

Discovery of fluorite deposits from Loralai District, Balochistan, Pakistan

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Fluorite deposits have been found for the first time in the Jurassic Loralai limestone of Gadebar, Daman Ghar, Tor Thana, Wategam, Mekhtar, Balao, Mahiwal areas of Loralai District, Balochistan. The first largest deposit of fluorite (over 0.1 million ton) are located in Dilband and in its vicinity in Kirthar foldbelt. The second largest deposit of 6750 tons of green fluorite is located in Mula-Zahri Range of Kirthar foldbelt. The third largest deposit of fluorite is found in Loralai district and its vicinity in Sulaiman foldbelt. The fluorite of Loralai area occurs as veins and as disseminated grains along faults and fractures which is hosted by the Jurassic Loralai limestone forming the anticlinal core. Fluorite has many colors such as pink, blue, light-grey, green and light-yellow. Chemical analysis shows CaF_2 varies from 95.20-95.40%, CaCO_3 from 3.20-3.40% and SiO_2 from 1.40-1.44%. Average weight % concentration of Ca is 49%, F is 45%, SiO_2 is 2.30%, CuO is 0.5%, Al_2O_3 is 2%, Fe_2O_3 is 0.08% and LOI is 1.47%. This type of fluorite can be used for acid preparation and also as gemstones. Mining of fluorite is in progress in the Mekhtar (Balao, Inde, Sande and Zhizhghi), Tor Thana and Zarah areas. The estimated reserves are about 50000 tons. Attractive gem quality fluorite crystals are found in light-green, yellow and light-blue colors from Mekhtar, Wategam Zarah of Loralai district. It is also suggested that the Jurassic strata especially limestone of Kirthar and Sulaiman foldbelts and adjoining western Indus suture Zone seems to be significant for further fluorite prospecting.