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Technical Note

GTL Feasibility Study Phase 1 - Summary Statement

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1 STATUS

Genesis Oil and Gas Consultants have been commissioned by INFRA Technologies Ltd to undertake a 4th Generation GTL Feasibility Study. The intention is to develop the technical definition and application of INFRA.gtl technology to suit a number of alternative business models and demonstrate whether 4th Gen GTL is the enabling technology for 'Stranded Gas' and other gas monetisation opportunities.

The study by Genesis is to be undertaken in two parts:

Part 1: A preliminary assessment to demonstrate the fundamental viability of the INFRA.gtl process and replicate heat and mass balance and flowsheet consistency.

Part 2: Further develop and optimise the process for 'real world' applications and develop Class III cost estimates for applications in diverse geographical stranded and associated gas situations.

Part 1 of the study has recently been completed, the outcome of which forms the basis for this summary statement document.

2 STUDY BASIS

Genesis were provided with the flowsheet solution for the proprietary INFRA.gtl F-T process block which had been developed for a GTL pilot plant based on 10,000 t/a synoil production. A generic Steam-CO2 syngas reforming block was combine with this to develop a fully integrated GTL Hysys simulation model. A typical natural gas composition was used as the feed stock for the Genesis simulation

3 RESULTS

Benchmarking of the process model was undertaken to verify the data provided by INFRA and a good match was obtained. It was possible to replicate the efficiency of gas to liquid product generation which had been quoted by INFRA. Using the feedstock selected by Genesis the yield obtained for Synoil production per mmscf of feed gas was found to be 96.7bbl/mmscf. With further optimisation of the process scheme in phase 2 of the study there is potential for a higher conversion ratio than this.

It is noted that this conversion rate is significantly above typical GTL conversion ratios . Which is very much a function of feed gas quality and in this simulation the feed gas was 67% Methane. A lower Methane content will deliver more synoil product owing to higher carbon efficiency. Conversely, the opposite will be true if leaner gas is used. However, the overall efficiency of the process as modelled is high.

4 ECONOMICS

Based on the achievable Synoil conversion rate and the high level reverse economics thereof, it is apparent that there is scope for 4th generation GTL technology to offer in the correct circumstances a commercially attractive alternative to monetising stranded and associated gas other than for geopolitical reasons.