

Petrotrin's Exploration & Production Operations uses new horizontal drilling technology

Petrotrin-Exploration & Production Operations' relentless quest to pursue methods of winning proven hydrocarbons reserves using cutting-edge horizontal drilling technology has once again paid rich dividends.



The Exploration & Production team at work, analysing drilling progress. Second from right, seated, is Manager Prospect Generation Egbert Waterman.

Though horizontal drilling has been done in the Soldado field in the recent past, it focused mainly on "thick" reservoirs where the risks are less and the reservoirs were already exploited by conventional vertical and deviated wells.

Schlumberger introduced the PERISCOPE-15 Geo-steering Horizontal Drilling Technology. The Management team of Petrotrin-Exploration & Production Operations and the Prospect Generation team lead by Egbert Waterman were convinced that it was the technological answer to tapping into stranded reserves, and one, which the company should grasp if it wanted to arrest declining production. We need to stay abreast with technology if we want to continue economically exploiting the old fields for new oil, he told his team. The successful application of the 'latest' tools for the drilling and successful completion of S-854ST Lateral signaled the advent of a new era of drilling. Petrotrin-Exploration & Production Operations is the first oil company in the Republic of Trinidad and Tobago and the North Western Hemisphere to utilize Schlumberger's PERISCOPE-15 Geo-steering tools and had remarkable success on the first well.

The team included Leila Seegobin Senior Geologist, Fazal Hosein Consultant Geologist, Rajindra Maraj Geologist, Gwenneth Graham Reservoir Engineer, Sheldon Sutherland Consultant Drilling Engineer, and was witnessed by Kendal Dolly, a Ministry of Energy engineer. They worked with the Schlumberger Specialists in Trinmar's Workstation while Dion Joseph, Trainee Geologist, accompanied the Schlumberger Directional Engineers and technicians on the rig. Considering that the target reservoir was actually found to be between 2' – 10' thick, traversing this sand horizontally ($\pm 85^\circ$) was extremely well-executed.

"I am pleased that we were willing to embrace the new technology in the pursuit of reserves recovery; which otherwise would have been uneconomical to exploit," commented Graham. "It was an extremely rewarding experience particularly having to make quick 'real-time' geological decisions in a reservoir that's not only thin but stratigraphically complex." said Leila Seegobin in her capacity of Operations Geologist.

"Notwithstanding the challenges encountered, I wish to seize the opportunity to congratulate you on a job well done" General Manager Exploration and Development Mr. Allan Russell told his team. "I particularly want to express my appreciation at the rapid adaptation into the use of new technology".

The well was completed and produced initially at rates of 895 Bopd of light crude. With ongoing evaluation on the lessons learnt from drilling of S-854ST Lateral, tool fine-tuning is in progress and already another candidate is being evaluated for exploitation in a similar reservoir environment and using an even more advanced tool.