

Spring 2009

newsletter

Solving the Exploration Puzzle

We are soon to launch a new corporate marketing campaign based on Spectrum's expertise in solving your exploration puzzle. The campaign will build on the evolution of Spectrum's image which was designed and implemented in 2008 by our internal Brand Council.

The Spectrum brand focuses on the dedication and commitment of our experienced geophysicists. Our new campaign is designed to portray how we use these values to solve our client's challenges using Spectrum's seismic solutions.

The "solving your puzzle" theme will be used in many aspects of Spectrum's marketing mix. Look out for the puzzles and Spectrum solutions in industry periodicals, exhibitions and conferences.

Always remember that Spectrum's dedicated staff are committed to successfully solving your exploration puzzle.



Tamar: What A Difference A Well Makes

The recent Tamar natural gas discovery proves the hydrocarbon prospectivity of the Levantine Basin, an exciting, under-explored sedimentary basin in the eastern most region of the Mediterranean Sea between Cyprus and the Nile Delta.

Spectrum have experienced a significant increase in demand for our high quality depth imaged Multi-Client seismic data and associated products since Noble announced the Tamar discovery in February this year. As previously reported, the Tamar well, drilled in 5,500 feet of water, encountered more than 460 feet of net pay in three reservoirs in the Lower Miocene. The estimated mean reserves of Tamar are estimated between 5-7 TCF. Immediately following the completion of Tamar, the Atwood Hunter semi sub commenced drilling the Dalit exploration prospect in the nearby Michal licence. Noble has recently announced that this well is also a discovery with more than 110 feet of net pay in a high quality Lower Miocene reservoir.

The Levantine basin, a frontier exploration region, contains up to 10,000 metres of Mesozoic and Cenozoic sedimentary sequences. Spectrum have acquired more than 22,000 km of modern seismic data, much of which is in partnership with Fugro Multi-Client. Recently the data has been reprocessed by Spectrum with a contemporary sequence including Kirchhoff pre stack depth migration (PSDM). We are continually adding to and refining our product portfolio from the Eastern Mediterranean. The latest deliverable is the PSDM data converted to time with a smoothed velocity field. The

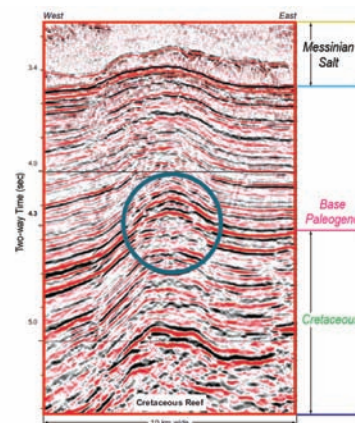


Fig 1: Typical play concept from Spectrum's East Mediterranean dataset.

objective being to provide a dataset with a more realistic image of the sub Messinian Lower Tertiary sequence in the time domain.

David Peace, the Exploration Director of EastMedCo who have interests in 3 licences in the nearby Levantine Basin acreage, has interpreted all the Spectrum Multi-Client data covering the Levantine Basin and wider Eastern Mediterranean region. David says "our evaluation of all the Spectrum data has allowed us to confirm the presence of a wide range of structural and stratigraphic play styles in the region, and we have been able to identify a good number of exciting leads around the basin. The Spectrum time data is of very good quality, and the Pre Stack Depth Migration data is excellent at not only improving the general sub-Messinian imaging of the Tertiary plays, but particularly the deeper pre-Tertiary section in the Cretaceous and Jurassic".

"The data over the Tamar & Dalit discoveries are excellent quality and illustrate an obvious flat spot within the structure. Numerous other DHI

and H/C seepage features are seen on the seismic data in the wider region and over the EastMedCo and PetroMed acreage nearby to Tamar and Dalit. We are planning both new 3D and 2D seismic programmes in the region for 2009/10."

For more information on Spectrum's excellent depth imaged data from the Eastern Mediterranean visit our website www.spectrumasa.com or contact debbie.sewell@spectrumasa.com

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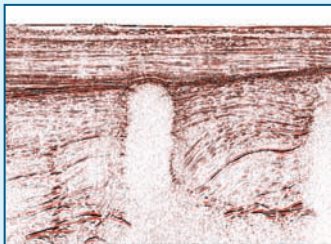
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Wave Equation PSDM Success In Eastern GoM

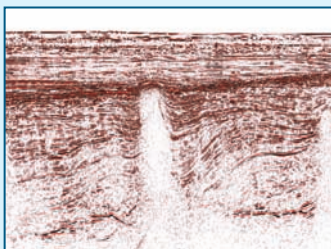
Spectrum Houston's depth imaging group has recently completed the processing of a significant volume of seismic data from the eastern Gulf of Mexico with a sequence which included Wave Equation pre stack depth migration (WEM).

The WEM method increases the focussing of seismic images in complex velocity models and overcomes the limitation of the standard Kirchhoff eikonal PSDM. The results of the advanced imaging on multi client data from the eastern Gulf of Mexico have impressed a number of our clients.

Spectrum provides both Kirchhoff and WEM on a proprietary basis from all of our regional data processing centres.



Example of salt structure imaged with Kirchhoff PSTM.



Improved imaging of salt structure using Wave Equation PSDM.

Spectrum US Demonstrates Advanced Seismic Processing Technology

Spectrum opened the doors of our newly refurbished Houston office to clients on 19th Feb, 2009. This was an ideal opportunity to demonstrate our ever increasing range of advanced seismic processing and image technology. Examples of excellent quality depth imaged data were shown from many parts of the world including both 3rd party and multi client projects.

Our Houston office has recently completed depth migrating (PSDM) a 28,000 km joint proprietary/multi-client survey from the eastern Gulf

of Mexico. We took the opportunity at the open day to showcase both Kirchhoff and Wave Equation versions of the PSDM data. Also on display were examples of the recent and very impressive multi-client reprocessing projects from the West Coast of India and the Dreki Ridge in Iceland.

Andy Cuttall, Executive Vice President of Data Processing stated that "this was the ideal opportunity to show clients that attended the open day the dramatic improvements and technological

advances made to Spectrum's seismic processing and imaging service during recent times. An increasing number of US based oil companies are becoming aware of the successful results being produced through the dedication and commitment of Spectrum's experienced geophysicists, supported by our upgraded technology".

For more information on Spectrum's data processing technology visit www.spectrumasa.com.

Spectrum Data Supports New NELP (India) Bid Round

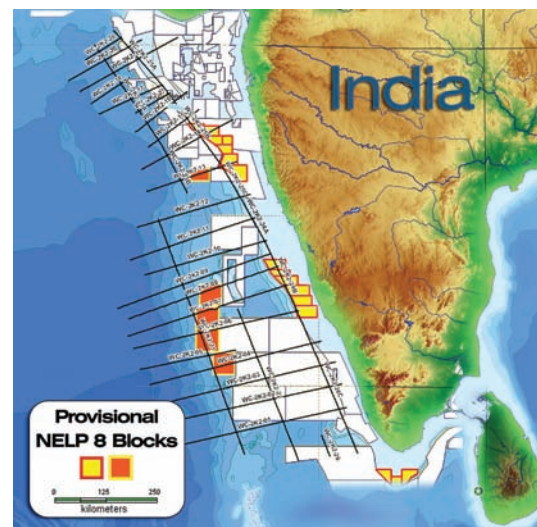
The Indian government recently announced its biggest-ever auction of exploration blocks, offering 70 areas for bidding under the first phase of the NELP-VIII licensing round. Of these blocks, 24 are deep water acreage, many of which are located in the area covered by Spectrum's regional multi-client seismic on the Indian west coast.

Last year India offered 57 blocks in NELP-VII and has already awarded 44 of these to successful bidders. Overall, forty-nine oil and gas discoveries have been made through blocks offered in previous NELP rounds with reported reserves of over 600 million tonnes.

Spectrum has experienced significant interest in its West Coast reprocessed regional seismic data which totals 12,000km of seismic. This data, acquired in 2002 by the Indian Directorate General Hydrocarbons (DGH), was recently reprocessed by Spectrum using a contemporary sequence including PSTM and PSDM. The results have impressed many clients and geologists.

Spectrum's depth imaging sequence considerably improved the final result and allowed geoscientists to recognise a key sedimentary section below basalt formations. The basalt had previously masked pre-Tertiary geology in the deep water offshore areas. The data now indicates deeper Mesozoic plays and has consequently upgraded the hydrocarbon potential of West Coast India.

A paper on this reprocessing and the exciting new plays is being given at this year's AAPG Annual Convention & Exhibition in Denver Colorado, 7th – 10th June. Please contact Spectrum via our website www.spectrumasa.com if you require more information on the regional West Coast India data.



Spectrum's West Coast India regional reprocessing. Available now from our multi-client department.