

DELINEATION OF GROUNDWATER POTENTIAL SITES IN SITAMOU AREA, SHIVNA RIVER BASIN, MANDSOUR DISTRICT, MADHYA PRADESH, INDIA

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ABSTRACT

The delineation of groundwater potential sites based on morphometric analysis of the Shivna River Basin of Sitamou area located in Mandsour district of Madhya Pradesh, India, has been conducted. The morphometric analysis of a part of Shivna River drainage basin covering an area of 118.15 km² in Sitamou block has been conducted based on Survey of India toposheet No 45 P on 1: 50,000 scale. The drainage basin is divided into three A, B, and C sub-basins. The results of linear, areal and relief parameters specify a fairly good variation range and their significance has been discussed. The hypsometric analysis of Shivna River basin around Sitamou reveals that the sub basin C belongs to Young stage and sub basins A and B represent Mature stage of River drainage development. The inter- relationship between morphometric parameters such as number of streams and stream order and length of stream and stream orders have been illustrated. An attempt has been made using geomorphic evidence to delineate the groundwater potential sites within the vicinity of Shivna River Basin, Sitamou area.

KEYWORDS: Delineation of Groundwater, Shivna River Basin, Sitamou Area