2009–10 SPE Distinguished Lecturer Program Announced

Featuring 40 speakers from various disciplines and professions, the 2009–10 Distinguished Lecturer Program emphasizes current industry trends, challenges, and technology through diverse topics such as reservoir management, hydraulic fracturing, and coiled tubing. Topics and speakers featured in this year's Distinguished Lecturer Program include the following.

Real-time Reservoir Management (RTRM) From Data Acquisition Through Implementation: Closed-Loop Approach

This presentation will present examples of various real-time optimization loops from Saudi Aramco fields. Actual examples from different fields will be demonstrated to illustrate the concept.

Saeed M. AlMubarak is supervisor in Reservoir Management Department and a specialist in RTRM, intelligent fields, and smart wells for Saudi Aramco.

Realizing Full Potential of Hydraulic Fracturing—Damage Mechanisms and Mitigation

This lecture will present recent experimental work that characterizes polymer concentration and the role of the filter cake in fracturing fluid damage. It will also review the different damage mechanisms and their impact quantified using a customized 3D-multiphase reservoir simulator.

Joseph Ayoub is reservoir and production engineering domain career leader for Schlumberger.

Carbon Capture and Storage in the Global Energy Perspective

This lecture will present options for an energy revolution, including the energy demand and the energy supply sectors. Scenarios for the deployment of a new energy portfolio will also be presented.

Kamel Bennaceur is chief economist of Schlumberger in Paris, following 2 years of secondment at the International Energy Agency.

Unlocking Ten Trillion Barrels of Global Oil Shale Resources. The State of the Industry

The US has vast deposits of oil shale—nearly 2 trillion bbl across the eastern and western states. A comprehensive analysis has been completed to address related issues and identify options to accelerate the development of this resource.

Khosrow Biglarbigi is president and director of petroleum engineering of Intek.

An Accurate Physical Model: Essential for the Economic Development of Complex Reservoirs

The presentation will include data sets, interpretations, analysis, and some nuances regarding low-porosity very-tight matrix rocks, natural fractures, highly elliptic drainage patterns, stimulation enhancement, lenticular or compartmentalized reserves, and well spacing.

Paul Branagan is a senior physicist at Branagan and Associates.

Formation Damage—Any Time, Any Place, Anywhere.....

This presentation will attempt to demystify many of the legends of formation damage and their evaluation. New examples will be presented of the process of understanding and avoiding damage.

Michael Byrne is principal formation damage consultant for Senergy.

Openhole Gravel Packing: New Trends and What We Are Doing to Overcome the Challenges

This presentation will review current procedures and provide important new developments from shallow to ultradeepwater scenarios and regarding infill drilling projects for mature fields. A comparison of technologies will be provided based upon impact on well productivity or injectivity.

Agostinho Calderon is a senior adviser in the completion, sand control, and stimulation engineering team for Petrobras E&P Services in Brazil.

Recent Advances in Horizontal Well Water Shut-Off and Production Improvement

This presentation will disseminate the mechanisms of water production and their effect on production decline in horizontal wells. Key problems and challenges in developing viable water shutoff solutions for the various horizontal well completions will also be discussed.

Keng Seng Chan is a principal reservoir engineer for the Petroleum Management Unit at Petronas in Malaysia.

Decades of Coalbed Methane Exploration and Development: What Secrets Remain Hidden in the "Black Box"?

This presentation will discuss how advances in our knowledge of critical coalbed methane reservoir properties have translated into improved reservoir characterization and modeling.

Christopher R. Clarkson is team leader, reservoir engineering for Talisman Energy and an adjunct professor with the Department of Chemical and Petroleum Engineering for the University of Calgary.

Effects of Complex Reservoir Geometries and Completion Practices on Production Analysis in Tight Gas Reservoirs

This lecture will demonstrate the effects of stress-dependent permeability, radial composite reservoirs, and multilayered reservoirs on the results obtained from production analysis. The completion issues addressed will include hydraulic fracture cleanup, fracture conductivity reduction, and liquid loading.

Stuart Cox is a senior technical consultant with Marathon Oil's Technology Services organization in Houston.

Preserving and Extending the Energy Advantage

This lecture will explore the vital role that oil and gas have played and will continue to play in providing energy to the world's burgeoning masses. This lecture will examine the urgency and challenge of extending petroleum-derived energy to more people, further into the future, with minimal environmental impact.

Ben Ebenhack is a senior lecturer in the Chemical Engineering Department at the University of Rochester, board chairperson of the Access to Energy for African Development Energy, and principal investigator for the sustainability and global energy systems project.

Multiple Pay Tight Gas Sands. Can the Lessons Learned in the Rockies Help You?

This presentation will discuss the factors that affect the economic optimization of well completion for the factory approach and how they are currently being addressed, with focus on the Rocky Mountain region of North America.

Mike Eberhard is technical manager for Halliburton's Rocky Mountain area.

Diagnosing and Resolving Chemical and Mechanical Problems in Produced Water Treating Systems

This lecture will discuss three interactive aspects of produced water treatment: water chemistry, process hardware, and chemical treatment. The diagnosis and resolution of actual, challenging water treatment problems will be discussed as examples of how the application of fundamental information can be used beneficially.

Ted Frankiewicz is a process engineering consultant and division manager for oil and gas production facilities for System Planning, Engineering & Coordinating Services.

Environmental Performance in the Oil and Gas Exploration & Production Industry: Assessment and Challenges

Companies need to collect and report on their environmental performances for various reasons. Efforts made at either national level, regional, or international level have been efficient but the quality of the data still needs to be improved and additional data are to be collected to meet stakeholders' expectations and the need of the industry.

Emmanuel Garland is a special adviser to the health, safety, and environment vice president, at Total E&P.

Understanding and Minimizing the Environmental Impacts of Offshore Drilling Discharges

New environmental regulations and higher expectations from partners and external stakeholders are driving the oil and gas industry to better manage the offshore discharge of drilling muds and cuttings. This presentation will address how our industry can ensure that our discharges do not cause significant adverse effects, and communicate this to regulators and other stakeholders.

Andrew Glickman is senior environmental scientist and team leader of the water science and technology team within the environmental unit of Chevron Energy Technology.

Environmental Performance of the Exploration and Production Industry: Past, Present, and Future

This lecture will discuss the improvements in environmental performance made by the E&P industry, examines industry and societal trends, and highlights some of the specific technological advances contributing to its performance. The lecture will introduce new concepts of environmental performance, particularly relating to extracting environmental value from existing infrastructure.

Michael Godec is vice president of Advanced Resources International.

How to Strengthen and Stabilize the Wellbore During Drilling Operations

Loss of drilling fluid to the formation is one of the costliest problems that drillers face during well construction. Current technology enables a comprehensive approach that includes remediative methods but gives greater emphasis to preventing lost circulation.

Fred Growcock is senior technical adviser for M-I SWACO in Houston.

Lunskoye Big Bore Gas Wells—Maximizing Gas, Minimizing Sand

This presentation will look at how the sandface completion design has impacted the Sakhalin Phase II project. Developments with Shell's fully integrated sand failure prediction tool enabled the sand volumes to be quantified and used for the first time during completion selection in Shell. The results predicted that unmanageable sand volumes would occur upon startup, for open hole completions with predrilled liners.

Mike Gunningham is the Lunskoye lead production technologist of Sakhalin Energy.

A Decade of Formation Testing. Do's and Don'ts and Tricks of the Trade

This lecture will review the best practices and techniques that have been employed to avoid failures and to successfully assess reservoir fluid properties in the early stages of a discovery. This presentation will discuss successful sampling of low undersaturated hydrocarbon accumulations, low condensate gas ratio, and other near-critical fluids.

Mohamed Hashem is regional technology manager Middle East, Caspian, and Southeast Asia and principal technical expert for formation testing and sampling for Shell.

How to Prevent the Loss of Oil and Gas Production Caused by Scale Deposits

This presentation will review the major elements which normally comprise any effort aimed at the successful control of scale deposition, starting with scale identification, followed by scale prediction, inhibition, and removal. Several case histories will illustrate the application of these scale-control techniques in oil production facilities.

Charles Hinrichsen is a chemical treating specialist for Chevron Energy Technology.

Miscibility Variations in Compositionally Grading Reservoirs—Consequences for North Sea Fields

This presentation will quantify the variation of minimum miscibility pressure (MMP) with depth for several North Sea reservoir fluid systems, and describe the reasons for seemingly complicated MMP variation and its practical implications on drainage strategies. Rich gas condensates and compositionally grading reservoirs will be given special attention.

Lars Høier is chief researcher within reservoir technology for StatoilHydro.

Listening to the Reservoir—Interpreting Data From Permanent Downhole Gauges

Interpretation of permanent downhole gauge data is a new problem. Permanent downhole gauges are being applied widely now, yet there is still much to be done to capitalize fully on all the advantages they can offer.

Roland N. Horne is Thomas Davies Barrow professor of Earth sciences and professor of energy resources engineering at Stanford University.

Close the Loop Between Geophysics and Reservoir Engineering

By looping between model updating, matching of production history, and seismic attributes, the model becomes more objective. The workflow should be a universal way to improve the consistency between reservoir engineers and geoscientists.

Xuri Huang is president of SunRise PetroSolutions Tech.

Environmental Due Diligence for International Finance of Oil and Gas Projects

This presentation will explain the requirements and process of environmental due diligence implemented by the European Bank for Reconstruction and Development (EBRD) and similar public and commercial financial institutions and shares the lessons learned through the environmental due diligence on two recent projects, the Baku-Tbilisi-Ceyhan pipeline and the Sakhalin Energy Investment Sakhalin II project.

Jeffrey L. Jeter is a geologist and senior environmental adviser for EBRD.

Produced Water Management: A Legacy or an Opportunity for Sustainable Field Development

This presentation will target a volume reduction of produced water, improved oil production, and cost reduction while focusing on technologies that will contribute to the sustainable development of producing fields.

Zara Khatib is technology marketing manager responsible for Middle East and South Asia for Shell E&P International.

Well Construction Hydraulics in Challenging Environments

This presentation will focus on the application of latest design, chemicals, software, and equipment technology for drilling and completing in challenging scenarios.

Andre Leibsohn Martins is a senior consultant in the well technology sector at the Petrobras R&D Center.

Reliability Based Design—The Inevitable Evolution in Complex Wellbore Tubular Design

This lecture will focus on the application of reliability-based design to complex wells. Traditional design approaches and their limitations are reviewed briefly. Several real-well examples will be used to illustrate the need for, and the power of, reliability-based design.

David B. Lewis is executive vice president of engineering for Blade Energy Partners.

The Concept of Sedimentary Steering Using High-Definition Geological Information While Drilling

The concept of sedimentary steering is introduced for advanced reservoir navigation (geosteering). The focus of this presentation will be on reducing uncertainties related to, and improving geosteering within, the desired sweet-spot of a variety of clastic and carbonate reservoirs.

Jeremy Lofts is director of Sales and Business Development Latin America for Baker Hughes.

Toward Production From Gas Hydrates: Current Status, Assessment of Resources, and Evaluation of Technology and Potential

This lecture will provide a quantitative assessment of gas hydrates, their classification by potential production type, and a modeling study designed to demonstrate the feasibility of producing different classes of gas hydrates.

George Moridis is research area leader (transport and thermodynamics) in the Earth Sciences Division, Hydrology and Reservoir Dynamics Department at Lawrence Berkeley National Laboratory, Berkeley, California.

Ways to Successfully Reduce the Well Blowouts

This presentation will show important aspects related to well control safety that have been conducted in Brazil by Petrobras that resulted in an almost 10-year period without a blowout event in drilling operations. This presentation

will focus on research and development projects that have been conducted in Brazil on well safety especially in deepwater environment.

Otto Luiz Alcantara Santos is coordinator of the well construction area of Petrobras University, coordinator of well control training and certification program of Petrobras, instructor of drilling technologies at Petrobras University, and senior technical adviser of Petrobras.

The Role of Oil and Gas in the Energy Mix of the Next 100 Years: Shifts in Demand, Supply, and Utilization of Energy

The global production curve for oil and gas will most likely resemble a long plateau with a serrated surface, tilted towards the year 2100. Oil and natural gas—so dominant in 2004 with 63%—should still be important in absolute terms in 2100, but with a much smaller relative share (about 15%) of the total energy mix.

Wolfgang E. Schollnberger is an international energy adviser and former technology vice president of BP.

Calibrating Permeability with Production Logs: A Breakthrough in Carbonate Reservoir Characterization

A step-change improvement can be made to the predictive accuracy of a carbonate reservoir flow simulator by using permeability calibrated using production-logging tools to construct the geologic model. The improvement is most dramatic in carbonate reservoirs exhibiting problematic excess permeability due to fractures and vuggy porosity.

Michael J. Sullivan is reservoir surveillance coordinator for the Tengiz field in Kazakhstan.

In-situ Combustion: As Good as It Gets

Experience with in-situ combustion process from bench scale to fieldwide implementation has been exotic. In-situ combustion never loses spark provided one does not sit on a smolder rather than a burn. Successful commercial field implementation of in-situ combustion-based oil recovery in two fields will be described.

Sidhartha Sur is general manager-heavy oil at Institute of Reservoir Studies, Oil and Natural Gas Corporation, Ahmedabad, India.

Fracturing for Sand Control: How Hydraulic Fracturing has Changed Sand Control

Hydraulic fracturing is used in most of the major cased-hole sand control techniques today. With more than 15 years of use in the industry it is time to assess its impact and its future.

Raymond Tibbles is a sand control adviser for Schlumberger Oilfield Services based in Kuala Lumpur.

Why Coiled Tubing Fails and How to Avoid Failures in Your Well

The development of reliable inspection technology provides another key to coiled tubing (CT) reliability. Magnetic flux leakage is the most common technique for finding flaws in CT. However, research is underway to adapt 3D laser imaging nondestructive evaluation. Output from such techniques is directly compatible with software that can quantify defect severity in real time.

Steven M. Tipton is the Frank W. Murphy distinguished professor of mechanical engineering at the University of Tulsa.

Examining Our Assumptions—Have Oversimplifications Jeopardized Our Ability To Design Optimal Fracture Treatments?

The primary message of this presentation will be that unrecognized opportunities exist to improve well profitability. Challenging our misconceptions and examining actual field production has yielded techniques to improve fracture designs, despite the failure of our simplistic models to recognize those opportunities.

Michael C. Vincent is a consulting engineer for Insight Consulting.

Incentives to Revitalize Mature Fields in an Environmentally Safe Manner—California Case Studies of Government/Industry Collaborations

This presentation will demonstrate how economic incentives provide stimulus for operators to apply off-the-shelf advanced technologies to revitalize mature oilfield production and promote development in an environmentally safe manner.

Marina Voskanian is chief of planning and development with the California State Lands Commission.

Completion of Hydrocarbon Bearing Shale Reservoirs

This presentation will focus on key stimulation issues associated with gas shale reservoirs and how to determine the appropriate completion methodology.

George Waters is an engineering adviser for Schlumberger Data & Consulting Services in Oklahoma City, Oklahoma.

Geomechanics—A Missing Link in Reservoir Management?

This lecture will illustrate with examples and outlines how geomechanics can be better integrated in the reservoir development and management processes to optimally develop the vast and yet finite hydrocarbon resources.

Sau-Wai Wong is manager for subsurface technology in Shell's Unconventional Oil and is regional geomechanics discipline focal point for Shell's operations in the Americas.

Improved Oil and Gas Recovery by Polymer Technology: EOR, Water Shutoff, and Sand Control

This presentation will give an illustration of new improvements with two examples, a successful polymer-flood project implemented in a heavy oil reservoir, and a successful water shutoff/sand-consolidation treatment by microgels in an underground gas storage well.

Alain Zaitoun is vice president of Poweltec. JPT

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