

FINAL YEAR PROJECT REPORT
ADVANCED DIPLOMA IN CIVIL ENGINEERING
SCHOOL OF ENGINEERING
MARA INSTITUTE OF TECHNOLOGY
SHAH ALAM

TO DETERMINE
THE BOUNDARY OF SALINE
GROUNDWATER INFLOW TO THE
REGION OF SUNGAI MELAKA AND
SUNGAI CENANG BASIN AT
LANGKAWI ISLAND

BY
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MAY 1996

ACKNOWLEDGEMENT

All praise be to Allah, the Almighty, the Merciful. By His Will, The author are able to complete this dissertation in partial fulfilment of the Advanced Diploma In Civil Engineering . Salam also to Nabi Muhammad S.A.W . his companion and beloved parents.

The author wishes to express his deep and sincere gratitude to his supervisors Tuan Haji Kamaruzzaman Wan Yussof for his able supervision, careful guidance, patience and kind advice which very invaluable towards the accomplishment of this study.

Special thanks also extended to En. Abdul Rahim Bin Harun, En. Jamaluddin Bin Othman and also the staffs of Geophysical section, Geological Department, Ipoh, for constant guidance and sympathetic co-operation in carrying out this study.

Finally, the author dedicate the greatest debt to his beloved wife Puan Jamaliah Hassan who gave the encouragement, support and assistance throughout the course and also his sons Muadz and Muhammad Mun'im, his daughters Nurul Attiyyah, Nur Ainul Yaqin and Nur Saiyidah Solehah who always missed him at the time of when his presence was required at home. Special gratitude also to his beloved mother who gave him much encouragement in all of his study life.

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ABSTRACT

The water resources of small islands are often very limited. Many have no surface water resources and rely on limited underground water resources. This paper presents a hydrological research to the boundary of saline ground water inflow for Langkawi Island .A geophysical survey is carried out and underground soil are analysed for their conductivity at several points along the coastal area between Sungai Melaka and Sungai Chenang basin using "Transient Electromagnetic Technique (TEM) ". The conductivity test results signify the boundary of saline ground water intrusion throughout the area (salt water has higher conductivity to fresh water). Results from the survey indicate the potential areas for fresh water resources and the technique employed enables the mapping of salt water intrusion in the study area .

CHAPTER ONE

INTRODUCTION

1.1 Small Island

Small island is defined as an island with areas less than 2000 squared kilometres or widths less than 10 kilometre (Falkland, 1991a). Alternative definitions have also been made (e.g a maximum area of 5000 kilometre square (Commonwealth Science Council, 1984).

Many small islands have areas less than 100 kilometre square and widths less than 3 kilometre. These are classified as " very small islands " (Dijon,1984). In this islands, the surface water does not exist in an exploitable form and fresh groundwater resources are very limited or non-existent, and geological conditions are not favourable to surface water storages.

1.2 Small Islands In Tropical Regions

There are numerous small tropical islands in the major oceans and smaller adjacent seas of the world. In the Pacific Ocean alone there are over 30,000