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Development Approach on Portfolio Geothermal Project in Dieng and Patuha

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ABSTRACT

Geo Dipa Energy, as an own state geothermal company have a plan to develop the last hanging fruit geothermal in java island, both dieng geothermal field and patuha geothermal field, in parallel. Management try to make it portfolio approach, not individual project approach. The benefit of portfolio approach only can reach the expectation if the project not only combine the name but it must be combine in every process start from the planning, procuring, executing and monitoring the project. It is normal to heard, that every single geothermal project have a specific characteristic, so within this paper we will explain how Geo Dipa Energy deal with all struggling condition and try to make compromising during project planning phase. any consideration at any step start from resource study, development planning optimization, plant design and procurement methodology optimization will be shared as a significant learn from the actual case study.

1 INTRODUCTION

2 PORTFOLIO PROJECT MANAGEMENT

2.1 Project Scope

2.1.1 Drilling Plan

2.1.2 Development Facilities

2.1.3 Infrastructure Development

2.1.4 Land Acquisition & CSR

2.2 Project Schedule

2.3 Project Procurement Package

GDE have selected semi-discrete contract procurement approach implemented in the expansion project, considering procurement risks and human resource plan in GDE. This semi-discrete contract approach is selected over integrated project management (IPM) and the option to have a totally discrete approach (entirely individual contracts) since GDE risk appetite is to take risks associated with relatively fixed items and to share risks associate with relatively variable items to the rig contractor and service contractor.

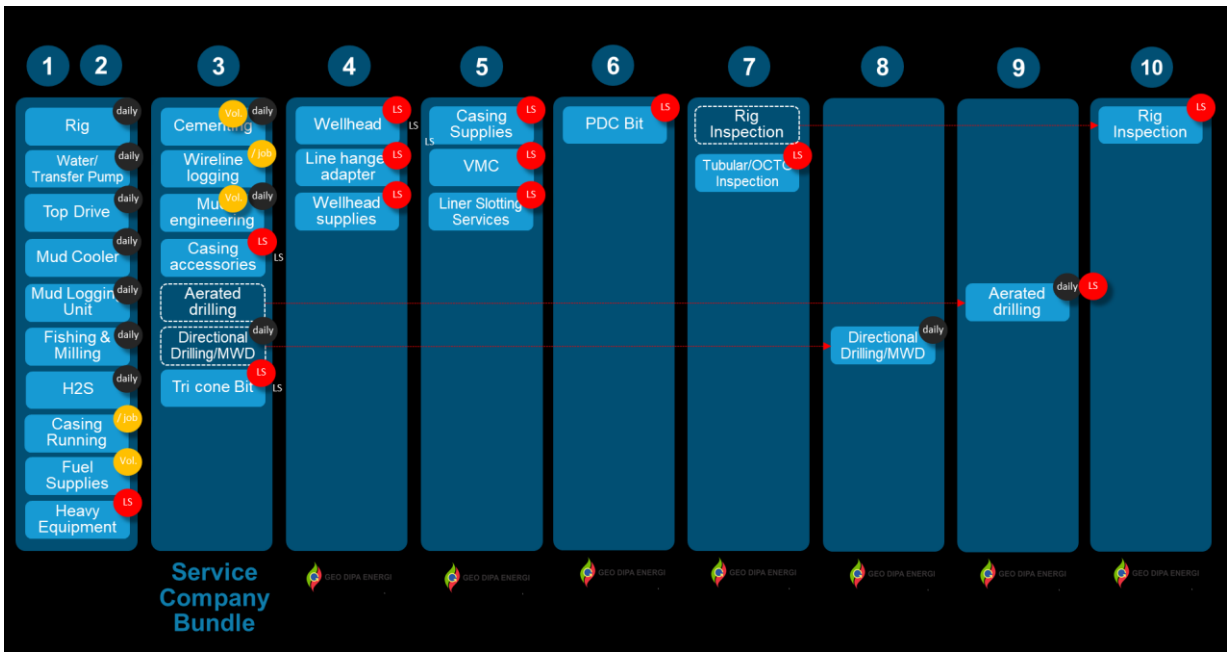

Figure xxx Illustration of GDE's drilling procurement strategy

In order to possibly have an accelerated development, EPC power plant contract will be procured almost in parallel with drilling, where Dieng may need to complete 6 (six) month pilot plant trial beforehand.

The commencement of EPC power plant procurement may not need to wait for the steam confirmation on well head, since reservoir modelling results has shown that steam is sufficient for Dieng-2 (very low resource availability risk).

2.4 Project Management Unit

GDE will require an additional and separate/dedicated organization to focus on the Dieng and Patuha expansion project, which consist of 2 (two) key structures:

- Project Office Structure
- Site Office Structure

In terms of functions, both project and site office structure will have the same function available i.e. engineering function, operation function and supporting function. This site and project office structure have reflected the necessary functions required for the major development activities, mainly drilling and surface facilities EPC, as per shown in illustration below.

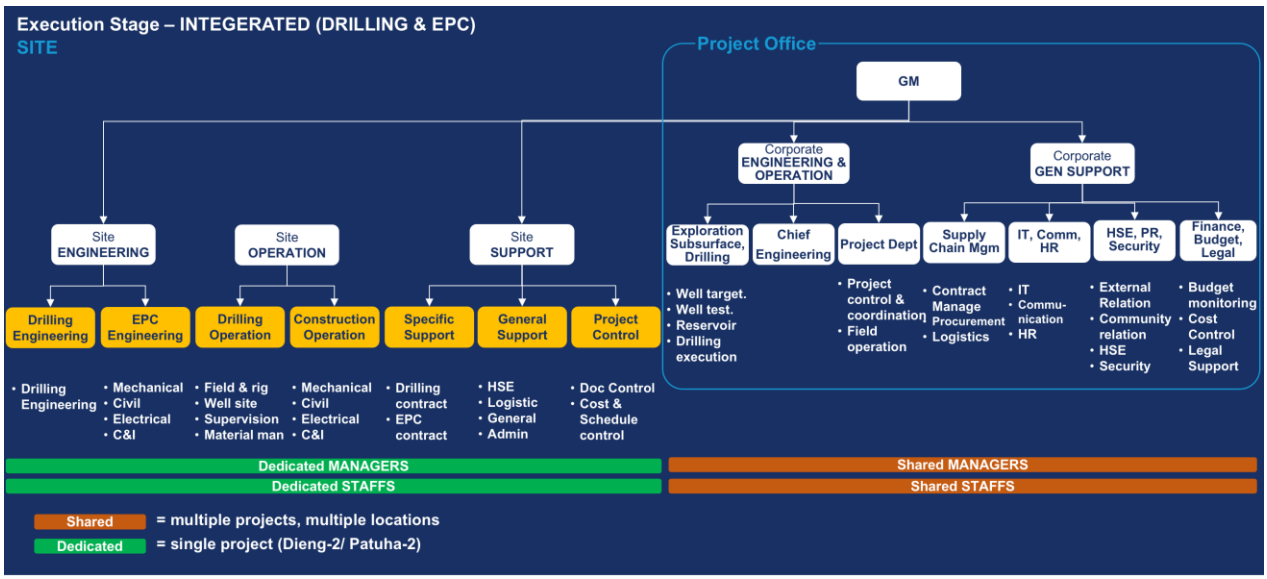

Figure xxx Project and Site Office Organization

This site and project office structure have reflected the necessary functions required for the major development activities, mainly drilling and surface facilities EPC.

GDE will prepare entire drilling functions required throughout the end-to-end drilling process from planning, engineering up to operation as per function as follows:

- Drilling engineering
- Drilling operation: field & rig, well site, supervision, material man
- Drilling support: Drilling contract, HSE, logistic, external relations and administration

The number of staffs required within each functions will need to accommodate the selected type of drilling procurement strategy.

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