

KOC Achieves Fast and Accurate Production Allocation Reporting Using Avocet Platform

Systematic data collection and standardized workflows improve data visualization, validation, and reporting, Kuwait

CHALLENGE

Reduce delays in generating production data reports, while improving operational efficiency and quality of the data.

SOLUTION

Use the Avocet* production operations software platform to capture production data and sales allocation routines for generating customized reports.

RESULTS

- Standardized well test validation workflows for enhanced visualization, validation, and reporting.
- Generated official allocation reports within 7 days of receiving the data from the gathering station.
- Improved data quality and detection of production issues.

Inaccurate data delays the reporting of gas volumes

Reliable and timely production data are the foundation of production-related initiatives, such as production and reservoir optimization as well as production accounting and reporting. Due to the large amounts of well test data collected monthly, the Kuwait Oil Company (KOC) faced challenges validating the data before running the monthly allocation reports. This often delayed KOC from delivering accurate reports to the Kuwait Ministry of Oil by several weeks.

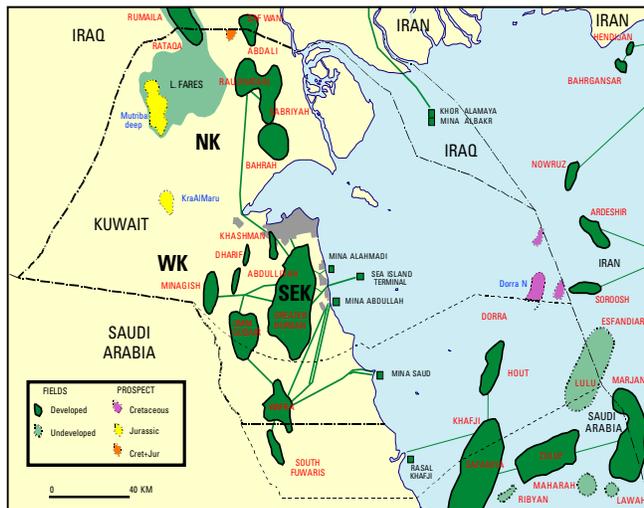
In addition, the production data management system used by KOC often provided inaccurate reporting since gas numbers were allocated based on the GOR, not on actual gas measurements. Also, running off outdated technology no longer supported by the vendor, data collection and validation proved very inefficient.

Collaborative team implements the Avocet platform for improved allocation reports

In June 2014, KOC worked with Schlumberger to implement the Avocet platform, which collects, stores, and displays all types of production operations information—surface, wellbore, wellhead, and facilities data—to enable users to view and track forecasts, production targets, budgets, and other KPIs at a corporate, business unit, or geographical level. With cross-domain workflows and integration with other Schlumberger software platforms and products, users can see their asset performance in a single environment, regardless of the asset type, size, or location.

“KOC has reaped significant benefits using the Avocet platform, which saves time in data manipulation and provides systematic QA/QC processes for data collection, automation, and transfer into operational databases from which daily operational reports can be generated.”

Hussain Al-Amji
Team Leader, Exploration and Production Information Management
Kuwait Oil Company



KOC land and offshore fields contain 26 gathering stations, connecting more than 3,000 wells.

CASE STUDY: Avocet production operations software platform provides accurate reports in less than 7 days, Kuwait

Schlumberger worked with numerous KOC personnel during the implementation phase, including field development, production operations, gas operations, system and policy, and IT teams. In close collaboration, allocation networks were created for oil, gas, and water volumes collected from 26 gathering stations, connecting more than 3,000 wells.

The Avocet platform allocates raw and sales figures on a daily and monthly basis using different estimates including well tests, model-based, produced gas-oil ratios, and field measurements. The allocated production volumes were used to generate official monthly reports for KOC management and the Kuwait Ministry of Oil.

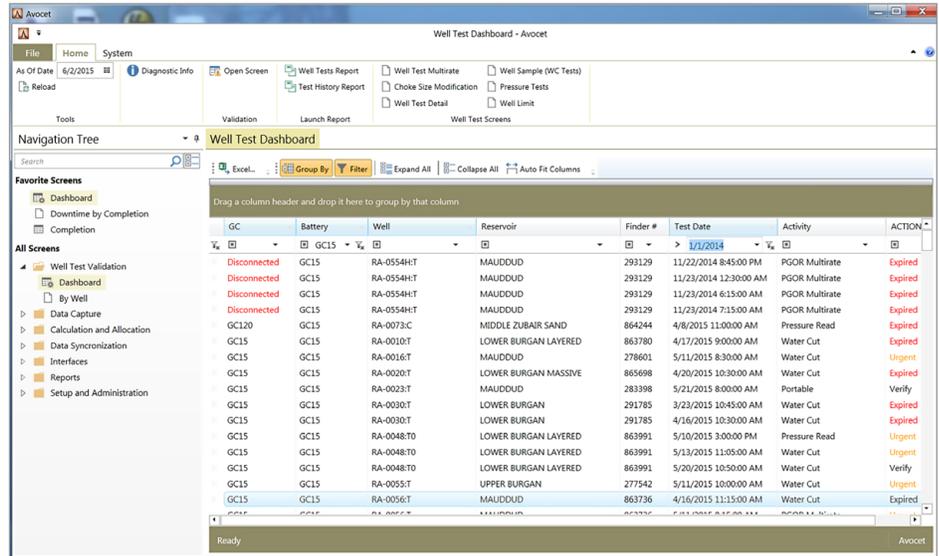
Customized dashboards were created for well test validation, which allowed KOC to keep track of the percentage of validated well tests or reject a test entirely. In addition, the well test validation screen summarized the main well test events and highlighted changes in the expected results. Workflows were also designed to validate wellhead pressure, flowline pressure, and water cut analysis.

New platform improves efficiency in generating production data reports

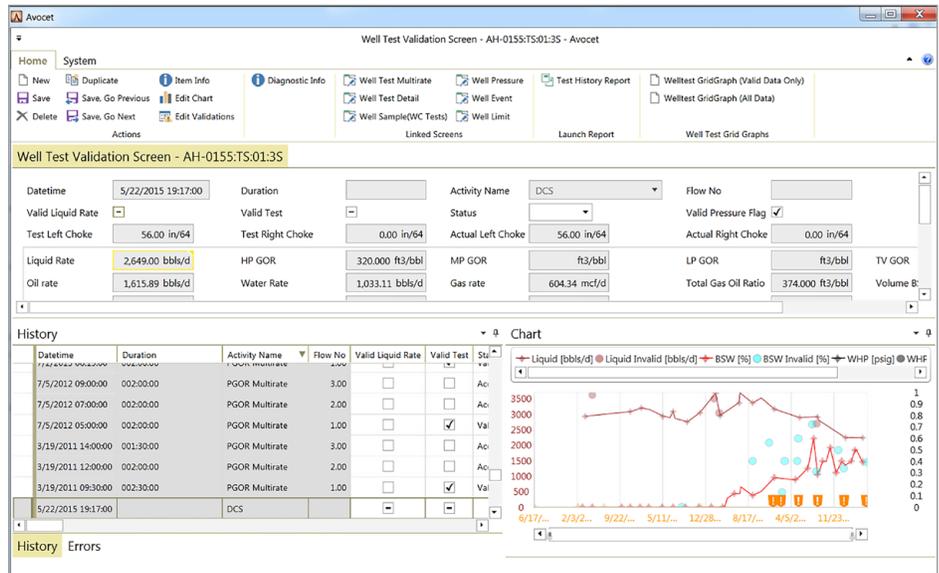
By integrating the Avocet platform with the KOC master database and gas measurement database, official allocations were generated less than 7 days after receiving the data from the gathering station.

The Avocet platform significantly improved the accuracy of the gas allocation numbers, ensuring systematic quality assurance and quality control processes for the data collection. Furthermore, daily collection and aggregation of available high-frequency data tags from data historians were automated, streamlining the process of moving data from the operational database. As a result, this new process significantly enhanced data quality and improved timeliness of data validation, approval, and reports.

Ongoing data collection process improvements are being planned by KOC. By combining the Finder* data management system and the Avocet platform, the data workflow will enable KOC field operators and supervisors to capture, verify, and report production data from wells and gathering stations more efficiently. Where it is possible, the data will be collected automatically from the KOC SCADA system, which includes meter readings, tank levels, and equipment readings. Manually captured data will be entered directly into the Avocet platform using a personal computer at the gathering stations or from a mobile device in the field.



The Avocet platform well test dashboard contains all well test events and highlights variations in expected results for well test validation.



The Avocet platform well test validation display includes the well parameters, history, and production history plot.

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