
CASE STUDY



Solutions for Premium Quality Data

Profiling Well Drilling Data After a Conversion

Implementing newer technologies can reveal significant data quality issues especially after a data conversion. This large North American Oil and Gas company began to recognize well drilling data quality issues after a major implementation and sought out ways to identify the scope of the problem.

THE CHALLENGE

After a data conversion to a new well drilling and completions system, users began to complain about the quality of the drilling data and the usability of the new application.

THE SOLUTION

Expertise and tools to assess the accuracy, completeness and consistency of the well drilling data repository to rule out system issues.

RESULT

A qualitative and quantitative analysis which became a key input to determine the best strategy to implement a data quality initiative.

TOOLKIT

Professional Services and HealthCheck™

Setting the Stage

Our client is an integrated energy and energy-related company that ranks among Canada's largest petroleum companies in terms of production and the value of its asset base. Upstream activities are currently focused in Western Canada, offshore Eastern Canada as well as overseas. In this case study, our client had just completed a conversion to a new system of record for well drilling and completion data.

The Challenge

The implementation of the new technology was hampered by missing drilling data and the quality of the converted data. Users began to question the functionality of the new technology and did not trust the information. However, it was uncertain whether the fault was with the new application or with the underlying legacy data. To determine the cause, the data needed to be assessed in two ways:

1. How good was the original data from the prior system; and,
2. How successful was the conversion in transforming all the relevant data to the new system?

The acceptance and ultimate success of the investment in the new technology relies on assess where the problem lay and how severe the problem might be.

The Solution

HealthCheck™ is a service that provides a comprehensive look at a client's data listings to evaluate the quality of the information. The package of reports is a thorough analysis used to determine scope of the problem and rate the quality of the original data.

Without manipulating the original data sets, these automated reports provided well drilling and completions quality metrics for all the relevant data. The following is a small example of some of the metrics used:



Generic Metrics

- ✓ Consistent Use of Standards
- ✓ Database Integrity
- ✓ Company Name Spellings
- ✓ Missing Well Data Attributes
- ✓ Unprintable Characters
- ✓ Consistent Date Formats

Well Drilling Specific Metrics (sample extract)

- ✓ Unique Well Identifier Conventions
- ✓ Complete Well Depth Validation
- ✓ Valid Geospatial Data
- ✓ Correct Wells attached to Wellbores
- ✓ Acceptable Elevations
- ✓ Cost of Errors & Omissions
- ✓ Well Header Consistency
- ✓ Owner / Partnership Consistency
- ✓ Consistent Unit of Measures
- ✓ Completeness of Cost Records
- ✓ Possible Well Duplication
- ✓ Mineral Land Rights

The first series of reports provided high-level analytical assessments and comparisons of the data base. Over 200 metrics were used to identify how compliant the detailed data was to generally-accepted well data conventions. Over 1000 tolerances were validated and reported. Finally, the HealthCheck™ suite of comprehensive reports was presented to the stakeholders in a user friendly format so that they could determine the best approach for fixing the data.

The Result

Our client was able to determine that the issues were related to data quality issues and not the technology. Using the detailed results of the report, they formulated a strategy to continue with implementing a data quality project .

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About DataVera

DataVera is the most sophisticated and complete set of data quality services within the Oil and Gas digital data management market. The repository of thousands of solutions is built from years of experience and many data transformations.

The service leverages an automated suite of tools enables Exploration & Producing firms to accomplish data quality transformations at a fraction of the cost in a fraction of the time often associated with manual projects.

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