

GEMSTONE METALLOGENY OF INDOCHINA AND ADJACENT REGIONS

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The main gemstone mines (resources) of Indochina are of ruby and sapphire. Besides, some minor deposits and many occurrences of aquamarine, topaz, jade, nephrite, spinel, tourmaline, garnet, peridot, zircon, amethyst, opal-chalcedony, jasper etc. are also confirmed.

On the basis of relatively popular existence of high-valued gemstones(ruby,sapphire), which were fixed in the typical geodynamic settings (Precambrian crystallized geoblocks, collision of continental blocks and hotspot type) and activities of subalkali-alkali/high alumina extrusive-intrusive complexes, as well as, alkali metasomatism, the territory of Indochina and adjacent regions belongs to a part of South-South East Asia gemstone (ruby-sapphire) metallogenic province from West Afghanistan-Pakistan-India-Myanmar--Thailand-Laos-Cambodia to Vietnam.It consists of three metallogenic regions: Bacbo (North Vietnam), South Indochina and Myanmar-Western Thailand. These metallogenic regions are divided into 18 gemstone metallogenic zones and more than 50 gemstone fields. It is necessary to point out that the ruby-sapphire resources are concentrated in 16 gemstone metallogenic zones yielding 26 ruby fields with 15 gemstone assemblages of ruby, sapphire, corundum, spinel, garnet,zircon, peridot..

The development history of gemstone metallogeny of Indochina has been subjected to five periods corresponding to the five metallogenic epochs: 1)Precambrian, 2)Early-Middle Paleozoic; 3)Late Paleozoic-Early Mesozoic, 4)Middle Mesozoic-Early Cenozoic and 5)Late Cenozoic, among them the 1), 4), and 5) ones played very important role.Almost gemstone mines have been exploited in placers and friable weathering crusts of gemstone-bearing hostrocks.