

Recent Seismic Results and Exploration of a Deepwater Foldbelt, South Falkland Basin, South Atlantic

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This paper describes the tectonic and stratigraphic evolution of the Falklands Microplate following the breakup of the Gondwana supercontinent, and the subsequent development of Mesozoic rift and Cenozoic foreland basins. Recently acquired 2-D seismic over the southern margin of the microplate spectacularly images the folds and thrusts of the recently active North Scotian Fold Belt. This fold belt represents an easterly extension of the onshore Andean Cordillera. A mixed thin and thick-skinned compressional model is presented and the evolution of the fold belt described. A suite of seismic profiles and balanced geological cross-sections are used to illustrate the structural and stratigraphic evolution of the area. Specific aspects of the regional hydrocarbon prospectivity are discussed and the paper concludes with a description of the principle hydrocarbon systems.