



From: Thorseth, Jay C
Sent: Wed Apr 14 19:18:21 2010
To: Rainey, David I
Cc: Yeilding, Cindy; Vinson, Graham (Pinky); Ritchie, Bryan; Pfau, Gerchard E; O'Leary, John; Hill, Geoff S; Fitzpatrick, Terry P.
Subject: Macondo deepening recommendation
Importance: High

Dave,

I do not recommend deepening the Macondo well for the M54 package or O90. The Macondo team have been surgically mapping and studying seismic attributes in EMC for several years, and they do not see any evidence for significant reservoir development or hydrocarbons at this M54 location (on recently reprocessed proprietary data). While the XX feedback suggests some possible thin pay and potential calibration to other prospects, the team feels we are well calibrated based on recent results at Isabela, Tortuga and Macondo and previous work at Thunderhorse and Blind Faith. Mick and Terry mentioned that Thunderhorse and Blind Faith penetrated debris flow (chaotic) seismic facies at M54, and they were shaley zones. There are no clear sand and/or hydrocarbon signatures on seismic. The Macondo well has penetrated chaotic facies shallower and only shales or very thin (< 5') sand stringers are present. The O90 thins to the Macondo location, and team feels it could even be absent. The Mesozoic needs to be worked further, and should be considered in the proper regional context. I think we should save the capital and move on.

From a drilling perspective, the Macondo well could be deepened based on the PPP work completed by the Tiger Team. We need to make the decision very quickly as drill pipe would need to be ordered, planning completed and MMS contacted.

I really appreciate the hard work from Bryan, the Macondo team, Gerchard and Marty over the past several days.

Below are some comments from the team and reviewers:

Bryan and Team

"There is little chance of finding economic resource in the M54 and O90 zones, and we do not recommend deepening."

XX Summary

- "The review team agrees that the most likely result of deepening Macondo is that we will find several discontinuous 10-15ft thick pay zones.
- However, a penetration through this facies will calibrate it for the first time and could impact the risk profile of Daily Planet and Daily Moon. These two prospects are currently high risk due to reservoir presence."

Terry Fitzpatrick

"I concur with the teams recommendation that there is very little top down support to deepen the Macondo well. A thicker M54 to O90 section exists just to the west of the wellbore. Seismic facies in this isopach thick is chaotic suggesting a sand poor interval with possibly thin discontinuous sands. This facies is well calibrated at both the Thunderhorse and Blindfaith fields in a similar Miocene age section."

Mick Casey

"After sitting down and reviewing the Macondo data with Chuck and Binh, I would have to conclude that there is very little chance for good Miocene sand development below the current TD of the well. What I see are three stacked chaotic zones which likely represent muddy mass transport complexes (MTCs) similar to the M54 "Brown Chaotic Zone" of Thunder Horse field, which corresponds to a thick shaley zone overlying the main reservoir. Off structure, there are more continuous reflectors separating the chaotic zone which could be condensed shales or thin sands. Based on Binh's comments about rock properties, I suspect that they are condensed shales. At any rate, they appear to be eroded by the overlying MTC on the structure itself and would not be tested by deepening of the well. As for the section below the O90, the Paleogene is typically condensed and marly in this area. On seismic the section between O90 and K100 thins dramatically onto the structure and could be completely absent."

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