83-#805c - #12162

GEOLOGICAL REPORT ON THE

TWIN CREEK PROPERTY

OMINECA MINING DIVISION

BEMA
Industries Ltd.

GEOLOGICAL REPORT ON THE

TWIN CREEK PROPERTY

Omineca Mining Division

55°39' North Latitude
125°18' West Latitude
N.T.S. Map 93 N/11

For:

AMIR MINES LTD.
Suite 510 - 475 Howe Street
Vancouver, B. C.
V6C 2B3

By:

Carl Edmunds, B.Sc. Geology

BEMA INDUSTRIES LTD.
203, 19945 - 56 Avenue
Langley, B. C.
V3A 3Y2

BEMA
Industries Ltd.

1.0 INTRODUCTION

The Twin claim group consists of six 2-post claims located along the axis of a NW-SE trending valley at the head of Twin Creek. The claims are owned by L. Warren of Smithers, B.C. and Neal Scafe of Fort St. James, B.C. Significant amounts of copper, gold and molybdenum mineralization occur in gossanous altered volcanics which overlie the Hogem batholith. These claims are under option to Amir Mines Ltd.

1.1 LOCATION AND ACCESS

The Twin Creek property is located in the Omineca Mining Division approximately 145 km NNW of Fort St. James; latitude 55°39', longitude 125°18' (93N/11). Helicopter is the only practical means of reaching the property, as the nearest road (Kwanika Creek road to Manson) is 10 km to the south (see Figure 1b).

1.2 PHYSIOGRAPHY

The Twin Creek claims are located on a northwestern tributary to Twin Creek. Elevations range from 1,500 m to 1,900 m in terrain of moderate slopes and smooth ridge tops.

Vegetation consists of alpine moss and grass with relatively open jack pine bush below the tree line in the valleys. Open meadows often occur in the valleys.

1.3 PROPERTY

The Twin Creek property consists of six 2-post mineral claims listed below:

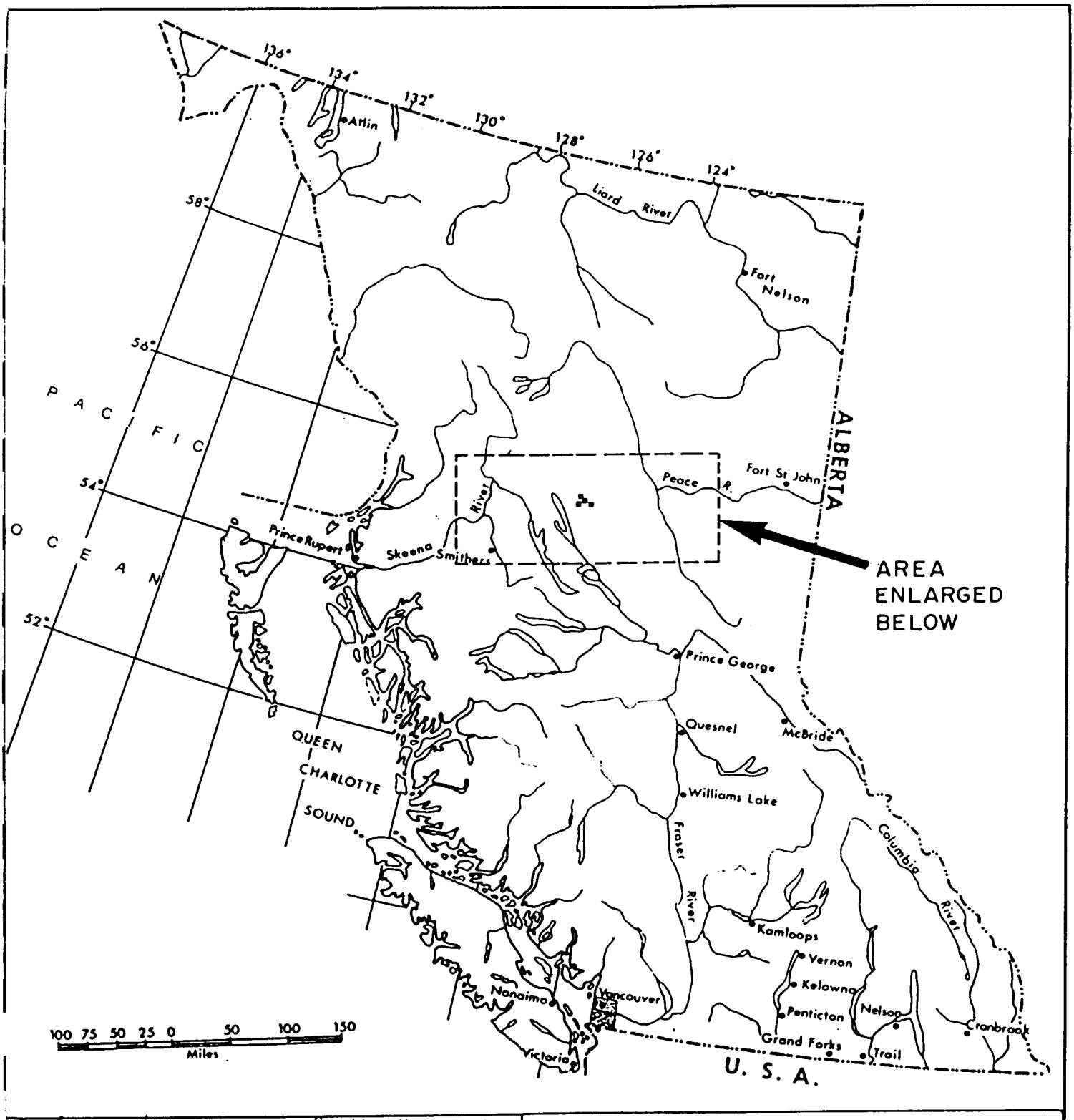
CLAIM	RECORD NUMBER	STAKED BY
Twin 1	3956	N. Scafe
Twin 2	3957	L.B. Warren
Twin 3	3958	L.B. Warren
Twin 4	3959	N. Scafe
Twin 5	3960	N. Scafe
Twin 6	3961	L.B. Warren

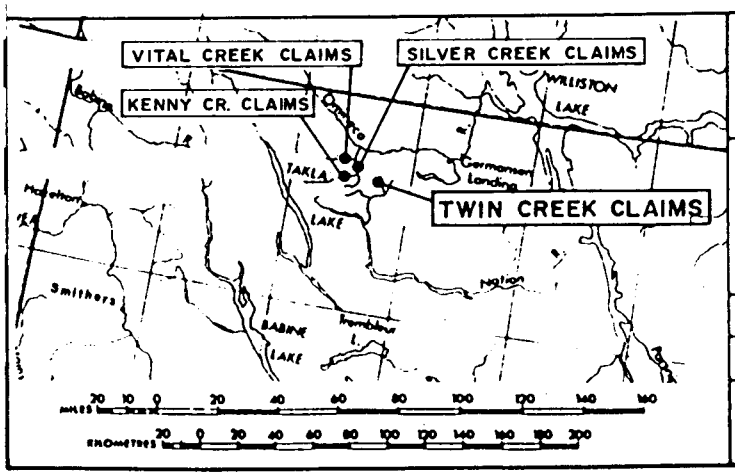
These claims are under option to Amir Mines Ltd. (See Location Map Figure 1a.)

1.4 HISTORY

First reference to the Twin Creek property is in B.C.D.M. assessment report #2501 by W. R. Bacon for the N.B.C. syndicate in 1970. Work in 1970 involved an extensive geochem program with detailed mapping of the property. Further work was recommended and in 1971 Falconbridge Mines worked the property carrying out geochem, geophysics and drilling. In 1972 the property was worked by WesFrob Mines and then by Hudsons Bay Mining and Exploration in 1973. Newmont Mines worked the area in 1981 completing a gold geochem survey. All the work in the 70's was aimed primarily at evaluating the property's Cu-porphyry potential.

In early July 1981 the property was staked by Lorne Warren and Neal Scafe. A week later the two prospectors accompanied T. Helsen of Mattagammi Lake Exploration on an inspection of the property. Encouraging grades of gold were found hosted in volcanics. These rocks came from gossan #3 and Trench #1. (See Figure 2.)





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OMINECA GOLD PROGRAM

TWIN CREEK LODE CLAIMS

BRITISH COLUMBIA KEY MAP

DATE:	JANUARY 1983	JOB NO.:	83 - 04
APPROVED BY:		FIG. NO.:	1

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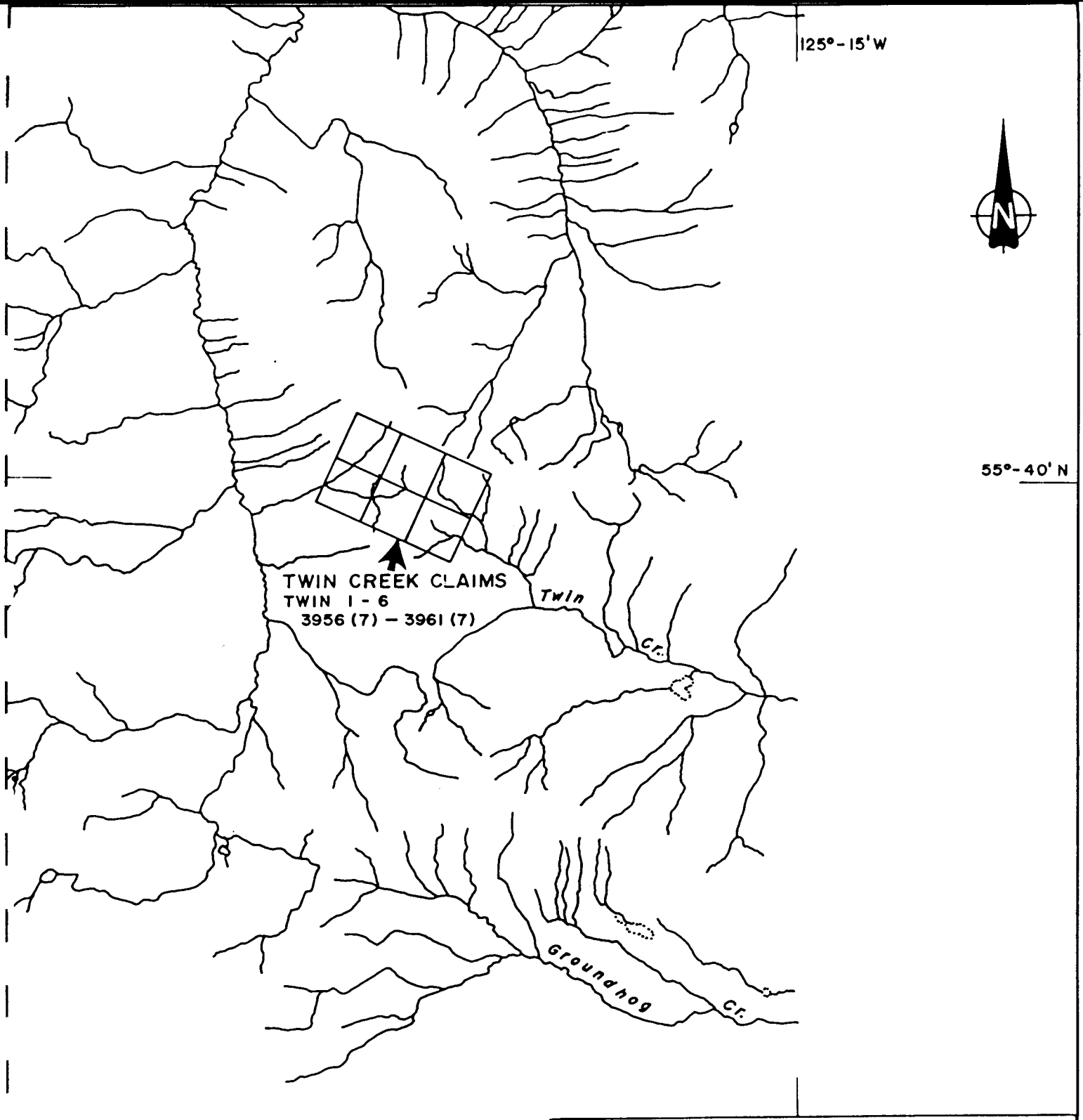

SCALE

1 0·5 0 MILES 1 2

1 0·5 0 1 2 3

KILOMETRES

AMIR MINES LTD.

OMINECA GOLD PROGRAM

TWIN CREEK LODE CLAIMS

LOCATION MAP

DATE: JANUARY 1983	JOB NO.: 83 - 04
APPROVED BY:	FIG. NO.: 1a

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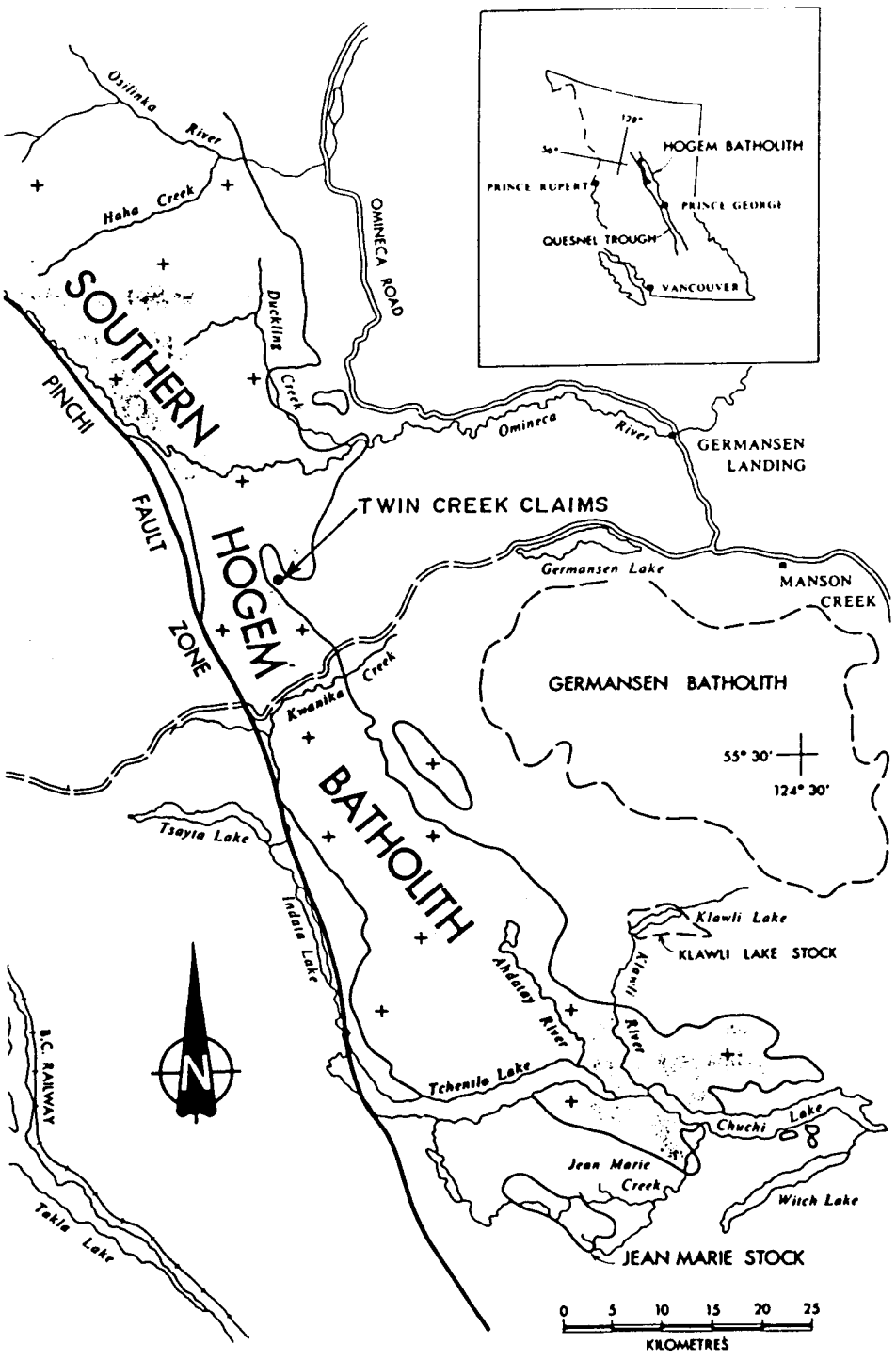

FROM: J. A. GARNETT, B.C.D.M. 1978

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OMINECA GOLD PROGRAM

TWIN CREEK PROPERTY

SOUTHERN HOGEM BATHOLITH

GENERAL LOCATION

DATE	83·12·06	JOB NO.	83-04
APPROVED BY		FIG. NO.	1b

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1.5 PRESENT WORK

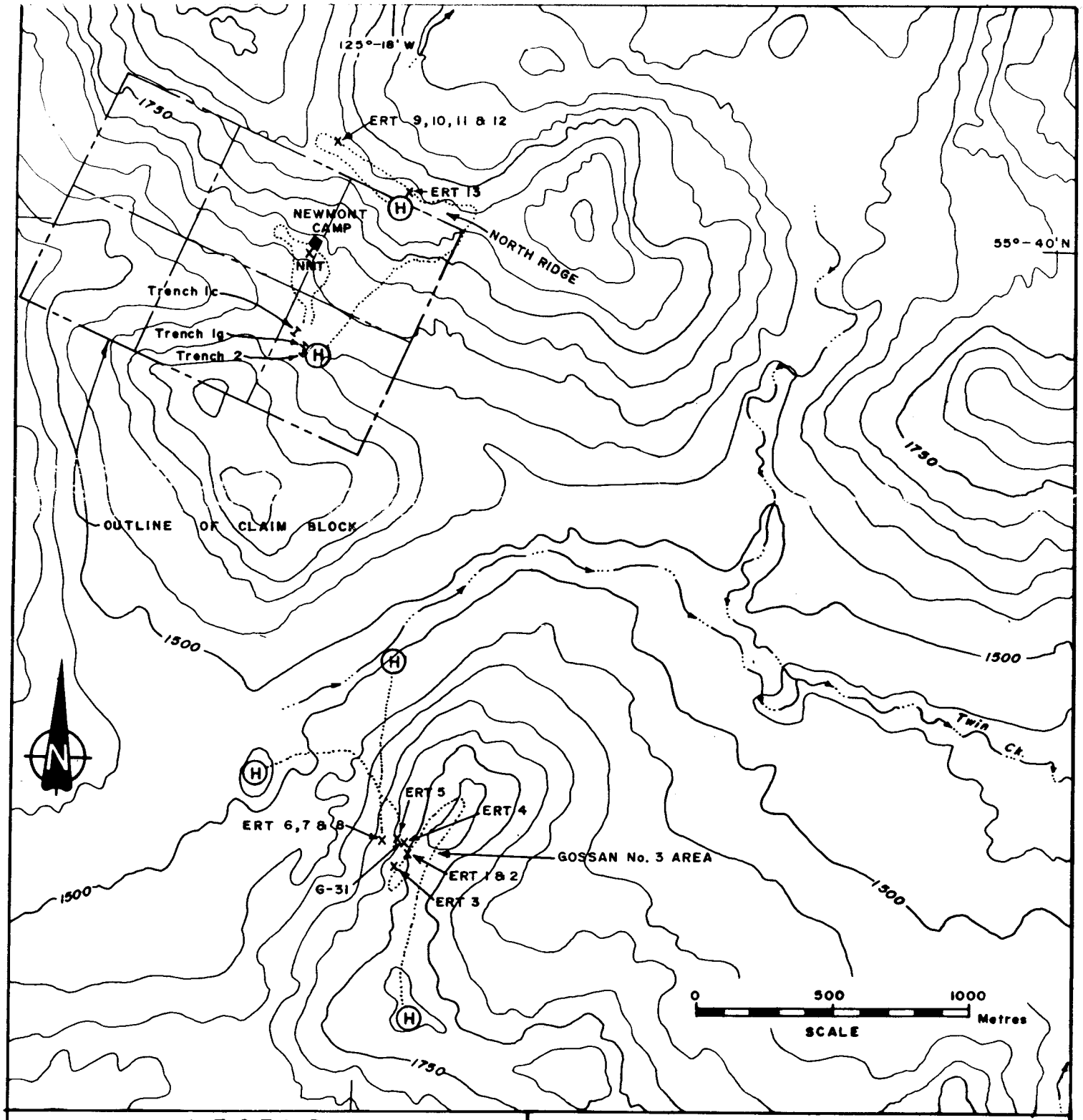
Bema Industries Ltd. was contracted to carry out two days of helicopter reconnaissance prospecting and sampling in order to assess the gold potential of the various gossans in the area.

Twenty-three rock samples were taken and their locations are plotted on Figure 2. Results are tabulated in the Appendix and on Figure 2. The samples were analyzed by Chemex Laboratories by the Atomic Absorption Method.

The gossan #3 (to the south) was sampled over 40 metres as a random grab and the north ridge was prospected for more gossans for Mo, Ag, Cu in parts per million and Au in parts per billion.

1.6 BIBLIOGRAPHY

Bacon, W. R.	Geological & Geochemical Report on the Twin Claim Group, B.C.D.M. Assessment Report #2501; 1970.
Garnett, J. A.	Geology and Copper-Molybdenum Mineralization in Southern Hogem Batholith, North-Central British Columbia, C.I.M. Bulletin; 1974.
Garnett, J. A.	Geology & Mineral Occurrences of Southern Hogem Batholith, B.C.D.M. 1978.
Henly, J.	Mattagammi Lake Exploration Ltd. Report.
Meade, H. D.	Notes to Accompany Preliminary Map No. 19, Geology of the Germansen Lake Area, B.C.C.M.
Turner, J.	Newmonth Exploration of Canada Ltd. Report to Lorne Warren.



LEGEND

TRAVERSE

(H) HELICOPTER LANDING AREA

ERT 3 SAMPLE LOCATION

ROCK CHIP SAMPLE DATA

SAMPLE No.	Mo ppm	Au ppb	Cu ppm	SAMPLE No.	Mo ppm	Au ppb	Cu ppm
ERT 1	44	<10	330	ERT 12	2	60	285
ERT 2	31	<10	268	ERT 13	1	20	88
ERT 3	1	<10	50	TRENCH 1B	2	70	265
ERT 4	2	60	500	TRENCH 1C	2	800	660
ERT 5	3	10	680	NMT	7	100	3600
ERT 6	2	100	14	G 31	2	10	55
ERT 7	1	30	395	TRENCH 2	2	40	150
ERT 8	3	620	585				
ERT 9	1	140	2150				
ERT 10	1	150	1350				
ERT 11	2	60	840				

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OMINECA GOLD PROGRAM

TWIN CREEK PROPERTY

SAMPLE LOCATION PLAN

DATE:	83-12-06	JOB NO.:	83-04
APPROVED BY:		FIG. NO.:	2

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2.0 REGIONAL GEOLOGY

The Twin Creek property lies within the Cassiar crystalline belt, along the eastern margin of the Hogem batholith. The Hogem batholith is situated within a narrow belt of lower Mesozoic rocks between very deformed Proterozoic/Paleozoic strata to the east, and deformed upper Paleozoics to the west. (See Figure 3.)

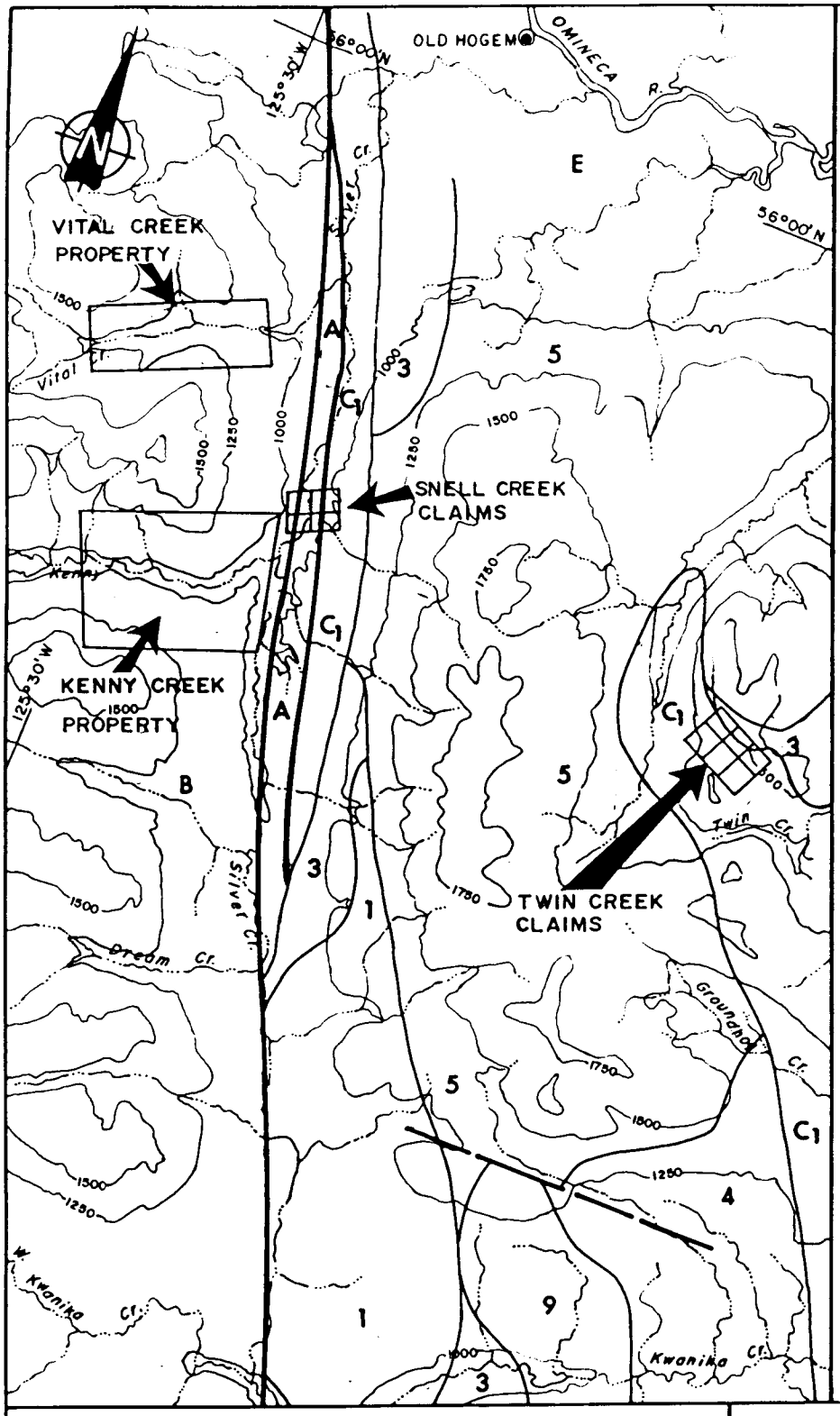
This belt of Mesozoics is known as the Quesnel Trough and defines a lower Mesozoic fault bounded basin. In the vicinity of the Hogem batholith, the Pinchi Fault Zone delineates the western border and the Manson Fault Zone marks the eastern border. The area is basically a NW-SE tranding graben bounded by these two fault zones.

The Hogem batholith is a composite intrusion composed of three phases evolving from granodiorite, to syenite, to granite between 212 to 108 Ma. The granodioritic phase is most voluminous, bracketing the main intrusive event from 212 - 176 Ma.

Along the irregular eastern margin, rocks of the southern Hogem batholith are in intrusive contact with Takla group volcanics. The Takla group is comprised of dark green-maroon tuffs, andesites, breccias, argillite, siltstone, comglomerate and agglomerate. This stratigraphy is commonly intruded by feldspar porphyry dykes and stocks. Mild hornfelsing, potassic alteration, fracturing and local pyritization are common features of the contact zone. The Twin Creek property is located along the axis of a Takla group embayment in the Hogem batholith.

It is thought that Takla volcanics represent the extrusive equivalents to the main granodiorite intrusive phase of the Hogem batholith (J. A. Garnet 1978). Nine major divisions of Talka rocks have been established between the Germansen and Hogem batholiths. Total thickness of the volcanics has been estimated between three and six kilometres (Meade, 1975).

The volcanic and sedimentary features exhibited by the Takla group are typical of Island Arc depositional environments (Meade, 1975). The Twin Creek property is located in the



Geology by
J. A. GARNETT, 1971-1973

RECENT

E — GLACIAL OVERBURDEN

LOWER CRETACEOUS

USLIKA FORMATION:

D — SANDSTONE, CONGLOMERATE

HOGEM BATHOLITH — PHASE III

9 — LEUCOCRATIC GRANITE, QUARTZ SYENITE ALASKITE

LOWER/MIDDLE JURASSIC

CHUCHI SYENITE:

8 — LEUCOCRATIC SYENITE, QUARTZ SYENITE

PHASE II

DUCKLING CREEK SYENITE COMPLEX:

7 — MAINLY LEUCOCRATIC SYENITE

6 — MAINLY FOLIATED MIGMATITIC SYENITE

UPPER TRIASSIC / LOWER JURASSIC

HOGEM GRANODIORITE:

5 — GRANODIORITE QUARTZ MONZODIORITE, minor tonalite, quartz diorite, quartz monzonite, granite.

HOGEM BASIC SUITE:

PHASE I

4 — MONZONITE, QUARTZ MONZONITE

3 — MONZODIORITE, QUARTZ MONZODIORITE

NATION LAKES PLAGIOCLASE PORPHYRY:

2a — (a) MONZONITE

2b — (b) MONZODIORITE

1 — DIORITE; minor gabbro, pyroxenite, hornblendite

TAKLA GROUP

C — MAINLY INTERBANDED BLACK ARGILLITE, BROWN SILTSTONE AND SHALE, minor limestone

C1 — MAINLY DARK GREEN ANDESITIC AND BASALTIC VOLCANIC ROCKS, TUFFS AND BRECCIAS, INTERBEDDED WITH FLOW ROCKS AND COMMONLY CUT BY PYROXENE AND FELDSPAR PORPHYRY DYKES

PERMIAN

CACHE CREEK GROUP:

A — MASSIVE LIMESTONE, DOLOMITE; minor gabbro, serpentine, quartzite

B — RIBBON CHERT, ARGILLACEOUS QUARTZITE, ARGILLITE, SLATE, GREENSTONE, LIMESTONE

LEGEND

PINCHI FAULT ZONE, APPROXIMATE TRACE

FRACTURE TRACE LINEAR, INFERRED

GEOLOGICAL CONTACTS

AMIR MINES LTD.

OMINECA GOLD PROGRAM

TWIN CREEK PROPERTY

GEOLOGY OF THE SOUTHERN HOGEM BATHOLITH

SCALE

0 1 2 3 4 5 MILES

0 1 2 3 4 5 6 KILOMETRES

BEMA INDUSTRIES LTD.

DATE: JAN. 1983

FIG. 3

uppermost exposed units of the Takla stratigraphy. The various gossans and mineralized zones occur near the contact between volcanic and intrusive phases, as disseminated pyrite, chalcopyrite and molybdenite in altered volcanics.

3.0 PROPERTY GEOLOGY

3.1 EXPOSURE

Most of the Twin Creek property area is covered by moss, alpine grass and jackpine. Exposure is limited to ridges and bluffs which occur on certain talus slopes.

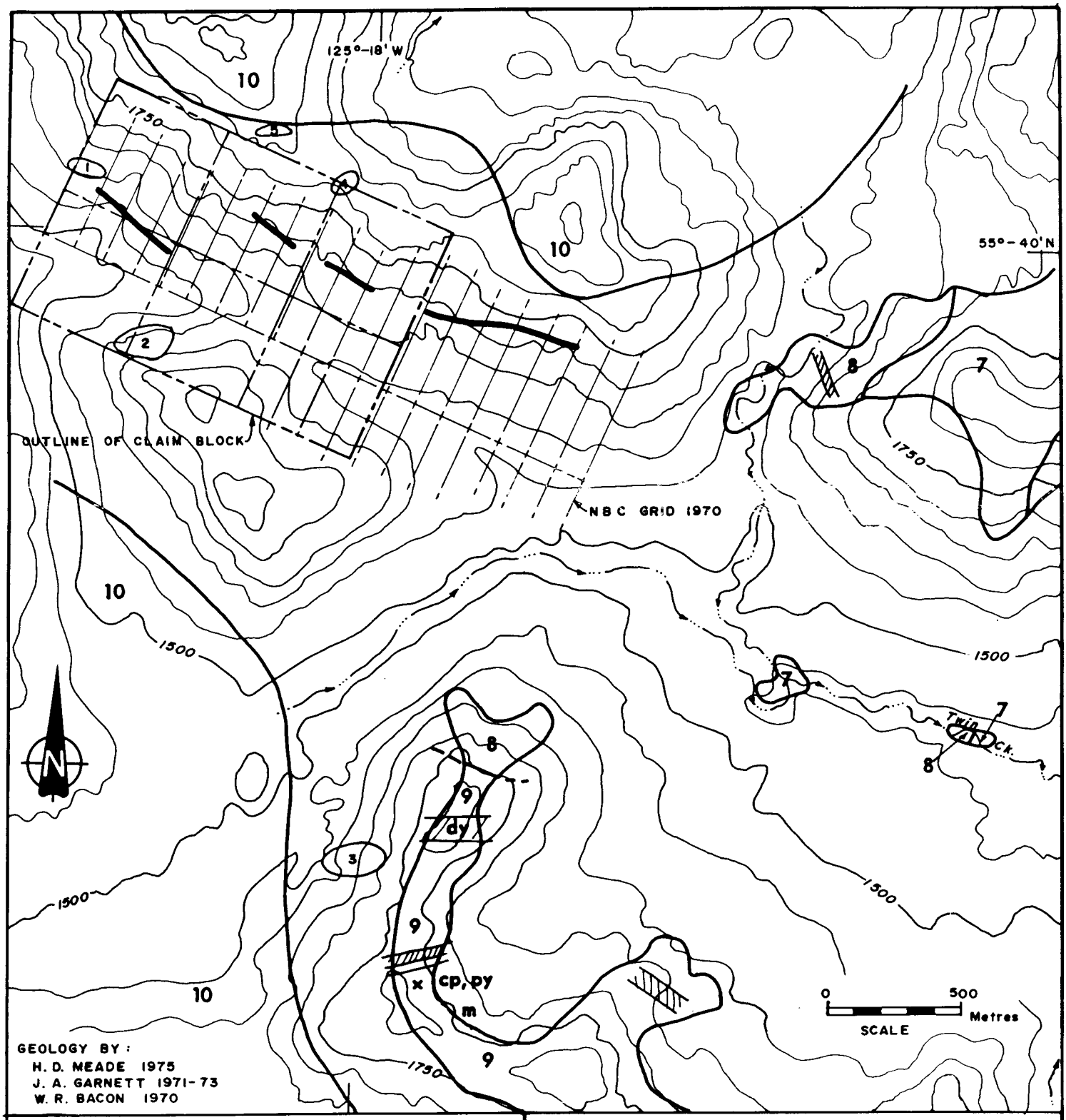
3.2 ROCK TYPES

During previous work on the property W. R. Bacon (1970) identified four mappable units. These are tabulated below:

1. Altered undifferentiated Takla volcanics
2. Medium-fine grained granodiorite termed "Border Phase"
3. Coarse grained granodiorite - Hogem intrusion
4. Quartz K-spar porphyry - granitic.

These units correspond to Takla volcanics (1), a mixing zone which is highly epidotized (2), the main Hogem intrusive phase (3), and later (?) stage granitic dykes which intrude the volcanics (4).

Numerous gossans, or deep red-brown weathering zones have been mapped and investigated in the area. Two are due to Cu-Mo mineralization (#1, #3) while the other is an intensively brecciated limonitic zone of altered volcanics (#2). General property geology is shown in Figure 4.



LEGEND

- GEOCHEMICAL ANOMALY - Cu
- UNDIFFERENTIATED TAKLA VOLCANICS
- 10 — HOGEM GRANODIORITE
- 9 — PLAGIOCLASE PHYRIC ANDESITE, AGGLOMERATE & TUFF
- 8 — HORNBLENDE PHYRIC BASALTIC ANDESITE
- 7 — SUBAQUEOUS/SUBAERIAL LAVAS
- 3 — GOSSAN AREA (NUMBERED)

AMIR MINES LTD.

OMINECA GOLD PROGRAM

TWIN CREEK PROPERTY

GENERAL GEOLOGY AND GEOCHEMICAL GRID

DATE: 83-12-06	JOB NO.: 83-04
APPROVED BY:	FIG. NO.: 4

BEMA INDUSTRIES LTD.

3.3 STRUCTURES

In the area of the Twin claims there exists a relatively small embayment of altered Takla volcanics overlying a small depression in the upper surface of the Hogem batholith.

The volcanics are a series of flows striking easterly to south easterly and are believed to dip to the south. The valley which forms a prominent saddle is a good linear feature and may indicate the presence of a fault.

3.4 MINERALIZATION

Disseminated chalcopyrite, malachite, pyrite and molybdenite is present on the northern slope above the saddle in the gossanous zones. Trench #1 in the valley contains subcrop of very pyritic altered volcanics which have assayed 0.015 oz/ton Au.

The edge of a dyke-like feature, located near gossan #3 is mineralized with disseminated pyrite, chalcopyrite, molybdenite and malachite hosted by altered and fractured Takla volcanics. All of these gossans were sampled and analysed for Cu, Mo and Au. Results are presented in Appendix 1.

4.0 GEOCHEMISTRY

In July 1970 an extensive soil geochem program for Cu was run over the area by W. R. Bacon. The most extensive coverage was on the northern slope and a clear anomalous zone was defined as shown in Figure 4. Newmont Mines (1981) also carried out an Au geochem survey outlining an Au anomaly of the same location and trend. During the course of the present work the area in question was investigated. A narrow 5 metre deep, 10 - 15 metres broad furrow was found in this area striking parallel to the anomaly traversing the entire slope. A stream runs along it for a short distance.

This feature is obviously associated with the anomaly and may be its cause, either as a topographic feature or a geologic feature (ie. a mineralized shear or dyke). Whether the anomaly is due to geology, or drainage patterns pooling these elements, is uncertain.

5.0 CONCLUSIONS

1. Results from 2 out of 23 rock geochem analyses confirm the existence of low grade gold values in altered Takla volcanics. The two samples yielding higher values are from trench #1 and gossan #3. Trench #1 results have been proved reproducible.

2. Analyses of trench #1 clearly show the "nugget effect" since both samples (trench #1 G and C) come from the same trench. Approximately 2 kg. of material was taken for both samples.

3. A SE-NW trending topographic feature along the north slopes parallels the Cu geochem anomaly (W. R. Bacon 1970). Source of this anomaly is unkown.

6.0 RECOMMENDATIONS

1. Further work should be confined to basic prospecting of the area, and locating and measuring zones which produced rocks running the higher grades (500 - 600 ppb Au).

2. Large as possible rock samples should always be taken on the property.

STATEMENT OF QUALIFICATIONS

I, FREDERICK CARL EDMUNDS, of Bema Industries Ltd., do hereby certify that:

1. I am a graduate of the University of Edinburgh, Scotland, and hold the following degree:

   B.Sc. Honours Geology

2. I have practiced my profession as a geologist since 1983 and worked summers as a geological assistant since 1979.

3. I have no interest, direct or indirect in the property or shares of Amir Mines Ltd. nor do I expect to receive any such interest.

4. That the information contained in this report is both true and correct to the best of my knowledge.

Signed: Frederick C. Edmunds

F. Carl Edmunds
B.Sc. Geology

Date: Dec 19 1983

APPENDIX 1

BEMA INDUSTRIES LTD. DATE 25·10·83 PROJECT TWIN CREEK 83-04 ANALYST CHEMEX
COLLECTOR RJB, MJB, GCP, RCE N·T·S· 93 N/11 METHOD

ROCK CHIP SAMPLE DATA

Number	Location	Grid Refer'ce	Notes	Date	Type	Depth	Length	Width	Remarks	Values (ppm)		Au PPB	Ag PPM	Cu PPM
61951C	CLAIM TWIN CK SOUTH SLOPE	125°A'W 55°45'N	#5	19·09·83					South gossan - limonitic breccia FCE	Mo		93	0.312	200
61952C	CLAIM TWIN CK SOUTH SLOPE	"	#4	19·09·83					Takla Volcanic - grab - py FCE	—		186	0.312	<100
61953C	CLAIM TWIN CK SOUTH SLOPE	"	#6	"					FCE " "	—		93	0.312	<100
61954C	CLAIM TWIN CK VALLEY	"	15' Chip	"			15'		TRENCH #1 RJB	—		156	0.312	300
61955C	CLAIM TWIN CK VALLEY	"	350'E of Trench1	"					TRENCH #2 RJB	—		<93	0.629	100
61956C	CLAIM TWIN CK NORTH SLOPE	"	Grab45'	"			45'		Falconbridge Drill zone MJB	—		125	5.0	3,900
61964C	CLAIM TWIN CK	"	ERT-1	7·10·83					South gossan	44		<10		330
61965C	CLAIM TWIN CK	"	ERT-2	"					"	31		<10		265
61966C	CLAIM "	"	ERT-3	"					"	1		<10		50
61967C	CLAIM "	"	ERT-4	"					"	3		60		500
61968C	CLAIM "	"	ERT-5	"					"	3		10		660
61969C	CLAIM "	"	ERT-6	"					"	2		100		14
61970C	CLAIM "	"	ERT-7	"					"	1		30		395
61971C	CLAIM "	"	ERT-9	"					North Ridge Gossans Takla volcs.	1		140		2150
61972C	CLAIM "	"	ERT-10	"					"	1		150		1350
61973C	CLAIM "	"	ERT-11	"					"	2		60		840
61974C	CLAIM "	"	ERT-12	"	✓				"	2		60		285
61975C	CLAIM "	"	ERT-13	"	"				"	1		20		85

BEMA INDUSTRIES LTD. DATE 25·10·83 PROJECT TWIN Ck. 8304 ANALYST CHEMEX
COLLECTOR GCP + FCE N·T·S· METHOD

ROCK CHIP SAMPLE DATA

Number	Location	Grid Reference	Notes	Date	Type	Depth	Length	Width	Remarks	Values (ppm) Mo	Ag	Au (ppb)		Cu PPM
61976C	CLAIM TWIN CK	125°W 55°30'N	Trench 1G	✓	chip		15'		GCP Sample of trench 1 (random)	2		70		265
61977C	CLAIM TWIN CK	"	Trench 1C	✓	chip		15'		FCE Sample of trench 1 (random)	2		500		530
61978C	CLAIM TWIN CK	"	NMT	✓	grab		—		Newmont campsite gulley	7		100		3650
61979C	CLAIM TWIN CK	"	G31	✓	grab		40m		GCP sample of south gossan	2		10		55
61980C	CLAIM TWIN CK	"	Trench 2	✓	chip		—		FCE Sample of Trench 2	2		40		150
61981C	CLAIM TWIN CK	"	ERT-8	✓	grab		—		FCE SOUTH GOSSAN Qtz carbonate vein fractured (ro) Tekla rd	3		620		555
	CLAIM													
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TWIN 1 - 6 (6 2-post claims) ($600.00/yr.)

SUPPLY, ROOM & BOARD

($9,754.58 = total cost to Omineca projects.
Twin 1 - 6 is 3.1% of total cost or $302.40) $302.40

TRAVEL EXPENSES

($7,264.22 = total cost to Omineca projects.
20% or $1,452.84 will be applied for assessment.)
Twin 1 - 6 is 3.1% of applied assessment total 45.04

GLACIER HELICOPTERS

(Total cost to Twin 1 - 6 is $2,874.49.)
Claim $600.15 for assessment 600.15

ASSAY COSTS

Chemex labs - soil & rock samples 415.37

FIELD LABOUR

C. Edmunds, geologist - Sept. 19, Oct. 7 1.5 days x $175.00/day	$262.50	
G. Picken, geologist - Oct. 7 1 day x $175.00/day	175.00	
Total field labour		437.50

OFFICE LABOUR

C. Edmunds, geologist - Oct. 17 1 day x $175.00/day	175.00	
B. Thacker, draftsman 0.5 day x $185.00/day	92.50	
Total office labour		267.50
TOTAL COST		$2,067.96

BEMA
Industries Ltd.

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES DIVISION – TITLES BRANCH

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I. AMIR MINES LTD. (Name)
#510 - 475 HOWE STREET (Address)
VANCOUVER BC
V6C-2B3 (Postal Code) 681-8371 (Telephone Number)

Valid subsisting F.M.C. No. 251826

Agent for ..... (Name)
..... (Address)
.....
..... (Postal Code) (Telephone Number)

Valid subsisting F.M.C. No. .....

STATE THAT

1. I have done, or caused to be done, work on the TWIN 1-6 (2 POST) Claim(s)
Record No.(s) 3956, 3957, 3958, 3959, 3960 & 3961
Situate at 93N.11.W. (TWIN CREEK) in the OMINECA Mining Division,
to the value of at least $2,067.96 dollars. Work was done from the 19 day
of SEPTEMBER 1983, to the 17 day of OCTOBER 1983

2. The following work was done in the 12 months in which such work is required to be done:

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)
(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

.....
.....
.....
.....

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

.....
.....
.....
.....

(For C and D sections, please turn over.)

o

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)

	COST

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL

(Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)

GEOLOGICAL MAPPING	
GEOCHEMICAL SOIL & ROCK ANALYSIS	
	$2,067.96
TOTAL OF C AND D	$2,067.96

Who was the operator (provided the financing)?

Name .....

Address .....

.....

Portable Assessment Credits (PAC) Withdrawal Request	AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):	
Name of Owner	
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.) 1.	
2.	
3.	
4.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 1200.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

2 YEARS TWIN 1 3956 (7)
2 YEARS TWIN 2 3957 (7)
2 YEARS TWIN 3 3958 (7)
2 YEARS TWIN 4 3959 (7)
2 YEARS TWIN 5 3960 (7)
2 YEARS TWIN 6 3961 (7)

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1. AMIR MINES LTD.	$867.96
	2.	
	3.	
In operator(s) name (party providing the financing).	1.	
	2.	
	3.	

.....

(Signature of Applicant)