

Mineral and gemstone resources of Azad Kashmir and Gilgit-Baltistan (Pakistan)

M. Sadiq Malkani

Geological Survey of Pakistan, Saria Road, Quetta, Pakistan

malkanims@yahoo.com

Abstract

The northern Indus Suture and Shyok Suture and adjacent areas, and major faults with high shear density in Karakoram, Kohistan and NW Himalayas are the main target areas for minerals and gemstones exploration. The Azad Kashmir includes bauxite, laterite and ochre from Muzafarabad, Kotli and Reshian regions (disconformity); copper, gossan/red iron oxide/ochre and graphite from Neelam river; sheet mica/muscovite and lithium mica/lipidolite from many pegmatites of Neelam valley; uranium in grphitic schist of Precambrian Salkhala Formation found in Reshian region ESE of Muzafarabad; nephelene syenite from Reshian region, coal from Kotli region and limestone and marble from different areas. The reserves of bauxite, laterite and ochre are Dhanwan (alumina 41-60%, silica 18-40%, iron 1-8%) is 4.9mt, Kamroti (alumina 50-70%, silica 9-28%, iron 1-2.5) is 1.36mt, Sawar (alumina 52-56%, silica 25%, iron 5%) is 0.93mt, Dandili (alumina 34-46%, silica 36-44%) is 1.18mt, Nikial (alumina 41-46%, silica 13-35%, iron 2-27%) is 0.424mt, Goi (alumina 47%, silica 35%) is 1.103mt, Shisetar is 0.656mt, Bermoch (alumina 51%, silica 23%) is 0.2mt, Balmi (alumina 46%, silica 31%) is 0.209mt, Khandar Karela is 0.209mt and Palan is 0.283mt with total 11.454mt. Azad Kashmir represents many gemstones from Neelam valley like orange-red spessartine garnet (large crystals) in pegmatites, ruby from Nangimali-Khora-Katha-Chitta Ratta and Naril Nala areas in metalimestone and calcite veins, green tourmaline from Donga Nar pegmatites, black tourmaline (schorl) and quartz from different gem localities.

The Gilgit-Baltistan Province includes arsenic (arsenopyrite, chalcopyrite, malachite, pyrite) from Dainyor Nala (15km NE of Gilgit) and Bagrot Nala (20km N of Gilgit); bauxite from Chapursan (Hunza); copper and gold associated with gossan/red iron oxide/ochre and base metals of Karakoram and Shyok Sutures like Dainyor Nala (NW of Gilgit), Barit, Bulashgah (also magnetite pod in ophiolitic rocks), Majadar and Bor Nala, and Bagrot Nala, Henzil (10km NW of Gilgit), Sher Qila (33km NW of Gilgit), Singal (45km NW of Gilgit), Nazbar valley (22km W of Yasin), Shigari Bala area of Skardu and Golo Das and surrounding areas, iron from Indus Suture and its vicinity areas like Chilas, east of Gilgit, western, northern and eastern part of Hamosh massif forming lobe; lithium/lepidolite from Shengus of Nanga Parbat Massive (numerous pegmatites intruded in gneissic rocks); sheet mica/muscovite from many pegmatites like Astor, Bagarian and Hawa Gali; uranium from many areas; graphite from Nagar Hunza, Chalt and Chelish; and widely exposed limestones and marbles from different areas; and coal from Chapursan valley. The Gilgit-Baltistan represents many gemstones like aquamarine from Askere, Shingus, Dusso and Tisgtung of Gilgit; emerald from Khaltaro of Gilgit; moonstone from Shingus and Bulechi (Gilgit); quartz from Gilgit and Skardu; red ruby and spinel (magnesium aluminate; from hunza are more attractive than Burma), and pargasite cabochons (green amphibolite; locally purchased as Hunza emerald) from Hunza valley; rose quartz from Dusso pegmatites near Skardu; topaz from pegmatites from Bulechi, Shingus and Gone near Dusso in Skardu; gem tourmaline (pink, blue, green and black) from pegmatites of Haramosh Range like Stak Nala between Gilgit and Skardu, Bulechi and Shingus; beautiful pyrite, malachite and azurite in pegmatite near Gilgit.