

Introduction of Chinese Standard and Comparison of International Codes

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The Mineral Resources and Reserves Evaluation Center



Introduction-Chinese Standard

History

1954 Copy Soviet Union *The Classification of Solid Minerals Reserves*

1959 National Committee of Mineral Reserves *The Classification of Mineral Reserves for Metal, Non-metal and*

{ *Coal*

A₁ A₂ B C₁ C₂

Inside-table Outside-table

1977 State Bureau of Geology *General Specification of Geological Exploration for Metal Deposits and General Specification of Geological Exploration for Non-metal Deposits*

{ *A B C D*

Exploitable Un-exploitable

1992 State Bureau of Technical Supervision *General Specification of Geological Exploration for Solid Minerals*

{ *A B C D E*

Exploitable Un-exploitable

1999 State Bureau of Technical and Quality Supervision *Classification for Resources/Reserves of Solid fuels and Mineral Commodities*

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1999 edition

- Refer to 1997 edition of *United Nations International Framework Classification for Reserves/Resources - Solid Fuels and Mineral Commodities* which was adopted by the United Nations Economic and Social Council in 1997 and recommended for worldwide application
- Refer to the 1980 edition of *Principles of a Resource/Reserve Classification for Minerals* which prepared by U.S. Bureau of Mines and the U.S. Geological Survey

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Introduction-Chinese Standard

Principle

- To facility the management and statistics of mineral resources, to provide basic information for policy making and development programming;
- To provide reference for investment , mine construction and exploration and exploitation licenses transaction;
- To have inheritance and continuity with old standard, to make compatible with international codes;
- To take into account feasibility study and economic viability based on market economy;
- To include the minerals in the stage of exploration and exploitation, the minerals that have potentiality to be discovered.

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Introduction-Chinese Standard

Codification

	Identified mineral resources			Potential mineral resources	
	Measured (Proved)	Indicated (Controlled)	Inferred	Reconnaissance	
Economic	Mineable reserve(111)				
	Basic reserve(111b)				
	Pre-feasibility reserve(121)				Pre-feasibility reserve(122)
	Basic reserve(121b)				Basic reserve(122b)
Marginal economic	Basic reserve(2M11)				
	Basic reserve(2M21)				Basic reserve(2M22)
Sub-Marginal economic	Resources(2S11)				
	Resources(2S21)				Resources(2S22)
Intrinsic economic	Resources(331)	Resources(332)	Resources(333)	Resources(334)?	

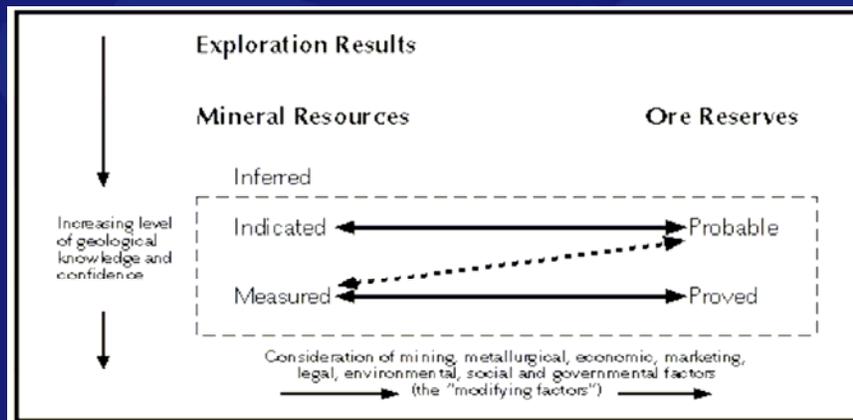
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Comparison-Similarity

➤ The core conceptions can expressed by one figure.

• JORC



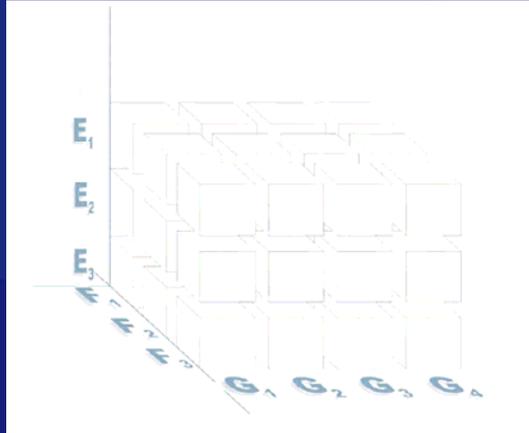
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Comparison-Similarity

➤ The core conceptions can expressed by one figure.

- UNFC



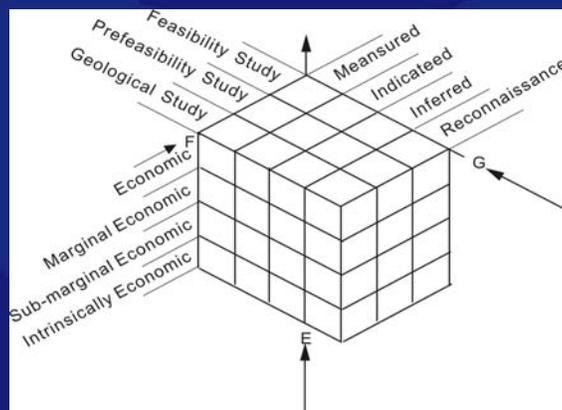
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Comparison-Similarity

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- China



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Comparison-Similarity

- The Proved Mineral (Ore) Reserves has almost the same meaning.
 - ✘ Economically mineable part of a recoverable quantity;
 - ✘ As the results of the Feasibility Study with assumed mining, metallurgical, economic, marketing, legal, environmental, social and government factors;
 - ✘ Mining operation or detailed exploration stage.



Comparison-Difference

- Intent
 - ✘ JORC CODE is a required minimum standard for Public Reporting.
 - ✘ UNFC is to harmonize various standards existing in countries, to facilitate international communication.



Comparison-Difference

➤ Content

- ※ JORC not only introduces the concepts, but also specify what kind of report or reporting should be done for public investment, who should prepare the report, what criteria should be followed. (Guidelines)
- ※ UNFC and Chinese Standards introduce the concepts of every class of the resources and reserves.



Comparison-Difference

➤ Implement

- ※ Chinese Standard is a national standard, which is mandatory in performance.
- ※ JORC CODE is adopted by professional society, ASX and NZSX. The CODE is strongly recommended by mining industrial and markets.
- ※ UNFC is a reference for countries who want to make international communication.



Comparison-Difference

➤ Format

- ※ JORC CODE is expressed in 2 dimensions.
- ※ UNFC and Chinese standard are in 3 dimensions.
- ※ For categories of economic viability:
 - ◆ UNFC has Economic, Potentially Economic, and Intrinsically Economic. Economic level and Potentially Economic level both have two subcategories
 - ◆ Chinese standard has 4 level: Economic, Marginal Economic, Submarginal Economic, Intrinsically Economic.

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Thank you!

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