

MAP No.

105 F 9

ASSESSMENT REPORT
N. M. E. A. P.
CONFIDENTIAL
OPEN FILETYPE OF
WORK:GEOLOGICAL
GEOCHEMICAL

REPORT FILED UNDER	AMERLIN EXPLORATION SERVICES LTD.	DOCUMENT NO. 091
DATE PERFORMED	July 1985	DATE FILED: December 16, 1985
LOCATION - LAT. LONG.	61°35'N	AREA: KETZA RIVER
	132°17'W	
CLAIM NO.	KETZA 1-20; YA72382-YA72401	
VALUE \$ 3,000		
WORK DONE BY	AMERLIN EXPLORATION SERVICES LTD.	
WORK DONE FOR	HIGH RIVER RESOURCES LTD. AND QUILLØ RESOURCES LTD.	
REMARKS	The claims are underlain by Upper Cambrian to Lower Devon phyllites, carbonates and quartzites. Mississippian volcanics and pyroclastics, which are spatially and temporally associated with northwesterly trending extensional normal faults, overlie the sediments. Galena bearing rubble is found near the summit of Mt. Misery.	
44 - Mt. Misery		
091724		

4EX 85 p. 126

The 1985 program consisted of geological mapping, prospecting and sediment and talus fines sampling. A few Ag-Pb geochemical anomalies were detected and a selected grab sample of galena bearing float assayed 44.04% Pb and 613.0 g/t Ag.

**PRELIMINARY
GEOLOGICAL AND GEOCHEMICAL REPORT
ON THE KETZA 1-20 CLAIMS**



Watson Lake Mining District, Y.T.
NTS 105F/9
(61°35'N, 132°17'W)



for

HIGH RIVER RESOURCES LTD.
715 - 525 Seymour Street
Vancouver, B.C. V6B 3H9

and

QUILLO RESOURCES INC.
16821 - 113 Avenue
Edmonton, Alberta T5M 2X2

by

Carl G. Verley, B.Sc., Geologist
AMERLIN EXPLORATION SERVICES LTD.
422 - 470 Granville Street
Vancouver, B.C. V6C 1V5
(604) 689-1966

December 1985

CLAIMS: Ketza 1-20 inclusive
LOCATION: 28 miles (46 km) south of Ross River, Y.T.
DATE: July 7 to 27, 1985

091724

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 3,000.00.

 19 Feb. '86

Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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Plates

Plate 1.	Geology
2.	Au, Ag Geochemistry
3.	As, Cu Geochemistry
4.	Pb, Zn Geochemistry

FIGURE I

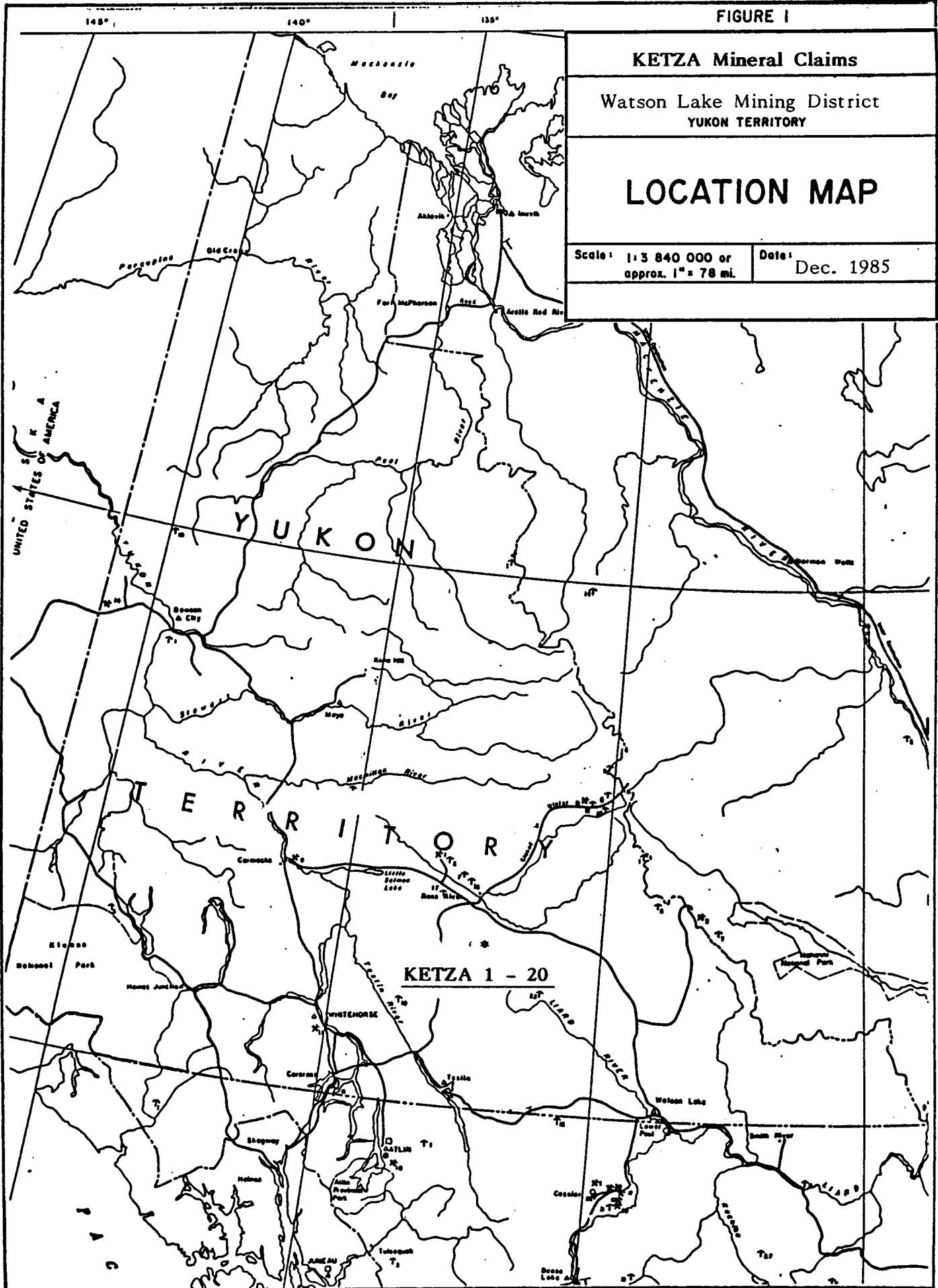
KETZA Mineral Claims

Watson Lake Mining District
YUKON TERRITORY

LOCATION MAP

Scale: 1:3 840 000 or
approx. 1" = 78 mi.

Date: Dec. 1985



S U M M A R Y A N D C O N C L U S I O N S

High River Resources Ltd. and Quillo Resources Inc. are joint owners of the Ketzal 1 to 20 mineral claims. The claims are situated in the Pelly Mountains, Watson Lake Mining District (105F/9), 46 kilometres south-southeast of Ross River, Yukon Territory. The property is accessible by helicopter, however a road to Canamax Resources Inc.'s Ketzal River gold property passes within 4 kilometres of the claims.

The group is underlain by a succession of presumably conformable Upper Cambrian to Lower Devonian phyllites, carbonates and quartzites. Allochthonous Mississippian volcanics and associated pyroclastics overlie this package. Northwesterly trending normal faults displace lithologies a few

tens of metres to several hundred metres. Silver-lead mineralized rubble is located on the claims near the summit of Mt. Misery. The nature and distribution of the rubble suggests it is related to a small shoot within one of the northwesterly trending faults.

The current program of work consisted of preliminary geological mapping, prospecting and limited talus fines and stream sediment sampling. Results of this work indicate that several areas on the claims have potential for hosting silver-lead mineralization. These areas should be examined further. A limited exploration program is recommended at an estimated cost of \$10,000.00.

I N T R O D U C T I O N

This report describes the results of a preliminary evaluation of the Ketzal 1 to 20 mineral claims. The object of the work was to locate and examine mineral showings on the claims as well as to map and prospect the ground. A limited amount of geochemical sampling was conducted as a part of the program.

LOCATION

The claims are located 45 kilometres south-southeast of Ross River in the Watson Lake Mining District, Y.T. (NTS 105F/9). Centered at latitude $61^{\circ}35'N$ and longitude $132^{\circ}17'W$, the property covers the summit locally known as Mount Misery. Physiographically the ground is in alpine terrain: very rugged on the north slopes, but gentler on south-facing slopes. Elevations range from 1500 to just over 2100 metres above sea level.

ACCESS

The property is best accessed by helicopter from Ross River (45 km) or the Ketza River airstrip (6 km). The Ketza River Road passes within 4 kilometres of the claims and an old trail up 'Misery' Creek leads to the southern claim boundary, making access by foot possible.

PREVIOUS WORK

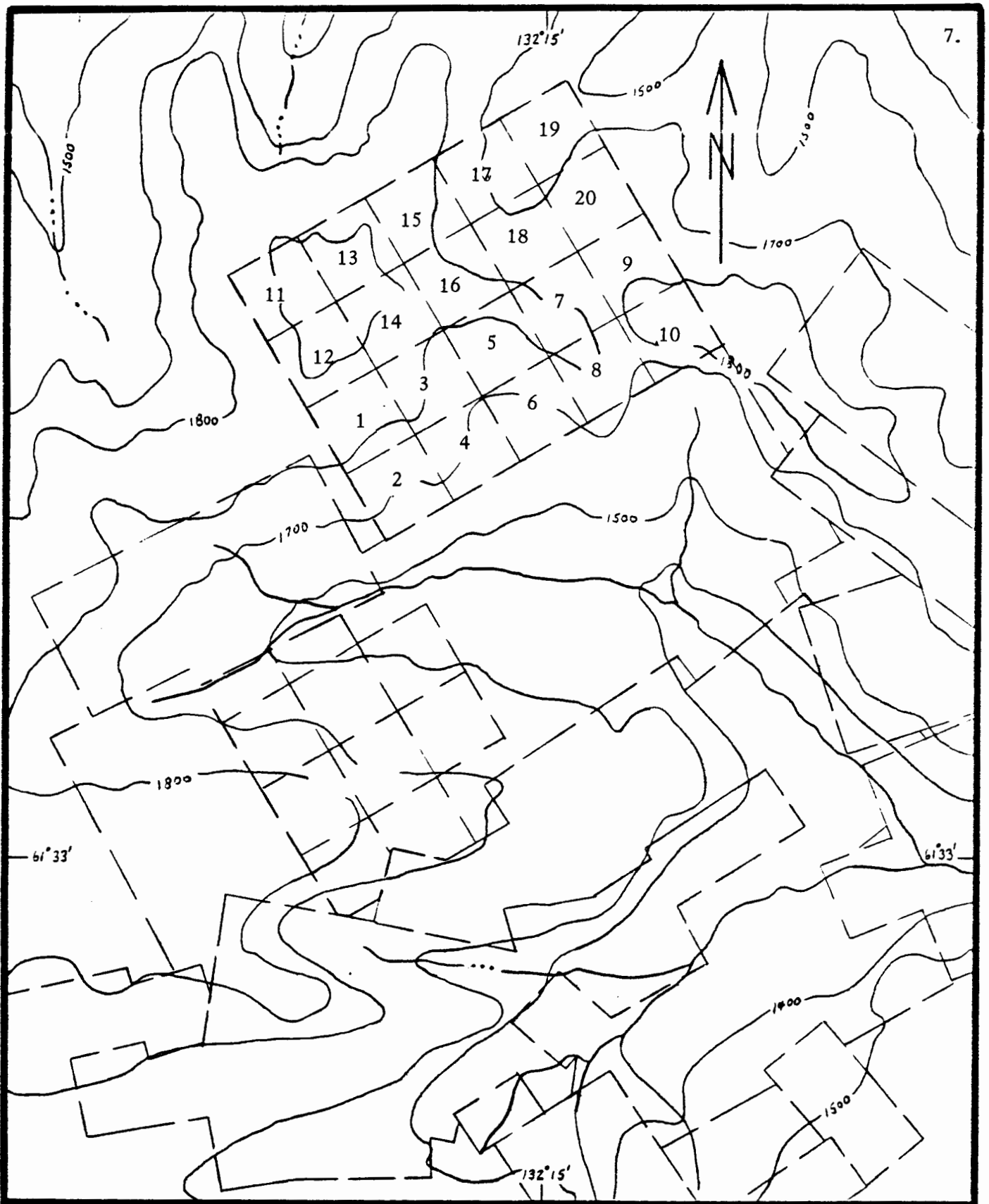
Work during the mid 1950's by Conwest Exploration Company Limited's prospectors resulted in the location of silver-lead mineralization, near the summit of Mt. Misery. This resulted in the acquisition of the ground. Further work consisted of drifting a short adit into the claims immediately below the Ag-Pb showing. This work failed to intersect the mineralized zone and the property was subsequently allowed to lapse. More recently, work by Canamax Resources Inc. has resulted in the development of a significant tonnage of gold mineralization on ground 4 kilometres south of the Ketza 1 to 20.

P R O P E R T Y

The Ketz 1 to 20 claims (Figure 2) were acquired by MBW Surveys Ltd. for High River Resources Ltd. in October 1984. The claims are currently subject to a joint venture agreement between High River and Quillo Resources Inc. The property, located in the Watson Lake Mining District (NTS 105F/9), consists of 20 full size mineral claims:

	Grant Number	Expiry Date*
Ketz 1-20	YA72382 - YA72401	April 23, 1987

* Pending acceptance of current work,
described herein by Mining Recorder.



CLAIM MAP

KETZA 1 - 20 Mineral Claims

**Watson Lake Mining District, Yukon Territory
NTS 105F/9**

**Scale 1:31,680
1" = 1/4 mile**

Figure 2.

G E O L O G Y

The Ketzal 1 to 20 are located in the Pelly Mountains, south-central Yukon. Regionally the property is situated in the Pelly-Cassiar platform, a suspect terrane (Templeman-Kluit, et al., 1985) that consists of a sequence of sediments ranging in age from Precambrian(?) to Lower Devonian. This succession is overlain by allochthonous sediments, volcanics and associated pyroclastics of Upper Devonian to Mississippian age. Rare syenitic intrusives of Mississippian(?) age intrude the sequence, however intrusive activity is not closely associated, spatially, with mineralization in the Ketzal River area.

The following subdivision of lithologies is based on that put forward by Templeman-Kluit (1977) for the Quiet Lake map area.

LITHOLOGIES**Upper Cambrian-Ordovician: phyllite, limestone**

A sequence, in excess of 300 meters in thickness, of rock ranging from phyllite, calcareous phyllite, argillaceous limestone to limestone, underlies approximately 70 percent of the property. Thin (2 - 3 metres), pale greenish lenses of volcanic material (flows or tuffs?) occur near the top of this unit. In general the sequence is thinly bedded, recessive and forms pale yellowish-orange weathering talus slopes.

Numerous silver-lead vein-type occurrences in the Ketzta river area are located by this formation.

Silurian: quartzite

This unit consists of a medium grey, blocky weathering, medium to pale grey, thick-bedded, but locally laminated, fine-grained quartzite. The quartzite is a relatively resistant, cliff forming unit. The thickness of it is estimated at 100 metres on the

property. Contact with the underlying phyllite-limestone sequence is assumed to be normal.

Silurian-Lower Devonian: carbonates

The lower 100 metres of a carbonate sequence is preserved on the Ketzal 1 to 20 claims. This unit consists of tan to pale orangish weathering creamy dolostone, arenaceous dolostone and medium grey quartzite. The sequence is crudely laminated and thin to medium bedded. Toward the base there is a noticeable increase in thin (30-60 cm) grey, fine-grained quartzite beds suggesting that there is a normal gradational contact with the underlying unit. Dolostone beds locally contain crinoidal debris and in some areas stromatolites are evident. White quartz stringers (1 mm to 3 cm wide), typically sulphide devoid and locally vuggy, are abundant in the section. Exposures of this unit on the eastern part of the property contain irregular grey to black chert masses.

Mississippian: volcanics

A sequence of pyroclastics, mainly lapilli tuff and fine-grained tuffs, of presumably andesitic composition, underlies the eastern 15 percent of the claims. This unit is believed to be in fault (thrust) contact with the underlying units.

STRUCTURE

In general, the formations around Mt. Misery are relatively flat-lying. However, locally small scale warps produce moderate dip angles in the sediments. A gentle, northeasterly dipping cleavage is developed in Upper Cambrian strata suggesting that the succession is part of a larger fold belt.

Two major northwesterly trending normal faults occur on the property. One of these, separating the two peaks of Mt. Misery, has offset of approximately 20 metres and is the locus of silver-lead mineralization in the saddle between the peaks. The other northwesterly trending fault has down dropped Mississippian volcanics on the east side of the claims and placed

them adjacent to Siluro-Devonian and older units. Offset on this fault is in excess of 100 metres. A northerly trending normal fault occurs between the two northwesterly faults and has offset of an estimated 300 metres, juxtaposing Siluro-Devonian rocks with Cambro-Ordovician strata.

MINERALIZATION:

Silver-lead mineralization consisting of rubble of massive galena and rare pyrite occurs in the saddle between the two peaks that form the summit of Mt. Misery. The mineralized rubble occurs over a width of 8 metres in the talus and can be traced down slope to the southeast for approximately 20 metres where, after gradually diminishing in number, very few mineralized fragments are found in the talus. The mineralized fragments are angular, dark brownish weathering, fine to medium-grained galena (60%), fine-grained pyrite (15%) and creamy to pale brown carbonate (25%). A selected grab sample of massive galena (7552) assayed 44.40% Pb, 17.88 oz/t Ag, 0.006 oz/t Au. The rubble occurs at the point in the saddle where a major northwesterly trending normal fault occurs. The fault presumably acted as a channelway for ascending(?) mineralizing solutions which concentrated galena and pyrite in what appears

to be a narrow shoot. The host rocks to the mineralization on either side of the fault, are Silurian quartzite and Siluro-Devonian carbonates. Cambro-Ordovician phyllites and carbonates underlie these units and host silver-lead mineralization at the other occurrences in the Ketz River area. It is conceivable that the mineralized shoot on Mt. Misery could persist and widen in the underlying formation as at the other showings. Further work should be directed to searching for evidence of this. Additional mineralized shoots may occur along the northwesterly fault. Prospecting should be directed to thoroughly examining this area.

Mineralization in the saddle was discovered in the mid-1950's by prospectors working for Conwest Exploration Company Limited. As a part of their evaluation work an adit was driven into quartzites 30 metres below and southeast of the saddle. The adit is now caved. Judging from the size of the dump beside it, the adit was probably driven for a distance of 10 to 15 metres. No silver-lead mineralization was found on the dump. However, massive pyrite was found beside it. A selected grab sample of this material (7553) assayed 0.61% Pb, 0.82 oz/t Ag, 0.005 oz/t Au. It is possible that the drift was stopped short of intersecting the mineralized shoot.

Cobbles and boulders of massive pyrite float are distributed sporadically across the southern boundary of the claims. Further prospecting to locate the source of this mineralization should be undertaken.

G E O C H E M I S T R Y

A series of 10 talus fines were collected during the course of mapping and prospecting on the property. As well, stream silt samples were collected from some of the creeks draining the claim area. Sample sites were flagged and labelled. Samples were placed in numbered bags and delivered to ACME Analytical Laboratories Ltd. in Vancouver, B.C. These samples were prepared and analysed for Au, Ag, As, Cu, Pb and Zn as per method and extraction techniques outlined on data sheets (Appendix A).

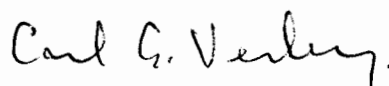
Talus fines were collected along 225 metres of line at 25 metre intervals at the 2000 metre elevation southeast of Mt. Misery. The results of this work (Plates 2-4) indicate that mineralized rubble from the saddle is detected geochemically, however the magnitude of the values (up to 3.1 ppm Ag, 462 ppm Pb) is not of the order that one would expect if mineralization related to the fault persisted down slope in this structure. Heavy talus accumulations could obscure this. Stream sediment values do not appear to reflect significant concentrations of metals in the drainages sampled.

R E C O M M E N D A T I O N S

Further evaluation of the Ketzal 1 to 20 should be directed to locating the source of massive pyrite boulders found in float on the southern part of the property. As well, an examination of the northwestward extension of the mineralized fault structure should be undertaken. The estimated cost of such a program of mapping and prospecting is \$10,000.00.

Respectfully submitted,

AMERLIN EXPLORATION SERVICES LTD.



Carl G. Verley, F.G.A.C.

Vancouver, B.C.

December, 1985

R E F E R E N C E S

Templeman-Kluit, D.J. and R.I. Thompson, 1985: Tectonics of
The Canadian Cordillera, Geological Association of
Canada short course number 5.

Templeman-Kluit, D.J., 1977: Geology of the Quiet Lake map
area, Geological Survey of Canada Open File 486.

APPENDIX A
ANALYTICAL DATA

ASSAY AND ANALYTICAL DATA

ROCK SAMPLE DESCRIPTIONS

Sample	Description	Reference
KT-1 to 10	Talus fines	Plates 2 to 4
KS-27 to 29	Stream silts	"
KR-17	Chips off massive pyrite boulder in creek bed draining south. Sample location just off claims	"
7552	Selected grab sample of galena float, Mt. Misery showing.	
7553	Selected grab sample of massive pyrite from adit area, Mt. Misery.	

ICME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: AUG 8 1985

DATE REPORT MAILED:

Aug 15/85

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-8 SOILS P9- SILTS -80 MESH AU** ANALYSIS BY FA+AA FROM 10 GRAM SAMPLE.

ASSAYER: *P10 - Soils P11 - Rocks* *J. Saundry* DEAN TOYE OR TOM SAUNDRY. CERTIFIED B.C. ASSAYER

AMERLIN EXPLORATION PROJECT - KETZA FILE # 85-1785

SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Ag PPM	As PPM	Au** PPB
KT-1	32	46	136	.7	13	1
KT-2	35	90	326	1.2	17	1
KT-3	36	57	174	1.1	24	1
KT-4	35	157	326	1.4	10	2
KT-5	20	31	39	.4	2	1
KT-6	39	392	60	3.1	24	2
KT-7	31	462	276	2.2	24	2
KT-8	16	193	77	1.0	24	5
KT-9	20	80	28	1.1	15	3
KT-10	27	84	88	1.1	15	1
KS-27	58	50	86	.3	81	5
KS-28	31	13	60	.1	89	5
KS-29	34	30	73	.2	20	1
KR-17	258	973	26	141.1	815	970

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE 253-3158 TELEX 04-53124

DATE RECEIVED: AUG 8 1985

DATE REPORT MAILED: *Aug 15/85*

ASSAY CERTIFICATE

1.00 GRAM SAMPLE IS DIGESTED WITH 50ML OF 3-1-2 OF HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR,
AND IS DILUTED TO 100ML WITH WATER. DETECTION FOR BASE METAL IS .01%.
- SAMPLE TYPE: ROCK CHIPS AU# 10 GRAM REGULAR ASSAY

ASSAYER: *T. Saundry* DEAN TOYE OR TOM SAUNDY. CERTIFIED B.C. ASSAYER

AMERLIN EXPLORATION PROJECT - KETZA FILE # 85-1785A PAGE 1

SAMPLE#	Cu %	Pb %	Zn %	As %	Ag OZ/T	Au OZ/T
7552	.01	44.40	.01	-	17.88	.006
7553	.01	.61	.01	-	.82	.005

APPENDIX B
STATUTORY DECLARATION

APPENDIX C

PERSONNEL

P E R S O N N E L

Mr. C. G. Verley
301 - 1867 West 3rd Avenue
Vancouver, B.C. V6J 1K9

Geologist

Mr. Michael Woods
5 Teak Avenue
Whitehorse, Y.T. Y1A 4W5

Field Assistant

APPENDIX D
WRITER'S CERTIFICATE

AMERLIN EXPLORATION SERVICES LTD.

422-470 Granville Street, Vancouver, B.C., Canada V6C 1V5

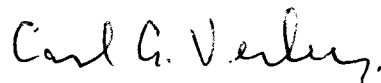
Phone (604) 689-1966

WRITER'S CERTIFICATE

I, Carl G. Verley of Vancouver, British Columbia hereby certify
that:

1. I am a geologist residing at 301 - 1867 West 3rd Avenue, Vancouver, B.C. and principal of Amerlin Exploration Services Ltd. 422 - 470 Granville Street, Vancouver, B.C. V6C 1V5.
2. I am a graduate of the University of British Columbia, B.Sc., in 1974, and have practised my profession since that time.
3. I am a Fellow of the Geological Association of Canada.
4. I am the author of this report which is based on work conducted by me on the KETZA 1 to 20 mineral claims during the period July 7 to 27, 1985.

Amerlin Exploration Services Ltd.



Carl G. Verley, F.G.A.C.

December 6, 1895.
Vancouver, B.C.



LEGEND

LITHOLOGIES

MISSISSIPPIAN

Mva volcanics

UPPER DEVONIAN - MISSISSIPPIAN

uDMs shale

SILURIAN - DEVONIAN

SDd₁ carbonates

SILURIAN

Sq quartzite

UPPER CAMBRIAN - ORDOVICIAN

uEOsl limestone, slate, v-volcanic component

LOWER CAMBRIAN

lC_c carbonates, lC_s - shale component

PRECAMBRIAN(?) - LOWER CAMBRIAN

PlCsq quartzite and phyllite

SYMBOLS

- x FeS mineral occurrence: pyrrhotite
- FeAs arsenopyrite
- PbS galena
- outcrop distribution
- lithologic contact: definite, inferred
- bedding
- cleavage
- jointing
- shearing
- vein
- axial plane to minor fold
- fold axis to minor fold
- lineation
- fault: definite, inferred - with sense of movement (up/down)
- adit
- trench
- rock glacier
- road

Note: - Geology outside of claim blocks adapted from GSC Open File 486
 - Topography from Dept. of Energy, Mines and Resources 1:50,000 scale map (105 F/9) and 1:250,000 scale map (105 F)
 - Contour interval: 100 metres
 - Magnetic declination: 31.5° (July, 1985)

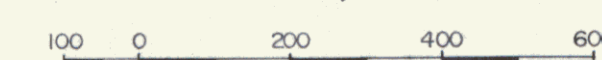
QUILLO RESOURCES INC.
 HIGH RIVER RESOURCES LTD.
 KETZA I-20 & QUILL CLAIMS

GEOLOGY

KETZA RIVER AREA 105 F-8,9
 WATSON LAKE MINING DISTRICT, YUKON

Scale in metres

1 : 10,000



by

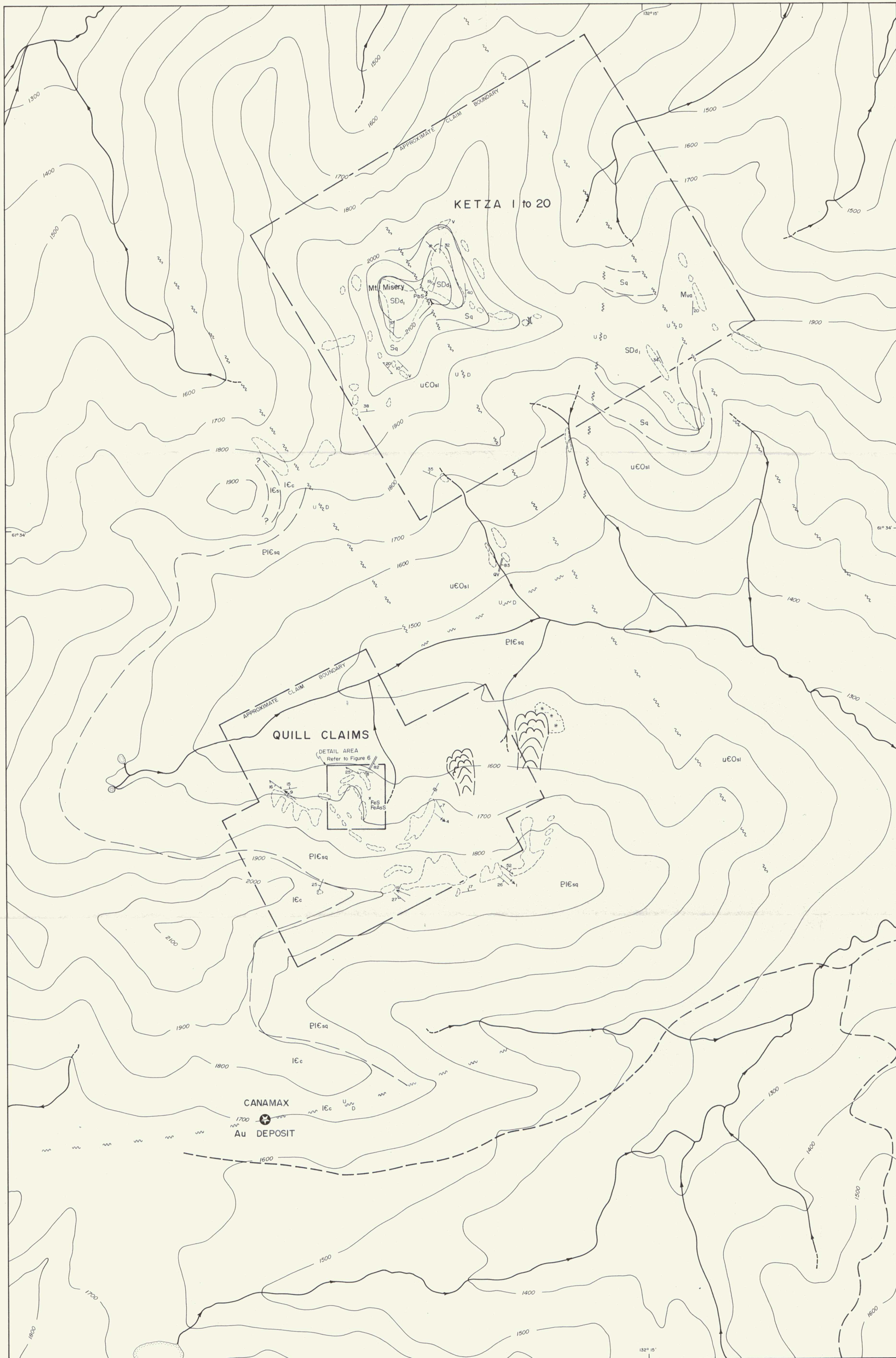
AMERLIN EXPLORATION SERVICES LTD.

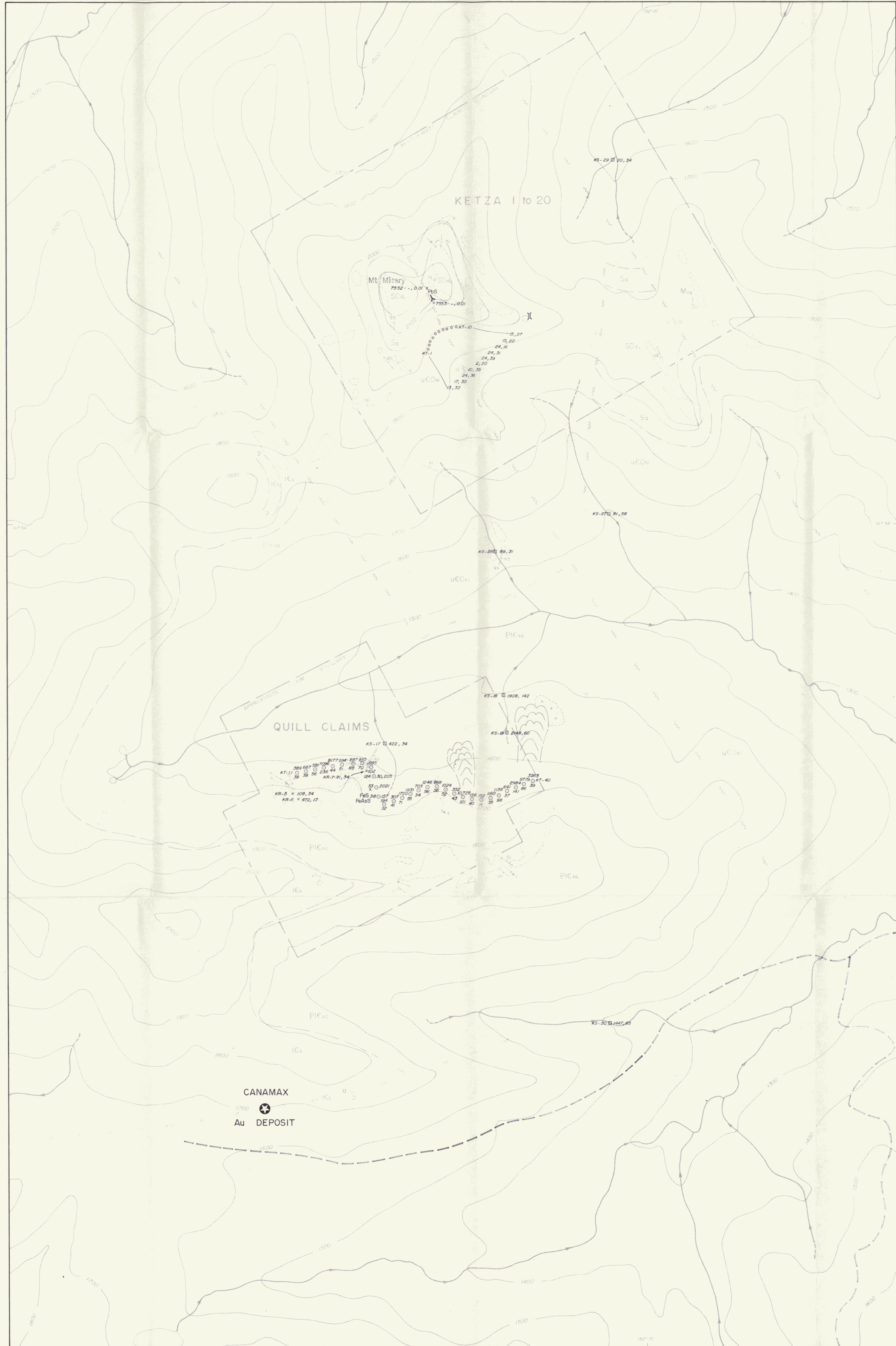
422 - 470 Granville Street, Vancouver, B.C. V6C 1V5

OCTOBER, 1985

091724

PLATE 1





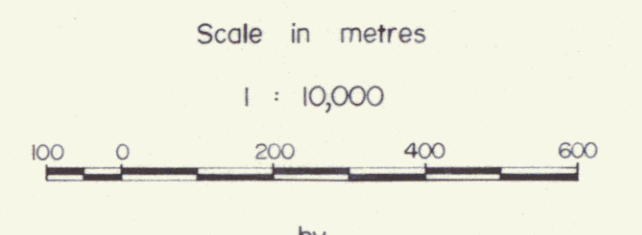
EXPLANATION

- Sample Site**
- Talus fines, As, Cu
 - × Rock ^{KR-5} (geochemical analysis) ₇₅₅₃ (assay) As, Cu
 - Stream silt, As, Cu

- Values**
- Analysis: As, Cu in ppm
 - Assays: As, Cu in %
 - Background*
 - Possibly anomalous*
 - Anomalous*
- *refer to text for ranges of categories

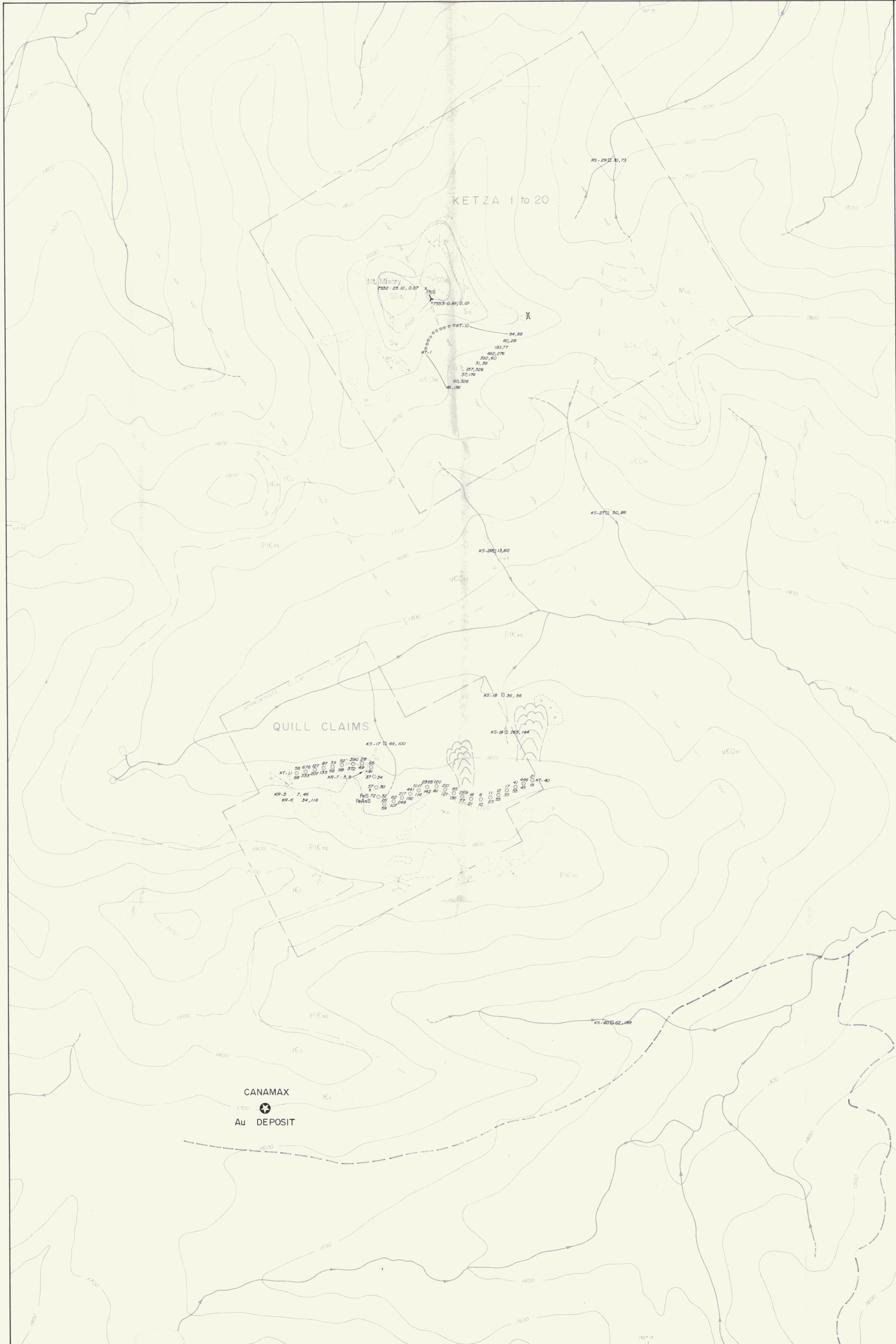
Note: - Refer to Plate I for geology legend.

QUILLO RESOURCES INC.
 HIGH RIVER RESOURCES LTD.
 KETZA 1-20 & QUILL CLAIMS
As, Cu GEOCHEMISTRY
 KETZA RIVER AREA 105 F-8, 9
 WATSON LAKE MINING DISTRICT, YUKON



by
 AMERLIN EXPLORATION SERVICES LTD.

422 - 470 Granville Street, Vancouver, B.C. V6C 1V5



EXPLANATION

- Sample Site**
- Talus fines, Pb, Zn
 - × Rock: *KS-5* (geochemical analysis) Pb, Zn
7553 (assay)
 - Stream silt, Pb, Zn

- Values**
- Analysis: Pb, Zn in ppm
Assays: Pb, Zn in %
- Background*
 - Possibly anomalous*
 - Anomalous*
- *refer to text for ranges of categories
- Note: - Refer to Plate 1 for geology legend.

QUILLO RESOURCES INC.
HIGH RIVER RESOURCES LTD.
KETZA 1-20 & QUILL CLAIMS
Pb, Zn GEOCHEMISTRY
KETZA RIVER AREA 105 F-8,9
WATSON LAKE MINING DIVISION, YUKON

Scale in metres
1 : 10,000

100 0 200 400 600

by
AMERLIN EXPLORATION SERVICES LTD.
422 - 470 Granville Street, Vancouver, B.C. V6C 1V5

OCTOBER, 1985