Overview of Trends in Canadian mineral exploration

Canadian Intergovernmental Working Group
on the Mineral Industry

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COVER PHOTO REPRODUCED WITH THE PERMISSION OF MR. GRAEME OXBY, TIMMINS, ONTARIO

The cover photo shows barge-mounted diamond drilling of the Central Porphyry Zone project of the Porcupine Joint Venture, managed by Placer Dome (CLA) Ltd. (51%) and Kinross Gold Corporation (49%). The barge is on Pearl Lake, within the City of Timmins, Ontario, with the historic headframe of the No. 11 shaft of the McIntyre gold-copper mine in the background (production of 10.8 million ounces of gold between 1912 and 1988). The drilling by Benoit Diamond Drilling Ltd. is part of an advanced exploration project for quartz vein-hosted, high-grade gold mineralization within the Pearl Lake Porphyry.

Preface

This report is prepared annually, on behalf of the Intergovernmental Working Group on the Mineral Industry (IGWG), for presentation to federal, provincial and territorial mines ministers. It contains information, current as of October 2002, on recent exploration and deposit appraisal spending levels in Canada, a review of exploration and deposit appraisal activities in the provinces and territories, and analyses of domestic and international trends affecting the Canadian mineral exploration sector.

The analyses, articles and reviews found in this report were prepared by officials from respective provincial/territorial departments responsible for mineral exploration and from Natural Resources Canada (NRCan). The Minerals and Metals Sector of NRCan was responsible for compiling, editing, producing and distributing this report, which covers exploration and deposit appraisal activities for metallic minerals, nonmetallic minerals, coal and uranium. It does not refer to petroleum-related work.

The report can be accessed via the Minerals and Metals Sector's home page on the Internet at www.nrcan.gc.ca/mms/pubs/explor_e.htm.

NOTE TO READERS

This report has been prepared on the basis of information available at the time of writing. The authors make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.

Government Contacts/ Information Requests

For further information on specific issues related to this report (i.e., exploration activities, incentives and programs, rules and regulations, geoscientific data, etc.), the reader is invited to contact the appropriate federal, provincial or territorial authorities at the telephone numbers listed below or to consult their respective web sites. The contact information for officials who prepared the provincial/territorial sections are also provided at the beginning of each of these sections while the NRCan officials who participated in the preparation of this report are listed below. Prince Edward Island is not included because of a current lack of mineral exploration activity.

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Executive Summary

Statistics from the federal-provincial/territorial Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures show that all-inclusive exploration and deposit appraisal spending has at least stabilized in recent years after declining significantly from the 1997 peak of $921 million to a low of $497 million in 2000. Most of that decline occurred in 1998 when expenditures dropped by $265 million (29%) to $656 million. Another significant decline of 23% occurred between 1998 and 1999 when exploration and deposit appraisal expenditures dropped by a further $152 million to $504 million.

While the spending levels recorded in 2000 ($497 million), 2001 ($513 million) and 2002 ($501 million) point at best to a leveling off of the downward trend, evidence collected since the revised intentions survey of August 2002 indicates that Canada may in fact have entered into an upward trend in exploration and deposit appraisal spending. Easier access to financing, a rising gold price and a sustained search for diamonds are all contributing factors to what could turn 2002 into a better year than expected (when the final statistics are released) and 2003 into the year that will confirm the rising trend based on a positive outlook for company spending intentions.

Canada's junior mining sector, which had been particularly affected by the downturn that began after 1997, has recovered nicely, registering a fourth consecutive increase in spending in 2002. The stronger junior sector contributed to higher exploration-phase expenditures (grass-roots exploration) in both 2001 and 2002. In 2001, junior companies accounted for 35% ($178 million) of total exploration and deposit appraisal expenditures in Canada. That proportion rose to 42% ($209 million) in 2002.

While a stronger junior mining sector and an increase in grass-roots exploration are both good news, spending by senior companies has been a cause of concern in recent years. As a group, these companies had been curtailing their exploration and deposit appraisal budgets as a result of the pressure that was put on their balance sheets by weak metal prices. A forecast increase of 44% in on-mine-site spending by senior companies in 2002, to $103 million, should help alleviate concerns about diminishing prospects for outlining and discovering additional ore reserves at existing mines.

A major shift in the traditional distribution of exploration and deposit appraisal funds was confirmed in 2001 when, for the first time ever, diamonds overtook base metals. With expenditures of $145 million on exploration and deposit appraisal, diamonds also came close to surpassing precious metals ($167 million) and becoming the most sought mineral commodity in Canada.

As detailed in the Regional Outlook section of this report, a number of interesting exploration and deposit appraisal projects are currently under way. Canadian governments continue to support and promote exploration and deposit appraisal activities in their respective jurisdictions through various initiatives, including innovative fiscal incentives, the resolution of land access issues, and the provision of state-of-the-art geoscientific data.

Canada ranks second in terms of countries where the world's larger mineral exploration companies are the most active. The larger Canadian companies were expected to undertake 30% of all the exploration programs in the world in 2001, by far the largest share of the global mineral exploration market.

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ABBREVIATIONS

The reader should note that a number of abbreviations for common units of measurement appear in the text:

cm	centimetres
ct	carats
ct/ht	carats per hundred tonnes
ct/t	carats per tonne
ct/y	carats per year
ft	feet
ft^2	square feet
g	grams
g/t	grams per tonne
ha	hectares
kg	kilograms
km	kilometres
km^2	square kilometres
lb	pounds
m	metres
m^2	square metres
Mct	million carats
Mha	million hectares
mm	millimetres
Mt	million tonnes
Mt/y	million tonnes per year
oz	troy ounces
ppm	parts per million
t	tonnes (metric)
t/d	tonnes per day
t/y	tonnes per year
tU	tonnes of uranium

Note: All dollar figures in this report are Canadian unless specified otherwise.