

Shale World MEXICO 2015

11 - 12 March 2015, Hyatt Regency Hotel, Mexico City, Mexico

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Confirmed Speakers Include:

Arturo Henríquez Autrey, Chief Procurement Officer, Pemex Hector Castro Vizcarra, Minister of Energy Affairs, Embassy of Mexico, Sener Representative

Rod Skaufel, President Unconventionals, BHP Billiton

Gervasio Barzola, VP Subsurface & Development, Pioneer Natural Resources

John Trahan, VP Business Development - Americas, Repsol

Andrés Peña, Executive Director, Yan Chang Petroleum & Group VP, China Copower

Stephen Lindsey, Senior Director of Government and Community Affairs, Quicksilver

Resources

Jorge Alfonso Mendoza Amuchástegui, Director of Exploration and Production, Mexican Petroleum Institute (IMP)

Gustavo Murillo Muñeton, Exploration and Production Research Division, **Mexican Petroleum Institute (IMP)**

Matt McChesney, Senior Geologist, Pioneer Natural Resources

Rubén Ignacio Moreira Valdéz, Governor, State of Coahuila

Héctor García García, Congressman (Nuevo León), Mexican Federal Congress

Andrés Marco Antonio Bernal Gutiérrez, Congressman, Mexican Federal Congress

(Diputado Federal, State of Tamaulipas)

Fernando Alonso Viñas, Chief of Government Affairs, Fermaca

Jorge Machnizh, Chief Executive Officer, SIGMA³

José Luis Vitagliano, CEO, Gasoductos de Chihuahua

Carlos Morales Velasco, Technical Expert, Texas A&M University

David Penchyna, Senator, State of Hidalgo and President, Committee on Energy

Eckhard Hinrichsen, Country Manager Mexico, DNV GL - Oil and Gas

Lars Sørum, Global Head of Unconventional Oil & Gas, DNV GL Oil and Gas

Jaime Felipe Cano Pérez, Director General, State Water Commission of Tamaulipas

Humberto Vela Del Bosque, Director General, Nuevo León State Water Institute (IANL)

Juan Acra, President, Energy Commission, COPARMEX (Mexican Employers'

Association)

Jaime de la Rosa, President, Asociación Mexicana de Energía

Antonio Juarez Alvarado, Director, Mexican Association of Petroleum Services Companies (AMESPAC)

Duncan Wood, Director- Mexico Institute, Wilson Center



Thomas Roesner, Global Business Development Manager, CAMSHALE™ Services, CAMERON

Israel Hurtado, President, Mexican Academy of Energy Law

Thomas Tunstall, Research Director, University of Texas at San Antonio

Ron Dusterhoft, Technology Fellow, Halliburton

Juan Carlos Garcia, Latin America Region Manager, Pinnacle - Halliburton

Juan Tavella, Manager of Reservoir Characterization, Geoprocesados

Maria Eugenia Calderón-Porter, Asst. Vice President for Global Initiatives/Binational

Center, Texas A&M International University

Dr. Eduardo Gonzalez Partida, Researcher, Centre for Geosciences, Universidad

Nacional Autónoma de México (UNAM)

Mo Cordes, VP Integration, Schlumberger

Eliecer Palacios, CEO, PetroRock Energy LLC

Erika Salazar, Coordinator for Energy and Environmental Technologies, ProMéxico

Miguel di Vincenzo, Vice President, EcoStim Energy Solutions

Miriam Grunstein, Professor, Mexican Center of Research and Higher Education

Luis Serra, Director of Economic Development, Energy and Climate Change, CIDAC

Shihong Chi, Senior Geophysical Advisor, ION Geophysical

Allan Julius Behul, Regional Director of Security – Mexico, Goldcorp Mexico

Martin Panelo, Managing Director, Ekotech

Dr. Luis Fernando Camacho Ortegon, Director, Universidad Autonoma de Coahuila

Jürgen Mahlknecht, Director, Water Center for Latin American and Caribbean

Nelson Balido, APR, CEO, Energy Council of the Americas

Ana Lilia Moreno, Economic & Regulatory Development, CIDAC



DAY ONE, Wednesday 11 March 2015

- **08:00** Registration opens. Coffee and tea are served in the exhibition room
- 09:00 Conference opening

 Denisa Luchian, Conference Director, Shale World Mexico
- 09:05 Chairman's opening remarks
 Duncan Wood, Director- Mexico Institute, Wilson Center

REALIZING MEXICO'S UNCONVENTIONAL POTENTIAL

- 09.10 Keynote Address: Building the future of unconventional oil and gas in Mexico: Highlighting post-reform government plans for developing shale resources
 - Energy reforms: what can this mean for the shale industry and cross-border collaboration
 - Defining the environmental and fiscal regulations to determine how these changes will impact unconventional project development timeframes and economics in the country
 - Understanding plans for generating investment in transport and midstream infrastructure to support unconventional oil and gas exploration in Mexico
 - How does Sener plan to support US and international investment in Mexico?

Hector Castro Vizcarra, Minister of Energy Affairs, Embassy of Mexico, **Sener Representative**

- 09:30 Keynote Presentation: Reforming Pemex's procurement operations in the changing Mexican energy landscape
 - Outlining Pemex's vision and role post-reform and evaluating Pemex's strategy for commercialising shale resources in Mexico
 - Understanding Pemex's activity in unconventional oil and gas to date and changes planned for their procurement operations.
 - How will international partnering expedite skills and technology transfer to help realise Mexico's unconventional potential?

Arturo Henríquez, Chief Procurement Officer, Pemex

- 10:00 Keynote Panel: Unlocking Mexico's shale potential: Multi-stakeholder perspectives on overcoming the challenges of making the Mexican shale oil and gas market a reality
 - Reviewing the Mexican energy market and the role shale oil and gas can play in country and its potential long term impact on market dynamics in the Americas
 - What are the driving factors which will support a "shale revolution" in Mexico, and where will more efforts be required?
 - How will an optimum balance of operator, government, and public interest be achieved?

Andrés Marco Antonio Bernal Gutiérrez, Congressman (Tamaulipas), Mexican Federal Congress

David Penchyna, Senator, State of Hidalgo and President, Committee on Energy



Héctor García, Congressman (Nuevo León), Mexican Federal Congress

10:50 How can IOCs and OSCs experience and expertise help expedite the development of Mexican shale?

- Reviewing the Mexican shale opportunity compared with international unconventional opportunities
- In what way has BHP Billiton's strategic partnership with Schlumberger helped advance E&P in the Eagle Ford and other prolific shale plays in the US?
- How easily can US shale success be transposed to Mexico? Assessing how skills and services can most effectively be transferred

Rod Skaufel, President Unconventionals, BHP Billiton

Session sponsored by: **Schlumberger**

11:10 Morning coffee and tea are served in the networking exhibition area

12:10 Enabling cross-discipline collaboration and forward modelling through advanced subsurface geocellular earth modelling

- Managing large quantities of data in the asset planning and field development stage
- Advantages of an evolving subsurface geocellular earth modelling tool
- Forward modelling and its role in improving the reservoir understanding, leveraging the latest
 generation of tools to model cause and effect behaviours, and in establishing optimized field
 development solutions faster
- Overview of proof-of-concept projects and analysis of the concept testing results

Ron Dusterhoft, Technology Fellow, Halliburton

GEOLOGY AND RESERVOIR CHARACTERIZATION OF MEXICAN SHALE BASINS

12:40 Insights into the formation of the Eagle Ford in the north-western part of the Burgos Basin, northern Coahuila, Mexico

- Analysing seismic information on areas of most potential to determine depth and orientation of rock formations and hydrocarbon traps
- Appraising existing core, well log, image log and other data to determine key information to determine hydrocarbon potential including TOC, porosity, permeability, thermal maturity and mineralogy
- Evaluating petrophysical logs including nuclear magnetic resonance data to assess the chemical and physical properties of hydrocarbons and other fluids
- Assessing logs on natural and induced fractures to identify fracture system

Gustavo Murillo Muñeton, Programme Manager Exploration and Production Research Division, **Mexican Petroleum Institute (IMP)**



13:00 Analysing key geology and reservoir information to assess oil and gas prospects in Mexico's Sabinas Basin

- Understanding the boundaries of the Eagle Ford and La Casita formations into the Sabinas basin and La Popas sub basin
- Assessing the structure and folds of the La Casita formation to identify prospective shale areas
- Evaluating seismic, well data and maps to identify maturities, thicknesses and TOC to determine hydrocarbon potential in the Eagle Ford and La Casita formations
- Drawing comparisons between Haynesville shale and La Casita and what this will mean for production potential

Dr. Eduardo Gonzalez Partida, Researcher, Centre for Geosciences, Universidad Nacional Autónoma de México

13:20 Networking lunch in exhibition area



******* SHALE WORLD MEXICO ROUNDTABLES **********

Discuss regional specific challenges, opportunities and solutions for specific areas in unconventional oil and gas in our breakout roundtable sessions. A variety of core themes ensure interactive discussion with your peers.

14:50 Roundtables along the following themes:

1) Reservoir Characterisation

Moderator: **Gustavo Murillo Muñeton**, Programme Manager Exploration and Production Research Division, **Mexican Petroleum Institute (IMP)**

2) Water Management

Moderator: Jürgen Mahlknecht, Director, Water Center for Latin American and Caribbean

3) Drilling & Completions

4) Mexico Investment Climate

Moderator: **Erika Salazar,** Coordinator for Energy and Environmental Technologies, **ProMéxico**

5) Regulatory and Fiscal Conditions

Moderator: Israel Hurtado, President, Mexican Academy of Energy Law

6) Security

Moderator: Allan Julius Behul, Regional Director of Security - Mexico, Goldcorp Mexico

7) Environment Law

Reserved for Geolyma

8) Human Capital and Labour Conditions

Moderator: Miriam Grunstein, Professor, Mexican Center of Research and Higher Education

9) Mexican Oil and Gas Market Dynamics

Moderator: Ana Lilia Moreno, Economic & Regulatory Development, CIDAC

10) Supply Chain

Moderator: Nelson Balido, APR, CEO, Energy Council of the Americas

15:40 Afternoon coffee and tea are served in the networking exhibition area

LEVERAGING US EXPERTISE

16:10 Beyond the horizon: A future look at shale development

- Evaluating the current landscape what does shale development look like?
- What's trending in the US? What will shale development look like in the near future?
- Understanding the industry's future challenges and the importance of innovation

Thomas Roesner, Global Business Development Manager, CAMSHALETM Services, CAMERON



16:30 Eagle Ford exploration and appraisal: Analysing key maps and the toolbox for a shale play

- Leveraging 8 years of exploration, appraisal and development in the Eagle Ford Shale
- Examining best practices for shale play testing
- Assessing critical data and examining Eagle Ford maps to identify reservoir sweet spots and understand regional and local control on well performance

Gervasio Barzola, VP Subsurface & Development, Pioneer Natural Resources

RESERVE ESTIMATIONS

17:00 Assessment of the Mexican Eagle Ford shale oil and gas resources

- Identifying relevant analog areas in the US Eagle Ford shale based on available geologic information in both the US and Mexico.
- Analysing and forecasting production data in each of the identified analog areas using a probabilistic decline curve methodology
- Estimating the oil and gas prospective resources of the Mexican Eagle Ford shale and their related uncertainty

Carlos Morales Velasco, Technical Expert, Texas A&M University

TRANSFERRABLE LESSONS FROM THE EAGLE FORD:

17:20 Identifying sweet spots in the Eagle Ford through analysis of seismic attributes

- Collection of elemental data / inorganic geochemistry data from well cuttings and core
- Use of elemental data as proxies for petrophysical parameters shown to be key drivers of well performance
- Extension of the elemental data from cuttings to 3D attribute volumes through the use of pre-stack seismic inversion products

Matt McChesney, Senior Geologist, Pioneer Natural Resources

17:50 Chairman's closing remarks

Duncan Wood, Manager, Woodrow Wilson International Center for Scholars

18:00 Networking drinks reception in exhibition area



DAY TWO, Thursday 12 March 2015

08:00 Registration opens. Coffee and tea are served in the exhibition room

09:00 Chairman's opening remarks

Duncan Wood, Director- Mexico Institute, Wilson Center

KEYNOTE PRESENTATIONS & INTERVIEWS

09.10 Evaluating the Mexican Opportunity: International partnering to commercialise Mexico's shale resources

- Perspectives on the current and future developments in the shale sector and how the Mexican opportunity compares with global shale plays
- How have the Mexican energy reforms changed the outlook of companies looking to grow their international businesses?
- Challenges and uncertainties for IOCs & independents when considering entry into the Mexican market and what this will mean in terms of risk
- Balancing the costs and opportunity of investing in Mexican shale

John Trahan, VP Business Development - Americas, Repsol Andrés Peña, Executive Director, Yan Chang Petroleum & Group VP, China Copower Eliecer Palacios, CEO, PetroRock Energy LLC

10:10 Best practice for the unconventional oil and gas industry

- Overview of risks that need to be managed including risk management strategies
- Insights to Best Practice Experience from around the world for Regulatory Risk Frameworks
- Insights on how the onshore oil and gas industry may benefit from the offshore oil and gas legacy

Lars Sørum, Global Head of Unconventional Oil & Gas, DNV GL Oil and Gas

10:30 Morning coffee and tea are served in the networking exhibition



STRATEGY STREAM

Main Conference Room - Constelaciones B

THE OPERATING LANDSCAPE: SECURITY, ACCOUNTABILITY AND STABILITY

11.00 Driving transparency, stability and accountability to support a robust energy sector in Mexico

- How will the Mexican Government ensure stability in the new energy contracting and fiscal structure?
- Understanding plans to encourage foreign companies working in Mexico and overcoming security and accountability issues in to address the cost impact on business operations in the country
- Proposals to increase transparency in Mexico in the recent energy reforms, timelines for change and expected benefits for the energy sector
- Identifying avenues for redress, support and enforcement available to protect investments into the country

Juan Acra, President, Energy Commission, COPARMEX

11:20 Expectation management for shale gas development - relating to state & local regulations and public perception

- Real-world lessons learned from US shale gas development- How to develop in challenging and supportive environments
- Why regulation is important- How regulations are needed to support strong market growth
- The balance between local, state and federal governments- Development of layered ordinances and regulations

TECHNICAL STREAM

Technical Seminar Room - Constelaciones A

GEOLOGY & GEOPHYSICAL EVALUATION AND PLANNING

11:00 Well planning and Execution in Shale plays through use of Geosteering Technology

- Well planning and execution in shale plays, geosteering
- Integration of subsurface data, completions optimization, and well performance to optimize well planning and field development
- Execution of a horizontal well development plan via multidisciplinary collaboration in operations
- Geosteering horizontal wells: from the basics to continued refinement and accuracy

Matt McChesney, Senior Geologist, Pioneer Natural Resources

11.30 Integrated Characterization of the Unconventional the Upper Jurassic Pimienta Formation in Northern Mexico

- Examining how the target formation was mapped and estimates of thermal maturity and TOC were calculated
- Determining the susceptibility of the formation to hydraulic fracturing using borehole image log processing and interpretation for fracture identification
- Using Azimuthal seismic analysis for characterization of fracture and stresses



- Relationship building with regulators, elected leaders and community leaders-Why maintaining positive and open communication is important
- The importance of terms like reputation, brand and trust- How to manage perception when things do not go right or as planned

Stephen Lindsey, Senior Director of Government and Community Affairs, **Quicksilver Resources**

11:50 Guideline to a comprehensive risk management strategy – Mexico

- Mitigating risk and alignment with business strategy
- Stakeholder mapping & engagement
- Operations public and private security services
- Information-gathering, analysis, and application
- Liaising with authorities state and federal

Allan Julius Behul, Regional Director of Security – Mexico, **Goldcorp Mexico**

INFRASTRUCTURE: MIDSTREAM

- 12:20 The Mexican Midstream Infrastructure framework and how to utilise key networks to support your operations
 - Understanding current and planned pipeline infrastructure to assess the midstream investment required to meet projected demand
 - Could proposed pipeline systems for oil and gas imports from the US be used for export in future?
 - Determining adequacy of current and planned storage, air, sea and land vehicle transportation, road and refining projects in Mexico

 Integration: explaining how consistency between TOC/brittleness system and the stratigraphic model was achieved

Juan Tavella, Manager of Reservoir Characterization, Geoprocesados

11.50 The Galaxia Project – An integrated approach towards the determination of sweet spots in non-conventional HCs exploration

M.Sc. Jorge A. Mendoza
Amuchástegui, Director of Exploration
and Production, Mexican Petroleum
Institute (IMP)

- 12.10 Using integrated GeoEngineering workflows to accurately plan, develop and optimize unconventional reservoirs
 - Understanding heterogeneity and performance variance in shale reservoirs and reservoir variability as a key production challenge
 - Explaining how reservoir properties be incorporated into a predictive model to precisely target pay zones and yield maximum EUR
 - How can models be used to inform decisions on well placement and spacing, hazard avoidance, wellbore azimuth and inclination as well as completion techniques?
 - Examining US and LatAm case studies implementing an integrated GeoEngineering approach to maximize ROI

Jorge Machnizh, Chief Executive Officer, SIGMA³

12:30 Advances in multi-disciplinary integration for unconventional field development



 What are the opportunities for midstream players in Mexico to align with SENER's strategy for development of oil and gas pipeline networks, compression facilities and distribution networks?

Moderated by: Nelson Balido, APR, CEO, Energy Council of the Americas

Jaime de la Rosa, President, Asociación Mexicana de Energía

José Luis Vitagliano, CEO, Gasoductos de Chihuahua

Fernando Alonso Viñas, Chief of Government Affairs, **Fermaca**

13:00 Networking lunch in exhibition area

INFRASTRUCTURE & SUPPLY CHAIN: TRANSPORT AND OPERATIONS

- 14:00 Panel: The current and future infrastructure network for the energy sector in Mexico and what it will mean for shale development
 - What does the current operational infrastructure look like? Where is investment needed in roads, facilities and other operational infrastructure as activity increases?
 - How can Mexico manage an influx of workers more effectively than in US shale plays experiencing rapid growth?
 - Gauging housing, local amenities and other infrastructure capabilities to determine the level of investment required in temporary or long term facilities
 - Vision and ability for support structure and network development in Mexico and how this will sustain and grow the energy sector in the near future

- Integration of petrophysics and engineering
- Integration of seismic with other disciplines
- Integration of seismic, petrophysics, geomechanics and engineering for reservoir modelling

Shihong Chi, Senior Geophysical Advisor, ION Geophysical

WATER MANAGEMENT

12:50 Treatment and Management of Produced Water and Flowback Fluids

Martin Panelo, Managing Director, Ekotech

13:00 Networking lunch in exhibition area

DRILLING & COMPLETIONS

14:00 Optimising completions in The Eagle Ford

- A systematic approach to test multiple completion variables by analog geologic areas
- Addressing the importance of fit for purpose completions
- Examining the implementation and results of completions optimisation

Gervasio Barzola, VP Subsurface & Development, Pioneer Natural Resources

14:30 Unlocking the full potential of unconventionals with a particular focus on Mexico



Moderated by Schlumberger Rubén Ignacio Moreira Valdéz, Governor of Coahuila Antonio Juarez Alvarado, Director, Mexican Association of Petroleum Services Companies (AMESPAC) Luis Serra, Director of Economic Development, Energy and Climate Change, CIDAC

14:40 Human capital. Is Mexico ready for the challenge

- Building human capital. What international experience tells us about what works and what does not.
- The state and the market. Rivalry or complementarity?
- Mexican challenges, initiatives and perspectives. How can we be ready?

Miriam Grunstein, Professor, Mexican Center of Research and Higher Education

- 15:00 Afternoon coffee and tea are served in the networking exhibition area
- 15.30 Panel: Skills, service and equipment availability in Mexico Assessing where additional resources will be required

(PANEL - 3:30 - 4:10 PM)

- Outlining current unconventional equipment availability
- Discussing the timelines and potential overall equipment requirements and how quickly they could be supplied to not hinder exploration
- Estimating the prospective workforce in Mexico to determine the availability, transferability and skill set of Mexicans for your projects and whether near or longshoring of personnel will be required
- Learning to work with local communities and government to ensure availability of key infrastructure to support projects

Maria Eugenia Calderón-Porter, Asst. Vice President for Global

- Discussing the challenges and trends in the US and Canadian unconventional plays
- Analysing the impact technology is having on shale economics
- Where is the industry heading given the low oil and gas prices?

Mo Cordes, VP Integration, Schlumberger

- 14.50 Supporting exploration, appraisal, and development in unconventional reservoirs key elements that enable effective wells
 - Stimulation of wells to provide proof of concept as part of the shale exploration process: analysis of this extra step in terms of scope and cost; ways of minimizing risks for a successful exploration program
 - Understanding the risks associated with shale appraisal: how to manage costs and keep projects closer to economic realization; how to manage risks associated with the failure of surface equipment;
 - Underlining the importance of refining the cost model to drive efficiency when moving from appraisal to development; How to minimize production costs and retain a low risk profile through an efficient use of equipment coupled with a strong efficiency model

Thomas Roesner, Global Business
Development Manager,
CAMSHALETM Services,
CAMERON

- 15:10 Afternoon coffee and tea are served in the networking exhibition area
- 15.30 Evaluating the improvement in efficiency and delivery of multi-stage horizontal completions in the US



Initiatives/Binational Center, **Texas**

A&M University

Thomas Tunstall, Ph.D., Research Director, Institute for Economic Development, University of Texas at San Antonio

Arturo Henríquez Autrey, Chief Procurement Officer, Pemex

Dr. Luis Fernando Camacho Ortegon, Director, Universidad Autonoma de Coahuila

WATER MANAGEMENT

16:10 Practical strategies in managing water resources in Mexico for fracking operations

- Evaluating the experience of companies currently operating in Mexico in securing water resources for their operations
- Assessing to what extent water scarcity could be an issue for shale in exploration and production
- How can existing and emerging water management strategies and technologies be used in Mexico?
- Assessing the cost implications of water related technologies and whether they will be economically viable in the country when considering other additional operational costs

Jaime Felipe Cano Pérez, Director General, State Water Commission of Tamaulipas Humberto A. Vela Del Bosque, Director General, Nuevo León State Water Institute (IANL) Jürgen Mahlknecht, Director, Water Center for Latin American and Caribbean, Tecnologico de Monterrey

Miguel Di Vincenzo, Vice President, EcoStim Energy Solutions

15:50 Integrated Sensor Diagnostics

- Analysis of the most impacting subsurface challenges in large-scale field development of unconventional wells
- Advantages of detailed subsurface insights when deciding the well spacing, fracture spacing and stimulation design
- The benefits of using far-field and nearwellbore monitoring sensing techniques when trying to optimize pad and asset development
- Integrating benefits with proven fracture and reservoir engineering techniques to address subsurface challenges

Juan Garcia, Latin America Region Manager, Pinnacle - Halliburton

16:10 Call for papers

16:50 Chairman's closing remarks

Duncan Wood, Manager, Woodrow Wilson International Center for Scholars

17.00 End of conference



PRE CONFERENCE WORKSHOP ON RISK MANAGEMENT

10th March

10:00 DNV GL Workshop - Best Practices for Shale Projects and Developments



Led by DNV GL, this workshop will explore recommended best practices for safe and responsible shale development. Furthermore it will explore and provide insights into best practices for assets optimization, performance improvement cost efficiency measures in order to maximize the efficiency and sustainability of shale oil & gas operations. This workshop will provide the required information to enable participants to:

- Explore new recommended practice in exploration & production, development and decommissioning
- Achieve maximum operational optimization while reducing costs through using fewer chemicals, optimizing gas and water use, RAM analysis and reducing the carbon footprint
- Ensure long term efficiency in hydrocarbon utilization through reducing environmental risk
- Providing insights into the importance of verification to Mexican regulation of pipelines infrastructure
- Innovation platforms and programs

Eckhard Hinrichsen, Country Manager Mexico, DNV GL Oil and Gas Lars Sørum, Director Unconventional Gas, DNV GL Oil and Gas Pedram Fanailoo, Head of Department for Risk Advisory Services DNV GL Oil and Gas Hamed Hamedifar, Project Manager for Risk and Reliability Projects, DNV GL Oil and Gas

16:00 End of workshop