

## **Mapping the groundwater potential areas by using the gis Method in Kg Samawang, Sandakan, Sabah, Malaysia.**

### **ABSTRACT**

This study aims to study the groundwater potential areas around Kg Samawang, Sandakan by using the Geographic Information System (GIS) method. There are few basic maps and data were used in this study, which is geology, drainage, soil type, lineament, topography, satellite images and rainfall distribution data. A total of seven thematic maps were produced including the lineament density map, drainage density map, landuse map, soil type map, rainfall distribution map, lithology map and topographic elevation map by using the ILWIS 3.0 software. All the thematic maps will be given a weightage based on its compensation to groundwater availability before being integrated based on the Hopkins Linear Equation using the Multi-Class Index Overlay model. This process will produce a forecast map of the groundwater potential at the study area. As a result of the forecast map, it is estimated that 40% of the study area has high potential of groundwater while 60% has medium, low and very low potential. It is hoped that this groundwater potential map can be used for the exploration work in the future.