

Cirque Property

- Ownership: - 50% Cyprus Anvil Mining Corp. (operator) and 50% Hudson's Bay Oil & Gas
(Cyprus Anvil now controlled by HBOG)
- Location: - 465 km north-northwest of Prince George in the western ranges of the Rocky Mountain Fold & Thrust Belt
- lat 57°30'N long 125°09'W
- Access: - fixed wing aircraft from Mackenzie or Prince George to the FINBOW Airstrip on the Finlay River thence via helicopter to the property a distance of 30 km to the NE
- the camp is located at the Airstrip
- a road is currently being constructed from the Finbow camp up the Paul River valley to the property and should be completed during the winter
- Discovery: - discovered in 1977 during airborne prospecting and regional geochem survey
- attracted by gossan in creek bed
- galena-bearing barite discovered in scree slope next to gossan
- Work Done: 1977 - mapping, soil, silt geochem
1978 - orthophoto base map, line cutting, soil samples, EM survey, diamond drilling
1979 - 8,000 m drilling
1980 - 12,000 m drilling; camp and airstrip construction, ground survey
1981 - 12-15,000 m drilling; road construction; preliminary feasibility and environmental studies
- Estimated Expenditures: 1977 - \$30,000; 1978 - \$150,000; 1979 - \$300,000
1980 - \$4,000,000; 1981 - \$10,000,000
- the project is estimated to require \$375 million (in 1980 dollars) to initiate production
- Known Reserves: 30 million tonnes - 2.2% Pb; 7.8% Zn; 48 gms Ag/tonne drill indicated (at completion of 1980 program)
- object of 1981 drilling to increase reserves to plus 40 million tonnes, the projected tonnage necessary for economic feasibility
- Geologic Setting:
- Cirque is one of several stratabound barite-sulphide deposits that occur within a 180 km NW trending belt of Devonian basinal sediments
- complex structure with NE directed thrusting and folding
- ore body occurs in small fault-bounded sub-basin that is defined by anomalous thickening of sedimentary units
- the Devonian host rocks are anomalously siliceous and pyritic with associated high barium and base metal concentrations

- the mineral deposit and host rocks are preserved with the SW dipping lower limb of a synform that has been truncated and overridden by imbricated thrust plates of Silurian and Ordovician age clastic rocks

Orebody:

- bands and laminae of sphalerite and galena occur within alternating beds of barite and pyrite
- grade and thickness increase down dip to SW with concomitant increase in massive pyrite
- orebody varies from 5 m on surface to greater than 90 m thick down dip (probable tectonic thickening)
- cut by normal faults

Mining:

- orebody dips moderately to steeply to SW and is deeply buried necessitating underground operation
- 2.5 km adit connecting with road in Paul River valley is required for further exploration and orebody delineation
- to be completed in 1982(?)
- at current conceptual stage of planning
 - a) production at 6000 tonnes/day
 - b) smelter concentrator at mine site with concentrate trucked to Ingenika, barged to Mackenzie and thence via rail to Prince Rupert for shipment to foreign markets
 - c) no company town, workers flown to mine from Mackenzie or Prince George and housed in camp
 - d) 600 direct jobs
 - e) power from W.A.C. Bennett dam
 - f) earliest feasible production start up late 1986 or early 1987

Metallurgical

Tests:

- preliminary tests indicate good recoveries and concentrate grades for both zinc and lead
- silver on other hand may be problem - only 40% recovery