UPSTREAM DIRECTIVE NO 1/2011:- FIELD DEVELOPMENT PLAN FOR MATURING HYDROCARBON DEVELOPMENT PROJECTS.

In order to ensure that the hydrocarbon resources of Brunei Darussalam are appropriately explored, developed and managed to maximize its value for the sustained economic benefits of the nation, the Government of His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam hereby issues the Upstream Directive No 1/2011: Field Development Plan for Maturing Hydrocarbon Development Projects.

Field Development Plan (FDP) for maturing hydrocarbon development projects must be submitted by each operator to Energy Department at Prime Minister's Office (EDPMO) and are required to meet the following requirements as follows with the exception of well reservoir management (WRM) activities like workovers, repairs and simple re-completion :-

1. Every discovered field in the acreage under the operatorship of an operator should have the **complete full life cycle opportunities as per the SPE Petroleum Resource Maturation System (SPE-PRMS) (Attachment 1) i.e. from reserves up to the contingent resources evaluated and justification for the remaining volumes deemed unrecoverable needs to be provided**. This assessment should be done with a certain degree of rigor and quality inline with proper reservoir management practices. Operators are required to submit plans on how the contingent and prospective resources will be matured and prudently produced. These plans will be visited on an annual basis to track progress and to identify obstacles that prevent progress.

2. **The operator needs to demonstrate that the development project has the objective of maximizing economic ultimate recovery from the target field, blocks or reservoirs**. The plan must first evaluate the Technical Limit recovery taking into account the full reservoir life cycle and must cover secondary recovery

e.g. water-flooding at start of production and tertiary recovery schemes. It should clearly show where the economic limit is and what is the corresponding recovery factor achieved.

3. **For gas development projects, the emphasis should be same, demonstrating how to maximize economic ultimate recovery of the total hydrocarbon fluids inline with proper reservoir management practices, for not just the natural gas but also its condensate**. In the case of condensate gas fields, if the depletion of the reservoirs results in reservoir pressure decline causing condensate to drop out in the reservoirs resulting in unrecoverable condensate, alternative schemes such as dry gas recycling needs to be considered and presented as an option with the economics fully evaluated.

4. Overall, in the studies operators are required to come up with **holistic, life cycle area development plan,** which include the complete exploration programme, that synergies with the development plans or options of the existing discovered fields. Small discovered accumulations that may not seem to justify anything else other than primary depletion may be part of a cluster development with secondary and tertiary schemes if the exploration prospects and other discovered blocks nearby are taken into consideration.

5. At all time operators are required to demonstrate **high standard of safety, asset integrity and environmental** considerations are in-place in the Field Development Plan.

Issued by:

Office of the Minister of Energy, Prime Minister's Office
Bandar Seri Begawan, BRUNEI DARUSSALAM

Issued on: 22 September 2011

Attachment 1

SPE-PRMS (SPE Petroleum Resource Maturation System) :-