

- (b) Controlled conditions of solvent extraction, scrubbing and stripping uranium from acid leach solutions, the resulting product being of nuclear purity.
- (c) Solvent extraction, stripping with sulphuric acid, electrolytic reduction and precipitation.
- (d) Reduction of uranium-sodium carbonate solutions by sodium amalgam.

Some of the methods have been brought to a point of development where pilot plant testing of continuous systems is warranted. At least one large mining company is now pursuing research which follows the lines outlined.

#### *Research on Non-Nuclear Uses of Uranium*

In early 1959 Eldorado made a survey of possible non-nuclear uses for uranium and initiated a project which is underway at the physical metallurgy laboratories of the mines branch. This project has been carried forward by the staff of the mines branch, and the research and development division of Eldorado has assisted by contributing funds as well as staff, supplies and analytical services. The progress to date gives promise of practical results and the project is being expanded.

#### *University Research*

Eldorado contributes yearly grants to research projects at several Canadian universities. The research and development division maintains contact with these research programs through reports and visits, and is responsible for evaluating results and for recommending the nature and scope of the projects.

#### *Research and Development Division Present and Future Program*

The functions and responsibilities of the research and development division were outlined in a directive issued in 1953 by the president, as follows:

At a meeting of the board of directors held on March 26th, 1953, approval was given to the establishment of a research and development division. This division will be attached to head office and will have its headquarters in Ottawa. The following is a description of the new division under the headings: A. Activities, B. Methods of Operation:

##### *A. Activities*

- (1). The division will supply technical assistance and advice for all existing ore dressing and refining operations. Such assistance and advice may involve changes in operating procedure or modifications of the flowsheet. The director of the research and development division will be responsible for recommending such changes or modifications and no changes or modifications shall be made without his approval.
- (2). The division will be responsible for initiating, directing and evaluating all research programmes affecting existing flowsheets or new flowsheets in ore dressing and refining operations.
- (3). The division will be responsible for pilot plant operations designed to test new processes or proposed major changes in existing processes in ore dressing and refining operations.
- (4). The division will be responsible for establishing sampling, assaying and analytical procedures for all ore dressing and refining operations.
- (5). The division will be responsible for maintaining the necessary liaison with the United States Atomic Energy Commission and the United Kingdom in the fields of ore dressing, refining, assaying