

LOG NO: 09-20	RD.
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REPORT ON THE
TAHL 1 GROUP
1989 PROSPECTING PROGRAM

TAHLTAN RIVER AREA
LIARD MINING DIVISION
BRITISH COLUMBIA

57° 59' NORTH LATITUDE
131° 45' WEST LONGITUDE
NTS 104G/13W

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>
Tahl 1	6073	20	April 28, 1989
2	6074	20	April 28, 1989
3	6075	20	April 28, 1989
4	6076	20	April 28, 1989

Work Period September 26 - October 6, 1989

Owner and Operator Kestrel Resources Ltd.
1124 - 470 Granville Street
Vancouver, B.C. V6C 1V5
(604) 683-9177

By
Bill Chase
March 30, 1989

RECEIVED
APR 18 1990
Gold Commissioner's Office
VANCOUVER, B.C.

BRANCH REPORT
GEOLOGICAL ASSESSMENT

19912

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SUMMARY

A preliminary program of prospecting and sampling was carried out on the Tahl 1 group of mineral claims, during the Fall of 1989, to evaluate the mineral potential on behalf of Kestrel Resources Ltd.

The claims are accessed by helicopter from a base camp at Telegraph Creek, B.C. Thirteen rock samples were collected.

The claims are comprised of mostly Upper Triassic volcanic and sedimentary rocks.

Results of the 1989 program are discussed in the text of this report and the data are plotted on the accompanying map.

INTRODUCTION

The Tahl 1 claim group was staked April 28, 1989. The claims are situated some 35 km NW of Telegraph Creek, B.C.

The claims cover favourable geology northwest of the active Glenora copper-gold camp, and southeast of the producing Golden Bear (Muddy Lake) Gold Mine.

A program of preliminary prospecting and sampling was conducted by Rangex Services during the Fall of 1989 to evaluate the mineral potential of the property.

LOCATION, ACCESS AND TOPOGRAPHY

The claim group is situated approximately 35 km NW of Telegraph Creek, B.C., centered at 57° 59' north latitude and 131° 45' west longitude, in the Liard Mining Division, B.C.

The claims are accessed via helicopter from a base camp at Telegraph Creek, B.C.

Regular fixed wing flights service Telegraph Creek from both Smithers, B.C. and Wrangell, Alaska. Telegraph Creek is also accessed via gravel road west and south of Dease Lake, B.C. on the Stewart-Cassiar Highway.

The topography of the Tahl 1-4 mineral claims ranges from a low of 3,200 feet 975 m, to a high of 6,064 feet, with vegetation non-existent above 4,500 feet 1,848 m. Lower elevations are covered with scrub alpine fir, middle elevations with grasses and heather, and higher elevations are predominantly barren or ice/snowpack covered. Middle slopes are invariably steep, while upper elevations tend to be rounded, weathered ridges.

CLAIM INFORMATION

The Tahl 1-4 mineral claims were staked April 28, 1989.

The four claims were grouped under the name Tahl 1, as described below.

Tahl 1 Group

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Record Date</u>
Tahl 1	20	6073	April 28, 1989
Tahl 2	20	6074	April 28, 1989
Tahl 3	20	6075	April 28, 1989
Tahl 4	20	6076	April 28, 1989

The claims are held by Kestrel Resources Ltd. and

AREA HISTORY

The discovery of fine gold in the Stikine River brought the first rush of exploration to the Telegraph Creek area in 1873. Active prospecting for placer gold continued through the Cassiar and Klondike gold rushes. In 1902, the first copper prospect was recorded near Glenora. Exploration throughout the early to mid-1900s was confined to areas accessible from the Stikine River and resulted in many prospects along the Stikine valley (Kerr, 1948).

KESTREL RESOURCES LTD.

LIARD MINING DIVISION, B.C.

LOCATION MAP

RANGEX SERVICES LTD.

N.T.S. 104 B/15, 104 G/2

SCALE: As Shown

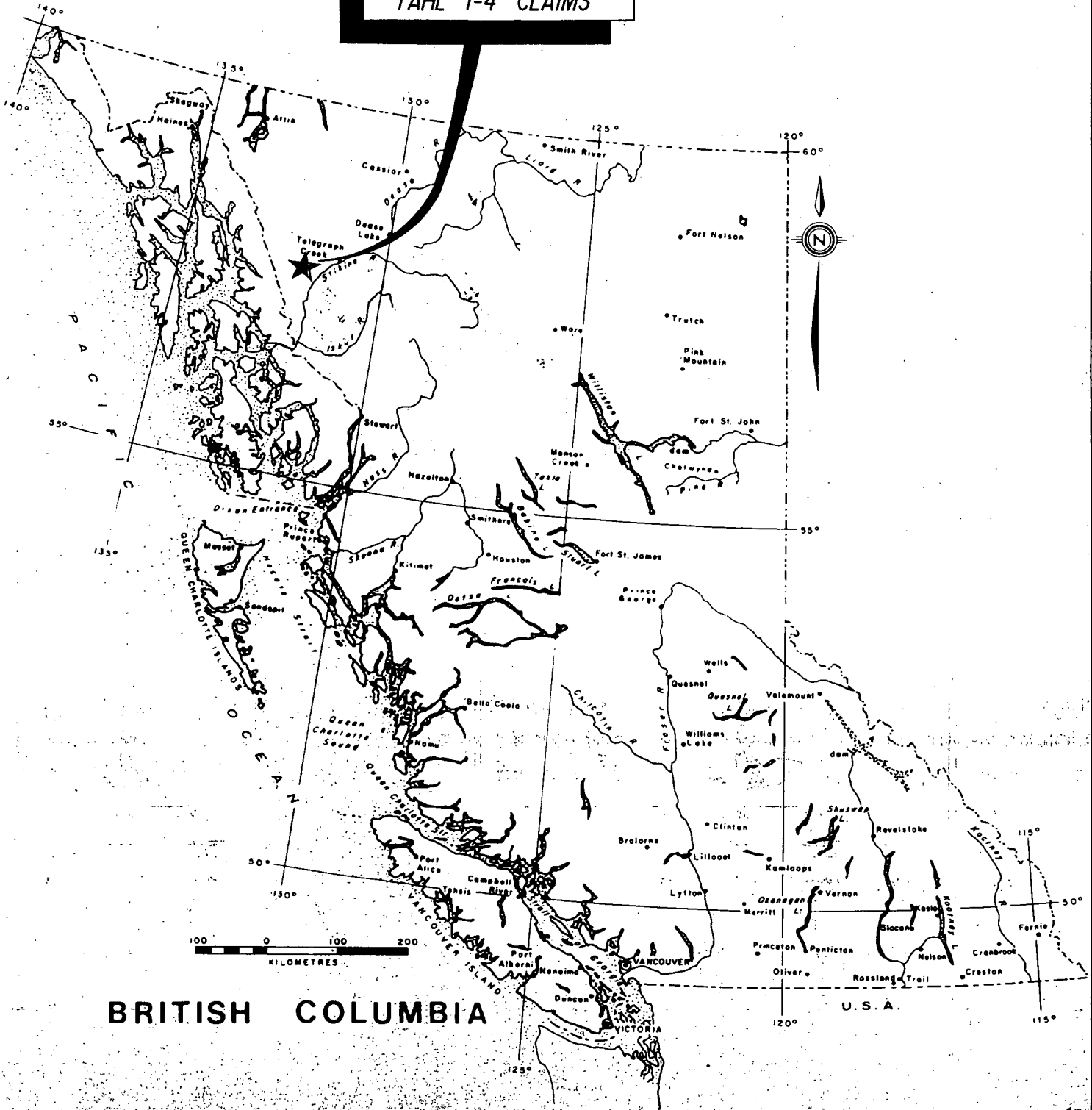
FIG.

DATE: FEB., 1990.

DRAWN: J.B. /dw

1

TAHL 1-4 CLAIMS



BRITISH COLUMBIA

U.S.A.

In 1917, a discovery of copper mineralization was made on the south facing slope of the Winter Creek Valley at an elevation of 5,000 feet 1,524 m. This consisted of a small massive sulphide body containing varying amounts of pyrrhotite and chalcopyrite, a sample of which assayed 0.12 oz/ton Au, 0.92 oz/ton Ag and 5.8% cu. A description of this occurrence is given by J.D. Mandy in G.S.C. Memoir 246, Lower Stikine and Western Iskut Areas, British Columbia, p. 75. Claims covering the area have been staked and abandoned several times, and include the Glenora and King Groups of 1929 and the NP Group of 1962.

Exploration in the more remote areas of the map sheet did not begin until 1955 when Hudsons Bay Mining and Smelting Company initiated a large helicopter-supported prospecting program. Texas Gulf Canada Limited undertook several programs during the 1970s, including work on the Glenora and King Groups. A great amount of exploration has occurred in the Muddy Lake region, north of the Telegraph area. Several major companies, including Esso Minerals, have been active there throughout the 1980s.

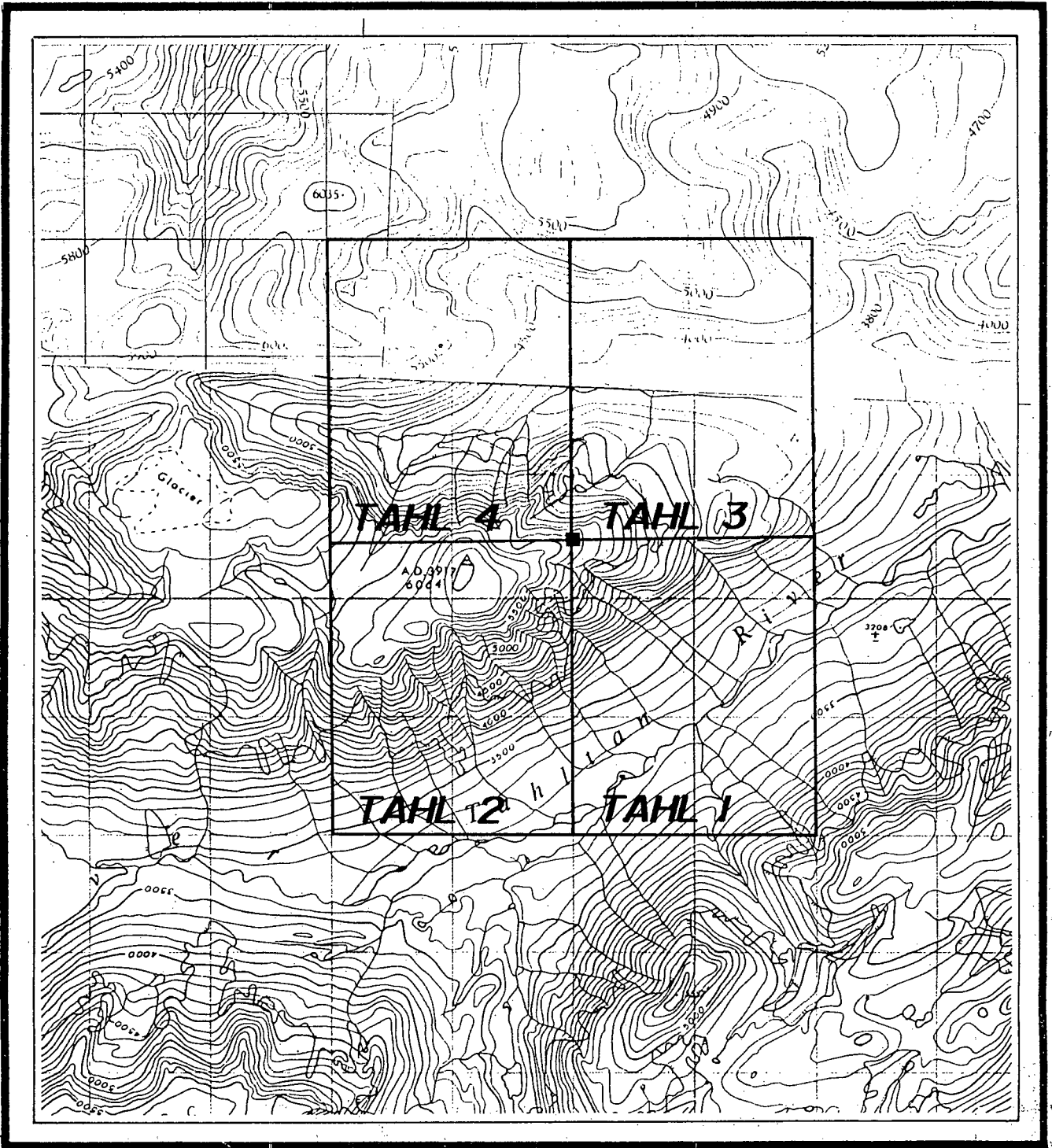
REGIONAL GEOLOGY

The area is underlain by undifferentiated volcanic and sedimentary rocks of Upper Triassic age. Augite andesite breccia, conglomerate and volcanic sandstone, greywacke, graded siltstone, tuff and minor black shale are present (Souther, 1971).

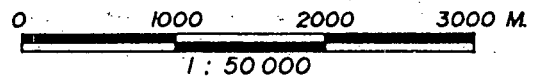
The augite andesite breccia and conglomerate form massive outcrops in which bedding is rarely visible and are riddled by dykes, sills and irregular intrusive bodies that are considered to be part of the subvolcanic feeder system. These subvolcanic rocks are darker coloured, and more uniform in colour and texture than the equivalent extrusive phases.

Discontinuous belts of Upper Triassic limestone are widespread in the area. This unit is thin bedded, flaggy, fetid limestone with interbedded shale and siliceous silt.

131° 45'



58.00.



KESTREL RESOURCES LTD.

TAHL 1-4
CLAIM MAP

DRAWN BDS	NTS. 104J/4W,4E, G/13
DATE : DEC 1989	FIGURE N°. 2

Massive amphibolite rich rocks, predominantly hornblende, occur in contact with the volcanic series in the northwest portion of the map area. This forms part of an amphibolite complex that contacts massive Permian limestone to the north in the Tulsequah map area.

The Tertiary rocks have undergone multiple deformations (Souther, 1971). The structure is complicated by contrasting competence of adjacent volcanic and sedimentary units, and their different responses to stress. Regional folding in Permian and older rocks trend north to northwesterly in the south and eastern parts of the Telegraph map area and east-west along the Chutine River valley to the northwest. Triassic and lower to middle Jurassic units are broken into a mosaic of fault-bounded blocks between which there is little structural continuity. Thickly bedded volcanics display open folds cut by minor faults and fractures, while more thinly bedded units are more tightly folded.

1989 EXPLORATION PROGRAM

The 1989 exploration program was undertaken in an attempt to assess the exploration potential of the property. The fieldwork was conducted October 1, 1989 to October 2, 1989. Access was via helicopter (provided by Northern Mountain Helicopters) from a base camp at Telegraph Creek, B.C., some 36 km to the east-southeast.

This report was prepared following the receipt of the field data and analytical results.

Two employees of Rangex Services and the author (under contract to Rangex Services) were contracted to Kestrel Resources to conduct the fieldwork.

Some 13 rock samples were collected in the course of the work.

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, 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 Fig. 4 of this report. Sample descriptions, analytical results and procedures accompany this report in Appendices I, II and III, respectively.

DISCUSSION OF RESULTS

A total of 6 man-days were spent prospecting the Tahl East mineral claims, completing two roughly parallel west to east traverses along the predominant east-west ridge centrally located on the claim block.

Rocks observed on the traverses ranged from a fresh green andesite in part porphyritic, and in places cut by rhyolite dykes, to a porphyritic diorite intrusive. Alteration and mineralization consists mainly of calc-carbonate zones with finely disseminated pyrite and rare fractures filled with pyrite smears. Large areas of ferrous andesite are also present.

One of these large areas of ferrous andesite, on the eastern toe of the ridge, carried weak values in gold (sample 27740, .012 oz/st Au).

In several localities along the north side of the main ridge, both rhyolite dykes and a dark tuffaceous unit, contain disseminated sulphides, including pyrite and pyrrhotite. Malachite was noted in one sample, 27739, which yielded a copper value of 616 ppm.

On the south facing slope, near the diorite-volcanic contact, a brecciated zone containing disseminated and fracture filled pyrite ranges up to 15 metres wide. Several variations of the porphyritic phase of the volcanics contain wide zones (5 - 15 m thick) of disseminated pyrite and chalcopyrite, often vividly stained with malachite.

Two rock chip samples taken in this area (27865 and 27866) yielded copper values of 2,099 and 1,215 ppm, respectively.

Complete sample descriptions are appended.

CONCLUSIONS

It is concluded that the property warrants further work as outlined below.

RECOMMENDATIONS

Large areas of the claim block remain unprospected. Any further work should attempt to correct this, with sufficient time allowed to further investigate both the ferrous-andesite gossans with weak gold values, and the porphyritic phase of the diorite-volcanic contact yielding fairly high values in copper.

LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE AND RECENT

- 29 Fluvatile 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 subvolcanic 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 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



MESOZOIC

10 11

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

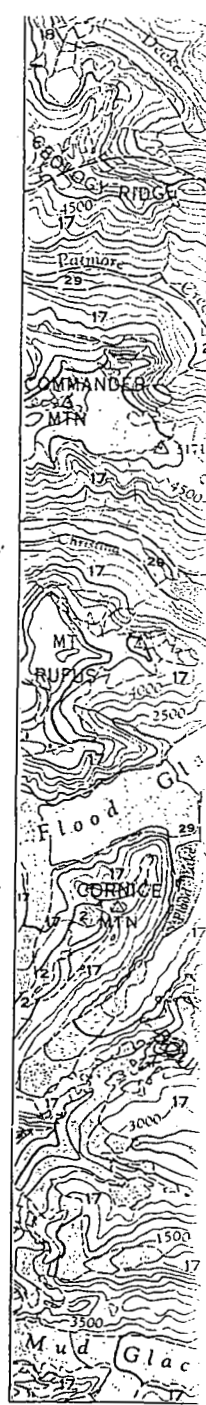
MISSISSIPPIAN

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

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

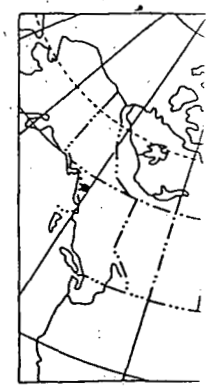
- A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic

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



57°00'
132°00'

Published, 1972
Copies of this map may
Geological Survey of Ca



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 |
| 4. Nabs | 8. Poke | 12. Copper Canyon | 16. Mary |

TAHL 1 - 4

Personal Expenses

J. Buchholz		
Geologist, 2 days at \$300 per day	\$	600.00
B. Chase		
Prospector, 2 days at \$225 per day		450.00
R. Riedel		
Prospector, 2 days at \$200 per day		400.00
R. Durocher		
Geological Assistant, 2 days at \$174 per day		<u>350.00</u>
Total Personnel Expenses		\$ 1,800.00

Field Expenses

Room and Board, 8 man days at \$125 per day		900.00
Aviation:		
Helicopter (Northern Mountain Helicopter)		2,253.27
Fixed Wing (Central Mountain Air Ltd.)		468.08
Drafting and Maps		314.00
Travel & Accommodation		102.38
Field Expendables		111.92
Freight		16.01
Equipment Rental		38.39
Customs Brokerage		35.96
Expediting		34.98
Assaying (Van Geochem Lab Ltd.)		<u>227.50</u>
Total Field Expenses		4,502.49
Management Fee (10% on Field expenses only)		450.25
Report Costs		<u>1,280.00</u>
TOTAL COSTS 1989 PROGRAM		<u>\$ 8,032.74</u>

REFERENCES

G.S.C. Memoir 246, J.D. Mandy, Lower Stikine and Western Iskut Areas,
B.C.

G.S.C. Paper 71-44, J.G. Souther.

Map 11-1971, Geology of Telegraph Creek, B.C. (104G), 1:250,000.

Map 21-1962, Geology of Dease Lake, B.C. (104J), 1:250,000.

CERTIFICATE

I, William F. Chase, of the City of Vancouver, B.C., do here state:

I have been employed in mineral exploration in the Province of British Columbia for the past twenty years, by such companies as Cochrane Consultants Ltd, Montgomery Consultants Ltd., SEMCO, Scope Exploration Services Ltd., Bill Chase and Associates Ltd., and Rangex Services Ltd.

Most of the time I have been employed as a party chief for geophysical and/or geochemical surveys, and as a prospector.

I was a participant in the B.C. - Yukon Chamber of Mines Prospecting School 1975 - 1976.

I was a participant in the B.C. Department of Energy, Mines and Resources Advanced Prospecting course, Nelson, 1980.

WF Chase

William F. Chase

Date

Apr 3/90

VANGEOCHEM SAMPLE ANALYSIS DESCRIPTION

The lithogeochemical samples were properly bagged, described and labelled in the field. When packaged, 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.

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REPORT NUMBER: 890768 AA

JOB NUMBER: 890768

RANGEX SERVICES LTD.

PAGE 3 OF 3

SAMPLE #	Au oz/st
27735	<.005
27736	<.005
27737	.010
27738	<.005
27739	<.005
27740	.012
27861	<.005
27862	<.005
27863	<.005
27864	<.005
27865	<.005
27866	<.005
27867	<.005

Rocks

DETECTION LIMIT

.005

1 Troy oz/short ton = 34.28 ppm

1 ppm = 0.0001%

ppm = parts per million

< = less than

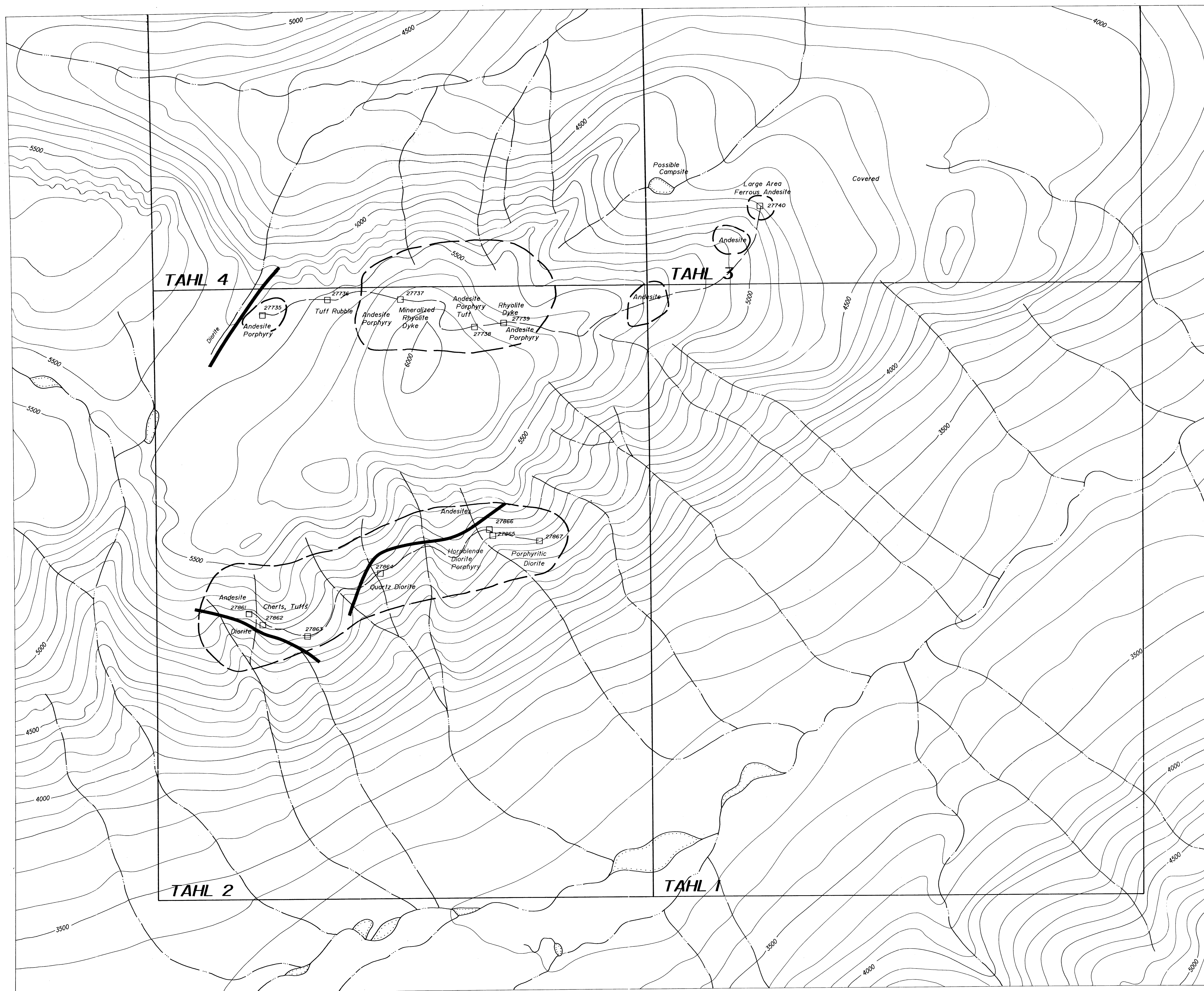
signed: _____

Raymond G.

Sample Number	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
27735	0.1	1.73	11	58	<3	0.99	0.1	20	20	280	3.65	0.26	0.87	686	2	0.04	54	0.30	28	<2	7	20	<5	<3	82
27736	0.6	3.03	9	133	<3	1.15	0.2	22	85	215	3.19	0.28	1.06	563	3	0.08	137	0.18	29	<2	4	198	<5	<3	109
27737	0.9	1.01	114	23	<3	1.29	0.4	24	80	328	0.78	0.21	0.28	297	1	0.05	117	0.14	20	<2	2	56	<5	<3	48
27738	0.4	1.92	13	72	<3	0.84	0.1	19	72	196	2.89	0.21	0.83	489	3	0.06	105	0.17	28	<2	6	75	<5	<3	72
27739	0.4	3.32	<3	31	<3	2.07	0.3	32	14	616	3.72	0.42	0.53	203	2	0.05	10	0.14	30	<2	<2	82	<5	<3	32
27740	0.3	1.60	13	38	<3	0.94	0.3	21	51	140	3.09	0.23	1.01	264	1	0.02	101	0.13	23	<2	4	13	<5	<3	34
7861	0.8	1.70	79	31	<3	1.87	0.3	13	52	70	4.54	0.12	1.06	177	4	0.01	51	0.10	42	<2	<2	73	<5	<3	94
7862	1.2	1.45	24	76	<3	3.00	0.2	14	148	44	2.54	0.17	0.41	89	5	0.03	80	0.12	24	<2	2	20	<5	<3	103
7863	0.5	2.65	13	57	<3	1.85	0.3	35	32	362	4.07	0.01	0.91	190	2	0.02	25	0.13	29	<2	<2	35	<5	<3	48
7864	0.3	3.83	4	34	<3	1.92	0.1	24	19	231	3.40	0.19	0.51	166	2	0.20	53	0.19	31	<2	<2	178	<5	<3	21
7865	0.6	3.70	<3	56	<3	3.13	0.3	35	14	2099	2.45	0.29	1.29	468	1	0.01	11	0.44	29	<2	<2	78	<5	<3	93
7866	0.3	3.50	12	64	3	2.27	0.6	32	18	1215	4.66	0.29	1.58	455	1	0.01	48	0.12	34	<2	<2	75	<5	<3	67
7867	0.3	5.37	10	25	3	2.79	0.4	41	13	174	6.05	0.40	1.04	374	1	0.08	21	0.22	47	<2	<2	77	<5	<3	83
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 is = Insufficient Sample ns = No sample > = Greater than Maximum ANOMALOUS RESULTS = Further Analyses by Alternate Methods Suggested

ROCKS



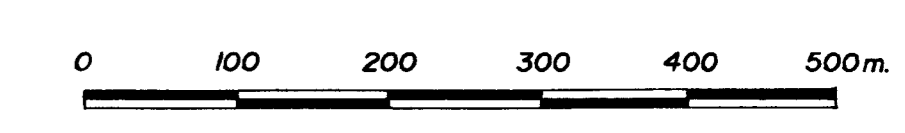
LEGEND

□ ROCK ASSAYS

Sample N°	Au oz/st	Cu (ppm)
27735		280
27736		215
27737	0.010	328
27738		196
27739		616
27740	0.012	140
27861		70
27862		44
27863		362
27864		231
27865		2099
27866		1215
27867		174

* Note : No Values are Non-Detection.

- Traverse Trail
- Location of Outcrops Visited
- Geologic Contact



01

A.R. 19912

KESTREL RESOURCES LTD.

TAHL 1-4
SAMPLE LOCATION MAP 1989
LIARD MINING DIVISION, B. C.

DRAWN : BDS	NTS : 104 G/13
DATE : MARCH 1990	FIGURE N°