ABSTRACTS

The Field of X located in Mahakam Delta East Kalimantan has been producing for more than 40 years under TEXPI operatorship. It is currently in declining phase with only 25% drilled wells producing and several production clusters are no longer in use. There are two options for managing the non-producing cluster, i.e. preservation and abandonment. The decision for non-producing cluster management takes long discussion as it involves conflicting interests between Field Operation Division which prefer abandonment for cost saving purpose and Geoscience and Development Divisions which prefer preservation to anticipate future field revival by applying new technology. Cluster X-I, one of Field X non-producing cluster is taken as case study.

The methodology used for criteria definition is literature review and expert discussion. The criteria interrelation is verified by Decision Making Trial and Evaluation Laboratory (DEMATEL) and the decision making is performed by Analytic Network Process (ANP) method. The input for DEMATEL and ANP is obtained by questionnaires distribution to TEXPI’s experts which are Operation Manager, Geoscience Manager and Development Manager and one District Manager as Top Management representative.

There are five criteria for decision making that are confirmed interrelated, namely Economic Performance, Operational Safety, Public Relation & Organization, Technology and Security. From management feedback, Geoscience Division is considered as key contributor to the decision making with priority of 71.7%. Based on the ANP simulation result, the selected option for non-producing Cluster X-I is Preservation with the weight of 62.3%.

Keywords: mature oil field, multiple criteria decision making, ANP, DEMATEL, Mahakam Delta