

**Ministry of Industry and Infrastructural Development of
the Republic of Kazakhstan
Committee of Geology and subsoil use**

**Kazakhstani classification on reserves
and resources and potential possibility
of harmonization with UNFC-2009**

Chairman of the Committee of Geology and Subsoil use
Nadyrbayev A.A.

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CURRENT CLASSIFICATION OF RESERVES AND RESOURCES OF SOLID MINERALS

Total initially-in-place	Reserves	Proved	Proved	A
				B
			Explored	C1
		Pre-evaluated		C2
	Resources	Contingent resources	Identified on flanks and deep levels of a deposit	P1
			Prospective	P2
			Potentially prospective	P3



IMPLEMENTATION OF THE INTERNATIONAL ACCOUNTING STANDARDS ON RESERVES OF SOLID MINERALS CRIRSCO

The Code of Subsoil and Subsoil use provides the transition to international standards on reserves and resources of minerals.

In 2016 Kazakhstan has become the member of CRIRSCO, Kazakhstani association KAZRC has become the 10th member of CRIRSCO committee, the Code of KazRC has been accepted, the Kazakhstan Professional Association of Independent Experts in Subsoil Use (PONEN) has been established.

The main objective of CRIRSCO is the dissemination of best practices and evaluation of resources on solid minerals, and establishing the international consensus on reporting standards.



Kazakhstan association of public reporting
system based on exploration results



Professional association of independent
experts

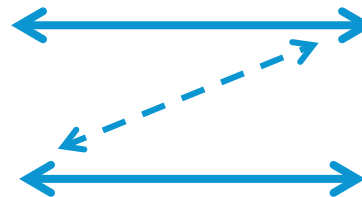


THE COMPARISON OF KAZAKHSTANI CLASSIFICATION OF RESERVES AND RESOURCES (GKZ) AND CRIRSCO

Increasing level of technical and economic knowledge

CRIRSCO	GKZ
Exploration results	
Resources	Resources/reserves without taking into account loss and dilution
Inferred	Resources P1
Indicated	Reserves C2 Reserves C1
Measured	Reserves C1 (A, B)

Resources of CRIRSCO (Inferred and Indicated) and GKZ reserves (A+B+C1 и C2) could possibly transferred to proved reserves CRIRSCO



CRIRSCO	GKZ
Reserves with taking into account loss and dilution	Reserves with taking into account loss and dilution (<u>redeemed reserves</u>)
Probable	The exploration reserves in estimated fields
Proved	The exploration reserves in the explored fields

Consideration of modifying factors



CURRENT CLASSIFICATION OF RESERVES AND RESOURCES OF HYDROCARBONS

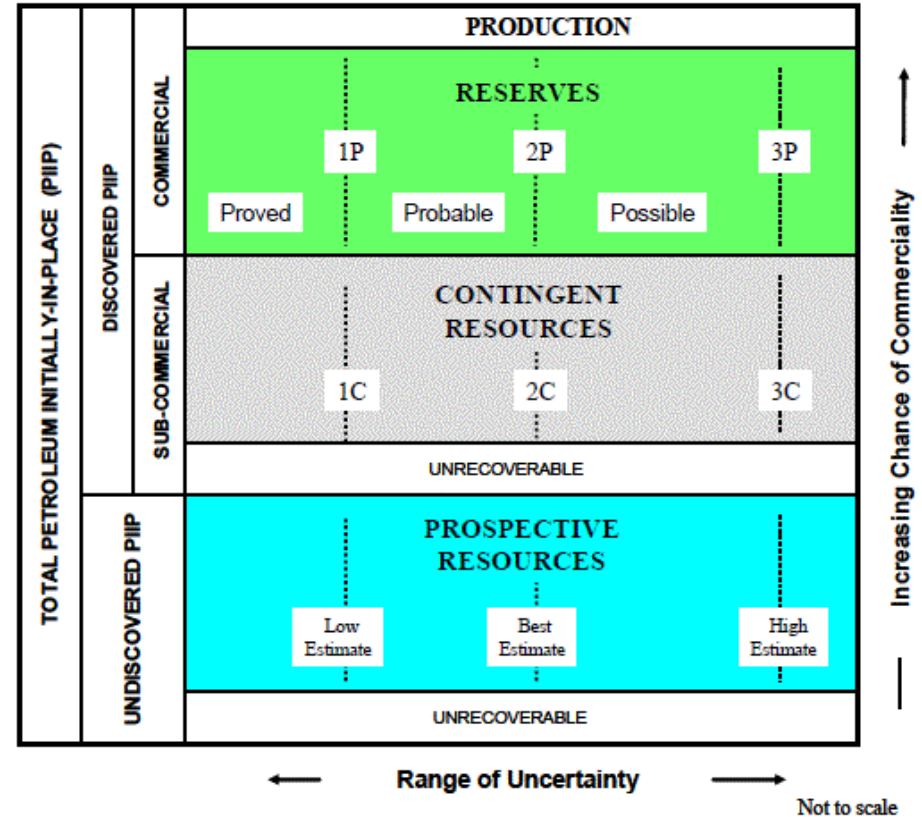
Total petroleum initially-in-place	Geological reserves	Proved	Discovered	Proved	A	
				Determined	B	
			Explored			C1
		Pre-estimated				C2
	Geological resources	Prospective				C3
		Contingent	Localized			D0
			Regionally estimated in a region			D1
			Regionally estimated by using analogs			D2



CLASSIFICATION OF SPE-PRMS SYSTEM

The main principles

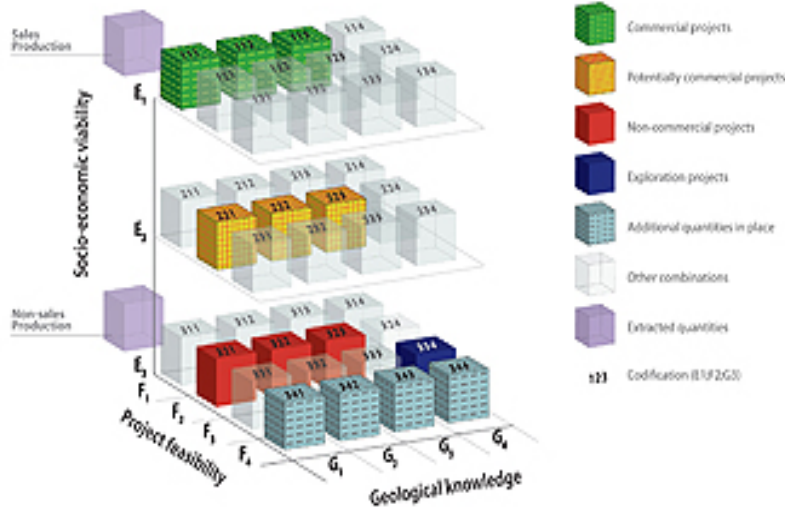
- The classification of PRMS based on the principle of commercial benefits
- Categorization of PRMS based on uncertainty of the recoverability of commodity
- The assessment of reserves based on deterministic/probabilistic methods
- Reserves/resources are estimated from the point of view of realization of production
- The estimated reserves of company based on terms of an agreement







UNITED NATIONS FRAMEWORK CLASSIFICATION (UNFC 2009)



The system has been created using the numerical and language independent coding scheme

Generic system which is applicable to solid minerals, hydrocarbons and ground water

Based on three fundamental criteria

Economic and Social viability (E)

Field project status and feasibility (F)

Geological knowledge (G)



The comparison of Kazakhstani classification of reserves and resources (GKZ) and UNFC-2009

	GKZ	UNFC-2009	UNFC-2009 class
Reserves	A, B, C ₁	E1, F1, G1, G2, G3	Commercial projects
	C ₁ , C ₂	E2, F2, G1, G2, G3	Potentially commercial projects
Resources	C ₂ , C ₃	E3, F3, G1, G2, G3	Non-commercial projects
	C ₃ , D ₀ , D ₁ , D ₂	E3, F3, G4	Exploration projects



Conclusion

Kazakhstan has sufficient mineral resources and needs a flexible system of classification of reserves and resources that meets the requirements of the legislation of Kazakhstan in the field of rational and integrated subsoil use

Due to the adoption of the Code “Subsoil and Subsoil use “ in Kazakhstan and implementation of the international standards on reserves and resources there is a generation of significant improvements for investment climate for solid minerals

Under the new Code, until the end of 2023 in Kazakhstan will simultaneously operate two systems of classification of resources and reserves GKZ and (CRIRSCO). Code of practice (CRIRSCO) will allow the mining companies, investors and government bodies to assess the benefits of public reporting and the availability of geological information on the objects of solid minerals.



Conclusion

With the beginning of the transition to international standards of public geological reporting in Kazakhstan, it is possible to harmonize the national classification system and the UN framework Classification (UNFC)

The UNFC is a tool for global accounting of mineral resources, which provides comparability and compatibility of classifications used today in Kazakhstan, it may be appropriate to use the UNFC at the level of state planning and subsoil management

If the UNFC is used, in the future, the state bodies of Kazakhstan will be able to take into account the diversity of factors of development of the mineral resource base to ensure sustainable development of the mining and geological industry of the country as a whole



Thank you for your attention!

For any inquiries please contact a.srazhadinova@miid.gov.kz