VIEWPOINTS:
Applying IFRSs in the Mining Industry

DEPLETION OF A MINE IN THE PRODUCTION PHASE: USEFUL LIFE OF THE MINE

AUGUST 2011

Background

A mine in the production phase[1] is depleted since it is accounted for by analogy to IAS 16 *Property, Plant and Equipment* and IAS 38 *Intangible Assets*.

Depletion is the systematic allocation of the depletable amount of an asset over its useful life. The depletable amount of an asset is the cost of an asset, or other amount substituted for cost, less its residual value. The useful life of an asset is:

1. the period over which an asset is expected to be available for use by an entity; or
2. the number of production or similar units expected to be obtained from the asset by an entity.

Although there are a number of practical issues in calculating the depletion of a mine, this publication only addresses the determination of the useful life of a mine.[2]

Issue

How does an entity determine the useful life of a mine?

1 For more information, download *Background on Different Phases of Activities of a Mining Entity* from www.cica.ca/ifrs.

2 For a discussion on determining the point at which the development phase ends and the production phase begins (i.e., the point at which depletion of the mine begins), download the paper on *Commencement of Commercial Production* from www.cica.ca/ifrs.

This publication was originally published by The Canadian Institute of Chartered Accountants in 2011. It has been reissued by Chartered Professional Accountants of Canada.

Mining Industry Task Force on IFRSs

Canada's move to International Financial Reporting Standards (IFRSs) creates unique challenges for junior mining companies. Financial reporting in the sector is atypical due to significant differences in characteristics between junior mining companies and other types of companies. The Canadian Institute of Chartered Accountants (CICA) and the Prospectors and Developers Association of Canada (PDAC) created the Mining Industry Task Force on IFRSs to share views on IFRS application issues of relevance to junior mining companies. The task force's views are provided in a series of papers that are available through free download. These views are of particular interest to chief financial officers, controllers and auditors.

The views expressed in this series are non-authoritative and have not been formally endorsed by the CICA, PDAC or the organizations represented by the task force members.

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Viewpoints

An entity typically determines the useful life of a mine based on the number of production units expected to be obtained from the mine, which may be estimated using one of the following reserve/ resource bases:

- Developed proven reserves (i.e., reserves that are accessible with the current infrastructure in place and without the need to incur further development costs). The entity includes only costs incurred that relate to developed proven reserves in the depletable amount (i.e., the entity excludes any costs incurred that relate to undeveloped proven reserves from the depletable amount).

- Proven reserves (i.e., developed and undeveloped proven reserves). The entity includes costs incurred that relate to developed and undeveloped proven reserves in the depletable amount. Furthermore, the entity chooses either to include in or exclude from the depletable amount expected future development costs related to undeveloped proven reserves.

- Proven and probable reserves. The entity includes costs incurred that relate to developed and undeveloped proven reserves and probable reserves in the depletable amount. Furthermore, the entity chooses either to include in or exclude from the depletable amount expected future development costs related to undeveloped proven reserves and probable reserves.

- Measured and indicated resources along with proven and probable reserves. The entity includes costs incurred that relate to developed and undeveloped proven reserves, probable reserves and measured and indicated resources in the depletable amount. Furthermore, the entity chooses either to include in or exclude from the depletable amount expected future development costs related to undeveloped proven reserves, probable reserves and measured and indicated resources.

A reserve/resource base that includes inferred resources is difficult to justify, given that the tonnage, grade and mineral content can only be estimated with a low level of confidence.

If an entity excludes expected future development costs from the depletable amount, it depletes:

- the portion of the depletable amount attributable to the entire reserve/resource base over the entire reserve/resource base
- each portion of the depletable amount attributable to a specific portion of the reserve/resource base over that portion of the reserve/resource base
- additional development costs incurred in the future over the specific portion of the reserve/ resource base to which they relate.

The appropriateness of using a particular reserve/resource base will depend on whether:

- incurred costs can be allocated between developed proven reserves, undeveloped proven reserves, probable reserves and measured and indicated resources
- estimates of costs to complete exploration, appraisal and development of the proposed reserve/resource base are expected to be close to actual costs
- estimates of the amount of reserves and resources in the proposed reserve/resource base are expected to be close to actual developed proven reserves.

With respect to using measured and indicated resources along with proven and probable reserves to estimate the useful life of a mine, the appropriateness of such a reserve/resource base will also depend on the probability that these resources will be converted into reserves. Some factors to consider in making this assessment include the:

- entity's history of converting resources into reserves
- reasons for not undertaking the additional work to convert resources into reserves
- type of deposit (for certain types of deposits, the likelihood of converting resources into reserves is higher)
- closeness of the scheduled start of the work to convert resources into reserves
- variations in the chemical or physical characteristics of the orebody, which may significantly affect whether it is economically viable to extract and process resources
- entity's preliminary assessment of the net present value of the resources and the sensitivity of that assessment to changes in key variables (e.g., commodity prices)
- additional cost to access the resource.

The Mining Industry Task Force on IFRSs

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For more information on IFRSs visit:

www.cpacanada.ca/ifrsmining