Expro Excellence

Accelerating LNG decision making through extended onsite analysis

Well Flow Management | Fluids

Objectives and background

- The Client required **high-confidence gas composition and contaminant data** to support a strategic LNG evaluation across assets in the **Central and West Africa subregion**
- Currently, various gas streams are flared, reinjected, or used for other purposes, across multiple sites in multiple locations and countries – an assessment of their composition was needed to determine heating value, molecular weight and Wobbe index, and to establish suitability for LNG production
- A key requirement of the analysis was the inclusion of BTEX (benzene, toluene, ethylbenzene, xylenes) and mercury, at low levels – crucial factors for LNG production, but which exceed the capabilities of a typical field compositional analysis
- Given mercury's instability and low concentration, measurements had to be conducted in proximity to the well-site to maintain the integrity of the samples
- Local options were limited, and exporting samples would have extended timelines prohibitively, primarily due to logistical restrictions and export licensing requirements

Expro Excellence

- Expro delivered a bespoke, mobile, multi-asset fluid sampling and analysis solution, providing onsite gas composition and contaminant measurements. The package was portable and self-sufficient, meaning it could be deployed in remote locations with limited on the ground infrastructure
- All sampling was conducted by Expro engineers, employing optimized techniques for the fluids encountered and the analysis required. Sampling location deficiencies were identified, reviewed with the client, and alternatives suggested
- In total, over 300 samples were analyzed onsite. Standardized workflows and robust QA/QC processes ensured data consistency across locations
- Gas composition, BTEX, and mercury measurements demonstrated excellent repeatability, with interim data shared with the client before leaving each location
- Identification of additional analytical requirements were quickly resolved with the provision of further sampling equipment so that samples could be exported for sulfur speciation analysis

Value to the client

- Expro's client were able to comprehensively evaluate the quality of their gas streams across multiple facilities and countries, and assess its suitability for the production of LNG. This enables them to monetize otherwise under-used hydrocarbons, diversifying revenue streams, reducing emissions, and addressing the increasing demand for lower carbon energy sources
- Without the data generated by Expro, and the confidence in the quality of the measurements, the client would have had to accept potentially significant uncertainties in the design of their LNG facilities – risking either under or over specifying their treatment processes
- Expro's fast turnaround and incountry analysis reduced the evaluation timeline, accelerating the decision-making process and enabling quicker time to bring LNG to market

Bespoke solution

Insight

To find out more, contact **fluids@expro.com** or visit **expro.com/wellflowmanagement**

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