

# EXPLORATION AND MINING in British Columbia 2010





**Ministry of Forests, Mines  
and Lands**

**Ministry of Natural Resource  
Operations**

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Ministry of Forests, Mines and Lands  
Mines and Mineral Resources Division  
British Columbia Geological Survey

Ministry of Natural Resource  
Operations  
Regional Geologists

**Front Cover:**

Drill move at the Aley property of Taseko Mines Ltd. located northwest of Chetwynd.  
(Photo credit: Duncan McLeish)

**Back Cover:**

Mining the Burnt Ridge South pit of the Line Creek Mine of Teck Coal Limited in the  
Elk Valley. (Photo credit: Dave Grieve)

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## FOREWORD

### INTRODUCTION

*Exploration and Mining in British Columbia 2010* represents the latest annual documentation of the activities of the province's exploration and mining industry. The record goes back to 1874 when the *Annual Report of the British Columbia Minister of Mines* first went to print and has evolved through various formats over the years. This publication provides a region-by-region perspective with an in-depth look at the mines and significant exploration and mine development projects in British Columbia. Readers who wish to acquire a first-pass or general picture of the mining and exploration industry in British Columbia may find the *British Columbia Mines and Mineral Exploration Overview* to be a useful publication.

The province's exploration sector for coal, metals and industrial minerals is large and by necessity the reviews and summaries contained in this volume tend to be focused on the larger and/or more advanced projects. To learn more detail about a particular region readers are encouraged to contact the appropriate regional geologist. Contact information is given below.

Readers are also encouraged to use this publication in concert with the online geological databases accessible through the BC Ministry of Forests, Mines and Lands' MapPlace Internet site (<http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/Pages/default.aspx>). For example, MINFILE references given in this publication can be geographically located and queried, and additional information such as bedrock geology, geochemistry, mineral tenures and assessment reports can be displayed concurrently.

Information in *Exploration and Mining in British Columbia 2010* has been compiled and written by the province's regional geologists and the Chief Geologist of the BC Geological Survey, based on their personal knowledge supplemented by industry information. A staffing vacancy in Prince George has necessitated that the chapters concerning the Omineca and Northeast regions are, for this year, less complete. In particular, the description for the Northeast is very brief. Readers will note that the names of the regions have changed from the preceding volume which reflects changes within government that occurred late in 2010. At this time the staff of the Ministry of Energy, Mines and Petroleum Resources were reassigned to several natural resource sector ministries. The regional geologists moved to the new Ministry of Natural Resource Operations while the British Columbia Geological Survey joined the new Ministry of Forests, Mines and Lands.

#### ***B.C.'s Regional Geologists and the Mineral Development Office***

The regional geologists are located in Vancouver (Bruce Northcote), Smithers (Paul Wojdak), Kamloops (Bruce Madu), Prince George (vacant) and Cranbrook (Dave Grieve). They work with the BC Mineral Development Office in Vancouver to provide geological and mineral industry expertise and to promote mineral exploration and development in the province. As regional experts they also support various functions of the Ministry of Natural Resource Operations, the Ministry of Forests, Mines and Lands and particularly of their respective offices.

Regional geologists' key roles and responsibilities include:

- fostering sustainable exploration, development and use of the province's mineral and coal resources;

- providing clients with up-to-date technical information and professional advice about known and potential mineral and coal deposits;
- providing geological and mineral resource information to project review or land-use decision-making processes;
- monitoring the status of the mining industry and the development of infrastructure required for mineral resource development;
- working on field projects and surveys, compilations, promotional brochures and deposit models; and
- contributing information to maintain and update geosciences databases (e.g. MINFILE).

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### **Methodology**

Compilation of *Exploration and Mining in British Columbia* presents certain challenges. Deadlines demand manuscript submission before all information from programs carried out later in the year is available, and before some programs are even complete. It is also difficult to garner information on all programs that have occurred. In particular, critical grassroots exploration that leads to new discoveries can be difficult to track.

Regional geologists maintain contact with their industry peers throughout the year, and are able to visit some of them at project sites to view outcrops and drill core and to discuss results and progress. A significant amount of information is gleaned from corporate press releases, websites and reports. Late in the year informal surveys are conducted to gather as much of the statistical information as possible, but in some instances the authors use their professional judgement to provide reasonable estimates of expenditures.

Exploration expenditures are broken down by category: grassroots exploration, early-stage exploration, advanced exploration, mine evaluation and mine lease exploration. Grassroots exploration commonly does not require permitting and the activities and expenditures assigned to this category are less likely to be reported. Early-stage exploration involves focused activities often based on a deposit model. It may include geophysics, geochemistry, trenching and drilling. Advanced-stage exploration is concerned with resource definition emphasizing drilling and bulk sampling, but may include baseline environmental

studies, economic pre-feasibility work and exploration of secondary targets. Mine evaluation begins with the firm commitment to develop a resource, and usually coincides with a pending application to government to open a mine; it tends to concentrate on the environmental, social, engineering and financial assessments of a project. Mine lease exploration represents work on a mining property beyond known reserves; it may have characteristics of early-stage or advanced exploration.

Since the exploration expenditures include some estimates, final dollar figures for each region are rounded to the nearest whole million.

## ACKNOWLEDGMENTS

The cooperation of the industry in providing information and access to project sites is always welcomed and sincerely appreciated. The authors also wish to thank Dave Lefebure, Chief Geologist, for his contribution to the volume and for his editorial improvements and coordination of the volume. Compilation and layout of the volume was completed by George Owsiacski and Garry Payie of Total Earth Science Services.



Dave Grieve

Bruce Madu

Bruce Northcote

Paul Wojdak

Dave Lefebure

Jay Fredericks

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