

Sagar Samrat is the only surviving rig in the World amongst the 3 mercury class vessels built in Japan. The credit for this continuous service for the last 18 years goes to the ONGC's maintenance crew for keeping the equipment in operational condition.

Sagar Samrat symbolises the growth and development of India's offshore industry and as a tribute to its service, its replica is reproduced on one rupee note by the Reserve Bank of India and is shown on TV everyday before the commencement of National Programme along with landmarks of India.

With the introduction of *Sagar Samrat*, the rig count of ONGC has increased rapidly. Today 28 rigs are operating in the western offshore, out of which ten are owned by ONGC and rest on charter hire.

In the last four years, rig manufacturing has been indigenised and *Sagar Bhushan* one of the ONGC drillship has been built by Hindusthan Shipyard, Vishakhapatnam, *Sagar Vijay* and *Sagar Kiran* are built by Mazagaon Docks Limited.

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GYPSUM IN MILL TAILING DUMPS, KOLAR GOLD FIELDS

Up to 1935 gold at Kolar Gold Field was recovered by amalgamation process with recovery of only 80% of the gold. From 1935 onwards cyanidation process was introduced. In this process, lime (CaO) was added to provide alkalinity for the dissolution of gold in sodium cyanide and also to protect the cyanide from getting oxidised. In the northern part of the Kolar Gold Fields (Old Nine Reef Mine Block) near Henty's shaft, on the Oriental lode, a small mill tailing dump exhibits well developed tiny gypsum crystals after the onset and cessation of rains. Such gypsum crystals are not seen on other dumps. The origin of gypsum can be attributed to the chemical reaction of calcium, sulphur and water vapour by capillary action. Perhaps the addition of excess lime in the early period when cyanidation process was introduced is responsible for the presence of residuary lime in the dump at the Henty's shaft. The source for sulphur can be attributed to the disintegration and decomposition of sulphide minerals such as pyrite and arsenopyrite present in the ores. The absence of gypsum on other tailing dumps may be due to the absence of residuary lime in the tailing dumps.

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