The Application of Autonomous Underwater Vehicle (AUV) Technology in the Oil Industry – Vision and Experiences

David BINGHAM and Tony DRAKE, United Kingdom, Andrew HILL, USA and Roger LOTT, United Kingdom

Key words: Autonomous Underwater Vehicle, AUV, Seabed Mapping, Swathe Bathymetry, Sub-bottom Profiling.

ABSTRACT

BP has been contracting commercial services using a survey class AUV to collect sidescan sonar, swathe bathymetry and sub-bottom profiler data at proposed oilfield development locations in the US Gulf of Mexico and the UK sector of the North Sea. In the deep-water Gulf of Mexico the surveys were conducted at proposed field facilities locations and along proposed pipeline routes in water depths ranging from 500 to 2300 metres. In the North Sea surveys were conducted on the continental shelf in water depths between 80 and 120 metres.

This paper will review the expectations we had of AUV technology before these surveys, contrast these expectations with our experiences during the surveys, and indicate directions in which we wish to see AUV technology develop.

CONTACT

David Bingham, Senior Surveyor
BP Exploration
Burnside Road, Dyce
Aberdeen, AB21 7PB
UNITED KINGDOM
Tel. + 44 1224 833460
Fax + 44 1224 832275
E-mail: binghamd@bp.com

Tony Drake, Senior Surveyor
BP Exploration
200 Chertsey Road, Sunbury on Thames
Middlesex, TW16 7LN
UNITED KINGDOM
Tel. + 44 1932 764555
Fax + 44 1932 764460
E-mail: draket@bp.com
Andrew W. Hill, Geohazards Team Leader
BP Exploration
501 Westlake Park Blvd.
Houston
Texas, 77253-3092
USA
Tel. + 1 281 366 4020
Fax + 1 281 366 2915
E-mail: hillaw@bp.com

Roger Lott, Head of Survey
BP Exploration
200 Chertsey Road
Sunbury on Thames
Middlesex, TW16 7LN
UNITED KINGDOM
Tel. + 44 1932 764365
Fax + 44 1932 764460
E-mail: lottrj@bp.com

Web site: www.bp.com