

# CANMET

Canada Centre  
for Mineral  
and Energy  
Technology

Centre canadien  
de la technologie  
des minéraux  
et de l'énergie

## REPORT 79-41

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### CATALOGUE OF CANMET PUBLICATIONS 1978/79

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MINERALS AND ENERGY RESEARCH PROGRAMS  
TECHNOLOGY INFORMATION DIVISION



Energy, Mines and  
Resources Canada

Énergie, Mines et  
Ressources Canada

JUNE 1980



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Ottawa, Canada K1A 0G1

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Catalogue No. M38-13/79-41                      Canada: \$18.50

ISBN 0-660-50636-X                              Other countries: \$22.20

Price subject to change without notice.

## CATALOGUE OF CANMET PUBLICATIONS 1978/79

Publications and papers published or presented by  
CANMET scientific and technical staff in 1978/79.

Compiled and edited by J.L. Metz  
French rendition by J. Collins-DeCotret

MINERALS AND ENERGY RESEARCH PROGRAMS  
TECHNOLOGY INFORMATION DIVISION

CANMET REPORT 79-41

JUNE 1980

#### FOREWORD

This catalogue is a compilation of publications and papers prepared by CANMET scientific and technical staff during 1978/79 as well as research reports prepared by outside agencies under contract to CANMET. It contains indices by author, title and subject. Information on where to obtain the publications listed precedes each of the five sections.

Section 1 contains titles and abstracts of major reports in the CANMET Report series for general distribution and sale.

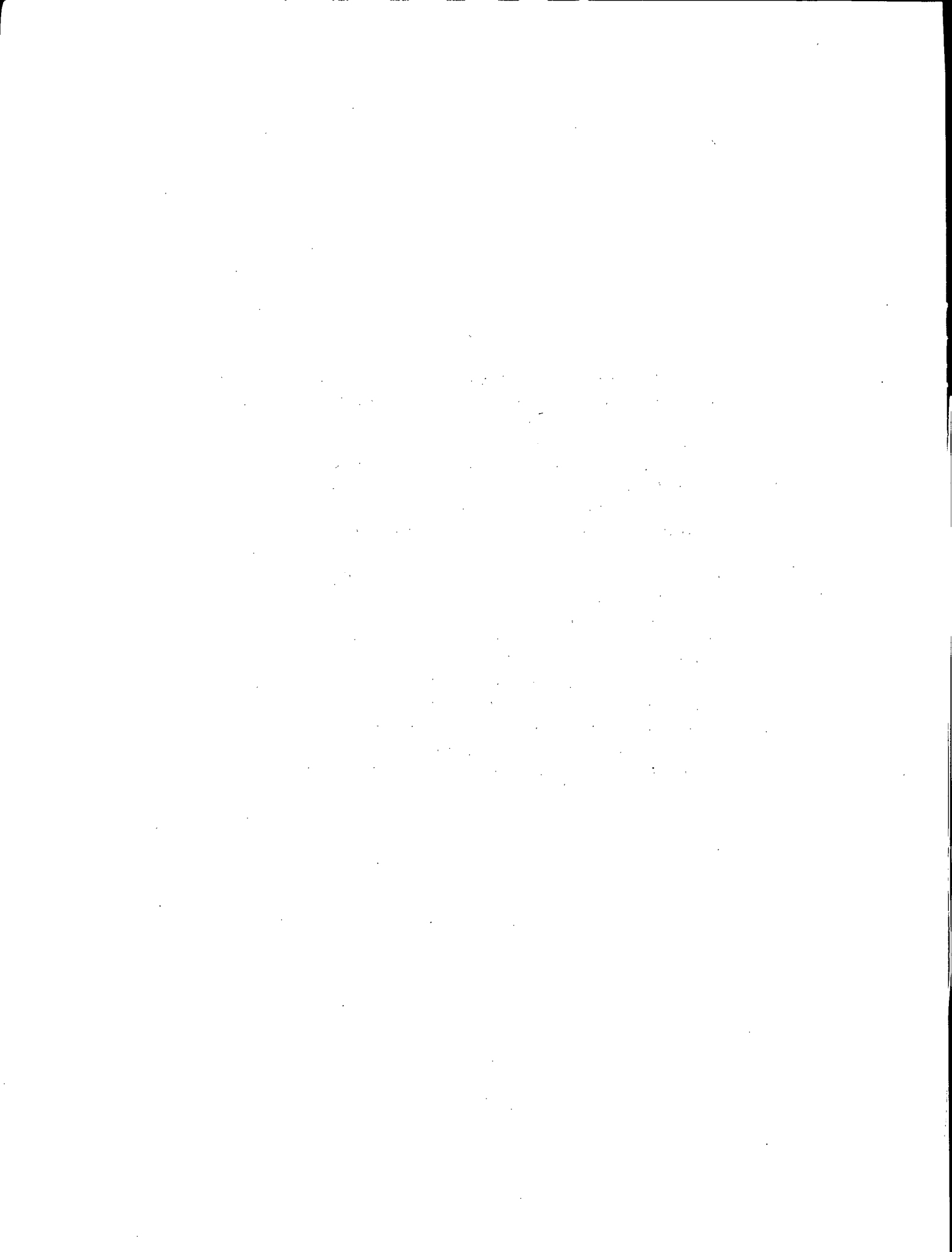
Section 2 covers papers, with abstracts prepared for publication in outside periodicals or for presentation at conferences.

Section 3 lists divisional reports which provide results of investigations performed at the request of industry or other government agencies, as well as of those initiated by CANMET. It also includes reports prepared by the Program Office.

Section 4 contains reports prepared by private research agencies under contract to CANMET dealing with studies on national mineral resources and energy supply and technology.

Section 5 lists reports describing research performed by outside agencies supported through financial grants by CANMET.

James E. Kanasy  
Chief,  
Technology Information Division



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## SECTION 1

## CANMET REPORTS

The reports listed below are available at prices indicated from either Printing and Publishing, Supply and Services Canada, Ottawa, K1A 0S9 or CANMET Publication Sales and Distribution, Energy, Mines and Resources Canada, 555 Booth Street, Ottawa, K1A 0G1. Microfiche copies may be obtained from Micro-media Limited, Box 502, Station S, Toronto, Canada, M5M 4L8.

001

CANMET REPORT 76-22F. Sage, R. (Editor) "Pit slope manual, Chapter 1, Summary"

This report was included in 1976/77 Catalogue of CANMET Publications and is now available in French.

Cat. No. M38-14/1-1978F - 67 p  
Canada \$2.50; other countries \$3.00

002

CANMET REPORT 76-40F. Tibbetts, T.E. and Montgomery, W.J. "Evaluation of Canadian commercial coals: Nova Scotia and New Brunswick - 1975"

This report was included in 1976/77 Catalogue of CANMET Publications and is now available in French.

Cat. No. M38-13/76-40F - 51 p  
Canada \$2.00; other countries \$2.40

003

CANMET REPORT 77-55F. Collings, R.K. "Mineral waste resources of Canada Report No. 2 - Mining wastes in Quebec"

This report was included in 1977/78 Catalogue of CANMET Publications and is now available in French.

Cat. No. M38-13/77-55F - 48 p  
Canada \$1.75; other countries \$2.00

004

CANMET REPORT 77-29. Gyenge, M. and Ladanyi, B. "Pit slope manual, Supplement 3-5, Sampling and specimen preparation"

A subsurface investigation should provide a sufficient number of soil and rock samples of a quality which will enable adequate testing for determining the mechanical properties pertinent to mine design. For this purpose various rock and soil sampling procedures as well as specimen preparation procedures are described.

Cat. No. M38-14/3-1977-5 - 30 p  
Canada \$1.50; other countries \$1.80

005

CANMET REPORT 78-3. Faye, G.H. "Certified and provisional reference materials available from the Canada Centre for Mineral and Energy Technology, 1978"

This catalogue describes all of the certified and provisional reference materials that may be purchased from CANMET through the Coordinator, Canadian Certified Reference Materials

Project (CCRMP). Where possible, source, chemical composition, recommended values of the certified elements, and price are given for each available material. Also included are brief descriptions of materials being processed and approximate dates of their availability.

Cat. No. M38-13/78-3 - 32 p  
Canada \$1.25; other countries \$1.50

006

CANMET REPORT 78-4. Patmore, D.J., Pruden, B.B. and Shah, A.M. "Thermal hydrocracking of Athabasca bitumen: Computer simulation of feed and product vaporization"

This report describes a computer simulation made to determine the fraction of feed and product vaporized when hydrocracking Athabasca bitumen. It was found that 75% or more of the liquid fed to the reactor can be in the vapour phase at reactor outlet conditions. The effect of temperature, pressure, gas-to-liquid ratio, mol % H<sub>2</sub> in the gas, and pitch conversion on the degree of vaporization were investigated.

Cat. No. M38-13/78-4 - 45 p  
Canada \$1.75; other countries \$2.10

007

CANMET REPORT 78-5. Sutarno, R., Charette, D.J., Bowman, W.S. and Faye, G.H. "Certification of reference iron ore SCH-1 for sodium and potassium"

Reference iron ore SCH-1, previously certified for nine constituents, has also been certified for sodium and potassium. Analytical results were obtained from 53 contributors in Canada and abroad. A statistical treatment of the data yielded recommended values which are 0.019% and 0.026% for sodium and potassium respectively.

Cat. No. M38-13/78-5 - 9 p  
Canada \$1.00; other countries \$1.20

008

CANMET REPORT 78-6. "Catalogue of CANMET publications 1976/77"

This catalogue is a compilation of publications published or presented by CANMET scientific and technical staff in 1976/77.

Section 1 lists, with abstracts, those publications intended for general distribution and external sale. Section 2 covers papers, with abstracts either published in or submitted to outside periodicals or which were presented at various conferences. Section 3 lists investiga-

tion reports, bibliographic compilations and declassified reports.

Cat. No. M38-13/78-6 - 131 p  
Canada \$4.00; Cat. No. \$4.80

009

CANMET REPORT 78-8. Quon, D.H.H. and Wheat, T.A. "Preparation of a ceramic electrolyte in the system MgO-K<sub>2</sub>O-TiO<sub>2</sub>"

Ionically-conducting materials are playing an increasingly important role in developing much more efficient energy storage and conversion devices. A newly developed wet process for producing this material in a homogeneous high quality sintered composition is described.

Cat. No. M38-13/78-8 - 103 p  
Canada \$3.00; other countries \$3.60

010

CANMET REPORT 78-9. Hedley, D.G.F. "Design guidelines for multi-seam mining at Elliot Lake"

Design guidelines are formulated for stope and pillar dimensions in multi-seam mining for a range of orebody configurations using past practice in a back-analysis approach. Constraints imposed by dip and seam thickness on the choice of equipment and mining layout are evaluated. A series of examples is worked through, showing how the design guidelines can be applied for typical orebody configurations.

Cat. No. M38-13/78-9 - 25 p  
Canada \$1.25; other countries \$1.50

011

CANMET REPORT 78-10. Coates, D.F. and Yu, Y.S. "Block flow slope instability"

An analysis procedure with examples is suggested for solving rock instability problems due to local crushing or progressive failure. This will provide a means of appraising the effects of incremental slope changes on benefits and costs.

Cat. No. M38-13/78-10 - 12 p  
Canada \$1.00; other countries \$1.20

012

CANMET REPORT 78-11. Herget, G., Miles, P. and Zawadski, W. "Equipment and procedures to determine ground stresses in a single drill hole"

CANMET, in cooperation with Canadian mining companies, has developed expertise in determining ground stresses.

A method is described for determining a three-dimensional stress field with the CSIR tri-axial strain cell using a single drill hole and modified testing procedures.

Cat. No. M38-13/78-11 - 22 p  
Canada \$1.25; other countries \$1.50

013

CANMET REPORT 78-12. "CANMET Review 1977-78"

Ensuring effective utilization of minerals and energy, developing new technology, and ensuring the availability of energy from innovative as well as traditional sources are the prime functions of the Canada Centre for Mineral and Energy Technology (CANMET).

Activities of the branch are planned and implemented through a Minerals Research and an

Energy Research Programs operating across five divisions.

This review presents the various achievements and progress made during 1977-78 under the two programs.

Cat. No. M38-13/78-12 - 55 p  
Canada \$2.25; other countries \$2.70

014

CANMET REPORT 78-14. Jambor, J.L. and Laflamme, J.H.G. "The mineral sources of silver and their distribution in the Caribou massive sulphide deposit, Bathurst area, New Brunswick"

Microprobe analyses of Caribou galena indicated that it contains up to 0.11 wt % Sb and 1.58 wt % Bi. Maximum silver content obtained from 465 spot analyses of the galena was 0.66 wt % and average was 0.10 wt %. For the Caribou ore-reserve average of 58 g/t, solid-solution silver in galena probably accounts for about 16 g, electrum for 1.4 g, minor silver minerals for 1.0 g, and the remainder is in tetrahedrite-group minerals. However, silver grade and mineral distribution are not consistent throughout the sulphide bodies. One body had an estimated 76% of its silver in tetrahedrite and 21% in galena; in another, 75% of the silver may be present in galena and only 19% in tetrahedrite. The tetrahedrite-rich East Sulphide Body is considered to have the best potential for silver recovery.

Cat. No. M38-13/78-14 - 26 p  
Canada \$1.00; other countries \$1.20

015

CANMET REPORT 78-15. Quon, D.H.H. and Malhotra, V.M. "Performance of high-alumina cement concrete stored in water and dry heat at 25, 35 and 50°C"

This report describes a study of the performance of high-alumina cement under varying conditions. Concretes exposed to moist curing at 21°C show continuous gain in strength for at least one year regardless of water/cement ratio. However, at 25 and 35°C under both dry and humid conditions a loss occurs in strength with age and the loss increases with an increase in the ratio. At 50°C under both humid and dry conditions, the change in strength with age depends on the water/cement ratio. At a ratio of 0.31 an insignificant drop in strength occurs at early ages, in spite of the high degree of conversion, following which the strength increases with age, reaching 125% of 1-day strength at 365 days. This suggests that very high strengths can be achieved and maintained at least up to one year.

Cat. No. M38/78-15 - 53 p  
Canada \$2.50; other countries \$3.00

016

CANMET REPORT 78-16. Berry, E.E. and Malhotra, V.M. "Fly ash for use in concrete, Part II - A critical review of the effects of fly ash on the properties of concrete"

This review is a critical evaluation of published data relating to the ways in which fly ash affects fresh concrete, concrete mix proportions, and the behaviour and durability of hardened concrete.

Cat. No. M38-13/78-16 - 51 p  
Canada \$2.25; other countries \$2.70



017

CANMET REPORT 78-20. Logie, R.B., Ranganathan, R., Pruden, B.B. and Denis, J.M. "Comparison of thermal hydrocracking with thermal cracking of Athabasca bitumen"

Thermal hydrocracking involves hydrogen addition as opposed to carbon removal in the thermal cracking process. Thermal hydrocracking allows flexibility in controlling pitch conversions, and at high conversions it produces more distillable oil than coking processes. Low conversion thermal hydrocracking is also important when transporting the product through pipelines. This report deals with low-conversion thermal aspects of thermal hydrocracking and compares data from thermal cracking.

Cat. No. M38-13/78-20 - 13 p

Canada \$1.25; other countries \$1.50

018

CANMET REPORT 78-22. Compiled and edited by Smithson, Gene L.; final preparation by Dalton, J.L. and Mason, G.L. "Radiochemical procedures for determination of selected members of the uranium and thorium series"

This manual is a comprehensive compilation of procedures for radiochemical analyses and contains radiochemical methods for determining Pb-210, Po-210, Ra-226, Ra-228, Th-228, Th-230 and Th-232. The procedures and methods are specially geared to the uranium industry's need for on-site analyses in connection with radioactive pollution arising from the mining and milling of uranium ores.

Cat. No. M38-13/78-22 - 65 p

Canada \$4.25; other countries \$5.10

019

CANMET REPORT 78-24. Kriz, J.F. and Ternan, M. "Development of a simulated catalyst aging technique"

A technique is described that simulates catalyst aging whereby catalyst deactivation is accelerated by changing the operating conditions. The technique can provide preliminary information on aging rates in a much shorter time than is normally required for performing an actual aging test. Suitable deactivation conditions were found to prevail when both the space velocity and temperature were increased. The relationship between the aging patterns observed under simulated and actual aging conditions is discussed.

Cat. No. M38-13/78-24 - 16 p

Canada \$1.25; other countries \$1.50

020

CANMET REPORT 78-26. George, A.E., Pruden, B.B. and Sawatzky, H. "Effect of hydrocracking Athabasca bitumen on sulphur-type distribution in the naphtha fraction"

A study was made on the effect of increasing hydrocracking severity of Athabasca bitumen on sulphur content of the products and on sulphur compound type distribution in the naphtha fraction. Products from both thermal and catalytic hydrocracking are compared. Results show that increased hydrocracking severity increased the proportion of lighter products and decreased the overall amount of sulphur. Sulphur content was also affected by its migration from heavier to lighter fractions. A modified procedure for potentiometric titration of sulphides in hydrocracked naphtha products containing high olefinic content is also described.

Cat. No. M38-13/78-26 - 9 p

Canada \$1.25; other countries \$1.50

021

CANMET REPORT 78-30. Gransden, J.F., Price, J.T. and Ramey, N.J. "Reduction rates of iron ore-char briquets used in cupola smelting"

CANMET recently examined the potential of the Peace River iron deposit as a source of iron for the steel industry in Western Canada. One unconventional ironmaking method was investigated - the smelting of iron ore-char briquets in a cupola. This report describes the reduction behaviour of the briquets determined in laboratory experiments. Prospects for the process are commented on in a previous paper.

Cat. No. M38-13/78-30 - 15 p

Canada \$1.25; other countries \$1.50

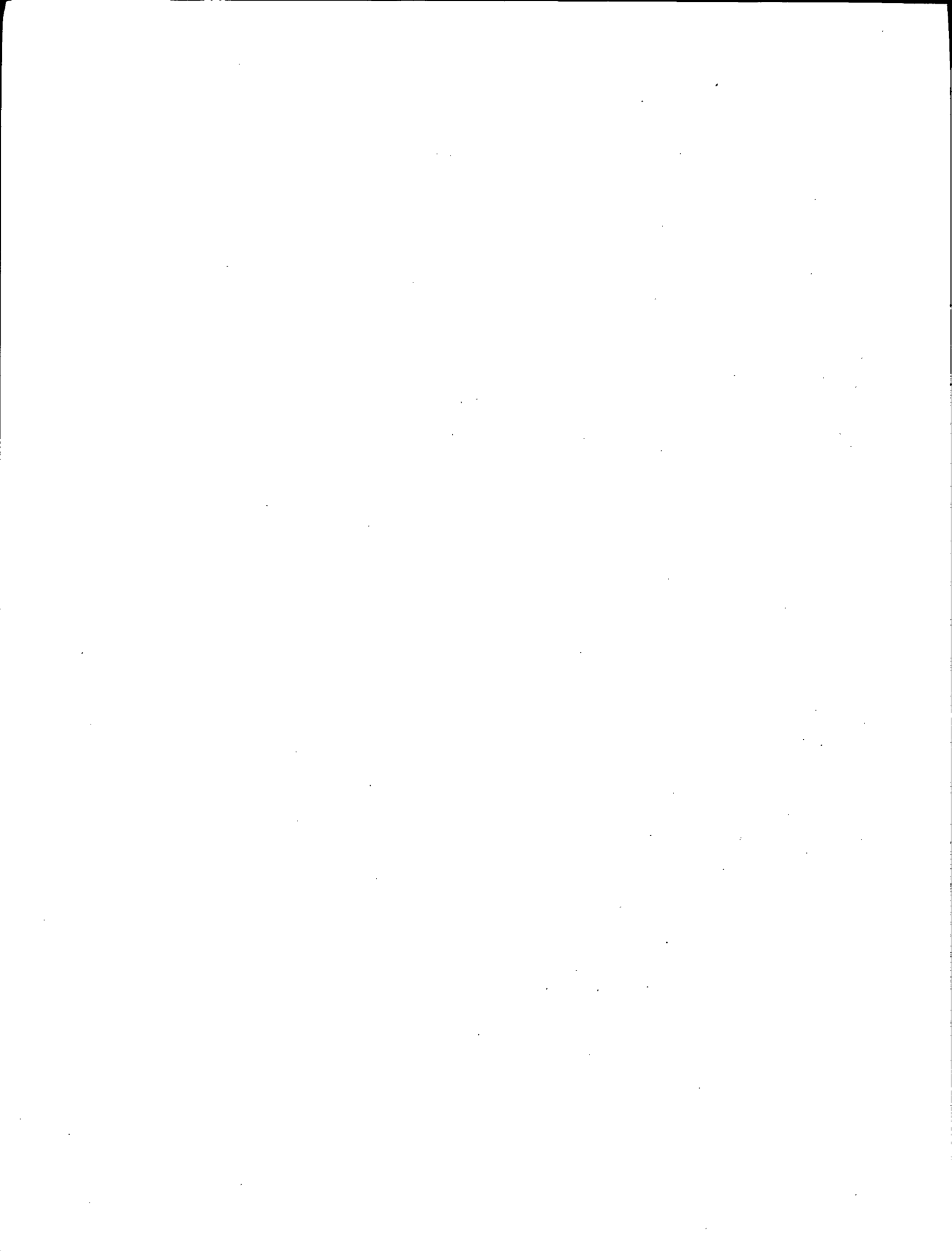
022

CANMET REPORT 78-31. Winer, A.A. and Tibbetts, T.E. "Coal associated materials as potential non-bauxite sources of alumina"

A study of the potential of alumina-bearing materials has shown that coal mine and wash plant rejects from southern Alberta and British Columbia represent a potential source of alumina. The Hat Creek area of British Columbia represents the best potential source of coal-associated alumina both quantitatively and qualitatively. Fly ash from pulverized coal-fired power generating plants in Alberta and possibly from Hat Creek, and in Ontario also represent potential sources.

Cat. No. M38-13/78-31 - 14 p

Canada \$1.25; other countries \$1.50



## SECTION 2

PAPERS PUBLISHED IN OR SUBMITTED TO PERIODICALS  
AND PRESENTATIONS

The papers listed below appear in the journals and conference proceedings cited. These publications are available in many libraries across the country.

## MINERAL SCIENCES LABORATORIES

023

Ahmed, S.M. "Influence of crystal surface orientation on redox reactions at semiconducting  $\text{MoS}_2$ "; MRP/MSL 78-92(J); submitted Electrochem Acta.

The redox systems  $\text{Cu}(\text{NH}_3)_x^{2+}/1+$ ,  $\text{Fe}(\text{CN})_6^{3-}/4-$  and  $\text{Fe}^{3+}/2+$  and oxygen reduction were studied on  $\text{MoS}_2$  surfaces normal to and parallel to the C-axis, using rotating disc electrodes under potentiostatic conditions. Current-voltage curves were obtained and apparent exchange current densities ( $i_0$ ) and rate constants ( $k_{\text{app}}^0$ ) were evaluated. Experiments demonstrated the different reactivities of the van der Waal's surface and the surface perpendicular to k.

024

Ahmed, S.M. "Electro-osmotic dewatering and hardening of the clay sludge from the Athabasca tar sands"; ERP/MSL 78-144(J); submitted CIM BULL.

Laboratory experiments show that clay sludge from oil sands can be successfully dewatered and hardened by electro-osmosis. This report describes the experimental procedure and discusses results obtained from the electro-osmotic process.

025

Ahmed, S.M. and Margeson, J.L. "Electro-osmotic dewatering and densification of mill tailings in the mining industry"; ERP/MSL 78-183(J); North Min; 64:38:C18-19; 1978.

The principles, techniques and potential applications of electro-osmosis in the mining and metallurgical industries are described.

026

Berry, E.E. "Strength development of some blended-cement mortars"; MRP/MSL 78-215(J); submitted Cement Concr Res.

This paper examines the cementing qualities of blended cements, particularly the less well-known ternary blends in the system portland cement-slag-fly ash.

027

Berry, E.E. and Hope, B.B. "Preparation and properties of sulphur infiltrated autoclaved concrete specimens"; MRP/MSL 78-146(OP); presented Int Conf on Sulphur in Construction, Ottawa; Sept. 12-15, 1978.

This paper describes the findings of preliminary and exploratory experiments designed to establish the feasibility of combining autoclaved-concrete manufacture with sulphur infiltration under possible commercial scale conditions.

028

Cabri, L.J. "Determination of ideal formulae for new minerals of the platinum-group"; MRP/MSL 78-131(OPJ); presented Int Mineral Assoc; Novosibirsk; Sept. 4-10, 1978 and in Proc.

A large number of unnamed platinum-group minerals (PGM) have been assigned incorrect formulae because of unreliable analyses using unsuitable standards or lack of synthesis data for the unidentified mineral. Examples are discussed.

029

Campbell, M.C. "Report to the Canadian Uranium Producers Metallurgical Committee on the NEA/IAEA Working Group on Uranium Extraction"; ERP/MSL 79-65(OPJ); presented Ann Meet Can Uran Prod Metall Comm, Elliot Lake, Ont.; May 17, 1979.

Proceedings are given of first meeting or Working Group on Uranium Extraction held in Vienna, Oct. 10-12, 1978.

030

Carette, G.G., Soles, J.A. and Malhotra, V.M. "CANMET researches in sulphur-infiltrated concrete"; MRP/MSL 78-165(OPJ); presented Int Conf on Sulphur in Construction; Ottawa Sept. 12-15, 1978 and submitted Proc.

A review is presented of research undertaken at CANMET to develop and evaluate the strength and durability characteristics of sulphur-infiltrated concrete to assess its potential as a construction material. Its strength is discussed in terms of influence of initial composition and porosity, infiltration procedures and sulphur loading. Long-term strength data are presented and indicate that sulphur-infiltrated concrete remains indefinitely stable in relatively dry ambient conditions.

031

Chen, T.T. and Dutrizac, J.E. "Lautite and cadmium-rich sphalerite from the Ross mine, Hislop Township, Ontario"; MRP/MSL 78-142(J); submitted Can Mineral.

This is the first reported Canadian occurrence of lautite. It is associated with a cadmium-rich sphalerite. This report summarizes studies on these two minerals.

032

Collings, R.K. "Synthetic gypsum prospects in Canada"; MRP/MSL 78-145(OPJ); presented Int Conf Use of By-products and Waste in Civil Engineering; Paris, France; Nov. 28-30, 1978 and in Proc.

This paper provides a brief summary of the Canadian gypsum industry, describes the types available, outlines research by CANMET on synthetic gypsum, and comments on the potential rise of several synthetic gypsums for products manufacture.

033

Coté, P. and Townsend, M.G. "Effect of thoron daughters on radon daughter counting procedures: examination of  $\alpha$ - and  $\beta$ - counting methods"; MRP/MSL 79-39(OPJ); submitted Health Phys and presented AECB Conf, Bancroft; March 1979.

The precision of radon daughter working levels (WL) estimated by standard  $\alpha$ -counting techniques and the effects of disequilibrium of radon daughters and of typical thoron-daughter activity levels on the precision of WL (Rn) estimated by a single total- $\beta$  count Kusnetz method were investigated. An examination was also made of the precision of radon daughter activity ratios estimated by total- $\beta$  count using the Thomas-Tsivoglou procedure. A 2-total- $\beta$  count procedure was derived for estimating WL (Rn) and WL (Tn) to within 25-30% and 12%, respectively.

034

Coté, P., Carson, D.W., Leclerc, A., Townsend, M.G. and Tremblay, R.J. "Optimization of radon and thoron daughter counting procedures"; MRP/MSL 78-201(OPJ); submitted J Phys Med Biol and presented AECB Meet, Ottawa, Oct. 1978 and OECD Meet, Paris; Nov. 1978.

A procedure for counting total  $\alpha$ -particles in air containing mixtures of radon and thoron is introduced that allows estimating radon and thoron daughter WL's to  $\pm 20\%$ . A procedure is also described for a 3-energy-channel  $\alpha$ -spectrometer to evaluate RaA, RaB, ThB and ThC. Thoron daughter WL's were found to be about half those of radon daughter WL's in a uranium mine in Canada.

035

Crook, W.W. and Jambor, J.L. "Nickelbischofite, a new nickel chloride hydrate"; MRP/MSL 78-164(J); submitted Can Mineral; Aug. 1978.

This paper describes nickelbischofite's occurrence, physical properties, crystallographical and chemical characteristics.

036

Dalton, J.L. and Hitchen, A. "The determination of uranium, a review of current methods"; ERP/MSL 78-103(OP); presented GEOANALYSIS 78; Ottawa, May 15, 1978.

A review of methods for determining uranium in ores is presented. An overview, with references to detailed methodology is given for

three methods which require chemical treatment for sample preparation, i.e., fluorimetry, colorimetry, and volumetric umpire analysis, and for three methods which require little or no sample preparation, i.e., radiometry X-ray fluorescence, and activation analysis followed by delayed neutron counting.

037

Donaldson, E.M. "Determination of antimony in concentrates, ores and non-ferrous materials by atomic-absorption spectrophotometry after iron-lanthanum collection, or by the iodide method after further xanthate extraction"; MRP/MSL 78-222(J); submitted Talanta.

Methods for determining trace and moderate amounts of antimony in copper, nickel, molybdenum, lead and zinc concentrates and in ores are described.

038

Dutrizac, J.E. "Some factors affecting the ferric ion leaching of chalcopyrite and the synthesis of lead jarosite"; MRP/MSL 79-29(OP); presented Univ of Utah, Salt Lake City, March 1979.

Abstract presented only.

039

Dutrizac, J.E. and Chen, T.T. "The characterization of mercury in some sulphide concentrates"; MRP/MSL 78-179(J); submitted CIM Bull.

Mercury balances were obtained for the flotation circuits at Parmour Porcupine Mines, Timmins, Ontario and at Brunswick Mining and Smelting Corporation, Bathurst, New Brunswick. The mineral form of mercury in both deposits has been ascertained.

040

Dutrizac, J.E. and MacDonald, R.J.C. "The dissolution of sphalerite in ferric chloride solutions"; MRP/MSL 78-21(J); Metall Trans; 9B:543-551; Dec. 1978

The kinetics of dissolution of both sintered sphalerite discs and lumps of natural sphalerite in ferric chloride-hydrochloric acid solutions were studied using the rotating disc technique. Experimental procedure is discussed with results and discussion.

041

Faye, G.H. and Steger, H.F. "A case study of the ambient oxidation of two zinc-lead (sulphide) reference ores"; MRP/MSL 78-98(J); submitted Talanta.

The history of two lead-zinc (sulphide) reference ores is presented to show, quantitatively, the serious effects of ambient oxidation on unprotected samples. Suggestions are given for overcoming or diminishing the oxidation problem.

042

Ghosh, R.S. and Malhotra, V.M. "Use of superplasticizers as water reducers"; MRP/MSL 78-189(J); submitted ASTM J Test Eval.

This report describes the performance of superplasticizers used as water-reducing admixtures in concrete. Various dosages of three commercially available superplasticizers were added

to air-entrained reference concretes containing ASTM Type I, II, and V cements. Results showed that in all cases the strength and modulus of elasticity of the specimens cast from superplasticized concrete exceeded those of the reference specimens.

043

Gilmore, A.J. "The behaviour of some anions during the anion-exchange recovery of uranium from an acidic-bacterial leach liquor"; ERP/MSL 79-13(OP); presented Can Uran Prod Meet, Elliot Lake, May 1979 and 18th Ann Conf of Metall, Sudbury, Aug. 1979.

A study was made of the ion-exchange processing of uranium sulphate leach liquors from an acidic-bacterial operation containing concentrations of interfering anions. The study identified areas where uranium recovery and consequently the economics may be improved.

044

Green, D.J. "Materials for fuel and storage cells: Preparation and fabrication of sodium beta-alumina"; MRP/MSL 78-162(OP); presented in-house, CANMET; Ottawa, June 15, 1978.

The technological application of the sodium beta-aluminas in secondary batteries, thermo-electric generators and refining operations is outlined. The relationship between structure and properties of sodium beta- and beta-alumina is summarized with emphasis on fabrication and microstructural problems that can occur. Also, CANMET's program on these materials is outlined and initial results are briefly discussed.

045

Green, D.J. "Preparation and fabrication of sodium beta-alumina from solution spray-dried and freeze-dried powders"; MRP/MSL 78-193(OP); presented Electron Div Meet, Am Chem Soc, Dallas, TX.; Sept. -0320, 1978.

Powders were produced by solution spray drying and spray freezing-freeze drying techniques. These powders and their calcined products were characterized by DTA, TGA, X-ray diffraction, chemical analysis, surface area measurements and microscopy. They were subsequently hot pressed into discs for microstructural and phase analysis.

046

Hamer, C.A., Quon, D.H.H. and Winer, A.A. "Extraction of alumina from Canadian non-bauxite materials"; MRP/MSL 78-111(OPJ); presented 4th Int Congr for the Study of Bauxites, Alumina and Aluminum; Athens, Greece; Oct. 12, 1978 and in Proc.

This paper describes investigations on extraction of alumina from anorthosite, clays and coal-associated wastes by the hydrochemical and melt-quench methods. Coal-associated wastes appear to have the greatest potential for alumina extraction.

047

Hoey, G.R. "Test procedure for the corrosion survey of mineral-fibre insulated attics"; MRP/MSL 78-178(OP); presented Comm Miner Fibre Therm Bldg Insul; Ottawa; Sept. 15, 1978.

A test procedure is given for inspecting attics to assess the extent of metal corrosion caused by mineral fibre insulation.

048

Joe, E.G. "Energy consumption in Canadian mills"; MRP/MSL 78-91(OP); presented Ann Gen Meet CIM; Apr. 23-27, 1978.

A survey of energy consumption was conducted at 67 metallic mineral processing plants; results are given.

049

Joe, E.G. "Capital and operating costs for uranium milling in Canada"; ERP/MSL 78-203(OP); presented Ann Gen Meet CIM; Apr. 22-26, 1979.

Methods for determining capital and operating costs of a 2700-t/d (3000-t/d, short) acid leach uranium mill are presented.

050

Kissen, S.A. and Owens, D.R. "New data on stannite and related tin sulfide minerals"; MRP/MSL 78-143(J); submitted Can Mineral.

This paper presents new data on stannite and related minerals possessing tetrahedrally coordinated sulphur atoms and lying within the system Cu-Fe-Zn-Sn-S.

051

Klymowsky, I.B. "Research on the modelling of grinding and classification of fine-grained sulphide ores at CANMET"; MRP/MSL 78-195(J); North Min; 64:38:B15-16; Nov. 30, 1978.

Research into mathematical modelling of grinding and classification of fine-grained sulphide ores has led to developing models which could be adapted to on-line use. The grinding model involves the concepts of particle selection, breakage and residence time in mills. The classification model involves the concepts of material by-passing the classification process, and material being classified with a characteristic efficiency independent of the cut-size.

052

Klymowsky, I.B. and Cameron, W.H. "Industrial application of mathematical modelling to the treatment of fine-grained sulphide ores"; MRP/MSL 79-46(OPJ); presented Can Miner Proc; Ottawa; Jan. 25, 1979.

This paper presents an overview of the work in progress at CANMET on the modelling of grinding and classification. Models for a ball mill and hydrocyclone are described, and new analytical expressions for the model parameters are given. Results of laboratory pilot plant and industrial experiments on grinding and classification are reviewed.

053

Kruml, F. "The influence of ambient medium variation on physico-mechanical properties of cellular concrete" (edited and rewritten by V.V. Mirko-vitch); MRP/MSL 78-166(OPJ); presented 1st Int Conf Durability of Building Materials and Components; Ottawa; Aug. 21-23, 1978 and in Proc.

Theoretical limits for maximum and minimum temperature gradients within which microcracks



occur in cellular concrete were established. It was found that microcracks reduce substantially the bending strength, have only a limited effect on the dynamic modulus of elasticity and have no effect on the compressive strength of cellular concrete.

054

Laguitton, D. and Wilson, J.M.D. "Material balance: A step towards modelling of fine-grained sulphide ores treatment"; MRP/MSL 79-17(OPJ); presented Can Miner Proc; Ottawa; Jan. 24, 1979.

This paper presents computer methods as a powerful alternative to traditional balancing of individual units by hand calculation whether refined data for computer modelling or routing metallurgical inventory is needed.

055

Leclerc, A. and Townsend, M.G. "Quadrupole splitting and ground state in FeS and NiS ( $Fe^{57}$ ); MRP/MSL 78-171(J); *J Phys Chem Sol*; 39:687-690; 1978.

From a Mossbauer study of an oriented single crystal of  $Ni_{0.996}S$  (2%  $Fe^{57}$ ) at 298 K (above the metal-insulator transition at  $\sim 230$  K) the sign of the quadrupole splitting in  $Fe^{57}$  is determined to be positive; this contrasts with a negative sign found for FeS and  $Fe_{0.92}S$ . A tentative model is presented that is consistent with these results and with magnetic anisotropy data.

056

Lucas, B.H. "Separation processes by single-stage deep fluidized bed continuous ion exchange"; MRP/MSL 78-150(OPJ); presented 17th Ann Conf Metall; Montreal; Aug. 29, 1979.

This paper describes development of the concept of single-stage fluidized bed continuous ion exchange. Processes were developed and tested as follows: removal of base metals from mine-water, cyanide removal from gold mill wastes, uranium from minewater and uranium from  $H_2SO_4$  acid leach liquor.

057

Lucas, B.H. and Ritcey, G.M. "An alkaline roast-leach process for treatment of titaniferous magnetite for recovery of chromium vanadium and aluminum; MRP/MSL 78-118(J); submitted *CIM Bull*.

This paper describes the roast-leach bench scale and pilot plant work undertaken to develop optimum conditions for integrating the alkaline roast-leach process.

058

MacKinnon, D.J., Brannen, J.M. and Lakshmanan, V.I. "Zinc deposit structures obtained from synthetic zinc chloride electrolyte"; MRP/MSL 78-114(J); submitted *J Appl Electrochem*.

Results are described of an investigation to determine the feasibility of electrowinning zinc from zinc chloride electrolyte. A study was made of solution composition, impurities, temperature, current density, deposit morphology, etc.

059

Mailhot, G., Bisailon, A. Carette, G.G. and Malhotra, V.M. "Investigations into the develop-

ment of new pull-out techniques for in situ strength determination of concrete"; MRP/MSL 78-226(OPJ); presented 1978 Am Concr Inst; Nov. 3, 1978 and in *Proc*.

This paper reports the results of investigations undertaken to determine in situ strength of concrete by pull-out tests that do not need pre-planning and that can be carried out by drilling holes in hardened concrete in the field using portable equipment.

060

Malhotra, V.M. "Performance of superplasticizers in high water to cement ratio concretes"; MRP/MSL 78-147(OPJ); presented Int Symp Superplasticizers, sponsored by TRB/NRC, Wash., D.C., Jan. 1979 and in *Proc*.

This paper gives results of laboratory investigations on superplasticized concretes having a high water to cement ratio. Incorporating superplasticizers in concrete did not significantly affect its initial time of set. The large increases in the slump of superplasticized concrete and its loss with time were functions of the dosage rate of the superplasticizer used.

061

Malhotra, V.M. "Effect of the use of sulphonated melamine formaldehyde condensates on the properties of fresh and hardened concrete - A review of North American research"; MRP/MSL 78-225(OPJ); presented 1979 Int Melment Symp on Superplasticizers in Concrete; Munich, W. Germany, March, 1979 and submitted *Can J Civ Eng*.

This paper presents North American data on the properties of fresh and hardened concrete superplasticized with Melment L10, a sulphonated melamine formaldehyde condensate.

062

Malhotra, V.M. "A review of a 1978 ACI symposium on in situ strength evaluation of concrete"; MRP/MSL 79-6(J); *Proc RILEM Symp Quality Control of Concrete Structures*, Stockholm; June 17-21, 1979.

A brief report is given of 14 symposium papers dealing with penetration resistance, pull-out, break-off, pulse velocity, maturity concept, and combined methods for determining the in situ strength of concrete.

063

Mirkovich, V.V. "Thermophysical properties research in North America between two conferences"; MRP/MSL 78-128(OPJ); presented 6th European Conf on Thermophys Properties; June 26, 1978 and in *Proc*.

Activities in thermophysical properties research in North America for the period between the 1976 and the 1978 European thermophysical properties conferences are reviewed.

064

Mirkovich, V.V. "Thermal diffusivity of Ba-mica/yttria-stabilized zirconia composites"; MRP/MSL 78-130(OPJ); presented 6th European Thermophys Conf; June 19, 1978 and in *Proc*.

The thermal diffusivities of five Ba-mica/stabilized  $ZrO_2$  composites were determined. Materials and experimental techniques used, and

results and discussion are given.

065

Mirkovich, V.V. "Thermal conductivity of sulphur-infiltrated concrete"; MRP/MSL 78-177(OPJ); presented Int Conf on Sulphur in Construction, Ottawa; Sept. 12-15, 1978 and in Proc.

Thermal conductivities of three partially and fully sulphur-infiltrated concrete specimens were measured and the results compared with the values available in the literature for non-infiltrated concrete.

066

Quon, D.H.H. "Performance of high-alumina cement concrete stored in humid and dry heat at 25, 35 and 50°C"; MRP/MSL 79-7(OP); presented Ann Meet Am Ceram Soc; Cincinnati, Ohio; Apr. 28 - May 3, 1979.

For abstract see CANMET Report 78-15, entry 015 of this catalogue.

067

Quon, D.H.H. and Wheat, T.A. "Preparation and characterization of the K-ion conductor  $K_xMg_{x/2}Ti_{8-x/2}O_{16}$ "; ERP/MSL 78-50(OP); presented Can Ceram Soc; Toronto; Feb. 27, 1978 and Am Ceram Soc; Detroit, May 10, 1978.

A series of K-ion conductors have been prepared and characterized to develop solid state ionically conducting materials for potential application in energy storage and conversion systems. The experimental procedure, results and discussion are given.

068

Raicevic, D. "Canada and chromium"; MRP/MSL 78-109(J); North Min; 64:38:B8-9, B14; Nov. 1978.

This report reviews chromium uses and provides an overview of the characteristics of foreign and domestic resources.

069

Raicevic, D. "Decontamination of Elliot Lake uranium tailings"; MRP/MSL 78-120(OPJ); presented Conf Metall; Montreal; Aug. 27-30, 1978.

This paper describes a flotation approach for treating Elliot Lake uranium tailings to produce new, decontaminated tailings practically free of pyrite and with the radium, thorium and uranium contents considerably reduced.

070

Ritcey, G.M. "Processing of Canadian uranium ores - CANMET's R & D contribution to present and future technology"; ERP/MSL 78-172(J); North Min; 64:39:12-13; 1978.

This paper describes briefly the on-going research at CANMET on processing of uranium ores. Process flowsheets of conventional and new technology are given.

071

Sastri, V.S. "Reverse osmosis and its application in the treatment of mining waste effluents"; MRP/MSL 79-49(OP); presented Chemistry Dept, Univ of Manitoba, Winnipeg; March 30, 1979.

Extended abstract only.

072

Skeaff, J.M. "Chlorination of uranium ore for extraction of uranium, other radionuclides and for pyrite removal"; ERP/MSL 78-155(OPJ); presented CIM Conf Metall; Montreal; Aug. 28, 1978 and in Proc.

This paper deals with a bench-scale investigation for developing a new process for uranium extraction by high-temperature chlorination in which Ra-226 is extracted from the ore along with the uranium. Thorium and the rare earths are extracted as byproducts and the pyrite content of the ore is reduced to a low level to produce an innocuous residue.

073

Soles, J.A., Carette, G.G. and Lessard, J.R. "Stability of sulphur-infiltrated concrete in silage environments"; MRP/MSL 78-175(OPJ); presented Int Conf on Sulphur in Construction; Ottawa; Sept. 12-15, 1978 and in Proc.

This paper gives results of an investigation into behaviour of sulphur-infiltrated portland cement concrete under conditions encountered in or near silos to assess its durability and potential usefulness in such environments. Results indicate that such concrete will not remain stable for long periods.

074

Steger, H.F. "Oxidation of sulphide minerals. VI Ferrous and ferric iron in the water-soluble oxidation products of iron sulphide minerals"; MRP/MSL 78-151(J); submitted Talanta.

An investigation to obtain information on the nature of oxidation products of iron sulphide minerals using chemical phase analysis is described. A method for determining ferrous and ferric iron in the water soluble oxidation products of pyrite, chalcopyrite and pyrhotite is also described.

075

Stemerowicz, A.I. and Petruk, W. "Laboratory investigations and image analysis studies on samples from the base metal deposit of Brunswick Mining and Smelting Corp. Ltd."; MRP/MSL 79-2(OPJ); presented Can Miner Proc; Ottawa; Jan. 23, 1979.

A two-phase program was undertaken by CANMET to develop flotation techniques for recovering zinc from mill tailings and for producing bulk concentrates from ores with high metal recoveries. This paper shows the recovery of metals and of free, slimed, and unliberated sphalerite obtained.

076

Sutarno, R. "Guide to the treatment of analytical results obtained from interlaboratory analyses for certification of reference materials of geological origin"; MRP/MSL 78-194(J); submitted Int Study Group Geol Ref Mat.

This is a general guide to the treatment given in the title. Although emphasis is on statistical evaluation of analytical results, suggestions on experimental design and underlying assumption are also given.

077

Sutarno, R. "ISO/TC 102/SC 2/WG 7 Report on activities for the period of 1976-1978; MRP/MSL 78-158(OP); submitted Secretariat ISO/TC 102/SC and presented 9th Meet ISO/TC 102/Sc 2; Sydney, Australia; Nov. 1-8, 1978.

This report describes the activities of ISO/TC 102/SC 2/WG 7 for 1976-78. It reports on the progress of the document on procedure for statistical evaluation of analytical data resulting from international tests; and comments on procedures and results of tests conducted by various working groups within the organization. It contains proposals for future work of WG 7.

078

Szymanski, J.T. "The crystal structure of plat-  
arosite,  $Pt(As, S)_2$  and a comparison with sper-  
rylite,  $PtAs_2$ "; MRP/MSL 78-176(J); submitted  
Can Mineral.

A comparison is presented of the crystal structures of platarsite and sperrylite.

079

Wheat, T.A. "Ionic conductors - A major growth area"; MRP/MSL 79-3(J); submitted Clay Ceram.

Potential applications of the nearly 40 known ionically-conducting materials are discussed.

080

Wheat, T.A. "Superionics - Today and tomorrow"; MRP/MSL 79-15(OPJ); presented Elect Basic Sci Div, Can Ceram Soc Ann Meet, Montreal; Feb. 25-27, 1979 and submitted J Can Ceram Soc.

The increasingly important role played by this group of electrical ceramics is reviewed and their potential future development and applications are considered.

081

Winer, A.A. "CANMET's mineral insulation project"; MRP/MSL 79-11(OP) presented ILIM; Feb. 6, 1979.

Insulation has successfully been made

from slags and asbestos tailings on an experimental scale at CANMET. This paper describes CANMET's research project on mineral wool, stating objectives and work plans.

082

Winer, A.A and Cassett, M. "The effect of aspect ratio on fibre counts; a preliminary study"; MRP/MSL 78-138(OPJ); presented New York Academy of Sciences and in Trans; 1978.

The results of a study of the inter-laboratory precision obtained by the NIOSH counting method are given. Three different aspect ratios: 3:1, 5:1, and 10:1 were applied as fibre counting criteria.

083

Winer, A.A. and Webster, A.H. "Possibility of Canadian sources for alumina"; MRP/MSL 78-182(J); North Min; 64:38:D6,D21; 1978.

This paper briefly outlines alternative sources and methods of abstracting alumina from various regions in Canada.

084

Yoon, R., Salman, T. and Donnay, G. "Predicting points of zero charge of oxides and hydroxides"; MRP/MSL 78-125(OPJ); presented 52nd Colloid and Surface Science Symp; Knoxville, Tennessee; June 12, 1978 and submitted J Coll Interface Sci.

An improved version of Parks' PZC equation is described. The proposed equation can predict the points of zero charge of oxides and hydroxides from crystallographic data.

085

Yoon, R. and Stemerowicz, A.I. "Collectorless flotation of chalcopyrite and sphalerite"; MRP/MSL 79-53(OPJ); presented Can Miner Proc; Ottawa; Jan. 24, 1979.

The flotation of chalcopyrite and sphalerite from copper and copper-zinc ores was achieved without using thiol-type collectors. Details of the investigation are described.

## ENERGY RESEARCH LABORATORIES

086

Banks, G.N. "Gaseous fuels from coal"; ERP/ERL 79-12(J); North Min; 65:6:C1; April 19, 1979.

This paper outlines some of the basic chemistry involved in coal gasification, gives a brief history of its commercial application and a summary of one aspect of the Federal government's involvement in establishing a coal-alternative answer to Canada's future energy requirements.

087

Belinko, K., Ciavaglia, L.A. and Nandi, B.N. "Production of metallurgical coke from poor coking coal by addition of waste residues from petroleum and bitumen refineries"; ERP/ERL 78-12(J); Int Symp Energy Ind (Pergamon Press); p. 79; 1979.

A summary is given of results obtained after adding residues derived from conventional petroleum crude, coal tar, and bitumen and heavy crude oil to poor coking coals.

088

Belinko, K., Ciavaglia, L.A. and Nandi, B.N. "Processed bitumen pitch as an additive for marginal coking coals"; ERP/ERL 78-56(J); Fuel; 58:247-251; April 1978.

This paper summarizes results obtained when various pitch binders including a processed petroleum pitch, and a coal-tar pitch derived from tar sands bitumen were added to a high-rank bituminous coal rich in inert macerals.

089

Botham, J.C. and Brown, T.D. "Innovations in cokemaking and the role of the Canadian Carbonization Research Association"; ERP/ERL 79-50(OP); presented 81st Ann Meet CIM, Montreal; April 22-25, 1979.

Recent innovations in cokemaking are described. These innovations are directed towards reducing costs, improving coke quality and expanding the range of coals used in the process.

090

Botham, J.C. and Taylor, G. "Cokemaking research at CANMET plays important role in coal industry"; North Min; 64:24:B6-B7,B9; Aug. 24, 1978.

CANMET houses the only centre in Canada capable of fully evaluating the potential of coals for coke manufacture. Its cokemaking facilities serve almost exclusively the technological needs of the Canadian coal and steel communities. This article focuses on the research and development expertise, facilities and programs at CANMET.

091

Brown, T.D., Lee, G.K. and Bamborough, H.A. "Sulphur neutralization by lignite ash: Pilot-scale combustion experiments"; ERP/ERL 78-55(J); submitted Fuels Div, Am Soc Mech Eng Ann Conf.

Pilot-scale combustion experiments were conducted by the Canadian Combustion Research

Laboratory (CCRL) to determine the degree of sulphur retention in ash when lignite was burned under conditions applicable to pulverized-fired utility boilers. This paper describes the pilot-scale test facility, the experimental procedures, and the results.

092

Brown, T.D., Lee, G.K. and Sekhar, N. "Modification of electrostatic precipitator performance by use of fly-ash conditioning agents"; ERP/ERL 78-49(J); submitted Air Poll Cont Div, Am Soc Mech Eng Ann Meet.

This paper describes a joint research project between Ontario Hydro and the Canadian Combustion Research Laboratory (CCRL) to investigate the potential of various conditioning agents for enhancing electrostatic precipitator efficiency when burning low-sulphur coals. The experimental equipment, procedures and results are described.

093

Chmielowiec, J. and Sawatzky, H. "Entropy dominated high pressure liquid chromatographic separations of polynuclear aromatic compounds - Temperature as a separation parameter"; ERP/ERL 78-57(J); submitted J Chrom Sci.

The elution sequences of polynuclear aromatic hydrocarbons from a Chromagabond-C<sub>18</sub> column with aqueous acetonitrile have been found to be influenced by temperature changes. These influences are ascribed to domination by entropy effects.

094

Friedrich, F.D. "Coal energy for Canada"; ERP/ERL 78-39(OP); presented Can Inst Energy; Toronto; April 1978.

This paper reviews the extent and nature of Canada's coal resources, identify the needs of the various energy market sectors and describes the limitations imposed by present or foreseeable technology on the application of coal in each sector. Guidelines are suggested for energy strategy over the next few decades.

095

Furimsky, E. "Deactivation and regeneration of refinery catalysts"; ERP/ERL 78-28(J); submitted Erdoel Kohle.

A survey is presented of works that refer to structure, composition and chemical reactivity in relation to deactivation and regeneration of refinery catalysts. Emphasis is placed on facts common to a great number of reactivation and regeneration processes.

096

Furimsky, E. "On coke determination on catalyst surface"; ERP/ERL 78-75(J); submitted Ind Eng Chem.

This paper gives four methods for removing adhering soluble hydrocarbon fractions from catalyst surface. A comparison is made of the results obtained after applying these different procedures. Results indicate that selection of a proper analytical method for coke determination is of crucial importance.

097

Furimsky, E. "Removal of sulphur, nitrogen and oxygen from heterocycle compounds present in petroleum"; ERP/ERL 78-85(J); submitted Amgewatan Chemie.

The effects of temperature and hydrogen on heterocyclic S-, N- and O-containing compounds were investigated. An attempt is made to explain the role of the catalyst in various reaction steps ending with final elimination of S, N and O from heterorings. Predictions are made on the trends of relative rates of hydrodesulphurization, hydrodenitrogenation, and hydrodeoxygenation at near atmospheric and high hydrogen pressures.

098

Furimsky, E., Ranganathan, R. and Parsons, B.I. "Catalytic hydrodenitrogenation of basic and non-basic nitrogen compounds in Athabasca bitumen distillates"; Fuel; 57:427-430; July 1978.

Denitrogenation characteristics of a heavy gas oil and a coker kerosene distillate are given. Effects of catalyst promoters on denitrogenation are reported and the mechanism for the removal of the basic and non-basic nitrogen compounds is discussed.

099

Furimsky, E. "Catalytic deoxygenation of heavy gas oil"; Fuel; 57:494-496; Aug. 1978.

The extent of oxygen removal during catalytic hydrotreatment of heavy gas oils depends on the chemical composition of catalysts. Further increases in the  $\text{MoO}_3$  concentration do not appreciably increase oxygen removal. Deoxygenation is also improved by adding cobalt and nickel oxides to the molybdate catalysts. Independent acidity measurements on the liquid products suggest the presence of phenols.

100

Furimsky, E. "Catalytic removal of sulfur, nitrogen and oxygen from heavy gas oil"; Am Inst Chem Eng J; 25:2:307-311; March 1979

Removal of sulphur, nitrogen, and oxygen from heavy gas oils is affected by the chemical composition of supported molybdate catalysts. Cobalt and nickel, when added to these catalysts, have a promoting effect on these reactions. However, the relative rates always follow the same trend; i.e., the hydrodesulphurization is the fastest, followed by hydrodenitrogenation and hydrodeoxygenation.

101

Furimsky, E. "Chemical origin of coke deposited on catalyst surface"; Ind Eng Chem Prod Res Dev; 17:4:329-331; 1978.

An attempt was made to obtain information on the chemical origin of coke on catalyst surface from its chemical composition. The experimental

work is based on a series of extractions with various solvents performed on a commercial cobalt molybdate catalyst used in hydrotreating either heavy gas oil or Athabasca bitumen. The possibility of removing the metals from used catalyst pellets by extraction is shown.

102

Gransden, J.F., Leeder, W.R. and Botham, J.C. "Correlation of ASTM stability with Japanese industrial coke drum indices - Update"; ERP/ERL 78-89(OP); presented 3rd Meet ISO/TC27/SC3, London, England; Nov. 1978.

A previous report, CANMET Report 77-47 presented correlations between the ASTM stability factor, S, and Japanese industrial drum indices from technical-scale ovens. Subsequently, additional data were generated in tests using 51 x 76-mm coke and were used to recalculate correlations involving the Japanese indices JIS DI<sub>15</sub><sup>30</sup> and JIS DI<sub>15</sub><sup>50</sup>. The results of these tests are summarized.

103

Gransden, J.F., Leeder, W.R., Botham, J.C. and Whalley, B.J.P. "Influence of coking variables on the quality of coke produced in a technical scale coke oven"; ERP/ERL 78-80(OP); presented 28th Can Chem Eng Conf, Halifax; Oct. 22-25, 1978.

The effect of carbonization variables on properties of coke made from one industrial coking coal blend using a rebuilt 450-mm oven is presented. The results were used to choose standard test oven operating conditions considered to simulate industrial practice. Cokes produced from the same blend in industrial and technical scale ovens are compared.

104

Hanza, H.A. "Flocculation of froth flotation tailings from a coal washery"; ERP/ERL 78-6(J); presented 80th Ann Gen Meet CIM, Vancouver; Apr. 23-27, 1978 and in CIM BULL; 72:116; 1979.

This paper describes an investigation to improve coal cleaning processes especially for low-grade or fine coals and to alleviate environmental problems associated with the mining and processing industries.

105

Hardin, A.H., Packwood, R.H. and Ternan, M. "Effects of medium pore diameters in Co/Mo/Al<sub>2</sub>O<sub>3</sub> catalysts on the conversion of Athabasca bitumen"; ERP/ERL 78-38(J); submitted 6th Can Congr on Catal.

This paper reports results from an investigation of the effects of variation in catalyst physical parameters on several measures of conversions. The results discussed are for a catalyst with nominal 2.2 wt %  $\text{MoO}_3$  and 1.1 wt % Co on alumina.

106

Kelly, J.F. and Ternan, M. "Hydrocracking Athabasca bitumen with alkali metal promoted Co-MoO<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts"; ERP/ERL 78-112(J); submitted Can J Chem Eng.

Alkali metal promoters (lithium, sodium and potassium) were added to catalysts used to



hydrocrack Athabasca bitumen. Results of experiments are given and explained in terms of the changes in catalyst electronic properties caused by adding the promoters.

107

Kriz, J.F., Belinko, K., Nandi, B.N. and Montgomery, D.S. "Changes within tin-containing catalysts under hydrorefining conditions"; ERP/ERL 78-53(J); submitted J Catal.

A series of tin catalysts was tested for bitumen upgrading and a study made of the changes during testing.

108

Kriz, J.F., Ternan, M., Packwood, R.H. and Parsons, B.I. "Support pre-treatment and its effect on the catalysts structure and the hydrorefining performance of a catalyst"; ERP/ERL 77-29(OP); presented Symp Refining of Coal and Shale Liquids, Div Pet Chem, Inc., Am Chem Soc; Chicago; Aug. 28 - Sept 3, 1977.

This report describes a technique for catalyst preparation where an alumina support material was coated with a layer containing the catalytically active component. Hydrorefining experiments indicated that catalysts prepared by this technique required smaller amounts of catalytically active materials than catalysts prepared in a more conventional manner.

109

Lee, G.K. "The potential role of coal in Canada's energy picture"; ERP/ERL 78-67(OP); presented Ann Gen Meet, Can Boiler Soc; Kingston, Ont., Sept. 14, 1978.

Adlibitum presentation only.

110

Ozubko, R.S. "Effect of paramagnetic relaxation reagent concentration on the nuclear Overhauser enhancement and on the use of gated proton decoupling in quantitative carbon-13 nuclear magnetic resonance spectroscopy"; ERP/ERL 78-52(J); submitted Anal Chem.

The concentration effect of  $\text{Cr}(\text{acac})_3$  on the pyrene  $^{13}\text{C}$  NMR resonances demonstrates that all NOE are not completely quenched until 0.25  $\text{MCr}(\text{acac})_3$  is present. In quantitative analyses using lesser  $\text{Cr}(\text{acac})_3$  concentrations, gated proton decoupling is necessary.

111

Sawatzky, H., Denis, J.M. and George, A.E. "Characterization of hydrocracked Athabasca bitumen"; ERP/ERL 78-60(OP); presented Confab '78, Saratoga, WY; July 1978.

Work is described on the characterization of hydrocracked products of Athabasca bitumen at various levels of severity. Results of the compound type separations are given, nitrogenous

materials in these products are discussed, and work on sulphur compounds is described.

112

Sekhar, M.V.C. and Ternan, M. "Thermogravimetric studies on catalytic and non-catalytic pyrolysis of pitch derived from hydrocracked Athabasca bitumen"; ERP/ERL 78-83(J); submitted Am Chem Soc Adv Chem.

The first half of a two-stage non-catalysed pyrolysis obeyed overall first order kinetics while in the second half the kinetics became complex. When the gamma alumina catalyst was used, the total yield of distillate products increased. Also, the catalysed reaction was first order with respect to the reactant throughout the pyrolysis. In the first-order regime of both the catalytic and non-catalytic pyrolysis, the activation-energy and the pre-exponential factor increased with increasing extent of reaction.

113

Ternan, M. "Electronic concepts applied to coke formation on hydrocracking and hydrodesulphurization catalysts"; ERP/ERL 79-28(J); 6th Can Symp Catal Proc, p. 220, Aug. 19-21, 1979.

A simple model of a hydrocracking catalyst employing two types of reaction sites is used to explain coke formation. This model is used also to explain changes in catalyst coke content reported previously to accompany changes in catalyst composition.

114

Tibbetts, T.E. and Fraser, J.A. "The utilization of Canadian peat as an alternative energy source"; CIM Bull; 71:797; 1978.

An overview is presented of the utilization of Canadian peat as an alternative energy source. Topics include mining methods, and costs, and recommendations for steps to be taken in developing a fuel peat industry in Canada.

115

Whaley, H. "A status report on coal-oil slurry projects in Canada"; ERP/ERL 78-68(OP); presented U.S. DOE Contractor Review Meet Coal-Oil Mixture (Base Technology) Field Project; Pittsburg, PA; Sept. 7-8, 1978.

Adlibitum presentation only.

116

Whaley, H. "Coal-oil mixture projects in Canada"; ERP/ERL 78-54(OP); presented 1st Coal-Oil Mixture Comb Symp, St. Petersburg, Fla.; May 8-11, 1978.

To encourage the use of coal in place of premium fuels, the Department of Energy, Mines and Resources Coal Conversion Program has invited R & D projects for funding. A brief description of each of four projects is given.

## MINING RESEARCH LABORATORIES

117

Allen, G. "The mining engineering function in the assessment of reasonably assured resources of uranium"; ERP/MRL 78-64(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

The methodology used in computing cut-off grades is explained. In addition to commenting on direct mine evaluations, other related activities are described.

118

Bigu, J. "Unattached radon daughter fraction - A potential source of error in alpha particle dose evaluation"; MRP/MRL 78-82(OP); presented Meet Pers Dosimetry and Pers Exp Est, sponsored by AECB, Ottawa; Oct. 5, 1978.

Sources of error in determining alpha-dose from radon and thoron daughter products are given. Conclusions and suggestions for further work are provided.

119

Bigu, J. "Radiation experiments for uranium mine inspectors training course (UMITC), Elliot Lake Centre, November 1978"; MRP/MRL 78-89(OP); presented Mine Inspector's Training Course, Elliot Lake, Ont.; Nov. 1978.

Common methods for determining the concentrations of radon gas and its daughter products are described. Experimental methods are discussed which enable determination of radon and radon daughters concentrations, age of air, working level (WL) due to individual radon daughters, total WL and unattached radon daughter fractions.

120

Bigu, J. "Some notes and recommendations for the routine determination of the WL in uranium mines by the Kusnetz method"; MRP/MRL 78-95(OP); submitted 88th Elliot Lake/Sudbury Vent Group Meet, Falconbridge Nickel Mines, Sudbury, Ont.; Dec. 14, 1978.

A brief discussion on the Kusnetz method for determining the WL in uranium mines is followed by a description of some instrumentation used in the modified Kusnetz technique. Recommendations are made for suitable instrumentation including radiation equipment and sampling pumps. Also guidelines and recommendations are made in an attempt to standardize practice in uranium mines.

121

Boyer, A. "Reserve calculation methods for the Gartner deposit, Key lake, Saskatchewan"; ERP/MRL 78-57(OP); presented EMR Uran Assess Sem; Ottawa; June 29, 1978.

Ore reserve assessment for the Gartner uranium deposit was made by the polygonal method using an area of 250 m<sup>2</sup> for each hole. Data quality evaluation, methodology, observations and conclusions are given.

122

Boyle, R. "Computer programs for processing coded data"; ERP/MRL 78-56(OP); presented EMR Uran Assess Sem; Ottawa; June 29, 1978.

Various Collection and Analysis of Drill Hole Data (CADD) computer programs have been developed to verify and correct drill hole data which are stored as computer files and to prepare the data for analysis by programs like COMPOS which are used for analysis and ore reserve calculations. This report briefly describes individual functions of the CADD programs, and illustrates their input modes and output formats.

123

Chakravorty, R.N. and Woolf, R.L. "Environmental monitoring for safety in underground coal mining"; ERP/MRL 78-20(OP); presented 80th Ann Gen meet CIM, Vancouver; April 23-27, 1978, and in CIM Bull; 72:801:100-108; Jan. 1979.

The state-of-the-art in monitoring technology is reviewed with particular reference to hazardous gas detection in underground coal mines. Preliminary results obtained from ongoing studies, with regard to continuous monitoring of methane and carbon monoxide in mine air in some of the operations in Western Canada, are discussed. Inadequacies of the methods using spot samples are examined.

124

Chakravorty, R.N. and Woolf, R.L. "Evaluation of systems for early detection of spontaneous combustion in coal mines"; ERP/MRL 79-9(OP); for presentation 2nd Int Mine Vent Congr, Reno, Nevada; Nov. 4-8, 1979.

This paper briefly reviews the state-of-the-art on the methods developed and used for the early detection of spontaneous combustion. CANMET work to date on carbon monoxide monitoring and infrared detection systems is discussed. Field and laboratory studies indicate that both systems can be used successfully for the early detection of heating in coal mines.

125

Darling, J.A. "Canadian stability testing of mixtures"; MRP/MRL 79-37(OP); presented Group of Experts on Explosives Meet, London, England; May 14, 1979.

This paper describes modifications made by Canada to the 75°C International Test which was designed to describe stability problems of slurry explosives.

126

Fisekci, M.Y., Grimley, A.W.T. and Cochrane, T.S. "Progress in underground mining of coal under the difficult mountainous conditions of Western Canada"; ERP/MRL 79-4(OP); for presentation 10th World Min Congr, Istanbul, Turkey; Sept. 17-21, 1979.

This paper briefly describes Canadian coal mining with historical background of mining in the mountain areas of Western Canada. It describes the hydromechanization experiment at Kaiser Resources Ltd. and discusses advances made to date. A short description is presented of selected ground control research conducted by Kaiser Resources Ltd. and CANMET Mining Research Laboratories in support of the hydro-mining experiment.

127

Fustos, A. "Ore reserve calculations - Their role in the mine evaluation process; the question of their reliability; the necessity and means of expressing their reliability quantitatively"; ERP/MRL 78-59(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

An overview is presented of the considerations necessary in making ore reserve calculations.

128

Grant, F., Wigelsworth, R.M. and Charlton, K. "Strata control with polyester resin grouted roof bolts in the underground mines of McIntyre Mines Coal Division, Grande Cache, Alberta"; ERP/MRL 78-18(OP); presented 1st Int Symp Stability in Coal Mining, Vancouver; Apr. 5-7, 1978.

Tests were conducted in various mine sections under both measure and trial conditions to establish if polyester resin grouted bolts could be used as an efficient, economical and safe support system. They were conducted under near extreme strata conditions in relation to strata weakness, seam heights and equipment limitations. Results varied from poor to very encouraging depending on installation technique, hole diameter to bolt diameter ratio and the number of resin cartridges used per hole.

129

Knight, G. "Why the CAMPEDS gravimetric dust sampling system?"; MRP/MRL 78-11(J); submitted Can min J.

The salient features of the Canadian Mines Personal Dust Sampler (CAMPEDS) system are described which distinguish it from the gravimetric samplers developed for use in coal mines.

130

Larocque, G. "Presentation to mining subcommittee of NACMMR on underground nuclear waste repository"; MRP/MRL 79-6(OP); presented as in title; Elliot Lake, Ont.; Jan. 1979.

An overview is presented of EMR participation in the Fuel Cycle Waste Management Program directed by Atomic Energy of Canada.

131

Mogan, J.P. and Dainty, E.D. "Emission control performance of diesel exhaust treatment devices"; MRP/MRL 78-69(OP); presented Am Conf Govt Ind Hyg Symp on Industrial Hygiene for Mining and Tunneling, Denver, Colorado; Nov. 6-7, 1978.

The performance of state-of-the-art emission control devices was determined for the five commonly measured exhaust pollutants: soot, hydrocarbons, carbon monoxide, oxides of nitrogen, and sulphur oxides. Efficiencies varied from 90% to 0.

132

Mogan, J.P., Ferguson, S., Sarin, N. and Stewart, D.B. "Factors affecting explosion pressures in flameproof diesel exhaust systems"; ERP/MRL 79-36(IR&OP); for presentation and publication XVIII Int Safety in Mines Res Conf, Yugoslavia; Oct. 1979.

Test results are given of actual exhaust systems and of an adjustable mock-up water scrubbing unit.

133

Sabourin, R. "Guide for coding drill-hole data from uranium deposits, version 2"; ERP/MRL 78-42(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

This paper describes a coding system which makes sampling data available for computer processing for uranium reserve estimations. Basic data coding procedures are explained and codes are given for a number of variables. Three examples of completed coding sheets are presented and the most significant details in coding the data are discussed.

134

Sabourin, R. "Computer programs for ore reserve evaluation"; ERP/MRL 78-48(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

This report briefly describes several computer programs used for actual ore reserve assessment.

135

Sabourin, R. "A geostatistical ore reserve evaluation"; ERP/MRL 78-54(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

A geostatistical reserve calculation is described. Fundamental concepts are explained and a description of a typical geostatistical reserve evaluation is given. Problems associated with reserve classification are discussed, and a quantitative method to classify the different types of reserves on the basis of assurance of their existence is suggested.

136

Sabourin, R. "The program COMPOS"; ERP/MRL 78-55(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

The COMPOS, computer program, for calculating composite values for an individual drill hole is described. Capabilities of COMPOS are given and output formats are illustrated.

137

Savich, M.U. "Attenuation of ear muffs in Canadian mines"; MRP/MRL 78-100(J) submitted CIM Bull.

The main characteristics of 11 commercially available ear muffs were investigated and analyzed by a psychophysical and a physical method. Results indicate that none of the ear muffs tested contain all of the characteristics desirable in an ideal unit.

138

Srajer, V. and Barron, K. "Gas observation in the Saline Creek Tunnel"; ERP/MRL 78-22(OP); presented Underground Excavation in Oil Sands Sem, Univ of Alberta, Edmonton; May 19, 1978.

This paper describes a gas monitoring structure carried out by the Mining Research Laboratories during excavation of the Saline Creek Tunnel in Fort McMurray, Alberta. The gas monitoring system, data interpretation and results, and gas sample analysis procedure are described.

139

Walsh, D. "Reserve calculation methods for the Aphebian uranium deposits, the Makkovik Sub-province"; ERP/MRL 78-58(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

Uranium reserves and resources have been calculated for the Kitts and Michelin deposits in

the Makkovik area of the central Labrador Coast. The reserve calculation method used for the Michelin deposit is discussed in detail.

140

Weldwood, R. "Fundamental aspects of the assessment of reasonably assured resources of uranium by the Mine Evaluation Group, MRL, CANMET, EMR"; ERP/MRL 78-63(OP); presented EMR Uran Assess Sem, Ottawa; June 29, 1978.

This paper summarizes the responsibilities and objectives of the Mine Evaluation Group of the Mining Research Laboratories, CANMET and provides some aspects of its work.

## PHYSICAL METALLURGY RESEARCH LABORATORIES

- 141  
Boyd, J.D. and Godden, M.J. "Evaluation of heat-affected zone toughness by the cross-weld Charpy test"; ERP/PMRL 78-4(J); presented Symp on What does the Charpy test really tell us?"; Denver, Colorado; Feb. 27-28, 1978.  
Results are given of tests on submerged arc welds of direct quenched plate which provide a qualitative assessment of heat-affected zone toughness.
- 142  
Couture, A. "Influence of antimony and iron, added singly, on the mechanical properties of tin bronzes"; MRP/PMRL 78-8(J); AFS Trans; 86:583-588; 1978.  
An investigation was made on the effect of antimony on several tin bronzes, particularly those containing lead. The effect of iron on the properties of tin bronzes was also studied. Testing methods, procedure and results are described.
- 143  
Davis, K.G., Buhr, R.K. and Magny, J.G. "The dissolution of MgFeSi alloy during in mold treatment"; MRP/PMRL 78-13(J) AFS Trans; 86:379-384; 1978.  
Reactions between molten iron and MgFeSi occurring in in mold treatments were studied by X-ray fluorescence. There was considerable loss of magnesium caused by reaction between magnesium vapour and a thin layer of sand around the alloy chamber, but this effect is expected to be minor in industrial in mold practice.
- 144  
Davis, K.G. and Magny, J.G. "Observations of blocking in horizontal nozzles during the injection of gas into liquid cast iron"; MRP/PMRL 78-5(J); Metals Tech; 6:1-7; 1979.  
X-ray fluorescence was used to study bubble formation and blocking in horizontal nozzles when injecting nitrogen gas into liquid cast iron. Bubble frequency and mode of formation were insensitive to the gas flow rate. Blocking is believed to be associated with periodic collapse of bubbles at the nozzle exit, causing metal droplets to be propelled into the nozzle tube. Nozzles designed to reduce blocking were examined.
- 145  
Dion, J.L., Couture, A. and Edwards, J.O. "Deoxidation of copper for high conductivity castings"; MRP/PMRL 78-7(J); AFS Trans; 86:309-314; 1978.  
A carbon rod test has been developed which will detect oxygen at levels greater than 0.01%. The effectiveness of the test is shown by using a variety of standard and experimental deoxidation techniques.
- 146  
Fegredo, D.M. "The controlled processing of HSLA steels"; MRP/PMRL 78-3(OP); in Symposia "Steel-making in the coming decade"; and 16th Nat Metall Day, 32nd Ann Tech Meet, Bokaro Steel Plant, Bokaro, India; Nov. 14-17, 1978.  
The fundamentals of controlled-rolling procedures and the behaviour of various micro-alloying additions in relation to these procedures are delineated for HSLA steels. Experiments on accelerated HP cooling techniques to decrease total rolling time and improve productivity are also outlined.
- 147  
Fegredo, D.M. and Pritchard, C. "A metallographic examination of rollers subjected to wear under rolling-sliding conditions"; MRP/PMRL 77-13(J); Wear; 49:67-78; 1978.  
An investigation is described on the formation of cracks at inclusions and microhardness of rollers subjected to wear under rolling-sliding conditions. Undeformed inclusions or inclusions with a low index of deformation are considered to be crack initiators. Microhardness tests disclosed that wear rate appears to correlate with hardness at the extreme surface.
- 148  
Gilmour, J.B. "Environmental cracking of HY-130 steel"; MRP/PMRL 78-2(J); presented 10th Offshore Tech Conf, Houston, Texas; May 8-11, 1978.  
This paper describes research on determining environmental cracking (EC) resistance of commercially produced HY-130 steel. Results show that HY-130 steel has excellent resistance to EC.
- 149  
Lavigne, M.J. "Material selection for Athabasca bitumen thermal hydrocracking plant"; ERP/PMRL 78-12(J); U.S. Dept of Energy Newsletter; DOE/ET-0053/18; Oct. 1, 1978.  
This paper summarizes a report produced by CANMET entitled "Selection of materials and fabrication methods for the pressure vessel of a 10 000 b/d demonstration plant for the thermal hydrocracking of Athabasca bitumen of heavy oils of Canada".
- 150  
Tyson, W.R. "Kinetics of temper embrittlement"; MRP/PMRL 77-19(J); Acta Met; 26:1471-1478; 1978.  
The kinetics of segregation to surfaces in ternary and binary alloys was investigated by computer simulation. It is shown that, in typical alloy systems, segregation occurs much more rapidly than predicted by the McLean equation which applies only in the dilute limit.



151  
Vosikovsky, O. "Frequency, stress ratio and potential effects on fatigue crack growth of HY130 steel in salt water; MRP/PMRL 77-6(J); Eval; 6:3:175-182; 1978.

Fatigue crack growth rates over wide ranges of stress intensities, from threshold to nearly critical, were measured on HY130 steel in 3.5% NaCl aqueous solution. The growth rates are compared with reference data measured in laboratory air of 40% relative humidity.

152  
Vosikovsky, O. "The effect of stress ratio on fatigue crack growth rates in steel"; ERP/PMRL 78-3(J); Eng Fract Mech; 11:3:595-603; 1979.

The effects of stress ratio on fatigue crack growth thresholds and low and intermediate growth rates are examined on steels with ferrite-pearlite and tempered martensite microstructures, tested in air. Experimental data show that simple

empirical relationships can be used to describe the stress ratio dependence of thresholds and fatigue crack growth rates. Results also indicate that thresholds decrease linearly with yield strength.

153  
Warda, R.D. and Buhr, R.K. "A new cupola dust collector"; MRP/PMRL 77-23(J); AES Trans; 86:439-446; 1978.

The concept, design and testing of a technique to remove particulate from a gas stream without intermediate cooling is described. Data are presented for work carried out on a small experimental apparatus capable of treating 0.28 m<sup>3</sup>/min (10 acfm); on an enlarged version used to investigate the efficiency of collection of metallurgical fume; a prototype unit connected to a foundry cupola capable of treating 210 m<sup>3</sup>/min (7500 acfm); and a large-scale laboratory unit of about 34 m<sup>3</sup>/min (1200 acfm) capacity.

#### TECHNOLOGY INFORMATION DIVISION

154  
Taylor, G. "Hydrocracking: More oil from sand"; GEOS; pp 18-20; Fall Issue, 1978.

This paper describes the evolution of the hydrocracking process developed by CANMET for upgrading Canada's extensive oil sand and heavy oil deposits from the Athabasca tar sands of Alberta.

155  
Taylor, G. and Kanasy, J.E. "Special challenges and problems in a technical information service serving the mineral and energy industries"; ERP/MRP/TID 78-5(OP); presented 6th Ann CAIS Conf, Montreal; May 10-13, 1978.

This paper describes the key elements of CANMET's technical information services in energy, mining, metallurgy and mineral processing.

156  
Taylor, G. and Lawton, B.E. "Recent Canadian developments in technical information services on coal and other energy sources"; ERP/TID 78-22(OP); presented Can Chem Eng Conf, Halifax; Oct. 22-25, 1978.

This paper reviews recent Canadian initiatives taken to cope with the growing volume of and need for scientific and technical information on coal, oil sands, heavy oils, and other energy sources. Types of services available and their potential benefits are described. Canadian participation in the coal projects of the International Energy Agency is outlined.

157  
Weidmark, P.E. "Fourteenth supplement to bibliography of Canadian contributions in the field of rock mechanics"; MRP/TID 78-4(J); submitted CIM Bull.

## SECTION 3

## DIVISIONAL AND PROGRAM REPORTS

The reports listed below are available for purchase in microfiche or paper copy from Micromedia Limited, Box 502, Station S, Toronto, Canada, M5M 4L8. They are also available for consultation on open file at the CANMET Library, 555 Booth Street, Ottawa, K1A 0G1.

## MINERAL SCIENCES LABORATORIES

INVESTIGATION REPORTS (IR)

- 158  
MRP/MSL 78-23(IR). Chen, T.T. and Petruk, W. "Electron microprobe analyses of silver-bearing minerals in samples collected from the Heath Steele Mill, New Brunswick in March 1977"
- 159  
MRP/MSL 78-26(IR). Wang, S.S.B. "Preparation of foamed thermal insulation from waste glass using waste limestone as the foaming agent"
- 160  
MRP/MSL 78-51(IR). Bell, K.E. "Evaluation of mixtures of clay and mill tailings from Shawville, Quebec, for the manufacture of extruded brick"
- 161  
MRP/MSL 78-75(IR). Chen, T.T. and Petruk, W. "Mineralogical studies of the silver-bearing minerals and sphalerite in a Cu-Pb concentrate and Zn pre-concentrate from Brunswick Mining and Smelting Limited, New Brunswick"
- 162  
MRP/MSL 78-83(IR). Kaiman, S. "Mineralogical examination of current Elliot Lake uranium tailings"
- 163  
MRP/MSL 78-89(IR). Ripley, L.G. "Effect of sodium carbonate additions in the lime-sinter process and the subsequent extraction of alumina from five non-bauxite sources"
- 164  
MRP/MSL 78-94(IR). Ripley, L.G. "Extraction of alumina from Canadian clay by the modified lime-sinter process"
- 165  
MRP/MSL 78-102(IR). Bell, K.E. "The resource potential of the Whitemud formation in Saskatchewan as a non-bauxite source of alumina"
- 166  
MRP/MSL 78-105(IR). Hamer, C.A. "Extraction and recovery of alumina from anorthosite by hydrochloric acid-fluosilicic acid leaching"
- 167  
MRP/MSL 78-107(IR). Quon, D.H.H. and Lemieux, G.R. "Acid processes for the extraction of alumina: Part II. Clays from Willows, Willow Bunch and Flintoft, Southern Saskatchewan"
- 168  
MRP/MSL 78-110(IR). Sutarno, R. and Bowman, W.S. "Iron ores - determination of titanium-spectrophotometric method with diantipyrylmethane: Statistical analysis of international test data"
- 169  
MRP/MSL 78-112(IR). Hamer, C.A. "Alumina extraction from anorthosite by the hydrochemical method"
- 170  
MRP/MSL 78-113(IR). Sutarno, R. and Bowman, W.S. "Iron ore - spectrophotometric determination of arsenic: Statistical analysis of international test data"
- 171  
MRP/MSL 78-116(IR). Sutarno, R. and Bowman, W.S. "Iron ores - determination of combined water: Statistical analysis of international test data"
- 172  
MRP/MSL 78-117(IR). Mikhail, S.A. and Webster, A.H. "Chlorination of sulphide minerals: Part I. Galena"
- 173  
MRP/MSL 78-121(IR). Farrell, D.M. "Infrared determination of quartz in respirable mine dusts and comparison with XRD analysis"
- 174  
MRP/MSL 78-122(IR). Sutarno, R. and Bowman, W.S. "Iron ores - determination of sodium and potassium by atomic absorption: Statistical analysis of international test data"
- 175  
MRP/MSL 78-123(IR). Sutarno, R. and Bowman, W.S. "Iron ores - determination of metallic iron in pre-reduced iron ores: Statistical analysis of international test data"

- 176  
MRP/MSL 78-126(IR). Mikhail, S.A. and Webster, A.H. "Chlorination of sulphide minerals: Part II. Sphalerite"
- 177  
MRP/MSL 78-129(IR). Sutarno, R. and Bowman, W.S. "Iron ores - determination of calcium and magnesium by complexo-metric method: Statistical analysis of international test data"
- 178  
MRP/MSL 78-132(IR). Kaiman, S. "Thorium distribution in current Elliot Lake tailings"
- 179  
MRP/MSL 78-134(IR). Hughson, M.R. "Image analysis studies of drillhole No. 1014, 1900 foot level, Brunswick No. 12 main orebody, New Brunswick"
- 180  
MRP/MSL 78-141(IR). Sutarno, R. and Bowman, W.S. "Iron ores - determination of hygroscopic moisture: Statistical analysis of international test data"
- 181  
ERP/MSL 78-149(IR). Saiddington, J.C. "Evaluation of abrasive and corrosive wear of pipeline steels in quartz slurries"
- 182  
MRP/MSL 78-157(IR). Sutarno, R. "Procedure for statistical evaluation of analytical data resulting from international tests (fifth draft proposal)"
- 183  
MRP/MSL 78-160(IR). Sutarno, R. and Bowman, W.S. "Iron ores - titrimetric determination of total iron without using mercuric chloride - ISO/TC 102/SC 2/IWG 16 (AU 2): Statistical analysis of international test data"
- 184  
MRP/MSL 78-167(IR). Bowman, W.S. and Sutarno, R. "Computer program for statistical evaluation of analytical data resulting from international tests"
- 185  
MRP/MSL 78-168(IR). Petruk, W. "Preliminary image analysis study of material from the mill of Brunswick Mining and Smelting Corporation Limited in New Brunswick"
- 186  
MRP/MSL 78-184(IR). Sutarno, R. and Bowman, W.S. "Determination of nickel in ferronickel by dimethylglyoxime gravimetric method - ISO/DP 6351, Draft 1: Statistical analysis of interlaboratory test data"
- 187  
MRP/MSL 78-188(IR). Petruk, W. "Image analysis of bulk concentrates and tailings produced in the Ore Processing Laboratory from Brunswick No. 12 Ore"
- 188  
MRP/MSL 78-200(IR). Berry, E.E. "Characteristics of some Canadian fly ash samples as potential concrete materials"
- 189  
MRP/MSL 78-206(IR). Wilson, H.S., Hora, Z.D. and Rodway, L.E. "A study of natural pozzolans in Southern B.C."
- 190  
MRP/MSL 78-207(IR). Wang, S.S.B. and Brown, G.A. "Preparation of foamed thermal insulation from waste glass using carbon as the foaming agent"
- 191  
MRP/MSL 78-210(IR). Quon, D.H.H. and Lemieux, G.R. "Acid process for the extraction of alumina: Part III. Acid extraction of alumina from an Ontario clay; Part IV. Alumina purification"
- 192  
MRP/MSL 78-218(IR). Ripley, L.G. "Extraction of alumina from Harp Lake (Labrador) anorthosite by the modified lime-sinter process"
- 193  
MRP/MSL 78-224(IR). Ripley, L.G. "Magnetic separation of iron from fly ash and the extraction of alumina from the non-magnetic fraction by the modified lime-sinter process"
- 194  
MRP/MSL 79-5(IR). Hughson, M.R. "An image analysis study of exsolution chalcopyrite in sphalerite from the east sulphide orebody of the Caribou Deposit, New Brunswick"
- 195  
MRP/MSL 79-21(IR). Hamer, C.A. "Alumina from fluidized bed combustion ash of Hat Creek, B.C., Coaly Waste - Part I: Acid extraction"
- TECHNICAL REPORTS (TR)
- 196  
MRP/MSL 77-401(TR). Sastri, V.S. "Reverse osmosis treatment of thiosalt solutions"
- 197  
MSP/MSL 77-402(TR). Kaiman, S. "Visit of J. Lencastre, I.A.E.A. fellow from Portugal"
- 198  
MRP/MSL 78-1(TR). Mark, E. "Reference material CPB-1: Determination of lead"
- 199  
MRP/MSL 78-2(TR). Owens, D. "Mineralogical and electron microprobe studies of two lead-jarosite samples"
- 200  
MRP/MSL 78-3(TR). Owens, D. "Determination of the mercury content and the limits of detection for mercury in sphalerite from Santander, Spain by electron microprobe analysis"

- 201  
MRP/MSL 78-4(TR). Farrell, D.M. "Qualitative infrared analysis of New Brunswick bulk concentrate, A and B blended"
- 202  
MRP/MSL 78-5(TR). Zechanowitsch, G., MacPherson, D.R. and Hitchen, A. "Certified reference material CZN-1: Chemical analysis for certification"
- 203  
MRP/MSL 78-6(TR). MacPherson, D.R. and Hitchen, A. "Certified reference material CPB-1: Chemical analysis for certification"
- 204  
MRP/MSL 78-7(TR). Zechanowitsch, G., MacPherson, D.R. and Hitchen, A. "Certified reference material CCU-1: Chemical analysis for certification"
- 205  
MRP/MSL 78-10(TR). Laflamme, G. "Electron microprobe analysis and microscopic examination of synthetic  $\text{AgSbS}_2$ "
- 206  
MRP/MSL 78-16(TR). Owens, D.R. "Electron microprobe analysis of brannerite in an ore specimen from Beaverlodge, N.W.T."
- 207  
MRP/MSL 78-17(TR). Laflamme, G. "Electron microprobe analyses of tetrahedrite from Caribou, N.B."
- 208  
MRP/MSL 78-18(TR). Carrière, P. "Electron probe analyses of clausthalite from Beaverlodge, Saskatchewan"
- 209  
MRP/MSL 78-19(TR). Laflamme, G. "Electron microprobe analysis of sperrylite from Frood, Ontario"
- 210  
MRP/MSL 78-20(TR). Owens, D.R. "Electron microprobe analyses to determine the mercury content of synthetic copper sulphides"
- 211  
MRP/MSL 78-22(TR). Laflamme, G. "Electron microprobe analyses of copper arsenic sulfosalt from Caribou, N.B."
- 212  
MRP/MSL 78-24(TR). Gilmore, A.J. "The removal of metals from chloride raffinates by ion exchange interim report No. 2"
- 213  
MRP/MSL 78-28(TR). Owens, D.R. "Electron microprobe studies to establish the Hf content of seven synthetic  $\text{ZrO}_2$  specimens"
- 214  
MRP/MSL 78-29(TR). Owens, D.R. "mineralogical examination of two mill products from the mill of Pamour Porcupine Mines Limited"
- 215  
MRP/MSL 78-32(TR). Pilgrim, R.F. "Mathematical analysis of the results of desilication tests on leach solutions from anorthosite-lime-soda sinters"
- 216  
MRP/MSL 78-33(TR). Carrière, P. "Electron probe analysis of brannerite from Beaverlodge, Saskatchewan"
- 217  
MRP/MSL 78-37(TR). Soles, J.A. and MacDonald, W.A. "A study of the liberation of mineral phases during processing of phosphate rock from Niger"
- 218  
MRP/MSL 78-39(TR). Pugliese, R.J. "Certified reference material CCU-1: Chemical analysis for certification of copper, zinc, lead, silicon, aluminum, calcium, magnesium and silver"
- 219  
MRP/MSL 78-41(TR). Dutrizac, J.E. "A listing of zirconium and zirconium-bearing materials"
- 220  
MRP/MSL 78-42(TR). Owens, D.R. "Electron microprobe analysis of silicates in a polished thin section of ore from the Caribou Mine, New Brunswick"
- 221  
MRP/MSL 78-43(TR). Owens, D.R. "Electron microprobe analyses to determine the iron content of sphalerite in ore specimens from the Caribou Mine, New Brunswick"
- 222  
MRP/MSL 78-46(TR). Rolia, E. "Generation of thiosalts in the flotation mill at Brunswick Mining and Smelting Corporation Limited, Bathurst, New Brunswick"
- 223  
MRP/MSL 78-49(TR). Owens, D.R. "Characterization of the phases in a sample of acid plant scrubber residue from the mill of Ecstall Mines Ltd., near Timmins, Ontario"
- 224  
MRP/MSL 78-52(TR). Makhija, R. "Preparation of sodium tetrathionate and sodium trithionate for studies of the thiosalt problem in mining effluent"
- 225  
MRP/MSL 78-53(TR). Carrière, P. "Electron microprobe analyses of zirconium and hafnium contents in zirconium minerals"
- 226  
MRP/MSL 78-54(TR). Hoey, G.R. and Dingley, W. "Ferric ion inhibition of ball wear in grinding ores in acid media - A preliminary report"

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MRP/MSL 78-56(TR). Owens, D.R. "Identification of the phases in a sample of ammoniojarosite"
- 228  
MRP/MSL 78-58(TR). Jongejan, A. and Wilkins, A.L. "Progress report on the study of the action of cellulose decomposers on the viability of sulphate-reducing micro-organisms"
- 229  
MRP/MSL 78-59(TR). Farrell, D.M. "Infrared investigation of a hydrated  $\text{CaZn}_2(\text{AsO}_4)_2$  mineral from Tsumeb, South West Africa"
- 230  
MRP/MSL 78-61(TR). Laflamme, G. "Electron microprobe analyses of tetrahedrite from Caribou, N.S."
- 231  
MRP/MSL 78-62(TR). Kaiman, S. "Mineralogical study of zirconium concentrates"
- 232  
MRP/MSL 78-64(TR). Laflamme, G. "Silver contents in galena from Caribou, N.B. by electron microprobe analysis"
- 233  
MRP/MSL 78-65(TR). Charette, D.J. "Contribution toward the evaluation of analytical methods for titanium and vanadium in iron ores for ISO committee TC 102 (iron ores)"
- 234  
MRP/MSL 78-68(TR). Carrière, P. "Qualitative analyses of unknown phases from Beaverlodge, Saskatchewan"
- 235  
MRP/MSL 78-70(TR). Hitchen, A., MacPherson, D.R. and Zechanowitsch, G. "The determination of zinc in zinc ores, concentrates and certified reference materials: Part IV: A comparison of an ion-exchange - EDTA titration method with a ferrocyanide amperometric titration method"
- 236  
MRP/MSL 78-74(TR). Gilmore, A.J. "The removal of metals from chloride raffinates by ion exchange Interim report No. 3"
- 237  
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ERP/ERL 78-64(TR). Janke, L. and Hickman, G.M. "Coal ash analysis by X-ray fluorescence: Preparation and analysis of fused glass discs"

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547  
ERP/ERL 78-74(TR). Sirianni, G.V. "Observations of the Westwood polygas wood waste gasifier at Chasm, B.C. during the experimental campaign, September 12-19, 1978"

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ERP/ERL 78-76(TR). Hayden, A.C.S. and Whaley, H.



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ERP/ERL 78-79(TR). Tibbetts, T.E. "Sampling and analytical anomalies in the Nova Scotia coal resource inventory"

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ERP/ERL 78-82(TR). Hayden, A.C.S. "Efficiency of wood-fired appliances"

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ERP/ERL 78-87(TR). Kriz, J.F. and Ternan, M. "Development of a simulated catalyst aging technique"

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ERP/ERL 78-91(TR). Tibbetts, T.E. "Summary assessment of quality of Canadian coals. A contribution to 1977 assessment of Canada's coal resources and reserves"

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ERP/ERL 78-98(TR). Montgomery, W.J. "Report of meeting of ISO/TC 27/SC 2, Brown coals and lignites - London, November 15-17, 1978"

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ERP/ERL 78-100(TR). Whaley, H. and Braaten, R.W. "An evaluation of water-in-oil emulsions in an oil-fired residential hot-water furnace"

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MRP/ERL 78-105(TR). Gransden, J.F., Price, J.T. and Ramey, N.J. "Zinc removal from waste iron oxide materials by thermal treatment of iron oxide-carbon agglomerate"

561

ERP/ERL 78-110(TR). Campbell, R.A. "Thermodynamics of coal conversion reactions, Part 3. The Boudard reaction"

562

ERP/ERL 78-111(TR). Campbell, R.A. "Thermodynamics of coal conversion reactions, Part 4. The shift reaction"

563

ERP/ERL 78-114(TR). Beshai, J. and Sawatzky, H. "Rapid method of hydrocarbon type separation of heavy fractions of synthetic fuels"

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ERP/ERL 78-117(TR). Botham, J.C. "Report of attendance at meeting of ISO/RC 27/SC 3, Subcommittee 2 (coke), Technical Committee 27 (Solid Mineral Fuels), International Standards Organization, London, England - November 13-15, 1978"

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ERP/ERL 79-17(TR). Andersen, N.E. "A critical review of size distributions of flocculated particles: Application of electronic particle counters"

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ERP/ERL 79-18(TR). Mikhail, M. "Size degradation of bituminous coal"

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ERP/ERL 79-19(TR). Andersen, N. and Hamza, H.A. "An evaluation of the applicability of the Coulter counter for the characterization of bituminous dispersions in aqueous phases"

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572

ERP/ERL 79-21(TR). Montgomery, W.J. "Second draft proposal for the determination of major elements of ash of solid mineral fuels (Classified & Instrumental Method)"

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## MINING RESEARCH LABORATORIES

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MRP/MRL 78-27(TR). Herget, G. "Ground stress tensor determinations at Unterjettenberg, West Germany"
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ERP/MRL 78-30(TR). Livesey, D.B. "The thermal coals of Western Canada"
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MRP/MRL 78-31(TR). Darling, J.A. "Canadian Explosives Research Laboratory Annual Report 1977-78"
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MRP/MRL 78-34(TR). Geller, L., Gyenge, M. and Larocque, G. "The Rock Properties task and its work elements"
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ERP/MRL 78-35(TR). Lobay, G. "Laboratory experience with combustible gas detection equipment tested to CSA Standard C22.2 No. 152-1976"
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ERP/MRL 78-38(TR). Mogan J.P. "Frictional hazard criteria for mobile diesel powered mining equipment"
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ERP/MRL 78-39(TR). Livesey, D.B. "Mineability studies for the Saskatchewan lignite deposits, Report No. 2: A computer program for the design and cost analysis of draglines for strip mining"
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MRP/MRL 78-40(TR). Murray, D.R. "Proposal for 5-year mine waste reclamation program 1978-1983"
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MRP/ERP 78-41(TR). Feng, K.K. and Hanasaki, K. "Finite difference methods for calculations of thermal explosion"
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MRP/ERP 78-42(TR). Sabourin, R. "Guide for coding drill-hole data from uranium deposit"
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MRP/ERP 78-43(TR). Scott, J.P. and Tupper, E.C. "Mining Research Laboratories Administration Services 1977-1978"
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MRP/TR 78-45. Kirk, B. and Seymour, R. "Sulphuric acid production by diesel mine equipment"
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ERP/TR 78-46. Fisekci, M.Y. and Lewis, R.W. "Research on high speed mine development system for underground coal mines"
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ERP/MRL 78-52(TR). Savich, M.U. "Canada is one of the leading nations in noise abatement in mines"
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MRP/MRL 78-53(TR). Herget, G. and Miles, P. "Stress determinations of the Heater Test Site, Copper Cliff, Ontario"
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MRP/MRL 78-62(TR). Savich, M.U. "A significant advance in noise monitoring instrumentation"
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MRP/MRL 78-66(TR). Contestabile, E. and Craig, T.R. "Non-destructive testing of pyrotechnic devices using neutron spectroscopy"
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MRP/MRL 78-71(TR). Hedley, D.G.F. "A profile of Canadian base metal mines in the 1970's"
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MRP/MRL 78-72(TR). Savich, M. "Efficiency of ear muffs in mines"
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MRP/MRL 78-73(TR). Savich, M. "Laboratory attenuation tests of ear muffs used in mines"
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MRP/MRL 78-74(TR). Savich, M. "Noise reduction evaluation of ear muffs"
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ERP/MRP 78-77(TR). Bossert, J.A. "Report on contract testing performed by the Canadian Explosive Atmospheres Laboratory for Outside Agencies (July 1/77 - June 30/78)"
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ERP/MRP 78-78(TR). Bossert, J.A. "Annual report on certification of equipment for use in coal mines (July 1/77 to June 30/78)"
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MRP/MRL 78-79(TR). Kirk, B. and Stefanich, W. "The logistics and problems of a CAMPEDS sampling program in Elliot Lake"
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MRP/MRL 78-80(TR). Gyenge, M. "Preliminary proposal on grouting field experiments"
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MRP/MRL 78-81(TR). Feng, K.K. and Hanasaki, K. "Behaviour of multiple phase explosives under dynamic loading"
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MRP/MRL 78-83(TR). De Korompay, V. "Multi purpose tester for measuring simultaneously engineering and radiation properties of radioactive hydraulic backfills, waste materials and uranium ores"
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MRP/MRL 78-86(TR). Tervo, R. "Bored-raise pilot hole deviation"
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MRP/MRL 78-88(TR). Knight, G. "The CAMPEDS Mark II dust sampler manual"
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MRP/MRL 78-92(TR). Yu, Y.S. "A summary of finite element stress analysis for the Kidd Creek mine, Timmins, Ontario"
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DECLASSIFIED REPORTS

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77-71. Mogan, J.P., Stewart, D.B. and Dainty, E.D. "Expected levels of diesel particulates in mine air"

## PHYSICAL METALLURGY RESEARCH LABORATORIES

INVESTIGATION REPORTS (IR)

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MRP/PMRL 78-1(IR). Briggs, D.C. and Thomson, I.R. "Preliminary evaluation of continuously cast high speed tool steel"

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MRP/PMRL 78-2(IR). Mitchell, C.M., Cousineau, E.J.-C. and Chartrand, V. "Stress distribution over the base weld in a single mast electrical transmission tower"

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ERP/PMRL 78-3(IR). Gordine, J. "Weldability testing of a direct quench line-pipe steel"

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MRP/PMRL 78-7(IR). Davis, K.G. and Magny, J.G. "The production of casting with abrasion resistant surface layers. Part II: Castings with powder layers held in position by suction"

690

MRP/PMRL 78-8(IR). Davis, K.G. and Magny, J.G. "The production of casting with abrasion resistant coatings. Part II: Castings with powder layers held in position by suction"

DECLASSIFIED REPORTS

691

Research Rep 23. "Investigation on the effect of calcium additions to magnesium alloy A280X" (Sept. 5, 1946)

692

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693

Research Rep 28. "Cathodic corrosion protection of steel in hot waters by magnesium, aluminum, zinc and various combinations of these metals: Summary and conclusions" (Nov. 29, 1946)

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Research Rep 30. "Electrodeposited metallic coatings on magnesium and its alloys" (Dec. 3, 1946)

695

Research Rep 31. "Cathodic corrosion protection of steel in hot waters by pure magnesium and A280X magnesium alloy containing additions of lead and/or silver" (Jan. 13, 1947)

696

Research Rep 32. "Electrodeposition of metallic coatings on magnesium alloys containing lead and silver" (March 3, 1947)

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701

Research Rep 38. "Corrosion resistant coatings for the protection of No. 255 aluminum alloy fuses" (Aug. 30, 1948)

702

Research Rep 39. Trudeau, L.P. "Preliminary investigation for the determination of parts of the equilibrium diagrams for the systems Mg-Zr and Mg-Zn-Zr" (Sept. 1, 1948)

703

Research Rep 50. Bragg, L.G. "The mechanical properties of zinc-base die casting alloys of very high purity: Progress report No. 1" (April 30, 1949)

704

Research Rep 51. Bragg, L.G. "The mechanical properties of zinc-base die casting alloy of ASTM Type XXV; made from zinc of very high purity: Progress report No. 2" (July 12, 1949)

705

Research Rep 54. Bragg, L.G. "The mechanical properties of further zinc-base die casting alloys of very high purity: Progress report No. 3" (Sept. 7, 1949)

706

Research Rep 59. Richardson, B.F. and Gertsman, S.L. "The influence of residual alloys and stray elements on the mechanical properties of steel castings. Part I - Combined effects of tin and copper. Part II - Segregation of tin in heavy sections of steel castings" (Oct. 22, 1949)

707

Research Rep 76. Brown, N.B. "Fatigue properties of magnesium alloy ZK61" (Sept. 12, 1950)

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Research Rep 156. Buchanan, J.G. "Report of electrical resistivity measurements made in Canmore No. 3 Mine, Canmore, Alberta" (Jan. 12, 1954)
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Research Rep 171. Kwasney, E.J., Campbell, W.P. and Gertsman, S.L. "Investigation of basic electric furnace steel produced with Cominco Pig Iron" (Aug. 20, 1954)
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IR 62-108. Edwards, J.O. "Examination of brass piping from Canadian Oxygen Co. Ltd., Victoria Island, Ottawa, Ontario"
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## ENERGY RESEARCH PROGRAM

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ERP 78-3. Faurschou, D.K., Ogle, I.C.G. and Reeve, D.A. "Predicted versus actual outputs in 1977/78 for the CANMET Energy Research Program"
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ERP 78-4. Reeve, D.A., Faurschou, D.K., Hardin, A.H. and Ogle, I.C.G. "CANMET 1978-79 Energy Research Program - Brief summary and highlights"
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ERP 78-6. Hardin, A.H. and Ogle, I.C.G. "Proposed five year plan for the CANMET renewables energy R & D program: 1978-83"
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ERP 78-7. Hardin, A.H. "Proposed five year plan for CANMET's coal conversion energy program: 1978-83"
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ERP 78-8. Reeve, D.A. "Federal interdepartmental energy R & D program on fossil fuels"
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ERP 79-1. Staff of Energy Research Program "CANMET Energy Research Program five year plan 1978-1983"
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ERP 79-2. Reeve, D.A. "Gasification of coal"
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ERP 79-5(TR). Ogle, I.C.G., Sage, R., Sawatzky, H. and Reeve, D.A. "Predicted versus actual outputs in 1978/79 for the CANMET Energy Research Program"

## TECHNOLOGY INFORMATION DIVISION

- 805  
ERP/MRP/TID 79-6(TR). Taylor, G. "Technology information services"
- LITERATURE SURVEYS(LS)
- 806  
MRP/TID 78-12(LS). MacDonald, R.J. "Bibliography of crushing and grinding - February 1978"
- 807  
MRP/TID 78-13(LS). MacDonald, R.J. "Bibliography of crushing and grinding - March 1978"
- 808  
MRP/TID 78-15(LS). Harrison, V.F. "General index to proceedings of the Canadian Gold metallurgists and Canadian Mineral Processors 1964-1978"
- 809  
MRP/TID 78-16(LS). Slowikowski, I. "The Norilsk Kombinat, climate, geology and mines"
- 810  
MRP/TID 78-17(LS). MacDonald, R.J. "CANMET monthly bibliography of crushing and grinding - April 1978"
- 811  
MRP/TID 78-18(LS). Dixon, C. "List of foundry-related non-confidential PMRL reports"
- 812  
MRP/TID 78-190(LS). MacDonald, R.J. "CANMET monthly bibliography of crushing and grinding - May 1978"
- 813  
MRP/TID 78-21(LS). MacDonald, R.J. "CANMET monthly bibliography of crushing and grinding - June 1978"
- 814  
MRP/TID 78-23(LS). MacDonald, R.J. "CANMET monthly bibliography of crushing and grinding - July 1978"
- 815  
MRP/TID 78-25(LS). Dixon, C. "Journals on METADEX tape not held by CANMET or CISTI libraries"
- 816  
MRP/TID 78-27(LS). Dixon, C. "PMRL reports related to marine materials, September 1968 to September 1978"
- 817  
MRP/TID 78-28(LS). MacDonald, R.J. "CANMET monthly bibliography of crushing and grinding - August 1978"
- 818  
MRP/TID 79-1(LS). Job, A.L. and Weidmark, P.E. "Supplement to a selected list of regular publications in mining subjects (revised)"
- 819  
MRP/TID 79-2(LS). MacDonald, R.J. "CANMET monthly bibliography of crushing and grinding - September 1978"

## SECTION 4

## CONTRACT RESEARCH REPORTS

The reports below are available for purchase in microfiche or paper copy from Micromedia Limited, Box 502, Station S, Toronto, Canada, M5M 4L8. They are also available for consultation on open file at the CANMET Library, 555 Booth Street, Ottawa, K1A 0G1.

820

"Annotated bibliography relative to the health implications of exposure of underground mine workers to diesel exhaust emissions"; Ian W. French & Associates Limited  
Contract OSQ77-00005 - 1596

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"Application of the Sherritt zinc pressure leaching process to New Brunswick zinc/lead bulk concentrates, summary report"; Sherritt Gordon Mines Limited  
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"Assessment of Canadian peat as an alternative fuel for power generation"; Montreal Engineering Company Limited  
Contract OSQ78-00163 - 232

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"Boiler utilizing a fluid-bed concept, final report, phase I"; INTEG - Continental Engineering  
Contract OSQ77-00240 - 185

824

"Canadian uranium health and safety program - annual report 1978-79"; Elliot Lake Centre  
Contract OSQ77-00032 - 42

825

"Coal-oil slurry firing of a utility boiler"; New Brunswick Electric Power Commission  
Contract OSQ77-00221 - 215

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"Critique on the Supplement 5-2 Computer Programs, Pit Slope Manual"; The University of Arizona  
Contract OST78-00030 - 19

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"Design, development and prototype production of heat reclaimer, Phase II"; Cambrian Engineering Group Limited  
Contract OSQ77-00110 - 20

828

"Development of a simulator of the Heath Steele Mines grinding circuit"; Université Laval  
Contract OSU77-00236 - 62

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"The ESCA analyses of bitumen processing cat-

alysts"; University of Western Ontario  
Contract OSQ77-00285 - 79

830

"Effects of certain superplasticizers on the properties of concrete"; University of Calgary  
Contract OSU76-00210 - 59

831

"Engineering feasibility study of the British Columbia Research hog fuel gasification system"; H.A. Simons (International) Ltd.  
Contract OSQ77-00269 - 83 p, 6 fig.

832

"Engineering study of applicability of shortwall mining in the Lethbridge coalfield"; Pacific Petroleum Ltd.  
Contract OSQ77-00175 - 57

833

"Estevan dryer and Onakawana lignite briquetting study"; Manalta Coal Limited  
Contract OSQ77-0024 - 149 p, 2 fig.

834

"Evaluation of the CEA personal alpha dosimeter"; University of Toronto  
Contract OSU76-00222 - 106

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"Extractive coking liquefaction process"; Nova Scotia Research Foundation  
Contract OSQ76-00154 - 54

836

"Final report on the processing of a CANMET produced zinc-lead-copper bulk concentrate through the Research and Productivity Council sulphation roast-leach process"; Research and Productivity Council  
Contract OSQ78-00134 - 10

837

"Fluidized bed gasification of fine coal waste"; British Columbia Research  
Contract OSQ77-00269 - 113

838

"Geotechnical review of applicability of shortwall mining in the Lethbridge coalfield"; Dames & Moore  
Contract OSQ77-00175 - 69

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"Health implications of exposure of underground mine workers to diesel exhaust emissions"; Ian W. French & Associates Limited  
Contract OSQ77-00005 - 350

840

"Liquefaction of low rank coals. Phase 1. An overview - Batch hydrogenolysis of lignite equilibrium thermodynamics"; Beak Consultants Limited  
Contract OSQ77-00131 - 267

841

"LNG pipelines: A technology assessment, Vol 1"; Canuck Engineering Ltd.  
Contract OSQ76-00119 - 442 p, 5 fig.

842

"LNG pipelines: Technology assessment, Vol 2"; Canuck Engineering Ltd.  
Contract OSQ76-00119 - 480

843

"LNG pipelines: A technology assessment, Supplement to Vol 1 & 2"; Canuck Engineering Ltd.  
Contract OSQ76-00119 - 68

844

"Low severity coal liquefaction process"; Nova Scotia Research Foundation  
Contract OSQ77-00209 - 55

845

"Miner's clothing and protective equipment"; Noranda Research Centre  
Contract OSU77-00055 - 129

846

"Mining of peat as a Canadian energy source"; Montreal Engineering Company Limited  
Contract OSQ77-00125 - 265

847

"Modelling of grinding and classification of fine-grained sulfide ores of New Brunswick"; Université Laval  
Contract OSU77-00236 - 18

848

"Modelling of the Heath Mines hydrocyclones and ball mills"; Université Laval  
Contract OSU77-00236 - 83

849

"Nuclear magnetic resonance spectroscopy in ERL of CANMET, Final Report, Appendices I-III"; Ozubko, R. S.  
Contract 93945 - 80

850

"Optimization of coal recovery from open pits"; University of Arizona  
Contract OSQ77-00036 - 235

851

"Optimization of coal recovery from open pits" (Revised); University of Arizona  
Contract OSQ77-00036 - 191

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"Parameters and mechanisms in the mechanical upgrading of Athabasca oil sands by a cold water process"; University of Toronto  
Contract OSU77-00052 - 144

853

"Pilot study on pyrite and radiotope removal by flotation"; Denison Mines Limited  
Contract OSQ78-00058 - 45

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"Preparation of large concrete specimens for long-term durability studies in sea water environment off the coast of the Maritime Provinces"; University of New Brunswick  
Contract OST78-00035 - 30

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"Production of liquid fuel from coal, Progress Report No. 1"; INCO  
OSQ77-00184 - 49

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"Quantitative analysis of fossil fuel samples using H-1 and C-13 NMR Spectroscopy, Part 2. (Appendix II to final report); Ozubko, Richard  
Contract 93945 - 71

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"Radon emanation rates in a cut and fill uranium mine"; Bondar-Clegg & Company Ltd.  
Contract OSQ78-00114 - 171

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"Rapid pyrolysis and hydropyrolysis of Canadian coals"; University of Toronto  
Contract OSU76-00204 - 51

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"Report on the design and development of micro-computer based real time data acquisition monitoring and control system"; Powers Conspec  
Contract OS077-00133 - 112

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"Research on optimizing the low temperature toughness of cast steels"; Dominion Foundries and Steel Limited  
Contract OSQ76-00167 - 58

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"Screen and float sink analysis of +1/8 inch for H3C, H3F"; Wamock HERSHEY Professional Services Ltd.  
Contract OSQ78-00026 - 27

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"Shaunavon coal utilization study, Vol 1: 300 MWe AFBC fired power generation plant"; Saskatchewan Power Corporation  
Contract OSQ76-00160 - 75

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"Shaunavon coal utilization study, Vol II: Comparison of schemes"; Saskatchewan Power Corporation  
Contract OSQ76-00160 - 379

864

"Shaunavon coal utilization study, Vol III: Water and environment"; Saskatchewan Power Corporation  
Contract OSQ76-00160 - 271

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"Study and assessment of the technological capabilities of the Canadian foundry industry"; Robert Shnay & Associates Ltd.  
Contract OSQ78-0078 - 168

866

"Study of creep and shrinkage of lightweight concrete cylinders"; University of Toronto  
Contract OSU76-00130 - 54

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"Study of deep-level mining and ground control methods at the Elliot Lake uranium mines"; Piteau & Associates  
Contract OSQ77-00262 - 73

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"Study of fluidized combustion and gasification of coal demonstration plant: Environmental considerations"; Acres Consulting Services Ltd.  
Contract OSQ76-00157 - 248

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"Study of fluidized combustion and gasification of coal demonstration plant: Power generation using low Btu gas"; Coal Processing Consultants  
Contract OSQ76-00157 - 93

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"Study of fluidized combustion and gasification of coal demonstration plant: Pressurized fluidized combustion"; Coal Processing Consultants

Contract OSQ76-00157 - 224

871

"Study of fluidized combustion and gasification of coal demonstration plant: Site studies"; Coal Processing Consultants  
Contract OSQ76-00157 - 113

872

"Study of fluidized combustion and gasification of coal demonstration plant: Substitute natural gas"; Coal Processing Consultants  
Contract OSQ76-00157 - 84

873

"Study of fluidized combustion and gasification of coal demonstration plant: Summary report"; Coal Processing Consultants  
Contract OSQ76-00157 - 156

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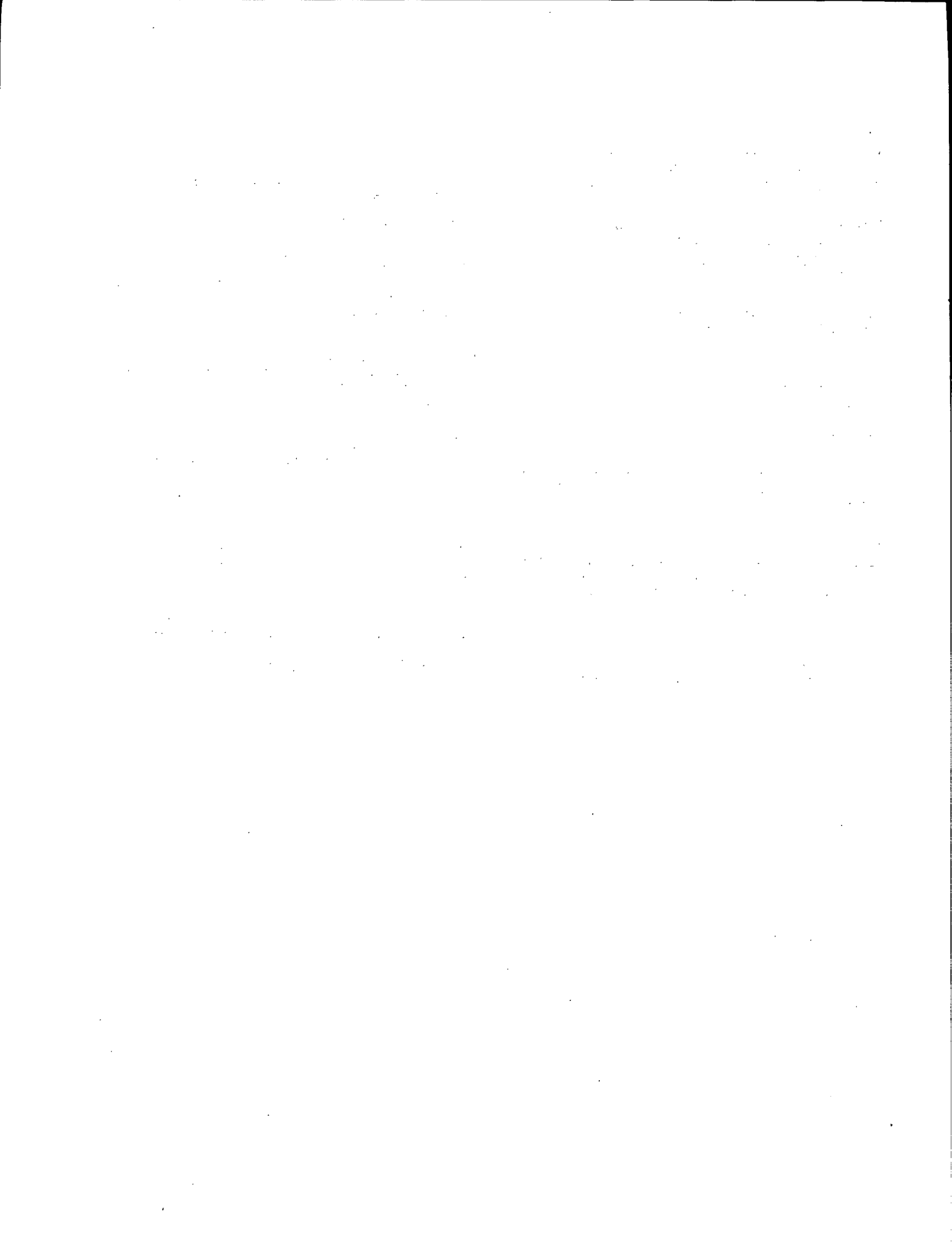
"Study of relative fuel efficiencies under Canadian climatic conditions of automobiles with advanced engine designs. Phase III"; Shell Canada Limited  
Contract OSQ77-00197 - 44

875

"Study of use of tailings as backfill in uranium mines"; Acres Consulting Services Limited  
Contract OSQ77-00096 - 215

876

"Test of application of shotcrete to stabilize a slope at Hilton Mine"; Smith & Bray Engineering Ltd.  
Contract OSP2-0041 - 69 p, 4 fig



## SECTION 5

## RESEARCH AGREEMENT PROGRAM REPORTS

The reports listed below are NOT available from CANMET. Copies should be requested from the authors at their respective institutional addresses.

877

Bibby, M. Progress report: "Electron beam welding high strength low alloy (HSLA) steels", Ottawa, Carleton University, Faculty of Engineering, Dec. 1974  
Agreement 109/73 - 18 p

878

Anderson, J.M. "Electrostatic separation of pyrites and coal macerals"; Thesis (M.E. Sc.) London, University of Western Ontario, Faculty of Engineering Science, Aug. 1976  
Agreement 166/73 - 121 p

879

Husband, W.H.W. and Storer, D.K. Progress report: "Theoretical studies and computer modelling of solution mining of potash and carnallite"; Saskatoon, Saskatchewan Research Council, Engineering Division, March 1975  
Agreement 279/74 - 55 p

880

Kennedy, T.A.C. "Mine production standards without judgement factors"; Thesis (M.E. Sc.) Kingston, Queen's University, Mining Engineering Department, Feb. 1978  
Agreement 93/75 - 49 p

881

Kerr, H.W. and Pacey, A.J. Progress report: "Weld metal toughness of HSLA steels"; University of Waterloo, Department of Mechanical Engineering, Oct. 1977  
Agreement 45/76 - 7 p

882

Kerr, H.W. and Lazor, R. Progress report June 1978  
Agreement 45/76 - 7 p

883

Saul, B.W. "Design and feasibility analysis of an in-pit coal sorter for strip mines"; Thesis (M.Sc.) Kingston, Queen's University, Mining Engineering Department, April 1978  
Agreement 54/76 - 90 p

884

Chow, C. and Peters, E. Progress report: "Reactivity of B.C. coals for gasification"; Vancouver, University of British Columbia, Centre for Materials Research, Oct. 1977  
Agreement 197/76 - 17 p

885

Tessier, L.P., Sullivan, H.F., Bragg, G.M. and Hermance, C.E. Progress report: "Reduction of diesel exhaust emission"; University of Waterloo, Mechanical Engineering Department, June 1978  
Agreement 45/77 - 41 p

886

Weinberg, F. Final report: "Cracking of steel during continuous casting"; Vancouver, University of British Columbia, Department of Metallurgy, March 1978  
Agreement 66/77 - 20 p

887

Chaklader, A.C.D. and Warren, I.H. Progress report No. 2: "Characterization of formed cokes and factors affecting formcoking"; Vancouver, University of British Columbia, Department of Metallurgy, Oct. 1977  
Agreement 68/77, 103/78 - 61 p

888

-----Progress report  
No. 3: Oct. 1978  
Agreement 68/77, 103/78 - 62 p

889

Brown, J.H. Final report: "Markets for reclaimables in municipal wastes"; Kingston, Queen's University, Department of Mining Engineering, April 1978  
Agreement 94/77 - 91 p

890

Foong, J., Watkinson, A.P. and Mathur, K.B. Progress report: "Gasification of coking coals in a spouted bed"; Vancouver, University of British Columbia, Department of Chemical Engineering, March 1978  
Agreement 110/77 - 31 p

891

Mular, A.L. Progress report: "Digital simulation of the Brenda concentrator"; Vancouver, University of British Columbia, Department of Mineral Engineering, Nov. 1977  
Agreement 120/77 - 31 p

892

Gupta, R.K., Mann, R.S. and Gupta, A.K. Final report: "Hydrodenitrogenation of pyridine over Co-Mo-Al<sub>2</sub>O<sub>3</sub> catalyst"; Ottawa, University of Ottawa, Department of Chemical Engineering, June 1978



Agreement 127/77 - 21 p

893

Amberg, C.H. and Chang, J.R. Final report: "Up-grading of coal-derived liquid fuels by catalytic hydrogenation"; Ottawa, Carleton University, Department of Chemistry, June 1978  
Agreement 131/77 - 23 p

894

Abbott, D. and Harvey, K.B. Final report: "Evaluation of a New Brunswick shale for the production of pottery"; Fredericton, Research and Productivity Council, March 1978  
Agreement 134/77 - 32 p

895

Kirkaldy, J.S., Embury, J.D. and Srivastava, K.K. Progress report: "Ferrite morphology in alloy steels with low carbon content"; Hamilton, McMaster University, Department of Metallurgy and Materials Science, 1978  
Agreement 148/77, 229/78 - 21 p

896

Nicholson, P.S. Progress report: "Study of production of high-strength high conductivity  $\beta$ - $\text{Al}_2\text{O}_3$  by a slip-casting, low-temperature firing process"; Hamilton, McMaster University, Department of Metallurgy and Materials Science, June 1978  
Agreement 149/77 - 6 p

897

Piercy, G.R. Progress reports: "Environmental cracking of line pipe steels in sour gas lines under Arctic conditions"; Hamilton, McMaster University, April 1977  
Agreement 150/77 - 12 p

898

-----April 1978  
Agreement 150/77 - 12 p

899

Davis, M. and David, M. Progress report: "Evaluation of a uranium deposit in three dimensions"; Montreal, Ecole Polytechnique; Département de Génie Minéral, June 1978  
Agreement 187/77 - 4 p

900

Jha, K.N., Montgomery, D.S. and Strausz, O.P. Progress report: "Chemical composition of gases in Alberta and in low-temperature thermolysis of oil sand asphaltenes and maltenes"; Edmonton, University of Alberta, Department of Chemistry, Hydrocarbon Research Centre, June 1978  
Agreement 207/77 - 25 p

901

Natel, J. Progress report: "Problems associated with deep mining"; Kingston, Queen's University, Department of Mining Engineering, 1978  
Agreement 214/77 - 49 p

902

Dyck, J.H. and McKenzie, C.T. Progress report: "Correlation of characteristics of coal in Saskatchewan with geophysical borehole logs"; Saskatoon, Saskatchewan Research Council, Physics Division, Dec. 1977  
Agreement 225/77 - 98 p

903

Inculet, I.I. Progress report: "Electrostatic beneficiation of complex fine-grained Canadian sulphide ores (Zn, Pb, Cu and Ag)"; London, University of Western Ontario, Faculty of Engineering Science, June 1978  
Agreement 250/77 - 10 p

904

Mackawa, Y., Chakrabartty, S.K. and Berkowitz, N. Progress report: "Carbon monoxide - steam reactions"; Edmonton, Alberta Research Council, Fuel Science Division, Nov. 1977  
Agreement 274/77 - 7 p

905

See: Research Agreement 68/77 (entry 887)  
Agreement 103/78 - 61 p

906

See: Research Agreement 148/77 (entry 895)  
Agreement 229/78 - 21 p

907

Weiss, I. "Precipitation and dynamic recrystallization in Nb-modified HSLA steels", Thesis (Ph.D.), Montreal, McGill University, Dept. of Mining and Metallurgical Engineering, July 1978  
Agreement 263 - 192 p

908

Weiss, I. and Jonas, J.J. "Interaction between recrystallization and precipitation during high temperature deformation of HSLA steels"; presented at AIME Symp on "Recrystallization and grain growth in materials"; Chicago, Ill., Oct. 1977, to be published in AIME Metall Trans  
Agreement 263 - 32 p

909

Weiss, I. and Jonas, J.J. "Dynamic precipitation and coarsening of niobium carbonitrides during hot compression of HSLA steels"; presented at AIME Symp on "Precipitation effects in HSLA steels", Denver, Colo., Feb. 1978, to be published in AIME Metall Trans  
Agreement 263 - 28 p

910

Jonas, J.J. and Weiss, I. "Effect of precipitation on recrystallization in microalloyed steels", presented Met Soc Conf on "Recrystallization in the development of microstructure"; Leeds, England, April 1978, published in Met Sci, March-April 1979  
Agreement 263 - 40 p

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- Aircraft undercarriage spring legs/Investigation of failure of two Cessna ..... (780)
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