim boundaries, hence the anomalous area is open to the west. A less-pronounced train of Mo anomalies runs eastward to a Home granite-granodiorite contact, and reflects copper-moly vein float located in this area downslope from the mineralized outcroppings.

Lead and zinc anomalies tend to coincide on both grids, and probably reflect minor contact mineralization, although only pyrite was found in the contact zones. Both lead and zinc backgrounds are low in general, and anomalies tend to be erratic.

CONCLUSIONS

1. Copper-molybdenum veins exposed on BID claims are small, widespread and erratic. No mineral concentrations of economic significance were encountered.

2. Hydrothermal alteration in Home granite and Klotassin granodiorite is related to sheared contact zones. Most Mo-Cu mineralization was detected in granodioritic contact rocks.
3. Geochemical anomalies, in the majority of cases, are satisfactorily explained by observed mineralization. A strong Cu-Mo anomaly at the southwest corner of the claim group warrants additional geochemical sampling and prospecting to the west and south of observed mineralization.
4. Additional regional exploration should be undertaken south of the BID claims, on the low ground in the basins of Hungry Creek and Tom Creek. This area was inadequately covered in the 1969 program.

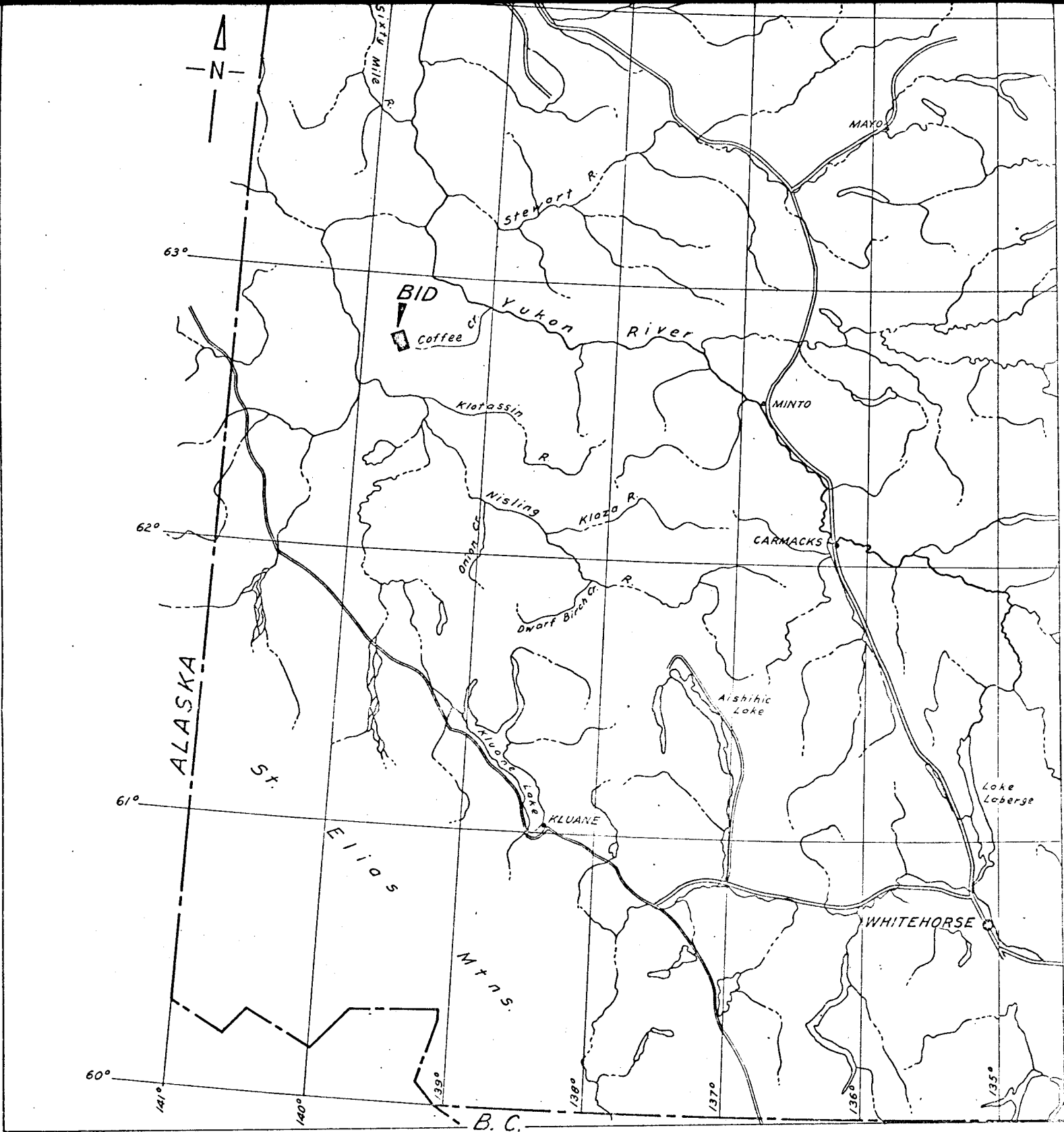
Respectfully submitted,



Kenneth M. Dawson,
Geologist

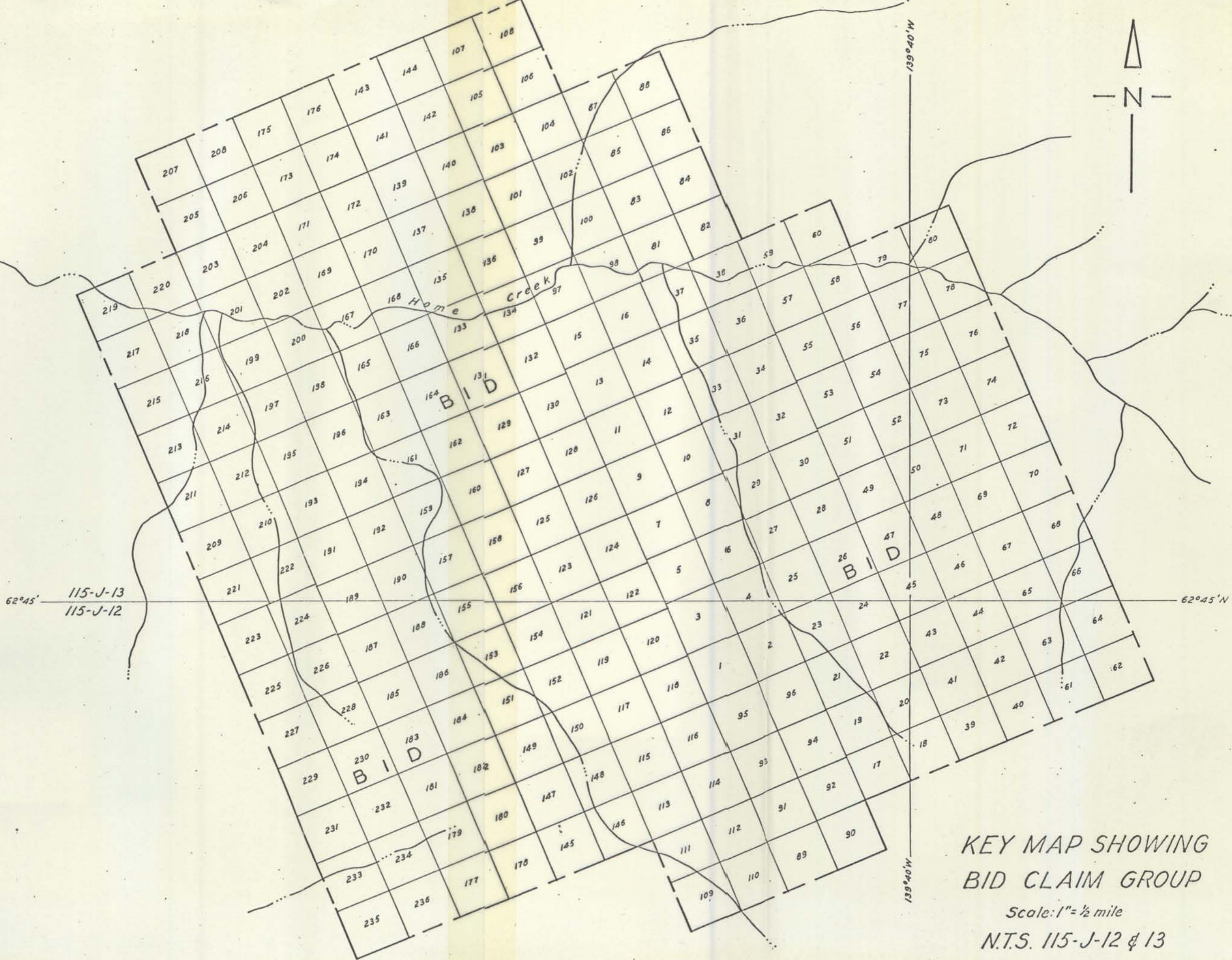
Sept. 1970



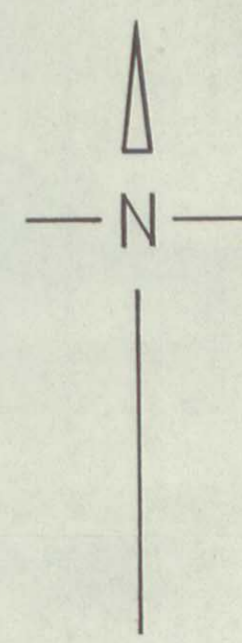
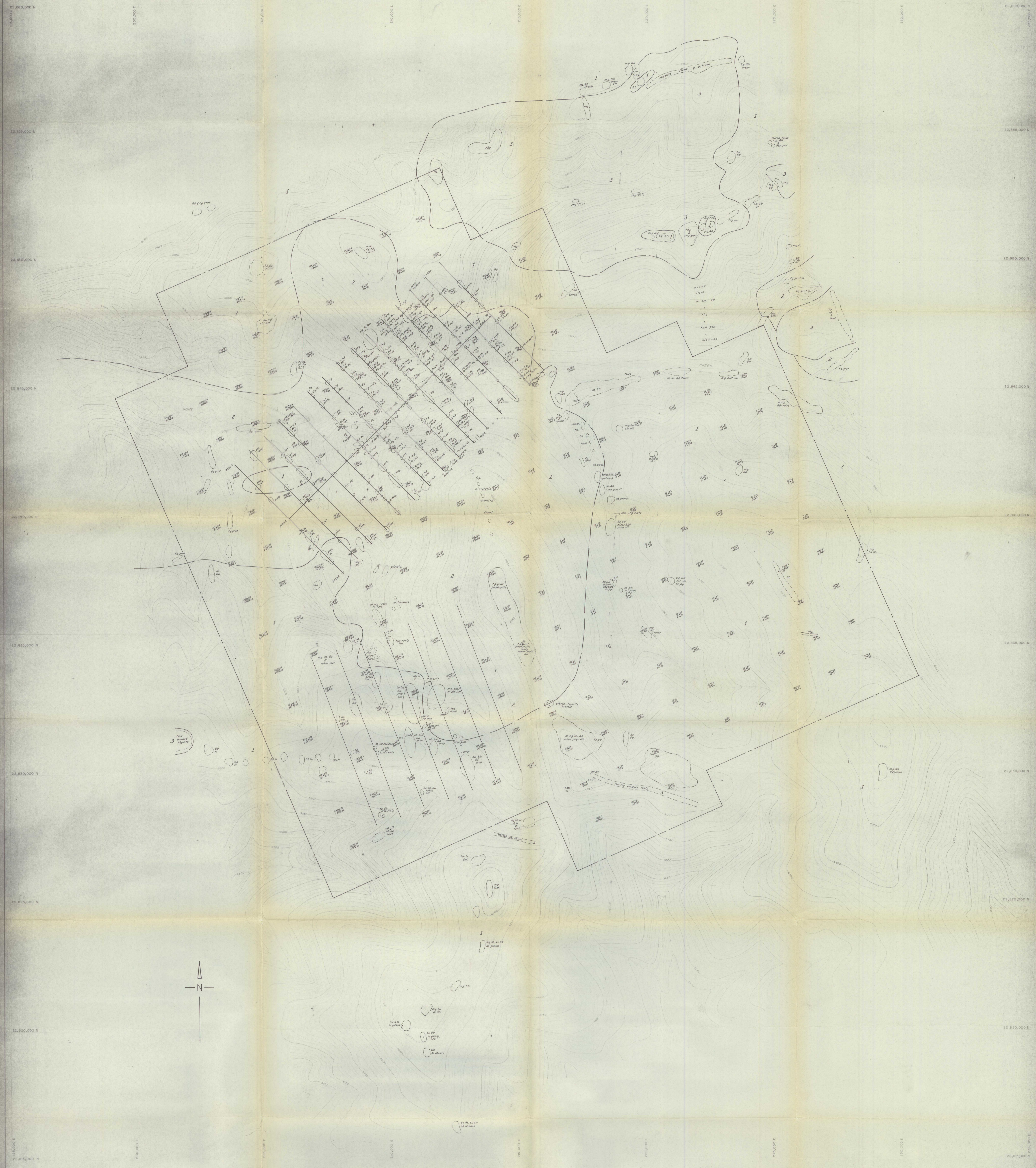


Scale: 1" = 32 miles

KEY MAP SHOWING
 BID CLAIM GROUP
 DAWSON RANGE - YUKON TERRITORY



KEY MAP SHOWING
 BID CLAIM GROUP
 Scale: 1" = 1/2 mile
 N.T.S. 115-J-12 & 13



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BID CLAIMS
YUKON TERRITORY

MAP SCALE 1" = 1000'
FOOT 0 100 200 300 400 500
CONTOUR INTERVAL 50

- GEOLOGICAL LEGEND**
- FERTIARY**
 - 3 Buff, pink or brown felsite, related porphyry and fine-grained granite dykes. Flow and dyke textures may be aphanitic, banded, porphyritic and/or spherulitic.
 - HOME GRANITE**
 - 2 Fine to medium grained equigranular pink buffite granite, buffite quartz monzonite and diorite. Commonly porphyritic and/or microlytic. Minor argillic alteration.
 - LATE CRETACEOUS**
 - 1 Miocene intrusions. Medium to coarse grained hypidiomorphic and/or porphyritic grey hornblende (minor buffite) granodiorite, quartz diorite and quartz monzonite. Foliated and gneissic, in part. Shearing and propylitic alteration at intrusive contacts.

- LEGEND**
- Proposed road
 - Boundary, mine
 - Track or path
 - Water
 - Contour
 - Spot elevation
 - Vertical control

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GEOLOGY OF BID CLAIMS DAWSON RANGE - YUKON	
N. T. S.:	SCALE: 1" = 1000'
DATE OF SURVEY: 115-J-13	PARTY CHIEF:
DATE DRAFTED: Sept 21, 1970	DRAFTED BY: 67
DATE REVISED:	REVISED BY:
CHECKED BY:	FIGURE No.: