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COLUMBIA

Ministry of Energy and Mines  
Energy and Minerals Division

# **EXPLORATION AND MINING IN BRITISH COLUMBIA - 2001**

# Energy and Minerals Division

## *COVER PHOTO...*

Looking north at DDH setup, Kemess North porphyry Au-Cu deposit (Mineral Resource Officer Brian McGrath in foreground).

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## FOREWORD

The year 2001 was pivotal for both the exploration and mining industry in British Columbia, and for the Energy and Minerals Division of the provincial Ministry of Energy and Mines. All the key mineral exploration indicators in the province improved in 2001 for the second consecutive year since the all-time low levels of 1999, confirming a positive trend in the new millennium. However, substantial increases in the annual levels of exploration activity must occur to make the new discoveries that are needed to rebuild a sustainable mining industry in British Columbia. The metal mining industry faced commodity prices that plummeted to historically low levels during 2001. By year's end, the number of producing metal mines in the province decreased from nine to five. In contrast, the coal mining industry enjoyed a year of higher commodity prices, with higher production from most of the eight coal mines in the province, as well as accelerated exploration activity on several coal projects throughout the province. In late 2001, the Ministry of Energy and Mines announced plans both to streamline the exploration permitting process for industry, and to reduce geoscience programs as part of the provincial government's three-year program to reduce the size and cost of government.

Exploration activity in British Columbia during 2001 showed significant encouragement, with all key indicators showing improvement compared to 2000. Exploration expenditures increased by 15% to \$31 million. Exploration drilling increased by 28% to 230,000 meters. The number of major projects increased by 18% to 58. These major projects also show a marked increase in both the kinds of target commodities and mineral deposit types from prior years. The amount of land tenured for exploration and mining in 2001 remained constant at 2.97 million hectares, with the amount of coal tenure increasing by 17%, compared to 1% decreases in both mineral and placer tenure. Mineral staking activity targeted new discoveries near Nelson on NTS maps 082G and 082F, near Stewart (103P), near Blue River (083D), and near Harrison Lake (092H). In spite of these positive trends, it remained challenging for junior companies to raise public venture capital for mining and exploration projects in British Columbia. This has been due in part to the perceived tenure uncertainty related to ongoing land use planning and First Nations issues in the province, in part to a lack of investor interest based on general suspicion lingering since the 1998 Bre-X scandal, and in part to tightened securities regulations since amalgamation of the CDNX and TSE stock exchanges in 2001.

New discoveries in British Columbia during 2001 consisted mainly of successful follow-up work on or around previously known targets in productive districts. Sultan Minerals Inc. discovered widespread intrusion-related gold mineralization at the **Kena** project near Nelson, where there is potential for a large tonnage, low-grade open pit, and/or a high-grade, underground operation. Near their Kemess South open-pit copper-gold mine, Northgate Exploration Ltd. discovered a large, higher-grade but deep extension to the original **Kemess North** porphyry copper-gold prospect. At the past producing **Afton** copper-gold mine property near Kamloops, DRC Resources Corp. successfully traced the porphyry copper-gold-silver-palladium mineralization along strike and to depth. At Imperial Metals Corporation's **Mount Polley** porphyry copper-gold mine near Likely, the Springer North Extension Zone was discovered in 2001. Near Germansen Landing, Eastfield Resources Ltd. established greater continuity and size to the previously known zones of porphyry/iron oxide copper-gold-PGE mineralization at the **Lorraine** project. These successes underscore the strong interest in large precious metal-rich, intrusion-related deposits in British Columbia.

New discoveries from exploration of other deposit types highlight the diversity of mineral potential and the innovative approaches of explorationists in the province. At its **Cariboo Gold Quartz** project near Wells, International Wayside Gold Mines Ltd. found replacement-style gold mineralization along trend from the high grade Bonanza Ledge Zone. Although Leader Mining International Corp. originally targeted copper-nickel-platinum group element mineralization at its **Cogburn** project near Harrison Lake, the company instead recognized a large resource of magnesium-rich ultramafic rock. Commerce Resource Corp. explored the **Fir** and **Verity** tantalum and niobium-bearing carbonatite deposits, which are located near Blue River. On Vancouver Island near Courtenay, Priority Ventures Ltd. discovered both coal and coalbed methane at the **Dove Creek** project during their initial drilling program in 2001.

British Columbia's mines and quarries produced a wide variety of solid mineral commodities in 2001. The total value of production increased to \$2.9 billion, up 2% from 2000. The most valuable commodities were metallurgical coal (34%), copper (22%), structural materials (16%), gold (11%), zinc (5%), silver (4%), molybdenum (2%), and industrial minerals, thermal coal and lead were less than 2% each. The prices for metallurgical and thermal coal rose substantially in 2001, creating

increased revenues for and stability at the province's eight coalmines. As a result, exploration activity occurred at six new coal projects and several coal bed methane projects were initiated in 2001. Metal prices decreased and remained at near low historic levels during 2001, resulting in the temporary suspension of mining operations at Imperial Metals Inc.'s **Mount Polley Mine** near Likely, and Boliden-Westmin (Canada) Ltd.'s **Myra Falls Operation** near Campbell River. In 2001, Wheaton River Minerals Ltd. decommissioned the **Golden Bear Mine** near Telegraph Creek, and Teck-Cominco Ltd. permanently closed its flagship **Sullivan Mine** near Kimberley. Industrial minerals enjoyed a year of growth and increased diversification, with 22 major and many smaller operations producing aggregate, limestone and other products.

In 2001 British Columbia's newly elected majority government initiated a series of sweeping changes within the Energy and Minerals Division of the Ministry of Energy and Mines designed to increase private sector investment in mineral projects in the province. In 2002, the Victoria-based Geological Survey Branch is to begin delivering geoscience programs through industry-funded partnerships, and the prospectors assistance program will be discontinued. Over the next two years, the five regional offices of the Mines Branch are to be consolidated in one strategic location, and will move to a single-window, results-based permitting regime. With an improved investment climate, excellent mineral potential and sound geoscientific database, the positive trends seen in exploration and mining in British Columbia during 2001 are expected to accelerate in 2002. The province is long overdue for a major new mineral discovery, and all the key factors to slingshot such a discovery into an economic boom are now in place.

Part A of this publication contains a review of exploration and mining highlights in each of the five regions, contributed by the Regional Geologists in Smithers, Prince George, Cranbrook, Kamloops and Nanaimo. Part B of the publication contains geological papers contributed by geologists from both industry and government. Bill McMillan of Victoria critically reviewed the reports, and Janet Holland of the Geological Survey Branch carried out final compilation and preparation of the volume for publication.

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## **PART A**

# **REVIEW OF EXPLORATION AND MINING ACTIVITY**

