



FACTS AT A GLANCE

Company: Woodside

Website: www.woodside.com.au

Description: Woodside is the largest operator of oil and gas production in Australia. It is also Australia's largest independent dedicated oil and gas company. Woodside produces around 900,000 barrels of oil equivalent each day from an extensive portfolio of facilities, which it operates on behalf of some of the world's major oil and gas companies. It is also the most active exploration company in the deepwater provinces of Australia, having participated in around 40 percent of Australia's deepwater exploration wells. Throughout Woodside's 58-year history, it has strived for excellence in its safety and environment performance, and it aims to ensure that wherever it operates, the community benefits from its presence. Woodside strives to be a global leader in upstream oil and gas.

Industry: Oil & Gas

Country: Australia

PRODUCTS USED

- SmartPlant® Fusion

KEY BENEFITS

- Rapid capture of large volumes of data and documents
- Intelligent organization of unstructured information for accurate analysis
- Linkage of plant objects together and cross-references for easy content navigation
- Accurate representation of 'as-exists' information asset

SMARTPLANT® FUSION ENABLES RAPID ASSET DATA CAPTURE FOR WOODSIDE

Australian oil and gas operator utilizes new Intergraph® solution to rapidly capture, organize, manage, and reuse unstructured information for brownfield offshore project

IDENTIFYING GOALS

Woodside is the largest operator of oil and gas production in Australia, and also the country's largest independent dedicated oil and gas company. It produces around 900,000 barrels of oil each day from an extensive portfolio of facilities. Woodside's operated facilities include six liquefied natural gas (LNG) trains, five offshore platforms (one under construction), and four oil floating, production, storage, and offloading (FPSO) vessels.

The Ngujima-Yin FPSO is currently moored 50 kilometers off the Western Australian coast. Ngujima-Yin is 333 meters long and the largest FPSO in Australian waters. The vessel operates at a depth of 350 meters and has a daily production capacity of 120,000 barrels of oil.

Intergraph was engaged by Woodside to help prepare the engineering scope for execution. The engineering information for Ngujima-Yin was found in multiple data sources, including several international locations. Data and documents were inconsistent and in different formats as they were managed differently at each location. There were also multiple versions of drawings and documents, and without a single set of masters, it was difficult to determine the latest and most accurate versions. To bridge this gap and move forward with the safe and effective operation of Ngujima-Yin, an accurate 'as-is' status of the FPSO was required.

OVERCOMING CHALLENGES

- Identify and manage critical engineering information from multiple sources
- Determine single set of masters for accurate 'as-is' status of Ngujima-Yin FPSO

REALIZING RESULTS

Woodside chose SmartPlant® Fusion, a new solution developed by Intergraph® to specifically tackle the challenges of managing unstructured information. SmartPlant Fusion is designed to rapidly capture, organize, and make large volumes of previously unstructured information available through a simple web portal interface in a highly organized and intuitive manner. The types of unstructured information include documents, drawings, lists and sheets, 3D models, and even laser scan images and high-resolution photography. SmartPlant Fusion is the fastest and smartest way to

make documents and drawings available for decision support. It enables intuitive navigation with an accurate representation of the way things are really connected, making unintelligent information smart.

SmartPlant Fusion automatically reads the loaded information as it incorporates many industry standards (such as databases) and new technologies. Over 360,000 documents (at about 1,000 documents per hour) were loaded into SmartPlant Fusion as a single source of information, with cross-referenced links to the original files. The Intergraph solution creates associations using unique alias pattern matching, such as tag-to-document relationships, even when the tag name may not be perfect. Woodside could then navigate and view the documents via a web portal interface, as well as to analyze the information to determine the set of master versions.

SmartPlant Fusion helps to improve analysis time as it enables the engineer to quickly search on a document and view every version before making an assessment. It also allows multiple users to work within the single master data source, eliminating errors from duplication or working on outdated versions. SmartPlant Fusion contains an integral web-based portal, providing project personnel remote access to live data during the project phase, an important requirement for major projects. It is set up with Woodside's workflow processes to enable documentation approval and acceptance.

Woodside could also execute field-based data capture using SmartPlant Fusion. The collection of accurate, as-built data is highly important for an existing brownfield asset. This would normally be a tedious and potentially dangerous process as the engineer would have to physically inspect the facility and collect such data. However, as SmartPlant Fusion can capture

and organize high-definition surveying information, Woodside could use Leica Geosystems laser scanners to provide an accurate 'as-exists' view of the Ngujima-Yin FPSO. Woodside can then compare the 'as-exists' view with the 'as-is' engineering information to record the FPSO's 'as-built' status accurately. SmartPlant Fusion reduces the amount of time required on-site, which helps to reduce costs and improve personnel safety.

MOVING FORWARD

SmartPlant Fusion supports the intelligent organization of unstructured data and documents, and improves the quality and integrity of engineering information. This solution can be easily applied to existing operating assets and brownfield facilities. The 'as-exists' view provided by SmartPlant Fusion can then be integrated with Intergraph's other SmartPlant Enterprise solutions.



ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data to make processes and infrastructure better, safer, and smarter. The company's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, operation, and data management of plants, ships, and

offshore facilities. Intergraph SG&I provides geospatially powered solutions, including ERDAS technologies, to the public safety and security, defense and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is a wholly owned subsidiary of Intergraph Corporation for the SG&I U.S. federal business.

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