



<http://speitaly.webex.com>
Meeting: 706 235 624 Pwd: 811710

Thursday, 16 June 2011
16:00–17:00

Sala Barbara
5° Palazzo Uffici
Via Emilia 1
San Donato Milanese

WELL INTEGRITY MANAGEMENT IN NATURAL GAS AND CO₂ STORAGE FIELDS

Paolo D'Alesio – ProEnergy

ABSTRACT

The most common definitions of “Well Integrity” are based on the concept of retaining two intact barriers between the well and the external environment, throughout the entire life cycle of the well. Well Integrity Management is defined as the application of technical, operational and organizational solutions to reduce the risk of uncontrolled release of formation fluids.

When dealing with natural gas or CO₂ storage fields, Well Integrity is even more critical than in conventional production fields for the additional safety, technical and economic challenges to be managed:

- the wellbore seals (cap rock, near wellbore formations, cement, casing) are required to maintain their effectiveness for an extended period of time
- the existing wellbores, including abandoned wells, represent primary potential pathways for stored gas to migrate back to surface;
- the storage fields, former production fields, were probably drilled and completed long time ago, using dated technologies;
- operating pressures during injection may be higher than the original profiles during production;
- the casing cement bond could be damaged when subject to injection and production cycles;
- the conventional Portland cement, which is used to seal annular spaces between formation and casing strings, deteriorates in presence of CO₂;
- the conventional carbon steel used for tubulars and completion equipment, is corroded when in contact with CO₂, especially in presence of water.

The subject of the lecture is to describe the methodology for the assessment of the integrity of existing wells, and highlight the main requirements to ensure the integrity of new natural gas and CO₂ injection wells during their entire life-cycle.

BIOGRAPHY



Paolo D'Alesio is the founder of ProEnergy, a consulting Company dedicated to Well Engineering, Well Integrity and Risk Analysis. He holds a MS degree in Chemical Engineering from “Politecnico di Milano”. He has a Service Contractor background with twenty-five years of experience in Completion Engineering, Production Optimization, Well Operations and Project Management.

ProEnergy has carried out Well Integrity studies for six natural gas storage fields and three CO₂ storage fields, for a total of about 450 wells. Paolo is an associated member of the Society of Petroleum Engineers (at present, Director in the Board of the Italian Section).



<http://speitaly.webex.com>
Meeting: 706 235 624 Pwd: 811710

Thursday, 16 June 2011
16:00-17:00

Sala Barbara
5° Palazzo Uffici
Via Emilia 1
San Donato Milanese

WELL INTEGRITY MANAGEMENT IN NATURAL GAS AND CO₂ STORAGE FIELDS

Paolo D'Alesio – ProEnergy

Non riesci a raggiungere la Sala Barbara? Partecipa in modalità **Webinar!**

- **Contatta un Webinar Focal Point** (vedi sotto) per assistere presso la relativa struttura
- oppure **collegati autonomamente** dal tuo computer.

È semplicissimo, sarà sufficiente una connessione ad Internet ed un telefono:

1. Per le immagini, clicca su: <http://speitaly.webex.com> e inserisci il **meeting number** e la relativa **password** (riquadro giallo sopra)
2. Per l'audio, componi il numero telefonico **+39 02 36 00 97 68** e digita il PIN: **811710#**
Il costo è quello di una normale chiamata nazionale

Il Webinar sarà disponibile da .

Al termine della presentazione sarà possibile interagire nella sessione Q&A.

SPE Italian Section – Webinar Focal Points Per maggiori informazioni sui Webinar, scrivere a filippo.capriotti@eni.com		
Val d'Agri	Roberto Cossetti <i>eni div. e&p</i>	roberto.cossetti@eni.com Tel. +39 0975 313 804 eni e&p distretto meridionale Contrada Cembrina – Zona Industriale 85059 Viggiano (PZ)
Roma	Gian Paolo Cappelletti <i>Chimec</i>	gpcappelletti@chimec.it Tel. +39 06 91825265 Chimec Via delle Ande 19, 00144 – Roma
Ravenna	Joachim Wilhelm <i>Rosetti Marino</i>	Joachim.Wilhelm@rosetti.it Office: +39 0544 878012, Mobile +39 335 471533 Rosetti Marino SpA Via Trieste 230, 40100 Ravenna
Torino	Giuseppe Gennaro <i>Politecnico di Torino</i>	Giuseppe.gennaro@polito.it Tel. +39 011 090 7610 Politecnico di Torino Corso Duca degli Abruzzi 24, 10129 Torino