Integrated Solution Safeguards Production for PEMEX
Avocet and OFM software provide improved monitoring and operational efficiencies

**CHALLENGE**
- Improve production monitoring and testing
- Enhance data capture and validation
- Avoid deferred production

**SOLUTION**
- Implement operational database, standardize data capture and validation, production volumes calculation, and production report generation
- Establish new processes for data collection, monitoring, production balancing, and anomaly detection
- Introduce well economics and tax calculations

**RESULTS**
- Reliable daily production records
- An 80% reduction in data capture and processing times, and a 60% improvement in data quality
- A collaborative environment for better decision making
- Automatic flow-anomaly detection, reducing deferred production by around 30%

PEMEX’s Active Tertiary Gulf Oil (AIATG) asset is a brownfield containing over 2,100 active wells, with over half producing using an artificial lift process (rod pump and gas lift). Production information had been measured in isolation by field engineers. This—coupled with dispersed and disorganized data—made general monitoring difficult. Further, forecasting and detection of abnormal well events was almost impossible.

PEMEX needed a way for its engineers to proactively monitor and control asset production levels in real time.

**Integrated technology**
After an initial assessment from Schlumberger, it was agreed that PEMEX needed a standard methodology to calculate production volumes and integrate the data into its strategic planning activities. The proposed solution combined the Avocet* production operations software platform with OFM* well and reservoir analysis software.

The solution was implemented in three stages. The first stage addressed operational data acquisition, monitoring, and reporting. An operational database was created and implemented using the Avocet platform, as well as standardized data capture and validation workflows and production report generation. This delivered accessible, reliable, and daily production data records within a single platform—third-party programs for data gathering and validation were no longer required.

The second phase saw the creation of a collaborative Web-based environment to accelerate and improve decision making. OFM software was introduced to allow early identification and analysis of well events and production anomalies—protecting against production interruptions. Back allocation procedures were also automated.

“Integrating our production operation software has coordinated and automated our workflows, and allowed our engineers to identify and proactively mitigate operational anomalies that could interrupt production. Our decision-making processes have also been accelerated and optimized.”

Gilberto Diaz Alcocer
Operational Coordination
AIATG Asset, PEMEX

The previous production solution featured dispersed and disorganized data.
The final phase involved the introduction of an advanced engineering-calculation workflow, to forecast the production rate per well—accounting for the type of artificial lift system in use—and automatically incorporate the production rates into back-allocation procedures. Training and user documentation was also provided, alongside onsite technical and operational support.

**Reduce deferred production**

The integrated Avocet and OFM software solution updated PEMEX’s previous methodology—production workflows were integrated into an optimized collaborative environment, key processes were automated, and real-time production monitoring and adjustment was introduced. The asset now benefits from a single operational database, improved data quality, and reduced data-processing times.

Automatic flow-anomaly detection has reduced deferred production by 30%—any events or issues that could delay or disrupt production can now be identified and addressed in a timely manner. Well-repair and development planning was also improved, while automated and integrated back allocation has driven important efficiencies for the accounting team.

E-mail sisinfo@slb.com or contact your local Schlumberger representative to learn more.