From: Schott, David W
Sent: Mon Oct 26 16:50:30 2009
To: Simpson, Brad; Bozeman, Walt; Gansert, Tanner
Cc: Ritchie, Bryan; Zamorouev, Alexander V; Donlon, Tom; Reiter, Doris; Mago, Alonso; Narayanan, Ram K.
Subject: RE: Macondo Core
Importance: Normal
Attachments: Decision_Tree_SC_Noble.ppt

Hi Brad,

Great summary, I agree with the logic, however, it might be operationally difficult to do this without a clear, agreed-upon strategy. I recommend you plan on running the bypass unless you encounter a clear set of conditions that would preclude running whole core. This set of conditions can be set up and agreed-upon by the entire drilling/project team. This means you would have people and tools on standby when cutting the pay and plans are in place before we encounter the pay zones. If you do not do this, you have basically decided not to run the bypass because of the logistical difficulties in getting the tools and people onsite along with paying the standby charges for the rig.

Attached is the decision tree we used with our partner, Noble, to make the decision to run a bypass core in the Santa Cruz well. This was suggested to us by John Farelly in our January TVP review. As I mentioned in our meeting we were basing our development decisions on 27% RF (from RSWC). With the new compressibility derived from whole core, this will push RF to 35% on a STOOIP close to 200 mmboe (16mmboe increase).

Sincerely,
David W. Schott
Senior Reservoir Engineer
Na Kika Resource Team
281-366-5848 (W)
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From: Simpson, Brad
Sent: Friday, October 23, 2009 4:58 PM
To: Bozeman, Walt; Gansert, Tanner
Cc: Ritchie, Bryan; Zamorouev, Alexander V; Donlon, Tom; Reiter, Doris; Mago, Alonso; Schott, David W
Subject: Macondo Core

Walt and Tanner,

I wanted to give you some feedback and suggestions from all the Core VOI work that you have been doing.

First, I wanted to thank you for including the Pompano team in these discussions and all the hard work that

you did into assessing the need for a whole core. Appraisal for these smaller prospects is somewhat more difficult due to the smaller level of development that is required. Value can be eroded quickly with too much or too little data. We are finding this out on Amethyst. Your team has been accommodating to us and we appreciate your collaboration.

The Pompano team discussed the whole core VOI and we came to the following conclusions:

- The issue around taking whole core: Will it supply decisive data for sanction and development decisions (i.e. number of wells)?
- We agree with you that the value of a heads up whole core is not apparent. Especially in regards to the recovery factor and how it relates to available offset compressibility data and uncertain aquifer support.
- If the subsurface predictions are below the predicted ranges it maybe prudent to do a by-pass core, even if sacrifices future well utility. I can see a couple of scenarios where this by-pass core would be needed.
  - The required reservoir thickness is achieved, but the rock quality is poor and/or is outside the range of available analogs.
  - The fluids are low API (<25) or tar like and there is uncertainty around how it will flow in the rocks.
  - The logs predict good sand quality, but the MDT has a lot of tight pressure points and cannot establish a gradient.
  - The predicated recovery is in an economic "gray" area and compressibility could make or break sanction.
- There are a lot of variables to consider, but I would suggest huddling up once the data starts coming to determine if a whole core is needed. If the data is above or within expectations then by-pass core is probably not needed.
- Recommend getting contingency plans in place to take this by-pass core with the drillers and contractors so that this could be executed in a safe and efficient manner.
- If the by-pass core is needed and ends up sacrificing the keeper well, we would have least taken the data need to make a development decision.

Finally, could we get on the daily drilling summary for the Marianas? And is there is a weekly update meeting that would one of us could sit in?

I hope this helps. I know it may add a bit more work now but could save the value in Macondo in the future. Let me know if you have any comments around this contingency planning.

Kind Regards,
Brad

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