



Integration of the Russian Classification System into International Reporting System

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The State Commission on Mineral Resources (GKZ)

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Ankara, Turkey

Globalization



ГКЗ

- **Alignment of informational exchange formats and standards between countries and organizations**
- **Development of Global system of classification and estimation for fossil energy and mineral reserves and resources by UNECE**

GKZ Cooperation and Collaboration with International Organizations



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- **United Nations Economic Commission for Europe (UNECE)**
- **Committee for Mineral Reserves International Reporting Standards (CRIRSCO)**
- **Society of Petroleum Engineers (SPE)**
- **European Federation of Geologists (EFG)**
- **and etc.**

- **Self regulating, professional organization established in 2007**
- **Provide disciplinary system and Code of Ethics**
- **Affiliated to the European Federation of Geologists**

GKZ-CRIRSCO-OERN Protocol of Intentions

28/09/2010



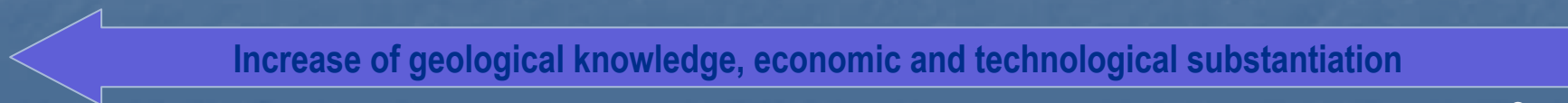
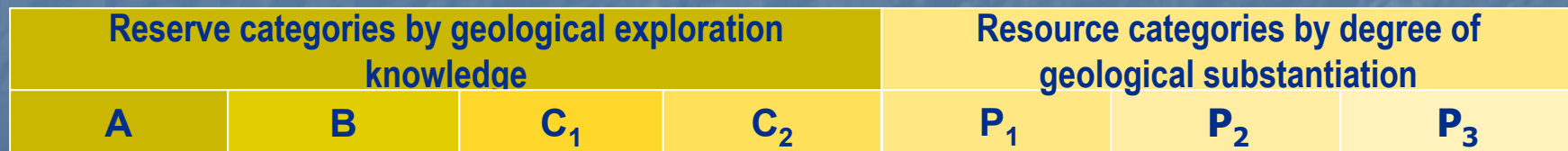
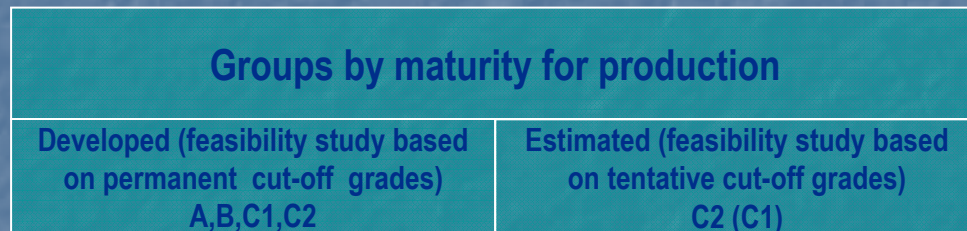
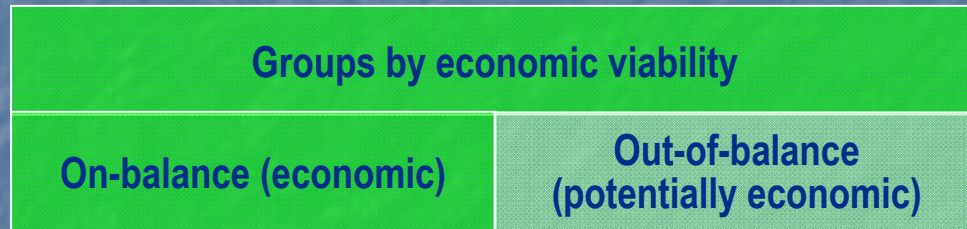
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- **Develop a draft Russian standard for reporting mineral resources and reserves compliant with the CRIRSCO Template, and compatible with other CRIRSCO-aligned reporting standards , but including features specific to Russian requirements**
- **Develop regulatory framework and requirements allowing professional specialist members of OERN to become recognised internationally as Competent Persons**

The Russian Classification



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Comparison of Mineral Reserve/Resource Categories by Economic Viability of Development (E)



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Cat.	Definitions of mineral reserve/resource categories and subcategories	
	UNFC	The Russian Classification
E1	Extraction and sale has been confirmed to be economically viable	On-balance (economic) (<i>economic on the basis of current market conditions</i>)
<i>E1.1</i>	<i>Economic on the basis of current market conditions</i>	<i>Not used</i>
<i>E1.2</i>	<i>Economic through government subsidies or/and other considerations.</i>	<i>Not used</i>
E2	Extraction and sale is expected to become economically viable in the foreseeable future	Out-of-balance (potentially economic)
<i>E2.1</i>	<i>Not used</i>	<i>Mining is economically justified in case of price changes and creation of new technologies.</i>
<i>E2.2</i>	<i>Not used</i>	<i>Mining is not feasible for environmental, social and other reasons.</i>
E3	Extraction and sale is not expected to become economically viable in the foreseeable future or evaluation is at too early a stage to determine economic viability	Economic viability of extraction can not yet be determined due to insufficient information
<i>E3.1</i>	<i>Quantities will be extracted but not for sale.</i>	<i>Not used</i>
<i>E3.2</i>	<i>Economic feasibility cannot yet be determined due to insufficient information.</i>	<i>Not used</i>
<i>E3.3</i>	<i>There are not reasonable prospects in the foreseeable future.</i>	<i>Not used</i>

Comparison of Mineral Reserves/Resources by Project Justification Category (F)



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Cat.	Definitions of mineral reserve/resource categories and subcategories	
	UNFC	The Russian Classification
F1	Feasibility of extraction by a defined development project or mining operation has been confirmed	Feasibility of further evaluation has been validated by data of permanent exploration cut-off grades.
<i>F1.1</i>	<i>Extraction is currently taking place.</i>	<i>Not used</i>
<i>F1.2</i>	<i>Implementation of project is underway.</i>	<i>Not used</i>
<i>F1.3</i>	<i>Studies of project development have been completed.</i>	<i>Not used</i>
F2	Feasibility of extraction by a defined development project or mining operation is subject to further Evaluation	Feasibility of further evaluation has been validated by data of tentative exploration cut-off grades.
<i>F2.1</i>	<i>Project activities are ongoing to confirm extraction in the foreseeable future.</i>	<i>Not used</i>
<i>F2.2</i>	<i>Project activities are on hold.</i>	<i>Not used</i>
<i>F2.3</i>	<i>There are no current plans for development or additional studies.</i>	<i>Not used</i>
F3	Feasibility of extraction by a defined development project or mining operation cannot be evaluated due to limited technical data.	Feasibility of extraction cannot be determined due to insufficient data.
F4	No development project or mining operation has been identified.	Not used

Comparison of Mineral Reserves/Resources by Categories of Geological Knowledge (G)



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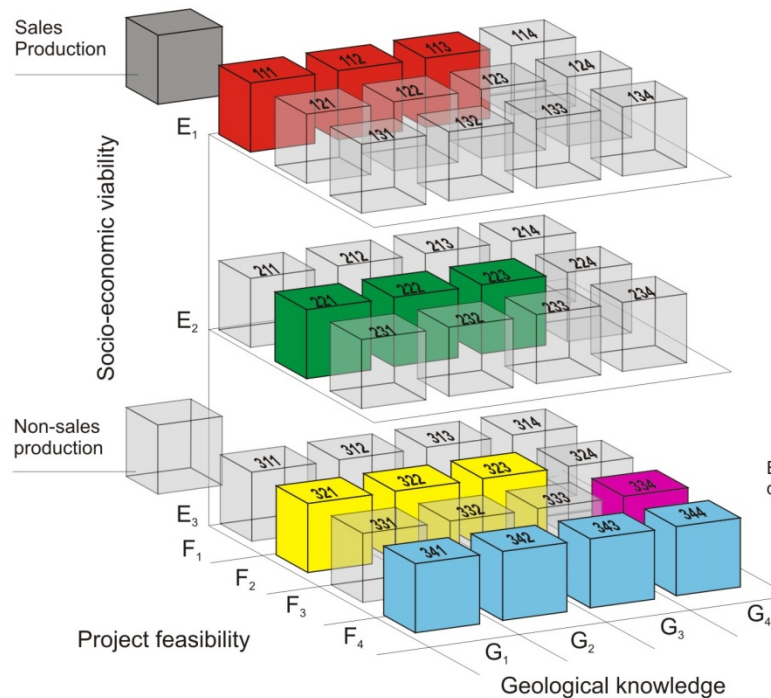
Cat.	Definitions of mineral reserve/resource categories and subcategories	
	UNFC	The Russian Classification
G1	Quantities associated with a known deposit that can be estimated with a high level of confidence	Reserves of C1 category aggregated with categories A and B at the plots of detailed study in deposits of 1, 2, 3 and 4 groups by complexity of geological structure
G2	Quantities associated with a known deposit that can be estimated with a moderate level of confidence	Reserves of C2 category in deposits of 1, 2, 3 and 4 groups by complexity of geological structure and C1 category reserves in deposits of 4 th complexity group
G3	Quantities associated with a known deposit that can be estimated with a low level of confidence	P1 category prognostic resources
G4	Estimated quantities associated with a potential deposit, based primarily on indirect evidence	P2 and P3 category prognostic resources

Scheme of Integrating Russian Mineral Reserves/Resources into UNFC-2009 Classification System

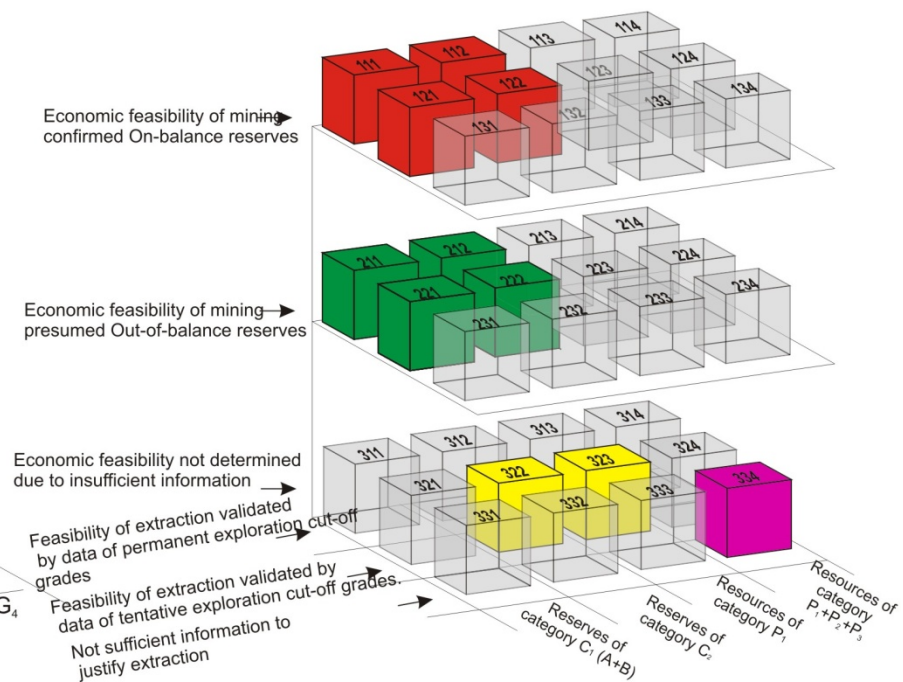


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UNFC-2009 categories and examples of classes



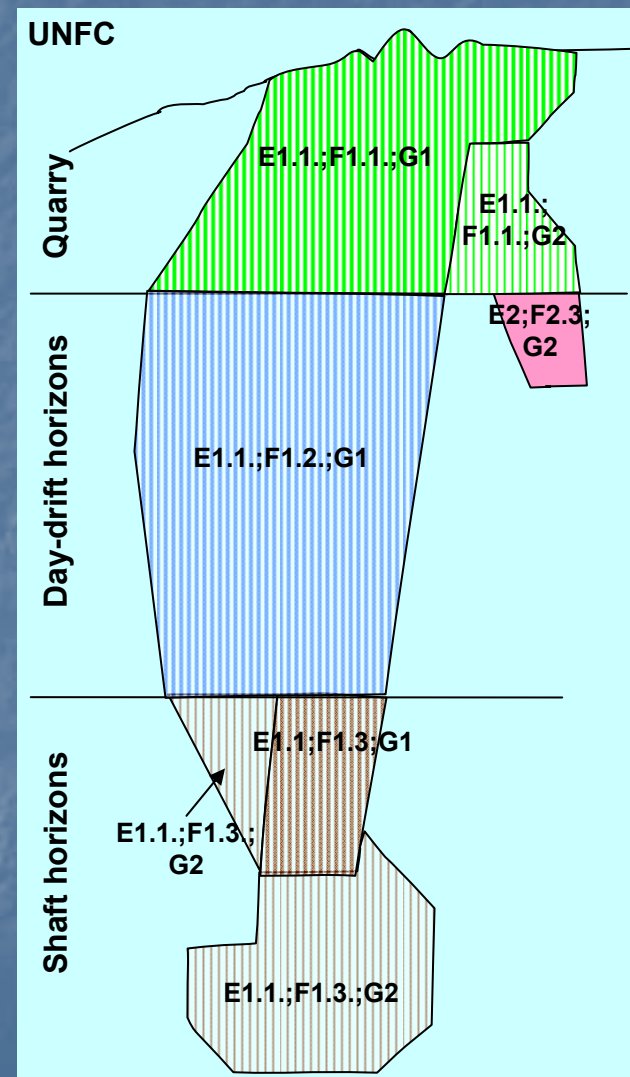
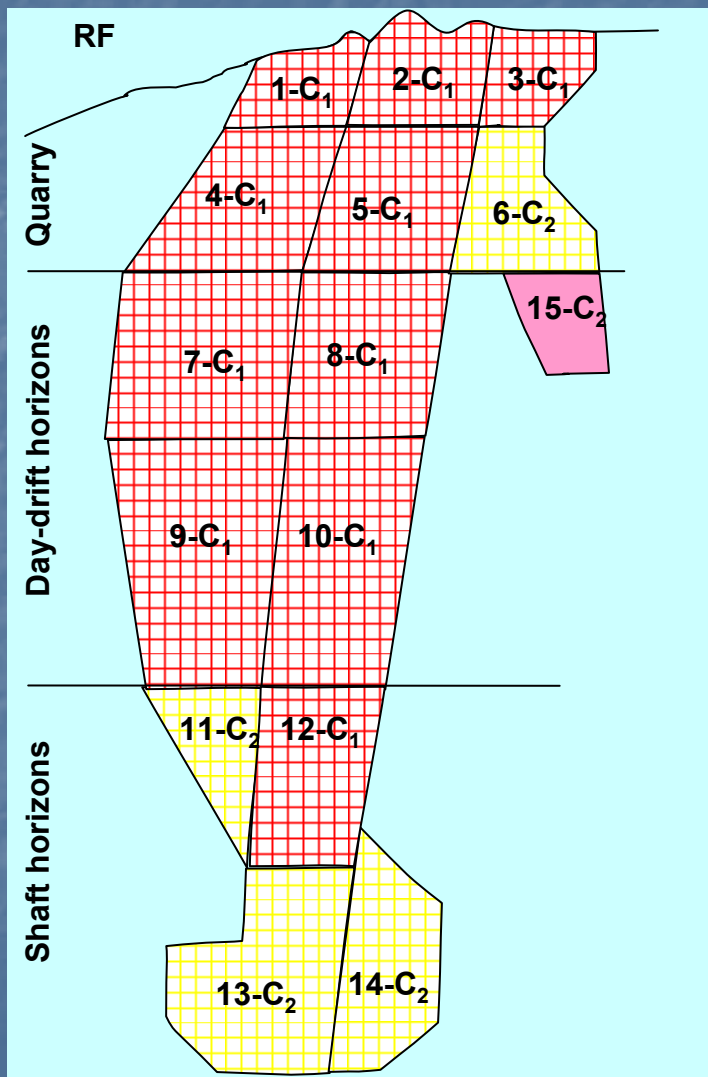
Scheme of integrating Russian mineral reserves/resources into UNFC-2009 classification system



Categories Definition of the Copper-Nickel Deposit in a Projection on a Vertical Plane according to the Russian Classification and the UN Framework Classification



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Comparison of Mineral Quantity (for Base Metal), Estimated by the Russian Classification and the UN Framework Classification



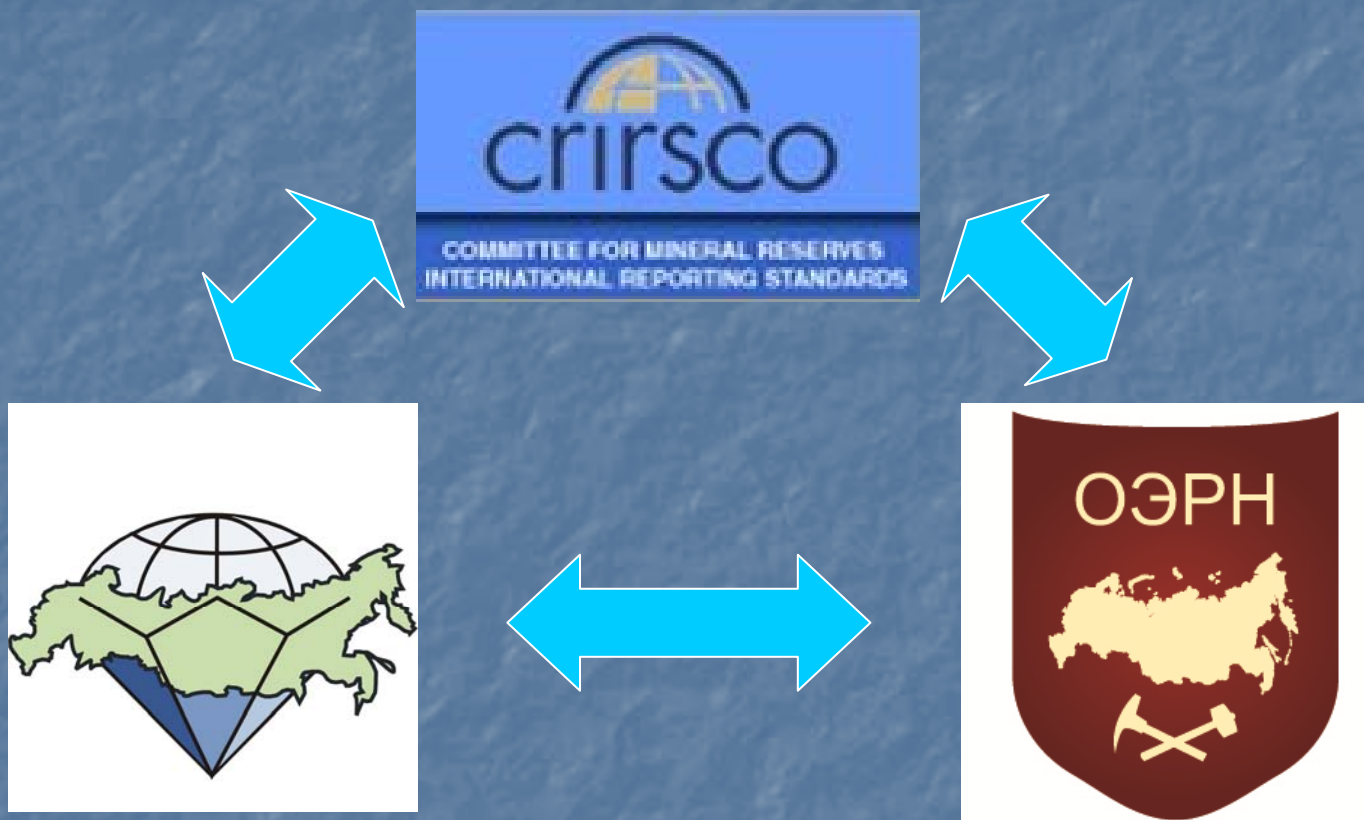
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UN Framework Classification			Russian Classification				
Categories and groups			Mineral quantity, (nominal units)		Mineral reserves, (nominal units)		Reserve categories, block numbers
E	F	G	Ore	Metal	Ore	Metal	
1.1	1.1	1	312491	16576	288276	16743	1,2,3,4 и 5-C1
1.1	1.1	2	6869	2860	6336	2890	6-C2
1.1	1.2	1	791312	40622	725975	43680	7,8,9 и 10-C1
1.1	1.3	1	137318	7556	125980	7630	12-C1
1.1	1.3	2	10623	3926	97455	4221	11,13 и 14-C2
2	4	2	5065	90	4647	97	15-C2об

GKZ-CRIRSCO-OERN Cooperation



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History of GKZ-CRIRSCO Cooperation



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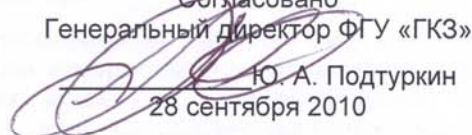
- **GKZ-CRIRSCO Protocol of Intentions, 2006**
- **Formation of GKZ-CRIRSCO Working group**
- **Development of Guidelines on Alignment of Russian minerals reporting standards and the CRIRSCO Template**



ГКЗ



Федеральное государственное учреждение
«Государственная комиссия по запасам полезных ископаемых»
(ФГУ «ГКЗ»)
Объединенный Комитет по международным стандартам
отчетности о запасах
(CRIRSCO)

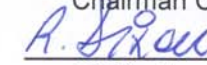
Согласовано
Генеральный директор ФГУ «ГКЗ»

Ю. А. Подтуркин
28 сентября 2010

Руководство по гармонизации стандартов отчетности России и CRIRSCO.

Москва, 2010 г



Russian Federal Government Agency
State Commission on Mineral Reserves
(FGU GKZ)
Committee for Mineral Reserves International Reporting Standards
(CRIRSCO)

Approved
Chairman CRIRSCO

Roger Dixon
28 September 2010

Guidelines on Alignment of Russian minerals reporting standards and the CRIRSCO Template

Moscow 2010

Guidelines



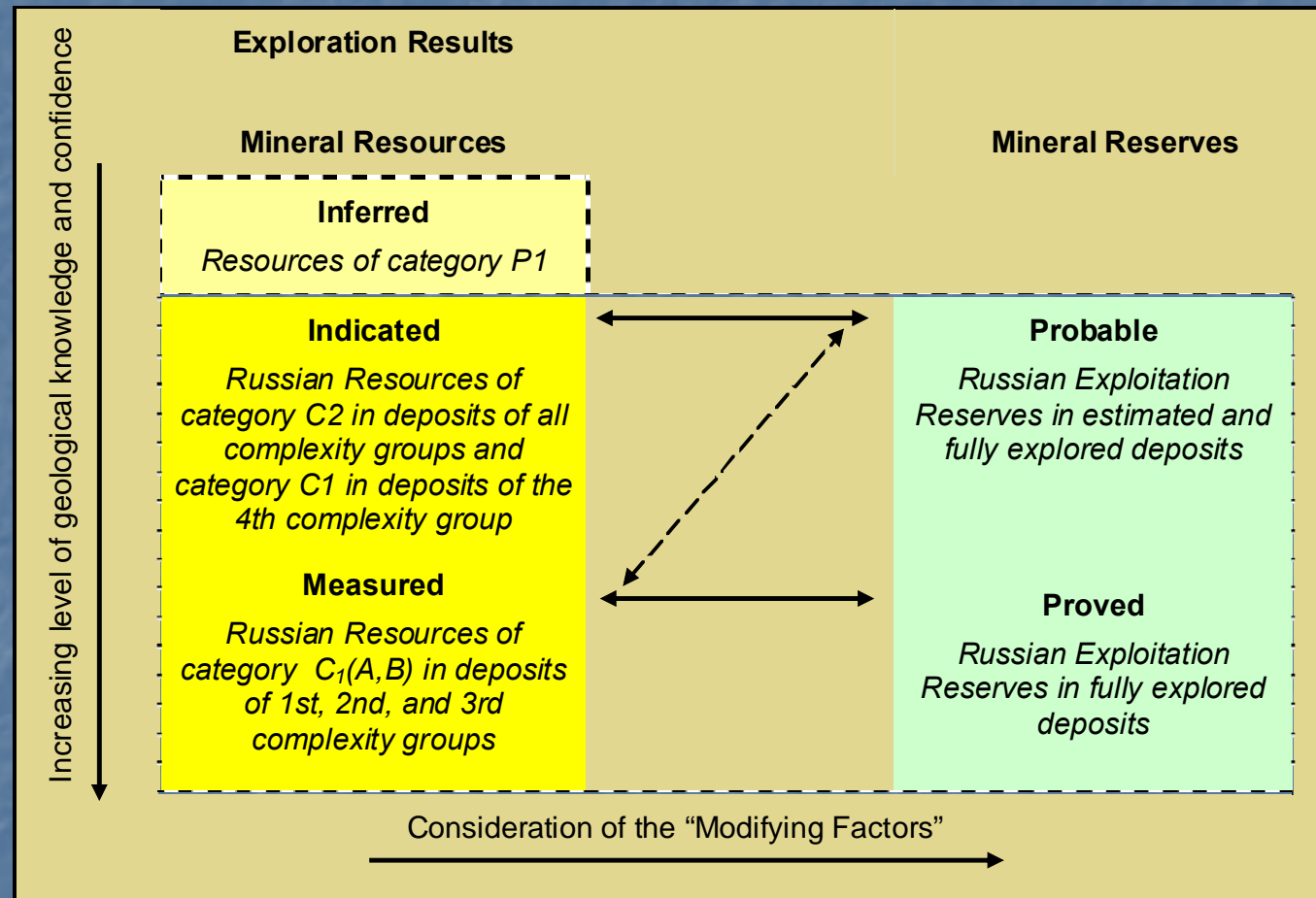
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- **Definition of Competent Person and GKZ Expert are very similar**
- **Competent Person (Expert) participation and signature are required by both systems**
- **Categories in both systems are comparable**
- **Conversion requires understanding, not mechanical**

Mapping of the Russian and CRIRSCO classifications (categorization) of Mineral Resources and Reserves



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Russian Code



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- Intended for all public reporting to the markets and investors and does not replace the existing Russian reporting system used for governmental purposes
- Development of Russian Code allows OERN to become a full CRIRSCO member as a National Reporting Organization (NRO)

Promotion of International Cooperation



ГКЗ

- Mutual exchange of knowledge and experience, similar approach to reporting reserves and resources
- Training of Russian specialists to international reporting standards
- Obtain clearer information on reserves and resources of Russian deposits for foreign experts and financial specialists and investors
- Obtain acceptable convergence and comparability of the results according to the Russian and international systems
- Obtain reporting of reserves and resources, fulfilling Russian and international requirements
- Obtain more affordable audit for small and medium Russian companies through development of national audit system and development of the Russian stock exchange system
- Development of conditions for increasing of capitalization for Russian mineral resources
- Implementation of international cooperation in development of mineral reserves