

Auto-sampler Upgrade on LACT Unit Enables Continuous Export Operations

Measurement Solutions / Sampling Systems



Customer challenges

The client's LACT Unit had previously operated intermittently (3–4 days/week), allowing the in-line auto-sampler to be maintained during planned pipeline downtime.

Transition to **24/7 continuous crude export operations** resulted in the pipeline remaining permanently in service and pressurised, eliminating any window for routine auto-sampler maintenance without a full export shutdown.

Each maintenance intervention required **4–6 hours of production stoppage**, causing significant revenue deferment, inability to maintain preventive maintenance schedules, and growing risk of equipment failure and compliance exposure.

The client was considering a **full system replacement** — at high cost and with a long lead time.

O&G Solutions was selected based on proven experience in LACT systems, prior successful commissioning at the same facility, and the ability to deliver fast-track upgrades without operational disruption.

O&G Excellence

O&G Solutions engineered and deployed an **enhanced in-line auto-sampling system** capable of safe probe removal and reinsertion under full pipeline pressure.

The solution maintained full compliance with **API MPMS Chapter 8.2, ASTM D4177, and NUPRC Guidelines**.

Key technical features included a **full-bore ball valve** for safe pipeline isolation after probe retrieval, an **extended sampling probe** for representative centre-line sampling, and a **pressure-rated retriever tool** enabling safe intervention without depressurisation.

The existing flow computer PLC and controller systems were retained. Both **flow-proportional and time-based sampling modes** were preserved.

Parallel engineering and procurement were used to accelerate delivery. No hot work was required, simplifying permitting and safety approvals. Deployment was completed within **12 weeks**.

Value to client

Zero export shutdown for maintenance: Eliminated oil export interruption associated with auto-sampler servicing.

Improved system availability and reliability: Enabled full adherence to preventive maintenance schedules.

Avoided full system replacement and **saved >1,500 engineering man-hours** and **more than \$500k** in CAPEX.

Regulatory compliance assured: Continuous adherence to NUPRC sampling requirements.

Continuous operations



Safety Improvement



Regular schedule



Cost savings



Contact us

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