

ECSTALL RIVER JOINT VENTURE

(E & B)

SUMMARY

- claim block 297 units
staked late in 1980
- first stage : helicopter AEM + mag. during 1981.
: Survey revealed numerous anomalies.
- 2nd stage : geological mapping + stream silt sampling with
emphasis on AEM anomalies.
 - a) : detailed soil sample survey carried out on the
Horsefly pyrite deposit. A massive pyrite sample
from it assayed 0.3% Cu, 4.55% Zn + 1.5oz/t Ag
∴ detailed ground follow-up recommended.
 - b) elsewhere 3 areas underlain by pyritic quartz-sericite
schist were found to be anomalous in Cu + Zn
 - Marmot
 - Pond
 - Strike

Location & Access

- 80 Km south of the town of Prince Rupert
- float plans and helicopters used. -beavers + otters available in Prince Rupert
and Terrace. as well as helicopters
- base camp on Johnston Lake.

ECSTALL HELICOPTER EM AND MAGNETOMETER SURVEY

Apex Airborne Surveys Ltd

- area 4Km x 14Km in rugged terrain.
- Geonic 33-1 electromagnetometer
 - 2 coaxial coils mounted 6 metres apart in a rigid "bird"
 - operates at 918 Hz.
 - changes in the alternating magnetic field at the receiver coil, caused by eddy currents in the subsurface rock are recorded.
 - changes expressed in ratios of the normal undistorted primary field - expressed in p.p.m
- Geometrics 803 magnetometer
 - total field nuclear precession instrument sensitivity = 1γ
 - the sensor located $\frac{1}{2}$ way between the helicopter and the EM 33-1 bird.

Data Presentation

EM - Profile map shows inphase and quadrature response

Mag - total field contour map.

Interpretation Map -

- Electromagnetometer - measures the "parameter-pair" conductivity thickness.

Five conductors located.

Zone T-1 (North of Ecstall).

Zone T-4

Good conductor 20-30 Mhos, Depth 0-3 metres

Zone T-5

Very high conductance > 150 mhos; Depth 5-20 metre

N.B The Ecstall deposit is located deep in a ravine and the E.M sensor was probably too distant from the deposit to sense it.

Zone T-5 may be the Horsefly Deposit.

T-1 Along strike from Ecstall Py deposit. (2 Km N).

Located in Qtz-ser. schist

No significant minz'n previously reported.

$\sigma_t = 30-50$ mhos, Depth 0-5 metres

A very subtle broad mag "high" 60% over T-1 & 2.

T-2 associated with T-1 6-10 mhos, 0-5 metres

MISCELL. - The pond zone seems to have a slight magnetic expression.

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- T-3 - located 3 Km south of the Ecstall deposit.
- gtz-sericite schist / siltstones, cherty black argillite.
 - narrow response indicating vertical dyke-like source.
 - apparently no magnetic variation
 - 15 → 20 mhos 0-3 metre depth.
 - this requires a second look.

- T-4 - located 1.8 Km NW along strike from the Horsetly massive pyrite zone.
- local distortion in magnetometer contour.
 - at 20 to 30 mhos.
 - in gtz-ser schist

- T-5 - in gtz-ser. schist
- likely corresponds to the Horsetly Massive Py deposit
 - high conductivity + 150 mhos
 - corresponds to 150 mhos mag high.
 - looks like it could be deep
indicated 5 to 20 metres

Miscell - weak response @ Over Mass Showing.

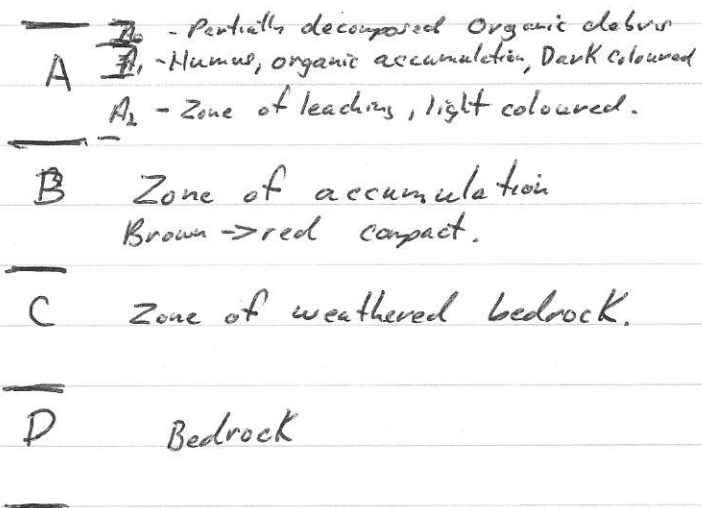
ECSTALL GEOCHEMISTRY

- w) Recon. stream silt-sampled
- one sample per \pm 500 metres
 - Cu, Zn, Pb, and select Au, Ag.

Horsefly Soil Sample Grid

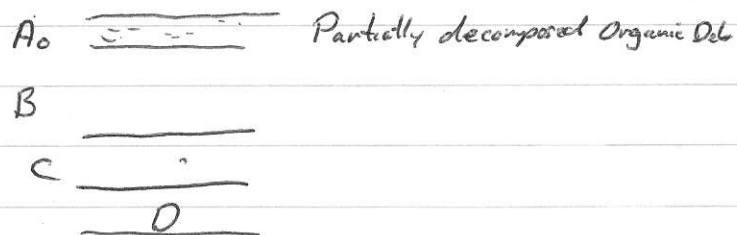
- 4 Km long
- line spacing @ 200 metres
- sample interval @ 100 metres
- 440 samples were collected

- sampled "B Horizon"



- the A & B horizon constitute the solum, or "true soil" above the parent material. They consist of organic material, a leached layer, and a layer of deposition
- the profile grades down into the weathered and then fresh parent material referred to as C and D horizons

- in mountain you have



Anomalous thresholds

- > 80 PPM Cu
- > 50 ppm Pb
- > 100 PPM Zn
- > 25 ppb Au
- > 1.5 PPM Ag.

Barium also analysed selectively. - Anomalous barium contents observed over MS.

JOINT VENTURE TERMS.

- effective April 9, 1981

Active Mineral Exploration Ltd. (Chris Graf) presented joint venture proposal to: Welcome North Mines Ltd } collectively Welcome/
Esperanza Exploration Ltd. } Esperanza
E & B Explorations Inc. E & B.

- property staked by C. Graf of Active Mineral Expl. Ltd.

- Active + Welcome/Esperanza — spent \$20,000 in prospecting, exploration, staking and other activities during 1980 on the Active Property and a defined area of interest.

Because Welcome/Esperanza spent \$20,000 on the area they are assured a right to participate in development of the active property.

- E & B agreed to enter into an option to form a joint venture with Active & Welcome/Esperanza.

E & B vs Active, Welcome/Esperanza Agreement.

- exclusive option to earn: E & B 50% interest
Welcome/Esperanza 50% interest

- option requirements:

- 1) E & B to carry out \$200,000 expl. program. during 1981
- 2) E & B and Welcome/Esperanza paying Active their respective proportions of the following payments:

\$20,000 Dec. 31/81

\$20,000 Dec. 31/82

\$40,000 Dec. 31/83

WELCOME/ESPERANZA INTEREST

: as of Dec. 31/81, assuming E & B has carried out their \$200,000 expl. program.

Welcome/Esperanza has 50% interest.

: if they want to maintain their 50% interest they will have to put up 50% of the money in 1982 etc. or be diluted.

Dilution =
$$\frac{\text{Party's Deemed and actual Expenditure + Payments}}{\text{Total deemed and actual expenditure + 300\% of option payment}}$$

~~plus 300% of option payment~~

: in the event a non-contributing party has its interest diluted to less than 10% working interest — it will be converted to 10% net proceeds of production royalty

ACTIVE INTEREST

1.0% Net Proceeds of production from the Active Property or any property staked within area of interest.

5% Net Proceeds of production from any property acquired from others pursuant to paragraph 5.01. ~~by any party w.~~ by purchase, option etc by the Joint Venture members within the area of interest.

OPERATOR

- committed to propose a program of not less than \$100,000/yr. if it does not, then a contributing party which is not the operator may become the operator by proposing & committing a one year program.

- operator shall provide the parties with written monthly program reports on accountings of expenditure