The Exploration Evolution of Marmalard Field:A Result of Improved Seismic Algorithms and Methods

Ed Zinni[1]

[1]Houston Energy, Houston, Texas

ABSTRACT

Marmalard Lead (MC 255, 256, 299 & 300) was generated using NAZ PSTM contractor (TGS MC Revival) speculative 3D with AVO attributes. Subsequently, TGS reprocessed those data using an anisotropic PSDM algorithm that yielded a better structural solution where the prospect goes subsalt in the northwest part of the prospect area. The improved structural model/interpretation allowed the Marmalard Lead to be elevated to a Prospect. Marmalard's probability of success (Ps) was still too low to be moved on to the drill schedule because of the weak AVO response. Proprietary PSTM post-stack gather conditioning (Generation Services) vastly improved the AVO attributes and the AVO analysis. To further improve the structural (specifically for the NW subsalt area) model/interpretation, the TGS Justice WAZ seismic survey was purchased and a proprietary reprocessing was done. These data led to a more confident structural mod-el/interpretation and increased the Ps to allow Marmalard Field to be drilled (LLOG Exploration). Currently there are 4 productive wells flowing ~ 36,000 BOD and 73 MMCFGD to LLOG's Delta House FPS.