

OVERVIEW OF THE CIRQUE PROJECT

Location and History:

The Cirque deposit is located in northern British Columbia, 925 km north of Vancouver. It is 475 km northeast of Prince Rupert, the nearest deep water port, and 280 km north of Mackenzie, the nearest railhead.

The deposit was discovered in 1977. Diamond drilling was carried out between 1978 and 1982. A total of \$21,000,000 (in real dollars) was spent on the project by the former owner, Cyprus Anvil Mining Corporation (CAMC). Included in the total were \$11,000,000 drilling at North Cirque and South Cirque (74 holes totalling 23,400m and 28 holes totalling 21,250m respectively); \$3,250,000 on other claim groups in the area and on regional exploration; and \$5,300,000 on road and airstrip construction.

Curragh Resources Inc. acquired the project from Dome Petroleum in 1985 as part of Curragh's purchase of the CAMC assets (which included the Faro Mine in the Yukon Territory). Curragh completed an updated geological interpretation and feasibility study of the project during 1986-1987.

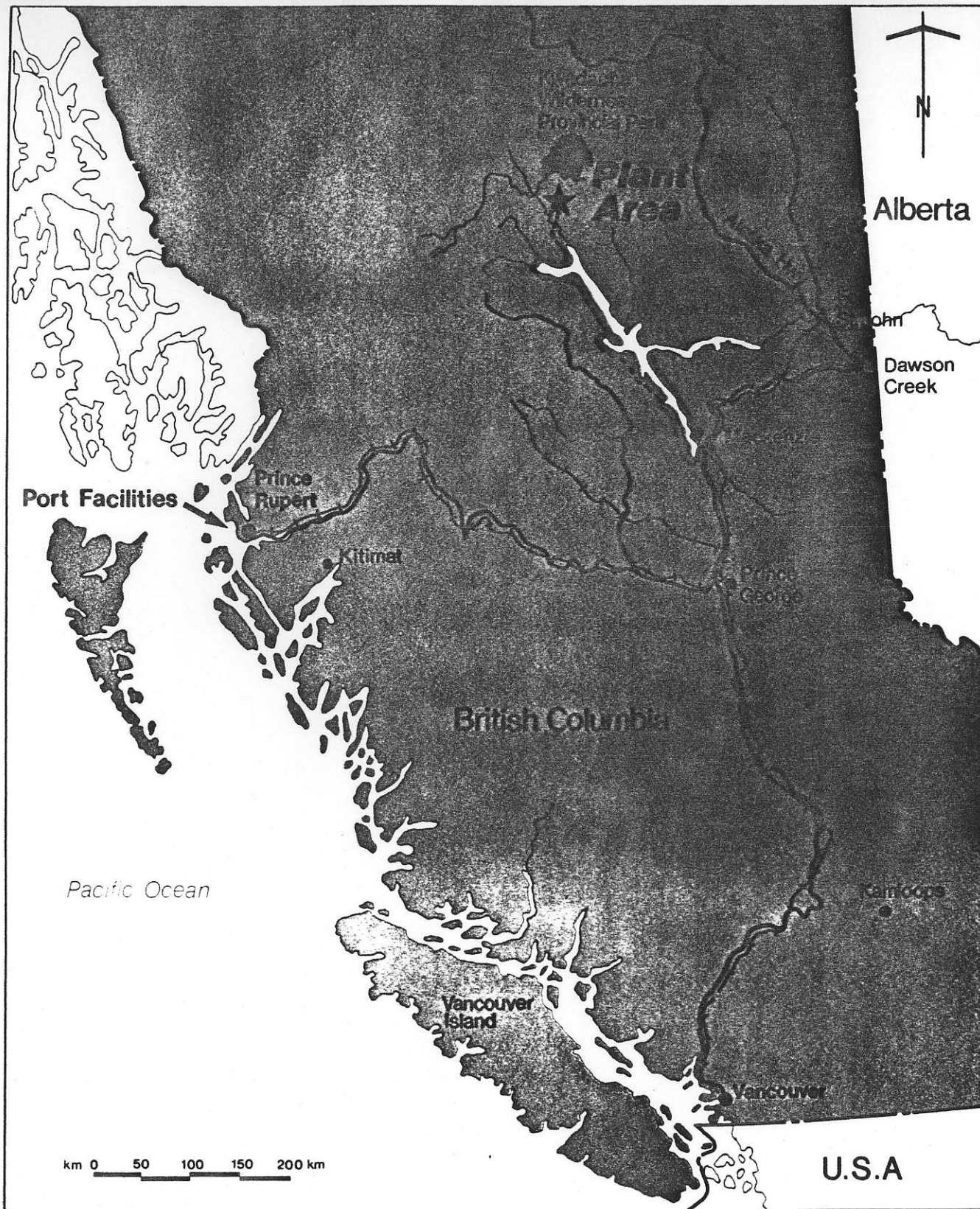
Geology and Metallurgy:

The Cirque project has two interpreted deposits separated by approximately one kilometre: North Cirque and South Cirque.

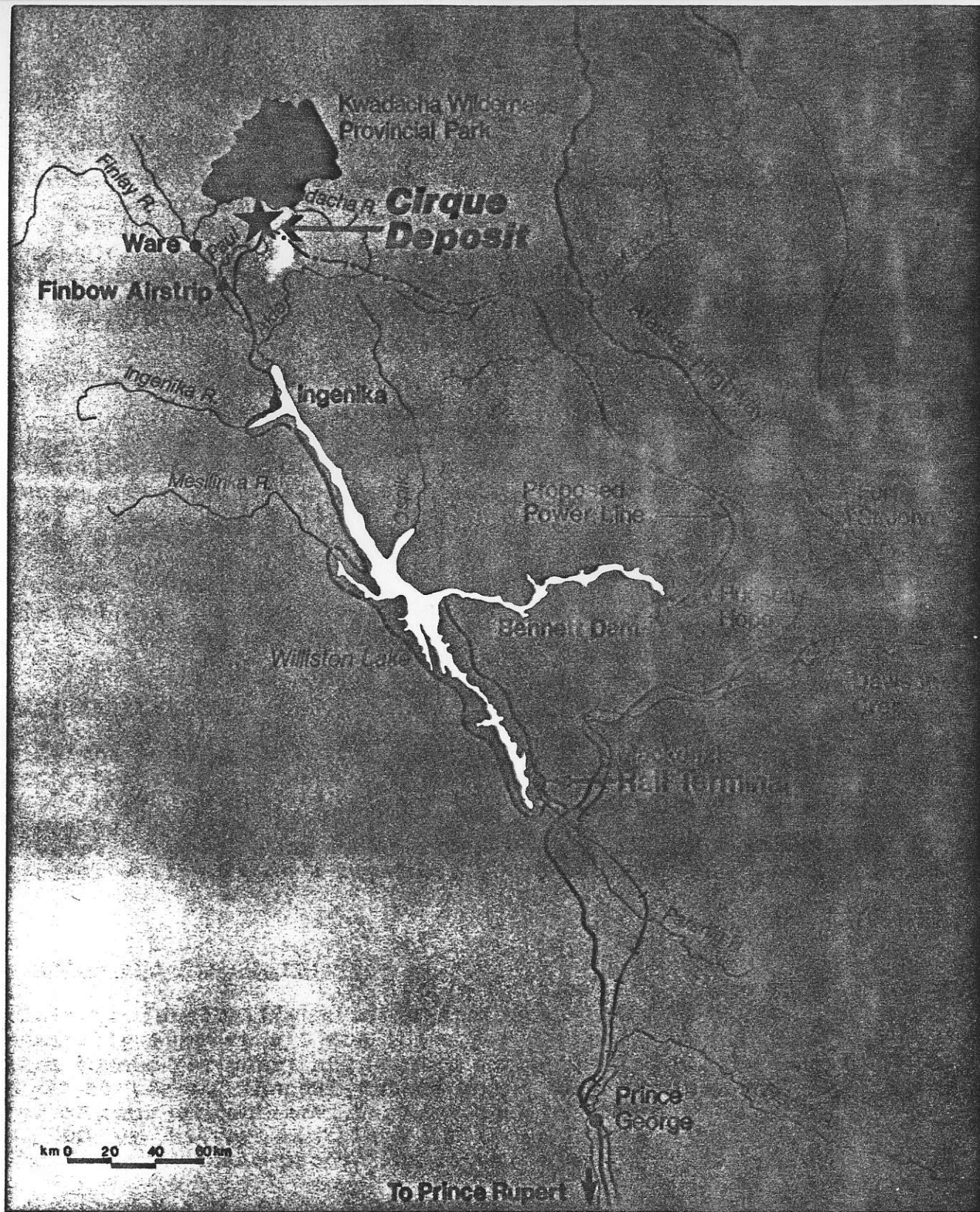
North Cirque is a stratiform, sediment hosted, massive sulphide/barite deposit. The deposit is a tabular body 1000m long, 300m wide and 2 to 70m thick. It dips 30 to 40 degrees towards the southwest, opposite the topographic slope, and plunges south. Geological reserves are 38.5 million tonnes averaging 2.2% lead, 8.0% zinc and 47.2 g/t silver. A high grade zone contains mining reserves of 22.2 million tonnes averaging 2.7% lead, 9.3% zinc and 57 g/t silver at an 8% lead plus zinc cutoff; eighty-six percent of this high grade reserve is judged to be extractable by room and pillar underground mining.

Preliminary drilling on South Cirque indicates 15.5 million tonnes averaging 1.4% lead, 6.9% zinc and 32 g/t silver, with the potential to contain 20 million tonnes of tenor similar to North Cirque. The South Cirque deposit is located below the proposed production adit for Cirque.

Metallurgical test work done to date indicates that Cirque ores produce a high quality zinc concentrate and an average quality lead concentrate using conventional flotation methods. Silver recovery in base metal concentrates is low, however preliminary work shows high silver recovery by autoclave leaching a pyrite concentrate.



**Cirque Deposit
Project Location Map**



Cirque Deposit
Location Map

Further Geology and Mine Planning Work:

To further evaluate the North Cirque deposit, a \$10 million advanced underground exploration program is planned for 1989. This program will include 1,600m of underground development and ~~123,000m~~ ^{13,000m} of underground diamond drilling, necessary bulk sampling and metallurgical testing, mine planning and design work.

This program will employ approximately 40 people, starting in June.

Construction:

Construction will begin after the completion of the \$10 million advanced underground exploration program and the detailed mine planing phases, and will be completed by the end of the third calender Quarter, 1991.

The construction phase will directly employ approximately 200 people and will cost \$120 million.

On-Site Facilities:

Outside the underground mine, on-site facilities will include a concentrator complete with a tailings disposal and environmental control area, a product storage facility, a maintenance and warehousing facility, offices, a small dam on the nearby Paul River for water supply, and a personnel accommodations facility (personnel will work on a fly-in, fly-out basis).

Production and Mine Life:

Preliminary feasibility studies indicate that the project will economically support a 3,500 tonne per day underground mine (1.2 million tonnes per year) and surface concentrating plant for a mine life of 20 years. Annual output would be a minimum of 170,000 tonnes of zinc concentrate, 54,000 tonnes of lead concentrate, with 1,000,000 oz silver contained in concentrates. Output can be expanded beyond these production rates.

The concentrates products will be road-transported by heavy off-highway trucks to Mackenzie and railed to either Vancouver or Prince Rupert, then transloaded onto ships for overseas export markets.

The project will directly employ approximately 250 permanent employees and will spend approximately \$50 million per year in operating costs.

Required Infrastructure:

The required infrastructure for the Cirque Project is as follows:

1. All weather road from Mackenzie to site, including bridges. etc;
2. Overpass or underpass at the intersection of the road in (1) and the existing highway for access to the rail line near Mackenzie;
3. Rail siding at the rail line near Mackenzie;
4. Hydro power line to site;
5. Upgrade of airport near site;
6. Port facilities at Vancouver or Prince Rupert.

Cirque Deposit
Exploration Schedule

Underground Mobilization Excavation Diamond Drilling Demobilization								
		█	█	█	█	█	█	█
			█	█	█	█	█	
				█	█	█	█	█
								█
Surface Studies Soils Surveys and Mapping Environmental Metallurgical Test Preliminary Engineering Transportation Socio-Economic Power Supply Financial Analysis Commercial Support								
			█	█				
			█	█	█			
		█	█	█	█	█	█	
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		█	█	█	█	█	█	█
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			█	█	█			
			█			█	█	
							█	█
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								█
								█
Month	1	2	3	4	5	6	7	8
Year	Year 1							

Underground Exploration	■														
Engineering Studies	■														
Metallurgical Testing	■														
Commercial Negotiation	■														
Permits	■														
Production Decision				■											
Mine Development				■											
Engineering and Procurement				■											
Site Preparation				■											
Surface Construction				■											
Commissioning															
Quarter	1	2	3	4	1	2	3	4	1	2	3	4			
Year	Year 1				Year 2				Year 3						

Cirque Deposit
Development Schedule