

News from CCS TLM - January 2012

CCS TLM is the leading provider of integrated, expert consultancy, engineering and advisory services to the emerging CCS sector.

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CCS TLM ACADEMY and NCCCS TRAINING



Our first course '**Simplifying CCS**' in January was a great success and more are planned throughout 2012. We will keep you updated through this newsletter, alternatively please keep checking our <u>website</u> for more details.

Bookings are now being taken for our next course 'Carbon, Capture and Storage:

A Field-Based Masterclass' on 30th April-4th May 2012 in Dorset which is being conducted in conjunction with AGR TRACS Training who provide technical and commercial training courses to the oil and gas industry and Dr Bryan Lovell OBE. For full information, click <u>here</u>.

Both courses are undergoing endorsement by the Geological Society and are supported by Dr Bryan Lovell OBE, Senior Research Fellow in Earth Sciences, University of Cambridge.



To book your place or discuss your individual or bespoke training requirements, please call +44 203 463 8529 or email academy@ccstlm.com

ON THE MOVE

CCS TLM are pleased to announce we have moved to new larger premises as part of our continued growth and expansion: <u>1st Floor, Chertsey House, 61 Chertsey</u> <u>Road, Woking GU21 5BN</u>.

NEWS

CCS TLM exhibiting at Platts 6th Annual European Carbon Capture and Storage event: 27-28 February 2012, London

CCS TLM will be exhibiting at the Platts European Carbon Capture and Storage event in

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Related Links

CCS TLM

CCS TLM Academy



February 2012 in London. This is the 6th annual event which has more sessions with a stronger focus on the storage challenge.

Paul Bryant, CCS TLM's CEO, will be part of the **'Driving CCS Forward'** panel discussion on day 1. For further information, including the full programme which gives a <u>25% discount</u> on the conference fee, click <u>here</u>. We look forward to seeing you there.

Inclusion of Carbon Capture and Storage in the Clean Development Mechanism

The decision of the Conference of the Parties (COP) at the Meeting of the Parties (MOP) to the Kyoto Protocol (CMP.7) in Durban to include Carbon Capture and Storage (CCS) in the Clean Development Mechanism (CDM) represents a significant step in the development of an international approach to emissions reductions from fossil fuel sources.

The decision adopts the modalities and procedures for CCS as CDM project activities, establishing a framework for project eligibility, registration and monitoring, reporting and verification (MRV) which will allow project developers to generate Certified Emission Reductions (CERs) from CCS projects. Although there are still administrative and policy preconditions to be met to enable CCS projects to satisfy the requirements of the CDM rules and qualify under the mechanism, the Decision presents potentially significant opportunities for developing countries to generate income whilst achieving emissions reductions and a transition to cleaner energy production. To read the full article, click <u>here</u>.

INTRODUCTION TO EOR

Enhanced oil recovery (EOR) is a tertiary recovery mechanism, which comes after the primary and secondary recovery mechanisms, to recover more oil, and thus to extend the life of the field. While primary and secondary recovery mechanisms target the mobile oil with a recovery up to 30% and 50% of Original Oil In Place (OOIP) respectively. EOR targets the immobile oil in the reservoir with an additional recovery up to 30% of OOIP.

Carbon dioxide enhanced oil recovery (CO2-EOR) is a type of EOR, where CO2 is injected into the reservoir, but it can be used at the same time for CO2 storage.

After the water flooding (secondary recovery) large volumes of oil still remains in the reservoir due to the capillary forces and surface forces between the fluid and reservoir rock. CO2 flooding can be applied as a tertiary recovery mechanism. There are two techniques, gravity stable gas injection (GSGI) or water alternating gas (WAG) injection. WAG technique is more effective than GSGI but the production of CO2 with the oil could be high, and thus it should be managed carefully.

CO2 is an excellent solvent and miscible with oil at moderate pressures and thus a good candidate for gas injection EOR. CO2 promotes the swelling of the oil and it decreases its viscosity and increases its density and thus reduces the surface tension between water and oil. However to be applied as an EOR fluid the reservoirs should meet certain criteria. Parameters that are critical for CO2-EOR are density, permeability, porosity, oil saturation, and miscibility pressure for miscible CO2 flood. Reservoir heterogeneity is another critical parameter as it affects the arrival of CO2 in the production wells.

CO2-EOR has been applied for more than 30 years and current field applications recover 5 to 15% of OOIP but laboratory tests and reservoir simulations indicate higher recovery potential. Higher recovery factors could be achieved by next generation CO2-EOR technologies such as increasing CO2 injection volume, innovative flood design and well placement.

For more information, or if you have any questions regarding EOR, please click here.

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