

(author - Gerry Carlson)

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Property File - 082FSW 290

-Katie

896267

**The Katie Cu-Au Porphyry Deposit, British Columbia**

J.A. Chapman Mining Services, 604.536.8356

The Katie property, located seven kilometers southwest of Salmo, B.C. was discovered in 1977 by Amoco Canada from a government RGS survey. Amoco outlined a one km by one-half km soil copper anomaly. Ken Murray acquired the property and defined a coincident gold soil anomaly. In 1990 junior Yellowjacket Resources Limited formed a joint venture with Hemlo Gold and Brenda Mines that drilled 8,260 m in 34 core holes. The soil anomaly was expanded to 1.5 km wide by over 2 km long and geophysics included comprehensive grid magnetics and IP surveys. In 1992, Yellowjacket drilled an additional 4,477 m in 18 holes. The property was re-staked by John A. Chapman and KGE Management Ltd. in 2001.

The Salmo area is underlain by an arcuate belt of sedimentary and volcanic rocks of the Lower Jurassic Rossland Group, in fault contact with Paleozoic Kootenay Terrane rocks to the south and the late Jurassic Nelson Batholith to the north, east and west. The Rossland Group includes the Archibald Formation clastic sediments, a thick sequence of volcanic and epiclastic rocks of the Elise Formation and Hall Formation clastics. They are cut by synvolcanic intrusives, Middle Jurassic to Cretaceous granitic intrusions of the Nelson Batholith, the Middle Eocene Coryell intrusions and felsic to mafic Tertiary dikes.

The Katie claims cover intermediate to mafic flows and volcanoclastic rocks of the Elise Formation. Synvolcanic intrusive rocks underlie a large portion of the property and range in composition from monzonite to monzogabbro. Younger intrusive rocks include feldspar porphyry, rhyolite, lamprophyre and diabase.

Drilling has outlined widespread alkaline porphyry copper-gold mineralization within an area 2.5 km by 1.75 km focused on three zones – Main, West and 17. From one percent to greater than 10 percent pyrite and chalcopyrite occur as disseminations, fracture fillings and veins associated with contacts between monzodiorite dikes and volcanics. Weathering effects have been noted to a depth of 20 m or more, with secondary malachite, azurite and local chalcocite.

Potassic core zones, with copper grades up to one percent and gold in the range of 0.5 gm/tonne are characterized by pervasive, vein and stockwork K-feldspar, with biotite, quartz, chlorite and sometimes coarse magnetite grains. These are enveloped by broad areas of propylitic alteration including pervasive and fracture controlled epidote, chlorite, hematite and magnetite. The potassic and propylitic alteration largely obliterates primary textures, with the exception of feldspar and pyroxene phenocrysts.

Mineralization and alteration are controlled by northwesterly oriented structures and are zoned outwards from highest copper and gold in the potassic cores, followed by lower grade values in the propylitic zone. A late stage of mineralization includes strongly deformed quartz-carbonate-sulphide veins within mylonitic shear structures. Sulphides include pyrite, chalcopyrite, tetrahedrite, molybdenite and arsenopyrite.

The Main Zone is northwest striking, steeply northeast dipping, 70 to 135 m thick and at least 500 m long, open in both directions and to depth. Copper grades average from 0.25% to 0.3% while gold values range from 0.15 gpt to 0.45 gpt. The 17 Zone is geologically similar to the Main Zone, 670 m to the south. It strikes northwest, dips gently to the east and has been outlined by limited drilling over an area 300 m by 110 m. Average grades are 0.28% copper and 0.3 gpt gold.

The property holds significant additional exploration potential. The drilling has been mostly directed to the northwest, parallel to the main controlling structure. The identified higher grade potassic core zones have not been fully tested. The Main Zone is open to the northwest and southeast, while the best results from drill holes in both the West and 17 Zones are on the edge of the areas tested. Soil geochemistry and IP define extensions to these zones as well as a number of other untested targets. Additional drilling is warranted.

## KATIE PROPERTY (Cu, Au, PGE's?)

### *Fact Sheet, August 2001*

- Location**
- Seven kilometers southwest of Salmo, British Columbia, Canada. Reference NTS map 082F03W, MinFile 082FSW290. See CIM Special Volume 46, pgs 666 – 673, "The Katie Copper-Gold Porphyry Deposit".
- Access**
- Two kilometers south of Salmo on Highway 6, then six kilometers west via Hellroaring Creek logging road to near its headwaters.
- Land Package Ownership**
- Two contiguous Mineral Claims consisting of 40 Units (1,000ha) in the Nelson Mining Division.
- Completed Exploration**
- John A. Chapman (50%) and KGE Management Ltd. (50%). Gerald G. Carlson is the President and major shareholder of KGE Management Ltd.
  - In 1977 a government RGS survey indicated anomalous copper values in silts from Hellroaring Creek. Amoco Canada Petroleum Company Limited followed up with a geochemical survey in 1980 and identified a large (1 km by 0.5km) and intense (+100 ppm) copper-in-soils anomaly over what would become the Katie deposit. In 1985 prospector Ken Murray staked the copper-in-soils anomaly discovered by Amoco and conducted a successful geochemical survey for gold-in-soils, indicating partially coincident anomalous gold-in-soils values compared with Amoco's copper anomaly. In 1988 Balliol Lassiter Petroleum Limited optioned the property and conducted geological and geophysical surveys and a four-hole, 305 meters core drilling program in 1989. The best hole, KT-89-4 intersected 6 meters grading 0.24% copper and 0.2 gpt gold. In 1990 Yellowjacket Resources Limited acquired Balliol's option interest in the property and formed a joint venture with Hemlo Gold Mines and Brenda Mines Limited. Over the next two years the joint venture conducted geological and geochemical surveys and drilled 34 core holes totaling 8,260 meters. Yellowjacket took over as Operator in 1992 and drilled 18 core holes totaling 4,477 meters. The drilling identified three zones of mineralization referred to as the Main, West and 17. The property lapsed and John Chapman acquired the property by staking in August 2001 with a view to examining the PGE potential in the mafic and ultramafic rocks in and adjacent to the Katie alkaline porphyry deposit. No known PGE assays have been made on rocks from the deposit.
- Resources**
- No calculations have been conducted to define the copper-gold resource. George Cross News Letter, June 3, 1992 states, "Large Tonnage East Kootenay Copper-Gold Porphyry Being Expanded by Current Drilling... 47 NQ core drilling holes have indicated a copper-gold shear related porphyry intrusive over a 1000 feet east-west, 150 feet north-south and minimum 600 feet of continuous depth... the potential of several 100,000,000's tons on the property is the outstanding feature learned during a recent project tour". Many of the core holes drilled by the various operators cut continuous +300 feet intervals grading about 0.2% copper and 0.01 opt gold, which were reported in News Releases and in Assessment Reports. Enough core drill sampling and surface sampling has been generated to warrant the development of a block model and the calculation of resources.
- Area Production**
- The Katie deposit occurs in one of the most highly mineralized parts of British Columbia, between the mining towns of Salmo, Rossland and Nelson. The area immediately over and for a considerable distance surrounding the Katie is categorized by the Geological Survey of British Columbia as having the highest possible ranking for "Mineral Potential - Metals". Historical mines in the region include the LeRoi, Silver King, Jersey, Emerald, HB, Reeves MacDonald, Yankee-Dundee, Ymir, and many others. In Memoir 308, Nelson Map-Area, West Half, British Columbia, 1959, the Author H.W. Little states, "... about one third of the properties in the province [British Columbia] that have produced metals are within the map-area.
- Geology**
- Host rocks for the deposit are mafic volcanic and intrusives of the Elise Formation belonging to the Lower Jurassic Rossland Group. The volcanics range in composition from andesite to basalt and include flows, flow breccias and tuffs, as well as syn-volcanic gabbro to monzonite dikes and sills. Mineralization occurs within a classic alkaline copper-gold porphyry-style system, with a potassic core surrounded by a broad propylitic zone. The pervasive potassic alteration includes K-feldspar, plagioclase, quartz, biotite and chlorite and corresponds to the elevated copper and gold values. Sulphide minerals include pyrite and chalcopyrite with minor pyrrhotite, sphalerite, tetrahedrite, bornite and molybdenite. The propylitic zone is characterized by epidote, chlorite, sericite and calcite with pyrite. Two major mineralized zones have been identified, characterized by copper values in excess of 0.2% and gold values in excess of 0.25 gpt. The **Main Zone** is 70 to 135 meters thick and at least 500 meters long. The **17 Zone** is 90 meters thick and at least 300 meters long. Both zones are open along strike and at depth. A second, later style of mineralization cuts the Main Zone and consists of quartz-carbonate-sericite mylonites containing up to 30% sulphides, including pyrite, chalcopyrite, tetrahedrite, molybdenite and arsenopyrite. Gold grades range up to 0.5 gpt with copper typically in the 0.1% to 0.2% range.
- Environment**
- The deposit is located between 1,200 meters and 1,700 meters elevation on the headwaters of Hellroaring Creek. The area is being actively logged with approximately 50% of the claim area clear-cut.
- Potential**
- The Katie deposit and surrounding area has potential for discovery of further copper, gold and perhaps PGE's. Similar Alkaline copper-gold porphyries in BC such as the Copper Mtn., Afton and Mt Polley mines contain PGE's. Also, PGE's have been reported as recovered from copper-gold ores at the Trail smelter in the period 1918 to 1930. The deposit setting lends it to development as a large low-grade open pit operation. Major highways, high capacity electric transmission lines and a high capacity natural gas pipeline are all located within 10 kilometers of the deposit.
- Area Claims**
- Adjacent to the south boundary of the Katie property is a large group of claims formerly owned by Falconbridge Limited and now controlled by Doublestar Resources Ltd. (acquired all of Falconbridge's BC mineral properties).
- Status**
- The Eden claims that cover the Katie deposit are available for option. Contact John Chapman at 604-536-8356 (Email: jacms1@sprynet.com), or Gerald Carlson at 604-688-0833 (Email: gcarlson@copper-ridge.com).

Katie

Property File

082FSW290

**Payie, Garry EM:EX**

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**From:** John A. Chapman [jacms1@sprynet.com]  
**Sent:** Monday, January 28, 2002 4:16 PM  
**To:** Payie, Garry EM:EX  
**Cc:** Gerald Carlson; Jones, Larry EM:EX; Schroeter, Tom EM:EX  
**Subject:** RE: Katie Fact Sheet



Katie Fact Sheet.doc



Katie Roundup Abstract A.doc

Garry, Attached are two write-ups done by Dr. Gerald Carlson, Geologist (part owner of Katie) that may assist you in doing your update. John

-----Original Message-----

**From:** Payie, Garry EM:EX [mailto:Garry.Payie@gems4.gov.bc.ca]  
**Sent:** Monday, January 28, 2002 3:29 PM  
**To:** 'John A. Chapman'  
**Subject:** RE: Katie Fact Sheet

John,

Just wanted to apologize for not getting to the Katie update that I promised a few months back. I received a major assignment at about the same time we discussed the update and it fell off my radar screen. I was reminded of the task today by way of Tom Schroeter.

Feel free to prod me directly if such a thing happens again.

Garry

-----Original Message-----

**From:** John A. Chapman [mailto:jacms1@sprynet.com]  
**Sent:** Wednesday, September 05, 2001 8:03 PM  
**To:** Payie, Garry EM:EX  
**Subject:** FW: Katie Fact Sheet

Garry, FYI. Regards, John

-----Original Message-----

**From:** John A. Chapman [mailto:jacms1@sprynet.com]  
**Sent:** September 5, 2001 8:57 AM  
**To:** Cathro, Mike EM:EX  
**Cc:** Tom Schroeter; David Terry; Trygve Hoy  
**Subject:** RE: Katie Fact Sheet

Hi Mike,

Attached is the "final" version of the Fact Sheet for Katie. I have spoken with both Ken Murray and Greg Hawkins and neither ever did analysis for PGE's at Katie. Greg thought there was a valid argument for PGE's at Katie given the mafic rocks and the deposit's similarities to Afton and Similco.

Regards, John

PS. Greg Hawkins has several meters of select high-grade core from Katie at the CME office in Richmond. Also, the core from drill programs at Katie are supposedly stored behind a garage in Salmo. I will try to get up there next

week to meet with Ken Murray and to view the core and determine if it should be moved to more secure storage.

-----Original Message-----

From: Cathro, Mike EM:EX [mailto:Mike.Cathro@gems2.gov.bc.ca]  
Sent: August 29, 2001 4:52 PM  
To: 'John A. Chapman'  
Subject: RE: Katie Fact Sheet

Hi John,  
Looks very good. I read it carefully and didn't notice any mistakes.

When you have a final version, I suggest you send it to Trygve Hoy and David Terry (my recently hired counterpart in Cranbrook), if you haven't already.

By the way, Trygve is just in the throes of completing a major Bulletin on the metallogeny of the Rossland Group. I saw him last Thurs and he was telling me about it. Apparently it will include a bunch of previously unpublished data including Pb isotopes, fluid inclusions and dates (?) on mineralization from throughout the Rossland Group. He may have some additional ideas and suggestions about Katie.

Good luck.

Mike  
Mike Cathro  
Regional Geologist, Kamloops  
BC Ministry of Energy and Mines

tel: (250) 828-4566 fax: (250) 828-4726  
email: mike.cathro@gems2.gov.bc.ca

-----Original Message-----

From: John A. Chapman [mailto:jacms1@sprynet.com]  
Sent: Tuesday, August 28, 2001 8:17 PM  
To: Cathro, Mike EM:EX  
Subject: Katie Fact Sheet

Hi Mike, This is the first pass draft by Gerry and me. Regards, John