

DOLMAGE CAMPBELL & ASSOCIATES (1975) LTD.
CONSULTING GEOLOGICAL & MINING ENGINEERS
1000-1055 WEST HASTINGS STREET
VANCOUVER, CANADA V6E 2E9

GEOLOGICAL AND GEOPHYSICAL REPORT

on the

HEK and HEL CLAIMS

in the
Grand Forks Area, B.C.

GREENWOOD MINING DIVISION
Map Sheet: NTS 82E/1W 1/2
(49° 12'N, 118° 29'W)

Owner of Claims
CONSOLIDATED BOUNDARY EXPLORATION LIMITED

Operator
ARIES RESOURCES INC.

Authors
G.M. Keyte
C.R. Saunders

15 December, 1980

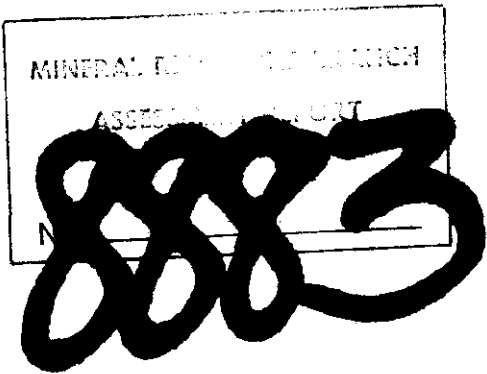


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INTRODUCTION

LOCATION (Fig. 1)

The claims are located 20 kilometres north of Grand Forks, to the west of the Granby River. They occupy steep, south-sloping terrain, between 600 and 1100 metres elevation in the Pass Creek watershed (Fig. 2). The claims are readily accessible, for the most part by two-wheel drive, and locally by four-wheel drive vehicles.

PROPERTY (Fig. 2)

The property, located in the Greenwood Mining Division, comprises two staked claims totalling 25 units (625 ha) as follows:

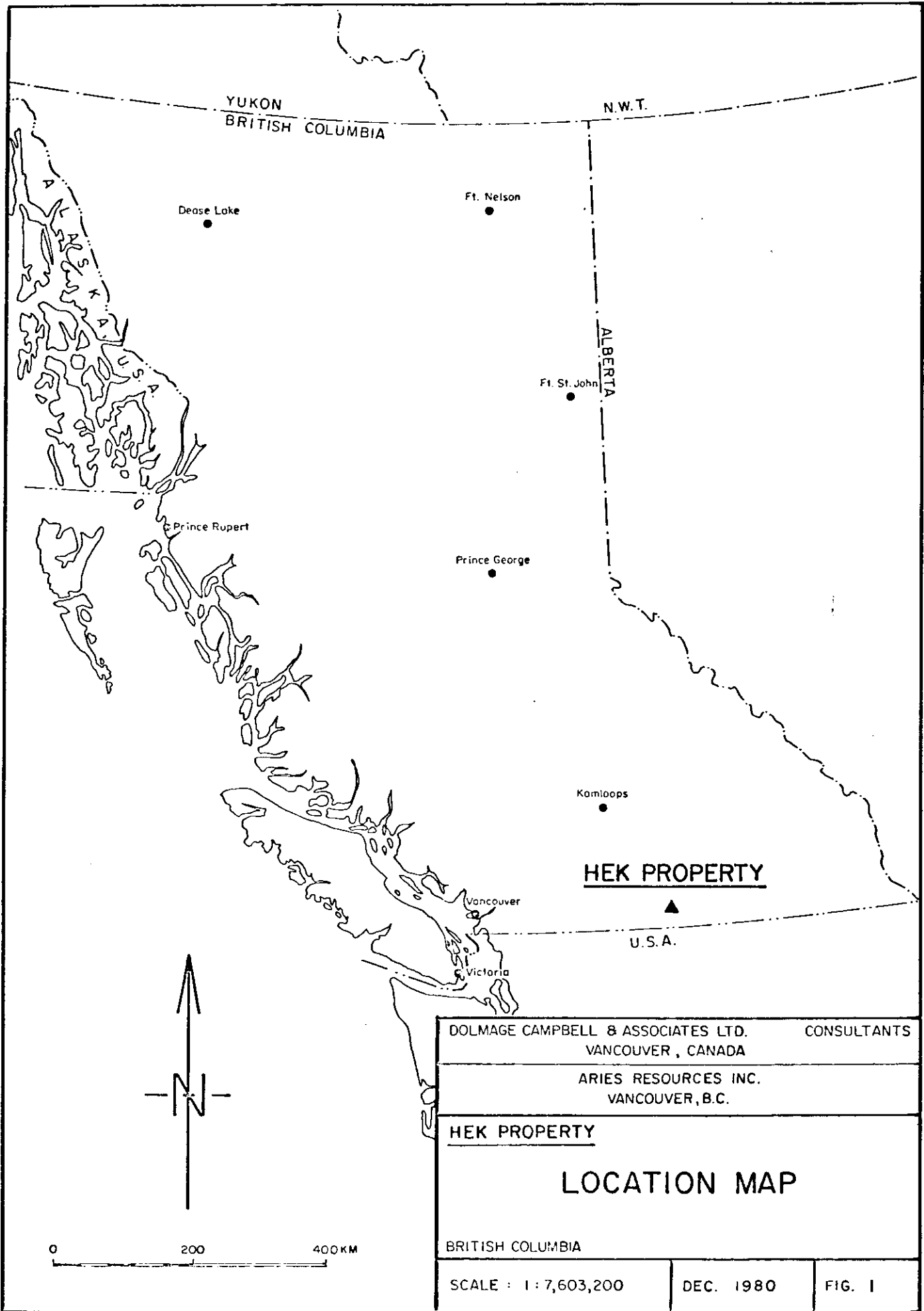
<u>Claim</u>	<u>Units</u>	<u>Record No.</u>
Hek	9	159(11)
He11	16	211(2)
	<u>25</u>	

HISTORY

The earliest record of the property dates back to 1901. Over the years a number of open cuts and pits were dug to expose gold-bearing massive sulphides. In 1939, 330 tonnes (364 tons) assaying 24.34 gms/tonne (0.71 oz./ton) gold and 8.57 gms/tonne (0.25 oz./ton) silver were mined from what is known as the Simpson-Zucco mine. A total of 213 metres (700 feet) of drifting and cross-cutting were driven in an attempt to extend this zone but without success.

Between 1966 and 1969, a varied exploration program, including the drilling of six core holes, was carried out by Bryell Mines Ltd.; the results of this work are poorly documented.

The property was acquired in 1975 by Consolidated Boundary Exploration Ltd. and since then, intermittent exploration work, which included the drilling of 11 core holes, has been done. In February, 1980 the property was optioned by Aries Resources Inc.



WORK DONE - 1980

In 1980, an exploration program was undertaken by Aries Resources Inc. with a view to assessing the potential of the Hek mineral showings in light of recent, higher gold prices. The entire property (625 ha) was geologically mapped at a scale of 1:5000; a smaller area (23 ha) on Hek 1 and 2 claim units was mapped in more detail at 1:500 scale. On this latter area, a grid totalling over five kilometres was established and, besides the geological mapping, magnetometer and VLF-EM surveys were conducted. Magnetometer follow-up (anomaly tracing) was done over the showings and all mineralized exposures were sampled.

The work was conducted as part of a larger exploration project in the Boundary area and, consequently, was done in somewhat intermittent fashion during the 1980 exploration fieldseason.

The numbers applicable to each type of work done are listed below:

Topographic survey - contour map at a scale of 1:5000 for the entire property made from air photo coverage - 625+ ha

Location survey - stadia survey of drill hole collars - 1.6 km

Flagged grid - for geological and geophysical control - 5.4 km

Geological mapping - 1:5000 - 625+ ha
1:500 - 23 ha

Magnetometer survey - 5.4 km

VLF - Electromagnetic survey - 5.4 km

Rock samples collected and assayed - 20

The work was conducted, initially by J.L. Rotzien, P.Eng. and later by G.M. Keyte under the direction of C.R. Saunders, P.Eng. Field assistance for establishing the grid, doing the geophysical and location surveys, and generally assisting the project geologist was provided by D. Hairsine and I. Wiebe.

PROPERTY GEOLOGY

On initial examination, the rock types on the Hek property appear to be complex and to occur in heterogeneous fashion. However, a semblance of order emerges when they are grouped into three major units that are based on suspected genetic relationships. The units are:

- Unit 1 - sedimentary rocks, volcanics and related intrusives of the Anarchist Group.
- Unit 2 - medium grained monzonite and diorite of the Coryell Intrusives.
- Unit 3 - coarse grained syenite, granite and lamprophyre of the Coryell Intrusions.

Unit 1 is the oldest of the three; the age relationship's between Unit 2 and Unit 3 are not clear. The geological mapping is shown on Figures 3 and 4.

UNIT 1

This unit underlies only a small part of the map area, occupying small pockets between the Coryell intrusive rocks. In order of abundance the rocks of this unit are: andesite (which is often pyritic), altered diorite, chert, rhyolite and trachyte. The andesites are very fine grained and often contain small white feldspar and pale green epidote phenocrysts. The diorites are very similar in appearance but are medium grained; their appearance suggests a common origin with the andesites. They display strong chlorite-epidote alteration. The cherts are very finely bedded, sometimes argillaceous and in places lightly pyritic. They have a uniform orientation of 140° to 160° , dipping steeply to the east. The rhyolite and trachyte are very fine grained pale green rocks. The trachyte contains white porphyritic feldspars.

The andesites contain an unusual amount (5-10%) of pyrite and pyrrhotite. These sulphides could be volcanogenic in origin, or they may be derived from the intrusive rocks by hydrothermal processes.

UNIT 2

This unit underlies 90% of the map area. It is a uniform medium grained hornblende biotite monzonite. There is some variation in the colour of the feldspar groundmass from white to pale pink to buff. In a

few outcrops, porphyritic white or pale green feldspars occur in a pale pink or buff groundmass. It is assumed that the pink feldspars are orthoclase and the white or pale green are albite. If this assumption is correct, these outcrops give an orthoclase to plagioclase ratio of 2:1.

In some outcrops the mafic content is sufficiently high to call the rock a diorite.

UNIT 3

This unit underlies only a few percent of the property, but it underlies most of the area of the grid where the showings occur and thus it is concluded that the mineralization is associated with the rocks of this unit.

The main rock type is a coarse augite syenite that occasionally contains muscovite and 2-3% quartz. The other rocks in the unit are granite, lamprophyre, quartz syenite and alaskite. These rocks show a close spacial relationship with each other. The quartz syenite, granite and alaskite are similar to the syenite except for the greater quartz content. The lamprophyre is quite variable, usually it consists of porphyritic white feldspars in a groundmass of biotite (about 30% of the rock) with minor quartz, but in places it is very silicic with more than 50% quartz. The Main Showing consists of 25-50% pyrrhotite with minor pyrite in lamprophyre.

MINERALIZATION

Two types of mineralization occur on the property. At the Main Showing, pyrrhotite and minor pyrite occur in semi-massive to disseminated forms in lamprophyre. The sulphide content varies from 50% down to 2 to 3%. The lamprophyre in which the sulphide occurs is quartz rich (10-15%) with minor feldspar in a biotite groundmass.

The average of three gold assays from the semi-massive sulphide zone is 4.11 gms/tonne (0.12 oz./t) gold and 15.1 gms/tonne (0.44 oz./t) silver. This zone has a strike length of 60 metres and a width of at least 3 metres. There is little possibilities that the lamprophyre, in which the sulphides and gold occur has any considerable strike length.

The second type of mineralization, and it is very common, is pyrite and pyrrhotite disseminated in andesite. Usually the total sulphides comprise 5-10% of the rock. A small pod of this material was mined at the Simpson-Zucco adits; 330 tonnes averaging 24.34 gms/tonne (0.71 oz./ton) gold and 8.57 gms/tonne (0.25 oz./ton) silver were shipped. Elsewhere, no significant gold or silver values are associated with this type of mineralization. The andesites are erratically distributed and very limited in extent and thus do not constitute a potentially mineable resource.

Assay results are plotted on Figures 3 and 4; a copy of the assay certificate is appended.

GEOPHYSICAL SURVEYS

Magnetometer and electromagnetic surveys were conducted only over that part of the property on which sulphide mineralization was known to occur. A grid was established with a 1600 m baseline and a total of 5400 m of survey lines, (Figs. 3-7). The grid was also used for control of detailed geological mapping.

MAGNETOMETER SURVEY

The magnetometer survey was done with a Scintrex MP-2 Portable Proton Precession Magnetometer, measuring total field. The base line was used as a check and any diurnal variation greater than 20 gammas was corrected. Results are shown on Figures 5 and 6.

The survey gave a -3000 gamma anomaly over the Main Showing and a small anomaly (+400 gammas) over showing No. 2. However, no continuity was found to these anomalies nor could any useful interpretation be made of any other anomalies located by the survey.

ELECTROMAGNETIC SURVEY

A V.L.F. electromagnetic survey was conducted over the grid with an EM 16 unit using Seattle, Washington as the transmitting station. Tilt angle and quadrature were measured. A good cross-over was obtained over the Main Showing and a small cross-over was found over No. 2 Showing. Unfortunately these anomalies could not be extended, suggesting that the mineral showings are of limited length.

The results are shown on Figure 7.

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CONCLUSIONS

The presence of gold and silver in association with pyrite and pyrrhotite has been demonstrated on the Hek property. The values of gold and silver are generally quite low (less than 3 gms/tonne for gold); unless in very large quantities they are not economic under present conditions.

The extent of the mineralized bodies has been found by geology and geophysics to be quite limited. At best they are only a few metres or tens-of-metres in maximum dimension.

It is concluded from the above-noted combination of low grade and small mineralized bodies, that the potential for an economic gold-silver deposit on the Hek property is quite low.

Respectfully submitted,

DOLMAGE CAMPBELL & ASSOCIATES (1975) LTD.



C.R. Saunders, P.Eng.



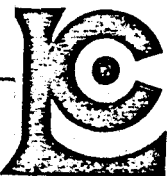
G.M. Keyte

APPENDIX No. I

ASSAY CERTIFICATE

AND

SAMPLE RECORD



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : DoImage Campbell & Associates Ltd.,
Ste. 1000 - 1055 W. Hastings St.,
Vancouver, B.C.
V6E 2E9

CERT. # : A8011049-001-
INVOICE # : 41036
DATE : 09-DEC-80
P.C. # : NONE

Sample description	Prep code	Cu percent	Ni percent	Ag oz/t	Au oz/t		
5931	207	--	--	0.12	<0.003	--	--
6932	207	--	--	0.10	0.003	--	--
6933	207	--	--	0.08	<0.003	--	--
6934	207	--	--	0.49	0.086	--	--
6935	207	--	--	0.65	0.186	--	--
5936	207	--	--	0.17	0.093	--	--
6937	207	--	--	0.09	0.024	--	--
6938	207	--	--	0.14	0.026	--	--
6939	207	--	--	0.33	0.005	--	--
6940	207	--	--	0.10	<0.003	--	--
6941	207	--	--	0.02	<0.003	--	--
6942	207	--	--	0.75	0.068	--	--
6943	207	--	--	0.02	0.003	--	--
6944	207	--	--	0.04	<0.003	--	--
6945	207	--	--	0.06	<0.003	--	--
6946	207	--	--	0.07	<0.003	--	--
6947	207	--	--	0.22	0.005	--	--
6948	207	--	--	0.14	0.003	--	--
6949	207	--	--	0.20	<0.003	--	--
6950	207	--	--	0.22	<0.003	--	--

[Signature]

.....
Registered Assayer, Province of British Columbia



SAMPLE RECORD - DOLMAGE CAMPBELL & ASSOCIATES LTD.

DATE November, 1980 COMPANY ARIES RESOURCES INC. PROJECT HEK PROPERTY

SAMPLE NUMBER	TYPE	LOCATION	FROM	TO	DESCRIPTION	m →	SAMPLE WIDTH	TRUE WIDTH	(oz/ton) ASSAY		
									Au	Ag	
6931	Chip	Trench, No. 3 Area			Andesite, pyritized (5%)		2		<.003	.12	
32	✓	Stripping, No. 3 Area			✓, rusty (5% pyrite)		4		.003	.10	
33	✓	Pit, No. 3 Area			✓, pyrite + pyrrhotite (5%)		1		<.003	.08	
34	✓	3+50E, 0+75N			Massive pyrite and pyrrhotite		2		.086	.49	
35	•	3+75E, 0+85N			✓ pyrrhotite with quartz		3		.186	.65	
36	✓	4+00E, 0+80N			Lamprophyre, 50% sulphides		2		.088	.17	
37	✓	✓, 0+95N			Lamprophyre, 5-10% pyrrhotite		1		.024	.09	
38	✓	5+25E, 0+85N			Andesite, 5-10% pyrite		2		.026	.14	
39	✓	5+75E, 0+65N			Andesite, 25% pyrite		2		.005	.33	
6940	✓	Quartz vein, south end			Quartz, some coarse pyrite		0.5		<.003	.10	
41	✓	✓, ✓, middle			✓, ✓, ✓		1		<.003	.02	
42	✓	1+10E, 0+35N			Andesite, pyritic (25%)		0.5		.068	.75	
43	✓	3+40E, 1+70N			Lamprophyre, pyritized		0.5		.003	.02	
44	✓	3+10E, 1+90N			Andesite, pyritic (5%)		3		<.003	.04	
45	✓	2+40E, ✓			✓, silicified, pyritic		1		<.003	.06	
46	✓	1+90E, 1+60N			✓, pyritic		2		<.003	.07	
47	✓	5+00E, 1+00N			✓, ✓		3		.005	.22	
48	✓	5+30E, 1+20N			✓, ✓ + lamprophyre		1		.003	.14	
49	✓	✓, 1+50N			✓, ✓		0.5		<.003	.22	
6950	✓	6+10E, 2+30N			✓, ✓		3		<.003	.22	

COMPANY ARIES RESOURCES INC. PROJECT HEK PROPERTY

APPENDIX No. II

QUALIFICATIONS

OF

G.M. KEYTE

STATEMENT OF QUALIFICATIONS

GEOFFREY M. KEYTE

Citizenship - Canadian

Education - Bachelor of Science (Geology), Imperial College, London, England, 1969.

Experience - Field and project geologist for a number of companies, mostly in British Columbia; a partial listing follows:

1968 (Student) - Patino Mining Company, Spain; massive sulphides.

1969-1971 - Teacher, Malawi, Central Africa.

1973 - John S. Vincent Ltd., B.C.; nickel exploration.

1974 - Atled Exploration, B.C., work on gold, copper, lead-zinc properties.

1975 - Serem Ltd., N.W.T.; lead-zinc properties.

1977 - Teck Corp. Ltd., B.C.; coal.

1978-1979 - Tournigan Mining Explorations Ltd., B.C.; work on several properties, gold-silver vein type, volcanogenic copper; also lead, zinc, barite.

1979 - Dolmage Campbell & Assoc. Ltd., B.C.; coal.

APPENDIX No. III

STATEMENT OF COSTS

STATEMENT OF COSTS - MARCH-DECEMBER, 1980WAGES

J. Rotzien - Geological Eng.	5 1/2 days @ \$225./day	\$1,237.50	
G. Keyte - Geologist	13 1/2 days @ \$225./day	3,037.50	
I. Wiebe - Helper	4 1/2 days @ \$ 80./day	360.00	
D. Hairsine - Helper	7 days @ \$ 75./day	<u>525.00</u>	\$ 5,100.

MAINTENANCE

22 man days @ \$36./man day		<u>792.00</u>	700.
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TRANSPORTATION

Blazer - 1 month @ \$338./month		338.00	
4 x 4 for 2 weeks @ \$275./week		<u>550.00</u>	800.

ASSAYING

20 samples for Au, Ag @ \$8.55		<u>171.00</u>	100.
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TOPOGRAPHIC MAP

Compiled from airphotos (McElhanney Surveying)		<u>1,150.00</u>	1,100.
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EQUIPMENT

Transit Rental - 1 week @ \$125./week		125.00	
Magnetometer - 2 weeks @ \$125./week		<u>250.00</u>	300.

SUPERVISION

C.R. Saunders, P.Eng. - 3 days @ \$300.		<u>900.00</u>	900.
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REPORT

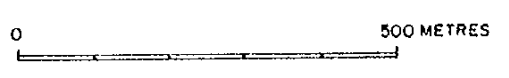
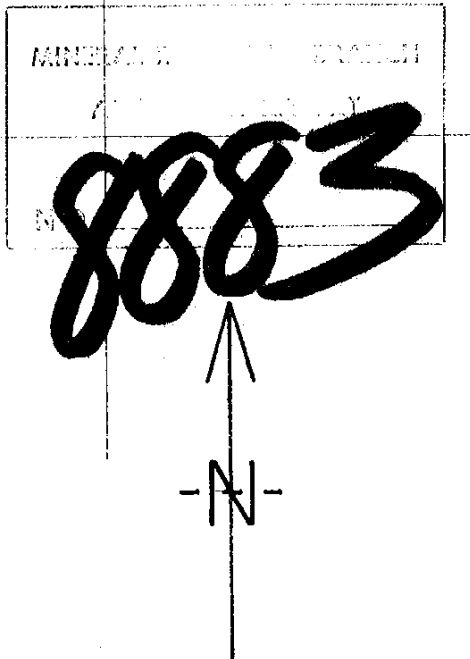
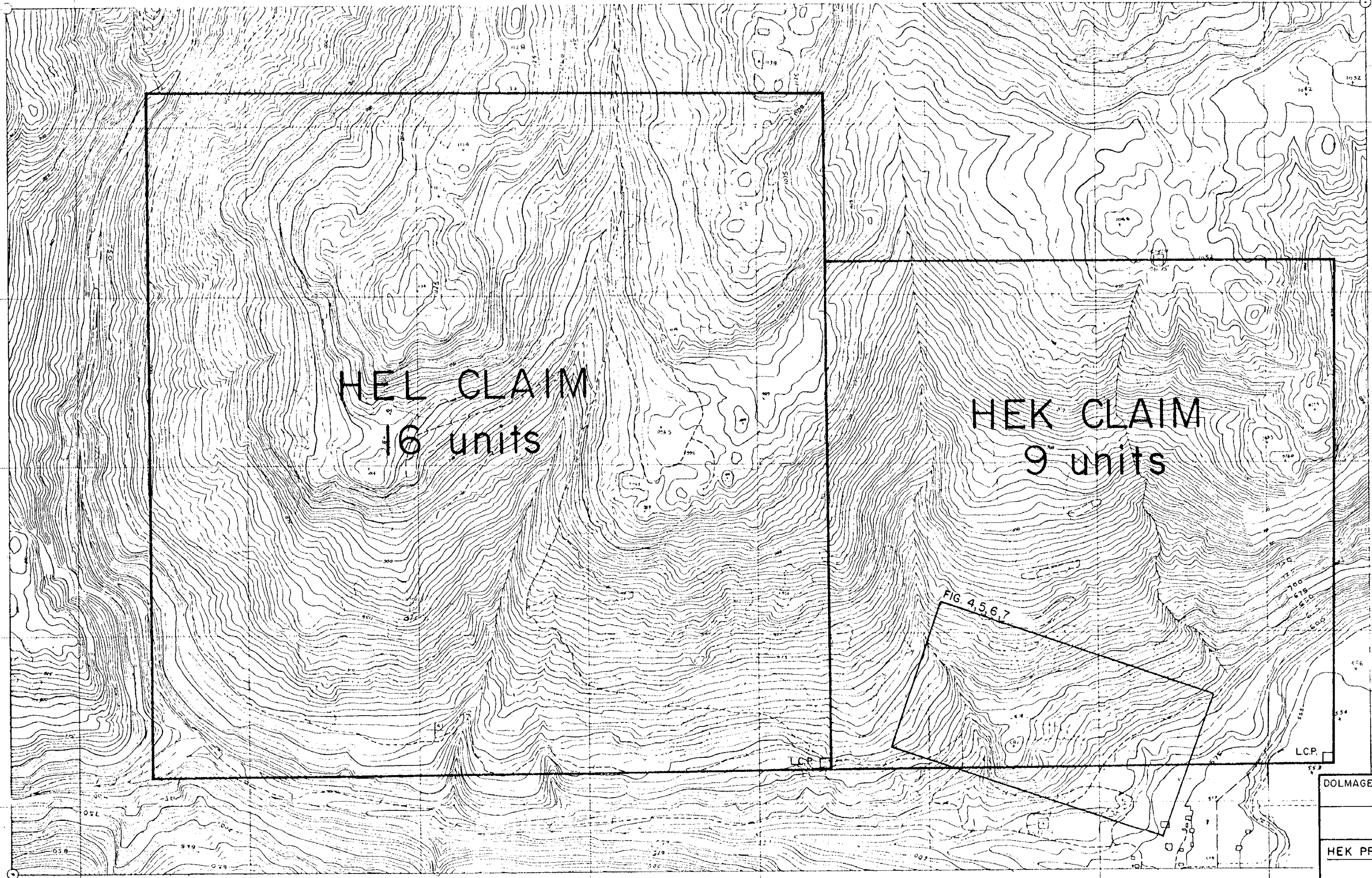
Writing, data compilation, draughting, typing, reproductions etc.			2,100.
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ADMINISTRATION

8% of other costs		<u>888.00</u>	<u>800.</u>
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TOTAL PROJECT COST			<u><u>\$11,900.</u></u>
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Note: All cost subtotals rounded down to nearest \$100.



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VANCOUVER, CANADA

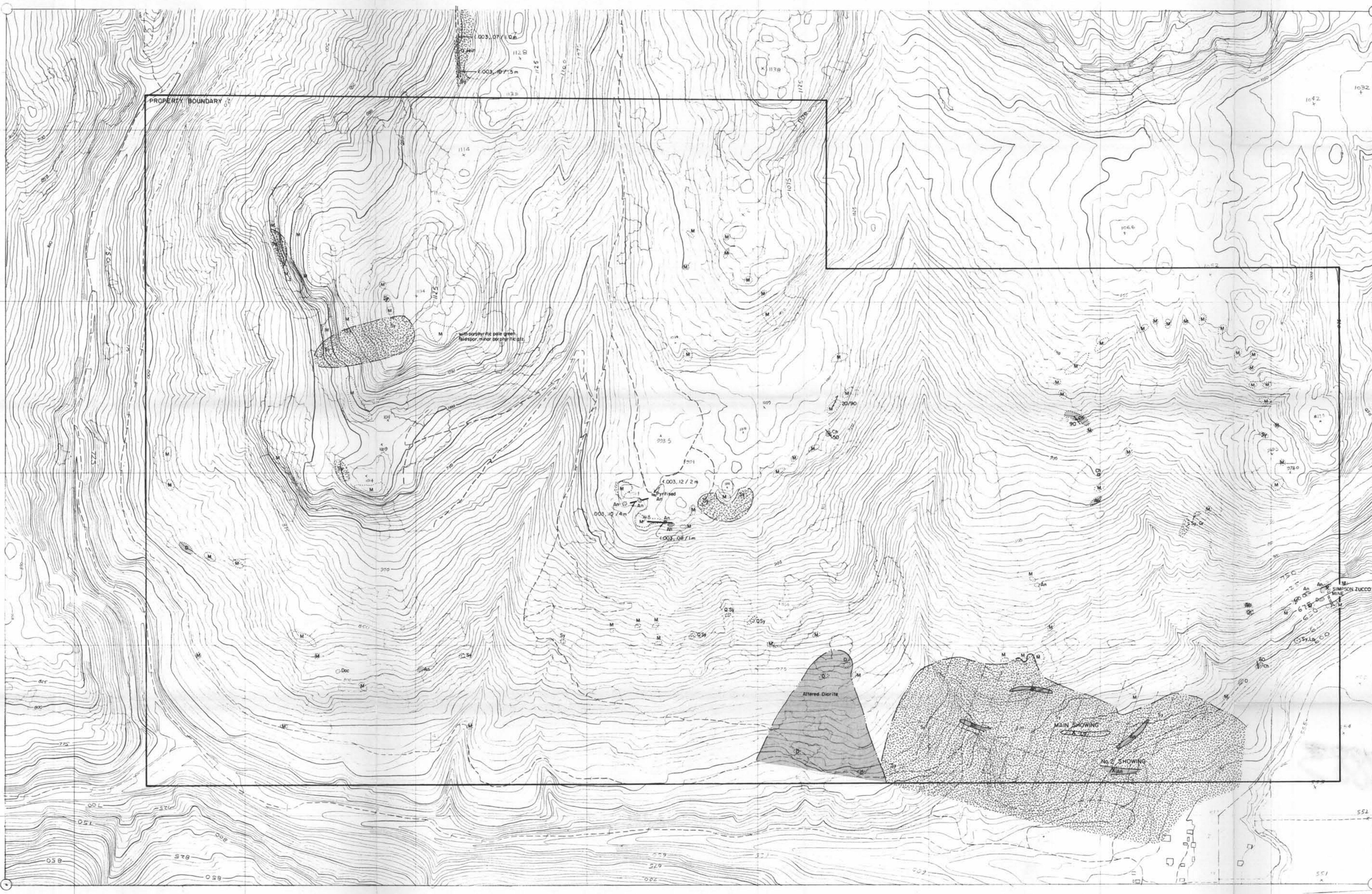
ARIES RESOURCES INC.
VANCOUVER, B.C.

HEK PROPERTY

INDEX & CLAIM MAP

SCALE 1:10,000 DEC. 1980 FIG. 2

S 452 000 N
S 451 500 N
S 451 000 N
S 450 500 N
S 450 000 N
S 449 500 N
S 449 000 N



LEGEND

- UNIT 1: An Andesite
 - D Diorite
 - Ch Chert
 - UNIT 2: M Monzonite
 - UNIT 3: Sy Syenite
 - QSy Quartz Syenite
 - A Alaskite
 - Gr Granite
 - La Lamprophyre
-
- Adit
 - Pit
 - Outcrop
 - Geological contact
 - Jointing attitude
 - Bedding
 - Magnetic anomalies
 - Mineral showing
 - X Au (oz/ton), Ag (oz/ton) / Length in metres
 - + Grid line

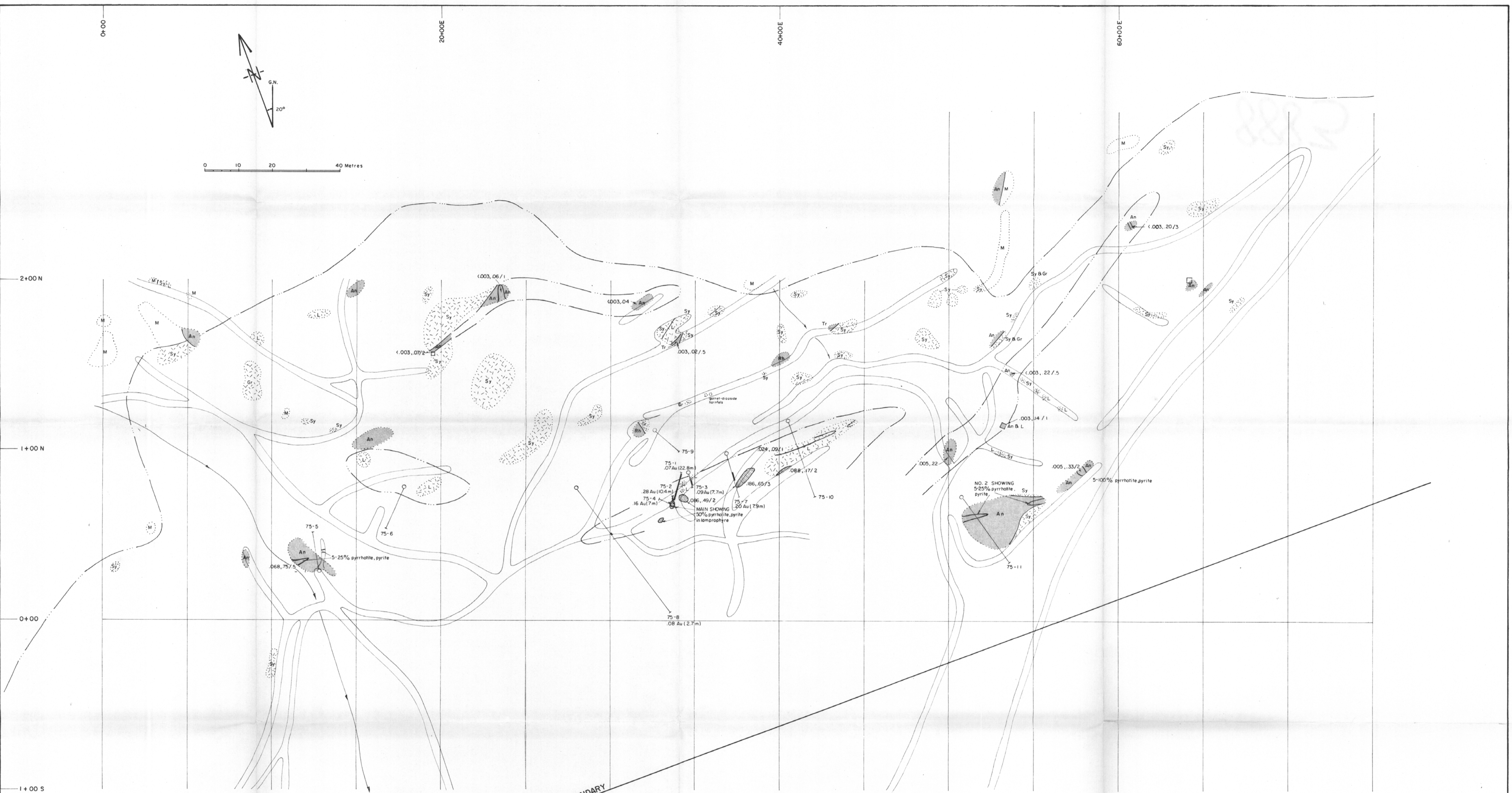


Scale and elevation datum based on limited ground control resulting in good relative, but uncertain absolute, map accuracy. Comp'd from aerial photography at an approximate scale of 1:50,000. Drawn in 1979.

MINERAL RESOURCES BRANCH
PROPERTY REPORT
8883

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS	
VANCOUVER, CANADA	
ARIES RESOURCES INC.	
VANCOUVER, B.C.	
HEK PROPERTY	
PROPERTY GEOLOGY	
SCALE 1:5000	DEC. 1980
	FIG. 3

300 000 E
310 000 E
320 000 E
330 000 E
340 000 E
350 000 E
360 000 E
370 000 E
380 000 E
390 000 E



LEGEND

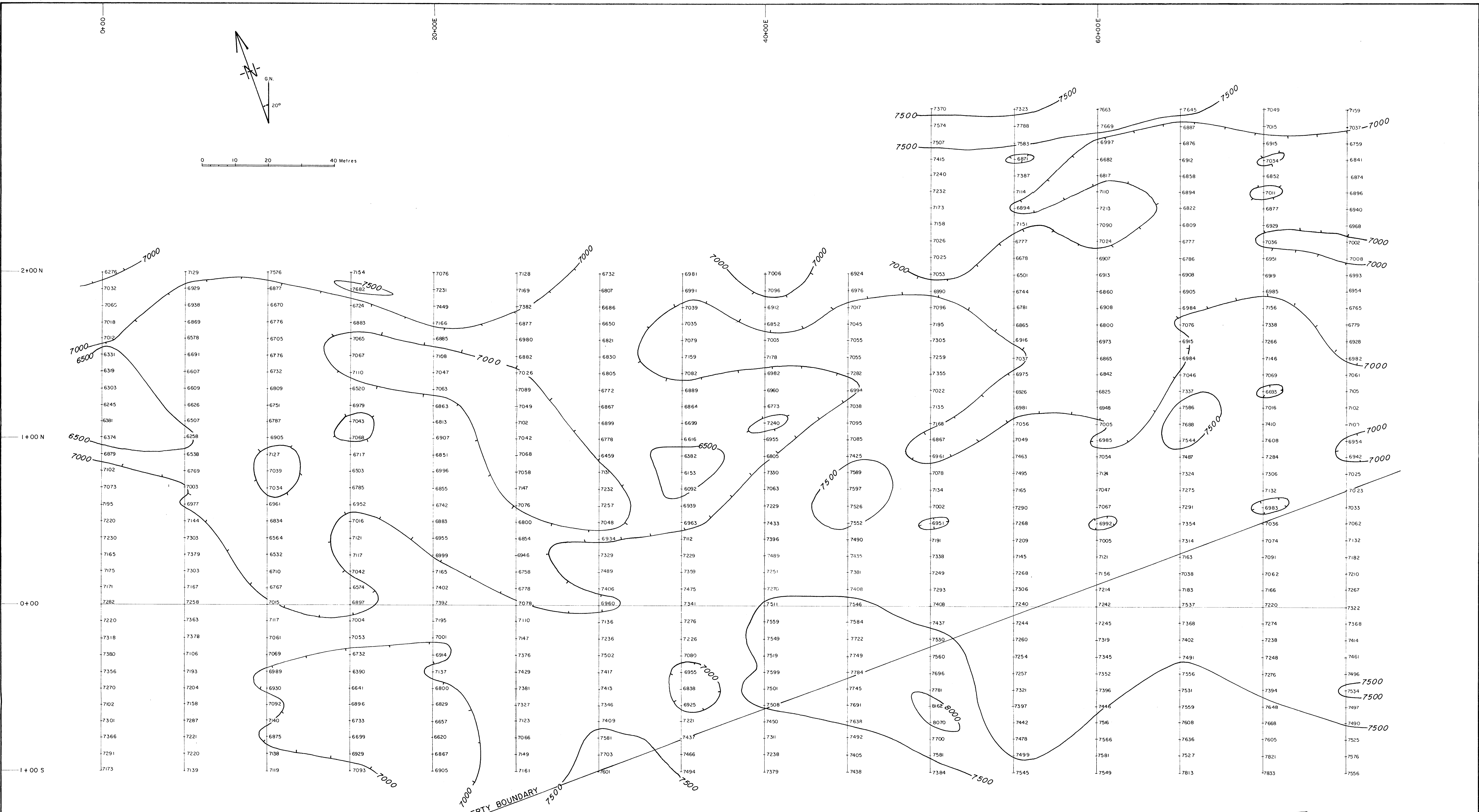
- UNIT 1
 - An Andesite
 - Rh Rhyolite
 - Tr Trachyte
- UNIT 2
 - M Monzonite
- UNIT 3
 - Sy Syenite
 - Gr Granite
 - A Alaskite
 - L Lamprophyre

- CUT, ROAD
- PIT
- DIAMOND DRILL HOLE
- OUTCROP
- GEOLOGICAL CONTACT
- MINERALIZED ZONE

005, 33/2 Au (oz/ton), Ag (oz/ton) / length in metres

MINERAL RESOURCES BRANCH
 REPORT
8883

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS VANCOUVER, CANADA	
ARIES RESOURCES INC. VANCOUVER, B. C.	
HEK PROPERTY	
DETAILED GEOLOGY	
SCALE 1:1000	DEC. 1980 FIG. 4

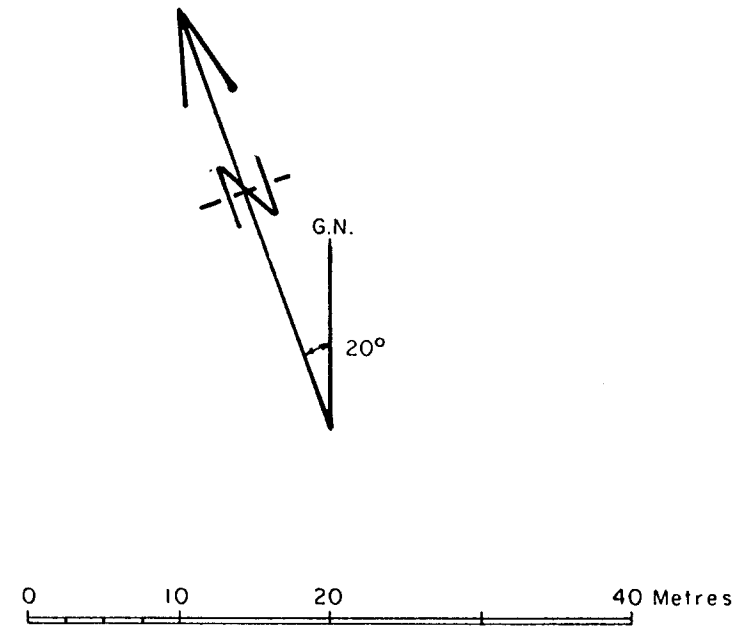


TOTAL FIELD IN EXCESS OF 50,000 G

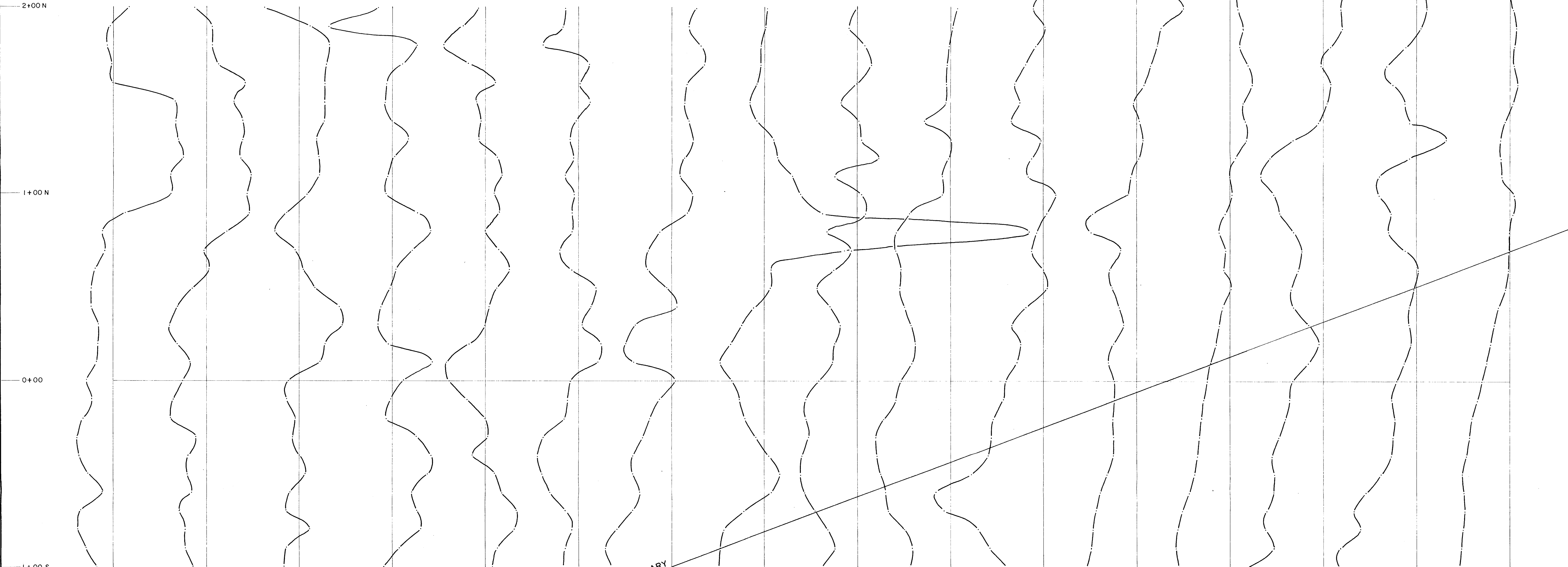
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8883

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS VANCOUVER, CANADA	
ARIES RESOURCES INC. VANCOUVER, B.C.	
HEK PROPERTY	
MAGNETOMETER SURVEY	
SCALE 1:1000	DEC. 1980
FIG. 5	

0+00 20+00E 40+00E 60+00E



Gammas
57,600
57,400
57,200
57,000
56,800
56,600
56,400



PROPERTY BOUNDARY

MINERAL RESOURCES BRANCH
8883

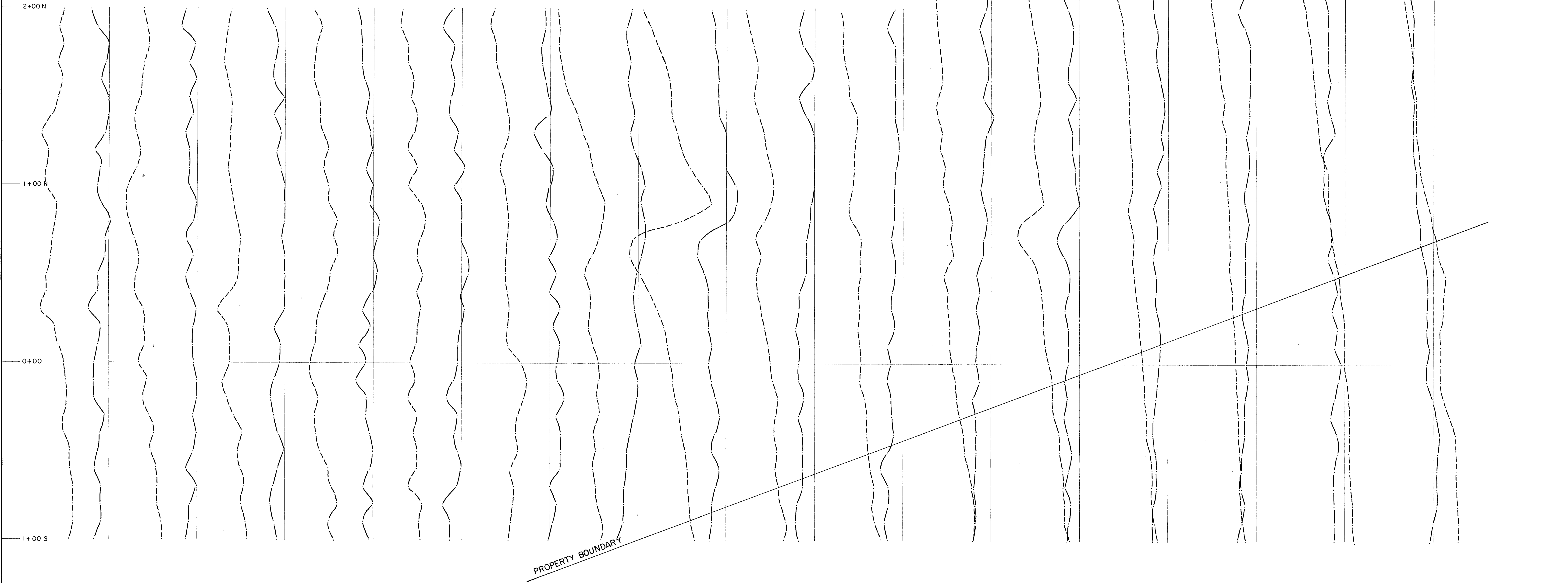
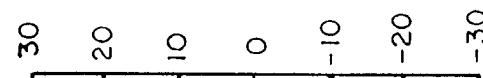
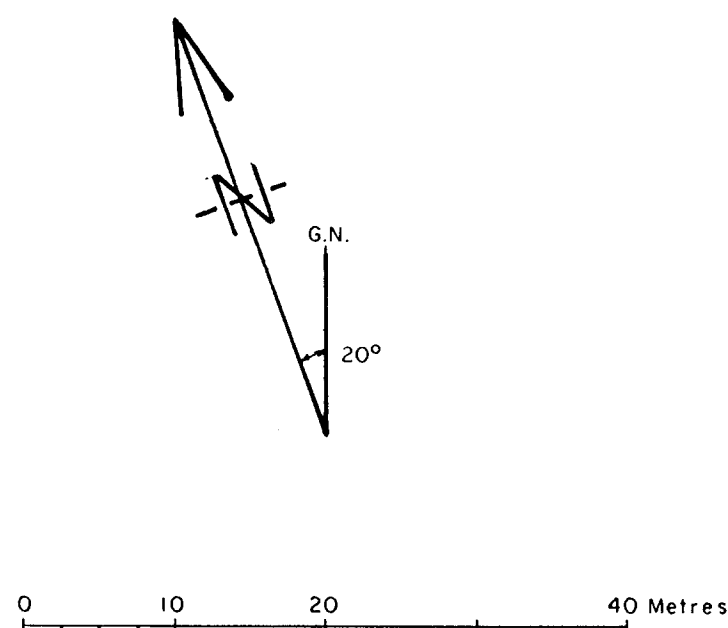
DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS VANCOUVER, CANADA	
ARIES RESOURCES INC. VANCOUVER, B.C.	
HEK PROPERTY	
MAGNETOMETER PROFILES	
SCALE 1:1000	DEC. 1980 FIG. 6

0+00

20+00E

40+00E

60+00E



LEGEND

- - - TILT ANGLE, %
- QUADRATURE

MINERAL RESOURCES BRANCH
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DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS VANCOUVER, CANADA	
ARIES RESOURCES INC. VANCOUVER, B.C.	
HEK PROPERTY	
ELECTROMAGNETIC PROFILES	
SCALE 1:1000	DEC. 1980 FIG. 7