

## Precious and Rare Metals in Overburden Carbonaceous Rocks: Methods of Extraction

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**Abstract :** A problem of complex mineral resources development is urgent and priority, it is aimed at realization of the processes of their ecologically safe development, one of its components is revealing the influence of the forms of element compounds in raw materials and in the processing products. In view of depletion of the precious metal reserves at the traditional deposits in the XXI century the large-size open cast deposits, localized in black shale strata begin to play the leading role. Carbonaceous (black) shales carry a heightened metallogenic potential. Black shales with high content of carbon are widely distributed within the scope of Bureinsky massif. According to academician Hanchuk's data black shales of Sutirskaya series contain generally PGEs native form. The presence of high absorptive towards carbonaceous matter gold and PGEs compounds in crude ore results in decrease of valuable components extraction because of their sorption into dissipated carbonaceous matter.

**Keywords :** carbonaceous rocks, bitumens, precious metals, concentration, extraction

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