Detailed Interpretation of a Channel System Using Geological Expression Workflows: A Case Study from the Taranaki Basin, New Zealand

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EXTENDED ABSTRACT

Introduction

"Historical exploration in the Taranaki Basin concentrated on drilling anticlinal or fault block traps with ancillary considerations given to stratigraphic trapping capabilities of the Miocene turbidite sandstones" (NZP&M, 2013). Turbidite systems of different ages have been penetrated by several wells; some as primary reservoirs (Kaimiro and Ngatoro fields) while others only have hydrocarbon shows. These wells indicate that slope and basinal fan sandstones are valid targets in the Northern Graben. "This play concept provides the most promise of large undiscovered commercial resources in the Taranaki Basin" (NZP&M, 2013). The purpose of this study is to use geological expression techniques to help in the interpretation of a channel complex in the Moki Formation, offshore New Zealand, and show how using these techniques have helped to understand the edges, internal variability and relationship of the individual channels.

... (Note: The full version of this extended abstract, including complete text, illustrations, and references, will be made available at a later date on both the 2014 GCAGS convention website [www.gcags2014.com] and AAPG Search and Discovery website [www.searchanddiscovery.com]).