The Power of Scientific Ocean Drilling Data in Frontier Exploration

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ABSTRACT

The International Ocean Discovery Program (IODP) and its predecessors form a global collaborative research and exploration effort with a 50-year history that has facilitated ocean research drilling and in so doing, helped explore Earth's history and dynamics. In this time, the program has collected a broad range of data types ranging from petrology to paleomagnetism, from paleontology to petrophysics, and beyond. An equally wide variety of geological environments have been sampled by the international consortium across the world's oceans, including sequences familiar to the hydrocarbon industry, such as siliciclastic sedimentary deposits, but also those which are perhaps more unfamiliar, including ocean crust formations. This presentation will explore how industry and the scientific community can better engage in order to prevent duplication of data acquisition and research, and forge new productive collaborations. The main IODP legacy datasets that may be relevant to industry include petrophysical, biostratigraphic and stratigraphic data, and novel applications of these and other data will be discussed. Case studies of existing industry uses of the databank will be presented as well as details of how researchers and industry can access the various publicly available databases generated by the program. As the energy and extractive industries move into more marginal environments, the program's breadth in geography, geology and data, in combination with the scientific expertise of the ocean drilling research community, makes an unrivalled resource for industry as they push the frontiers.