Indonesia's Ocean Resource Developments

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ABSTRACT

Indonesia’s offshore Exclusive Economic Zone (EEZ) can be divided into three parts from a geological point of view:

1. Sunda Shelf: Western Indonesia’s shallow water, low tectonic activity, very stable area, mostly covered by the South China Sea

2. Sahul Shelf: Eastern Indonesia’s shallow water with very active tectonic phenomena

3. Central Indonesia: Very tectonically active deep water stretching from the east coast of Java and Kalimantan to the west coast of Irian Jaya

The east and the west are the most prospective areas for detrital mineral deposits. Thick quartary sediment exists, with barren overburden up to 50 meters thick and underlying detrital bearing layers of 10 meters and more.

The central area possesses manganese nodules, cobalt nodules and ferro-metal mud. Because the deposit is not encouraging, no additional exploration information has been gathered in the last 30 years.

Given this situation, Indonesia’s ocean research will be most valuable if it is concentrated on how to mine deep-seated, shallow water deposits.

INTRODUCTION

Coastal dredging operations have been actively carried out for 70 years mainly by tin mining companies on the nearshore of the so-called “tin islands” in the South China Sea. The tin belt in the area is a part of Sunda Shelf with an average water depth of only 25 metres from mean sea level.

The tin bearing paleochannel on the coastal area of the Sunda Shelf can be traced further offshore down to bedrock at a depth of 120 metres from mean sea level. The tin bearing layer exists down to 90 m below mean sea level. The thickest tin bearing layer drilled to date is only a 15-metre thick of fan type deposit with 25 metres overborder.