

83-#301 - 11608

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,608

ASSESSMENT REPORT
DOUGLAS PINE GROUP

VANCOUVER MINING DIVISION

NTS 92K/6
BRITISH COLUMBIA

OPERATOR: AMALGAMATED MINING & DEVELOPMENT CORP. LTD.

BY VIRGINIA KURAN, GEOLOGIST

JUNE 24, 1983

TABLE OF CONTENTS

	PAGE
List of Figures	ii
List of Appendices	ii
Statement of Expenditures	iii
1.0 Introduction	1
2.0 List of Claims	1
3.0 Location and Access	1
4.0 Physiography and Vegetation	1
5.0 History	4
6.0 Regional Geology	4
7.0 Property Geology	4
8.0 Underground Geology	4
9.0 Geochemistry and Assays	6
9.1 Soil Geochemistry	6
9.1.1. Introduction	6
9.1.2. Evaluations	6
9.2 Rock Geochemistry and Assays	7
9.2.1. Introduction	7
9.2.2. Evaluations	7
10.0 Geophysical Surveys	7
10.1 Magnetometer Survey	7
10.1.1. Introduction	7
10.1.2. Evaluations	7
10.2 VLF EM-16 Survey	8
10.2.1. Introduction	8
10.2.2. Evaluations	8
11.0 Discussion and Conclusions	8
12.0 Recommendations	9

LIST OF FIGURES

FIGURE	TITLE
1	Claim Map
2	Location Map
3	Regional Geology
4	Property Geology
5	Longitudinal Section of Douglas Pine Vein Workings
6	Soil Geochemistry - Copper, Silver, Gold, Rock Chip Geochemistry and Assays - Surface
7	Adit 285m el. Geology and Assays
8	Adit 305m el. Geology and Assays
9	Magnetometer Survey
10	EM - 16 Survey

LIST OF APPENDICES

Appendix 1	References
Appendix 2	Statement of Qualifications
Appendix 3a	Magnetometer Survey - Graphical Analysis of Daily Fluctuations of magnetometer readings
Appendix 3b	Graphical Presentation of Magnetometer Readings after corrections
Appendix 4a	EM - 16 Field Data & Reduction
Appendix 4b	Fraser Filter with Slope Incorporation EM - 16 Data

DOUGLAS PINE GROUP
STATEMENT OF EXPENDITURES
FIELD WORK
PERIOD MAY 23 - JUNE 14, 1983

1) Personal		
Virginia Kuran (geologist) 8 days @ 100/day	\$ 800.00	
Mike Price (geologist) 7 days @ 100/day	700.00	
Tom Huml (assistant) 8 days @ 58/day	464.00	
Ellen Webber (assistant) 14 days @ 40/day	<u>560.00</u>	
		\$ 2,524.00
2) Room & Board		
37 days @ \$25/day/man		925.00
3) Transportation		
Rental of Spartan III Boat		
20% of \$ 2,250.00		450.00
4) Geochemistry		
259 Soil geochemistry analyses @ 4.30/sample	1113.70	
17 Rock geochemistry analyses @ 6.20/sample	74.40	
10 Rock assays @19.50/sample	<u>195.00</u>	
		1383.10
5) Geophysics		
EM Rental	465.00	
Magnetometer Rental	<u>500.00</u>	
		965.00
6) Report Preparation		
V. Kuran (report writing) 3 days @ 100/day	300.00	
T. Huml (report drafting) 6 days @ 58/day	<u>348.00</u>	
		<u>648.00</u>
Total		<u>\$ 6,895.10</u>

1.0 Introduction

Between May 23 and June 14, 1983, an exploration program was carried out on the Douglas Pine Group on East Thurlow Island, B.C. The potential of the property for gold in quartz veins was explored by mapping, sampling and geophysics. Results of the program were disappointing and Amalgamated Mining and Development Corporation released their option on the property back to Queenstake Resources.

2.0 List of Claims

The Douglas Pine Group, located in the Vancouver Mining Division, consists of the following claims (Fig. 1):

Minerals Claims:

Spartan	Record No. 1203(6)	12 units
Crown Grants:	Lot No.	
Morning Star	L343	
Douglas Pine	L271	
Gold Exchange	L272	
Cone Fraction	L273	

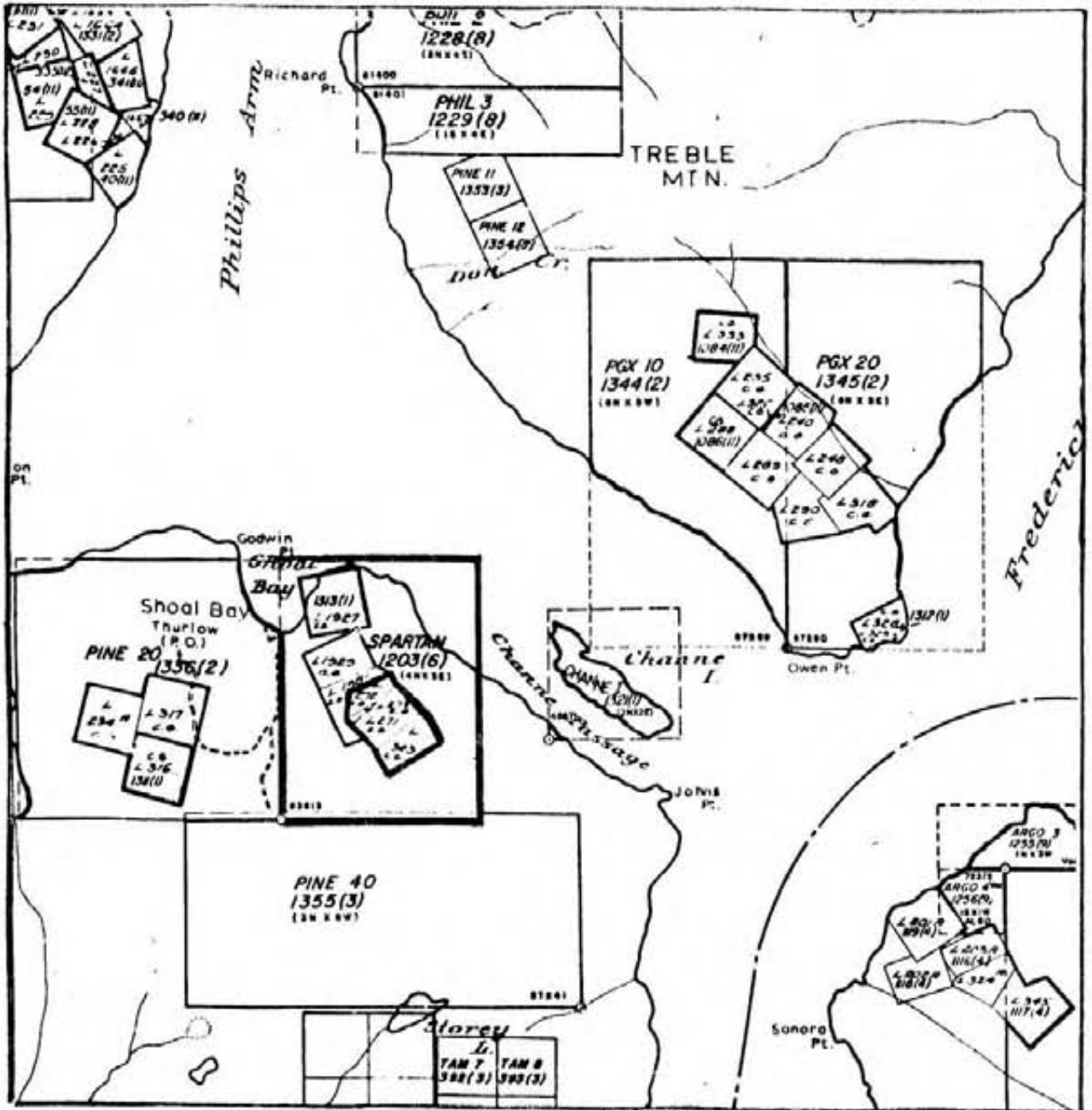
The Spartan claim was staked by Queenstake Resources in 1982. Queenstake optioned Lot 343 from Gemini Management Ltd. and Lot 271, L272 and 273 from Margaret Withington. These claims were grouped and optioned to Amalgamated Mining & Development Corp. Ltd. Amalgamated provided the financing for the 1983 exploration program and has dropped their option on the property as of July 1983.

3.0 Location and Access

The Douglas Pine Group is located on East Thurlow Island, British Columbia in the Vancouver Mining Division (latitude $50^{\circ}27'$, longitude $125^{\circ}22'$), approximately 45 km north of Campbell River (Fig. 2). Access to the property is by float plane via Campbell River or by water.

4.0 Physiography and Vegetation

Elevations range from 150 meters to 600 meters above sea level. Outcrops are exposed on moss covered rock bluffs along the northeastern section of the property. Vegetation consists of red cedar and Douglas pine with minor local underbrush of alder.



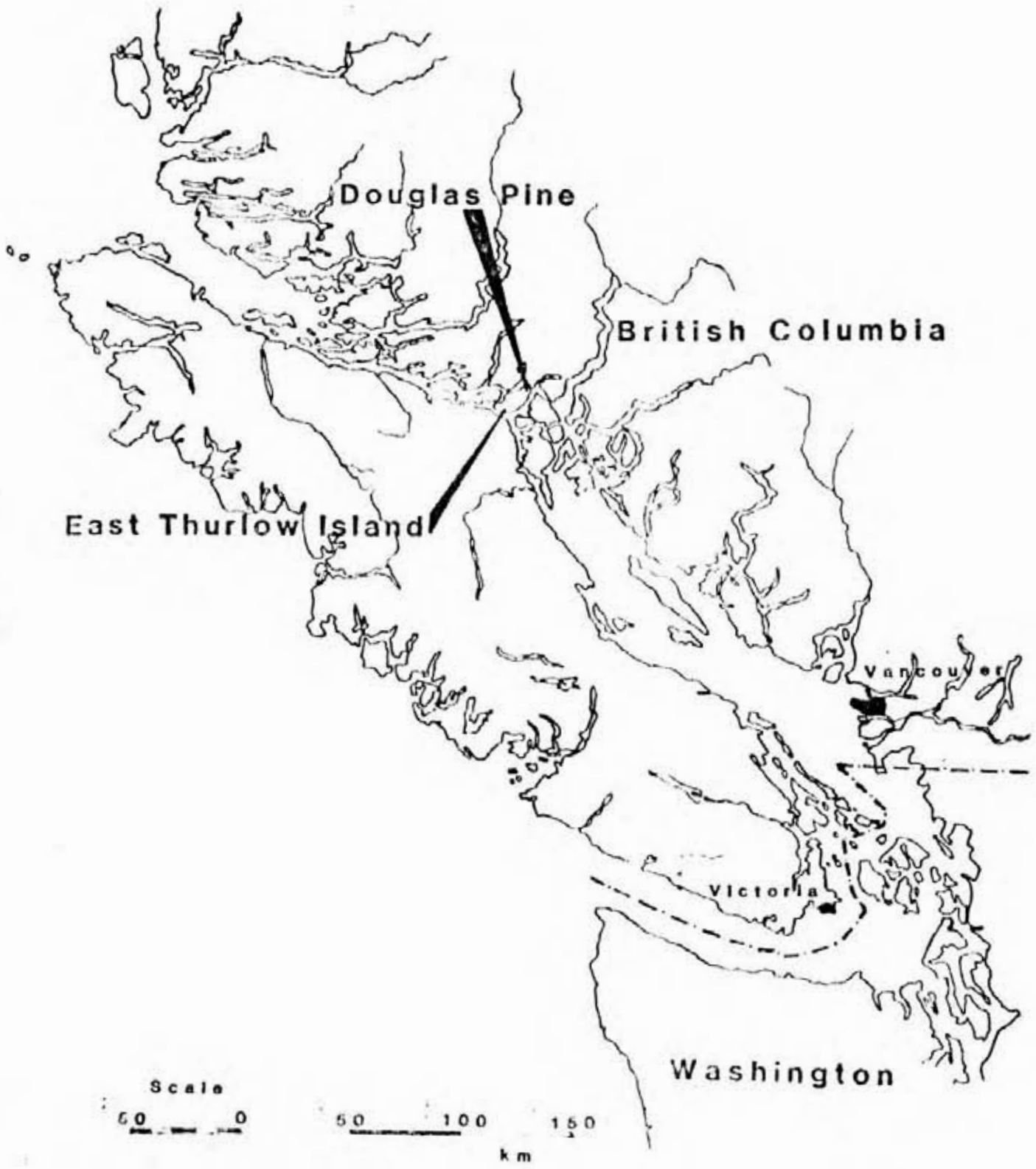
AMALGAMATED MINING & DEVELOPMENT CORPORATION

DUGLAS PINE GROUP
CLAIM MAP
N.T.S. 02016

1271, 1271
1271, 1271

FIG. 1

Fig. 2. Property Location Map



5.0 History

The original crown grants in the Douglas Pine Group were staked in the late 1890's and sporadic work continued on the claims until the late 1930's. Between 1938 and 1940, 340 tons were mined which reportedly ran .63 oz. gold and .98 oz. silver per ton. After 1940 the mine lay dormant. In 1982 Queenstake Resources conducted a brief program on the crown grants. Several of the old workings were located and one dump sample assayed 3.9 oz. gold and one underground sample assayed 1.0 oz. gold from the 285 m el adit. Based on these preliminary results, Amalgamated optioned the Douglas Pine Group.

6.0 Regional Geology

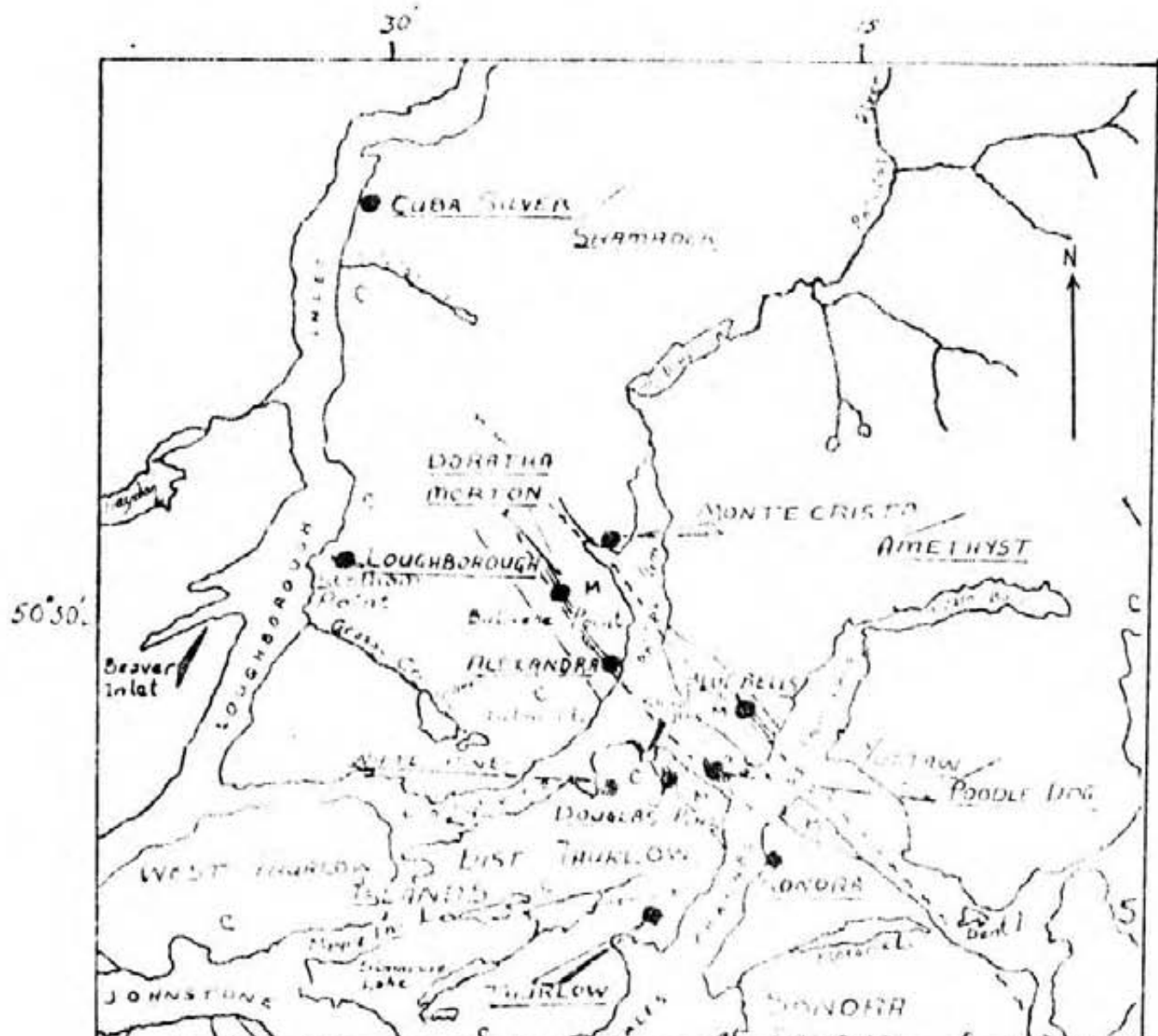
The Douglas Pine Group is situated in metamorphic rocks of possible Paleozoic age. These rocks form an elongated roof pendant within coast Plutonic Complex intrusives of late Jurassic to Cretaceous age (Fig. 3).

7.0 Property Geology

Four geological units have been mapped on the Douglas Pine Group (Fig. 4). The three oldest units are part of a Paleozoic roof pendant. Unit MS, the oldest unit on the property, consists of aphanatic, pale green metasediments which have been locally weakly foliated. These sediments have been intruded by a medium to coarse crystalline, dark grey feldspar porphyry, Unit FP. The third oldest unit appears to be a finer crystalline phase of Unit FP and occurs as a dark grey, fine crystalline diabase which is often chloritized and is locally pyritic, Unit Di. The roof pendant that these units form is located within a coarse grained felsic intrusive of Mesozoic age which averages a granodiorite in composition.

8.0 Underground Geology

The Douglas Pine vein was mined from four levels which are referred to as the 270m el. adit, 285m el. adit, 305m el. adit and 330m el. adit (Fig. 5) Mapping of the accessible levels 285m el., 305m el. and 330m el. indicates the vein varies from 0.5 to 2.0 meters in width. The vein contains variable amounts of pyrite, minor chalcopyrite, pyrrhotite and malachite. Wall rocks in the workings consist of diabase. In level 330m el. the vein is abruptly faulted off along strike. The 270m el. adit portal was caved and dump material from the adit appeared to be mostly waste. Mapping of the accessible adits indicated that an ore chute of approximately 30m in strike length in the 285m el. adit and 15m strike length in the 305m el. was mined extensively.



REGIONAL GEOLOGY Fig. 3

LEGEND

- JURASSIC TO TERTIARY
- [Symbol] COAST MOUNTAINS INTRUSIVES
- [Symbol] METASEDIMENTS & METAVOLCANICS
- TRIASSIC
- [Symbol] LIMESTONE (QUATSINO, MARBLE BAY)
- [Symbol] VOLCANICS (ARMUTSEN, TENADA)
- QUARTZ VEINS
- MAJOR FAULTS (V. JONES)

SCALE 1:250,000

9.0 Geochemistry and Assays

9.1 Soil Geochemistry

9.1.1 Introduction

During the 1983 program, a baseline of .95 km in length was cut parallel to the strike of the Douglas Pine vein at a bearing of 120°. Crosslines of up to 400 meters in length were run at 100 meter spacing. Stations were placed at 10 meter intervals and marked with flagging. Approximately 3.7km of line were established and a total of 259 samples were taken on 8 lines all located up slope from any known underground workings which might have contaminated the samples. Soil samples were taken where possible from a poorly developed B soil horizon at 15cm to 30cm depth. Samples were placed in Kraft envelopes, dried and sent to Chemex Laboratories in Vancouver.

Chemex dried the samples further if required when they arrived in Vancouver. The samples were then sieved through an ASTM 80 mesh screen. Ash from a 5 gram sample of this fraction was put into a hot aqua regia digest and then analyzed for gold by the atomic absorption method. One gram samples of the -80 mesh fraction were dissolved in perchloric nitric acid and analyzed by the atomic absorption method for copper and silver. A total of 259 samples were analyzed for copper, silver and gold.

9.1.2. Evaluations

Results of the geochemical survey were plotted on Fig. 6 and contoured. Several anomalous areas for copper were outlined, while only one area was outlined for silver and gold.

L1+00SE features copper values of between 50 and 99 ppm between stations 0+40NE and 0+90SW. L2+00E also contained a broad copper anomaly of between 50 and 99 ppm between stations 0+10NE and 0+70SW. These anomalies reflect the overall strike of the Douglas Pine vein system as outlined by geological mapping.

However, at L3+00SE an abrupt shift to the northeast occurs where the broad copper anomaly of 50-99 ppm is located between station 1+20NE and the baseline. Within the boundary of this anomaly, copper values between 100 and 375 ppm copper occur between stations 0+90NE and 0+20NE. These copper values are coincident with a gold anomaly of 100 ppb at station 0+60NE and a silver anomaly of .7 ppm between stations 1+30NE and 0+20NE. Geological mapping outlined quartz pods in the feldspar porphyry at station 0+70NE on L 3+00SE and these pods may be causing the anomalies.

L 4+00SE and L 5+00SE contain scattered copper anomalies of 50 to 99 ppm, while L 6+00SE exhibits an abrupt end to all copper anomalies. The geochemical survey for copper indicates that the Douglas Pine vein system does not have a strike extension to the southeast past L 5+00SE.

9.2 Rock Geochemistry and Assays

9.2.1. Introduction

A total of 18 rock chip samples were taken from underground workings on the Douglas Pine vein. One chip sample and three grab samples were collected from open cuts on surface.

9.2.2. Evaluations

Resampling of the 285m el. adit provided disappointing results. The average width of the eleven samples is 1.27 m with average assay values of .06% copper, .97 oz/ton silver and .06 oz/ton gold (Fig. 7). In the 305m el. adit, seven samples were taken. The average width of the samples is 74cm with average values of 4474 ppm copper (.45% copper), 16 ppm silver (.5 oz/Ag) and 3580 ppb gold (.11 oz/Au). Access to this level was obtained by building a log bridge across a large water filled winze (Fig. 8).

The values for the four rock grab samples are plotted on Fig. 4 with the geology. The best value obtained was 1200 ppb gold (.12 oz Au) from a trench 20 meters uphill from the 305m adit. The sample was taken from a pyritic quartz boulder.

10.0 Geophysical Surveys

10.1 Magnetometer Survey

10.1.1 Introduction

A total of 3.7 line kilometers of magnetometer survey was completed between L 1+00NW and L 8+00SE. Readings were taken at 10 meter intervals. Comparison readings were taken on the baseline each day of the survey at the start and end of each day to monitor daily fluctuations in magnetic readings. These readings were compared graphically and corrections were made whenever necessary. (Appendix 4). Corrected magnetometer readings were plotted and contoured (Fig. 9).

10.1.2. Evaluations

Results of the magnetic survey have not been found useful in outlining the strike extension of the Douglas Pine vein even though vein material commonly contains pyrrhotite mineralization. Magnetometer values over the old workings are generally less than 56,300 gammas, the lowest values encountered on the grid. High values averaging 56,600 gammas are associated with the diabase unit. The magnetic anomaly of greater than 57,000 gammas on L 6+00SE between stations 0+60SW and 1+00SW is the only

anomaly of real interest. This anomaly occurs in metasediments which generally had a much lower magnetic character over the rest of the grid.

10.2 VLF EM-16 Survey

10.2.1. Introduction

A total of 1.48 kilometers of very low frequency electromagnetic survey was completed between L 1+00NW and L 3+00SE. Readings were taken at 10 meter intervals. Seattle, Washington was used for the transmitting station. The VLF EM-16 dip angle data was corrected for topographic slope (Appendix 4A) and a Fraser Filter was applied to the corrected data (Appendix 4B). The data from the Fraser Filter process was plotted (Fig. 10) and the positive values were contoured according to the Fraser Filter method which outlined three specific conductors.

10.2.2. Evaluations

Conductor "A" runs parallel to the hypothetical extension of the strike of the Douglas Pine vein between L 1+00SE and L 3+00SE with a 20 meter offset to northeast. Mapping shows that the Douglas Pine vein generally dips northeast which agrees with where the EM-16 outlined the surface trace of the vein from 50 meters at depth. Conductor B occurs between L 1+00NW and L 3+00SE approximately centered at station 1+00SW. This conductor vaguely follows the contact between Unit GT and Unit FP. Conductor C occurs toward the southwest edge of the grid between L 1+00NW and 2+00SE and could not be related to the geology or mineralization. It is likely that the cliffs along this conductor still affect the data even with the slope correction.

11.0 Discussion and Conclusions.

Geological mapping on the property outlined four geological units: Unit MS - metasediments, Unit FP - feldspar porphyry, Unit D1 - diabase and Unit GT - granodiorite. Three of the four underground levels were examined and it was determined that the Douglas Pine vein strikes southeast dipping to the northeast and its width varies from 0.5 to 2.0 meters.

A coincident copper-silver-gold anomaly occurs on L 3+00SE on the northeast section of the line. Some quartz lenses were located at the center of this anomaly. Further prospecting is warranted here.

Rock Chip Sampling of the underground workings gave disappointing results. Level 285m el. averaged .06 oz Au and level 305m el. yielded .11 oz Au. These grades are not economic for an underground mining prospect.

Geophysical Surveys helped outline the extension of the Douglas Pine Vein system as well as geological contacts.

12.0 Recommendations

Due to the low gold values obtained in the underground workings and only a single soil gold anomaly of 100 ppb, it was recommended that Amalgamated Mining & Development Corp. Ltd. drop its' option on the Douglas Pine Group.

APPENDIX I

Price, M.

Exploration Proposal, Douglas Pine and White
Pine Properties, East Thurlow Island, B.C..
Private Report, 1983.

Fraser, D.C.

Contouring of VLF - EM Data Geophysics Vol.
XXXIV, No. 6, December 1969.

APPENDIX 2

Statement of Qualification

I, Virginia M. Kuran, of 1742 Pendrell Street, Vancouver, in the Province of British, DO HEREBY CERTIFY THAT:

1. I am a geologist contracted by Amalgamated Mining & Development Corp. Ltd. with offices at 611-900 West Hastings Street, Vancouver, B.C.
2. I am a graduate of the University of British Columbia with an Honors Bachelor of Science Degree in Geology.
3. My primary employment since graduating in 1980 has been in the field of mineral exploration, as a field geologist.
4. This report is based on field work which I actively participated in between May 23, 1983 and July 24, 1983.

Dated at Vancouver, British Columbia, this 7th day of July
1983.

Virginia Kuran

APPENDIX 4A

EM-16 FIELD DATA & REDUCTION

LINE: 1+00 NW

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+00	-15	+16	+31	-6
0+10 NE	-54	+22	+76	-10
0+20 NE	-5	+12	+17	-9
0+30 NE	-40	+8	+48	-10
0+40 NE	-51	+10	+61	-10
0+50 NE	-120	+15	+135	-10
0+60 NE	-130	+6	+136	-15
0+70 NE	-60	+8	+68	-10
0+80 NE	-70	+9	+79	-11
0+90 NE	-56	+9	+65	-10
1+00 NE	-54	+11	+65	-11
1+10 NE	-55	+6	+61	-8
1+20 NE	-50	+8	+58	-6
1+30 NE	-15	+6	+21	-7
1+40 NE	-9	+4	+13	-6
1+50 NE	+50	+4	+54	-11
1+60 NE	+23	+6	+29	-10
1+70 NE	-150	+6	+156	-8

COMMENTS:

EM-16 FIELD DATA & REDUCTION

LINE: 1+00 NW

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+10 SW	-28	+15	+43	-9
0+20 SW	-5	+19	+24	+1
0+30 SW	+35	+19	-16	-6
0+40 SW	+30	+17	-13	-5
0+50 SW	+30	+21	-9	-1
0+60 SW	+30	+18	-12	-6
0+70 SW	-5	+28	+33	-12
0+80 SW	0	+22	+22	-8
0+90 SW	-28	+15	+43	-7
1+00 SW	-150	+24	+174	-20
1+10 SW	-22	+18	+40	-8
1+20 SW	-40	+19	+59	-10
1+30 SW	-20	+17	+37	-10
1+40 SW	-150	+19	+169	-12
1+50 SW	-150	+19	+169	-12
1+60 SW	-30	+17	+47	-8
1+70 SW	-20	+21	+41	-10
1+80 SW	-40	+20	+60	-6
1+90 SW	+150	+21	-129	-8
2+00 SW	+8	+21	+13	-8

EM-16 FIELD DATA & REDUCTION

LINE: 0+00

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+00	-30	+14	+44	-10
0+10 NE	+10	+8	-2	-10
0+20 NE	-5	+6	+11	-9
0+30 NE	-15	+2	+17	-9
0+40 NE	+10	-2	-12	-5
0+50 NE	-5	-2	+3	-7
0+60 NE	+5	0	-5	-6
0+70 NE	+5	0	-5	-3
0+80 NE	+80	+3	-77	-3
0+90 NE	+45	+4	-41	-8
1+00 NE	-5	0	+5	-11
1+10 NE	-43	-2	+41	-11
1+20 NE	-150	-5	+145	-16

COMMENTS:

EM-16 FIELD DATA & REDUCTION

LINE: 0+00

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+10 SW	-5	+10	+15	-6
0+20 SW	-25	+11	+36	-7
0+30 SW	-75	+18	+93	-12
0+40 SW	-70	+17	+87	-12
0+50 SW	-55	+16	+71	-8
0+60 SW	-55	+15	+70	-8
0+70 SW	-25	+20	+45	-6
0+80 SW	-10	+18	+28	-9
0+90 SW	-65	+21	+86	-7
1+00 SW	-75	+23	+98	-9
1+10 SW	-2	+16	+18	-8
1+20 SW	-18	+18	+36	-7
1+30 SW	-53	+18	+71	-6
1+40 SW	-30	+21	+51	-5
1+50 SW	-5	+25	+30	-7
1+60 SW	-10	+29	+34	-12
1+70 SW	-20	+25	+45	-7
1+80 SW	-5	+18	+23	-10
1+90 SW	-20	+19	+39	-7
2+00 SW	-30	+25	+55	-6

EM-16 FIELD DATA & REDUCTION

LINE: 1+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-n True Dip	d. % Relative Field Strength
0+20	+25	+4	-21	-7
0+10 NE	-150	+5	+155	-8
0+20 NE	-10	+10	+20	-2
0+30 NE	+10	+5	-5	-9
0+40 NE	-10	+5	+15	-9
0+50 NE	+30	+5	-25	-11
0+60 NE	-35	+2	+37	-7
0+70 NE	-5	0	+5	-6
0+80 NE	-35	-2	+33	-5
0+90 NE	-30	0	+30	-8
1+00 NE	-20	-2	+18	-6
1+10 NE	-15	-5	+10	-11
1+20 NE	-15	-5	+10	-8
1+30 NE	-68	-6	+62	-4
1+40 NE	-16	-7	+9	-16
1+50 NE	+2	-10	-12	-15
1+60 NE	+5	-10	-15	-17
1+70 NE	-7	-13	-6	-15
1+80 NE	-150	-15	+135	-18
1+90 NE	-91	-4	+87	-15
2+00 NE	-150	-12	+138	-20

EM-16 FIELD DATA & REDUCTION

LINE: 1+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+10 SW	-40	+6	+46	-11
0+20 SW	-20	+5	+25	-1
0+30 SW	-15	+5	+20	-6
0+40 SW	-30	+10	+40	-7
0+50 SW	-45	+10	+55	-7
0+60 SW	-40	+16	+56	-6
0+70 SW	-40	+13	+53	-6
0+80 SW	-76	+15	+91	-6
0+90 SW	-25	+13	+38	-7
1+00 SW	-50	+13	+63	-5
1+10 SW	-65	+11	+76	-9
1+20 SW	-12	+10	+22	-7
1+30 SW	-45	+10	+55	-4
1+40 SW	-10	+13	+23	-8
1+50 SW	-23	+15	+38	-5
1+60 SW	-20	+15	+35	-7
1+70 SW	-45	+17	+62	-6
1+80 SW	-20	+17	+37	-6
1+90 SW	-22	+17	+39	-7
2+00 SW	+23	+18	-5	-7

EM-16 FIELD DATA & REDUCTION

LINE: 2+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+00 NE	-55	+1	+56	-12
0+10 NE	-63	+1	+64	-8
0+20 NE	-45	+1	+46	-9
0+30 NE	-53	-2	+31	-10
0+40 NE	-63	-1	+62	-12
0+50 NE	-43	-7	+36	-12
0+60 NE	-35	-7	+28	-14
0+70 NE	-21	-7	+14	-16
0+80 NE	-42	-8	+36	-12
0+90 NE	-60	-7	+53	-10
1+00 NE	-50	-5	+45	-13
1+10 NE	-50	-6	+44	-9
1+20 NE	-81	-3	+78	-11
1+30 NE	-15	-5	+5	-10
1+40 NE	+40	-5	-45	-11
1+50 NE	+40	-7	-47	-12
1+60 NE	-10	-10	0	-14
1+70 NE	-8	-8	0	-15
1+80 NE	-12	-8	+4	
1+90 NE	+4	-9	-13	
2+00 NE	+5	-9	-14	

FM-16 FIELD DATA & REDUCTION

LINE: 2+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+10 SW	-65	+1	+66	-8
0+20 SW	-63	+1	+64	-7
0+30 SW	-8	+4	+12	-10
0+40 SW	-30	+3	+33	-11
0+50 SW	-35	0	+35	-10
0+60 SW	-65	+1	+66	-12
0+70 SW	-65	+1	+66	-11
0+80 SW	-42	0	+42	-10
0+90 SW	-150	+8	+138	-13
1+00 SW	-20	+4	+24	-9
1+10 SW	-10	+3	+13	-9
1+20 SW	-5	+9	+14	-9
1+30 SW	-10	+7	+17	-8
1+40 SW	-58	+13	+71	-12
1+50 SW	-40	+9	+49	-10
1+60 SW	-15	+12	+27	-11
1+70 SW	-80	+13	+93	-14
1+80 SW	-25	+11	+36	-13
1+90 SW	+2	+15	+13	-10
2+00 SW	-30	+15	+45	-9

EM-16 FIELD DATA & REDUCTION

LINE: 2+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+10 SW	-65	+1	+66	-8
0+20 SW	-63	+1	+64	-7
0+30 SW	-8	+4	+12	-10
0+40 SW	-30	+3	+33	-11
0+50 SW	-35	0	+35	-10
0+60 SW	-65	+1	+66	-12
0+70 SW	-65	+1	+66	-11
0+80 SW	-42	0	+42	-10
0+90 SW	-150	+8	+138	-13
1+00 SW	-20	+4	+24	-9
1+10 SW	-10	+3	+13	-9
1+20 SW	-5	+9	+14	-9
1+30 SW	-10	+7	+17	-8
1+40 SW	-58	+13	+71	-12
1+50 SW	-40	+9	+49	-10
1+60 SW	-15	+12	+27	-11
1+70 SW	-80	+13	+93	-14
1+80 SW	-25	+11	+36	-13
1+90 SW	+2	+15	+13	-10
2+00 SW	-30	+15	+45	-9

EM-16 FIELD DATA & REDUCTION

LINE: 3+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-n True Dip	d. % Relative Field Strength
0+00	-80	-4	+76	-13
0+10 NE	-70	-6	+64	-14
0+20 NE	-150	-6	+144	-15
0+30 NE	-80	-5	+75	-15
0+40 NE	-43	-6	+37	-15
0+50 NE	-60	-6	+56	-13
0+60 NE	-100	-7	+93	-15
0+70 NE	-90	-10	+80	-17
0+80 NE	-80	-7	+73	-17
0+90 NE	-90	-12	+78	-16
1+00 NE	-40	-14	+267	-16
1+10 NE	-10	-13	-3	-16
1+20 NE	-30	-12	+17	-14
1+30 NE	+5	-13	-18	-14
1+40 NE	+4	-13	-17	-14
1+50 NE	-10	-12	-2	-14
1+60 NE	-15	-12	+3	-17
1+70 NE	-5	-16	-11	-17
1+80 NE	+5	-19	-24	-19
1+90 NE	-40	-15	+25	-17
2+00 NE	-150	-22	+128	-22

EM-16 FIELD DATA & REDUCTION

LINE: 3+00 SE

Station	a. Topog. Slope	b. Dip Angle	c. b-a True Dip	d. % Relative Field Strength
0+10 SW	-40	-4	+36	-13
0+20 SW	-50	-5	+45	-13
0+30 SW	-60	-3	+57	-14
0+40 SW	-40	-4	+36	-14
0+50 SW	-12	-4	-76	-16
0+60 SW	-50	-1	+49	-14
0+70 SW	-38	-3	+35	-14
0+80 SW	-36	-2	+34	-14
0+90 SW	-5	-2	+3	-16
1+00 SW	-8	-3	+5	-18
1+10 SW	-30	-5	+25	-14
1+20 SW	-70	-2	+68	-16
1+30 SW	-100	-3	+97	-16
1+40 SW	-92	-1	+91	-16
1+50 SW	-90	-2	+88	-16
1+60 SW	-120	-4	+16	-16
1+70 SW	-150	-5	+145	-13
1+80 SW	-150	-1	+149	-13
1+90 SW	-150	+1	+149	-14
2+00 SW	-150	-2	+148	-11

FRASER RIVER WITH 100 NE IMPROVEMENT

EQUATION DATA

LINE 1+00 NW

STATION	100 NE	100 NW	100 SE
0+00	+31	+107	+19
0+10 NE	+76	+93	-42
0+20 NE	+17	+65	+16
0+30 NE	+48	+109	+131
0+40 NE	+61	+196	+62
0+50 NE	+135	+171	+8
0+60 NE	+136	+204	-24
0+70 NE	+68	+147	-60
0+80 NE	+79	+144	-17
0+90 NE	+65	+130	-18
1+00 NE	+65	+126	-11
1+10 NE	+61	+119	-47
1+20 NE	+58	+79	-85
1+30 NE	+21	+34	-12
1+40 NE	+13	+67	+49
1+50 NE	+54	+83	+118
1+60 NE	+29	+185	
1+70 NE	+156		

APPENDIX 4B

FIELD DATA SHEET

DATE

1100 NW

STATION	POSS. DIP	STEP 1	STEP 2
2+00 SW	+13		
1+90 SW	-129	-116	
1+80 SW	+60	-69	+217
1+70 SW	+41	+101	+157
1+60 SW	+47	+88	+115
1+50 SW	+169	+216	+250
1+40 SW	+169	+338	-10
1+30 SW	+37	+206	-242
1+20 SW	+59	+96	-107
1+10 SW	+40	+99	+118
1+00 SW	+174	+214	+118
0+90 SW	+43	+217	-149
0+80 SW	+22	+65	-162
0+70 SW	+33	+55	-44
0+60 SW	-12	+21	-34
0+50 SW	-9	-21	-43
0+40 SW	-13	-22	-8
0+30 SW	-16	-29	+30
0+20 SW	+24	+8	+86
0+10 SW	+43	+67	-66
0+00	+31	+74	+40

FRASER RIVER WITH TIDE RECORDS

S. 1. 1. 1.

0+00

STATION	0+00	1+00	2+00
2100 SW	+55		+94
1+90 SW	+39		+62
1+80 SW	+23		-26
1+70 SW	+45		+68
1+60 SW	+34		+17
1+50 SW	+30		-4
1+40 SW	+51		+64
1+30 SW	+71		+81
1+20 SW	+36		+68
1+10 SW	+18		+132
1+00 SW	+98		+26
0+90 SW	+86		+107
0+80 SW	+28		-78
0+70 SW	+45		+9
0+60 SW	+70		+54
0+50 SW	+71		+116
0+40 SW	+87		+130
0+30 SW	+93		+184
0+20 SW	+36		-2
0+10 SW	+15		+114
0+00	+44		-111
			+1
			+73
			+115
			+68
			+141
			+43
			+158
			+39
			+180
			-19
			+129
			-129
			+51
			-70
			+59
			-9

FRANK ... 1900 ...

DATA

LINE 0+00

STATION
0+00	+44		
0+10 NE	-2	+42	-50
0+20 NE	+11	+9	-14
0+30 NE	+17	+28	-4
0+40 NE	-12	+5	-37
0+50 NE	+3	-9	-8
0+60 NE	-5	-2	-1
0+70 NE	-5	-10	-80
0+80 NE	-77	-82	-100
0+90 NE	-41	-118	+46
1+00 NE	+5	-36	+164
1+10 NE	+41	+46	+222
1+20 NE	+145	+186	

FEASIBLE WITH ACCEPTED DISCREPANCY

DATA

LINE: 1100 SE

STATION	RAW	ADJ	RESIDUAL
2100 SW	-5		
1+90 SW	+39	+34	
1+80 SW	+37	+76	+65
1+70 SW	+62	+99	+21
1+60 SW	+35	+97	-26
1+50 SW	+38	+73	-36
1+40 SW	+23	+61	+5
1+30 SW	+55	+78	+16
1+20 SW	+22	+77	+20
1+10 SW	+76	+98	+62
1+00 SW	+63	+139	+3
0+90 SW	+38	+101	-10
0+80 SW	+91	+129	+43
0+70 SW	+53	+144	-20
0+60 SW	+56	+109	-33
0+50 SW	+55	+111	-14
0+40 SW	+40	+95	-51
0+30 SW	+20	+60	-50
0+20 SW	+25	+45	+11
0+10 SW	+46	+71	-20
0+00	-21	+25	+63

FRASER HILL WITH SLOPE INDICATED

EM-16 DATA

LINE 1+00 SE

STATION	EM-16	EM-16	EM-16
0+00	-21		
0+10 NE	+155	+134	+150
0+20 NE	+20	+175	-119
0+30 NE	-5	+15	-165
0+40 NE	+15	+10	-25
0+50 NE	-25	-10	+2
0+60 NE	+37	+12	+52
0+70 NE	+5	+42	+26
0+80 NE	+33	+38	+21
0+90 NE	+30	+63	+10
1+00 NE	+18	+48	-35
1+10 NE	+10	+28	-28
1+20 NE	+10	+20	+44
1+30 NE	+62	+72	+51
1+40 NE	+9	+71	-75
1+50 NE	-12	-3	-98
1+60 NE	-15	-27	-18
1+70 NE	-6	-21	+102
1+80 NE	+135	+129	+243
1+90 NE	+87	+222	+96
2+00 NE	+138	+225	

FRASER TRAPEZ WITH SLOPE INCORPORATION

SP-10 DATA

LINE 2+00 SE

STATION	ORIG. PIV	ADJ. PIV	ADJ. PIV
2+00 SW	+45		
1+90 SW	+13	+58	
1+80 SW	+36	+49	+71
1+70 SW	+93	+129	+80
1+60 SW	+27	+120	-53
1+50 SW	+49	+76	0
1+40 SW	+71	+120	+12
1+30 SW	+17	+88	-99
1+20 SW	+14	+21	-61
1+10 SW	+13	+27	+16
1+00 SW	+24	+37	+135
0+90 SW	+138	+162	+143
0+80 SW	+42	+180	-54
0+70 SW	+66	+108	-48
0+60 SW	+66	+132	-7
0+50 SW	+35	+101	-64
0+40 SW	+30	+68	-56
0+30 SW	+12	+45	+8
0+20 SW	+64	+76	+85
0+10 SW	+66	+130	+46
0+00	+56	+122	-10

FRASER FILTER WITH SLOPE INCORPORATION

E19-16 DATA

LINE 2100 SE

STATION	1950	1951	1952
0+00	+56		
0+10 NE	+64	+120	-12
0+20 NE	+46	+110	-43
0+30 NE	+31	+77	-17
0+40 NE	+62	+93	+21
0+50 NE	+36	+98	-29
0+60 NE	+28	+64	-56
0+70 NE	+14	+42	-14
0+80 NE	+36	+50	+47
0+90 NE	+53	+89	+48
1+00 NE	+45	+98	0
1+10 NE	+44	+89	+24
1+20 NE	+78	+122	-6
1+30 NE	+5	+83	-162
1+40 NE	-45	-40	-175
1+50 NE	-47	-92	-7
1+60 NE	0	-47	+92
1+70 NE	0	0	+51
1+80 NE	+4	+4	-9
1+90 NE	-13	-9	-31
2+00 NE	-14	-27	

FRANK ... WITH ...

DATE

LINE 3+00 SE

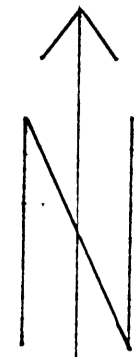
STATION
2+00 SW	+148	+297	
1+90 SW	+149	+298	-3
1+80 SW	+149	+294	-37
1+70 SW	+145	+261	-90
1+60 SW	+116	+204	-82
1+50 SW	+88	+179	-16
1+40 SW	+91	+188	-14
1+30 SW	+97	+165	-95
1+20 SW	+68	+93	-135
1+10 SW	+25	+30	-85
1+00 SW	+5	+8	+7
0+90 SW	+3	+37	+61
0+80 SW	+34	+69	+97
0+70 SW	+35	+84	-94
0+60 SW	+49	-25	-124
0+50 SW	-76	-40	+118
0+40 SW	+36	+93	+142
0+30 SW	+57	+102	-12
0+20 SW	+45	+81	+10
0+10 SW	+36	+112	+59
0+00	+76		

FRASER CREEK WITH SLOPE INCORPORATION

S13-16 DATA

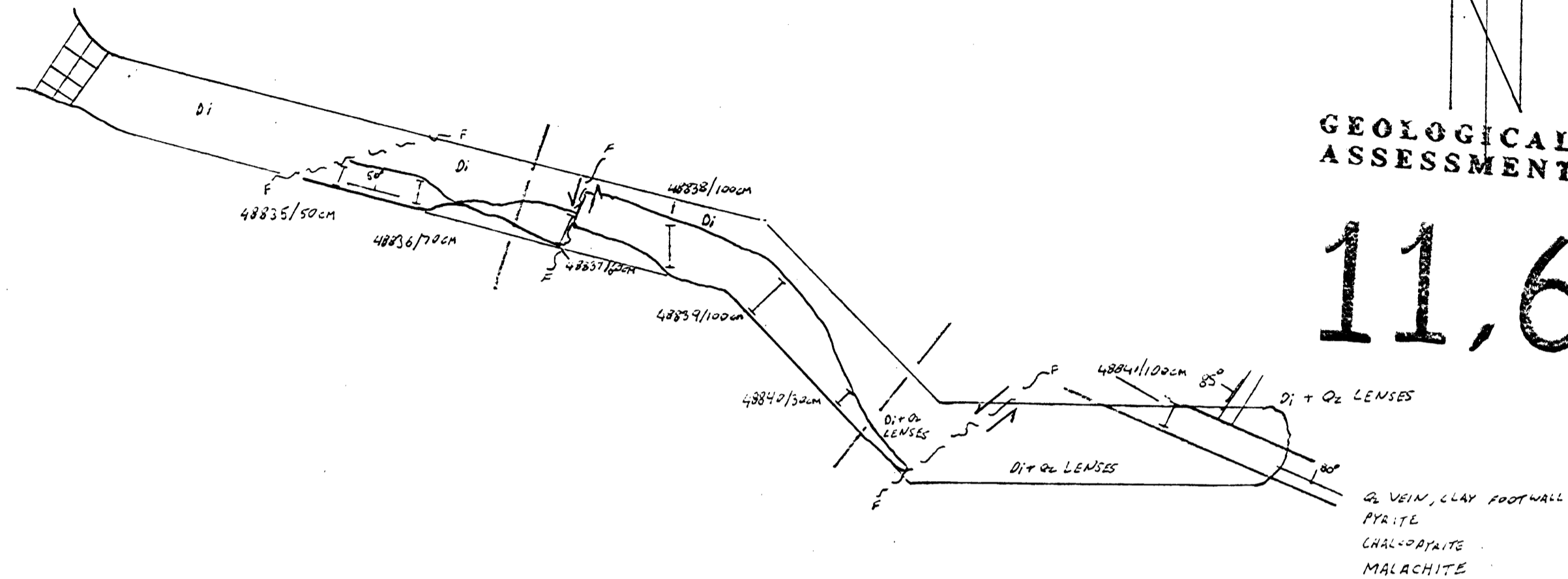
LINE 3+00 SE

STATION	TIME OF	TIME	TIME
0+00	+76	+140	+96
0+10 NE	+64	+208	+79
0+20 NE	+144	+219	-96
0+30 NE	+75	+112	-126
0+40 NE	+37	+93	+37
0+50 NE	+56	+149	+80
0+60 NE	+93	+173	+4
0+70 NE	+80	+153	-22
0+80 NE	+73	+151	-49
0+90 NE	+78	+104	-128
1+00 NE	+26	+23	-90
1+10 NE	-3	+14	-24
1+20 NE	+17	-1	-39
1+30 NE	-18	-25	-18
1+40 NE	-17	-19	+24
1+50 NE	-2	+1	+11
1+60 NE	+3	-8	-36
1+70 NE	-11	-35	+7
1+80 NE	-24	+1	+188
1+90 NE	+25	+153	
2+00 NE	+128		



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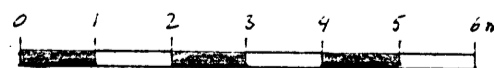


SYMBOL LIST

- Di DIABASE
- Qz QUARTZ VEIN
- +— ROCK CHIP SAMPLE
- ▣ TIMBERING
- /— ATTITUDE OF VEIN
- /— FAULT, DIRECTION OF MOVEMENT INDICATED

SAMPLE NO.	SAMPLE WIDTH	Cu ppm	Ag ppm	Au ppb
48835	50 cm.	2400	8.2	13000
48836	70 cm.	4800	17.8	3400
48837	60 cm.	5750	18.0	960
48838	100cm	2800	14.3	5700
48839	100cm	6200	19.3	9600
48840	30 cm	5200	20.0	3100
48841	100cm	2200	14.3	1000

SCALE

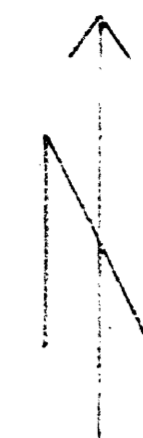
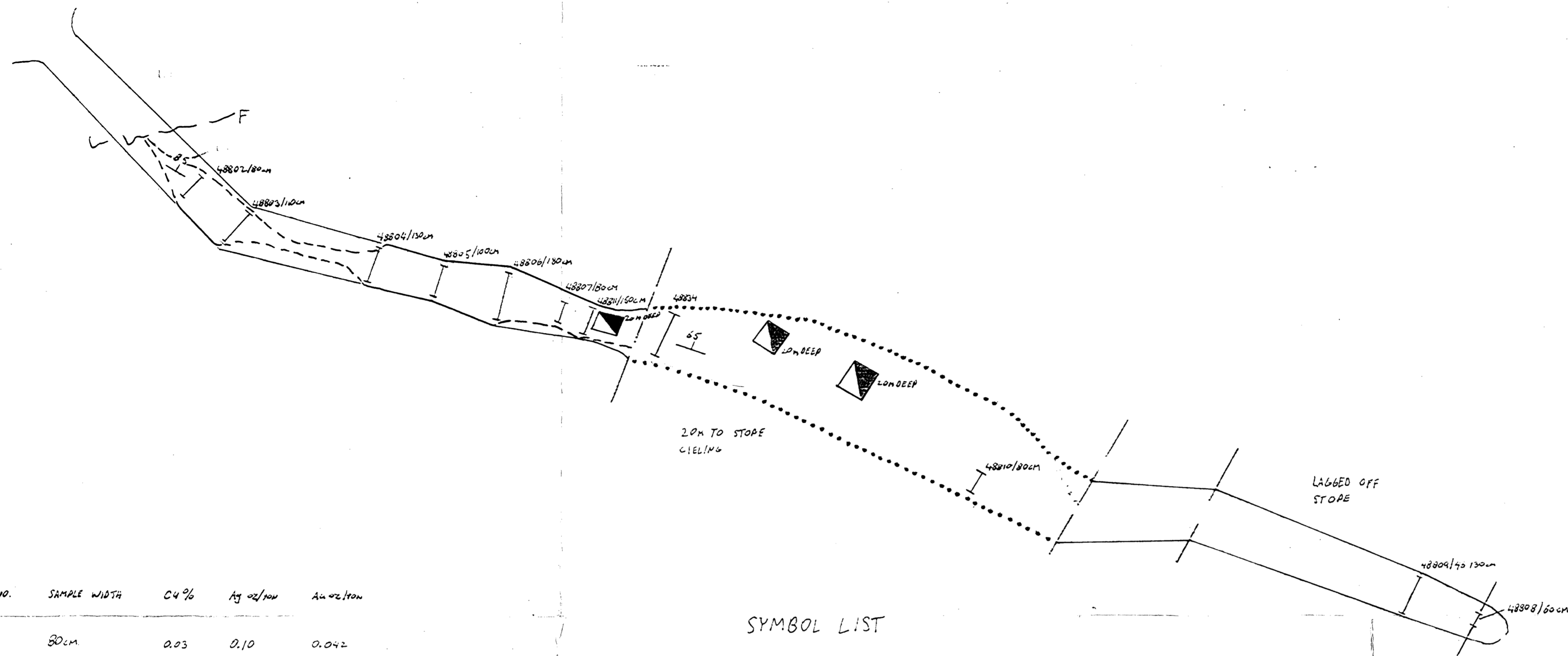


1cm = 1m
1:100

AMALGAMATED MINING + DEV. CORP. LTD.

SPARTAN CLAIM
EAST THURLOW ISLAND B.C.
Adit - Elevation 305m
Geology + Assays

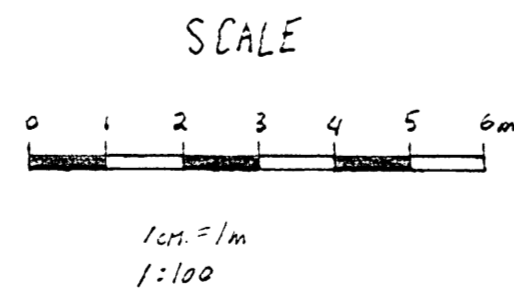
OWN	V. KURAN	DATE	JUNE 22, 1983	FIG	8
-----	----------	------	---------------	-----	---



SAMPLE NO.	SAMPLE WIDTH	Cu %	Ag oz/ton	Au oz/ton
48802	80cm	0.03	0.10	0.042
48803	110cm	<0.01	0.04	0.003
48804	130cm	<0.01	0.08	0.076
48805	100cm	0.04	0.01	0.005
48806	120cm	0.02	0.02	<0.003
48807	180cm	0.03	0.04	0.005
48808	60cm	0.04	0.12	0.003
48809	130cm	0.34	0.48	0.180
48810	90cm	0.04	0.08	0.006
48811	150cm	<0.01	0.02	<0.003
48834	200cm	780ppm	310ppm	>10,000ppm

SYMBOL LIST

- DIABASE Di
- CHIP SAMPLE
- GEOLOGICAL CONTACT
- LIMIT OF STOPS
- PROJECTED OUTLINE OF STOPE
- ATTITUDE OF VEIN 55
- FAULT
- WINZE



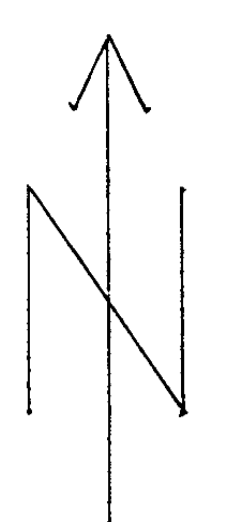
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11,608

AMALGAMATED MINING + DEV CORP. LTD.

SPARTAN CLAIM
DOUGLAS PINE MINE
EAST THURLOW ISLAND, B.C.
ADIT ELEVATION 285m.
GEOLOGY - ASSAYS

SPARTAN



BASELINE HEADING - 100° 00' 00"

LOT 1929

LOT 1981

LOT 272

LOT 273

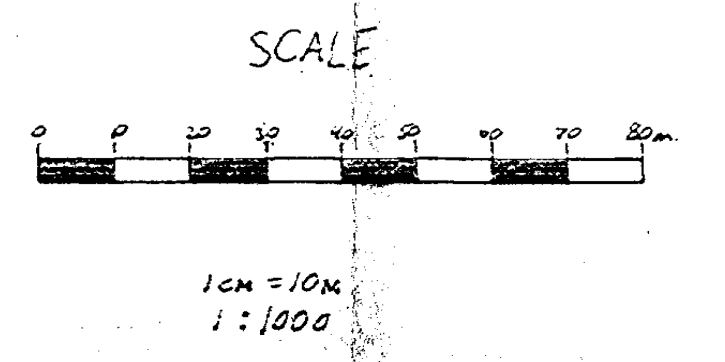
LOT 271

LOT 343

SYMBOL LIST
 (2) OUTCROP PATTERNS
 / GEOLOGICAL CONTACT

LEGEND

- MESOZOIC - COAST MOUNTAIN INTRUSIVES
- 11 COARSE GRAINED FELSIC INTRUSIVE: VARIABLE COMPRESSION OVERLAPPING GRANODIORITE
- PALAEZOIC - THURLOW PENDANT
- 12 DARK GREY FINE GRAINED INTERMEDIATE ROCK (GNEISS) } POSSIBLY THE SAME ROCK TYPE,
 OPEN COLLECTED, LOCALLY SPATIC } DIFFERING ONLY IN GRAIN SIZE
 - 13 MEDIUM TO COARSE GRAINED, DARK GREY FELSIC }
 FELSIC }
 14 VERY FINE GRAINED TO ARGILLIC LIGHT GREEN METASOLIMENTS
 LOCALLY WEAKLY BLENDED



GEOLOGICAL BRANCH
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11,608

AMALGAMATED MINING + DEV. CORP.

SPARTAN CLAIM

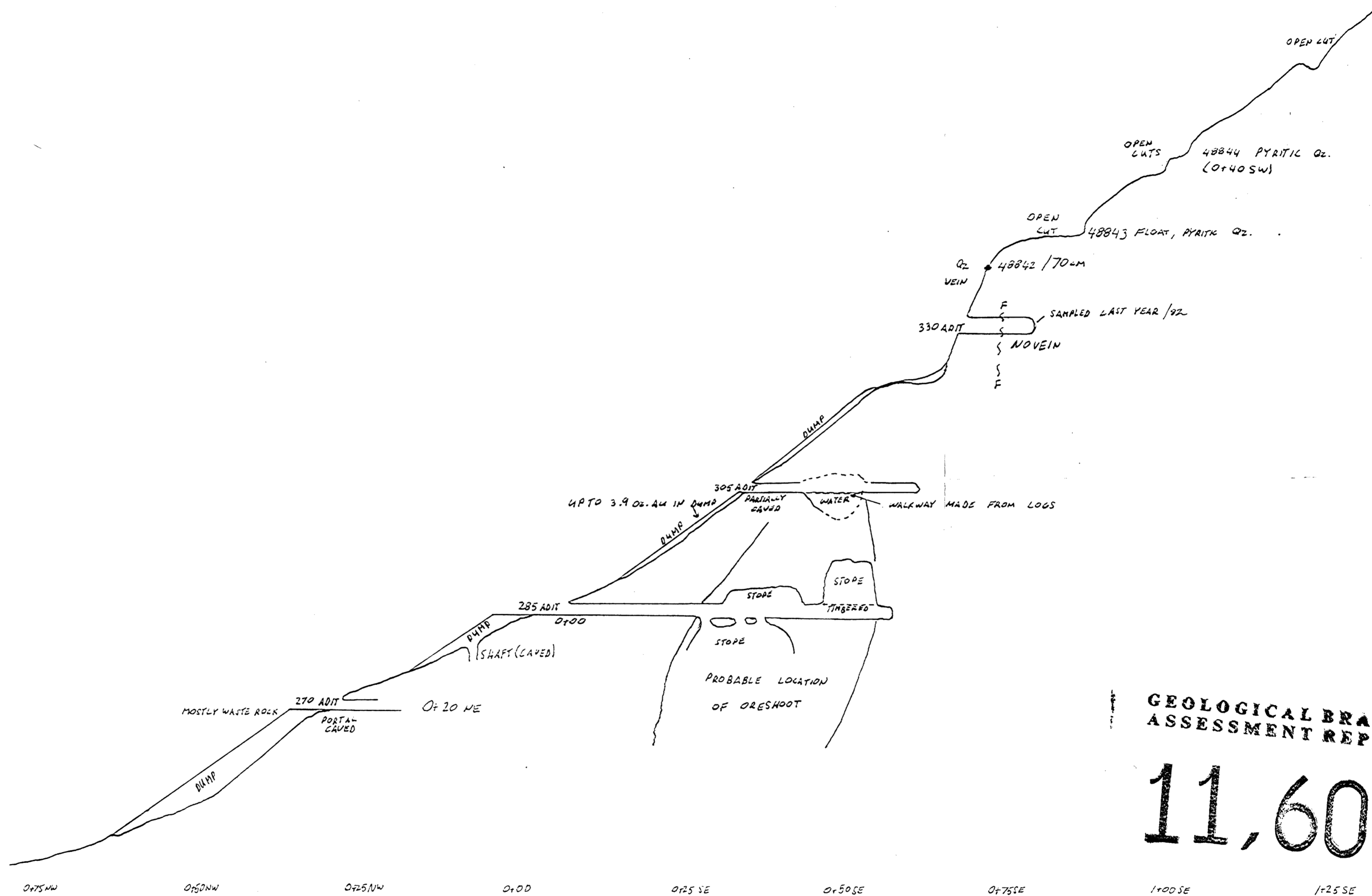
EAST THURLOW ISLAND B.C.

GEOLOGY
 SURFACE ROCK GEOCHEMISTRY

ELEVATION IN METRES

NW

SE

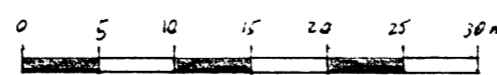


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11,608

DISTANCE ALONG B/L IN METRES

SCALE



1cm = 5m.
1:500

AMALGAMATED MINING + DEVELOPMENT CORP. LTD.

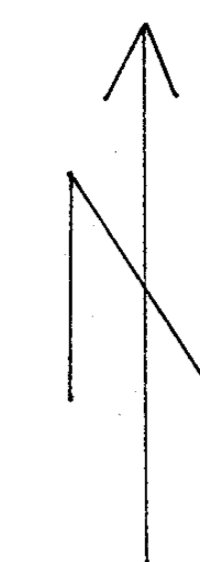
DOUGLAS PINE MINE
EAST THURLOW ISLAND, B.C.
LONGITUDINAL SECTION ALONG VEIN
PROJECTED INTO PLANE OF BASELINE
SCALE 1:500

SPARTAN CLAIM

BY	DATE	PAGE
M. PRICE	JUNE 22, 1983	5

SOIL SAMPLING RESULTS

EAST THURLOW ISLAND PROJECT



BASELINE BEARING - 120° A2

LOT 1929

LOT 1981

LOT 272

LOT 273

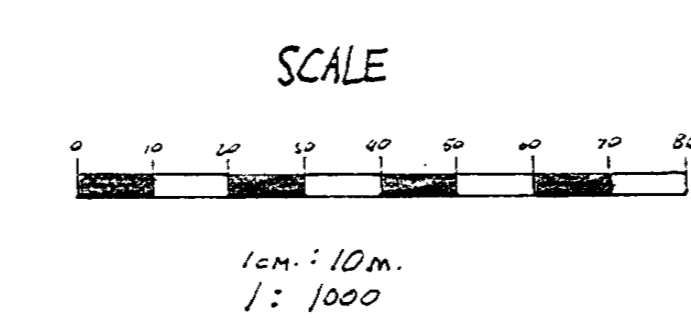
LOT 271

LOT 343

SPARTAN

SYMBOL LIST

• 25, 4, 510	• Copper ppm	Silver ppm	800 ppm
NS	Non-sulfidant	Sample	
Au ppm	Cu ppm	Ag ppm	
20-29	50-99	≥ 0.7	
30-99	100-199		
> 100	200-299		
	> 300		



GEOLOGICAL BRANCH
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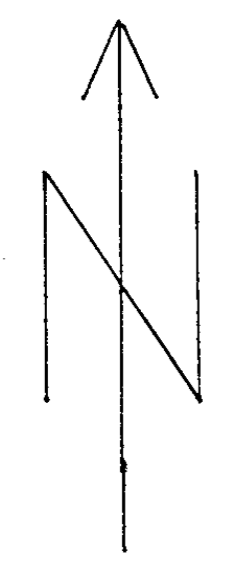
AMALGAMATED MINING + DEV. CORP.

SPARTAN CLAIM

EAST THURLOW ISLAND B.C.

SOIL SAMPLING PROGRAM

SPARTAN



LOT 1929

LOT 1981

LOT 272

LOT 273

LOT 271

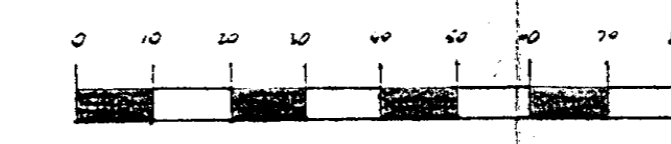
LOT 343

LEGEND

52000 - 52009	0
52010 - 52019	100
52020 - 52029	200
52030 - 52039	300
52040 - 52049	400
52050 - 52059	500
52060 - 52069	600
52070 - 52079	700
52080 - 52089	800
52090 - 52099	900
> 52100	1000

MAGNETIC DEPRESSION

SCALE



1cm = 10m

1:1000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

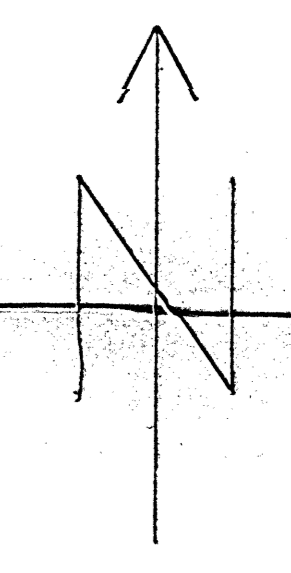
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AMALGAMATED MINING + DEV. CORP.

SPARTAN CLAIM
EAST THURLOW ISLAND B.C.

MAGNETOMETER SURVEY

SPARTAN



LOT 1929

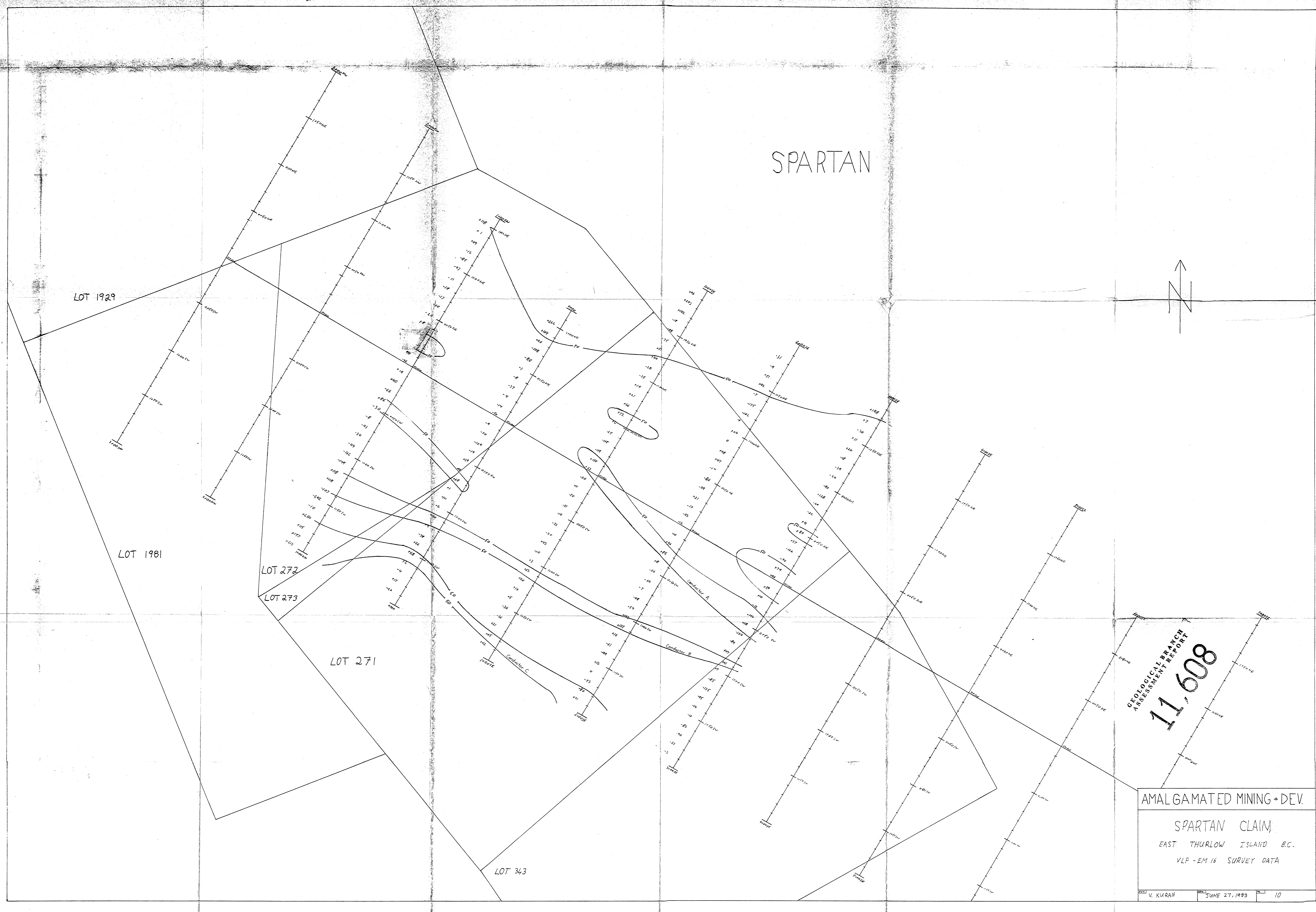
LOT 1981

LOT 272

LOT 273

LOT 271

LOT 343



GEOLOGICAL BRANCH
ASSESSMENT REPORT
11,608

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SPARTAN CLAIM
EAST THURLOW ISLAND B.C.
VLF-EM 16 SURVEY DATA