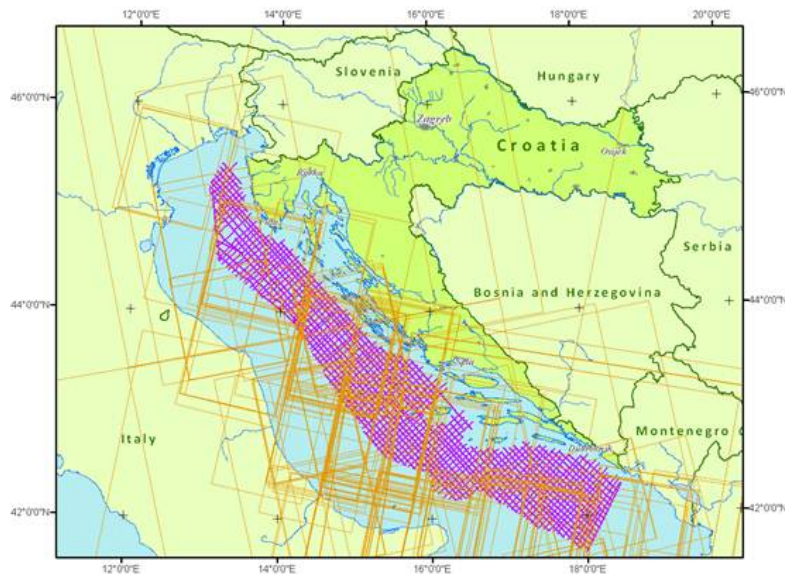


Oil seep and seismic correlation study for the Adriatic Sea

Success Story on the use of EO to assess hydrocarbon system in the Adriatic to support ongoing licensing round.

Summary



The relationships observed have been documented for the customer in a comprehensive report featuring seep information (optical and radar), seismic case studies, structural interpretation and well locations, along with other supporting datasets.

This study provides a new perspective on the hydrocarbon potential in the region, supporting both the ongoing licensing round and future exploration.

© Airbus Defence & Space. Adriatic Study Area. The purple lines represent the 2013 Spectrum seismic survey and the orange polygons are the radar scenes extracted from the Airbus DS Global Seeps database. Selected analysis was also made in Italian waters.

Project Background

In a global context of growing demand for energy, Oil and Gas companies are investing in their exploration activities, including the assessment of frontier areas and the re-evaluation of previously explored regions.

To answer this demand for hydrocarbons, the Croatian Government launched its first offshore licensing round in the Adriatic Sea. In order to assist Oil and Gas companies with their investment decisions during the licensing round, this unique study provides an additional level of insight into region including the prospectivity of Italian waters.

Issues & Needs

Airbus Defence and Space utilised their extensive experience in identifying natural oil seeps offshore, from predominantly radar satellite data, in providing seep locations and confidence levels. Going further with the level of information provided to the customer, Spectrum convolved their own optical satellite seep detection and seismic with the Airbus DS seep locations.

Results suggest a strong correlation between higher confidence slicks and structural seismic features acquired offshore Croatia in 2013, including faults, salt diapirs and anticlines. There is also an association with surface slicks and potential seismic-interpreted Direct Hydrocarbon Indicators (DHIs).

These results validate seep clusters associated with subsurface features providing proof of a working hydrocarbon system and allowing the client to understand and offshore prospects more confidently. In addition some of the slick observations have revealed hidden prospectivity, drawing attention to legitimate potential leads not previously identified by seismic interpretations alone.

Solution

Oil seep information is valuable to oil exploration companies for the detection and monitoring of natural seepage and oil pollution on the ocean's surface.

Global Seeps is a non-exclusive database of offshore oil slicks, constructed by systematically screening the world's offshore basins. It is based on satellite data acquired over the ocean to detect any oil slicks that may be present on the sea surface. Slicks are characterised to differentiate man-made pollution from natural seepage of hydrocarbon reserves.

Results & Perspectives

This de-risking product is mission critical at crucial time:

- Information related to the confidence of hydrocarbon presence in the area.
- Correlation between natural oil seeps from radar and optical data and 2D seismic data.
- New perspective on the hydrocarbon potential in the region for future exploration.
- Collaboration to support on-going licensing round.

Based on the results of the seep seismic-correlation study a series of case studies have been produced to explore further the relationships observed and these have been documented in a comprehensive written report. Also, accompanying the study is an ArcGIS project, with the project data in digital form including slick location, satellite imagery, fault interpretation derived from the seismic data and hyperlinks to the relevant case studies.

Related Info



- For further information about our services for Oil & Gas, contact us at: [@AirbusDS_GEO](#) www.geo-airbusds.com
- Spectrum is a global multi-client seismic acquisition company managing new 2D and 3D operations, with offices in Norway, UK and USA. They have a number of seismic around the world providing state of the art services, as well as collaborative products with top industry technology suppliers.