

CLUFF MINING - THE FIRST TWO YEARS

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I N D E X

- 1. ABOUT THE CLUFF LAKE PROJECT

- 2. AMOK/CLUFF MINING EMPLOYEES
 - 2.1 Northerners Must Benefit From the Project.
 - 2.2 Northern Employment Program.
 - 2.2.1 Recruiting
 - 2.2.2 Hiring and Commuting
 - 2.2.3 Training
 - 2.2.4 Employment Plan and other Measures
 - 2.2.5 Results

- 3. EMPLOYEES OF CONSTRUCTION CONTRACTORS

- 4. INCOME TO COMMUNITIES

- 5. NORTHERN BUSINESS PROGRAM

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1. ABOUT THE CLUFF LAKE PROJECT

The Cluff Lake Project is a uranium mining and milling operation located in a very isolated area on the west side of northern Saskatchewan. It is approximately 740 kilometres northwest of Saskatoon, 80 km south of Lake Athabasca and 29 km east of the Alberta border. The closest community by land is La Loche, nearly 250 km south. In the fall of 1979, an all-weather road was completed linking the project to this community and the rest of Saskatchewan.

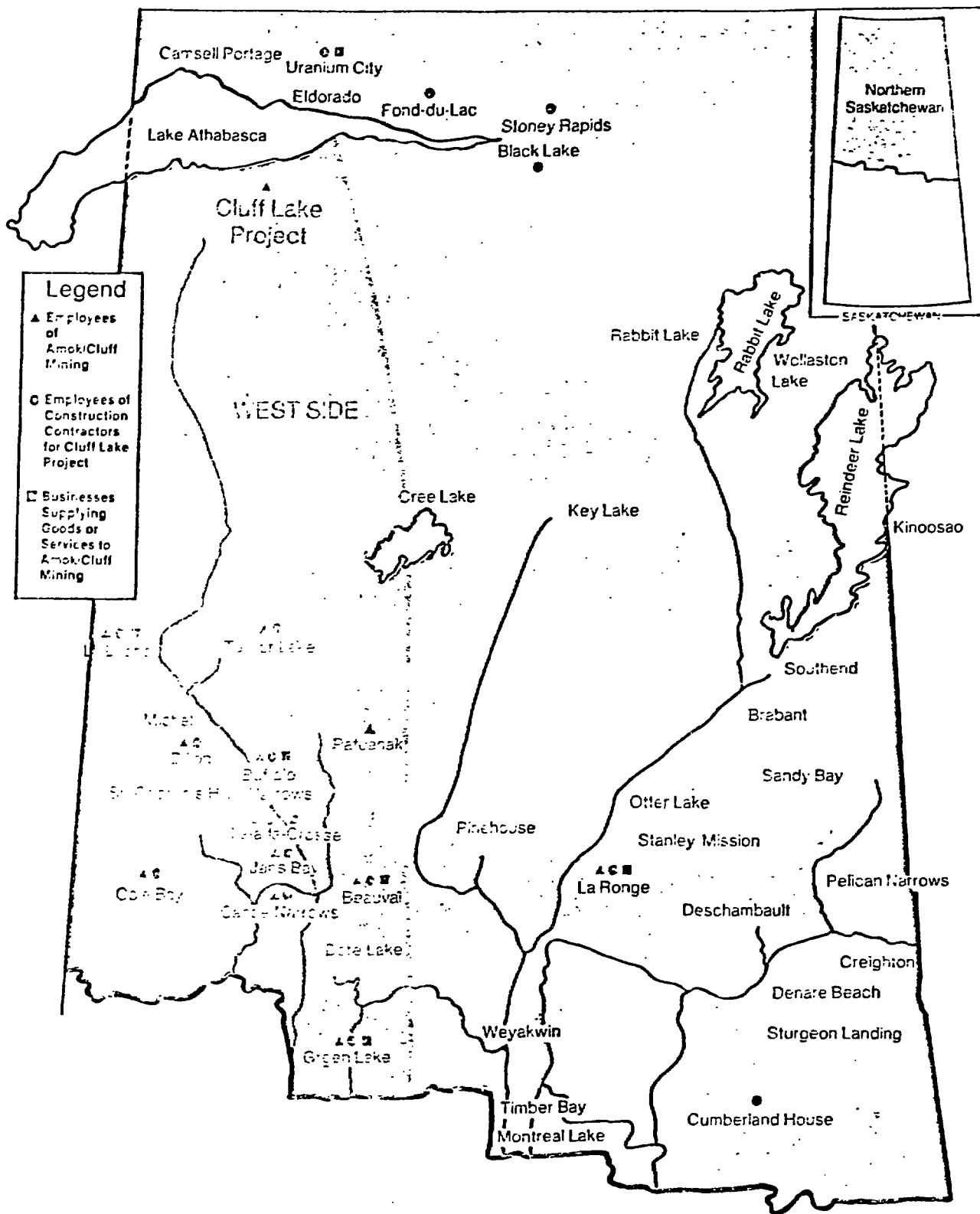
The project was originally owned and operated by Amok Ltd., an exploration and mining company based in Saskatoon. Early in 1980 the Saskatchewan Mining Development Corporation acquired 20% of the venture. The two companies formed a new partnership, Cluff Mining, to operate and further develop the mine. This partnership uses the same personnel and maintains the same policies as Amok Ltd. which acts as Manager of Cluff Mining.

While exploration in the Cluff Lake area has been going on since 1967, active development of the mine site started in the fall of 1978. Ore was extracted using an open pit mining technique and milling facilities have a productive capacity of four million pounds of uranium oxide per year. There are two phases to the project. The first is expected to last about five years and the second while not yet committed, could last until early in the next decade. Continuing exploration efforts promise to prolong the project by several years. At the end of 1980, construction for the first phase had been completed, mining was well underway, and mill operation had just begun.

On September 1981, open pit operation was completed, ore stockpiled waiting to be processed at capacity of the mill.

Yellowcake production was 3,350,000 lbs. for 1981 and is expected to exceed 3,000,000 lbs. in 1982. This yellowcake is sold under long-term sales contracts.

Some of the most remarkable aspects of the first phase are its very high grade (more than 6% U3O8) and the milling process using gravimetric concentration and double precipitation.



MAP OF NORTHERN SASKATCHEWAN

2. AMOK/CLUFF MINING EMPLOYEES

2.1 Northerners Must Benefit From the Project.

Prior to its start, the Cluff Lake Project was subject to a thorough examination by an independent board of inquiry chaired by Mr. Justice E. D. Bayda. One of the principal recommendations of this inquiry was that steps be taken by Amok Ltd. and various other groups to ensure that residents of northern Saskatchewan derive significant benefits from development of the project.

Subsequently, Amok Ltd. and the Government of Saskatchewan entered into a surface lease agreement which set out the terms and conditions for development of the project. A major part of the agreement deals with measures and targets that the company is expected to implement and achieve in order to maximize northern participation in the Cluff Lake Project. While these are among the most stringent social and economic requirements accepted by a mining company in Canada, Amok/Cluff Mining agrees with their intent and is fully committed to meeting them.

2.2 Northern Employment Program.

One of the major problems in northern Saskatchewan is very high unemployment rates. This is most pronounced among the Indian and Metis population, who make up the vast majority of the region's permanent residents.

Amok/Cluff Mining's Northern Employment Program strives to make ongoing jobs generated at the Cluff Lake Project more accessible to these people by giving them hiring preference and removing some of the key factors that block their obtaining and staying with a mining job.

This comprehensive program contains numerous measures covering recruiting, hiring, commuting and training for northern employees. In addition there are provisions for an annual employment plan, cultural orientation for supervisors and scholarships for northerners.

To ensure that long time or permanent residents of northern Saskatchewan are the principal beneficiaries of the program, it is directed to people who have lived in the region for fifteen years or half of their lives.

2.2.1 Recruiting

Amok/Cluff Mining has designed an innovative recruiting plan that relies on special company effort and initiative to seek out potential employees and thoroughly inform them of the job opportunities available at the Cluff Lake Project.

Two native coordinators, employed by the company, organize and carry out most of recruiting activities. The coordinators make frequent visits to communities on the west side of northern Saskatchewan where the company concentrates its recruiting efforts.

Promising applicants are generally invited to make two pre-employment familiarization trips at company expense. The first trip is to Saskatoon, where candidates are interviewed by company officials and given a pre-employment medical. The second is to Cluff Lake where as guest of the company, the candidates are given a tour of the facilities and the opportunity to become familiar with the operation.

Candidates who successfully complete this process are offered jobs as soon as a suitable position becomes available.

2.2.2 Hiring and Commuting

Northerners are given first consideration on all job openings at Cluff Lake. The position is given to a Northerner if a suitable candidate is available.

A commuter rotation system has been implemented so that northern and other employees can continue to reside in their home communities while being employed on the Cluff Lake Project. For seven days at a time an employee works and lives at Cluff Lake, where food, lodging and recreational facilities are supplied free of charge by the company. At the end of this time, the employee returns to his or her home community for a seven day rest period. Many northern employees use this week at home to pursue traditional activities such as trapping, hunting and fishing.

Air transportation is supplied by the company between the Cluff Lake Project and the employees' home communities or a community located nearby. To accommodate northern employees, pick-up points have been established in north-western Saskatchewan communities.

2.2.3 Training

Northern employees develop the skills necessary to perform their job and are given the opportunity to progress to highly skilled, better paying, and supervisory positions through more than ten company sponsored training courses. Eighty-five percent of the northerners employed by Amok/Cluff Mining are on one of the company training courses where for the most part they are acquiring highly transferable skills. The remaining are in supervisory positions or positions for which they already received training.

Technical training courses have been approved under the Canada Manpower Industrial Training Program or the Critical Trades Skills Training Program. The trades courses which are for

heavy duty repair mechanics, industrial mechanics, electricians, welders and plumbers conform with provincial government apprenticeship program standards. An enrollment of nineteen northerners is maintained in the apprenticeship program.

Much of the training is done at the Cluff Lake site which has a training centre with classrooms, audio-visual equipment and other required facilities. Most of the training involves a three step process, beginning with classroom instruction, followed by practice in a demonstration setting and finally practice on the job. All courses involve progressive skill development with pay increases accompanying successful completion of each stage in the course. It usually takes six months to complete a stage.

To the end of December 1981, over 56,000 hours of technical training had taken place at the Cluff Lake site, with 85 percent involving northerners. Northerners enrolled in apprenticeship programs completed over 6,500 hours of classroom instruction at technical institutes in Moose Jaw and Saskatoon.

The company also offers other types of courses that are important to northerners. These include employee orientation, radiation protection, and safety, pre-employment mill operator training, fire fighting, first aid and supervisory skills development.

2.2.4 Employment Plan and Other Measures

The Company engages in a number of other activities that complement those described above.

Each year, Amok/Cluff Mining prepares an employment plan and submits it for review to the Department of Northern Saskatchewan. The plan presents estimated manpower requirements at Cluff Lake for the following year and indicates what proportion of these requirements is expected to be filled by northerners as well as how this will be achieved.

To further the education of northern employees and residents, the company has established a scholarship program. Every year up to twelve scholarships, valued from \$3,500 to \$4,500 each are awarded to northerners for studies at universities or technical institutes. Four of these scholarships are for the company's northern employees while the remainder are open to any northern resident.

2.2.5 Results

The Cluff Lake Project and the Northern Employment Program provided an average of 43 continuing jobs to northerners in 1979, when ongoing activities were getting underway. The next year, an average of 96 jobs were filled by northerners, as the operations workforce was approaching its stable level. During 1981, when all operations phase activities were underway an average of 130 northerners were working for the company at Cluff Lake.

In all months since January of 1979, the proportion of northerners has approximated half of the company's Cluff Lake work force. The company appears to be near the goal set out in the surface lease agreement, to have 50 percent northern employment by 1982. In the past, a native employment level of 25 percent was considered a difficult goal; 50 percent was thought practically unattainable.

Northern employees have been involved in over twenty-five types of jobs encompassing practically every aspect of the company's activities at Cluff Lake including mine and mill operations, camp and equipment maintenance and repair, warehousing and administration, and environmental protection. Several have progressed to supervisory positions. They have come from over fifteen communities, including nearly every community on the west side of northern Saskatchewan. The most heavily represented communities are Beauval, Patuanak, Ile-a-la-Crosse and La Loche, all from the west side. The largest of these has a population of 2,000 people.

Amok/Cluff Mining jobs, and the income they generate, can have a significant impact on the economy of northern communities, where 80 percent unemployment is not uncommon. Besides income, northerners are gaining work experience and acquiring skills that could expand their options for the future. This could also make them better able to contribute to the industrial development of northern Saskatchewan as well as other parts of the province.

3. EMPLOYEES OF CONSTRUCTION CONTRACTORS

Construction of the mill and other surface facilities began in the fall of 1978 and continued over a span of nearly two years. Most of the work was performed by construction contractors.

To encourage northern employment during construction, the company included the proposed level of northern employment as a criterion for selection in awarding a contract. Many of the unions also introduced special measures that favoured northern employment.

Northerners, nearly all of whom were Indian or Metis, accounted for approximately one-quarter of the manpower used during construction of the surface facilities at Cluff Lake and were represented in more than half of the twenty trades and occupational groups that were involved.

4. INCOME TO COMMUNITIES

Wages earned by Cluff Lake employees have led to more spendable income in northern communities. The resulting increased demand for goods and services is helping local businesses to create another source of jobs and income for northern residents.

Since the start of Cluff Lake construction in the fall of 1978, over nine million dollars in wages have been paid to northerners employed on the project. More than 80 percent of these wages have flowed into communities on the west side of northern Saskatchewan. The remainder have gone to numerous additional communities in the region.

5. NORTHERN BUSINESS PROGRAM

Employing residents of northern Saskatchewan is one way to ensure benefits of Cluff Lake development reach people who live there. Another is to use northern businesses to supply goods and services for the project.

Generally, businesses in northern Saskatchewan are small, employ fewer than ten people, and lack experience in working on large industrial projects.

To deal with this situation, Amok/Cluff Mining devised an ambitious program, consisting of three groups of policies:

- inform and communicate with northern businesses,
- reduce problems or barriers faced by northern Saskatchewan businesses which results from operating in a relatively isolated region,
- provide preferential treatment of northern businesses.

Involving northern businesses in a mining project poses challenges not only to the developer but also to the owners and employees of the businesses. They must be willing to reassess their positions and try new things. So far, some northern Saskatchewan businesses have organized their work load differently, others have begun to manufacture and carry new products, and some have pooled their resources to meet the demands of the Cluff Lake Project. The spirit of entrepreneurship, exemplified in this willingness to adapt and eagerness to participate, has been a vital ingredient in making the Northern Business Program work.

The Cluff Lake Project and the Northern Business Program have provided a major stimulus to the business sector of northern Saskatchewan, especially on the west side, and have made important contributions to economic development of the region. New businesses have opened, others have expanded and the variety of goods and services produced has increased. Many northern businesses have gained valuable first time experience which they are now able to apply especially when dealing with other

large industrial projects. The increase in business activity has added to the spendable income in many northern communities and led to expanded benefits from the Cluff Lake Project in the region.

It's been estimated that The Northern Business Program has led to twice and possibly three times as much northern business involvement in the Cluff Lake Project as there would otherwise have been.

During the project's two year construction phase, 23 contracts valued at over \$10.3 million were awarded to northern businesses. This is more than 12.5 percent of total estimated construction costs.

Northern businesses have also performed over \$1 million of work for Amok in its exploration activities including camp installation, line clearing, surveying and earthmoving.

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