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## **Dewatering of an arctic base metal mine in karstic rocks, Pine Point, NWT, with Cominco Ltd.**

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<b>Project Location:</b>	Pine Point Mines, Pine Point, NWT
<b>Client(s):</b>	Cominco Ltd.
<b>Date Completed:</b>	1980
<b>Project Budget:</b>	\$ 1,000,000

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Dewatering, Pine Point Mines

### **Project Summary**

From 1975 to 1985 Dr. Weyer was an Advisor to the NWT Water Board on matters dealing with Mining and Water. On the occasion of his initial visit to Pine Point Mines in November 1975, Dr. Weyer predicted the failure of the dewatering system for the spring recharge due to melting snow. When this occurred, the only operating pit was flooded. Subsequently Cominco Ltd. went into a joint project with the Hydrology Research Institute for Dr. Weyer to investigate the reasons for failure, to facilitate safe dewatering, and to determine possible environmental effects within Wood Buffalo National Park.

During the life of the project the regional and local nature of fractured system, karst systems and associated groundwater movements was successfully investigated, proposals for improved dewatering were delivered, and the effect of dewatering on the flow of karst springs and the probable effect on the nesting area of the Whooping Cranes was documented and evaluated.

### **Services Provided**

- \* Investigation of regional and local groundwater flow systems.
- \* Investigation of the interdependence of groundwater flow and open pit dewatering.
- \* Compilation of a hydrogeological and geological database for the mining area and its surroundings based in DIAND's database of exploration holes in the area.
- \* Preparation of proposals for low cost and more efficient mine dewatering.
- \* Preparation of a 3 volume report compiling the results of the project.

### **Deliverables or Results**

- \* Successfully determined the reasons for previous dewatering failure.
- \* Proposed an improved dewatering scheme.
- \* 3 volume report with compilation of results.