



P2[®] Well Test

Well Test Management, Multiphase Flow Rate Calculation and Reporting

The Challenge

Management of the well test process and associated raw and calculated data sets is inherently inaccurate and often confined to the assets control system.

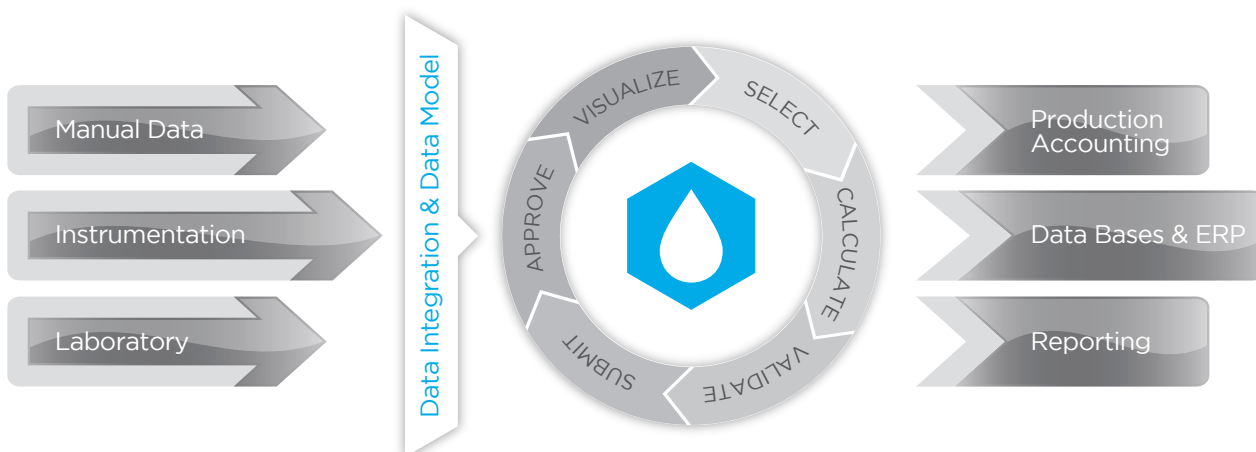
The well test process is one of the most critical functions in an Oil and Gas business. Test results are used for analysis, forecasting, and end of month production reconciliation and allocations which form the input to a number of key production decisions and management processes. Most of the well test processes today, however, produce test results that are inherently inaccurate, stemming from manual test processes and the use of disparate test interfaces and equipment. In many cases the management of the test data and associated results are limited to the assets control system (DCS / SCADA).

The Solution

P2 Well Test provides a web based user interface that allows operators and engineers to plan, execute, capture, calculate, and analyze well test data in a consistent manner, independent of any specific control system and/or data historian.

P2 Well Test automatically or manually starts and stops tests in line with the actual physical test being performed. Tests can be performed in real time or retrospectively if required. Users are able to select the stabilized period of the test on which to perform the calculations to determine the well's 24-hour multiphase production rate, thus improving the accuracy of the calculated test results. Detailed trending of well and test equipment parameters allow operators and engineers to visualize the high frequency data utilized when performing a test. Test results are consumed by the P2 Flow Rate Coefficients module to derive the polynomial variables for estimating theoretical flow rate for use in other workflows. Please see the P2 Flow Rate Coefficients brochure for further information.

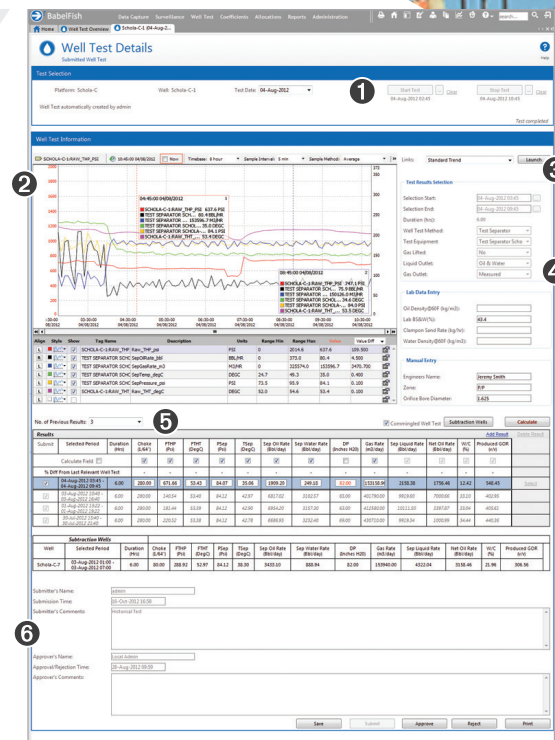
Inputs ————— Process ————— Results



P2 Well Test

P2 Well Test Details

- 1 Actual well test period.
- 2 Raw well test data (well and test equipment parameters).
- 3 Select stabilized period, using the date time picker or by moving hairlines in the trend.
- 4 Laboratory/Analyzer results captured here.
- 5 Previous and current well test results.
- 6 Submitter and Approver details and comments.



Key Features

- Abstraction of the well test process from the 'Control System' domain to the company intranet.
- Abstraction of the well test process from the well test data sources (e.g. utilise multiple historians, databases etc. as sources for well test data).
- Automatic scheduling of well tests based on well priority.
- Default library of test methods and multiphase flow rate calculations such as Test Separator, MPFM and supports manual entry of test results.
- Well Test interfaces to the P2 Server Data Dictionary, utilizing P2 Server hierarchies and templates.
- Ability to perform comingled well tests.
- Ability to perform multistep well test (e.g. multiple choke settings in a single physical well test).
- Ability to perform well tests automatically in line with or retrospectively of the physical well test (e.g. based on well valve status).
- Tests approval and validation workflows.
- Capturing of lab results for each test performed (or integrate to LIMS system to obtain qualities).
- Ability to automatically submit approved test results to external system (e.g. for allocation or reporting purposes).
- Support comprehensive users security configurations.
- Full audit trail.

Solution Benefits

- Enable operators and engineers to perform well tests across multiple control system environments over the intranet.
- Removes the implicit overhead incurred by solutions deployed within the control domain.
- Streamlines the well test initiation, validation and approval process.
- Removes error-prone and time-consuming manual data entry/manipulation process.
- Leverages structure and data source integration available in P2 Server and provides seamless integration with the P2 Product Operations Product Suite.
- Rapid configuration based on P2 Product Operations templates and default test and calculation methods.
- Ensure regularity compliance with well test scheduling and full auditing of well test dates, data, results and approval process.

Technology Vitals

P2 Well Test has a three-tier structure comprising of a web based client platform utilizing AJAX and Javascript, a Server platform using Windows Server 2008 R2 and .NET Framework to provide interoperability and processing. P2 Well Test data is stored in either Microsoft SQL Server or Oracle database, and P2 Server is utilized by P2 Well Test to retrieve data from disparate data sources.

Contact P2 Energy Solutions, enquiries@p2energysolutions.com, for more information or for a demonstration.

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