

Paper 47 — 2:30 p.m.

The Casmo (Stobie) Molybdenite Deposit, Cassiar, B.C.
CHRISTOPHER BLOOMER, Geologist, Western Base Metals, Shell
Canada Resources Ltd., Calgary, Alberta.

The Casmo (Stobie) molybdenite deposit, discovered in the early 1950s, is located 6 kilometres south of the town of Cassiar in northern British Columbia. The New Jersey Zinc Exploration Company of Canada optioned the property in 1964 and from 1964 through 1968 completed approximately 7,000 metres of diamond and percussion drilling. In 1971, Levana Exploration optioned the property from New Jersey Zinc and drilled an additional 960 metres. Approximately 50.6 million tonnes of mineralization at a grade of 0.123% MoS₂ had been outlined by 1971. The property lay dormant from 1971 until 1979, when Shell Canada Resources optioned the property from

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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.

100.5 million tonnes @ .130% Mo

$$100.5 \times .0013 = \underline{130,650 \text{ tonnes Mo}} = \text{size 2. OK.}$$