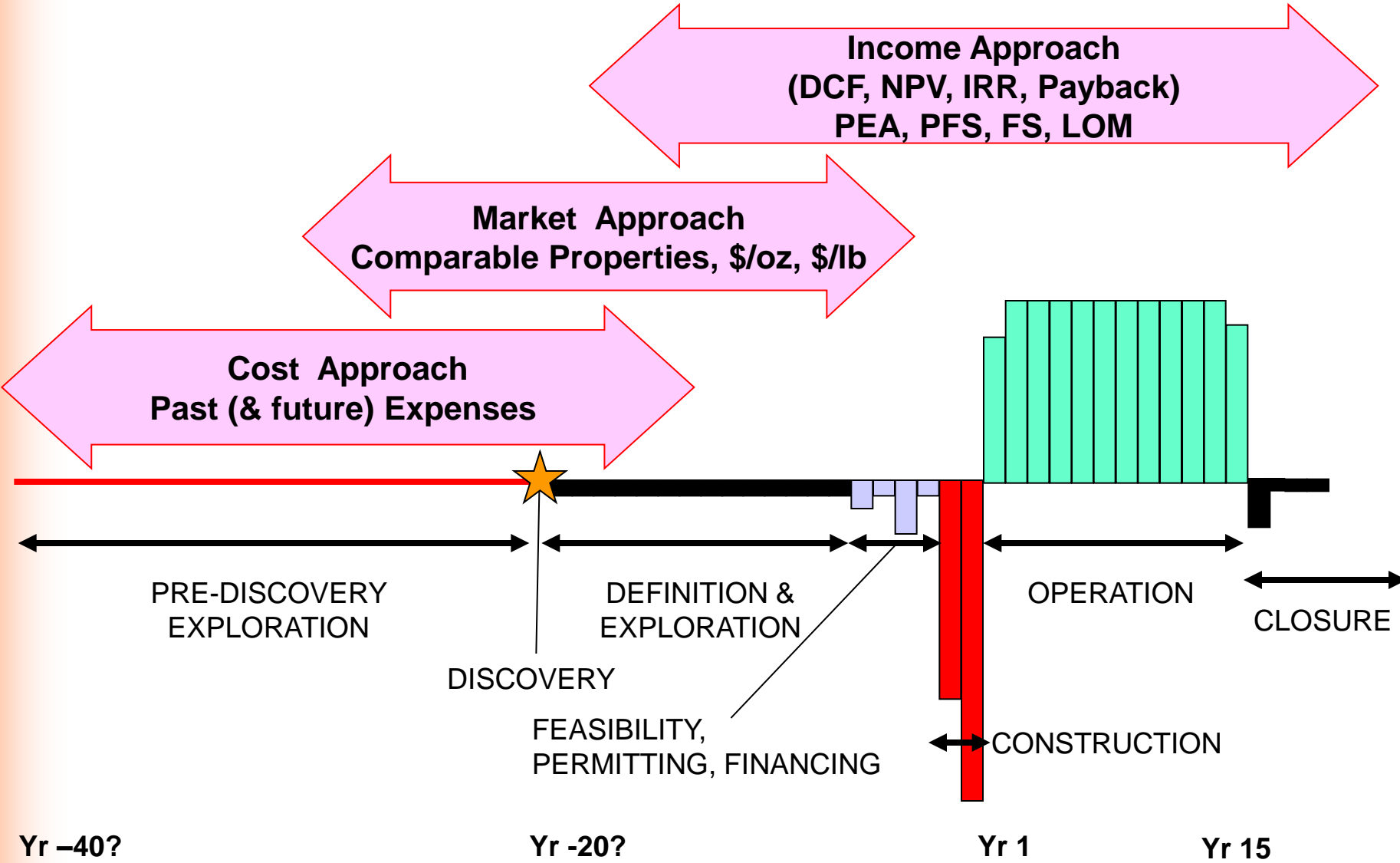


# Valuation Approaches



# Valuation Methods & Mining Life Cycle

Valuations



LDsmith



# Valuation Approaches

## CIMVal Descriptions

<p>Cost Approach</p>	<p>Based on the principle of contribution to value.</p> <p>The appraised value method, is one commonly used method where exploration expenditures are analyzed for their contribution to the exploration potential of the Mineral Property.</p>
<p>Market Approach</p>	<p>Based primarily on the principle of substitution.</p> <p>Also called the Sales Comparison Approach.</p> <p>The Mineral Property is compared with the transaction value of similar Mineral Properties, transacted in an open market.</p> <p>Methods include comparable transactions and option or farm-in agreement terms analysis.</p>
<p>Income Approach</p>	<p>Based on the principle of anticipation of benefits.</p> <p>Includes all methods that are based on the income or cash flow generation potential of the Mineral Property.</p>

The three generally accepted Valuation approaches of Income, Market and Cost must be considered and discussed in the Valuation Report.



# Valuation Methods

## CIMVAL - Canada

Valuations

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### Cost

Appraised Value

Multiple of Expenditures

Geoscientific Methods

- Primary
- Secondary
- NA

### Market

Comparable Transactions

Option & farm-in Agreements

Value per metal unit

\$ per unit area

Market Capitalization

Gross insitu value

### Income

Cash Flow DCF

Option Pricing

Monte Carlo

Probabilistic

# International Standards Australia, Canada, South Africa, IVSC

Valuations


LDSmith

Australasian Code for  
Reporting of Exploration Results,  
Mineral Resources and Ore Reserves

~ The JORC Code ~  
2004 Edition

Effective December 2004


Prepared by:  
The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC)



Code for the  
Technical Assessment and Valuation  
of  
Mineral and Petroleum Assets and Securities  
for  
Independent Expert Reports

~ The VALMIN Code ~  
2005 Edition

Prepared by:  
The VALMIN Committee, a joint committee of The Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Mineral Industry Consultants' Association with the participation of the Australian Securities and Investment Commission, the Australian Stock Exchange Limited, the Minerals Council of Australia, the Petroleum Exploration Society of Australia, the Securities Association of Australia and representatives from the Australian finance sector.



THE SOUTH AFRICAN CODE FOR THE  
REPORTING OF EXPLORATION RESULTS, MINERAL RESOURCES AND  
MINERAL RESERVES  
(THE SAMREC CODE)  
2007 EDITION

Prepared By  
The South African Mineral Resource Committee (SAMREC)  
Working Group under the Joint Auspices of the  
Southern African Institute of Mining and Metallurgy and the  
Geological Society of South Africa

[www.samrec.co.za](http://www.samrec.co.za)

THE SOUTH AFRICAN CODE FOR THE  
REPORTING OF MINERAL ASSET VALUATION  
(THE SAMVAL CODE)  
2008 EDITION

Prepared By  
The South African Mineral Asset Valuation Committee (SAMVAL)  
Working Group under the Joint Auspices of the Southern African  
Institute of Mining and Metallurgy and the Geological Society of  
South Africa

[www.samval.co.za](http://www.samval.co.za)

CIM DEFINITION STANDARDS - For Mineral Resources and Mineral Reserves

Prepared by the CIM Standing Committee on Reserve Definitions  
Adopted by CIM Council on December 11, 2005

**FOREWORD**

CIM Council, on August 20, 2000, approved the "CIM Standards on Mineral Resources and Reserves - Definitions and Guidelines", developed by the CIM Standing Committee on Reserve Definitions. The CIM Definition Standards on Mineral Resources and Reserves (CIM Definition Standards) establish definitions and guidelines for the reporting of exploration information, mineral resources and mineral reserves in Canada. The Mineral Resources and Mineral Reserves definitions were incorporated, by reference, in National Instrument 43-101 - Standards of Disclosure for Mineral Projects (NI 43-101), which became effective February 1, 2001.

At the August 20, 2000 Council meeting, a new CIM Standing Committee on Reserve Definitions was established consisting of the following: John Purdie, former, Raymond, Larry Cochrane, Normand Champagne, Mike Hoffman, Colin McKeown, Jack Mullins, Phil Olson, Paul Potts, Andy Todd and Joe Winkwald.

Subsequent to the publishing of the August 20, 2000 CIM Standards on Mineral Resources and Reserves, various CIM committees have compiled and published more extensive documentation on mining industry standard practices for estimating Mineral Resources and Mineral Reserves. These standard practices provide more detailed guidance than that contained in the August 20, 2000 CIM Standards on Mineral Resources and Reserves. On November 14, 2004 CIM Council adopted an update to the CIM Definition Standards to reflect the more detailed guidance available and effect certain editorial changes required to maintain consistency with current regulations. This version of the CIM Definition Standards includes further editorial changes required to maintain compatibility with the new version of National Instrument 43-101 which is expected to become law at the end of 2007. The CIM Definition Standards can be viewed on the CIM website at [www.cim.org](http://www.cim.org).

Readers should be aware that reports written by persons issuing technical reports that disclose information about exploration or other mining properties to the public are governed by a number of regulations in Canada. The most important of these are NI 43-101 for mineral properties and National Instrument 51-101 for oil and gas properties.

**CIM DEFINITION STANDARDS**

The CIM Definition Standards presented herein provide standards for the classification of Mineral Resources and Mineral Reserves estimates into various categories. The category to which a resource or reserve estimate is assigned depends on the level of confidence in the geological information available on the mineral deposit, the quality and quantity of data available on the deposit, the level of detail of the technical and economic information which has been generated about the deposit, and the interpretation of the data and information. In the document the definitions are in bold type and the guidance is in italics.

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November 22, 2005

CIMVAL STANDARDS AND GUIDELINES (FINAL VERSION) FEBRUARY 2003

**STANDARDS AND GUIDELINES  
FOR VALUATION OF MINERAL  
PROPERTIES**

**SPECIAL COMMITTEE OF THE  
CANADIAN INSTITUTE OF MINING,  
METALLURGY AND PETROLEUM ON  
VALUATION OF MINERAL  
PROPERTIES  
(CIMVAL)**

**FEBRUARY 2003  
(FINAL VERSION)**

NATIONAL INSTRUMENT 43-101 - Standards of Disclosure for Mineral Projects, Form 43-101F1 and Companion Policy 43-101CP

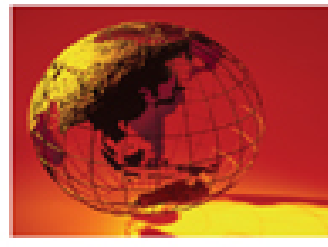
NATIONAL INSTRUMENT 43-101  
STANDARDS OF DISCLOSURE FOR MINERAL PROJECTS

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October 1, 2003 (NISC 08 0008 010)

International Valuation Standards  
Eighth Edition  
2007



IVSC  
INTERNATIONAL VALUATION STANDARDS COUNCIL

Thank You!

