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Brief on Cirque Lead-Zinc Deposit in Northeast B.C. $BY : D_{ev} M_{c} In TrR^{c}$

The Cirque deposit is located in Northeastern British Columbia: 925 kms north of Vancouver, 475 kms northeast of Prince Rupert, and 280 kms north of Mackenzie.

Access to the property at present is possible by air and intermittantly by logging roads from Mackenzie. Mackenzie is linked by rail to major port facilities at Prince Rupert and Vancouver.

The deposit was discovered by conventional prospecting and geochemical techniques in 1977 and further explored by surface diamond drilling from 1978 to 1982. To date a total of \$21,000,000 has been spent on the project: including \$11,000,000 drilling at Cirque and South Cirque (74 holes totalling 23,400 m and 28 holes totalling 21,250 m respectively); \$3,250,000 on other claim groups and regional exploration; and \$5,300,000 on road and airstrip construction. Curragh Resoures acquired the property in November 1985.

Geologically the deposit is a stratiform, sediment hosted leadzinc-silver bearing, massive sulphide/barite deposit. Geometrically the deposit is a tabular body, 1000m long, 300m wide and from 2-70m thick dipping 30° to 40° opposite the topographic slope.

The Cirque deposit proper contains geological reserves of 32,170,000 tonnes at 2.15% Pb 7.88% Zn 47.7 g/t. A high grade core contains mining reserves of 22,170,000 tonnes averaging 2.74% Pb 9.25% Zn and 57 g/t at an 8% Pb + Zn cutoff. 86% of this mining reserve is judged to be extractable.

Freliminary drilling one km south of the Cirque has indicated the presence of an additional deposit, South Cirque, with potential to contain 20,000,000 tonnes of similar tenor to Cirque. The South Cirque deposit is located along the proposed production adit for the Cirque.

Metallurgical test work done to date indicates that Cirque ores produce a high quality zinc concentrate and an average quality lead concentrate with conventional flotation; an additional silver concentrate is possible by leaching silver rich pyrite tailings.

Feasibility studies indicate that the property can economically support a 3500 tpd underground mine and surface concentrating plant producing 170,000 tonnes of zinc concentrate, 54,000 tonnes of lead concentrate and 1,000,000 ounces silver annually for 15 years. Further potential from South Cirque and possibly other properties in the area will prolong the life by a number of years.

Employment would see 400 jobs during construction and 274 permanent jobs at the minesite plus 100 in secondary and service industries. A flyin-flyout operation is planned.

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To further evaluate the deposit for mining, an underground exploration program with a total estimated cost of \$10,000,000 will be necessary. This program will include 1600m of underground tunnels and 13000m of underground diamond drilling, necessary bulk sampling and metallurgical testing, mine planning and design work. This program must be commenced during the early summer season.



Figure 2. Location of Cirque deposit in northeastern British Columbia. Major highways and rail transportation routes are shown.



Figure 3. Location of Cirque deposit and Elf and Fluke claim groups near Williston Lake, northeastern British Columbia. Logging roads along the west side of Williston Lake are indicated. Finbow airstrip southwest of the Cirque deposit is also shown.





Figure 9. Distribution of baritic and pyritic mineral facies for the main Cirque deposit. Viewer's perspective is from the south; cross-sections trend 050°. Pyritic facies dominates in the north end of the deposit. Baritic facies forms a partial envelope around the pyritic facies.

