



Tuesday, 13 May 2008

SALA BARBARA

5° Palazzo Uffici - Eni E&P division

Via Emilia 1

SAN DONATO MILANESE

11:00

2007-2008 SPE Distinguished Lectures Series

**LOW-COST, NON-INVASIVE, REMOTE PIPELINE AND  
WELL INSPECTION TECHNIQUES**

*By A. Di Lullo – Eni E&P division*

➤ **ABSTRACT**

The prevention and remediation of several flow assurance problems require timely knowledge about the internal deposition conditions of pipelines, sealines and tubings. This information plays an important role in the decision process for repair operations and in the optimization and monitoring of prevention technologies. Most inspection methods either imply the insertion in the pipe of special devices, with a significant intrinsic risk, or require moving along the inspected pipe, which may be difficult, expensive or time-consuming.

A newly developed monitoring technology requires access to only one end of the pipe and the ability to generate small flow rate transients, thus resulting in straightforward applicability and very low cost for most operational settings.

Techniques carried out by measuring and analyzing pressure signals induced by fast flow-rate changes constitute an extremely flexible, sensitive, and easily applied methodology. Examples of the applications include: rapid and effective localization of complete and partial obstructions in wells and pipelines, quantification of the profile distribution of deposits in oil wells, inspection of gas wells and pipelines to determine the presence and distribution of fluids, monitoring of the movement of pigs in sealines and the investigation of other characteristics of both pipes and the fluids transported.

The basic principles of the method will be illustrated, together with case histories of onshore and offshore applications.

➤ **BIOGRAPHY**

*Alberto Di Lullo leads the Flow Assurance Technologies Program of the Engineering Department of the Eni E&P Division, where he coordinates Flow Assurance operational support, design activities and R&D projects. He acquired laboratory and field experience in various upstream technologies such as: well production optimization; wax, asphaltenes and emulsion issues; well and pipeline monitoring; deposits and obstructions localization techniques; water shut-off; knowledge management in production chemistry. He is also co-author of several patents and publications. As a SPE member, he currently serves in the Production & Operations Advisory Committee.*