

New Jersey Zinc. To date, Shell has completed 8,500 metres of diamond drilling outlining 100.5 million tonnes of mineralization at a grade of 0.130% MoS₂.

The deposit is hosted by the Cassiar Stock, a 72-Ma quartz-monzonite intrusion of the Cassiar Batholith. Molybdenite, the only economic mineral present, is hosted primarily within quartz-pyrite-bearing fracture fillings.

There is no readily discernible alteration pattern. Propylitic alteration is widespread, as are barren pyrite-bearing fractures. Argillic alteration is erratic and is mainly related to faulting. Potassic alteration is present as K-feldspar enveloped along fractures.

The Casmo deposit lacks many of the characteristics associated with classic molybdenite systems. There is no evidence of forceful intrusive events, such as breccia pipes, dyke swarms, strong quartz stockworks or multiple intrusive events. Alteration patterns are not consistent and their over-all development is weak. Rocks at Casmo are, however, chemically similar to other deposits, indicating that this deposit is part of a highly evolved intrusive system.

Paper 48 — 3:30 p.m.

Preliminary Geology of the Thanksgiving Tungsten Prospect, North of Revelstoke, Southeastern British Columbia.

ROY WARES, Northair Mines Ltd., Vancouver, B.C.

A number of exposures of high-grade scheelite were discovered in metamorphosed clastic rocks just east of the Columbia River, 20 km north of Revelstoke, on Thanksgiving Day, 1980, by local prospectors. They were acquired by Andorex Resources Ltd. and subsequently optioned by Northair Mines Ltd. in the spring of 1981. Field work, initiated in early June, includes geophysical and geochemical exploration programs as well as geological mapping. The paper will outline in preliminary fashion the geology of this interesting new discovery, described as a stratabound tungsten occurrence (Northern Miner, 1981), and the results of the on-going exploration program.

Paper 49 — 3:50 p.m.

The Aspen Mine: a Dolomite-Breccia-Hosted Silver Deposit Near Salmo, B.C.

MEL DE QUADROS, Consultant, Vancouver, B.C.

Surface mapping and underground drilling at the Aspen property of Extotal Resources Inc. has shown the presence of three distinctive mineralized zones in a dolomite breccia of the Lower Cambrian Reeves Formation: a zinc zone, a silver zone and a lead-zinc-silver zone.

The talk will focus on the silver zone, which presents a unusual example of metal zonation in an otherwise typical "Mississippi Valley-type" deposit.

SESSION 12, Mineral Processing: "Design and Operation of Small Gold-Silver Mills"

GEORGE W. POLING, Head and Professor, Department of Mining and Mineral Process Engineering, University of British Columbia, and

ROGER M. NENDICK, Senior Metallurgist, Kilborn Engineering (B.C.) Ltd., Session Chairmen

Paper 50 — 2:00 p.m.

The Sala Caravan Mill—a Technical and Economic Presentation.

JORAN KOLLBERG, Sales Manager, Sala Canada, Toronto, Ontario.

Comparisons are made between the Sala workshop pre-assembled modules, with or without wheels, and plants erected at the mill site.

Field Excursion Guidebook

This 104-page Guidebook, covering the Val d'Or, Kirkland Lake and Timmins gold mining camps, represents an up-date on the local and mine geology and, in some cases, is the only published report on a particular mine. The symposium and Field Excursion, sponsored by the CIM Geology Division, took place in mid-September of 1980 and covered such mines as Sigma, Lamaque, Camflo, Kerr Addison, Dome and Pamour. It concludes with abstracts of all the Symposium papers.

Cost: \$6.00 to CIM Members and \$10.00 to non-members, plus \$1.00 for postage and handling. Orders must be pre-paid.

Available: CIM Headquarters, 400 - 1130 Sherbrooke St. West, Montreal, Que., H3A 2M8.

Paper 51 — 2:30 p.m.

Methods for Recovering Fine Placer Gold.

WANG WENQIAN, Visiting Scholar from Kunming Institute of Metallurgy, and
GEORGE W. POLING, Head and Professor, Department of Mining and Mineral Process Engineering, University of British Columbia, Vancouver, B.C.

Devices and flowsheets for recovering fine placer gold are reviewed. Prospects of combining gravity separation devices with froth flotation are evaluated. Possibilities of using magnetic and electrostatic separators are also discussed.

Paper 52 — 3:30 p.m.

Gold-Silver Amalgamation Practice.

M.J.A. VREUGDE, Manager, Mineral Processing, and
R.W. EDWARDS, Metallurgist, Bacon, Donaldson & Associates Ltd., Vancouver, B.C.

Mercury amalgamation fulfills an important function in precious metals recovery from both lode and placer deposits. For many lode and placer operations, amalgamation provides the only practical means of recovering fine gold (or electrum) from gravity concentrates. Current applications of amalgamation, its particular function and cost in those flowsheets and its basic chemistry with respect to several precious metals are discussed. Limitations and advantages of amalgamation are also presented.

Paper 53 — 4:00 p.m.

The RMS - Ross Sluice Box.

T. PLUMBER, General Sales Manager, Rosedale Machine Shop Limited, Rosedale, B.C.

The design and operation of the RMS - Ross sluice box will be described.

SESSION 13, Mining

DON BARKER, Mine Engineering Superintendent, Fording Coal Ltd., Elkford, B.C., Session Chairman

Note: If there are **two** mining sessions, one will be Session 5 on Friday PM, October 30; the other will be Session 13 on Saturday PM, October 31. If there is only **one** session, it will be Friday PM, October 30.

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