

**REPORT ON THE  
BREN 1-4 MINERAL CLAIMS  
1990 PROSPECTING PROGRAM**

LOG NO: 0530	RD
ACTION:	
FILE NO:	

ISKUT RIVER AREA  
LIARD MINING DIVISION  
BRITISH COLUMBIA

LOG NO: NOV 22 1991	RD.
ACTION:	
FILE NO:	

56°50' NORTH LATITUDE  
131°03' WEST LONGITUDE  
N.T.S. 104 B/14E

**RECEIVED**  
  
MAY 24 1991  
  
Gold Commissioner's Office  
VANCOUVER, B.C.

Claim Name	Record No.	No. of Units	Record Date
BREN 1	6995	20	Feb. 26, 1990
BREN 2	6996	12	Feb. 26, 1990
BREN 3	6997	20	Feb. 26, 1990
BREN 4	6998	20	Feb. 26, 1990

*Work Period:* July 1990 to September 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 7, 1991

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**21,361**

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## INTRODUCTION

The BREN 1-4 mineral claims are located approximately 8 kilometres due west of Newmont Lake within the Liard Mining Division of Northwestern British Columbia.

The claims are accessible by helicopter from a base camp at the Forrest Kerr airstrip, located 16 kilometres to the northeast.

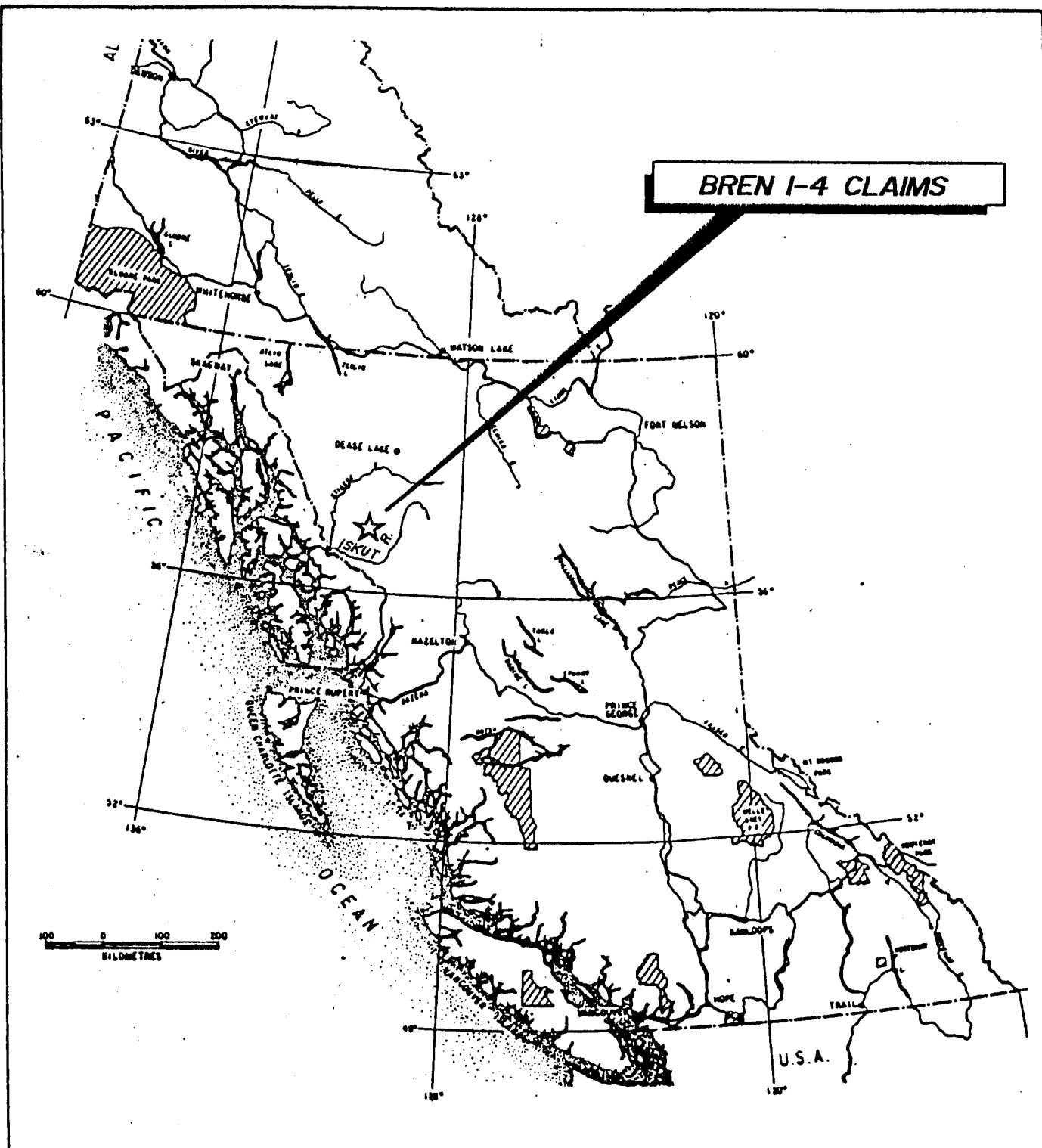
A program of preliminary prospecting and sampling was carried out by Kestrel Resources during the summer of 1990 to evaluate the mineral potential of the property.

A total of 25 rock samples were collected and the results are discussed in the text of this report and the data are plotted on the accompanying map.

## LOCATION, ACCESS AND TOPOGRAPHY

The claims are located approximately 8 kilometres due west of Newmont 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 however, glaciers cover large portions of the claims particularly on the BREN 3 and 4. Elevations range from 1350 metres to 1850 metres A.S.L.



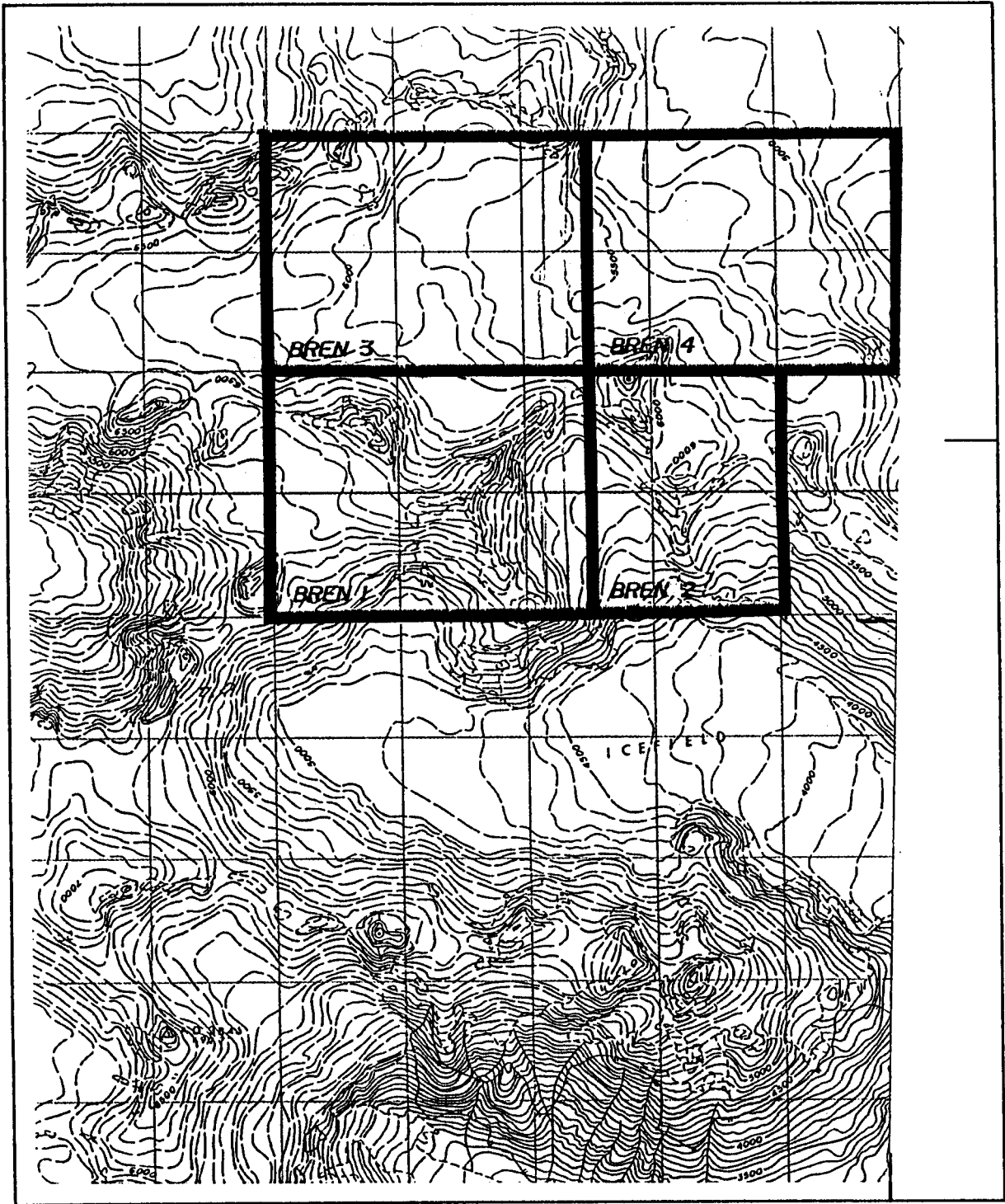
**BREN 1-4 CLAIMS**

KESTREL RESOURCES LTD.

LOCATION MAP  
LIARD MINING DIVISION, B.C.

STU TENNANT

SCALE: NOTED	DATE: APRIL 91	MAP: 1	N.T.S. 104B 14/E
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131°00'



0 1.0 2.0 3.0 km



**KESTREL RESOURCES LTD.**

**BREN 1-4 MINERAL CLAIMS**  
**LIARD MINING DIVISION, B.C.**

**CLAIM MAP**

**STU TENNANT**

DATE : APRIL 1991

SCALE : 1 : 50 000

NTS : 1048/14

FIGURE : 2

## PROPERTY AND LIST OF CLAIMS

The BREN claim group consists of the following modified grid claims wholly owned by Kestrel Resources Ltd.

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
BREN 1	6995	20	Feb. 26, 1990,	Feb. 26, 1991
BREN 2	6996	12	Feb. 26, 1990	Feb. 26, 1991
BREN 3	6997	20	Feb. 26, 1990	Feb 26, 1991
BREN 4	6998	20	Feb. 26, 1990	Feb 26, 1991

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

## 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 of 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**

Generally the area consists of a northerly trending succession of Upper Triassic and Jurassic volcanic and sedimentary rocks underlain in part by Paleozoic volcanic and sedimentary units. All of these units have been intruded by Mesozoic and Tertiary intrusive rocks and cut by extensive fault zones. These country rocks form the Stewart Complex bounded on the west by the main Coast Plutonic Complex, and on the east by the Bowser Basin sedimentary assemblage.

Since 1948, Government workers have attempted to clarify relationships and assign ages to various lithological units of the area. Work completed by Kerr, 1948, G.S.C. Memoir 246; GG.S.C. maps 9-1957, 1481-1979-Iskut River, and Grove, E.W., 1985, Bulletin No. 58 B.C. Department of Mines, form the basis of earlier government mapping. Recently work completed by the G.S.C. - Open File No. 2094 (1989) and the B.C. Department of Mines Open File 1990-2 has greatly enhanced the geological data base.

The oldest known rock of the area are limestone, dolomite and low grade metamorphosed sediments (quartzite, slate, phyllite), of Lower Cambrian age that have been correlated with the Cache Creek Group prevalent in the southern half of the province. The limestone unit contains fossil crinoids and is unconformably overlain by Upper Triassic Hazelton volcanics and sediments.

Overlying the Triassic Hazelton volcanic-sedimentary assemblage is a similar group of volcanic-sedimentary rocks of Middle Jurassic age tentatively named the Betty Creek Formation.

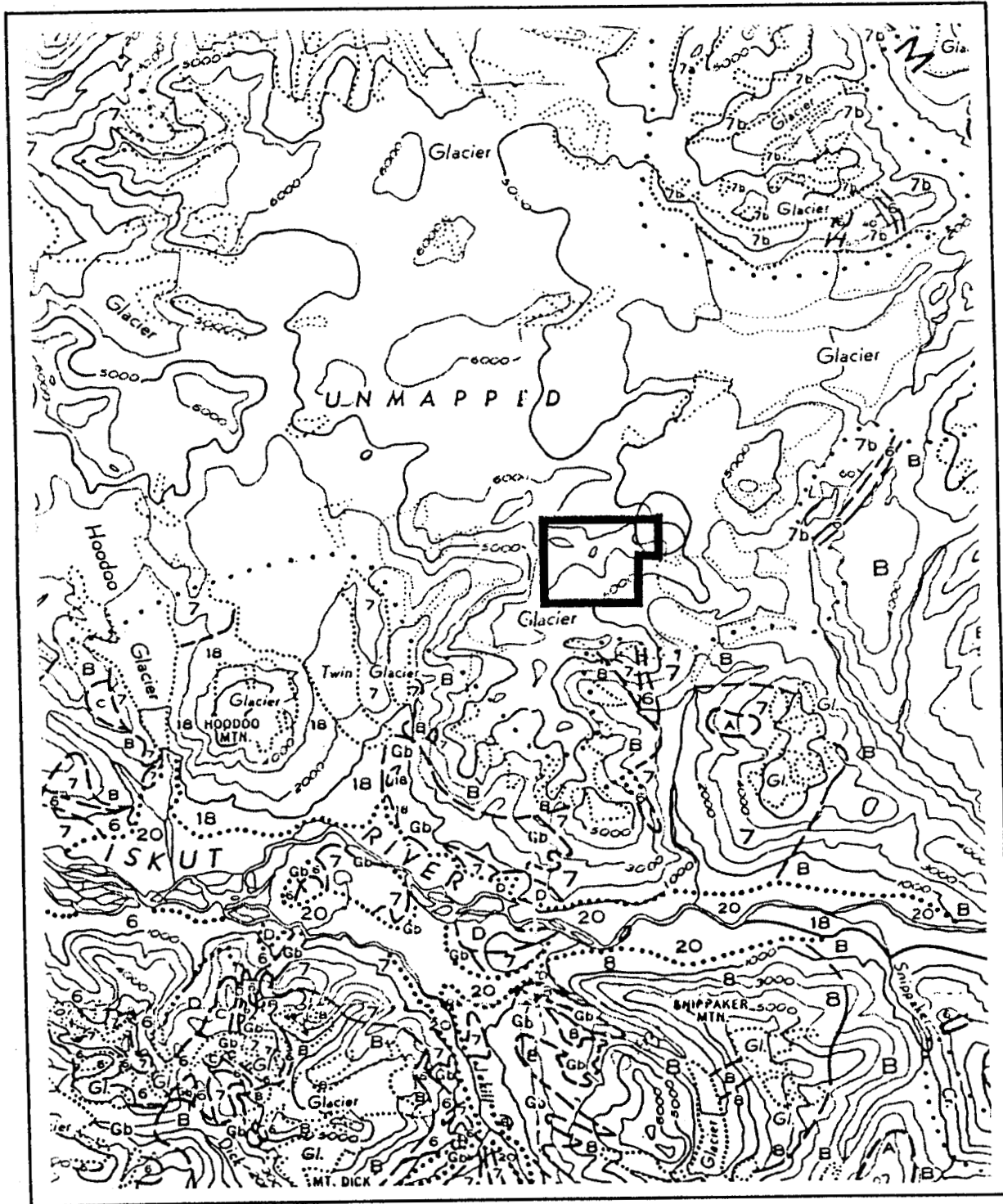
Cretaceous to Tertiary Coast Plutonic intrusions of granite, granodiorite and diorite occupy large portions of the map area. In addition, smaller bodies of monzonite or syenite, as well as sub-volcanic acidic porphyries are sparsely distributed.

Tufa, hot spring deposits and pyroclastic material of Pleistocene and Recent age occur at several localities within the area, notably at Hoodoo Mountain.

The foliated rocks, present in the area, are not of great lateral extent and owe their origin to low grade metamorphism, rather than high temperature regional metamorphism.

Structurally, the map area is bisected by a prominent thrust fault along the Iskut River from Forrest Kerr Creek to the Stikine River Junction. The thrust separates unconformably, Mississippian-Pennsylvanian rocks from middle Jurassic strata and is thought to override rock formations to the south. Regionally, a dominant northeast trending and a subdominant northwest trending faulting system complicate the local geology, especially where folding of the strata, which is common, has occurred.





KESTREL RESOURCES LTD.

BREN 1-4 CLAIMS  
LIARD MINING DIVISION, B.C.

**REGIONAL GEOLOGY**

STU TENNANT

DATE : APRIL 1991

SCALE : 1 : 50000

NTS : 104B/15

FIGURE : 3

# LEGEND

## SEDIMENTARY AND VOLCANIC ROCKS

CENOZOIC

**QUATERNARY  
RECENT**

**20** Unconsolidated glacial and fluvial clay, silt, sand, gravel; till; peat, muskeg

**19** Tufa, hot spring deposits

**18** Olivine basalt, ash, cinders

**TERTIARY  
PLEISTOCENE AND (?) EARLIER**

**17** Basalt, rhyolite, ash, tuff, agglomerate; locally may include 16; 17a, rhyolite, pisolitic siliceous tuff, chalcidonic rhyolite breccia

**EOCENE**

**16** Basalt, rhyolite and associated volcanic rocks; minor conglomerate, sandstone, shale

**CRETACEOUS AND TERTIARY  
UPPER CRETACEOUS AND PALEOCENE**

**15** Conglomerate, sandstone, shale, minor coal

**CRETACEOUS  
POST LOWER CRETACEOUS**

**14** Volcanic rocks, breccia

**JURASSIC AND CRETACEOUS  
UPPER JURASSIC AND LOWER CRETACEOUS**

**12** Argillite, greywacke, conglomerate, coal; 12a, andesite, chert; tuff, conglomerate, shale, greywacke

**JURASSIC  
LOWER AND MIDDLE JURASSIC**

**11** Conglomerate, greywacke, grit, siltstone, shale; 11a, may include younger rocks

**TRIASSIC**

**8** Tuff, siltstone, limestone, conglomerate, breccia

**PERMIAN AND/OR TRIASSIC**

**7** 7. Volcanic and sedimentary rocks undivided; 7a, mainly andesitic and basaltic volcanic rocks; flows, breccia, tuff breccia, tuff; 7b, mainly greywacke, siltstone, conglomerate; 7c, mainly limestone

MESOZOIC

**CRETACEOUS AND /OR EARLIER  
PRE UPPER CRETACEOUS**

**13** Mainly volcanic rocks; minor conglomerate, greywacke; chert, argillite

**JURASSIC AND /OR EARLIER  
PRE UPPER JURASSIC**

**9 10** 9. Mainly volcanic rocks; minor conglomerate; greywacke, argillite  
10. Mainly sedimentary rocks

**PALAEOZOIC**

**PERMIAN AND (?) EARLIER**

- 6** Limestone, greenstone, chert, argillite, phyllitic quartzite, greywacke; meta-andesite and meta-diorite locally abundant near ultramafic bodies. May include younger greenstone; *bs*. Carboniferous or Permian, mainly andesitic flows, breccia, tuff; minor sedimentary rocks

**DEVONIAN AND MISSISSIPPIAN  
UPPER DEVONIAN AND MISSISSIPPIAN**

- 5** Chert, argillaceous quartzite, argillite, greywacke, greenstone, conglomerate, limestone

**DEVONIAN  
MIDDLE DEVONIAN**

- 4** Limestone, dolomite, quartzite

**ORDOVICIAN AND SILURIAN  
UPPER ORDOVICIAN AND LOWER SILURIAN**

- 3** Limestone, cherty limestone, quartzite, red and green chert, shale

**CAMBRIAN AND ORDOVICIAN  
MIDDLE AND (?) UPPER CAMBRIAN, LOWER AND MIDDLE ORDOVICIAN**

- 2** Shale, phyllite, slate, calcareous slate, limestone

**CAMBRIAN  
LOWER CAMBRIAN**

- 1** Limestone, dolomite, quartzite, slate, phyllite

**INTRUSIVE ROCKS**

- A** Felsite, felsite porphyry
- B** Mainly quartz monzonite, granodiorite, granite
- C** Mainly diorite; minor gabbro
- D** Granite porphyry, granophyre, syenite and related rocks
- E** Serpentinite, peridotite; locally includes meta-andesite and meta-diorite

## METAMORPHIC ROCKS

### TRIASSIC OR EARLIER

**F** Phyllite, sericite schist, hornfels, granulite, fine-grained biotite-hornblende gneiss; Fa, may include or be equivalent to 9

### PERMIAN AND/OR EARLIER

#### PRE MIDDLE PERMIAN

**G** Ga, Gneiss; Gb, phyllite, quartzite, minor crystalline limestone, highly altered and sheared greywacke and volcanic rock

#### MAINLY CARBONIFEROUS AND PERMIAN

**H** Biotite-quartz-feldspar gneiss, biotite-muscovite schist, crystalline limestone, greenstone, quartzite, phyllite

#### MISSISSIPPIAN AND EARLIER

**J** Gneiss, schist, crystalline limestone, crystalline dolomite, quartzite

## **PROPERTY GEOLOGY**

The claims are underlain by late Paleozoic-Upper Triassic sediments and volcanics; with minor carbonate lenses which are intruded by a diverse suite of intrusive rocks, most commonly syenitic. The volcanic rocks vary in composition from mafic to felsic and display a wide variety of igneous, pyroclastic and volcanoclastic textures. They consist of intensely folded and sheared tuffs, agglomerates, lavas and bedded sediments.

The claim block has large areas covered by ice and snow, particularly in the northern half.

## **1990 EXPLORATION PROGRAM**

The 1990 exploration program was undertaken to assess the exploration potential of the property, and 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 16 kilometres to the northwest. Field work was conducted by employees of Kestrel Resources Ltd. under the supervision of the author. A total of 8 man days were spent in collecting 25 rock samples.

The lithogeochemical 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 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.

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

## DISCUSSION OF RESULTS

A total of 8 man days were spent prospecting the BREN 1-4 claims. The claims are underlain by late Paleozoic-Upper Triassic sediments and volcanics, with minor carbonate lenses which are intruded by a diverse suite of intrusive rocks.

Samples collected on the BREN claims were generally from quartz carbonate shears, quartz veins or pyritic gossans. Disseminated pyrite, minor chalcopyrite-bornite and sphalerite were the only visible sulphides. Sporadic malachite staining was observed in several gossanous zones.

Generally assay results did not return significant values in base or precious metals. The highest gold and silver assay, 30 ppb and 11.6 ppm respectively was from Sample 92359 which also assayed 0.85% copper. The sample had some visible sulphides and was taken from a quartz stringer in syenite.

## RECOMMENDATIONS

The 1990 reconnaissance sampling program did not delineate any extensive anomalous zones, however assays from samples 92357 to 92364 indicate some mineralization along that traverse. Minor chalcopyrite and sphalerite was observed in the field in several localities.

Additional work on the BREN claims should concentrate on the southwestern part of the BREN I claim. Detailed geological mapping together with additional sampling should be carried out to further investigate the known mineralization.

**BIBLIOGRAPHY**

Logan, J.M.; Koyanagi, Victor M.; Drobe, John R. Geology, Geochemistry and Mineral Occurrences of the Forrest Kerr-Iskut River Area, Northwestern British Columbia, Open File 1990-2, Ministry of Energy, Mines and Petroleum Resources, Geological Survey Branch.

GSC Open File No. 2094 (1989).

Kerr, 1984: GSC Memoir 246; GSC Maps 9 - 1957; GSC Maps 1481-1979 "Iskut River".

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 7<sup>th</sup> day of May, 1991.



## PROGRAM COSTS

S. Tennant Geologist	2 days @ \$325/day	\$ 650
B. Chase Prospector	1 day @ \$275/day	275
C. Bilquist Prospector	1 day @ \$200/day	200
K. Forster Prospector	1 day @ \$200/day	200
W. Grier Prospector	1 day @ \$200/day	200
D. Wituik Prospector	1 day @ \$175/day	175
J. Lee Prospector	1 day @ \$175/day	<u>175</u>
		\$ <u>1,875</u>

Field Expense

Room and Board	8 man days @ \$125/day	1,000
Helicopter	3.5 hours @ \$800/hour	2,800
Drafting and Maps		120
Freight		60
Assaying (Vangeochem Labs) 25 samples @ \$18/samples		450
Report		<u>1,250</u>
TOTAL COST		\$ <u>7,555</u>

**APPENDIX I**

**Sample Assay Results**

1630 P... RA STREET  
VANCOUVER, BC V5L 1L6  
(604) 251-5656

# VGC VANGEOCHEM LAB LIMITED

**MAIN OFFICE**  
~~1088 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: 900205 GA

JOB NUMBER: 900205

SULLIVAN MANAGEMENT/KESTREL RES.

PAGE 1 OF 1

SAMPLE #	Ag ppm	Au ppb
80529	nd	10
80530	.4	nd
80531	nd	nd
80532	nd	30
80533	.8	nd
80534	nd	nd
80535	nd	nd
80536	nd	nd
80537	nd	nd
80538	nd	10

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

**VANGEOCHEM LAB LIMITED**

1630 Pandora Street, Vancouver, B.C. V6L 1L6  
Ph: (604) 251-5656 Fax: (604) 254-5717

**ICAP GEOCHEMICAL ANALYSIS**

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO<sub>3</sub> to H<sub>2</sub>O 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: *R. J. ...*

REPORT #: 900205 PA      SULLIVAN MANAGEMENT / KESTREL RES.      PROJECT: BREN 1-4      DATE IN: AUG 07 1990      DATE OUT: AUG 29 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
80529	<0.1	3.93	<3	45	<3	2.96	4.2	37	338	67	4.69	<0.01	3.97	1085	13	<0.01	106	0.06	<2	<2	16	74	<5	<3	99
80530	0.4	3.91	<3	63	<3	2.69	2.3	40	52	115	5.71	<0.01	3.32	1028	13	<0.01	36	0.12	<2	<2	23	54	<5	<3	144
80531	<0.1	1.43	<3	112	<3	>10.00	2.0	17	40	74	3.39	<0.01	1.34	1448	12	<0.01	25	0.19	7	<2	4	218	<5	<3	90
80532	<0.1	2.81	<3	320	<3	6.27	3.5	30	45	91	7.10	<0.01	2.88	1391	23	<0.01	40	0.09	22	<2	11	150	<5	<3	139
80533	0.8	0.30	31	86	<3	0.16	4.7	12	126	60	1.58	0.07	0.05	561	6	<0.01	90	0.02	31	<2	8	6	<5	<3	312
80534	<0.1	1.13	<3	68	<3	>10.00	1.7	7	26	44	2.36	<0.01	0.91	1847	2	<0.01	28	0.04	<2	<2	6	1033	6	<3	67
80535	<0.1	2.48	<3	107	<3	1.41	3.5	22	42	11	4.18	0.19	2.07	1102	17	<0.01	18	0.06	4	<2	8	43	5	<3	64
80536	<0.1	5.46	<3	56	<3	2.00	3.5	65	171	27	>10.00	0.07	5.45	2350	24	<0.01	55	0.05	<2	<2	21	54	<5	<3	190
80537	<0.1	3.49	<3	216	<3	>10.00	3.9	35	62	29	6.11	<0.01	3.59	3007	17	<0.01	34	0.02	<2	<2	18	518	<5	<3	114
80538	<0.1	3.13	<3	30	<3	0.63	2.8	30	44	54	4.84	0.08	1.93	804	17	<0.01	31	0.08	<2	<2	21	28	<5	<3	93

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   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.

1600 ANDORA STREET  
VANCOUVER, BC V5L 1L6  
(604) 251-5656

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RENO, NEVADA, U.S.A.

REPORT NUMBER: 900171 GA

JOB NUMBER: 900171

SULLIVAN MANAGEMENT/KESTREL RES.

PAGE 1 OF 1

SAMPLE #	Ag ppm	Au ppb
81502	nd	nd
81503	1.0	nd
81504	.8	nd
81505	nd	nd
81506	.6	nd
81507	.1	nd
81508	nd	nd
92357	2.3	nd
92358	1.4	nd
92359	11.6	30
92360	1.0	nd
92361	nd	nd
92362	.5	nd
92363	1.3	nd
92364	4.0	nd

DETECTION LIMIT

0.1 5

nd = none detected

-- = not analysed

is = insufficient sample

**VANCOUVER LAB LIMITED**

1630 Pandora Street, Vancouver, V5L 1L6  
Ph: (604)251-5656 Fax: (604)254-5717

**ICAP GEOCHEMICAL ANALYSIS**

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO<sub>3</sub> to H<sub>2</sub>O 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: Agartha

REPORT #: 900171 PA      SULLIVAN MANAGEMENT / KESTREL RES.      PROJECT: BREN      DATE IN: AUG 03 1990      DATE OUT: AUG 22 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
B1502	<0.1	0.67	33	122	<3	2.04	5.6	25	25	58	5.05	0.16	0.18	1401	12	0.02	35	0.14	45	43	3	42	<5	8	72
B1503	1.0	1.76	6	43	<3	3.26	8.0	37	24	520	7.46	0.15	1.15	2273	19	0.04	39	0.32	35	9	7	53	17	37	53
B1504	0.8	1.66	59	33	<3	1.54	8.6	42	12	207	7.22	0.26	1.02	1087	14	0.03	43	0.30	94	90	6	43	<5	29	34
B1505	<0.1	0.69	13	162	<3	0.12	5.2	9	56	60	1.69	0.39	0.14	52	11	<0.01	9	0.08	57	58	<2	12	<5	10	16
B1506	0.6	0.47	10	124	43	0.12	4.9	5	29	30	3.44	0.33	0.03	110	21	<0.01	6	0.11	108	28	3	12	8	5	18
B1507	0.1	1.66	<3	161	<3	6.72	6.1	20	46	86	4.66	0.14	0.53	1123	10	0.02	13	0.20	21	8	7	129	10	32	91
B1508	<0.1	0.65	47	174	<3	4.77	5.0	14	20	21	4.01	0.12	0.91	965	7	0.03	19	0.13	<2	<2	7	144	7	8	69
92357	2.3	0.33	163	90	<3	5.94	74.2	18	52	320	3.04	0.06	1.93	3573	22	1.23	116	0.08	<2	<2	6	79	8	13	10016
92358	1.4	0.34	161	92	8	4.30	20.7	25	30	238	3.07	0.09	1.28	3825	12	0.32	69	0.11	35	17	3	74	<5	<3	2535
92359	11.6	0.37	151	17	<3	0.43	7.6	24	72	8259	4.33	0.15	0.06	486	17	0.04	53	0.12	43	16	6	34	7	8	158
92360	1.0	1.28	<3	40	<3	1.01	7.6	27	25	264	5.21	0.23	0.62	336	14	0.02	18	0.19	91	58	4	54	<5	17	60
92361	<0.1	0.35	59	510	63	0.10	4.4	12	94	44	0.71	0.31	0.03	343	9	<0.01	1	0.04	76	52	<2	668	<5	5	16
92362	0.5	0.52	396	254	<3	<0.01	23.8	30	36	72	>10.00	<0.01	0.04	435	39	0.11	15	0.07	143	205	15	71	<5	<3	35
92363	1.3	1.67	35	193	<3	4.38	7.9	42	86	58	4.40	0.30	0.55	2239	26	0.03	9	0.12	69	43	5	400	7	27	132
92364	4.0	1.08	<3	>1000	<3	0.08	9.7	38	126	1312	8.89	0.12	0.03	840	14	0.05	11	0.03	109	68	9	53	6	14	129

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.



MAIN OFFICE  
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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.

A handwritten signature in cursive script, appearing to read 'Conway Chun', written over a horizontal line.

Conway Chun  
VANGEOCHEM LAB LIMITED

## VANGEOCHEM SAMPLE ANALYSIS DESCRIPTION

The lithogeochemical 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.

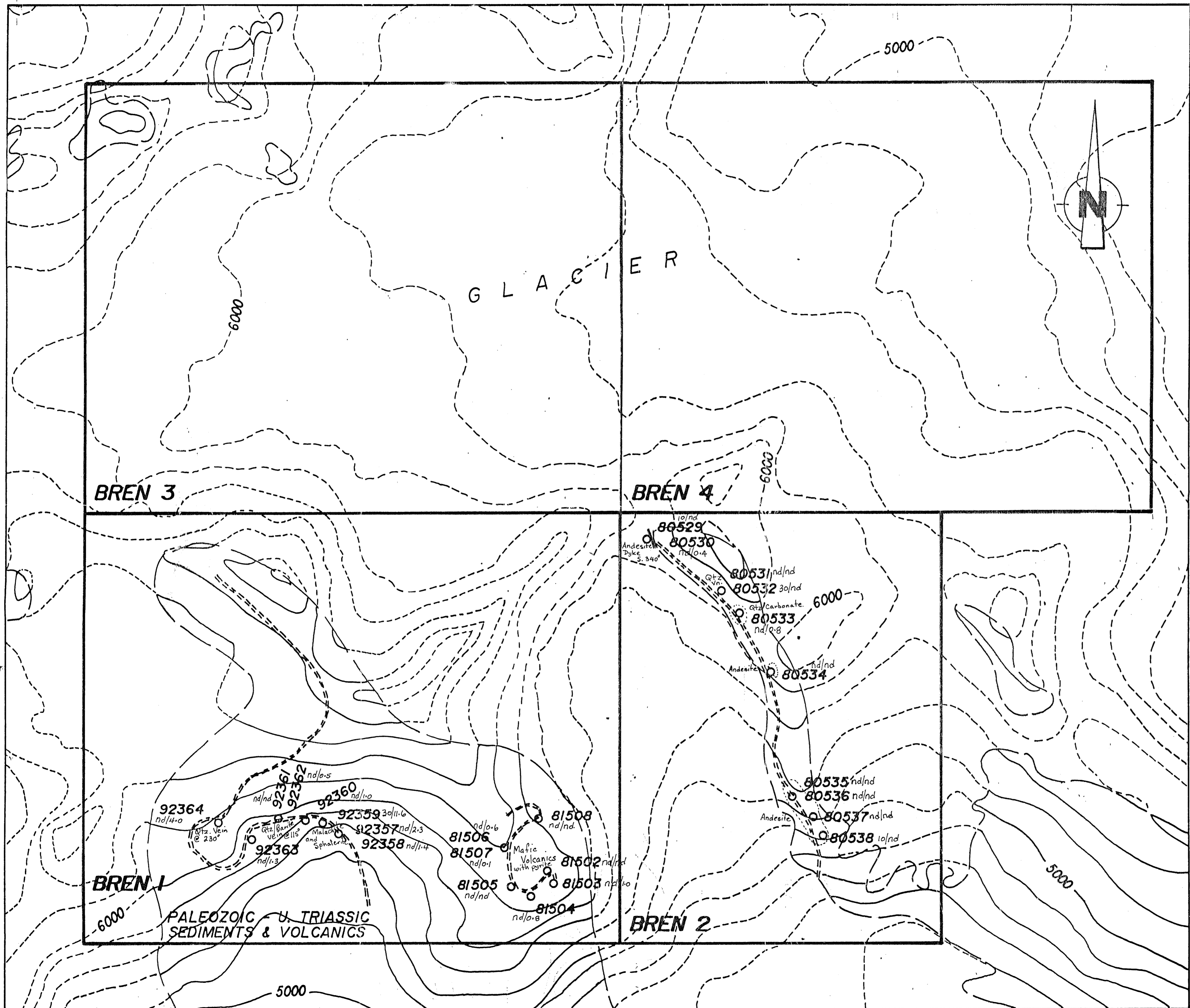


**APPENDIX II**  
**Sample Descriptions**



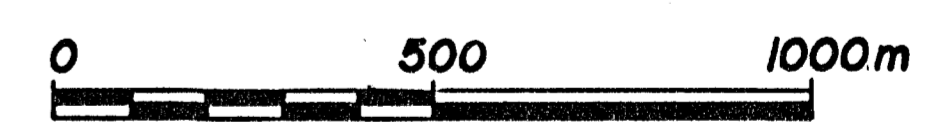






Sample No.	Au(ppb)	Ag(ppm)	Zn(%)	Cu(%)
81502	nd	nd		
81503	nd	1.0		
81504	nd	0.8		
81505	nd	nd		
81506	nd	0.6		
81507	nd	0.1		
81508	nd	nd		
92357	nd	2.3	1.00	
92358	nd	1.4	0.25	
92359	30	11.6		0.85
92360	nd	1.0		
92361	nd	nd		
92362	nd	0.5		
92363	nd	1.3		
92364	nd	4.0		0.13
80529	10	nd		
80530	nd	0.4		
80531	nd	nd		
80532	30	nd		
80533	nd	0.8		
80534	nd	nd		
80535	nd	nd		
80536	nd	nd		
80537	nd	nd		
80538	10	nd		

- ASSAYS- Au(ppb)/Ag(ppm)
- Outcrop
  - Traverse
  - Prospecting Sample Location



**KESTREL RESOURCES LTD.**

**BREN 1-4 MINERAL CLAIMS**

**SAMPLE LOCATION MAP**

LIARD MINING DIVISION, B.C.

DATE	APRIL 1991	SCALE	1:10000
DRAWN	S. TENNANT	FIGURE	4

A.R. 21361