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## Probability of economic mineral deposits in North Mizoram

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### ABSTRACT

The north Mizoram consists of an area 600 sq. km, incorporated in parts of 83 D/11 and 83D/12, Survey of India toposheets in 1:50,000 scale. The area has immense potential of economic minerals, as revealed by the positive findings. The area has the following minerals. Good deposits of sandstone are found in Kolasib Formation These are being used as road metal and as building stone.

There are reported occurrences of coal (Peat/Lignite) in Thinglian area. The coal occurs as thin streaks and lenses, in the fine to medium grained micaceous sandstone. The lenses are about a few m to 0.3 m wide and few cm. to 0.6 m long. The maximum-recorded length of lens was about 2 m. It has worn burrows filled up with sands and pyrite. The dense vegetation in the area prevented further study of these deposits.

Probable occurrence of uranium mineralization under reducing environment has also been indicated by several direct/indirect evidences. The relatively higher concentration of Radon<sup>222</sup> in the soils, dwellers and vegetation than in the neighbouring states of northeastern India, viz. 0.25 ppm in cereals, 0.44 in fruits, 0.77 ppm in leaves and 2.67 ppm in soils. Again, proximity to the Mogak Group consisting of Gneisses, schists, and Kalibag Granites exposed in the northern Myanmar, which may be the source region of these uraniferous sediments, may support the presence of uranium underneath. The heavy mineral assemblage in the Surma sediments are suggestive of a mixed provenance of acid igneous rocks and high grade metamorphic rocks. The Chintimpui River drains water from Arakan-Yoma Hill Ranges of Myanmar. The vegetation in the Mizoram area are still seizing uranium content present in the mobile water. The presence of carbonaceous shales with fossil wood and clay balls are further indicative of strong reducing conditions prevailed during the time of deposition.