



“Heading for Deeper Water”

Abstract: Dr. Andrew MacRae, Saint Mary’s University

Implications of Scotian Margin salt stratigraphy for early Atlantic history

(R. Andrew MacRae, Georgia Pe-Piper, Mark Deptuck and Allie Decoste)

Mesozoic salt of the Scotian Margin is traditionally assigned to the Argo Formation, and its palynological age to Early Jurassic. On the Grand Banks, two Mesozoic salt formations occur: the Late Triassic Osprey Formation and the Early Jurassic Argo Formation. Besides the age, the Osprey Formation is also characterised by low Br content in salt (<20ppm), whereas the Argo is characterised by higher Br (60 to >200ppm).

Recent biostratigraphy as part of the OETRA Play Fairway Analysis (2012) identified Late Triassic salt on the southwest Scotian Margin at the Glooscap well. It occurs beneath basaltic tholeiites related to the Central Atlantic Magmatic Province (CAMP), the same relationship as seen on the Grand Banks. Is this a Scotian Margin equivalent to the Osprey Formation?

We examined the petrography and geochemistry of the salt at Glooscap and 5 other Scotian Margin wells. As predicted, the Late Triassic salt at Glooscap is indeed low-Br facies (<1ppm) and likely represents Osprey Formation. All other sites with Early Jurassic ages have higher Br content (50 to 142ppm), consistent with their continued assignment to Argo Formation.