

The Director
Geological Survey
PO Box 401
Pretoria

SINKING OF BOREHOLE BELLVILLE AIRPORT CONSTRUCTION

Following your instructions in the above matter, I have completed a survey of the area, and wish to report as follows:

The site to be occupied by this project is approximately covered by Lots KK, 337, MM and NN on Geological Survey Sheet 247 (Cape Town). The Construction Officers in charge of the development of underground water, favored the more Northern part of the area (in the neighbourhood of the existing Offices and Workshops), for the location of boreholes, pumping installations and water tower from the point of view of convenience. In view of this I confined my work to that area and found it to be satisfactory.

The whole area to be occupied by the Airport is covered with sand dunes of no considerable altitude. The approximate altitude of the area is 250 feet above sea level, the area selected for boring operations being about 9000 yards north of the coast at False Bay. Intercalated with the Recent Sands found in the area, are Limestone bands. Underlying these are probably members of the Malmesburg Series of Cape Granite. Reference to Sheet 247 points to the Malmesbury series as the more likely alternative.

Insufficient lengths of wire limited maximum electrode separation of resistivity traverses to 102 meters separation due to the above mentioned condition. Considering the low altitude of the area and the fact that solidity shows from 250 – 340 feet it is possible that holes neighbouring on this maximum depth may yield a saline water. In view of this, it was suggested to Mr. Townsend, of the Resident Engineers Office, that site S3 be drilled first and to a maximum depth of 275 feet; so that I might return and examine bailer samples and the quality of the water at that depth. Should the water prove too saline for use, it may be advisable to drill the other sites only as far as necessary, that is, down to an impervious clay or limestone layer formation for fair solidity may be intersected at lesser depths than those figures quoted below in respect of the Various sites. Should this prove to be the case it may be advisable to limit the depths to a maximum of approximately 250 feet.

The attached rough plan shows location of the sites, which have been marked with pegs, and the list below indicates the approximate depths at which solid rock may be encountered.

**GH0080
C LISTER PIKE
GEOLOGICAL SURVEY
POSTE RESTANTE
PAARL
31 JULIE 1947**