Paper 3-5—11:00 a.m.
Geology of the Carolin Gold Deposit, Hope, B.C.
D. GRIFFITH, Carolin Mines Ltd., Hope, B.C.
(Abstract not available at press time)

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Session 4: MINING, Social Suite West, "Underground Mining Technology", with M.D. ROWSWELL, Canadian Natural Resources Ltd., Vancouver, B.C., Session Chairman.

Paper 4-1—9:00 a.m.
Electro-Hydraulic Drilling—Panel Discussion.
Experience at Elliot Lake,
HUGH FAIRLEY, Denison Mines Ltd.
Experience at Kimberley,
EDWARD KRAFT, Cominco Ltd.
Experience with Diamond Drills,
C.D. MacDONALD, Canadian Mine Services Ltd.

Paper 4-2—10:00 a.m.
Blasting Technology—The Challenge of the 1980's.
W.L. GIACHINO, Canadian Industries Ltd., Montreal, Quebec.

Over the last 10 years, major advances have taken place in blasting technology. These include:
development and introduction of cap-sensitive slurries;
bulk slurry systems;
new developments in bulk large-diameter delivery systems;
development of delay blasting systems;
vertical crater retreat system.

This paper outlines these developments and what we foresee industry needs over the next decade.

Paper 4-3—10:40 a.m.
Electric-Powered LHD's as an Alternative to Diesel Power for Underground Mining.
R.A. RICHARD, Jarvis Clark Co. Ltd., North Bay, Ont.

Electric-powered load-haul-dump (LHD) machines have been in service in underground metal mines since 1970. The range of these machines has progressed from the earlier 1-cu.-yd-capacity model to a 5-cu.-yd model. Three models are available and all use trailing cables and have operating ranges of up to 300 metres. There are now more than 100 machines in service.

This paper outlines the evolution of the machines, as well as the applications and service experience.

Paper 4-4—11:20 a.m.
Practical Rock Mechanics Underground.
C.O. BRAWNER, Dept. of Mining, University of British Columbia, Vancouver, B.C.

The importance of ground control in underground mining has become widely appreciated for economic and safety reasons. In the last decade, the understanding of the influence of geologic structure, tectonic stress, groundwater and blasting on rock stability has significantly increased. The analysis of rock behaviour during mining is complex; however, the majority of ground control problems can be monitored, evaluated and stabilized with reasonable simplicity based on surprisingly simple underground monitoring programs.

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Carolin: Dave Griffith

upper E contact of Hozameen Gp

= W limit of all Au min in Coquihalla Belt

Ribbon chert. Ladner Gp contains most Au min. Slate mainly. Massive lithic wacke near base. - v.f.g. Felds. wacke also v.f.g., green. - both flexo-turbidites at base of Ladner. Both host Au pyrr., the preferable c̄ feldsp wacke. Mudstone c̄ pebbly have no Au. Its flych unit at base of Ladner - dep at base of continental slope. W fault contact with Hozameen. E contact platen.

Needle (Eagle Peak pluton) Serpentine - altered UM - in uncont. Ladner/Hozameen.. Locus of movement. Aurum min on fault.

F.g. altered diorite plug + Au feeder in sills - pipestem & McMaster zone to N+S. Idaho zone further S.

No significant Au in Hozameen group.

Genesis — Griffiths — faulting along serpentinite; mixing + albitization. Fluids moved from form seds. to fault zones. Serpentinite contemporaneous, derived. Au, move to low P fract zones. Graphite spotted. Altn around ore similar to altn around Au.

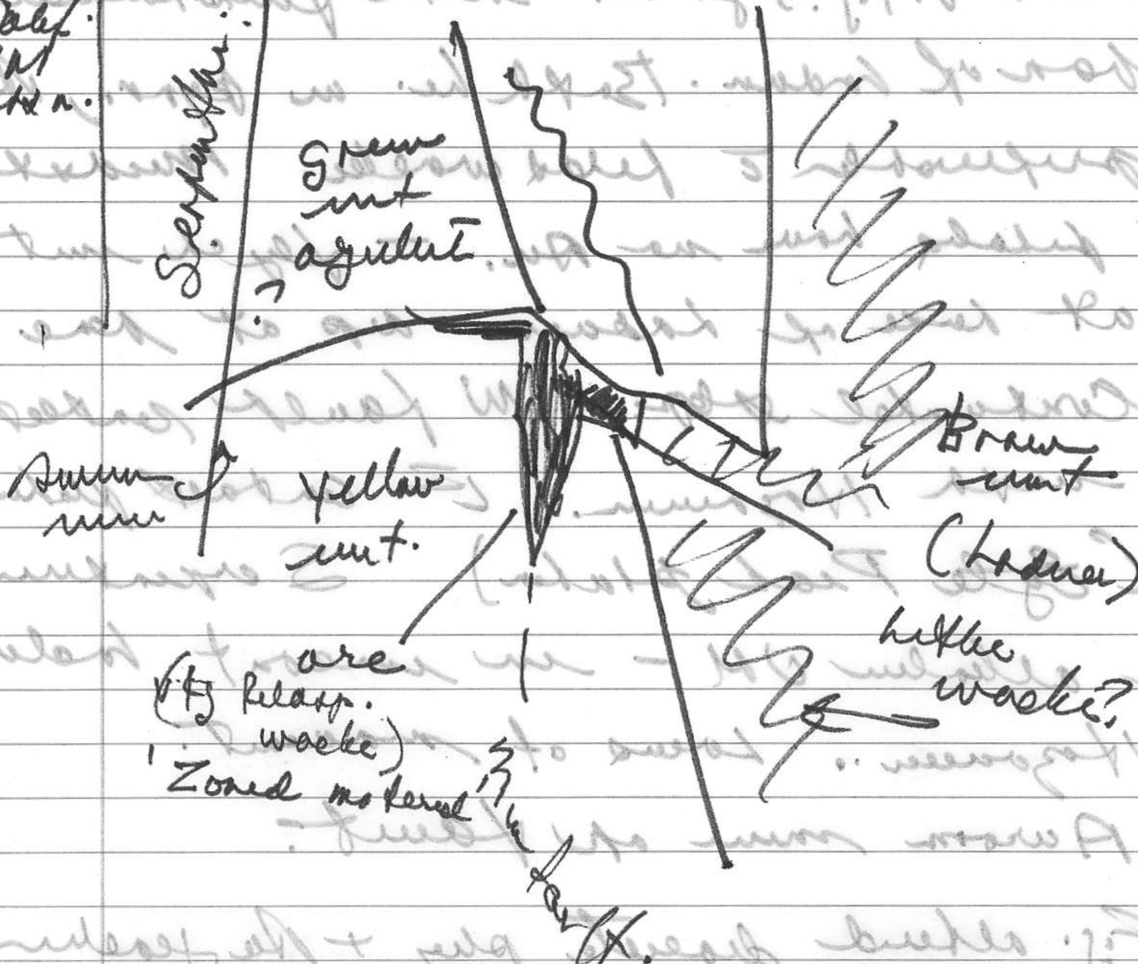
early late K clast meant

Au dep with seds. like Mother Lode Calif. Unit attn.

Au in talc shows py po asp + Au in serpentine - are uncommon

← contact, asp belt / Hayden fault talc carb py asp shoots + Au (Auro mine)

Pelaho zone 1.5 MT .18 Au.



No correl Au c̄ clasp., all free Au, VFG.
Selective replacement beds.