# Depth-dependent inversion of normal faults: Structural analysis of the Penobscot 3D seismic volume, offshore Nova Scotia

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- 51 faults interpreted in the - Dominated by ENE-WSW fault set

- Southward dipping faults are

- All smaller faults are normal

- Reverse kinematics only observed

points = 8185



## **Predictions:**

- Evidence for salt loss at depth - Salt present in the region below the inverted interval - Other structures likely to be inverted by salt flow - May display a gradual vertical shift from

- Schulmberger for Petrel

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Model 1: Salt Tectonics

Model 2: Fusili shaped faults

- Normal to reverse slip along fault

- The fault should have a compatible fault geometry - Gradual vertical shift from normal to reverse slip along fault - No inversion recorded along non strikeslip faults

Evidence for strike-slip (e.g. riedel

# Acknowledgements

- Petroleum experts Ltd. for MOVE and including technical guidance

**Predictions:** 

shears)



Model 3: Multi-Phase extension/inversion



### **Predictions:**

- Significant inversion is required before a lesser extensional event

- Inversion should be recorded elsewhere in the region

- Unconformity likely to be observable

### References