BAYVIEW RESOURCES LTD.
Geophysical Report
On An
Airborne VLF-Electromagnetometer and Magnetometer Survey
Goldie 1 claim, Slocan Mining Division
Latitude 50°03'N Longitude 117°53'W
NTS 82K/4W
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Geophysicist
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Consulting Geophysicist
Date of Work: November, 1982
Date of Report: July 20, 1983

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,208
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BAYVIEW RESOURCES LTD.
GOLDIE 1 CLAIM
LOCATION AND CLAIMS MAP

FIGURE 1
INTRODUCTION

During the month of November, 1982 Western Geophysical Aero Data Ltd. conducted a regional airborne magnetometer and VLF-electromagnetometer survey across the Tillicum Mountain Gold Prospect area. The data was recorded digitally on magnetic tape and approximately 35 kilometres was reviewed in detail to examine the area of the Goldie 1 claim on behalf of Bayview Resources Ltd.

The purpose of the survey was to delineate any variations in magnetic intensity and near surface conductivity that would assist in the search for gold and/or sulphide mineralization.

PROPERTY

The property owned by Bayview Resources Ltd. is comprised of one mineral claim totalling 20 units as described below and illustrated on Figure 1.

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Record No.</th>
<th>Tag No.</th>
<th>Units</th>
<th>Expiry Date</th>
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<tr>
<td>Goldie 1</td>
<td>3148</td>
<td>56875</td>
<td>20</td>
<td>Sept. 24, 1983</td>
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LOCATION AND ACCESS

The Goldie 1 claim is located some 6 kilometres north of Burton, B.C. in the Slocan Mining Division and NTS 82K/4W. Approximate geographical co-ordinates are latitude 50°03'N and longitude 117°53'W.

The Burton Nakusp highway (B.C. #6) passes within a few metres of the western border of the Goldie 1 claim. No roads are known of by the authors to traverse the property.
GENERAL GEOLOGY

A geological evaluation report written by Larry Sookochoff, P.Eng. (Oct. 12, 1982) describes the general geology of the Tillicum Gold Prospect area and the Goldie 2 claim (located immediately south of the Goldie 1 claim) in detail. Those portions of this report which are applicable to the Goldie 1 claim have been reviewed and described below.

"The general geology of the area of the Triassic Slocan group of metavolcanics and sediments including limestones, argillites and quartzites. Intrusives of Jurassic and/or Cretaceous stocks envelope the Slocan group in this area in addition to the outcropping of small stocks and plugs within the enveloped group.

Mineralization in the area consists of gold-silver-lead-zinc values within quartz veins or quartz flooded metasediments and/or metavolcanics. Gold-silver values are also reported in a rhyolitic skarn zone as well as within green aphenitic rocks.

The Goldie #1 claim is heavily overburdened according to open file geological map 432 and is indicated to be completely underlain by the Caribou Creek Stock. The Caribou Creek Pluton is distinguished by the dominance of hornblende over biotite and presence of potash feldspar megacrysts.

Major fault zones are indicated on the property by northerly trending fault scarps."
PREVIOUS WORK

A description of the exploration and production history of the Burton area was also included in the report by L. Sookochoff.

"The Burton area was a gold mining camp founded around 1895 when gold mining was originally confined to placer production. Burton and Mineral City at Caribou Creek flourished upon the working on the placers and upon the location of gold in outcroppings at the turn of the century. Some of the old mines which were found included the Millie Mac, Mountain Meadows, Kincardin, Tillicum and many others. Since the depression of the 1930's, there was little activity in the old mines and it was not until 1979 when the activity in the area regenerated through a gold discovery made by Arnie Gustafson. Work carried out from the discovery to date and presently under exploration by La Teko and Esperanza resulted in the recent reporting of a significant zone of substantial gold mineralization.

On the Millie Mac, seven km southwest of the Gold Standard claims, work completed was over 800 metres of underground work with 300 tons of ore shipped to 1933.

From 1960 to 1979 production was reported at 119 tons which included some concentration.

On the Skylark, a group of Crown Grants two km southwest of the Gold Standard claims reported work includes a shaft exploring a zone of "rich ore".

To the east of the Skylark on Blue Grass Mountain, Mac Gold reportedly plans to explore a molybdenite-gold zone on which Brenda had earlier worked. "Two hundred pounds" of material was shipped from this zone in the spring of 1982."

The writer is not aware of any previous mineral exploration on the Goldie l mineral claim.
AIRBORNE VLF-ELECTROMAGNETIC AND MAGNETIC SURVEY

This survey system 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 power 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 on- board 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 on magnetic cassettes in a format compatible with the Hewlett-Packard 9845 computer. The flight path locations are digitized, thus the information can be processed as either time series or space point 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 receiver oscillation. Oscillation effects can be removed by filters tuned to the dominant period. Long period terrain effects can be removed by subtracting a polynomial fitted base level from the data. The degree of the polynomial can be selected to best represent terrain variations observed in the survey area.

Short period terrain effects often have similar response parameters to target conductive features. An interpretational technique often useful in distinguishing between terrain anomalies and conductor anomalies is to observe the difference between the responses from two transmitter stations. Terrain variations normally affect both data sets to a similar degree and are much reduced on a difference plot. The amplitude of the response due to a conductive body is dependent upon the relationship between the conductors' strike and direction to the transmitter station. In most instances the anomalous responses will vary between frequencies and therefore remain evident on the difference plot.
REGIONAL AIRBORNE MAGNETICS
DISCUSSION OF RESULTS

Approximately 35 kilometres of flight lines were recovered to evaluate the area of the Goldie 1 claim. The magnetic data is presented in contour form as Figure 2 of this report and the VLF-EM data as Figures 3-5. Plate 2 delineates the regional airborne magnetics of the area.

Referring to Plate 2, a large magnetic high trends northwest-southeast across the area. This zone is bisected by two magnetic low trends. The southern low trends northwest-southeast to the south of the Goldie 1 claim and displaces the magnetic high in the manner of a right lateral fault. The northern low crosses the Goldie 1 claim in an east-west direction near lines 53A and 53B. There appears to be a minor displacement of the magnetic high associated with this feature as well.

Figure 2 illustrates the magnetic data gathered over the Goldie 1 claim in detail. The magnetic high referred to above is best outlined by the 1050 gamma contour which trends roughly north-south across the claim. A relatively consistant gradient of 55 gammas per 100 metres decreases the field intensity to the west of this contour. One anomalous response is observed within this gradient zone which takes the form of a 300 gamma dipole near the western end of line 60A.

Significant variations in intensity are observed within the large magnetic high. Possibly related to the east-west low noted on line 53B is another low which extends south-southwest from line 53B to line 57 through the center of the magnetic high. Extremely high magnetic values are observed flanking this trend producing a number of dipole type anomalies.
A strong magnetic low follows the eastern shore of Lower Arrow Lake due west of the claim.

The VLF-EM field intensity is very weak across the survey area. No definitive correlation between the magnetics and VLF-electromagnetics is evident. The strongest response observed is evident on the Seattle frequency data as a 6% field increase near the western end of line 57. Weak northeast-southwest trending zones of increased conductivity are observed across lines 57B through 55 inclusive. These may be associated with a similarly striking magnetic low in the area.

SUMMARY AND CONCLUSIONS

In November, 1982 Western Geophysical Aero Data Ltd. conducted a regional airborne magnetometer and VLF-electromagnetometer survey in the Tillicum Mountain Gold Prospect area. The portion of that survey which covered the Goldie 1 claim has been reviewed on behalf of Bayview Resources Ltd.

The Geological Survey of Canada maps the Goldie 1 claim as being completely underlain by the Caribou Creek Stock and a large northwest-southeast trending magnetic high is observed in the area. This feature is of the intensity and character observed elsewhere as reflections of the Cretaceous stocks and plutons. There is however, a distinct gradient which lowers the magnetic field intensity over the western third of the claim. This may be reflecting a gradual decrease in the content of high magnetic susceptibility materials within the stock or a contact with another rock type. The lower magnetic field intensities observed across the western third of the survey area are similar to those obtained over metasedimentary sequences.
The east-west trending magnetic low observed near line 53B is possibly the reflection of a fault. Similar magnetic lows have been tied to mapped fault zones in the area. Another magnetic low extends south from line 53B through the center of the regional high. Extremely high, localized magnetic features flank this trend. This zone is interpreted as another fault and the extreme variations are strong indications that the area has been a chemically active heat source. Weak VLF-EM responses indicate zones of minor increased conductivity are associated with this north-south trending anomaly.

Within the magnetic gradient zone along the western portion of the claim is a well defined magnetic dipole (line 60A). The higher intensity pole lies along a tree covered slope due east of three farm buildings and extends to the base of bare cliff. The low intensity pole of the anomaly begins at the top of this outcrop at a higher elevation. This anomaly is due to a narrow east-west trending zone of high magnetic susceptibility material, possibly magnetite or pyrrhotite. Evidence to identify the causitive body will likely be found at or near the outcrop on the cliff face.

Two isolated weak VLF-EM anomalies are located approximately 1 kilometre north of this magnetic dipole. These features are likely reflecting a farm house and related machinery observed next to the highway.
RECOMMENDATIONS

Two "Areas of Interest" are outlined on the magnetic contour map (Figure 2) which warrant further investigation. The magnetic dipole in the extreme southwest corner of the Goldie 1 claim and the area of possible faulting along the eastern claim boundary.

Normal ground exploration techniques consisting of geological prospecting and soil geochemistry should be employed. Dependent upon the amount of outcrop available some amount of ground magnetometer survey may be necessary to precisely locate the anomalous areas.

Respectfully submitted

E. Trent Pezzot, B.Sc.
Geophysicist

Glen E. White, B.Sc., P.Eng.
Consulting Geophysicist
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 airfoil.
INSTRUMENT SPECIFICATIONS

SABRE AIRBORNE VLF SYSTEM

Source of Primary Field: - VLF radio stations in the frequency range of 14 KHz to 30 KHz.

Type of Measurement: - Horizontal field strength

Number of Channels: - Two; Seattle, Washington at 24.8 KHz
- Annapolis, Maryland at 21.4 KHz

Type of Sensor: - Two ferrite antennae arrays, one for each channel, mounted in magnetometer bird.

Output: - 0 - 100 mV displayed on two analogue meters (one for each channel)
- recorder output posts mounted on rear of instrument panel

Power Supply: - Eight alkaline 'AA' cells in main instrument case (life 100 hours)
- Two 9-volt alkaline transistor batteries in bird (life 300 hours)

Instrument Console: - Dimensions - 30 cm x 10 cm x 25 cm
- Weight - 3.5 Kg.
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 to housing - housing bolted to helicopter skid

ii) Video Recorder
    Model: Sony SLO - 340
    Power Supply: 12 volt dc / 120 volt AC (60Hz)
    Tape: Betamex ½" 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 413 B
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 2-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 VA)
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 volt dc signal
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

i) **Survey Date** - November, 1982

ii) **Personnel:**

   Survey, E. Trent Pezzot, Geophysicist-operator  
   J. Behenna, Operator-navigator  
   M. McDermott, Navigator

   Data  
   Processing- E.T. Pezzot, Geophysicist-computer  
   M. McDermott,  
   N. Porter

   Report, E.T. Pezzot, Geophysicist-interpretation  
   Glen E. White, Geophysicist-supervision

iii) **Project Fee:**

   This survey was processed by agreement for an  
   all inclusive fee of $3,500.00 which includes an overall  
   proportion of helicopter charges, computer processing,  
   interpretation, report, drafting and reproduction.
STATEMENT OF QUALIFICATIONS

NAME: PEZZOT, E. Trent

PROFESSION: Geophysicist - Geologist

EDUCATION: University of British Columbia - B.Sc. - Honors Geophysics and Geology

PROFESSIONAL ASSOCIATIONS: Society of Exploration Geophysicist

EXPERIENCE:
Three years undergraduate work in geology - Geological Survey of Canada, consultants.

Three years Petroleum Geophysicist, Senior Grade, Amoco Canada Petroleum Co. Ltd.

Two years consulting geophysicist, Consulting geologist - B.C., Alberta, Saskatchewan, N.W.T., Yukon, western U.S.A.

Three years geophysicist with Glen E. White Geophysical Consulting & Services Ltd.
<table>
<thead>
<tr>
<th>NAME:</th>
<th>WHITE, Glen E., P. Eng.</th>
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<tbody>
<tr>
<td>PROFESSION:</td>
<td>Geophysicist</td>
</tr>
<tr>
<td>EDUCATION:</td>
<td>B.Sc. Geophysicist - Geology University of British Columbia.</td>
</tr>
<tr>
<td>PROFESSIONAL ASSOCIATIONS:</td>
<td>Registered Professional Engineer, Province of British Columbia.</td>
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<tr>
<td></td>
<td>Associate member of Society of Exploration Geophysicists.</td>
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<td></td>
<td>Past President of B.C. Society of Mining Geophysicists.</td>
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<tr>
<td>EXPERIENCE:</td>
<td>Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.</td>
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<td></td>
<td>Two years Mining Geophysicist with Sulmac Exploration Ltd. and Airborne Geophysics with Spartan Air Services Ltd.</td>
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<td>One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W.P. McGill and Associates.</td>
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<td>Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions with Geo-X Surveys Ltd.</td>
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<td>Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.</td>
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<td>Eleven years Consulting Geophysicist.</td>
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<td>Active experience in all Geologic provinces of Canada.</td>
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REFERENCES

L. Sookochoff, P.Eng. Oct, 12, 1982
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BAYVIEW RESOURCES LTD.
GOLDIE I CLAIM
VLF-EM Profiles (Annapolis)
TOTAL FIELD INTENSITY

DATE: NOV/82  FIG.: 4
INSTRUMENTS: Sabre Total Field Intensity VLF-EM

Key:
- Roads
- Claim boundary
- Claim post

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BAYVIEW RESOURCES LTD.
GOLDIE 1 CLAIM
VLF-EM DIFFERENCE PROFILES
(SEATTLE - ANNAPOLIS)

DATE: NOV/82 FIG.: 5

To accompany the Geophysical Report on the Goldie 1 Claim