

## PRESS RELEASE

**Subsea 7 presents papers on how it helped to deliver the Pazflor project for Total and on its revolutionary Autonomous Inspection Vehicle at OTC 2012**

Subsea 7, a global leader in seabed-to-surface engineering, construction and services to the offshore energy industry, will deliver two papers on the second day of this year's Offshore Technology Conference (OTC), in Houston, USA, on 1 May. The two papers demonstrate the Company's groundbreaking work in developing subsea technology.

Appropriately titled 'Frontier Subsea Technologies', this paper presented by Subsea 7's Project Director Philippe Gleize describes the innovation and the key challenges to deliver first oil in the landmark Pazflor project, operated by Total E&P Angola. Subsea 7 successfully installed three subsea separation units (SSUs), each weighing in excess of 1,000t.

Subsea 7 Engineering Manager James Jamieson will also present a paper on the technical challenges in creating the pioneering Autonomous Inspection Vehicle (AIV), which is set to transform Life-of-Field projects. Working from Subsea 7's Aberdeen office in Scotland, the team has now fully developed the AIV and it is commercially available. The AIV can operate directly from a host facility, such as an FPSO or Platform, or from infield support vessels or mobile rigs. It can provide cost-effective, low-risk inspection to aid field survey and integrity management and intervention activities.

ENDS

30 April 2012

**PRESS RELEASE****Paper Ref OTC 23177PP****Frontier Subsea Technologies**

## Abstract

Technip and Subsea 7 Consortium, acting as a contractor to Total, operator of the Pazflor Project, made a challenging oil field development a reality and demonstrated their ability to deliver a complex project, maintaining a world class HSE performance and pushing the frontier of subsea technologies with focused innovation. Among the several key challenges, the necessity to handle two different oil characteristics led to two distinct architectures. Oligocene with a high constraint on thermal efficiency for such a large field foot print made Pipe-In-Pipe flowline and IPB (Integrated Production Bundle) flexible riser essential. Miocene with Heavy and viscous oil characteristics led to the development of Subsea Separator Units (SSU) where Subsea 7 demonstrated the efficiency of an integrated Consortium especially with the management of simultaneous offshore operation involving simultaneously up to five construction vessels with one FPSO and two drilling rigs. Finally with the first implementation of the patented diverless risers automatic hook-up system to FPSO, the Consortium's leading edge technology was further demonstrated on Pazflor, successfully enabling safer and faster hand over for first oil.

**Paper Ref OTC 23365****Autonomous Inspection Vehicle: a new dimension in Life-of-Field****Operations**

## Abstract

A new tool for subsea inspection in the offshore oil and gas industry is currently going through performance and qualification testing. The Autonomous Inspection Vehicle (AIV) has been designed and built by Subsea 7 and SeeByte Ltd to provide the industry with a valuable tool capable of making a positive contribution to Life-of-Field operations.

**PRESS RELEASE**

The station keeping and hovering ability of the AIV is the next step in the evolution of autonomous systems in the marine environment. Survey class autonomous vehicles have already shown their value with improved data quality and efficiencies over traditional methods. The first commercial AIV will be capable of many of the inspection tasks currently carried out by Remotely Operated Vehicles (ROV). Regular inspection data of risers, pipelines and seabed equipment can be gathered using a single AIV operating directly from an offshore facility. A more rapid assessment of a field can be made using multiple systems operating together from a single support vessel. This has not been done before with a commercial vehicle and hence is truly leading edge technology.

The paper will outline some of the technical challenges in creating the vehicle and how the use of advanced simulation linked to practical testing is being used to ensure the performance of the system. Finally the paper will draw a parallel with the evolution of subsea infrastructure that has fully enabled the capability of the ROV and demonstrate how the introduction of autonomous technology should be considered with confidence.

**For further information contact:**

Achilleas Georgiou

+44 20 8210 5544

[achilleas.georgiou@subsea7.com](mailto:achilleas.georgiou@subsea7.com)

For contact at OTC, Houston

Jackie Doyle

mb +447880 700044

[jackie.doyle@subsea7.com](mailto:jackie.doyle@subsea7.com)

## Notes to editors:

1. Subsea 7 will have a major presence at this year's event. As well as presenting conference papers, it will be exhibiting at stand 1641. On display will be examples of the Company's deepwater and ultra-deepwater technical expertise and its investment in its fleet.
2. Subsea 7 S.A. is a seabed-to-surface engineering, construction and services contractor to the offshore energy industry worldwide. We provide integrated services, and we plan, design and deliver complex projects in harsh and challenging environments.
3. For further information visit [www.subsea7.com](http://www.subsea7.com)