

MAR 19890001: CROWSNEST PASS

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CROWSNEST METALLICS LTD.

1989 FIELD SEASON REPORT

The 1989 field season conducted by Crowsnest Metallics Ltd. on its metallic exploration permits in the Crowsnest Pass began in early 1989. The objectives of the program were to complete a detailed mapping reconnaissance of the property and a detailed geochemical sampling program consisting of soil, sediment and rock samples taken at selected points over the property for the purpose of determining the extent, if any, of the sulphide mineralization within the main body of the Crowsnest Volcanics.

Preliminary work conducted over the winter and early spring of 1989 seemed to indicate that significant gold values as high as .014 oz per ton were found in sulphide bearing breccias of the Upper Crowsnest Volcanic member. Tests conducted using heavy mineral separates performed at the University of Alberta in the late spring gave values as high as .074 oz per ton (2.6 ppm gold).

Because of the gold concentration found in the magnetic portion of this sample, a comprehensive sampling program was also undertaken several miles to the east of the Crowsnest Volcanic

formation (permit numbers 688906005 and 68890⁵009). This property consists of a paleo placer consisting of the consolidated material weathered from the Crowsnest Volcanics. This material is a titanomagnetite with values running as high as 12% Ti in certain samples, with significant values of vanadium averaging .25%. It was thought that this material might contain gold values, considering that its source was the Crowsnest Volcanics. This was not proved to our satisfaction this summer, but some samples returned values as high as .006 oz per ton gold, with silver values on the order of .08 oz per ton.

The property encompassing Crowsnest Permits #6889030001, 6889040001 and 6889040002 is a rugged area. Access is by roadways following the creeks and drainage pattern of the region. Due to budget restraints, a helicopter was out of the question for our field work, and transportation was restricted to foot traverse and small motorcycles. The work began with a comprehensive survey from the north end of the property north of Ma Butte with stream sediment samples and rock chip samples. Ma Butte was climbed and samples were collected all the way to the summit. Several days were spent on this mountain, and a good suite of rocks has been collected.

The area between Highway #3 at Coleman and Ma Butte was then sampled with rock chips and sediment samples collected from MacGillivray Ridge and Wedge Mountain. This material is composed

of massive upper member, and with the exception of small localized showings, the mineralization to be found in this unit was not encouraging, based upon cursory examination of surface material. No visible mineralization was present to the naked eye. Assays of selected samples gave disappointing gold values on the order of 5 ppb to 15 ppb.

One thing that became evident very quickly in the course of the exploration season was that mineralization seemed to be associated with several large northeast trending structures which bisect the property. These structures were possibly conduits for mineralizing fluids and the highest values found on the property were in association with these structures. The values for surface samples collected from the non-mineralized body of the Volcanics, distant from any of the major structures, ran either a blank (indicating no gold) or showed values on the order of 5 ppb.

It should be noted that the area of Iron Ridge which was first sampled in early 1989 for gold values seemed to show the most promise. This zone is mineralized all along the highway cut (Highway #3) just outside the town of Coleman, and is also intersected by one of the large northeast trending structures which cross the property. It was on the basis of samples collected from this area that the original claims were filed.

Extensive interviews with local residents and sampling of sulphide material from some of the local coal mines gave a confusing picture. Some of the samples from the north end of our claims in the vicinity of Racehorse Creek gave copper values as high as 25% in a float sample of chalcopyrite, with silver values running about 5.5 oz per ton. Samples of mine water from old coal workings were checked for gold and silver values, but results of this line of investigation are inconclusive at this time. It is one of the objectives of the 1990 field season to continue this research.

Several hundred samples were collected along the north-south trend of the Volcanics from the north, along Racehorse Creek, to the south, along Willoughby Ridge. The area south of Coleman in the vicinity of the pipeline cut (Ash Ridge) seems to show some promising mineralization. Work will be continuing in this area during the 1990 field season.

Detailed mapping of the Volcanics is very difficult due to the nature of the deposit. Maps by Price and existing work by Robin Adair are incomplete, dealing mostly with the highway cut, some sections at Ma Butte, and the pipeline cut.

Work at Burmis (Permit Nos. 688906005 and 688906009) consisted of a detailed sampling of several outcrops of this formation. The country is rugged and without the use of

helicopters, field work in this area may be slow. The outcrops of the Burmis deposit were followed based on the work of Mellon in 1959. Samples were taken to confirm some of the test results of the 1959 study of this deposit.

While initial work on the deposit focussed on the possibility of a paleo placer which might contain free gold, later work was directed toward the promising titanium values found in this deposit. Work by Mellon put the size of the deposit at about 3 million tons of ore grading about 40% magnetite by weight, with an average titanium value of about 3.5%. Later work in 1969 raised the amount of this reserve to about 15 million tons based upon drilling done in 1969. There seems to be some disagreement concerning the size of this deposit, for another study by Energy, Mines and Resources put the reserve on the order of 30 million tons. If this proves to be correct, it is possible that this deposit may contain sufficient titanium for a domestic industry. This is currently being explored by the Alberta Department of Industry, Trade and Commerce. Several tentative feelers have been extended to several major U.S. firms with the possibility of establishing facilities in Southern Alberta.

Given the fact that Alberta has a magnesium facility at High River, about 60 miles from the Burmis site, and that plentiful power is available on the Burmis site (the transmission lines

cross the property), this location may be suitable for the development of a titanium metal production facility. It is hoped that, should this proceed, it will fit in with Alberta's plan for a secure domestic supply of this vital metal.