Revision of China Solid Mineral Resource/Reserve Classification System (Draft)

Yan Tiexiong

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The China Solid Mineral Resource/Reserve Classification System has been implemented for ten years。**In consideration of that some content of this system become not suitable to the new situation in China, it should be amended. In addition, great efforts to develop International standards have been made in the last decade so that the standards would provide a more consistent base under the globalization economic environments. By reason of these, the Ministry of Land and Resources decided to conduct a revision for the system in 2007.**

The Principals of the revision

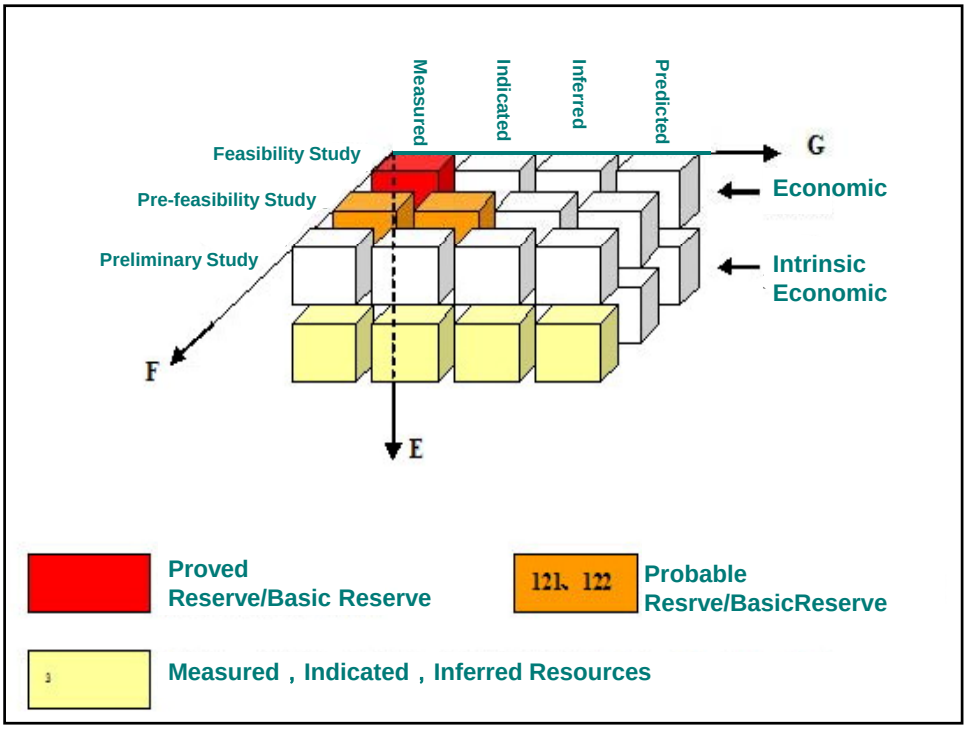
1. In consistent with international standards.
2. Keeping continuity of the system by taking the history and reality of such standards in China into account.
3. Taking a open approach for such standards revision.
4. Simplification and easy to use.

The Major Changes

1. Retaining UNFC framework, Classification is based on three axes, but taking advantages of the classification strategy of CRIRSCO Template.
2. Reducing the number of categories.
3. Redefining some terms.
4. Retaining “Basic Reserves” in consideration of the governmental requirements.

	Identified			Undiscovered
	Measured	Indicate	Inferred	Predicted
Economic	Proved Reserve (111) Proved Basic Reserve (111b)			
	Probable Reserve (121) Probable Basic Reserve (121b)	Probable Reserve (122) Probable Basic Reserve (122b)		
Intrinsic Economic	Measured Resource (231)	Indicated Resource (232)	Inferred Resource (233)	Predicted Resource (234)

The Proposed Revised Classification Framwork



Historical Correlation of Chinese Mineral Resource/Reserve Categories

附录 B(提示的附录)

国内外矿产资源主要分类概略对比表

B1 我国历次矿产资源储量主要类型对比表

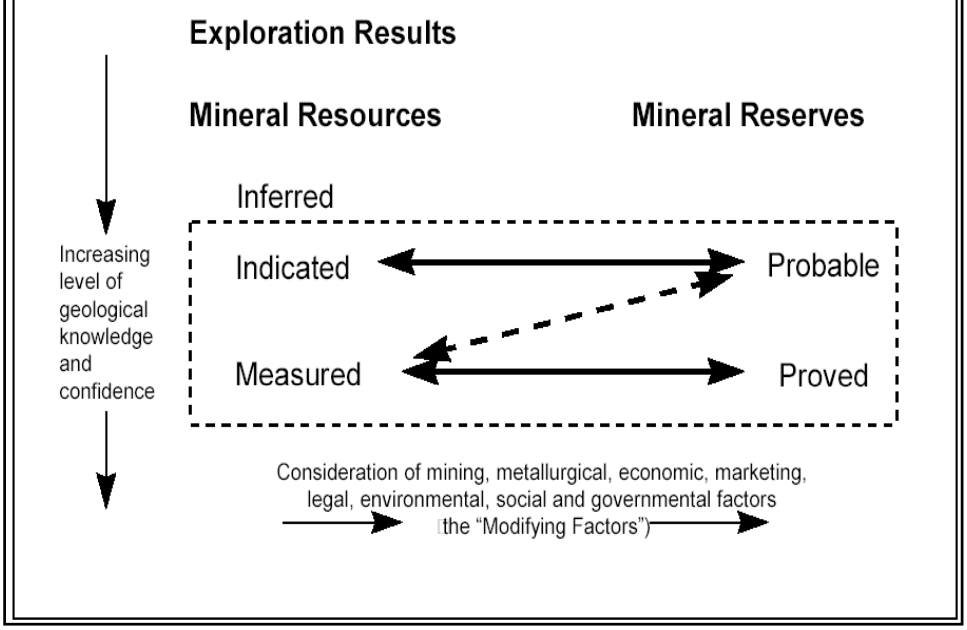
分类		分级					
固体矿产储量分类 1954		探明储量					
	平衡表内	A_1	A_2	B	C_1	C_2	
	平衡表外	A_1	A_2	B	C_1	C_2	
矿产储量分类暂行规范（总则） 1959		探明储量					
		开采		设计		远景	地质
	平衡表内	A_1	A_2	B	C_1	C_2	
	平衡表外	A_1	A_2	B	C_1	C_2	
金属非金属矿床地质勘探规范总则 1977a		探明储量					
	能利用储量	A		B	C	D	
	暂不能利用储量	A		B	C	D	
固体矿产地质勘探规范总则 1992	能利用储量 a	A		B	C	D	E
	储量 b	A		B	C	D	E
	尚难利用	A		B	C	D	E

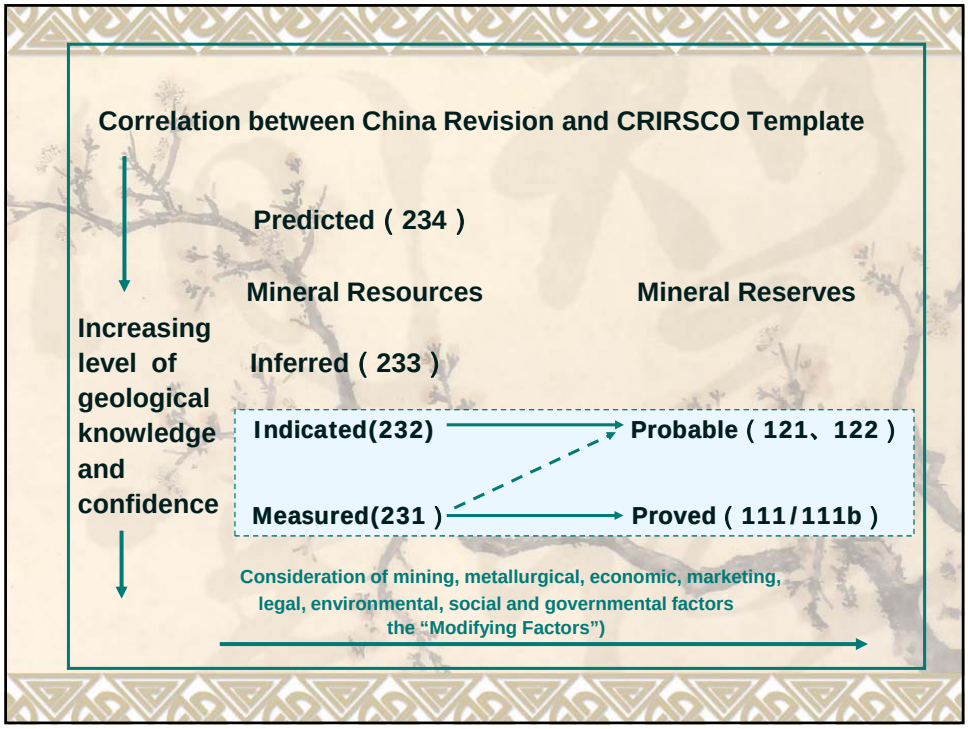
固体矿产资源/储量分类 GB/T17766 -1999		查明矿产资源			潜在矿产资源
		探明的	控制的	推断的	预测的
	经济的	可采储量 111			
		基础储量 111b			
		预可采储量 121	预可采储量 122		
		基础储量 121b	基础储量 122b		
	边际经济的	基础储量 2M11			
		基础储量 2M21	基础储量 2M22		
	次边际经济的	资源量 2S11			
		资源量 2S21	资源量 2S22		
	内蕴经济的	资源量 331	资源量 332	资源量 333	资源量 3347

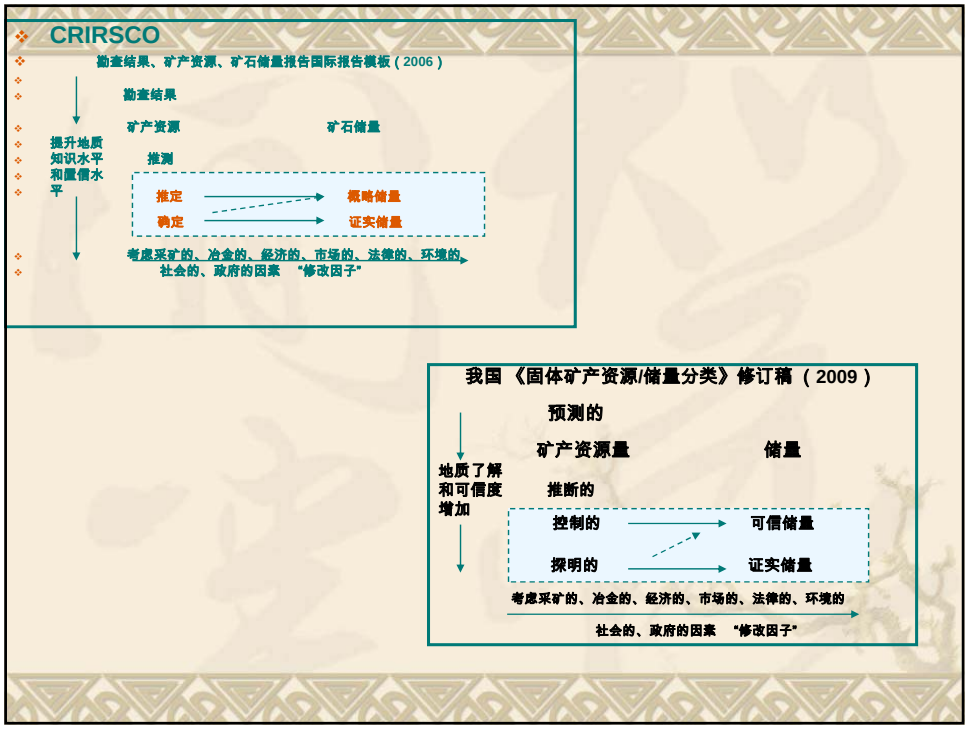
固体矿产资源/储量分类 GB/T17766 -修订代拟稿		已发现矿产资源			未发现矿产资源
		探明的	控制的	推断的	预测的
	经济的	证实储量 (111)			
		基础储量 (111b)			
		可信储量 (121)	可信储量 (122)		
		基础储量 (121b)	基础储量 (122b)		
	内蕴经济的	资源量 (231)	资源量 (232)	资源量 (233)	资源量 (234)

注 固体矿产地质勘探规范总则（1992）中，C 级与 D 级的界线，与固体矿产资源储量分类(1999)中，控制的与推断的界线，上下不贯通，是因为总则中对 D 级的要求是“应有系统勘探工程控制”，而分类中要求“数量有限的工程”，后者控制程度低的缘故。

Figure 1 General relationship between Exploration Results, Mineral Resources and Mineral Reserves




Correlation between China Revision and CRIRSCO Template
Predicted (234)
Mineral Resources
Mineral Reserves
Increasing level of geological knowledge and confidence
Inferred (233)
Indicated(232)
Probable (121、122)
Measured(231)
Proved (111/111b)
Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors the "Modifying Factors")


CRIRSCO
勘查结果、矿产资源、矿石储量报告国际报告模板 (2006)
勘查结果
矿产资源
矿石储量
提升地质知识水平和置信水平
推测
推定
概略储量
确定
证实储量
考虑采矿的、冶金的、经济的、市场的、法律的、环境的、社会的、政府的因素 "修改因子"
我国《固体矿产资源/储量分类》修订稿 (2009)
预测的
矿产资源量
储量
地质了解和可信度增加
推断的
控制的
可信储量
探明的
证实储量
考虑采矿的、冶金的、经济的、市场的、法律的、环境的
社会的、政府的因素 "修改因子"

Correlation Among Domestic and Foreign Standards

GB/T17766-1999	GB/T17766-Revison	UNFC 2004	JORC 2004	CRIRSCO 2006	CIM 2005
Rec. Rese. 111 BR 111b	Pro.Rese. 111 BR 111b	Pro.Rese. 111	Pro.Rese.	Pro.Rese.	Pro.Rese.
Pre.Rese. 121 BR 121b	Prb.Rese. 121 BR 121b	Prb.Rese. 121	Prb.Rese.	Prb.Rese.	Prb.Rese.
Pre.Rese. 122 BR 122b	Prb.Rese. 122 BR 122b	Prb.Rese. 122	Prb.Rese.	Prb.Rese.	Prb.Rese.
BR 2M11		Fea.Reso. 211			
BR 2M21					
BR 2M22		Pre.Reso. 221			
Reso. 2S11					
Reso. 2S21					
Reso. 2S22		Pre.Reso. 222			
Reso. 331	Mea.Reso. 231	Reso. 331	Mea.Reso.	Mea.Reso.	Mea.Reso.
Reso. 332	Ind.Reso. 232	Reso. 332	Ind.Reso.	Ind.Reso.	Ind.Reso.
Reso. 333	Inf.Reso. 233	Reso. 333	Inf.Reso.	Inf.Reso.	Inf.Reso.

Rec-Recovered Pre-Prefeasibility study
Rese-Reserve Reso-Resource
BR-Basic Reserve Pro-Proved
Prb-Probable Mea-measured
Ind-Indicated Inf-Inferred
Exp-Exploration Resu-Results

Thank You !