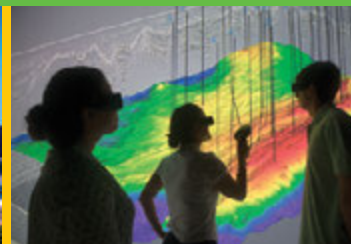
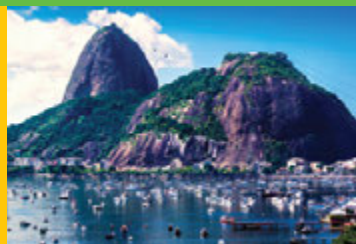




# OTC BRASIL 2019

AN EVENT ORGANIZED BY IBP AND OTC

29–31 October 2019  
SulAmérica Convention Center  
Rio de Janeiro, Brazil  
[go.otcbrasil.org/offshoreinnovation](http://go.otcbrasil.org/offshoreinnovation)



**Strengthening Deepwater for the Future**







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## OTC Organizations

### Sponsoring Organizations



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Institute of Electrical and Electronics Engineers, Oceanic Engineering Society



Marine Technology Society



Society of Exploration Geophysicists



Society for Mining, Metallurgy, and Exploration



SNAME



Society of Petroleum Engineers  
Society of Petroleum Engineers



The Minerals, Metals & Materials Society

### Regional Sponsoring Organization



Brazilian Petroleum, Gas and Biofuels Institute

### Endorsing Organizations



International Association of Drilling Contractors



Petroleum Equipment Suppliers Association



**About the Offshore Technology Conference (OTC)**  
OTC is where energy professionals meet to exchange ideas and opinions to advance scientific and technical knowledge for offshore resources and environmental matters. Founded in 1969,

OTC's flagship conference is held annually at NRG Park in Houston. OTC has expanded technically and globally with the Arctic Technology Conference, OTC Brasil, and OTC Asia.



**About the Brazilian Petroleum, Gas and Biofuels Institute (IBP)**

Founded in 1957, IBP is a private, non-profit organization focused on promoting the development of Brazilian oil, gas and biofuels industry in a competitive, sustainable, ethical and socially responsible environment. Today, IBP gathers more than 200 companies' members, and it is recognized as an important industry representative for its technical knowledge and for fostering the related to its biggest issues. Organizer of the main oil and gas events in Brazil, such as Rio Oil & Gas and OTC Brasil, IBP also develops technical courses and it is also responsible for standardization, certification of inspection services and technical publications. Learn more at [www.ibp.org.br](http://www.ibp.org.br).



# A global company in the Brazilian pre-salt

Galp is an integrated energy company, present in 11 countries. Operating in Brazil for 20 years, Galp was one of the pioneering companies on the development of some the most important projects in the pre-salt of the Santos Basin.

Currently, we are the third largest oil and gas producer in the country, with participations in 21 projects, and actively contributing for the development of some of the largest oil reserves in the world.

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Conheça **AIRIS**, Artificial Intelligence RSB Integrated System, o novo supercomputador dedicado à pesquisa científica no Brasil.

Resultado da parceria entre a Repsol Sinopec Brasil e o SENAI CIMATEC, AIRIS representa um avanço no uso de ferramentas de machine learning e inteligência artificial, além de acelerar o uso de grandes bancos de dados para obter resultados mais eficazes.

É o investimento em pesquisa e tecnologia impulsionando a transformação digital do setor de energia.



## Welcome Message :: Mensagem de Boas-Vindas



**Renato Pinheiro**

Program Committee Chair  
Petrobras

Welcome to OTC Brasil 2019 where the brightest minds in offshore exploration and production are taking part in a tradition of technical excellence. Themed “Strengthening Deepwater for the Future,” OTC Brasil is the ideal venue to get up to date on the current progress and future challenges in the Brazilian offshore industry.

Modeled after the prestigious Offshore Technology Conference (OTC) Awards, we will honor the recipients of the Distinguished Achievement Awards. Join us to congratulate these recipients during the awards luncheon on Wednesday presented by Roberto Castello Branco, Petrobras CEO.

This year’s technical program includes 200+ papers, 41 technical sessions, 3 general plenary sessions, 16 panel sessions, 3 breakfasts and 3 topical luncheons.

For the first time at OTC Brasil, the exhibition will offer interactive sessions in the newly created Offshore Arena covering topics like FPSOs, subsea solutions, renewables, and digital transformation in the offshore sector.

OTC Brasil continues an OTC tradition of focusing on innovative technologies and practices that improve safety, production and efficiency. Pre-salt reservoirs, addressing challenges in drilling, completion, subsea systems and decommissioning are just a few of the topics to be discussed during the conference.

Please set aside time to visit the exhibition that showcases the latest technologies and equipment.

We would like to thank our sponsors and exhibitors for their participation. Without their generosity and support, this conference would not be possible.

Enjoy the conference and the vibrant city of Rio de Janeiro!

Bem-vindo à OTC Brasil 2019, onde as mentes mais brilhantes da exploração e produção offshore participam de um tradicional evento com reconhecida excelência técnica. Com o tema “Strengthening Deepwater for the Future”, a OTC Brasil é a plataforma perfeita para se atualizar sobre o cenário e os futuros desafios da indústria offshore brasileira.

A exemplo dos reconhecidos prêmios da Offshore Technology Conference (OTC), este ano serão entregues na OTC Brasil, o Distinguished Achievement Awards. Venha homenagear seus vencedores e participar conosco da cerimônia de premiação que acontecerá na quarta-feira, 30 de outubro, durante o almoço que terá como palestrante Roberto Castello Branco, Presidente da Petrobras.

Este ano o programa técnico apresentará mais de 200 trabalhos técnicos, 41 sessões técnicas, 3 sessões plenárias, 16 sessões-painéis, 3 cafés-da-manhã-palestra e 3 almoços- palestras. Os principais líderes mundiais da indústria offshore de petróleo e gás irão debater soluções e perspectivas para o mercado brasileiro.

Pela primeira vez na OTC Brasil, a exposição oferecerá sessões interativas na recém-criada Arena Offshore, abordando temas como FPSOs, soluções submarinas, renováveis e transformação digital no setor offshore.

A OTC Brasil mantém a tradição da OTC de dar foco em práticas tecnológicas inovadoras e no aperfeiçoamento da produção, eficiência e segurança. Serão debatidos durante a conferência, dentre outros assuntos, reservatórios do pré-sal, desafios da perfuração e completação, sistemas submarinos e descomissionamento.

Reserve um pouco do seu tempo para visitar a exposição e conhecer as últimas tecnologias e equipamentos do setor.

Agradecemos aos nossos patrocinadores e expositores por sua participação. Sem a sua generosidade e apoio este evento não seria possível.

Aproveite a OTC Brasil e a cidade maravilhosa do Rio de Janeiro!



# Impulsione a sua carreira.

Por sermos um líder global do setor de óleo e gás, nossos colaboradores atuam nos mais fascinantes e arrojados projetos na área de energia, promovendo inovação e gerando resultados concretos. O entusiasmo, a dedicação e a determinação desses profissionais são o segredo do sucesso da TechnipFMC. Nossa capacidade de oferecer oportunidades promissoras de carreira e de incentivar os colaboradores a vivenciar plenamente nossos valores centrais atrai naturalmente os melhores talentos.

**Você quer nos ajudar a solucionar os grandes desafios energéticos mundiais?**

**Venha para a TechnipFMC.**

[TechnipFMC.com/careers](https://www.technipfmc.com/careers)

Para conferir tudo o que acontece na TechnipFMC, visite-nos no





## Schedule of Events

Tuesday 29 October	0730–0900	<b>T</b> Topical Breakfast: ANP–Twenty Years of Activity and the Vision of the Future and the Opportunities Risen From New Auctions	Room B5
	0800–1900	Registration	Ground Floor
	0900–1020	Opening Ceremony: <b>Bento Albuquerque</b> , Minister of Mines and Energy	Room B8 / 2nd Floor
	1030–1300	Technical Sessions	2nd Floor
	1200–2000	Exhibition	Ground Floor / 2nd Floor
	1300–1430	<b>T</b> Topical Luncheon: Fatih Birol, International Energy Agency	Room B5 / 2nd Floor
	1300–1800	Offshore Arena: Subsea Arena–Next Steps Towards All Subsea Solutions	Exhibit Hall / Ground Floor
	1430–1700	Technical Sessions	2nd Floor
	1700–1830	Plenary Session	Room B8
Wednesday 30 October	0730–0900	<b>T</b> Topical Breakfast: Successful Integration between Operators and Services providers Validates the Production Sharing model and Increases Pre-salt Global Competitiveness	Room B5
	0800–1900	Registration	Ground Floor
	0930–1200	Technical Sessions	2nd Floor
	1200–2000	Exhibition	Ground Floor / 2nd Floor
	1215–1345	<b>T</b> Distinguished Achievement Awards Luncheon, presented by <b>Roberto Castello Branco</b> , Petrobras CEO	Room B5
	1300–1800	Offshore Arena: FPSO Arena–Roadmap to Successful FPSO Developments	Exhibit Hall / Ground Floor
	1400–1630	Technical Sessions	2nd Floor
	1630–1800	Plenary Session	Room B8
Thursday 31 October	0730–0900	<b>T</b> Topical Breakfast: The New Paradigm of Innovation	Room B5
	0800–1900	Registration	Ground Floor
	0900–1700	Professional of the Future	2nd Floor, Room B1
	0930–1200	Technical Sessions	2nd Floor
	1200–2000	Exhibition	Ground Floor / 2nd Floor
	1215–1345	<b>T</b> Topical Luncheon: Deepwater E&P and Breakeven Reduction: Challenges and opportunities	Room B5
	1300–1800	Offshore Arena: Digital Transformation Arena–Digital Transformation Applied to the Oil and Gas Industry–Where are we heading?	Exhibit Hall / Ground Floor
	1400–1630	Technical Sessions	2nd Floor
	1630–1800	Plenary Session	Room B8

**T** = Ticketed event, separate registration required. Registration for Topical Breakfasts is available daily at 0700 on the ground floor.

# IBP. Boosting the future of the brazilian oil and gas industry.



The Brazilian Petroleum, Gas and Biofuels Institute (IBP) works comprehensively to create the conditions for the development of the oil, gas and biofuels whole value chain, pursuing a competitive, sustainable, ethical and socially responsible industry.

Welcome to the Home to our Industry.

[ibp.org.br](http://ibp.org.br)



The home  
to our  
industry.

From the 29 to 31 of October 2019, the Home to our Industry will host a booth at OTC Brasil 2019. Come visit us at booth #A18.



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## General Information

### OTC Brasil Headquarters

Room 11, 2nd Floor

### Press Room

Room 10, 2nd Floor

Members of the working press are invited to use the facilities in the OTC Brasil Press Room.

### Speaker Check-In Room

Room 11, Second Floor

All presenting authors and session chairmen should report to the Speaker Check-In Room 30 minutes prior to their Session. Audiovisual equipment is available for speakers to preview their presentations.

### Luggage Check

A luggage check will be available free of charge in the registration area on the ground floor.

### Lost and Found

Lost and Found is located in OTC Brasil Headquarters, Room 11, and is open during conference hours.

### Food and Beverages

Food and beverages will be available for purchase on-site in:

- Cafeteria on the ground floor and 2nd floor
- Food Square outside, close to the entrance of the convention center
- SulAmérica Convention Center Restaurant outside, close to the entrance

### Transportation and Parking

#### Parking at SulAmérica Convention Center

The cost of parking for visitors is R\$ 40,00 per day. Exhibitors may purchase a 3-day ticket for a special price. Prices are subject to change by SulAmérica Convention Center without prior notice.

#### Airport Transportation

Please contact FollowUp Tours.

#### Taxi Cabs

Taxi drivers do not expect to be tipped, although the common practice is to tell the driver to 'keep the change.' The taxis pick up in front of SulAmérica Convention Center at Rua Beatriz Larragoiti Lucas, 121.

### EXHIBITION HOURS—GROUND FLOOR/2ND FLOOR

For details, download the OTC Brasil App.

Tuesday, 29 October ..... 1200–2000

Wednesday, 30 October ..... 1200–2000

Thursday, 31 October ..... 1200–2000

### Exhibition Services

Exhibition services are available in the CAEX, located on the ground floor, for any questions or concerns regarding your exhibition booth.

### City Tours Information

OTC Brasil, through its travel partner Follow Up Tours, is offering pre- and post-show tours of Brazil. They are also offering local tours during the show for guests and spouses. Follow Up will be operating a desk on site at the 2nd floor close to the escalators.

### Proceedings

OTC Brasil 2019 digital proceedings are available as a valuable reference tool after the conference. Full conference attendees will receive a ticket for a complimentary digital proceedings with their badge and may pick up their proceedings in the ground floor exhibits area. Cost is USD 110 for members and USD 175 for nonmembers.

To purchase proceedings from previous OTCs, email [books@otcnet.org](mailto:books@otcnet.org) or call +1.972.952.9494.

### Badge Pickup Hours


When you arrive at SulAmérica Convention Center please proceed to the registration area in ground floor to pick up your badge. Plan to arrive early and be prepared to show your government-issued photo ID.

Tuesday, 29 October ..... 0800–1900

Wednesday, 30 October ..... 0800–1900

Thursday, 31 October ..... 0800–1900

Doors open daily at 7:30am for topical breakfasts. Please note the topical breakfasts and luncheons attendance is not included in your general registration. Registration for the luncheons and breakfasts is also available on-site.

A large offshore oil platform is illuminated at night, with its complex steel structure and various levels clearly visible. The platform is situated in the ocean, and a long walkway extends from the main structure towards the right. The sky is dark with some clouds, and the water reflects the lights from the platform.

# O pacote de soluções tubulares inteligentes escolhido pelas operadoras e EPCistas no Brasil.

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[www.vallourec.com/br](http://www.vallourec.com/br)

The logo for Vallourec Smart, featuring a stylized 'V' shape composed of a white triangle and a white circle.

**vallourec**  
smart

## Publication Bins

OTC Brasil publication bins are located on the ground and 2nd floors. Attendees are encouraged to pick up complimentary issues of the following publications:



Brasil Energia



Journal of Petroleum Technology



Offshore Engineer



Petro & Química



Portos e navios



TN Petróleo

Get your complimentary copy of the official OTC Brasil show daily, produced daily by *Upstream*.



Upstream

## Policies and Procedures

### Attendee Qualifications

All delegates and exhibitors are required to wear their OTC Brasil name badge and badge holder at all times. Use of a badge by a person not named on the badge is grounds for confiscation. If you lose your conference badge, please return to Registration to obtain a replacement. No one under 18 years of age will be admitted to OTC Brasil.

### Alcohol Policy

We recognize the legitimate serving of alcoholic beverages in the process of conducting business and social activities. We also recognize that the use and consumption of alcohol carries with it the requirement for all attendees to consume those beverages responsibly. We strongly oppose the abuse and misuse of alcohol.

### Smoking Policy

The SulAmérica Convention Center is a nonsmoking facility. Smoking is prohibited in all areas except in designated smoking areas.

### Delegates with Disabilities

We take pride in ensuring that our meetings and events are accessible to all attendees with special needs. All meeting rooms are wheelchair accessible.

### Consent to Use of Photographic Images

Attendance at or participation in OTC Brasil and other activities constitutes an agreement by the registrant to OTC's use and distribution of the registrant's image or voice in promoting future OTC events in any way OTC deems appropriate.

### Mobile/Cell Phone Policy

As a courtesy to the speakers and your fellow attendees, please turn off all mobile phones during meetings and sessions.

### Photography Policy

All OTC Brasil sessions are protected by international copyright laws. Photography and video/audio recording of any kind are strictly prohibited in the sessions and throughout the exhibition area.

Members of the press are required to report to the Press Room to obtain permission for photography and videography.

### Safety

One of the key components to the success of OTC Brasil is the safety of our delegates, exhibitors, and presenters.

When traveling, as in any major city, take certain precautions. Always keep your valuables such as jewelry, airline tickets, money, and any important documents, out of sight and safely stored in a hotel safety deposit box. In the event of a lost or stolen room key, notify hotel management as soon as possible. Travel in a group and plan your itinerary before leaving the hotel to ensure you arrive to your destination smoothly.

Due to the popularity of some session topics, it is possible for overcrowding to occur in a session or meeting room. Should this occur, we must comply with the Fire Commander's policies regarding room capacity and limit admittance to a room that is at capacity. Please make plans to arrive early for sessions that you have a strong interest in attending.

In the event of an emergency at SulAmérica Convention Center, OTC Brasil staff and/or the convention center staff will provide conference delegates with any necessary information and instructions. An emergency procedures video is presented before each session with details for escape routes.

### Emergency Phone Numbers

Police: 190

Fire Department: 193

SAMU (Medical Emergency): 192

DEAT (Tourist Police): +55 21 2332-2924



# NEW THIS YEAR!

## Offshore Arena

29-31 October, 1300–1800, Exhibit Floor, Ground Floor

For the first time the exhibition offers Parallel Events with interactive sessions in the newly created Offshore Arena where E&P leaders will unveil FPSOs, subsea solutions, and digital transformation in the offshore sector. Attendees can also experience ground-breaking technologies from BP, ExxonMobil, Royal Dutch Shell, Chevron, Shell, Tenaris, Total, and many others.

## 29 October Subsea Arena–Next Steps Towards All Subsea Solutions

Sponsored by:



### 1400 Panel Session E&P Operators - Demands & Drives

#### MODERATOR

Eduardo Oazen, Petrobras

#### SPEAKERS

Andrew Kaczmarksi, Shell  
Adriano Motta, Total

Gustavo Freitas, Petrobras  
Rodrigo Carvalhal, Equinor

### 1510 Panel Session Equipment Suppliers - Christmas Trees, Boosting and Processing Solutions to reduce Lead time and enhance ramp-up + solutions to reduce CAPEX + Digital Transformation/Subsea 4.0 adding value and Business models to reduce Operator's commercial risk

#### MODERATOR

Marcello Augustus

#### SPEAKERS

Leandro Arceu, Aker  
Alan Labes, TechnipFMC

Carlos Tadeu, Onesubsea  
Sidnei Corratte, Baker Hughes

### 1640 Panel Session Flexible Line Suppliers - Qualifications for harsh conditions regarding the present and future of pre-salt, Solutions to reduce the lead time and enhance Ramp-up, solutions to reduce CAPEX, Digital Transformation/Subsea 4.0 adding value and Business models to reduce Operator's commercial risk

#### MODERATOR

Alessandro França, Petrobras

#### SPEAKERS

Bruno Pitella, NOV  
Daniela Riva, TechnipFMC

Rodrigo Farias, Baker Hughes

### 1745 Panel Session Rigid Line Contractors - Solutions to reduce Lead time and enhance ramp-up, solutions to reduce CAPEX, Digital Transformation/ Subsea 4.0 adding value and Business models to reduce Operator's commercial risk

#### MODERATOR

Fabio Braga, Petrobras

#### SPEAKERS

Otávio Sertã, Saipem  
Anderson Dolinski, TechnipFMC

Paulo Veronesi, Mcdermott  
Paulo Cesar Martins, Subsea7

### 1850 Closing Remarks

#### ARENA CHAIRPERSON

Gustavo Adolfo Freitas, Petrobras

## 30 October FPSO Arena: Roadmap to Successful FPSO Developments

Sponsored by:



Life Is On



### Opening Remarks

#### SPEAKERS

Alberto Morandi, GustoMSC

Carlos Mastrangelo, B-in Partners

### 1410 Panel Session E&P Operators - Their strategy and ongoing FPSO Developments

#### SPEAKERS

Maysa Pimenta Goulart, Petrobras  
Andre Leite, Equinor

Roberto Goulart, Enauta  
Artur Nunes da Silva, Total

### 1530 Interview E&P Operators - Local Content and Competitiveness

#### MODERATOR

Felipe Maciel, EPBR

#### SPEAKERS

Alberto Machado, ABIMAQ

Luis Bispo, ANP

### 1600 Panel Session Designers & Constructors - FPSO designers in Brazil and abroad, modules and shipyards in Brazil and abroad

#### MODERATOR

Carlos Mastrangelo

#### SPEAKERS

Mattias Elgstrom, KBR  
Mauricio Almeida, Estaleiro Enseada  
Industry Leader, KeppelFels

Joao Chachamovitz, Radix  
Alain Wassink, Gusto  
Industry Leader, Technip

### 1710 Invited Speaker

#### SPEAKER

Luis Felipe Kessler, Schneider

### 1730 Invited Speaker

#### SPEAKERS

Claudio Makarovsky, Siemens

Soichi Ide, Modec

### 18:10 Closing Remarks

#### SPEAKERS

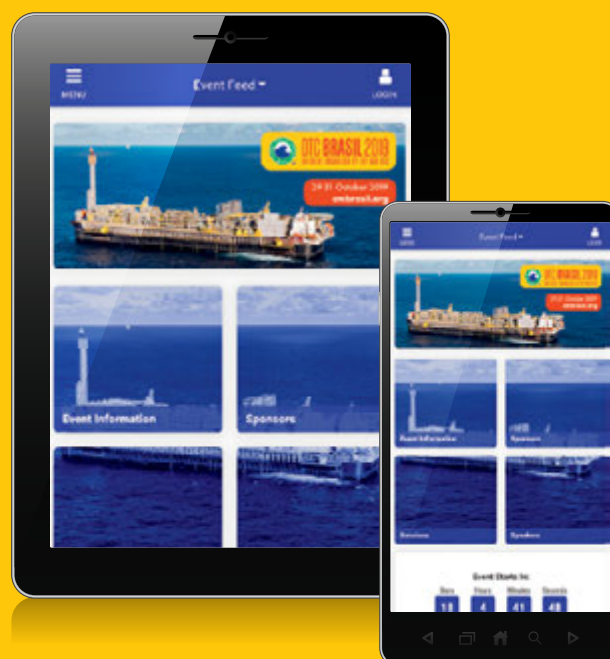
Alberto Morandi, GustoMSC

Carlos Mastrangelo, B-in Partners

### 18:15 Cocktail offered by MODEC

# Download the OTC Brasil 2019 Mobile App

To download the app, search **OTC Brasil** in the Apple Store or Google Play.



This year, the exhibitor list is not available on-site. We encourage you to download the free OTC Brasil 2019 mobile app for easy access to information about the exhibitors and more!



**31 October**

## Digital Transformation Arena–Digital Transformation Applied to the Oil & Gas Industry–Where are we heading?

**1300 Opening Remarks**

**SPEAKER**

**Melissa Fernandez**, IBP

**1305 Innovating for Oil & Gas with AWS; lessons and insights to deliver value from digital transformation**

**SPEAKER**

**Arno Van der Haak**, Amazon

**1335 Shell digitalization and cultural transformation**

**SPEAKER**

**Gabriel Rampo**, Shell

**1405 Impact of digital transformation in the research and development area**

**SPEAKER**

**Tamara Garcia Bermejo**, Repsol Sinopec

**1435 The role of digital transformation in adding value to ultra-deepwater projects**

**SPEAKER**

**Thiago Lopes da Rosa**, Petrobras

**1505 Equinor Digital Transformation Journey**

**SPEAKER**

**Ligia Camara**, Equinor

**1535 Development of Ocyan's Real-Time Integrated Operations Center based on Big Data Analytics, Machine Learning (AI) and CBM Solutions**

**SPEAKER**

**Rodrigo Chamusca Machado**, Ocyan

**1605 End of Activities**

## Special Events

### OTC Brasil Cocktail Reception

Tuesday, 29 October

Private event, available for guests only.

Sponsored by:

1900-2100, Casarão



### T Distinguished Achievement Awards Luncheon

Wednesday, 30 October

1215-1345, Room B5

During this luncheon the award winners will be recognized, followed by a keynote presentation.

#### MODERATOR

**Marcos Assayag**, OTC Brasil Chairperson, Independent Oil and Gas Consultant

#### KEYNOTE PRESENTER

**Roberto Castello Branco**, CEO, Petrobras



#### OTC Brasil Distinguished Achievement Award for Individuals

Carlos Tadeu Fraga was awarded the Individual Award for his outstanding leadership and key roles in the advancement of deepwater oil and gas production projects in the areas of well construction, subsea and topsides.



#### OTC Brasil Distinguished Achievement Award for Companies, Organizations, and Institutions

Petrobras was presented with this Award in recognition of its groundbreaking Extended Well Test (EWT) Libra Project. The Libra EWT pushed the concept of the dynamical appraisal to a new dimension.

### Professional of the Future

Thursday, 31 October



The Professional of the Future was created to broaden the horizons of young students interested in the oil and gas industry in Brazil. Focused on debating career challenges, opportunities and professional perspectives in the industry, each session gathers a CEO, a human resources leader, and a young professional to bring to the table career issues for youth talents, their previous experiences, and projections for the future. It also serves to promote and disseminate knowledge about the industry and contribute to the training of young people through engagement with the academic environment.

0900-1700, Room B1 | Advance registration required

#### Theme: The Resumption of Oil and Gas, Opportunities for Young People

##### What will happen:

- 20 minutes presentations (similar to TED Talks) focused on personal stories about the career of CEOs in the oil and gas industry
- Presentation of a human resources leader to talk about career issues and lessons
- Less formal environment to promote participation

#### SPEAKERS

**Alessandra Simões**, Head Hunter, UpHill  
**Eduardo Chamusca**, Country Director, SBM Offshore  
**Volmir Korzeniewski**, Country Manager, Aker Solutions  
**Jaume Vergés**, Head of Human Resources and Corporate Innovation, PetroRio

Sponsored by:



T = Ticketed event, separate registration required





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»»» keep advancing



# *Mais do que um prêmio, um reconhecimento de que estamos no caminho certo.*

---

A Petrobras ganhou mais uma vez o prêmio Distinguished Achievement Award, na edição brasileira da OTC. E vamos seguir nos movendo, para ser ainda mais inovadores e eficientes.

**Petrobras. Energia para transformar.**

Saiba mais em  
**[petrobras.com.br/nossaenergia](http://petrobras.com.br/nossaenergia)**









## Technical Program: Tuesday, 29 October 2019, 0730–1300



Please note: The technical program is only available in English. All technical sessions are located on the 2nd Floor. Papers are also available in the multi-society library OnePetro®.

0730–0900, Room B5

SE01

### **T Topical Breakfast: ANP–Twenty Years of Activity and the Vision of the Future and the Opportunities Risen From New Auctions**



**MODERATOR**

**João Carlos de Luca**

De Luca Energy Consulting



**SPEAKER**

**Decio Oddone**

General Director, ANP

0900–1020, Room B8

SE02

### **Opening Ceremony**

**MODERATOR**

**Marcos Assayag**, OTC Brasil General Chairperson, Independent Oil and Gas Consultant

**SPEAKERS**



**Bento Albuquerque**

Minister of Mines and Energy

**Cindy Yeilding**, OTC Board Chairperson, BP

**Jose Firmo**, President, Brazilian Petroleum, Gas and Biofuels Institute

**Wilson Witzel**, Governor of the State of Rio de Janeiro

1030–1300, Room B1

SE03

### **Panel: Driving Innovation - Faster Concept to Application in the Offshore Industry**

**MODERATOR**

**Orlando Ribeiro**, Chief Technology Officer, Petrobras

**PANELISTS**

**Orlando Ribeiro**, Chief Technology Officer, Petrobras

**Marie Noelle Semeria**, Chief Technology Officer, Total SVP

**Marco Brummelhuis**, Libra General Manager, Shell

**Marcelo Eskenazi**, Diretor, Atech, an Embraer Company

## Room B8

01

## Lula Complex: 10 Years and 1 Million Barrels Per Day

## SESSION CHAIRPERSON(S):

**Antonio Capeleiro Pinto**, Former Petrobras Executive Manager, Currently PPSA  
**Cristiano Pinto da Costa**, Shell

1030

## Lula Complex: Development, Achievements and Future Perspectives

M.B. Rosa, Lula Complex Reservoir Manager, Petrobras

1045

## Geological Characterization and Modelling of a Unique Carbonate Reservoir

V. Artagão, Lula Development Plan Coordinator, Petrobras

1100

## Geophysical Characterization and Monitoring

N. Martinho Cruz, Geophysics Consultant, Petrobras

1115

## Reservoir Development Strategy - A Journey from Conception to Enhanced Oil Recovery

T.M. Miyakawa, Lula Complex Reservoir Engineer, Petrobras

1130

## Evolution of Drilling and Completion Performance and Innovations in Well Engineering

R.A. Tomita, Drilling and Completion Engineer, Petrobras

1145

## Challenges Overcome in Flow Assurance

S.G. Pinho, Flow Assurance Consultant, Petrobras

1200

## Main Achievements in Subsea Systems

D.L. Lima, Subsea Engineering Consultant, Petrobras

1215

## A New Era of FPSOs: From the Tupi Pilot to the Replicants

C. Aimoli, Topsides Engineering Consultant, Petrobras

## Room B2

02

## Atlanta Project - Heavy Oil and Ultra-Deepwater in Brazil

## SESSION CHAIRPERSON(S):

**Danilo Oliveira**, Enauta  
**Christophe Viellard**, Schlumberger

1030

29721

## Atlanta Field: Producing Heavy And Viscous Oil In Ultra-deepwater

M.D. Marsili, P. Rocha, I.d. Ferreira, Enauta Energia S.A.

1055

29757

## Atlanta Field: Constructing Long Horizontal Wells in a Challenging Environment

C.A. Pedrosa, J.B. Salies, Enauta; R. Aguiar, D. Lemos, R.G. Pereira, P. Oliveira, W.D. Costa, Baker Hughes, a GE company; R.T. Soares, C.L. Cova, A.L. Tocchetto, B.C. Simões, M.J. Nunes, Halliburton

1120

29828

## Robust Artificial Lift Solution For Ultra Deepwater Heavy Oil Atlanta Field

B.F. Cavalcante, P.S. Rocha, M.P. Santos, A. Tavares, S.J. Alves Neto, Enauta Energia S.A.; J.S. Matos, Siqueira de Matos and Companhia Ltda.; M.D. Marsili, Enauta Energia S.A.

1145

29686

## Atlanta Field: Operational Safety and Integrity Management

J.R. Siqueira, C.A. Pedrosa, F. Bastos, Enauta; H. Alves, 4Subsea AS; A. Henriques, S. Wardlaw, Expro

1210

29846

## Atlanta Field Development - Present and Future

P.S. Rocha, R.O. Goulart, Enauta Energia; S. Kawathekar, Genesis Oil and Gas; R. Dotta, Technomar Engenharia LTDA

## Room B3

03

## Decommissioning Preparedness for Offshore Brazil

## SESSION CHAIRPERSON(S):

**Armando Rebello**, Stress Subsea, Inc.

1030

29712

## Decommissioning of Subsea Facilities in Brazil

A. Rebello, Stress Engineering Services, Inc.

1055

29704

## An Analytical Method To Combine Environmental Attributes To Generate the Matrix of Importance of Environmental Impacts for the Decommissioning of Subsea Installations in Brazil

L.F. Oliveira, S.B. Schaffel, J. Domingues do Amaral Netto, DNV GL Group

1120

29891

## Potential Environmental Impacts of Subsea System Installation and Decommissioning: A New Tool for Comparison of Local and Technological Alternatives in the Oil and Gas Industry

P.R. Silva, T.A. Silva, E.R. Nicolosi, C.A. Miranda, Petrobras

1145

29834

## Brazilian Regulatory Framework: From the Past to the Expectations About the Future

M. Bastos, J. Bastos, B-in Partners

T = Ticketed event, separate registration required



## Room B4-1

04

## Drilling Waste Disposal - What Lies Ahead?

## SESSION CHAIRPERSON(S):

Andre Martins, Petrobras

Carlos Henrique Abreu Mendes, IBP

1030 29920

## Subsurface Drilling Waste Injection: Challenges, Recent Advances and Cases Studies

S. Benelkadi, E. Bianco, P. Burton, M. Motta, Schlumberger

1055 29835

## Modeled Environmental Risk of Offshore Drill Cuttings Discharges With Different Drilling Base Fluids

D. Lyon, Shell Oil Company; M. Smit, Shell International; B. Lee, Shell Global Solutions; B. Conley, Shell Chemical Company

1120 29746

## Ecotoxicological Evaluation of Non Aqueous Drilling Fluids Using a Brazilian Native Versus an Exotic Amphipod

L.A. Kraus, LABTOX; S.L. Melo, Petrobras Cenpes; M.V. Reynier, LABTOX; L.D. Marinho, L.F. Veiga, Petrobras; B.C. Pereira, L.F. Araujo, D.d. Ximenes, Petrobras Cenpes

1145 29785

## Corporate Strategy To Tackle Offshore Drilling Discharge Regulation

L.S. Marinho, C. Pamphili, S.D. Loureiro, T.L. De Oliveira, A.L. Martins, Petrobras

1210 29964

## Microwave Drying of Reservoir Drilled Cuttings

I. Petri Junior, A.S. Mota, V.P. Barbosa, Universidade Federal de Uberlândia; A.L. Martins, C. Marques de Sa, Petrobras; M.S. Pereira, C. Ataide, Universidade Federal de Uberlandia

1235

## Open Discussion: The Role of Technology-on the Continuous Minimization of the Environmental Impact of Offshore Drilling Activities

## Room B4-2

05

## Advancements in Well Completion and Workover

## SESSION CHAIRPERSON(S):

Deepak M Gala, Shell E&amp;P Laboratories

David Renzi, Stress Engineering Services

1030 29705

## Implementation of Dissolvable Metals To Isolate Inflow Control Devices and Deliver a Washpipe Free Deep Water Sandface Completion Solution

K.J. Johnson, V. Okengwu, B.C. Orluwosu, R. Novelen, J. Hanson, Halliburton; V. Chaloupka, A. ACHICH, Total

1055 29948

## Application of a Transient Near-Wellbore / Reservoir Simulator for Complex Completions Design

R.P. Satti, J. Gilliat, D. Bale, P. Hillis, B. Myers, J. Harper, Baker Hughes, a GE company

1120 29914

## Perforating The Largest Deepwater Wells In Brazil - Minimizing Shock Loads

C.E. Baumann, R.P. Scudino, M.E. Smart, Schlumberger; M. Tsuchie, E. Schnitzler, R. Savoldi Roman, Petrobras

1145 29842

## New Strategies For Cost Reduction With Depth Correlation In Deepwater Wells

Y.S. Pereira, Petrobras - Petroleo Brasileiro SA; R.P. Borges, Schlumberger; E. Schnitzler, R.S. Roman, H.V. Paraski, A.C. Destri, J.A. Destri, D.S. Gozzi, Petrobras - Petroleo Brasileiro SA; C.E. Baumann, C. Merino, Schlumberger

1210 29839

## Successful Offshore Coiled-Tubing, Permanent Well-abandonment Operation Uses Downhole Real-time Parameters To Set Inflatable Packers With Surgical Precision in a Cost-effective Manner

C. Guimaraes, E. Delgado, L.d. Galvao, A.C. Frotte, Halliburton; M. Gouveia, C.A. Borges, Petrobras

## Room 4

06

## New Technologies for Reservoir, Production and Geophysics

## SESSION CHAIRPERSON(S):

**Anna Paula Lougon**, Schlumberger  
**Aly Brandenburg**, Shell

**1030 29823**  
**Optimization of CO<sub>2</sub>-WAG and Calcite Scale Management in Pre-Salt Carbonate Reservoirs**  
 H.W. de Lima Rodrigues, E.J. Mackay, D. Arnold, D. Silva, Heriot-Watt University

**1055 29904**  
**Tuning a Fully Convolutional Network for Velocity Model Estimation**  
 L.R. Campos, P. Nogueira, E.G. Nascimento, Senai CIMATEC

**1120 29956**  
**Research on Engineering Technologies To Develop China's Complex Reservoirs and Their Feasibility in Development of Marginal Oilfields in South America**  
 F. Jin, W. Xi, Z. Shunyu, L. Bingshan, C. Chen, Y. Guobin, CNPC Engineering Technology R&D Company Ltd

**1145 29899**  
**Virtual Reality for Visualization of Enhanced Oil Recovery Processes at Nanoscale**  
 J.M. Almeida, C.R. Miranda, Universidade de São Paulo

**1210 29779**  
**A Deep Dive Into Disruptive Technologies in the Oil and Gas Industry**  
 D. Wishnow, H. Rokhsari, Darcy Partners; M. Pashaei Rad, Darcy Partners / University of Houston

**1235 29860**  
**Data-Centrism: A Path to Digital Transformation in Engineering Design Environment**  
 F. Diniz, B. Espindola, I. Affonso, J. Queiroz, L. Oliveira, G. Barboza, C. Pereira, Petrobras

## Room 5

07

## Advanced Materials and Emerging Oilfield Technologies

## SESSION CHAIRPERSON(S):

**Thomas Shattuck**, Deloitte Services LP  
**John Wiltshire**, University of Hawaii Manoa

**1030 29922**  
**The Importance of Dielectric Properties for the Optimization of Microwave Drying Systems in the Treatment of Drill Cuttings**  
 A.C. Silva Mota, V.P. Barbosa, F. Garcia Friaça, M. Seixas Pereira, C.H. Ataíde, Federal University of Uberlândia

**1055 29931**  
**Nanoparticles Treatment for Reducing Surfactant Adsorption in Clay Containing Reservoirs**  
 D.K. Agrawal, R. Suresh, Q. Darugar, V.N. Khabashesku, Baker Hughes, a GE company

**1120 29901**  
**Effect of Silica Nanoparticles on Thermal Stability in Bentonite Free Water-Based Drilling Fluids to Improve its Rheological and Filtration Properties After Aging Process**  
 J. Vargas Clavijo, L. Roldan Vargas, S.H. Lopera, Universidad Nacional De Colombia; J. Cardenas, R.D. Zabala Romero, Ecopetrol S.A.; C.A. Franco Ariza, F.B. Cortes, Universidad Nacional De Colombia

**1145 29756**  
**Aramid Reinforced Thermoplastic Pipes (RTPS) for Transport of Hydrogen Gas**  
 B. Cornelissen, H. Knoester, M. Breed, M. Schipper, Teijin Aramid

**1210 29749**  
**Determining Produced Fluid Properties for Accurate Production Profiling During a Drill Stem Test Using Thermal Imaging Technology**  
 D. Lavery, D. Fyfe, Metrol; A.R. Hasan, Texas A&M University

**1235 29761**  
**A Detailed Examination of The Mechanics of Slip Crush When Landing Heavy Casing Strings**  
 R.L. Thibodeaux Jr., Franks International

## Room 6

08

## HSE Innovation - Improving Safety in the Offshore Industry

## SESSION CHAIRPERSON(S):

**Jerry Carroll**, IEEE/Oceanic Engineering Society  
**Antonio Amorim**, Faculdade De Tecnologia E Ciencias

**1030 29681**  
**Proof of Value in Automating the Drill Floor**  
 J.R. Angelle, Frank's International

**1055 29880**  
**Drilling To Well Integrity- Multidisciplinary Approach Using Advanced Multipole Sonic-While-Drilling Technology Saves Rig Time**  
 A.A. Al-Fawwaz, F.A. Al-Ajmi, Al-Khafji Joint Operations; K. Razwan, K. Ghosh, I.A. Naqeeb, Schlumberger

**1120 29928**  
**Compact Hydrate Dissociation Plant: Combined Direct and Indirect Heating For Increased Efficiency**  
 R. Margotto, G. Franklin, J.d. Cunha, Halliburton

**1145 29703**  
**Granting Operating Permit Based Upon a Preemptive Risk Assessment**  
 A. Manhaes, A. Garcia Neto, A.A. Zanetti, D. Tiago Muller, E.D. Radespiel, L. Marazzo Garcia, Petrobras -Petroleo Brasileiro

**1210 29838**  
**Asa Branca Offshore Wind Farm Project - Main Technical Aspects**  
 A. Wey, Eólica Brasil Ltda

**1235 29865**  
**Influence of Whipping on the Structural Response of the Flare Tower Foundations of a Typical Spread Moored FPSO**  
 A. Benhamou, Bureau Veritas; J. Shimazaki, MODEC; F. Bontemps, Total

## Technical Program: Tuesday, 29 October 2019, 1300–1830

1300–1430, Room B5

SE04

### I Topical Luncheon: Energy Transition and its Challenges in Today's World



**Moderator**

**Cindy Yeilding**

OTC Board Chairperson, BP



**Speaker**

**Fatih Birol**

International Energy Agency

Sponsored by:



1430–1700, Room B8

SE06

### Panel: FPSO Challenges: Innovation, Cost Reduction and Competitiveness in Design, Construction and Operation

**MODERATOR**

**Rudimar Lorenzatto**, Petrobras

**Mariano Vela**, Chevron

**PANELISTS**

**Joao Henrique Rittershausen**, Executive Manager - Construction Services, Petrobras

**Barton Cahir**, Senior Vice President Global Project Delivery, ExxonMobil

**Artur Nunes da Silva**, Vice-President Deepwater and Subsea, Total

**Soichi Ide**, Vice President, Modec do Brasil

**Eduardo Chamusca**, Country Director, SBM Brazil

1430–1700, Room B1

SE06

### Panel: Geophysical Advanced Technologies Applied to the Brazilian Pre-Salt Reservoirs

**MODERATOR**

**Paulo Johann**, Petrobras

**PANELISTS**

**Adel Khalil**, CGG

**Luiz Loures**, Equinor

**Alejandro Alcudia-Leon**, PGS

**Christian Deplante**, Total

**Jorge Lopez**, Shell Brasil Ltda

**Paulo Johann**, Petrobras

1430–1700, Room B2

SE07

### Panel: R&D Levy Funds as a Game Changer in the Brazilian Offshore Industry

**MODERATOR**

**Alfredo Renault**, ANP

**PANELISTS**

**Arthur Braga**, President, Ouro Negro

**Orlando Ribeiro**, Chief Technology Officer, Petrobras

**Kazuo Nishimoto**, Head of Department of Naval Architecture and Ocean Engineering, Universidade de Sao Paulo

**Telmo Ghorzi**, Oil and Gas, Petroleum Regulation and Economics Consultant



## Room B3

09

## Flow Assurance: Challenges and New Technologies

## SESSION CHAIRPERSON(S):

Joao Carneiro, ISDB Flowtech

Thomas Lindvig, Schlumberger

1430 29925

## Slug Flow Root Cause Analysis: A Data-Driven Approach

A. Sandnes, V. Uglane, B. Grimstad, Solution Seeker AS

1455

## Non-Conventional Phase Behavior of Pre-Salt Reservoir Fluids

F. Montel, University of Pau

1520

## Operationalizing Flow Assurance Models Through Machine Learning

N. Zambare, Kongsberg Digital

1545

## Taking Hydrates Management to the Digital Age

C. Viellard, OneSubsea LLC

1610

## Recent Studies on Wax Deposition in Pipelines

L.F. Azevedo, Catholic University of Rio De Janeiro

1635

29730

## Asphaltene Structural Changes Induced By Carbon Dioxide Injection

N. Golshahi, S. Afra, H. Samouei, H.A. Nasr-El-Din, Texas A&amp;M University

## Room B4-1

10

## Libra EWT Project: How Technology and Strategy Overcome Challenges of a Complex Giant Offshore Field Development and its Legacy to the Industry

## SESSION CHAIRPERSON(S):

Paulo Rovina, Petrobras

Marco Brummelhuis, Shell Brasil S.A.

1430

## Extend Well Test (EWT) Libra Project Overview and Technological Highlights

J. Lopes, Petroleo Brasileiro S.A.

1450

## Libra Extended Well Test - an Innovative Approach to De-risk a Complex Field Development

F.P. Figueiredo, Petrobras

1510

## Addressing Specificities on Flow Assurance Through EWT Data Evaluation to Overcome Challenges for Definitive Systems Design

L.M. Hayashi, Petrobras

1530

## Intelligent Completion in Extended Well Test

L.C. Cruz, A.M. Oliveira Junior, Petroleo Brasileiro S.A.

1550

## Libra Subsea Achievements and Future Challenges

C.J. Valenca, Petrobras -Petroleo Brasileiro

1610

## Libra's FPSO - Conceptual Design Challenges

M. Marques Fernandes, Petroleo Brasileiro S.A.

1630

## Libra@35 - Bringing the Project Break Even to US\$ 35/bbl

M.d. Muniz Pinto, Petroleo Brasileiro S.A.

T = Ticketed event, separate registration required

## Room B4-2

11

## Advancements in Well Integrity Management

## SESSION CHAIRPERSON(S):

Thomas Shattuck, Deloitte Services LP

Joao Marcelo Baima Da Silva, Shell

**1430            29915****Epoxy Resin Ends 45 Days Nonproductive Time in Deepwater Wells: Case History**

R.V. Blanc, L.R. Brunherotto, Halliburton

**1455            29833****Case Study: Brazil Deepwater, Pre-Salt - Successful Intermediate Casing Shoe Squeeze Using Microcement**

R.A. Freitas, L. Rossi, A. Gregatti, F. Moretti, L. Pagani, Schlumberger

**1520            29795****MSE-Index: A New Concept of Energy Management To Control Salt Creep and Optimize Drilling Operations in Extensive Salt Intervals**

C.N. Pinto, A.L. Lima, S.P. Knabe, Halliburton

**1545            29866****On The Ultimate Limit State Strength Models and its Application for Casing Design**

J.N. de Araujo, L.P. Gouveia, E.T. Lima Junior, T.B. da Silva, Federal University of Alagoas; J. Anjos, F.L. de Oliveira, Petrobras - Petroleo Brasileiro; W.M. Lira, J.P. Santos, Federal University of Alagoas

**1610            29764****Salt Creeping Analysis on Deepwater Wells Submitted to Cooling Operations on Trapped Annular**

C.E. Agostini, L.M. de Almeida, N.M. Junior, M.D. Magalhães, R.S. Roman, E. Schnitzler, A.P. Silva, Petrobras

**1635            29943****Seal Qualification and Single-Trip Lockdown Sleeve Reduces Risk Through Innovative and Advanced Technology**

S.P. Ellisor, Dril-Quip, Inc.; R.A. Queiroz, C.E. Gaban, G.P. Eppinghaus, B.N. Lucci, Dril-Quip do Brasil

## Room 4

12

## New Technologies for Wells and Marine Operations

## SESSION CHAIRPERSON(S):

Anna Paula Lougon, Schlumberger

Soraya Carvalho, NOV

**1430            29763****Digital Technologies Used In Constructability Design For Surface Installations**

M.S. Torres, B.A. Rodrigues, A.R. Nascimento, Petrobras S.A.

**1455            29808****A New Maintenance Era With Digitization**

P.R. Ribas, A. Barbosa, Wood; C.J. Coutinho, BRtech3D

**1520            29952****Dry Sea State Monitoring For More Efficient Marine Operations**

M. Vinther, Miro

**1545            29728****Automated Supervision of Personal Protective Equipment Usage**

L.D. Gessoni, E. Gadben, P. Gonçalves Alves, M. Pedroza Ferreira, A. Luis Michels de Alcantara, C. Santos Fernandes, Instituto de Pesquisas Eldorado; D. Colombo, Petrobras

**1610            29725****Data Science and Business Intelligence Techniques for Learning From Environmental Accident Analysis for Offshore Oil Fields**

R.A. Loretti, V.F. Costa, D.G. Memoria, Halliburton; A. Barbosa, Independent Author; H.L. Oliveira, I.R. Wegner, C.A. Zank, Petrobras

## Room 5

13

## Reservoir Characterization - Innovations in Modeling and Algorithms I

## SESSION CHAIRPERSON(S):

Laryssa Oliveira, CGG Brasil

**1430 29726****Unsupervised Deep Learning for Facies Pattern Recognition on Borehole Images**

L. Lima, UFRJ/Schlumberger; N. Bize-Forest, Schlumberger; A. Evsukoff, R. Leonhardt, UFRJ

**1455 29877****A Practical Model For Production Forecast of Fractured Vertical Well in Coalbed Methane Reservoirs: Dynamic-Drainage-Area Concept**

Z. Sun, China University of Petroleum at Beijing, Texas A&amp;M University; K. Wu, J. Shi, China University of Petroleum at Beijing; J. Fu, CNPC Engineering Technology R&amp;D Company Ltd; C. Shao, Tarim Oilfield Branch of China National Petroleum Corporation; Y. Zhou, C. Liu, Y. Jia, J. Fang, M. Lv, China University of Petroleum at Beijing

**1520 29801****Efficient Selection of Reservoir Model Outputs Within an Emulation Based Iterative Uncertainty Analysis**

C.J. Ferreira, Durham University/ University of Campinas; I. Vernon, C. Caiado, Durham University; H.N. Formentin, Durham University/ University of Campinas; G. Avansi, University of Campinas; M. Goldstein, Durham University; D.J. Schiozer, University of Campinas

**1545 29856****Dissolution Behavior of Carbonate Rocks From Brazilian Pre-Salt at Reservoir Conditions by LSWI**

T.C. Borges, FEM/Unicamp; J.A. Vidal, E.T. Koroishi, Cepetro/Unicamp; N.R. Kim, O.V. Trevisan, FEM/Unicamp; G. Bassani, Repsol Sinopec Brasil

**1610 29921****Decreasing Well Construction Costs for Mature Fields in The Reconcavo Basin**

J.A. Loza, J. Rosales, Halliburton; T. Finney, M. Venuto, A. Hupp, F. Camara, PetroReconcavo

**1635 29881****Big Data Approach for Assessing Hydraulic Interference Between Wells in Not-Controlled Systems**

V.C. Silva, Petrobras

## Room 6

14

## Innovative FLNG and Gas Monetization Design for Offshore Deepwater

## SESSION CHAIRPERSON(S):

Hoss Shariat, KBR Energy Solution – Americas

Andrew Taylor, Exxon Mobil Corporation

**1430 29905****P-67: Review of Dry Transportation of FLNG's/FSRU's/FPSO's**

A. De Lira, M. Soares Pinheiro, Petrobras; J. Van Leuwen, M. Seij, R. Goetheer, Boskalis Offshore – Heavy Marine Transport

**1455 29790****BLNG: The Future of FLNG?**

E.A. Hernandez, T. Highfield, T.G. Forbes, D. McLachlan, io oil and gas consulting

**1520 29852****Gas to Wire as an Alternative to Natural Gas Monetization of the Pre-Salt Province in Brazil**

L. Mota de Lima, D. Santos Baleeiro, Ministry of Mines and Energy Brazil; B. Peixoto Cortez, Centro Universitario Estacio - Brasilia

**1545 29827****Mid-Scale FLNG Production Unit For Marginal Fields**

S. Tierling, M. Mahdavian, KBR

**1610 29825****Optimization of Advanced Dual Refrigerant Expansion Cycle for Liquefaction**

M. Kim, S. Ryu, J. Lee, D. Lee, M. Kim, H. Park, H. Kim, K. Lee, T. Kim, Samsung Heavy Industries Co., Ltd.

**1635 29816****A Feasibility Study of Producing Natural Gas From Subsea Hydrates With Horizontal Snake Wells**

L. Wan, Chongqing University of Science and Technology; R. Shaibu, University of Louisiana at Lafayette; X. Hou, Chongqing University of Science and Technology; B. Guo, University of Louisiana at Lafayette



1700–1830, Room B8

SE08

## Plenary: Unlocking Natural Gas from Offshore Fields

### MODERATOR

**João Carlos de Luca**, De Luca Energy Consulting

### PANELISTS



#### Anelise Lara

Executive Director of Refining and Natural Gas, Petrobras

**Felipe Arbelaez**, Regional President Latin America, BP

**Lucas Tristao**, Secretary for Economic Development, State of Rio de Janeiro

**Miguel Pereira**, CEO, Petrogal Brasil

**Mariano Ferrari**, CEO, Repsol Sinopec Brasil SA

**Olav Skalmernaas**, Vice President for Marketing and Midstream, Equinor

Room 8

15

## ePoster Session I

### SESSION CHAIRPERSON(S):

**Mauro Nunes**, Halliburton

**1430** **29868**

### Wettability Alteration in Carbonate Rocks by the Low Salinity Water Using a High-Speed Centrifuge

S.B. Almeida, A. Winter, L.O. Pires, O.V. Trevisan, University of Campinas

**1455** **29739**

### Recent Developments in Polymer Flooding for Carbonate Reservoirs Under Harsh Conditions

W. Diab, E.W. Al-Shalabi, Khalifa University of Science and Technology

**1520** **29716**

### The Branched Steel Catenary Riser Interference Study

A.M. Ogbeifun, S. Oterkus, J. Race, University of Strathclyde; H. Naik, E. Decnop, D. Moorthy, S. Bhowmik, McDermott

**1545** **29719**

### Real-Time Simulation and Motion Planning For Riser-Based Deepwater Drilling and Equipment Positioning

A.A. Bizzi, E.F. Fortaleza, UnB – University of Brasilia; M. Yamamoto, NMRI - National Maritime Research Institute

## Technical Program: Wednesday, 30 October 2019, 0930–1300

0730–0900, Room B5

SE09

### **T** Topical Breakfast: Successful Integration Between Operators and Services Providers Validates the Production Sharing Model and Increases Pre-salt Global Competitiveness

MODERATOR

Renato Pinheiro, Petrobras

SPEAKER



Adam Champagne, Country Manager, Halliburton

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**HALLIBURTON**  
100 YEARS

0930–1200, Room B8

SE10

### **Panel: Mature Fields Revitalization: Opportunities in Brazil**

MODERATOR

Heloisa Borges Esteves, ANP

PANELISTS

Francisco Francilmar, Operations Director, PetroRio

Reynal Timothee, General Manager, Perenco Brazil

Marcelo Castilho, Development and Production Superintendent, ANP

Alexandre Calmon, Associate, Tauil and Chequer Advogados Associated to Mayer Brown

Lavinia Hollanda, Executive Director, Escopo Energia

0930–1200, Room B1

SE11

### **Panel: Diverless Operations - Increasing Safety by Reducing Human Exposure**

MODERATOR

Marcus Vinicius Araujo, Petrobras

PANELISTS

Antonio Saverognini, Dive Competency and Safety Coordinator, Petrobras

Andrew Kaczmariski, Brownfield Projects General Manager, Shell Brazil

David Parramore, Subsea Engineering and Operations Director, Eddyfi Technologies

Mario Paris, Director of Regional Development, EM&amp;I Alliance

0930–1200, Room B2

SE12

### **Panel: Subsea Innovation, Cost Reduction and Standardization**

MODERATOR

Andre Cordeiro, Petrobras

PANELISTS

Carlos Tadeu Cunha, Project and Operations Director - Brazil, OneSubsea- A Schlumberger Company

Paulo Martins, Marketing and Business Dev VP, Subsea 7

Alan Buchi, Project Services and EPCI Projects Director, TechnipFMC

Volmir Korzeniewski, Country Manager, Aker Solutions Do Brasil

Lauro Puppim, Director of Subsea Business Development, Saipem do Brasil

**T** = Ticketed event, separate registration required

## Room B3

16

## Libra Ultra-Deepwater - Applied Technologies Changing the Game

## SESSION CHAIRPERSON(S):

Ricardo Rosa, Petrobras

Sylvia dos Anjos, Petrobras

0930 29685

## Libra: Applied Technologies Adding Value To a Giant Ultra Deep Water Pre-Salt Field - Santos Basin, Brazil

S. Anjos, F.M. Passarelli, Petrobras; O. Wambersie, Petrobras/Shell; K. Lewis, Consultant; P.S. Rovina, O. Coelho, M. Martins, O. Ribeiro, R.A. Fernandes, F.A. Borges, Petrobras

0940 29953

## Libra Digital: An Integrated View

F.P. Silva, S. Anjos, A.C. Ferreira, Petrobras; O.E. Wambersie, Shell; D.G. Moura, L.F. Pinheiro, B.E. Santos, T.E. Oliveira, Petrobras

0950 29711

## Human Factors and Resilience Engineering Program for Safety Culture Enhancement

J.C. Vaz, S.L. Touma, L.C. Frota, Petrobras; E. Henriqson, PUCRS; P.C. de Almeida, L.V. Garotti, Petrobras; O.E. Wambersie, Shell

1000 29829

## The Use of Drones and Deep Learning To Identify Igneous Rocks and Fractures

M.J. Resende Oliveira, V. Savastano, Petrobras; G. Matos, Future Smart Solutions Ltd.; R.d. Schmitt, UFRJ; S.d. Valente, UFRJ; M.N. de Araujo, Petrobras; L. Inocencio, UNISINOS

1010 29691

## Fault Activity and its Influences On Distribution of Igneous Rocks in Libra Block, Santos Basin, Semi-Quantitative to Quantitative Assessment of Fault Activity Based on High-Resolution 3D Seismic Data

J. Zhao, CNPC; M.J. Resende Oliveira, Petrobras; J. Zhao, K. Ren, CNPC; L. Costa de Oliveira, I. De Oliveira Carmo, C. Rancan, Petrobras; Q. Deng, CNOOC

1020 29818

## Using Wireline Logging and Thin Sections to Identify Igneous Contact Metamorphism and Hydrothermal Influence on Presalt Limestone Reservoirs in Libra Block, Santos Basin

K. Ren, CNPC; M.J. Resende Oliveira, Petrobras; J. Zhao, J. Zhao, CNPC; L. Costa de Oliveira, C.C. Rancan, I. De Oliveira Carmo, Petrobras; Q. Deng, CNOOC

1030 29805

## How Repeatable Will Libra Pre-Salt PRM (Permanent Reservoir Monitoring) Be ? A Full Wave Elastic and Acoustic Study

C. Deplante, TOTAL E&amp;P do Brazil; R. Sansonowski, D.C. Garcia, B.R. Meirelles, M.M. Muzette da Costa, R. de Melo Dias, Petrobras

1040 29906

## Hybrid Composite Flexible Risers in Free Hanging Catenary Configuration and Flowlines for UDW Projects

W.C. Loureiro Jr., R.G. Sobreira, Petrobras; A. Buckley, Shell Brasil Petróleo Ltda (Libra/AT)

1050 29913

## Innovative Gas Treatment Solutions for Offshore Systems

S.L. Touma, J.C. Vaz, F.C. Rego, V.A. Barros, J.F. Nascimento, M.D. Amaral, E.C. Costa, A.F. Souza, Petrobras – Petróleo Brasileiro S.A.

1100 29762

## HISEP: A Game Changer To Boost the Oil Production of High GOR and High CO2 Content Reservoirs

F.M. Passarelli, D.A. Moura, A. Bidart, J. Silva, A.J. Vieira, L. Frutuoso, Petrobras

## Room B4-1

17

## Total Cost Reduction in Field Development I

## SESSION CHAIRPERSON(S):

Christophe Viellard, Schlumberger

Leonardo Nascimento, NOV

0930 29840

## Brazil Oil and Gas Sector Piece De Resistance: The Pre-Salt Play Developments

F.D. Jesus, P.G. Neves, M. Chambriard, FGV Energia

0955 29784

## Increasing the Attractiveness of Phased Field Development: De-risk Reservoir Uncertainty with Efficient Field Development Solution

S. Basu, T. Bhaumik, KBR

1020 29815

## Discovering Patterns within the Drilling Reports using Artificial Intelligence for Operation Monitoring

D. Colombo, Petrobras; D.C. Pedronette, I.R. Guilherme, J.P. Papa, L.C. Ribeiro, L. Sugi Afonso, J.C. Presotto, G.J. Sousa, UNESP

1045 29707

## Technology Intelligence Analysis Based on Document Embedding Techniques for Oil and Gas Domain

F. Cordeiro, D. Gomes, F. Gomes, R. Teixeira, Petrobras

1110 29804

## Starting With the End in Mind: More Certain Field Development

D. McLachlan, J. Isherwood, M. Peile, io oil and gas consulting

1135 29773

## FPSO Topsides Standardization

R.B. Baharim, J.E. Leemeijer, MISC Berhad



**Room B4-2**

18

**Offshore Drilling - Maximizing Value and Reducing Costs**
**SESSION CHAIRPERSON(S):**
**Felipe Freitas**, ROSEN USA, Inc.

**Alberto Morandi**, GustoMSC

**0930 29849**
**Statistical Analysis of Split Switchboard Operation in Dynamic Positioning Drilling Units**

M. Passos Ramalhete, Petrobras

**0955 29875**
**Combined Data Analytics and Physics-Based Simulation for Optimum Bit, Motor, BHA Combination**

S. Ba, D. Belov, D. Nobre, L. Yin, E.J. Johnson, Schlumberger

**1020 29783**
**Collaborative Bit and Reamer Design Solution for Performance Drilling in Salt and High Durability in Challenging Subsalt Interval in One Run, Deepwater Gulf Of Mexico**

K. Havard, B. Durairajan, Schlumberger; S. Stith, Shell; S. Goyal, P. Trunk, M. Nagaraj, D. Trahan, Schlumberger; G.G. Descamps, M.W. Dykstra, Shell; L. Louback, M. Norvell, C. Pinard, Schlumberger; Y. Zhang, R. Rabei, M. Halpin, Shell

**1045 29843**
**Setting a New Benchmark in ROP and Bit Durability in The Pre-salt Section (Carbonate Rocks) of the Deepwater Mero Field in Brazil**

N. Silva, A. Boulton, Halliburton

**1110 29933**
**A New Robust Drilling Rate Model**

M.M. Al Ruba'ii, Saudi Aramco D&amp;WO; R.N. Gajbhiye, KFUPM; A.S. Alyami, R.A. Alouhali, Saudi Aramco

**1135 29684**
**Restricted Diagram: Reliability Study of Drilling Ships With Dynamic Positioning System**

A.T. Oshiro, R. Mendes, G.R. Diederichs, D.S. Vieira, A.S. do Amaral, Petrobras

**Room 4**

19

**Drilling and Completion Fluids**
**SESSION CHAIRPERSON(S):**
**Paulo Ribeiro**, Universidade Estadual De Campinas

**Carlos Pedrosa**, Enauta

**0930 29786**
**Influence of Hole Cleaning on the Liner Cement Job in Papa Terra Field**

R. Balthazar Vadinal, S. Ribeiro Perrou, R. de Campos Chuvas, A. Gouveia Lima Gomes dos Passos, L. Pacheco da Silva, Petrobras

**0955 29919**
**Lessons Learned From Cuttings Treatment at Offshore Wells in the Campos Basin**

R. Balthazar Vadinal, L.S. Tormen Reis, D. Ribeiro Del Claro, S. Pereira Ceolin, M.C. do Couto Pessanha Bernardes, Petrobras

**1020 29802**
**Low Impact Drilling Fluid for Deepwater Drilling Frontier**

E. Kakadjian, A. Shi, J. Porter, P. Yadav, D. Clapper, W. Pessanha, Baker Hughes, a GE company

**1045 29738**
**Customized High-Performance Water-Based Drilling Fluid Helps Improve Drilling Efficiency in Extended-Reach Wells on the Peregrino Field**

D.M. Obando, F.C. Fornasier, A.J. Junior, Halliburton; R.H. Mattos, R. Andrade, Equinor

**Room 5**

20

**Trends for Pre Salt Metallic Materials**
**SESSION CHAIRPERSON(S):**
**Pascoal Bordignon**, Companhia Brasileira de Metalurgia e Mineração - CBMM

**Murali Manohar**, ArcelorMittal Global R&D

**0930**
**Petrobras Metallic Materials Requirements for Pre-salt**

I. Palmieri Baptista, Petrobras

**0955**
**Control of Manganese in the Development of Improved Sour Service High Strength Linepipe Steels**

M. Manohar, ArcelorMittal Global R&amp;D; F. Barbaro, University of Wollongong, Australia

**1020**
**Fracture and Fatigue Design Considerations for Pre-Salt**

J.R. Gordon, Microalloying International Inc.

**1045**
**Corrosion Perspectives for Deep Offshore Pre-Salt Developments**

C. Mendez, ExxonMobil Upstream Research Company

**1110**
**Niobium Technology Delivers Enhanced Weldability in Steels for Offshore Applications**

P. Kirkwood, Micro-Met International Limited

## Room 6

21

## Topside Innovative Processing and Design for Offshore Deepwater

### SESSION CHAIRPERSON(S):

**Hoss Shariat**, KBR Energy Solution – Americas

**Mika Tienhaara**, Tienhaara Management

**0930 29961**

### Increasing Fire Safety - Fire And Life Safety Ecosystem

A. Queiroz, National Fire Protection Association

**0955 29791**

### 1st Development of Advanced Purification of Produced Water Technology at Greater Sirikit Oil Field By Dissolved Gas Flotation Technique

N. Lertrojanchusit, U. Thunmasarnrit, R. Techasuwan, P. Linjongsubongkoch, I. Sa-Nguanwong, P. Kiravanich, P. Metheethara, S. Umpuch, PTT Exploration and Production Public Company Limited

**1020 29822**

### Conceptual Design of a Large Water Treatment System for Offshore Smart Water Injection

B.F. Machado, O. Vale, B. Pivatto, L. Mota, C. Cavaliere, M. Souza, Petrobras

**1045 29811**

### Optimizing the Separation Process in Floating Facilities: The Wash Tank Oil Processing Technology

D. Thierens, Sulzer Chemtech Ltd; P. Pedenaud, Total SA

**1110 29848**

### A Case Study In Production Enhancement Through Installation Of Optimum Artificial Lift Technology

S. Ali, S. Kumar, Mari Petroleum Company Limited; S. Kalwar, Weatherford International Ltd.

**1135 29810**

### New Compact Gas Dehydration Technology

B.K. Neumann, T. Selteit, Minox Technology

## Room 8

22

## ePoster Session II

### SESSION CHAIRPERSON(S):

**Cassandra Dewan**, DNV GL

**Anny Beatriz Cabral Andrade**, Universidade Federal do Rio de Janeiro

**0930 29887**

### Novel In-Field Technique To Monitor and Optimize Asphaltene Remediation and Inhibition Job With Direct Field-to-Laboratory Correlation

A.D. Punase, C.P. Mazzeo, R. Garan, E. Vita, R. Kristensen, J.J. Wylde, Clariant

**0955 29882**

### Dielectric Logging: Principles, Applications, and Examples From the Brazilian Oilfields

R. Herlinger Jr, Petrobras S.A.

**1020 30464**

### Digital Transformation Through Integrated Process and Power

B.M. Mancuso, A. Oguro, C.C. Lau, Schneider Electric

**1515 29879**

### Replacing Fossil Fuels By Wind Power in Energy Supply to Offshore Oil and Gas Exploration and Production Activities - Possibilities for Brazil

S.B. Schaffel, F.F. Westin, O.M. Hernandez, E.L. La Rovere, LIMA/COPPE/UFRJ

**1110 29731**

### Improved Digital Rocks-Based Model For NMR Permeability Estimation in Vuggy Deepwater Carbonates

R.A. Victor, Petrobras; C. Torres-Verdín, M. Prodanovic, The University of Texas At Austin

## Technical Program: Wednesday, 30 October 2019, 1200–1830

1215–1345, Room B5

SE13

### **T Distinguished Achievement Awards Luncheon**

Speaker Roberto Castello Branco will present the Distinguished Achievement Awards, followed by a keynote presentation: **Petrobras Investment Programs–The Next 5 Years.**


**MODERATOR**
**Marcos Assayag**

OTC Brasil Chairperson, Independent  
Oil and Gas Consultant


**SPEAKER**
**Roberto Castello Branco**

CEO, Petrobras

1400–1630, Room B8

SE14

### **Panel: Women in the Oil and Gas Industry: Improving Profitability and Results**

**MODERATOR**
**Anelise Lara**, Petrobras

**PANELISTS**
**Margareth Ovrum**, CEO, Equinor Brasil

**Andre Araujo**, CEO, Shell Brasil

**Kimberly McHugh**, VP of Drilling, Chevron

**Maria Marques**, Chair of the Brazilian Advisory Board, Goldman Sachs

**Tracy Francis**, Senior Partner, McKinsey & Company

1400–1630, Room B1

SE15

### **Panel: Offshore Renewables - Planning for the Future in Brazil**

**MODERATOR**
**Andre Bello Oliveira**, Petrobras

**PANELISTS**
**Mariana de Assis Espécie**, Energy Research Analyst, Division of Energy Economics and Environmental Studies, EPE

**Gaynor Jones**, Director, Business and Sustainable Development, Aquatera

**Veronica Rezende Coelho Fernandes**, SVP of Partner Operated Licenses and Area Development, Equinor

**Mario Gonzalez**, Professor, Universidade Federal do Rio Grande do Norte

**Segen Farid Estefen**, Professor of Ocean Structures and Subsea Engineering, Universidade Federal do Rio De Janeiro

**Fabio Menezes Passarelli**, Libra Project Technical Consultant, Petrobras

**Glauro de Deus Ribeiro**, Civil Engineer, Petrobras

**Rafael Torres**, Business Development Director - Brazil, SBM Offshore

**Astrid Ønsum**, Senior Vice Presidente Wind Power, Aker Solutions

**Claudio Pirolo**, Executive Director, DEME Group

1400–1630, Room B2

SE16

### **Panel: Floating and Subsea Technologies - Innovation Initiatives**

**MODERATORS:**
**Rajiv Aggarwal**, Consultant

**Daniel Carneiro**, Wood

**PANELISTS**
**Asmund Maeland**, Subsea Segment, Group Vice President, ABB

**John Macleod**, Chief Technology Officer/ Senior VP, Aker Solutions

**Ricardo Toneto De Melo**, Subsea EPCI Department Manager, Petrobras

**Marcelo Xavier**, Vice-President for Brazil Region, Subsea 7

**Hugues Corrigan**, Director South America, Subsea and Export Systems, Wood

**Rajiv Aggarwal**, Independent Consultant; Daniel Carneiro, Wood

**T** = Ticketed event, separate registration required



**Room B3****23****Innovation in Upstream Oil and Gas: How to Make it Work****SESSION CHAIRPERSON(S):****Mika Tienhaara**, Tienhaara Management

This panel session will explore new technologies, innovations, and execution methodologies that are being developed to reduce offshore project costs and improve the value of operations. Panelists will include representatives who have been intimately involved with identifying, developing, commercializing, implementing and operating offshore projects in a cost-efficient manner using new innovations and technologies.

**1400****Subsea Viable Technology: Water Treatment and Robust Electronic Components**

M. Andreotti, Repsol Sinopec Brasil SA

**1425****Technology Deployment: How to Get it Done**

E. Nijveld, Deployment Matters

**1450****Improve Your Operational Efficiency by use of Novel Tomographic Technology Sensors**

P. Laakkonen, Rocsole Ltd

**1515****Building the Digital-Twin Prediction Capability, a Hybrid Approach Using Physically Based and Statistical Models**

V. Girardi Silva, ESSS

**1540****Innovation in Offshore Water Injection - Worlds 1st All Membrane Injection Plant**

D. Lee, Suez

**1605****Transforming Energy - Energy Challenges, Trends and Digitalization**

D. Scuzzarello, Siemens

**Room B4-1****24****Subsea Field Development - New Methodologies and Technologies****SESSION CHAIRPERSON(S):****Andre Luiz Massa**, Genesis Oil and Gas Consultants**Rick Wincheski**, Shell International E&P Co.**1400****29903****Subsea Arrangements Optimization for Gas Export Systems**

C.A. Patusco, E.F. Simoes, Petrobras

**1425****29895****Methodology to a Feasibility Study To Implement an Oil/Water Subsea Separation**

G. Cosme Vigano, Schlumberger

**1450****29724****Subsea Induction Heating Technology Solves Hydrate and Wax Issues in Subsea Flowlines**

S.J. Anres, R. Hallot, T. Valdenaire, L. Macauley, Saipem

**1515****29872****Subsea X-mas Tree Standardization Benefits in Brazil Scenario**

R.V. Beppler, A. Rabello Pereira, M.A. Roberto, Petrobras

**1540****29820****On the Shared-Actuation Control for the Operation of Manifolds in Subsea Production Systems**

A. Rabello, D. Natal Neto, E. Coelho, E. Seraco, W. Destro, Petrobras

**1605****29729****A Novel Application of Production Acceptance Testing in The Development of Intelligent Well Completion Equipment Used in HPHT Applications**

A. Balasubramanian, M. Christie, P. Shrivastava, Halliburton

## Room B4-2

25

## Mature Field - Increasing Field Life and Reducing Costs

## SESSION CHAIRPERSON(S):

**Christophe Viellard**, Schlumberger**Eduardo Carvalho**, DNV GL**1400 29798****Improving Recovery Factor in Campos Basin**

P. Ferreira Da Silva, C.C. Branco, D. Bampi, G.E. Silveira, F. Nunes, M. Faerstein, F. Cordeiro, Petrobras

**1425 29709****Water-Out Performance and Pattern of Horizontal Well for a Thin Carbonate Reservoir With Bottom Water in the Middle East**

L. Sun, Y. Li, H. Zhao, J. Yang, B. Li, Research Institute of Petroleum Exploration and Development, PetroChina

**1450 29942****Application of Highly Inclined Well to Optimizing Well Pattern: Case Study of a Giant Carbonate Reservoir in the Middle East**

L. Sun, L. Wei, H. Zhao, B. Li, Y. Li, Research Institute of Petroleum Exploration and Development, PetroChina

**1515 29741****Effective Cross Flow Diagnostic by Pulse Neutron, Cement Logs and Fluid Production: Water Shut Off Well Case in Amo Field**

N.H. Orellana, A. Gaibor, R.A. Astudillo Bohorquez, Repsol Ecuador; S. Lozada, Repsol USA; E.R. Munoz, T. Tamayo, L.R. Bailon, C. Padilla, Repsol Ecuador

**1540 29896****Finding New Hydrocarbons in Mature Fields With High Resolution Dielectric Dispersion**

U.D. Bustos, Schlumberger; D. Chaparro, D. Serrano, Ecopetrol S.A.; A. Chapellin, E. Kovarskiy, Schlumberger; D.F. Rodriguez, H. Canarete, J.C. Ortiz, Ecopetrol S.A.

**1605 29830****Integrated Workflow for Optimizing Waterflood Design in Brazil Large Mature Field Using Streamline Simulation**

F. Marques, G. Cosme Vigano, J.L. Giuriatto, M. de Freitas Bezerra, Schlumberger

## Room 4

26

## Improving Carbonate Reservoirs Models and Solutions

## SESSION CHAIRPERSON(S):

**Paulo Couto**, Universidade Federal do Rio de Janeiro**Tabitha Hensley**, ExxonMobil**1400 29916****Prediction of Wettability Alteration Using the Artificial Neural Networks in The Salinity Control of Injection Water in Carbonate Reservoirs**

L.F. Reginato, C.C. Carneiro, R.S. Gioria, M.S. Pinto, Universidade de São Paulo

**1425 29722****Evaluation of Karst Porosity Morphological Properties Through Borehole Image Logs - Correlation With Dynamic Reservoir Properties From a Presalt Oil Field**

C.M. De Jesus, A.M. Compan, Petrobras; J.P. Coêlho, Tecgraf Institute - PUC-RIO; A.E. de Sá Silveira, M. Blauth, Petrobras

**1450 29908****Multiscale Coupling Between Molecular Simulations and Reservoir Simulator: Geochemical Reactions for Low Salinity Water Injection in Carbonates**

A. Torrez Baptista, M.A. Salvador, G.D. da Silva, E.F. Martins, J.M. de Almeida, C.R. Miranda, University of São Paulo

**1515 29694****Identifying Reservoir Rock Types Using a Modified FZI Technique in the Brazilian Pre-Salt**

N. Bize Forest, Schlumberger; F. Abbots, Shell; V.C. Baines, Schlumberger; A. Boyd, LRAP - POLI/COPPE/UFRJ

**1540 29776****Implementation of a Two-Phase Simulator Based on the Brinkman'S Equation for Vuggy-Karstified Reservoirs**

D. Hallack, J.D. Cavalcante Filho, Petrobras; P. Couto, Universidade Federal do Rio de Janeiro

**1605 29909****Impact of Rock Aging Time on The Initial Wettability of Minerals and Analogue Rocks Using Pre-Salt Fluids Under Reservoir Conditions**

S. Drexler, F.O. Hoerlle, T.M. Silveira, L.A. Cavadas, P. Couto, Universidade Federal do Rio de Janeiro

## Room 5

27

## Production Optimization: Equipment Design and Artificial Lift

## SESSION CHAIRPERSON(S):

Luiz Carlos Marques, Petrobras

Geraldo Afonso Spinelli Ribeiro, Petrobras

1400 29699

**Magnetic Drive System With Levitated Flow-Through Permanent Magnet Motors and Magnetic Bearings To Increase the Reliability and Retrievability of Electrical Submersible Pumps for Offshore Production**

K. Chen, H. Artinian, Upwing Energy; D. Harris, Chevron; J. Xiao, Saudi Aramco

1425 29772

**Ultra: Flow Assurance Coating Technology - Product Portfolio For Distinct Operating Scenarios**

N. Cunha, Shawcor

1450 29775

**Technical Economical and Risk Analysis Methodology for Defining the Optimum Positioning of The Electrical Submersible Pump System for Production of Heavy Oil in Deep Water**

B.F. Cavalcante, PEC/COPPE/UFRJ; J.S. Baioco, Poli/UFRJ; B.P. Jacob, LAMCSO/PEC/COPPE/UFRJ; N.P. Urupukina, PEC/COPPE/UFRJ

1515 29889

**Optimization Methodology of Artificial Lift Rates for Brazilian Offshore Field**

M.D. Bezerra, G. Vigano, J.L. Giuriatto, Schlumberger

1540 29858

**Wet Christmas Tree Interface for Depressurizing Underwater Flowlines**

R.V. Beppler, R.M. Camargo, C.A. Cardoso, E.d. Nascimento, D.M. Pimentel, R. Rodrigues, R. Soares, Petrobras

1605 29907

**Severe Slugging Mitigation in an S-shape Pipeline-Riser System With a Venturi for Increased Production and Recovery**

J. Inok, L. Lao, Cranfield University; Y. Cao, Zhejiang University; J.F. Whidborne, Cranfield University

## Room 6

28

## Cost Effectiveness Decommissioning

## SESSION CHAIRPERSON(S):

Mauro Destri, Consultant

Armando Rebello, Stress Subsea, Inc.

1400 29814

**Comparative Analysis of Permanent P & A Requirements and Consequences in Terms of Leakage - A Case Study**

K. Beltrán-Jiménez, Federal University of Rio de Janeiro (UFRJ); H. Lohne, E. Patrick Ford, H. Skadsem, Norwegian Research Centre (NORCE)/Drillwell; M. Lourenço de Souza, Federal University of Rio de Janeiro (UFRJ); O. Arild, Norwegian Research Centre (NORCE)/Drillwell

1425 29878

**Abandoned Well Monitoring System With Wet Christmas Tree**

P.E. Panta, Ouro Negro; R.C. Furtado, Petroleoconavo S/A; J.R. Moreira, Ouro Negro

1450 29894

**Influence of Humidity, Moisture and Temperature on The Electric Properties of Self-Sensing Cement Pastes for Post-Abandonment Well Monitoring**

P.A. Carísio, Universidade Federal do Rio de Janeiro; C.P. Carvalho, Petrobras; M.O. Cocchiarale, Universidade Federal do Rio de Janeiro; L. Ferreira, Petrobras; O.A. Mendoza Reales, E. Fairbairn, R.D. Toledo Filho, Universidade Federal do Rio de Janeiro

1515 29718

**Leakage Through Micro-Annulus Geometries Incorporating Pressure-Driven Elastic Deformation**

K. Beltrán-Jiménez, Federal University of Rio de Janeiro (UFRJ); H. Skadsem, D. Gardner, S. Kraseg, Norwegian Research Centre (NORCE)/Drillwell; M. Lourenço De Souza, Federal University of Rio de Janeiro (UFRJ)

1540 29748

**Case Studies: Opportunities and Challenges in Brazilian Mature Fields' Subsea Conceptual Design**

G.R. Cabral, H.F. Silva, R.S. Bressan, Petrobras S.A.



1630–1800, Room B8

SE17

## Plenary: How to Enhance the Competitiveness of Deep Water Projects? (New Business Models, New Concepts and Technologies)

### MODERATOR

**Jorge Camargo**, IBP

### PANELISTS

**Stephen Greenlee**, Global Business Development President, ExxonMobil Upstream

**Uwem Ukpog**, Chief Global Operations Officer, Baker Hughes, a GE company

**Arnaud Breuillac**, E&P Director, Total

**Margareth Ovr**, CEO, Equinor Brasil

**Carlos Alberto de Oliveira**, E&P Director, Petrobras

Room 8

29

## ePoster Session III

### SESSION CHAIRPERSON(S):

**Pedro Campos Torres**, Halliburton

**Laura Lima**, Schlumberger

**1400 29959**

### Improved Reamer Cutter Blocks Optimizes The Brazilian's Pre Salt Well Construction

L.P. Da Silva, P. Mata, Petrobras; R. Oliveira, C. Almeida Junior, A. Matamoros, J. Florido, Schlumberger

**1425 29923**

### Parametric Assessment of the Buoy for Supporting Lines (BSL) Applied to Large FPSOs

P. Asgari, A.C. Fernandes, J.S. Sales Junior, A.C. Thurler, LOC-COPPE-Universidade Federal do Rio de Janeiro; A.M. Vilela, WESTSHORE - WSB Consultoria e Afretamentos; J.B. Araujo, ATNAV Consultoria Naval

**1450 29750**

### A Study of Directional Drilling Using Rotary Steerable System in Soft Shallow Formation (Benin Sand) - Rio Del Rey Area, Offshore Cameroon

O.M. Oredolapo, Baker Hughes Drilling Services; C.P. Onomo, Perenco

## Technical Program: Thursday, 31 October 2019, 0730–1300

0730–0900, Room B5

SE18

### **T Topical Breakfast: The New Paradigm of Innovation**

#### **MODERATOR**

**Wafik Beydoun**, International Association of Oil and Gas Producers

#### **SPEAKER**

**Nicolas Simone**, Director of Digital Transformation and Innovation, Petrobras

0930–1200, Room B8

SE19

### **Panel: Deepwater Safety – Improving Effectiveness and Reducing Failures**

#### **MODERATOR**

**Wafik Beydoun**, International Association of Oil and Gas Producers

#### **PANELISTS**

**Mauricio Diniz**, HSE Executive Manager, Petrobras

**Milton Costa Filho**, General Secretary, IBP

**Raphael Moura**, Superintendent Operational Safety and Environment, ANP

**Debra Phillips**, VP Global Industry Services, API

**Mark Cockram**, Team Lead, Deepwater Wells Process Safety, Shell

0930–1200, Room B2

SE20

### **Panel: Offshore Brazilian Engineering Industry: Lessons Learned and Challenges Ahead**

#### **MODERATOR**

**Claudio Makarovsky**, Abespetro

#### **PANELISTS**

**Mauricio Almeida**, CEO, Enseada

**Francisco Francilmar**, Operations Director, PetroRio

**Luiz Octavio Bandeira**, Business Development Manager, Genesis

**Guilherme Pinto**, Technology Manager, SBM Offshore Do Brasil

0930–1200, Room B3

SE21

### **Panel: Natural Gas–Worldwide Best Practices and their Application to the Brazilian Case**

#### **MODERATOR**

**Melissa Mathias**, ANP

#### **PANELISTS**

**Marina Abelha Ferreira**, Superintendent of Exploration, National Petroleum Agency of Brazil - ANP

**Rodrigo Costa Lima e Silva**, Executive Manager of Natural Gas, Petrobras

**Flavio Ofugi Rodrigues**, Head of Government and Regulatory Affairs, Shell

**Maria Clara Costa**, Reservoir Manager, Equinor

## Room B4-1

30

## Riser and Flowlines – Historical Review and Future Projections

## SESSION CHAIRPERSON(S):

Ivan Cruz, Subsea 7

Rajiv Aggarwal, Consultant

0930 29678

## Flexible Joint Stiffness Modelling Improving Ultra-Deep-Water Rigid Risers Fatigue Damage

G. Venero, V. Gomes, H. Corrigan, D. Carneiro, Wood

0955 29876

## A Flexible Riser System For Ultra-deepwater

Y. Hou, J. Yuan, Z. Tan, Baker Hughes, a GE company

1020 29787

## Deepwater Risers - Historical Review and Future Projections

P.J. Simpson, A.J. Lima, 2H Offshore

1045 29698

## The Gimbal Joint Riser: Enabling Free-Hanging, Buoyancy Free, Rigid Risers

I.C. Cruz, A. Ramiro, D.N. Karunakaran, F. Nicoletti, G. Hepner, L. Lemos, M. Chiodo, J. Gouveia, Subsea 7

1110 29819

## Thermoplastic Composite Pipes: A Reliable Cost-effective Solution For Pre-salt

T. Barbosa, R. Bastos, H. de Boer, R. Rojas, Airborne Oil and Gas

1135 29813

## Non Linear Time Domain Drilling Riser VIV Modelling

S. Truche, A. Malassagne, R. Aljarah, C. Saunier, M. Minguez, GENESIS Nîmes; A. Ulanov, P. Moe, TechnipFMC

## Room B4-2

31

## Novel technologies in Offshore Water Management

## SESSION CHAIRPERSON(S):

Jorge Rodriguez, Repsol

Carlos Pedroso, Enauta

0930 29911

## Electrocoagulation Treatment For Reverse Electrodialysis Wastewater From Petroleum Refinery

F.M. Gonçalves, D.H. Galdino Duarte Tocafundo, A.L. Alvarenga Santos, E.M. Nigri, S.D. Ferreira Rocha, Universidade Federal de Minas Gerais

0955

## Produced Water Treatment Polishing : A Step Change

P. Pedenaud, Total SA

1020 29946

## Remediation of Hydrate Plug in a Gas Export Line - A West Africa Deep Water Case

F. Papot, C. Alexandre, M.M. Abdulsalam, A. Chita, A. Pina, A. Chipoque, P. Glenat, Total E&amp;P

1045 29751

## Thermal-Numerical Simulation of the Gas Offshore Production Undersea Facilities at the Amistad Field

F.P. Gallo Cruz, A.L. Sola Naranjo, J.A. Rosero, J. Gonzalez Maya, Escuela Politecnica Nacional

1110 29720

## Corrosion in Multiphase Slug Flow Loop in Deep-water Oil and Gas Exploitation

C.A. Silva, D.R. Filho, G.B. Nunes, IPT - Research Institute; G. Bassani, Repsol Sinopec; N.L. Almeida, Z. Panossian, IPT - Research Institute

1135 29949

## Test Results of a Comparison Between a Conventional and Low Shear Valve and its Effect on Water/Oil Separation

A.S. Monteiro, F.S. Silva, Petrobras

## Room 4

32

## Deepwater Operation - Challenges and Opportunities

## SESSION CHAIRPERSON(S):

Felipe Freitas, ROSEN USA, Inc.

Anna Paula Lougon, Schlumberger

0930 29926

## The Science of Capping a Subsea Blowout

M. Guinn, Oil Spill Response (USA) Inc.; M. Cargol, Trendsetter Engineering, Inc.

0955 29680

## Challenges for the Development of New Bop Generation

V.E. Beal, R.T. Claro, M.d. Araújo, SENAI CIMATEC; D. Colombo, Petrobras; S.M. Souza, SENAI CIMATEC

1020 29947

## Delivering Step Change in Directional Well Design for Soft Formation In Deepwater Environment Using Rotary Steerable Directional-Jetting Technique

H.O. Osita, N. Foekema, O.M. Oredolapo, R.C. Ozioko, Baker Hughes, a GE company; A. Chapoulie, K.S. Omojowolo, J.I. Okoroafor, S. Affes, Total E&amp;P Nigeria Ltd.

1045 29958

## Performance Evaluation of Wireline-Retrieval Downhole Chemical Injection System Used in HPHT Wells

Z. He, L. Zhao, O. Bello, Baker Hughes, a GE company

1110 29832

## Structural Analysis of Thermal Transient Behavior on Cooling Trapped Annular Pressure in Water and Gas Injections Wells

N.M. Jr, C.E. Agostini, C. Moura dos Santos, R.S. Roman, E. Schnitzler, M. Dias Magalhães, M.V. Ferreira, C.O. De Souza, Petrobras

1135 29713

## Improving Emergency Response With Better and Faster Remote Monitoring

P.E. Neri, R. Philo, Energistics

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## Room 5

33

### Enhanced Oil Recovery - WAG, CO<sub>2</sub> Injection, Polymer Injection and Beyond

#### SESSION CHAIRPERSON(S):

**Claudio Ziglio**, Petrobras

**Lirio Quintero**, Baker Hughes

**0930 29766**

#### An Integrated WAG Characterization Study for an Offshore Oilfield

R.A. Vieira, M.A. Cardoso, J.D. Pizarro, Petrobras

**0955 29924**

#### Estimation of Three-Phase Oil Relative Permeability in WAG Experiments

S. Aghabozorgi, M. Sohrabi, Heriot-Watt University; J. Facanha, LASURF - PUC Rio

**1020 29769**

#### Effect of CO<sub>2</sub> Injection on the Interfacial Tension for a Brazilian Pre-Salt Field

S. Drexler, E.L. Correia, A.R. Jerdy, L.A. Cavadas, P. Couto, Universidade Federal do Rio De Janeiro

**1045 29939**

#### Study of the Effect of Low Salinity Water Injection on the Oil Recovery Factor in Fractured Carbonate Rocks Using Computed Tomography

C. Camargo Angarita, J.A. Vidal Vargas, E. Ruidiaz, A. Winter, E.T. Koroishi, O.V. Trevisan, University of Campinas; R.V. Almeida, G. Soares Bassani, Repsol Sinopec Brasil

**1110 29754**

#### Artificial Intelligence-Based Screening of Enhanced Oil Recovery Materials for Reservoir-Specific Applications

R. Giro, S.P. Lima Filho, R.F. Neumann, M. Engel, M.B. Steiner, IBM Research

**1135 29732**

#### Recent Updates on Smart Water EOR in Limestone

S. Strand, T. Puntervold, University of Stavanger/The National IOR Centre of Norway

## Room 6

34

### Solutions in Scale, Asphaltenes and H<sub>2</sub>S

#### SESSION CHAIRPERSON(S):

**Felipe Fleming**, Petrobras

**Geraldo Afonso Spinelli Ribeiro**, Petrobras

**0930 29812**

#### Optimization Algorithm of Hydrogen Sulfide Scavenging Process in Oil Production Industry

F.C. Souza, F.L. Pessoa, T.F. Ferreira, E.E. Calixto, A. Bomfim, Universidade Federal do Rio de Janeiro

**0955 29886**

#### ScaleProTect - Scale Deposition Modeling in Pre-Salt Reservoir

R. Bouamra, G. Carneiro, P. Pereira Machado, Schlumberger; M. Da Silva JR, Petrobras; G. Franquiz, H. Guan, T. Lindvig, Schlumberger

**1020 29836**

#### Towards a Deterministic Approach To Calcite Scaling in the Porous Media During CO<sub>2</sub> Sequestration and Immiscible CO<sub>2</sub> Flooding

S. Muhemmed, H.T. Kumar, H.A. Nasr-El-Din, Texas A&M University

**1045 29683**

#### Improved Protocol for Scale Inhibitor Evaluation: A Meaningful Step on Scale Management

K.S. Da Rosa, R.A. Fontes, F.F. do Rosário, T.C. Freitas, M.d. Penna, B.B. Castro, M.G. Da Silva, G.L. da Silva, J. Silva, M.d. Figueiredo, Petróleo Brasileiro SA

**1110 29727**

#### Flow Assurance Issues on Mexilhao Field Operation

J.F. Lorenzetti, C.A. da Silva, T.M. Barbosa, PETROBRAS

**1135 29817**

#### Influence of Asphaltene Inhibitors on Wax and Asphaltene Deposition - Are Problems Associated?

J.S. Aguiar, A. Punase, C.P. Mazzeo, Clariant

**Alternate 29887**

#### Novel In-Field Technique To Monitor and Optimize Asphaltene Remediation and Inhibition Job With Direct Field-to-Laboratory Correlation

A.D. Punase, C.P. Mazzeo, R. Garan, E. Vita, R. Kristensen, J.J. Wylde, Clariant

## Room 8

35

## Reservoir Characterization - Innovations in Modeling and Algorithms II

## SESSION CHAIRPERSON(S):

Gerardo Acosta, U Nacional Del Centro De La Provincia De Buenos Aires

**0930 29885**  
**Uncovering the Mechanisms of Low-Salinity Water Injection EOR Processes: A Molecular Simulation Viewpoint**

E.F. Martins, G.D. da Silva, M. Salvador, A. Torrez, J.M. de Almeida, C.R. Miranda, University of São Paulo

**0955 29736**  
**Application of the Convective-Dispersive Equation To Estimate Field Scale Dispersivity Based on a Field Scale Numerical Model and Tracer Production Data**

J.D. Cavalcante Filho, J.D. Pizarro, Petrobras

**1020 29770**  
**Mechanical Characterization of Grainstone and Dolomite Rock Samples From Quissama Formation, Campos Basin**

P.V. Garcia, D.F. Rossi, F.H. Ferreira, E.S. Raggio Santos, A. Borba, Petrobras

**1045 29831**  
**Understanding Main Data Structure of Complex Well Logs: Example of Images, Nuclear Magnetic Resonance Distributions and Acoustics Waveforms**

J.K. Oliveira, Schlumberger

**1110 29898**  
**Research and Application of Dynamic Monitoring Technology Applied in Separate Injection Wells in Digital Oilfield**

Y. Lingzhi, Y. Bin, Y. Jiuzheng, L. Yanqing, H. Gaixing, W. Zijian, B. Fuwei, Petrochina ChangQing Oilfield Company



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## Technical Program: Thursday, 31 October 2019, 1200–1800

1215–1345, Room B5

SE22

### **I Topical Luncheon: Deepwater E&P and Breakeven Reduction: Challenges and Opportunities**

#### MODERATOR

**Jose Firmo**, IBP

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1400–1630, Room B8

SE23

### **Panel: Decommissioning of Offshore Oil and Gas Assets - From Planning to Execution**

#### MODERATOR

**Eduardo Zacaron**, Petrobras

#### PANELISTS

**Eduardo Hebert Zacaron Gomes**, Decommissioning Manager, Petrobras

**Marcelo Semeraro de Medeiros**, Environmental Advisor, Shell

**Marcio Silva**, Engineering Director, Genesis

**Melinda Truskowski**, Principal, Global Oil and Gas Sector Leader, Ramboll

**Bernardo Brandao Gobbi**, Wells Plug and Abandonment Coordinator, Petrobras

1400–1630, Room B2

SE24

### **Panel: How to Foster Productivity and Competitiveness of the Oil and Gas Brazilian Supply Chain**

#### MODERATOR

**Eberaldo De Almeida**, Petrobras

#### PANELISTS

**Jose Firmo**, President, Brazilian Petroleum, Gas and Biofuels Institute

**Claudio Makarovsky**, President, ABESPETRO

**Claudio Cesar de Araujo**, Head of Supply Chain, Petrobras

**José de Sá**, Partner, Bain & Company

1400–1630, Room B3

SE25

### **Panel: Digitalized Production Facilities in Deepwater South America—Challenges and Opportunities**

#### MODERATORS:

**Rajiv Aggarwal**, Consultant

**Maiza Goulart**, Petrobras

#### PANELISTS

**Alberto Manuel Fernandes Dias**, Global Digital Advisor, Enterprise Architecture - Oil and Gas, Microsoft Digital

**Leonildes de Melo Filho**, R&D Project Coordinator in Digitalization and Geosciences, Repsol Sinopec Brasil

**Marcio Mattoso de Padua**, Facilities Electrical and Automation Engineering Manager, Petrobras

**Soichi Ide**, Chief Digital Officer & VP of Operations, Modec do Brasil

**Guilherme Pinto**, Technology Manager, SBM Offshore Do Brasil

**Hugues Corrigan**, Director South America, Subsea & Export Systems, Wood

**David Renzi**, Principal, Stress Engineering Services Inc

**Jose Esteve Otegui**, Project Director, Marine and Offshore Division, Bureau Veritas

**Ingar Fossan**, Chief Adviser, Safetec



**Room B4-1**
**36**
**Continued Use of Existing Deepwater and Subsea Facilities, Offshore Brazil**
**SESSION CHAIRPERSON(S):**
**Daniel Carneiro**, Wood

**Jorge Capeto**, Stress Engineering Services Inc

**1400 29792**
**FPSO Hull Brackets Repair By Cold Bonded Reinforcements - Project Lessons Learnt From a World First Offshore West Africa**

C. Paillusseau, X. Errotabehere, COLD PAD; V. Florio, M. Bulboaca, G. Pinto, A. Galter, SBM Offshore

**1425 29918**
**Life Extension of Mooring Systems- A Structured Approach**

C. Del Vecchio, Stress Engineering Services Inc; P. Biasotto, Murphy Exploration and Production Co.

**1450 29824**
**Flexible Riser Repair and Dissection Following Exceedance of API Fatigue Limit**

R. Tapias, 2H Offshore Engineering; M. Mansour-Tehrani, Tullow Oil plc; N.K. Langhelle, Sintef Ocean

**1515 29759**
**Life Extension of Offshore Structure Using Machine Learning**

S. Bhowmik, McDermott International

**1540 29767**
**Floating Deepwater Production Integrity Challenges and Solutions**

M.J. Paris, EM&amp;I Integrity Services Brasil; D.A. Constantinis, EM&amp;I Trading

**Room B4-2**
**37**
**Improving Brazilian Offshore Regulatory Environment-What Can Be Done?**
**SESSION CHAIRPERSON(S):**
**Jerry Carroll**, IEEE/Oceanic Engineering Society

**Antonio Amorim**, Faculdade De Tecnologia E Ciencias

**1400 29696**
**Brazilian Local Content Policy: An Overview and Analysis of Adjustment Clauses Applications**

A.L. d'Almeida, Petrobras; B.D. Apolinario, L.C. Ribeiro, Universidade Federal Fluminense

**1425 29702**
**Brazil Natural Gas Flaring And Its Regulatory Regime**

P.M. Camargos, Petrogal Brasil; L.M. Albuquerque, Universidade Veiga de Almeida; H.C. Saad, Agência Nacional do Petróleo, Gás Natural e Biocombustíveis.

**1450 29862**
**On the Development of Technology Governance in the Well Area**

J.C. Leite, M.T. Lopes, Petrobras

**1515 29884**
**Analysis of Brazilian's Oil and Gas Industry Research Fostering**

M.A. Gemaque Cantuaria, M. Peczek, Universidade Federal Fluminense

**1540 29743**
**Challenges With Production Sharing Contracts in Brazil: What the International Experience and Literature Review Can Tell Us?**

B.B. Medeiros, R. Britto, F. Barsan, Deloitte

**Room 4**
**38**
**Innovations in E&P Geophysical Methods-Risk Reduction**
**SESSION CHAIRPERSON(S):**
**Eduardo Faria**, Enauta

**Marcilio Castro De Matos**, SISMOS S.A.

**1400 29929**
**Probabilistic Techno-Economic Appraisal of Prospective Hydrocarbon Resources in Five Turbidites, Offshore Uruguay**

P. Rodriguez, S. Ferro, ANCAP; R. Weijermars, Texas A&amp;M University

**1425 29935**
**Pseudo-Sticking and Pull: A New Old Artifact on Image Logs Acquired in Ocean Wireline Log Operations**

S.A. Fornero, L.d. Fioriti, A.C. Laier, G.D. Felipe, Petrobras

**1450 29893**
**Depth Imaging of Complex Geological Structures Using the RTM Technique in Order to Reduce Exploration Costs**

M. Xavier, Halliburton

**1515 29693**
**Comparison of Methodologies for Statistical Evaluation of Characteristic Soil Properties for Top Hole Design**

A.V. Esteves, C.A. Varady Filho, E.T. Lima Junior, J.P. Santos, Federal University of Alagoas; R. Dias, F.S. Cutrim, Petrobras

**1540 29782**
**Carbonate Porosity and Permeability from Sonic Log**

F.G. Silva, C.F. Beneduzi, G.F. Nassau, T.B. Rossi, Petrobras- Petróleo Brasileiro S.A.

**1605 29689**
**Exploratory Potential of the Brazilian Equatorial Margin**

K.S. d'Almeida, M.F. de Souza, N.O. Castro, P.C. Vilela, R.F. Leggieri, R.F. Fernandes, R.A. Cardoso, Empresa de Pesquisa Energética

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## Room 5

39

## Total Cost Reduction in Field Development II

## SESSION CHAIRPERSON(S):

**Ivan Cruz**, Subsea 7**Thomas Lindvig**, Schlumberger**1400 29954****Predictive Data Mining Techniques for Economic Evaluation of Unconventional Resources: The Tight Gas of Argentina**

R.J. Cervantes Bravo, E.T. Jimenez Nieves, L. Arcaya Arhuata, Consultant

**1425 29806****Reduction of CAPEX and Optimization of OPEX With Innovative Ideas by Integration With Brown Field and Green Field Development To Achieve Zero Venting**

R. Sunnapu, A.B. Awang, PETRONAS

**1450 29793****Study of the Optimum Level of Financial Participation in Risky Projects for Oil and Gas Exploration and Production**

R.d. Motta, L.A. Basilio, Federal University of Rio de Janeiro

**1540 29841****Partnerships and Joint Ventures In Brazilian Oil and Gas Markets**

M. Bastos, J.A. Bucheb, B-in Partrtners

**1540 29869****Financial Planning of Maintenance Services for Atmospheric Hydrocarbon Filled Tanks**

J.E. Modica, Independent Consultant; H.H. Federico, Petrobras Transporte S/A - TRANSPETRO

**1605 29778****The Remarkable Growth of Integrated Subsea Projects from 2016 to 2019**

D. Labbe, K.A. Jan, M. Xavier, Subsea 7; C. Tadeu, M. Vilchez, OneSubsea

## Room 6

40

## Advanced Technologies for Production Engineering

## SESSION CHAIRPERSON(S):

**Howard Painter**, Glenair Subsea Group**Sergio dos Santos e Lucato**, Teledyne Scientific**1400 29892****Detailed CFD Simulations of Green Water Flow on FPSO Deck**

D.F. Silva, Petrobras

**1425 29861****Forecasting Smart Well Production Via Deep Learning and Data Driven Optimization**

T. Calvette, A. Gurwicz, A.C. Abreu, M.C. Pacheco, Pontifical Catholic University of Rio de Janeiro

**1450 29788****Visualization of Ensembles of Oil Reservoir Models Based on Pixelization, Small Multiples and Reservoir Similarities**

C.G. Silva, A.A. Santos, D.J. Schiozer, University of Campinas

**1515 29700****Machine Learning Applied on Fishing Occurrence Prediction**

F.T. Peixoto Filho, J.G. Filardo, Petrobras

**1515 29883****Application of Machine Learning to Oil Production Forecast under Uncertainties-The Linear Model**

L.K. Kubota, F. Souto, Petrobras

**1605 29733****Integrated Simulation of Offshore Oil and Gas Production Systems During Project Design**

L.P. Fulchignoni, M.A. Cardoso, A.T. Oshiro, T.D. Santos, L.d. Pinto, D.M. Rocha, Petrobras

## Room 8

41

**Materials Technology**

## SESSION CHAIRPERSON(S):

**Pascoal Bordignon**, Companhia Brasileira de Metalurgia e Mineração - CBMM**Murali Manohar**, ArcelorMittal Global R&D**1400**      **29955****Optimizing Rotary Shoulder Connection for Drilling Program**

S. Bhukya, G. Plessis, R. Hussain, NOV Grant Prideco

**1425**      **29679****Regulatory Design Assessment of Cold Bonded Fasteners**

M. Quéméré, J. Court, P. Montaufray, X. Errotabehere, COLD PAD; P. Noury, K. Zakariyya, H. Martinsen Olin, DNV GL

**1450**      **29845****Understanding The Behavior of Surface Hardness (Hard Spots) of Plate And Pipe: Extensive Test Program**

T.S. Kathayat, Welspun Corp Ltd; R.T. Hill, Welspun; R.K. Goyal, P. Thakor, A. Singh, Welspun Corp Ltd

**1515**      **29962****Structural Integrity of HSLA Steels Under Hydrogen Embrittlement Condition**

G.F. Melo, Federal University of Uberlândia; W.W. Bose Filho, University of São Paulo; R.F. Alvarenga, Federal University of Uberlândia; M.T. Paes, D.C. Ferreira, Petrobrás; S.D. Franco, Federal University of Uberlândia

**1540**      **29758****Novel Solution For Cementing Operations in Scenarios of Losses and Improving Cement Bonding Results in The Brazilian Deepwater Pre-Salt**

R.A. Freitas, L. Rossi, L.P. Pagani, A. Gregatti, Schlumberger

**1605**      **29768****Mechanically Lined Pipe (MLP) With Improved Fatigue Resistance**

S. Popescu, P.A. Montague, Cladtek Holdings PTE LTD

## 1630–1800, Room B8

SE26

**Plenary: Digital Transformation**

## MODERATOR

**Jose Firmo**, IBP

## PANELISTS

**Joao Carlos Bolonha**, Director, Google Cloud**Ana Hofmann**, Manufacturing Lead Brazil, Microsoft**Marcelo Braga**, Vice-President, IBM Cloud and Cognitive Software Brazil



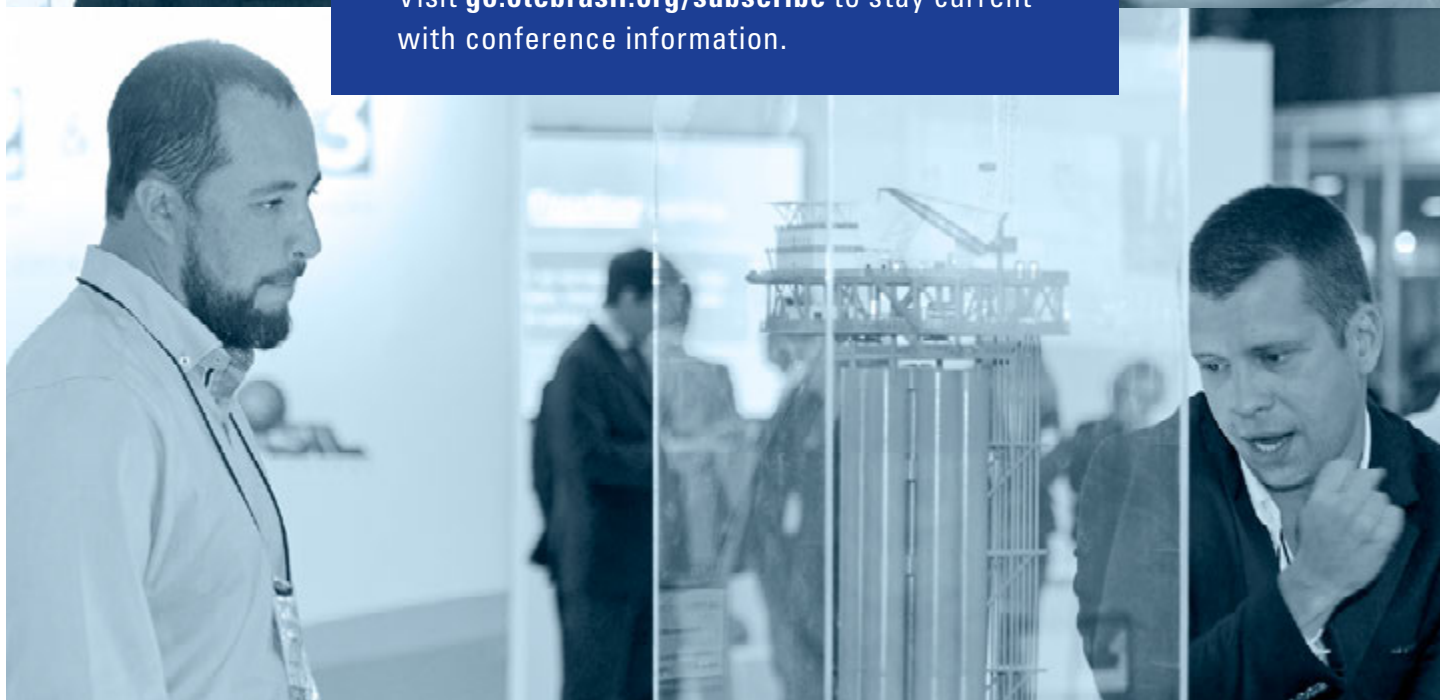
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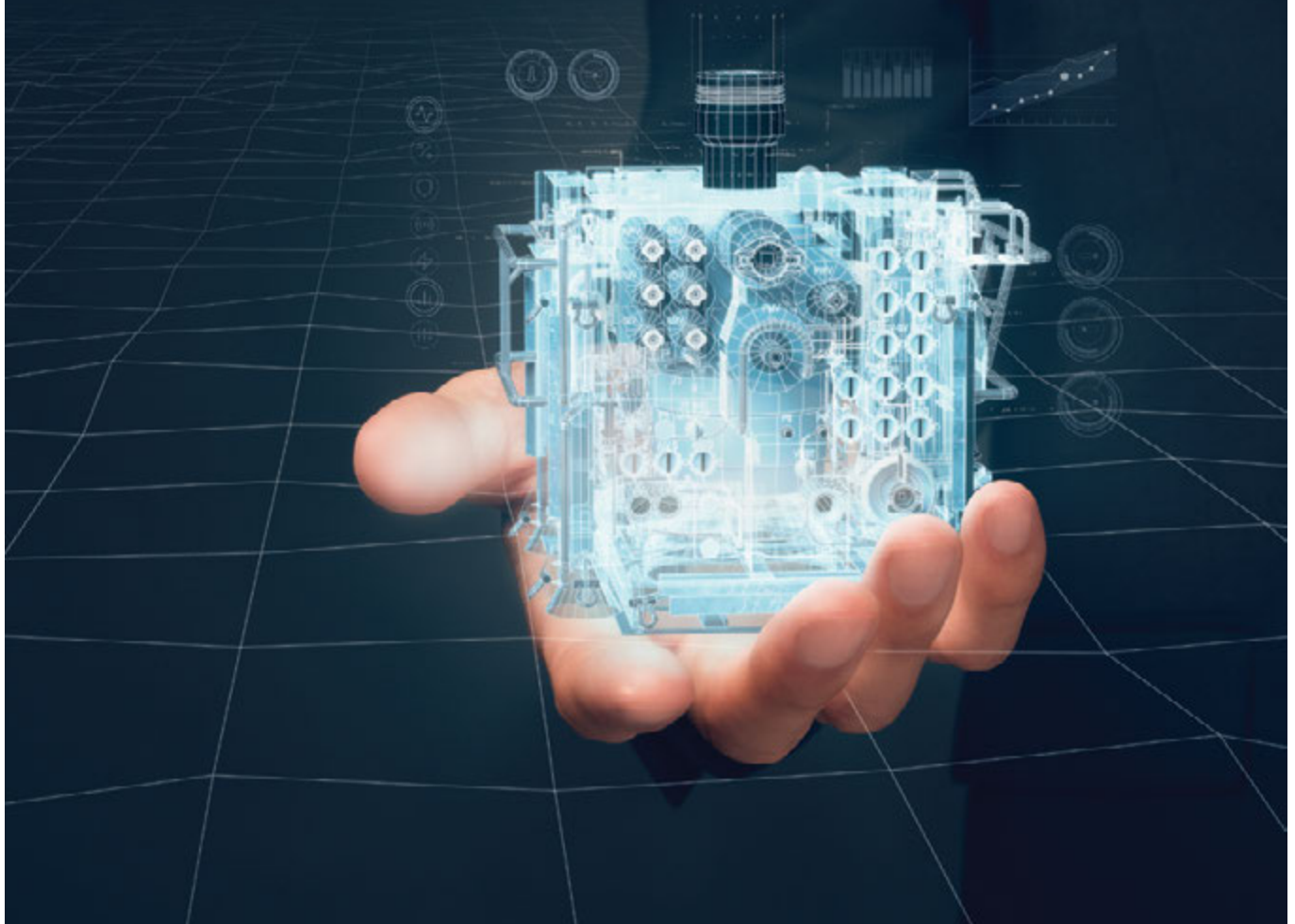
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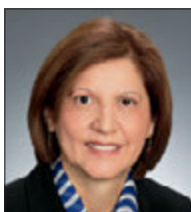
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