**IPTC 17255 RasGas Experience with Production Optimisation System, a Success Story**

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This paper discusses RasGas' experience in developing and implementing production optimisation technology for reservoir management, surveillance and production sustainability using PETEX software (PROSPER, GAP, RESOLVE, IFM, IVM). The objective was to achieve long term deliverability and secure contractual LNG demands by meeting targets and honouring constraints.

The main goals for the production optimisation and surveillance system are:

- Develop fit for purpose optimisation engine for well streams mixing and network production optimisation.
- Allow recommendations to the operations in response to changing operational constraints and production demands with improved consistency as and when required.
- Enable appropriate responses to short-term conditions with tactical wellstreams composition mixing recommendations.
- Integrate the data source and databases available within RasGas and easily export data to the existing platforms for display surveillance and analysis.
- Provide a seamless interface to major modelling software packages available within RasGas required by the system.
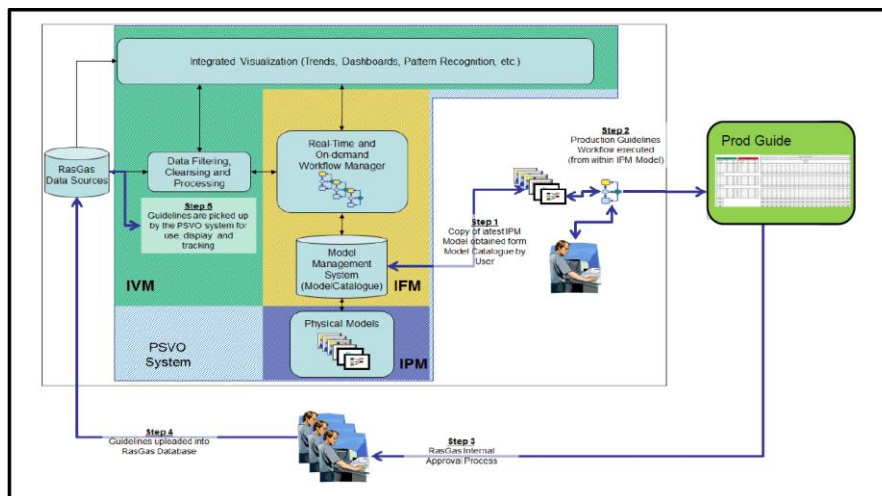


An example of the system can be seen to the left, showing the setup of the fully integrated system made up of five key components:

- Physical Models
- Model Catalogue
- Workflow Manager
- Data Manager
- Integrated Visualisation

IPM + IFM + IVM
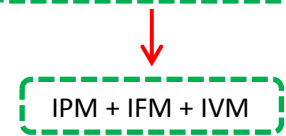
*CONCLUSIONS*

- The new system significantly improved the process of developing production guidelines for RasGas by well, based on the defined objectives and criteria of the company's strategy (when compared with the cumbersome and limited manual process).
- A real time monitoring tool was achieved for daily well management to ensure that the wells are being operated within the guidelines set by reservoir management with an 'automatic alarm' functionality to indicate any deviations.
- The system allows for different scenarios to be studied when maximising long term field recovery along with meeting the short term objectives of maximising the condensate

recovery, minimising H2S content in the produced gas, controlling the salinity in the pipelines, etc.

- The speed of the tools provides additional flexibility to respond to unexpected short term scenarios.
- Engineers could make prompt and effective decisions regarding well rate adjustments in the event of unexpected upsets, constraints or sudden increases in demand.
- The system could also be used for creating production schedules to predict any planned or intervention activities such as pigging operations, train turn around, platform shut-ins, etc.