KOC Seismic Data Management System Drives Productivity

ProSource software and eSearch technology power seismic database

CHALLENGE
Develop and implement a master database for seismic data, new group workflows, and standards for managing and handling physical seismic data.

SOLUTION
Schlumberger and KOC E&P Information Management planned for a master database, containing all poststack seismic data. This involved creation of new workflows, standards, and conventions related to seismic data across several KOC groups, including research and technology, exploration, and field development. In addition, the plan addressed management of physical seismic tapes and reports.

RESULTS
- Dedicated, comprehensive seismic database.
- Effective corporate workflows.
- Increased confidence in data quality.
- Barcoded field tapes and seismic reports, stored and loaded to the eSearch physical data management system.
- Easily interrogated repository; data is found in minutes, rather than days.

"After a successful design and implementation phase, our new KOC Seismic Data Management System—based on ProSource software incorporating eSearch physical data management technology—has driven astonishing efficiencies, time savings, and increased confidence in data quality."

Mohammad Arief Joenaedy,
Snr. Engineer Petroleum Data,
KOC

SIS Information Management consultants conducted a site assessment to investigate the existing data management infrastructure, workflows, and systems. Data management procedures were not clearly documented or universally understood. Further, there were no master databases for seismic data storage. This translated to a lack of trust in the quality of the available data. In addition, the need to improve physical asset management and capture interpretation results was identified.

Based on the findings of this assessment, the project was initiated. The Schlumberger team used ProSource® E&P corporate information management system—based on Seabed® advanced E&P datastore system—to build the seismic database. After installation and configuration, standard naming conventions were defined. Seismic data was then collated from users and stored tapes, and exported from existing data management systems. The loading and quality control procedures were defined and seismic trace and navigation data was loaded to the Seabed system.

Seismic data management configuration after installing ProSource seismic software.
To successfully manage the physical data items, the team created inventories for documents and tapes. The physical inventory data were then loaded to the eSearch system for powerful, searchable storage. A gap analysis was undertaken, per asset, for any missing tapes and associated reports. The team then recommended suitable workflows to manage new seismic data going forward.

**Productivity and data confidence**

KOC now benefits from a dedicated and comprehensive seismic database. This promotes confidence in data quality, when previously there was little. Over 45,000 field tapes have been barcoded, stored, and loaded to the eSearch database. Seismic reports were also processed in this way and stored in an exploration library. Users now benefit from an easily interrogated repository, and can request any tape or report through the system.

The Schlumberger team ran a survey to define efficiency and productivity improvements realized through the deployment. Users reported significant time savings in obtaining seismic data; tasks which previously took days now take minutes using the master database.

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