

## **Marine Seismic Acquisition Using Wave Glider Autonomous Marine Vehicles: A Field Test, Offshore Abu Dhabi**

**M. A. Benson<sup>1</sup>, T. Lecoq<sup>1</sup>, G. Mercado<sup>2</sup>, S. Nakayama<sup>2</sup>, N. Moldoveanu<sup>3</sup>, P. Caprioli<sup>3</sup>, G. Nyein<sup>3</sup>, S. Pai<sup>4</sup>,  
E. Yandon<sup>4</sup>, and L. Alkan<sup>4</sup>**

<sup>1</sup>ADMA-OPCO

<sup>2</sup>formerly ADMA-OPCO

<sup>3</sup>WesternGeco

<sup>4</sup>Liquid Robotics Oil & Gas

### **ABSTRACT**

A field test was conducted utilizing autonomous marine vehicles (AMVs) and 3D sensor arrays (3DSAs) to record and compare seismic data generated during an ocean-bottom cable (OBC) survey. The test was a field verification to check that the AMV platform and the sensor array can deliver high-quality seismic data in a form that can be successfully processed and compared to ocean-bottom fixed-receiver data. The test was conducted to (a) assess the feasibility of seismic acquisition using AMVs and 3D sensor arrays including safe deployment and retrieval, (b) evaluate the performance of the 3D sensor arrays based on holding station capability, maintenance of desired depth, and accuracy of measurements of pitch and orientation, and (c) compare the quality of the acquired seismic data with the pressure data recorded in the OBC survey.