

## WHO SHOULD HEAD THE GEOLOGICAL SURVEY OF INDIA

After one hundred and fifty years of service to the nation as the premier geological organization of India, charting all the geological work in the country, it is rather strange that a doubt has arisen in the minds of administrators as to who should head the Geological Survey of India – a geologist or any one from non-geological branch. From the year 1851 right up to 1994, the head of the organisation was always a geologist who adorned the seat and guided with distinction the destiny of this great geological organisation, one of the largest and the oldest surveys in the world. Successively the chief of the GSI, who was for long designated as Director that was later changed to Director General, could hold his ground in any scientific forum on any aspect of earth science. However, in the year 1994, it was an aberration that a geophysicist of instrumentation branch, may be eminent in his own field, was hoisted on GSI as Director General. This appointment was legally tenable on grounds of the prevailing modified rules of promotion which accepted cadre equation, though it was based on the most unscientific method. However, at that time every geologist in the organisation and even some geophysicists themselves, questioned the wisdom of such an appointment. Now the concern of earth scientists is all the more since this is likely to become a precedence for similar appointments in future.

In GSI, the work is mainly related to various aspects of geology which forms the core of all geoscientific activities. Geophysics, chemistry, drilling, mechanical engineering and administration provide only a supporting role in the investigations executed by geologists. In all such investigations, no geophysicist, chemist, drilling engineer, mechanical engineer or administrator carries out any primary investigation on their own and their work is dovetailed to

the need and guidance of the geologist in the field. These supporting disciplines normally do not have any major independent programme and they have only a supportive role. GSI is primarily a geological organisation where geologists have always been at the helm. The post of Director General (D.G) of the GSI is not merely one of technical administration, but basically one of leadership in geology, as the D.G. is expected to deal with all aspects of geological science. Without sound geological knowledge, the person holding this post would not be able to provide the required leadership and has to rely on the superficial briefing provided by his assistants even for the routine functions of the Department. Such a situation is damaging to the Department's reputation assiduously built over one and a half century. Therefore, any deviation from the position of primacy of the role of geologist would tantamount to tampering with the rhythm of working of the organisation, leading to unhealthy competition among senior officers from various supportive streams to aspire for the post of Director General. The prospect of a chemist or an engineer heading the organisation is therefore disquieting and will ultimately have destabilising effect on GSI. In the interest of proper functioning of the GSI, the Ministry of Steel and Mines, Government of India should revoke the rule of cadre equation and restore the previous position that the Director General of the GSI should invariably be from the cadre of geologists. This will do natural justice to the main scientific stream of the geological organisation. This is ultimately in the interest of the organisation and geological work in the country.

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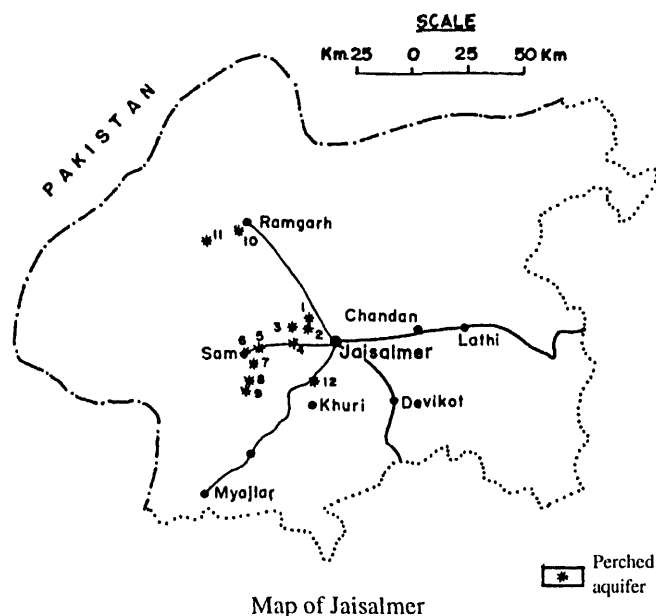
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## NOTES

### SHALLOW PERCHED WATER CONDITIONS IN JAISALMER AREA, RAJASTHAN

Water occurring under perched aquifer conditions is an important natural source available to meet the needs of the people dwelling in desert areas that are deficient in rainfall. In most cases, lithological and structural features play an important role in the development of such perched

aquifer conditions, as seen in Jaisalmer area that forms part of Thar desert in western Rajasthan. Water occurring at shallow depth under perched water conditions is exploited by 2-4 m deep shallow wells locally known as Berris. Exploitation of water from the same perched aquifer zone



through a group of such shallow wells is called Par. Such perched water zones are seen in alluvial and aeolian fills developed over the Jurassic Baisakhi shales and Eocene bentonitic clays. Other alluvial and aeolian fills and palaeochannels also host such perched waters. In interdunal areas, hard pan depressions are covered by thick aeolian fills. The shale and bentonitic clay zones, particularly those situated in depressions, when covered with loose sand, fragment or porous material, act as repositories of water during rainfall. In Baisakhi terrain, alluvial fills over Jurassic shales (Baisakhi Formation) near Rupsi, Lodurva, Chhatrel and Khaderon-ki-Dhani have become congenial for development of shallow perched

water conditions. Baisakhi shale being an impervious layer, accentuates the accumulation of water in alluvial fills. In the western part of the area near Kanoi, perched water aquifers are developed over Abur sandstone and limestone (Middle Cretaceous) in a subsidence zone near NW-SE trending Kanoi fault. Further west and southwest in the Sam-Ganga-Niba-Samdani area, Berris are located in bentonitic clay horizons. West of Bida, Berris are located at the topographic break covered by aeolian sand. This N-S trending topographic feature possibly represents a N-S trending fault. In the northern part of the area near Khuiala and Biprasar, perched aquifers are located over bentonitic clays. North of village Pithala, on Jaisalmer-Khuri-Myajlar road, alluvial fills are developed in *nala* bed over Jurassic fine grained limestone and sandstone (Jaisalmer Formation). In south-western part of Jaisalmer District, aeolian fills over the impervious hard pans along the depressions in the interdunal areas have developed into perched aquifers. Perched aquifers of Rupsi, Chhatrel, Lodurva, Khuiala, Khaderon-ki-Dhani (near Damodara), Kanoi, Ganga, Pithala are perennial, while the other perched aquifers are seasonal. The quality of water of these aquifers is potable, as they are periodically recharged during rainfall.

Depressions with impervious layers at the bottom, with a cover of porous material, are suitable areas for development of perched water zones. At places, faults have contributed to the development of perched water zones.

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## DISCUSSION

**SALINITY INTRUSION FROM TIDAL RECHARGE AND ITS IMPACT ON GROUNDWATER QUALITY IN GOA STATE** by K. Keerthiseelan, S.L. Kapoor, A. Suresha and T.R. Prakash. *Jour. Geol. Soc. India*, 2001, v.57, no.3, pp.257-262

S. Das, 18 Madhusudan Nagar, Unit 4, Bhubaneswar - 751 001 comments:

This is an interesting case study of saline water intrusion in Goa. However, I have following observation to make:

1. The study is confined to 'shallow zone'. But the shallow zone, as tapped by dug wells and borewells, has not been clearly defined.

2. Why the salinity intrusion from tidal recharge is confined only to areas adjoining the Chapora river, and not observed in the vicinity of other rivers like Mandovi, Zuari or in the coastal fringe areas?
3. Pre-monsoon (May) and post-monsoon (November) groundwater samples were collected and studied, because of seasonal water quality variations. But the river water samples were collected in November only