



Prospect of Chinese classification system on solid mineral resources and reserves

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- The Status of Chinese classification on solid mineral resources and reserves(the following called Chinese System)
- The program of revising Chinese system has been approved by MLR
- Basic principles of revising Chinese System

The Status of Chinese classification on solid mineral resources and reserves

- **Chinese System origin**

Application of UNFC-1997 with elements of U.S. Geological Survey Circular 831, issued since 1999

- **the features as follows:**

- _ Structure of 3-axes(E,F,G)

- _ Numeric codes 111, 121,122...

- _ 4 classes, 4 categories, 16 codes



3 axis

Feasibility Study axis

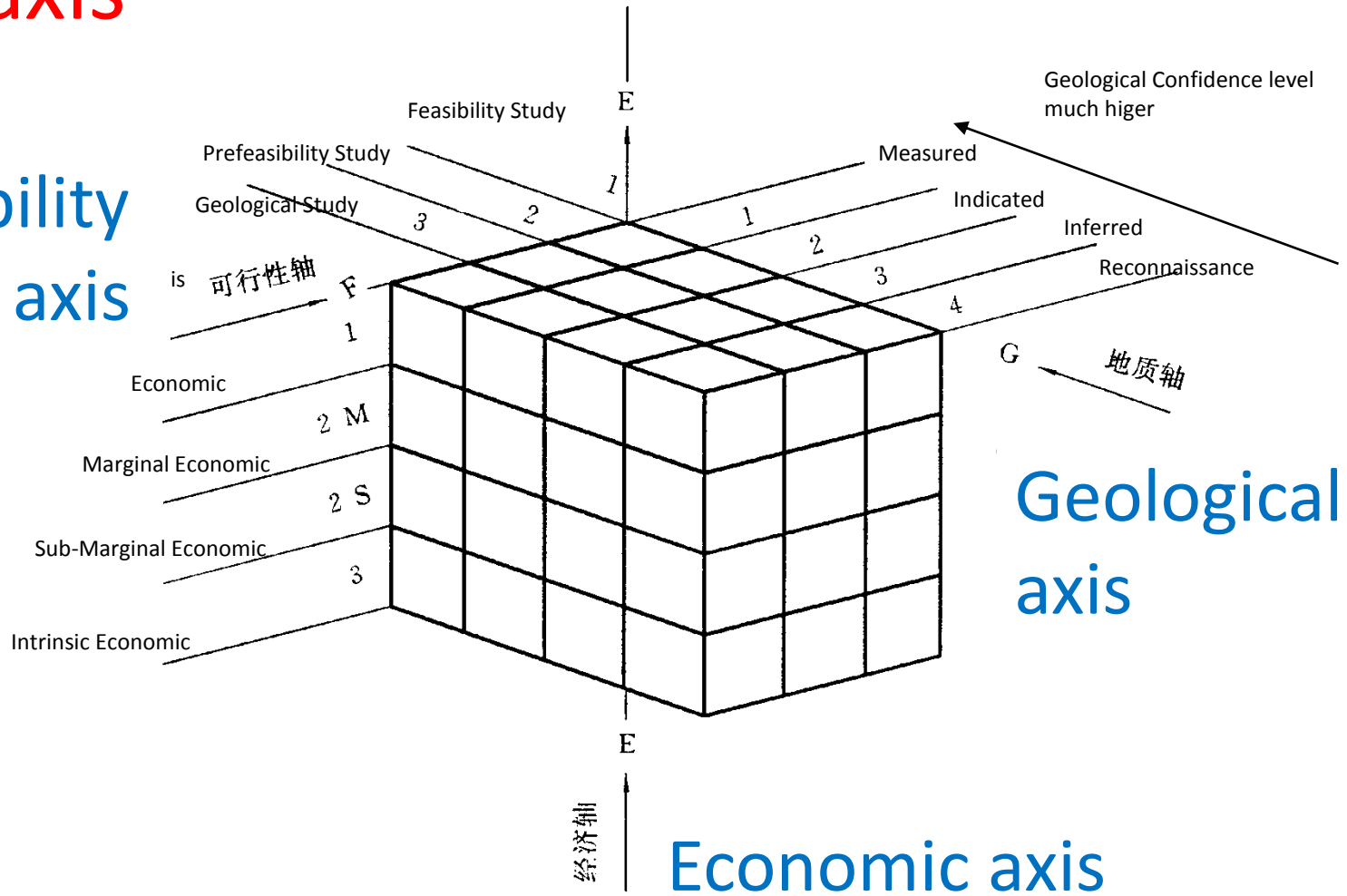


Fig.1 The Framework of Chinese System on solid mineral resources and reserves

Table 1 Classification Codes

Economic Status	Geological confidence Level			
	Measured	Indicated	Inferred	Reconnaissance
Economic	Extractable Reserves (111)	4 categories		
	Reserves Base (111b)			
	Pre-Extractable Reserves (121)	Pre-Extractable Reserves (122)		
	Reserves Base (121b)	Reserves Base (122b)		
Marginal Economic	Reserves Base (2M11)			
	Reserves Base (2M21)			
Sub-Marginal Economic	Resources (2S11)			
	Resources (2S21)			
Intrinsic Economic	Resources (331)	Resources (332)	Resources (333)	Resources (334)?

classes



Classification System

The Status of Chinese classification on solid mineral resources and reserves

- **Application status**

- _ Users call on the simple one

- _ Has been simplified during application

- _ added an idea “project status”



Classification Codes						
Project Status	Economic Status		Geological confidence Level			
			Measured	Indicated	Inferred	Reconnaissance
Commercial Projects	Economic	Extractable Reserves	Feasibility Study			
			(111)	(122)		
		Reserves Base	Feasibility Study			
			(111b)	(122b)	Parts of (333)	
Potentially Commercial Projects	Intrinsic Economic		Geological Study			
			(331)	(332)	(333)	(334)?

Commercial Projects include on production project, constructing project, approved for development project.



New idea same as UNFC

Table 2 Activity of Chinese System

Marginal Economic、 Sub-Marginal Economic Classification Codes has not been used at present.

The program of revising the classification has been approved by MLR

- Chinese system will be revised in recent years.
- Mineral resources and reserves evaluation center has been appointed to take on the responsibility this year.



Table 3 Geological Confidence Comparison between Chinese system, UNFC, CRIRSCO

System		Geological Confidence Level					
Chinese System-1992	Metal and non-metal		B	C	D	E	
	Coal		A	B	C	D	
Chinese System-1999		*	1	2+part of 3		Part of 3+ Part of 4	Part of 4
UNFC-2009		G1		G2		G3	G4
JORC、43-101、CRIRSCO System		Measured		Indicated		Inferred	Exploration Results
Canadian Gold Assessment Guidline (1992)		Measured		Indicated		Inferred	
		Class I	Class II	Class I	Class II		

*Generally, We complete exploration after geological confidence (class II) of a project can meet with the need of mining plan. If design institute thinks it is not enough to make a mining plan, more exploration will be done. The geological confidence of exploration project will be promoted to class I after mining construction and production system have been prepared.

Basic principles of revising the classification

- **Succession**

- _keeping basic framework

- _keeping numeric form

- **Opening**

- _Absorbing good operation of UNFC, such as project status.

- _Bridging with other system, such as UNFC, CRIRSCO

- **Simplification**

- **Operability**



Thanks for your comments

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