

04/86

REPORT OF FIELDWORK  
ON THE SOMBRIO 1-4,  
GOLDRIDGE 1-3, AND  
SOM 1-4 MINERAL CLAIMS.

Victoria Mining Division,  
British Columbia.

Latitude 48°33'  
Longitude 124°15'

for

UNICORN RESOURCES INC.  
VANCOUVER, B.C.

by:

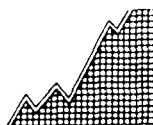
Wim Vanderpoll

November, 1984

FILMED

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

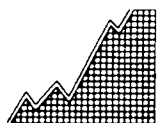
**14,214**



HI-TEC  
RESOURCE  
MANAGEMENT  
LIMITED

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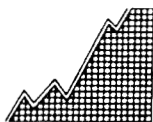
SUMMARY

The San Juan Property, consisting of Sombrio 1-4, Goldridge 1-3, and Som 1-4 mineral claims totalling 138 units, is located on Vancouver Island, 57 km north of Victoria.

Mapping of the property indicates it to be entirely underlain by pelitic sediments of the Leech River Formation, intruded by concordant to semi-concordant diorite sills.

The 1984 program consisted of the collection and analyses of stream sediment pan concentrates, geological mapping and prospecting and blasting and trenching in an area where quartz veins intruding diorite are accompanied by arsenopyrite.

Cost of the program was \$14,078.78.



## CONCLUSIONS

The collection of stream sediment samples has indicated the presence of significant anomalous values in Au. Maximum values obtained were 140 and 180 ppb Au: lesser anomalous values were also present.

The area outlined as being anomalous in As in the 1983 soil survey yielded several narrow quartz veins with which small lenses of arsenopyrite are associated. Blasting, trenching and sampling of these veins and the hosting diorite returned values strongly anomalous in As but values in Au are low. A vein composite sample at this location returned a value of 1675 ppb Au.

It is concluded that, while the area that received the most attention at this time has returned only sub-economic values, these values, in their association with arsenic bearing quartz veins and diorite offer encouragement for other, as yet, unexplored areas of the property, particularly the northwest corner of Sombrio 4 claim where adjacent creeks show moderate Au anomalies.

## RECOMMENDATIONS

At present, the property contains four moderate Au anomalies in stream sediments that warrant further investigation.

It is believed that much denser stream sediment sampling data can be obtained by pan sampling all tributaries and gullies leading into the anomalous creeks, to provide a focus for additional prospecting and, if results warrant this, trenching and/or diamond drilling will follow.

The cost for such a sampling program is projected as follows:

2 men; 10 days @ \$400	\$4,000
Room and board; 20 man-days @ \$40	800
Vehicle	700
Assays	900
Fuel	500
Materials	600
Contingencies	<u>1,000</u>
Total	\$8,500

## INTRODUCTION

Location and Access

The Sombrio claims, part of the San Juan Property, are located 14 km east of Port Renfrew and 57 km northwest of Victoria on Vancouver Island, in the Victoria Mining Division, at latitude 48°33' and longitude 124°15'.

Access is by local logging roads from Highway 14. Active logging is continually improving access and exposure.

Topography is steep; vegetation ranges from extremely heavy in second growth forest to light growths of underbrush in areas of virgin timber. Recently logged areas are covered in heavy slash where travel is arduous.

Property History

Reconnaissance work in 1983 by Hi-Tec Resource Management consisted of geological mapping, limited stream sediment sampling and a detailed soil geochem survey covering 21 km of soil lines on a grid in the southeast corner of Sombrio 2 claim and the adjacent part of Goldridge 2 claim.

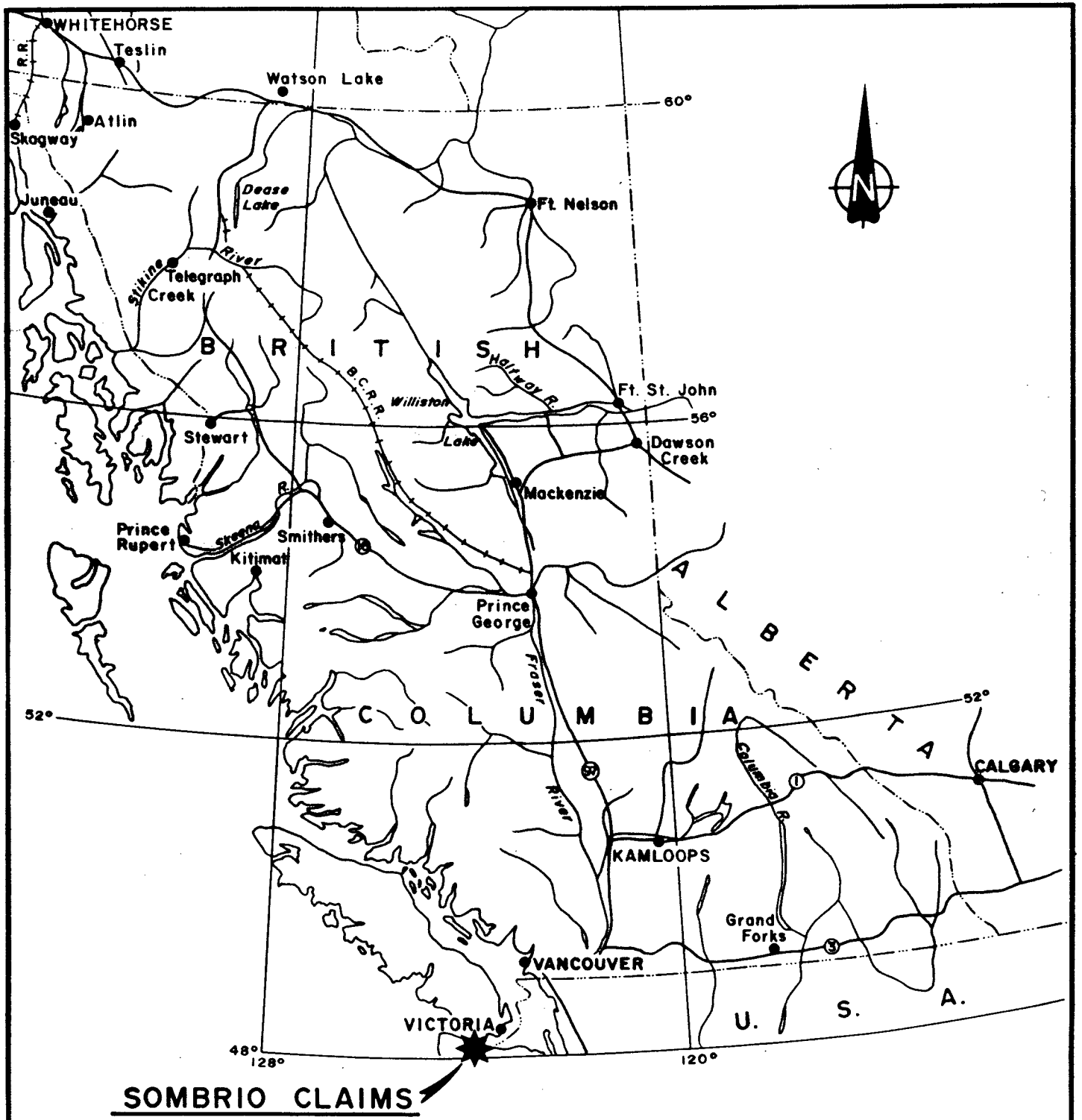
The soil survey outlined an area of weakly anomalous values in arsenic, locally accompanied by weak Au values.

1984 Program

In 1984 a staged program was conducted.

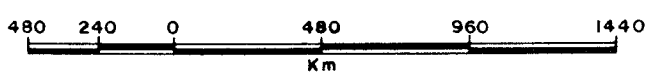
In July, the property was visited by Matti Tavella, PhD, whose expertise on the nearby Ox claims, also a gold prospect, led to the suggestion of sampling of dry creek beds by blasting to expose finer grained stream sediments, to be subsequently concentrated by panning. Active streams were also sampled by panning sediments.

Detailed geological mapping was carried out over portions of Sombrio 1-4 claims; quartz veins were sampled and, in the northeast corner of Sombrio 2 claim where arsenic-bearing quartz veins were discovered, blasting and trenching were carried out, and the veins and the hosting diorite were sampled.



**SOMBRIO CLAIMS**

UNICORN RESOURCES LTD.  
**LOCATION MAP**  
 OF  
 — SAN JUAN PROJECT —



Claims

The San Juan Property, located in the Victoria Mining Division, consists of the following claims:

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Expiry Date*</u>
Sombrio 1	20	873	11 April, 1984
Sombrio 2	20	874	"
Sombrio 3	20	875	"
Sombrio 4	20	876	"
Goldridge 1	186	866	"
Goldridge 2	186	867	"
Goldridge 3	186	868	"
Som 1	1	1200	"
Som 2	1	1201	"
Som 3	1	1202	"
Som 4	1	1203	"

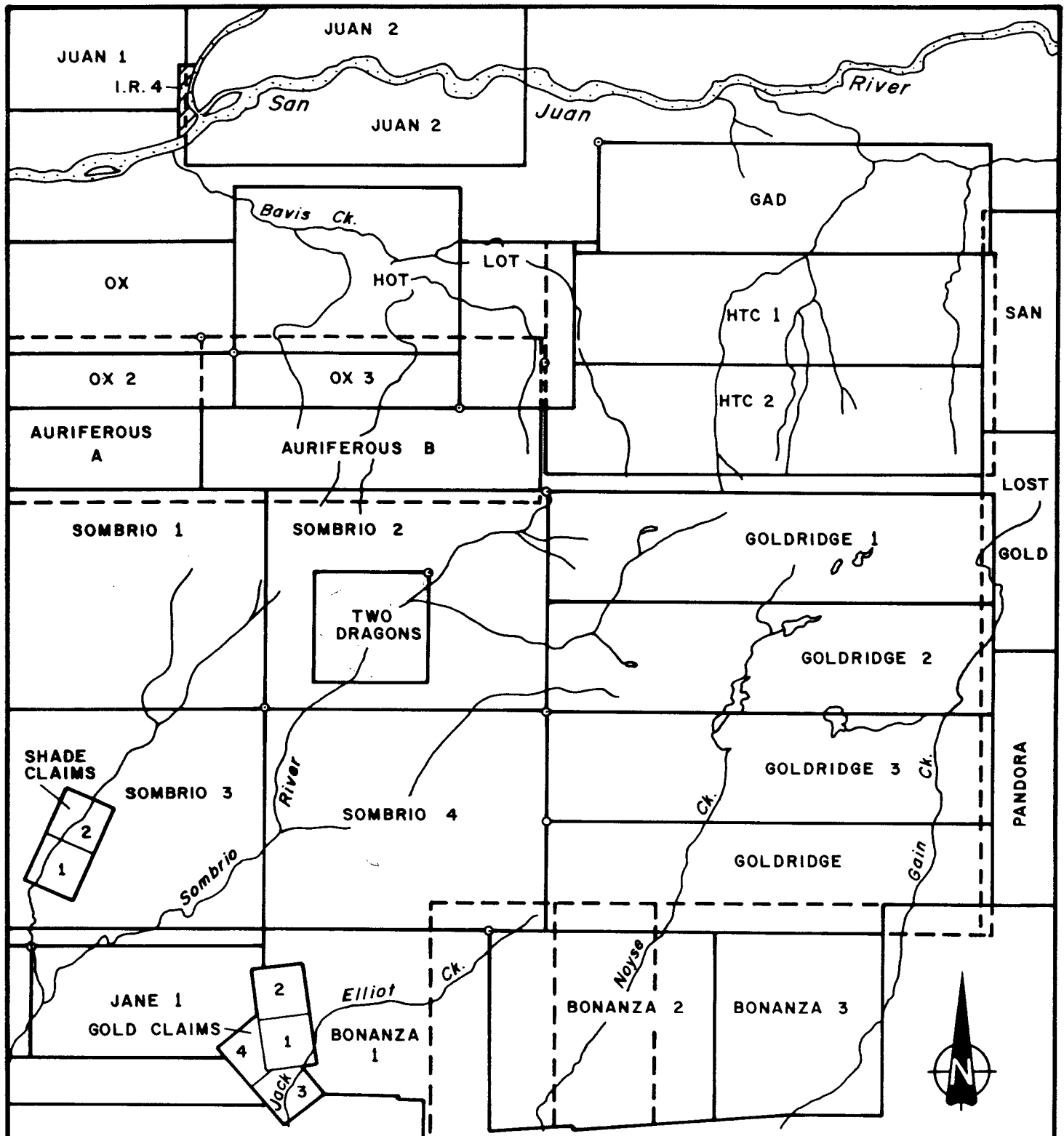
Total units            1382

For grouping purposes, the total cost of the 1984 program, \$14,078.78 is allocated as follows:

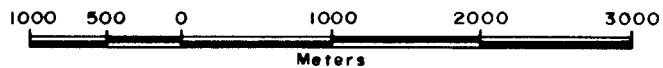
Sombrio 1,2,3,4; Som 1,2,3,4 (84 units)...	\$8,600.00
Goldridge 1,2,3 (54 units)....	\$5,400.00

\* Prior to application of 1984 assesment credits





UNICORN RESOURCES LTD.  
**CLAIM MAP**  
 OF  
 — SAN JUAN PROJECT —



## GEOLOGY

Regional Geology

The San Juan Property lies within the Leech River Complex which consists of metamorphosed pelitic rocks, sandstone, and minor chert and volcanic rocks of probable late Jurassic to Cretaceous age. The Complex is bound by the San Juan fault to the north and the Leech River fault to the south. Regional, progressive, low-pressure greenschist to amphibolite-facies metamorphism and deformation have taken place, accompanied by the intrusion of dioritic sills which have been dated at 39-41 Ma.

The complex hosts the Valentine Mountain Au occurrence of BeauPre Explorations Ltd. and several other Au prospects. The nearby Sombrio River Au placer operation has a test plant in operation.

Property Geology

The property is underlain by argillite, sandstone and greywacke, intruded by diorite sills.

West of Sombrio River the sediments strike to the northeast; east of the river strikes are east to southeast. This implies a major fault whose trace lies along the Sombrio River.

Staurolite-andalusite are present on bedding planes on argillaceous rocks (unit 1), which are commonly thinly bedded, dark grey to black, and rusty weathering. Boudinaged quartz veins that have limited continuity are common.

Fine grained, massive, brown weathering sandstone and darker coloured greywacke (unit 2) are interbedded with argillites throughout. The sandstone and greywacke are massive, and bedding is not always obvious. The components of the rock are quartz, plagioclase and muscovite.

Volcanic rocks (unit 3) on the claims are limited to a 2m thick chlorite-rich "greenstone" on Som 4 claim. The rock is believed to be a metamorphosed pillow lava. Its continuity could not be established. The unit contains abundant fine calcite veinlets; epidote is common on the fractures.

The greenstone occurs interbedded with sandstone; at its upper contact a 30cm zone of chloritic and graphitic gouge marks a fault zone that parallels the bedding.

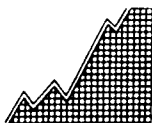
The main intrusive body on the claims is a subconcordant diorite sill (unit A) on Sombrio 2 claim that has been intermittently traced for 4 km. The maximum width of the sill is 700m; westward the sill becomes narrower and may pinch out in the vicinity of the Sombrio 1-Sombrio 2 claim boundary.

This writer sees no evidence to concur with Mr. Tavella's hypothesis of a diorite "neck" (see Appendix II).

Several much smaller bodies of diorite were observed. While exposure is limited, such smaller dykes and sills are believed to be also concordant, and genetically related to the main diorite sill. Contact relationships between intrusive and sedimentary rocks, where observed, show little evidence of extensive contact alteration. Several narrow dykes ( less than .5m ) of aplite, felsite and pegmatite are present, and also believed to be related to the diorite sill.

Quartz veins are abundant in argillaceous rocks. The veins are invariably boudinaged and can be traced for only a few meters. At the contact with the hostrock, weak limonite is frequently found. Most of these veins appear to occupy foliation gashes, and these have little economic potential. A set of three, more continuous veins occur in the south-east corner of Sombrio 2 claim. The veins are not mineralized and may occupy a northeast trending zone of structural weakness.

Several strong quartz veins are present in diorite, and frequently carry small quantities of arsenopyrite. Arsenopyrite also occurs locally in the vicinity of the veins in the host rock.



## BLASTING AND TRENCHING

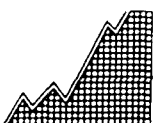
Weak arsenopyrite in quartz veins cutting diorite was discovered in the area of the 1983 arsenopyrite soil anomaly in the northeast portion of Sombrio 2 claim. Blasting, trenching and sampling were carried out at this location, over an area of 1x5 meters.

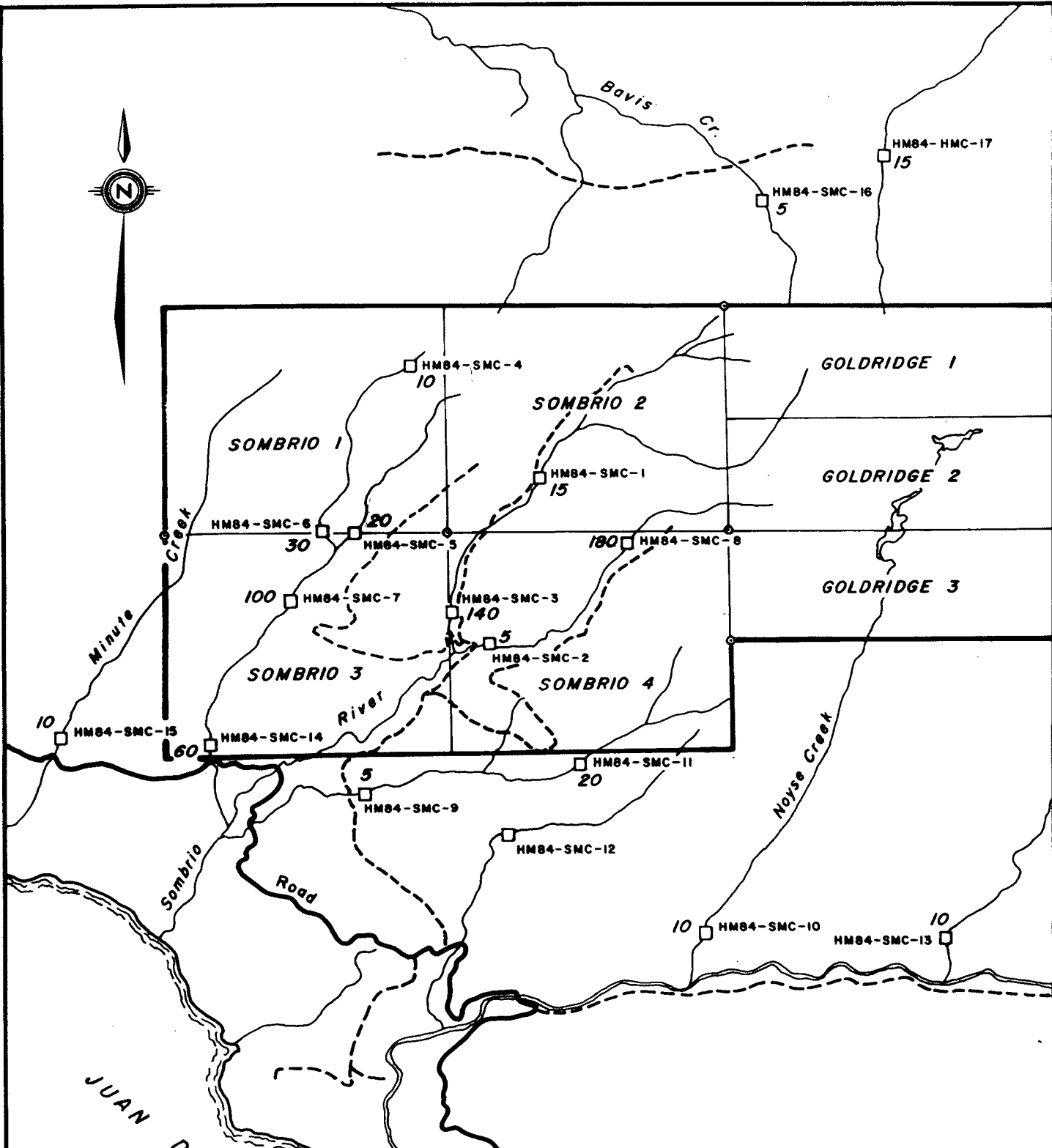
Results shown on Fig. 3 indicate anomalous As values in diorite while the veins themselves only carry traces of As. A vein composite sample runs 1675 ppb Au, diorite only carries traces of Au.

## STREAM SEDIMENT SAMPLING



Geochemical work during 1984 consisted of the collection of pan concentrated stream sediments in active streams. In dry stream beds dynamite was used to loosen the boulders and to obtain finer underlying material, which was then panned, a procedure suggested by Mr. Tavella.

Results of the stream survey are shown on Fig. 4 and 5. Several weak to moderate anomalous Au values ( to 180 ppb) are present; these anomalies have not yet been followed up, and should be the focus of future work on the property.





**LEGEND**

- HM84-SMC-5      Sample number
-       Silt sample location
-       Geochemical value in ppb Au

UNICORN RESOURCES LTD.

**SAN JUAN PROJECT**

VICTORIA M.D.

NTS 92C/9

SOMBRIO CLAIMS

**Stream Sampling - 1984**  
**Values in ppb Au**

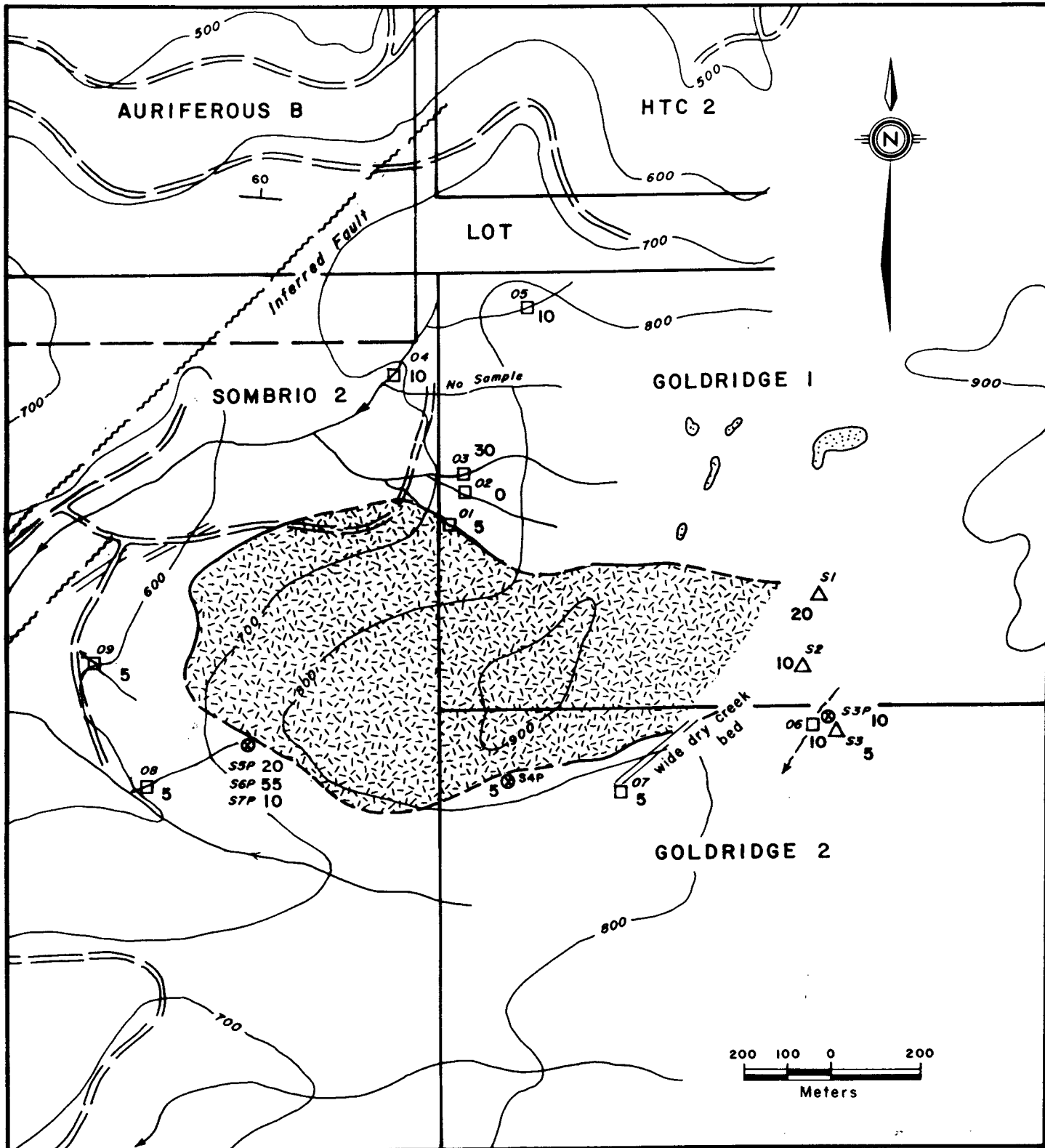


DWN. BY:  
 CHK. BY:  
 SCALE: 1:50,000






DATE: AUG. /84

FIGURE NO.

4



**LEGEND**

-  Fine grained diorite and phyllite
-  Silt sampling station
-  { Silt sample number  
Sample result in ppb Au
-  Float
- ss* Sombrio Project; chip sample No.
-  Outcrop
- P* In situ

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SAN JUAN PROJECT

VICTORIA M.D.

NTS 92C/9

SOMBRIO CLAIMS

Geology & Geochemistry



OWN. BY:

DATE: AUG. /84

CHK. BY:

FIGURE No.

SCALE: 1:12,500

5

## REFERENCES

- Fairchild, L.H. & D.S. Cowan. 1982; Structure, Petrology and Tectonic History of the Leech River Complex north-west of Victoria, Vancouver Island; Can. Journal of Earth Sciences; Vol. 19, No. 9; pp. 1817-1835.
- Muller, J.E., 1977; Geology of Vancouver Island; GSC Open File 463, 1980; Geology, Victoria Map Area; GSC Open File 701.
- Von Einseidel, C., 1983; Report on the Sombrio Group; for Unicorn Resources Inc.

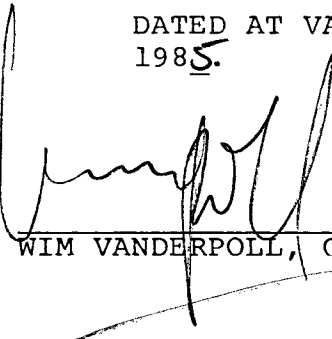


## STATEMENT OF QUALIFICATIONS

I, WIM VANDERPOLL, am a geologist, residing at 45-1101 Nicola Street, Vancouver in the Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am employed by Hi-Tec Resource Management Ltd with offices at 1970-1055 West Hastings Street, Vancouver, B.C.
2. I graduated from the University of Tulsa (Oklahoma) with a B.Sc. in Geological Sciences in 1972.
3. I have practiced my profession for 12 years and during that period worked for Amax of Canada, Dolmage Campbell & Associates, McIntyre Mines, Canamax Resources and other companies.
4. This report is based on my personal examination of the property and on work carried out by crews under my direct supervision.
5. I do not have any direct or indirect interest in the property reported nor do I expect to receive any such interest.

DATED AT VANCOUVER, B.C. this 22<sup>nd</sup> day of February, 1985.

  
WIM VANDERPOLL, Geologist



APPENDIX I  
Statement of Cost

STATEMENT OF COST

Period of work: July 17-27; Oct. 29-Nov. 2, 1984

Personnel

W. Vanderpoll, Geologist Oct 29-Nov 2 5 days @ \$275	\$1,375.00
B. Hamilton, Jr. Assistant July 17-27 8 days @ \$175	\$1,400.00
D. Hammer, Sr. Assistant July 17-27 8 days @ \$195	\$1,560.00
J. Miller, Jr. Assistant July 17-27 9.5 days @ \$175	\$1,662.50
A. Smallwood, Blaster Oct 29-Nov 2 5 days @ \$225	\$1,125.00

Room & Board \$1,270.81

Vehicle \$ 870.00

Fuel \$ 408.80

Assays \$ 607.15

Drill Rental \$ 252.00

Explosives \$ 588.74

Sundry field supplies, ferry, phone, office materials \$ 538.78

Report preparation, drafting, typing and reproduction \$1,250.00

Consulting- M. Tavella \$1,170.00

Total \$14,078.78

APPENDIX II

Report by Mr. M.Tavella

S O M B R I O   P R O S P E C T

Gold Possibilities Around A Diorite/Granite Complex

by

Matti Tavella

July 4, 5, 6, 1984

## GEOLOGY

The following is a description of the geology shown on the accompanying plan and cross-section.

The country rock on the eastern portion of the plan is a shale interspersed with quartz veins. The shale is formed from what were once silts and clays and the quartz veins from what were formerly organic and sandy material interspersed within the original silts and clays. Graphite and pyrite are abundantly evident in the silt material west of the diorite found in the slope and bowl. (sample #2).

To the areas west of the diorite there is an abundance of chloritic rocks originating from the basic volcanics which are again interstratified with mud. These two units have been formed in the waters adjacent to several nearby volcanoes.

The sedimentary pile is then intruded by its own source material: dioritic magma. It appears in two forms: one as a deep-seated diorite neck and the other as a swarm of parallel dykes which run east-west parallel to the sediments.

In general, the area is similar to the south slope of the San Juan River but has gentler and more varying strikes and dips and, significantly for ore deposition, more basic igneous and sedimentary chemistry.

We have, at hand, a medium level cut of strato-volcanoes and it is the neck of one of these that is the focus of this study.

There is evidence that the diorite body is small and consolidated. To the west there is a previously formed swarm of dykes of similar composition. The main intrusion has subsequently been intruded by reoccurring residual granitic magma from the same vent area.

Granites, exposed over 100 meters, have varying textures becoming increasingly pegmatitic toward the center. Lack of sulphides, volatiles in general - with the exception of water, leads one to assume that if gold is present it exists here or in the adjacent black schists.

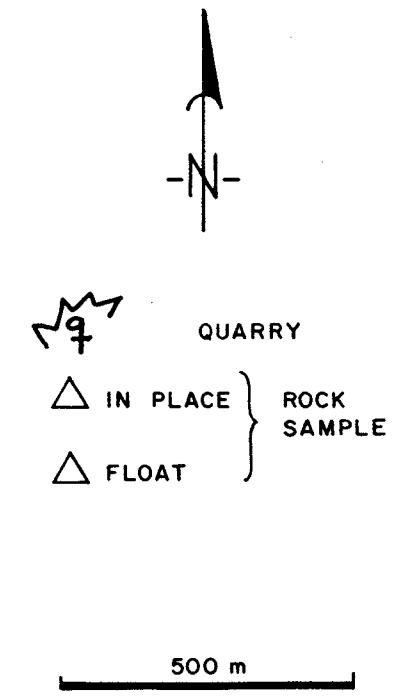
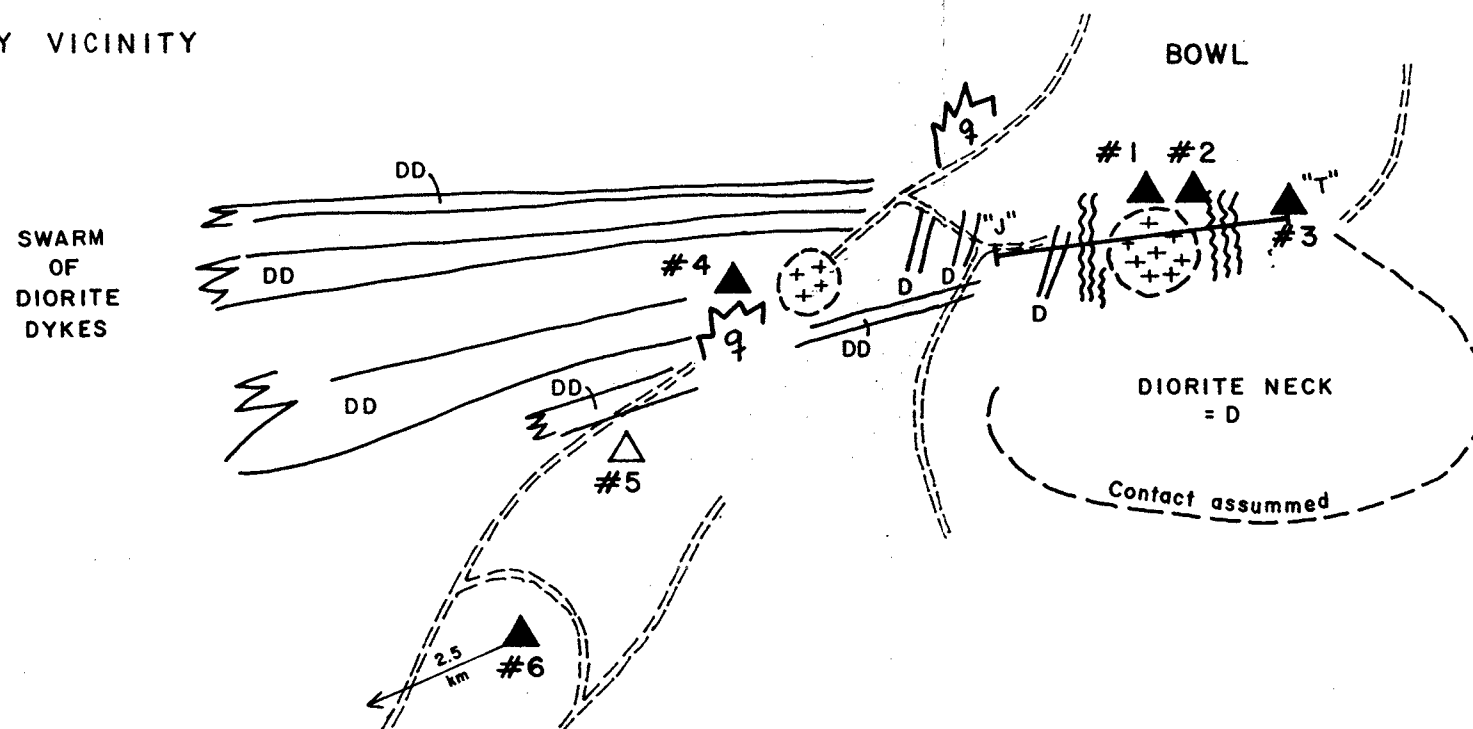
Since the rocks are generally barren of mineralizing fluids or agitation mechanisms, particular emphasis

should probably be placed on the water deposited mudstones which are rich in sulphur and graphite. These occur right in the granite environment. If the timing is favorable, gold may be precipitated to the scavenger rock.

If from analysis, samples #3, 4, and 5 prove to give positive values it will indicate that gold is present but it will not establish the conditions of formation nor will it indicate any volumes of significance. Therefore a continuing reconnaissance program should place chief emphasis on determining the areas of the mother lodes.

**PLAN VIEW**

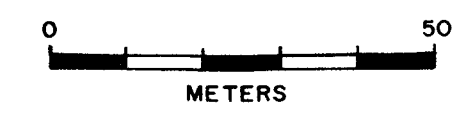
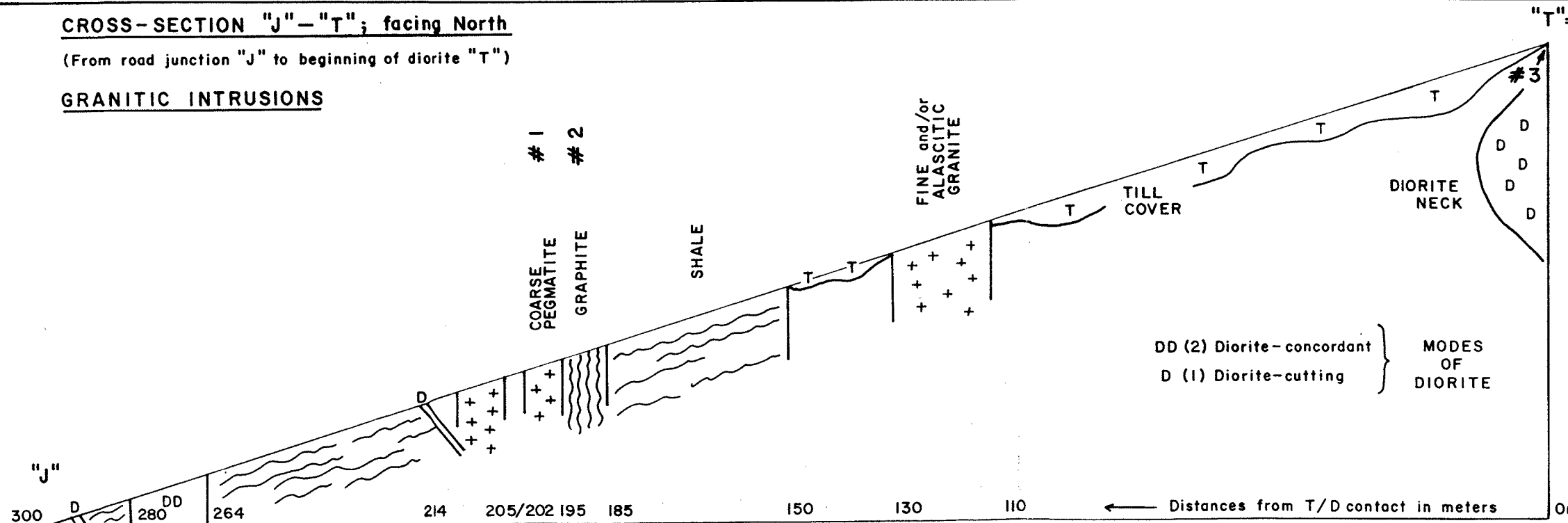
**DIORITE and its WESTERLY VICINITY**



**CROSS-SECTION "J"-"T"; facing North**

(From road junction "J" to beginning of diorite "T")

**GRANITIC INTRUSIONS**



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SOMBRIO CLAIMS

PLAN VIEW  
DIORITE and its WESTERLY VICINITY

&  
CROSS SECTION of GRANITIC INTRUSIONS

HI-TEC  
RESOURCE  
MANAGEMENT  
LIMITED

DWN BY: M. Tavella

DATE:

CHK. BY:

FIGURE NO.

SCALE: As shown

## PROPOSED ACTIONS IN ORDER OF IMPORTANCE

1. Regional geochem reconnaissance; micropanning representative and commensurable material from major creeks in the Sombrio system.
2. If samples 1 & 2 have values 20 ppb a detailed bulk sampling in the cross-section area is in order.
3. If 1 and 2 are positive and coincide, a third pass in 2 is recommended.
4. If the geochem reconnaissance indicates that the main source is elsewhere, its attack should precede 3.
5. If all above are inconclusive or negative, the diorite should be studied in detail to find more vents (one can be in the centre).
6. If gold is persistently present in 2, the bowl below should be geochemically sampled as described previously.
7. Before the bulk of the above experience is at hand, a wildcat prospecting should be avoided for reasons of lack of suitably situated roads.



## LIST OF SAMPLES

- 001 Pegmatitic part of the granite adjoining the black schist; represents some hundreds of tons of rock.
- 002 Black schist immediately from 001's contact, well consolidated rock as a whole; represents thousands of tons of rock.
- 003 Residual material (quartz, granite) from the cracks/slickensides in diorite; qualitative.
- 004 Similar to 003.
- 005 15 cm cutting quartz vein in siltstone based shale, in vicinity of 004.
- 006 Chlorite rock intimately associated with glassy dyke material (2.5 km from the above samples).

APPENDIX III  
Geochemical Results

**WIMBERGER LAB LIMITED**  
1521 Pemberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 985-5211 Telex: 04-352578

PREPARED FOR: HI TEC RESOURCE  
NOTES: nd = none detected  
: — = not analysed  
: is = insufficient sample

REPORT NUMBER: 84-45-013

JOB NUMBER: 84233

PAGE 1 OF 1

SAMPLE #	Au ppb
1	nd
2	10
3	1700
4	10
5	5
6	15

SAMPLES SUBMITTED BY M. TAVELLA

DETECTION LIMIT 5

VANBEECHEN LAB LIMITED  
1521 Pemberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 986-5211 Telex: 04-352578

PREPARED FOR: HI TEC RESOURCE

NOTES: nd = none detected  
: - = not analysed  
: is = insufficient sample

REPORT NUMBER: 84-45-023

JOB NUMBER: 84325

PAGE 1 OF 1

SAMPLE #	Au ppb
HM 84/S/H S-01	5 -
HM 84/S/H S-02	nd -
HM 84/S/H S-03	30 -
HM 84/S/H S-04	10 -
HM 84/S/H S-05	10 -
HM 84/S/H S-06	10 -
HM 84/S/H S-07	5 -
HM 84/S/H S-08	5 -
HM 84/S/H S-09	5 -
HM 84/S/M C-01	15 ✓
HM 84/S/M C-02	5 ✓
HM 84/S/M C-03	140 ✓
HM 84/S/M C-04	10 ✓
HM 84/S/M C-05	20 -
HM 84/S/M C-06	30 ✓
HM 84/S/M C-07	100 ✓
HM 84/S/M C-08	180 ✓
HM 84/S/M C-09	5 ✓
HM 84/S/M C-10	10 -
HM 84/S/M C-11A	20 ✓
HM 84/S/M C-11B	20 } ?
HM 84/S/M C-13	10 - } ?
HM 84/S/M C-14	60 -
HM 84/S/M C-15	10 -
HM 84/S/M C-16	5 -
HM 84/S/M C-17	15 ✓
DETECTION LIMIT	5

**VANGOCHEM LAB LIMITED**

1521 Pemberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 986-5211 Telex: 04-352578

PREPARED FOR: HI TEC RESOURCE

NOTES: nd = none detected  
: -- = not analysed  
: is = insufficient sample

REPORT NUMBER: 84-45-020

JOB NUMBER: 84326

PAGE 1 OF 1

SAMPLE #	Au
	oob
S1F DH	20 ✓
S2P DH	10 ✓
S3F DH	5 ✓
S3P DH	10 ✓
S4P	5 ✓
SSP	20 ✓
S6P	55 } ?
S7P DH	10 }
DETECTION LIMIT	5

VANGEOCHEM LAB LIMITED

1521 Pemberton Avenue  
 North Vancouver B.C. V7P 2S3  
 (604) 986-5211 Telex: 04-352578

PREPARED FOR: HI TEC RESOURCE

NOTES: nd = none detected  
 : -- = not analysed  
 : is = insufficient sample

REPORT NUMBER: 84-45-037

JOB NUMBER: 84615

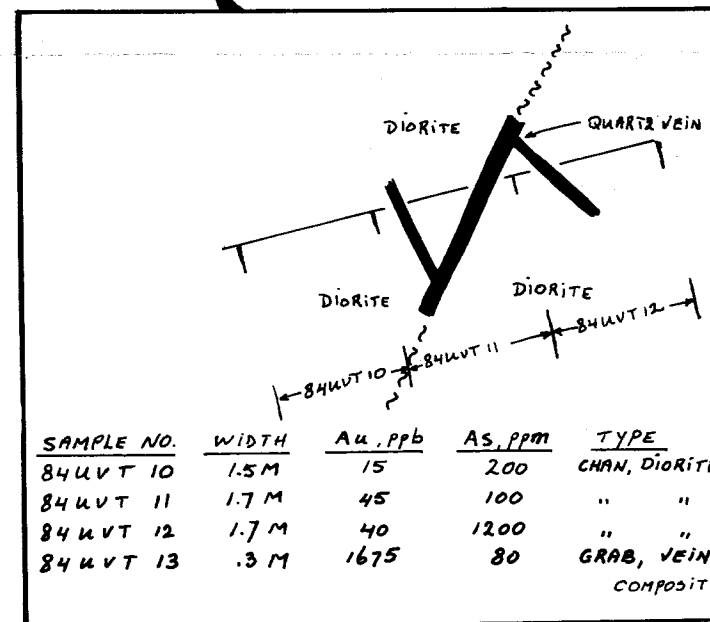
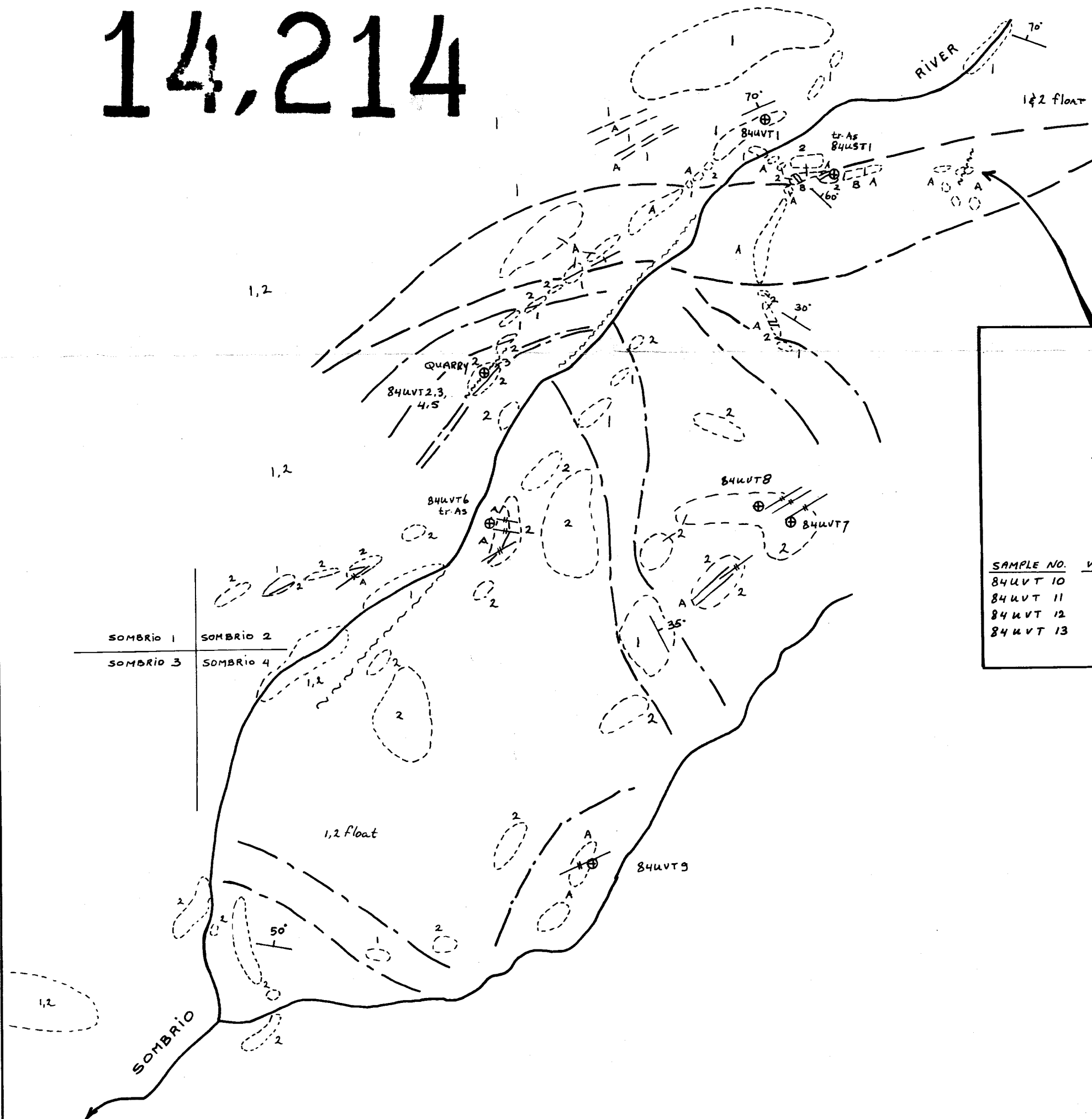
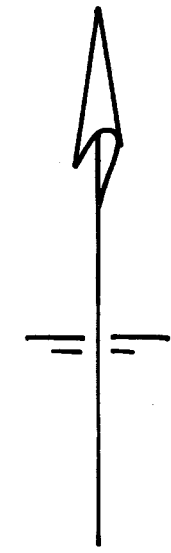
PAGE 1 OF 1

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppm	As ppm	
84 UST 1	5	9	21	nd	10	600	3 cm quartz vein in diorite dyke.
84 UVT 1	15	6	50	nd	15	2	quartz gash fillings in Argillite
84 UVT 2	62	17	55	1.0	10	4	30 cm fault gouge (chloritic)
84 UVT 3	36	12	72	.3	10	10	sandstone, pyrite fractures
84 UVT 4	5	1	6	.1	10	2	Quartz vein float or subcrop
84 UVT 5	100	15	46	nd	40	40	Greenstone
84 UVT 6	3	3	13	nd	10	400	Quartz veins to 30cm wide, tr. As
84 UVT 7	8	2	13	.2	15	4	6" Quartz vein in Argill
84 UVT 8	19	3	19	.1	5	100	6" rusty Quartz vein
84 UVT 9	2	1	9	.1	5	2	4-6" Quartz vein in diorite
84 UVT 10	12	7	40	.1	15	200	diorite
84 UVT 11	11	19	37	.3	45	100	diorite
84 UVT 12	14	8	40	.4	40	1200	diorite
84 UVT 13	2	36	13	.9	1675	80	Quartz vein Composite
DETECTION LIMIT	1	2	1	0.1	5	2	

} see fig. 3.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**14,214**



**LEGEND**

LEECH RIVER FORMATION

UNIT	1	ARGILLITE
	2	SANDSTONE & GREYWACKE
	3	GREENSTONE

INTRUSIVE ROCKS

UNIT	A	DIORITE
	B	APLITE; FELSITE; ALASKITE

- STRIKE; DIP
- QUARTZ VEIN
- OUTCROP
- CONTACT; DEFINED; APPROXIMATE; ASSUMED
- SAMPLE SITE; SAMPLE NUMBER



**UNICORN RESOURCES LTD.**

**— SAN JUAN PROJECT —  
SOMBRIO CLAIMS**

VICTORIA MINING DIVISION — BRITISH COLUMBIA

**GEOLOGY**



HI-TEC  
RESOURCE  
MANAGEMENT  
LIMITED

DWN. BY: W. V.

CHK. BY:

SCALE: 1:25,000

DATE: NOV. /84

FIGURE NO.

**3**