

To succeed, UB E&P pros must work together

THE SPE/IADC Underbalanced Technology Conference and Exhibition set for 11-12 Oct in The Woodlands, Texas, *Successful Underbalanced Operations Demand Unification of Petroleum Disciplines*, promises to leave the attendees with the latest information about the technologies, methods and experiences of this important emerging technology. The conference is sponsored by **Signa Engineering Corporation**.

Rick Stone, Signa Engineering Corporation and Program Chairman, and **Mike Dubose, Rowan Drilling**, and Chairman of the IADC UBO Committee, will open the conference at 8 am.

The first session, Reservoir Case Studies, begins at 8:30 with session chairmen **David A Roseland**, Signa Engineering, and **Dale Wong, Navidad Resources**.

The first presentation is *Underbalanced Drilling in Canada: Tracking the Long-Term Performance of Underbalanced Drilling Projects in Canada* by **D W Kimery, M McCaffrey, Weatherford Canada**.

This is followed by *Underbalanced Drilling of Fractured Carbonates in Northern Thailand Overcomes Conventional Drilling Problems and Leads to a Major Gas Discovery* by **R H Pinkstone, W S McMillan and R A Doll, Halliburton Energy Services; A Timms, Amerada Hess Ltd; H de Vries, Amerada Hess Corp.**

The session wraps up with *Damage Interpretation of Properly and Improperly Drilled Underbalanced Horizontals in the Fractured Jean Marie Reservoir Using Novel Modeling and Methodology* by **D W Kimery, Weatherford Canada; H Ferreira, Weatherford International Ltd; and B Bennion, Hycal Energy Research Laboratories Ltd.**

Following a coffee break from 10-10:30 are two concurrent sessions. The Reservoir I session, chaired by **Isabel C Gil, Halliburton Energy Services**, and **Bruce A Selby, Shell International E&P**, will

also feature three presentations. *Impact of Thief Zone Identification and Shut-off on Water Production in the Nimr Field* by **P V Suryanarayana, Blade Energy Partners; R S Medeiros, Petroleum Development Oman**; and **D Biswas, DeGolyer and MacNaughton**. The next presentation is *UBD Well Productivity: A "Stop and Go" Prediction Tool* by **L K Dipeolu with Shell E&P Technology**.

This is followed by *Numerical Simulation of the Gas Inflow During Underbalanced Drilling (UBD) and Investigation of the Impact of UBD on Long-time Well Productivity* presented by **T Friedel, Technical University, Freiberg**; and **H Voigt, Freiberg University of Mining and Technology**.

The second concurrent session beginning at 10:30 is Managed Pressure Drilling chaired by **Oliver D Coker, ConocoPhillips**, and **Johan Eck-Olsen with Statoil**. The first presentation is *MPD—Uniquely Applicable to Methane Hydrate Drilling* by **Don Hannegan and R J Todd** with Weatherford International Ltd; **D M Pritchard, Successful Energy Practices International**; and **B Jonasson with Integrated Ocean Drilling Program**.

G H Medley and **R Stone** with Signa Engineering will make the next presentation, *Mud Cap Drilling When? Techniques for Determining When to Switch From Conventional to Underbalanced Drilling*.

The final presentation is *Well Control Problems in Deeper Waters* by **B Fossli** with **Ocean Riser Systems A/S**.

PANEL SESSION

After lunch comes the conference's first panel session (1:30-3:00) *UBO and the Reservoir: Unifying Petroleum Disciplines*. The panel is moderated by **Jonny Gent, BP**, with panelists **Celso Branco, Petrobras; Paul Comrie, Amerada Hess; and Richard Medeiros, Petroleum Development Oman**.

Panelists will present how they look at UBO for their reservoir from the point of view of where they are in their project,

how they view UBO's impact on their asset, their experience with it, issues and concerns and future expectations. The panel will identify issues that tend to either facilitate or impede the implementation of UBO and to determine whether these issues change with experience.

Following the panel, two concurrent sessions will be held, Reservoir II, and Management.

Reservoir II is chaired by **Sara Shayegi, Halliburton Energy Services**; and **Robert G Davis, Signa Engineering**. The first of four presentations during the session is *Enhancement Well Productivity—Investigating the Feasibility of UBD for Minimizing Formation Damage in Naturally Fractured Carbonate Reservoirs* by **S Salimi and M Golan, Norwegian University of Science & Technology**; and **K I Andersen** with Statoil.

This will be followed by *Reduction of Wellbore Effects on Gas Inflow Evaluation Under Underbalanced Conditions* by **O J Aremu and S O Osisanya** with the **University of Oklahoma**. The third presentation is *Underbalanced Drilling for Production Enhancement in the Rasau Oil Field, Brunei* by **W S McMillan, Halliburton Energy Services; M W Sarssam, PDO; R L Peterson and M J Ward, Brunei Shell Petroleum**; and **D Elliot, Shell**.

The final presentation of Reservoir II is *Underbalanced Drilling as a Tool for Optimized Drilling and Completion Contingency in Fractured Carbonate Reservoirs* by **J Abdollahi, I M Carlsen and S Mjaaland, Sintef Petroleum Research**; and **P Skalle, Norwegian University of Science & Technology**.

The Management session is chaired by **Fred Curtis, Halliburton Energy Services**, and **Keith Kaase, Varco International**. Four presentations are also included during this session, the first of which is *Challenges in Implementing UBO Technology* by **Johan Eck-Olsen and A E Vollen, Statoil**; and **T Tonnessen** with Halliburton.

The second paper is *Changing the Value Equation for Underbalanced Drilling* by **B A Selby**, Shell International E&P; **I A Davidson**, Shell Markets (Middle East) Ltd.; **R S Medeiros**, PDO; and **D Reitsma**, Shell International. **R M Pilko**, **P V Suryanarayana** and **P J Frink**, **Blade Energy Partners**, will next present **UBD Business Case for Small US Independents: Value Analysis Tools**.

The last presentation is *The Relationship Between Petroleum Economics and Risk Analysis: A New Integrated Approach for Project Management* by **D W Lewis**, Halliburton Energy Services; **V Guerrero**, Warrior Technologies; **S Saeed**, Halliburton Energy Services; and **M F Marcon**, **InControl Technologies Inc.**

The conference continues Tuesday, 12 October at 8:00 am with Drilling Case Studies chaired by **Philip Frink**, Blade Energy Partners, and **Ian Davidson**, Shell International E&P.

The first presentation is *HSE Training, Implementation, and Production Results for a Long-Term Underbalanced Coiled-Tubing Multilateral Drilling Project* by **J P Knight** and **R J Pickles**, Blade Energy Partners; and **B E Smith** and **C Leslie**, BP.

Utilization of Underbalanced Drilling Techniques to Exploit a Low-Pressure Reservoir in Indonesia by **P R Brand**, **P Savage** and **R J Pickles** with Blade Energy Partners, follows that paper.

The next presentation is *Drilling Underbalanced in Hassi Messaoud* by **D D Moore**, Signa Engineering; and **J R Chopty** with Weatherford.

The final presentation of the session is *A Safe Approach to Underbalanced Drilling in an H2S Producing Field Leads to Operational Success and Productivity Improvement* by **A Coy** and **R.M. Gorniak**, Weatherford International; and **D R Hall** and **M R Veza**, **Marathon Oil**.

Following a coffee break, the Modeling session, chaired by **Steven Nas**, **Peer-Group International Ltd** and **Robert Urbanowski**, **Grey Wolf Drilling**, will feature three presentations.

The first is *Methodology for Manipulation of Wellhead Pressure Control for the Purpose of Recovering Gas To*

Process in Underbalanced Drilling Applications by **R A Graham**, **Northland Energy Services**; and **M S Culen**, **Precision Drilling Corp.**

Next up is *Bottomhole Pressure Control During Pipe Connection in Gas-Dominant Wells* by **E H Vefring**, **Rogaland Research Centre**; **G H Nygaard**, **S Mylvaganam**, **Telemark U College**; **R J Lorentzen**, **G Naevdal** and **K K Fjelde**, **RF Rogaland Research**. **S Shayegi**, **I C Gil** and **S Saeed**, Halliburton Energy Services, will present *Advanced Wellbore Hydraulic Methodologies for Underbalanced Application*.

PANEL SESSION

The conference's second panel session begins at 1:30 following lunch. The topic is *Modeling—What's the Point?* **John Boyle**, Weatherford, moderates panelists **Patrick Brand**, Blade Energy Partners; **Michael Golan**, University of Trondheim; **Antonio C Lage**, Petrobras; **Sara Shayegi**, Halliburton Energy Services; and **Jerome Schubert**, Texas A&M University.

HSE and Well Design is the conference's final session and begins at 3:30. It is chaired by **Johan Eck-Olsen**, Statoil, and **Tim Tonnessen**, Halliburton Co.

The first presentation is *Risk-Based Decision Support for Planning of an Underbalanced Drilling Operation* by **T Nilsen**, Statoil; and **O Arild**, RF-Rogaland Research.

This will be followed by *Technical Feasibility and Applicability of a Concentric Jet Pump in Underbalanced Drilling* by **P V Suryanarayana** and **A K Hasan**, Blade Energy Partners; and **W J Hughes**, **SunStone Energy**.

The third presentation will be *Use of Dynamic Modeling in Preparations for the Gullfaks C-5A Well* by **R Rommetveit**, Sintef Petroleum Research; **K K Fjelde**, RF-Rogaland Research; and **Johan Eck-Olsen**, Statoil.

The conference's final presentation will be *Well Completions Techniques and Methodologies for Maintaining Underbalanced Conditions Throughout Initial and Subsequent Well Interventions* by **T T W Cavender** and **H L Restarick**, Halliburton Energy Services. ■