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ABSTRACT

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HAI THACH GAS FIELD – NEW 3D SEISMIC ACCELERATES FIRST GAS.

The contribution of any subsurface team to the development of a hydrocarbon resource is the calculation of HIIP, the understanding of uncertainty in that calculation and finally the creation of a reservoir depletion and data acquisition plan that will deliver the production profiles whilst mitigating against the identified HIIP uncertainty.

This paper will address the role that 3D seismic plays in this activity and the requirement to obtain and use 3D seismic of the right quality. In particular, where field complexity is moderate to high and where there is a requirement to use seismic attributes, the necessity to examine the currently available 3D seismic and the reacquisition of new 3D seismic will be discussed.

Recent advances in acquisition technology have delivered significant improvements in data quality and data examples from Hai Thach will be shown to illustrate this. Additional data will be shown to illustrate that over many fields in many parts of the world the reacquisition of 3D seismic data has delivered value to the field owners.

In the case of the Hai Thach gas field (block 05.2, Nam Con Son basin, offshore Vietnam), 3D seismic was originally acquired in 1994, reprocessed in 1996, reprocessed again in 2000 and then reacquired in 2001. The new 3D data, together with the final appraisal well drilled in 2002 have:

- Significantly improved the operators' understanding of GIIP and its uncertainty.
- Been instrumental in the elimination of the further field appraisal activities.
- Allowed the creation of a reservoir depletion plan that delivers the required production profiles, mitigates remaining uncertainty and allows the acceleration of the field development.

Critical to this success was the understanding of the field owners (PetroVietnam and BP) that a step change in 3D data quality had taken place and that re-acquisition of the Hai Thach 3D seismic would deliver greater value.