

Winter 2008

newsletter

Offshore Iceland Multi-Client Project Giving Impressive Results

Spectrum recently commenced the reprocessing of Multi-Client seismic data offshore Iceland. Initial results are most impressive.

The data, comprising 5237km of 2D seismic shot in Icelandic and Norwegian waters, includes the interesting Jan Mayen ridge. The first licensing round in the Jan Mayen agreement area is planned for early 2009 with a bid round opening in the Northern Dreki area of Iceland.

Although little prospect information is known about the area, well-documented correlation of source and reservoir rocks in adjacent Norwegian and Greenland margins give promising indications of hydrocarbons. Similar geological development could be reasonably assumed for the Icelandic prospects.

The Jan Mayen Ridge is a micro-continent with geological similarities to East Greenland and Mid Norway. It is a sliver of continental crust with sedimentary rocks of sufficient thickness and age to contain significant hydrocarbons with many formations similar to source rocks found in East Greenland. Submarine fans in the area indicate potential reservoirs and the classic trap characteristics of rotated fault blocks constitute attractive exploration targets.

For more information on the forthcoming availability of this newly-reprocessed data or any other project Multi-Client, please contact Spectrum.

Spectrum As You've Never Seen Us Before

PETEX 2008 – Booth D29

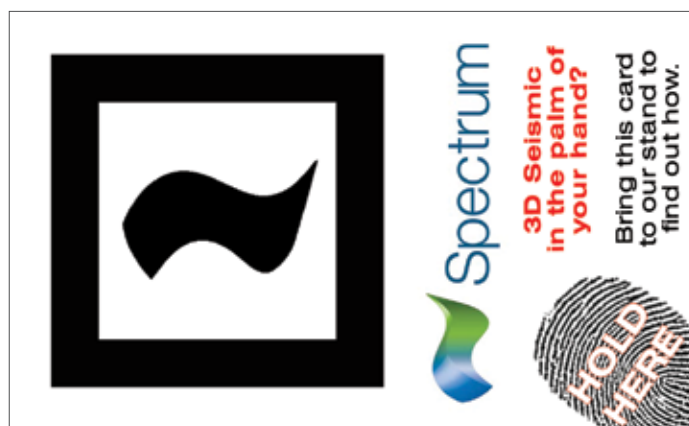
The biennial PETEX exhibition takes place between 25-27th November at Kensington Olympia, London. PETEX is the largest UK conference and exhibition dedicated to oil and gas exploration.

As the end of a very exciting year for Spectrum comes to a close, this PETEX show provides us with a great opportunity to showcase all our major successes of the last 12 months as well as introduce our ambitious plans for 2009.

Spectrum's 2008 PETEX booth is bigger and better than ever. It will be packed with information on our latest Multi-Client ventures and innovative seismic processing solutions, and will be manned by industry-leading experts, on hand to guide you through our services.

The extensive range of Spectrum Multi-Client surveys will be showcased. These include surveys in the Far East, East Mediterranean, West Coast India and an exciting new project offshore Iceland which is already producing some impressive sub-surface imaging. Each survey can be viewed on-demand.

For data processing, the enhanced QC capabilities of our new, upgraded software from Globe Claritas will be demonstrated by both Spectrum geophysicists and software experts from Claritas itself. Specialist geoscientists will also guide you through the results of our latest processing technologies and



will be pleased to discuss possible solutions to any of your geophysical challenges.

Also new to Spectrum this year, we feature an innovative method of looking at seismic data. We shall be placing seismic in the palm of your hand with the aid of a web cam and some fantastic imaging technology. You will be able to view 3D seismic cubes in a unique and fun way. Why not bring a copy of this newsletter to Spectrum's PETEX stand at D29 and give it a try?

It's not just our booth activity that may be of interest, we are also presenting four separate technical poster talks in the Poster Session area on the gallery level of the conference. These Poster Sessions will be presented by Spectrum on Thursday 27th November at the times highlighted on the back of this newsletter.

Should you be unable to attend any of these talks, the posters will be on show throughout the duration of the event and copies of each poster will be available from the Spectrum booth. The authors will also be available to answer any queries on the content of their posters.

We look forward to seeing you at PETEX 2008.

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New Multi-Client Office Opened In Singapore

September saw the opening of a new branch office in Singapore, managed by Martin Bawden. This office will focus on the demand for Spectrum's Multi-Client services in the Far East business region.

Martin is a recent recruit to Spectrum and has over 30 years experience in the seismic industry, mainly in the Asia Pacific region. Martin has recently assisted with the establishment of successful multi-client surveys offshore North-West Australia.

Martin's primary objective is to promote the company's extensive Multi-Client data library in the region including surveys from East Timor, Northern Sumatra and East Java as well as those from offshore West Australia in the Exmouth, Bonaparte and Browse basins. Martin will also assist with expanding Spectrum's Multi-Client data library in the region, adding even more surveys to our exciting database.

Come and see us...

PETEX 2008 – BOOTH D29

Kensington Olympia, London
Thursday 27th November

TECHNICAL POSTER TALKS:

10:30am – “The Petroleum potential of Deep Offshore West Coast India from newly reprocessed seismic data”

G. Roberts¹, K. Rutherford² & C. O'Brien³
(1 = Spectrum, 2 = Rutherford Exploration, 3 = Geophysics International)

11:30am – “Seismic multiples can be responsible for masking underlying data”. A case study demonstrating the unmasking of hidden seismic through the use of Eigenimage filtering.

J. DeWildt¹ & R. Oldfield¹ (1 = Spectrum)

11:50am – “A Case History of OBS Data PSDM Processing and Refine Frequency Enhancement”

D. Woolmer¹, C. Benson¹ & R. Kerr²
(1 = Spectrum, 2 = Devon Energy)

12:10pm – “Pre-Stack Depth Migration on Regional 2D Seismic Surveys – A Cost and Time Effective Way of Optimising Structural Detail”

R. Oldfield¹ & C. Benson¹
(1 = Spectrum)

Spectrum Enhances Software Suite

As part of a continued strategy of technical enhancement, Spectrum's software suite was given a significant upgrade in November with the addition of new 3rd party processing software from Globe Claritas.

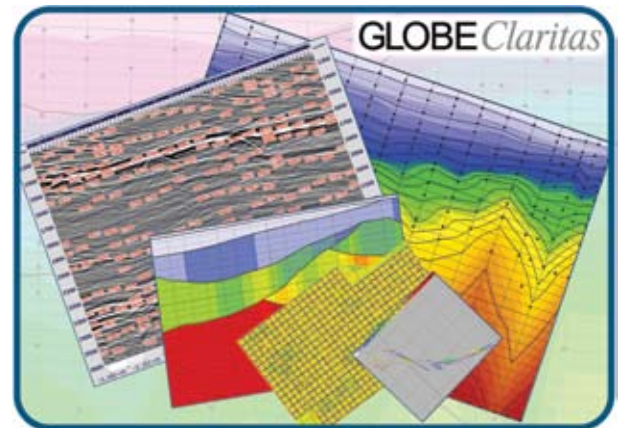
Designed by geoscientists for geoscientists, Claritas provides Spectrum's experienced geophysical teams with enhanced seismic processing tools. Alongside the latest processing algorithms, Claritas offers significantly enhanced QC capabilities and user interactivity.

One of Claritas's main features is its “Parameter Comparison Interface” giving our geophysicists the opportunity to visualise the results from many different test parameters simultaneously, ensuring optimum processing at every stage of a sequence. Meanwhile, enhanced facilities such as sophisticated velocity modelling QC and reliable, accurate automatic first break picking should reduce turnaround times for our clients whilst maintaining integrity.

Full compatibility with Spectrum's proprietary software package (SPA) means that all existing and future technologies developed by our own research teams can be easily integrated within the Claritas programming. In addition, Globe Claritas has agreed to work directly with Spectrum to evolve the software's capabilities according to the specific needs of our clients.

Claritas Enhancements include:

- Comprehensive QC suite
- Dynamic visualisation capabilities
- Ongoing development
- Full integration with SPA (Spectrum's proprietary software)
- Full 3D / 2D / Land / Marine and Depth processing suite
- Integrated wavelet processing
- Built-in statics modelling
- Automatic first break and velocity picking with sophisticated QC options



Fast Turnaround Speeds From New Middle Eastern Survey

Recent seismic processing conducted on behalf of Perenco has presented some interesting challenges for Spectrum's dedicated geophysicists.

The survey is currently being acquired in a remote mountainous area of the Middle East by Polarix Explorer. The unusual and difficult terrain requires the use of a mixture of vibroseis and dynamite sources to enable the acquisition crew to cover a variety of terrain.

In order to ensure optimal acquisition parameters, Perenco requested that seismic data be transmitted overnight to Spectrum's central computing hub in Houston, Texas. This data was then given priority for testing by Spectrum geophysicists.



Vibroseis Trucks shooting a line for the Perenco survey

Much of the early part of the testing concentrated on field acquisition tests. These were processed very quickly in order for Perenco to give advice back to the field crew. This included vibroseis sweep tests and dynamite shot hole combination tests. The aim is to optimise acquisition parameters. When the initial testing was completed, brute stacks were produced and delivered to the client to ensure a constant feedback to the field crew.

With a wide variety of terrains and acquisition techniques the data is providing some particularly interesting geological and geophysical challenges, something which Spectrum's geophysicists relish. As the field crew complete their work, Spectrum is already in a good position to deliver the final processed survey.