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HYDROGEOLOGICAL ASSESSMENT OF THE HARD ROCK AQUIFERS IN PROPOSED BIYAGAMA EXPORT PROCESSING ZONE

A PROJECT REPORT PRESENTED BY

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to the Board of Study in Earth Sciences of the **POSTGRADUATE INSTITUTE OF SCIENCE**

In partial fulfillment of the requirement for the award of the degree of

MASTER OF SCIENCE IN ENGINEERING GEOLOGY AND HYDROGEOLOGY

of the

UNIVERSITY OF PERADENIYA SRI LANKA 2004

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Ground water in hard rock is important in Sri Lanka for drinking but nowadays it is also important for fulfillment of industrial requirements. An approach to understand the hydrogeology of hard rocks in proposed Biyagama Export Processing Zone was carried out. Rocks are massive and there is no matrix porosity, but secondary porosity has formed by weathering and fracturing. The thick fracture zone in gneissic rocks is identified as a productive aquifer unit. This zone is thicker in Northwestern region of the study area rather than the Southeast region. Its transmissivity is very low and variable due to the low effective porosity and aquifer anisotropy which consist of fractures. However its storage volume may be able to consider for supply water to the requirement of industrial zone. The aquifer mainly recharged by precipitation during the heavy rainfall period.