Newfoundland and Labrador Offshore Oil Seeps Survey

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Global Seeps Database - Newfoundland & Labrador

Late in 2010 Nalcor Energy Oil and Gas contracted the GEO-Information division of Astrium Services on a non-exclusive basis, to conduct a regional oil seep mapping and interpretation study offshore Newfoundland and Labrador. Astrium GEO-Information Services is a global leader in providing offshore oil seepage information products to the oil exploration industry.

This study covered offshore areas of Newfoundland and Labrador totaling approximately 1.5 million square kilometers and was linked to southwest Greenland. Astrium purchased a wide range of satellite data to produce the most up to date oil slick mapping project using weather compliant data from numerous satellite operators. Astrium has characterized and ranked all oil slicks shown, as either natural seepage or man-made pollution.

The data has now been collected and added to Astrium’s Global Seeps Database, which can be licensed by oil exploration companies. The mapping and classifying of oil slicks has proven to be a cost-effective, risk-ranking tool in the analysis of the prospectivity for both under-explored and mature offshore basins.

This project was funded through the Government of Newfoundland and Labrador - Department of Natural Resources’ Offshore Geoscience Data Program (OGDP). The purpose of the OGDP is to fill knowledge gaps by purchasing existing proprietary geoscience data for re-evaluation as well as acquiring new data.

Benefits
- Screening of frontier basins;
- Risk-ranking prior to new exploration;
- Obtaining spatial characteristics of the oil slick over areas of existing production;
- Planning surface geochemical programs;
- Seismic planning and integration;
- Tool to link geological interpretation from onshore to offshore; and
- Environmental monitoring: environmental risk assessment, impact statement or full environmental baseline.

Data Specification
The database is delivered as a plug and go GIS product. It is available on a local, regional or global license and contains the following deliverables:
- Scene interpretation results including scene outlines, metocean interpretation details, ship traffic and rig/platform information;
- Slick interpretation results including slick source points, slick vectors, probable slick type and confidence levels;
- Digital geo-coded calibrated data for the full scene at 100m resolution; and
- Slick subset images at 25m resolution.