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Canada Centre for Mineral and Energy Technology | Centre canadien de la technologie des minéraux et de l'énergie

# MINUTES OF THE 36TH ANNUAL BUSINESS MEETING OF THE COAL DIVISION

# CANADIAN INSTITUTE OF MINING AND METALLURGY

# TORONTO

# APRIL 20, 1980

T.E. Tibbetts
Secretary, Coal Division
Canadian Institute of Mining and Metallurgy

April 1980





ENERGY RESEARCH PROGRAM
ENERGY RESEARCH LABORATORIES
DIVISION REPORT ERP/ERL 80-55(TR)

36th ANNUAL BUSINESS MEETING - TORONTO

SUNDAY, APRIL 20, 1980 - 1400 HOURS (2:00 P.M.)

KENT ROOM, SHERATON CENTER HOTEL

AGENDA

1. Minutes of the 35th Annual Business Meeting, Montreal, April 22, 1979.
2. Business arising from Minutes
3. Chairman's Annual Report — E.D. Jamieson
4. Divisional Programs — K. Barron
   - Review of the years activities
   - CIM Council policy on joint sessions
   - Relationship of Coal Division and Canadian Conference on Coal
   - Future Coal Division Meeting schedules and themes.
5. Report of Education and Student Essays Committee — D.S. Montgomery
6. Report of Publications Committee — T.E. Tibbetts
7. Reports of Representatives on Institute Committees
   - Bulletin — A.L. Job
   - Special Volumes — D. Faurschou
   - Computer and Process Control — A.D. Walters
   - Distinguished Lecturers — W.J. Riva
   - Education — H. Zorychta
8. Report of Committee on Technology — T.S. Cochrane
   - Exploration and Mining Methods (G. Stephenson)
   - Research and Processing (D. Reeve)
   - Utilization (J.J. Laffin)
   - Environment and Safety (B.A. Bowers)
   - Economics and Special Studies (L. Chrismas)
9. Report of the Committee on Nominations — G.T. Page
10. Other Business

MINUTES OF THE 36TH ANNUAL BUSINESS MEETING, COAL DIVISION, CIM
KENT ROOM, SHERATON CENTER HOTEL, TORONTO
APRIL 20, 1980

The Chairman, E.D. Jamieson welcomed those in attendance, as listed in Appendix 1.

Agenda Item 1
Minutes of the 35th Annual Business Meeting, Montreal, April 22, 1979.

It was moved, seconded and approved that the Minutes as earlier distributed to the Coal Division membership be accepted as a true record of the proceedings of the 35th Annual Business Meeting, Montreal, April 22, 1979.

Agenda Item 2
Business arising from Minutes

There was no business arising from the Minutes.

Agenda Item 3
Chairman's Annual Report - E.D. Jamieson

The Chairman's Annual report appears herein as Appendix 2. The Chairman tabled a report by David E. Pearson on the CIM Conference on Western Canadian Coal; this is included herein as Appendix 3. The Chairman also tabled an interim report by the Division's Distinguished Lecturer, Neil Duncan; the report is included herein as Appendix 4.

Agenda Item 4
Divisional Programs - K. Barron

K. Barron reported on the activities of the Technical Program Committee; the report is given herein as Appendix 5.

Considerable discussion was held concerned with a proposal that Canada host the 10th International Coal Preparation Congress in 1986. The background for this proposal is contained in a letter to K. Barron from Stanley Butcher tabled in Appendix 6. A motion was approved that the Chairman introduce the proposal to the CIM Council for consideration. Dependent upon Council reaction the Program Committee and the proposed Coal Division Steering Committee would take follow-up action.

Concerning joint sessions with other Divisions at the AGM it was proposed that the incoming Chairman examine what can be done to get together with other Divisions. Council is to be asked to clarify activities of the Divisions with respect to commodities at the AGM and to ask for better communication between Divisions. It was recommended that the technical program Chairman of the various Divisions meet to discuss commodity overlap.

A proposal from the Rocky Mountain Branch represented by Bob Latimer to hold an Operators Conference in the fall of 1981 at Hinton, Alberta was discussed. The Branch suggested that such conferences be held in the future to alternate with proposed technical conferences on Canadian coal. The proposal for 1981 would include sessions on open pit and underground mining and coal preparation. It was suggested that there may be some advantage for the Operators Conference to be held back-to-back with the Coal Conference, that there would not be conflict because the Conferences would be aimed at different audiences. An alternate date for an Operators Conference could be March, 1981.

J. Phalen, representing the Mining Society of Nova Scotia suggested expansion of the fall technical meetings of that Society to a full day of technical sessions followed by technical visits on the second day.

It was agreed that the Technical Program and proposed Coal Division Steering Committee would examine all of these Conference proposals and make proposals and decisions as soon as possible.

Bill Devereaux proposed that CIM Council attempt to clarify with the Coal Association of Canada and establish terms of reference for the Canadian Coal Conference and the CIM Coal Division sponsored conferences.

Agenda Item 5

Report of Education and Student Essays Committee - D.S. Montgomery

A report was not available from the Education and Student Essays Committee (The Secretary will attempt to obtain a report for distribution with the Minutes). ( See APPENDIX 11 )

Agenda Item 6

Report of Publications Committee - T.E. Tibbetts

The report of the Publications Committee is given herein as Appendix 7. During the year 21 technical papers were submitted to the Committee for examination. Fifteen papers were approved for publication in the Bulletin, five papers were rejected and one was in the course of being examined. Eleven of the fifteen were published and the remaining four were scheduled.

Agenda Item 7

Reports of Representatives on Institute Committees

Bulletin - A.L. Job

The Secretary reported for A.L. Job, who has resigned due to retirement.

During the year the Division used 85% of the page quota in the Bulletin. It appears that in the current year the Division will well exceed the 100 page quota, as by March 31 about 70 pages had been used and two papers were scheduled for April and one each in May and June.

Special Volumes - D.K. Faurschou

The Secretary read a report by Don Faurschou, the Division's representative on the Special Volumes Committee. This report is given herein as Appendix 8. The proposal for a Special Volume on Coal will be studied by the Committee on Technology and the proposed Coal Division Steering Committee.

The Secretary was asked to determine if a request has been made to the Special Volumes Committee to consider a Special Volume for publication of the Proceedings of the Conference on Western Canadian Coal.

Computer and Process Control - A.D. Walters

The report by A.D. Walters is given herein as Appendix 9.

Distinguished Lecturers Award - W.J. Riva

In the absence of Walter Riva the Secretary reported that the Division's nomination for an Award was again elected and that J.C. (Jack) Botham was a winner of an Award in 1980. Congratulations were recorded to Jack.

Education - H. Zorychta

Although no report was available from the Division's representative the Meeting was reminded of the Monday afternoon special technical session of the Education Committee with the theme "Education Leadership in the '80's."

Agenda Item 8

Report of Committee on Technology - T.S. Cochrane

Tom Cochrane highlighted the reports of the various diciplines under the Committee on Technology. That report appears herein as Appendix 10. It was

proposed that the Secretary would take whatever action was necessary to have the individual reports published in the Bulletin, in Newsletter form as in the past. The Secretary stressed the need for the final and complete reports to be in his hands at an early date.

It was suggested that the Committee on Technology be given the task of preparing a special volume on coal that would include technological trends.

Agenda Item 9

Report of the Committee on Nominations - G.T. Page

The report of the Committee on Nominations consisting of G.T. Page, Chairman, E.D. Jamieson and H. Zorychta was presented by E.D. Jamieson. It was moved, seconded and unanimously that the report be accepted. The 1980-81 Chairman is W.A. Devereaux. The complete slate of Officers and Committees of the Coal Division for 1980-81 follows:

| | |
|---|---|
| Chairman | W.A. Devereaux |
| 1st Vice-Chairman | A.W.T. Grimley |
| 2nd Vice-Chairman | J. Coady Marsh |
| Secretary | T.E. Tibbetts |
| Publications Committee | T.E. Tibbetts - Chairman<br>S. Butcher, A. Romaniuk,<br>D.S. Montgomery |
| Education and Student Essays | K. Barron - Chairman<br>D.S. Montgomery, H. Zorychta |
| Committee on Nominations | E.D. Jamieson - Chairman<br>W.A. Devereaux, G.T. Page |
| Committee on Divisional Programs | N. Duncan - Chairman<br>G. Smith, S. Farrell, R. Leeder,<br>S. Butcher, D.E. Pearson, J. Popowich, A. Romaniuk |
| Committee on Technology | K. Barron - Chairman<br>W. Potter - Exploration<br>G. Stephenson - Mining Methods<br>V.E. Dawson - Environment and Safety |

| | |
|---|---|
| Committee on Technology (Continued) | |
| | D. Reeve - Research and Development |
| | L. Chrismas - Economics and Special Studies |
| | P.J. Read - Utilization |
| | J. Martin - Processing |
| Distinguished Lecturers Committee | T.H. Patching - Chairman |
| | W.A. Devereaux, E.D. Jamieson |
| Representatives on Institute Committees | H. Zorychta - Education |
| | Graham Taylor - Bulletin |
| | N. Duncan - Technical Program |
| | D. Faurschou - Special Volumes |
| | A.D. Walters - Computer and Process Control |
| | W. Riva - Distinguished Lecturers |
| | L. Chrismas - Mineral Economics |
| Steering Committee | W.A. Devereaux - Chairman |
| | A.W.T. Grimley, L. Coady Marsh, |
| | N. Duncan, E.D. Jamieson |

Eric thanked the Officers and Committees that had served under his Chairmanship.

Agenda Item 10

Other Business

Bill Devereaux thanked Eric Jamieson for his services to the Division during the past year and there being no further business adjourned the meeting.

APPENDIX 1

Attendance at the 36th Annual Business Meeting of the

Coal Division, CIM, 20 April, 1980, Sheraton Center Hotel, Toronto

| Name | Affiliation | Mailing Address |
|---|---|---|
| John J. Laffin | N.S. Power Corp. | P.O. Box 910<br>Halifax, Nova Scotia |
| Jim Popowich | Fording Coal Ltd. | Box 100<br>Elkford, B.C. |
| Coady Marsh | Cape Breton Development Corp. | Sydney, Nova Scotia |
| Bob Latimer | Luscar Sterco | Box 5000<br>Edson, Alberta |
| Larry Chrismas | EMR | 580 Booth Street<br>Ottawa, Ontario |
| Barry Munro | McIntyre Mines Ltd. | P.O. Box 117<br>Grande Cache, Alberta |
| Ed Smith | N.S. Mines & Energy | Box 999<br>Stellarton, Nova Scotia |
| Bernard Bowers | Labour Canada | Cabot House<br>Sydney, Nova Scotia |
| T.E. Tibbetts | EMR, CANMET | 555 Booth Street<br>Ottawa, Ontario K1A 0G1 |
| W.A. Devereaux | Montreal Engineering Co. Ltd. | P.O. Box 6088, Station "A"<br>Montreal, Quebec H3C 3Z8 |
| T.S. Cochrane | CANMET, MRL | 555 Booth Street<br>Ottawa, Ontario K1A 0G1 |
| Stanley A. Butcher | Coal Mining Research Centre | University of Alberta<br>Edmonton, Alberta T6G 2E2 |
| K. Barron | Coal Mining Research Centre | University of Alberta<br>Edmonton, Alberta T6G 2E2 |
| Eric D. Jamieson | H.A. Simons (International) Ltd. | 425, Carrall Street<br>Vancouver, B.C. V6B 2J6 |
| David Fawcett | CMRC | University of Alberta<br>Edmonton, Alberta T6G 2E2 |

APPENDIX 2

Chairman's Annual Report

It is with pleasure that I present my report today at the end of what seems to be a momentus year for the Coal Division of CIM. Distinct signs have emerged during the course of the year of a healthy resurgence of interest and activity at Branch level. The welcome initiative of District #6 in arranging the first technical Coal Conference in Western Canada, is now being followed by others so that the lack of a forum for exchanges of experience is now being rectified very quickly. I am sure you will share my satisfaction with these developments and will join with me in expressing appreciation to the organizers of the successful technical meeting held in Vancouver, in February, and to the proponents of further new activities which will be tabled this afternoon.

In order to accommodate the greater level of activity now being undertaken, the executive proposes certain changes to the responsibilities and functions of committees within the division. During the course of the past year the functioning of the executive committee has been adversely affected by cutbacks in Federal government travel funding which curtailed my ability to perform effectively as your Chairman. Loss of effectiveness on my part was compounded by a lengthy indisposition of the secretary. As a means of preventing such a reoccurrence in the future, it is proposed that an expanded Steering Committee be formed to be chaired by the division Chairman and to include the immediate Past Chairman for purposes of continuity as well as the program chairman for coordination and close communication. It is proposed that the Steering Committee meet three times a year.

It is proposed that the committee on divisional programs should take on a coordinating role for all division sponsored conferences, to advise on the content and assist in the arrangement of branch sponsored conferences. For this purpose it is proposed that the Chairman of the Program Committee be appointed to the Coal Division Steering Committee and that a secretary be appointed to the Program Committee.

The third modification concerns the Committee on Technology. In this case it is proposed that the committee be given the mandate to produce a compendium of trends in coal technology which have an immediate bearing on the expansion of coal production and use in Canada. This might be published as a CIM special volume.

The current membership of the Coal Division is 540 which makes it the second smallest division in the CIM. However, during the past five years, membership in the Coal Division has increased by 40% and from 3.8% to 4.8% of the total Institute membership. During this five year period that is the Institute membership has increased by 10%, but this increase has been confined to three Divisions (Coal, Petroleum, Mechanical-Electrical). The Coal Division expansion has taken place against an industry background which, after rapid expansion in the early 1970's, entered a period of stagnation from which it is only now beginning to emerge under the thrust of world thermal coal demand. I feel therefore, that there is an opportunity for the infusion of new blood into the committee structure of the Coal Division to provide incentive for

branch recruitments of new members and with this objective in mind the committee on nominations has introduced quite a number of new appointees, that we hope will meet with your approval.

A proposal will also be put forward by the Chairman of the Rocky Mountain Branch later on in the meeting for sponsorship of a Western Canadian Coal Operators Conference to be held in Hinton, Alberta, in September, 1981. A conclusion from the Vancouver Technical Meeting was that this type of meeting should be held bi-annually to maintain the necessary standards of papers. The proposal for an operators conference leads to the idea of alternating technical and operator conferences to provide a strong basis for an annual Coal Conference in Western Canada. The executive supports this principal and would recommend your serious consideration and approval of these initiatives.

With regard to meetings during the year the program at the 81st Annual General Meeting in Montreal departed from our normal practice of covering most aspects of coal, and concentrated on current experiences in coal mining. Several papers were presented by different companies and I had the very enjoyable and interesting task of preparing a synthesis of those papers which, incidentally, appeared in the current issue of the Bulletin.

The Mining Society of Nova Scotia meeting was held in June, at Keltic Lodge, and as usual it provided a brilliant setting for an interesting full program.

The Canadian Conference on Coal which was, until three years ago, co-sponsored by the CIM Coal Division, was held at the Banff Springs Hotel in September. The content of this conference was policy and energy orientated. This trend towards a program content of policy rather than technical metters, has opened a door for the new dimension of activity being undertaken and proposed for the CIM Coal Division.

The first CIM conference on Western Canadian Coal held in Vancouver, February 14-15 of this year, despite my absence, was a resounding success. I would like to table Dave Pearson's report for inclusion with the munutes of this meeting.

Finally, on March 10th, I attended a most enjoyable dinner meeting of the Rocky Mountain Branch at Edson. The feature of the evening was the rapid fire, sophisticated, highly entertaining presentation by our Distinguished Lecturer, Neil Duncan, who has very conscientiously promoted the interests of Coal in all parts of Canada throughout the course of the year. I would also like to table his interim report for inclusion with the minutes of the meeting.

With this rapid preview of the major topics to be discussed during the rest of this business meeting on the report of my somewhat limited activities as your Chairman for the year, I now open the meeting for discussion of the rest of the agenda.

E.D. Jamieson
Chairman - Coal Division, CIM

APPENDIX 3

# Report to Coal Division on CIM Conference on Western Canadian Coal

David E. Pearson

Victoria
March 14, 1980

The first CIM Coal Division Technical Meeting on Western Canadian Coal was held in Vancouver on February 14 and 15, 1980. Sixteen papers covered the whole gambit of coal technology and addressed the central theme - "Evaluation of Western Canadian Coal for the 1980's".

Invited guest speakers included Garnet T. Page, president of the Coal Association of Canada, and Dr. Norbert Berkowitz, Professor of Fuel Science at the University of Alberta and vice-chairman of the Alberta Energy Resources Conservation Board.

Session chairmen were E.R. Macgregor, British Columbia Assistant Deputy Minister for Mines and Neil Duncan, of the Coal Department, Alberta Energy REsources Conservation Board.

Registered attendance at the meeting was 177, which ensures no shortfall of expenses over income; indeed a small contribution should ensue to Coal Division's operating funds. At the time of writing, the size of this surplus has not been assessed.

It was the feeling of authors that the papers and discussions should be published as a Proceedings and I have taken the liberty of contacting Mac Buchanan, Chairman, Special Volumes Committee, to explore this possibility.

For the future, I would like to see this kind of meeting on a biannual basis, with Calgary and Edmonton as alternate venues. It is doubtful at this time that there is sufficient research to support an annual meeting. Stan Butcher of the Coal Mining Research Centre, Edmonton and

Ross Leeder of CANMET, Edmonton, have tentatively agreed to organize the next meeting in Edmonton.

The Program of the meeting is appended for your information.

Respectfully submitted,

David E. Pearson
Chairman, Organizing Committee

APPENDIX 4

THE CANADIAN INSTITUTE OF MINING AND METALLURGY

Calgary Branch

Headquarters: Suite 400, 1130 Sherbrooke St. W., Montreal, Quebec H3A 2M8 Phone: 1-514-842-3461

21 December 1979

Eric D. Jamieson, Esq., P. Eng.
Chairman, CIM Coal Division
Senior Coal Advisor
Dept. of Energy Mines & Resources
Energy Policy Sector
19th Floor, 580 Booth St.
OTTAWA, Ontario
K1A 0E4

Dear Eric

CIM Distinguished Lectures

The mid-point in my series of lectures would seem a good time to report to you on the lectures which I have been privileged to give to various CIM Branches and other professional bodies over the past four months.

Chronologically these were -

20th September - CIM Sullivan Branch - Ladies Night in the "Miners' Den" in the Kimberley Ski Lodge.

3rd October - CIM Esterhazy Branch - Evening meeting in the Masonic Hall.

16th October - University of Alberta - Talk by invitation of the Dean of Engineering to address 510 first year engineering students in the Henry Marshall Tory Theatre.

22nd October - CIM Thunder Bay Branch - Evening lecture in the Prince Arthur hotel, reported by a local newspaper.

25th October - CIM New Brunswick Branch - a well attended combination of Students' Night and Ladies' Night at Keddys Motor Inn, again reported by the local press.

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1st October - Evening lecture to the Calgary and District Chemistry Teachers' Association.

16th November - CIM Northern Alberta Branch - Ladies Night in the Edmonton Plaza Hotel.

22nd November - a busy day with a noon lecture to the CIM Vancouver Branch in the Engineers Club, and to a Ladies Night engagement with the CIM South Central B.C. Branch at Kamloops

27th November - The Association of Professional Engineers, Geologists and Geophysicists of Alberta at a noon meeting of the Edmonton District.

The multi-projector rear-view presentation appears to have been well accepted, and I enclose photo copies of several of the letters of thanks received after the meetings. The tour has given me the opportunity to visit mines and plants while in each area and the arrangements for these, and for the meetings themselves, have been excellent.

I enclose a copy of my schedule for the next four months, and I will make a final report to you prior to the AGM in April. Hopefully, we will meet at the Coal Technical meeting in Vancouver in mid February or during my visit to Ottawa on 19th March.

Meantime, seasons greetings and best wishes for the New Year.

Yours sincerely

Neil J. Duncan, P. Eng.
Distinguished Lecturer

NJD/jg

cc Mr. Garnet T. Page, Immediate Past President, CIM Coal Division
Mr. G.S. Skilling, Executive Director CIM
W. Roe (Cleland, B. Eng. [etc]

APPENDIX 5

# REPORT ON COAL DIVISION PROGRAM TO 36TH ANNUAL BUSINESS MEETING

by

K. Barron

## 1. 1979/80 Program Committee Membership

The Program Committee comprised: K. Barron (Chairman), C. Marsh, E. Scholz, A. Romaniuk, D. E. Pearson

## 2. Activity during the year

### (1) "Evaluation of Western Canadian Coal for the 1980's

This conference on coal was organized under the auspices of the Coal Division under the Chairmanship of D. E. Pearson. It was held in Vancouver, 14-15 February, 1980. A total of 16 detailed technical papers were presented under the session themes:-

Oxidation studies
Beneficiation studies
Utilization
Evaluation

Attendance at the meeting was approximately 150. This clearly indicates the need and demand for a forum at which papers of more detailed technical content than is advisable for presentation at the AGM may be presented. It is thought that Divisional conferences (rotating?) can fill this need, as demonstrated by the success of this venture.

### (ii) Annual General Meeting

The program committee has organized the Coal Division program for the 82nd Annual General Meeting, addressing the overall theme "Canadians - Mineral Leaders in the 80's". A total of 16 papers will be presented in the four Coal Division Sessions under the following session themes:-

Coal Preparation in the 80's
The Workforce in the 80's
Coal Research
Rail Transportation

The latter session was organized as a joint session between the Coal Division and the Mineral Economics Division. In addition, Mr. Walter Riva, President, Coal Division, Kaiser Resources Ltd., represents the Coal Division as one of the key speakers in the Plenary Session on "Canadians - Energy Leaders in the 80's".

3. Future Coal Division meeting schedules and themes

A list has been attached to the agenda for this business meeting.

4. Canada to host International Coal Preparation Congress?

An informal approach has been made to the Canadian delegates to the 8th International Coal Preparation Congress held in Donetsk, U.S.S.R., last year with the suggestion that Canada might consider hosting this Congress in 1985 or 86. If Coal Division members deem this to be a desirable objective then, in my opinion, the CIMM would be the appropriate body to co-ordinate the organization of such a congress and to extend an official invitation to the International Organizing Committee.

I bring this to the attention of the Coal Division Business meeting in order that the pro's and cons of such an undertaking may be discussed. The attached Appendix gives a brief background to this item.

K. Barron
Chairman
Coal Division Program Committee

APPENDIX 6

Dr. K. Barron
Chairman
Committee on Divisional Programs
Coal Division
Canadian Institute of Mining and
Metallurgy

Dear Ken:

International Coal Preparation Congress

The International Coal Preparation Congress has generally been convened every 4th year:

I. France: Paris, 1950
II. FRG: Essen, 1954
III. Belgium: Brussels & Liege, 1958
IV. Great Britain: Harrowgate, 1962
V. U.S.A.: Pittsburgh, 1966
VI. France: Paris, 1973
VII. Australia: Sydney, 1976
VIII. U.S.S.R.: Donetsk, 1979

The next congress is planned for November, 1982 in New Delhi, India.

The absence of any congress between 1966 and 1973 can be attributed primarily to the low level of activity of the coal industry during that period, although attendance in Pittsburgh in 1966 was low since at that time the European participants were not used to trans-atlantic travel. In contrast, the 1976 congress at Sydney, Australia, achieved a record attendance of some 600 delegates.

The 1979 congress at Donetsk, was attended by 445 delegates from 27 countries. There were also 39 "accompanying persons", (wives, etc.).

It can, therefore, be appreciated that support for the congress is representative of the coal industry world wide. However, the delegation to Donetsk from the U.S.A. was relatively small. Also, South Africans had been excluded by the Russians.

South Africa would like to host a congress, and drafted a proposal for 1982. To avoid confrontation with the U.S.S.R. this has not been presented. It is anticipated that the Eastern countries are formalizing an invitation given verbally in Committee from Poland to host the 10th Congress in May 1985. There are objections to this:

1. This would be only two and half years after the New Delhi Congress.

2. After Donetsk and New Delhi a distinctly western location is preferred.

3. The 10th Congress should not exclude South Africa and should be in a country which would draw support from the U.S.A.

I attended the Donetsk Congress along with Bob Symington and Harold Lilleker of Simon-Carves of Canada, and Tony Walters of Kilborn Engineering. We were unofficially approached by the Australian representative on the International Organizing Committee with a view to Canada giving an invitation for the 10th Congress in 1986. On an ad-hoc basis I was asked to assume co-ordination until a committee could be formed. This possibility has been discussed with a variety of people associated with coal preparation in Canada. The general consensus of opinion is:

1. 1985/86 might be too early for our fledging industry.

2. We do not have an effective Canadian forum for discussion of coal preparation. (Whilst the coal industries of the respective nations have given necessary financial backing, the initiative for previous Congresses have usually come from domestic Coal Preparation Societies.) The priority therefore seemed to be to concentrate on immediate domestic needs.

The possibility of Canada hosting the International Congress was raised briefly during the Coal Association tour of preparation facilities in Germany and the U.K. last fall. Subsequently I have been approached in writing to solicit a Canadian invitation for the 10th Congress in 1985 or 1986. We are requested to forward a letter of invitation to Mr. Bose, Organizing Secretary of the New Delhi Congress, to be tabled at the International Committee Meeting this November. This should be a duly accredited formal invitation

on which the International Committee can make a decision. (Four of the eight committee members have indicated personally to me that they are in favour of Canada in principle. In the event that our invitation for 1985/86 were not accepted we would be virtually certain to be asked to host the next Congress).

There appear to be three organizations which would have the authority to give such an invitation:

The Department of Energy, Mines and Resources
The Coal Association of Canada
The Canadian Institute of Mining and Metallurgy

Mr. Garnet Page has indicated the implicit support of The Coal Association, but suggests that CIMM is the correct organization to host this technical event. I therefore request the Coal Division of CIMM to consider this suggestion and, if accepted, to initiate a Canadian invitation.

Yours Sincerely

Stanley G. Butcher.

Stanley G. Butcher
Head, Coal Preparation Division
Coal Mining Research Centre
SGB/s

APPENDIX 7

THE COAL DIVISION OF CIM

REPORT OF THE PUBLICATIONS COMMITTEE
Papers Reviewed During the Past Year

(April 1, 1979 - March 31, 1980)

| Institute No. | Title and Author(s) | Committee Decision | Published or Scheduled |
|---|---|---|---|
| 4404 - | Influence of rib pillar width on the stability of strata around the face-end and gate-roadway in longwall mining (A.B. Szwilski) | 13/07/79 Rejected | - |
| 4406 - | Mine planning for a large truck-shovel pit at Fording Coal Operations (W.H. Shaw) | Revision requested 13/07/79 | - |
| 4415 - | The panel No. 6 project: Latest developments in hydraulic coal mining at Kaiser Resources Ltd., Sparwood, B.C. (N. Stonestreet) | Revision requested 13/07/79 | - |
| 4422 - | Experimental and theoretical investigation of hydraulic cutting of a western Canadian coal (M.P. du Plessis and M. Hashish) | Revision requested 13/07/79 | - |
| 4436 - | Experience with mine roadway steel arch supports in the United Kingdom (A.B. Szwilski) | Accepted 13/07/79 | Published October, 1979 |
| 4473 - | The quality of western Canadian coking coals (D.E. Pearson) | Revision requested Accepted | Published January, 1980 |
| 4477 - | A pilot scale treatment of coal preparation plant effluent by the selective agglomeration process (L.W. Armstrong, A.R. Swanson and S.K. Nicol) | Accepted 13/07/79 | Published November, 1979 |
| 4479 - | Longwall mining methods applied to plains coal region (A.B. Szwilski) | Accepted | Published January, 1980 |
| 4503 - | Coal mining at Smoky River minesite, McIntyre Mines Limited, Grande Cache, Alberta (J.E. Carter and D. Walli) | Accepted 04/02/80 | Scheduled June, 1980 |
| 4504 - | Luscar's coal mining operations (John Tribe) | Accepted 13/11/79 | Published January, 1980 |
| 4505 - | Coal mining in Poland (Z. Wegrzyk) | Accepted | Published July, 1979 |

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| Institute No. | Title and Author(s) | Committee Decision | Published or Scheduled |
|---|---|---|---|
| 4521 | The Fording River Mine - An overview (P.J. Urso) | Accepted 13/11/79 | Published February, 1980 |
| 4531 | Coal at Saskatchewan Power (M.H. Allan) | Rejected 27/11/79 | - |
| 4533 | New Brunswick Coal Industry (L.S. Armstrong) | Rejected 27/11/79 | - |
| 4542 | Coal mining practices at Kaiser Resources Ltd. (G.K. Livingstone) | Accepted | Published January, 1980 |
| 4543 | Innovations in cokemaking and the role of the CCRA (J.C. Botham and T.D. Brown) | Accepted 13/08/79 | Published January, 1980 |
| 4544 | The rebirth of Corbin - the Byron Creek Collieries story (J. Aiello) | Accepted 13/11/79 | Published January, 1980 |
| 4549 | Status report on Canadian coal mining (E.D. Jamieson) | Accepted 05/02/80 | Scheduled April, 1980 |
| 4559 | Effect of subcoal strata on coal pillar stability (M.L. Jeremic) | Rejected 05/12/79 | - |
| 4578 | Coal-fired power plants (D.R. Wright) | Accepted 27/11/79 | Published March, 1980 |
| 4579 | The Quinsam coal project (D.R. Barnstable) | Accepted 26/11/79 | Scheduled April, 1980 |
| 4581 | Size degradation of bituminous coal from western Canada (M.W. Mikhail and T.H. Patching) | Accepted 11/01/80 | Scheduled May, 1980 |
| 4589 | Carbon Creek - Geology and coal resources (R.B. Anderson) | Rejected 05/02/80 | - |
| 4595 | Competition and Canadian coal prices in the Japanese coking coal market | Under review | - |

SUMMARY

| | Submitted | Accepted | Rejected | Under review | Published | Scheduled |
|---|---|---|---|---|---|---|
| 1979-80 | 21 | 15 | 5 | 1 | 11 | 4 |

T.E. Tibbetts
Chairman, Publishing Committee
Coal Division, CIM

APPENDIX 8

REPORT ON SPECIAL VOLUMES COMMITTEE TO CIM
COAL DIVISION, ABM, APRIL 1980

Last year Ross Leeder anticipated that the Canadian Society of Chemical Engineers would organize a special session on coal which could merit joint CIM/CSCE publications of the proceedings as a special volume. This session did not materialize and in any event, I do not believe that its proceedings would meet the criteria for a CIM special publication, which briefly are:

1. support of a CIM Division
2. content appropriate to the terms of reference of CIM
3. substantive reference and landmark value
4. not competitive with commercial publications
5. perceived need and demand with recovery of at least 50% of the costs within three to five years.

The Special Volumes fund balance has declined from $250,000 (31 Dec '77) to $124,199.97 (31 Jan '80) because of inflation and non-recovery of publication costs, so justification of any new proposed volume must be sound.

I suggest that the Coal Division discuss and consider the sponsorship of a CIM special technical publication on Canadian Coal. Such a volume could possibly supplement a basic text like Lowry's Chemistry of Coal Utilization with specific consideration of Canadian coal, e.g.:

Chapter 1, Geology
Chapter 2, Resources and Reserves
Chapter 3, Coking Coals
Chapter 4, Thermal Coals
Chapter 5, Mining
Chapter 6, Beneficiation
Chapter 7, Transportation
Chapter 8, Current Utilization
Chapter 9, Project Utilization
Chapter 10, Federal and Provincial Coal Policies
Chapter 11, Coal Producer
Chapter 12, Prospective Producers and Properties
Chapter 13, Coal R&D
Chapter 14, References and Bibliography.

Its my impression that a special volume on Canadian Coal would fill a technical, marketing and educational vacuum. The very tentative Chapter headings on page 1 may be too comprehensive and ambitious for CIM as a sole sponsor. There are too many considerations of detail to be discussed in this report. If the Coal Division at the ABM in Toronto expresses interest in this proposal, I can explore the matter further; or, the Division, if seriously interested, could set-up a committee and guidelines for an in-depth study.

D.K. Faurschou

Ottawa, 16 April 1980

APPENDIX 9

## 36th ANNUAL BUSINESS MEETING OF CIM: COAL DIVISION

REPORT OF REPRESENTATIVE: COMPUTER APPLICATIONS AND PROCESS CONTROL COMMITTEE, 1979 - 1980

The Committee met three times during the year.

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| Meeting 20 (April 1979): | At the CIM, Montreal |
| Meeting 21 (October 1979): | At Canadian Bechtel, Toronto, followed by a demonstration of the microcomputer system installed at Bechtel. |
| Meeting 22 (January 1980): | At Foxboro Canada, La Salle, Quebec, followed by a visit to the Foxboro factory. |

### CANADIAN DEVELOPMENTS

As reported at the last coal division meeting, the major areas of computer applications in the Canadian coal industry are:

1. Geological
2. Mine Planning
3. Coal Preparation
4. Economic Analysis

There have been no major new developments in the last year, however, the computer controlled high accuracy clean coal rail-loadout systems at Fording, Byron Creek and Coal Valley have been refined and are reported to be operating very well.

The EMR at Edmonton are planning to install a pilot scale Batac jig from Germany, which has a programmable computer control of feed, water, bed thickness and the speed, length and cycle characteristics of the pulsations.

### INTERNATIONAL DEVELOPMENTS

A major development in computer control application in the coal industry is the MINOS system (Mine Operating System) developed by the British National Coal Board. The system has the following functions in underground mines:

1. Automatic coal transport control from faces
2. Production and face monitoring
3. Environmental monitoring
4. Monitoring of fixed plant.

MINOS has been successfully demonstrated in eight mines and has been adopted as an industry wide standard. Twelve MINOS controlled coal clearance installations were installed in British Mines in 1979. A further development is the new FIDO system (Face Information Digested On-Line) currently being tested. With the objective of obtaining accurate minute-by-minute feedback about face performance, FIDO links into the switchgear in each of the gate roads and can monitor the status of up to three cutting machines at one face, the armoured face conveyor and many items of auxiliary plant. An alarm is generated when a main face machine stops and interactive command facilities allow the selection of delay causes from standard lists. A scale on the gate belt can make rough measurements of face tonnage. Histogram displays that provide updated information on machine utilization and production over 10 minute periods may be displayed together with previous shift and days displays for comparison. At the end of the shift the information is transferred to a secondary computer for generating reports, storage and for subsequent analysis.

In October 1979, the Coal Association of Canada organized a visit to Britain and West Germany to inspect new coal preparation facilities, many of which had computerized process control elements. The National Coal Boards Mining Research and Development Establishment (MRDE) has collaborated with a number of electronics companies over the past five years in the application of computer based systems to control coal handling underground (MINOS). This has led to adaption and further development for the monitoring and control of coal preparation plants. Three plants, Prince of Wales, Thurcroft and Rawdon are currently operating with either a programmable logic controller of a microprocessor, controlling the sequence starting and stopping of drives with a colour visual display unit (VDU) to indicate the state of any selected section of the plant circuitry. Transducers monitoring liquid and solid levels and flowrates and medium S.G. are connected into these minicomputers along with analogue coal blending control loop systems, to centralize monitoring and control.

A much more comprehensive computer system comprising 128 k of store memory is presently installed at Lea Hall colliery. This forms part of an EEC sponsored MRDE research programme aimed at providing the experience necessary to determine the extent to which future computer based systems should be taken.

The system used is of the Digital Equipment Co. type on which the NCB plans to standardize. A large number of transducers have been installed to establish component and system accuracies and reliability. The system includes the installation of numerous belt weighers, bunker level indicators, automatic valves, flow meters, level gauges, density gauges, ash and other monitors. A special 240 V ring main distribution system has been installed to serve these transducers. Print-out facilities are also incorporated to provide hard copy data regarding plant problems and to provide management data in report form such as tonnage, yields of various grades of coal and plant operating times.

Lea Hall contains some 200 electrically powered items, about 300 valves and 30 pumps. The control system monitors continuously, plant units with about 2 000 digital inputs and 300 analogue signals. Almost 700 digital outputs are required for controlling the plant and about 20 continuous control loops have so far been introduced.

Although in Germany there is considerable interest being shown in comprehensive direct digital control systems, it is generally felt that all that is required in electronic plant control can be achieved by programmable controllers and microprocessors, as evidenced by the new BATAC jig installation at Lohberg.

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APPENDIX 10

REPORT - COMMITTEE ON TECHNOLOGY

Let me say at the outset it is a pleasure and privilege to respond on behalf of the Coal Technology Committee. Teamwork is considered the key to technological development and teamwork is certainly the key to technological reporting. All my committee members responded promptly to my belated request for contributions.

This year we are attempting to streamline the technology presentations by having one report rather than five separate reports. It is not my intention to read the contributions but rather to highlight. The report in total will possibly be published at a later date in CIM Bulletin.

The objective of the Committee's report is to draw attention to technology adaptations on changes in 1979 that we feel are important. We leave it to each individual to pursue in depth his or her interests. We are really only interested in stating 'What is being done and who is doing it, and how far along any adaptations or changes are.'

Mining Methods

In Nova Scotia the first set of shield supports to be placed in a Canadian mine have been installed at DEVCO's No. 26 colliery. This follows a world wide trend away from chocks to shield supports, which provide better protection against roof falls or flushing of rock from the waste. The greater range of operation of shields provides significant advantages in seams where fluctuations in thickness are a serious problem.

Meanwhile, on the other side of the continent, in British Columbia, the Panel 6 operation in Kaiser Resources Balmer South mine is now in production. This hydraulic operation will produce coal from below drainage for the first time in Canada. The impressive dewatering station, which separates coal into two sizes for transportation to the surface by belt conveyor and slurry pipeline, has been successfully brought into operation.

A study of punch mining from the ultimate highwall of a surface mine in Alberta plains coal. This effort will provide information which will allow a site specific comparison of the economics of underground operations, mining a short distance beyond the highwall, with the surface mined coal produced at, or near, the same highwall.

Approval was given for a joint research programme, between CANMET and PETROCANADA, to test hydraulic supports in a total caving operation in Alberta plains coal. This test will be carried out in the Galt seam as part of a Pilot mine being developed by Petro-Canada, near Lethbridge. The test will take place on a shortwall face which will be developed as part of a programme to obtain a 25 000 ton bulk sample of coal.

## Report on Environment and Safety

### British Columbia

It is anticipated that the current Coal Mines Regulation Act will be revised during 1980.

### Alberta

The Alberta Coal Mines Safety Act and Regulations are undergoing revision, and one change envisioned is that EMR approval will be the only recognized certification for mining equipment for use in hazardous atmospheres in the Province of Alberta.

### New Brunswick

The Mines Branch was transferred from the Department of Natural Resources to the Department of Labour and Manpower on June 1, 1979.

### Nova Scotia

Ad-hoc meetings of committees in full cooperation with operators and, in the case of DEVCO, with Labour Canada, monitor the progress of change; part of which is the inclusion of mine rescue training in the TRAC (training resources applied to coal) programme at the College of Cape Breton.

In June, 1980, the third annual Workshop on Occupational Health will be held at the College of Cape Breton.

There were four (4) reports of ignitions at the coal face through shearer picks striking stone intrusions during 1979 and, on February 24th an explosion occurred in No. 26 Colliery. Ten (10) men were killed, and two (2) succumbed later.

A report by the ensuing Commission of Inquiry had not been completed at the time of this writing. However, both the investigation made on behalf of DEVCO and that by Labour Canada, deduced that shearer picks struck an intrusion of highly incendive rock into the floor of the seam at the extreme top-end of No. 12 South Wall Face in the presence of an explosive mixture of methane in

air: also, that coal dust could have played a part in the subsequent propagation but to no large extent.

Labour Canada is grateful for the ready assistance and cooperation of CANMET in its investigation.

A retreating shortwall face has been developed and is now being equipped for production.

General

A revised Canada Labour Code was enacted during the period under review and the changes include: foundation of the Canadian Centre for Occupational Health and Safety.

Coal R&D in the Federal Government in 1979

Current expenditures on coal R&D by governments and industry is currently at about $25 million per year (U.S. - $728 million in FY 1980, Germany $204 million in FY 1978, and U.K. $105 million in FY 1978). Federal expenditures on coal R&D total about $9 million in 1979/80 and EMR is the lead agency within the federal government.

Under the Working Party on Coal Technology of the International Energy Agency, EMR has become involved in three new technology areas during the year under review. These are:

a) Exchange of technology in the area of atmospheric pressure fluidized-bed combustion; implementing agreement has been signed.
b) International program on the development of an improved coal burner to give low NOx emissions; implementing agreement has been signed.
c) Participation with the U.S., Sweden and Japan in development and implementation of coal-oil-mixture combustion technology; negotiations in progress.

EMR also maintains membership in the following three coal services of the IEA:

a) Mining Technology Clearing House
b) Technical Information Service
c) Economic Assessment Service.

Reports and project registers emanating from these Services are distributed extensively within Canada. During 1979, EMR decided to withdraw from membership in the IEA Coal Services World Coal Resources and Reserves Data Bank.

In coal resource assessment, the Geological Survey of Canada is developing a coal resource data base and will produce on request coloured contour maps of coal deposits.

In the coal preparation program at CANMET conducted mainly at the Western Research Laboratory in Edmonton, flocculant behaviour for the treatment of fine streams has been quantified and flocculants are being developed to meet specified performance criteria.

The effect on coking qualities of washing selected western Canadian coals to different ash levels is being investigated.

Through the CANMET coal conversion program, the suitability of Canadian coals for gasification is being evaluated in fluid beds, fixed beds, and spouted beds as well as using molten salt technology.

Perhaps the most important part of the coal R&D program currently underway in EMR is development of new technologies for coal combustion which meet environmental requirements.

Finally, in coal transportation, a technique for the removal of oil from coal-oil slurries has been developed at the bench scale.

## Statistical Review of Coal - 1979

### Production

In 1979 total production of all types of coal increased by 8.5 per cent to 33.0 million tonnes. The total value of production (f.o.b. mines) is estimated to be $835 million, representing an increase over the previous year of about 13 per cent.

### Exports

Canadian coal exports declined moderately to 13.7 million tonnes valued at $785 million in 1979. Of the total exports, 93 per cent were comprised of coking coal with the remainder bituminous thermal coal. Approximately 75 per cent of the coal shipped was destined for Japan with the remainder going to 16 other countries. Large shipments were made to Korea, Germany and Brazil.

The average value (f.o.b. Vancouver) of coking coal exports was $59.00 per tonne or a total of approximately $752 million. The average value (f.o.b. Vancouver) of thermal coal exports was $34 per tonne as a grand total value of approximately $33 million.

Imports

Total imports, all from the United States, increased from a level of 14.1 million tonnes in 1978 to 17.5 million tonnes in 1979 representing an increase of 24 per cent. In 1979 the value of imports f.o.b. port of exit was $1,034 million in terms of Canadian dollars.

Report on Coal Utilization

The electric utilities which consumed 80 per cent of Canadian coal production continue to be the largest users of coal. Coal fired generating stations require less construction time and less capital than nuclear stations, as well as avoiding the extreme controversial issues involved with nuclear generation.

Our largest coal consumer and imported of thermal coal from the United States continues to be Ontario which consumed nearly 10 million tonnes in 1979. Over two million tonnes of bituminous coal were supplied from mines in British Columbia and Alberta for consumption at Ontario Hydro's Nanticoke station on Lake Erie. Consumption of Western coal is expected to double by the mid 1980's with Saskatchewan lignite being used to fuel a new 300 MW addition at Thunder Bay expected to begin operation in 1980 at Atikokan where a new coal-fired station is to be located.

Electric utilities are studying topics, such as district heating, combined with existing or new power plants that will utilize the energy input more efficiently. The need for a long term plan for the disposal of ash from coal-fired plants is recognized and taken into account in the case of a new plant. The marketing of fly ash is being pursued both as a means of disposal and a possible source of revenue.

The freezing of coal in rail cars continues to be a problem and will increase in importance as greater quantities of coal are delivered by rail. Pre-burn cleaning and beneficiation of coal is being found advantageous because of the resulting lower ash content, lower sulphur content and higher Btu content of the product.