

83-#805 A - 11978

25/11/84

GEOLOGICAL REPORT ON THE  
VITAL CREEK  
PROPERTY  
OMINECA MINING DIVISION

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,978**

GEOLOGICAL REPORT ON THE  
VITAL CREEK  
PROPERTY

Omineca Mining Division  
55°42' North Latitude  
125°30' West Longitude  
N.T.S. Maps 93N11, 93N12

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

## 1.0 INTRODUCTION

The Vital Creek property consists of six placer leases and six 2-post claims located on Vital Creek. The leases are owned by Mr. Lorne Warren of Smithers, B. C., and are under option to Amir Mines Ltd. Coarse gold is found within the lower few feet of gravel in a pre-glacial channel to the north of the present creek under 30 - 60 metres of compact glacial till.

## 1.1 LOCATION AND ACCESS

The Vital Creek property is located in the Omineca Mining Division approximately 144 kilometres northeast of Smithers and 40 kilometres northeast of Takla Landing. Access is via rough seasonal road 168 kilometres north from Fort St. James through Manson Creek. It is passable during the summer months in the period June 1 - October 30. (See Figure 1.) The nearest helicopter is stationed in Smithers.

## 1.2 PHYSIOGRAPHY

The property is located along the east northeast flowing Vital Creek from one kilometre west of its mouth to its summit along the north branch. The creek occupies a steep sided canyon with the main access adit located at the base of a 25 metre waterfall in the central portion of the creek. Elevations range from 1,000 metres at the base of the creek to 1,500 metres at the head of the creek.

Vegetation consists of small stunted spruce (2 m - 5 m) along the valley slopes and thick underbrush in the immediate creek valley.

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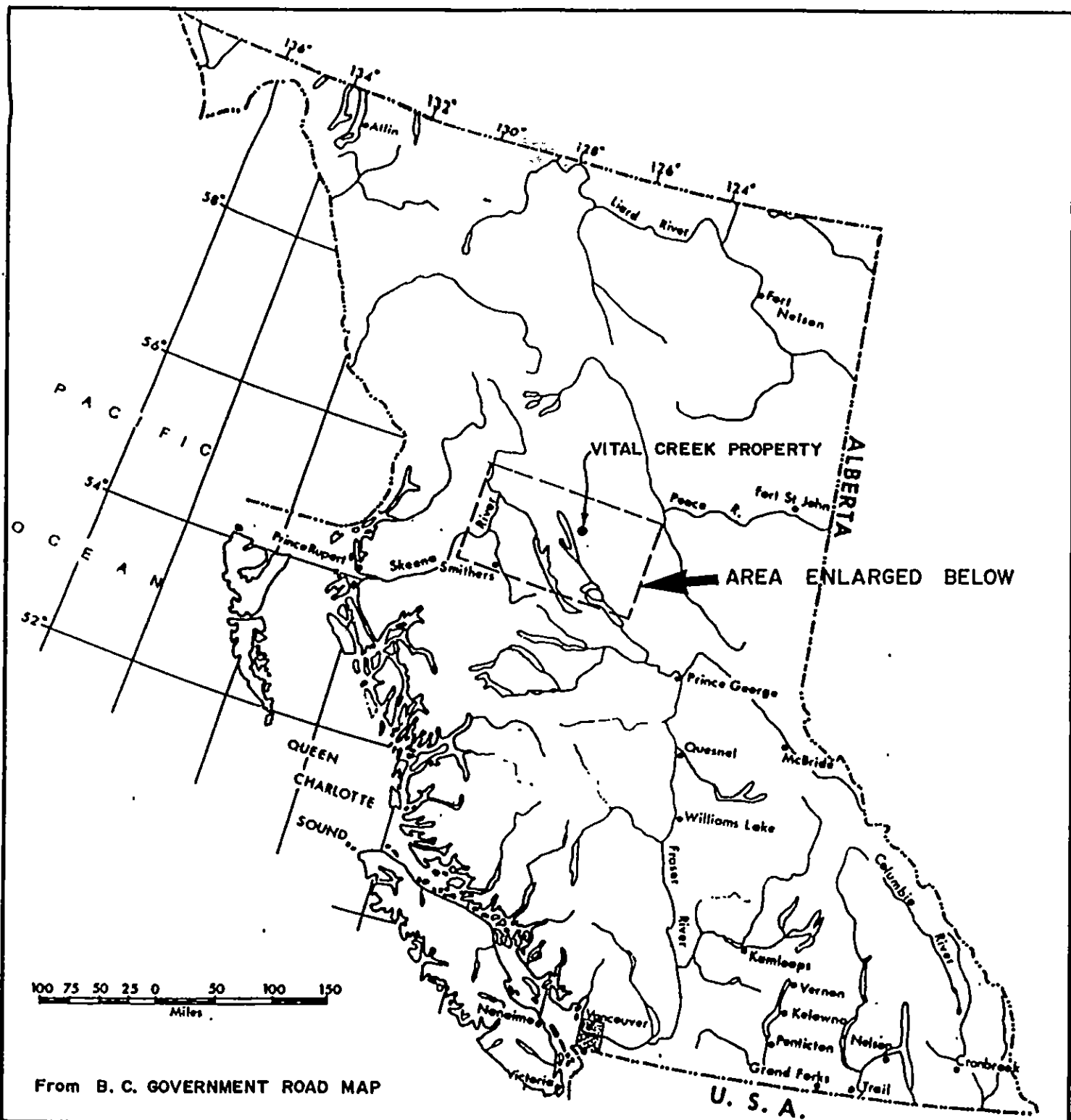
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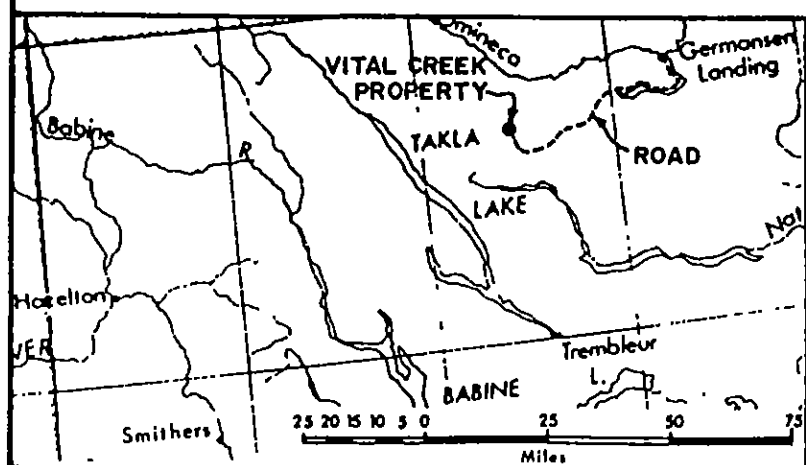
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From B. C. GOVERNMENT ROAD MAP



<b>AMIR MINES LTD.</b> <b>OMINECA GOLD PROGRAM</b>		
<b>VITAL CREEK PROPERTY</b> <b>BRITISH COLUMBIA</b> <b>KEY MAP</b>		
SCALE AS SHOWN		
 <b>BEMA INDUSTRIES LTD.</b>	DATE: FEB. 1963	FIG. 1

1.3      PROPERTY

The Vital Creek property consists of six placer leases and six 2 post lode claims. A list of these claims follows: (See Figures 2 and 3.)

PLACER LEASES

<u>LEASE NUMBER</u>	<u>CREEK NAME</u>	<u>EXPIRY DATE</u>
P.L. 2622	Vital Creek	Dec. 31, 1984
P.L. 2623	Vital Creek	Dec. 31, 1984
P.L. 2624	Vital Creek	Dec. 31, 1984
P.L. 3885	Vital Creek	July 16, 1984
P.L. 3886	Vital Creek	July 16, 1984
P.L. 3895	Vital Creek	July 16, 1984

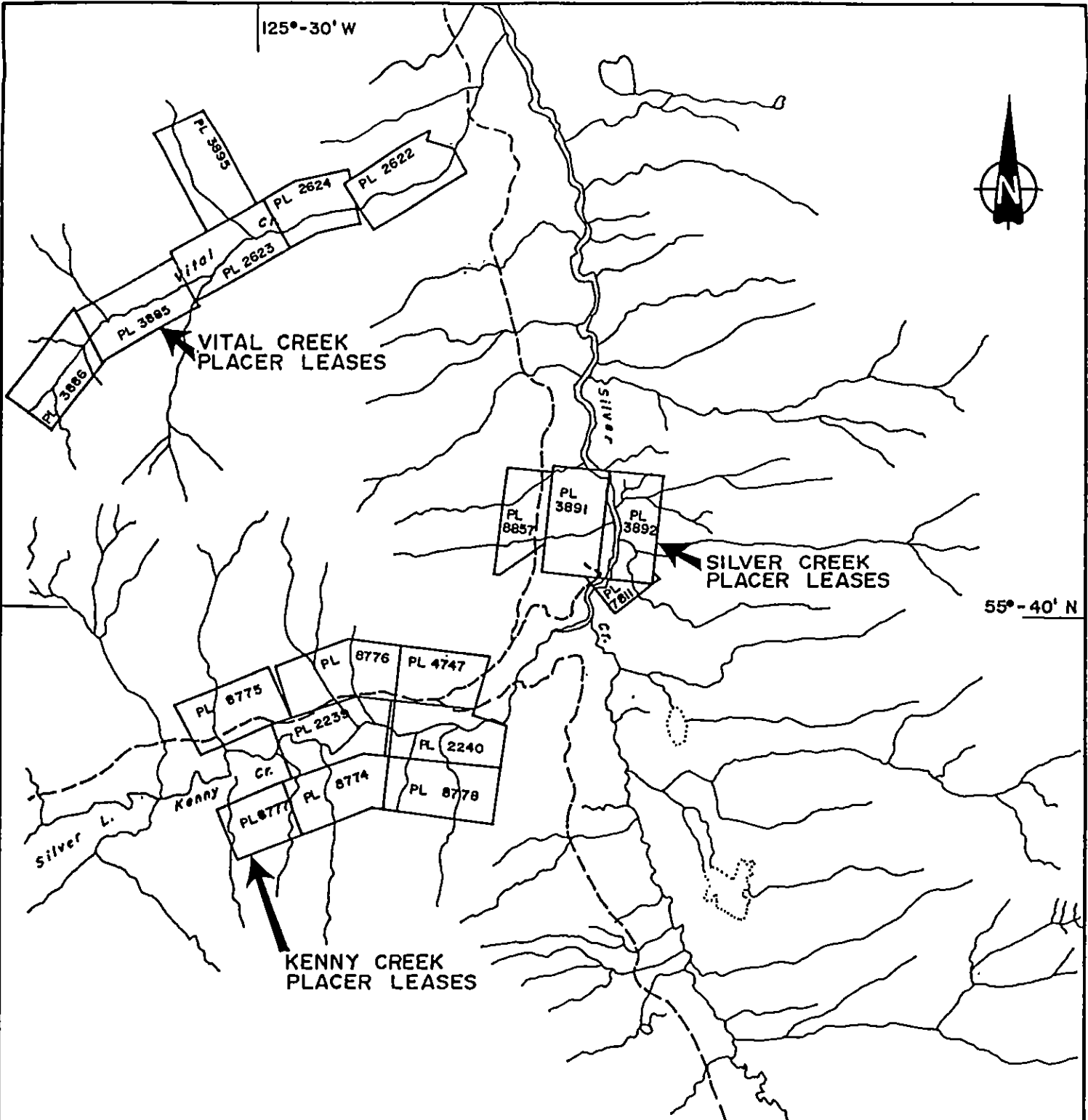
LODE CLAIMS

<u>CLAIM NAME</u>	<u>NUMBERS</u>	<u>EXPIRY DATE</u>
CHIN 1 - 6	4682(8) - 4687(8)	Aug. 5, 1984

1.4      HISTORY

The first alluvial gold was discovered in the area on Vital Creek in 1869, which flows easterly into Silver Creek approximately 5 kilometres north of Kenny Creek. The recorded production is approximately 4,602 ounces Au from a deeply buried, elevated, pre-glacial stream course. The deposit was worked on by drift mining and later by hydraulicking.

The creek was first worked by the old timers by means of ground sluicing and shallow drift diggings. In the early 1900's the creek was owned by several companies, the Caledonia General Mining Association, Limited of Victoria, and the Vital



125°-30' W



VITAL CREEK  
PLACER LEASES

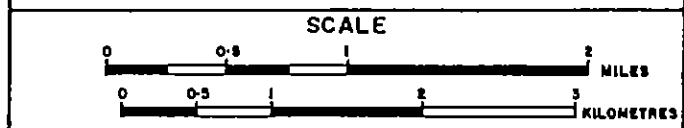
SILVER CREEK  
PLACER LEASES

KENNY CREEK  
PLACER LEASES

55°-40' N

AMIR MINES LTD.  
OMINECA GOLD PROGRAM

VITAL, SILVER AND  
KENNY CREEK PLACER LEASES  
LOCATION MAP

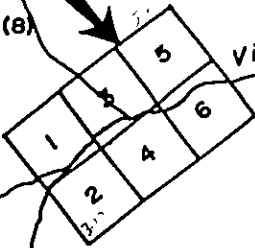


From: B.C. CLAIM MAPS 93 N/11, 93 N/12

▲▲  
BEMA INDUSTRIES LTD. DATE: FEB. 1983 FIG. 2

125°-30' W

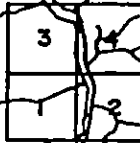
VITAL CREEK CLAIMS  
CHIN 1-6  
4682(8) - 4687(8)



Vital Cr.

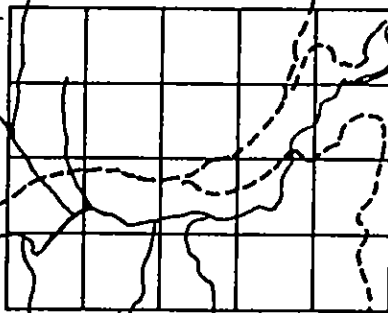


SNELL CREEK CLAIMS  
SNELL 1-4  
4588(5), 4589(5),  
4593A(5), 4594(5)



Silver

55°-40' N



Kenny Cr.

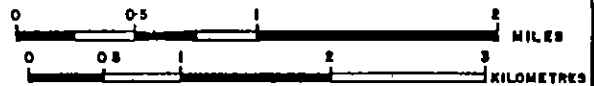
Silver L.

KENNY CREEK CLAIMS  
KEN 1  
2144 (9)

AMIR MINES LTD.  
OMINECA GOLD PROGRAM

VITAL, SNELL AND  
KENNY CREEK LODE CLAIMS  
LOCATION MAP

SCALE



From: B.C. CLAIM MAPS 93 N/11, 93 N/12

▲▲  
BEMA INDUSTRIES LTD.

DATE: JAN. 1983

FIG.  
3



Creek (B.C.) Mining Syndicate of London, England, with little work or recorded production from either. Individuals and groups of Chinese worked the claims during the period 1921 to 1934. The largest of these operations was by Gow Sing, Lee Tong and Associates between 1922 and 1934. Their initial operations were located 2.4 kilometres upstream from the mouth of Vital Creek at the base of a 25 metre cliff (see Figure 5). They initially worked the channel by ground sluicing and later by underground mining, following the pre-glacial channel by driving a tunnel along bedrock for 280 metres.

Leases held by R. M. Shepard and Associates were located 2.4 kilometres upstream from the Gow Sing, Lee Tong property close to the fork of Vital Creek. In 1933 a tunnel 42 metres long was driven on the north side of the creek just above creek level. It penetrated the right rim of the buried channel and was continued in tight boulder clay. Previous to this work a shaft was sunk at a point 75 metres upstream to a depth of 12 metres and a drift run from the bottom but was discontinued due to water.

In 1935 Northern Ventures Limited (Venture Exploration Company of East Africa) acquired all claims and leases on the creek. They abandoned drift mining in favour of hydraulicking. Hydraulicking commenced in 1936 but was abandoned in several months due to insufficient grade of the creek to carry away the waste and the great dilution. The company ceased operations shortly after with little production.

Little is known of any further work on Vital Creek until Mr. Lorne Warren of Smithers acquired the leases and claims in 1979. In 1982 Amir Mines Ltd. examined the property data from Mr. Lorne Warren and optioned the claims and placer leases in an agreement signed in December, 1982.

### 1.5      PRESENT WORK

Amir Mines Ltd. contracted Bema Industries to carry out a program of geological mapping and geochemical surveying of the Chin 1 claims. A total of five days were spent on the property and all the surface workings were surveyed on to a base.

1.6            BIBLIOGRAPHY

- Armstrong, J. E.                    G.S.C. Memoir 252, Fort St. James  
Map Area, Cassiar and Coast Districts,  
British Columbia, pp. 125, 128, 140.
- Holland, Stuart S.                    B.C.D.M. Bulletin 28, Placer Gold  
Production in British Columbia, 1950.
- Lay, Douglas                        M.M.A.R. 1933, pp. 107; North-eastern  
Mineral Survey District (No. 2).
- McClelland, T. H.                    Private report Canadian Exploration  
Limited, Winifred Tait Properties,  
December 1954.
- Monger, J.W.H. and                    G.S.C. Current Research 74-1, pp. 8 - 9,  
Paterson, I.A.                        Upper Paleozoic and Lower Mesozoic  
Rocks of the Omineca Mountains, Project  
720041 (1974).
- Paterson, I.A.                        G.S.C. Current Research 74-1, pp. 31 -  
42, Geology of the Cache Creek group  
and Mesozoic Rocks at the Northern End  
of the Stuart Lake Belt, Central  
British Columbia. Project 720041  
(1974).
- Nordin, G. D.                        Geological Report on the Kenny Creek  
Placer Leases and Lode Claims. 17/2/82  
Bema Industries Report.

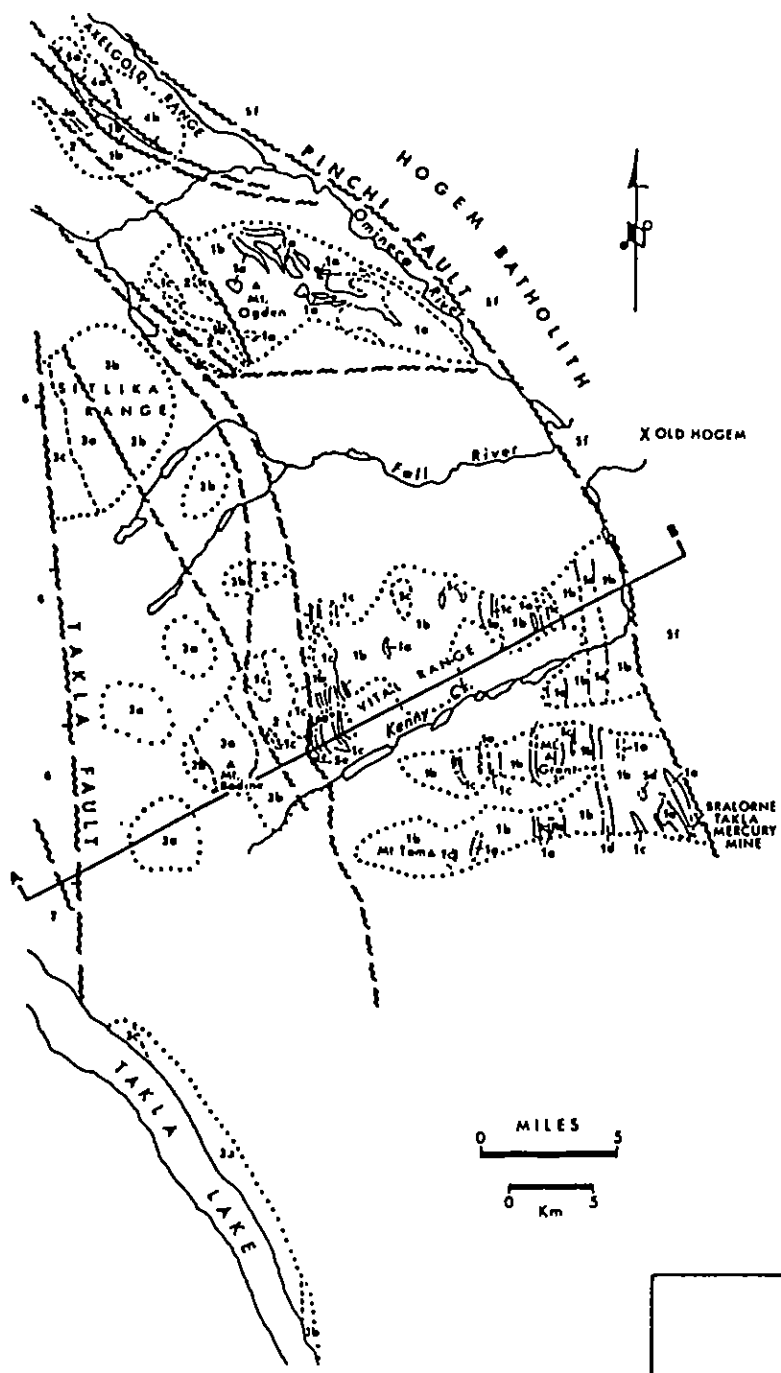
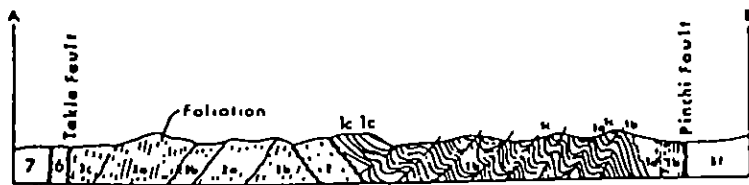
## 2.0 REGIONAL BEDROCK GEOLOGY

The Kenny Creek and Chin properties lie within deformed Upper Paleozoic strata within the Intermontane Tectonic belt immediately to the west of the Quesnel trough, separated by the Pinchi fault.

The Pinchi fault is the main structural feature in the area (see Figure 4), separating Permian rocks on the southwest from Upper Triassic rocks to the east. The Permian rocks were mapped by I. A. Paterson (in 1974) as the northern subdivisions west of the Pinchi fault.

Immediately west of the fault is a narrow belt of Upper Triassic or Lower Jurassic chert pebble conglomerate, argillite and sandstone. These rocks are separated from the main belt of Permian Cache Creek Group rocks to the west by a narrow northeast-dipping fault zone containing serpentine and greenstone. The main belt of Cache Creek rocks west of the two previous subdivisions is a package of phyllite, greywacke, and massive limestone containing Mid to Upper Permian fossils. Just east of Takla Lake the Cache Creek rocks are in contact with Upper Triassic (Takla Group) volcanic and volcanoclastic rocks along an easterly dipping thrust-melange zone.

The eastern two subdivisions of rocks immediately west of the Pinchi Lake fault are metamorphosed and faulted but not folded, whereas the Cache Creek Group rocks have been metamorphosed to lower greenschist facies and undergone at least three stages of deformation. The older structures include a penetrative foliation generally parallel to compositional layering which marks the orientation of axial planes of mesoscopic, east-west trending, tight or isoclinal folds. Later chevron or concentric folds trend north-south with eastward dipping axial planes. The last deformation stage are kink folds related to late faulting.



**LEGEND**

- UPPER CRETACEOUS and PALEOCENE  
SUSTUT GROUP
  - 7 conglomerate, shale, greywacke
- JURASSIC  
HAZELTON GROUP
  - 8 tuff, volcanic breccia
- UPPER TRIASSIC and JURASSIC  
TAKLA GROUP (?)
  - 4 (4a) chert pebble conglomerate;  
(4b) greywacke, argillite
- UPPER TRIASSIC (?), JURASSIC (?)  
SITLIKA ASSEMBLAGE
  - 3 (3a) tuff, volcanic breccia, rhyolite, feldspar porphyry  
(3b) greywacke, siltstone  
(3c) black phyllite or argillite
- UPPER PALEOZOIC  
CACHE CREEK GROUP
  - 1 (1a) limestone; (1b) chert & phyllite;  
(1c) greenstone; (1d) greywacke, laminated siltstone
- INTRUSIVES  
MESOZOIC or TERTIARY
  - 5 (5a) syenite; (5b) granite; (5c) biotite, hornblende feldspar porphyry; (5d) biotite, granodiorite; (5e) felsite
- JURASSIC (Mainly ?)
  - st granodiorite (Hogem Batholith)
- PERMO-TRIASSIC
  - 2 serpentinite, harzburgite
- FAULT (defined, approximate, inferred)
- THRUST or high angle REVERSE FAULT
- CONTACT (defined, approximate)
- LIMIT of MAPPING.....

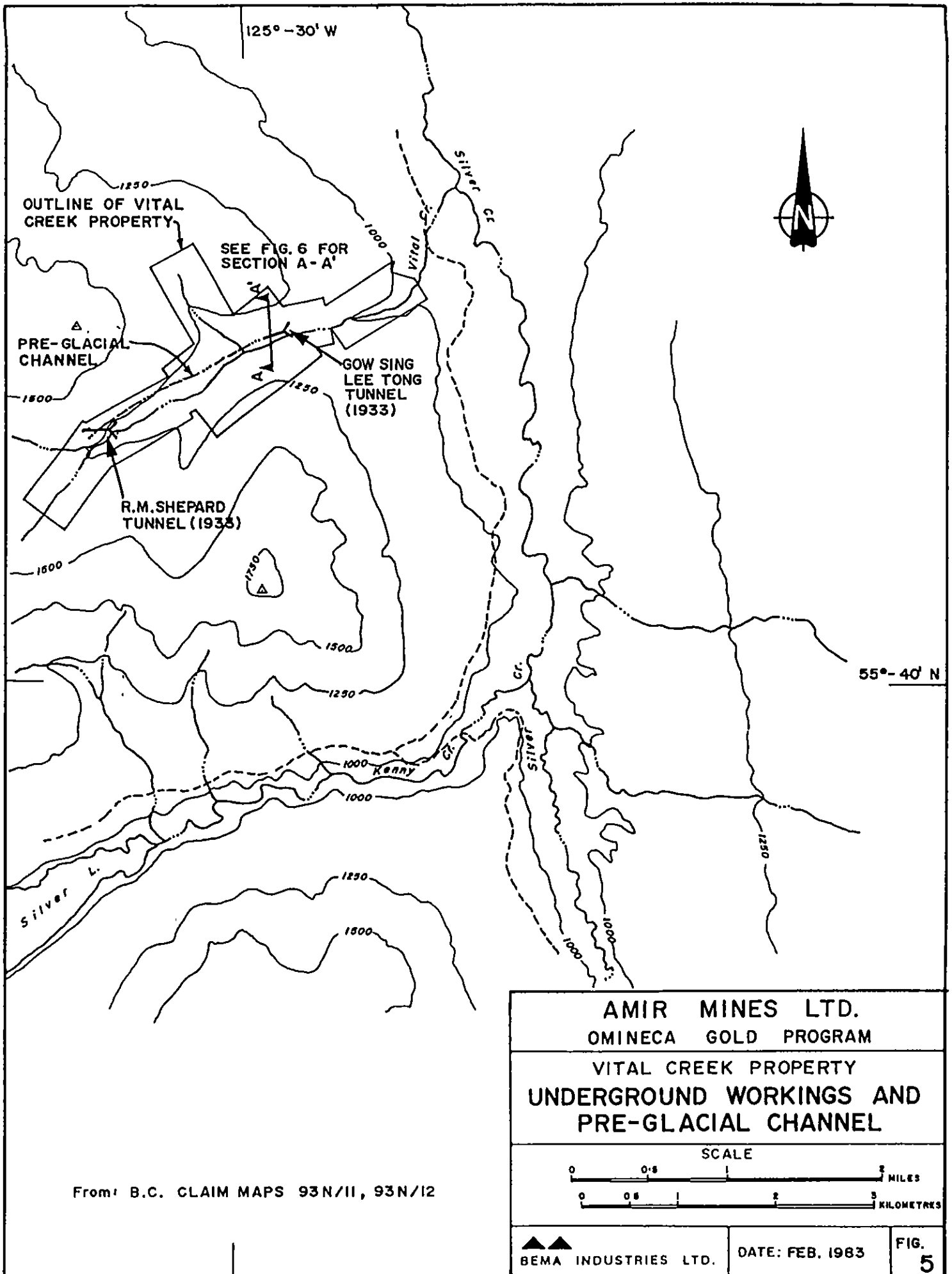
**AMIR MINES LTD.**  
**OMINECA GOLD PROGRAM**

**REGIONAL GEOLOGY**

DATE	83-12-05	JOB NO.	83-04
APPROVED BY:		FIG. NO.:	4

**BEMA INDUSTRIES LTD.**

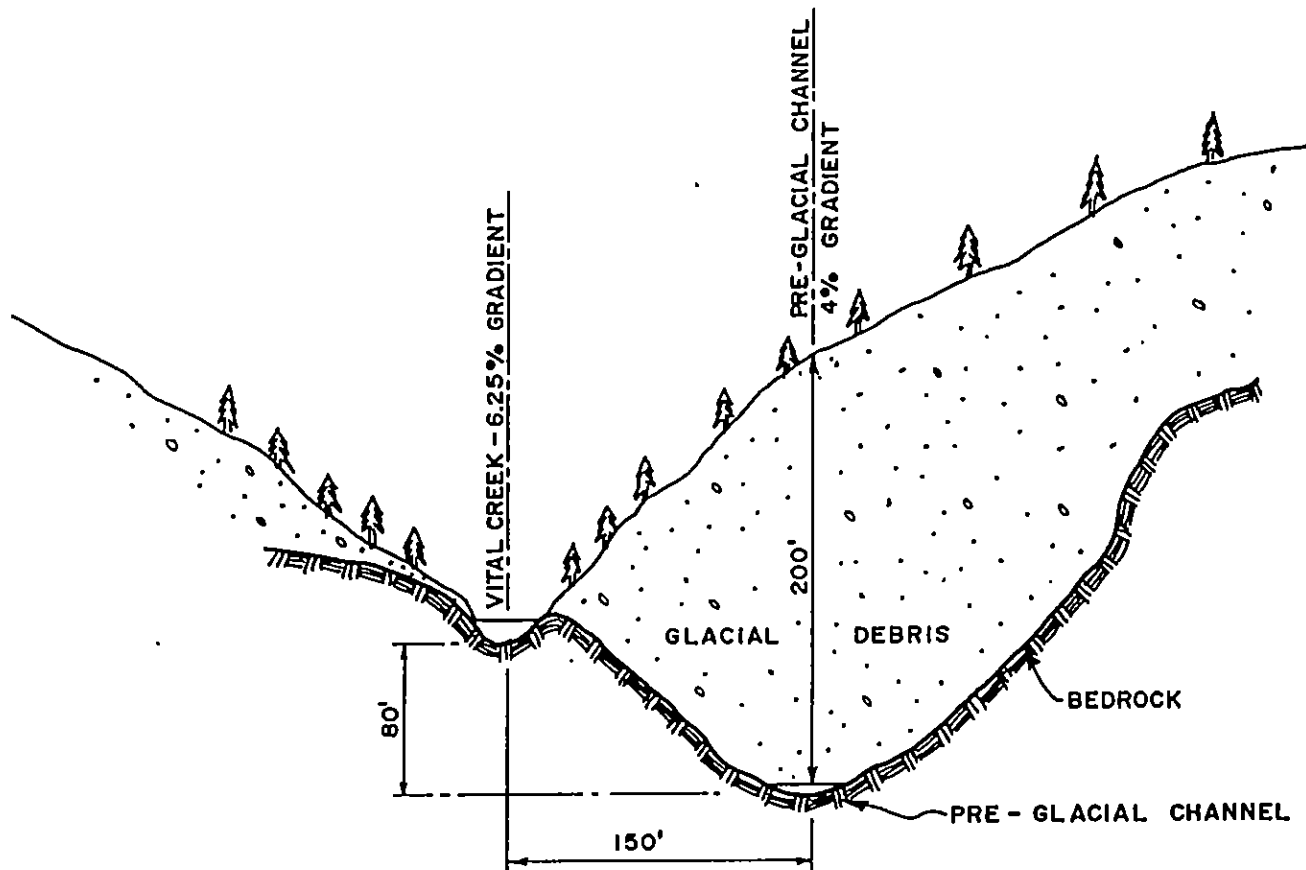
From: I. A. Patterson  
G. S. C. Current Research 74-1 part B



A

A'

LOOKING WEST



AMIR MINES LTD. OMINECA GOLD PROGRAM		
VITAL CREEK PROPERTY CROSS-SECTION A-A' THROUGH VITAL CREEK		
SCALE 1 INCH = APPROXIMATELY 100 FT.		
▲▲ BEMA INDUSTRIES LTD.	DATE: FEB. 1983	FIG. 6

From: B.C.M.M. ANNUAL REPORT 1933, p.105  
by DOUGLAS LAY,  
RESIDENT MINING ENGINEER  
HAZELTON, B.C.

## 2.1 REGIONAL SURFICIAL GEOLOGY

The Fort St. James area was extensively glaciated during Pleistocene time with glacial till being deposited up to elevations of 2,300 metres. There were at least two major advances of the Cordilleran ice sheet, the last advance from the southwest to northeast. Predominate parallel drumlins and intervening depressions in the area are best explained by two major ice advances, the first carrying a heavy load of debris and the second a relatively light load. Pronounced drumlins and parallel grooving in the Kenny Creek valley indicate the ice moved north-easterly along the valley and swung northerly near its junction with Silver Creek.

Most of the auriferous gravels found in old stream channels lie beneath glacial drift and are probably of pre-glacial (Late Tertiary) age with some reworking by streams in Pleistocene time. The gold generally rests on bedrock and is concentrated in the lower few feet and in bedrock crevices. Most of these ancient channels occur above the present streams but they may occur at or below the present streams as at Kenny and Vital Creeks. Most of the preserved channels lie across or parallel to the direction of ice movement. The general movement of ice was easterly and no buried placer deposits have been found in creeks draining the westerly mountain slopes where the ice was moving uphill and scouring. Where buried channels are preserved the ice was moving down hill or level and in general depositing rather than excavating material.

The Vital property is a buried pre-glacial channel deposit buried on the north bank of the present creek valley. It is located 45 metres to the north of the present creek and 24 metres lower in elevation and has been traced for 2.5 kilometres along the north bank of the present creek.

### 3.0 PROPERTY BEDROCK

Exposure on the Chin property is limited to the hydraulicked areas, road cut exposures and the creek valley bottom.

### 3.1 ROCK TYPES

Rock units of the Upper Permian Cache Creek group present on the property are described below:

#### 1. Tuff/Metasiltstone

This unit is exposed to the eastern margin of the property in the creek valley below the hydraulicked area. It is a medium-fine grained, light olive green, massive quartz-felspathic meta tuff or siltstone commonly containing euhedral pyrite. The rock often contains dark carbonaceous lenticles and possesses a well developed foliation with cm-thick quartz segregations.

#### 2. Chlorite-sericite-quartz phyllite

This unit is the most common rock type on the Chin property exposed as isolated outcroppings in the creek valley. It is a light-medium grey, fine grained pyritic (2 - 5%) phyllite. It is commonly interbedded on the decimeter scale with dark grey, fine grained graphitic phyllite.

Due to poor continuity between exposure it is impossible to map lithological boundaries. The entire section is very similar to the rocks on Kenny Creek and probably consist. of 1 - 10 metre thick units of alternating meta-tuffs/siltstones and argillites.



### 3.2            STRUCTURE

The lithologies of the area possess a steeply dipping cleavage striking NNW - SSE ( $340^{\circ}$  -  $350^{\circ}$ ). Various crenulation cleavages are also present in the rocks, plunging north at shallow ( $10^{\circ}$  -  $15^{\circ}$ ) angles. One upright, isoclinal, antiformal fold closure has been mapped at the top of the hydraulicked area. These structures are consistent with those studied by Paterson (1974), who provides more detail on the time relationships of these structures.

Quartz veins and metamorphic quartz segregations are a ubiquitous feature of the area tending to sub-parallel or completely crosscut the rock fabric. At least two generations of these veins exist, as some are clearly deformed whilst others are not. The veins are commonly rust stained and vuggy. No significant Au-bearing sulphide/oxide mineralization has been found in these veins.

#### 4.0            GEOCHEMISTRY

The Vital Creek drainage was covered by a 50 metre centre soil survey and the results are presented in Appendix 1. 53 soil samples were collected from the B soil horizon in kraft soil sample bags. Chemex Laboratories analyzed the samples by the Atomic Absorption Method for Au in parts per billion and Arsenic in parts per million. One anomalous area has been outlined on the southern slope in the western portion of the property. An anomalous gold value of 90 ppb. occurs in close proximity to four arsenic anomalies. The other anomalies in the area are not considered significant as they are isolated.

7 rock chip samples were collected in the Vital Creek drainage (Appendix 1 & 2) and were analyzed by Chemex Laboratories by the Atomic Absorption Method for Au in parts per billion, Ag, Cu in parts per million.

#### 5.0            CONCLUSIONS

1. During the mapping of the Cache Creek group rocks on Chin 1 no significant Au-mineralization was found in bedrock or float specimens.
2. A contour soil survey in the Vital drainage indicated two gold anomalies, the westernmost being coincident with four Arsenic anomalies.
3. Apart from the single soil anomaly mentioned above there is no concrete evidence linking the Vital Creek placer gold accumulations to the bedrock on the property.

#### 6.0            RECOMMENDATIONS

No further hardrock exploration work should be carried out on the property apart from confirming the existence of the western soil anomaly by resampling. This soil anomaly may warrant follow-up work.

STATEMENT OF QUALIFICATIONS

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

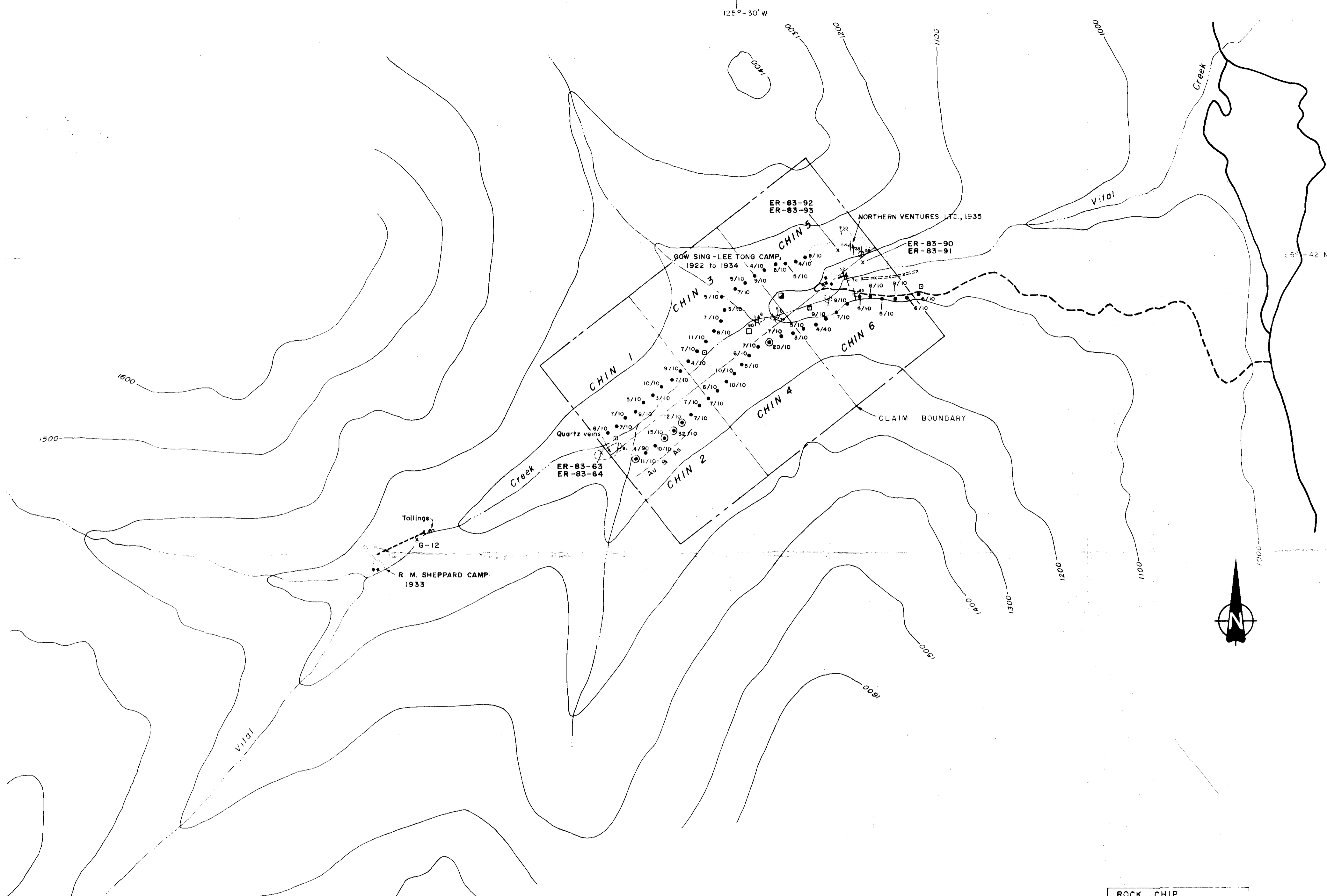
1. I am a graduate of the University of Edinburgh, Scotland, and hold the following degree:  
  
B.Sc. Honours Geology
2. I have practiced my profession as a geologist since 1983 and worked summers as a geological assistant since 1979.
3. I have no interest, direct or indirect in the property or shares 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 Carl Edmunds  
F. Carl Edmunds  
B.Sc. Geology

Date: Dec 19 1983

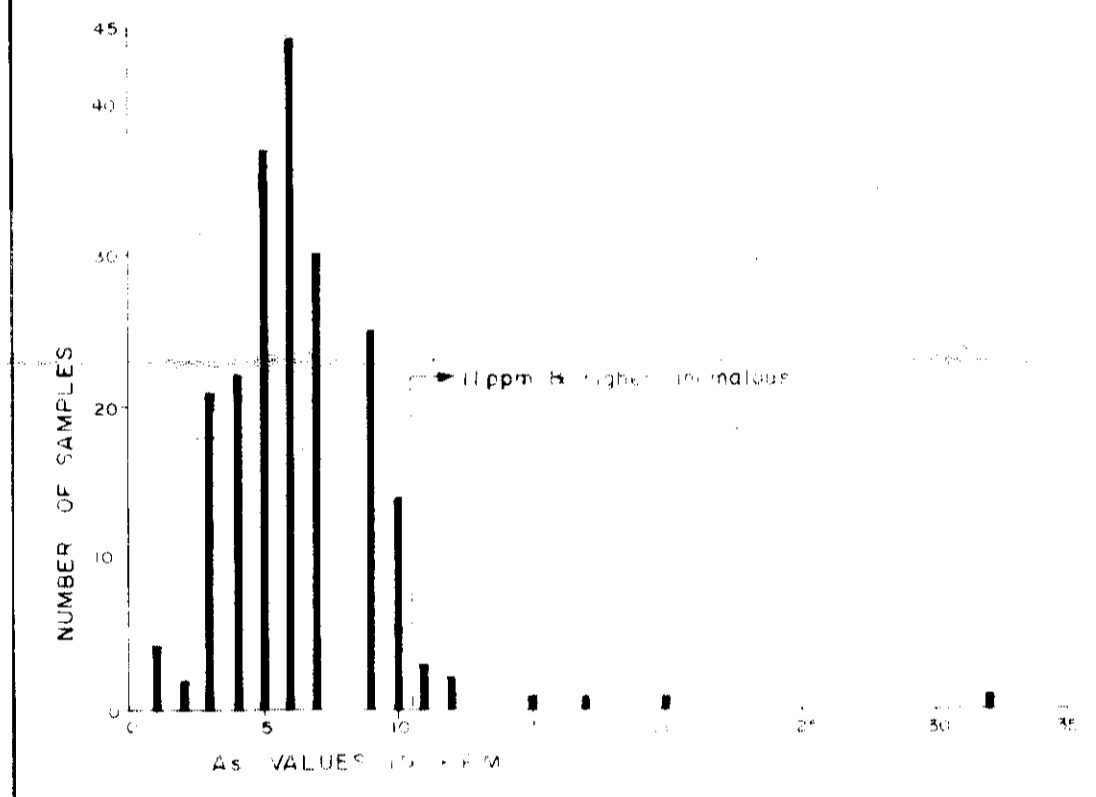
APPENDIX 1





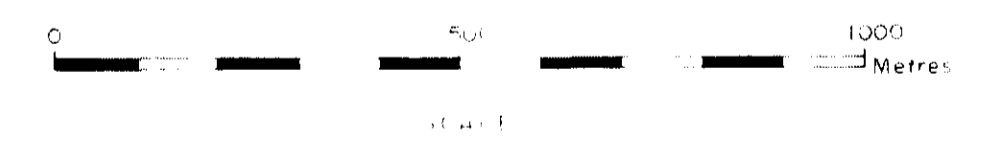
LEGEND

- CONTOURS (100 METRE INTERVAL)
- CREEK
- ROAD
- ROAD/TRAIL
- BUILDING
- TIMBER TRESTLE
- Y WELL
- TEST PIT
- AIR SHAFTE
- CLAIM POST
- ROCK OUTCROPPING (DIFFERENTIATED CACHE CREEK THYLITE)
- ⊥ DIF. OF CLEAVAGE
- ↑ LINEATION
- ↑ FOLD AXIS
- SOIL SAMPLE LOCATION
- 4/90 As value (ppm) / Au value (ppb)
- ⊙ As ANOMALY
- HYDRAULICED AREA
- X G-12 ROCK CHIP SAMPLE LOCATION



ARSENIC HISTOGRAM (Σ 208)

N.B. ALL OTHER Au VALUES ≤ 0.1ppb



ROCK CHIP SAMPLE DATA		
SAMPLE No.	Au ppb	Ag ppm
ER - 83 - 63	<10	0.1
ER - 83 - 64	<10	0.1
ER - 83 - 90	<10	0.1
ER - 83 - 91	<10	0.1
ER - 83 - 92	<10	0.1
ER - 83 - 93	<10	0.2
G-12	<10	0.1

11,978

MINERALOGICAL BRANCH  
LABORATORY REPORT

AMIR MINES LTD.  
OMINECA GOLD PROGRAM

VITAL CREEK  
GEOLOGY, GEOCHEMISTRY &  
SURFACE WORKINGS

DATE: 83-12-28	JOB NO. 83-04	FIG. NO. APPENDIX I
DRAWN BY: J.F.T.	SCALE:	

BEMA INDUSTRIES LTD.

CHIN 1 - 6 (6 2-post claims)

(\$600.00/yr)

SUPPLY, ROOM & BOARD

(\$9,754.58 = total cost to Omineca projects.)

Chin 1 - 6 is 6.6% of total cost or \$643.81

\$ 643.81

TRAVEL EXPENSES

(\$7,264.22 = total cost to Omineca projects.)

20% or \$1,452.84 will be applied for assessment.)

Chin 1 - 6 is 6.6% of applied assessment total

95.89

ASSAY COSTS

Chemex Labs - soil & rock samples

379.60

FIELD LABOUR

Carl Edmunds, geologist - Sept. 29, Oct. 1,2,4

3.0 days x \$175.00/day

\$525.00

G. Picken, geologist - Sept. 29, Oct. 1,2

2.5 days x \$175.00/day

437.50

Total field labour

962.50

OFFICE LABOUR

C. Edmunds, geologist - Nov. 14

1 day x \$175.00/day

\$175.00

B. Thacker, draftsman - Nov. 10

1 day x \$185.00/day

185.00

Total office labour

360.00

TOTAL COST

\$2,441.80





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

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL  
 (Details in report submitted as per section 8, 6, or 7 of regulations )  
 (The itemized cost statement must be part of the report.)  
 (State type of work in space below.)

		COST
..... GEOLOGICAL MAPPING .....		
..... SOIL + ROCK GEOCHEM. ....		
		\$2,441.80
TOTAL OF C AND D		\$2,441.80

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 \$ 1,200.00 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 ..... CHIN. 1 ..... 4682 ..... (B) .....
- .. 2 YEARS ..... CHIN. 2 ..... 4683 ..... (B) .....
- .. 2 YEARS ..... CHIN. 3 ..... 4684 ..... (B) .....
- .. 2 YEARS ..... CHIN. 4 ..... 4685 ..... (B) .....
- .. 2 YEARS ..... CHIN. 5 ..... 4686 ..... (B) .....
- .. 2 YEARS ..... CHIN. 6 ..... 4687 ..... (B) .....

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 MINGS LTD.	\$1,241.80
	2.		
	3.		
In operator(s) name (party providing the financing).	1.		
	2.		
	3.		

(Signature of Applicant)