# Süreli Yayınlar 1986

## Mining Magazine

## OCTOBER 1986

#### 288 Panorama

The use of hydropower in South African gold mine could save energy; Platinum/palladium mine to be developed in Montana; Video Outreach — a new means of mining education from Kentucky University; U.K. Mine safety laboratory celebrates 75th anniversary

#### 308 Mechanized Narrow Vein Mining

The Mine Superintendent at Dome Mine describes methods used to mechanize stoping in narrow veins.

#### 322 Mufulira's New Sub-Vertical Shaft

ZCCM's Mufulira Mine is planning to exploit deep ore reserves. The sinking of the Musombo sub-vertical shaft to gain access to this ore described in detail.

#### 343 AMC

October's American Mining Congress International Show at Las Vegas, a premier event in the mining calendar, is previewed.

#### 374 Sulphur

Sulphur prices have risen in recent years — will the trend continue?

#### 382 Mineral Processing

A means of analysing mineral processing operations with a view to their optimization.

## 388 Mining Company Staff

Efficient organization of staff functions is a challenging problem for mining companies. Some possibilities are discussed.

## NOVEMBER 1986

### 419 Panorama

Iron Ore Company of Canada ships 50 millionth tonne to U.K.; Geological deep drilling in U.S.A; Piast — a high output Polish coal mine: No. 1 Shaft Project at Western Deep Levels, R.S.A.

#### 438 Mining in Latin America

Latin America possesses great mineral wealth, although the mining industry faces difficult times.

#### 453 Mexican Mining

Mexico's polymetallic producers are focussing on silver.

#### 460 Codelco Chile

The copper mining giant's plans for the future.

#### 470 Mining in Brazil

Mining is one of the keys to Brazil's economic growth

#### 473 Peruvian Mining

Low Prices and frozen exchange rates are taking their toll.

#### 476 Minera Aguilar

Modern methods at Argentina's 50-year old Ag-Pb-Zn mine.

#### 481 Venezuela's Iron Ore

C.V.G. Ferrominera Orinoco's recently opened San Isidro mine.

### 486 Interalumina

Venezuela's alumina plant regularly exceeds design capacity.

#### 490 Precious Metals Refinery

A study shows a new refinery in the southern Pacific could pay.

## DECEMBER 1986

#### 543 Panorama

Venezuela's aluminium plans: U.S.S.R. and China's gold output; Turkish opencast coal mining project; Energy developments in Canada and Israel.

#### 558 Glesanda

This export-oriented granite quarry on the west coast of Scotland currently being developed could become one of the largest single quarries in the world.

#### 568 Gibbons Creek

A power station in Texas runs on low grade lignite. The authors describe how the related mining project was established and how it is managed.

#### 581 Environmental Benefits

Handled correctly, surface mining can have beneficial effects, examples of which are given.

#### 586 In-Seam Bunkers

Horizontal in-seam bunkers can alleviate problems caused by outbye conveyor stoppages, aiding coal-face productivity.

#### 588 Blasthole Drills

The wide variety of available rigs and some recent innovations are reviewed.

# Mining Engineering

## OCTOBER 1986

- 953 Longwall dust control: An overview of progress in recent years Robert A. Jankowski, Fred N. Kissell, and J. Harrison Daniel
- 959 Steps outlined to ensure precious metals miners have good relationships with their refiners

  P.D. Chamberlin, D.J. Kinneberg, and R.M. Nadkarni
- 963 Silver distribution described at the Brunswick No. 12 massive sulfide deposit W.M. Luff
- 971 Metallurgy and mineral processing plant at St. Joe's El Indio mine in Chile E.H. Smith
- 980 Mine subsidence effects on a pressurized natural gas pipeline

  V.J. Hucka, CK. Blair, and E.P. Kimball
- 985 Discussion: Commercialization of eastern US oil shales a review
  V. Rajaram

## NOVEMBER 1986

- 1025 Fluorspar—trends and changes in production and use

  Lawrence Pelham
- 1030 Case study: Ozark-Mahoning, sole surviving US fluorspar producer V.A. Evans and D.L. Hellier
- 1033 Case studies illustrate the need for a new concept of coal pillar design

- 1036 Technical innovations spur resurgence of copper solution mining J.B. Hiskey
- 1045 Computer-based dispatching in mines, with concurrent operating objectives *J. W. White and J.P. Olson*
- 1054 Design guidelines for improved water spray systems

  Sandip K. Mukherjee, Madan M. Singh, and Natesa I. Jayaraman
- 1060 Discussion: Treatment methods for difficultto-float Copper Porphyry ores S.G. Malghan
- 1060 Discussion: Environmental approach to coal refuse disposal A.G. Sciulli, G.P. Ballock, and K.K. Wu

## DECEMBER 1986

- 1097 Progress report on Cominco's Red Dog project in Alaska, second largest zinc deposit ever discovered *H.M. Giegerich*
- 1102 Paradise Peak precious metals mill begins production ahead of schedule and under budget

L.J. Buter and D.J. Collins

1105 Agglomeration: Cheap insurance for good recovery when heap leaching gold and silver ores

P.D. Chamberlin

- 1110 Technology news:
  - Wire rope isolators stop centrifuge vibration at Amax
  - Belt conveyor transfers pellets to hopper at carbon plant

- 1115 Quality control and shipment planning at the Carter Mining Co

  J.D. Brown, J.A. Dille, and J.P. Hand
- 1120 Secondary recycle of tin from primary production residues in the US T.S. Mackey
- 1123 Technical note: SO<sub>2</sub> abatement in a 440-kW pillot-scale combustor—limestone injection tests

G.H. Lewis, C.L. Krcil, D.E. Havekotte, and N.S. Harding

- 1125 Technical note: Southern Illinois white tripoli as filler, extender, and abrasive S.M. Pickering, Jr., D.M. Avant, Jr., A.J. Solomon, and W.R. Fox
- 1127 Discussion: Lemniscate-guided powered roof supports adapted for proper operation with the roof on longwall faces

  J.B. Gwiazda

## **Industrial Minerals**

## OCTOBER 1986

- 8 World of Minerals
- 19 Coloured pigments News of the hues
- 40 Silica Sand & Gypsum Australian export commodities of growing significance
- 59 War and the ceramics industry in Lebanon A lesson to learn

## NOVEMBER 1986

- 8 World of Minerals
- 21. Oilwell drilling Survival of the fittest

- 39 Perlite & Vermiculite The market overlap
- 51 Opportunities, trends & developments Open Forum abstracts
- 55 The Catalan potash field
- 61 US Cement Record demand and basic change

## DECEMBER 1986

- 8 World of Minerals
- 19 Italy's industrial minerals
- 53 Abrasive Minerals Hard work in soft markets

# Institution of Mining and Metallurgy

## OCTOBER 1986

- A165 Movable in-pit crushing and conveying system at Island Copper mine, British Columbia R.B. Robertson and W.M. Dowall
- Al76 Interaction of underground mining and surface development in a central city environment *T.R. Stacey*
- A181 Subsurface investigations of abandoned limestone workings in the West Midlands of England by use of remote sensors *P.A. Braithwaite and K.W. Cole*
- A191 Review of rock drillability and borability assessment methods D.F. Ho worth
- A203 Technical notes

Rates of working of mines—a simple rule of thumb

H.K. Taylor

A204 Swedish drilling and blasting practice *P.J. Geddes* 

#### A208 Discussions

Cutoff grades—some further reflections *H.K. Taylor*Principles of an adaptive concentrator cutoff grade policy *W.Schaap* 

A213 Policy analysis model for open-pit mining enterprises and Policy analysis model for underground mining enterprises R.G. Coyle and D.H. Montaldo-Cancela

## NOVEMBER 1986

- B165 Stratiform ores and geological processes *R.L. Stanton*
- B179 Alluvial sampling formula and recent advances in alluvial deposit valuation

  A.G. Roy le
- B183 Place of gold ore formation in the geological development of Abitibi greenstone belt, Ontario, Canada *C.J. Hodgson*
- B195 Assessment of the role of organic matter in ore transport processes in low-temperature base-metal systems

  D.A.C. Manning
- B201 Sulphur isotope study of massive and stockwork pyrite deposits at Rio Tinto, Spain C.J. Eastoe, M. Solomon and F. Garcia Palomero

#### B208 Technical notes

Appraisal of induced polarization technique for uranium exploration—case study from Arbail, Karnataka, India *B.Narasimha Rao et al.* 

- B211 Radioelement and REE content of Namurian phosphorites, County Clare, Ireland *P.J. O'Connor and J.F. Pyne*
- B214 Rapid field-laboratory method for determination of molybdenum in geologica materials D.Peachey et al.

## B218 Discussion

New trends in geological concepts C.J. Morrissey

## DECEMBER 1986

- C179 Gaseous diffusion in hematite and magnetite pellets
  - A. Ünal
- C187 Theoretical model of collision between particles and bubbles in flotation

  Z. W. Jiang and P.N. Ho It ham
- C195 Improved gold and silver recovery from Spanish gossan ores by sulphidization prior to cyanidation
  - C. Nunez, A. Roca and F. Espiell
- C199 Lift spray vacuum processing (LSV) of molten aluminium
  - R. Harris, F. Dimayuga and B. Pouliquen

#### C206 Technical notes

Effect of chloride salts on dissolution of bornite in a hydrochloric acid oxygen medium

B. Pesic and F.A. Olson

G. Ferrara and G.D. Schena

- C209 Use of coarse sand particles to aid ferric hydroxide floe dewatering by hydrocyclones T. Leadbetter and D.A. White
- C211 Dense medium separation notes:
  Influence of contamination and type of ferrosilicon on viscosity and stability of dense media
- C215 Differences in physical properties of milled and atomized ferrosilicon powders R.A. Williams, G.H. Kelsall and R.J. Gochin
- C221 Dense medium separation research at the Julius Kruttschnitt Mineral Research Centre A.J. Lynch and T.J. Napier-Munn
- C225 Operating experience with the Tri-Flo dense medium separator

  H.J. Ruff

## C229 Discussion

Commissioning and operation of the 800 t/h heavy medium cyclone plant at Mount Isa Mines Limited

K.J. Fiedler, P.D. Munro and J.D. Pease

# **International Journal of Mineral Processing**

## NOVEMBER 1986

- 155 Apparent hindered settling in a gas—liquidsolid countercurrent column J.B. Yianatos, J. A. Finch and A.R. Laplante
- 167 Application of FT-IR spectroscopy for in situ studies of sphalerite with aqueous solutions of potassium ethylxanthate and with diethyldixanthogen

  S.C. Termes and P.E. Richardson
- 179 Interaction of poly(amino-amine)-type polymers with chalcocite

  J.E. Gebhardt, A.M. Marabini, M. Nocentini
  and D.W. Fuerstenau
- 191 Flotation behavior of nickel arsenide H. Nakazawa and I. Iwasaki
- 203 Galvanic contact between nickel arsenide and pyrrhotite and its effect on flotation H. Nakazawa and I. Iwasaki
- 217 Surface chemistry of carbonaceous gold ores I. Characterization of the carbonaceous matter and adsorption behaviour in aurocyanide solution G.M.K. Abotsi and K. Osseo-Asare

- 237 A settler for continuous particle shape separation
  - C. Murali and B. Pitchumani, and N.N. Clark
- 251 The entropy approach to material balancing in mineral balancing in mineral processing T.R. Jefferson and C.H. Scott
- 263 Quantitative determination of collector adsorbed on fluorite, galena and quartz particles by selective oxidation surface analysis R.J. Pugh and K. Husby
- 277 Influence of air on oil agglomeration of carbonaceous solids in aqueous suspension J. Drzymala, R. Markuszewski and T.D. Wheelock
- 287 Alizarin red S as a flotation modifying agent in calcite-apatite systems

  E. Fu and P. Somasundaran
- 297 Settling velocities of particulate systems, 4.
  Settling of nonspherical isometric particles
  F. Concha and A. Barrientos
- 309 Settling velocities of particulate systems, 5. Settling velocities of suspensions of particles of arbitrary shape F. Concha and A. Christiansen

## **CIM Bulletin**

## OCTOBER 1986

- 31 Bonus and accidents: Is there a link?; Jean-Luc Choulnard, and Noel Billette
- 36 Attenuation measurements of ear muffs at Falconbridge Limited, Canadian Nickel Division, Sudbury Operations, 1984; M. U. Savich, and K.J.K. Weglo.
- 50 Mine hoist braking systems; LC. Galloway, and G.L. Tiley
- The role of Canadian universities in technology development;

  Paul Dufour, and Michael Farley

66 Radon emanation rate studies: inter-laboratory standard reference materials and the effects of powdering and pelletizing; R.H. McCorkell

## NOVEMBER 1986

- 27 Recovery of gold from old tailing ponds; M.A. Cristovici
- Development of a radiotracer technique to evaluate gold recovery by gravity concentrators;

Daniel E. Walsh and P.D. Rao

- 39 The effects of design and operating variables on rod mill performance; *R.E. Melvor and J.A. Finch*
- 47 Design and operation of thickened tailings disposal system at Les Mines Selbale; K.R. Wood, and G.W. McDonald
- Selective desliming of sedimentary phosphate ores;
   A. Correa de Araujo, E.M. Coelho, and G.W. Poling
- Literature survey on the recovery of gold from thiourea solutions and the comparison with cyanidation;G. Deschenes
- 84 Prochem 's NITROX process;
  G. Van Weert, K.J. Fair and J.C. Schneider
- 60 Recommended reading: IGWG report on mining taxation;
  Robert B. Parsons

## **DECEMBER 1986**

- 47 Failure mechanics and design considerations for footwall slopes;

  P.M. Hawley, D.C. Martin, and C.P. Acott
- 54 Three-dimensional fracture mapping in granite excavations using ground-penetrating radar;
  A.L. Holloway, N.M. Soonawala, and L.S. Co lie 11
- 60 Application of a rock buttress to design of slopes at Cassiar Mine;

  Dennis C. Martin, and Tim J. Carew
- 67 Geochemical exploration in areas of shallow till: some case histories; W.N. Rampton, CF. Gleeson, R.D. Thomas and S. Paradis
- 75 The use of till geochemistry as an exploration tool in southeastern Ontario;

  I.G.L. Sinclair