
FASTER ACCESS TO GEOLOGIC DATA IMPROVES OIL EXPLORATION AND PRODUCTION DECISIONS

PROJECTWISE, BENTLEY GEOSPATIAL MANAGEMENT LET USERS FIND INFORMATION BY CLICKING A MAP

When geoscientists need to make a decision, time is often at a premium. An oil company may be facing a tight deadline on a competitive bid to develop an area. Or it may be considering alternatives to reverse a sudden decline in production at an existing field.

In such situations, it's critical to quickly assemble all information for the problem at hand. It's also important to minimize time spent on information-gathering by highly skilled scientists whose talents are needed in many areas. Total E&P Nederland B.V. faces particular challenges in this area because of the scope of its operations. The company has been engaged since 1964 in the exploration and production of natural gas in the Netherlands and in the Dutch sector of the North Sea. It is the No. 2 producer of gas in the Netherlands, and part of the global Total group based in Paris.

MULTIPLE STORAGE LOCATIONS HINDERED SEARCH FOR DATA

Total's scientists rely on geologic studies, which help locate new oil and gas reservoirs and determine ways to improve production at existing fields. Some 40,000 geospatial files maintained in the company's archives were stored in various locations such as technical archives, the drawing office, and the offices of technical assistants to the geosciences division. Finding the right location was often only the beginning of the search. Finding specific files related to a particular geographic area often required the review of a considerable selection of documents, one by one. Also, geoscientists did not always have a way of knowing whether they had found every available document related to the problem at hand. The risk always existed that they were unaware of a missing piece of information.



PROJECT OVERVIEW

Project

Geospatial index to exploration and production documents

Organization

Total E&P Nederland B.V.

BE Awards category

Geospatial: Managed Environment

Project objectives

Quickly identify and access geospatial documents in order to reduce time required to make decisions and ensure that all relevant information has been considered.

Fast facts

Users can now quickly find all documents relating to a particular geographical area simply by clicking on a map. Time to locate all documents needed has been reduced from a day or more to minutes.

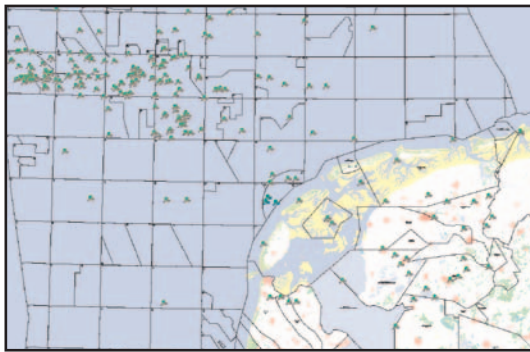
Bentley products used

- MicroStation®
- MicroStation GeoGraphics®
- Bentley® ProjectWise® V8
- Bentley Geospatial Management™
- Bentley Publisher™
- Bentley Redline™

PROJECTWISE CREATES CENTRAL REPOSITORY FOR INFORMATION

Total's geosciences division wanted to store all information in a central database that could be searched by users through a simple graphical, map-based interface. They chose to implement ProjectWise V8 and its Bentley Geospatial Management™ extension, along with Bentley Publisher™.

"In the upstream oil and gas industry, the common characteristic of different types of data is the fact that most data has a geographical location. The geospatial extension to ProjectWise deals with the fact that our graphic documents and files also have a connection to a geographical location. Bentley Geospatial Management is an easy index to documents and files," said Huub Streng, Total project manager. Additionally, "ProjectWise integrates exceptionally well with our MicroStation drawings," he said. "Support for reference files means we only need to maintain a single copy of documents to serve as a reference for other drawings.



"We can move or rename reference files without losing links, and if a file is updated it only needs to be changed in one place," Streng said. "We also like the ProjectWise file versioning system, which maintains copies of older versions, and the user friendliness of the Web interface."

ProjectWise also makes things simpler for the information technology staff, Streng said. It can be scaled to hundreds of thousands of documents without compromising performance. The implementation process is easy, and the Web interface intuitive, so that users require minimal help. Finally, the Web interface through Bentley Publisher eliminates the need for installing software on client computers.

Implementing ProjectWise involved the indexing of thousands of MicroStation design files and importing

60,000 graphical documents and files from various sources. The documents were spatially indexed using Bentley Geospatial Management's capabilities. ArcGIS thematic maps were also spatially indexed. End users were trained in the use of the new system in one-hour workshops.

FINDING KEY DATA BY NAVIGATING A MAP

"Today, the users at Total E&P Nederland can search amongst tens of thousands of documents with an intuitive Web application," Streng said.

"Entering a few keywords and clicking on a location on a map is enough to find and review all of the documents that relate to the decision process," he said.

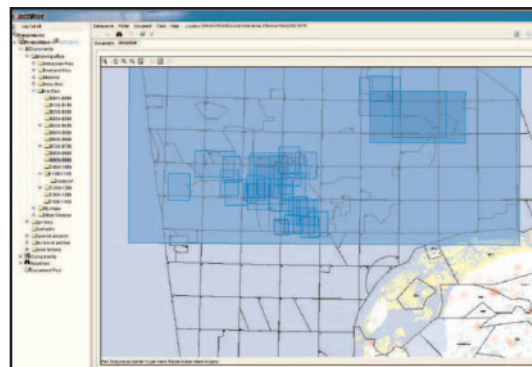
"Whatever proves useful can be gathered in a short time, and the documents are immediately available for review and searching. Geoscientists can now be confident that they have every document involving the area they are interested in."

Paper maps and documents can also be quickly located as needed by calling up a reference to the storage location in the technical archives.

"Geoscience is a very complex activity that involves many processes. Because of the complex nature of the processes and objectives of a project, it is difficult to quantify its benefits. But it's clear that the time savings have been substantial," Streng said.

"In a single project, a geoscientist can easily save a day by capturing the needed information in a fraction of the time that would have been required in the past," he said.

"Even more important, when Total is competing against other companies for a license, the ability to obtain accurate and complete information in a shorter period of time can potentially have a considerable impact on the profitability of the group."



For more information on Bentley, please visit www.bentley.com or call 1-800-BENTLEY.

