

THE WORLD ON THE VERGE OF DISCOVERY OF RICH GEM-QUALITY DIAMOND DEPOSITS

Zeilik B. S. Satpaev Institut of Geological Sciences

The known primary gem-quality diamonds deposits are placed in diatremes of kimberlites and lamproites. The primary diamondiferous deposits are regarded as "traditional" diamonds hosts with grades of up to the first ct/t.

Attention should be paid to the fact that the explosive pipes usually contain the depth xenoliths of diamondiferous peridotites and eklogites. The diamond contents of the xenoliths can be tens or hundreds or thousand times more than in kimberlites. The presence of the depth xenoliths supports the longheld concept that kimberlites only act as suppliers and transport agents for diamonds to the earth's surface.

There are grounds to suggest the probable existance of diamondiferous deposits represented by large erratic masses within the earth's mantle-primary diamondiferous peridotites and eclogites that are actually the parent source of diamonds. There deep mantle rocks, which occur at the same depth as diamonds and are transported with it in the form of large erratic masses to the surface, could form an entirely new unusual and extremely rich type of diamond deposit, without analogy among existing diamond occurrences. The new idea proposed is based on the paradigme of impact-explosive tectonics. According to the notions being developed within the frame of this concept, large meteorites and asteroids can make holes in the earth's crust and the upper mantle during powerful space bombardments against the earth.

The mantle seems to turn inside out during powerful space explosions, with its fragments creating powerful zones of serpentinite melange together with those of the "diamond layer" within the contour of giant astroblemes (giblemes). One can assume that specialised, purposive exploration for rich gem diamonds deposits in vast areas containing serpentinite melange and mega-melange may produce good results not only in Kazakhstan, but in other parts of the world as well. In other words, rich gem diamond deposits do exist and must be found.