COMBINED DEVELOPMENT’S WAY
OF MINERAL RESOURCES’ BEDDED DEPOSITS

Description
Combined development’s way includes: stripping operations, seams’ extraction by surface mining method, and at determining zone – underground works with division of a mine field into panels of modular mining section.

The technological decisions which form the structure of modular mining section are adapted to the combined development’s (open - underground) ways of coal deposits that allows minimizing the transport characteristic of an opencast due to the internal piling and rational use of bowels. Modular mining sections in the system of open mining works have the high technical and economic parameters with designed labour capacity of workers up to 900 t/month (at a level of world parameters) and commensurable efficiency of coal output due to sharing an industrial infrastructure of coal opencast.

Technological decisions of the combined way have special efficiency at the use of inexplosive technologies at open mining works, including “Highwall miners” technology (Joint-Stock Company «Opencast Raspadskiy», Mezhdurechensk town). It is a system (in Russian interpretation) of a deep manless mining seams’ development and according to the Agreement of interaction and scientific-technical cooperation between the Institute of Coal and Coalchemistry of SB RAS and Joint-Stock Company «Raspadskaya coal company», the authors take parts in application of the mentioned way at Kuzbass’ coal deposits.

Open-underground technologies permit to begin coal output in short terms and set up the initial capital for coal underground extraction. This circumstance is of great importance for initiative creation of coal mining productive capacities and use of various patterns of ownership.

Technical appraisal and economic benefits
The opportunity to move from a complex inefficient and labor intensive industrial infrastructure of coal-mining enterprises to flexible geotechnological and organizational structures, allowing joint development of thick and medium thickness seams by open and underground ways.

Application areas
Mining industry, coal deposits of Kuznetskiy basin.

Development stage
Open-underground developments are carried out at one of the sections of Sibirginskiy opencast and in reconstruction projects of Tomusinskiy (Southern Kuzbass) and Mohovskiy opencasts (Kuzbassrazrezugol).

Patent situation
The Russian Federation’s patent is obtained (1993).

Commercial offers
The investment contract for commercial activities’ development.

Estimated cost
The price is contractual.

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