

ROBERT JAMES LEADER, P. Eng.
Senior Mining Engineer

BACKGROUND

Jim Leader is a mining engineer with 30 years of varied experience in all aspects of mining including operations, technical planning and consulting work, and has expertise in all levels of technical and economic evaluations of mining properties. He has experience in the use of computerized tools for reserve estimation, mine planning and cost estimation for underground and open pit mines. After graduation from Camborne School of Mines in 1974, he worked for four and a half years at a large underground copper mine in Zambia. From 1979 to 1980 he attended Queen's University in Ontario to obtain his M.Sc. in mining engineering. He then worked for two years as a senior planning engineer for Amax of Canada at an open pit molybdenum mine in northern British Columbia. Subsequently, he worked as a mining analyst for Control Data Canada undertaking resource evaluations and mine designs.

In 1984 Jim joined Wright Engineers as a senior mining engineer and became a senior mining consultant with the successor company, Fluor Daniel Wright (now Fluor Daniel). During his 15 years with these companies he undertook numerous project evaluations, due diligence and feasibility studies for many clients on projects worldwide. Since 2001 he spent four years teaching as an instructor in the Mining Technology program at BCIT, becoming a permanent member of staff in 2004

WORK EXPERIENCE

Micon International Limited, August 2006

Mining Instructor BCIT Mining Program, Burnaby, BC, 2001 - 2006

Three years as a temporary mining instructor at BCIT followed by a permanent staff position in 2004. Courses taught include mining methods, mine planning, mine economics, mining report, blasting technology, rock mechanics and environmental applications. Also organized and ran the mining field school and the week-long international mine tours.

Self Employed, Consultant 1999 - 2001

Provided project assistance to Vancouver based engineering and mining companies in areas of mine planning and cost estimates.

Conducted business development and networking activities in Vancouver and the United Kingdom

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Fluor Daniel Wright, Vancouver, BC 1989 – 1999

Senior Mining Consultant

- Successfully completed over 25 technical and economic evaluations of mining and processing projects and ongoing operations worldwide.
- Acted as technical consultant to banks and finance corporations on due diligence studies.
- Developed complex computer spreadsheets for use on detailed feasibility studies.
- Authored numerous reports on property evaluations
- Prepared, issued, evaluated and presented contract mining bid documents in English and Spanish.

Selected assignments projects worked on include:

- **Sigiri Gold Mine Due Diligence, Guinea**
Technical Consultant to the bank with responsibility for due diligence review of feasibility study and construction monitoring as part of loan agreement. Work included review of open-pit mine plans, mine equipment, gold heap leach processing operations, construction costs and mine operating cost estimates. Site visits were carried out during construction and for verification of mine and plant completion tests.
- **Mengyin Diamond Projects, China**
Mining Consultant to client on preparation of an independent evaluation report on open pit and underground diamond properties. Work included a site visit inspection of all areas of the mines and process plants, preparation of mine, plant and infrastructure plans, cost estimation and submission of evaluation report on the two properties.
- **Cho Dien Project, Vietnam**
Project Manager for a technical and economic evaluation of a lead-zinc deposit in northern Vietnam. Work included an audit of reserves, selection of open-pit and underground mining methods, preliminary process design, infrastructure analysis, estimates of capital and operating costs and financial evaluation.
- **Fachinal Project, Chile**
Mining Engineer on feasibility study for combined underground and open pit gold project in Chile. Work included preparation of mining contract bid documents in

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English and Spanish and evaluation of bids. Reviewed all aspects of mine design, equipment selection and cost estimates.

- **Palabora Project, South Africa**

Mining Engineer on detailed feasibility study for a proposed 60,000 tonnes per day underground block caving copper mine. Reviewed fragmentation and dilution estimates, production schedules and mine layout plans. Preparation of operating cost estimates and authoring of mining sections of feasibility report.

Wright Engineers Limited, Vancouver, BC 1984 – 1989

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Control Data Canada, Vancouver, BC 1982 - 1984

Principal Mining Analyst

- Carried out mineral resource evaluations using company's Mineval and Seamsys software
Provided technical assistance in sales and marketing of software to potential clients in Canada and South Africa.

Amax of Canada, Kitsault, BC 1980 - 1982

Mine Planning Engineer

- Developed ore reserves and open pit mine plans for 10,800 tonnes per day Molybdenum mine using MEDSystem.
- Prepared reclamation plans for the mine and presented to inter-government agencies as part of permitting process.

Roan Consolidated Mines, Luanshya, Zambia 1974 - 1978

Mine Engineer then Sectional Mine Engineer

- Provided front-line supervision in underground mine as miner then as a shift boss responsible for the safety and productivity of work crews.
- Prepared short and long term production forecasts for all mining operations using manual and computer techniques.
- Designed and evaluated underground haulage systems using computer simulation systems.

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- Involved in the planning aspects of a shaft sinking program and served as member of mine rescue team.

EDUCATION

Queen's University, Kingston Ontario 1979 - 1980
M. Sc. Mining Engineering

Camborne School of Mines, Cornwall, UK 1974 - 1978
ACSM First Class

Further Coursework

- Mintec Inc – MEDSystem and Minesight general training course (1996)
- BCIT – AutoCAD 2000 level 1 (2000) & MS Access (2001), Introduction to GIS (2003)
- UBC – MS Office programs (2001)
VSB/Langara College – Various courses in languages (German, Spanish)

PROFESSIONAL MEMBERSHIPS

Association of Professional Engineers and Geoscientists of BC and sits on the consulting practices committee (CPC)

Canadian Institution of Mining (CIM) and member of local committee