# ISOTOPIC SIGNATURE OF MIDDLE PROTEROZOIC MAGMATISM FROM BOMBAY HIGH FIELD OF WESTERN OFFSHORE OF INDIA

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Precambrian granitic basement from well BH-36 of Bombay High field of west- ern offshore of India has been dated both by Rb-Sr and K-Ar methods. Seven samples from two cores (CC-5 & CC-6)have yielded whole rock Rb-Sr isochron age of 1446±67 Ma, with an initial Sr ratio of 0.7062±0.0012. Two biotites of different size (40-50 and 50-70 mesh), separated from one sample have yielded slightly lower mineral isochron age of 1385±21 Ma. However, this age is indistinguisha- ble, within experimental error, from the whole rock isochron age indicating a common starting isotopic composition both on whole rock and mineral scale close to 1450 Ma ago. K-Ar studies carried out on four biotites separated from different sam- ples, including two size fractions used in Rb-Sr studies, have yielded mutually consistent ages with a mean of 1438±19 Ma, which is indistinguishable from the whole rock Rb-Sr age of 1446±67 Ma. The similarity in the whole rock and biotite ages obtained by different isotopic methods suggets no thermal disturbance after their emplacement around 1450 Ma ago. Present study provides the first indication of existence of an important Middle Proterozoic magmatic event around 1400-1450 Ma from the basement rocks of Bombay High field, similar to those evi- denced in the Middle Proterozoic Mobile Belts (MPMB)of Eastern Ghats,Satpura and Delhi. This finding extends the limit of MPMB to the western offshore and may have an important bearing on the re- construction of Proterozoic crustal evo- lution of western Indian shield.