

Tulsequah Chief
Redfern Resources Ltd.

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NWMA
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THE TULSEQUAH CHIEF DEPOSIT
A KUROKO MASSIVE SULPHIDE

Introduction

The Tulsequah Chief deposit is a Kuroko-type base metal/precious metal volcanogenic massive sulphide deposit. The project is a joint venture between Cominco Ltd. (60%) and Redfern Resources Ltd. (40%).

The property is located on the east side of the Tulsequah River at approximately 500 feet elevation, some 40 miles east of Juneau, Alaska and just inside British Columbia. Access is either through Juneau or through Atlin, B.C. via Whitehorse. A gravel airstrip is located close to the property.

Originally discovered in 1923 as a small gossan on the exposed tip of one of the upper ore lenses, the Tulsequah Chief claims were not developed until 1951 when Cominco leased and re-tooled a nearby mill to process the ore. The mill operated at an average 500 tons/day until late 1957 when falling metal prices forced mine closure.

When the mine closed it contained proven and probable reserves of 780,000 tons grading 1.3% copper, 1.6% lead, 8.0% zinc, 0.07 oz/ton gold and 2.9 oz/ton silver hosted in several massive sulphide lenses whose full dimensions were not known.

In 1980 the property was recognized as a volcanogenic massive sulphide deposit and it became immediately apparent that there was considerable new ore potential. In 1987 a program of surface geological mapping, sampling and deep diamond drilling provided an understanding of the volcanic stratigraphy and ore controls and formed the basis for subsequent exploration. Two of the 1987 drill holes intersected a new massive sulphide lens on strike with, and beyond the previously known mineralization. In 1988 underground drilling started with the objective of expanding and delineating ore reserves.

Geology

The Tulsequah Chief ore lenses are hosted within a complexly faulted intermediate to felsic volcanic pile that strikes northeast and dips northwest at approximately 60°. The volcanics are believed to be Devonian to Carboniferous in age.

The basal andesite volcanics are flow and pyroclastic rocks that may be porphyritic or massive. Some pillow structures are evident locally in flows. Lying above the andesites are felsic pyroclastics up to 1000' thick subdivided into dacites and rhyodacites based upon color index. Andesite pyroclastics with minor clastics, limestone and chert overlie the felsic pyroclastics. The felsic pyroclastics and to a lesser degree the andesite pyroclastics have locally been intruded by Paleozoic diorite plugs and Tertiary felsic dykes.

The central mine area footwall volcanics are variably altered in a distinctive funnel shaped zone that extends up to a kilometer south of the deposit and cuts across almost a kilometer of footwall stratigraphy. The inner alteration zone is

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representative of a footwall feeder pipe and hosts bleached sericitized and pyritized andesites and dacites. The outer margins of the zone are less altered but are locally chloritized and contain clots of reddish brown biotite. The ore lenses are enclosed within felsic pyroclastics that are referred to as the mineral horizon. The mineral horizon consists of sericitized, pyritized tuffs and tuff breccias which appear to be thickest in the central fault block and taper out to thinner less altered tuffs to the southwest. The northeastern limits are not defined.

Ore lenses consist of varying proportions of sphalerite, galena, chalcopryrite, pyrite, barite and gypsum with significant gold and silver content. Metal zonation patterns are not yet understood, however in general there appears to be a higher copper content in the central part of the system with higher zinc values in mineralization to the northeast and southwest. All of the ore lenses are open to extension.

Exploration Results

Following the successful results in 1987 and having established a sound geological model on which to base further exploration, an underground program was completed in 1988 which included about 2,500 feet of rehabilitation on one level (5400 level) and underground diamond drilling.

Eight underground holes tested the extensions of the "B", the "E" and the newly discovered "G" ore lenses. Seven holes intersected massive sulphides of varying widths and grades. Four of these intercepts extended the "G" lens to at least 575 feet along strike and 500 feet down dip; 2 holes extended the E" lens to a total of 700 feet down dip from the lowest mine level, and a single hole extended the "B" lens 425 feet down dip. Present reserves in all categories are in the order of 2.38 million tons with an average gross metal value of approximately \$225 per ton based on average metal prices over the past year.

Based on the increasing thickness and alteration intensity of the mineral horizon with increasing depth, it is presumed that the main part of the system is still further down dip from the lowest levels tested to date.

Planned Exploration and Potential

In 1989, the underground workings will be extended to establish new drill stations which will enable deeper drilling to further expand reserves. An extensive massive sulphide-type alteration system 2000 feet west of the Tulsequah Chief system will also be tested with surface drilling.

The rich ores of the Tulsequah Chief are related to a large massive sulphide system which could have an ore potential of 10-20 million tons. Based on the present grade, a deposit of approximately 3-4 million tons could be economically viable. Exploration results to date have shown at least that potential.

*Av. Grade ~ 2% Cu
6% Zn
1.2% Pb
0.08 opt Au
2.9 opt Ag* } *i.e. similar to when closed down*

REDFERN RESOURCES LTD.

Publicly traded since December 1979, under the symbol RFR on the Vancouver Stock Exchange.

The Company has interests in mineral projects in British Columbia and Ontario, mainly for massive sulphide deposits. A number of projects are carried out with joint venture partners including Noranda Exploration Company, Limited and Cominco Ltd.

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