ARIS SUMMARY SHEET

District Geologist, Victoria

Off Confidential: 89.04.25

ASSESSMENT REPORT 17420

MINING DIVISION: Alberni

PROPERTY: Morning

LAT 49 17 58 LONG 125 16 09

UTM 10 5463002 335025

NTS 092F06W

CLAIM(S): Morning, Morning 1

OPERATOR(S): Goldsmith, L.B. AUTHOR(S): Goldsmith, L.B.; Kallock, P.

REPORT YEAR: 1988, 20 Pages

COMMODITIES

LOCATION:

SEARCHED FOR: Gold

GEOLOGICAL

SUMMARY: Upper Triassic Karmutsen Formation volcanics are intruded by

Lower-Middle Jurassic Island Intrusions. Northeasterly trending

quartz-sulphide veins carry appreciable quantities of gold.

WORK

DONE: Geological

GEOL 18.0 ha

Map(s) - 1; Scale(s) - 1:2000

ROCK 8 sample(s); AU

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GEOLOGICAL AND ROCK GEOCHEMICAL INVESTIGATION
MORNING AND APEX CLAIM GROUP
TAYLOR RIVER-SPROAT LAKE AREA
ALBERNI MINING DIVISION
PORT ALBERNI, B.C.
NTS 92 F/6 W
LATITUDE 49°19'N, LONGITUDE 125°15'W

FILMED

Prepared for

REGINALD WHUNCHUK ASSESSMENT REPORT

17,400

ARCTEX ENGINEERING SERVICES

Locke B. Goldsmith, P.Eng. Consulting Geologist

> Paul Kallock Consulting Geologist

> > May 4, 1988

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Rock Sample Descriptions Geochemical Procedures Geochemical Analysis Assays	
MAP:	(Pocket inside back cover)
Geology and Rock Geochemistry, 1:2000 Scale	

GEOLOGICAL AND ROCK GEOCHEMICAL INVESTIGATION MORNING AND APEX CLAIM GROUP TAYLOR RIVER-SPROAT LAKE AREA ALBERNI MINING DIVISION PORT ALBERNI, B.C.

SUMMARY

The Morning-Apex mineral claim group consists of six reverted crown-granted claims totalling approximately 83.76 hectares. They are located in west-central Vancouver Island near Sproat Lake. At least four northeast-trending quartz-pyrite veins are present on the property in addition to the main vein which was sampled in 1987. Values up to 8000 ppb Au have been recovered from surface samples of these veins. Galena-bearing quartz float from what appears to be another structure contains 0.320 oz Au/ton. All veins are hosted in intermediate volcanics of the Triassic Karmutsen Formation. Middle to late Jurassic Island Intrusions are known in the vicinity. Additional work including geological mapping, rock geochemical sampling, geophysics (induced polarization), dozer or backhoe trenching with possible subsequent diamond drilling is recommended. A first-phase budget of \$44,000 is recommended with estimates of \$254,000 in the next three phases.

INTRODUCTION

The Morning-Apex mineral claims are located 4.8 km west of Sproat Lake, immediately north of Taylor River on west-central Vancouver Island, B.C. The claims lie within the Alberni Mining Division, NTS map sheet 92 F/6 W, latitude 49°19' north, longitude 125°15' west. Elevation of the property ranges from 75 m at Taylor River to 800 m on the upper Apex claim.

The property includes six reverted crown-granted mineral claims totalling approximately 83.76 hectares (207 acres) as follows:

Claim Name	Lot No.	Record No.	Units	Date of Record
Morning	975	240(7)	1	July 14, 1984
Morning 1	976	190(5)	1	May 1, 1984
Morning 2	977	191(5)	1	11
Apex	978	192(5)	1	11
Apex Fr.3	980	192(5)	<1	17
Apex Fr.	979	193(5)	<1	н

The claims can be reached via the Port Alberni-Tofino Highway No.4, some 37 km westerly from Port Alberni. Various logging roads and trails cross the claims a short distance form the highway. A four-wheel drive vehicle is required to get within 100 metres of the lower adit on the Morning claim. Access to the Apex showings was not attempted.

A geological reconnaissance and rock chip sampling of several veins was undertaken on the Morning and Morning No. 1 claims. This report details the April, 1988 work.

The history of the property has been summarized by von Rosen (1982) who relies on Fawley (1962) for history prior to 1962. It is as follows:

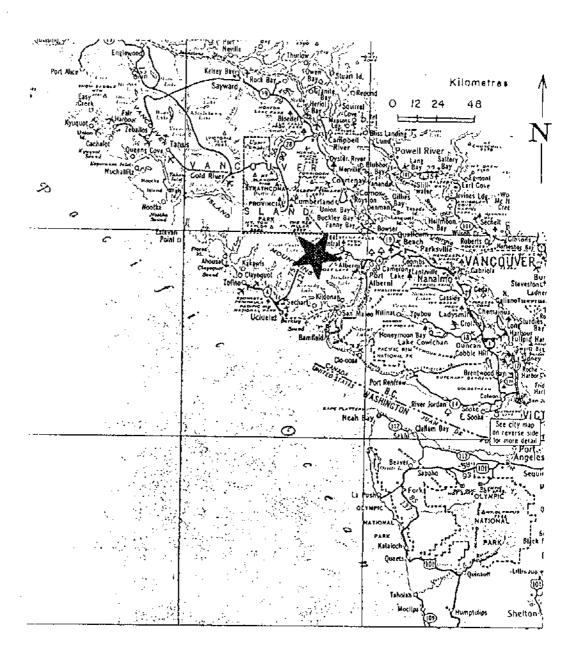
"Operations to 1962 are described by Allan P. Fawley, P. Eng., in a report to Sileurian Chieftain Mining Company Ltd. dated January, 1962, and are summarized as follows:"

1899	Discovery and staking
1907-1923	Underground work, one adit 345-365 feet and 2 short adits; trenching
1932	B.C. Department of Mines, Bulletin No.1 by G.A. Clothier description of workings and vein structure and mineralization.
1933	Dickinson and Johnson exploration. Original maps not on hand

1959	Report by B.W.W. McDougall, P. Eng. based on examination made in 1945; describes geology and results from 45 samples.
1960	Drilling No. 1 Zone Apex vein.
1961	V.B. Bjorkman, P. Eng., general description plus logs of D.D. holes 2-5, inclusive in No. 1 Zone. Laid out holes on No. 3 Zone which were mistakenly drilled at the wrong locations and missed the zone. Holes 2 and 3 logged by A.P. Fawley.
1961	Holes A-1 to A-6 and A-9 drilled on No. 2 Zone under the supervision of A.P. Fawley for Sileurian Chieftain.
1972	One hole (72-1) drilled by M. Zunic for Lou-Mex (No. 2 Zone)
1973	Two holes (73-2 and 73-3) drilled by M. Zunic for Lou-Mex (No.2 Zone).
1974	July, August holes 74-1 and 74-2 drilled by Highland Mercury (Lou-Mex option) on Zone 2.
1975	Hibernian (Lou-Mex option) enlarged and timbered No. 6 adit to $6' \times 7'$, and extended 30'.
1976	Highland Mercury (Lou-Mex option) extended drift to 487' and crosscut diamond drill. Harold M. Jones, P. Eng.: Geological Report on AJ Claims: Assessment Report.
1978	Acquisition of reverted crown grants by G. von Rosen.
1979	G. von Rosen, P. Eng.: Geophysical Report on Apex-Morning Group: Assessment Report.
1980	Option of property by International Giant Mining Corporation from Gearex Management Ltd. (G. von Rosen): Physical assessment work.
1982	Addendum agreement between International Giant Mining and Gearex. Retained interest sold to Ted Radomski. Agreement between International Giant and International Phasor Telecom.

GEOLOGY

The Karmutsen Formation of upper Triassic age underlies much of the Morning-Apex claim group. Regionally this formation consists of 6,000 m of tholeitic volcanics including pillow basalts, breccias and bedded flows. Basalt is host to mineralized veins in the map area.



LOCATION MAP

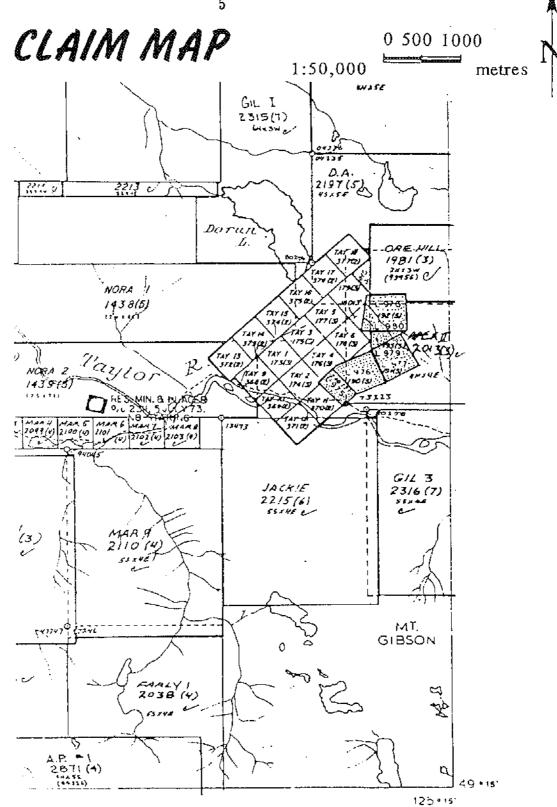
MORNING APEX CLAIM GROUP TAYLOR RIVER AREA ALBERNI MINING DIVISION: N.T.S. 92F/6W: Lat. 49°19'N, Long. 125°16'W

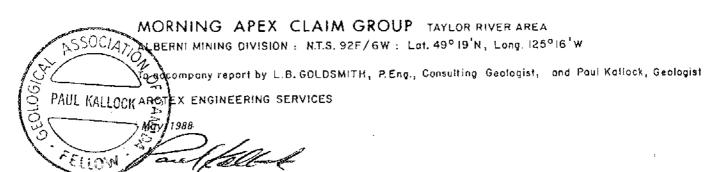
Diaccompany report by L.B. GOLDSMITH, P.Eng., Consulting Geologist, and Paul Kallock, Geologist

ARCTEX ENGINEERING SERVICES

FELLOWN MOD 1988

PAUL KALLOCK





Middle to late Jurassic Island Intrusions are also present in the claim area. Dykes of diorite or quartz diorite intrude basalt.

Regional faults transect the vicinity in a northwesterly direction. However, a strong system of northeasterly faults is most important at the claims. The Apex and No. 6 Vein structures are coincident with these northeast-trending shear zones. Approximately 10 km to the west in the Kennedy River area northeast-trending veinlet zones which contain appreciable quantities of gold were explored in 1987 by Kerr Addison Mines.

MINERALIZATION

In 1987 the main vein which had been explored by two adits was mapped and sampled on surface. It was found to be at least 175 m long and locally returned samples up to 0.75 m wide which contained 10,000 ppb gold.

During April, 1988 four more quartz-sulphide veins were found which lie between 28 and 68 metres northwest of the adits. They each trend northeast with steep dips to the northwest, being subparallel to the adit vein.

The widest of the four veins, at 5+35N 4+38E, consists of two parallel quartz-pyrite veins of 0.4 and 1.0 m in thickness separated by 0.3 m of moderately silicified light green andesite. Neither of the veins contained abundant clay, and no signs of slickensides or faulting were seen. The veins consist of iron-stained quartz with 5-10% pyrite and show strong fracturing near vein margins.

A vein at 5+65N 4+26E contained the most pyrite. Local pods of massive pyrite may account for 30% of the 0.35 m thick vein. Like the other veins only minor clay was noted and alteration of the host andesite was minor.

Sixty metres northwest of the previously mentioned quartz-pyrite vein a float boulder of quartz-pyrite-galena was found in a N50°E-trending gully. The angular nature of the boulder and close proximity of other quartz-pyrite cobbles suggest a nearby (within 10 m) source. The trend of the gully may coincide with a quartz-sulphide vein.

Quartz and epidote are sporadically distributed in the andesites and basalts, generally as massive irregular pods. One such area was sampled at 4+40N 6+04E. Another area at 5+21N 5+24E showed similar quartz and epidote except that the discontinuous pods were oriented as a N45°E 67°N vein and contained minor pyrite and traces of chalcopyrite.

Exploration is currently being undertaken on the adjoining Tay claims of Dalmatian Resources. An I.P. geophysical survey was conducted last year and subsequently at least 10 diamond drill holes have been cored. Outcrops of quartz-pyrite mineralization lie approximately

550 m. west of the Morning No. 1 claim. Their subsurface projection appears to have been the main target of exploration. Quartz with up to 15% pyrite trends N83°E 75°N. The area on trend to the east of the vein was traversed but no additional mineralization was seen until the quartz-pyrite-galena boulder at 6+25N 4+20E on the Morning claim was discovered.

ROCK GEOCHEMISTRY

A 1:2000 scale plan map showing location of 8 rock samples collected during April 1988 is included with this report. Analysis for gold was carried out by Chemex Labs of Vancouver, B.C.. Analytical procedures and certificates of analysis are included in the appendix.

Four quartz-pyrite veins which lie 28 to 68 m northwest of the bifurcation of the main adit vein were chip sampled across their true width. Values ranged from 1050 ppb Au at 5+25N 4+26E to 8000 ppb Au at 5+65N 4+26E.

Sixty metres northwest of the quartz-pyrite veins a float boulder measuring 0.70 x 0.50 x 0.30 m was found in a northwest trending gully. It was angular quartz vein material with 10% pyrite and 3-5% very fine grained galena. A chip sample, #6+25N 4+20E, of this float boulder contained 0.320 oz Au/ton. Several other angular pebbles and cobbles of quartz-pyrite vein material were seen in the immediate area.

Two areas of quartz-epidote were also sampled; at 5+21N 5+24E a 0.31 vein showing minor pyrite and chalcopyrite contained 40 ppb Au. An irregular zone of patchy quartz and epidote at 4+40N 6+04E also contained 40 ppb Au.

CONCLUSIONS

Four additional quartz-pyrite veins have been found northwest of the main adit vein. They are sub-parallel to the main vein and each carry significant gold values. The strongest of the four is 0.35 m thick and contains 8000 ppb Au. A separate vein, as yet unobserved in outcrop, may be the origin of a quartz-pyrite boulder at 6+25N 4+20E which contained 0.320 oz. Au/ton. It is expected that a northwest-trending vein structure similar to the other veins may underlie the gully in which the quartz-pyrite-galena boulder was found. No diamond drilling or other exploration appears to have taken place in this immediate area.

Exploration by I.P. geophysical survey and diamond drilling has been carried out on the adjoining Tay claims of Dalmatian Resources in recent months. The main quartz-pyrite mineralized structure at these claims trends easterly toward the veins as mapped on the Morning claims.

RECOMMENDATIONS

Detailed geological mapping of the Morning- Apex claim group should be carried out. Extensions of the veins found during the present investigation should be sampled. Dozer or backhoe trenching in the area of 6+25N 4+20E where quartz-pyrite-galena float is located, should also be undertaken. An I.P. geophysical survey should be conducted over the Morning and Morning No. 1 claims. If the next phase of exploration is successful, a subsequent programme of diamond drilling to explore for mineralization at depth would be required.

COST ESTIMATE

Phase 1

Phase 1 has been partially completed and documented by this report. Additional expenditure for dozer/or backhoe trenching will be required in the remainder of Phase 1

Geological mapping	\$ 5,000	
Lithogeochemical survey	2,000	
Geochemical analyses	5,000	
I P Survey	15,000	
Dozer and/or backhoe trenching	6,000	
Transportation, travel expenses	2,000	
Food, lodging	1,000	
Engineering and supervision	2,000	
Report	_2,000	
	40,000	
Contingencies@ 10%	4,000	
Total Phase 1	\$ 44,000	\$ 44,000

Phase 2

Backhoe trenching, drill site preparation	\$ 5,000	
Diamond drilling 250 m @ \$100/m	25,000	
Geological survey, core logging	8,000	
Engineering & supervision	2,000	
Assays	4,000	
Transportation, travel	2,000	
Food, lodging	1,000	
Report	_3,000	
	50,000	
Contingencies @ 20%	_10,000	
Total Phase 2	\$ 60,000	\$ 60,000

Phase 3

A budget of \$150,000 should be available to continuedrilling of targets which may be developed in Phases 1 and 2

<u>150,000</u>

Total Phases 1, 2 and 3

\$254,000

Results of each Phase should be compiled into an Engineering Report; continuance to the subsequent Phase should be contingent upon favourable conclusions and recommendations from an Engineer.

Respectfully submitted

Locke B. Goldsmith, P. Eng. Consulting Geologist

Vancouver, B.C. May 4, 1988

Paul Kallock

Consulting Geologist

AUE KALLOCK

ENGINEER'S CERTIFICATE LOCKE B. GOLDSMITH

- 1. I, Locke B. Goldsmith, am a registered Professional Engineer in the Province of Ontario and the Northwest Territories, and a Registered Professional Geologist in the State of Oregon. My address is 301, 1855 Balsam Street, Vancouver, B.C.
- 2. I have a B.Sc. (Honours) degree in Geology from Michigan Technological University, a M.Sc. degree in Geology from the University of British Columbia, and have done postgraduate study in Geology at Michigan Tech and the University of Nevada. I am a graduate of the Haileybury School of Mines, and am a Certified Mining Technician. I am a Member of the Society of Economic Geologists, the AIME, and the Australasian Institute of Mining and Metallurgy, and a Fellow of the Geological Association of Canada.
- 3. I have been engaged in mining exploration for the past 29 years.
- 4. I have co-authored the report entitled, "Geological and Rock Geochemical Investigation, Morning and Apex Claim Group, Taylor River-Sproat Lake Area, Alberni Mining Division, Port Alberni, B.C.", dated May 4, 1988. The report is based upon fieldwork and research supervised by the author.
- 5. I have no ownership in the property

6. I consent to the use of this report in a prospectus, or in a statement of material facts related to the raising of funds.

Respectfully submitted,

Locke B. Goldsmith, P.Eng.

Consulting Geologist

Vancouver, B.C. May 4, 1988

GEOLOGIST'S CERTIFICATE PAUL KALLOCK

I, Paul Kallock, do state: that I am a Geologist with Arctex Engineering Services, 301 - 1855 Balsam Street, Vancouver, B.C.

I Further State That:

- 1. I have a B.Sc. degree in Geology from Washington State University, 1970. I am a Fellow of the Geological Association of Canada.
- 2. I have engaged in mineral exploration since 1970, both for major mining and exploration companies and as an independent geologist.
- 3. I have co-authored the report entitled, "Geological and Rock Geochemical Investigation, Morning and Apex Claim Group, Taylor River-Sproat Lake Area, Alberni Mining Division, B.C." The report is based on my fieldwork carried out on the property and on previously accumulated geologic data.
- 4. I have no direct or indirect interest in any manner in either the property, nor do I anticipate to receive any such interest.
- 5. I consent to the use of this report in a prospectus, or in a statement of material facts related to the raising of funds.

5 X //7

Geologist

Vancouver, B.C. May 4, 1988

REFERENCES

- Fawley, A.P. 1962. Report to Sileurian Chieftain Mining Company.
- Goldsmith, L.B. and Kallock, P. 1987. Geochemical and Geological Investigation, Morning and Apex Claim Group, Taylor River-Sproat Lake Area, Albern't Mining Division, Port Alberni, B.C. Report for Reginald W. Hunchuk.
- McIntyre, J.F. 1980. Summary Engineering Report, Taylor River Gold Property, Sproat Lake, B.C. Report for International Giant Mining Corporation.
- Muller, J.E. 1977. Geology of Vancouver Island. GSC Open File 463.
- von Rosen, G. 1982. Recommendation Report, Apex-Morning Gold Property, Taylor River, B.C. Report for International Phasor Telecom Ltd.

COST STATEMENT, 1988 PROGRAMME

Personnel

L.B. Goldsmith, 1/4 April 22, 1/4 24, total 1/2 day @ \$400/day	\$ 200.00	
P. Kallock, 1/2 April 20, 21, 22, total		
2-1/2 days @ \$330/day	825.00	
	1,025.00	1,025.00
Accommodation, Food		
Travel		
Ferry	42.00	
Vehicle, 394 km @ 0.35/km	137.90	
Gas	<u>14.00</u>	
	193.90	193.90
\$193.90 divided by 2.5 days = \$77.56/day		
Analyses		
8 rock geochemical samples cost	86.00	
1 assay cost	12.50	
•	98.50	98.50
8 samples cost \$98.50 = \$12.31/sample	70.50	70.50
Report		
Drafting, prints, word processing,		
photocopying, report materials		_289.70
TOTAL		\$1,797.05

APPENDIX

ROCK SAMPLE DESCRIPTIONS

			Au, ppb or oz/ton
6+25N	4+20E	Chips from float boulder, 0.7 m x 0.5 m x 0.3 m in size; angular boulder of quartz with 10% pyrite, 3-5% very fine-grained galena, drainage trends N50°E.	0.320 oz/tor
5+65N	4+26E	0.35 m true width, quartz vein with 25% pyrite trends N52°E 90°.	8000 ppb
5+45N	4+30E	0.17 m true width, quartz and comb quartz, no sulphides, trends N65°E 75°N, siliceous andesite host.	2350 ppb
5+35N	4+38E	1.70 m true width, mostly quartz vein with 5-10% pyrite, includes 0.3 m of internal moderately siliceous green andesite.	3200 ppb
5+35N	4+26E	0.50 m true width quartz vein with 15% pyrite; same vein as previous sample, trends N45°E 78°N.	1650 ppb
5+25N	4+26E	0.15 m true width, quartz vein with 5% pyrite, trends N70°E 80°N.	1050 ppb
5+21N	5+24E	0.31 m true width, includes 0.05 m of quartz and epidote with traces pyrite, trace chalcopyrite; weakly siliceous andesite host. Vein trends N45°E 67°N.	40 ppb
4+40N	6+04E	Grab sample from $1\ m^2$ area of irregular white quartz and epidote hosted in dark green andesite; no sulphides.	40 ppb



Chemex Labs Ltd

Analytical Chemists * Geomemists * Registered Assayers

112 BROOKSBANK AVE., NORTH VANCOUVER, BRITISH COLUMBIA, CANADA V7.1-2C1

PHONE (604) 984-0211

To: ARCTEX ENGINEERING SERVICES

2390 - 1055 W. HASTINGS ST. VANCOUVER, B.C. V6E 2E9

A8814542

Comments: CC: PAUL KALLOCK

CERTIFICATE A8814542

ARCTEX ENGINEERING SERVICES

PROJECT : MORNING/APEX

PO.A : NONE

Samples submitted to our lab in Vancouver. BC.

This report was printed on 25-APR-88

SAMPLE PREPARATION

ļ		NUMBER SAMPLES			DESCRIPTION	
	203	 8	Rock	Geochem:	Crush.split,ring	
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		: 				
		:				
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		Ĺ			 	

ANALYTICAL PROCEDURES

COLDE	NIMBER SAMPLES		DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	8	Au ppb:	Fuse 10 g sample	FA-AAS	5	10000



Analytical Chemists * Geochemists * Registered Assayers

212 BROOKSBANK AVE. NORTH VANCOUVER. BRITISH COLUMBIA, CANADA V73-2C!

PHONE (684: 984-0221

To: ARCTEX ENGINEERING SERVICES

2390 + 1055 W. HASTINGS ST. VANCOUVER, B.C.

V6E 2E9

Project : MORNING/APEX Comments: CC: PAUL KALLOCK

Page No. :1 Tot. Pages: 1

Date : 2 5-APR-8 8

Invoice #: I-8814542 P.O. # :NONE

CERTIFICATE OF ANALYSIS A8814542

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	<u> </u>	:			
4+40N 6+04E 5+21N 5+24E 5+25N 4+26E 5+35N 4+26E 5+35N 4+38E	205 205 205 205 205	40 40 1050 1650 3200					
5+45N 4+30E 5+65N 4+26E 6+25N 4+20E	205 205 205	2350 8000 >10000					
		:					
					:	•	

CERTIFICATION : tathsull-,



Chemex Labs Ltd

Analytical Chemists * Geo themists * Registered Assayers

?12 BROOKSBANK AVE . NORTH VANCOUVER. BRITISH COLUMBIA. CANADA V7J~2C1

PHONE (604) 984-0121

To: ARCTEX ENGINEERING SERVICES

2390 - 1055 W. HASTINGS ST. VANCOUVER, B.C. V6E 2E9

A8814700

Commissis: CC: PAUL KALLOCK CC: C.M. IZZARD

CERTIFICATE A8814700

ARCTEX ENGINEERING SERVICES
PROJECT : MORNING/APEX

PO# : NONE

O # : NONE

Samples submitted to our lab in Vancouver. BC. This report was printed on 3-MAY-88

SAMPLE PREPARATION

CHEMEX NUMBER CODE SAMPLES

DESCRIPTION

	2 1	. 4	ļ	į	ļ		Received	sample	as	pulp
į į				1		:				
-				İ		:				
:										

ANALYTICAL PROCEDURES

	number Samples			DESCRIPTION	METHOD	DETECTION	UPPER LIMIT
398		Au	oz/T: 1/2	assay ton	FA-AAS	0.002	20.00



Analytical Chemists * Geometrists * Registered Assayers 212 BROOKSBANK AVE. NORTH VANCOUVER. BRITISH COLUMBIA, CANADA V7J-2CI

PHONE (674) 984-8221

To : ARCTEX ENGINEERING SERVICES

2390 - 1055 W. HASTINGS ST. VANCOUVER, B.C. V6E 2E9

Project : MORNING/APEX

Comments: CC: PAUL KALLOCK CC: C M. IZZARD

Page No. :1 Tot. Pages:1 Date : 3-MAY-88

Invoice # . I-8814700

P.O. # :NONE

A8814700 CERTIFICATE OF ANALYSIS

SAMPLE DESCRIPTION	PREP CODE	Au oz/T			:					
6+25N 4+20E	214	0.320				:				!
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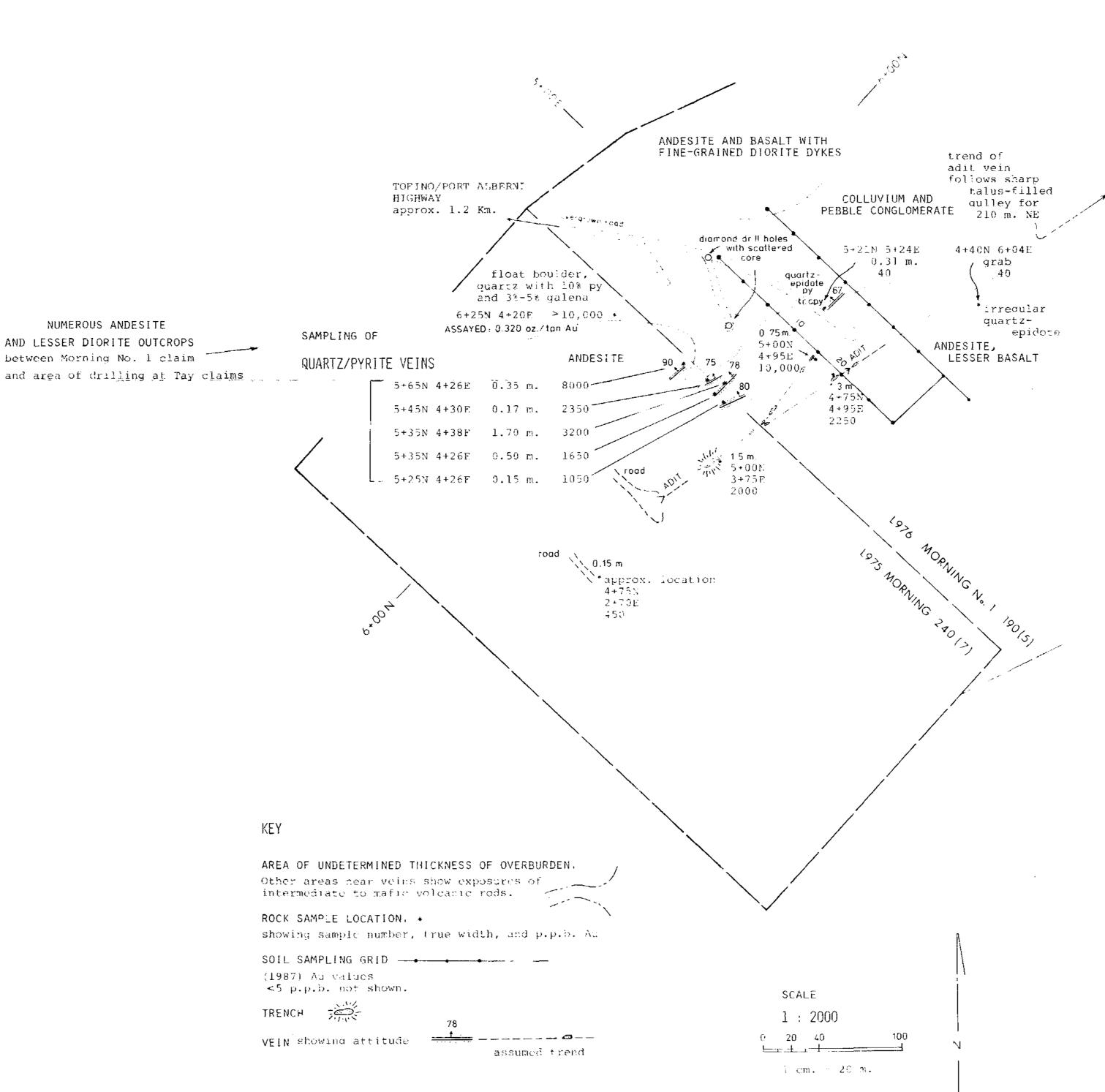
TAY claims of DALMATIAN RESOURCES AREA OF CURRENT DIAMOND DRILLING ACTIVITY AND RECENT GEOPHYSICAL (IP) SURVEY

NUMEROUS ANDESITE

AND LESSER DIORITE OUTCROPS

between Morning No. 1 claim

Approximate location of N83°E 75°N trending 2.3 m. wide zone of QUARTZ-PYRITE VEINS WITH BRECCIATION AND SHEARING, HOSTED IN ANDESITE AND PORPHYRITIC ANDESITE



GEOLOGY

AND

ROCK AND SOIL GEOCHEMISTRY

MORNING APEX CLAIMS

TAY_OR RIVER AREA ALBERNI MINING DIVISION NTS 925/6W

To accompany report by Paul Kallock, Consulting Geologist, and Locke B. Goldsmith, P. Eng.

Consulting Geologist. May 1988

ARCTEX ENGINEERING SERVICES.

GEOLOGICAL BRANCH ASSESSMENT REPORT