

84-1031-13178

GEOLOGY AND GEOCHEMISTRY ON THE KANGAROO PROPERTY
KANGAROO 2, 4, 5, GOLDFINGER 1, 2 and GOLD LEAVES 1, 2

MINERAL CLAIMS

CARIBOO MINING DIVISION

NTS 93A/11W

LATITUDE 52° 32'N

LONGITUDE 121° 23'W

DATES OF WORK: July 1, 1984 to November 20, 1984

Goldfinger?

OPERATOR: E & B EXPLORATIONS INC.
#1440-800 West Pender Street
Vancouver, B.C.

CONTRACTOR: JMT SERVICES CORP.
8827 Hudson Street
Vancouver, B.C.

WRITTEN BY: G.G. RICHARDS, P.Eng

SUBMITTED November 20, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,178

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INTRODUCTION

Mineral claims have been staked as part of the KANGAROO prospect since May 25, 1981. The area has a long history of gold prospecting including placer gold mining along Cedar and Spanish creeks. Lode gold occurrences on Spanish Mountain have been explored intermittently for many years including the old Mariner showing area presently being explored by Mount Calvary-Teck Corp. and Hycroft Resources. This occurrence and the discovery in 1983 by Eureka Resources-Amoco at Frasergold Creek, some 60 km southeast, both with apparent stratabound gold mineralization within Upper Triassic black phyllites have led to extensive exploration within this unit in the general area.

On the KANGAROO property, previous geological-geochemical surveys indicated two areas of anomalous gold geochemistry in rocks and soils. The present survey provides more detailed sampling and mapping over one of these areas underlain by Upper Triassic phyllites and additional reconnaissance sampling along strike. A total of 347 samples were collected, 63 of which were rock chips, 10 were silt samples and 174 were soil samples.

Results have been encouraging. More sampling should be done followed by trenching and/or percussion drilling.

LOCATION AND ACCESS

The property covers much of the east flank of Spanish Mountain extending to the north shore of Quesnel Lake at the mouth of Winkely Creek. It includes the headwaters of Cedar Creek, and the principal drainages into the southeast end of Spanish Lake. It is situated about 15 km southeast of the town of Likely, from which point a network of good logging roads leads to the property area. An attractive feature of the property is that existing road

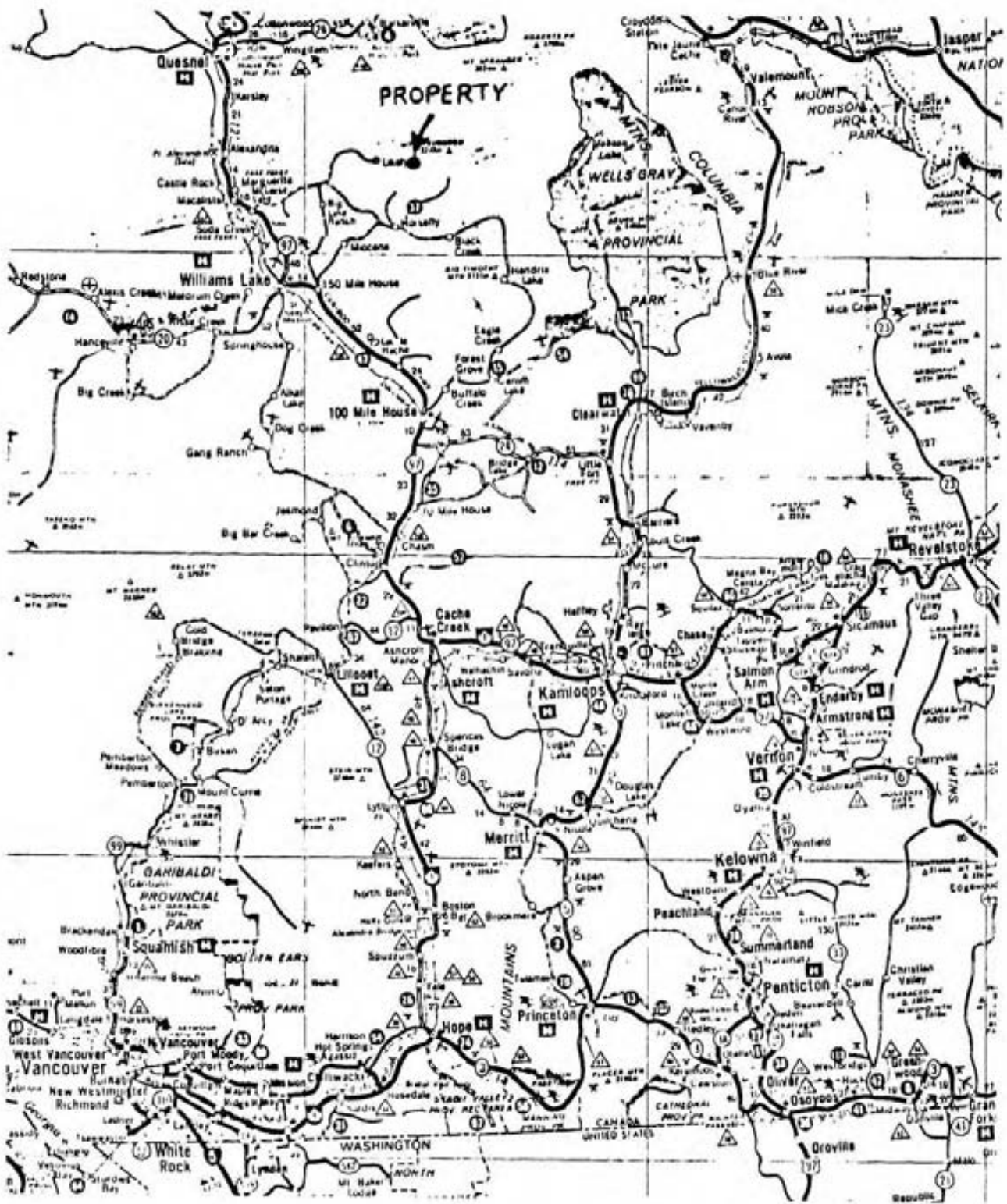


FIGURE 1: KANGAROO PROPERTY LOCATION MAP

access is sufficiently good to permit exploration work to be completed by traversing from existing roads. There is no need for helicopter or other special transportation which substantially reduces exploration costs and facilitates any future work.

TOPOGRAPHY AND VEGETATION

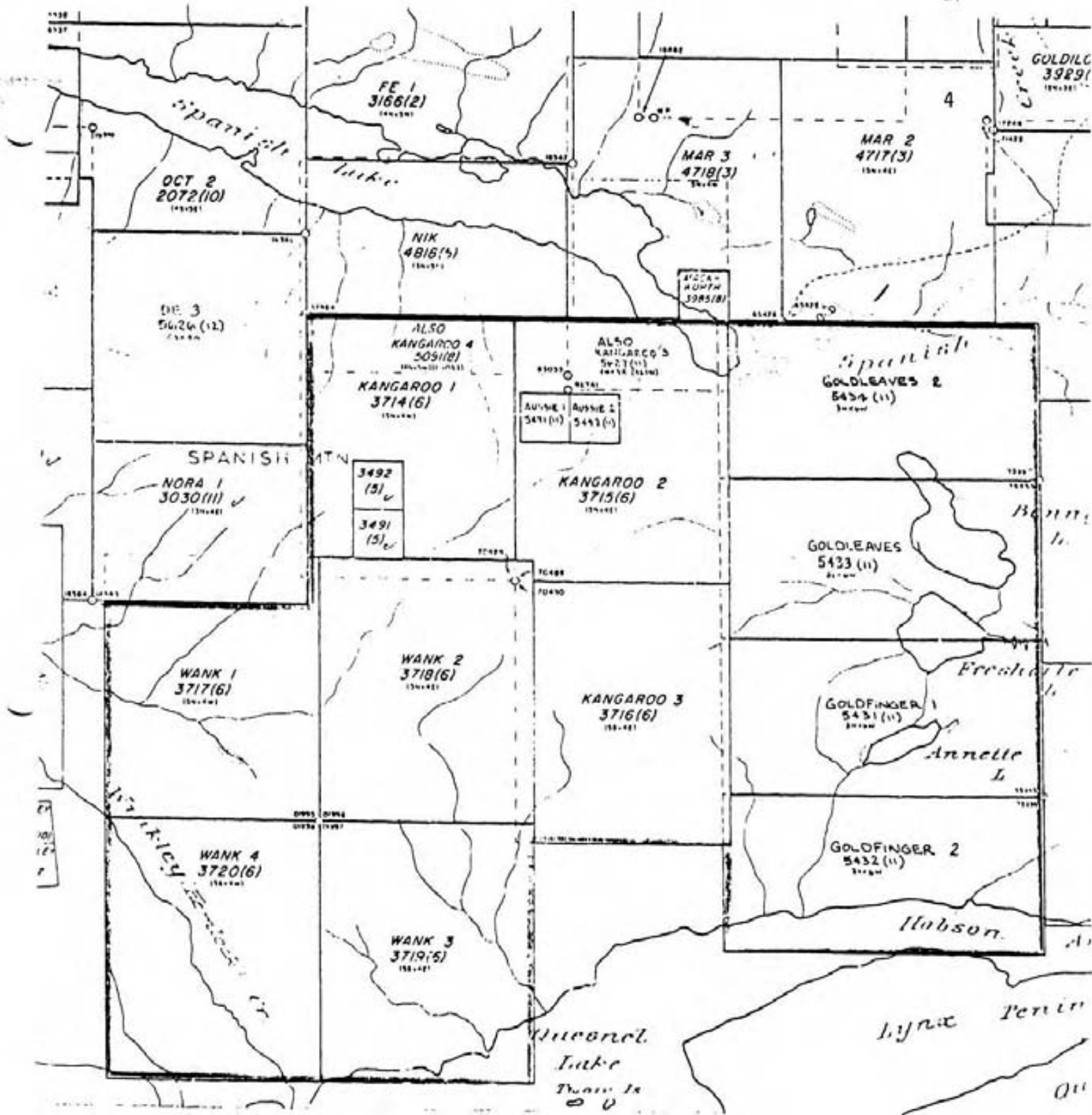
The Spanish Mountain area is characterized by gentle to moderately steep slopes ranging from 2400-5000 feet in elevation. Bedrock exposures are not abundant, except along some roadcuts, some creeks and the steepest slopes. Overburden is deep enough in some areas to inhibit geochemical interpretation. Backhoe trenching would be effective in most areas.

Dense forest cover is characteristic of the area but about 30 percent of the property has been clearcut-logged in recent years. Spruce, fir, balsam and cedar are the principal types of trees on the property.

MINERAL CLAIMS

The property consists of 13 contiguous LCP claims (228 units) as listed below and shown on Figure 2. The AUSSIE #1 and #2 are being allowed to lapse and mineral title to the ground covered by them will be retained by the KANGAROO claims because of common ownership.

<u>CLAIM NAME</u>	<u>UNITS</u>	<u>RECORD #</u>	<u>RECORD DATE</u>	<u>OWNER</u>
KANGAROO #1	20	3714(6)	June 24/81	E & B Explorations Inc.
#2	20	3715(6)	"	"
#3	20	3716(6)	"	"
#4	10	5091(8)	Aug. 22/83	"
#5	6	5627(11)	?	"
WANK #1	20	3717(6)	June 24/81	"



KANGAROO PROPERTY
 FIGURE 2: CLAIM MAP

#2	20	3718(6)	"	"
#3	20	3719(6)	"	"
#4	20	3720(6)	"	"
GOLDFINGER #1	18	5431(11)	Nov. 22/83	"
#2	18	5432(11)	"	"
GOLD LEAVES #1	18	5433(11)	"	"
#2	18	5434(11)	"	"
AUSSIE #1	1	5491(11)	?	"
#2	1	5492(11)	?	"

GEOLOGY

General

The southwestern portion of the claims is principally underlain by a mixed succession of intermediate to acidic volcano-clastic sediments ranging from coarse lapilli to argillites of Upper Triassic to Lower Jurassic age. The northeastern portion of the claims is principally underlain by foliated and/or metamorphosed rocks of Upper Triassic age and contains the area explored by the present work.

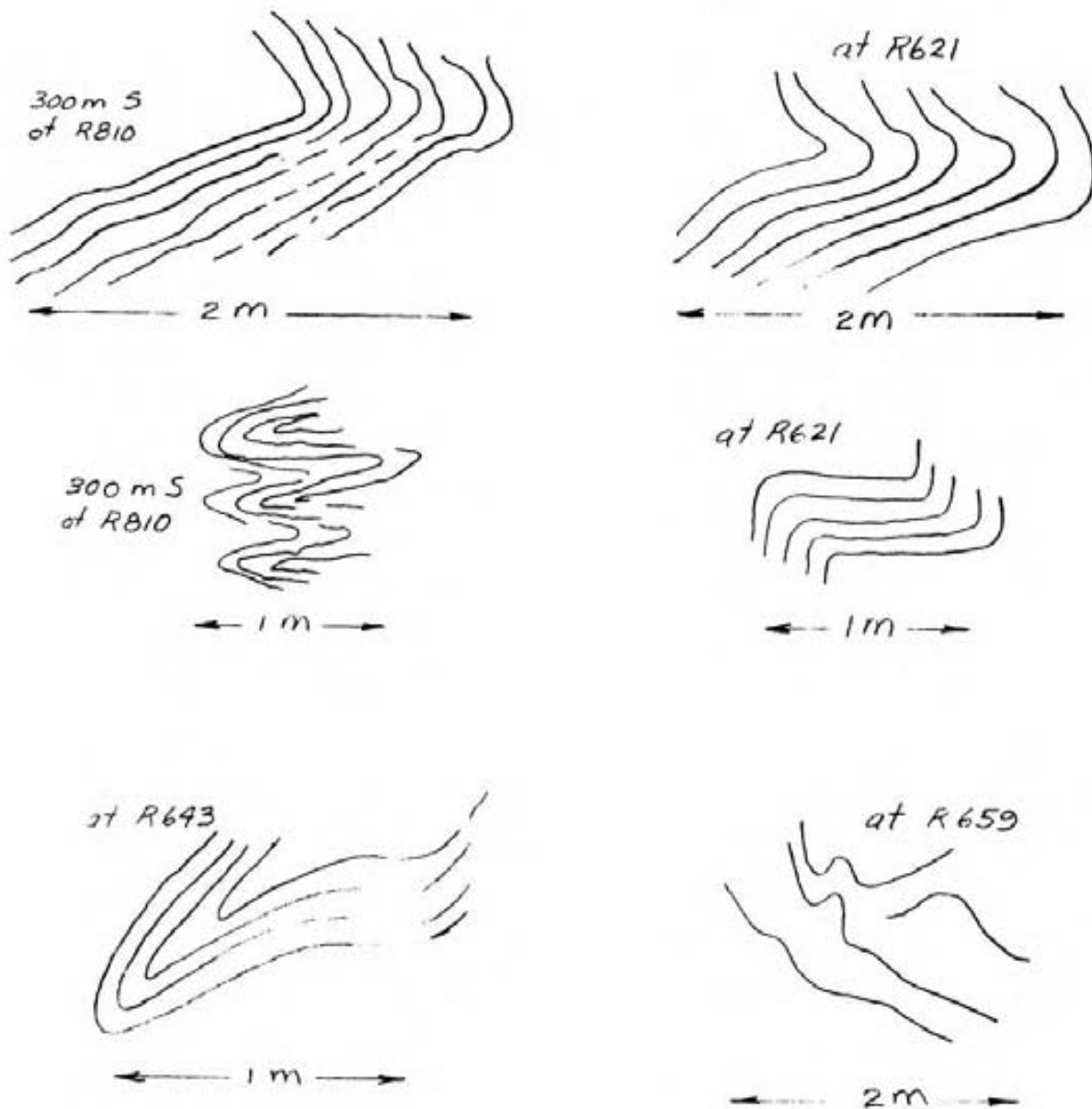
Stratigraphy of the Upper Triassic rocks has been mapped in some detail and subdivided into four units which form a syncline-anticline overturned to the west. The stratigraphically lowest and probably oldest unit is black phyllite, slate, shale and argillite with minor limy sections. Wispy quartzose segregations occur in several outcrops and ankerite porphyroblasts up to 0.5 cm diameter form up to 30 percent of rock volume but none typically form less than 5 percent of rock volume. A few beds of ankerite less than 1 m thick were mapped in a previous survey along a road west of the present survey area. The unit is uniformly black to dark grey without any or only

minor volcanic component. Although only the top of the unit is mapped, it is very extensive, underlying much of the area to the northwest and southeast based on a few reconnaissance traverses.

The black phyllite unit grades upwards into a mixed andesite tuffs and tuffaceous argillite. Sections of black phyllite, slate, shale and argillite appear interbedded with tuffaceous sections particularly near the base of the unit. One of the commonest and most striking tuffaceous rock types particularly higher in the unit is comprised of multiple tuff beds 2 cm-6 cm thick with shaly segregations less than 1/2 cm thick. Other more massive argillaceous tuffs also occur throughout the section. This unit appears to be approximately 200 m thick, thickening to 500 m at major fold axes.

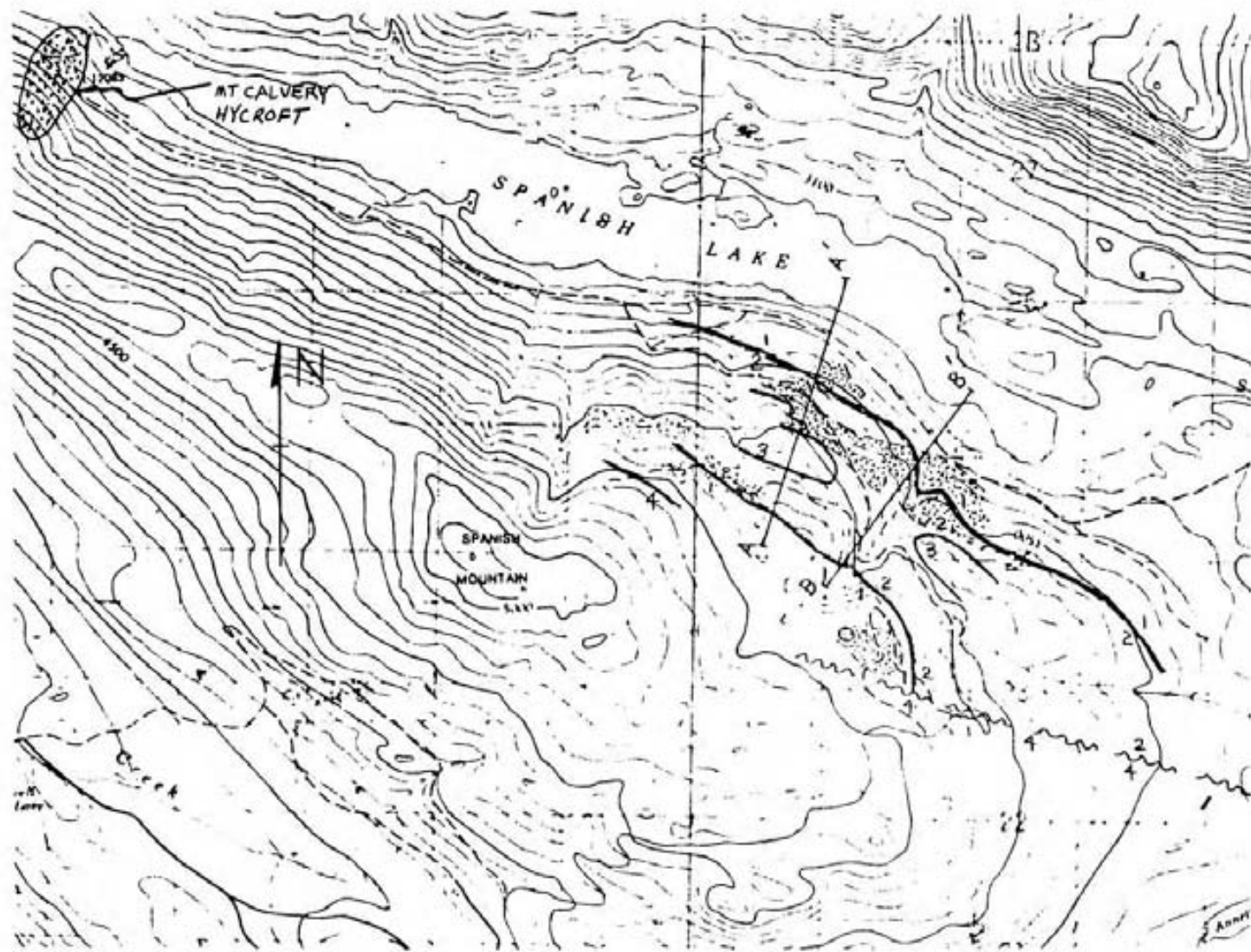
Conformably "overlying" the andesite tuff unit is a coarser andesite unit grading from breccia and pillow breccia at the base to pillow lavas higher in the section. The pillows and pillow breccias show 2 cm thick cooling rhinds and variolitic cores but have been deformed somewhat by folding, faulting and regional metamorphism. Some massive fine grained diorite sections are thought to be flaws but may be small dykes, sills or plugs. The unit is exposed only in the core of a major syncline without any overlying strata. Thus the thickness is unknown but is at least 100 m thick at this location.

The only other unit mapped by the present survey is a massive, blocky, clean, uniformly pale-grey dacite to andesite tuff with barely discernable bedding. Its age relationship to the other units is uncertain but is in apparent fault contact with the other three units in the south of the map sheet. Its occurrence as noted in a previous survey further to the west of

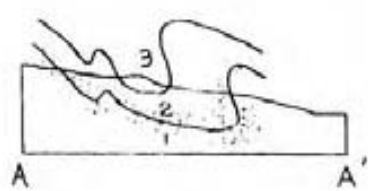


KANGAROO PROPERTY

FIGURE 3: Small Scale Folds. Some Examples of minor folds in andesite tuffs. All views are looking easterly.



SCALE 1:50,000



KANGAROO PROPERTY

FIGURE 4: Generalized geology and geochemistry.

- 1. Black phyllite. 2 Andesite tuffs.
- 3. Pillow andesite

Anomalous gold geochemistry (>20 ppb Au in soils on plan view).

Sampling is incomplete along the southwest contact between units 1 and 2 and thus the three areas of anomalous geochemistry along this contact may form a more continuous pattern.

the present survey area is in an area which indicates it might underlie or occur within the black phyllite unit.

Alteration and Mineralization

The black phyllite and argillaceous tuff units commonly contain pyrite cube impressions up to 2 cm diameter with rims of quartz less than 2 mm thick. Pyrite is generally not present in the cubic impressions having been removed by weathering or alteration. Silica flooding of the matrix is generally present locally to a minor degree in areas of more intense occurrence of quartz rimmed pyrite cube impressions. The pyrite impressions occur as lenses along bedding up to one or two cm thick and also as lenses along fractures crosscutting bedding. Pyrite mineralization greater than one or two percent is not common but does occur in outcrops along a main creek at R797 to R806, at R639, at R686 to R690, at R692 to R703 and locally along the road cuts and better exposures in the large + 20 ppb Au soil anomaly on Figure 5.

The pillow breccia to pillow andesite unit is variably altered to epidote often quite intensely and in several outcrops cut by zones of intense quartz vein lacework with associated ankerite and sericite.

Structure

Small scale folds are shown in Figure 3 and larger scale folds interpreted from geological contacts, bedding attitudes and small scale folds are shown on Figure 4. Overturning to the west is apparent on Figure 4 which is similar to folding further to the northeast and described by L.C. Struik in Geological Survey of Canada, Open File 920. Tops have not been determined but pillow lavas appear to be right way up.

GEOCHEMISTRY

The present survey was run to provide detailed geological and geochemical information in an area known from previous surveys to contain anomalous gold geochemistry in a setting similar to the Mount Calvary-Hycroft Resources showings at the other end of Spanish Mountain. Lines were run north-south across structure from two baselines: the NIK baseline started at the NIK legal lower post and ran east with stations marked every 25 meters; baseline K ran east and west from a road along the edge of slash in the south part of the survey area with stations marked every 25 meters.

Soils, silts and rock chips were collected along the survey lines and along roads and creeks tied to baselines and topographic features. Soil samples were collected from pits dug with a mattock to a depth of approximately 20 cm. B-horizon soil was collected from the pit using a stainless steel scoop and placed in an identified gusseted kraft paper sample bag. Silt samples were collected from active silts using a stainless steel scoop. Rock chip samples consist of from 3 to 10 rock chips small enough to fit into the gusseted kraft paper sample bags used for all samples.

All samples were shipped to Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. for geochemical analysis. All samples were analyzed for gold, using a fire assay preconcentration with neutron activation analysis.

Results indicate large areas of anomalous gold (>19 ppb) geochemistry in soils containing numerous samples greater than 49 ppb Au (Figure 5). The anomalous gold geochemistry appears closely related to black phyllite of unit 1 and the lower part of unit 2. The two areas of anomalous gold in soils at BL NIK 2500 to 2750 m east probably represent bedrock gold mineralization

that could be continuous, beneath masking tills, with anomalous gold in the northeast flowing creek at R798 and beyond to the outcrop sampled by R639.

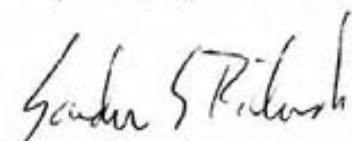
CONCLUSIONS AND RECOMMENDATIONS

Recent work has indicated large areas of anomalous gold geochemistry worthy of more detailed work. A large syncline-anticline overturned to the west is defined by geological contacts between black phyllite, argillaceous tuffs and pillow andesites. The best gold geochemistry occurs in areas underlain by the upper black phyllite and lower argillaceous tuff units giving some suggestion of a stratabound control of mineralization. The Eureka-Amoco Frasergold deposit and the Mount Calvary-Teck Corp-Hycroft Resources showings occur in identical host rocks as the KANGAROO prospect and are believed to be strata controlled occurrences.

The following work programme is recommended on the property:

1. Complete geological mapping and geochemical sampling along NS lines west and southeast of the present survey area. Provide fill-in geochem lines in areas of anomalous geochem.
2. Clean out existing roads with a tractor and trench with a backhoe in areas of anomalous gold geochemistry to provide fresh exposures for large rock chip sampling.
3. Percussion drill the better targets based on the above work.

Respectfully submitted,


Gordon G. Richards, P.Eng.

JMT Services Corp.

8827 HUDSON STREET · VANCOUVER, B.C. V6P 4N1 · TELEPHONE 266-1811



November 20, 1984.

JAMES S. CHRISTIE, PhD	228-8054
K. WAYNE LIVINGSTONE, MSc	266-4208
GORDON G. RICHARDS, M.A.Sc., P.Eng.	274-2839
GERALD LAUZON, Mgr.	277-4778
W.A. HOWELL, Geol.	277-7082

STATEMENT OF COSTS

JMT Invoice #84-240-069	\$ 6,648.36
JMT Invoice #84-240-077	<u>4,108.57</u>
TOTAL	<u>\$ 10,756.93</u>

\$900.00 of the above work was done in the period August 1, 1984 to August 20, 1984.

\$9,856.93 of the above work was done in the period September 1, 1984 to November 20, 1984.

JMT Services Corp.

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W.A. HOWELL, Geol. 277-7082

October 16, 1984

Mr. Len Saleken
Exploration Manager
E & B Explorations Ltd.
#1440 - 800 West Pender
Vancouver, B.C.

INVOICE #84-240-069

Dear Len:

RE: KANGAROO

The following is our initial bill for geological-geochemical work on the Kangaroo Prospect near Likely, B.C.

TIME

G. Richards	Sept 25-30 Oct. 1-4,6,7,	12 days @ \$250.	\$3,000.00
D. Bennett	Aug 19, Sept 19(†) Oct 1,2(†),4,10(†)	4½ days @ \$200	900.00
TRUCK RENTAL	Aug 19, Sept 28,29,30 JMT Jimmy	4 days @ \$ 40/day plus 120 miles @ \$.25¢mi	190.00

DISBURSEMENTS

Northern Lights Lodge	\$508.75	+ 10%	559.08
D. Bennett, expenses	236.60	+ 10%	261.36
G. Richards, expenses	659.57	+10%	725.53
Truck rental, G. Richards	572.10	+10%	629.31
Chemex, #18480086 share	164.00	+10%	180.40
Hudson Buildings Supplies	184.25	+10%	202.68

\$6,648.36

E & B Share 90% - \$5,983.52
Geo-Ex 10% \$ 664.84

Yours truly,

Gordon G. Richards
Geologist

GGR:gmb
enclosure

JMT Services Corp.

8827 HUDSON STREET · VANCOUVER, B.C. V6P 4N1 · TELEPHONE 266-1811



November 20, 1984.

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GERALD LAUZON, Mgr. 277-4778
W.A. HOWELL, Geol. 277-7082

Mr. Len Saleken
Exploration Manager
E & B Explorations Ltd.
#1440-800 West Pender Street
VANCOUVER, B.C.

INVOICE 84-240-077

Dear Len: re: KANGAROO Property

The following is a bill for geological-geochemical work on the KANGAROO Property, near Likely, B.C.

<u>TIME</u>			
G. Richards	Nov. 13, 14, 15	3 days @ \$250	\$ 750.00
D. Bennett	Nov. 6(½)	½ day @ 200	100.00
<u>DISBURSEMENTS</u>			
Chemex Labs #18417005		\$ 1,876.30 + 10%	2,063.93
	I8417006	530.00 + 10%	583.00
	I8415991	186.10 + 10%	204.71
FineLine #472		90.00 + 10%	99.00
	#385	125.00 + 10%	137.50
Vanca1		64.03 + 10%	70.43
Report			<u>100.00</u>
			\$ 4,108.57

E & B Share 90% - \$ 3,697.71
Geo-Ex 10% - 410.86

Yours truly,

GGR:mh
Enclosures

Gordon G. Richards
Geologist

STATEMENT OF QUALIFICATIONS

I, Gordon G. Richards, of Vancouver, British Columbia, do hereby certify that:

1. I am a Professional Engineer of the Province of British Columbia, residing at 6195 Lynas Lane, Richmond, B.C., V7C 3K8.
2. I am a graduate of the University of British Columbia, B.A.Sc., 1968, M.A.Sc. 1974.
3. I have practised my profession as a mining exploration geologist continuously since 1968.
4. This report is based on my personal knowledge of the district, and mapping of the geology at the property.



Gordon G. Richards, P.Eng.

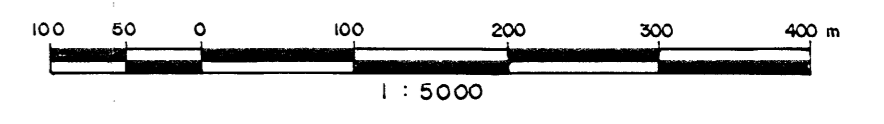


FIGURE 5

LEGEND:		GEOLOGICAL LEGEND:	
	OUTCROP PATTERN		DACITE TUFFS
	FAULT		PILLOW AND PILLOW BRECCIAS
	SHEARING ATTITUDE WITH DIP		TUFFS / ARGILLACEOUS TUFFS WITH BLACK PHYLLITE
	BEDDING ATTITUDE WITH DIP		BLACK PHYLLITE
	OVERTURNED SYNFORM WITH PLUNGE		5-9 PRB. Au IN SOIL
	OVERTURNED ANTIFORM WITH PLUNGE		4-9 PRB. Au IN SOIL
	BEDDING ATTITUDE FLAT		ROCK SAMPLE LOCATION
	ROAD		SILT SAMPLE LOCATION
	SKID TRACK		GEOLOGICAL CONTACT
	SOIL SAMPLE LOCATION		SAMPLE NUMBER, PRESENT SURVEY
	ROCK SAMPLE LOCATION		SAMPLE NUMBER, PREVIOUS SURVEY
	SILT SAMPLE LOCATION		PPB. Au
	5-9 PRB. Au IN SOIL		
	4-9 PRB. Au IN SOIL		

GEOLOGICAL BRANCH
 ASSESSMENT REPORT

13,178

SURVEY BY HIP CHAIN, COMPASS, ON 1:50,000 N.T.S. MAP. ENLARGEMENT

