

Alignment of UNFC and Classification System of the Russian Federation

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Director General

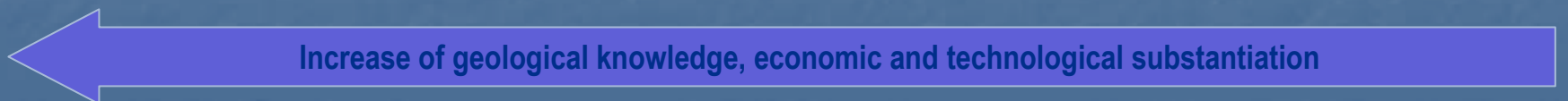
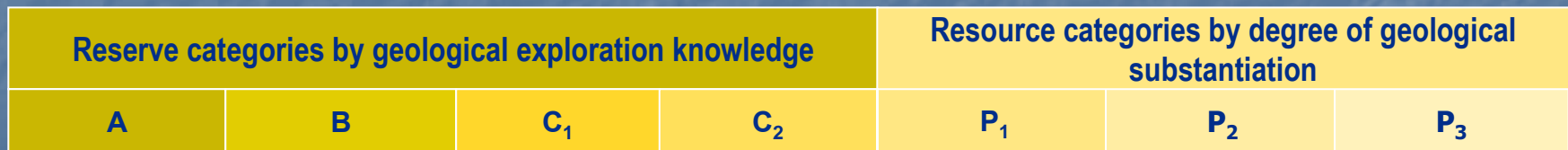
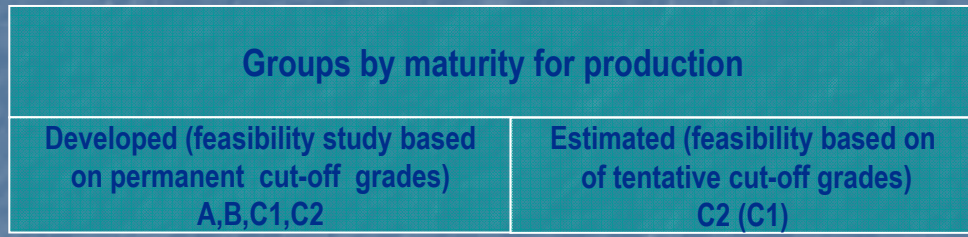
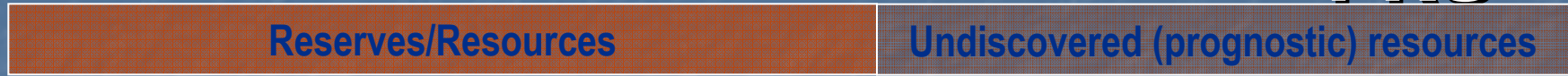
The State Commission on Mineral Resources (GKZ)

Geneva, 29 April 2010

The Russian Code *(continued)*



ГКЗ



Juxtaposition of mineral reserve/resource categories by economic viability of development



ГКЗ

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

Juxtaposition of mineral reserves/resources by project justification category (F)



ГКЗ

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

Juxtaposition of mineral reserves/resources by categories of geological knowledge



ГКЗ

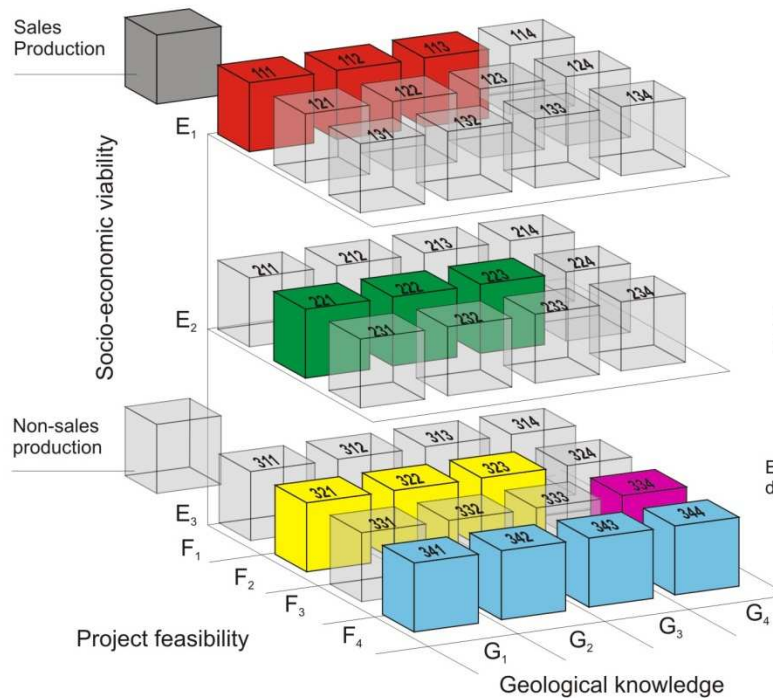
Cat.	Definitions of mineral reserve/resource categories and subcategories	
	UNFC	The Russian Classification
G1	Quantities associated with a known deposit that can be estimated with a high level of confidence	Reserves of C1 category aggregated with categories A and B at the plots of detailed study in 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

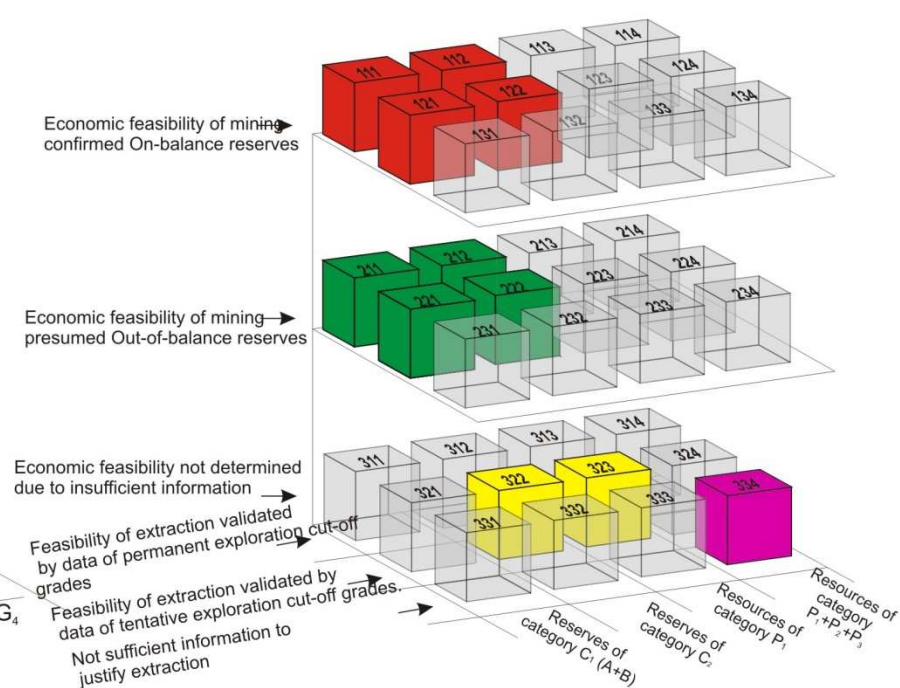


GKZ

UNFC-2009 categories and examples of classes



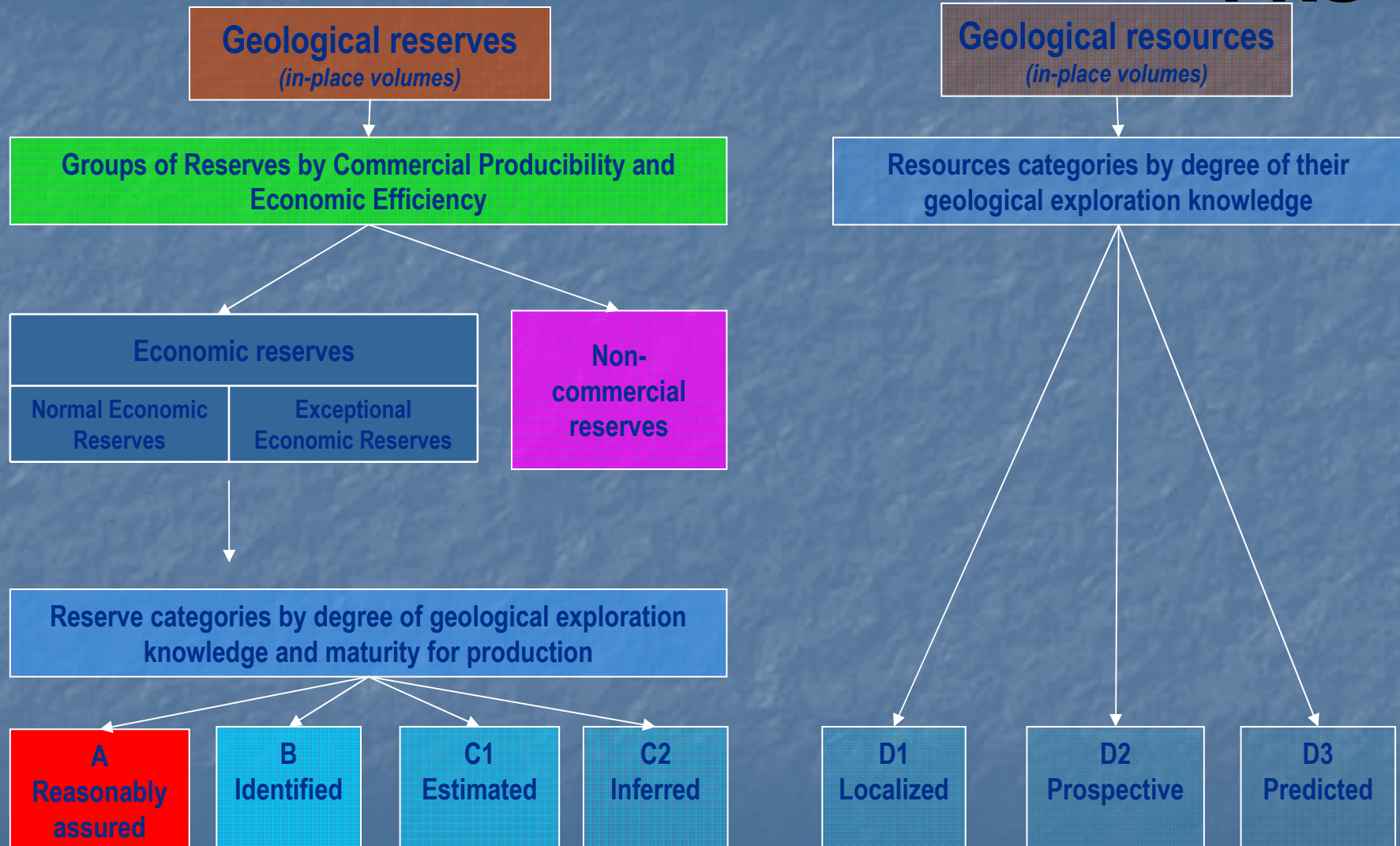
Scheme of integrating Russian mineral reserves/resources into UNFC-2009 classification system



Scheme of the Russian Classification



ГКЗ



Juxtaposition of petroleum reserve/resource categories by economic viability



ГКЗ

Cat.	Definitions of petroleum reserve/resource categories and subcategories	
	UNFC	The Russian Classification
E1	Extraction and sale has been confirmed to be economically viable	Economic reserves (Normal Economic Reserves)
<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	Economic reserves (Exceptional Economic Reserves) reserves.
<i>E2.1</i>	<i>Not used</i>	<i>Not used</i>
<i>E2.2</i>	<i>Not used</i>	<i>Not used</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	Non-commercial reserves
<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>

Juxtaposition of petroleum reserves/resources categories by degree of maturity for production



GKZ

Cat.	Definitions of petroleum reserve/resource categories and subcategories	
	UNFC	The Russian Classification
F1	Feasibility of extraction by a defined development project or mining operation has been confirmed	Production is underway or a development project (or technological scheme) has been completed.
<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	Development project is underway. Feasibility of production needs further evaluation.
<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 by a defined development project or mining operation cannot be evaluated due to limited technical data.
F4	No development project or mining operation has been identified.	<i>Not used</i>

Juxtaposition of petroleum reserves/resources categories by geological exploration knowledge



ГКЗ

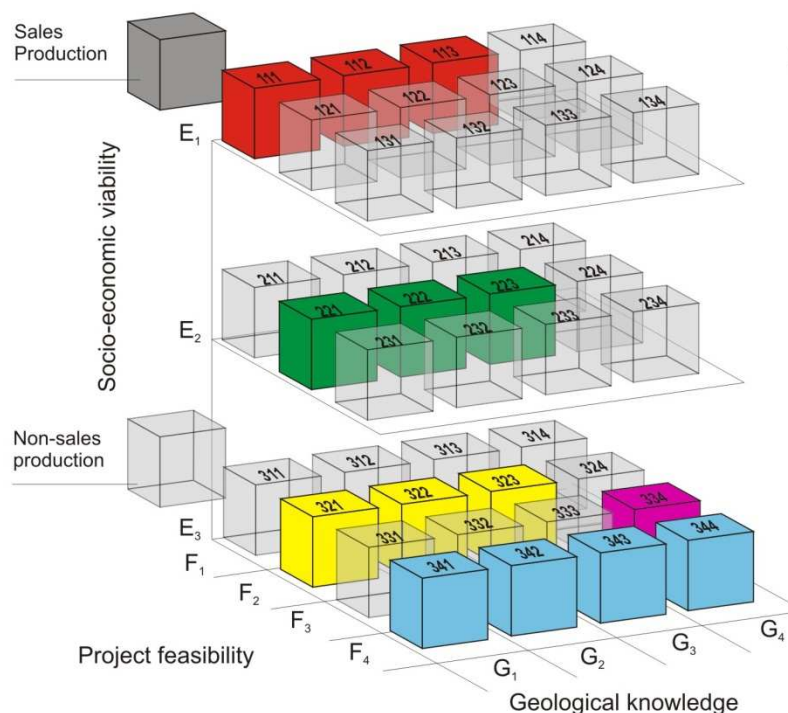
Cat.	Definitions of petroleum reserve/resource categories	
	UNFC	The Russian Classification
G1	Quantities associated with a known deposit that can be estimated with a high level of confidence	Reserves of category A
G2	Quantities associated with a known deposit that can be estimated with a moderate level of confidence	Reserves of category B + C ₁
G3	Quantities associated with a known deposit that can be estimated with a low level of confidence	Reserves of category C ₂
G4	Estimated quantities associated with a potential deposit, based primarily on indirect evidence	Resources: <i>Category D1 (localized)</i> <i>Category D2 (prospective)</i> <i>Category D3 (prognostic)</i>

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



ГКЗ

UNFC-2009 categories and examples of classes



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

