GRANDUC MINES LIMITED (N. P. L.)

To the Shareholders:

On Thursday, February 18th, at about 10 a.m. an avalanche, originating on top of Granduc Mtn. above the 6,000 ft. elevation, descended unexpectedly on the Leduc portal of the recently started drainage tunnel at the 2450 ft. elevation and on the nearby campsite, resulting in the tragic loss of twenty-six lives. The Leduc campsite and tunnel plant installations were partially destroyed.

The men who perished were in the direct path of the avalanche while the one hundred and twenty-eight survivors were mostly in the bunkhouses, office and warehouse all of which still stand, and in the tunnel. Nineteen were injured, of whom six were seriously hurt and two are still hospitalized, but none appears to be in critical condition.

Within a few minutes of the disaster, the news was broadcast by the radio transmitter at the campsite, while some of the survivors started rescue operations. It is fortunate that Dr. H. B. Veasey of Stewart and the first aid man, F. W. Moore, were in camp and unharmed and they immediately attended the injured.

At Stewart and Vancouver the Company began mobilization of help, but weather prevented any reaching the campsite until early in the morning of February 19th, when two of the Granduc supervisory staff arrived by helicopter. Meanwhile, a call for aid to Ketchikan in Alaska met a generous response and a base at the mouth of the Chickamin River was organized by the Ketchikan Rescue Squad, the local aircraft companies and many others, supported in strength by the U. S. Coast Guard.

As soon as the weather began to clear, medical aid and rescue parties from Chickamin and Ketchikan arrived by helicopter at the scene of the disaster. Chartered helicopters came from the interior of British Columbia and by afternoon a party of the Vancouver Mountain Rescue Group and the Royal Canadian Mounted Police had arrived. When the news of the disaster first came, R. D. Baker, General Manager of Granduc, was in Vancouver and immediately proceeded to the scene, while M. A. Upham, Executive Vice-president, who was in Tokyo, returned to Canada next day and has been in overall charge of operations at Vancouver, Stewart and the disaster site.

All survivors but a few who insisted on remaining with the outside rescue teams were evacuated from the campsite by the evening of the 19th, the day after the disaster. Almost all were evacuated by aircraft and ship to Ketchikan, where adequate accommodation and hospital facilities existed, a few to Stewart. The injured were hospitalized, most released in a day or two. The rest returned to their homes, ninety-nine of them by way of Vancouver on the 20th on aircraft chartered by Granduc.

The search for the missing was continued by Royal Canadian Engineers and Granduc personnel until February 24th when the R. C. M. P. ordered complete evacuation because of presumed avalanche hazard. However, Granduc crews began to return on the 28th and the search is continuing for the five bodies still missing.

The tragic loss of life is a source of deep sorrow for the Granduc management and directors, who have communicated their feelings to the families of those who perished.

The response to Granduc's call for aid was immediate and generous. Despite the extraordinarily difficult terrain and weather conditions the rescue of 120 men within 36 hours is a remarkable example of swift mobilization, co-ordination and effectiveness of United States and Canadian help. There can be no doubt that lives were saved and pain and distress relieved more quickly by the efforts of many who worked under arduous and trying conditions. The list of those who participated is long and varied and direct acknowledgment of appreciation and gratitude has been made to all of whom there is record.

High mention must be made of the debt to the Governor of Alaska, W. A. Egan, the U. S. Coast Guard and the many individuals and organizations of Ketchikan, such as the Ketchikan Rescue Squad, who provided wholehearted and effective help. In British Columbia, the Company is greatly indebted to the Honourable Donald L. Brothers, Minister of Mines and Petroleum Resources, and his staff, the aircraft companies, Royal Canadian Mounted Police, Royal Canadian Engineers, the Vancouver Mountain Rescue Group and many others. It is timely also to recognize the efforts of the Company's own staff and crew who were involved in the mobilization and rescue. They worked long and hard and displayed the highest devotion to the tasks, some in the most difficult circumstances under constant stress. We are proud of them.

Physical damage to the Leduc campsite and tunnel portal installations was considerable, perhaps in the neighbourhood of \$1,000,000 but its exact amount and its coverage by insurance must await the completion of the recovery operations still in progress and the detailed assessment of the damage. The delay in the project cannot yet be estimated as it depends on the speed with which a rehabilitation program can be accomplished. Granduc is proceeding with the project along the general plan adopted and announced last year.

Granduc is a copper mine containing 32,500,000 tons of 1.93% copper ore, for which \$55 million financing was arranged last year. Access will be provided from Stewart, B. C. by a 30-mile road to the Tide Lake site where the concentrating plant and other necessary installation will be centered, and where the portal of the access tunnel will be located. This 11.6 mile long tunnel will be driven from both ends, Tide Lake and Leduc. The Leduc portal of the tunnel is about 6,000 feet from the underground copper deposit. This end of the tunnel will serve primarily for drainage of the mine and had been driven 800 feet at the time of the accident.

Since 1953 Granduc personnel, and others before that, have observed no evidence of previous avalanches in the disaster area. Exhaustive investigation of possible avalanche conditions in all areas of Granduc operation is under way by outstanding world-wide experts in this field, Montgomery Atwater of Tahoe City, California, and Noel Gardner of Albert Canyon, B. C.

Full resumption of work at the Leduc site will be after the snowslide period this winter, and such measures as might be recommended by the avalanche experts referred to above, as well as by the Inspector of the B. C. Department of Mines, will be implemented well ahead of the next winter season.

The Tide Lake site lies within a broard valley and is completely free of any possible snowslides. Project work is continuing on the installations on the campsite there and on the building of the Stewart-campsite road.

Installations at the Leduc portal site have always been planned on a temporary basis until such time as the access tunnel to Tide Lake is completed in two to two and one-half years. All installation will then be centered at Tide Lake and the campsite at Leduc will be dismantled and abandoned.

> John Drybrough President

Vancouver, B. C. March 9, 1965.