

Project 2002-8: Geometric configuration of exploration targets

The objective of the project is to provide members of CONSOREM with a tool to assess the economic value of a resource, focusing on the Abitibi region.

The evaluation process of a mineral resource is typically divided into two parts that are usually handled independently. The first part evaluates the resource based on technical and geological parameters (technical feasibility); whereas the second evaluates the viability of the project based on current economy (economic feasibility). The approach chosen to obtain an evaluation tool in the specific perspective of Abitibi was to take advantage of historical mining in the region. The approach can be summed up in three statements representing a premise, a major and a minor:

- 1) Deposits, producers and past producers in the Abitibi make up a statistical population from which we can establish the distribution parameters of the geometry, tonnage, grade, etc.
- 2) The statistical parameters of new deposits to be discovered in the future belong to the same distribution.
- 3) It is possible to determine the basic parameters of the historical population and to characterise portions of this population as having little, moderate or high economic attractiveness based on geometry.

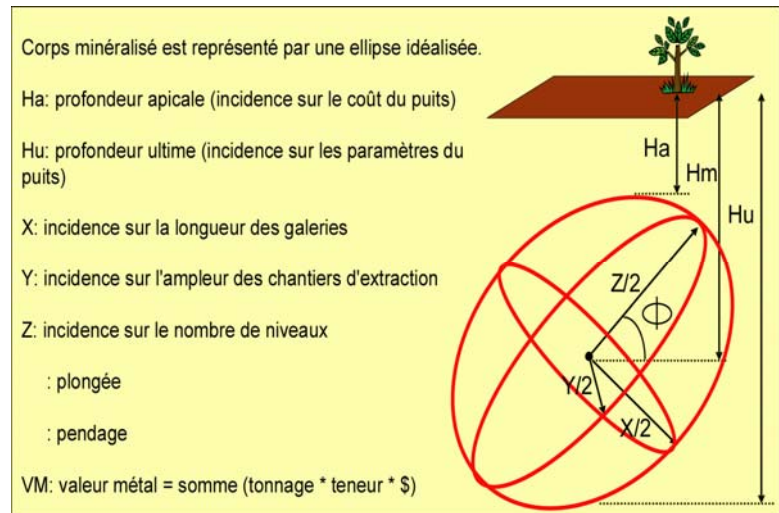


Illustration of geometric variables used in economic parametisation of mineral resources in the Abitibi.

To assess the relevance of the approach, a sequence of calculations to establish the hypothetical costs associated with the extraction of a resource based on an idealised geometry (ellipse) was developed. This cost, expressed in “cost of production/tonne” is then compared to the costs found in public databases (e.g.: annual reports). It should be noted that this approach will be further developed during the 2003-2004 program in project 2003-4.

The results of project 2002-8 are a brief compilation of more than 570 deposits, amalgamating various parameters needed for an economic evaluation. Real examples of data processing are also given.

Summary: Project 2002-8	
Objectives	<ul style="list-style-type: none"> • To develop a tool to assess the economic value of a resource with particular attention to the Abitibi region.
Results	<ul style="list-style-type: none"> • Establishing a method (evaluation process); • Development of a sequence of calculations to assess the cost of production of a mineral resource based on its geometry and production history in the Abitibi.
Tools and Innovations	<ul style="list-style-type: none"> • A new approach to assess the viability of a mineral resource at a relatively early stage of exploration.
Note	<ul style="list-style-type: none"> • The project continues in project 2003-4.