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From: Cavalero, Sean R

Sent: Friday, July 16, 2010 12:33 PM

To: Syms, Richard M; Ritchie, Bryan; Clifford, Peter J; Needham, Karen M; Schott, David W

Cc: Singh, Pramod K

Subject: RE: GoM aquifer sizes

Richard,

our Miocene reservoirs have a wide range of apparent aquifer connectivity's, and it doesn't easily correlate to something like permeability to compare to Macondo. Atlantis has higher rock perm than Macondo, but very little aquifer support (< 1x aquifer). Thunder Horse South Brown is a close perm analog to Macondo at 200-400 mD, with a 20x plus strong active aquifer. Mad Dog is between these two for aquifer strength, perm around 200 mD. All these reservoirs are more sheet sand / massive amalgamated channel sands.

Then there is aquifer connection geometry. Macondo sand deposition is very channel shaped, with aquifer sand connecting in a longish ribbon off only two opposite sides. Oil sand connectivity has obviously been demonstrated to be very strong. All else being equal, the aquifer connection geometry has to restrain the aquifer support/connectivity from a more massive sand, wrap-around support model.

I have some inquiries out for Pompano/Dorado/Nakika ranges.

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