

LOG NO: 0417	RD.
ACTION:	
REPORT ON THE FILE NO:	

BAL 5-8 MINERAL CLAIMS
 1989 PROSPECTING PROGRAM

Ball Creek Area
 Liard Mining Division
 British Columbia

NTS-M104G/8W/7E/2E/1W

at

57° 16' North Latitude
 130° 29' West Longitude

GEOLOGICAL BRANCH
 ASSESSMENT REPORT

19,896

SUB-RECORDER
 RECEIVED
 APR 6 1990
 M.R. # \$
 VANCOUVER, B.C.

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>	
Ball	5	5786	20	Jan 24, 1989
	6	5787	20	Jan 24, 1989
	7	5788	20	Jan 24, 1989
	8	5789	20	Jan 24, 1989

Work Period September 22 - 30, 1989

OWNER AND OPERATOR
 KESTREL RESOURCES LTD.
 1124 - 470 Granville Street
 Vancouver, B.C. V6C 1V5
 (604) 683-9177

FILMED

by

BILL CHASE

March 15, 1990



Province of
British Columbia

RECEIPT

471080 J

THE SUM OF

\$

DOLLARS

ON ACCOUNT OF

Queen Rep - LIARD

BAL 5-8

RECEIVED FROM

Bill Chase

ON

April 6

19

ISSUING OFFICE

Victoria

ISSUING OFFICER'S SIGNATURE

[Signature]

FIN 48 REV 85/6 (QP 78463)

WHITE: CUSTOMER

PINK: MINISTRY FILE

CANARY: RETAIN IN BOOK FOR AUDIT

FILED

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SUMMARY

A preliminary program of prospecting and sampling was completed on the Bal 5-8 mineral claims during the fall of 1989 to evaluate the mineral potential, on behalf of Kestrel Resources Ltd.

Access was via helicopter from a base camp at Forrest Kerr Creek. A total of 19 rock samples were taken in the course of the work.

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

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

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

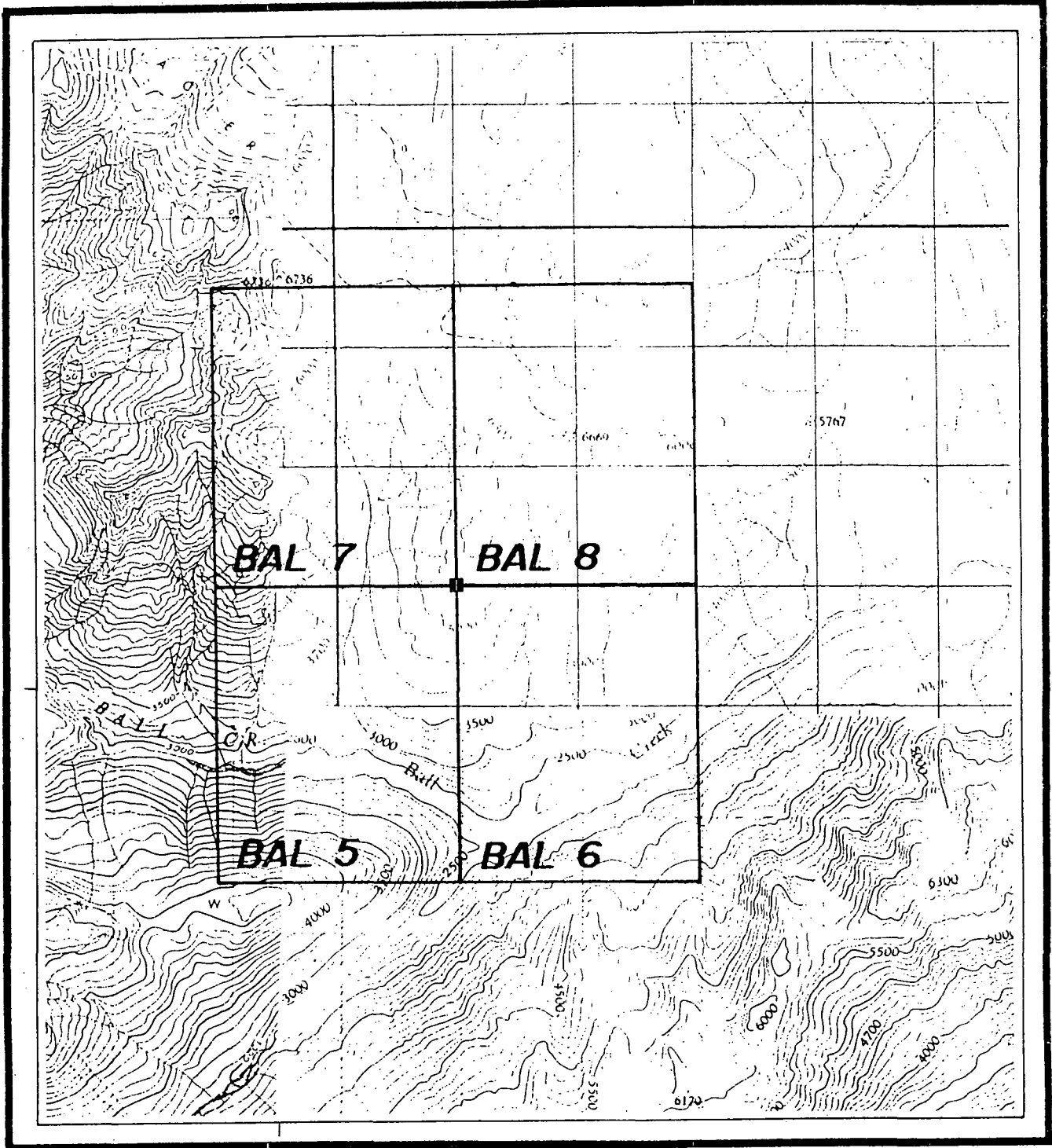
BAL 5-8 CLAIMS



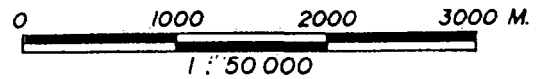
BRITISH COLUMBIA

U.S.A.

57° 15'



130° 30'



KESTREL RESOURCES LTD.

BAL 5 to 8
CLAIM MAP

DRAWN BDS

NTS. 104 G/1,2,7,8W

DATE : DEC 1989

FIGURE N° 2

INTRODUCTION

The Bal 5-8 mineral claims, a total of 80 units, were staked January 24, 1989. The claims are situated immediately to the north of Ball Creek, some 12 km west of the mouth of Ball Creek.

The claims cover favourable geology to the north of a large block of claims held by Lac Minerals, who have drilled their property for the past two seasons.

Immediately to the east of the Bal claims, Placer Dome holds ground previously owned by Great Plains Development.

LOCATION, ACCESS AND TOPOGRAPHY

The claim group is located 83 km southeast of Telegraph Creek, B.C., centered at 57° 16' north latitude and 130° 29' west longitude in the Liard Mining Division of B.C.

Access is via helicopter from a base camp at the headwaters of Forrest Kerr Creek (56° 56' north latitude, 130° 48' west longitude). Regular fixed wing flights from Smithers, B.C. and from Wrangell, Alaska, service the Forrest Kerr Strip during the operating season.

The claims are some 15 km to the west of the Stewart Cassiar Highway.

The topography of the Bal 5-8 mineral claims ranges from a low of 731 m to a high of 2,033 m, with vegetation non-existent above 1,372 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 Bal 5-8 mineral claims (record numbers 5786 to 5789, inclusive) comprising 80 units, were staked January 24, 1989 on behalf of Kestrel Resources.

The claims are located on mineral map M104G/8W, in the Liard Mining Division.

<u>Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Record Date</u>
BAL 5	5786	20	Jan. 24, 1989
6	5787	20	"
7	5788	20	"
8	5789	20	"

AREA HISTORY

There is no recorded work from the Ball Creek area until 1963 when Southwest Potash staked the Mary claim group covering an area referred to as the Cliff zone. Southwest Potash completed a program of geological mapping and limited diamond drilling.

In 1966, Stikine Exploration restaked the area but did not explore the claims. In 1970, Newmont and Great Plains Development Company Ltd. staked the Greg group, and the Me and Rog claims, respectively. Newmont allowed the Greg claims to lapse and Great Plains subsequently staked the Tara group in 1971.

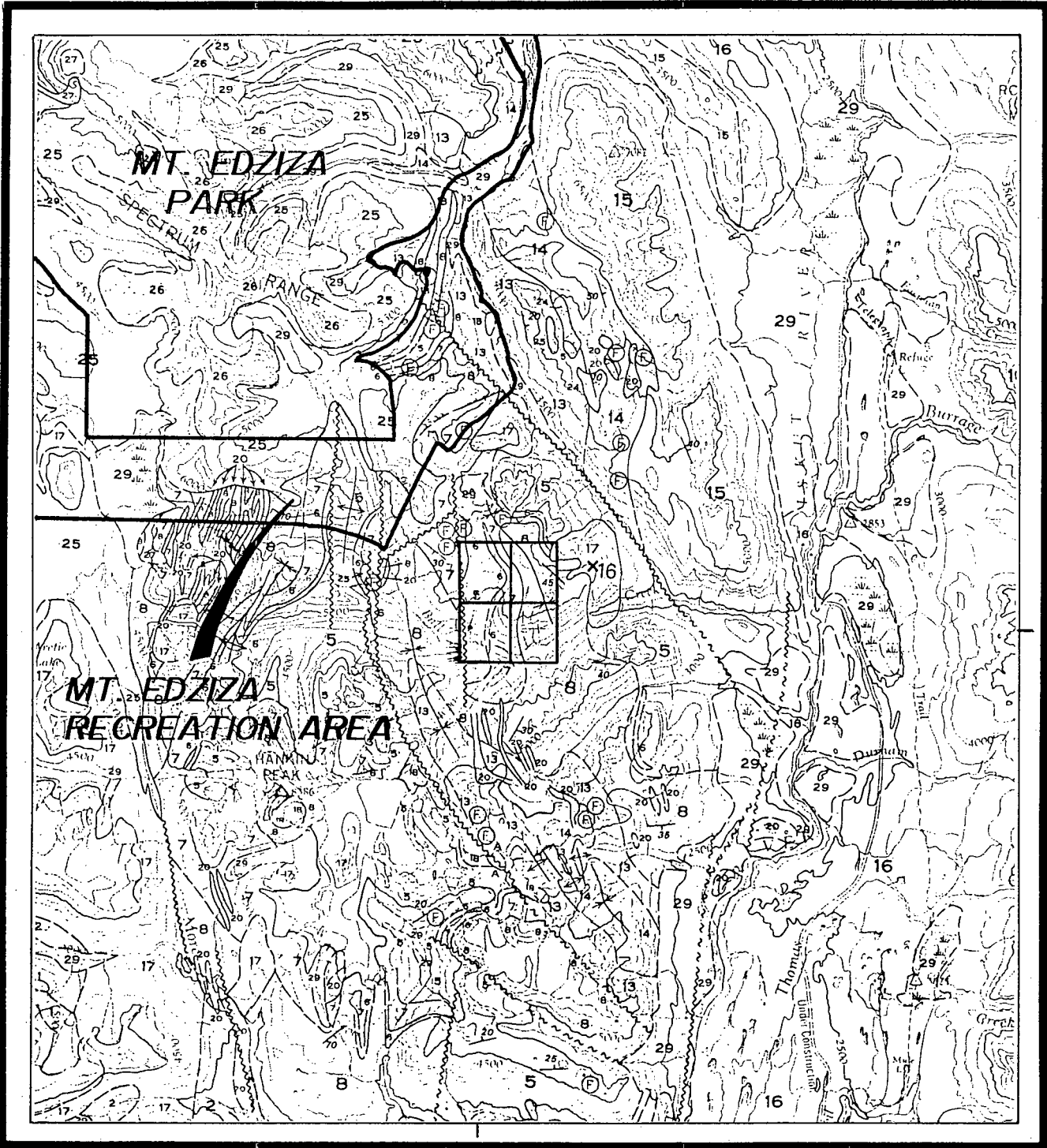
Great Plains worked in the area extensively until 1975, completing geological mapping, rock and soil geochemistry, and 2013 metres of diamond drilling.

In 1979, J.R. Woodcock Consultants Ltd. explored the south side of Ball Creek for Mr. D. Mann. A program of mapping and rock geochemistry was undertaken and resulted in the acquisition of additional claims. In the following year they completed 953 metres of drilling.

In the recent past, Lac Minerals has completed extensive drilling on the south side of Ball Creek and Placer Dome has been active on the claims previously owned by Great Plains, immediately to the east of the Bal claims.

REGIONAL GEOLOGY

The claim group lies within a region of Triassic and Jurassic sediments and volcanics which are exposed in the deeply dissected mountains between the flat lying lavas of the Spectrum range and the fault controlled valley of the Iskut river, as classified by Souther. The claims lie in the center of this region in an area of upper Triassic rocks intruded by an andesite porphyry. Just to the east of the claims there is a large northwesterly trending fault which caused Jurassic rocks to



130° 30'

57° 15'



1 : 250 000

KESTREL RESOURCES LTD.

REGIONAL GEOLOGY

BAL 5-8 CLAIMS

DRAWN BDS/km	NTS 104G/1,2,7,8.
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DATE : DEC 1989	FIGURE N°. 3
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* Geology After J.G. Souther Paper 71-44

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 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 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

MESOZOIC

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, pillow-breccia and derived volcanoclastic rocks

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 volcanoclastic 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 **.15 x**

Glacier 

come in contact with upper Triassic rocks, indicating a displacement of at least 10,000 feet.

Previous mapping in the area was performed by the G.S.C. as part of a large scale program (map 9-1957). Much more detailed mapping, also for the G.S.C., was done by Souther in 1969. Souther's work indicates that the claim group is underlain by augite andesite breccia, flows and related intrusions, minor tuff, volcanic sandstone, black carbonaceous shale, ribbon chert, siliceous siltstone, greywacke, grit and discontinuous lenses of limestone, and is intruded by an andesite porphyry "extremely variable in texture and composition".

1989 EXPLORATION PROGRAM

The 1989 exploration program was undertaken in an attempt to assess the exploration potential of the property.

Fieldwork was conducted September 22 to 23, 1989. Access was via helicopter (provided by Northern Mountain Helicopters) from a base camp at Forrest Kerr Creek, some 42 km to the southwest.

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. A total of 19 rock samples were taken 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 silver using 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 for silver.

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.

PROSPECTOR'S REPORT

Work was conducted on the Ball Creek mineral claims from September 22, 1989 to September 23, 1989. A total of four man days were spent conducting a west to east traverse across the north central portion of the claim block.

Work was carried out along exposed flanks of a pre-dominant ridge that dissects the claim block.

Rocks observed and sampled tended to be various alterations of older volcanic flows, agglomerates and porphyries. Alteration ranged from calcite-filled shears and hydrothermally-altered breccias to carbonate and highly weathered gossanous zones.

The samples taken all contained disseminated / massive pyrite. In one sample, #25022, a pyroclastic volcanic rock, the groundmass has been almost completely replaced with massive pyrite.

North-south trending regional structures reflect a major fault, displayed in a southerly flowing tributary of Ball Creek, situated on the west-central portion of the claims. This fault appears to separate the upper Triassic sediments (siltstones, cherts and limestones) to the west from the upper Triassic (mostly) pyroclastic volcanics to the east. Numerous gossans (as yet unsampled) were observed throughout the volcanics.

CONCLUSIONS

The 19 rocks sampled were analyzed for gold and silver. Assay results of these analyses returned values less than .005 oz/st Au. However, in light of recent work in the immediate area, additional work is recommended in and near the many gossan zones and pyrite outcrops.

In addition, the balance of the property warrants a careful reconnaissance program since experience in the region has determined many of the significant mineral zones subcrop or are talus covered.

RECOMMENDATIONS

Samples taken in 1989 should be analyzed by 26 element ICAP methods for base metals and pathfinder elements.

A major silt sample program should be undertaken at the start of the 1990 field season.

There should be completed at least a cursory examination of all accessible gossans on the property.

These recommendations could be carried out for less than \$50,000.

APPENDIX I

PROGRAM COST

BAL 5-8 PROGRAM COSTS

Wages

J. Buchholz	1 day @ \$300) Property Evaluation	\$ 300.00
D. Blanchflower	1 day @ \$300) and program design	300.00
R. Riedel	1 day @ \$200 carried out work	200.00
B. Chase	2 days @ \$225 carried out work	450.00
J. Elmore	1 day @ \$175 carried out work	<u>175.00</u>
		\$ 1,425.00

Expenses

Room and Board	6 man days @ \$125	750.00
Fixed Wing		218.93
Helicopter	5.5 hours	3,969.37
Assaying		285.00
Drafting and Maps		8.14
Travel and Accommodation		61.43
Field Expendibles		67.15
Freight		9.61
Customs Brokerage		42.00
Expediting		<u>22.60</u>
Total Expenses		\$ 5,434.23
10% Management Fee on Expenses		543.42
Total Wages		<u>1,425.00</u>
		\$ 7,402.65
Report Costs		<u>750.00</u>
Total Program Costs		<u><u>\$ 8,152.65</u></u>

APPENDIX II

BIBLIOGRAPHY

BIBLIOGRAPHY

Souther, J.G., GSC. Paper 71-44.

APPENDIX III

STATEMENT OF QUALIFICATIONS

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

Mar 15 / 90

APPENDIX IV

ASSAY CERTIFICATES

VANGEOCHEM SAMPLE ANALYSIS DESCRIPTION

The lithochemical 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.

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.

Geochemical Data Sheet - ROCK SAMPLING

NTS 104G 1,2,7,8

Sampler J. BUCHHOLZ

Project ISKUT

Location Ref LIARD M.D.

Date FALL 1989

Property BAL 5-8

Air Photo No

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
83606	Ball Creek	Float	/	Volc.		Lim. py.	Saddle at 6,000						
83607	Ball Creek	Float	/	Volc.	Hydroth.	Lim. py.	Saddle at 6,000						
			/										
			/										
			/										
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Geochemical Data Sheet - ROCK SAMPLING

NTS 104G 1,2,7,8

Sampler B. CHASE
Date SEPTEMBER 22-23, 1989

Project ISKUT
Property BAL 5-8

Location Ref LIARD M.D.
Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
					Rock Type	Alteration	Mineralization							
25015	Ball Creek	Select grab			Andesitic tuff		Dis. py.							
25016	"	"			Blue volc porphyry		Dis. py. magnetic	Also smears, veinlets py.						
25017	"	Float			Calc. carbonate		Dis. py.	grab, selected float						
25018	"	Chip	10cm	10cm	Agglom.	Calcite shear	Py., Pbs	340° @ 74°W						
25019	"	"	1m		Rhyolite		Dis. py.	185°, Vert.						
25020	"	Select grab			Breccia		Min. dis. py.	Adjacent to 25019						
25021	"	"	2m		"	Carbonate	Blebs py.						1	0.2
25022	"	"	1m		Pyroclastic	Volc.	Py.	Up to 3cm massive py. pods					1	
25023	"	"			Volc.	Argillaceous	Blebs py.							
25024	"	Chip	10m		Green felsic volc.		Lim., py.	NE cirque						
25025	"	"	3m		" "		" "	" "						
25026	"	"	60cm		Felsic volc.	Weathered yellow, white	Dis. py.							
25027	"	Talus grab			Green volc.		Dis. py.	Selected grab, rubble						
25028	"	" "	5m		As #25026		Dis. py.							
25029	"	Chip	6m		Med. green andesite		Dis. smeared py.							
25030	"	"	50cm		Silic. volc.	Shear	Py.	120°, Vert.						
25031	"	Grab	40m		Calc - carb. breccia		Py.	Select grab						

REPORT NUMBER: 890659 AA

JOB NUMBER: 890659

RANGEX SERVICES LTD.

PAGE 1 OF 1

SAMPLE #	Ag oz/st	Au oz/st
25015	.01	<.005
25016	.02	<.005
25017	.04	<.005
25018	.02	<.005
25019	.03	<.005
25020	.02	<.005
25021	.02	<.005
25022	.04	<.005
25023	<.01	<.005
25024	.01	<.005
25025	<.01	<.005
25026	<.01	<.005
25027	.01	<.005
25028	.03	<.005
25029	.01	<.005
25030	<.01	<.005
25031	<.01	<.005

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.01

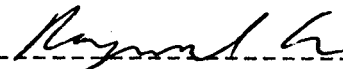
1 ppm = 0.0001%

.005

ppm = parts per million

< = less than

signed: _____



REPORT NUMBER: 890582 AA

JOB NUMBER: 890582

RAMBEI SERVICES LTD.

PAGE 1 OF 1

SAMPLE #	Ag oz/st	Au oz/st
83606	<.01	<.005
83607	<.01	<.005

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.01

1 ppm = 0.0001Z

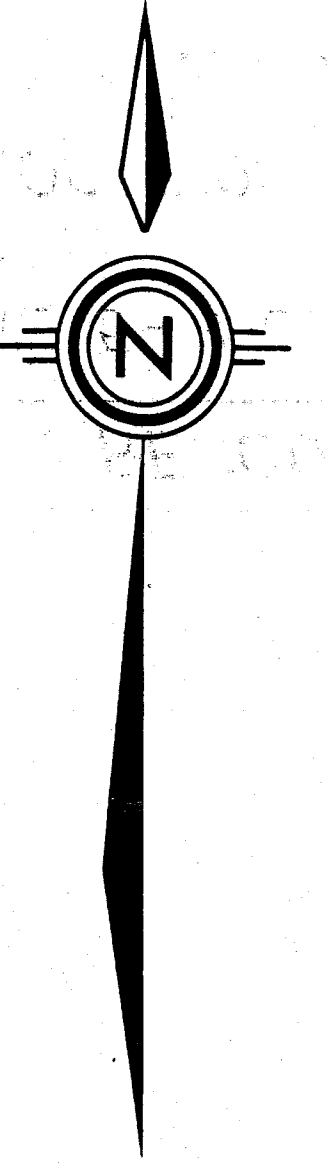
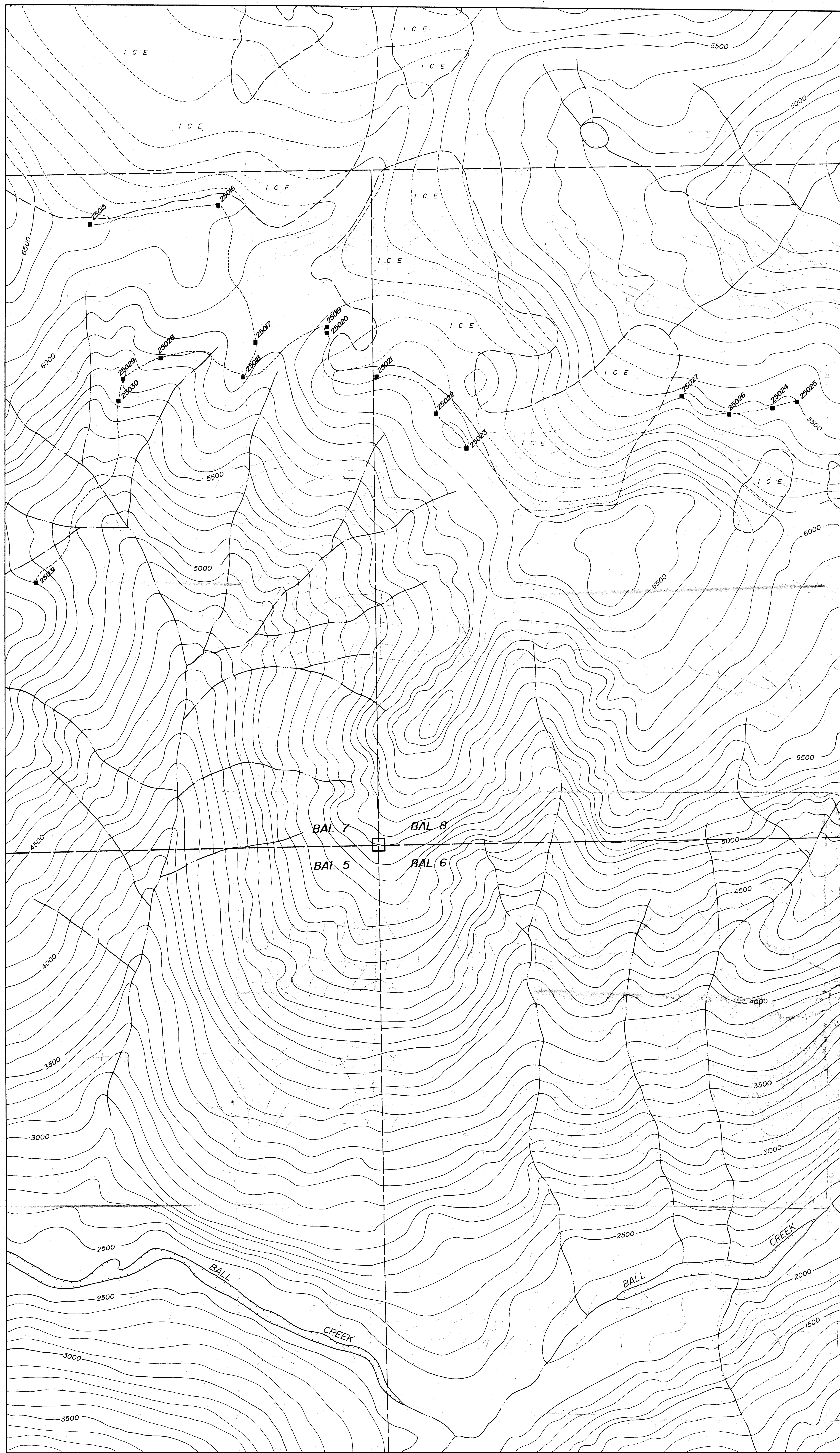
.005

ppm = parts per million

< = less than

signed: _____

Raymond

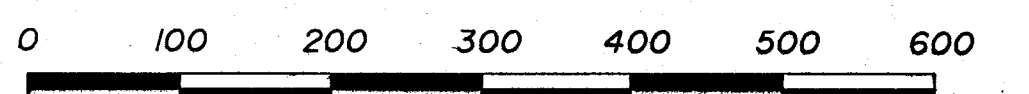


- LEGEND -

SAMPLE #	Ag oz/st	Au oz/st
25015	.01	<.005
25016	.02	<.005
25017	.04	<.005
25018	.02	<.005
25019	.03	<.005
25020	.02	<.005
25021	.02	<.005
25022	.04	<.005
25023	<.01	<.005
25024	.01	<.005
25025	<.01	<.005
25026	<.01	<.005
25027	.01	<.005
25028	.03	<.005
25029	.01	<.005
25030	<.01	<.005
25031	<.01	<.005
83606	<.01	<.005
83607	<.01	<.005

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,896



1: 5000

KESTREL RESOURCES LTD.
BAL 5-8 CLAIMS
SAMPLE LOCATIONS & PROSPECT
TRAVERSE

DATE : FEB. 1990 NTS : 104 G/B
DRAWN : BDS/km FIGURE N° : 4