

# Large Scale Groundwater Exploration Selangor, Malaysia

## Introduction

The Kuala Lumpur area has an estimated population of 7.6 million people, and almost all fresh water supply for the city is provided by large surface reservoirs dependent on rainfall.

In 1998 the vulnerability of these reservoirs was demonstrated by a long period of drought causing a massive water shortage. Since then, the Malaysian government is focusing on extending the water supply of Kuala Lumpur to include alternative sources such as groundwater.

A SkyTEM airborne TDEM survey performed by SkyTEM ApS and DanWater Malaysia Sdn Bhd is being carried out as part of a groundwater exploration program by Sime Darby Water Resources Sdn Bhd. The TDEM data are modelled by SkyTEM ApS.

## SkyTEM airborne system setup:

- Dual TDEM moment
- 314 m<sup>2</sup> transmitter loop
- Peak moment of 150000 Am<sup>2</sup> (high moment) and 15000 Am<sup>2</sup> (low moment)
- Two receivers recording the Z-and the X-component of secondary magnetic field



Ongoing TDEM airborne survey in Selangor, Malaysia, 2008-2009.

## Benefits

- The high peak moment enables great penetration depth and the low peak moment ensures detailed resolution of near surfaces anomalies within the same flight
- The two-component receiver system secures more information of shape and orientation of a recognized conductor

## Survey objectives

The short term objective is to localize possible groundwater resources in selected areas in the state of Selangor using the SkyTEM TDEM airborne system. The results from the geophysical survey will be applied to choose optimal drilling locations in the selected areas.

The long term objective is to establish a sustainable groundwater abstraction and supply the treated water to the cities of Kuala Lumpur and Putrajaya as well as the state of Selangor.



Ongoing TDEM airborne survey in Selangor, Malaysia, 2008-2009.

## Client:

Sime Darby Water Resources Sdn Bhd Malaysia.



## Survey operator and data modelling:

DanWater Malaysia Sdn Bhd  
Malaysia



SkyTEM ApS  
Denmark

