**CHALLENGE**
Mitigate duplication of seismic data and organize related well, checkshot, and log data when unifying Petoro’s extensive offshore E&P database by implementing the Studio* E&P knowledge environment.

**SOLUTION**
Use the Studio Find module to identify duplicate seismic datasets for cleanup, followed by Studio environment implementation and customized user training for Petoro’s geoscientists and collaborating contractors.

**RESULTS**
- Removed duplicates and increased integrity of the seismic data.
- Reduced 7,336 seismic cubes to 761 cubes (90% reduction).
- Reclaimed storage space.
- Created project setup templates to preserve data integrity.
- Trained Petoro geoscientists on how to best use the new workflow.
- Achieved best-in-class redesigned database environment for Petoro.

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**Redefine Petoro’s E&P seismic database, eliminating duplication**

The state-owned Norwegian petroleum company, Petoro, has many external consultants working on various short-term projects within the Petrel* E&P software platform. Over several years, large quantities of duplicate data accumulated across multiple projects in multiple storage locations. With such a complex data environment, Petoro sought a solution to ensure all geoscientists in the organization, including consultants, could find and share data, limit duplication, and ensure integrity of the data.

Based on these challenges, Schlumberger recommended Petoro implement the Studio E&P knowledge environment to manage its seismic database, enabling multiuser collaboration and effective capturing and sharing of knowledge between users throughout the life cycle of the field—helping drive productivity.

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**A subset of data from Petoro’s core areas after the cleanup.**

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**Software**
Use Studio Find module to clean up the duplicate data

During the planning and design phase of the Studio environment implementation, large amounts of duplicated seismic data and related interpretations were discovered in the Petrel platform user projects. In agreement with Petoro, the implementation of the Studio environment was put on hold, and an extensive seismic cleanup project was implemented to remove duplicate data, organize the associated well data and logs, and capture interpretations from working projects.

Using the Studio Find workflow, Petoro identified every seismic cube (associated with the Petrel platform) saved on the company’s network. One unique version of each duplicate was saved to a specific network location and then moved to a clean Petrel platform project for QC. Once the cleanup project was complete, the Studio environment was implemented for Petoro.

During the implementation process, Petoro geoscientists completed a customized training program for using the Studio environment. One-on-one training sessions were also held to explain how to connect and update individual projects within the Studio environment. In addition, the existing Petrel platform life cycle guide was updated to fit the new Studio environment, and various templates were created to ensure correct setup of projects by external consultants.

Reduced overall number of seismic cubes by 90%

Schlumberger successfully completed the seismic cleanup workflow, reducing the initial 7,336 seismic cubes (including a large number of duplicates) by 90% to 761 seismic cubes. The QC methods applied to the operation ensured the integrity of the seismic data and prepared it for migration into the Studio environment. The reduced size of seismic data reclaimed a significant amount of storage space. This extensive cleanup and organization of both well and seismic data achieved Petoro’s objectives, and the customer’s geoscientists successfully adopted the new technology and workflows—making this new data management environment a best-in-class solution for the customer.

<table>
<thead>
<tr>
<th>Zone</th>
<th>Before</th>
<th>After</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTM31</td>
<td>5,971</td>
<td>699</td>
<td>89%</td>
</tr>
<tr>
<td>UTM32</td>
<td>1,357</td>
<td>56</td>
<td>95%</td>
</tr>
<tr>
<td>UTM34</td>
<td>4</td>
<td>4</td>
<td>0%</td>
</tr>
<tr>
<td>UTM35</td>
<td>4</td>
<td>2</td>
<td>50%</td>
</tr>
</tbody>
</table>

The Studio Find workflow successfully eliminated duplicate seismic data cubes within the Petrel platform and reclaimed storage space.