



DAVE L. COOPER *P.Eng.*

Mining Experience

- EIA
- Design
- Diversions
- Water Supply
- Sediment Control
- Dams/Tailings
- Culverts/Bridges
- Dewatering/Drainage

Fording Coal Ltd., Coal Mountain, B.C. (1995 - Present)

Project Manager for the detailed design of Seven Pit Settling Pond, drainage control works along the 4 km long west slope and west access road and re-assessments to lower Corbin Pond for water supply and sediment control to permit expansions of the East Pit Spoil.

Huckleberry Mines, B.C. (1996 - 1997)

Provided detailed design and input during construction of water management facilities for this \$250 million copper mine development near Houston, B.C. Components involved defining site hydrology, tailings pond water balance analyses developing the water management plan and detailed design of diversion ditches, sediment control ponds and culvert crossings.

Bronson Slope Mine, B.C. (1997)

Provided hydrologic input and feasibility design of tailings facilities, hydraulic control structures, spillways and diversions including an inverted siphon for development of this proposed gold mine near Stewart, B.C.

Mont Wright Tailings, Quebec (1997)

Computation of the Probable Maximum Flood (PMF) and hydrologic routing and impact of this event on the tailings facility at this mine for Quebec Carter Mining Company.

Smoky River Coal Ltd., Alberta(1997, 1979)

Surface water specialist for preparation of the Environmental Impact Assessment for B2 Pit and planned expansions to Pits D to F in No. 12 Mine. Investigations involved regional flood and drought hydrology, site correlations, evaluation of performance of existing sedimentation control facilities and projecting impact of operations on the hydrologic flow regime. Conducted flow and aquatic monitoring in 1979 to assess water quality impacts of site specific mine operations.

Suncor Inc., Oil Sands Operation, Alberta (1992-96)

Responsible for evaluation and design of operations and abandonment erosion control measures of the 100 metre high and 5 kilometer long Tar Island Dyke (TID) adjacent to the Athabasca River. Investigations and designs for long term sustainability considered: geomorphic regime changes; climate change; ice, flood and scour impacts; slope stability and weathering. River bank protection and slope erosion control measures were developed.

Responsible for river engineering design input for preliminary and final design of the 400 metre wide Athabasca River bridge to Steepbank mine.

Senior Reviewer of mine drainage abandonment plans, rainfall simulation studies and designs for instrumentation and upgrading of surface water monitoring at mine drainage outlets.

Solv-Ex Corporation, Alberta (1996)

Provided baseline hydrology, Athabasca River water and ice level designs, and supervised plant site runoff and water quality monitoring for this oil sands development.

Syncrude Canada Ltd., Alberta (1993-96)

Provided detailed design of H-flume and weir monitoring devices and senior review of hydrologic studies, investigations, and monitoring programs for the Aurora Mine EIA and ongoing operations. Advised on erosion control measures for Mildred Lake tailings dyke and abandonment drainage plans.



Clough Lake - Cogema Resources Inc., Sask. (1994-96)

Determined the impact of the probable maximum flood on the present and future tailings facility and evaluated alternatives to control runoff into and out of the facility.

Cigar Lake - Cogema Resources Inc., Sask. (1996)

Provided hydrologic and hydraulic design input for modification of water storage and runoff control works for this uranium mine.

OSLO Oil Sands Project, Alberta (1984-1990)

Consultant to Esso Resources Limited for initial hydrologic and drainage planning studies in 1984-85 and Senior Reviewer for subsequent surface water study components including: site monitoring; baseline hydrology; flood and drought frequency analysis; defining disturbed and natural basin runoff parameters; flow regime impact assessments; developing design criteria; and design of water management facilities such as diversions, drainage ditches, sedimentation ponds and lake control structures for this \$4 billion project.

Alsands Energy Ltd. Alberta (1980-84)

Responsibilities included site monitoring; determining optimal drainage plans based on initial site drainage, defining baseline hydrology; regional frequency analysis, defining design runoff parameters, assessing impacts, developing hydrologic and hydraulic design criteria, and design of water management features. Provided hydrologic input for detailed tailings pond water balance studies. Designed and supervised construction of abandonment measures for the initial site drainage network.

Judy Creek North Thermal Coal Project, Alberta (1981-83)

Installed gauges, conducted surface water monitoring, prepared baseline hydrology and developed preliminary design criteria for mine development planning for Esso and Trans Alta Utilities. Regional analyses incorporated the impact of extensive forest harvesting activities.

Elk River Coal Project, B.C. (1977-1983)

Responsible for all hydrologic investigations, design and installation of long term monitoring stations, preparation of a major river diversion and surface drainage designs, reviewing mine plans from a water resources perspective, and preparation of the surface water components of the Environmental Impact Assessment.

Coalspur Project, Alberta (1982-83)

Conducted site monitoring, prepared baseline hydrology, assessed surface water impacts and prepared preliminary designs of drainage facilities for this proposed mine for Dentherm Resources Ltd.

Surface Water Management Guidelines, Alberta (1983)

Project Engineer of "Guidelines for Administration of Surface Water for Mining Developments in Alberta" to be used as Alberta Environment guidelines for the mining industry for all aspects of surface water management.

Sandalta Project, Alberta (1981-82)

Project Engineer of a multi-disciplined team including geotechnical, fisheries and construction/costing components for the design of alternative Hartley Creek diversions for Gulf Canada Resources proposed oil sands mine.

Hinton East Coal Project, Alberta (1981-82)

Responsible for site runoff monitoring, preparation of baseline hydrology, assessing surface water impacts and preliminary design of drainage facilities for this proposed mine by Esso Resources.

Luscar Ltd. Coal Valley, Alberta (1982)

Developed detailed hydrologic design criteria and methodologies to be applied in the design of drainage works, sedimentation control measures, and stream diversions for this operating mine.

Cypress Anvil Mine/Curragh Resources, Yukon (1980-83)

Design of surface drainage works for mine expansion, mine planning, and design of tailings pond water management control measures.

Manalta Coal Ltd., Alberta (1977-79)

- Preparation of surface water and groundwater aspects of the initial Development and Reclamation Plan for Gregg River Mine.
- Designed muskeg drainage network (layout and depth) for initial mine development at Onakawana Project, Ontario.
- Conducted hydrogeologic drilling and monitoring programs and prepared surface drainage plans for mine expansion planning Vesta, Sheerness and Roselyn Mines.

