Paper No. 88 — 14:30
History and Operation of Westshore Terminals.
ROBERT STANLAKE, President, Westshore Terminals Limited, Roberts Bank, Delta, B.C.

The paper reviews the historical development of the coal terminal at Roberts Bank from its inception in the late 1960s through to the present. The recent expansion of the terminal to 22 million tonnes per year is highlighted. The paper concludes with a description of Westshore's operation style and its management philosophy.

Paper No. 89 — 15:00
Design Criteria for Export Coal Preparation Plants.
R.A. LATCHIOOR, Manager, D.G. OSBORNE, Senior Coal Preparation Engineer, and A.D. WALTERS, Senior Coal Preparation Engineer, Kilborn Engineering (B.C.) Ltd., Vancouver, B.C.

A new approach has been required in establishing the design criteria necessary for large treatment capacity, high capital cost complex coal preparation plants built in Canada to produce export coals.

The need for high levels of availability and operational utilization, combined with 24 hours-per-day, 7 days-per-week operation, have set difficult targets for the plant designers and have necessitated careful and comprehensive planning of engineering construction and commissioning schedules. The added need to build a plant readily amenable to rapid and successful start-up, has been another prerequisite for ensuring the required pay back period for the substantial investment involved.

This paper is intended to provide an insight into the design criteria and associated factors which must be firmly established from the outset in order that a successful project may be developed, to the satisfaction of all involved.

Paper No. 90 — 15:30
The Use of Gas-Coal Interactions to Predict the Degradation of Beneficiation and Utilization Properties that Occur During Oxidation.
R.J. MIKULA, Research Scientist, and M.W. MIKHAIL, Head, Coal Preparation Section, Coal Research Laboratories, EMR/CANMET, Edmonton, Alberta

The effects of weathering on the beneficiation and utilization properties of coal have been studied in coal science for many years and it is well known that the chemical changes which occur during coal oxidation can have an impact on economically important coal properties. In western Canada, where the proportion of fine coal (0.6 mm) ranges between 25% and 60%, oxidation and weathering can have serious consequences on coal quality and marketability. Knowledge of gas interactions with the coal surface (especially O_2, in the case of oxidation) can give useful information about the rate and mechanism of coal oxidation.

A simple procedure has been developed for monitoring coal weathering which is very sensitive to changes in the surface characteristics of the coal. An instrument, which monitors coal oxidation by measuring the amount and rate of gas released from a coal sample saturated under standard conditions, has been built by our laboratory. The results have been compared with those obtained via standard wet chemical analysis and photo acoustic FTIR (fourier transform infrared) spectroscopy.

The information obtained from this new instrument can be used as a quick test of changes in coal quality versus time in a stockpile and is also being utilized to provide an indication of the weathering propensity of a coal before it is stockpiled.

Paper No. 91 — 16:00
Dry Cleaning of Thermal Coal.
G.I. MATHIEU and L.L. SIROIS, EMR/CANMET, Ottawa, Ontario

Fully integrated dry processing methods were tested at the Canada Centre for Energy and Mining Technology (CANMET) on a raw coal originating from a western Canada property under development.

This paper deals with the dry processing methods, the results of the sample investigation, as well as the conditions tested for optimizing the equipment performance.

COMPUTER APPLICATIONS AND PROCESS CONTROL COMMITTEE/COMITÉ DE L'INFORMATIQUE ET DES PROCÉDÉS DE CONTRÔLE

14:00, ROOM 233/SALON 233 (HOTEL VANCOUVER)

Computers Applied to Ore Deposits

DON B. CROSS and JOHN SHELFORD, Suncor Inc., Calgary, Alberta, Session Chairmen

Paper No. 92 — 14:00
Advanced Computer Graphics Techniques in Geological Modelling.
SIMON W. HOULDING, Managing Director, Geomin Computer Services Corporation, West Vancouver, B.C.

This will be a presentation dealing primarily with the application of advanced computer graphics display techniques to geological modelling, emphasizing the micro-processer workstation approach to computer solutions. Other application areas covered will include exploration data analysis, mine planning and design and equipment simulation.

The presentation will stress the advantages of computer graphics, primary application areas, the necessity for graphics in modern interactive computer systems and recent advances in graphics display techniques.

Colour slides will be employed intensively as the primary presentation medium.

Paper No. 93 — 14:30
Computer Modelling of the Eaglet Fluorspar Deposit.
J. DONALD GRAHAM and FRANS JANSEN, Senior Engineering Consultants, Control Data Canada Ltd., Vancouver, B.C.

The Eaglet deposit consists of a series of near horizontal fluorspar zones in a metamorphic host. Computer techniques were employed to evaluate the reserves at various cut-offs. As a first stage, sample logs were loaded into a data base. Grade distribution was then studied and computer-drawn sections were prepared. Fluorspar zones were identified and correlated between holes on these sections. Surface fitting techniques were applied to model zone hangingwall and footwall, followed by grade interpolation by inverse distance weighting. The zones were then displayed as contoured surfaces and isopachs. Finally, reserves were calculated in detail.