

Muskwa  
Kechika SMZ -  
2-3 km from  
Park  
N on the Rocky Mtn. Prov. park.  
N Arcuron

Reds Came -

DRAFT

Prophet River Zinc-Germanium-Gallium Prospect

Lang Bay  
Best Ge (Co.)

94-G-12W

520016

40 mi  
N of  
Hwy.

The Prophet River zinc-germanium-gallium prospect located in the foothills of the northern Rocky Mountains of British Columbia is one of the highest grade germanium-gallium showings in the western Cordillera of Canada and the United States. Germanium is mainly used in fiber optic systems and other electronic devices while gallium's main use is for light emitting diodes (LED's), particularly the newly developed blue and white LED's. According to mineral information published by the United States Geological Survey, germanium metal was priced at \$1,150 US per kilogram in December 2000. Gallium was reportedly priced at \$2560 US per kilogram in March, 2001. Converted to Canadian dollars at \$0.64, germanium metal is worth \$1.80 per gram and gallium metal is worth \$4 per gram.

The property enclosing the prospect consists of 14 two-post mineral claims (Pro 1-14) owned by Archer, Cathro & Associates (1981) Limited. The claims are 55 km west of Trutch on the Alaska Highway between the Muskwa and Prophet Rivers. The property is within the Muskwa-Kechika Management Area near the southern edge of Northern Rocky Mountain Park

Zinc mineralization was originally discovered in the Prophet River area by Cominco Limited which carried out limited soil geochemical sampling, prospecting and geological mapping in 1972 and 1973. Equinox Resources Limited restaked the area after an extensive literature search and wide ranging exploration program that involved sampling over 300 known zinc occurrences for germanium and gallium. Only a few of the occurrences were found to have anomalous values of these relatively rare metals. One notable exception was the Prophet River prospect that stood out head and shoulders above all other candidates. Equinox carried out geochemical surveys, geological mapping, bulk sampling and limited diamond drilling on the prospect in 1986 and 1987.

Widespread zinc-germanium-gallium mineralization with accompanying zinc soil geochemical anomalies and mineralized float boulders have been outlined along a linear, north trending, 2.5 km long zone of well developed brecciation and silicification within Middle Devonian Dunedin Formation reef limestone. Underlying Stone Formation dolomite and overlying Besa River Formation shale are less reactive and do not host significant mineralization.

Two types of mineralization are present. **Type I mineralization** is hosted by areas of intense silicification. In outcrop, the silicified zones are massive, dark grey to black in colour and resistant to erosion. Mineralized material consists of quartz, fine-grained disseminated sphalerite (which has a reddish to purplish tinge), irregular segregations of black, vitreous pyrobitumen, some euhedral crystals of galena (sphalerite->galena), and minor pyrite. Quartz-pyrobitumen veinlets are common. In polished section, minor chalcopyrite inclusions in sphalerite and germanite (a germanium sulphide) were identified. SEM studies indicate that the sphalerite is very unusual with respect to that of other nearby Mississippi Valley Type zinc occurrences in that it contains almost no iron and up to 1% copper.

Where sulphide minerals are present in greatest abundance (sphalerite may comprise up to 50% of the volume), the silicification is intense and no sedimentary textures are preserved. In areas of less intense alteration, the rock has a distinctly brecciated texture. Silicified breccia fragments may locally be replaced by sphalerite and/or pyrite and they are hosted by a matrix of silica, pyrobitumen and disseminated sulphides.

- 3 km long zone of silicification and zinc geochem.

**In conclusion:**

- the Prophet River prospect is one of the highest grade germanium-gallium showings in the western Cordillera of Canada and the United States;
- germanium and gallium are associated with zinc mineralization that is structurally controlled but restricted to a porous Middle Devonian reef limestone unit;
- zinc-germanium-gallium mineralization is contained within a 2.5 km long, linear zone of brecciation and intense silicification with associated barite and lesser fluorite;
- the style of mineralization is distinguished from Mississippi Valley Type zinc-lead mineralization elsewhere in the northern Rocky Mountains by the presence of intense silicification, abundant barite and distinctive low-iron, copper-rich, reddish coloured sphalerite; and
- the potential of the largely overburden covered claim group has not been adequately tested by the previous exploration programs.

April 24, 2001

# ARCHER, CATHRO

& ASSOCIATES (1981) LIMITED

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## **PROPOSED OPTION TERMS** **PROPHET RIVER ZINC, GERMANIUM, GALLIUM OCCURRENCE**

Archer, Cathro & Associates (1981) Limited is prepared to sell 100% of its interest in Pro 1-14 mineral claims covering the Prophet River occurrence for \$500,000 cash (with no work commitments) and other consideration as outlined below.

### Cash Payment Schedule

on signing	\$ 20,000
6 month anniversary	20,000
12 month anniversary	20,000
18 month anniversary	20,000
24 month anniversary	20,000
30 month anniversary	40,000
36 month anniversary	60,000
42 month anniversary	100,000
48 month anniversary	200,000

### Other Considerations

- a 2% NSR (definition attached) with the optionor having the right to purchase half of the NSR at any time for \$500,000;  
  
a 5 km area of influence around the perimeter of the Pro 1-14 claims;
- a minimum of four years' assessment credit on any of the Pro 1-14 claims that are returned and at least one year's assessment credit on claims that are returned from the 5 km area of interest;
- two copies of all final reports for each year's exploration on or before February 28 of the ensuing year; and,
- a \$100,000/year advance royalty cash payment starting eight years after the signing date.

## **PROPOSED**

### **NET SMELTER RETURNS ROYALTY SCHEDULE**

#### **1. Interpretation**

##### **1.1 Where used herein:**

- (a) "Agreement" shall mean the above-referenced agreement, including any amendments thereto;**
- (b) "Property" shall mean those mineral claims or other mineral interests which are the subject of, or which become subject to, the Agreement or which are otherwise included in or become part of the Property;**
- (c) "Fiscal Period" shall mean each calendar year or other period of twelve consecutive months adopted for tax purposes during the term of the Agreement; and,**
- (d) "Royalty" shall mean the percentage share of Net Smelter Returns payable under the Agreement.**

**1.2 All capitalized terms in this Schedule which are not defined herein shall have the meanings ascribed thereto in the Agreement.**

#### **2. Net Smelter Returns**

**2.1 "Net Smelter Returns" shall mean the actual proceeds received from any mint, smelter, refinery or other purchaser for the sale of ores, metals (including bullion) or concentrates produced from the Property and sold or proceeds received from an insurer in respect of such ores, metals or concentrates, after deducting from such proceeds the following charges to the extent that they were not deducted by the purchaser in computing payment:**

- (a) smelting and refining charges;**
- (b) penalties, smelter assay costs and umpire assay costs;**
- (c) cost of freight and handling of ores, metals or concentrates from the Property to any mint, smelter, refinery, or other purchaser;**
- (d) marketing costs;**