ARIS SUMMARY SHEET

District Geologist, Kamloops — Off Confidential: 89.01.04

ASSESSMENT REPORT 17195 — MINING DIVISION: Similkameen

PROPERTY: Stik (Bromley)
LOCATION: LAT 49 24 54 LONG 120 35 01
UTM 10 5476179 675265
NTS 092H07E
CLAIM(S): Stik 1-4,Stik 8-17,Bromley 1-2,Bishop,Whip
OPERATOR(S): Kettle River Res. Silver Bar Res.
AUTHOR(S): Wood, D.V.
REPORT YEAR: 1988, 30 Pages
COMMODITIES SEARCHED FOR: Copper,Gold,Silver,Platinum
GEOLOGICAL SUMMARY: The property is underlain by the Tertiary age Princeton Basin, a terrigenous sediment-filled homoclinal graben. The western margin of the basin follows the western boundary of the property except for the Bromley 1-2 claims which extend to the west and are underlain by volcanics of the Tertiary Princeton Group and the Upper Triassic Nicola Group.
WORK DONE: Geophysical
EMAB 425.0 km;VLF
Map(s) - 2; Scale(s) - 1:20 000
MAGA 425.0 km
Map(s) - 1; Scale(s) - 1:20 000
MINFILE: 092HSE160,092HSE163,092HSE165,092HSE166

BLACKBERRY GOLD RESOURCES INC.
GEOPHYSICAL REPORT ON AN
AIRBORNE MAGNETIC AND VLF-EM SURVEY
STIK 1-4, STIK 8-17, BROMLEY 1-2,
BISHOP AND WHIP CLAIMS
LATITUDE: 49°24'N LONGITUDE: 120°34'W
NTS 92H/7E

AUTHOR: Dennis V. Woods, Ph.D., P.Eng.,
Geophysicist

DATE OF WORK: Nov. 28 - Dec. 3,1987
DATE OF REPORT: March 3,1988

TABLE OF CONTENTS **PAGE**

ILLUSTRATIONS

INTRODUCTION

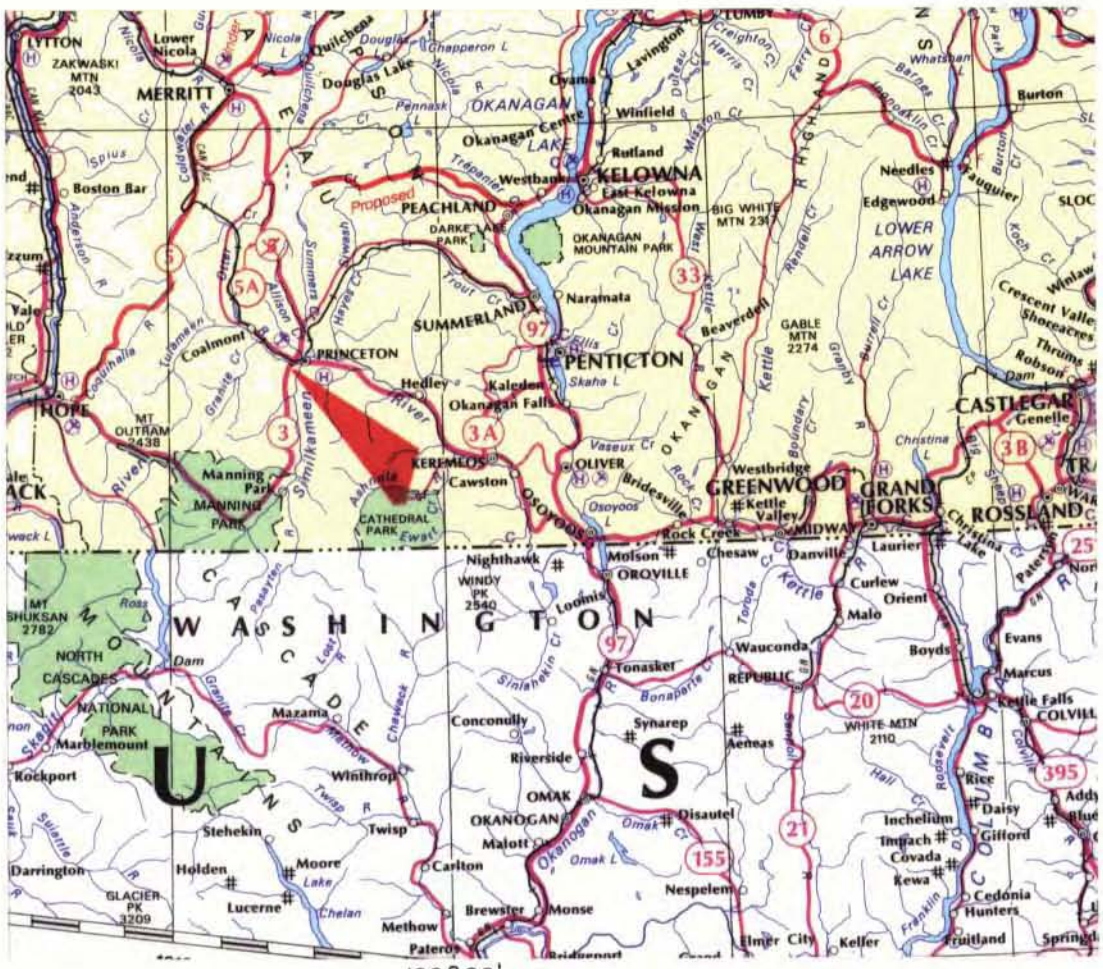
On November 28,1987 to December 3,1987 a helicopter airborne magnetic and VLF-EM survey was conducted over the **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claims for **Blackberry Gold Resources Inc.** The subject properties are situated just southwest of Princeton, B.C. (Figure 1).

The intention of this survey is to direct further exploration to any favorable anomalous zones and assist in the geological mapping of the area. Approximately four hundred and twenty five line kilometers of magnetic and VLF-EM data was gathered over the claims. The airborne magnetic and VLF-EM data has been examined in detail to evaluate the subject properties.

PROPERTY

The **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claims are owned by Kettle River Resources Ltd. and optioned to **Blackberry Gold Resources Inc.** Both companies are part of the Similkameen Gold Joint Venture who operate the claims as per a 1985 contractual agreement. The claims are described in the table below and illustrated in Figure 2.

CLAIM NAME	UNITS	RECORD NO.	DATE
STIK 1	20	2320	DECEMBER 13,1988
STIK 2	8	2321	DECEMBER 13,1988
STIK 3	20	2322	DECEMBER 13,1988
STIK 4	15	2323	DECEMBER 13,1988
STIK 8	20	2327	DECEMBER 13,1988
STIK 9	20	2328	DECEMBER 13,1988
STIK 10	4	2329	DECEMBER 13,1988
STIK 11	20	2330	DECEMBER 13,1988
STIK 12	10	2331	DECEMBER 13,1988
STIK 13	20	2332	DECEMBER 13,1988
STIK 14	20	2333	DECEMBER 13,1988
STIK 15	20	2334	DECEMBER 13,1988
STIK 16	20	2335	DECEMBER 13,1988
STIK 17	20	2336	DECEMBER 13,1988



BLACKBERRY GOLD RESOURCES INC.

STIK 1-4, STIK 8-17, BROMLEY 1-2,

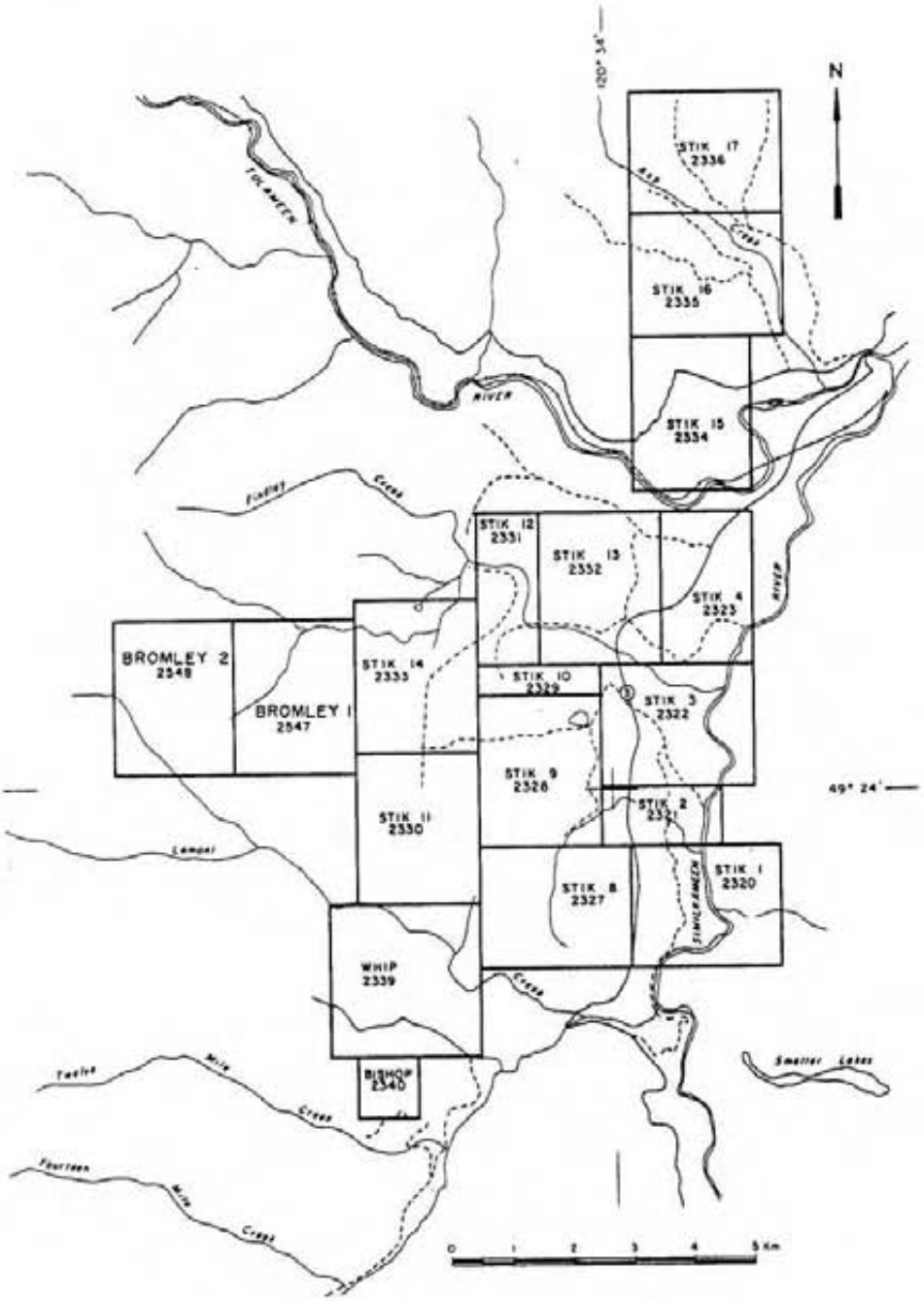
BISHOP AND WHIP CLAIMS

LOCATION MAP

N.T.S. 92H/7E

SCALE : 1:2000000

FIG. 1



BLACKBERRY GOLD RESOURCES INC.

STIK 1-4, STIK 8-17, BROMLEY 1-2,

BISHOP AND WHIP CLAIMS

CLAIMS MAP

N.T.S. 92 H/7E

FIG. 2

CLAIM NAME	UNITS	RECORD NO.	DATE
BROMLEY 1	20	2547	APRIL 2,1988
BROMLEY 2	20	2548	APRIL 2,1988
BISHOP	4	2340	DECEMBER 13,1988
WHIP	20	2339	DECEMBER 13,1988

LOCATION AND ACCESS

The **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claims are located just a few kilometers south and west of Princeton, B.C.

The centre of the claim block is located near Steveson Lake and eight kilometers southwest of the confluence of the Tulameen and Similkameen Rivers. The claim block is situated within the Similkameen Mining Division of B.C. The NTS map coordinates of the claims are 92H/7E. The approximate geographical coordinates are a latitude of $49^{o}24'$N and a longitude of $120^{o}34'$W.

Access to the area is usually achieved via B.C. Provincial Highway 3 south from Princeton and west along various logging, mining and public gravel roads intersecting Highway 3.

REGIONAL GEOLOGY

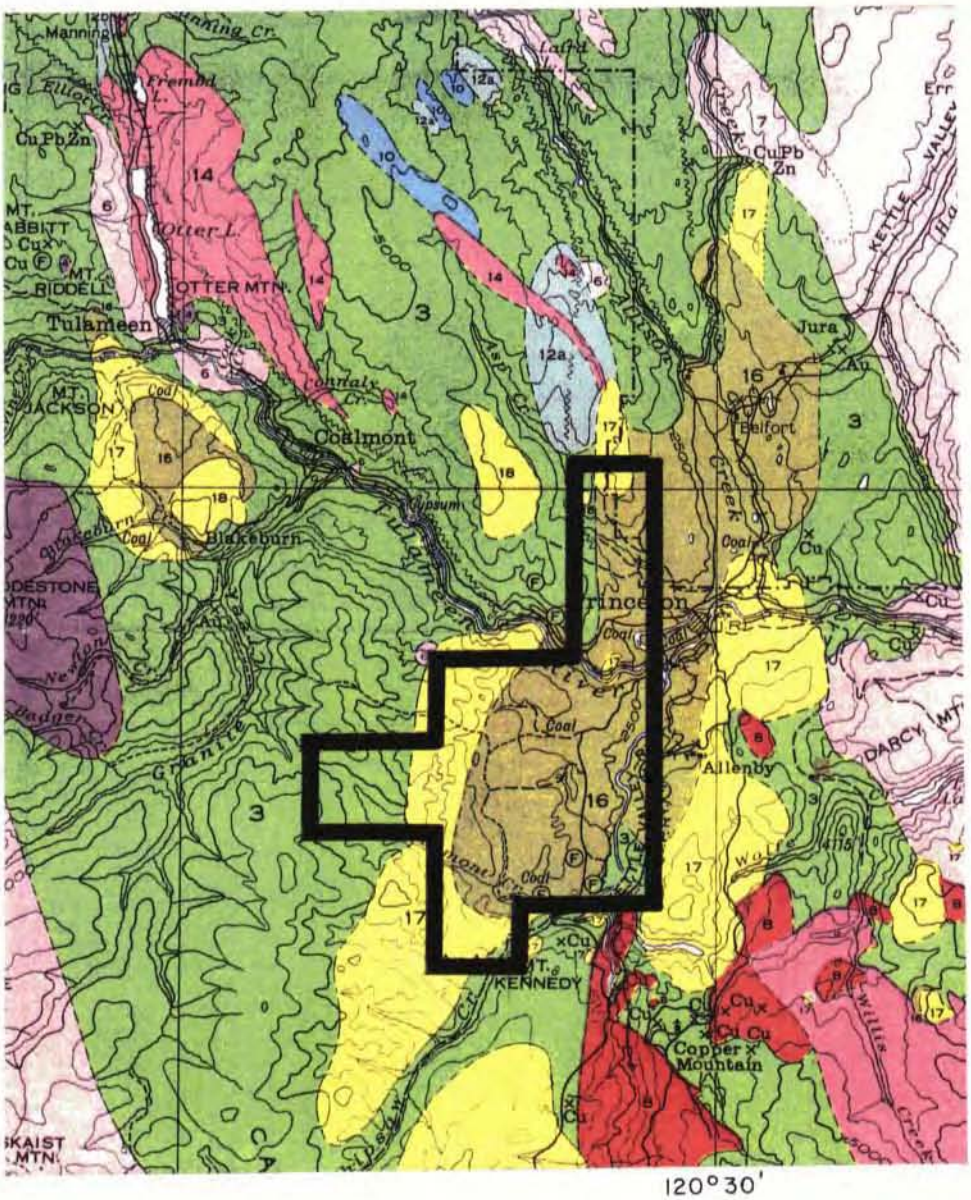
The **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claims are situated within the Intermontaine alkalic volcanic/ plutonic belt of Upper Triassic and Lower Jurassic age. This belt hosts most of the significant porphyry copper deposits in British Columbia. The Copper Mountain Mine is 4 km south of the property and the Axe deposit is 10 km to the north.

The regional geology was originally described by Rice (1947). A portion of his map is shown in Figure 3. The main unit in the region of the properties is the Upper Triassic Nicola Group: varicoloured subaerial and submarine basaltic to rhyolitic flows, tuffs, breccias and lahars with associated intrusive rocks and minor interbedded limestone, conglomerate and sandstone. The Nicola Group has been mapped at 1:50,000 in an area immediately north of the property by Preto (1979).

Lower Jurassic intrusives into the Nicola Group are (in order of age): the Tulameen Ultramafic Complex, Coast Intrusions such as the Osprey Lake Batholith and the Alison Lake Pluton, and the Copper Mountain Intrusion. The Tulameen Ultramafic Complex lies about 10 km west of the property and is composed of peridotite, pyroxenite and gabbro. Similar ultramafic intrusives are also found near Hedley about 20 km to the west, hence it is possible that they underlie the **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claim group.

The Coast Intrusives are typically light coloured (grey to pink) siliceous granite, granodiorite and quartz diorite. The Copper Mountain Intrusives range in composition from syenite to gabbro and are quite distinctive by their almost total absence of free quartz. Preto (1972) has mapped the Copper Mountain Intrusion at 1:12,000 - a portion of his map covers the southern limit of the claim block.

Resting uncomformably on the Upper Triassic - Lower Jurassic volcanic-plutonic basement are two units initially described by Rice (1947): the Kingsvale Group and the Princeton Group. The Kingsvale Group is composed of Lower Cretaceous rhyolitic to dacitic breccias and flows with minor andesitic porphyry flows. It has rather limited distribution.



BLACKBERRY GOLD RESOURCES INC.

STIK 1-4, STIK 8-17, BROMLEY 1-2,

BISHOP AND WHIP CLAIMS

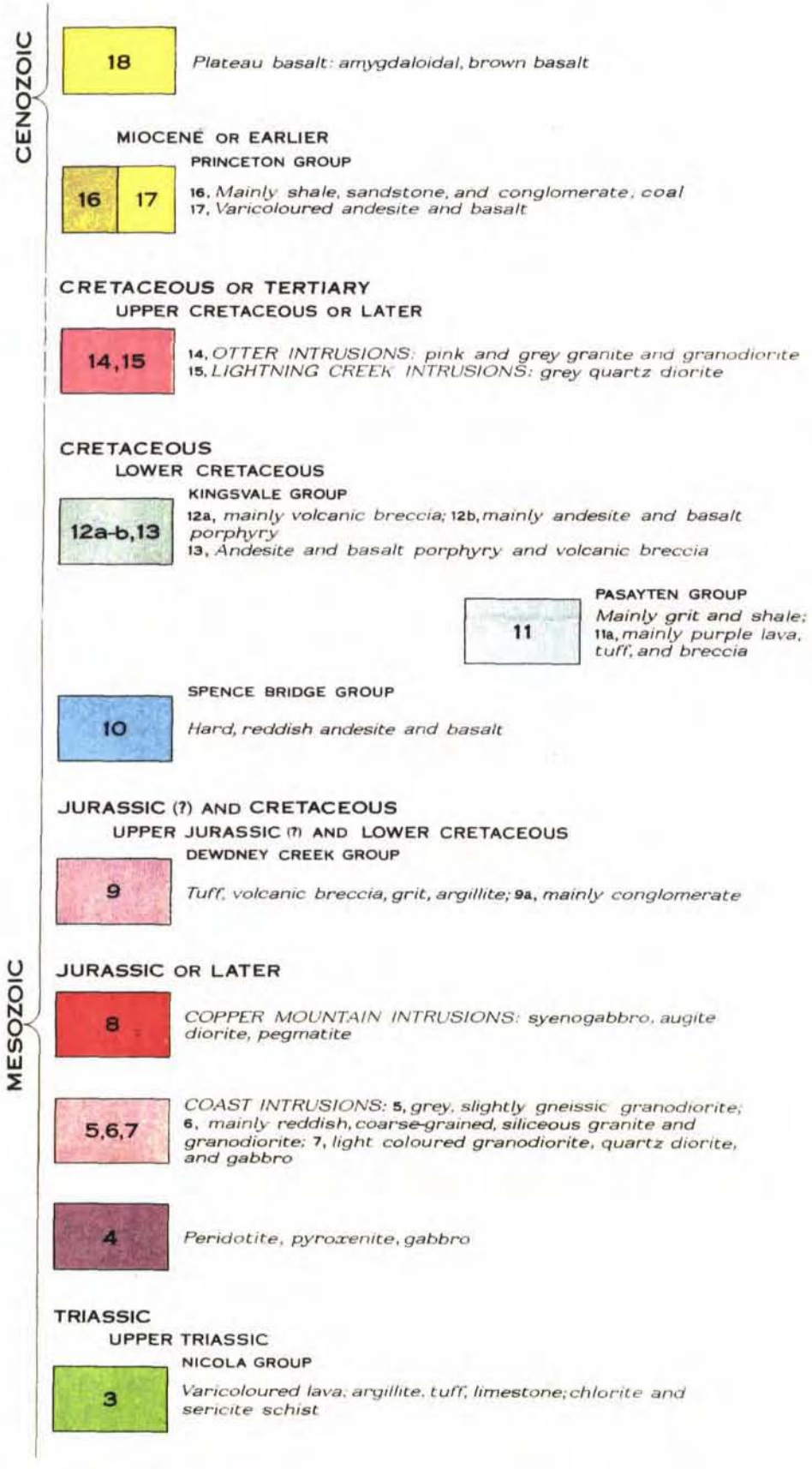
REGIONAL GEOLOGY

N.T.S. 92 H/7E

SCALE : 1" = 4 miles

FIG. 3

LEGEND FOR REGIONAL GEOLOGY - FIGURE 3

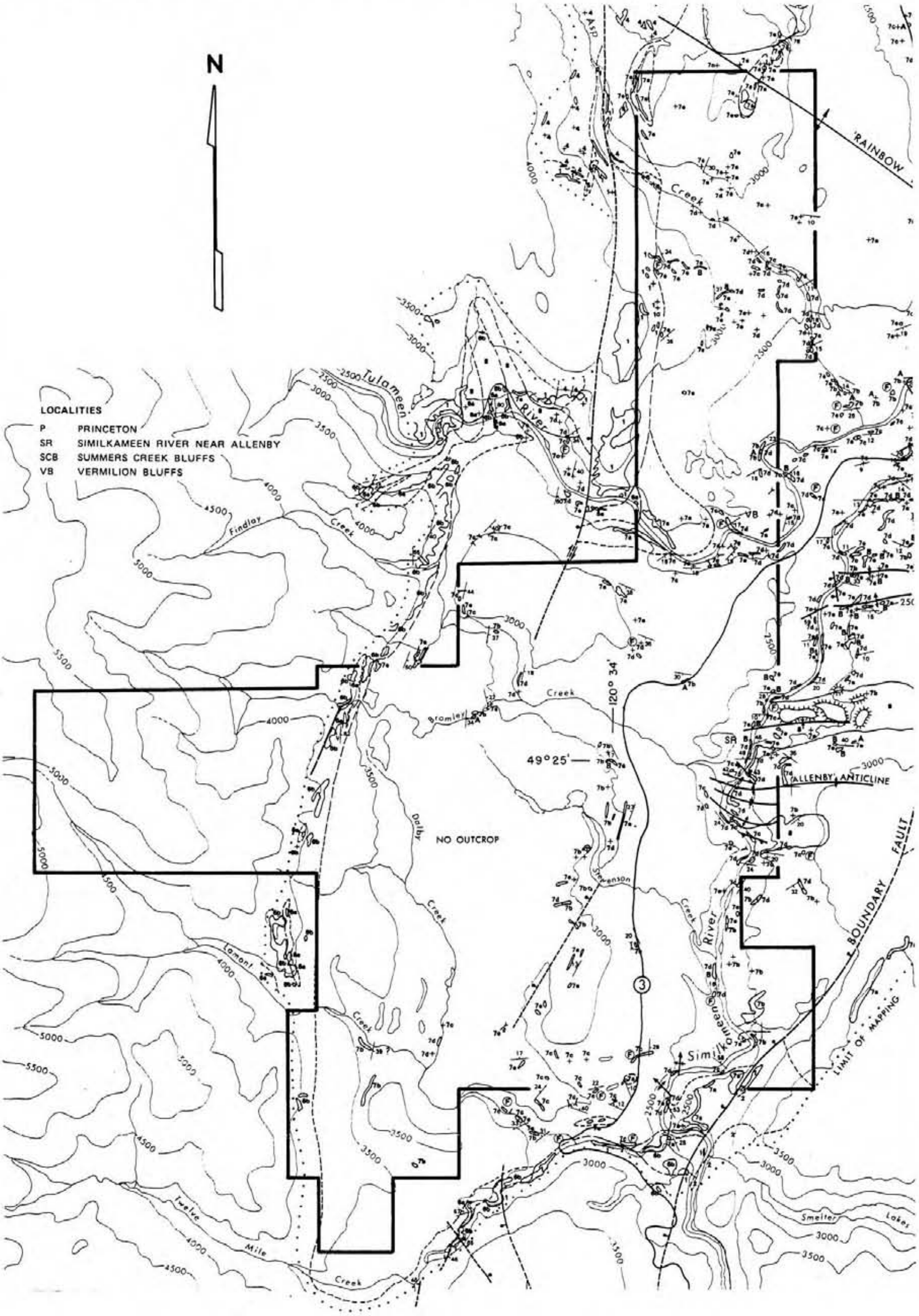


The Tertiary Princeton Group has two members: a lower volcanic formation consisting of intercalated flows, breccias, tuffs and minor volcanoclastic sediments ranging in composition from rhyolitic breccias to dacite, andesite and basalt flows and porphyries; and the Allenby Formation consisting of massive, cross-bedded conglomerate and sandstone, massive and thinly bedded shale, with intercalated beds of coal, carbonaceous siltstone and shale The Princeton Group has been described in detail by McMechan (1983) who has mapped the entire region of the properties at 1:50,000. A portion of his map is reproduced in Figure 4.

LOCAL GEOLOGY

The **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claim group covers the southern half of the Princeton Basin - a homoclinal graben structure filled with Tertiary sediments and volcanics of the Princeton Group (Figure 4). The basin is 6-8 km wide and about 30 km long. It was formed by extensional tectonics during the Tertiary (similar to the Basin and Range in western United States) which resulted in a simple downdropped rotated block along a north-south trending listric normal fault zone (the Boundary Fault) which now forms the eastern margin of the basin. Maximum depths of about 1000m are found in the southern half of the basin (i.e. beneath the claim group).

The Boundary Fault cuts across the extreme southeast corner of the claim group and separates a small section of Nicola Group volcanics and Copper Mountain intrusives. The western boundary of the basin follows the western boundary of the claim group except for the **Bromley 1-2** claims which lie outside the basin in Nicola Group volcanics. North-south trending normal faults have been mapped in the central part of the basin and in the Nicola basement rocks to the north and south of the property.



BLACKBERRY GOLD RESOURCES INC.

STIK 1-4, STIK 8-17, BROMLEY 1-2, BISHOP AND WHIP CLAIMS

LOCAL GEOLOGY

N.T.S. 92H/7E

SCALE : 1:50000 After report by R.D. McMechan on the Princeton Basin

FIG. 4

LEGEND FOR LOCAL GEOLOGY - FIGURE 4

GEOLOGICAL MAP OF THE PRINCETON BASIN
SOUTH-CENTRAL BRITISH COLUMBIA

PRINCETON BASIN GEOLOGY BY R. D. McMECHAN (1975)
SURROUNDING GEOLOGY BY
R. D. McMECHAN AND J. NEBOCAT (1975) AND BY PRETO (1972, 1979)

TERTIARY OR QUATERNARY

8 LANDSLIDES

TERTIARY
MIDDLE EOCENE
ALLENBY FORMATION

7e DOMINANTLY MEDIUM TO VERY COARSE-GRAINED ARKOSIC WACKE, COMMONLY TUFFACEOUS, INCLUDES GRANULE TO COBBLE CONGLOMERATE

7d THINLY TO THICKLY INTERBEDDED, FINE TO VERY COARSE-GRAINED, TUFFACEOUS TO ARKOSIC WACKE, SILTSTONE; BROWN, COMMONLY CARBONACEOUS SHALE; SOME CLAYSTONE AND COAL

7c DOMINANTLY CARBONACEOUS SHALE/MUDSTONE, SOME SILTSTONE AND NON-CARBONACEOUS CLAYSTONE; COAL; MUDROCKS LOCALLY TUFFACEOUS, LOCALLY BURNT DUE TO COMBUSTION OF ADJACENT COAL

7b DOMINANTLY BENTONITIC AND OTHER TUFFACEOUS MATERIAL, INCLUDING WHITE ASH (FOR EXAMPLE, PRINCETON ASH); BENTONITE COMMONLY SILTY OR SANDY

'VOLCANIC MEMBER'

7a FLOWS OF DACITIC TO BASALTIC COMPOSITION; GENERALLY FRESH APPEARANCE; MAY HAVE OLIVINE PHENOCRYSTS; COMMONLY VESICULAR; WELL-DEVELOPED FLAGGY OR COLUMNAR JOINTS; SUBORDINATE RHYOLITIC TO DACITIC TUFFS AND BRECCIA

MIDDLE EOCENE OR EARLIER
LOWER VOLCANIC FORMATION

6b VARICOLOURED FLOWS OF INTERMEDIATE COMPOSITION, COMMONLY VESICULAR OR AMYGDALOIDAL; WITH MINOR BRECCIA

6a RED OR BROWN LAHARS AND PYROCLASTIC (?) BRECCIA, WITH SUBORDINATE RED FLOWS, TUFFACEOUS UNITS, AND MINOR INTERBEDDED VOLCANICLASTIC SEDIMENTARY ROCKS

POST LOWER CRETACEOUS

5 ALLISON CREEK STOCKS: PINK TO GREY LEUCOGRANITE, SYENODIORITE, MONZONITE, GRANODIORITE, AND QUARTZ DIORITE; MINOR MAFIC MICRODIORITE

LOWER CRETACEOUS
KINGSVALE GROUP

4 REDDISH BROWN TO GREEN RHYOLITIC TO DACITIC BRECCIAS AND FLOWS; LESSER GREY PLAGIOCLASE PORPHYRIES OF INTERMEDIATE COMPOSITION

JURASSIC OR LATER

3 OSPREY LAKE INTRUSION: DOMINANTLY PINK AND GREY GRANITE AND QUARTZ MONZONITE, COMMONLY CONTAINING LARGE PINK MICROCLINE PHENOCRYSTS WITHIN A MEDIUM TO COARSE-GRAINED GROUNDMASS; SOME LIGHT-COLOURED GRANODIORITE

UPPER TRIASSIC OR LATER

2 OTHER INTRUSIONS: MOSTLY FINE-GRAINED INTRUSIVE ROCKS OF VARIABLE COMPOSITION, INCLUDES DIORITE AND MICRODIORITE OF COPPER MOUNTAIN INTRUSIONS

UPPER TRIASSIC
NICOLA GROUP

1 DARK TO LIGHT GREEN AND GREY BASALTIC (ANDESITIC (?)) FLOWS, TUFFS, AND BRECCIAS, AUGITE AND AUGITE-PLAGIOCLASE PORPHYRITIC FLOWS AND BRECCIAS; COMMONLY CHLORITIZED, IN MANY PLACES BLEACHED AND SILICIFIED, MINOR LIMESTONE AND LIMY MUDSTONE

SYMBOLS

AREA OF OUTCROP
GEOLOGICAL CONTACT, DEFINED, ASSUMED, INFERRED
EXTENSION (NORMAL) FAULT, DEFINED, ASSUMED, INFERRED
CONTRACTION (REVERSE) FAULT (APPROXIMATE)
OTHER FAULTS
ATTITUDE OF STRATIFICATION
ANTICLINE, SYNCLINE (PLUNGING)
FOSSIL LOCALITY
ABUNDANT BENTONITIC MATERIAL — B
ASH HORIZON — A
ADIT OR MINE ENTRY
TAILINGS DUMP
PAVED HIGHWAYS
SECONDARY ROADS

HISTORY AND PREVIOUS WORK

There has been little previous base or precious metal mineral exploration on the **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claims. Prospecting has been carried out along the southern boundary of the claim group where Copper Mountain intrusives crop out, however such work has not extended into the Princeton Basin.

Placer gold and platinum exploration has been carried out on or near the property since the late 1800's. This work is best summarized by I. (Rocky) Borovic in his summary and evaluation report on the Dalby Placer Project dated in 1988 and is reproduced below:

> "The active exploration and placer mining of the Tulameen-Princeton area started with discovery of coarse gold on Granite Creek in 1885. "Nuggets valued up to $150 were recovered from Granite Creek, though the largest nugget, valued at $900, came from Lockie (Boulder) Creek, a tributary of Otter Lake."(B.C.Dept. Mines Bull.No.21). Platinum is recovered with placer gold from Tulameen River and its productive tributaries. The old reports show that in some places there is more platinum recovered than gold. "The platinum found is in nuggets up to one half ounce in weight. It is estimated (Camsell.C.1913) that from 10,000 to 20,000 ounces of placer platinum has been recovered since 1885. The total placer gold production in the area "has had a value of approximately $750,000 (1980).
>
> At the beginning of the century, the district was regarded as the best platinum producer in North America. A ratio of platinum to gold was said to be 1 to 4 on the Lower Tulameen River and near the mouth of Olivine Creek was 1 to 1 or better. Platinum in minor amounts is still being recovered in placer deposits in the area.
>
> The writer didn't find any recorded account of placer-exploraion and mining activity in the Dalby property area.

The Dalby placer leases were staked on the premise that the Dalby Meadows is an ancient channel of the Tulameen River and that platinum and gold, derived from the Tulameen Ultramafic Complex to the northwest and/or from some smaller ultramafic bodies outcropping in the neighboring areas are present in sufficient quantities in the gravels of the ancient river bed.

Nov.19.1985 and Dec.13.1985:
Twenty-nine test pits were excavated to bedrock or to the depth of the excavator boom (20 feet). Eleven 45 gallon drums of material (each equivalent of 1/4 yard) were taken for further testing and twelve 5 yard piles were left for on-site testing in the spring.

The first testing was done in the present Dalby Creek draw. The trenching showed a thick section of clay beneath 10 to 20 feet of gravel in the present small stream bed. Dalby Creek is a stream 2 to 3 feet wide and 1 to 2 feet in depth.

Prospecting showed that the gravels resting on the siltstone bedrock contain one to two colors per pan. The bedrock is very soft and in places is weathered to clay, making the bedrock gravel contact impossible to sense with the bucket. The gold content appeared to be on the west side of the creek only and striking in a northwest direction.

Further trenching, approximately 2,000 feet to the northwest up on a timbered flat and approximately 100 feet above Dalby Creek draw, encountered a water-filled horizon containing large boulders.

Jan.1986.:
The eleven 1/4 yard samples were tested in the Greenwood test plant in early January 1986.

A gold platinum bearing boulder channel mixed with normal stream gravels and boulders with a known pay depth of 10 to 15 feet and a minimum width of 100 feet lies beneath 10 to 20 feet of sandy silt for an unknown length in the Dalby Meadows.

The channel is not cemented and contains no large amount of black sand. The main gold values are coarse and nuggets. The amount of platinum noted in the preliminary testing shows that 15% of the values can be expected as Platinum Group Metals. The amount of minus 60 mesh gold is not known but appears to be significant.

The rough testing indicates values in the channel will average 100 mg to 500 mg gold per yard, with platinum averaging 10 mg. Not enough sampling has been done to indicate the high range.

The electron probe studies show the gold content of the nuggets to be in the nineties. The platinum content of the P.G.M. nuggets is 80% with an 8% iridium content. Local experience indicates that these types of gravels have to be bulk tested to indicate the true gold-platinum content because of the nugget effect. The experience in the Tulameen River and Similkameen has shown that a marked increase in recoverable values will take place with testing of larger samples.

These encouraging results warranted further staking. This additional acquisition of placer ground was completed during the latter part of February 1986."

AIRBORNE VLF-ELECTROMAGNETIC AND MAGNETIC SURVEY

This survey simultaneously monitors and records the output signal from a proton precession magnetometer and two VLF-EM receivers installed in a bird designed to be towed 100 feet below a helicopter. A gimbal and shock mounted TV camera, fixed to the helicopter skid, provides input signal to a video cassette recorder allowing for accurate flight path recovery by correlation between the flight path cassette and air photographs of the survey area. A KING KRA-10A radar altimeter allows the pilot to continually monitor and control terrain clearance along any flight path.

Continuous measurements of the earth's total magnetic field intensity and of the total horizontal VLF-EM field strength of two transmission frequencies are stored in three independent modes: an analogue strip chart recorder, digital magnetic tapes and a digital video recovery system. A three-pen analogue paper recorder provides direct, unfiltered recordings of the three geophysical instrument output signals. A Hewlett-Packard 9875 tape drive system digitally records all information as it is processed through

an onboard micro-computer. The magnetic and electromagnetic data is also processed through the onboard micro-computer, incorporating an analogue to digital converter and a character generator, then superimposed along with the date, real time and terrain clearance upon the actual flight path video recording to allow exact correlation between geophysical data and ground location. The input signals are averaged and updated on the video display every second.

Correlation between the strip chart, digital tape and the video flight path recovery tape is controlled via fiducial marks common to all systems. Line identification, flight direction and pertinent survey information are recorded on the audio track of the video recording tape.

DATA PROCESSING

Field data is digitally recorded, with the time of day fiducial, on magnetic cassettes in a format compatible with the Hewlett-Packard 9845 computer. The recovered flight path locations are digitized and the field data is processed to produce plan maps of each of the parameters. A variety of formats are available in which to display this data.

Total field intensity magnetic information is routinely edited for noise spikes and corrected for any diurnal variations recorded on a base magnetometer located in the survey area.

Total field intensity VLF-EM signals are sensitive to topographic changes and sensor oscillation. Oscillation effects can be reduced by filters tuned to the dominant period. Long period effects attributable to topography can be removed by high pass filtering the planimetric data.

DISCUSSION OF RESULTS

The **Stik 1-4, Stik 7-18, Bromley 1-2, Bishop and Whip** claims were surveyed on November 28 to December 3,1987. Approximately four hundred and twenty five line kilometers of airborne magnetics and VLF-EM survey data has been recovered and examined in detail to evaluate the **Stik 1-4, Stik 7-18, Bromley 1-2, Bishop and Whip** claims.

Survey lines were flown east-west on 200 meter centres with data being digitally recorded at one second intervals, providing an average sample spacing of 25 metres. The sensors were towed beneath the helicopter and maintained a terrain clearance of approximately 60 meters. The magnetic data is presented in contour form on a photomosaic base map of the area as Figure 5. The total field VLF-EM data is presented in contour form as Figures 6 and 7 representing the Annapolis and Seattle frequency information respectively.

The magnetic contour map shown in Figure 5 primarily reflects the structure of the Princeton Basin. The magnetic field is smoothly varying (i.e. broad contours) over the basin reflecting variation in thickness of the Allenby Formation or variation in lithology of the basement rocks. The low magnetic intensities over the southern portion of the basin reflect the greater depth to basement in this area. The intensities increase to the north as the basin thins over the Rainbow Lake Anticline. The lowest intensities are observed in the southeastern corner of the basin next to the Boundary Fault where the basin is deepest.

A series of magnetic anomalies are observed along the western margin of the basin where the lower volcanic member of the Princeton Group and older volcanic rocks of the

Nicola Group crop out. These anomalies may be due to associated intrusives within the basement rocks, although more magnetic sections of the volcanic units are also possible. A few individual anomalies rate special mention: a) east end of line 70, b) lines 37-42 immediately west of the basin, c) line 27 immediately west of the basin and extending beneath the basin to the southwest. These anomalies are close to mapped faults and warrent further investigation.

The VLF-EM total field contour maps shown in Figures 6 and 7 also display the effect of the Prineton Basin structure. A series of VLF-EM anomalies are observed along the western margin of the basin which are probably due to outcropping carbonaceous shales near the bottom of the basin stratigraphy. In addition, there are a set of short stike-length conductive anomalies in the central area of the basin. These conductors are probably due to carbonaceous material within normal faults in the basin. Indeed, one of these conductors (lines 49 to 58) is coincident with the downdip projection of a fault mapped on surface.

One conductor rates special mention: lines 39 to 44 immediately west of the margin of the basin. This conductor is coincident with a magnetic anomaly. It is probably due to a magnetite-rich volcanoclastic argillaceous unit in the lower volcanic member of the Princeton Group, however the possibility of a mineralized fault or shear structure should also be considered particularly as a fault has been mapped on surface a few hundred metres to the east.

SUMMARY AND CONCLUSIONS

An airborne magnetic and VLF-EM survey was carried out over the **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claims for **Blackberry Gold Resources Inc.** A total of 425 line km were flown during the period 28 November - 3 December, 1987.

The magnetic and VLF-EM data primarily reflects the structure of the Princeton Basin: a terrigenous sediment filled homoclinal graben of Tertiary age. Magnetic intensities are directly related to the thickness of the basin or to variation of basement lithology. Magnetic and VLF-EM anomalies are observed along the western margin of the basin where the lower volcanic formation of the Princeton Group and the volcanic Nicola Group crop out. VLF-EM anomalies within the central part of the basin are interpreted to be due to carbonaceous material within normal faults.

Some of the magnetic anomalies along the margin of the basin and extending beneath the basin warrent further investigation since they could be due to intrusive rocks similar to the Copper Mountain Intrusion or the Tulameen Ultramafic complex. One of the magnetic anomalies is coincident with a VLF-EM anomaly which suggests a mineralized conductive shear structure as a possible source.

RECOMMENDATIONS

Much of the **Stik 1-4, Stik 8-17, Bromley 1-2, Bishop and Whip** claim group is located over the deepest sections of the Princeton Basin where the Allenby Formation sedimentary rocks are 1000m thick. Since exploraton beneath this cover would be prohibitively expensive it is recommended that part of the claim group be dropped: namely **Stik 1-4, Stik 8-10**

and Stik 12-13. Stik 11, Stik 14-17, Bromley 1-2, Bishop and Whip claims, which are over the thinner parts of the basin or are outside the basin, should be retained for further exploration.

Further exploration should be directed toward the airborne magnetic anomalies along the margin of the basin. The work should include reconnaissance ground magnetics, geochemistry and prospecting.

Respectfully Submitted,

Dennis V. Woods, Ph.D., P.Eng.
Geophysicist

INSTRUMENT SPECIFICATIONS

HERZ TOTEM - 2A VLF-EM SYSTEM

Source of Primary Field: -Global network of VLF "OMEGA" radio stations in the frequency range of 14 KHz to 30 KHz

Number of Channels: Two; Field selectable by 100 Hz steps. Ex:
Seattle, Washington at 24.8 KHz
Annapolis, Maryland at 21.4 KHz

Type of Measurement: Total Field Strength
(Location of Conductors)
Vertical Quadrature
(useful in interpreting the quality and depth to a conductor)
Horizontal Quadrature
(orientation of field & structures)

Type of Sensor: Ferrite antennae array of 3 orthoganal coils mounted in a fiberglass bird with preamp.

Output: -0 to ± 1000 mV displayed on two switch selectable analogue meters.
-noise monitoring light.
- audio monitor speaker.

Filters:	Noise blanking spherics (lightning) Anti Aliasing filters (Adjacent Stations) Crystal Controlled Phase Lock loop digital tuning. 1 sec. output Time Constant.
Sensitivity:	130 micro V/m at 20 kHz.

INSTRUMENT SPECIFICATIONS

BARRINGER AIRBORNE MAGNETOMETER

MODEL:	Nimbin M-123
TYPE:	Proton Precession
RANGE:	20,000 to 100,000 gammas
ACCURACY:	± 1 gamma at 24 V d.c.
SENSITIVITY:	1 gamma throughout range
CYCLE RATES:	
Continuous -	0.6, 0.8, 1.2 and 1.9 seconds
Automatic -	2 seconds to 99 minutes in 1 second steps
Manual -	Pushbutton single cycling at 1.9 seconds
External -	Actuated by a 2.5 to 12 volt pulse longer than 1 millisecond.
OUTPUTS:	
Analogue -	0 to 99 gammas or 0 to 990 gammas - automatic stepping
Visual -	5 digit numeric display directly in gammas
EXTERNAL OUTPUTS:	
Analogue -	2 channels, 0 to 99 gammas or 0 TO 990 gammas at 1 m.a. or 1 volt full scale deflection.
Digital -	BCD 1, 2, 4, 8 code, TTL compatible
SIZE:	Instrument set in console 30 cm X 10 cm X 25 cm
WEIGHT:	3.5 Kg.
POWER REQUIREMENTS:	12 to 30 volts dc, 60 to 200 milliamps maximum.
DETECTOR:	Noise cancelling torroidal coil installed in air foil.

INSTRUMENT SPECIFICATIONS

FLIGHT PATH RECOVERY SYSTEM

i) T.V. Camera:

Model:	RCA TC2055 Vidicon
Power Supply:	12 volt DC
Lens:	variable, selected on basis of expected terrain clearance.
Mounting:	Gimbal and shock mounted in housing, mounted on helicopter skid.

ii) Video Recorder:

Model:	Sony SLO-340
Power Supply:	12 volt DC / 120 volt AC (60Hz)
Tape:	Betamax 1/2" video cassette - optional length.
Dimensions:	30 cm X 13 cm X 35 cm
Weight:	8.8 Kg
Audio Input:	Microphone in - 60 db low impedance microphone
Video Input:	1.0 volt P-P, 75Ω unbalanced, sync negative from camera.

iii) Altimeter:

Model:	KING KRA-10A Radar Altimeter
Power Supply:	27.5 volts DC
Output:	0-25 volt (1 volt /1000 feet) DC signal to analogue meter, 0-10 v (4mv/ft) analogue signal to microprocessor.
Mounting:	fixed to T.V. camera housing, attached to helicopter skid.

INSTRUMENT SPECIFICATIONS

DATA RECORDING SYSTEM

i) Chart Recorder

Type:	Esterline Angus Miniservo III Bench AC Ammeter - Voltmeter Power Recorder.
Model:	MS 413B
Specification:	S-22719, 3-pen servo recorder
Amplifiers:	Three independent isolated DC amplifiers (1 per channel) providing range of acceptable input signals.
Chart:	10 cm calibrated width z-fold chart.
Chart Drive:	Multispeed stepper motor chart drive, Type D850, with speeds of 2,5,10,15,30 and 60 cm/hr. and cm/min.
Controls:	Separate front mounted slide switches for power on-off, chart drive on-off, chart speed cm/hr. - cm/min. Six position chart speed selector individual front zero controls for each channel.
Power Requirements:	115/230 volts AC at 50/60 Hz (Approximately 30 W).
Writing System:	Disposable fibre tipped ink cartridge (variable colors)
Dimensions:	38.6 cm X 16.5 cm X 43.2 cm
Weight:	9.3 kg.

ii) Digital Video Recording System

Type:	L.M. Microcontrols Ltd. Microprocessor Control Data Acquisition System.
Model:	DADG - 68
Power Requirements:	10 - 14 volts DC, Maximum 2 amps.
Input Signal:	3,0 - 100 mvolt DC signals 1,0 - 25 DC signals
Microprocessor:	Motorola MC-6800
CRT Controller:	Motorola MC-6845
Character Generator:	Motorola MCM-6670
Analogue/Digital Convertor:	Intersil 7109
Multiplexer:	Intersil IH 6208
Digital Clock:	National MM 5318 chip 9 volt internal rechargeable nickle-cadmium battery.
Fiducial Generator:	internally variable time set controls relay contact and audio output.
Dimensions:	30 cm X 30 cm X 13 cm
Weight:	3 kg.

iii) Digital Magnetic Tape

Type:	Hewlett Packard cartridge tape unit.
Model:	9875A
Power Requirements:	24 volt d.c.
Data Format:	HP'S Standard Interchange Format (SIF)

Tape Cartridge:	HP 98200A 225K byte cartridge compatible with HP Series 9800 desktop computers.
Tape Drive:	Dual tape drives providing up to 8 hours continual recording time.
Controller:	Internal micro-computer provides 23 built in commands External computer generated commands.

COST BREAKDOWN

The geophysical data was analyzed, geological information researched and compiled, and this report prepared for an all inclusive fee of $24,350.00. This total is based on a cost of $47/km for total field magnetic data and two stations of VLF-EM data. The survey was conducted by Graham and Colin Parkinson on November 28 to December 3,1987.

425 km of Magnetometer data @ $47/km	$19,750.00
Mobilization/Demobilization	2,000.00
Geological compilation	500.00
Interpretation and report	2,100.00
TOTAL	**$24,350.00**

TOTAL ASSESSMENT VALUE OF THIS REPORT **$24,350.00**

STATEMENT OF QUALIFICATIONS

NAME: WOODS, Dennis V.

PROFESSION: Geophysicist

EDUCATION:
B.Sc. Applied Geology
Queens' University

M.Sc. Applied Geophysics
Queen's University

Ph.D. Geophysics
Australian National University

PROFESSIONAL ASSOCIATIONS:
Registered Professional Engineer
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Society of Exploration Geophysicists

Canadian Society of Exploration Geophysicists

Australian Society of Exploration Geophysicists

President, B.C. Geophysical Society

EXPERIENCE:

1971-79 - Field Geologist with St. Joe Mineral Corp. and Selco Mining Corp. (summers).
- Teaching assistant at Queen's University and the Australian National University.

1979-86 - Professor of Applied Geophysics at Queen`s University.
- Geophysical consultant with Paterson Grant & Watson Ltd., M.P.H. Consulting Ltd., James Neilson and Assoc. Ltd., Foundex Geophysics Geophysics Ltd.
- Visiting research scientist at Geological survey of Canada and the University of Washington.

1986-87 - Project Geophysicist with Inverse Theory and Applications Inc.
- Chief Geophysicist with White Geophysical Inc.

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N

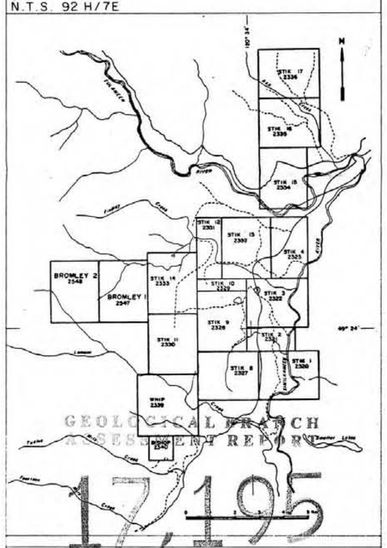
LEGEND :

- Edge of Princeton Basin (limit of Allenby formation)

Mapped Faults (from McMechan - 1983)

- Normal
- Shear

N.T.S. 92 H/7E



BLACKBERRY GOLD RESOURCES INC.

STIK 1-4, 8-17; BROMLEY 1-2; BISHOP & WHIP CLAIMS

AIRBORNE MAGNETIC AND VLF-EM SURVEY

CONTOURED TOTAL MAGNETIC FIELD

Scale 1: 20000.0

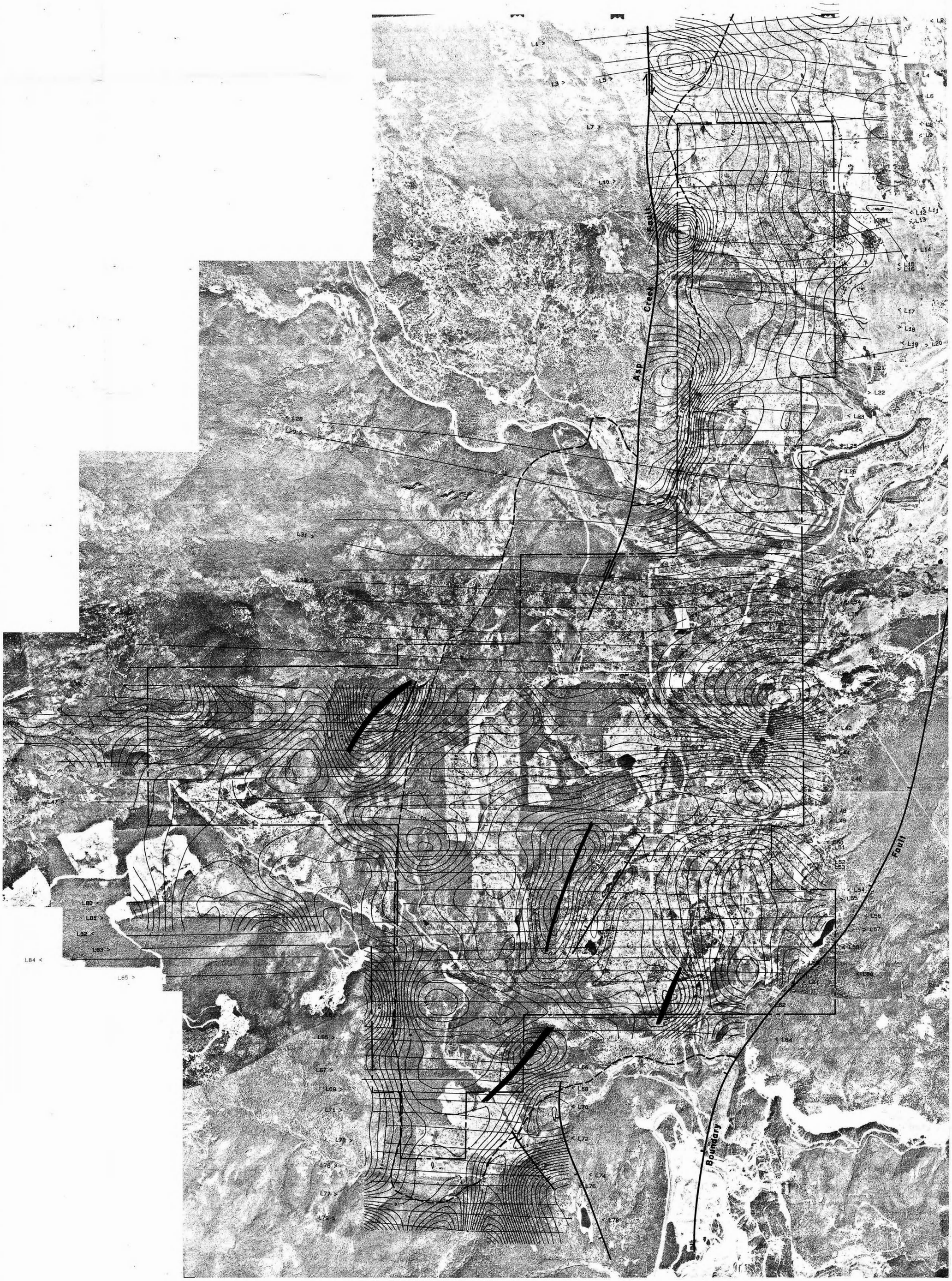
0 400 800 1200 1600 2000 M

Date: OCTOBER, 1987 | FIG. 5

WESTERN GEOPHYSICAL AERO DATA LTD.

N

To VLF Station



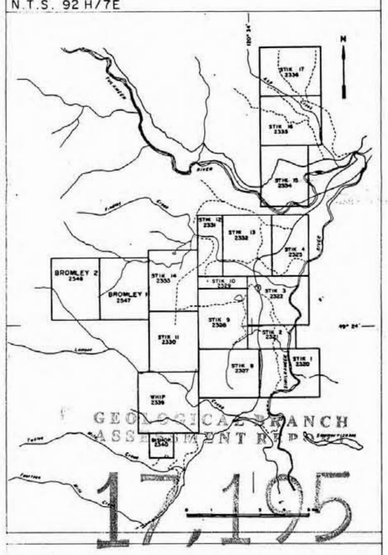
LEGEND:

- Edge of Princeton Basin (limit of Allenby formation)

Mapped Faults (from McMechan - 1983)

- Normal
- Shear
- Conductor axis

N.T.S. 92 H/7E



BLACKBERRY GOLD RESOURCES INC.

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AIRBORNE MAGNETIC AND VLF-EM SURVEY

CONTOURED TOTAL FIELD VLF - ANNAPOLIS

Scale 1: 20000.0

0 400 800 1200 1600 2000 M

Date: OCTOBER, 1987 | FIG. 6

WESTERN GEOPHYSICAL AERO DATA LTD.

N

To VLF Station

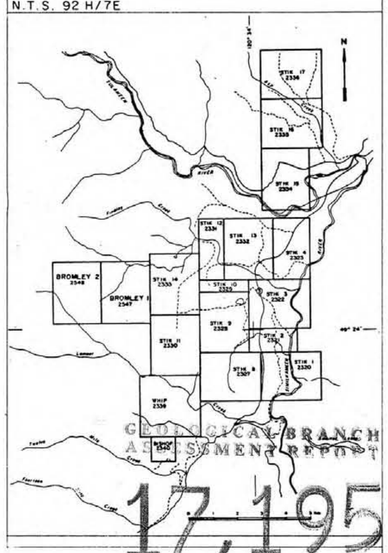
LEGEND:

- Edge of Princeton Basin (limit of Allenby formation)

Mapped Faults (from McMechan - 1983)

- Normal
- Shear
- Conductor axis

N.T.S. 92 H/7E



BLACKBERRY GOLD RESOURCES INC.

STIK 1-4, 8-17; BROMLEY 1-2; BISHOP & WHIP CLAIMS

AIRBORNE MAGNETIC AND VLF-EM SURVEY

CONTOURED TOTAL FIELD VLF - SEATTLE

Scale 1: 20000.0

0 400 800 1200 1600 2000 M

Date: OCTOBER, 1987 | FIG. 7

WESTERN GEOPHYSICAL AERO DATA LTD.