

REPORT ON THE
ZIZ GROUP
ZIZ 24, 28, 29, 30, 31 MINERAL CLAIMS

1990 PROSPECTING PROGRAM

LOG NO: 0580	RD.
ACTION:	
FILE NO:	

ISKUT RIVER AREA
LIARD MINING DIVISION
BRITISH COLUMBIA

57°17' NORTH LATITUDE
130°57' WEST LONGITUDE
N.T.S. 104G 7/W

LOG NO: NOV 22 1991	RD.
ACTION: <i>[Handwritten signature]</i>	
FILE NO:	

RECEIVED
NOV 22 1991
Gold Commissioner's Office
VANCOUVER, B.C.

Work Period: July 1, 1990 to September 15, 1990

Owner and Operator: KESTREL RESOURCES LTD.
506 - 675 West Hastings Street
Vancouver, B.C.
V6B 1N2
(604) 683-9177

By: S. J. Tennant

May 8, 1991

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,560

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Appendix I	Sample Assay Results	✓
Appendix II	Sample Descriptions	✓

INTRODUCTION

The ZIZ claims were acquired by staking in February of 1990 on behalf of Kestrel Resources Ltd. The claims are located 8 kilometres northwest of Arctic Lake, within the Liard Mining Division of northwestern British Columbia.

A preliminary program of prospecting and sampling was carried out on the ZIZ claims during the summer of 1990, to evaluate the mineral potential. The claims are accessible by helicopter from a base camp at the Forrest Kerr airstrip. A total of 10 samples were collected.

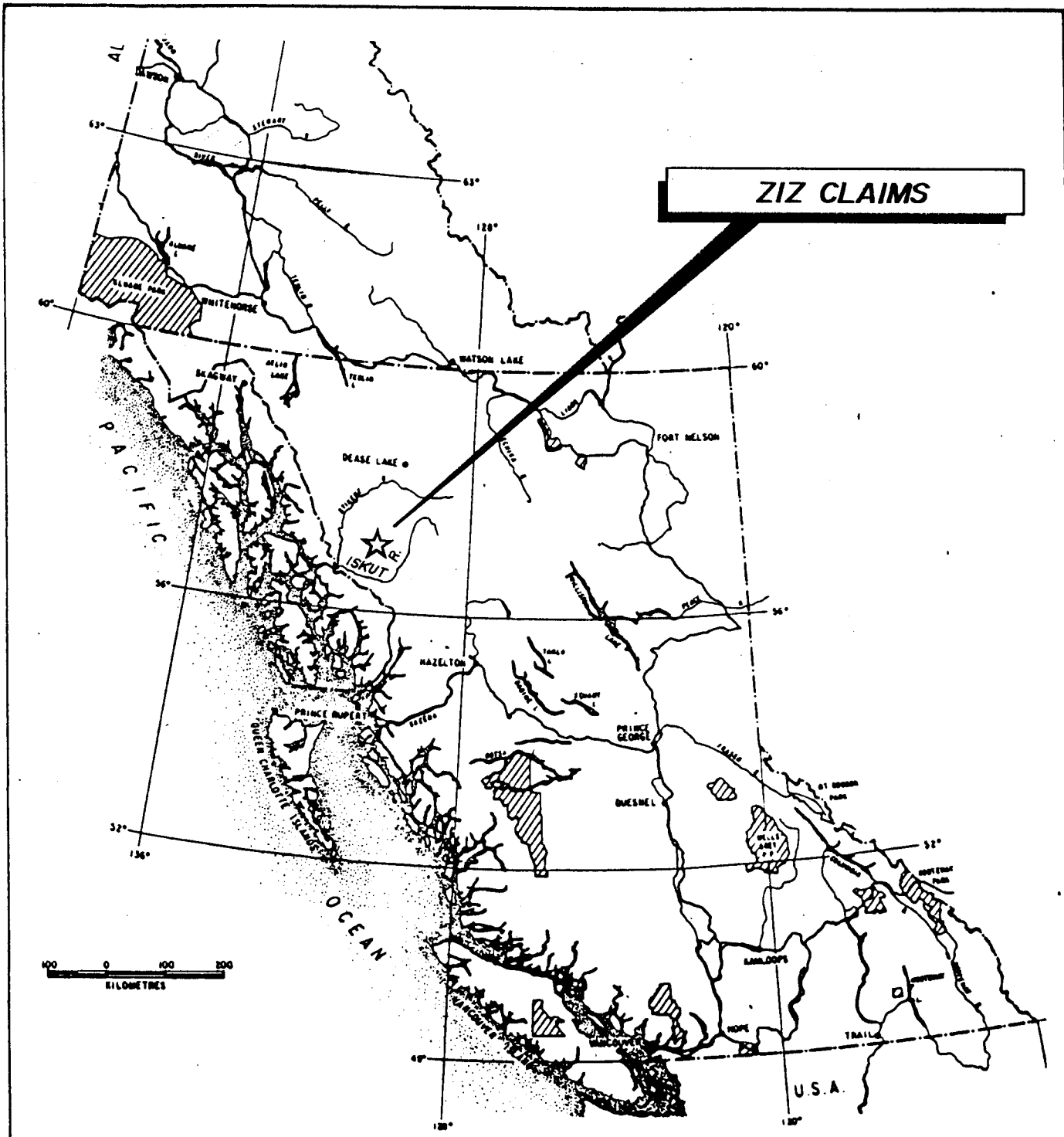
The claims are underlain by low temperature foliated rocks (in part calcareous), of Paleozoic age together with associated intermediate intrusive rock of Jurassic-Triassic Age.

Results of the 1990 program are discussed in the text of this report and the data plotted on the accompanying map.

LOCATION, ACCESS AND TOPOGRAPHY

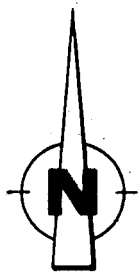
The claims are located approximately 8 kilometres northwest of Arctic Lake within the Liard Mining Division of Northwestern British Columbia. Access to the property is via fixed wing aircraft from Smithers or Terrace to Bronson, which is located 110 kilometres northwest of Stewart, or the Forrest Kerr airstrip located at the headwaters of the Forrest Kerr River. Access from Bronson or Forrest Kerr is via helicopter and via foot traverse within the claims.

Most of the property is accessible by foot or helicopter. Elevations range from 760 metres to 1800 metres A.S.L. Above 1,200 metres the claims are devoid of vegetation except grasses and shrubs, and exhibit abundant outcrop. Below 1,200 metres, the usual coast mountain evergreens, alder and devils club predominate. Precipitation exceeds 4,000 millimetres annually; temperatures range from -40° to +25°C.



ZIZ CLAIMS

0 100 200
KILOMETRES

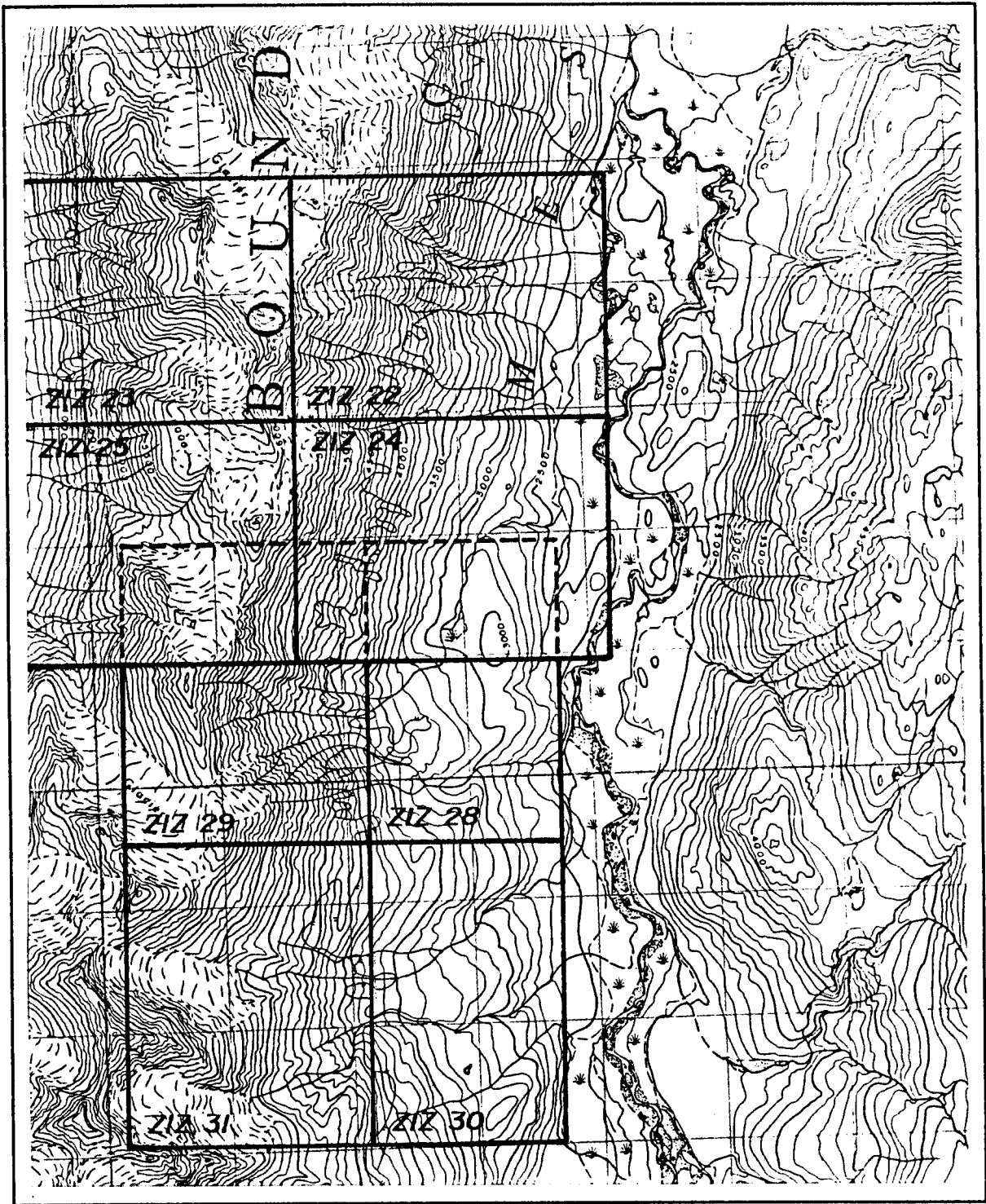


KESTREL RESOURCES LTD.

LOCATION MAP
LIARD MINING DIVISION, B.C.

STU TENNANT

SCALE: NOTED	DATE: APRIL 91	MAP: 1	N.T.S. 104G/7
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57°15'

131°00'



0 1.0 2.0 3.0km



KESTREL RESOURCES LTD.

**ZIZ CLAIMS
LIARD MINING DIVISION, B.C.**

CLAIM MAP

STU TENNANT

DATE : APRIL 1991

SCALE : 1 : 50000

NTS : 104B/15 10467W

FIGURE : 2

PROPERTY AND LIST OF CLAIMS

The ZIZ Group of mineral claims consist of the following claims:

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
ZIZ 24	6969	20	Feb. 25, 1990,	Feb. 25, 1991
ZIZ 28	6973	9	Feb. 25, 1990	Feb. 25, 1991
ZIZ 29	6974	12	Feb. 25, 1990	Feb 25, 1991
ZIZ 30	6975	15	Feb. 25, 1990	Feb 25, 1991
ZIZ 31	6976	20	Feb. 25, 1990	Feb 25, 1991

So far as the writer is aware the claims were properly staked and recorded and are in good standing as indicated by the expiry date.

AREA HISTORY

The first recorded work from the Iskut River region was in 1907 when a staking party from Wrangell, Alaska recorded nine mineral claims north of Johnny Mountain. The Iskut Mining Company worked the claims and in 1917 shipped a ton of high grade ore which reportedly assayed \$1.20 gold, 44.2 ounces silver and 12.45% copper (B.C.M.M.A.R., 1917).

In 1954 Hudson Bay Mining and Smelting limited discovered high grade gold-silver-lead-zinc mineralization, known as the "Pickaxe" showing, on the slopes of Johnny Mountain.

Throughout the 1960's several major mining companies undertook reconnaissance prospecting and exploration programs in search for porphyry copper-molybdenum deposits resulting in the location of several claims on Johnny Mountain and on Sulphurets Creek.

Skyline Exploration Limited staked the Inel property in 1969 following the discovery of massive sulphide in float on the Bronson Creek glacier. In 1980 the company staked the Reg property. During the 1980's, Skyline has developed both these

properties discovering high grade veins and polymetallic massive sulphide mineralization on the Inel and Reg properties.

The joint venture partners of Cominco Ltd. and Prime Resources Corporation have developed their Snip property which is located immediately north of the Reg property on the northern slopes of Johnny Mountain. The combined geological reserve for the Snip property is 1,000,000 tons grading 0.80 opt gold.

Other advanced prospects currently undergoing intense exploration efforts in the area include Gulf International Minerals Ltd.'s Inel and McLymont properties, Placer Dome Ltd.'s Kerr porphyry copper-gold deposit and Calpine's Eskay Creek gold deposit, as well as the redevelopment of the Silback Premier/Big Missouri mines by Westmin.

The discovery of the Eskay Creek gold prospect in November 1988 has done much to stimulate exploration activity in the Iskut region. Drill hole intersections varying from 5 to 10 metres (16 to 33 feet), and grading to 100 grams gold per tonne (2.92 opt) with an average 1,000 grams or more of silver per tonne (29.2 opt), are not uncommon. The Eskay Creek deposit is probably the most significant precious metal deposit discovered in British Columbia.

Recently completed road access studies has resulted in a proposed shared cost road which would commence at the Stewart-Cassiar highway near Bob Quinn Lake and extend into the Iskut Valley.

REGIONAL GEOLOGY

The Stewart-Iskut-Eskay Creek gold silver area is situated along the western margin of the Intermontaine belt of volcanic and sedimentary rocks where they join the Coast Plutonic Complex of intrusive and metamorphic rocks. The most significant host of gold-silver mineralization in the area is the Triassic to Jurassic volcanic-sedimentary Stewart complex (Hazelton Group). Triassic to Tertiary plutonic rocks of the Coast Intrusion are considered to be the source of the mineralization. Jurassic sedimentary rocks of the Bowser Basin are extensively underlain by rocks of the Stewart Complex.



131° 00'



KESTREL RESOURCES LTD.

**ZIZ CLAIMS
LIARD MINING DIVISION, B.C.**

REGIONAL GEOLOGY

STU TENNANT

DATE : APRIL 1991

SCALE : 1:250000

NTS : 104B/15

FIGURE : 3

LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE AND RECENT

- 29 Fluvialite gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium
- 28 Hot-spring deposit, tufa, aragonite
- 27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 29

TERTIARY AND QUATERNARY

UPPER TERTIARY AND PLEISTOCENE

- 26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related sub-volcanic intrusions; minor basalt
- 25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26

CRETACEOUS AND TERTIARY

UPPER CRETACEOUS AND LOWER TERTIARY

SLOKO GROUP

- 24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments
- 22, 23 22. Biotite leucogranite, subvolcanic stocks, dykes and sills
23. Porphyritic biotite andesite, lava domes, flows and (?) sills

SUSTUT GROUP

- 21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal
- 20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite; in part equivalent to 22
- 19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite

JURASSIC AND/OR CRETACEOUS

POST-UPPER TRIASSIC PRE-TERTIARY

- 18 Hornblende diorite
- 17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite

JURASSIC

MIDDLE (?) AND UPPER JURASSIC

BOWSER GROUP

- 16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 13
- MIDDLE JURASSIC
- 15 Basalt, pillow lava, tuff-breccia, derived volcanoclastic rocks and related subvolcanic intrusions

LOWER AND MIDDLE JURASSIC

- 14 Shale, minor siltstone, siliceous and calcareous siltstone, greywacke and ironstone

LOWER JURASSIC

- 13 Conglomerate, polymictic conglomerate; granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, peperites,

MESOZOIC

TRIASSIC AND JURASSIC
POST-UPPER TRIASSIC PRE-LOWER JURASSIC

12 Syenite, orthoclase porphyry, monzonite, pyroxenite

HICKMAN BATHOLITH

10 11 10. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende, quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite

TRIASSIC

UPPER TRIASSIC

9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)

8 Augite-andesite flows, pyroclastic rocks, derived volcaniclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate

7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomitic siltstone, greywacke, volcanic conglomerate, and minor limestone

6 Limestone, fetid argillaceous limestone, calcareous shale and reefoid limestone; may be in part younger than some 7 and 8

5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone

MIDDLE TRIASSIC

4 Shale, concretionary black shale; minor calcareous shale and siltstone

PALEOZOIC

PERMIAN

MIDDLE AND UPPER PERMIAN

3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff

PERMIAN AND OLDER

2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone

MISSISSIPPIAN

1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite

B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic

A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic

- Geological boundary (defined and approximate, assumed)
- Bedding (horizontal, inclined, vertical, overturned) + / x
- Anticline
- Syncline
- Fault (defined and approximate, assumed)
- Thrust fault, teeth on hanging-wall side (defined and approximate, assumed)
- Fossil locality
- Mineral property
- Glacier

5:

INDEX TO MINERAL PROPERTIES

1. Liard Copper	5. Bam	9. MH	13. Ann, Su
2. Galore Creek	6. Gordon	10. BIK	14. SF
3. QC, QCA	7. Limpoke	11. JW	15. Goat

Within the Stewart Complex of volcanics and sedimentary rocks both narrow fractures and wide shear zones carry gold, silver and often, copper and molybdenum values associated with quartz veining. These mineralized areas are frequently close to felsic porphyry sills and dykes. The northern portion of the district appears to contain higher frequency of gold quartz veins grading to increased silver toward the south and increased copper toward the west.

The recently discovered 21 Zone on the Stikine Silver/Calpine claims to the southeast of the ZIZ claims, is hosted in the Mount Dilworth formation of the upper Hazelton group. The Dilworth formation has been traced to the northwest from 21 Zone.

PROPERTY GEOLOGY

Geological Survey Map 11-1971, prepared by J.G. Souther, shows the geology of the ZIZ claims at a scale of 1:250,000. More detailed maps are unavailable from Government sources and Kestrel has not completed reconnaissance mapping on this property. According to Souther's work, the claims are underlain by foliated rocks of Paleozoic age, minor limestone, and associated intermediate intrusive rocks of Jurassic-Triassic age. Foliated rocks consist of phyllite, greenstone, quartz sericite-chlorite schist, argillaceous quartzite, minor chert and schistose tuff. Regional north/south faulting occupies the valley of More Creek east of the claims. The rock units generally trend northwesterly with moderate to steep dips to the southwest, and are variably altered, deformed and metamorphosed.

1990 EXPLORATION PROGRAM

The 1990 exploration program was undertaken to assess the exploration potential of the property. The field program was conducted during the last week of July.

Access was via helicopter (provided by Northern Mountain Helicopters), from a base camp at Forrest Kerr Airstrip, some 20 kilometres to the south. Field work was conducted by employees of Kestrel Resources Ltd. under the supervision of the author. A total of 10 man days were spent in collecting 5 rock and 5 soil samples.

The lithochemical samples were properly bagged, described and labelled in the field. Later, they were shipped by air and ground freight to Vangeochem Lab Ltd. in Vancouver, B.C. for analysis under the supervision of professional assayers. All of the samples were analyzed for gold, using fire assay and atomic absorption procedures, and for a 25-element suite by inductively coupled argon plasma (ICAP) methods.

At Vangeochem Lab Ltd., each rock sample was ground to -100 mesh and a 0.5 gram pulp was digested with 5 millilitres of 3:2:1 hydrochloric acid to nitric acid to water at 95°C for 90 minutes, and then diluted to 10 millilitres with water. The resulting precipitate was then analyzed by ICAP methods for: silver, aluminum, arsenic, barium, bismuth, calcium, cadmium, cobalt, chromium, copper, iron, potassium, magnesium, manganese, molybdenum, sodium, nickel phosphorus, lead antimony, tin strontium, uranium, tungsten and zinc.

A 20.0 to 30.0 gram pulp was split from each of the ground samples, mixed with flux, fused at 1,900°F to form a button, and subsequently digested in an aqua regia solution. This solution was then analyzed for gold by a Techtron model AA5 Atomic Absorption Spectrophotometer with a gold hollow cathode lamp.

Prospecting traverses and all sample locations are shown on Figure 4 of this report. The analytical results and lithochemical sample description accompany this report as Appendices I and II respectively.

DISCUSSION OF RESULTS

A total of 10 man days were spent prospecting the ZIZ claims. The claims are underlain by foliated rocks of Paleozoic age as well as an Upper Triassic volcanic-sedimentary sequence. Structurally the formations trend northwesterly with moderate dips to the southeast.

Results of the soil samples did not give much encouragement in locating significant precious metals. Assays from rock chip samples 80724-80727 taken from the western part of the ZIZ 24 claim, indicate an area of interest, particularly in copper. Sample 80725 assayed 870 ppb in gold and 1.83% in copper. Significant copper values were also obtained in the other samples. These samples were taken from shears in andesite containing stringers of massive and disseminated pyrite, chalcopyrite and malachite. These rocks are partly brecciated and silicified as a result of north-south faulting.

RECOMMENDATIONS

The 1990 prospecting program completed by Kestrel Resources on its ZIZ claims has been successful in outlining an area containing interesting copper mineralization.

Additional work should concentrate on the western part of the claim block, starting in the northwest area where copper mineralization has been observed. A program of intensive rock sampling and detailed geological mapping appears to have a good chance to expand the known outlined mineralized area.

BIBLIOGRAPHY

Souther, J.G., Geological Survey of Canada, Paper 71-44, Map 11-1971.

STATEMENT OF QUALIFICATIONS

I, STUART J. TENNANT, of Kestrel Resources Ltd., do hereby certify that:

1. I am a Geologist employed by Kestrel Resources Ltd. during the period October 1989 to present.
2. I am a graduate of the University of British Columbia with a B.Sc. in Geology in 1959.
3. From 1959 until present, I have been engaged in exploration primarily in Western Canada.
4. I personally supervised and participated in the field work and have compiled, reviewed and assessed the data resulting from the work.



Stuart J. Tennant

DATED at Vancouver, British Columbia, this 8th day of May, 1991.

PROGRAM COSTS

S. Tennant Geologist	2 days @ \$325/day	\$	650
M. Callaghan Prospector	1 day @ 200/day		200
J. Elmore Prospector	1 day @ 165/day		165
W. Grier Prospector	3 days @ \$200/day		600
K. Forster Prospector	3 days @ \$200/day		<u>600</u>
		\$	<u>2,215</u>

Field Costs

Room and Board	10 man days @ \$125/day	\$	1,250
Helicopter	4.0 hours @ \$800/hour		3,200
Assaying	10 samples @ \$18/sample		180
Freight and Miscellaneous			45
Drafting and Maps			150
Report			<u>1,120</u>
	TOTAL COSTS	\$	<u>8,160</u>

APPENDIX I
Sample Assay Results

1650 PANORAMA STREET
VANCOUVER B.C. V5L 1L6
(604) 251-5656

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900372 AA

JOB NUMBER: 900372

SULLIVAN MANAGEMENT/KESTREL RES.

PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st
80724	.46	.05	.010

DETECTION LIMIT

1 troy oz/short ton = 34.28 ppm

.01

1 ppm = 0.0001%

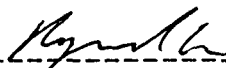
.01

ppm = parts per million

.005

< = less than

signed: _____



To: KESTREL RESOURCES LTD.
507, 675 W. Hastings Street,
Vancouver, B.C.

ATTN: John Buchholz



File No. 33688-SM
Date September 28, 1990
Samples Soil
Smithers Ref. # 0023

Certificate of Assay LORING LABORATORIES LTD.

Page # 3

SAMPLE NO.

PPB
Au

Geochemical Analysis

ZIZ-1 B1	5
ZIZ-1 B2	20
ZIZ-1 B3	15
ZIZ-1 B4	35
ZIZ-1 B5	10

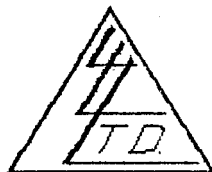
I Hereby Certify that the above results are those
assays made by me upon the herein described samples....

Subjects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.


Assayer

To: KESTREL RESOURCES LTD.,
506, 675 W. Hastings Street,
Vancouver, B.C.
ATTN: John Buchholz

File No. 33743-SM
Date October 17, 1990
Samples Rock
Smithers Ref # 0033



Certificate of Assay LORING LABORATORIES LTD.

Page # 2

SAMPLE NO.

PPB
Au

PPM
Ag

Geochemical Analysis

21Z. 80725

870

2.0

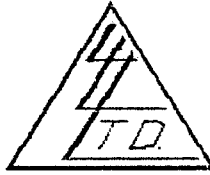
I Hereby Certify that the above results are those
assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.


Assayer

To: KESTREL RESOURCES LTD.,
506, 675 W. Hastings Street,
Vancouver, B.C.
ATTN: John Buchholz

File No. 33743-SM
Date October 17, 1990
Samples Rock
Smithers Ref # 0033



Certificate of Assay

LORING LABORATORIES LTD.

Page # 1

SAMPLE NO.

%
Cu

%
Zn

"Assay Analysis"

80725

1.83

-

~~80725~~

-

I Hereby Certify that the above results are those
assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.


Assayer

GEOCHEMICAL ANALYSIS CERTIFICATE

Loring Laboratories Ltd. PROJECT 33743 File # 90-5001

629 Beaverdam Road N.E., Calgary AB T2K 4W7

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
80725	16	19474	91	383	2.0	23	41	545	6.52	4	5	ND	1	39	3.8	4	6	92	1.88	.125	3	31	1.25	50	.14	2	1.46	.05	.08	1
STANDARD C	19	62	36	133	7.5	72	32	1056	4.00	42	16	8	37	52	18.4	15	19	58	.44	.094	39	59	.92	182	.07	34	1.89	.06	.14	11

ICP - .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 SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: PULP

1630 PARADORA STREET
VANCOUVER, BC V5L 1L6
(604) 251-5656

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
~~1988 TRIUMPH ST.~~
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, N.F.L.D.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900407 AA

JOB NUMBER: 900407

SULLIVAN MANAGEMENT/KESTREL RES.

PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st
80726	.46	<.01	<.005
80727	1.08	<.01	<.005

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.01

1 ppm = 0.0001%

.01

ppm = parts per million

.005

< = less than

signed: _____

[Handwritten Signature]

REPORT NUMBER: 900375 GA JOB NUMBER: 900375 SULLIVAN MANAGEMENT/KESTREL RES. PAGE 1 OF 1

SAMPLE # Ag Au

2122 *****
80666 nd nd

DETECTION LIMIT 0.1 5
nd = none detected -- = not analysed is = insufficient sample

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water.
 This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST: *Raymond*

REPORT #: 900375 PA

SULLIVAN MANAGEMENT / KESTREL RES.

PROJECT: NONE GIVEN

DATE IN: SEPT 04 1990

DATE OUT: OCT 03 1990

ATTENTION: MR. JOHN BUCHHOLZ

PAGE 1 OF 1

Sample Name	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sn ppm	Sr ppm	U ppm	W ppm	Zn ppm	
B0666	<0.1	2.46	<3	33	<3	0.92	0.5	37	28	178	5.07	0.18	1.43	859	14	0.04	12	0.06	<2	<2	17	29	<5	<3	75	
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1	
Maximum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000	
< - Less Than Minimum > - Greater Than Maximum is - Insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses By Alternate Methods Suggested.																										

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

April 30, 1991

TO: Mr. Stuart Tennant
KESTREL RESOURCES LTD.
506 - 675 W. Hastings St.
Vancouver, BC V6B 1N2

FROM: VANGEOCHEM LAB LIMITED
1650 Pandora Street
Vancouver, BC V5L 1L6

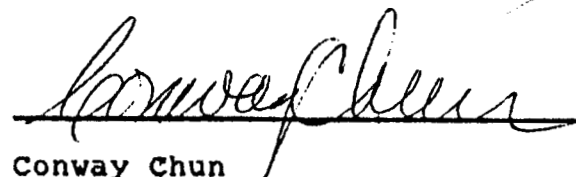
SUBJECT: Analytical procedure for soil samples preparations.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags.
- (b) Dried soil and silt samples were sifted by hands using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.

2. Analysts

The sample preparations were supervised or determined by Mr. Conway Chun or Mr. Raymond Chan and his laboratory staff.



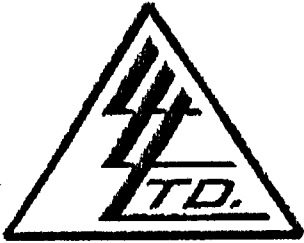
Conway Chun
VANGEOCHEM LAB LIMITED

VANGEOCHEM SAMPLE ANALYSIS DESCRIPTION

The lithochemical samples were properly bagged, described and labelled in the field. Later, they were shipped by air and ground freight to Vangeochem Lab Ltd. in Vancouver, B.C. for analysis under the supervision of professional assayers. All of the samples were analyzed for gold, using fire assay and atomic absorption procedures, and for a 25-element suite by inductively coupled argon plasma (ICAP) methods.

At Vangeochem Lab Ltd., each rock sample was ground to -100 mesh and a 0.5 gram pulp was digested with 5 millilitres of 3:2:1 hydrochloric acid to nitric acid to water at 95°C for 90 minutes, and then diluted to 10 millilitres with water. The resulting precipitate was then analyzed by ICAP methods for: silver, aluminum, arsenic, barium, bismuth, calcium, cobalt, chromium, copper, iron, potassium, magnesium, manganese, molybdenum, sodium, nickel, phosphorus, lead, antimony, tin, strontium, uranium, tungsten and zinc.

A 20.0 to 30.0 gram pulp was split from each of the ground samples, mixed with flux, fused at 1,900°F to form a button, and subsequently digested in an aqua regia solution. This solution was then analyzed for gold by a Techtron model AAS Atomic Absorption Spectrophotometer with a gold hollow cathode lamp.



829 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2

LORING LABORATORIES LTD.

Phone 274-2777

Preparation Procedures for Geochemical Samples

1 - Soil And Silts:

- a) The soil sample bags are placed in dryer to dry at 105°C.
- b) Each sample is passed through an 80 mesh nylon seive. The +80 mesh material is discarded.
- c) The -80 mesh sample is placed into a coin envelope and delivered to the laboratory for analysis.

2 - Lake Sediments:

- a) The sediment sample bags are placed into the dryer at 105°C until dry.
- b) The dried material is transferred to a ring and puck pulverizer and ground to -200 mesh.
- c) The -200 mesh pulp is then rolled for mixing, placed into a coin envelope, and taken to the laboratory for analysis.

3 - Rocks and Cores:

- a) The samples are dried in aluminum disposable pans at 105°C.
- b) They are then crushed to 1/8" in jaw crusher.
- c) the 1/8" material is mixed and split to sample pulp size.
- d) The sample is then pulverized to 100 mesh, using a ring and puck pulverizer.
- e) The -100 mesh material is rolled on rolling mat and transferred to sample bag. The sample is then sent to the laboratory for analysis.



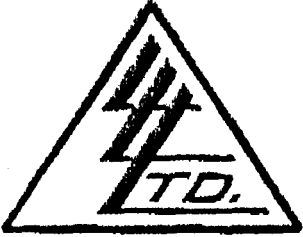
LORING LABORATORIES LTD.

629 Beavardam Rd. N.E.
Calgary, Alberta T2K 4W7

Tel: (403) 274-2777
Fax: (403) 276-0541

ICP ANALYSES

- Weigh 0.5 g sample in 16 x 150 mm test tubes.
- Digest samples with 3 ml of 3-1-2 HCl-HNO₃-H₂O at 95°C for one hour.
- Cool sample and dilute to 10 ml with distilled water.
- Mix and allow to settle.
- Select the 30 element simultaneous program for ICP.
Enter sample numbers into computer in proper sequence to which they will be analyzed, along with client name or project number.
- Transfer samples to sample cups on auto sampler.
- Analyze samples on ICP using auto sampler.
- Ensure control standards are within acceptable limits.
- Print out final report for client.



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Au Geochems (Soils & Sediments)

1. Weigh 10 g sample to fire assay crucible (carry blank)
 2. Place crucibles in fire assay furnace at fusion temperature for 15 minutes.
 3. Allow crucibles to cool on steel table.
 4. Add 1 tablespoon flux and 1 in quart to each crucible.
 5. Fuse for $\frac{1}{2}$ hr. at fusion temperature.
 6. Pour pots, remove slag and cupel.
 7. Place beads into 50 ml flasks.
 8. Pipette stds. and blank into 50 ml flasks.

1 ml of 10 ppm	=	1000 ppb
1 ml of 5 ppm	=	500
1 ml of 1 ppm	=	100
0 ml	=	0
 9. Add 5 mls H₂O, 3 mls HNO₃ and place on 1 switch plate for 5 minutes. Take off plate. Add 5 mls HCl.
 10. Digest until total dissolution approximately $\frac{1}{2}$ hr.
 11. Bulk flasks to approximately 25 mls with distilled H₂O. Cool to room temperature.
 12. Add 5 mls MIBK. Stopper and shake each flask for exactly 1 minute.
 13. Allow MIBK to settle.
 14. Set 1100 AA unit as follows:

mu	-	2428
slit	-	.5
lamp MA	-	3
flame	-	air-acetylene - extremely lean
- Stds.:
- | | | |
|----------|---|---------|
| 100 ppb | - | 10 |
| 1000 ppb | - | 100 |
| 500 ppb | - | reading |

15. Report directly in ppb. Detection limit 5 ppb at reading of .5.

*-1 - for rock geochems steps 2 and 3 can be eliminated.

*-2 - it is important to maintain as closely as possible standard conditions for all samples and standards in a series.

Reagents & Material

- MIBK - 4-Methyl-2-Pentanone
- HCl - conc
- HNO3 - conc
- Flux - 2980 g PbO
777 g Na₂CO₃
68 g Na₂B₄O₇
68 g SiO₂
167 g Flour

NOTE:

With rocks or drill core the amount of sample can vary from 10 grams to 30 grams. The fluxes are all adjusted according to the clients requirements.

APPENDIX II
Sample Descriptions

Geochemical Data Sheet - ROCK SAMPLING

Sampler Mike Callaghan
 Date Aug 19 / 90

Project PROSPECTING
 Property ZIZZ UNITS

Location _____
 M.D. _____

NTS _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	DESCRIPTION			OBSERVATIONS	ASSAYS											
				Rock Type	Alteration	Mineralization													
ZIZZ																			
MC-B1	100m S20W OF 80666 EL 3900'	SOIL	8" Deep 12"	Na. feldspar ANDESITE			EL-3900' Steep N60W Talus begins to south												
MC-B2	300m S20W OF 80666 EL 4600	SOIL				PYRITE	Some sections of andesite flow has 1-2% disseminated pyrite on fractures near barren or weak pyrite in fresher andesite general strike of rock is NW dip 45-60° SW Noted gossans 200m and 500m above EL 4600'												
MC-B3	100m S70E OF B2 EL 5000'	SOIL		BLACK SILTSTONE		PYRITE	BLACK PYRITIZED SILTSTONE beds 15m thick Qtz-carb fracture fillings in volcanic flow overlying siltstones.												
MC-B4	100m S70E OF B3 EL 4700	SOIL					Near top of a dry water course volc flow EL 4850' a grey weathered dyke intrusive plagioclase and long hornblende crystals strikes N30W volcanic andesite on hang and foot wall												

Geochemical Data Sheet - ROCK SAMPLING

JASON Elmore

NTS _____

Sampler Mike Callaghan

Project PROSPECTING

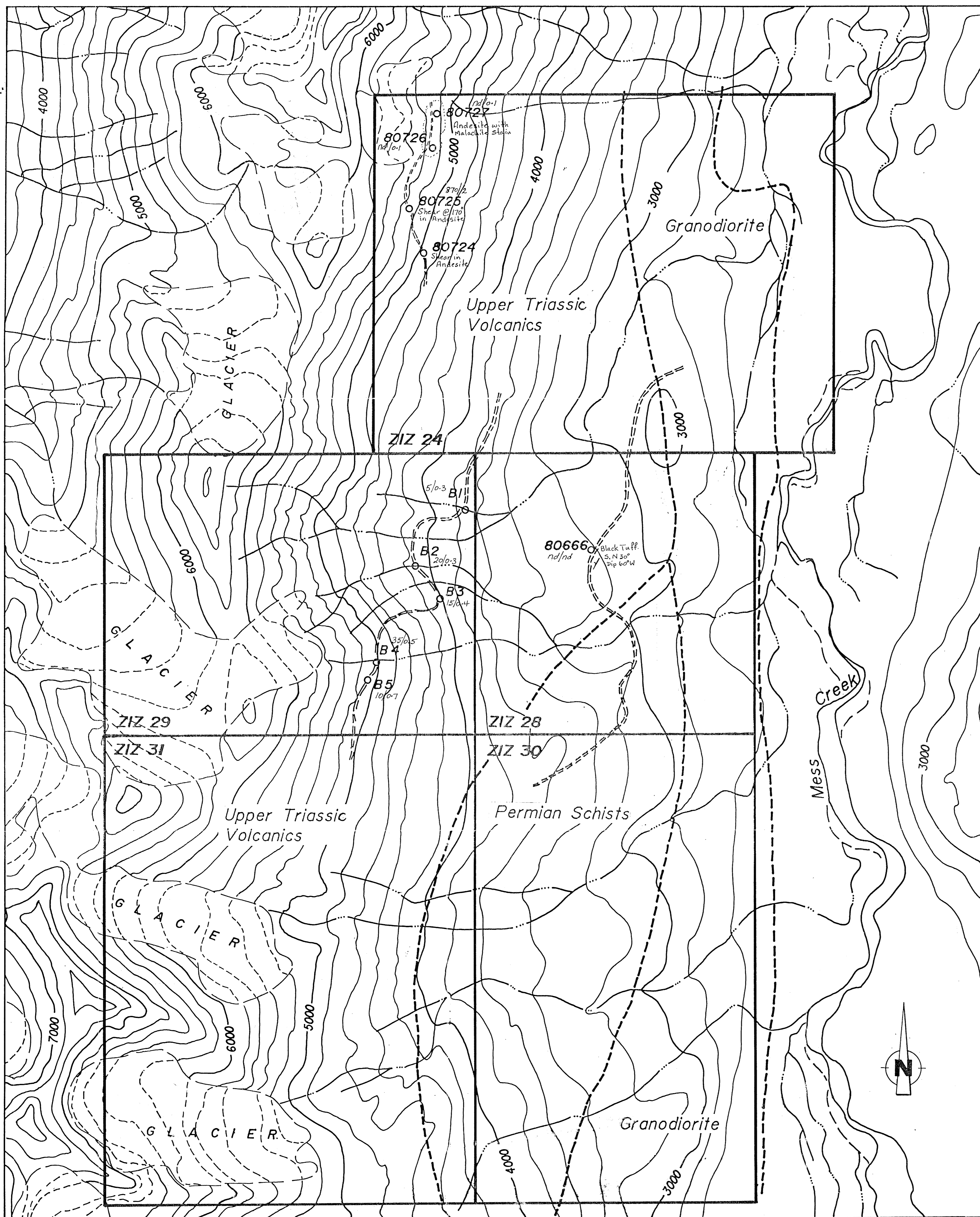
Location _____

Date Aug 19/90

Property ZIZZ Claims

M.D. _____

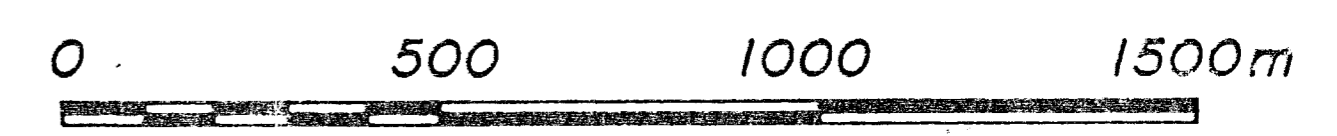
SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	DESCRIPTION			OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
80666	ZIZZ CLAIMS	CHIP SAMPLE	3M W 20m Long	BLACK SILTSTONE		PYRITE	LOCATED ON A CENTRAL EAST ZIZZ UNIT EL 3700'						
							1 1/2 km West of Mess River APPROX 3 1/2 km SW of an OLD EXPLORATION CAMP ON A LAKE EAST SIDE MESS R. LANDED ON WEST END OF A SMALL LAKE IN ZIZZ UNITS						
							EL 2900'. Low Country and slides are very thick vegetation, most outcrop begins above talus at 3500' EL.						
							Light weathered ANDESITE flow chloritic slip fracture CARBONATE Qtz fillings						
							The sampling was taken in a fine black dustuff or cherty mudstone this rock is thin bedded and about 10m wide strike N30E Dip 60° N60W.						
							FRACTURING IS ON STRIKE AND ACROSS. FINE PYRITE OCCURS THROUGHOUT AND ON FRACTURES.						
				BLACK TUFF OR CHERTY SILTSTONE		PYRITE 2-3%							
				GREEN ANDESITE	Chloritic Volcanics Hem STAIN	BORNITE	GREEN ANDESITE flow chloritized CARBONATE Hemite FRACTURES SPOTTY BORNITE + MALACHITE						
							NOT MUCH CAPOR BORNITE FLOAT. POSSIBLE						
							elevation and location near GOSSANS QT						
							5500 EL.						



Sample No.	Au(ppb)	Ag(ppm)	Cu(%)
ZIZ - B1	5	0.3	
ZIZ - B2	20	0.3	
ZIZ - B3	15	0.4	
ZIZ - B4	35	0.5	
ZIZ - B5	10	0.7	
80725	870	2	1.83
80726	nd	.01	0.46
80727	nd	.01	1.08
80666	nd	nd	
80724	0.010 (opt)	0.05 (opt)	0.46

LEGEND

- ASSAYS- Au(ppb)/Ag(ppm)
- Outcrop
- Traverse
- Contacts
- 80666 Rock chip sample
- Soil sample



G7W
NTS 104B/15

KESTREL RESOURCES LTD.

ZIZ CLAIMS

SAMPLE LOCATION MAP

LIARD MINING DIVISION, B.C.

DATE : APRIL 1991	SCALE : 1 : 10 000
DRAWN : S. TENNANT	FIGURE : 4

AR 21360