

Carbonaceous megafacies of regional metamorphism and their mineragenetic specialization

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The dislineation of mineral facies of regional metamorphism depends of:

1) many components of mineral phases with different mobility of those in mineral formation, 2) over growing progressive metamorphism to metasomatism, therefore eclogitic, granulitic, glaucophanic and zeolitic facies very often are considered as metasomatic, 3) laying on of dynamic metamorphism (tectonofacies), contact metamorphism, propylitization and hydrothermal changes with resembled mineral facies, 4) often local manifestation of different levels facies in the mapping of regions with block mosaic structure, 5) «zero» metamorphism in young platform sediments of oil and gas basins and troughs, 6) lack of the searching criterions in direct genetical relationships with mineralization.

We offer to differ monocomponent carbonaceous megafacies of metamorphism: carbonate, hydrocarbonate, coaly, oil shales, antraxolite-schungitic, graphitic and londsdeleit-adamantine. This classification based on the stationary model of geological cycle organical carbon by R.Garels and the main role of water and carbon dioxide at metamorphism of rock by D.Korzhinski. Therefore there sistematicaly inserted hydrocarbonate (HCO_3^-) facies of metamorphosed underground waters with hydrocarbon facies (such as CH_4 etc.). In general carbonaceous megafacies of metamorphism include and are correlated with facies of diagenesis, regional metamorphism and ultrametamorphism. As an example in the Torgai trough and at its flang areas calcium carbonate facies of metamorphism are specialisated to oil, gas and coal deposits in the platform cover and mineral facies of carbon, such as diamond, graphite, schungite, vanadium, jaspilite and itabiriter deposits in folded flanges of caledones of Kazakhstan and hereynides of Urals with their Pre-Cambrian blocks.