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**Investigation of well plan parameters for directional drilling in Gulf of Thailand****Anusara Hentoog and Jirawat Chewrourngroaj**  
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Directional drilling is commonly practical in complex structure reservoir as Gulf of Thailand. Directional well path is planning by difference well planner experiences. After, torque and drag analysis will be performed to examine drillability of well path. If torque and drag exceed limit, well plan will be adjusted in order to reduce torque and drag. Although the method is still considered effective; but the selected well design may not be the best one technically or economically. As mention, well plan is depend on well planer experience. This process may take time and effort. This study will provide optimum sets of well plan parameters i.e. kick of point (KOP), inclination (INC), build rate (BUR) based on torque and drag as criterion, to improve well planning process. The optimum parameters set and limited of well plan parameters for each well profile can be used as a guideline for all well planer experience level. The scope of this study is based on 4 well profiles; 2 dimensional (2D) build and hold, 2 dimensional (2D) build hold and drop, 3 dimensional (3D) build and hold and 3 dimensional (3D) build hold and drop. Well plan parameters are varying, while formation properties, operation conditions, drilling parameters and drillsting components are constrained. Derivative torque and drag from each well profile will be observed and analyzed. For 2D build and hold profile, the preliminary result show that maximum torque straight declines with deeper kick of point. The declined is enlarged while deviated inclination is lager. Build rate affected smaller compared to other 2 varying parameters. The limited of well design can be determined from straight line equation.

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