

From Statement of Material Facts April 25/88

Terracamp Developments Ltd.

APPENDIX B

103I019

REPORT ON THE
KALUM LAKE PROPERTY
TERRACE AREA
BRITISH COLUMBIA

NTS 103 - I / 10 & 15

Longitude 128° 45' West Latitude 54° 45' North

FOR

TERRACAMP DEVELOPMENTS LTD.
4624 Tuck Avenue
Terrace, B.C.
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BY

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December 22, 1987

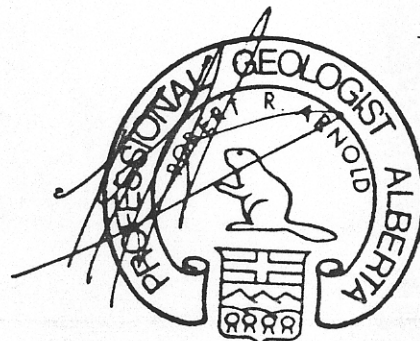


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SUMMARY

The Kalum Lake property consists of five contiguous claim blocks, totalling 87 units, which are held by Terracamp Developments Ltd. who have an option agreement with the Kalum Lake Mining Group. The property lies about 32 kilometers north of Terrace on the west shore of Kitsumkalum Lake, British Columbia, and easy access is gained by four wheel-drive vehicle along an all-weather gravel road which runs through the central property area.

Interest in the claim area dates back to 1919 when the main vein was discovered. Between 1923 and 1937 shafts and adits were sunk in the mineralized zone. Assay values up to 0.62 oz Au/t and 2.2 oz Ag/t were reported from these old workings. In 1972, the original claims were restaked and a drill hole was drilled sub-parallel to the main vein. Only traces of gold and silver were recorded in this drill hole. In 1983 trenching of the #1 and #2 veins was carried out by the newly formed Kalum Mining Group. Assay values up to 7.32 oz Au/t and 6.58 oz Ag/t were recorded in the #2 vein. In 1987 three diamond drill holes were drilled over the main showing. Visible gold was noticed in two intersections of the #2 vein.

The property is underlain by Upper Jurassic-Lower Cretaceous greywackes, conglomerates and argillites of the

Bowser Group. These rocks are intruded by granodiorite and quartz monzonite stocks of Upper Cretaceous Age. Mineralization occurs as auriferous epigenetic quartz veins associated with the intrusives. These veins exhibit hydrothermal alteration.

Salazar (1987) calculated a very conservative potential grade and tonnage by utilizing the data of the 1987 drilling program. The calculated potential reserves of the main site were estimated to be 10,400 short tons at a grade of 0.47 oz Au/t to a depth of 45 meters.

It is in the opinion of the authors that underground drift exploration in conjunction with bulk sampling and metallurgical testing is a more suitable exploration method to determine the exact geometry, composition and grade characteristics of a hydrothermal vein system. Such an underground program is warranted on the Terracamp Developments Ltd. property and highly recommended by the writers.

1.0 INTRODUCTION

This summary and evaluation of the Kalum Lake Property is done at the request of Mr. I. Dow, on behalf of Terracamp Developments Ltd. of Terrace, British Columbia. The main purpose of the present report is to evaluate the potential of the property for hosting gold mineralization and to propose an exploration program designed to test this potential.

This report is based on a review of public and private reports pertaining to the area, recent exploration activities on the property, government geological and topographical maps and claim data from the mining recorder's office. One of the writers (D.A. Collins, Ph.D.) visited the property during the month of November, 1987 and examined the property geology and inspected the sites of the old shafts situated on the claims.

1.1 Location and Access

The subject property is located, and partly incorporates, the west shore of Kitsumkalum Lake, in west-central British Columbia. The claim group is approximately centered at latitude 54 degrees 45' North and longitude 128 degrees 45' West.

The Kalum Lake claim group is 32 kilometers north of Terrace, British Columbia. Access to the property is gained by four wheel drive vehicle along an all-weather gravel road which leaves Highway 16 five kilometers west of Terrace and passes through the middle of the claim group (Figures 1, 2).

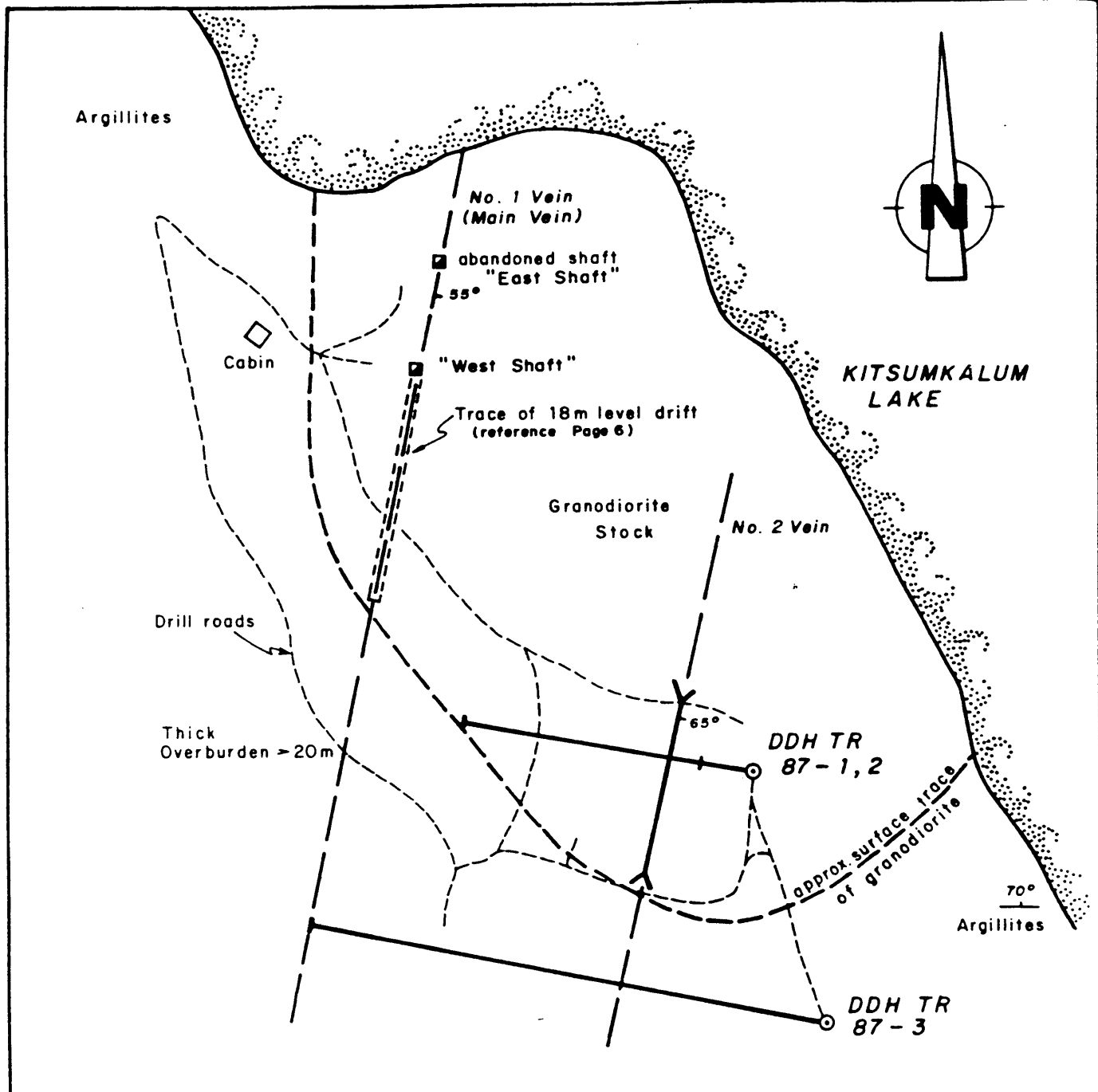
1.2 Property and Ownership

The Kalum Lake property comprises 5 claim blocks totalling 87 units. The claims are held by Terracamp Developments Ltd. who have an option agreement with the Kalum Lake Mining Group.

The Bav 1 to 4 claims were originally staked by Mr. R.H. Bates on July 15, 1972 and were recorded at the Prince Rupert mining recorder's office on July 21, 1972. The remainder of the claims were staked by Mr. J. Apolczer between November 1983 and May 1984 and recorded at the Prince Rupert mining recorder's office during the same period.

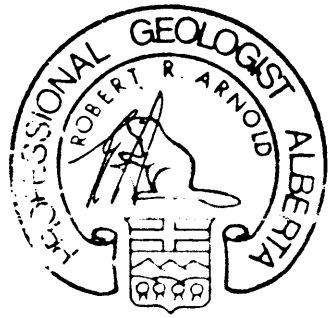
A list of pertinent claims data is given below:

CLAIM NAME	UNITS	RECORD No.	EXPIRY DATE
Trench 1	20	4390	April 13, 1991
Burn 1	20	4399	April 13, 1992
Burn 2	20	4425	April 27, 1992
Burn 3	10	4445	May 11, 1992



LEGEND:

- DRILL HOLE
- TRENCH
- GEOLOGICAL CONTACT



AFTER: Covey & Chapman (1987)

TERRACAMP DEVELOPMENTS LTD.			
KALUM LAKE CLAIMS			
SKEENA MINING V., N.T.S. 103I/10, 15W, B.C.			
PROPERTY GEOLOGY & DIAMOND DRILL HOLE LOCATION MAP			
Scale: As Shown	Date: DEC 87	N.T.S. 103 I / 10, 15 W	Figure 5
By: J.P. SORBARA & Associates			

Bav 1	1	37397	July 21, 1993
Bav 2	1	37398	July 21, 1993
Bav 3	1	37399	July 21, 1993
Bav 4	1	37400	July 21, 1993
Bav 5	1	4223	November 28, 1992
Bav 6	1	4224	November 28, 1992
Bav 7	1	4225	November 28, 1992
Bav 8	1	4226	November 28, 1992
Bav 9	1	4227	November 28, 1992

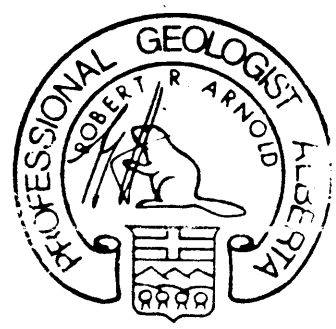
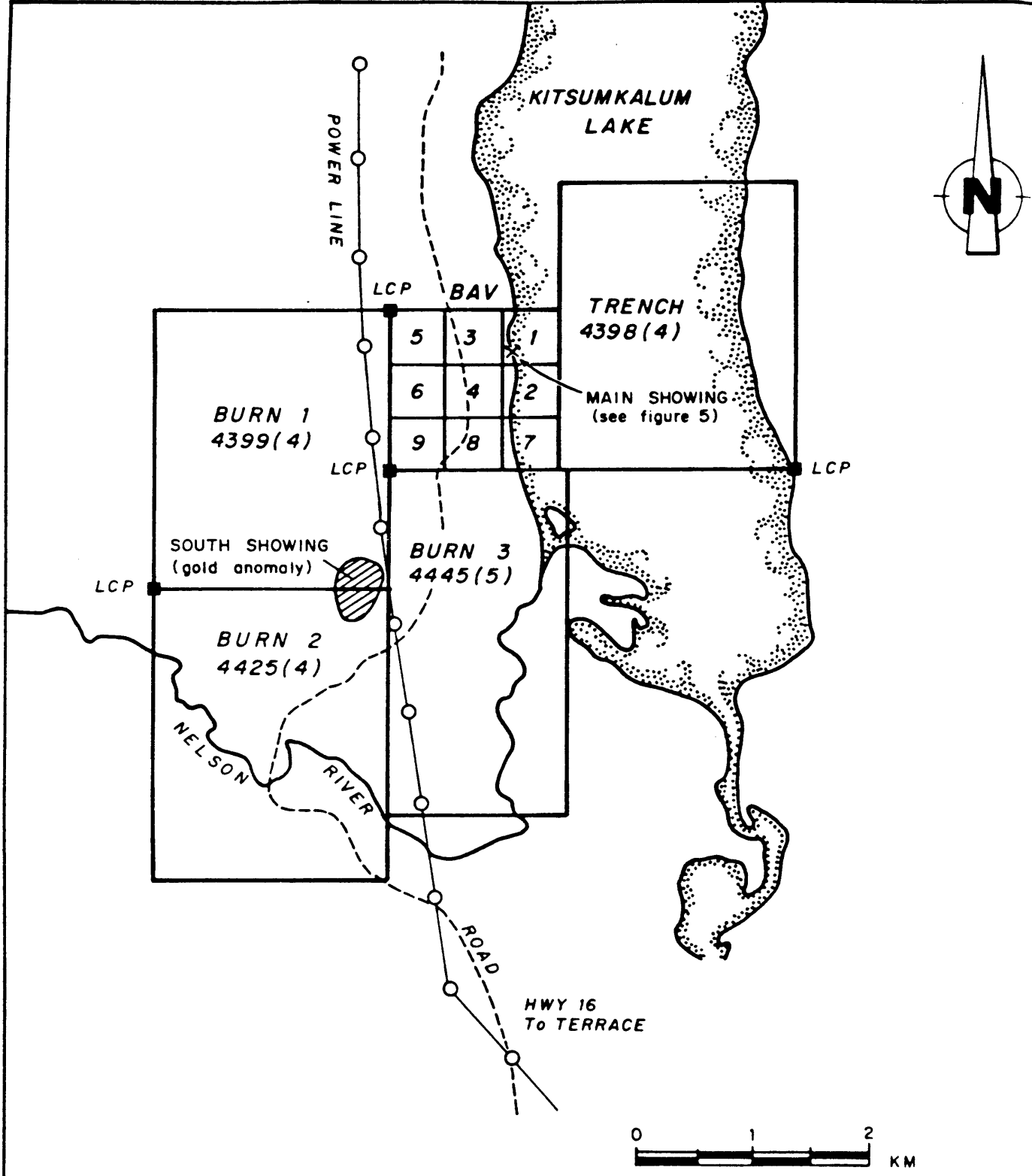
The entire property is shown on the Mineral Claim Map 103-1/10W & 15W, and on figure 3 of this report.

1.3 Physiography

The property is located within the divide of the Pacific Ranges of the Coast Mountains and the Hazelton Mountains of the Intermontane Physiographic Belt.

The area is incorporated within, and exhibits the characteristics of, a typical glaciated valley. These include a wide faintly undulated valley bottom, containing Kitsumkalum Lake, flanked by steep rugged mountains. Elevations within the property range from 150 meters (492 feet) to 475 meters (1558 feet) above sea level.

The lower slopes are predominantly timbered with a variety of conifers with an intergrowth of alder and willow.



TERRACAMP DEVELOPMENTS LTD.			
KALUM LAKE CLAIMS			
SKEENA MINING DIV., N.T.S. 1031/10, 15W, B.C.			
CLAIM MAP			
Scale: 1: 50,000	Date: DEC 87	N.T.S. 1031/10, 15W	Figure 3
By: J.P. SORBARA & Associates			

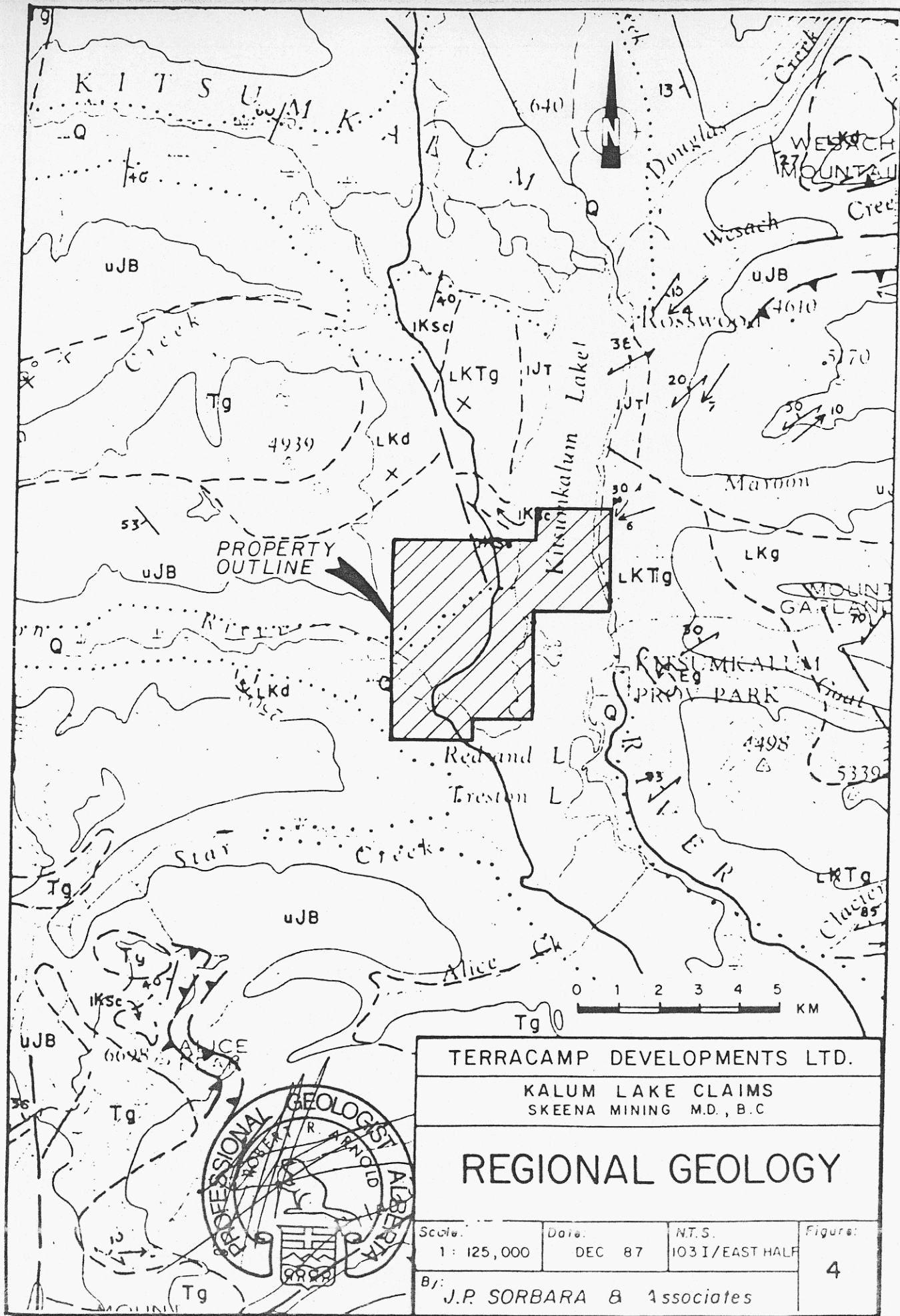
2.0 HISTORY AND PREVIOUS WORK

Interest in the Kalum Lake property dates back to 1919 when C.A. Smith staked the Lakeside, Portland and West Portland claims in 1922. Shaft sinking and drifting was carried out by Kalum Mines Ltd. between 1923 and 1925 on a vein, now termed the main vein, discovered in 1919. Two inclined shafts, the East and West shafts, were sunk to depths of 9.1m and 18.2m respectively. A westerly drift 64 m long was developed from the West shaft. It is reported by Cavey and Chapman (1987) that a grab sample collected in 1930 assayed 0.62 oz Au/t (21.0 g/t) and 2.2 oz Ag/t (75.0 g/t). These workings appear now to be caved and flooded.

A second adit, 26m long, was developed along a vein located approximately 90m southeast of the main vein. Only minor amounts of gold and silver were reported from this vein in 1937. This adit is now caved.

The original claims were restaked as the Bav 1-4 claims by J. Apolczer of Terrace, B.C., in 1972. A 114m drill hole was drilled sub-parallel to the main vein and consequently only trace gold and silver values were recorded.

In 1983 the Kalum Lake Mining Group was formed. They undertook a trenching and sampling program on the Main and #2 veins which yielded values up to 7.32 oz Au/t (250.7 g/t)



TERRACAMP DEVELOPMENTS LTD.			
KALUM LAKE CLAIMS SKEENA MINING M.D., B.C.			
REGIONAL GEOLOGY			
Scale: 1: 125,000	Date: DEC 87	N.T.S. 1031/EAST HALF	Figure: 4
By: J.P. SORBARA & Associates			

REGIONAL GEOLOGY LEGEND

- Q QUATERNARY
unconsolidated sediments
- 1KSc LOWER CRETACEOUS
Skeena Group: chert pebble conglomerate,
sandstone, siltstone
- UJB MIDDLE - UPPER JURASSIC
Bowser Lake Group: marine and nonmarine
sandstone, siltstone, shale
- 1JT UPPER TRIASSIC - LOWER JURASSIC
Calc-alkaline basalt to rhyolite breccia,
tuff and flows, minor intravolcanic sediments
- TG TERTIARY - POST-TECTONIC
Granite, granodiorite
- LKd LATE CRETACEOUS (?) TO EARLY TERTIARY
Pre- to Post-Kinematic Granodiorite
- LKTg LATE CRETACEOUS (?)
Post-Tectonic Granodiorite
- LKg LATE CRETACEOUS (?)
Pre- to Syn-Kinematic Granodiorite

and 6.58 oz Ag.t (225.3 g/t) in the #2 vein. The trench was later filled in at the request of B.C. Government officials.

In 1984, as a result of a soil survey on the southwestern portion of the claim group, a second anomalous gold showing was discovered 2.25km from the main area of interest.

During February 1987 three diamond drill holes were collared at the main showing and 393m of NQ core was recovered, under the supervision of Orequest Consultants Ltd. Two of the holes, TR-87-1, 2 were collared from the same site at an azimuth of 280 degrees and dip angles of -50 and -80 degrees respectively. The third hole, TR-87-3, was collared 60m to the southwest at a dip angle of -45 degrees and parallel to the previous holes. The holes reached depths of 114.6m, 87.2m and 190.8m respectively. All the core is stored on site.

3.0 GEOLOGY

3.1 Regional Geology and Mineralization

The oldest rocks underlying the area are Upper Jurassic-Lower Cretaceous greywackes, conglomerates and argillites of the Bowser Group (Figure 4). These rocks are

intruded by granodioritic and quartz monzonite stocks of Upper Cretaceous Age collectively termed the "Coast Intrusions". The granodioritic stocks have undergone phases of propylitic alteration and epigenetic vein hosted mineralization.

Cavey and Chapman (1987) report that:

" Just to the West of the Kalum Lake Mining Claims, Campbell Resources Ltd. has conducted a drilling program on the Misty claims. Staked as a result of the release of the 1979 Silt Geochemical Survey by the Government. Campbell Resources Ltd. has outlined areas of high gold values using soil geochemistry. Published data indicate this to be a similar system to that encountered on the Kalum Lake Claims."

3.2 Property Geology

Bedrock exposure is sparse within the claim group with the exception of the shore of Kitsumkalum Lake. Up to 60 meters of glacial sand and gravel blankets much of the property.

Two granodioritic stocks, 2.25 km apart, are exposed and these exhibit hydrothermal alteration and mineralization. Two auriferous epigenetic steeply dipping, subparallel quartz veins, termed #1 and #2, are exposed at the main site (Figure 5). The #1 vein, which was the focus for work in 1922-1923, is approximately 30cm wide and dips 45 degrees southwest. It is reported that grab samples from

the dump site (Cavey and Chapman, 1987) recorded assay values up to 5.62 oz Au/t (192.5 g/t) and 13.92 oz Ag/t (476.8 g/t).

The #2 vein was trenched for 30m on strike and showed thickness variations from 15cm to 60cm with a dip of 65 degrees southeast. Drilling reports by Cavey and Chapman (1987) show that both the #1 and #2 veins steepen to subvertical at depth.

Mineralization consists of pyrite, chalcopyrite, tetrahedrite, galena, sphalerite and occasional visible gold within a quartz gangue. Selected trench samples yielded values up to 7.32 oz Au/t (250.7 g/t) and 6.58 oz Ag/t (225.3 g/t). A third sub-parallel vein, 10cm wide, was intersected in diamond drill hole TR-87-1, adjacent to the #2 vein.

Cavey and Chapman (1987) recognized the following types of alteration zones in the diamond drill core:

" Alteration in the granodiorite is directly related to the density of veining and shearing. The predominant type is propylitic with lesser silicification and epidotic and hematitic alteration...

Grey white argillitic alteration is prominent over short intervals, less than 40cm, usually surrounding fault zones. Abundant gouge is normally associated with these intervals containing variable amounts of fragments...

Mineralization is predominantly associated with the stonger propylitic alteration although minor pyrite is associated with many of the argillic sections...

The main lithology intersected in the drilling was the granodioritic stock. In its least altered state this was a dark green, generally equigranular, medium to coarse grained massive rock."

Visible gold was present in two of the diamond drill core intersections of the #2 vein. In diamond drill hole TR-87-3, true width of the #2 vein ranged from 0.3m to 0.4m, while the #1 vein consisted of two 0.2m thick veins at depth which are separated by 2m of altered and brecciated granodiorite.

Assay values of up to 1.86 oz Au/t (63.7 g/t) and 4.9 oz Ag/t (167.8 g/t) were recorded from the drill intersections of the #2 vein. Anomalous gold values were also noted for up to 5m on either side of this vein. The #1 vein was only intersected by the long hole TR-87-3 and an assay value of 0.006 oz Au/t (0.165 g/t) was recorded.

4.0 RESERVE POTENTIAL

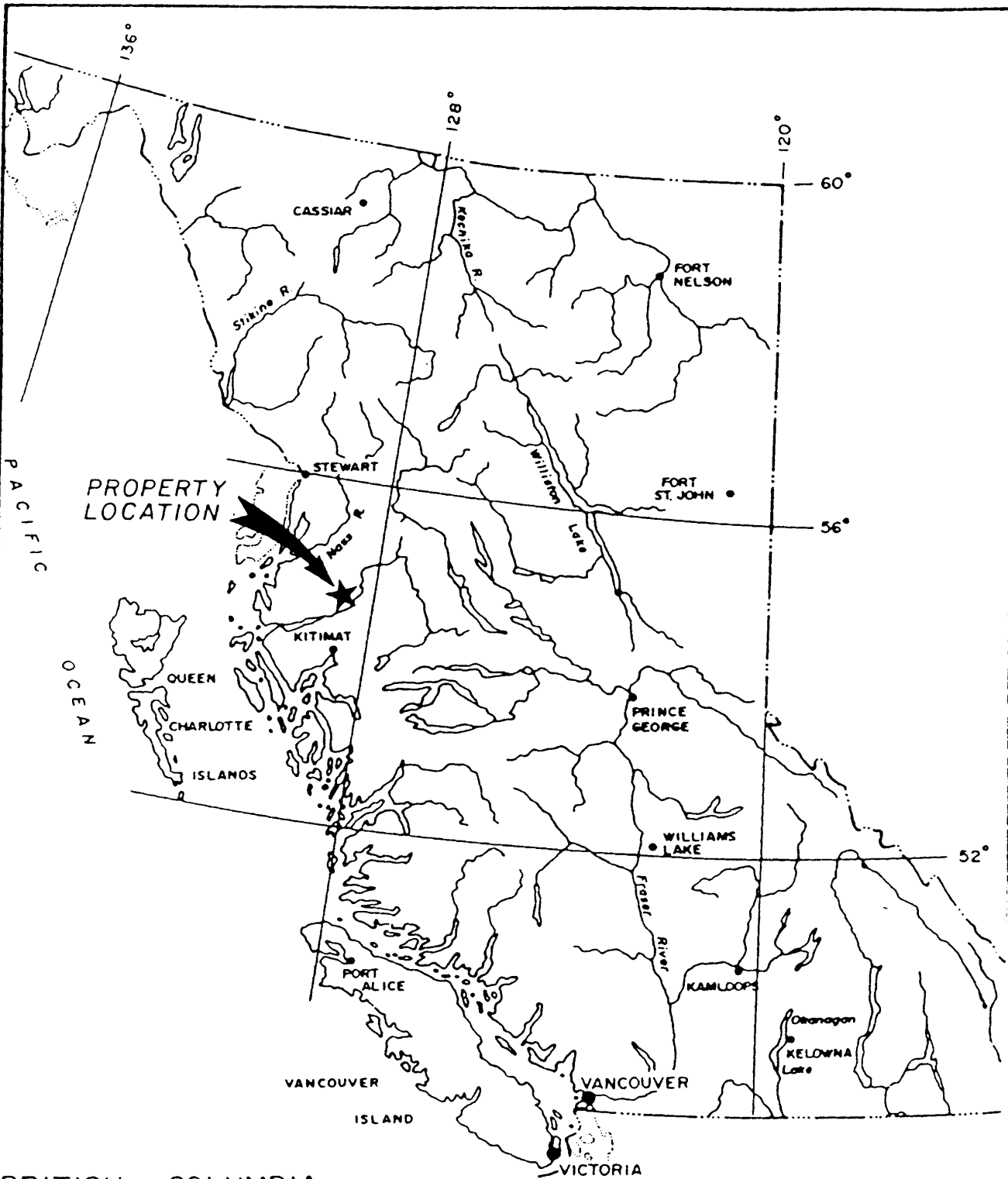
Salazar (1987) evaluated the potential grade and tonnage at the #1 and #2 veins by utilizing the data of Cavey and Chapman (1987). To compensate for "nugget effect" of vein type deposits he used a conservative grade estimate of 0.47 oz Au/t over a width of 0.54m, a depth of 45m and a strike length of 60m for the #2 vein. He calculated the

potential reserve tonnage for the #2 vein from this as 4,900 tonnes or 5,400 short tons. However, anomalous gold values were recorded in the drill core for up to 5m on either side of the #2 vein and therefore the ore potential is considerably higher. Furthermore, thick overburden was problematic during drilling and inhibited deeper diamond drilling. Due to the similar geology and mineral composition of both the #1 and #2 veins, the potential reserves of the main site are, at present, conservatively estimated by Salazar (1987) to be 10,400 short tons at a grade of 0.47 oz Au/t (16.1 g/t) to a depth of 45 meters.

In addition to the main site a subsidiary mineralized zone is partially exposed 2.25 kilometers to the southwest. Cavey and Chapman (1987) state "A second intrusive body... is very similar but with more intense alteration and more extensive veining. Surface samples of oxidized material from this area have assayed up to 0.49 oz Au/t (16.8 g/t) and 7.0 oz Ag/t (239.8 g/t)."

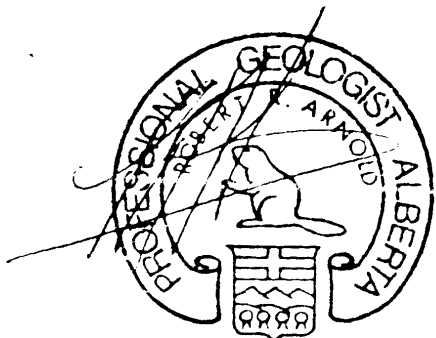
During a geochemical soil sampling program conducted by Orequest Consultants Ltd. in November 1984, gold values up to 9,400 ppb were recorded. The average values were in the 20-350 ppb range over a width of 400m and a length of 600m, open in two directions.

A correlation between this showing and the main site has not yet been proved, but their similarities in



BRITISH COLUMBIA

Scale 1:7,500,000 approx.

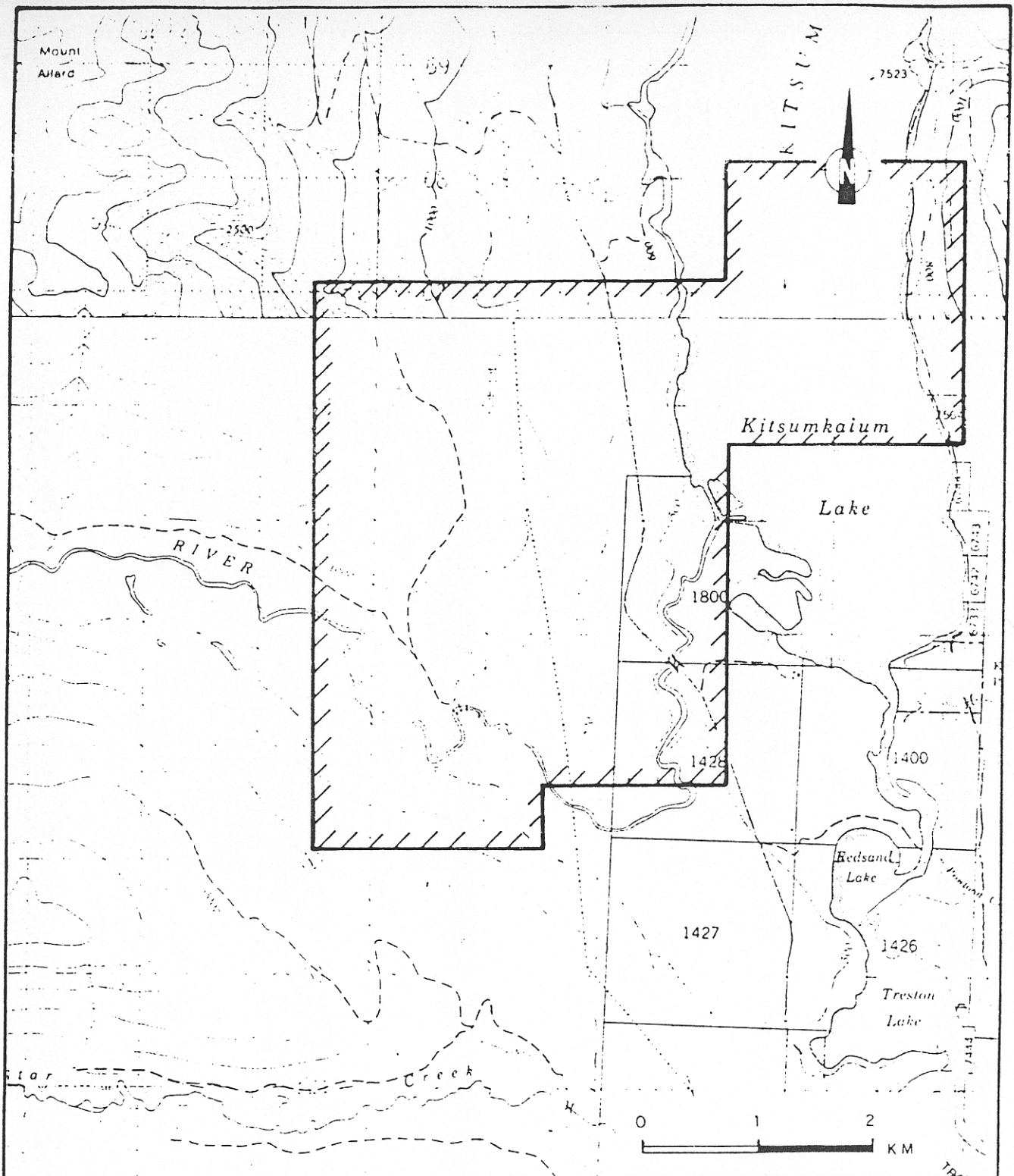


TERRACAMP DEVELOPMENTS LTD.

KALUM LAKE CLAIMS
SKEENA MINING M.D., B.C.

GENERAL LOCATION MAP

Scale: As Shown	Date: DEC 87	NT.S.	Figure: 1
By: J.P. SORBARA & Associates			



TERRACAMP DEVELOPMENTS LTD.			
KALUM LAKE CLAIMS SKEENA MINING M.D., B.C.			
TOPOGRAPHIC MAP			
Scale: 1 : 50,000	Date: DEC 87	N.T.S. 103 I/10,15 W	Figure: 2
By: J.P. SORBARA & Associates			

composition suggest a lateral extension may exist between the two zones of mineralization.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The 1987 drilling program confirmed the presence of high grade vein type mineralization at depth and along strike of the main showing. Visible gold has been recognized in outcrop, trenching and in drill core intersections of the #2 vein. Furthermore, reconnaissance trenching 2.25 km to the southwest yielded gold values up to 0.49 oz Au/t.

The determination of an accurate grade and ore reserve potential of hydrothermal vein type deposits is complicated by the "nugget effect" of native gold. A more satisfactory method of determining the exact geometry, composition and grade of such deposits is by underground drift development in conjunction with bulk sampling and processing of the collected material.

The #2 vein has been the source of high grade grab samples; therefore, it should be the focus of any future evaluation program. An adit would be required to first intersect the vein below its present outcrop elevation and then a declined drive along the vein would facilitate geological mapping and bulk sampling.

Underground diamond drilling would eliminate overburden problems and facilitate the intersection of both the #1 and #2 veins at a greater depth and longer strike length than currently proven.

Confirmation of the down dip and along strike extensions of the ore zone would greatly increase the ore potential for the claim group. An indication of the possible strike length of the mineralization is provided by the second exposed showing 2.25 kilometers to the southwest of the main site. Due to the tectonic setting of such vein type deposits, the potential for the presence of other mineralized veins exists in adjacent host granodiorite.

An estimated cost breakdown of this underground exploration program is given in Appendix I.

Respectfully submitted

J.P. SORBARA & ASSOCIATES

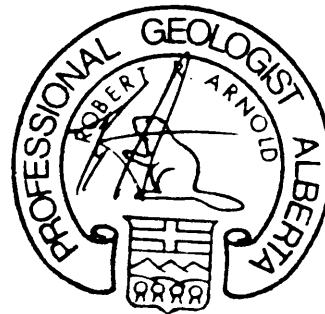
Denis Collins

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Robert R. Arnold

ROBERT R. ARNOLD, M.Sc., P.Geol., F.G.A.C.

December 22, 1987



6.0 REFERENCES

- Cavey, G.T. and Chapman, J. (1987)
Report on the 1987 Drilling Program, Kalum Lake Claims
for Terracamp Developments Ltd.
- Salazar, G. (1987)
Evaluation of the Kalum Lake Project for Terracamp
Developments Ltd.
- British Columbia Ministry of Energy, Mines and Petroleum
Resources
Annual Reports : 1923-47
 1925-69
 1927-47
 1927-63
 1030-74
- British Columbia ministry of Energy, Mines and Petroleum
Resources
Assessment Reports: 8299
 8393
- Woodsworth, G.J., Hill, M.L., Van der Heyden, P. (1986)
Preliminary Geologic Map of Terrace (NTS 103-I East
Half) Map Area, British Columbia; GSC Open File 1136.

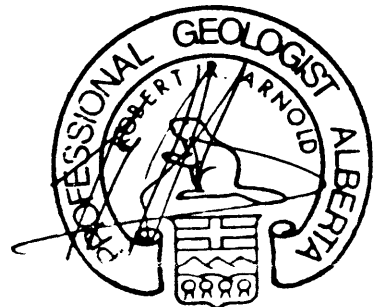
APPENDIX C

ADDENDUM TO THE REPORT ON THE
KALUM LAKE PROPERTY, TERRACE, B.C. FOR
TERRACAMP DEVELOPMENTS LTD. BY
DENIS A. COLLINS, PH.D. AND
ROBERT R. ARNOLD, M.Sc., P.Geol., FGAC
DATED DECEMBER 22, 1987

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March 28, 1988



A bulk sample program was carried out in early 1988 on the Kalum Lake claims and two samples, labelled Test #1 and Test #3 and having respectively a net weight of 115.5 lbs and 102.9 lbs, were collected and pre-ground. The samples were submitted to Nesmont Precious Metals Corporation, in Ladner, B.C., for concentration and gravity recovery tests as well as gold and silver assays.

The method of testing was described by the laboratory as follows: "Each sample was subjected to a 100 mesh screen test, then concentrated using a vibratory concentrating table to produce a "concentrate", a "middlings" and a "tailings" product".

Results can be found on the enclosed certificates of assay and are summarized below:

Test #1

<u>Product</u>	<u>Weight</u>	<u>Gold (oz/t)</u>	<u>Silver (oz/t)</u>
Heads	115.50 lbs	0.346	0.45
Concentrate	3.70 lbs	9.50	11.47
Middlings	64.16 lbs	0.054	0.09
Tailings	47.64 lbs	0.026	0.06

The concentrate ratio of Test #1 is 31.21 to 1.00.

Test #3

<u>Product</u>	<u>Weight</u>	<u>Gold (oz/t)</u>	<u>Silver (oz/t)</u>
Heads	102.29 lbs	0.409	0.52
Concentrate	5.25 lbs	7.21	8.54
Middlings	39.69 lbs	0.051	0.12
Tailings	57.96 lbs	0.036	0.06

The concentrate ratio of Test #3 is 19.60 to 1.00.

The writer concludes that the results of the bulk sampling program were very encouraging: respectively 9.5 oz Au/t and 7.21 oz Au/t were recovered in the concentrates of samples #1 and #2. Further exploration to test the precious metals potential of the property is fully warranted.

These results were not included in the report by D. Collins, Ph.D. and R. Arnold, M.Sc., P.Geol., FGAC due to the fact that this bulk sampling program was conducted after the completion of the report dated December 22, 1987.

