Companies today generate huge amounts of data regardless of industry. In the exploration and production sector of oil and gas, the large volumes of data generated by seismic and well-related exploration efforts are especially challenging. This data can take many formats: structured digital data and/or unstructured hardcopy maps, charts, files and more. Where can all of this data, both structured and unstructured, be stored? How can it be managed cost-effectively throughout its lifecycle of creation, distribution, use, maintenance and disposition? How can the quality of the data be monitored? Will it be secure? And how can interpreters and analysts search this data and access it quickly and easily for projects?

OVERVIEW

PetroBank® Master Data Store™ software provides easy, secure access to online, quality-assured E&P information. It can manage bulk seismic, well, production and other raw, technical information at a corporate, regional or national level for rapid distribution to a network of clients. As a modular, scalable, multi-client system, it can provide access to huge amounts of data in an efficient and secure environment. Data is delivered in real time on the user's desktop, enabling rapid identification and loading/unloading of business-critical information.

Ideally suited for a national data repository, the PetroBank Master Data Store software enables E&P professionals to quickly locate, access and retrieve shared or company-private information via a multi-user, multi-client central data store. Extensive security features ensure proper access rights. The solution complies with the most common industry standards and works efficiently with the existing information and application infrastructure. Master Data Store software technology includes a high performance tape indexing system designed to handle a wide variety of seismic data types. It also provides a powerful vehicle for integrating Landmark’s PetroBank data management solution into any seismic processing environment.

BENEFITS

Reduced Costs

The costs of storing and locating data can be minimized with the PetroBank Master Data Store software. The data needed is always at hand, avoiding the need for expensive duplication and management within the organization. Once data is loaded into the PetroBank system, media and formats are not an issue, a flexibility that also saves on costs in the future. The multi-client model allows partners to share infrastructure investments as well as data.
Rapid and Easy Data Access
By leveraging network technology in a proven multi-client environment, users can easily access desired project data on their desktop – even remotely. Productivity improves when users’ can complete seismic processing or interpretation tasks more quickly, without the need to reformat data or move large blocks of information around.

Easier Access for Casual Users
A new Web interface exposes information in the PetroBank Master Data Store database in a simple and intuitive manner. Designed with the broader user community in mind, this solution addresses the majority of users’ natural workflows. Its features include:
  » Internet Search Engine Capabilities
  » GIS viewing
  » Data previewing
  » Data ordering
It is equally suitable for use within an individual company or as an interface for users accessing a multi-client PetroBank Master Data Store database.

Process Orientation to Automate Best Practices
PetroBank software now has business process management support to provide best practices guidance for all types of users:
  » Consistent lifecycle tracking of data, from incoming media to end user order and data delivery
  » Data loading can be automated and standard QC criteria enforced; QC metrics are stored in the index database
  » Additional metadata is consistently extracted and can be used to facilitate search for the right data set, an especially important feature, as more and more processing versions are managed in PetroBank
  » Entitlement setting for sharing, trading and licensing of specific data follows a guided process, ensuring accuracy and completeness of the operation
  » The new user interface makes it easier for casual G&G user lacking specialist data manager training to search, select and order the right data sets
  » Review step prompts data manager to review the order before it is sent to the data bank, for example, to check that the requested data has not already been downloaded

Extensive Coverage of E&P Technical Data
PetroBank Master Data Store software technology supports storage of all essential created E&P information, including voluminous seismic and well log information.

Quality Assurance of Raw Data
The well-defined quality control processes for data loaded into the PetroBank system ensures the quality of data retrieved.
**Advanced Web Browser Access Provides Simple and Fast Data Navigation**

Landmark delivers Web-based interfaces that provide fast and powerful control of data management tasks. Interfaces can be selected to fit the specific role of the user, whether it requires heavy-duty management or quick and easy access and ordering.

**Vendor-Neutral and Scalable**

By utilizing best-of-breed architecture and database technology, The PetroBank software can easily be deployed and customized to meet the particular data delivery requirements of any corporation or national data bank. PetroBank software technology has powerful capabilities for integration with other systems and can be incorporated into a seismic processing environment.

**Multi-Layer Security to Protect Data Investment**

The PetroBank Master Data Store system provides unmatched security that provides tight access control to the network, data, systems, applications and physical system. Mechanisms for intruder alerts and disaster recovery are also part of PetroBank technology.

**FEATURES**

**Extendable/Adaptable Data Model**

PetroBank Master Data Store software consists of an index data store with a flexible data model, closely integrated with a bulk store that holds the large-volume data. This makes a very versatile combination that can be tailored to customers’ specific needs.
Seismic Data Management
Extensive seismic support covers navigation, field, pre-stack, post-stack and velocity data, as well as acquisition and processing parameters. PetroBank software is the most proven and successful solution for managing seismic data.

Well Data Management
This module covers well headers, log curves and directional data. The flexibility of the solution means that other well-related data can also be managed if required. Powerful tools are available for viewing and managing log curves.

Cultural Data Support
Data coverage here includes leases, basins, quadrants, blocks and sub-areas. The GIS tools provided allow display, data selection and ordering based on such geographic features.

Production Data
The production module provides a secure and convenient solution for holding reported production data and aggregated results. It is particularly suitable for statutory reporting at a national level.

Object Archival
As well as allowing a catalogue of physical objects and artifacts, the archive module allows total flexibility to capture important digital files and documents of any sort in a secure environment, and to view and unload them as required.

Gravity/Magnetic Survey Data
A gravity and/or magnetic survey can be conducted using a marine vessel, an aircraft, or a carried shoulder-rig. The raw readings that are acquired from the survey are corrected for local terrain variations, e.g. mountains or valleys. Gravity surveys can be especially useful if the subsurface contains horizons with bad reflecting properties for normal seismic surveys, vertical surfaces, salt domes etc.

The magnetic survey measures the magnetic flux generated by subsurface rock bodies and is especially useful if a rock layer has known magnetic properties.

Marine, Controlled-Source Electromagnetic (CSEM) Survey Data
A CSEM survey is a relatively recent data collection type used for remote identification of hydrocarbons in marine settings. CSEM is at its most powerful when interpreted within a geological framework alongside other geophysical and petrophysical data, including seismic and well log information.

Landmark offers solutions to help you deliver on your business strategies. For questions or to contact your Landmark representative, visit us at www.landmark.solutions.

“Using PetroBank® Master Data Store”, registered users can search across the content of all catalogs in a single, index-based search—and not just the metadata, but also within documents and reports. This has been a huge productivity benefit.”

INFORMATION SERVICES MANAGER, A NATIONAL GEOTECHNICAL DATA REPOSITORY