

SEISMIC SURVEYS AND MARINE LIFE: WHY IS IT SO DIFFICULT TO LET THE SCIENCE SPEAK?

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The offshore oil and gas exploration industry in Australia (and worldwide) has conducted extensive research and monitoring programs which have provided valuable insights into the nature of seismic signals in different water depths and the behaviour of marine animals such as whales, dolphins and fish in the vicinity of seismic surveys. Despite this, we in Australia still have to operate marine seismic surveys under a set of protocols covering the interaction between seismic surveys and whales that are the most stringent (over-precautionary?) in the world.

Why can this be so? If all regulators and all interested parties are looking at the same body of science; i) why are the protocols for interaction between seismic surveys and whales not consistent throughout the world and ii) why is the seismic industry accused of adversely impacting marine life when, after 40 years of marine exploration using airgun arrays, there is no real evidence of this?

This presentation briefly describes the results achieved from using such techniques as towed PAM (passive acoustic monitoring), seabed acoustic loggers, shipboard observations (synthesis of MMO data), aerial surveys, etc.

It then goes on to explore the main reasons why the industry finds it so difficult to get its message across. These reasons include the lack of awareness of many geophysicists, asset managers and companies about the challenges involved in acquiring seismic data in the first place, the complexity of the science, the difficulties involved in collating it into a meaningful result, the fact that the science is often interpreted or portions of it selected by those who have a biased opinion (as opposed to panels that provide a balanced view) and the reluctance of many companies in the industry to challenge the often emotive and inaccurate accusations by some environmental groups and the media.

PRESENTER PROFILE

John Hughes is a consultant Geophysical Operations Adviser running his own company, John R Hughes Geophysical Pty Ltd. He graduated from UCW Aberystwyth in 1969 with a BSc (Hons) degree in geology and during his 39-year career has become a highly experienced acquisition and processing geophysicist with an excellent command of environmental issues and economic/geological objectives. This has led to him being invited to talk at numerous conferences and workshops and sit on national and international committees. Having retired from corporate life in 2007 after 20 years as Santos' Chief Operations Geophysicist, John now specialises in providing services to operators on the more challenging aspects of seismic surveys such as operations in Central Asia, offshore environmental approvals, onshore seismic productivity improvement and near surface (statics) issues. He is a member of ASEG, SEG, EAGE and PESA.

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