BID MINERAL CLAIM GROUP

REPORT ON MAGNETIC GEOPHYSICAL SURVEY OF CLAIMS

RECEIVED
30 OCT 1970
MINING
RECORDERS OFFICE
WHITEHORSE, Y.T.

Whitehorse Mining District
Yukon Territory

RECEIVED
OCT 30 1970
MINING
INSPECTOR'S OFFICE
WHITEHORSE, Y.T.

Latitude : 60°45'N

Longitude: 139°45'W

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

Field work done in the period
May 28 - June 28, 1970

By

KENNETH M. DAWSON

ATLAS EXPLORATIONS LIMITED

September, 1970

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $2231.36

Resident Geologist or
~~Resident Mining Engineer~~

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

Commissioner of Yukon Territory

TABLE OF CONTENTS

LIST OF CLAIMS	Page
INTRODUCTION	1
LOCATION AND ACCESS	3
MAGNETOMETER SURVEY	3
Instrument.....	3
Survey Control	4
Survey Method	4
Treatment of Data	5
GEOLOGY	6
GEOPHYSICAL OBSERVATIONS AND INTERPRETATIONS..	8
CONCLUSIONS	9

Appendix	I	Location Map of BID Claims
Appendix	II	Key Map of BID Claim Group
Appendix	III	Geological Map of BID Claims
Appendix	IV	Magnetic Station Data - North Grid
Appendix	V	Magnetic Profiles and Geology - North Grid
Appendix	VI	Summary of Costs
Appendix	VII	Schedules Supporting Costs
Appendix	VIII	Affidavit Supporting Summary of Costs
Appendix	IX	List of Personnel

LIST OF CLAIMS

CLAIM NO.	GRANT NO.	RECORDING DATE
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	Nove. 26, 1969
217-220	Y40567-Y40570	Nov. 26, 1969
221-228	Y53638-Y53645	July 22, 1970
229-236	Y53646-Y53653	July 22, 1970

TELEPHONE 685-4331

ATLAS EXPLORATIONS LIMITED

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

BID MINERAL CLAIM GROUP
REPORT ON MAGNETIC GEOPHYSICAL SURVEY OF CLAIMS

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.

MAGNETOMETER SURVEY

Instrument

A Sharpe MF-1 fluxgate-type vertical component magnetometer was used. The instrument is hand-held and designed for

rapid, accurate ground surveys. It gives a direct reading in gamma values and is not subject to large-scale drift by virtue of extensive temperature compensation and advanced transistorized circuitry. The maximum sensitivity is 20 gammas per scale division and readibility is 5 gammas per scale division on the 1000-gamma range.

Survey Control

Base map used in the geophysical survey, as well as geochemical and geologic mapping of BID claims, was a 1"= 1000 ft. topographic map, contour interval 50 ft., prepared for Atlas by Northwest Survey Corp. Ltd. The map was enlarged to 1"= 400 ft. for plotting geophysical data.

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.

Survey Method

A rapid reconnaissance magnetometer survey was made of the North (No. 1) Grid to ascertain if anomalous conditions existed

in the area. Two weakly anomalous areas were detected in the southern part of the grid and the rest of the grid was magnetically "flat". Consequently, only the southern four grid lines plus base line were surveyed with the magnetometer. The South Grid was similarly checked out, and lack of response to the reconnaissance survey resulted in no magnetometer survey of the South Grid.

Prior to the actual survey, readings were taken at intersections of cross lines with the base line. The stations were "looped" and re-read every hour as a means of controlling drift and diurnal variations. Base stations of an established value served as reference points for each cross-line portion of the survey. A rapid check was kept on magnetic variations and the entire survey was kept on a relative basis during day-to-day operations.

Treatment of Data

Results were corrected for diurnal variations and drift each night be the operator. The final gamma values were plotted on a grid plan using scale 1"= 400 ft. (Appendix). Profiles were constructed and geology superimposed on the profiles for correlation (Appendix

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.

The BID claims are underlain predominantly by an irregularly-shaped body of fine to medium grained biotite granite (Home granite) that intrudes coarse grained hornblende granodiorite of the Klotassin batholith. 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 granite. This pluton is the southernmost of a family of large sub-parallel sills that crop out on VINA claims to the north.

Rhyolite, dacite and andesite flows and pyroclastics crop out in a discontinuous northwest-trending belt immediately east and north of the claims. Two small rhyolite flows occur west of the claims.

Contacts between granite and granodiorite are sheared, brecciated, altered and mineralized. Home granite exhibits sporadic weak argillic alteration, whereas intruded granodiorite is more pervasively chloritized and epidotized. Small quartz-pyrite-molybdenite-chalcopyrite veins occur mainly in granodiorite adjacent to contacts with Home granite.

A geological map of BID claims, based upon mapping by Atlas geoligists Kenneth Dawson, Donald Hersak and Gary Pearse is given in Appendix III.

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

GEOPHYSICAL OBSERVATIONS AND INTERPRETATIONS

Three weak magnetic anomalies are detected at the western and eastern ends of the three southermost grid lines of the North Grid. A plan and profile are given in Appendices IV & V. The anomalies correspond with a weak aeromagnetic low in Geophysics Paper 4292.

The northernmost anomaly consists of an east-west linear array of lows on the western ends of lines 4984N, 4976N and 4968N. The anomaly occurs directly over a felsite dyke outcropping. The dyke trends southwestward, and intersects a granite-granodiorite contact.

An inlier of sheared and propylitically-altered Klotassin granodiorite has a weak positive magnetic response along its northern contact with Home granite. No magnetic mineralization was detected in granodiorite but altered granodiorite float containing quartz-molybdenite veins was found at the southern contact of the inlier.

A magnetic high of 900 gammas, or about 300 gammas above background, occurs over a re-entrant of Klotassin granodiorite at the southern corner of the grid. No magnetic minerals were detected in this unit, and no positive magnetic contact effects are observed. The positive response appears to be due to the

higher magnetic background of granodiorite in comparison to that of granite.

CONCLUSIONS

1. Reconnaissance magnetometer surveys of North and South Grids on BID claims revealed a weakly anomalous area underlain by granodiorite and felsite.

2. A large felsite dyke gives a linear magnetic low. A granodiorite inlier gives a weak magnetic high along its contact with granite. A lobe of granodiorite gives a magnetic high relative to adjacent granite.

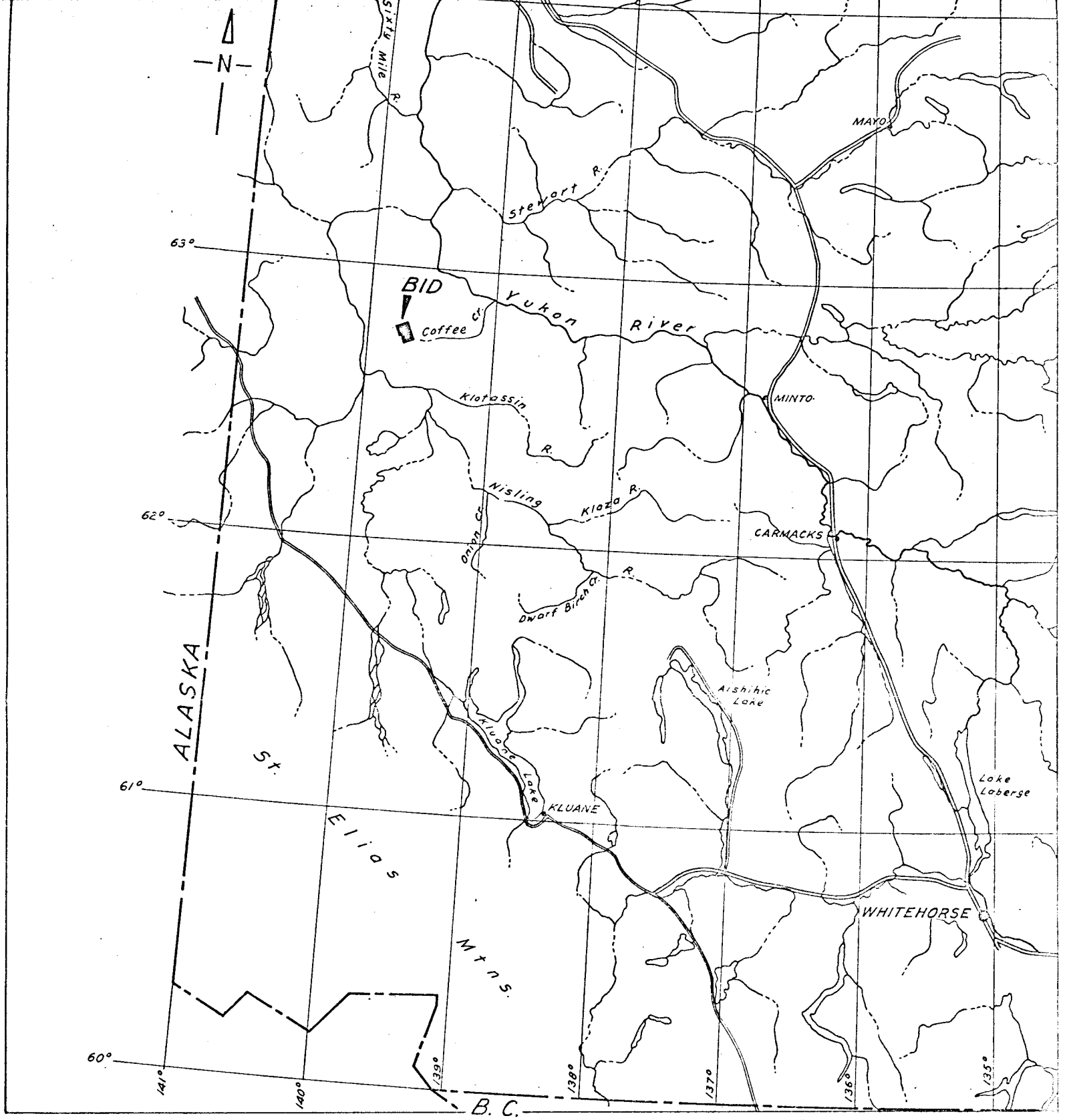
3. Follow-up geological and geochemical surveys of the above features revealed no significant mineralization.

4. No magnetic anomalies worthy of trenching or diamond drilling were detected on BID claims.

Respectfully submitted,

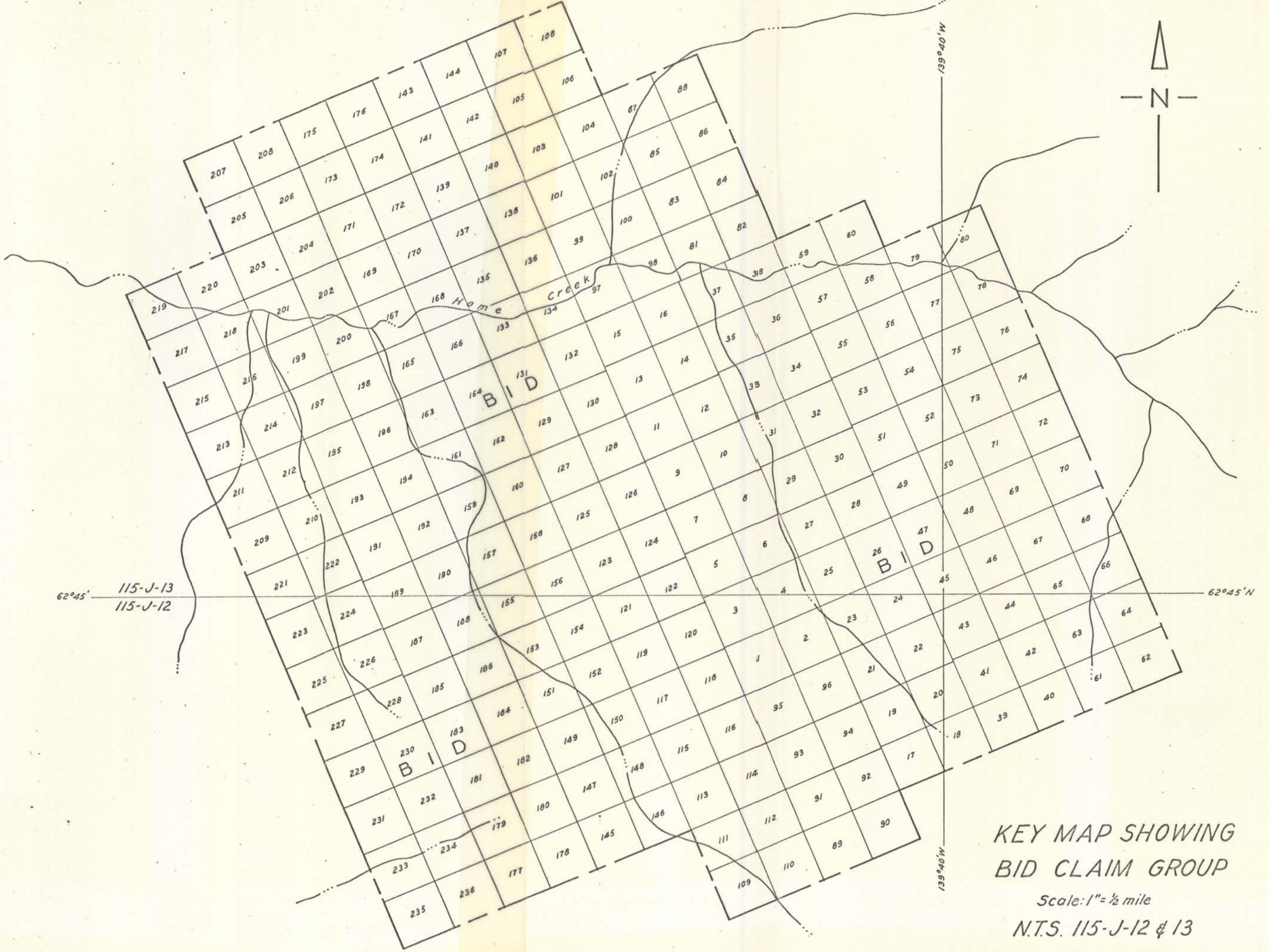
Kenneth M. Dawson,
Geologist

Sept. 1970



Scale: 1" = 32 miles

KEY MAP SHOWING
BID CLAIM GROUP
DAWSON RANGE - YUKON TERRITORY



KEY MAP SHOWING BID CLAIM GROUP

Scale: 1" = ½ mile

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

ATLAS EXPLORATIONS LIMITED

BID CLAIMS

YUKON TERRITORY

MAP SCALE

FEET 1000 500 0 1000 2000 3000 FEET

CONTOUR INTERVAL 50'

N

LEGEND

- Improved road
- Secondary road
- Track or trail
- Railway
- Contours 4100
- Cut line
- River
- Stream
- Intermittent stream
- Swamp
- Spot elevation 4190
- Horizontal control △ STA 16
- Vertical control V-4710-57

GEOLOGICAL LEGEND

TERTIARY

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

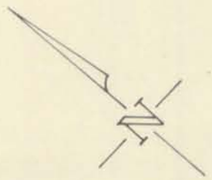
HOME GRANITE

2 — 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.

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



L 4992 N	L 4984 N	L 4976 N	L 4968 N
4970E			
.680	.650	.700	.690
.700	.700	.690	.730
.660	.750	.680	.720
.620	.770	.690	.710
.630	.730	.660	.660
.650	.710	.620	.700
.680	.650	.540	.680
.670	.610	.740	.650
.650	.590	.780	.710
.660	.590	.840	.690
4980E			
.660	.650	.850	.660
.670	.640	.800	.680
.660	.690	.800	.670
.680	.680	.780	.670
.690	.650	.810	.680
.660	.640	.720	.709
.650	.640	.710	.690
.640	.680	.700	.710
.690	.650	.710	.680
.680	.620	.700	.730
4990E			
.690	.670	.680	.660
.680	.650	.700	.670
.650	.650	.690	.670
.660	.670	.710	.670
.680	.660	.690	.680
.670	.660	.700	.670
.690	.670	.720	.690
.690	.700	.710	.700
.680	.680	.670	.670
.700	.690	.670	.700
5000E			
.690	.680	.720	.710
.730	.660	.730	.680
.740	.680	.700	.680
.730	.680	.700	.690
.730	.670	.710	.670
.720	.670	.720	.680
.720	.700	.770	.690
.740	.690	.740	.700
.730	.700	.730	.670
.720	.700	.760	.700
5010E			
.720	.690	.700	.680
.740	.680	.730	.690
.730	.680	.710	.670
.740	.690	.740	.680
.730	.670	.730	.700
.720	.700	.690	.680
.720	.690	.680	.690
.720	.700	.700	.680
.710	.700	.690	.670
.690	.700	.680	.670
5020E			
.720	.690	.700	.680
.680	.710	.640	.690
.670	.690	.690	.670
.680	.720	.670	.680
.680	.700	.670	.680
.670	.720	.670	.700
.650	.670	.680	.690
.660	.690	.700	.670
.670	.690	.710	.680
.680	.720	.690	.690
5030E			
.660	.690	.690	.680
.670	.690	.710	.690
.660	.700	.690	.680
.680	.700	.690	.690
.670	.700	.690	.680
.650	.720	.690	.670
.660	.670	.690	.680
.670	.720	.690	.690
.660	.730	.690	.680
.680	.750	.690	.670
.660	.800	.690	.680
.650	.850	.690	.680
.660	.790	.690	.690
.670	.910	.690	.680
.660	.920	.690	.670
.650	.730	.690	.680
.660	.800	.690	.690
.670	.770	.690	.680
.660	.820	.690	.690
	.800	.690	.680

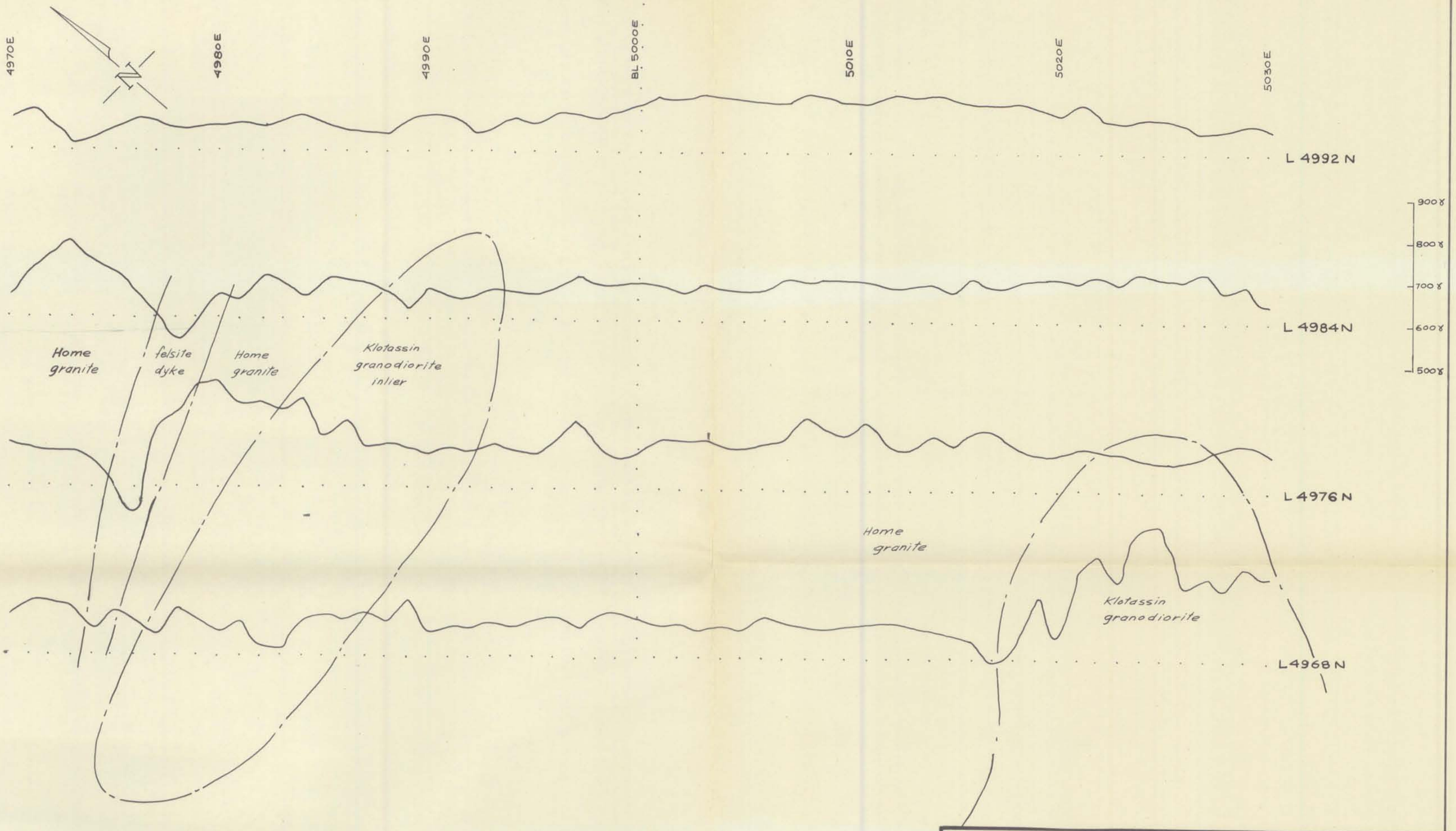
ATLAS EXPLORATIONS LIMITED

BID MINERAL CLAIMS

Magnetometer Survey North (No.1) Grid

STATION DATA

N. T. S.: 115-J-13		SCALE: 1" = 400
DATE OF SURVEY:		PARTY CHIEF:
DATE DRAFTED: SEPT 23		DRAFTED BY: J.A.D
DATE REVISED		REVISED BY:
CHECKED BY:		FIGURE No.:



ATLAS EXPLORATIONS LIMITED

BID MINERAL CLAIMS
MAGNETOMETER SURVEY - NORTH (No.1) GRID
MAGNETIC PROFILES AND GEOLOGY

N. T. S.: 115-J-13		SCALE: 1" = 400' VERTICAL PROFILE 1" = 200γ
DATE OF SURVEY:		PARTY CHIEF:
DATE DRAFTED: Sept. 23, 1970		DRAFTED BY: J.A.D.
DATE REVISED		REVISED BY:
CHECKED BY:		FIGURE No.: