

Offshore Technology Conference 2021

16-19 AUGUST 2021 » NRG PARK » HOUSTON, TEXAS, USA » 2021.OTCNET.ORG



DOWNLOAD THE OFFICIAL OTC MOBILE APP!

Download the OTC mobile app to plan your route on the exhibit hall floor and to maximize your OTC experience. After the app is downloaded on your device, it does not require Wi-Fi or data connectivity for its key functions.



TO DOWNLOAD

- **For Apple and Android devices:** visit your App Store or Google Play on your device and search for "Offshore Technology Conference"
- **For All Other Device Types:** While on your smartphone, point your camera to the QR code.
- If OTC 2019 is previously downloaded on your device, simply update this application in your app store to access OTC 2021.

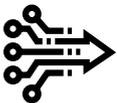
TOGETHER, WE CAN TACKLE ANY CHALLENGE.



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& COSTS THROUGH FUEL FLEXIBILITY**



**POWERING ELECTRIFICATION
WITH EFFICIENT, 100% GAS-FUELED MOBILE SOLUTIONS**



**PROVIDING HYBRID FLEXIBILITY
THAT INTEGRATES CONVENTIONAL & LOW-CARBON POWER**

OTC Organizations

Sponsoring Organizations



AAPG
American Association of Petroleum Geologists



AIChE
The Global Home of Chemical Engineers
American Institute of Chemical Engineers



AIME
Founded 1871
American Institute of Mining, Metallurgical, and Petroleum Engineers



ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS
American Society of Civil Engineers



ASME
SETTING THE STANDARD
American Society of Mechanical Engineers



IEEE Oceanic Engineering Society
Institute of Electrical and Electronics Engineers, Oceanic Engineering Society



marine technology SOCIETY
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Marine Technology Society



SEG
SOCIETY OF EXPLORATION GEOPHYSICISTS
Society of Exploration Geophysicists



SME
Society for Mining, Metallurgy & Exploration
Society for Mining, Metallurgy, and Exploration



SNAME
SNAME



SPE
SOCIETY OF PETROLEUM ENGINEERS
Society of Petroleum Engineers



TMS
The Minerals, Metals & Materials Society
The Minerals, Metals & Materials Society

Regional Sponsoring Organization



ibp
Brazilian Petroleum, Gas and Biofuels Institute

Endorsing Organizations



IADC
International Association of Drilling Contractors



ENERGY WORKFORCE & TECHNOLOGY COUNCIL
Energy Workforce & Technology Council

Supporting Organizations



AADE
AMERICAN ASSOCIATION OF DRILLING ENGINEERS
American Association of Drilling Engineers



API
AMERICAN PETROLEUM INSTITUTE
American Petroleum Institute



ASTM INTERNATIONAL
Standards Worldwide
ASTM International



CENTER FOR OFFSHORE SAFETY
Center for Offshore Safety



IPAA
INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA
Independent Petroleum Association of America



MARINE
Institute of Marine Engineering, Science and Technology



IOGP
International Association of Oil & Gas Producers
International Association of Oil and Gas Producers



IMCA
International Marine Contractors Association
International Marine Contractors Association



ISA
International Society of Automation
International Society of Automation



NOIA
National Ocean Industries Association
National Ocean Industries Association



HOUSTON
World Petroleum Congress

2021 Invited Organizations

American Clean Power Association



American Clean Power Association (ACP) is uniting the power of America's renewable energy industry to advance our shared goals and to transform the U.S. power grid to an affordable, reliable and clean power system. Our goal is to make clean energy the dominant electricity source in the United States by uniting the power of solar, wind, storage, and transmission companies along with manufacturers and construction companies, developers and owners/operators, utilities, financial firms, and corporate purchasers in the clean energy value chain.

International Council on Systems Engineering



The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the transdisciplinary principles and practices that enable the realization of successful systems. INCOSE is designed to connect systems engineering professionals with educational, networking, and career-advancement opportunities in the interest of developing the global community of systems engineers and systems approaches to problems.

NRG Park maintains a comprehensive recycling program. During OTC 2019, more than 26 tons of recyclable material was captured and diverted from landfills. NRG Park will have recycling pods and recycling trash cans for paper products in all meeting rooms inside NRG Center. We encourage all OTC attendees to practice recycling.

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Welcome Back to OTC!



Dear Colleagues,



On behalf of the Offshore Technology Conference (OTC) Board of Directors, I write this letter with great excitement! Whether you call Houston home, have traveled to be here, or are joining us virtually, I applaud your commitment to be part of the conversation propelling the advancement of all forms of energy, technology, and safety in the offshore sector.

OTC kicks off Sunday evening with the Distinguished Achievement Awards Reception. Join your colleagues as the recipients of both the 2020 and 2021 Distinguished Achievement Awards as well as the OTC Beneficiary, United Against Human Trafficking (UAHT) are recognized.

Jumpstart your Monday morning by attending the Opening General Session where a dynamic group of industry leaders will examine the future of offshore energy. Topics to be discussed range from record low oil prices, lessons learned and recovery from the global COVID-19 pandemic, and the business of the energy transition.

Seven concurrent technical tracks will run Monday through Thursday of OTC. With more than 300 papers being presented, you will have the opportunity to explore a wide variety of multidisciplinary topics such as digital solutions, the energy transition, cost reduction, environmental and safety aspects, drilling technology, and much more.

The 2021 program will also feature an Executive Dialogue Series starting Monday, 16 August. This new series is aimed at engaging executives in a thoughtful discussion around workforce, industry adaptability, offshore resource development, emerging technologies, and the future of the offshore energy sector.

Join Greentown Labs Wednesday, 18 August as a diverse panel of representatives from climate tech startups discuss designing a more sustainable world through offshore wind and the current challenges it is facing. Pioneers representing new enterprises, corporations, investors, and employees will discuss offshore wind technology.

During the Around the World Series, listen to global industry leaders as they discuss business opportunities and recently introduced technologies in their region of the world. This year's series will focus on the Arctic, Brazil, Canada, Guyana, Israel, Norway, the Netherlands, and West Africa.

In addition to a full program of a keynote speaker series, special events, and panel sessions, OTC exhibitors will showcase their latest product offerings in person and on the virtual platform. Spend some time on the exhibit hall floor and test drive product demos, see pipes and drills, systems designed for floating offshore wind turbines, bits and gloves, augmented reality, data-control centers, and trucks used for distribution.

New this year is the inaugural OTC Emerging Leaders recognition program. This program will recognize one young professional from each of OTC's sponsoring, endorsing, and supporting organizations on Wednesday, 18 August during the Young Professionals Networking Event. Take a moment to congratulate the emerging leaders making waves in the offshore sector.

I am immensely proud of the resilience, flexibility, and professionalism this industry has encountered this past year. Your knowledge, experience, vision, and continued support help us pave the way for a more sustainable future. Throughout the conference, I ask you stay engaged with your colleagues and make new professional connections throughout the world. I look forward to joining you for OTC 2021!

Sincerely,

Cindy Yeilding
OTC Board of Directors Chairperson



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Hess is a leading global independent energy company engaged in the exploration and production of crude oil and natural gas. We are committed to help meet the world's growing energy needs in a safe and responsible way while making a long-lasting, positive impact on the communities where we do business.

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DJSI Recognition for Outstanding
Sustainability Performance
NORTH AMERICA INDEX



Leadership Status, 12 years
CDP CLIMATE
CHANGE REPORT



[Hess.com](https://www.hess.com)

Schedule of Events

All events in conjunction with OTC 2021 which will be held at NRG Center in Houston, Texas, USA, a photo identification will be required. To ensure a secure conference, a government-issued photo identification (passport or driver's license) is required to retrieve your badge. Your personal items may be subject to search before you enter OTC.

MONDAY, 16 AUGUST	TUESDAY, 17 AUGUST	WEDNESDAY, 18 AUGUST	THURSDAY, 19 AUGUST
0700–1700	Registration	0730–1700	Registration
0800–0900	Keynote Speaker Series	0800–0900	Keynote Speaker Series
0900–1030	Opening General Session	0900–1200	Around the World Series—Netherlands
0900–1700	Exhibition	0900–1200	Around the World Series—Guyana and Suriname
0930–1200	Technical and Panel Sessions	0900–1200	Around the World Series—Arctic
0930–1606	ePoster Lounge I: Part 1	0900–1200	Press Conferences
0930–1442	ePoster Lounge I: Part 2	0900–1700	Exhibition
1230–1345	Keynote Speaker Series	0930–1200	Technical and Panel Sessions
1300–1400	Executive Dialogue: Daryl Wilson, Hydrogen Council	0930–1628	ePoster Lounge III: Part 1
1330–1700	Virtual Rice Alliance Energy Venture Day	0930–1354	ePoster Lounge III: Part 2
1400–1500	Executive Dialogue: David Calender MD, Memorial Health System	1130–1400	Panel Session with Greentown Labs
1400–1630	Technical and Panel Sessions	1230–1345	Keynote Speaker Series
1500–1600	Executive Dialogue: Kenton Prindle, Studio X	1300–1700	Exhibitor Demonstrations
1600–1700	Spotlight on New Technology® Awards Ceremony	1400–1630	Technical and Panel Sessions
1600–1800	Networking Event	1400–1700	Around the World Series—Israel
0730–1700	Registration	1400–1700	Around the World Series—West Africa
0800–0900	Keynote Speaker Series	1600–1700	OTC + NAPE Joint Session: SYNERGY IN ENERGY
0900–1000	Executive Dialogue: Katie Mehnert, ALLY Energy	1600–1800	Young Professionals Networking Event
0900–1700	Exhibition	0730–1400	Registration
0900–1200	Press Conferences	0730–1345	Energy4me Teachers STEM Workshop
0900–1200	Around the World Series—Canada	0800–0900	Keynote Speaker Series
0930–1200	Technical and Panel Presentations	0900–1100	Networking Event
0930–1606	ePoster Lounge II: Part 1	0900–1200	Exhibitor Demonstrations
0930–1522	ePoster Lounge II: Part 2	0900–1400	Exhibition
1000–1100	Executive Dialogue: Bill Vass, Amazon Web Services	0930–1200	Technical and Panel Sessions
1100–1200	Executive Dialogue: Peter Green, National Renewable Energy Laboratory	1230–1345	Keynote Speaker Series
1100–1400	WISE Networking Event	1300–1700	Exhibitor Demonstrations
1230–1345	Keynote Speaker Series	1400–1630	Technical and Panel Sessions
1300–1700	Exhibitor Demonstrations	1400–1700	Around the World Series—Israel
1300–1400	Executive Dialogue: Bharrat Jagdeo, Guyana	1400–1700	Around the World Series—West Africa
1400–1630	Technical and Panel Sessions	1600–1700	OTC + NAPE Joint Session: SYNERGY IN ENERGY
1400–1700	Around the World Series—Norway	1600–1800	Young Professionals Networking Event
1400–1700	Around the World Series—Brazil	0730–1400	Registration
1500–1600	Executive Dialogue: Esther Morales, Clean Energy Leaders; Damian Bednarz, External Affairs Director, EnBW	0730–1345	Energy4me Teachers STEM Workshop
1600–1800	Networking Event	0800–0900	Keynote Speaker Series
0730–1700	Registration	0900–1100	Networking Event
0800–0900	Keynote Speaker Series	0900–1200	Exhibitor Demonstrations
0900–1200	Around the World Series—Netherlands	0900–1400	Exhibition
0900–1200	Around the World Series—Guyana and Suriname	0930–1200	Technical and Panel Sessions
0900–1200	Around the World Series—Arctic	1230–1345	Keynote Speaker Series
0900–1200	Press Conferences	1400–1630	Technical and Panel Sessions
0900–1700	Exhibition	0730–1400	Registration
0930–1200	Technical and Panel Sessions	0730–1345	Energy4me Teachers STEM Workshop
0930–1628	ePoster Lounge III: Part 1	0800–0900	Keynote Speaker Series
0930–1354	ePoster Lounge III: Part 2	0900–1100	Networking Event
1130–1400	Panel Session with Greentown Labs	0900–1200	Exhibitor Demonstrations
1230–1345	Keynote Speaker Series	0900–1400	Exhibition
1300–1700	Exhibitor Demonstrations	0930–1200	Technical and Panel Sessions
1400–1630	Technical and Panel Sessions	1230–1345	Keynote Speaker Series
1400–1700	Around the World Series—Israel	1400–1630	Technical and Panel Sessions
1400–1700	Around the World Series—West Africa	0730–1400	Registration
1600–1700	OTC + NAPE Joint Session: SYNERGY IN ENERGY	0730–1345	Energy4me Teachers STEM Workshop
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0800–0900	Keynote Speaker Series	0900–1400	Exhibition
0900–1100	Networking Event	0930–1200	Technical and Panel Sessions
0900–1200	Exhibitor Demonstrations	1230–1345	Keynote Speaker Series
0900–1400	Exhibition	1400–1630	Technical and Panel Sessions
0930–1200	Technical and Panel Sessions	0730–1400	Registration
1230–1345	Keynote Speaker Series	0730–1345	Energy4me Teachers STEM Workshop
1400–1630	Technical and Panel Sessions	0800–0900	Keynote Speaker Series

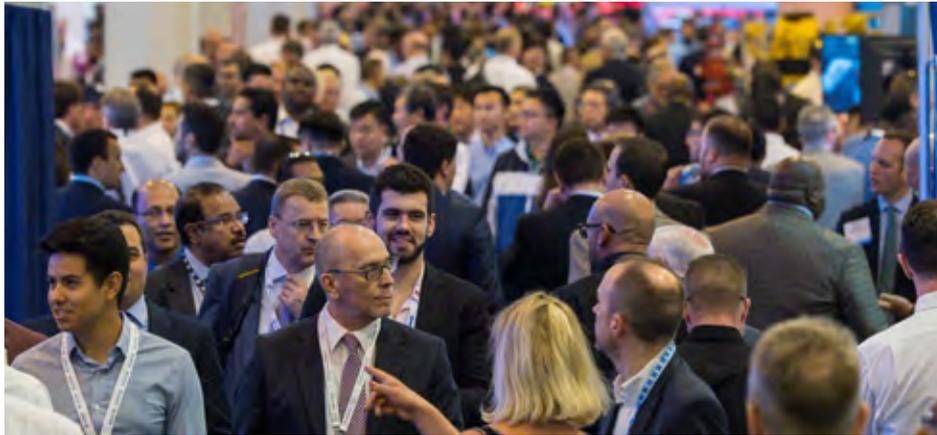
Offshore Technology Conference 2022

SAVE THE DATE!

2-5 May 2022
NRG Park » Houston, Texas, USA
2022.otcnet.org



General Information



OTC Gift Shop

NRG Center, Level 1, Exhibit Floor, Hall C, Booth 1829

OTC Headquarters

+1.832.667.2902
NRG Center, Level 1, Room 106-107,
OTC Headquarters

Lost and Found

+1.832.667.2902
NRG Center, Level 1, Room 106-107,
OTC Headquarters

First Aid

First Aid is located in the NRG Center, Level 1, Lobby C.

Lost and Found

Lost and Found is located in OTC Headquarters, NRG Center, Level 1, in Room 106-107 and is open during conference hours.

Luggage Check

A complimentary luggage check is located outside NRG Center, Level 1, Lobby E.

Internet Access

OTC offers free, low-bandwidth wireless internet access in the lobbies of NRG Center. The wireless network name is OTC 2021. This free wireless access will not be available on the exhibit floors or meeting rooms.

Virtual Platform

You can access the OTC 2021 Virtual Platform by visiting: 2021otc.onlineeventpro.freeman.com

Mobile App

Download the free mobile app to plan your route on the exhibit hall floor and to maximize your OTC experience. Visit your App Store or Google Play and search for "Offshore Technology Conference." After the app is downloaded to your device, it does not require Wi-Fi or data connectivity for its key functions.

Exhibition Hall

With respect to health and safety concerns of all OTC attendees, OTC encourages all attendees to search for exhibitors using their personal mobile devices. A detailed list of exhibiting companies and their locations can be found on the mobile app.

Search for exhibitors by name, booth, or product category, and find technical session details and locations.

OTC Continues to Help Build Awareness of Human Trafficking

United Against Human Trafficking (UAHT)

OTC continues its partnership with UAHT to increase human trafficking awareness among our attendees and exhibiting companies from the greater Houston area and around the world. To request help or report suspected human trafficking, call the National Human Trafficking Resource Center hotline at 1.888.373.7888, or text INFO or HELP to them at: BeFree (233733). Visit their booth in the NRG Center, Lobby D.

OTC Gift Shop

Visit the OTC Gift Shop in NRG Center, Level 1, Exhibit Floor, Hall C, Booth 1829, to browse and purchase a variety of apparel items, including jackets, luggage, golf shirts, caps, and T-shirts. Many sizes and colors are available. Stop by early to get the best selection. The OTC Gift Shop is open each day during exhibition hours.

Press Room and Press Badge Pick-Up Room

+1.832.667.3031

NRG Center, Level 2, Room 403-405

Members of the working press will register or pick-up their badge in the press registration room on level 2. The press room offers a quiet work space with complimentary internet access. The press conference area is located in the NRG Center, Level 1, Hall C, Booth 3035.

Printing and Office Supply Needs

A FedEx Office Print and Ship Center is located at 8330 S. Main Street, Ste. 200, Houston, Texas 77025 and an Office Depot is located at 8202 Kirby Drive # 1240, Houston, Texas 77054.

Technical Program Color Reference

- Technical/Poster Sessions
- Panel
- Keynote Speaker Series
- Around the World
- Networking Event
- Executive Dialogue Series
- Young Professionals

Proceedings

OTC 2021 technical papers are available as a valuable reference tool after the conference. Proceedings are available for purchase on the OTC 2021 website during registration. The cost is USD 110 for members and USD 175 for nonmembers.

If you purchased a copy of the digital proceedings, you can access the papers via OnePetro using the access code that was emailed to you or provided to you on-site. You can also access the digital proceedings on the OTC virtual platform.

Speaker Check-In Room

NRG Center, Level 2, Room 500

All presenting authors, speakers, and session chairpersons should report to the Speaker Check-In Room one hour prior to their presentation. Audiovisual equipment is available for speakers to preview their presentations.

Policies and Procedures

Attendee Qualifications

All attendees are required to wear their OTC name badge 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. Attendees 15 to 18 years of age must be accompanied by an adult. No one under 15 years of age will be admitted to OTC. Conference registrants will be allowed two free badge reprints. A fee of USD 50 will be charged for additional badge reprints.

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.

Americans with Disabilities Act

We take pride in ensuring that our meetings and events are accessible to all attendees with special needs. All meeting rooms are wheelchair accessible. Should you require special arrangements, please contact our staff at OTC Headquarters.

Consent to Use of Photographic Images

Attendance at or participation in OTC 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.

OTC Speakers

The views and opinions expressed by speakers or others who have provided materials to and for this meeting are not necessarily those of the Offshore Technology Conference (OTC). OTC assumes no responsibility for, nor endorses, any of the comments, recommendations or materials that are provided.

Photography Policy

All OTC sessions are protected by US 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 OTC Press Room to obtain permission for photography and videography.

Health and Safety

One of the key components to the success of OTC is the safety of our attendees and presenters. OTC will work to incorporate innovative features that will further enhance the onsite experience and safety for everyone in attendance. Individuals who do not comply with the COVID-19 rules will not be permitted to enter or remain on the NRG Park premises.

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 Marshall'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, OTC staff and/or convention center staff will provide conference attendees with any necessary information and instructions.

Smoking Policy

NRG Center are nonsmoking facilities. Smoking is prohibited in all areas of the centers except in designated smoking areas.

SHOW YOUR BADGE PROGRAM

With Visit Houston's Show your Badge program, it's never been easier to tap into exclusive savings and discounts for conference attendees, allowing you to get the most out of our city while you're in Houston! Redeem your deals and discounts by simply presenting the digital coupon to your server. For details visit:

go.otcnet.org/ShowYourBadge



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- **For All Other Device Types:** While on your smartphone, point your camera to the QR code.
- If OTC 2019 is previously downloaded on your device, simply update this application in your app store to access OTC 2021.



Transportation and Parking



NRG Park Parking – Credit Card and Cash Accepted

Please allow plenty of time for the extra traffic around NRG Park during OTC. Close-in parking fills up quickly. After midmorning, consider exiting on South Main and park in the yellow, green, or teal lot.

The parking fee at NRG Park is USD 15 per entry, credit card and cash accepted. Exhibitor permits can be obtained on-site in the Exhibitor

Services Center in the Exhibit Hall, Back of Hall E. Bring your parking stub to the service desk for a USD 10 credit towards the purchase of a permit. If you preordered a permit, a refund of USD 10 will be processed when you pick up your permit.

Handicap Parking

NRG Park has ample handicap parking spaces located in the following lots: Red Lot #4, Orange Lot #10, and Blue Lot #16.

Airport Taxi Service

Taxi service between George Bush Intercontinental Airport (IAH) and NRG Park is approximately USD 70; service between William P. Hobby Airport (HOU) and NRG Park is approximately USD 40. Cab sharing is permitted with a maximum of four passengers per cab.

METRO

The METRO Rail is a convenient way to get around Houston. It offers stations conveniently located in and around many busy activity centers such as downtown and NRG Park. You can also park your car at one of METRO's Park & Ride lots. Trains run every six minutes and the fare cost is USD 1.25 each way. Park & Ride rates vary depending on zone. Visit www.ridemetro.org to plan your trip and purchase tickets.

Continuous loop every 10-15 minutes

Monday-Wednesday, 16-18 August . . 0700-1900
 Thursday, 19 August 0700-1700

Complimentary Shuttle Service to NRG Park from Downtown Area Hotels		
See list on following page to find the boarding information for your hotel.		
Complimentary shuttle service for attendees is provided between NRG Park and some official OTC hotels during conference hours. Schedules are posted in hotel lobbies. Shuttle service begins Monday, 16 August, and continues through Thursday, 19 August.		
Route 1	Inbound from Hotels to NRG Park every 20-30 minutes	Return to Hotels from NRG Park every 30 minutes
Monday, 16 August	0700-1100	1500-1830
Tuesday, 17 August	0700-1100	1500-1830
Wednesday, 18 August	0700-1100	1500-1830
Thursday, 19 August	0700-1100	1300-1700

Please be advised due to weather or traffic conditions pick up times listed above may vary.
 Note: Hotel lobby signs will be updated with any schedule/boarding point changes prior to the start of the event.

Conference Hotels with Complimentary Shuttle Service

DOWNTOWN AREA HOTELS (ROUTE 1)	BOARDING POINT
Courtyard Houston Downtown Convention Center by Marriott 832-366-1600	Curbside, Front Entrance on Dallas
C.Baldwin, Curio Collection by Hilton Downtown (formerly Doubletree by Hilton) 713-759-0202	Curbside, Front Entrance on Dallas
Embassy Suites Downtown 713-739-9100	At Hilton Americas, Curbside on Avenida de Las Americas
Four Seasons Hotel Houston Downtown 713-650-1300	At Hilton Americas, Curbside on Avenida de Las Americas
Hilton Americas—Houston Downtown 713-739-8000	Curbside on Avenida de Las Americas
Holiday Inn—Houston Downtown 713-658-8888	Curbside, Side of Hotel on Pease St.
Hyatt Regency Houston Downtown 713-654-1234	SW Corner of Dallas & Louisiana
JW Marriott Houston Downtown 713-237-1111	At Courtyard Downtown—Curbside, Front Entrance on Dallas
Magnolia Hotel Houston Downtown 713-221-0011	At Courtyard Downtown—Curbside, Front Entrance on Dallas
Marriott Marquis Houston 713-654-1777	At Hilton Americas, Curbside on Avenida de Las Americas
Residence Inn Houston Downtown/Convention Center 832-366-1600	Curbside, Front Entrance on Dallas
Springhill Suites Houston Downtown/Convention Center 832-366-1600	Curbside, Front Entrance on Dallas
The Whitehall Houston (formerly Crowne Plaza Houston Downtown 713-739-8800	Curbside, Front Entrance on Smith

Please be advised due to weather or traffic conditions pick up times listed above may vary. Please consult the sign in your hotel lobby for up to date schedule and boarding point information.



Thank You to Our Sponsors for Your Support *(as of 10 August 2021)*



Thank You to Our Sponsors for Your Support *(as of 10 August 2021)*



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- If OTC 2019 is previously downloaded on your device, simply update this application in your app store to access OTC 2021.



OTC DISTINGUISHED ACHIEVEMENT AWARDS EVENT RECEPTION

Sunday, 15 August | 1730–1930

NRG Park, Level 2, Room 300

T Tickets are USD 25 each.

The 2021 Reception will recognize the recipients of both the 2020 and 2021 Distinguished Achievement Awards as well as the 2020 and 2021 Beneficiary, United Against Human Trafficking (UAHT). Attendees will have the opportunity to network with peers, exhibitors, executives, and award winners in a unique setting for 2021. OTC is honored to recognize these incredible individuals, organizations, and the work of UAHT.

Passed hors d'oeuvres and open bar. Valet Parking will be available.



2018 beneficiary recipients, Young Women's College Preparatory Academy

2020 Distinguished Achievement Awards

Distinguished Achievement Award for Individuals



Professor Ronald W. Yeung, PhD
University of California at Berkeley

Yeung will be awarded the Distinguished Achievement Award for Individuals, recognizing him for his 45-year career in educating a generation of naval architects and ocean engineers, as well as his fundamental research in ship and offshore hydrodynamics. Over this period, he has supervised 28 doctoral dissertations in the marine field, more than 100 master's students and visiting scholars, and published more than 190 articles. Yeung's advisees have received 16 U.S. and international Best-Paper awards, with many of them active in academia and the ocean industry. Read more about Ronald's accomplishments.

Distinguished Achievement Award for Companies, Organizations, and Institutions



Petróleo Brasileiro S.A. (Petrobras)
for its Búzios Project

The Petrobras-led Búzios Project will be recognized for the use of technological advancements in extreme conditions, leaving a legacy to the offshore oil and gas industry. The Búzios Field is located in the ultra-deepwater, 6,560 feet of the Santos Basin pre-salt, roughly 130 miles from the Rio de Janeiro coast. Petrobras has, for the first time in the offshore industry, installed four floating production storage and offloading (FPSO) units in a single field within a timespan of only 11 months. Each FPSO has the capacity to process 150,000 barrels of oil per day and to compress and re-inject 212 million standard cubic feet per day of associated gas. Together, the four production systems have a total of 19 injection wells and 21 production wells. Read more about the Búzios project.

Special Citation



TotalEnergies
for its Egina Project

Total Upstream Nigeria Limited has been awarded a Special Citation for its Egina project, which executed a sustainable deepwater project using local engineering, project management, yards and support services providing the foundation for future projects.

The Egina project is the largest FPSO to date in the Total S.A. Group Fleet of FPSO and the first deep-water project in Nigeria after the 2010 Nigerian Oil and Gas Industry Development Content Act. This project provided connections between different companies, more than 48 million person-hours worked in Nigeria, fabrication of more than 60,000 tons of equipment in Nigeria and the advancement of drilling technologies leading to greater oil production in ultra-deep waters of 1,400 to 1,700 meters. Read more about the Egina project.

2021 Distinguished Achievement Awards

Distinguished Achievement Award for Individuals



Joe Fowler, PE
Stress Engineering

Joe Fowler will be honored with the Distinguished Achievement Award for Individuals for his extraordinary technical leadership in risers and pipelines, industrial leadership and entrepreneurship, significant contributions in higher education, and his substantial contributions to the societies that organize

OTC. As principal investigator for the American Gas Association and Gas Research Institute, his achievements in offshore and land pipelines specifically focus on the collapse behavior of pipelines, the effects of dents on pipeline life, strength of tee and elbow fittings, repair procedures for damaged pipelines, and the development of a diverless pipeline repair clamp. Read more about Joe's accomplishments.

Distinguished Achievement Award for Companies, Organizations, and Institutions



The Abu Dhabi National Oil Company (ADNOC) for the *Panorama Digital Command Center*

The Abu Dhabi National Oil Company (ADNOC) will be presented the OTC Distinguished Achievement Award in recognition of its cutting-edge Panorama digital command center. Established in November 2017, the fully integrated

platform provides ADNOC with the unique capability of allocating and centralizing more than 200 dashboards representing the entire value chain of ADNOC Group of 14 companies, while displaying 250,000 real time data points from all operational sites and plants. The platform also provides a complete integration of data between offshore and onshore facilities. Read more about the Panorama digital command center.

Heritage Award



Edward Heerema



Russell Hoshman

The Heritage award will be presented to Edward Heerema in recognition of his long-term continuous, distinguished service in management and leadership of offshore installation for the deepwater industry and Russell Hoshman for his long-term continuous, distinguished service in safety and environmental stewardship for the

offshore industry. Read more about Edward's and Russell's accomplishments.

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OPENING GENERAL SESSION

Focus on the Future: A Global Perspective on Offshore Energy

Monday, 16 August | 0900–1030

NRG Center, Level 2, Room 300

The global offshore community has been waiting more than two years to gather again at the Offshore Technology Conference (OTC). What better way to kick off the week than with an opening general session of industry-leading executives to discuss the future of offshore energy.

This panel will focus on the offshore sector's outlook that will be formed by lower oil prices, recovery from the global COVID-19 pandemic, and the energy transition. The panelists will show that offshore drilling is still part of the future but will be more focused and deliberate.

[Read more about the Opening General Session.](#)

MODERATOR:



Erik Milito
President, NOIA

PANELISTS:



Amy Bowe
Head of Carbon Research,
WoodMackenzie



Jonathan Landes
President Subsea,
TechnipFMC



Bill Langin
SVP - Deepwater
Exploration, Shell

[Read more about the Moderator
and Panelists.](#)



EXECUTIVE DIALOGUE SERIES

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives are invited to address innovations, transformations, new technologies, real-life applications

of new technologies, post-pandemic priorities and strategies, or other topics that would be of interest to a broad range of stakeholders. The goal of the series is to provide an opportunity for high-level executives to address today's most pressing topics in a less-formal atmosphere.

Monday Speakers:



Daryl Wilson

Executive Director,
Hydrogen Council

1300–1400 | Monday, 16 August
NRG Center, Level 2, Room 206



David Callender, MD

President and CEO of Memorial
Hermann Health System

1400–1500 | Monday, 16 August
NRG Center, Level 2, Room 206



Kenton Prindle

Head of Data Science and
Geoscience, Studio X

1500–1600 | Monday, 16 August
NRG Center, Level 2, Room 206

Tuesday Speakers:



Katie Mehnert

Chief Executive Officer,
ALLY Energy

0900–1000 | Tuesday, 17 August
NRG Center, Level 2, Room 206



Peter Green

Deputy Laboratory Director,
Science and Technology Research
Officer, National Renewable
Energy Laboratory (NREL)

1100–1200 | Tuesday, 17 August
NRG Center, Level 2, Room 206



Bill Vass

Vice President of Engineering
at Amazon Web Services

1000–1100 | Tuesday, 17 August
NRG Center, Level 2, Room 206



Bharrat Jagdeo

Vice President, Guyana

1300–1400 | Tuesday, 17 August
NRG Center, Level 2, Room 206

Co-Presenters:



Esther Morales

Executive Director
Clean Energy Leaders

1500–1600 | Tuesday, 17 August
NRG Center, Level 2, Room 206



Damian Bednarz

External Affairs Director, EnBW

1500–1600 | Tuesday, 17 August
NRG Center, Level 2, Room 206

Congratulations

OTC 2021 Emerging Leaders

Wednesday, 18 August | 1600–1800 | NRG Center, Level 2, Room 202

The inaugural OTC Emerging Leaders program will recognize one young professional from each of OTC's sponsoring, supporting, and endorsing organizations at OTC 2021. The OTC Emerging Leaders are individuals who are making key contributions to the offshore energy sector in their field of work, service to the industry, innovation, and focus on safety. The 2021 recipients will be honored during the Young Professionals Networking Event: Young Professionals: Diversify Your Network, which will take place Wednesday, 18 August from 1600–1800 hours in NRG Center, Level 2, Room 202.



LAURA DAFOV, PhD
American Association
of Petroleum Geologists
(AAPG)



**RAMAKRISHNA
PONNAPATI, PhD**
American Institute of
Chemical Engineers (AIChE)



AMY MCCLENEY, PhD
American Petroleum
Institute (API)



PATRICIA VARELA
American Society of Civil
Engineers (ASCE)



ALEXANDER MACKAY
American Society of
Mechanical Engineers
(ASME)



RAMI JABARI
Institute of Electrical and
Electronics Engineers (IEEE),
Oceanic Engineering Society



KEVIN JENSEN
International Association of
Drilling Contractors (IADC)



RIAD EFENDI, PhD
International Marine
Contractors Association
(IMCA)



MICHAEL SAGER
Marine Technology Society
(MTS)



CATHERINE NESBIT
National Ocean Industries
Association (NOIA)



SHANE CARLEY
Society of Exploration
Geophysicists (SEG)



NATE MEREDITH
Society of Naval Architects
and Marine Engineers
(SNAME)



**KUHANESAPATHY
THAVARAS PATHY**
Society of Petroleum
Engineers (SPE)

OTC + NAPE Joint Session: SYNERGY IN ENERGY Navigating the Energy Transition



Wednesday, 18 August 2021 | 1600–1700 CDT | NRG Center, Level 2, Room 307

Join the Offshore Technology Conference (OTC) and NAPE for a jointly organized fireside chat of industry leaders as they discuss the energy transition journey.

Oil and gas leadership has traditionally focused their strategic planning on geographies, hydrocarbons, and policy but with the introduction of the energy transition, Chris Golden, US Country Manager, Equinor and Kimberly Krieger, COO – Production, bpx energy will discuss how their corporate strategies have changed.

Golden and Krieger will discuss new end-customers and stakeholders that have developed due to the energy transition; how policy and regulatory changes have affected their business; changes to the workforce; revenue expectations, and how they repurposed assets.



Randolph Bell
Moderator
Director
Atlantic Council's
Global Energy Center
(GEC)



Chris Golden
Speaker
Senior Vice President
U.S. Upstream and
U.S. Country Manager
Exploration and
Production International
Equinor



Kimberly Krieger
Speaker
Chief Operating
Officer—Production
BPX Energy



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India Oil & Gas Pipeline Conference (IOGPC)
September 23 – 24, 2021 Virtual

Onshore Petroleum Technology Conference (OPTC)
September 27 – 29 2021 Virtual

International Mechanical Engineering
Congress & Exposition (IMECE) November 1 – 5, 2021 Virtual

Wind Digital Summit
November 9 – 10, 2021 Virtual

International Conference on Ocean,
Offshore & Arctic Engineering (OMAЕ)
June 4 – 10, 2022 Hamburg, Germany

Robotics for Inspection & Maintenance (RFIM)
December 8-9, 2021 Virtual
June 12 – 13, 2022 Houston, TX Hybrid

Big Data Industry Summit – Oil & Gas
June 14 – 15, 2022 Houston, TX Hybrid

Turbomachinery Technical Conference & Exposition Turbo Expo
June 13 – 17, 2022 Rotterdam, The Netherlands

Pressure Vessels & Piping Conference (PVP)
July 17 – 22, 2022 Las Vegas, NV

International Pipeline Conference (IPC)
September 26 – 30, 2022, Calgary, AB, Canada

OTC 2020 Energy Challenge

The OTC Energy Challenge is a high school competition where each team will work in solving a real-world energy challenge. Each team was supported by their teacher, or “coach” and assigned an industry mentor(s). Through this event, OTC and its sponsorship partners intend to: challenge and inspire students by asking them to solve real-world energy challenges; discover new technologies and innovations from the next generation of engineers and scientists; inform students of the wide range of STEM opportunities in the energy industry; and learn more about what drives and motivates young STEM students.

Energy Challenge Sponsors:



CONGRATULATIONS TO THE WINNERS

*A big thank you to all the teams who participated in the OTC Energy Challenge.
Congratulations on your hard work and well-deserved success.*

FIRST PLACE:

SEVEN LAKES HIGH SCHOOL Project: Farm of the Future

Team Members:

Anya Gandavadi
Shannon Smith
Aarushi Gupta
Brayden Olds

Teacher:

Mayra E. Colombani-Acosta

Mentors:

Gavin Mason
Elliott Brayshaw

Read the presentation



Watch the video



SECOND PLACE:

TAFT HIGH SCHOOL Project: Clean Sweep

Team Members:

Garrett Jeffries
Willow Pilgrim
Ulises Sanchez
Amanda Diaz

Teacher:

Ted Pendergrass

Mentors:

Jessica Buster
Catriona Shepherd

Read the presentation



Watch the video



THIRD PLACE:

DULLES HIGH SCHOOL Project: Deepwater Carbon Storage

Team Members:

Ella Quiambao
Sravya Nadella
Purva Pawar
Abigail Rajagopal

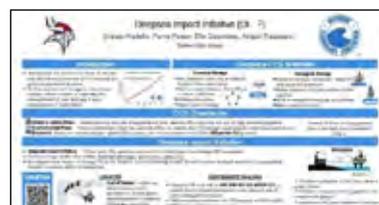
Teacher:

Brian Sonnier

Mentors:

Chris Piela
Akshay Mohikar

Read the presentation



Watch the video



OTC 2020 Energy Challenge

ACHIEVEMENT AWARDS

EXCELLENCE AWARD

CHAVEZ HIGH SCHOOL

Project: Double-Duty Defense

Team Members:

Ashley Cao
Rosallynn Garza
Tai Nguyen
Mitchell Harper

Teacher:

Dr. Afroz

Mentors:

Angela Molina
Krishnaraj Sambath

[Read the
Presentation](#)

[Watch the
video](#)

INNOVATION AWARD

EPISCOPAL HIGH SCHOOL

Project: Carbon-Neutral City by the Sea

Team Members:

Zack Donovan
Chris Lahoti
Kathryn Bragg
Connor Smith

Teacher:

Dr. Joanna
Papakonstantinou

Mentors:

Avinash Chandra
Nikhil Joshi

[Read the
Presentation](#)

[Watch the
video](#)

SAFETY LEADERSHIP AWARD

HARMONY SCHOOL OF INNOVATION KATY

Project: Robots Offshore

Team Members:

Isobel Bodefeld
Manaf Asif
Vivian Le
Ali Novruzov

Teacher:

Ramazan Ozdemir

Mentors:

Karen Scarbrough
Eric Liedtke

[Read the
Presentation](#)

[Watch the
video](#)

SUSTAINABILITY AWARD

MEMORIAL HIGH SCHOOL

Project: Carbon-Neutral City by the Sea

Team Members:

Jacob Bearden
Charlotte Fairfield
Chandler Gartner
Daragh Haddon

Teacher:

Patrick Sombilla

Mentors:

Michael Edwards
Tannaz Machhi

[Read the
Presentation](#)

[Watch the
video](#)

ENVIRONMENTAL AWARD

PEATOW HIGH SCHOOL

Project: A Plan-i-full Opportunity

Team Members:

Zack Donovan
Chris Lahoti
Kathryn Bragg
Connor Smith

Teacher:

Dr. Joanna
Papakonstantinou

Mentors:

Avinash Chandra
Nikhil Joshi

[Read the
Presentation](#)

[Watch the
video](#)

DIGITAL AWARD

THE VILLAGE SCHOOL

Project: Twice as Nice

Team Members:

Divya Khatri
Caroline Hsu
Jay Natarajan
Alex Ilacqua

Teacher:

Meg Hennessy

Mentors:

Eduardo
Berendson
John-Patrick
Akinyemi

[Read the
Presentation](#)

[Watch the
video](#)

TECHNOLOGY AWARD

YOUNG WOMEN'S COLLEGE PREPARATORY ACADEMY

Project: Neptune Power

Team Members:

Karrison Ibe
Clarisse Forro
Lochana
Kalyanaraman
Nathalia Dormand

Teacher:

Astra Zeno

Mentors:

Bethany Clarkson-
Morgan
Ken Gettselg

[Read the
Presentation](#)

[Watch the
video](#)



Rice Alliance Energy Venture Day at OTC

Monday, 16 August

1300–1500 | Virtual Platform

The Rice Alliance Energy Venture Day at OTC will feature pitches from 14 energy ventures, followed by Q&A from industry leaders. At the conclusion of the program, three companies will be announced “Most Promising Companies” determined by a panel of industry experts. In attendance will be venture capitalists, industry leaders and the Houston startup community.

The Rice Alliance at the Jones Graduate School of Business at Rice University has a 20-year history of supporting startups, tech and the innovation ecosystem. With a vibrant community, including more than 52,000 entrepreneurs, investors and members of the entrepreneurial ecosystem participating in their programs, the Rice Alliance is devoted to the support of technology commercialization, entrepreneurship education and the launch of tech companies.

Since inception, more than 961 energy tech ventures have participated in Rice Alliance energy events and raised more than \$6.6 billion in funding.



Offshore Technology Conference 2022

**Distinguished Achievement Award
Nominations are Being Accepted**

Submission Deadline: 21 September 2021

Nominate Today

2–5 May 2022
NRG Park » Houston, Texas, USA
2022.otcnet.org



Exhibitor Demonstrations

OTC 2021 exhibitors represent a range of services and products for the offshore energy sector. Browse through the following demonstration schedule and stop by booth # 3035 to see them in action.

TUESDAY, 17 AUGUST

TIME	EXHIBITOR DEMONSTRATIONS
1300–1330	ServiceMax
1400–1430	ARES Security Corporation
1500–1530	PSRG

WEDNESDAY, 18 AUGUST

TIME	EXHIBITOR DEMONSTRATIONS
1300–1330	ServiceMax
1400–1430	ARES Security Corporation
1500–1530	PSRG

THURSDAY, 19 AUGUST

TIME	EXHIBITOR DEMONSTRATIONS
1000–1030	ARES Security Corporation
1100–1130	PSRG
1300–1330	ServiceMax

Press Conference Schedule

Press conferences will be held on the exhibit hall floor in NRG Center, Level 1, Hall C.

No press conferences will be scheduled on Monday or Thursday.

TUESDAY, 17 AUGUST

TIME	ORGANIZATION TOPIC
0900–0950	Axis Communications, Inc. Explosion Protected Camera
1000–1050	Nikkiso Cryogenic Industries Nikkiso enhances and expands After Market Service for Offshore and Onshore operations
1100–1150	Vericor Power Systems Cost-effective and environmentally friendly power solution for the frac market

WEDNESDAY, 18 AUGUST

TIME	ORGANIZATION TOPIC
1100–1150	Antea North America (co-exhibitor) Digital Asset & IIoT – Realizing the Value

Exhibit



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in February 2022.

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SCHEDULE OF EVENTS

Monday, 16 August

MORNING EVENTS

Registration Open 0700–1700
NRG Center, Level 1, Lobbies D and E, Escalator E

Keynote Speaker Series 0800–0900
NRG Center, Level 2, Room 202

- Egina Development, Technological Expertise and Local Commitment

Opening General Session 0900–1030
NRG Center, Level 2, Room 300

- Focus on the Future: A Global Perspective on Offshore Energy

Exhibition 0900–1700
NRG Center

Panel and Technical Sessions 0930–1200
Included with your registration
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, 610

- Offshore Wind: Supporting a Growing Industry
- Buzios Project: A Brazilian Pre-Salt Super Giant
- New Technologies to Advance Offshore EOR: From the Lab to the Field
- Topside Innovative Processing and Production
- Geosciences: Innovation and Integration
- Advanced Flow Assurance: Cornerstone for Deepwater Development
- Life Extension Advances

OTC ePoster Lounge 0930–1600
NRG Center, Level 2, ePoster Lounge

TECHNICAL PROGRAM COLOR REFERENCE

- | | |
|---|--|
| ● Technical/Poster Sessions | ● Networking Event |
| ● Panel | ● Executive Dialogue Series |
| ● Keynote Speaker Series | ● Young Professionals |
| ● Around the World | |

[View NRG Center, Level 2 Map](#)

AFTERNOON EVENTS

Keynote Speaker Series 1230–1345
NRG Center, Level 2, Room 202

- Offshore Oil and Gas Industry Transformation and Smart Technologies: A New Era to Sustain Profitable Operations

Executive Dialogue: Daryl Wilson, Hydrogen Council 1300–1400
NRG Center, Level 2, Room 206

Rice Alliance Energy Venture Day 1300–1500
Virtual Platform

Executive Dialogue: David Calender MD, Memorial Health System 1400–1500
NRG Center, Level 2, Room 206

Panel and Technical Sessions 1400–1630
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, and 610

- The Synergies Between Deepwater and Shale: Finding Common Ground Across Markets
- Invited Organization: Bringing Offshore Wind to Scale: Offshore Energy at the Heart of the Transition
- The Guyana Liza Project: Rapid Development of a Giant Offshore Resource
- Advances in Offshore Geotechnics
- Materials and Technology Advancements for Deepwater and HPHT Environments
- Additive Manufacturing for Advancing Offshore Technology
- Pipeline Design: Analytical Concepts

Executive Dialogue: Kenton Prindle, Studio X 1500–1600
NRG Center, Level 2, Room 206

Spotlight on New Technology Awards Presentation 1600–1700
NRG Center, Level 1, Exhibit Floor, Hall C

Networking Event: Shaping a Low Carbon Future with Supplier Diversity 1600–1800
NRG Center, Level 2, Room 204

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Technical Program *(as of 10 August 2021)*

Monday, 16 August 2021

0800–0900 // Room 202

Egina Development, Technological Expertise and Local Commitment ●

During this session, the keynote speaker will share Total Upstream Nigeria Limited (TUPNI) successful execution strategy which builds on the significant track record of Total and partners in delivering giant deep offshore field developments in West Africa and what are TOTALs latest updated views on new forthcoming FPSO developments. The Egina Field was discovered by TUPNI in 2003, 150 km offshore Nigeria in more than 1,500m water depth. The challenge of developing the Egina Field was undertaken by TUPNI, as operator, in partnership with NNPC, CNOOC, SAPETRO and PETROBRAS and represents to date the largest investment project completed in the Nigerian upstream oil and gas sector. This giant deepwater field based on a spread-moored FPSO design, came into production 29 December 2018 and has since reached a plateau of 200,000 barrels of oil per day, which represents a 10% overall increase in the oil production of Nigeria. The Egina Field contained unprecedented levels of Nigerian content in terms of people involvement and in-country fabrication of topsides and subsea equipment, and therefore is a testimony that large and complex deepwater projects can be developed with a very high level of in-country activities and with the highest quality standards, thus fulfilling the aspirations and objectives of all of the Nigerian stakeholders. Finally, despite originating 10 years prior, the Egina FPSO design already included technologies and equipment which are reducing its carbon footprint in line with Total's ambition today.

Moderators:

Philippe Charlez, Senior Technical Advisor, Total S.A.

Speaker:

Artur Nunes Da Silva, Vice President, Deepwater and Subsea, Total S.A.

Monday, 16 August

0900–1030 // Room 300

Opening General Session Focus on the Future: A Global Perspective on Offshore Energy

The U.N. Climate Change Conference of the Parties stated its number one objective to "secure global net-zero by mid-century and keep 1.5 degrees within reach." Consistent with that objective, nations and companies around the world have established net-zero goals. The International Energy Agency (IEA) released a special report earlier this year entitled "Net Zero by 2050". Under this scenario of achieving net-zero emissions, the IEA concludes that "no exploration for new resources is required and, other than field already approved for development, no new oil fields are necessary." It should be emphasized that this is one potential pathway and the global energy future remains highly uncertain, and it is highly dependent upon market forces, resource availability, deployment of technologies, and governmental policies. It may seem counterintuitive, but the offshore oil and gas sector is well-positioned for the energy transition. No matter the scenario, the global economy will depend upon oil and gas to provide the energy that is essential for society. The offshore industry is a source of innovation and new technologies that will help drive decarbonization efforts while providing the abundant, affordable and reliable energy the global economy will rely upon for a high quality of life. Time and time again, offshore has elevated our understanding of what is possible, and the carbon and climate challenges of today will be no different. Offshore production can be the energy anchor the world needs. Multi-billion-dollar offshore projects produce massive amounts of oil and natural gas for decades. Advances in technology means offshore fields are producing even more for even longer. New seismic technology, better and smarter subsea tiebacks, and other infrastructure are opening the door to a new era of productivity and efficiency. Offshore progress means the industry can be a source of stability and optimism as the world strives to solve climate and emission challenges. The offshore produces a vast amount of energy with an incredibly small environmental footprint with low emissions. Perhaps most importantly, offshore oil and gas production provides among the lowest carbon barrels when compared to the other producing regions of the world. Considering the reality of continued oil and gas demand for decades to come, the offshore sector stands out as what should be the region of choice for global oil and gas production. Furthermore, the offshore oil and gas sector will be a key player in the development and deployment of emerging, low-carbon energy sources. Whether it is the build-out of new offshore wind projects, developing CO₂ storage facilities, finding new ways to produce hydrogen, or optimizing logistics and operations to reduce the carbon footprint, the offshore energy industry and its full supply chain is at the forefront of energy solutions and emission reductions. Our panelists will discuss the energy transition and how the industry and respective companies are driving ahead to provide low carbon oil and gas resources, continue to achieve emissions reductions from all operations, and invest in new, emerging energy opportunities.

Moderator:

Erik Milito, President, NOIA

Speakers:

Abdulrahman Abdulla Al Seiri, Chief Executive Officer, ADNOC Drilling

Amy Bowe, Head of Carbon Research, WoodMackenzie

Jonathan Landes, President Subsea, TechnipFMC

Bill Langin, SVP – Deepwater Exploration, Shell

Monday, 16 August 2021

0930–1200 // Room 306

Offshore Wind: Supporting a Growing Industry

Offshore wind projects are moving into an era of rapid growth. From initial financing and planning through construction and operation, projects encounter a number of challenges that have potentially significant impacts. Lessons learned from traditional offshore energy disciplines can provide important efficiencies in offshore wind. Challenges for foundation, cabling, and structural design activities are being overcome with a wide range of offshore expertise. Ongoing construction faces challenges with supply chains and vessels that is transforming aspects of the offshore energy industry. The panel will discuss prioritizing and addressing the fundamental obstacles in multiple aspects of offshore wind energy with a mix of experts from a range of offshore energy disciplines. Discussing the biggest challenges will explore how our community's broad offshore energy experience can be effectively applied.

Session Chairpersons:**Scott Chitwood**, Structural Specialist, Shell International Ltd.**Craig Jones**, Principal, Integral Consulting Inc**Moderators:****Craig Jones**, Principal, Integral Consulting Inc.**Scott Chitwood**, Structural Specialist, Shell International Exploration and Production**Speakers:****James Cotter**, General Manager, Offshore Wind Americas, Shell**Rain Byars**, Technical Director, Atlantic Shores Offshore Wind**Scott Lundin**, Head of Permitting, Equinor Wind**John O'Keefe**, Head of Renewables, Americas—Blue Water Shipping**Zach Finucane**, Project Manager and Structural Engineer, Ørsted

Monday, 16 August 2021

0930–1204 // Room 312

Buzios Project: A Brazilian Pre-Salt Super Giant

The Buzios Field is the largest deepwater oil discovery in the world. It reached a daily production record of 674,000 bpd on 13 July 2020, with four installed and fully operational FPSOs. Located approximately 130 miles from the coast of Rio de Janeiro, southeast of Brazil, its initial development plan included five production systems, with four of them already operating and one to be commissioned soon, and a projected number of 26 production wells and 24 injection wells. Seven more FPSOs are planned in the second phase of the full field development, with a forecasted peak production above 2 million boe per day. Its deployment has brought innovative solutions to produce extremely high flowrates per well, up to 65,000 bpd, and overcome a very challenging scenario in ultra-deepwater; a layer of 7,000 ft of salt above the reservoir, a complex reservoir fluid with high GOR, 23% CO₂ content, up to 160 ppmv of H₂S, and a highly heterogeneous rock, combined with fractures, faults, vugs and karsts. Such challenges required extrapolation of current industry limits and the adoption of key new technologies in subsea systems, including risers and manifolds, mooring systems, well drilling and others, as to support safe and profitable development. This session aims to provide a general overview of the projects involved in the first development phase of the asset and describe the applied technologies, which should be applicable to similar offshore cases in Brazil and elsewhere and are readily accessible through our service providers.

Session Chairpersons:**Jaime Naveiro**, Buzios Asset General Manager, Petrobras**Fernando Mendes**, General Manager for Production Development Projects of Buzios Field, Petrobras**0930 31154****Buzios: The Largest Ultra-deepwater Oilfield To Date**

J.d. de Oliveira, P.L. Tavares, V.C. da Silva, I.N. Lima, J.F. Britto, T. Hernalsteens, M. Kahn, Petrobras S.A.

0952 31170**Buzios Drainage Strategy: A Combination Of Reservoir Characterization, Risks Mitigation And Unique Contract Features**

V.C. Silva, J.R. Melo, Petrobras; A.C. Moliterno, F.P. Lima, Petroleo Brasileiro S.A.; C.V. Araujo, T.C. Pessoa, C.D. Falcao, Petrobras

1014 31277**Flow Assurance In Buzios Field: Key Challenges And Implemented Solutions**

I. Noville, M. Silva Maciel, A. Mattos, J.G. Siqueira, Petrobras

1036 31116**Buzios Pre-salt Wells: Delivering Intelligent Completion In Ultra-deepwater Carbonate Reservoirs**

E. Schnitzler, L.F. Goncalves, R.S. Roman, M. Marques, M.F. Da Silva Jr., C.A. Castilho, Petrobras; F.R. Gutterres, Former Petrobras employee

1058 31274**FPU Mooring Footprint Reduction In Buzios Field: Key Driver To Its Successful Subsea Layout**

G. Cabral, H. Silva, A.T. Oshiro, T. Hernalsteens, L. Trovoado, J. Britto, L. Pinto, Petrobras S.A.

1120 30972**Optimizations Applied To Buzios Flexible Riser Systems And Subsea Layout**

V. Gasparetto, T. Hernalsteens, J.F. Fleck Heck Britto, J.F. Araujo Leao, T.D. Santos, Petrobras S.A.; R. Caldeira de Oliveira, Former Petrobras S.A. employee

1142 31074**Buzios FPSO Experience: Standardization And Perspectives For Our Next Generation Of Pre-salt FPSOs**

M.M. Padua, M.P. Goulart, Petrobras

Monday, 16 August 2021

0930–1120 // Room 604

New Technologies to Advance Offshore EOR: From the Lab to the Field

This session will provide an overview of the portfolio of technologies currently progressed by the Department of Energy in the US to advance offshore EOR, followed by papers that present new ways to estimate key EOR related properties like in-situ fluid rheology, effective density and polymer retention, as well as presenting very promising novel fluids for EOR use in harsh environments. On the modeling side a new approach that integrates standard EOR modeling with geochemistry demonstrates the relevance of adding this data to optimize chemical flooding and best practices from EOR technologies in heavy oil formations.

Session Chairpersons:

Yani Araujo De Itriago, Global Manager EOR Laboratory Services, SGS North America

Mariela Araujo Fresky, Commercial Delivery Manager, Shell

0930 31227

Technologies For Advancing Offshore Enhanced Oil Recovery Capabilities

E.S. Melchert, U.S. Department of Energy; R.C. Long, U.S. Department of Energy National Energy Technology Laboratory

0952 31087

Impact Of Rheology Models On Horizontal Well Polymer Flooding In A Heavy Oil Reservoir On Alaska North Slope: A Simulation Study

J. Leng, M. Wei, B. Bai, Missouri University of Science and Technology; R.S. Seright, New Mexico Inst-Mining & Tech; Y. Zhang, University of Alaska—Fairbanks; D.P. Cercone, Department of Energy National Energy Technology Laboratory; S. Ning, Reservoir Experts, LLC/Hilcorp Alaska, LLC

1014 31010

Hybrid Modeling In Unconventional Reservoirs To Forecast Estimated Ultimate Recovery

C. Temizel, Saudi Aramco; C.H. Canbaz, Ege University; K. Balaji, University of North Dakota; A. Ozesen, Pennsylvania State University; K.S. Yanidis, Nostrum Oil & Gas PLC; H.K. Alsaheb, Schlumberger Middle East SA; N. Alsulaiman, M.A. Basri, N. Jama, Saudi Aramco

1036 31279

Innovation To Reduce Operation Downtime In Sulfate Removal Offshore Applications

Y. Cuenca, A. Tejero, S. Das, D. Brooke-Peig, P. Martin, F. Bechir, DuPont

1058 205482

Physicochemical Process Modeling Of Barium And Sulfate Transport In Porous Media

Y. Wang, X. Li, M. Chen, J. Lu, University of Tulsa

Monday, 16 August 2021

0952–1142 // Room 610

Geosciences: Innovation and Integration

Innovative geological processes and data integration are critical in providing cost savings and efficiencies in the oil and gas industry. This session utilizes field studies to showcase innovative geomechanical and geological processes, modeling, and data integration. The session presents examples on a variety of geoscience topics, including seismic attributes, pore-pressure, and reservoir characterization.

Session Chairpersons:

Gokay Bozkurt, Senior Advisor—Geophysics, Total E&P

Christopher Madere, Senior Geologist/Project Manager, Geoscience Earth & Marine Svc

0952 31102

Seismic Attributes And Acoustic Inversion For Shallow Marine Slope Stratigraphy Analysis

J. Son, R. Boon, J. Kuhn de Chizelle, Fugro USA Marine, Inc.

1014 31067

Pore-scale Study Of Effects Of Hydrate Morphologies On Dissociation Evolutions Using Lattice-boltzmann Method

Z. Li, G. Qin, University of Houston

1036 31206

Field Scale Geo-mechanical Analysis To Identify Fracture Sweet Spots Within Deccan Trap, Western Onshore, India

R.R. Kumar, Schlumberger Asia Services Ltd; S. Mukherjee, R. V. S. Biswal, ONGC; S.K. Subbiah, J. Zacharia, Schlumberger; R. Talreja, A. Bandyopadhyay, Schlumberger Asia Services Ltd; M. Kumar Singh, Schlumberger

1058 31085

Predicting Porosity And Water Saturation From Well-log Data Using Probabilistic Multi-task Neural Network With Normalizing Flows

J. Lee, M. Kwon, Y. Hong, ENERZAi Inc.

1120 30931

Pipe Conveyed NMR Logging Secures Successful Reservoir Characterization In A Low Resistivity Pay

P.A. Romero, Geoneurale; L. Tagarieva, S. Mohamed, M. Belloul, Weatherford; C. Chen, M. Bousheri, M. Nwab, K.A. Al-Hendi, J. Manzo, Kuwait oil company

Monday, 16 August 2021

0952-1142 // Room 600

Topside Innovative Processing and Production

This session incorporates the full life cycle of topsides engineering, including diligent planning to zero emissions, digital commissioning, exceeding processing capacity to inspections using robots. The advances in technology are discussed to enable substantial increases in offshore production and processes.

Session Chairpersons:

Hoss Shariat, Chief Technical Engineering Oil & Gas Process, KBR

Mika Tienhaara, CEO, Rocsole Ltd

0952 31200

Riser Robotic Inspection - Reducing Safety Risk While Improving Efficiency And Effectiveness

A. Vagata, N. Mabile, Innospection Americas Inc.

1014 31326

Analysis Of Carbon Footprint Applied To Conceptual Engineering Of Offshore Production Units

P.B. Machado, L.P. Basilio, D.C. de Sousa, A.G. Barbosa, Deep Seed Solutions; D.R. Juliano, P. Boeira, Shell Brasil Petróleo Ltda.; M. Andreotti, Repsol Sinopec Brasil SA

1036 31089

From Basic Engineering To Ramp-up: The New Successful Execution Approach For Commissioning In Brazil

B.P. dos Santos, G. Teixeira Junior, L.d. Nogueira, L.V. Joao, L.d. Costa, M.S. Torres, Petrobras

1058 31307

High Production Well Operating Plant In A Traditional Design: Piping & Instrumentation Challenges

J.L. Veiga, A.J. Chaves, B.S. Silva, I.N. Lima, I.P. Pereira, G.J. Teixeira, A.P. Costa, Petrobras

1120 31157

Hybrid Conductor-supported Tripod Platform: Brownfield Design Perspective To Unlock Production Capacity

S.N. Ozkul, W. Huang, S. Taxy, Doris Inc.

Monday, 16 August 2021

1014-1204 // Room 602

Advanced Flow Assurance: Cornerstone for Deepwater Development

Flow assurance has always remained a cornerstone for deepwater development but has been challenged lately as a mature discipline. The topics discussed in this session adopt innovation such as real-time monitoring, machine learning, application of modeling to mitigate traditional challenges, and enable efficient deepwater development. The session covers a breadth of relevant challenges including hydrates, asphaltenes, wax, emulsions, and well integrity.

Session Chairpersons:

Jerry Swearingen, Global Manager—Production Chemistry Services, SGS North America Inc.

Janardhan Davalath, Business Development Manager, TechnipFMC

1014 31173

AI Based Water-in-oil Emulsions Rheology Model For Value Creation In Deepwater Fields Production Management

T.G. Silva, L.K. Miyatake, R.M. Barbosa, A.G. Medeiros, O.C. BORGES, M.C. Oliveira, F.M. Cardoso, Petrobras

1036 31189

Surface Treatment Strategies For Mitigating Gas Hydrate & Asphaltene Formation, Growth, And Deposition In Flowloops

M. Pickarts, J.G. Delgado-Linares, Colorado School of Mines; E. Brown, V. Veedu, Oceanit; C.A. Koh, Colorado School of Mines

1058 31232

Restoring Technical Potential Of Deep-water Well Impaired By Hydrate Plug Embedded With Wax Deposit With Improved Characterization And Innovative Chemistry

A.S. Mohamed, Reservoir Link Solution Sdn Bhd; S.J. Effendi, I. Raman, PTTEP Sarawak Oil Limited; K. Sanmugam, Reservoir Link Solutions; D. Turunawarasu, ACE Hljau; M. Samsudin, Reservoir Link Solution Sdn Bhd; A. Al Bakri, K. Selamat, PTTEP Sarawak Oil Limited

1120 30990

Unlocking The Potential Of Fiber-Optic Distributed Temperature Sensing In Resolving Well Integrity Issues

S. Dutta, A. Kumar, G. Agrawal, K. Singh, Schlumberger

1142 31121

Real-Time Digital Chemistry Offshore Transforms Flow Assurance Management

J.R. Lovell, O. Kulbrandstad, S. Madem, D. Meza, MicroSilicon Inc

Monday, 16 August 2021

1014–1204 // Room 606

Life Extension Advances

In this session, advancement in life extension assessment of offshore facilities, such as remote and automated inspection technologies, atypical repairs, remaining life assessment tools, and methods to assess the strength of corroded members will be presented.

Session Chairpersons:

David Wisch, Fellow, Chevron ETC

Mariam Junaid, Offshore Structural Engineer, Shell International E&P Co.

1014 31328**Structural Digital Twin of FPSO for Monitoring the Hull and Topsides Based on Inspection Data and Load Measurement**

S. Bhat, Shell Petroleum Development Corporation; V. Nadathur, Shell Intl E&P Deepwater Svcs; D. Knezevic, Akseles; P. Aalberts, MARIN; H. Kolsters, Shell Global Solution; D.T. Amuda, Shell Nigeria E&P Co. Ltd.; O. Atebe, Shell Nigeria Exploration and Production Company; D.R. Pasala, INTECSEA Engineering; T. Hoang, T. Luong, P. Huynh, Akseles; R. Hageman, R. Righetti, MARIN; J. Yu, Intecsea

1036 31055**A Safe And Cost Effective Diverless Method For Hull Wetted Surface Side Shell Repairs Executed On FPSO Fluminense**

C.M. Webb, DeepTech Consulting Alliance, LLC; A. Rezvani Sarabi, NSG Engenharia Ltda.; D. Constantinis, EM&I Group; T.H. Anthony, Shell Brasil Petroleo Ltda

1058 31021**Rational Approach To Assess The Effect Of Corrosion On Stiffened Panel Buckling And Ultimate Capacity**

N.P. Joshi, J.L. Brewer, Stress Engineering Services, Inc.; C.J. Rose, Chevron Technology, Projects, & Services

1142 30939**Towards Remote Inspections Of FPSO's Using Drones Instrumented With Computer Vision And Hyperspectral Imaging**

E. Stensrud, D. Lillestøl, A. Torstensen, DNV GL

Monday, 16 August 2021

0930–1606 // ePoster Lounge

ePoster Lounge I: Part 1

This poster session gives the OTC program committee a special opportunity to showcase talented technical leaders from across the industry and the globe.

Session Chairpersons:

Xiaochuan Yu, Assistant Professor, University of New Orleans

Ashraf Zeid, Managing Director, Eternal Energy

0930 30953**Lies, Damned Lies, And Simulation Results: How To Change The Conversation And Build A Thriving Simulation Ecosystem**

B.G. Kashid, M. Eichler, Parker Hannifin Corporation

0952 31048**18 3/4" 15000 Psi Shear Anything KBOS For Subsea Well Applications**

B. Gallagher, Kinetic Pressure Control Ltd; K. Dupal, R.E. Jones, Kinetic Pressure Control

1014 31070**Drilling With Glass And Air: Using Hollow Glass Spheres To Address A Wide Ranging Drilling Challenge In A Safe, Efficient And Cost-effective Manner**

M. Rylance, IXL Consulting; Y. Tuzov, V. Sherishorin, bp Russia

1036 31091**Lost Circulation Risk Mitigation In Deepwater Cementing Operations With A New Tailored Spacer System**

A. Gorman, Halliburton; S.P. Patil, Halliburton Co.; K. Agapiou, Halliburton

1058 31100**Application Of LWD Multipole Sonic For Quantitative Cement Evaluation - Well Integrity In The Norwegian Continental Shelf**

S. Sarkar, M. Horstmann, Schlumberger; T. Oian, P. Byrski, G. Lawrence, M. Gast, Wintershall DEA Norge AS; M. Cecena, M.S. Dahroug, K.H. Sylta, Schlumberger

Monday, 16 August 2021

0930–1606 // ePoster Lounge

ePoster Lounge I: Part 1 (continued)**1120 31159****Sealing Advancements For Rotating Control Devices**

A. Richie, L.L. Dietle, Kalsi Engineering, Inc.

1142 30934**Drilling Optimization Applying Machine Learning Regression Algorithms**

F.J. Marquez, EPRA Consultores

1204 30994**Delivering Low Cost Wells At Matured Field With Enhanced Statistical Approach**

M.H. Mhd Yusof, R. A Halim, A. Sella Thurai, N. Ahmad Fauzi, M. Mahictin, T. Tengku Yahya, F.A. Muslim, M.Z. Sulaiman, PETRONAS

1226 31092**Integrated Underreamer Technology With Realtime Communication Helped Eliminate Rathole In Exploratory Operation Offshore Nigeria**

R.C. Ozioko, Baker Hughes Intl Inc; O. Humphrey, Baker Hughes; U. Ohia, Baker Hughes Int

1248 31093**Machine Learning Prediction Of Formation Evaluation Logs In The Gulf Of Mexico**

B. LeCompte, T. Majekodunmi, M. Staines, Murphy Exploration and Production; G. Taylor, B. Zhang, R. Evans, N. Chang, Quantico Energy Solutions LLC

1310 31179**Drilling Fluids Project Engineering Guidance And Most Common Fluids Related Challenges For Deepwater And HPHT Offshore Wells**

A. Ay, H.A. Dogan, A. Sonmez, GEOS Energy Inc.

1332 31128**A New Insight Into Hybrid Surfactant And Low Salinity/Engineered Water Injections In Carbonates Through Geochemical Modeling**

A.S. Adila, E.W. Al-Shalabi, W. Al Ameri, Khalifa University of Science and Technology

1354 31312**Development Of A Computationally Intelligent Model To Estimate Oil Formation Volume Factor**

M.R. Khan, Schlumberger; S. Kalam, R.A. Khan, King Fahd University of Petroleum & Minerals

1416 31239**Autonomous Inflow Control Valve Multiphase Flow Performance For Light Oil**

S. Taghavi, E. Gisholt, H. Aakre, InflowControl; S. Haland, K. Langaas, Aker BP ASA

1438 31050**Debris Capture Distribution In Deepwater Wells With Riser Filter Tool**

P.R. Maher, Halliburton Energy Services

1500 31167**Development Of Perforating System For Unique HPHT Injection Application**

B. Grove, J. MacGillivray, J. Cook, C. Hoelscher, Halliburton

1522 30967**Nanomaterials Improve Polymer-Based Gravel-Packing Fluids At High Temperature**

R. Prabhu, J. Santamaria, N. Vaidya, P. Abivin, V. Lafitte, B.R. Gadiyar, Schlumberger

1544 31051**HPHT Subsea Connector Verification And Validation Using An API 17TR8 Methodology**

B. Stewart, S. Lee, TechnipFMC

Monday, 16 August 2021

0930-1442 // ePoster Lounge 2

ePoster Lounge I: Part 2

This poster session gives the OTC program committee a special opportunity to showcase talented technical leaders from across the industry and the globe.

Session Chairpersons:

Shiladitya Basu, Technical Professional Leader, KBR
Donald Burris, Senior Naval Architect, KBR

0930 31066**Task Scheduling For Subsea Flexible Pipes Decommissioning**

R.S. Bressan, Petrobras; D. Artigas, Universidade Federal Fluminense

0952 31236**Consistency Under Applied Pressure Test (CAPT) - A Novel Method For Evaluating Pressure Effect On The Gel Time Of Thermosetting Resin**

D. Zhu, S. Normann, M. Xie, J. Haugen, Wellcem AS

1014 31315**Three-phase Separator Online Measurement And Data Analytics For Fluid Interface And Emulsion Thickness Utilizing A Single Emulsion Watch Profiler**

J. Hartikainen, P. Kaunisto, J. Walls, A. Voutilainen, P. Laakkonen, O. Lehtikangas, Rocsole Ltd

1036 31072**Sustaining Oil And Gas Fields By Using Multiphase Gas Compression To Increase Production And Reserves, And Lower Operating Costs And Environmental Emissions Footprint**

R.A. Perry, J. Pitts, A. Strikovski, U. Sinha, Reach Production Solutions

1058 31147**Managing Flow Assurance Challenges: Below Ambient Well Head Temperature [WHT] In Deep-water Dry Tree Wells**

S.E. Jalis, PTTEP Sarawak Oil Limited; I. Raman, A. Al Bakri, PTTEP Sarawak Oil Ltd.; A. Saidu Mohamed, Reservoir Link Energy Bhd; M.F. Samsudin, Reservoir Link Solution Sdn Bhd; K. Sanmugam, Reservoir Link Solution Sdn. Bhd.

1204 31108**Design Perspectives For Selection Of Subsea Gas Lift Technology For Deep Water Fields**

L. Tornisiello, S. Taxy, R. Curto, Doris, Inc.

1226 31175**Daisy Chain And Manifold-based Subsea Architectures For Brazilian Pre-salt**

E.V. Oazen, O.B. Sertã, L. Macauley, C. Siu, Saipem

1248 31061**Subsurface Characterization Using Ensemble Machine Learning**

G.G. Leiceaga, Multi-Physics Technologies; R.S. Balch, Petroleum Recovery Research Center; G. El-kaseeh, Petroleum Recovery Research Center

1310 31114**lithofacies Classification Of Carbonate Reservoirs Using Advanced Machine Learning: A Case Study From A Southern Iraqi Oil Field**

M.A. Abbas, W.J. Al-Mudhafar, Basrah Oil Company

1332 31138**Characterization Of Productive Zones With Data From Advanced Mass Spectrometry Of HPHT Well**

V.A. Barrera Deutsch, J.C. Mathison Jimenez, F. Flores, KasOil Integrate Services

1358 31056**Seismic Coefficients For Simplified Deepwater Slope Stability Assessment Under Earthquake Loading**

A.C. Trandafir, Fugro

1420 31203**Value Creation And Cost Management By Use Of The New ISO 15663 Life Cycle Costing Standard**

E. Willmann, Willmann Engineering AS; R. Oestebøe, Equinor ASA; E. Montalva, Petrobras

Monday, 16 August 2021

1230-1345 // Room 202

Offshore Oil and Gas Industry Transformation and Smart Technologies: A New Era to Sustain Profitable Operations

The challenges associated with maintaining the lower cost regime that has emerged from the downturn in the deep-water industry has forced the manufacturers and operators to work together for better solutions. Development and application of innovative subsea drilling and production technologies that reduce CAPEX and OPEX to enable offshore operations in the low oil price environment will be discussed. Leveraging new technologies for the carbon footprint reduction through hardware elimination, reduced manufacturing, simplification of operations, reduced rig personnel, and reduced number of trips into the well make a difference and are promising for the future of deep-water operations. Restructuring and alliances of the suppliers to improve commercial relationships and technology integration and standardization are crucial and are adding value to operators.

Moderator:**Madeleine Kopp**, Sales Operations Manager, Stress Engineering Services Inc.**Speaker:****Blake DeBerry**, CEO, Dril-Quip, Inc.

Monday, 16 August 2021

1300-1400 // Room 206

Executive Dialogue

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives will discuss innovations, transformations, new technologies, real-life applications of new technologies, post-pandemic priorities and strategies, and other topics.

Moderator:**Galen Cobb**, Member, OTC Board of Directors**Speaker:****Daryl Wilson**, Executive Director, Hydrogen Council

Monday, 16 August 2021

1400-1500 // Room 206

Executive Dialogue

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives will discuss innovations, transformations, new technologies, real-life applications of new technologies, post-pandemic priorities and strategies, and other topics.

Moderator:**Brian Miller**, Member, OTC Board of Directors**Speaker:****Dr. David Callender**, President & Chief Executive Officer, Memorial Hermann Health System

Monday, 16 August 2021

1500-1600 // Room 206

Executive Dialogue

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives will discuss innovations, transformations, new technologies, real-life applications of new technologies, post-pandemic priorities and strategies, and other topics.

Moderator:**Barbara Thompson**, Chairperson, OTC Program Committee**Speaker:****Kenton Prindle**, Head of Data Science and Geoscience, Studio X

Monday, 16 August 2021

1400–1630 // Room 306

The Synergies Between Deepwater and Shale: Finding Common Ground Across Markets

Even in a low oil and gas price environment, the deepwater offshore industry not only needs to compete with low cost supplies from conventional onshore fields but also with the quick turn on/turn off supplies from unconventional fields, particularly in the US. This panel will zoom in on: market outlook/commodity expectations/how has this cycle changed, government views and experiences in both basins, cost evolution; how an operator thinks about a diversified portfolio, and technology evolution; how to transfer unconventional operations, such as fracking to offshore, and vice versa.

Moderators:

Kerry Fellers, Consultant

Huyen Bui, Sr. Geophysicist, Shell

Speakers:

Julie Wilson, Research Director Global Exploration, Wood Mackenzie

Elena Melchert, Director Upstream Research Division, U.S. Dept. of Energy

Richard Lynch, Senior Vice President, Technology and Services, Hess Corp.

Chris Powers, General Manager of Strategy and Business Performance, Chevron

Blaine Dow, Global Technology, MPD-UBD, Schlumberger

Kenneth Medlock, Senior Director, Center for Energy Studies, Baker Institute for Public Policy

Monday, 16 August 2021

1400–1630 // Room 604

Invited Organization: Bringing Offshore Wind to Scale: Offshore Energy at the Heart of the Transition

There's never been a more exciting time for offshore wind in the U.S. After years of permitting delays, the industry is poised to take off. The White House has announced a series of moves to help spur construction of 30 GWs of offshore wind capacity by 2030, creating millions of jobs from the East to West Coast and encouraging the development of a domestic supply chain. This session will give you an overview of the state of play for offshore wind in the U.S. and provide insights into the latest progress and needs in infrastructure, technology and workforce development. Learn how oil and gas expertise can further catalyze the growth of offshore wind in the U.S.

Moderator:

Ruth Perry, Marine Scientist and Regulatory Policy Specialist, Shell

Speakers:

James Martin, Director, Technology Center Americas (TCA)—LM Wing Power

Nick Prokopuk, Offshore Wind Business Developer—Total Energies

Evan Zimmerman, Executive Director—Offshore Operators Committee

Walter Musial, Manager, Offshore Wind—National Renewable Energy Laboratory

Dave Jones, Bathymetry Account Manager—Saildrone

Stephanie Ingle, Technical Sales Manager—Fugro

Tershara Matthews, Gulf of Mexico Wind Regional Lead—Bureau of Ocean Energy Management

Cheri Hunter, Renewable Energy Program Coordinator—Bureau of Safety and Environmental Enforcement

Michael Greenwood, Senior Project Manager, Offshore Wind, Great Lakes Dredge & Dock Company, LLC

Monday, 16 August 2021

1400–1634 // Room 602

The Guyana Liza Project: Rapid Development of a Giant Offshore Resource

The Liza field is being developed by ExxonMobil, along with co-venturers Hess and CNOOC, and is located in the Stabroek Block, roughly 200 km offshore Guyana in approximately 1,800-meter-deep water. Spanning the range of upstream oil and gas activities from exploration, drilling, development, and operations, the Liza Development has applied technology and novel execution approaches to discover, define, and rapidly develop the Liza field in a frontier oil and gas location. Liza Phase 1 combined remarkable exploration success with project, subsurface, and drilling execution excellence to deliver Guyana's first ever oil and gas production among industry leading cycle times. Liza Phase 2 is delivering a world-class deepwater development which combines a new build FPSO in the cycle time of a conversion with one of the industry's largest subsea developments. The efficient designs and execution build on learnings while innovating in key areas to incorporate technology for the present and future. The Liza Development is underpinned by a commitment to safety, a One Team approach, and sustainable local content development to set the foundation for future deepwater developments in Guyana.

Session Chairperson:

Martin Terrell, Geoscientist, Exxon Mobil Corporation

Roald Lokken, Retired

1400 30946

Innovation and Integration: Exploration History, ExxonMobil, And The Guyana-Suriname Basin

A. Varga, M. Chandler, W. Cotton, E. Jackson, R. Markwort, R. Perkey, T. Riley, S. Webb, B. Renik, ExxonMobil

1422 31084

The Liza Field: From Discovery To Development

N. Austin, M. Das, A.S. Oyerinde, E. Elkington, ExxonMobil

1444 31158

Guyana: Liza Phase 1 Rapid Development In A Deepwater Frontier

A. Styslinger, D. Yost, G. Dickerson, A. Minois, ExxonMobil Global Projects; R. Wiwel, ExxonMobil Global Projects Company

1506 30948

Guyana: Liza Phase 2 Novel Execution To Accelerate Field Development

L. Burns, T. Allen, ExxonMobil Global Projects; J. Kartik, ExxonMobil; J. Ding, R.K. Cauthen, ExxonMobil Global Projects; M. Das, G. Ashley, R. Szafranski, ExxonMobil

1528 31230

Drilling Execution And Completion Advancements Continue To Deliver For Guyana

O. Adeola, ExxonMobil Upstream Integrated Solutions; K. Burmaster, Exxon Mobil Corporation; M. Phi, ExxonMobil Upstream Integrated Solutions; S. Arnold, ExxonMobil; A.H. Robinson, Exxon Mobil Corporation; J. Klein, ExxonMobil

1550 30979

Guyana Operations And First Oil

M. Ryan, B. Unietis, A. Kaverzin, ExxonMobil Upstream Oil and Gas; T. Townson, ExxonMobil; J. Steves, ExxonMobil Global Projects; C. Chew, ExxonMobil; M. Maggard, ExxonMobil Upstream Oil and Gas; J. Jones, B. McGehee, ExxonMobil; K. Minnaar, Exxon Mobil Corporation

1612 31016

Early Interventions For Guyanese Business Development And Optimization

T. Roberts, ExxonMobil; N. Gaskin-Peters, DAI Group LLC

Monday, 16 August 2021

1400–1550 // Room 610

Advances in Offshore Geotechnics

In the current environment of cost cutting, combined with continued expansion of offshore developments in challenging geologic and environmental conditions, significant advances have been made in offshore geotechnics, particularly in the area of foundation design and installation. For example, new databases of soil properties are being developed and advances are being made in design of anchoring systems for hydrocarbon production and renewables facilities. This session will showcase such advances and provide an opportunity to re-evaluate best practices in offshore geotechnics.

Session Chairpersons:

Daniel Spikula, Senior Geotechnical Engineer, bp

Christopher Hadley, Senior Engineer, Shell Global Solutions

1400 31153

Normalized Modulus Reduction And Damping Ratio Curves for Bay of Campeche Calcareous Clay To Carbonate Mud

V.M. Taboada, S.C. Cao, Fugro; F.A. Flores Lopez, Ingenieros Geotecnistas Mexicanos; D. Cruz Roque, P. Barrera Nabor, Instituto Mexicano del Petroleo

1422 31268

Experience With Interface Shear Box Testing For Pipe-soil Interaction Assessment On Sand

Z.J. Westgate, NGL; R. Argiolas, ENI; R.C. Wallerand, Total; J. Ballard, Fugro

1444 30957

Wellhead Movement Analysis And Surface Casing Integrity In Pre-salt Wells

F.S. Cutrim, C. Okama, B.S. de Souza, Petrobras

1506 30973

Effect Of Fins On Combined Loaded Suction Caisson In Deepwater Clay Soils. A Numerical Analysis

P. Castillo Garcia, S. Panayides, Subsea7

1528 31129

Design Of Large-Size Suction Embedded Plate Anchors For Permanent Mooring Systems In The Gulf Of Mexico

J. Chen, Shell Global Solutions (US) Inc.; C. Heyl, J. Newlin, Shell International Exploration and Production, Inc.; M. Karayaka, Chevron Gulf of Mexico Business Unit

Monday, 16 August 2021

1422–1612 // Room 312

Materials and Technology Advancements for Deepwater and HPHT Environments

Materials innovations promise exciting new opportunities for progressing the technological frontiers critical for sustainable advancements, such as energy production, nanoelectronics, artificial intelligence, advanced environmental, among others. Focusing on our energy industry, materials advancements have enabled development of metallic alloys and polymers for tools and technology deployed in HPHT and deepwater environments. These engineering efforts have allowed us to harness major reserves which have been out of our reach due to our constraints in operating in certain hostile environments. This session is dedicated to Materials Advancements, encompassing unique synthesis/fabrication strategies for novel materials, integration routes for new and enhanced functionalities, and advanced device applications.

Session Chairpersons:

Ting Roy, President and CEO, Damorphe Inc

Thomas Shattuck, University of Houston

1422 31141

Novel Elastomer Materials For Extreme Temperature Operation In Subsea Thermal Insulation Applications At Unlimited Water Depth

A. Jackson, R. Diaz, R. Hansen, H. Svalund, G. Hartviksen, Vipo a.s.

1444 30945

The Challenge Of Elastomer Seals For Blowout Preventer (BOP) And Wellhead/christmas Trees Under High Temperature

X. Chen, R. Zono, H. Salem, Schlumberger

1506 30989

Fit For Service Qualification For Sour Service High Strength Production Casing For High Temperature

L.I. Lima, C. Gomes, C. Landier, K. Schleiss, M. Lima, Vallourec; A.F. Lazaro, B. Diehl, I. Palmieri, Petrobras

1528 31311

Powerful Material Technology Removes Barriers

T.C. Roy, Damorphe Inc; D. Markel, V. Bolze, Damorphe; C. Harrison, J. Shelton, Harrison Jet Guns; L. Harp, D. Groesbeck, DAMORPHE; G. Grullon, Rice University; S. Chakarvarti, C. Wilkinson, R. Shenoy, DAMORPHE; I. Roy, Damorphe Inc

1550 31266

Full Generic Qualification Of Nylon 12 Carbon Fiber Composite For Dynamic Thermoplastic Composite Pipe And Hybrid Flexible Pipe Applications

C. Schuett, Evonik Industries AG; A. Paternoster, Strohm

Monday, 16 August 2021

1444-1634 // Room 606

Additive Manufacturing for Advancing Offshore Technology

Additive manufacturing (AM) is bringing about a paradigm shift in the way mechanical design and supply chain integrates with manufacturing; the session intends to put this into context from the viewpoint of AM applications in the oil and gas industry. Showcasing current and future potential AM applications, and the lessons learned in developing these, serves as a great platform to further promote AM for safer, more reliable, more efficient oil and gas operations. This session promotes the application of AM methods for realizing novel, more complex, and highly efficient functional capabilities out of mechanical and structural components that may not have been realized in the past due to the constraints on traditional/conventional manufacturing.

Session Chairpersons:

Atul Ganpatye, Senior Associate, ADV

Colin Johnston, Managing Director, SeaNation LLC

1444 30961

Qualification And In-service Performance Of An Additively Manufactured Oilfield Pump Impeller

R. Rettew, Chevron; R. Rettberg, Sulzer; D. Griffiths, TWI

1506 31249

Novel Design Approach To Create Deep Water Metallic Buoyancy Modules

V. Loentgen, Y. Brouard, N. Maach, Subsea7; O. Lodeho, Subsea 7; J. Verdeil, F. Germanetto, Subsea7

1528 31261

Quality Assurance Framework To Enable Additive Manufacturing Based Digital Warehousing For Oil And Gas Industry

S.Y. Kandukuri, O. Ellingsen Moe, DNV GL

1550 31065

A Case Study For Graded Material Development

W. Chen, A.S. Cachinasky, C. Yates, M. Anisimov, J. Speights, J. Overstreet, A. Avagliano, Baker Hughes

1612 30971

Qualification Of Am-parts For The Offshore Industry

O.E. Moe, DNV GL; B. Maillon, Vallourec

Monday, 16 August 2021

1444-1634 // Room 600

Pipeline Design: Analytical Concepts

As fields continue to be explored and commercialized to greater water depths, pipeline engineers are confronted with even greater challenges. This session attempts to assist modern designers by examining contemporary concepts associated with flowline design and application in real-world scenarios.

Session Chairpersons:

Ronald Hughes, CEO, Blackfin Offshore

Jim Malachowski, Consultant

1444 31257

Design Challenge Of The West Nile Delta Gas Development: The Rosetta Channel Crossing

L. Gitahy, D. Manso Haddad, G. de Freitas Carvalho, M. Lewis, Subsea 7; D. Migliaresi, BP

1506 31064

Pipe Clamping Mattresses To Mitigate Flowline Walking; Physical Modelling Trials On Three Offshore Soils

C. O'Beirne, P. Watson, C. O'Loughlin, University of Western Australia; D. White, University of Southampton; A. Hodson, bp; S. Ang, S. Frankenmolen, Shell Global Solutions; J. Hoj-Hansen, M. Kuo, Woodside Energy; T. Roe, Subcon

1528 31188

Challenges Of Engineering The Hottest Subsea Heated Pipeline For The CRISP Project

C. Geertsen, ITP InTerPipe; F. McKinnon, Wood Plc; C. McKinnon, Wood; S. Langford, N. Wang, Wood Plc; F. Orberg, ITP InTerPipe; V. Niesen, Evoleap

1550 31015

Water Injection Pipeline Repair Offshore Angola Enhances Production

K. Sobolewski, Oceaneering; Z. Hao, Oceaneering International, Inc.

1612 31031

Machine Learning-based Optimization For Subsea Pipeline Route Design

S. Showmik, McDermott International

Monday, 16 August 2021

1600-1800 // Room 204

Shaping a Low Carbon Future with Supplier Diversity

Supplier Diversity is the process of integrating diverse suppliers into the execution of corporate strategy. That is why corporations like bp are coming together for a networking reception and panel discussion to showcase the importance of supplier diversity in offshore. Attendees will hear from corporations on how supply chain inclusion can shape a low carbon future and how diverse companies can offer innovative solutions toward net zero. Business owners and entrepreneurs will also learn how to make their businesses carbon neutral. Especially in today's environment as the energy industry shifts to low carbon, students, business owners, and any member of the offshore community will gain an understanding on supplier diversity across the energy and oil and gas industry.

Speakers:

Jane Stricker, Senior Relationship Manager, Regions, Cities and Solutions, bp

Jonathan Lee, Business Development Manager, Customer and Products, bp

Nastassja Hagan, Vice President Supply Low Carbon Energy, Finance, bp

Viet Van, Supply Chain Strategy, Shell

Douglas Fisher, Director, Strategic Procurement, ExxonMobil

Kimberly Thornton, Senior Director, Diversity Equity & Inclusion Western Hemisphere, bp

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SCHEDULE OF EVENTS

Tuesday, 17 August

MORNING EVENTS

Registration Open 0730–1700
NRG Center, Level 1, Lobbies D and E, Escalator E

Keynote Speaker Series 0800–0900
NRG Center, Level 2, Room 202

- The Role of Technology in Advancing the Energy Transition

Executive Dialogue: Katie Mehnert, ALLY Energy 0900–1000
NRG Center, Level 2, Room 206

Around the World Series—Canada 0900–1200
NRG Center, Level 2, Room 307

Exhibition 0900–1700
NRG Center

Panel and Technical Sessions 0930–1200
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, and 610

- The Brazilian Pre-Salt Development
- System Interoperability
- Metocean Advances
- Offshore LNG: Drivers, Alternatives, Design Solutions and Market Analysis
- Deployment of Offshore Technologies and Solutions I
- HPHT Systems, Technology Advancements, and Value Added Well Structural Changes
- Integration of Systems Engineering and Project Management to Deploy Effective Offshore Systems

OTC ePoster Lounge 0930–1606
NRG Center, Level 2, ePoster Lounge

Executive Dialogue: Bill Vass, Amazon Web Services 1000–1100
NRG Center, Level 2, Room 206

Executive Dialogue: Peter Green, National Renewable Energy Laboratory 1100–1200
NRG Center, Level 2, Room 206

Networking Event: Women in the Industry Sharing Experiences (WISE): Beyond Diversity INTO Inclusion 1100–1400
NRG Center, Level 2, Room 204

AFTERNOON EVENTS

Keynote Speaker Series 1230–1345
NRG Center, Level 2, Room 202

- Digitalization in the Oil and Gas Industry: How the Industry is Going to Transform in the Next 10 Years

Executive Dialogue: Vice President Bharrat Jagdeo, Guyana 1300–1400
NRG Center, Level 2, Room 206

Panel and Technical Sessions 1400–1630
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, 610

- Subsea Innovation and Digital Strategies for the Energy Transition
- Invited Organization: Systems Engineering in Practice: Stories from Experts in the Field
- Maritime Civil Infrastructure
- Subsea Innovative Processing and Design
- Applying Geophysics to Lower Field Development Costs
- Deployment of Offshore Technologies and Solutions II
- Digitalization, Data Science, and Modeling in Oil and Gas

Around the World Series—Norway 1400–1700
NRG Center, Level 2, Room 300

Around the World Series—Brazil 1400–1700
NRG Center, Level 2, Room 302

Executive Dialogue: Esther Morales, Clean Energy Leaders; Damian Bednarz, External Affairs Director, EnBW .. 1500–1600
NRG Center, Level 2, Room 206

Networking Event: How Sustainability Can Drive Innovation in the New Energy Ecosystem 1600–1800
NRG Center, Level 2, Room 204

TECHNICAL PROGRAM COLOR REFERENCE

- Technical/Poster Sessions
- Panel
- Keynote Speaker Series
- Around the World
- Networking Event
- Executive Dialogue Series
- Young Professionals

[View NRG Center, Level 2 Map](#)

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Technical Program *(as of 10 August 2021)*

Tuesday, 17 August 2021

0800–0900 // Room 202

The Role of Technology in Advancing the Energy Transition ●

Our industry faces the dual challenge of providing energy the world needs, while reducing greenhouse gas emissions. This will require transformational change and the need for disruptive innovation to deliver both lower carbon and generate continued returns. bp will explore the current state of energy and technology, describe the key challenges for accelerating the energy transition, and the important role that existing and emerging technologies are playing in making this transition happen.

Moderator:

Cindy Yeilding, Board Chairperson, Offshore Technology Conference

Speaker:

Rob Kelly, Vice President, Digital Production & Products, bp

Tuesday, 17 August 2021

0900–1000 // Room 206

Executive Dialogue ●

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives will discuss innovations, transformations, new technologies, real-life applications of new technologies, post-pandemic priorities and strategies, and other topics.

Moderator:

Paul Jones, Vice Chairperson, OTC Board of Directors

Speaker:

Katie Mehnert, CEO, ALLY Energy

Tuesday, 17 August 2021

0900–1200 // Room 307

Canada: Development of Oil and Gas from Coast to Coast with Innovative Technology under High Environmental, Social and Governing Standards ●

Learn about Canada's global leadership in emissions reductions and carbon pricing, the growing involvement of women and Indigenous Peoples in the oil and gas sector, and stewardship of Canada's vast resource endowment under high environmental, social and governance standards. In combined live and virtual presentations, Canada's Minister of Natural Resources and Energy and Natural Resource Ministers from Canadian provinces will highlight Canadian leadership in: **Carbon pricing**, where Canada is one of only two major global oil and gas producers with a nation-wide carbon tax, fitted to each province's unique resources and technologies; **Frontier offshore seismic** through Newfoundland and Labrador's government-supported and publicly available seismic, opening new frontiers in the North Atlantic for offshore development to join currently producing offshore projects; Ground-breaking geoscience in Nova Scotia, where geoscience continues to reveal new offshore hydrocarbon prospects and unlock geologic ties that link North America to North Africa; **The world's lowest-emission LNG plant** and gas pipeline in British Columbia, where construction is underway to serve the Asia-Pacific market; **Carbon capture, utilization and storage**, where Saskatchewan's technological advances in capturing carbon from electricity generation stations and deploying CO₂ in enhanced oil recovery and deep saline solution permanent storage are making Canada a leader in energy transition; **CO₂ gathering, transportation and storage innovation** in Alberta where its Carbon Trunk Line facilitates enhanced oil recovery through CO₂ utilization and storage in formations; **Indigenous engagement** in the oil and gas sector, through the Alberta Indigenous Opportunities Corporation, with up to \$1 billion in loan guarantees available, enabling economic prosperity and social improvements for generations to come; **Resource stewardship** in Alberta's Montney and Duvernay plays, growing liquids-rich gas production, and in the oil sands where producers continue to dramatically reduce costs and emissions per barrel. **Canada's vast resources** – the third-largest oil reserves in the world and among the world's top five oil and natural gas producers – are being developed through some of the **highest global standards for environmental, social and governance (ESG) criteria**, such as Canada's participation in Equal by 30, the international effort to bring more women into the energy sector. A second segment of presentations will highlight developments from almost **\$1 billion in research** underway at some of **Canada's Innovation Superclusters**, such as Scale Artificial Intelligence and Ocean, focused on applications in the global oil and gas sector. Canada's Oil Sands Innovation Alliance (COSIA), a unique intellectual property-sharing organization, will detail environmental improvement results from its unique multi-company intellectual property consortium. Emissions Reduction Alberta will showcase cutting-edge research to reduce GHG emissions from oil and natural gas production. Innovative Canadian companies will showcase new technologies to lower emissions and improve efficiency, highlighting Canada's leadership in Digital Oilfield, Artificial Intelligence, Big Data Analytics, Blockchain, IIOT, software development, and developments in drilling technology, along with world-leading technology to capture CO₂ emissions.

Tuesday, 17 August 2021

0930–1200 // Room 306

The Brazilian Pre-Salt Development ●

Over the last four years, Brazil has had successful lease rounds at its pre-salt prospects. Production has more than doubled in the last five years, with a significant increase of almost 18% from 2019 to 2020, even under the influence of the pandemic. Many new areas have development plans for the near future and many super-majors are targeting this hot market. Investment plans in the Brazilian pre-salt have suffered a smaller impact than most other offshore provinces around the world. This panel will discuss the next steps on these developments, including the progress on the plans for exploration and development. The panelists include key executives from IOCs and NOCs with interest in the pre-salt prospects in Brazil and will discuss the opportunities and challenges ahead.

Moderators:

Eberaldo Almeida, President—IBP

Flávio Vianna, Executive Director of Exploration and Production—IBP

Speakers:

Veronica Coelho, President—Equinor Brasil

Andre Araujo, President—Shell Brasil

Philippe Blanchard, General Director—Total Energies Brasil

Décio Oddone, Chief Executive Officer—Enauta

Mariano Vela, Brazil Country Manager—Chevron

João Rittershaussen, Chief Production Development Officer—Petrobras

Tuesday, 17 August 2021

0930–1120 // Room 604

System Interoperability ●

Improving operations performance through analysis and optimization of interconnected systems.

Session Chairpersons:

Peter Wallace, Manager, Marine Projects, SeaOne Holdings LLC

Ashraf Zeid, Managing Director, Eternal Energy

0952 30936

Data-driven Performance Optimization In Section Milling

S. Neema, L. Singh, F. Chiquiza, J. First, C. Collier, T. Oo, K. Katla, D. Martin, Chevron Oil Co.

1014 31278

A Digital Twin For Real-time Drilling Hydraulics Simulation Using A Hybrid Approach Of Physics And Machine Learning

P. Amur Varadarajan, M. Ringer, Schlumberger; N.I. Abolins, Geoservices; G. Roguin, Schlumberger

1036 31002

Lessons Learned From Optimising Sand Control And Management Strategies In A Low Permeability Sandstone Oil Field

B. Daramola, Propellio Limited; C.M. Alinnor, Drilling & Completions Consultant

1058 31143

Case Study: The Impact Of VR & AR Simulation Project To Decrease Human Exposure In Critical Environments

J.R. Reis, T.S. de Oliveira, AVEVA do Brasil LTDA; W.L. de Oliveira, D.C. Barboza, SENAI Innovation Institute for Virtual Production Systems; L.S. de Melo Filho, REPSOL SINOPEC BRASIL S.A.; A.L. Oberziner, P.A. da Silva Jr., AVEVA do Brasil LTDA

Tuesday, 17 August 2021

0930–1120 // Room 606

Metocean Advances ●

This session will highlight papers covering progress in metocean studies of the Gulf of Mexico, a state-of-the-science multi-resolution ocean current modeling system and a fresh look at the definition and statistical properties of sudden hurricanes. In addition, advances in understanding of the current circulation and processes offshore Guyana, the use of machine learning techniques to forecast squalls and to improve characterization of sea surface wind fields utilizing an extensive dataset collected by radar satellites, as well as comparison of design sea states with wave conditions experienced during heavy transport voyages and lessons learned, will be presented.

Session Chairpersons:

Oleg Esenkov, Senior Technical Professional Advisor—Metocean, ExxonMobil Upstream Integrated Solutions Co

Amitava Guha, Marine Engineer, ExxonMobil Development Co.

0952 30932

On The Likelihood Of Encountering Design Conditions During Heavy Transport - A Case Study Of 56 Replicate Voyages From Korea To The Suez Canal

D. Hodapp, Chevron Technical Center; S. den Breejen, COSCO Shipping; T. Pniewski, Chevron Shipping Company; H. Wang, Z. Lin, COSCO Shipping

1014 31316

Satellite Observations For Better Characterization Of Sea Surface Wind Field And Offshore Wind Energy Resource Assessment

M. Fragoso, L. de Montera, R. Husson, H. Berger, CLS; P. Appelghem, Atmosky; L. Guerlou, G. Fabritius, CLS

1036 31152

MACRO-GOM: Long Term Multi-resolution Ocean Current Reanalysis Dataset For The Gulf Of Mexico

N. Groves, Woods Hole Group Inc.; A. Srinivasan, Tendral LLC; L. Ivanov, Woods Hole Group Inc.; J. Storie, Woods Hole Group; D. Gustafson, R. Ramos, Woods Hole Group Inc.

1058 31247

Potential Of Synthetic Weather Radar For Squall Identification And Prediction

R. Fulton, DTN; J. Luffman, Solcast

Tuesday, 17 August 2021

0952-1142 // Room 610

Offshore LNG: Drivers, Alternatives, Design Solutions and Market Analysis

This technical session focuses on drivers, alternatives, and design solutions for handling LNG offshore and the future of the floating LNG (FLNG) technology. Topics covered will include market analysis, mitigations, and advancements in FLNG technology and execution solutions for the current market.

Session Chairpersons:

Hoss Shariat, Chief Technical Engineering Oil & Gas Process, KBR

Nikhil Joshi, Director, Evoleap LLC

0952 30929

REIMAGINE LNG - An Overview Of The LNG Market Potentially Leading To A Future AFLOAT

A. Subramanian, NA

1014 31177

Making Lng Affordable As A Means To Monetize Associated Gas Offshore

J. Dimbour, D. Gadelle, L. Disaro, B. Laflotte, Technip Energies

1036 31053

Cash Is King - Repurposing Marginal Assets To Reduce Floating LNG Capex

S. Tierling, KBR

1058 31063

Research On Robust And Efficient Approach For Extreme Mooring Tension Estimation For FLNG And FOWT

T. Ando, ClassNK; W.C. Simon, R. Wada, K. Takagi, M. Watanabe, University of Tokyo; A. Usami, ClassNK

1120 31212

Propulsion Solution For Icebreaking Lng Carriers

S. Hanninen, ABB Inc.; M. Barisic, ABB AS; S. Viherialehto, T. Heideman, P. Maattanen, ABB OY; K. Goldon, ABB Business Services Sp. z o.o.

Tuesday, 17 August 2021

0952-1142 // Room 600

Deployment of Offshore Technologies and Solutions I

This session will focus on the deployment of technologies within the offshore energy. The session will review technology qualification, validation, and review for offshore deployment and adoption with service companies and operators. The presentations will focus on two areas - topside structures and downhole advanced materials and equipment. Topside presentations will focus on three topics: Qualification Method For Cut Resistant Jackets For Fiber Mooring Ropes; Maximizing Production With Real-time Integrity Operating Windows; and Development And Deployment Of The Surface Current Imaging Nowcast System. Downhole equipment deployment presentations will include the following two topics: Development Of A Passive Magnetic Radial Bearing System For Electric Submersible Pumps and Strategic Alliance Enables Fast-track Engineering And Expeditious Deployment Of Novel Flowable Sensors and Water Reactive Nano-composite Plugs In Mena.

Session Chairpersons:

Joseph Gomes, Associate Director, Offshore Operators Committee

Indranil Roy, Chief Technology Officer, Damorpe Inc.

0952 30962

Qualification Method For Cut Resistant Jackets For Fiber Mooring Ropes

Ø. Gabrielsen, K. Larsen, Equinor ASA; S. Gjørund, K. Reite, Sintef; K. Eide, H. Haugland, DNV; A. Leao, Lankhorst

1014 31023

Development Of A Passive Magnetic Radial Bearing System For Electric Submersible Pumps (ESPs)

P. McMullen, H. Artinian, D.J. Biddick, Upwing Energy

1036 31030

Maximizing Production With Real-time Integrity Operating Windows

S. Honjo, S. Matsumoto, Mitsubishi Heavy Industries; T. Sano, Mitsubishi Heavy Industries, Ltd.

1058 31103

Development And Deployment Of The Surface Current Imaging Nowcast System

S.P. Anderson, S. Zuckerman, Arete; J. Stear, Chevron Corporation; S. Fan, Shell International Exploration and Production Inc.

1120 31118

Strategic Alliance Enables Fast-track Engineering And Expeditious Deployment Of Novel Flowable Sensors & Water Reactive Nano-composite Plugs In MENA

T.C. Roy, Damorpe Inc.; V. Bolze, D. Markel, D. Merlau, Damorpe Inc.; M. Muhammad, D. Dudeja, NESR; T. Yamate, NAGANO KEIKI CO., LTD; G. Grullon, Rice University; C. Wilkinson, L. Harp, R. Shenoy, Damorpe Inc.; I. Roy, Damorpe Inc

Tuesday, 17 August 2021

1014-1204 // Room 602

HPHT Systems, Technology Advancements, and Value Added Well Structural Changes

This session will cover technological advancements, well structural changes resulting in simple operations and time savings. Design verification and validation, and industry standards and regulatory requirements of HPHT and other equipment (HPHT Systems, Wellheads, Trees, BOPs, Risers, etc.) will be covered.

Session Chairpersons:

Jim Kaculi, Vice President, Dril-Quip, Inc.

Greg Kusinski, Director, Chevron

1014 31109

Development Of Design Criteria And NDE Method For HPHT Equipment

K. Padmanabha, P.D. Pathak, L.H. Coutinho, J. Wilhelmi, V. Vempati Veera, Schlumberger

1036 31075

Premium Anti-rotation Casing Connector With Metal-to-metal Seal Optimized For High Fatigue Performance To Meet Market Needs By Reducing Opex And Risk Exposure

A.J. Grohmann, J.T. Kaculi, S.P. Ellisor, J. Rye, Dril-Quip, Inc.

1058 30970

Optimizing Deepwater Rig Operations With Advanced Remotely Operated Vehicle Technology

B. McCoy Jr, P. MacInnes, TechnipFMC; D. Angelidis, R. Collins, J. Sosa, Z. Rauf, Shell Exploration & Production Company

1120 31259

Fatigue Monitoring And Life Extension For Top Tensioned Production Riser Systems

B. Mercan, 2H Offshore Inc; M. Campbell, 2H Offshore Inc.; C. Thompson, Occidental Petroleum Corporation

1142 31240

Cost Effective, Digital, Fail-safe Production Tree And Wellhead Actuator System

E.S. Johansen, Techni Oilfield Products; D. Fredheim, Equinor; R. Volkers, Baker Hughes; D. Hansen, C. Petersen, Techni

Tuesday, 17 August 2021

1014-1204 // Room 312

Integration of Systems Engineering and Project Management to Deploy Effective Offshore Systems

Effective integration of Project Management (PM) and Systems Engineering (SE) is essential to deploy successful offshore systems in the rapidly advancing space of digitalization and automation systems. Both SE and PM have formal methods to help guide projects and products through the life cycle. Where these two philosophies converge to deliver value is an intricate balancing act between overburdening processes that slow progress and deficient processes which allow flaws to propagate throughout the system and ultimately result in poor performance or failures. This session highlights some recent advancements and success stories and how to overcome challenges with implementing PM and SE in an immersive data rich ecosystem. Each author discusses practical applications in the current environment and demonstrates how they leveraged digitized information to create value and enable successful digital transformation initiatives.

Session Chairpersons:

Jason Baker, Senior Systems Integration Manager, Microsoft

Egidio Marotta, Sr. Advisor, Seera Labs

1014 31271

Facing The Challenges Of Implementing Systems Engineering

J.A. Bullion, Booz Allen Hamilton

1036 30966

Transformation Of Digital Requirements: An Enabler For Successful Complex Projects

J. Marsh, IBM USA; A. Hudson, Barrios Technology

1058 31012

Standardization Of Procurement Equipment Specifications: Establishing A Strong Foundation For Oil & Gas Capital Project Development And Delivery

A. Postema, International Association of Oil & Gas Producers

1120 31024

Benefits Of Using Requirements Management Tools On A Digitized API 170 Document

R. Climacosa, S. Matlock, J.A. Ollero, Barrios Technology; D.L. Miller, American Petroleum Institute

1142 31113

Data Centric Verification To Streamline Project Planning And Execution

M. Reed, Shell Oil

Tuesday, 17 August 2021

0930–1606 // ePoster Lounge

ePoster Lounge II: Part 1

This poster session gives the OTC program committee a special opportunity to showcase talented technical leaders from across the industry and the globe.

Session Chairpersons:

Craig Jones, Principal, Integral Consulting Inc.

Tirtharaj Bhaumik, Principal Technical Professional - Marine, KBR

0930 30926**Using Nano-materials To Change Metal Surface Characteristics And Slow The Buildup Of Paraffins, Asphaltenes And Other Oil-based Contaminants**

T. Mathias, A. Patil, S. Drees, e9 Treatments Inc.

0952 30937**Automation Of Large Parametric Flow Assurance Analyses In The Cloud**

L.G. Staaen, R.S. Hubbard, D.J. Scales, Atteris; A.C. Tran, Schlumberger Oilfield Australia

1014 30951**Selecting A Product For Wax Remediation: From Characterization Of Field Wax Deposits To Improvement Of Treatment Sustainability**

J.I. Aguiar, A. Pontifes, J. Rogers, A. Mahmoudkhani, Locus Bio-Energy Solutions

1036 31243**Assessment Of The Impact Of Wax Deposition In A Pre-salt Project**

N.C. Pinheiro, S.P. Pinho, Petrobras

1058 31273**Novel Intelligent Pigging Tool For Deposit Inspection Using Electrical Tomography With High Computational Efficiency Enabled Through Neural Networks**

A. Nissinen, O. Lehtikangas, A. Voutilainen, P. Laakkonen, A. Lehkoinen, Rocsole Ltd

1120 30981**Real-time Prediction Of Choke Health Using Production Data Integrated With AI**

A.A. Al-Ghamdi, O.T. Ayoola, K.F. Almulhem, M. Alotaibi, Saudi Aramco

1142 31139**LNG Loading Lines High Surge Analysis**

A.T. Noor Arnida, M. Fadzrul Izwan, Z. Shahrlul Azman, Petronas

1204 31181**Four Point Bend Test Of 5LPP-Concrete Coated Pipe**

S.V. Mathakari, C. Cox, P.D. Rattenbury, TechnipFMC

1248 30944**Effect Of Temperature, Reeling Speed And Pipe Tension On The Performance Of Field Joint Coating During Reeling Of Offshore Pipelines**

R. Dhole, Subsea 7; I. Ripoll, Xodus Group; S. Rajaratnam, C. Jablonski, Subsea 7

1310 31078**Electrically Heated Trace Flowline On Aerfugl Project—A Journey From Product Qualification To Offshore Campaign**

G. Mencarelli, P. forbord, J. Bourbon, subsea 7; D. Gibson, AkerBP

1332 31088**Reelability Assessment Of Adhesively Bonded Mechanically Lined Pipe**

G. Toguyeni, J. Fernandez-Vega, R.L. Jones, M. Gallegillo, Subsea 7; J. Banse, Butting

1354 31204**Qualification Of Local Stress Relief Heat Treatment Of Double Submerged-Arc Welded (DSAW) Pipe For Reel-lay Installation**

J. Terris, J. Safari, TechnipFMC

Tuesday, 17 August 2021

0930–1606 // ePoster Lounge

ePoster Lounge II: Part 1 (continued)**1416 31238****Taylor Bubbles Of Viscous Slug Flow In Inclined Pipes**

L.A. Dafyak, B.N. Hewakandamby, A. Fayyaz, D. Hann, University of Nottingham

1438 30992**Qualification Of Mechanically Lined Pipe (MLP) With High Frequency Welded (HFW) Host Pipe For Subsea Applications With Reeling Installation**

C. Macdonald, J. Safari, S. Anderson, TechnipFMC

1500 31254**An Innovative ECA Approach For Reeled CRA Welds And Its Validation Programme**

R.L. Jones, T. Sriskandarajah, Subsea 7; D. Zhou, J. Hymers, K. Munro, H.H. Chan, G. Roberts, Subsea7

1522 31214**Electrical & Optical Double Barrier Qualification And Implementation On Fenja Electrically Trace Heated Pipe-in-pipe Project**

F. Le Naour, K. MacLeod, A. Marret, TFMC; I. Aglen, Neptune Energy; R. Vivet, TFMC

1544 31267**A Real Time Fatigue Monitoring Platform For Flexible Risers**

J. Yuan, Y. Hou, Baker Hughes; Z. Tan, Baker Hughes Company; E. Wilson, Baker Hughes

Tuesday, 17 August 2021

0930–1522 // ePoster Lounge 2

ePoster Lounge II: Part 2

This poster session gives the OTC program committee a special opportunity to showcase talented technical leaders from across the industry and the globe.

Session Chairpersons:

Jaime Naveiro, Buzios Asset General Manager, Petrobras America Inc.

Zhiyong Su, Research Engineer, SOFEC Inc.

0930 31194**First Time Utilization Of Cloud-based Technology To Fast Track A 521 Million Cell Gas Condensate Reservoir Dynamic Model: A Case Study From Saudi Arabia**

A.A. Al-Fawwaz, Y.M. Al-Dhafiri, Al-Khafji Joint Operations; M.N. Akhtar, S. Ali, M. Ibrahim, M.A. Giddins, A. Amer, Schlumberger

0952 30956**Novel Design Optimization For Additive Manufactured Components**

S. Acharya, ANSYS Inc.; R. Matroja, Cognitive Design Solutions; M.A. Elyyan, ANSYS Inc.; H. De Charnace, Yamaichi Special Steel; Y. Zhang, ANSYS Inc

1014 31144**Qualification Of Metal 3D Printed Parts For Production Use**

M. Vasquez, 3Degrees, LLC

1058 30996**Digitally Transforming Offshore Production: Making Low-Manned Brownfield Installations A Reality**

E. La Grange, B. Bollinger, A. Elnaamani, Siemens Energy

1036 30984**Drilling Problems Forecast Based On Neural Network**

S. Borozdin, Gubkin Russian State University of Oil & Gas; N. Eremin, OGRI RAS; A. Arkhipov, Gubkin University; O. Chashina-Semenova, OGRI RAS

1120 30924**Accelerated First Oil With Integrated Execution Model, Digital FEED Platform And Product Standardization**

H. Priyadarshi, C. Waskow, T. Parenteau, J. Sammon, C. Cruz, TechnipFMC

1142 31017**Digital Transformation And Automation Of Flow Assurance Engineering Workflows Using Digital Field Twin**

H.R. Patel, J. Cai, G. Noiray, S. Bhowmik, McDermott International

Tuesday, 17 August 2021

0930–1522 // ePoster Lounge 2

ePoster Lounge II: Part 2 (continued)**1204 31073****Improving Offshore Platform Production With Artificial Intelligence**

P. Herve, M. Capotosto, SparkCognition

1226 31150**A Data Centric Omnichannel Digital Platform For Configuring Subsea Field Developments**

R.G. Morgan, T. Parenteau, H. Priyadarshi, M. Le-Nel, P. Jetter, J. Somabathula, N. Lefebvre, K. Le Prin, S.V. Mathakari, TechnipFMC

1248 31202**Online Modeling Of CO₂ Storage System**

D.D. Erickson, Wood Group USA Inc; G.D. Metcalf, John Wood Group PLC

1310 31209**CABLE JIP: A Research Project To Assess The Feasibility Of A Semi-static Electrical Subsea Cable For The Power Take-off From A TLP-type Floating Offshore Wind Turbine**

J. de Wilde, MARIN; C. van der Nat, Bluewater Energy Services B.V.; L. Pots, Twentsche Kabel Fabriek BV; L. de Vries, Ketelbink; Q. Liu, Twentsche Kabelfabriek

1332 31318**Design And Installation Of Leading Edge, Practical And Economic Mooring Systems For Commercial Scale Floating Offshore Wind Energy**

T. Fulton, Acteon; Y. Arikan, 2H Offshore; R. Miller, InterMoor Inc.; J.K. Longridge, InterMoor, Inc.; M. Campbell, 2H Offshore

1354 31090**Repurposing Oil & Gas Wells And Drilling Operations For Geothermal Energy Production**

R.M. Pilko, N. Hart-Wagoner, Blade Energy Partners; A. van Horn, GreenFire Energy Inc.; J. Scherer, GreenFire Energy

1416 31097**Center Of Excellence: Leveraging Data To Reduce Incidents On Offshore Oil And Gas Assets**

L. Boyd, Siemens Energy

1438 30942**Diverless Revolution - Initiatives And Preliminary Results In The Replacement Of Human Diving In Submarine Inspection And Maintenance Operations**

N.M. Felix, R.D. Nunes, A. Savergnini, A.B. Santana, Petrobras

1500 31255**How Brazil Operators and Regulators Implemented, Audited And Learned From COVID-19**

N.A. Biddle, Premier Oil do Brasil; M. Rodrigues Franca, N. Nunes Ferreira, Agência Nacional do Petróleo, Gas Natural e Biocombustíveis—ANP; D. Goni Coelho, Agência Nacional do Petróleo, Gas Natural e Biocombustíveis—ANP; J. Siqueira, A. Guedes, Independent Operator Consultant

Tuesday, 17 August 2021

1000–1100 // Room 206

Executive Dialogue: Energy's Digitalization at the Edge

Learn how edge-to-cloud technologies like high-performance computing, autonomous systems, IoT, and robotics are accelerating the path to full-scale renewables and net-zero carbon emissions for AWS customers in the energy and industrial sectors.

Moderator:**Dan McConnell**, Member, OTC Board of Directors**Speaker:****Bill Vass**, Vice President Engineering, AWS

Tuesday, 17 August 2021

1100–1200 // Room 206

Executive Dialogue: Viable Pathways and Challenges Associated with the Clean Energy Transition

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives will discuss innovations, transformations, new technologies, real-life applications of new technologies, post-pandemic priorities and strategies, and other topics.

Moderator:**Doreen Chin**, Member, OTC Board of Directors**Speaker:****Peter Green**, Deputy Laboratory Director, Science and Technology, National Renewable Energy Laboratory

Tuesday, 17 August 2021

1100–1400 // Room 204

Women in the Industry Sharing Experiences (WISE): Beyond Diversity INTO Inclusion

As the energy sector evolves, so should its workforce. Whether your program is non-existent or fully developed, join us for a three-hour networking event and learn more about how to research, develop, and implement a successful diversity and inclusion program. Help to move our industry beyond statistics and into true inclusion.

Moderators:**Kerry Fellers**, Principle, Opportunity Bridges**Yvette Scheiber**, Conflict Management & Organizational Leadership, Conflict Intell L.L.C**Speakers:****Maria Capello**, Founder and Senior Partner, Red Tree Consulting LLC**Tamara Page**, Senior Director, Workforce D&I, bp**Maurissa Douglas Rogers**, Manager of Functions, Bechtel**Shara Hammond**, Leadership and Inclusion Manager, Marathon Oil Company**Patricia Vega**, Found & Chief Executive Officer, Quantum New Energy

Tuesday, 17 August 2021

1230–1345 // Room 202

Digitalization in the Oil and Gas Industry: How the Industry is Going to Transform in the Next 10 Years

The oil and gas industry began taking baby steps towards digital transformation but the industry has not yet captured the value that it can create. During a time where the industry has seen unprecedented supply and demand disruption, the need for transformative technologies becomes vitally important to remain competitive. Understanding and learning from successful transformation may assist operating and service companies in getting ready for the future, especially in the offshore industry as it is still at a very embryonic stage. There is a strong need to understand factors of change, the pitfalls when faced implementing digital transformation, and the benefits of digital excellence for digital oil fields. Now is the time to accelerate the pace of digital transformation, to maximize the value from exponential technologies, instead of increasing the capital waster and data waste. The speakers will discuss the role and importance of data, insights, and learnings from successful and barriers to digital transformation. They will also discuss emerging trends on Oil and Gas 4.0, data-driven innovation and creation of sustained digital value.

Moderators:**Phaneendra Kondapi**, Affiliate Faculty, Colorado School of Mines**Y Doreen Chin**, President, Yunka Energy LLC**Speakers:****Satyam Priyadarshi**, Chief Data Scientist and Technology Fellow, Halliburton International Inc**Hani Elshahawi**, Managing Director, NoviDigiTech LLC**Arno Van Den Haak**, Head World Wide Business Development Oil & Gas, Amazon Web Services

Tuesday, 17 August 2021

1300–1400 // Room 206

Executive Dialogue: Guyana: An Emerging Oil Industry in the Context of Net Zero Emission

The Executive Dialogue Series is a new initiative aimed at engaging in a thoughtful discussion around corporate shifts, offshore resource development, emerging technologies, and the future of the offshore energy sector. Executives will discuss innovations, transformations, new technologies, real-life applications of new technologies, post-pandemic priorities and strategies, and other topics.

Moderator:

Cindy Yeilding, Board Chairperson, OTC Board of Directors

Speaker:

Bharrat Jagdeo, Vice President, Guyana

Tuesday, 17 August 2021

1400–1700 // Room 300

Norway: Improved Drilling Efficiency by Extended Use of Automation and Digitalization: Presenting the Latest Advances

Ensuring Safe and Clean Drilling Operations from Space Andreas Hay Kaljord, Director EO Sales, Kongsberg Satellite Services - KSAT

Satellite remote sensing is used extensively by organizations such as The Norwegian Clean Seas Association for Operating Companies (NOFO) and The European Maritime Safety Agency (EMSA) to detect acute pollution from petroleum activity and shipping. Satellite-based technology has proven to be the most cost effective, robust and reliable method for monitoring offshore activities. Satellite monitoring is used to document clean operations in the different stages of an oil field life cycle, from exploration to decommissioning. The technology can also be used to discover and monitor natural oil seeps. KSAT (Kongsberg Satellite Services) has delivered satellite-based oil spill detection services to the O&G industry for more than 15 years. The streamlined service concept from KSAT enables the operating oil companies to meet regulatory requirements for clean operations, and all the O&G assets on the Norwegian Continental Shelf are now being monitored daily from space. The focus on delivering reliable, concise, actionable information as fast as possible to operational personnel, has recently led to significant improvements of the service in terms of data access and processing, analysis and visualization interfaces. Given the large number of oil fields and assets that can be covered in one satellite image, the collaborative model executed by NOFO has led to significant synergies and cost savings for the operators. A similar collaborative approach would be ideally suited for the provisioning of the service to O&G operators in the Gulf of Mexico. As the energy sector moves towards remote operations and a higher degree of digitalization, the value of using satellites for environmental monitoring is more relevant than ever. KSAT also provides satellite-based solutions for ice monitoring, met-ocean monitoring and increased maritime domain awareness to the O&G and shipping industry.

Digitalization of Offshore Work Processes through User Driven Innovation

Bjarne Sandrib, Vice President, MHWirth

Need for efficiency have driven the oil industry to focus on innovation. A significant efficiency potential has been identified that can be utilized through automation and digitization of manual work processes. Together with key customers, MHWirth has developed digital products and systems to optimize the drilling process. One of the solutions is a digital interaction platform where participants in the drilling process have a common information base and can have a common situational understanding of the process. The core of the system is a digital platform developed by MHWirth under the brand name "beAware". The solutions are developed with a user-driven innovation process where the end users have a central role in the development. The interaction between users and software developers create a dynamic development process and ownership by the users of the end result. This is unique and has been a vital component in the development process. The presentation describes the development process, the end users involvement and examples of products and systems that have been developed and piloted.

Tuesday, 17 August 2021

1400–1700 // Room 300

Norway: (continued)

Improved Well Delivery in the Context of Digitalization

Dr. Per Arild Andresen, Vice President, Cognite

Digitalization of well delivery—from well construction to completion—requires a shift in thinking about data ownership and data control. New and existing valuable use cases require data from several separate systems. Once that data has been liberated and collected in one place for contextualization, it is available for future use cases, reducing the time to value repeatedly. Embracing the well delivery plan and execution phases into an open, standardized and structured data-driven ecosystem saves time and costs and enables automation. This makes it easy to find, share, and store data, increasingly efficient well workflows from well planning to automated execution. A key driver is also the enablement of innovation and competition between multiple third parties each performing parts of the workflow on equal terms.

How Modern Technology Plays a Key Role at all Levels of Digital Transformation

Linda Sæther, Senior Director—Technical Sales, Oliasoft

In recent years, the oil industry has embarked on a major technology shift involving development and implementation of modern technology. Innovation is key for the industry to ascend the technology curve. Through this session, Oliasoft will present how our innovation, Oliasoft WellDesign®, helps stimulate the transformation and various gains at the various stages towards a digital future within the drilling and well domain. By using Oliasoft WellDesign®, significant gains are achieved even at the first stage of this technology curve, giving engineers the opportunity to work with modern well design tools, built to advance when desired. This enables an integrated work processes and interaction across disciplines, all to design safer and more efficient wells. Oliasoft will be presenting a case study showcasing how one of our customers successfully realized significant gains already at the first step on the technology curve and how this approach gives the company momentum in the quest for the digital future.

Digital Operating Procedures—A prerequisite for Automation

Jim Krupa, Vice President—Americas, Exebenus

The oil and gas industry today are increasingly anxious to prepare for and maximize their benefits from digitalization and automation in the oilfield. Operational procedures—used to describe actions required at the rig site—are often excluded from this digital transformation. Operators are carefully avoiding "disrupting" the planning and operation teams even if they could benefit greatly from such a change. As a result, they are left with tools like Excel, Word or PDF to create and communicate their principal tool for conducting operations safely and effectively. The inherent problem with this approach is that the benefits of digitalization and technology transformation are lost on the drilling and wells departments. With a new digital solution, they could increase procedure consistency and quality, standardize across operations, document approval processes, and provide timely changes to the operation team. Before operators can consider digitalization or automation on the rig, they must first address the issue of converting paper procedures into digital procedures that are machine readable. Digital procedures enable the ability to compare actual results, using real-time data, to planned activities helping to establish and record lessons learned, best practices, KPIs and benchmarks. Without addressing this issue, operators are missing out on the opportunity to further increased efficiency and reduced nonproductive time.

Tuesday, 17 August 2021

1400-1700 // Room 300

Norway: (continued)**AI for Predictive Analytics and Increased ESG Impact on Drilling**
Kristian Solem, VP Product Strategy and Management, eDrilling

Environmental, Social and Corporate Governance are becoming ever more important in today's climate. It touches investments, operations, and decision making across many different industries. Oil and gas is no exception, and most companies are doing what they can to govern by this. New ways of doing things are necessary to reach the ESG goals. One way of reducing emissions, enable safer operations, and drill better and faster with the same resources, is to use artificial intelligence combined with digital twins. eDrilling has been creating digital twins for more than a decade and have proved that artificial intelligence is not only the future of drilling, but also the present.

iWellBook - The Digital Wellwork Assistant

Brian Chia, Commercial Manager, International, ELOGIX

Orchestration of Well centric activities start from Planning all the way to the end of well report. 'Manual' orchestration can lead to inefficiencies, errors and misunderstandings - iWellBook is a field proven digital solution that enables collaboration between operator and service companies, provides just in time reminders for all actors to fulfil required tasks, displays KPI's and ensures that verification processes and record keeping are executed. iWellBook is cloud based, secure and comes with dedicated support to ensure that uptake by the organization and 3rd parties are seamless. Join our satisfied clients by replacing essential but mundane tasks by letting iWellBooks digitally orchestrate your Wellwork process.

Improving Communication Workflow and Digital Data Quality using AGR Software's Applications on the iQx Platform

Olav Larsen, Sales Manager, AGR Software

A great challenge of well delivery is the struggle towards efficient workflow between team members, both internal and external. Keeping team members updated with correct information through existing processes takes valuable engineering time, time that could have been better utilized for well engineering. In addition, documentation (e.g. Drilling Program and End of Well report) is often made manually, thereby not utilizing the available data and with little contribution from external parties. This presentation will describe how AGR Software's iQx platform can be integrated into a company's digital well delivery process, and thereby be the orchestration tool for data coming from different sources and contributions from team members. The advantages of this are numerous, including faster planning of wells, reduced risk of errors due to inefficient knowledge transfer and enhanced data quality.

Moderator:

Jan Eckhoff, U.S. and Guyana Country Manager—Norwegian Energy Partners

Speakers:

Andreas Hay Kaljord, Director EO Sales—Kongsberg Satellite Services—KSAT

Bjarne Sandrib, Vice President—MHWirth

Carolina Torres, Senior Director, Energy Transformation—Cognite

Linda Sæther, Senior Director—Technical Sales—Oliasoft

Jim Krupa, Vice President—Americas—Exebenus

Kristian Solem, Vice President Product Strategy and Management—eDrilling

Brian Chia, Commercial Manager, International—ELOGIX

Olav Larsen, Sales Manager—AGR Software

Tuesday, 17 August 2021

1400-1700 // Room 302

Opportunities in Brazil's Energy Sector and the Role of Innovation and Digitalization in Securing Brazil's Energy Future

Join the U.S. Department of Commerce and OTC Board of Directors for a discussion on business and investment opportunities in Brazil's energy sector. Brazil's energy policies measure up well against the world's most urgent energy challenges and its energy sector is one of the least carbon-intensive in the world. The session will provide updates on Brazil's energy goals and policies, including natural gas reform, the Open Acreage program, divestment opportunities, and offshore renewable development. The session will also explore how energy companies in Brazil are racing to reduce emissions, increase efficiencies, and lower costs of oil and gas production through innovation and digital technologies.

Speakers:

Uwem Ukpong, Executive Vice President for Regions and Alliances—Baker Hughes

Rodolfo Saboia, Director General—National Oil and Gas Regulatory Agency/ANP

Nicolas Simone, Chief Digital Transformation and Innovation Officer—Petrobras

Douglas Koneff, Charge d'Affaires—U.S. Embassy in Brazil

Eric Dunning, Managing Director for Latin America Business Unit—Chevron

Monica Gorman, Deputy Assistant Secretary for Manufacturing—U.S. Department of Commerce

Beth Urbanas, Assistant Secretary for International Affairs—U.S. Department of Energy

Tuesday, 17 August 2021

1400-1630 // Room 306

Subsea Innovation and Digital Strategies for the Energy Transition

The market for subsea may recover in the next year or two to a point where demand and supply balance again but what will it look like? The future of subsea will may not be business as usual with focus just on lower cost, faster deliveries. We are in the midst of a significant shift in energy - how it's developed, deployed, and used. Our carbon footprint profiles are as important as our technology and profitability and must be considered in our business models. This panel will showcase business leaders in subsea that are integrating the energy transition into how we work, how we attract talent, and how we deploy new and digital technology to meet all these goals.

Moderator:

Barbara Thompson, Early Engagement Manager—Americas, Baker Hughes

Speakers:

Neil Saunders, CEO, Oilfield Equipment, Baker Hughes

Blake DeBerry, CEO, Dril-Quip, Inc.

Ajay Mehta, Delivery Manager, Shell International E&P Inc.

Keith Magowan, Central Subsea Unit Leader, bp

Tuesday, 17 August 2021

1400–1630 // Room 604

Invited Organization: Systems Engineering in Practice: Stories from Experts in the Field

This panel session will bring together four recognized expert practitioners in the field of systems engineering. Each panelist will present a personal story of their experience working in systems engineering. The audience will learn how the complexity of missions between NASA and OTC is fundamentally the same, as are the failure risk and classifications. The audience will learn that many people in oil and gas may be practicing systems engineering to some degree already, possibly without recognizing it as such. The audience will learn how a "fixer" used Model-Based Systems Engineering to rescue a series of failing projects and deliver the systems on time and within budget. The audience will learn how systems engineering techniques can help us to better understand the warming Arctic region as it expands with increased tourism, fishing, exploration, and related traffic along with the promise of vast undersea oil, gas, and other mineral assets. Finally, the audience will be given the opportunity to ask questions and engage in conversations with the panelists.

Moderator:

Don Gelosh, Worcester Polytechnic Institute

Speakers:

Jon Holladay, Systems Engineering Technical Fellow, NASA

Robert Perry, CEO and President, Reach Production Solutions

Barclay Brown, Engineering Fellow, Raytheon Technologies

Tom McDermott, Deputy Director and Chief Technology Officer, Systems Engineering Research Center, Stevens Institute of Technology

Tuesday, 17 August 2021

1400–1550 // Room 606

Maritime Civil Infrastructure

The Maritime civil infrastructure sector is a critical component of both the economy, and resiliency of many countries. An innovative maritime infrastructure sector can impart a competitive advantage to a country's logistics improving delivery and transport of goods and people. At the same time, it can create more livable space and help safeguard against a changing environment. The recognition of the importance of this sector has strongly increased in recent decades. This focus on sustainable and reliable structures, without compromising aspects such as safety, quality and affordability has resulted in new and innovative projects being undertaken. This session will feature a review of recent maritime civil infrastructure projects.

Session Chairpersons:

Julien Denegre, Director, Corporate Business Development and Marketing, Colas SA

Christopher Wyatt, Director, Behre Dolbear & Co. Inc.

1400 31025

Underwater Photogrammetry As An Environmental Assessment Tool To Monitor Coral Reefs And Artificial Structures

V. Mahamadaly, CREOCEAN; I. Urbina Barreto, University of la Réunion; L. Fréchon, CREOCEAN OI; R. Pinel, GEOLAB; R. Garnier, -; K. Destarzes, CREOCEAN

1422 31183

Offshore Urban Extension of the Anse du Portier In Monaco

D. Compte, P. Arstaghès, Bouygues Travaux Publics

1444 30997

Highly Efficient Renewal Of A Hydropower Plant Pipe Coating

P. Palatka, JettyRobot s.r.o.

1506 31105

Carbon Footprint Minimization For Deepwater Pipelay Construction

R.C. Young, Wood Plc; M. Kashani, Individual

1528 31285

Replacing The Piled Foundations Of The Houphouët Boigny Bridge In Abidjan (Cote D'Ivoire)

A. Ameri, Spie Batignolles Fondations; A. Mercer, Spie Batignolles Fondations UK

Tuesday, 17 August 2021

1422–1612 // Room 610

Subsea Innovative Processing and Design

This session will focus on the subsea processing and design aspects of deep-water subsea installations. It includes introducing the innovative process, methodology, technology development, experiences, and lessons learned for subsea facilities. The practice of locating boosting, separation, and gas compression equipment on the seabed continues to gain momentum. Several successful projects will be presented that deliver on the long-promised goal of increased production and reliability. In addition, attendees will see the very latest in subsea processing technology that promises further gains in cost, efficacy and reliability.

Session Chairpersons:

Art Schroeder, President, Energy Valley Inc

Phaneendra Kondapi, Affiliate Faculty, Colorado School of Mines

1422 31187

Pazflor Subsea Separation, Ten Years After

P. Bibet, Total E&P; R. Santos, Total E&P Angola; A. Lucas, Total E&P; D.V. Vunza, Total E&P Angola

1444 31032

Brazil Subsea Processing & Boosting Technologies Yard: More Than 20 Years Of Lessons Learned

M.A. Roberto, Petrobras; H. Koelln, R. De Rezende, Petrobras Petróleo Brasileiro S.A

1506 31192

A New Era: Large Subsea Multiphase Compressor—Driven By Subsea Adjustable Speed Drive

H. Lendenmann, ABB; J. Floisand, OneSubsea LLC; S. Vatland, ABB AS

1528 31035

Subsea Sulfate Removal And Low Salinity Plant Membrane Life Prediction For IOR And EOR

O.S. Haruna, T. Hegdal, NOV; X. Huang, Hydranautics

1550 31054

Key Technology Qualification For Increasing Subsea Well Production Via Drag Reducing Agents

A.J. Schroeder, J.E. Chitwood, Safe Marine Transfer, LLC; J. Verdeil, T. Hughes, Subsea7; T. Gay, Safe Marine Transfer, LLC; J. Gillespie, Y. Lee, LiquidPower Specialty Products Inc

Tuesday, 17 August 2021

1422-1612 // Room 600

Applying Geophysics to Lower Field Development Costs

Our industry has responded to the relentless pressure to do more with less resources and at even lower cost: cutting edge geophysical technologies and workflows allow us to optimize field developments around the world. Global examples that are featured in this session include the early identification of subsurface risks before and during drilling (ultra-deep EM LWD), constraining wellbore stability with 3D stress models, the combination of ocean bottom seismic acquisition with geochemical fingerprinting, the use of novel machine learning and advanced geostatistics for reservoir delineation and identification, and production optimization through data integration. The application of these geophysical breakthroughs not only allows us to reduce cost, but also underpins tackling tremendous unrealized opportunities such as the recent huge pre-salt Brazil hydrocarbon discoveries.

Session Chairpersons:

Stephan Gelinsky, Manager, Shell International E&P Co.
Huyen Bui, Sr. Geophysicist, Shell International E

1422 31216

Mapping Complex Geological Surface Morphology During Landing Operations Using 3D Inversion Of Ultra-deep Electromagnetic LWD Data

N.M. Clegg, Halliburton; A.B. Domingues, N. Gardner, Shell Brazil; V. Mendoza Barron, Norske Shell A/S; R. Ameneiro Paredes, Halliburton; D. Marchant, Computational Geosciences Inc; E. Rowden, Halliburton

1444 30975

Acquire Ocean Bottom Seismic Data And Time-lapse Geochemistry Data Simultaneously To Identify Compartmentalization And Map Hydrocarbon Movement

R. Schrynemeekers, Amplified Geochemical Imaging LLC

1506 30919

Static Reservoir Modelling Comparing Inverse Distance Weighting To Kriging Interpolation Algorithm In Volumetric Estimation. Case Study: Gullfaks Field

D.A. Otchere, Universiti Teknologi PETRONAS; D. Hodgetts, University of Manchester; T.A. Ganat, N. Ullah, A. Rashid, Universiti Teknologi PETRONAS

1528 31291

Productivity Optimization And Validation Of Multistage Fracturing In A Rare Geomechanical Setting With Production Logging

G. Agrawal, A. Kumar, S. Dutta, A. Kumar, S. Pandey, A.K. Jha, R.R. Gondalia, Schlumberger

1550 31119

3d Stress Field Modeling For Wellbore Stability Analysis

S. Li, L. Liu, Z. Han, R. Wu, N. Guo, Tianjin Branch of CNOOC Ltd

Tuesday, 17 August 2021

1444-1634 // Room 602

Deployment of Offshore Technologies and Solutions II

This session will focus on the deployment of technologies within the offshore energy. The session will cover technology qualification, validation, and standard approval for offshore deployment and adoption with service companies and operators. Presentations will focus on topics below the waterline and in the wellbore. Subsea topics for discussion include: Improving Mooring Integrity Through Standardized Inspection Practices and Nano Technology For Produced Water Treatment - State Of The Art Analysis And New Technology Development. For downhole equipment deployment, the following three topics will be discussed: Accelerated Development Of HPHT Smart-dissolvable Potted Nozzle Assemblies Through Nippon-Deepstar Sponsorship For Extended Reach Deepwater Wells, Within A Short Time Of Project Launch; Development Of A Magnetic Vibration And Temperature Sensor System For Electric Submersible Pumps (ESPs) and Accelerated Development Of Subsurface Safety Valve Technologies.

Session Chairpersons:

Joseph Gomes, Associate Director, Offshore Operators Committee
Indranil Roy, Chief Technology Officer, Damorphe Inc

1444 31218

Accelerated Development Of Subsurface Safety Valve Technologies

J.W. Edwards, Baker Hughes Company

1506 31281

Improving Mooring Integrity through Standardized Inspection Practices - A DeepStar® 19403 Project

K. Ma, Retired; R. Spong, Spire Engineering; D. DeBroeck, ExxonMobil; D. L'Hostis, Total; Ø. Gabrielsen, Equinor ASA; L. Valeixo, Petrobras; Y. Chen, Shell; C. Roberts, R.B. Gordon, D. Byatt, Spire Engineering

1528 30927

Accelerated Development Of Pressure Balanced HPHT Dissolvable Plugged Nozzle Assemblies Through The Nippon Foundation - Deepstar Joint Ocean Innovation R & D Program For Extended Reach Deepwater Wells, Within A Short Time Of Project Launch

T.C. Roy, D. Markel, WellNoz-HPHT, DAMORPHE; Y. Koyanagi, C. Furusho, H. Watanabe, Daido Steel; C. Wilkinson, WellNoz-HPHT, DAMORPHE; G. Grullon, Rice University; H. Elshahawi, R. Shenoy, I. Roy, WellNoz-HPHT, DAMORPHE

1550 30987

PEKK (Poly Ether Ketone Ketone) For High Temperature High Pressure Oil & Gas Conditions

A. Geslin, P. Bussi, C. Paul, Arkema; R. Barsotti, J. Hollahan, M. Calvin, Arkema Inc

1612 31134

Assessment Of Internal Tubular Coating Using Flow Loop

M. Zakaria, A. M Sauri, PETRONAS Research Sdn Bhd

Tuesday, 17 August 2021

1444–1634 // Room 312

Digitalization, Data Science, and Modeling in Oil and Gas ●

This technical session focusses on various digitalization, data science, and modeling projects with the oil and gas industry. The papers introduce methods, applications, and results on digital twins, data and physics-based models, data mining and machine learning along with the details of the case studies. The companies within the sessions are well balanced among the players of the industry such as operators, OEMs, consultants and service companies.

Session Chairpersons:

Mete Mutlu, Senior Engineer, Transocean Offshore Deepwater Drlg Inc
Egidio Marotta, Sr. Advisor, Seera Labs

1444 31297

Detecting Interesting And Anomalous Patterns In Multivariate Time-Series Data In An Offshore Platform Using Unsupervised Learning

I. Figueirêdo, T. Carvalho, W. Silva, L. Guarieiro, E. Nascimento, SENAI CIMATEC

1506 31104

Unlocking Potential Thru Sand Management Insights In Digital Fields

R.C. Fuenmayor, Schlumberger WTA Malaysia Sdn Bhd; E. M Shabarudin, PETRONAS; A.H. Abu Bakar, Petronas Carigali Sdn Bhd; S. Mohamad Salleh, PETRONAS; M. Jamaluddin, Petronas Carigali Sdn Bhd; N.T. Vo, R. Hermann, M. Mokhlis, Schlumberger WTA Malaysia Sdn Bhd

1528 31235

Cyberdefence Of Offshore Deepwater Drilling Rigs

D. Angelidis, Shell; I. Sela, P. Rossi, R. Rizika, NavalDome; M. Duck, R. Morrison, Shell

1550 31082

Modeling Production Facilities Using Conventional Process Simulators And Data Validation And Reconciliation (DVR) Methodology

T. Mooney, K. Bratley, BP America Inc.; A. Amin, Belsim Engineering USA, Inc.; T. Jadot, Belsim Engineering SA.

1612 31034

Asset Lifecycle Management—The Digital Solution

J. Dady, Seadrill

Tuesday, 17 August 2021

1600–1800 // Room 204

How Sustainability Can Drive Innovation in the New Energy Ecosystem ●

There is no better time to educate energy professionals in the current market conditions about the need for sustainability in the energy ecosystem. This panel session will present attendees with an in-depth perspective on sustainability, how it integrates and drives innovation, and its overall integration with business decisions and responsibilities improves performance. The panel session will also discuss advancing their professional development in this field and sharing knowledge and technical know-how among practitioners and operations decision-makers.

Moderator:

Johana Dunlop, Sustainability Strategist & Thought Leader, Blue Walrus Sustainability Strategies

Speakers:

Will Foiles, Co-Founder and Chief Operating Officer, Project Canary

Steve Liang, Founder and CTO, SensorUp

Pravin Chandran, Director Advisory, KPMG

Deanna Zhang, Director, Energy Investment Banker, TPH

Tuesday, 17 August 2021

1500–1600 // Room 206

Executive Dialogue: Adaptive Ecosystems in the Era of Electrification ●

This session invites you to consider an adaptive leadership approach towards “meeting the moment” in a new age characterized by uncertainty and rapidly changing conditions. The transition to a clean energy ecosystem has begun and will accelerate. Join us to discuss strategies around building a pipeline of talent given that this next generation is looking for mission-centric engagement and action by their company. How do we, as employers, meet the demands of emerging leaders as our economy moves towards electrification and stands up new industries to meet our climate ambition.

Moderator:

Sandeep Khurana, Member, OTC Board of Directors

Speakers:

Esther Morales, Executive Director, Clean Energy Leadership Institute

Damian Bednarz, External Affairs Director, EnBW

SCHEDULE OF EVENTS

Wednesday, 18 August

MORNING EVENTS

Registration Open 0730–1700
NRG Center, Level 1, Lobbies D and E, Escalator E

Keynote Speaker Series 0700–0900
NRG Center, Level 2, Room 202

- Project Execution in the Energy Transition

Around the World Series—Netherlands 0900–1200
NRG Center, Level 2, Room 300

Around the World Series—Guyana 0900–1200
NRG Center, Level 2, Room 302

Around the World Series—Arctic 0900–1200
NRG Center, Level 2, Room 307

Exhibition | NRG Center 0900–1700

Panel and Technical Sessions 0930–1200
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, and 610

- Active Arena: Pathway for a Sustainable Offshore: Markets, Community, Stakeholders and Technology
- Offshore Hydrogen: The Path to Net-Zero
- Mooring Technologies and Field Experiences
- Advances in Offshore Completions
- Resiliency vs. Efficiency: Ensuring Sustainability of Assets
- Advances in Robotics
- Floating Production Systems
- Advancing Offshore Technology Panel with Greentown Labs

OTC ePoster Lounge 0930–1628
NRG Center, Level 2, ePoster Lounge

Panel Session 1130–1400
NRG Center, Level 2, Room 204

- Advancing Offshore Wind Technology Panel with Greentown Labs

AFTERNOON EVENTS

Keynote Speaker Series 1230–1345
NRG Center, Level 2, Room 202

- The Journey to Net-Zero-Emissions: Challenges and Actors

Panel and Technical Sessions 1400–1630
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, and 610

- Enabling Normally Unattended Facilities (NUF)
- Big Data and Digital Transformation in Oil and Gas
- Health, Safety and Environment: From Assessment, Detection, Protection to Digital Solutions
- The Role of Offshore Facilities towards Net-Zero Emissions
- Well Completion Technologies
- Advances in Production Chemistry for Sustainable Operations
- Applied Digitalization in Geosciences and Technologies to Shape the Future: Effective Cost and HSE

Around the World Series—Israel 1400–1700
NRG Center, Level 2, Room 300

Around the World Series—West Africa 1400–1700
NRG Center, Level 2, Room 302

OTC + NAPE Joint Session: SYNERGY IN ENERGY .. 1600–1700
NRG Center, Level 2, Room 307

Networking Event: Young Professionals: Diversify Your Network 1600–1800
NRG Center, Level 2, Room 204

TECHNICAL PROGRAM COLOR REFERENCE

- Technical/Poster Sessions
- Panel
- Keynote Speaker Series
- Networking Event
- Executive Dialogue Series
- Young Professionals
- Around the World

[View NRG Center, Level 2 Map](#)

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Technical Program *(as of 10 August 2021)*

Wednesday, 18 August 2021

0800–0900 // Room 202

Project Execution in the Energy Transition ●

This presentation gives a high-level summary of the experiences and lessons learned from the development of the Johan Sverdrup Field. It highlights what it took to make Johan Sverdrup a true North Sea giant, fit for the 21st century: a safe and successful execution of a mega-project, with next-generation facilities adapted to a more digital way of working, with an ambition to profitably recover more than 70% of the resources, while limiting carbon emissions from production to a minimum. As the Johan Sverdrup development in many ways has set a new standard for project execution for Equinor, the presentation concludes with lessons-learned of relevance for both Equinor's future project portfolio and for offshore projects globally more generally.

Moderator:

Paul Jones, Vice Chairperson, OTC Board of Directors

Speaker:

Arne Sigve Nylund, Executive Vice President Projects, Drilling and Procurement, Equinor

Wednesday, 18 August 2021

0900–1200 // Room 307

Towards a Sustainable Arctic Region ●

The Arctic is a polar region located at the northernmost part of Earth. The Arctic consists of the Arctic Ocean, adjacent seas, and parts of Alaska (United States), Finland, Greenland (Denmark), Iceland, Northern Canada, Norway, Russia and Sweden. Hydrocarbon exploitation has been cyclical in the Arctic due to three main reasons: ROI: it is a challenging region to exploit. Price of Oil has been a significant factor; Regulations: Countries have enforced strict regulations in the region; and Commitment for people and environment: Arctic holds protected species of marine mammals; whose migration patterns are not fully known. The sentiments of the local communities and metocean conditions like ice and icebergs must be respected.

Moderator:

Sudhir Pai, Chairman, Board of Directors, Technology Collaboration Center

Speakers:

Corri Feige, Commissioner - Department of Natural Resources, State of Alaska

Rachel McCormick - Consul General of Canada for Texas

Lars Erik Aamot, Director General - Ministry of Petroleum and Energy, Government of Norway

Rada Khadjinova, Area Manager - Alaska - Fugro

Reko-Antti Suojanen, CEO - Aker Arctic Technology Inc.

Robert Gerber, Business Development Manager - IceWind

Peter Erkers, Sales Director - Saab

Storm Tussey-Haverly, Interim CEO Americas - Hurtigruten

Astronaut Timothy Kopra, Vice President, Robotics and Operations - MDA

Wednesday, 18 August 2021

0900–1200 // Room 300

The Netherlands: Embracing the Energy Transition: The Dutch Approach ●

The Netherlands is taking part in a global effort to develop a low CO₂ energy economy that is safe, reliable and affordable. We are currently dependent on fossil fuels for almost 93% of our energy supply. During the coming decades, fossil fuels will continue to play a role in the energy system, but they will decrease in importance and new energy sources are needed. In the North Sea, the offshore energy sector is in transition from offshore oil and gas production towards offshore wind. Furthermore, CCS in offshore aquifers and depleted fields is being developed. This session highlights the roadmap The Netherlands has set out to a future-proof sustainable offshore energy supply system.

Moderators:

Tjerk Suurenbroek, Business Development Manager, IRO

Han Tiebout, Consultant, GustoMSC BV

Speakers:

Rene Peters, Director of Gas Technology, TNO

Bas Buchner, President, MARIN

Jacqueline Vaessen, General Manager, Nexstep

Lex de Groot, Managing Director NL, Neptune Energy

Pieter van Oord, CEO, Van Oord

Wednesday, 18 August 2021

0900–1200 // Room 302

The Guyana-Suriname Basin: Exploration, Production and Transition ●

The Guyana-Suriname basin is proving to be prolific – with an estimated oil-in-place exceeding 14 billion bbls, a slew of 18 substantial discoveries in the Stabroek block, four additional recent large discoveries offshore Suriname and successful early production in 2020 from the Liza field. The Liza discovery in 2015 on the Stabroek block, Offshore Guyana, initiated a string of eighteen discoveries on this block, in addition to three discoveries Offshore Suriname as of the end of 2020. International attention on the two small countries of Guyana and Suriname is significant. Not only because of the massive volumes of high-grade reserves but also due to the extremely low breakeven prices of less than USD 35/bbl and falling despite the challenging deepwater environment. Opportunities are abundant for these two countries and also present challenges given the lack of experience and knowledge in high technology offshore petroleum activities. With invited speakers and thought leaders from industry, government and NGOs, this session will celebrate the successes to date and look at the way ahead for resilient and sustainable development of these critical resources. Embracing knowledge sharing, showcasing experiences, wins and technology, and debating the requirements for transparent regulatory frameworks, equitable local content policies and lifting, providing STEM education for current and future work generations.

Moderator:

Nils Kaageson-Loe, Technology Leader - Drilling and Completion Fluids - Baker Hughes

Speakers:

Bharrat Jagdeo, Vice President - Guyana

Rebecca Collacott, Senior Manager - Sustainable Development - IPIECA

Jean-Michel Lavergne, President - Total E&P Americas

Tim Chisholm, Vice President, Guyana & Suriname - Hess Corporation

Robin Muneshwer, Director - Guyana Shore Base Inc.

Tomas Zapata, Director of Exploration Americas Assets - Repsol

Mike Cousins, Senior Vice President, Exploration & New Ventures - ExxonMobil

Patrick Brunings, Manager Exploration and Subsurface, Staatsolie Maatschappij Suriname N.V.

Sponsored by:

Baker Hughes 

ExxonMobil

Wednesday, 18 August 2021

0930–1200 // Room 306

Active Arena: Pathway for a Sustainable Offshore: Markets, Community, Stakeholders and Technology

Across the world, the demand for energy continues to grow. Emerging economies globally and in the United States continue to drive this demand as the global population continues to increase. However, the energy mix is undergoing a transition. Many institutions and industries are considering options concerning the upcoming changes in the energy mix. Successful energy projects generally require engagement with a variety of stakeholders. Thus, this session focuses on sustainability, and engagement with stakeholders (including capital markets, workforce, technological advancement and external communities) on enhancing the offshore energy industry.

Moderators:

Mimosa Miller, Senior Engineer I—American Bureau of Shipping

Adonis Ichim, Well Design Solutions Engineer—Tenaris

Speakers:

Timothy Duncan, President, CEO, and Founder—Talos Energy

David Reid, Chief Technology Officer and Chief Marketing Officer—NOV

Matthew Tremblay, Senior Vice President of Global Offshore Markets—ABS

Aline Almeida, Socioeconomics Specialist—Petrorio

Water Cruickshank, Deputy Director—Bureau of Ocean Energy Management

Wednesday, 18 August 2021

0930–1200 // Room 604

Offshore Hydrogen: The Path to Net-Zero

Hydrogen and hydrogen-based fuel cell technologies are poised to play an integral role in our energy future. This panel of hydrogen technology experts will discuss hydrogen's potential global impact and the applications for hydrogen generation derived from harnessing offshore wind power and other relevant modes of offshore energy harvesting. Panelists will discuss potential demonstration projects and other related activities, as well as the safety and materials challenges that must be addressed for the success of these technologies.

Moderator:

Nick Barilo, Executive Director, Center for Hydrogen Safety, American Institute of Chemical Engineers

Speakers:

Rene Peters, Business Director Gas Technology, TNO

Ajay Mehta, General Manager, New Energies Research and Technology, Shell International E&P Inc.

Jaime Martin Juez, Director, Technology and Corporate Venturing, Repsol

David Edwards, Hydrogen Energy Advocate, Air Liquide Hydrogen Energy

Eric Miller, Senior Advisor, U.S. Department of Energy

Wednesday, 18 August 2021

0930–1120 // Room 606

Mooring Technologies and Field Experiences

This session focuses on technology advancements and learnings from field experience on station keeping systems. Topics covered include design verification, digitization, offshore calibration, operational surveillance, field performance and material selection associated with mooring systems, as well as mooring application on a variety of floater types.

Session Chairpersons:

Sai Majhi, Naval Architect & Marine Engineer, ExxonMobil Global Services Co.

Alison Sheppard, Commercial Project Manager, Exmar Offshore Company

0930 31171

Design Considerations For Polyester Construction Stretch Removal And Its Impact On Mooring System Design

H. Moideen, Hish Consulting; S. Le-Guennec, Total; A.M. Mansour, C. Peng, Worley; M. Huntley, Whitehill Manufacturing

0952 31052

Dropped Polyester Mooring Line Qualification For Reuse

G.R. Craig, P.F. Liagre, C. Heyl, Shell International Exploration and Production, Inc.; C. Del Vecchio, Stress Engineering Services Inc

1014 31233

Corrosion Experience With Low Carbon Steel R4 Grade Mooring Chain

Ø. Gabrielsen, T. Liengen, Equinor ASA; R. Gisle, Equinor; S. Molid, T. Stavang, Equinor ASA

1036 30959

The Auger TLP: Calibration Of Minimum Bottom Tendon Tension Based On Field Measurements

J. Chen, Shell Global Solutions (US) Inc.; Y. Chen, Shell International Exploration and Production Inc.; J. Barras, Shell Exploration & Production Company; V. Nadathur, Shell Intl E&P Deepwater Svcs; Z. Tang, E. Huang, Technip - Genesis

1058 31145

Deepwater Riser & Mooring Life Cycle Digital Integrity Management

D. Renzi, Stress Engineering Services, Inc; V. Nadathur, Shell International Exploration & Production, Inc.; S. Wong, Shell Exploration & Production Company; M. Zhang, Independent Consultant; Y. Chen, Shell International Exploration & Production, Inc.; L. Zarate, RPS Group; S. Fan, Shell International Exploration & Production, Inc.; D. Ayewah, I. Chakraborty, S. Kucukcoban, M. Mistic, Stress Engineering Services, Inc; K. Kurrus, RPS Group

Wednesday, 18 August 2021

0952-1142 // Room 610

Advances in Offshore Completions

This session discusses the advances in technology and operational experience with completions in the offshore environment, including those in deepwater and complex reservoirs. A subsequent session titled Well Completion Technologies will follow addressing the same topics.

Session Chairpersons:

Kenneth Ogier, Completion Manager, Chevron

David Angel, Senior Project Leader, The Aerospace Corporation

0952 31222**Optimization Of Control Line Encapsulation Based On Numerical Simulations Of Shock And Vibration.**

L.B. Nardi, Petrobras; D.F. Sias, L.T. Abreu, M.S. Guimarães, Wikki Brasil; M.F. Da Silva Junior, T.T. Eduardo, Petrobras

1014 31234**A Machine Learning Workflow To Predict Anomalous Sanding Events In Deepwater Wells**

M. Kara, M. Majeran, B. Peterson, T. Wimberly, G. Sinclair, Chevron Corporation

1036 31210**New Downhole Sand Entry Detection Technology Leads Directly To Successful Remedial Work And Additional Oil Production**

G. Agrawal, M.M. Eisa, K. Singh, S. Dutta, A. Kumar, U. Okeke, Schlumberger

1058 30991**Three-Phase Flow Profile Determination Of A Horizontal Well In Offshore By Tracer Technology**

A. Katashov, I. Novikov, E. Malyavko, N. Husein, GeoSplit LLC

1120 31246**Low-temperature Divertor Improves Operational Efficiency And Well Performance In Offshore Application**

K. Vidma, S.E. Bremner, S. Ziyat, D. Choo, P. Abivin, T. Yusuf, Schlumberger

Wednesday, 18 August 2021

0952-1142 // Room 600

Resiliency vs. Efficiency: Ensuring Sustainability of Assets

How can assets be economically designed to last? This session will touch on designing with decommissioning in mind, using technologies to reduce OPEX through better surveillance, maintenance, and operability, and repurposing facilities.

Session Chairpersons:

Michael Romer, Artificial Lift Advisor, Exxon Mobil Corporation

Jerry Carroll, Senior Past President, IEEE/Oceanic Engineering Society

0952 30985**From Data To Assessment Models Demonstrated Using A Digital Twin Of Marine Risers**

M.S. Triantafyllou, MIT; G.E. Karniadakis, Brown University; D. Fan, MIT; E. Kharazmi, Brown University; T. Sapsis, MIT; Z. Wang, Brown University; S. Rudy, MIT

1014 31237**Lena Guyed Tower Decommissioning Engineering**

F. Wu, KBR; C. Alvarez, G. Osterman, ExxonMobil; C. Chen, R.W. Litton, KBR; G. Apostolakis, University of Central Florida

1036 31302**Acoustic Evaluation Of Annulus B Barriers Through Tubing For Plug And Abandonment Job Planning**

S. Bose, L. Zhu, S. Zeroug, Schlumberger-Doll Research; I.A. Merciu, K. Constable, P.V. Hemmingsen, Equinor ASA, Research and Technology; E.V. Berg, Equinor ASA, DPN PT Well Studies; R. Kalyanraman, E. Wielemaker, A. Govil, Schlumberger

1058 30933**Repurposing Of Offshore Oil And Gas Cables For Renewable Generation: Feasibility And Conceptual Qualification**

R.M. Mahmoud, Overseas Solutions Ltd.; H. Fayad, J P Kenny Inc; P.E. Dodds, UCL Energy Institute | UCL Institute for Sustainable Resources

1120 30993**The Use Of Offshore Wind To Reduce Greenhouse Gas Emissions In Offshore Hydrocarbon Production—A Case Study**

D. McLaurin, M. Paulin, C. Peng, R. Yadlapati, Intecsea

Wednesday, 18 August 2021

1014-1204 // Room 602

Advances in Robotics

Robotic tools utilization uptake increased over the years in order to reduce HSSE (Health Safety Security and Environment) risk by taking people out of harms way and increasing efficiency and productivity gains by shortening the duration of operations related to inspection, maintenance, repair, exploration, logistics, drilling and production. New advances in robotic technology aims to reduce asset OPEX (Operational Expenditure) and by doing so increases profitability of oil and gas and new energy operations.

Session Chairpersons:

Ilkay Darilmaz, Robotic IMR Program Manager, Shell

Ross Doak, Digital Project Engineer—Robotics, Shell

1014 31151**Autonomous Subsea Field Development - Value Proposition, Technology Needs And Gaps For Future Advancement**

G. Arcangeletti, Saipem; M. Mattioli, Saipem S.p.A.; M. Ausborn, D. Matskevitch, ExxonMobil Upstream Research Company; A. Marcotulli, Saipem America

1036 31019**First Use Of Rov Remote Operations From Shore In The Gulf Of Mexico**

S. Silva, Oceaneering; B. Terrell, M. Philip, N. Rouge, Oceaneering International; D. ANGELIDIS, J. Sosa, R. Collins, Z. Rauf, Shell

1058 31042**SeaRAY Autonomous Offshore Power System (AOPS): Results Of Sea Trials And Payload Support Demonstration**

R. Lesemann, E. Hammagren, C-Power

1120 31196**Aerial Robotic Systems (Drones) For Contact-based Ultrasonic Wall Thickness (UT) Measurements At Height**

R. Dahlstrom, Apellix

1142 30918**On The Subsea Production System Availability With Resident Drones. A Reliability, Availability, Maintainability (RAM) Analysis.**

M. Mattioli, A. Di Padova, Saipem SPA

Wednesday, 18 August 2021

1014–1204 // Room 312

Floating Production Systems

Methods for design, analysis, and operations of floating production systems continue to evolve. Presentations in this session will discuss advances in structural and hydrodynamic analysis methods used during design and operational phases for a range of floater types. Strategies for engineering, procurement, construction, and installation contracting will also be discussed.

Session Chairpersons:

Todd Carrico, Technology Manager, Gibbs & Cox, Inc.

Sathish Ramamoorthy, Principal, Stress Engineering Services Inc

1014 31166

Validation Of Spectral Fatigue Assessment Of A West-Africa FPSO Using Full-scale Measurements

A. Andoniu, J. de Lauzon, Bureau Veritas Marine & Offshore; R. Hageman, P. Aalberts, MARIN; D. L'Hostis, A. Ledoux, TOTAL

1036 31155

A Critical Assessment Of Deepwater Gulf Of Mexico Floating Platform Engineering, Procurement, Construction And Installation (EPCI) Contracting Strategies and Cycle Times

R.B. D'Souza, Richard B. Offshore; S. Basu, KBR

1058 30921

An Interactive Numerical-experimental Approach For Predicting The Vortex Induced Motion Of Floating Production Systems

A.M. Mansour, C. Peng, Worley; S. Le-Guenec, TOTAL; H. Moideen, Hish Consulting

1120 31280

Advances In Offshore Structural Analysis Using Response-based Time-domain Approach

J. Kyoung, S. Samaria, J. O'Donnell, S. Tallavajhuta, genesis

1142 31304

Offshore Platform Topsides Structural Design: Using Topology Optimization To Generate Novel Design Concept

Z. Li, A. Wang, J. Wang, O.M. DaSilva, Exmar Offshore Company

Wednesday, 18 August 2021

0930–1628 // ePoster Lounge

ePoster Lounge III: Part 1

This poster session gives the OTC program committee a special opportunity to showcase talented technical leaders from across the industry and the globe.

Session Chairpersons:

Jason Pasternak, Project Manager—R&D Lead Engineer, Delmar Systems, Inc.

Surupa Shaw, Assistant Professor, Texas A&M University

0930 30930

Well Integrity Diagnostics Using Acoustic Event Classification On Distributed Acoustic Sensing Data

L. Noble, H. Rees, P. Thiruvenganathan, T. Langnes, Lytt Ltd

0952 31160

Intelligent Pipe, A New Monitoring Solution For Your Wells

F. Bulard, Vallourec; E. Tavernier, OpenField; A. Deroubaix, U. Caruso, Vallourec

1014 31250

Wandoo B: Application Of Advance Reinforced Concrete Assessment For Life Extension For Non-jacket Structures

R. Sheppard, Spire Engineering Services LLC; C. O'Brien, Vermilion Oil and Gas Australia; Y. Moslehy, R. Roberts, Spire Engineering Services LLC

1036 30917

Corrosion Evaluation In Dual Completions Using A Multifrequency Electromagnetic Tool

J. Dai, A.E. Fouda, Halliburton Energy Services Group

1058 30999

Fracture Mechanics Assessment Of Cracks In Areas Of Large Scale Plasticity In Subsea HPHT Equipment

M.C. Kulkarni, Stress Engineering Services, Inc; D.J. Kluk, J.F. Chappell, Stress Engineering Services Inc; C.F. Lopez, Stress Engineering Services, Inc

1120 31060

TRACS JIP - TTR Life Extension Process

D. DeKa, M. Campbell, 2H Offshore Inc.; V. Patil, Clarus Subsea Integrity; M. Ge, bp; S. Wong, Shell; T. Frame, Occidental Petroleum

1142 31207

The Effects Of Low Temperature Carbon Diffusion On Stainless Steel

P. Dymond, A. Bauer, D. Cummings, Bodycote

1204 31288

Hydrophobic Dielectric Sealing Material Enabled Highly Reliable Electrical Connectors For Downhole Data And Power Transmission Application

H. Xia, Hermetic Solutions Group; D. DeWire, Hermetic Solutions Group LLC

1248 31252

Recent Developments In The Use Of Hip For The Offshore Industry

J. Shipley, Quintus Technologies AB; C. Beamer, Quintus Technologies LLC; J. Gårdstam, Quintus Technologies AB

1332 30955

Qualification Of A New Multiphase Pump. The Setting Of A New Standard

A. Hofstad, Aker Solutions AS; M. Rondon, P. Bibet, Total SE; T. Olderheim, Aker Solutions AS; E. Thibaut, Total SE; M. Almgren, Aker Solutions AS

1416 31184

Springs® Design Optimized By Seawater Quality. Laboratory Pilot Tests

P. Pedenaud, M. Rondon, N. Lesage, E. Tournis, Total SE; R. Giolo, Saipem S.A.; G. Skivington, Veolia

1226 31229

Introducing An Innovative Perfluoroelastomer Cross Linking Technology: Achieving Superior Chemical Resistance And Thermal Stability

A. Rodriguez, DuPont; J. Alvarez, Kalrez; C. Bish, DuPont

Wednesday, 18 August 2021

0930–1628 // ePoster Lounge

ePoster Lounge III: Part 1 (continued)**1310 31314****Minimising The Risk Of Hydrogen Embrittlement (HE) And Hydrogen Assisted Stress Cracking (HASC) Within Steel Lifting Products Used In The Marine Environment**

B. Burgess, William Hackett Holdings Limited

1354 31172**Subsea Chemical Storage And Injection - Qualification Of Hammelmann Hampro 70V Pump**

B. Thorkildsen, L.J. McKenzie, S. Følknær, TechnipFMC; F. Pasquet, Total; P. Bibet, Total E&P; S. Følknær, TechnipFMC

1438 31182**Rams Analysis For Different XT Technologies**

M. Glaser, Aalen University; T. Winter, Advanced Mechatronics GmbH

1500 30941**Pathway To Decarbonisation And Maximum Value Recovery For Remote Offshore Gas Fields**

L. Thomas, INTECSEA (UK) Ltd; T.G. Wood, L. Liebana Yeste, IntecSea; A. Coaker, Worley; G. Rogerson, The Oil and Gas Technology Centre; A.M. Mansour, IntecSea; R. Hunt, Worley

1522 31123**Condition Monitoring Of Next Generation Digitized Electric Subsea Actuators**

T. Winter, Advanced Mechatronics GmbH; M. Glaser, Aalen University

1544 31096**Integrated Approach To Multiphase Flow Regime Prediction Through Computational Fluid Dynamics (CFD)**

M. Straw, Norton Straw Consultants; R. Aglave, R. Piccioli, Siemens Digital Industries Software

1606 31308**A Model-Based System Metaheuristic Engineering (MBSME) Approach In The Conceptual Selection Of Offshore Production Units**

L.P. Basilio, P.B. Machado, D.C. de Sousa, R. de Castro, Deep Seed Solutions; D.R. Juliano, P.S. Boeira, Shell Brasil Petróleo Ltda.; M. Andreotti, Repsol Sinopec Brasil SA

Wednesday, 18 August 2021

0930–1416 // ePoster Lounge 2

ePoster Lounge III: Part 2

This poster session gives the OTC program committee a special opportunity to showcase talented technical leaders from across the industry and the globe.

Session Chairpersons:

Jun Zhang, CFD/Research Engineer, ZEECO

Nagu Daraboina, Assistant Professor, University of Tulsa

0930 31079**Monitoring And Calibration Of Long Term Mooring System Design Assumptions Through Use Of AIS And Weather Data**

D.B. Lillestøl, A. Torstensen, O.T. Kårvand, DNV GL

0952 31131**Improved Acoustic Quick-disconnect Technology For Mooring Operations**

K. Longridge, InterMoor; J. Shield, Subsea Riser Products Ltd; S. Finn, InterMoor; T. Fulton, Acteon

1014 31049**Recent Progress In Applying Advanced Computation Methods To Radar-based Wave Measurements**

M.L. Vinther, T. Eide, A. Paraschiv, D. Bonvik-Stone, Miro

1036 30940**Extreme Coastal Inundation Under Different Climate Scenarios: Fourchon Junction Case Study**

O. Sequeiros, Shell Global Solutions International B.V.; S. Jaramillo, Shell Global Solutions (US) Inc

1058 31020**Energetics And Kinematics Of Inertial Oscillations In The Central Northern GOM**

L. Ivanov, Woods Hole Group Inc.; R. Ramos, Woods Hole Group; D. Gustafson, Woods Hole Group Inc.

1120 31253**Using Metocean Forecast Verification Information To Effectively Enhance Operational Decision-Making**

E. Steele, H. Brown, C. Bunney, P. Gill, K. Mylne, A. Sautler, J. Standen, Met Office; L. Blair, S. Cruickshank, M.K. Gulbrandsen, TechnipFMC

1142 31258**Experimental Investigation Of Fpso Roll Motion Response Coupled With Slushing In A Pair Of Two Row Cargo Tanks**

J. Igbadumhe, Stevens Institute of Technology; M. Fürth, Texas A&M University; J. Bonoli, J. Dzielski, Stevens Institute of Technology

1204 31178**New Insights Into Geochemical Modeling Of Hybrid Low Salinity/ Engineered Water And Polymer Injections In Carbonates**

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

1226 31136**Offshore LNG And Gas Monetization**

F.A. Alabi, Total E&P Nigeria Ltd.

1248 31282**Subsea Tree Fatigue Mitigation Solutions For Shallow Water Drilling**

M. Sonawane, 2H Offshore Inc.; L. Ge, BP America Production Co.; S. Johnson, M. Campbell, 2H Offshore Inc.

1310 31165**Improving The Fatigue Performance Of Welded Tubular Connections Via Flared And Thickened Pipe Ends**

G. Mansour, ARTIFEX ENGINEERING INC.

1332 31299**Structural Analysis Of Rigid High-pressure Risers For Seismic Loads**

M. Sonawane, R. Vaidya, 2H Offshore Inc.; H. Haerberle, Baker Hughes

1354 31284**Greater Tortue Ahmeyim Project For BP In Mauritania And Senegal/ Breakwater Design And Local Content Optimizations**

D. Bellengier, Y. JULIEN, A. REPLUMAZ, Eiffage Genie Civil Marine

Wednesday, 18 August 2021

1130–11400 // Room 204

Advancing Offshore Wind Technology Panel with Greentown Labs ●

Join Greentown Labs, North America's largest Climatedtech Startup Incubator, for a panel discussion on Offshore Wind Technology! This panel will bring together Startups, Corporations, Investors, and Employees working in the Offshore Wind Industry from virtually every angle. It will serve as a place for attendees of the 2021 Offshore Technology Conference to learn more about Offshore Wind, where the industry is going, and the current challenges it is facing.

Moderator:

Juliana Garaizar, Head of Houston Incubator and VP of Innovation, Greentown Labs

Speakers:

Katie Geusz, Director of Programs, Greentown Labs

Julie Angus, CEO and Co-Founder, Open Ocean Robotics

Roy Robinson, CEO and Co-Founder, Excipio Energy, Inc.

Nastassja Hagan, Vice President Supply Low Carbon Energy, Finance—bp

Pierre Liagre, Senior Civil & Marine Engineer—Shell

Wednesday, 18 August 2021

1230–1345 // Room 202

The Journey to Net-Zero-Emissions: Challenges and Actors ●

Over the last year few years, many oil and gas operators have presented their strategy to reduce their greenhouse emissions, with the aspiration of achieving net-zero emissions in energy generation by 2050. Apart from these operators, quite a number of governments have set similar targets. The path to net-zero emissions, in all the related scopes, requires a large investment in diversification, technology development, and supply chain management on a scale that will certainly face many challenges over the next decades. A combined effort between public institutions and private companies are required to fulfill this objective. This session features two keynote speakers from The European Commission, a continent that is leading the energy transition with their Green Deal initiative launched early in 2020, and bp, an integrated energy company, that has publicly announced a strategy to reduce emissions down to net zero by 2050.

Moderators:

Kerry Fellers, Consultant

Daniel Merino-Garcia, Manager, Completions and Production Engineering, Repsol S.A.

Speaker:

Sarah Hill, Senior Manager of the Gulf of Mexico Procurement—bp

Wednesday, 18 August 2021

1400–1700 // Room 302

U.S.-West Africa: Sharing Prosperity in Oil and Gas Resources ●

This program will consist of two panel discussions followed by a reception. The first panel will focus on policies, laws and regulations covering the exploration and development of petroleum in Nigeria, Ghana, Senegal, Mauritania, and Cote d'Ivoire. The panelists will consist of senior level government officials of the selected countries and these officials will speak on specific investment opportunities in oil and gas. The second panel will include IOCs that will discuss their operations on the Continent, the impact of Government policies on their investment, the use of new technology, and navigating local content regulations and their corporate social responsibility activities.

Moderators:

Kimathi Kuenyehia, Partner, Kimathi & Partners Corporate Attorney

Senyo Hosi, Chief Executive Officer, Chamber of Bulk Oil Distributors (CBOD)

Speakers:

Hon. Dr. Matthew Opoku Prempeh-MP, Minister of Energy, Ghana

H.E Hajia Alima Mahama, Ghana's Ambassador to the United States

Hon. Andrew Kofi Egyapa Mercer-MP, Deputy Energy Minister, Ghana

Egbert Faibille Jr., CEO, Petroleum Commission, Ghana

K.K Sarpong, CEO, Ghana National Petroleum Corporation (GNPC)

Joe Mensah, Senior Vice President & Head of Ghana Business Unit, Kosmos Energy LLC

Bharathwaj Kannan, Area Manager for North West Africa and Managing Director for Ghana, Halliburton

Wissam Al Monthiry, Managing Director, Tullow Ghana

Theophilus Ahwireng, Managing Director, MODEC Production Services Ghana Limited

Ben Asante, CEO, Ghana Gas Company Limited

Mustapha Abdul-Hamid, CEO, National Petroleum Authority (NPA)

Edwin Alfred Provencal, Managing Director, Bulk Oil Storage and Transportation (BOST)

Benjamin Kwame Asante, Director of Petroleum, Ministry of Energy, Republic of Ghana

K. Osei-Prempeh, MD & Group CEO, GOIL Company Limited

Wednesday, 18 August 2021

1400–1700 // Room 300

Emerging Israeli Safety and Security Technologies ●

This session will highlight upstream, midstream, and downstream oil and gas industry collaboration with emerging Israeli technologies. Chevron will lead off with a special keynote showcasing progress in Israel and collaboration with Israeli innovation. The Bird Foundation will introduce its USD 1 million matching grant program together with a testimonial presented by Opgal. Delek U.S. and GOARC will present a case study around advanced safety technology and operational excellence and share their experience and success on a recent Shutdown/Turnaround project, and also discuss how their combined strength and technologies are applicable offshore. TechnipFMC will then lead the finale with an emerging Israeli maritime security technologies discussion with executives from Naval Dome, Prisma Photonics, SeaErra, Captain's Eye and Opgal.

Speakers:

Orna Avraham, Incoming Houston-based Economic Consul, Ministry of Economy and Industry—Government of Israel

Livia Link, Incoming Houston-based Consulate General of Israel to the Southwest, Ministry of Foreign Affairs—Government of Israel

Andrew Kulpecz, Manager, Eastern Mediterranean Value Chain Optimization—Chevron

Shir Freund Koren, Business Development, Southern US and the US Coordinator, US-Israel Energy Center—BIRD Foundation

Taha Hussein, Venture Partner—Delek U.S.

Paul Linkin, Vice President, HSE and Methodology—GOARC

Gabriel Silva, Director Technology Watch—TechnipFMC

Itai Sela, CEO—Naval Dome

Eran Inbar, CEO—Prisma Photonics

Nir Eliaz, CEO—SeaErra

Uri Ben Dor, CEO—Captain's Eye

Ehud Dinerman, CEO—Opgal

Wednesday, 18 August 2021

1400–1630 // Room 306

Enabling Normally Unattended Facilities (NUF) ●

Normally Unattended Facilities (NUF) are emerging in the oil and gas industry. While still in early stages, NUF concepts are becoming a reality as the industry continues to enhance safety and reduce expenditure. Presentations from industry experts at operating companies will provide perspectives on how NUFs are being enabled. Topics of interest include differences from sometimes-attended facilities; design considerations for when human interaction is not needed; autonomous operation including the utilization of robotics systems, advanced communication networks, and sensing for remote situational awareness.

Moderators:

Sudhir Pai, Chairman, Board of Directors, Technology Collaboration Center

Rami Jabari, Senior Research Engineer, ExxonMobil

Speakers:

Jean-Michel Munoz, Next-Generation Facilities R&D Project Manager, Total

Sean Eckerty, Principal Concept Engineer and Team Lead for Front End Engineering and Development Planning, Shell International Exploration and Production Company

Patrick Moore, Instrument and Controls Advisor, ExxonMobil

Moises Abraham, General Manager—Subsea, Civil and Marine Engineering, Chevron

Camila Vasconcellos, Equipment Engineer for Offshore Surface Production Systems, Petrobras

Peter Stephens, Regional Concept Lead—Shell Development Australia, Royal Dutch Shell

Wednesday, 18 August 2021

1400–1630 // Room 604

Big Data and Digital Transformation in Oil and Gas ●

This panel will discuss the big data and digitalization in the oil and gas industry. Implementation examples, lessons learned, and value added will be discussed. Key examples and elements of the discussion include: Unstaffed Facilities, Automation, Standards Development, Offshore Renewables, Value Added. In this discussion, panelists will explore the challenges associated with maintaining the lower cost regime that has emerged from the last five years of downturn in the deepwater industry and how Big Data and Digitalization adds value and reduces cost.

Moderator:

Barbara Thompson, Early Engagement Manager—Americas, Baker Hughes

Speakers:

Tom Costabile, CEO/Executive Director, American Society of Mechanical Engineers

John Boot, VP/CIO, Yutime Petroleum

Arno Van Den Haak, Head, WorldWide Business Development Energy, Amazon Web Services

Maria Bulakh, Specialist Subsea Systems & Digitalization, Aker Solutions

Wednesday, 18 August 2021

1400–1550 // Room 606

Health, Safety and Environment: From Assessment, Detection, Protection to Digital Solutions ●

The oil and gas industry has been facing lots of challenges for the last couple of years due to the downturn and the pandemic. Both operating and service companies have been focusing not just on remaining time efficient and cost competitive, but also on maintaining all industrially technical standards to ensure HSE, reliability and integrity. This session covers a broad range of all related topic from risk assessment during planning phase, early kick detection, mitigation and protection plan, and advanced digital solutions to ensure people, process, and environmental safety. Health, safety, and environment will always be critical for the oil and gas industry to move toward digitalization revolution and energy transition.

Session Chairpersons:

Kim Faulk, Project Manager, Marine Archaeology, Geoscience Earth & Marine Svc

Claudia Ludwig, Consultant

Fabian Vera, Reservoir Engineer, Mire & Associates Inc

1400 30968

A System-theoretic Approach To Well Control Assurance Programs

B. Baylor, Chevron Upstream

1422 31115

Protective Barrier Wall Response To Sequential Blast And Fire Events

H. Smith, Wood PLC

1444 30976

Incorporating Digital Solutions To Foster Greater Remote EHS Engagement With Personnel

L. Boyd, Siemens Energy

1506 31262

The Functional State Assessment As The Psychological Safety Marker Of The Offshore Production Platform Workers

Y.A. Korneeva, Northern Arctic Federal University; N.N. Simonova, Moscow State University; Northern Arctic Federal University

1528 31057

Planning For Unknown In The New Age Of Digital: A Paradigm For Offshore Oil And Gas Risk Assessment And Management

H. Hamedifar, H. Wilczynski, Accenture

Wednesday, 18 August 2021

1422-1612 // Room 610

The Role of Offshore Facilities towards Net-Zero Emissions

This session will explore new developments and lessons learned from several field cases where offshore facilities have a role in reducing CO₂ emissions, either decreasing gas /diesel consumption to provide power for existing exploration and production assets with renewable energy or unlocking the potential of offshore wind. Topics include applications for lithium-ion batteries, wave/wind energy hybrid farm, floating wind, and renewable hydrokinetic energy from the river and tidal currents.

Session Chairpersons:

Daniel Merino Garcia, Manager, Completions and Production Engineering, Repsol S.A.

Nikhil Joshi, Director, Evoleap LLC

1422 31098

Net Zero Facilities - A Tenet For Survival Or Pipedream?

J. Varney, R. Dyson, io consulting; V. Khan, McDermott; C. Dartnell, Schneider Electric

1444 30947

Are You In The Green? The Economic Impact Of Carbon-Conscious Choices On Project Development Planning

D. Choe, J.L. Whitworth, A. Kak, G. Bisset, Genesis

1506 30923

Applications of Lithium-ion Batteries in Offshore Oil & Gas: The Journey to Building a Low-emissions Drilling Rig

S.O. Settemsdal, Siemens Energy

1528 31220

Innovative Energy Storage Concept For Saipem Offshore Windstream Application

E. La Sorda, F. Pucci, Saipem; B. Mauries, Saipem SA; B. Storheim, Moss Maritime a.s; G. Arcangeletti, Saipem

1550 31124

Feasibility Of The Potential For Wave And Wind Energy Hybrid Farm To Supply Offshore Oil Platform In Gulf Of Mexico

G. Gu, H. Li, F. Haces-Fernandez, Texas A&M University-Kingsville

Wednesday, 18 August 2021

1422-1612 // Room 600

Well Completion Technologies

Well completions interface with many technology areas in the oilfield. The papers in this session present a broad spectrum of advances that support those overlapping areas. Equipment, stimulation, simulation, conveyance, and architecture are all featured. There is certainly something in this session for participants from all offshore regions.

Session Chairpersons:

Rodney Wetzel, Retired

Robert Mccavitt, Retired

1422 31142

Umbilical-Less Tubing Hanger Installation Controls System

T. Lovland, T. Løkka, Optime Subsea

1444 31313

Near-wellbore Hydraulic Fracture Non-planar Propagation And Torturous Morphology In Tight Sandstone Formation

R. Zhang, Texas AM University; Q. Shan, Shandong University of Science and Technology; W. Cheng, China University of Geosciences(Wuhan)

1506 31301

Optimized Completions Design Using Retrofit Autonomous Inflow Control Devices

E.A. Nnebocha, Schlumberger; A. Akinbola, NPDC; G.O. Kakayor, A. Odutayo, T. Olukayode, O. Oguntayo, C. Onwuchekwa, First Hydrocarbon Nigeria; A. Dikshit, T. Kumar, T. Ilusemeti, A. Rudic, A.B. Nkanga, O. Olagunju, Schlumberger; R. Nwaokwu, C.H. Ugboaja, Litewell Services

1528 31186

Aqueous Degradable Polyurethane Elastomers For Oil & Gas Applications

M. Burdzy, Ph.D., Lanxess Corporation

1550 31260

Novel Experimental Method To Determine The Performance Of Vacuum Insulated Tubing (vit) For Deepwater Applications

I. Ceyhan, S. Vasantharajan, P.V. Suryanarayana, U.B. Sathuvalli, Blade Energy Partners, Ltd.; A. Helou, P. Barde, Synergy Petroleum International LLC

Wednesday, 18 August 2021

1444-1634 // Room 602

Advances in Production Chemistry for Sustainable Operations

This session presents fluid flow engineering practice and lessons learned from development projects, green field and brown field, and the advances in fluid engineering technologies that help to deliver cost effective engineering concepts and risk management solutions.

Session Chairpersons:

Phaneendra Kondapi, Affiliate Faculty, Colorado School of Mines

Aiman Al-Showaiter, Principal Engineer, Wood Group USA Inc

1444 31327

Density Measurement Of Three-phase Flows Inside Of Vertical Piping Using Planar Laser Induced Fluorescence (plif)

A.B. McCleney, K. Supak, Southwest Research Institute

1506 31303

Qualification Of Wax Control System

Ø. Stangeland, Subsea 7; S. Daasvatn, Subsea7; Y. Novoseltsev, Subsea 7

1528 30998

Hydrate Management Strategy For Subsea Development In Gulf Of Mexico

S. Soroush, D. Lu, T. Golczynski, C.J. White, T. Spratt, Assured Flow Solutions LLC

1550 31300

Scale Removal In A Deepwater Oil Production Well Using Fresh Water

P.H. Martins, B.M. Freiman, Petrobras

1612 31161

Reducing THI Injection And Gas Hydrate Agglomeration By Under-Inhibition Of Crude Oil Systems

J.G. Delgado-Linares, A.A. Majid, L.E. Zerpa, C.A. Koh, Colorado School of Mines

Wednesday, 18 August 2021

1444–1634 // Room 312

Applied Digitalization in Geosciences and Technologies to Shape the Future: Effective Cost and HSE

In less than a decade, the oil and gas industry has made a significant shift to big data volume and digitalization revolution. This session focuses on the application of digitalization and technologies in a new era of the oil and gas industry to ensure operational safety and cost reduction. The papers in this session cover broad range of applying digitalization from utilizing automation and advance technology in drilling, well testing, and reservoir management; applying digital solutions in quality, health, safety, and environmental control; and implementing neural networks; to improving interpretation and forecast drilling problems to developing a computationally intelligence model for oil formation volume factor estimation for effective cost and safe operation. Applied digitalization will open more opportunities for future shaping of oil and gas industry and its transition to clean energy.

Session Chairpersons:

Huyen Bui, Sr. Geophysicist, Shell International E&P Co.

Oluwayomi Oyedele, Senior Geoscientist, Geoscience Earth & Marine Svc

1444 31275

Bringing Flexibility And Automation To Well Testing Operations Through Wireless Telemetry—Case Study

E. Temer, D. Subramaniam, Y. Kaipov, C. Merino, Schlumberger

1506 31125

Advancing Effective Response Technology To Manage Containment Of High Pressure, High Temperature Wells

M.J. Goldsmith, Marine Well Containment Company

1528 30950

Principles For Selection Of The Quality, Health, Safety And Environmental Digital Solution

R. Efendi, M. Cabassa, B. Cagnart, TechnipFMC

1550 31169

MultiResU-Net: Neural Network For Salt Bodies Delineation And QC Manual Interpretation

Y. HajNasser, Seismic Geo-Engineering Solutions LLC

1612 31295

Automated Reservoir Management Workflows To Identify Candidates And Rank Opportunities For Production Enhancement And Cost Optimization In A Giant Field In Offshore Abu Dhabi

C. Mata, L.A. Saputelli, D.G. Badmaev, W. Zhao, R.D. Mohan, ADNOC; D. Gonczi, A. Schweiger, R. Manasipov, G. Schweiger, L. Kren, O. Toumi, Datagrator

Wednesday, 18 August 2021

1600–1700 // Room 307

OTC + NAPE Joint Session: SYNERGY IN ENERGY

Join the Offshore Technology Conference (OTC) and NAPE for a jointly organized fireside chat of industry leaders as they discuss the energy transition journey.

Oil and gas leadership has traditionally focused their strategic planning on geographies, hydrocarbons, and policy but with the introduction of the energy transition, Chris Golden, US Country Manager, Equinor and Kimberly Krieger, COO—Production, bpx energy will discuss how their corporate strategies have changed.

Golden and Krieger will discuss new end-customers and stakeholders that have developed due to the energy transition; how policy and regulatory changes have affected their business; changes to the workforce; revenue expectations, and how they repurposed assets.

Moderator:

Randall Bell, Director, Global Energy Center (GEC)—Atlantic Council

Speakers:

Christopher Golden, US Country Manager—Equinor

Kimberly Krieger, COO—Production—bpx

Wednesday, 18 August 2021

1600–1800 // Room 204

Young Professionals: Diversify Your Network

Expanding professional networks is essential for creating greater visibility. Most jobs rely on being able to forge professional relationships, both with colleagues and experts in the wider industry. However, the outbreak of COVID-19 has led to the cancellation of networking events, as well as forcing a significant proportion of the global population to work from home, in a bid to slow the spread of the virus. Amid the pandemic, reaching out to professionals virtually can feel daunting and one can't guarantee "having chemistry" with new contacts. Hence it's important to come out of one's comfort zone to connect with people "under any circumstance." This session will highlight the various ways to get creative and network with professionals despite the current climate, as a catalyst for increased online networking. It will allow participants to lay the foundation for future growth regardless of new ways of working in which we may find ourselves.

Moderator:

Nii Ahele Nunoo, Senior Associate Energy Core Operations, KPMG

Speakers:

Ernesto Valbuena, Senior Petroleum Engineer, Chevron

Catalina Leal Isaza, Global Quality Leader Oilfield and Industrial Chemicals, Baker Hughes

Yuliya Olsen, Client Manager, McKinsey & Co. Inc.

SCHEDULE OF EVENTS

Thursday, 19 August

MORNING EVENTS

Registration Open 0730-1400
NRG Center, Level 1, Lobbies D and E, Escalator E

Energy4me High School Teacher Event 0730-1345
NRG Center, Level 2, Room 300

Keynote Speaker Series 0800-0900
NRG Center, Level 2, Room 204

- Center for Offshore Safety: SEMS Leadership Presentation

Networking Event: Digital Networking for Professionals: Tips for Building Connections and Careers 0900-1100
NRG Center, Level 2, Room 202

Exhibition | NRG Center 0900-1400

Virtual University R&D Showcase 0900-1400
Virtual Platform

Panel and Technical Sessions 0930-1200
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, and 610

- Subsea Power Generation
- Center for Offshore Safety: Promoting a Culture of Safety Through Transparency and Knowledge Sharing
- Advances in Drilling Technology I
- Advanced Developments in Subsea Production Systems
- Impact of Digital Twins in Enhancing Offshore Activities
- SURF Key Challenges and Innovative Solutions
- Subsea Electrical Applications

AFTERNOON EVENTS

Keynote Speaker Series 1230-1345
NRG Center, Level 2, Rooms 202 and 204

- Offshore Aquaculture
- Center for Offshore Safety: Safety and Environmental Management Regulatory Perspective

Panel and Technical Sessions 1400-1630
NRG Center, Level 2, Rooms 306, 312, 600, 602, 604, 606, and 610

- Best Practices in Dealing with a Pandemic such as COVID-19 in the Offshore Industry
- Well Abandonment and Facilities Decommissioning
- Advances in Drilling Technology II
- Improved Reservoir Description for Production Optimization
- Advances in Digital Technologies for Driving Innovation and Transformation
- Innovations in Riser Systems
- Subsea Fields of the Future

Energy4me Teacher STEM Workshop

The OTC Energy4me Teachers STEM Workshop welcomes science teachers to this free, one-day workshop. Teachers receive hands-on training by qualified facilitators, listen to a presentation from a prominent energy professional and tour the OTC exhibit floor. Additionally, teachers receive a variety of free instructional materials to take back to their classrooms. This year, the Teacher's workshop is generously sponsored by Saudi Aramco.

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| ● Panel | ● Executive Dialogue Series |
| ● Keynote Speaker Series | ● Young Professionals |
| ● Around the World | |

[View NRG Center, Level 2 Map](#)

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Technical Program *(as of 10 August 2021)*

Thursday, 19 August 2021

0800–0900 // Room 204

Center for Offshore Safety: SEMS Leadership Presentation ●

Enhancing Process Safety through Scenario Based Assessments presented by ExxonMobil will describe Exxon's journey to selecting this approach, details of the methodology, and learnings since it was implemented in 2018. ExxonMobil's approach to internal SEMS assessments had been primarily focused on evaluating the status and effectiveness of each SEMS element (Risk Assessment and Management, Management of Change, etc.). While this approach provides insight into each individual SEMS element, it doesn't fully capture the interdependency that is required among the SEMS elements to maintain safe operations. ExxonMobil has enhanced its SEMS assessment process to include scenario-based process safety assessments. In addition to the SEMS element assessments, two to three process safety major hazard scenarios are selected for review. As part of the SEMS assessment, a dedicated process safety assessor performs an in-depth evaluation of the scenarios across all SEMS elements, including assessment of barrier health. Incorporating Scenario Based Process Safety Assessments into SEMS assessments has increased the assessment team focus and insights on process safety major hazards and use of a dedicated assessor is driving improved consistency and quality of assessments. Embedding Process Safety into Operations presented by Baker Hughes will discuss one critical success component of a management system is the integration of process safety into conducting operational activities. In operations this involves ensuring operational readiness and crew response capability. The "Forgetting Curve" effect is empirical evidence that operational readiness and crew response capability degrades over time. Thus, crew resource management is not static and as such requires a lifecycle management approach to increase knowledge, skill and ability retention. At Baker Hughes we have developed a human performance approach to embed process safety into the way we do business. The following are two tactical examples from the Baker Hughes process safety risk management strategy: Threat Response Drills and Tactical Decision-Making Scenarios to evaluate and enhance crew ability to accurately detect, diagnose, decide, and act when encountering abnormalities or deviations in operations; and Process Safety Operations Fundamental (PSOF) that focus on safety critical tasks in operations to prevent or mitigate major accident hazards.

Moderators:

Julia FitzGerald, Center for Offshore Safety
Michael Fairburn, Engineer, Shell International E&P Co.

Speakers:

Huzefa Ali, Reliability and Work Management Manager, ExxonMobil Upstream Oil and Gas
Terrence Sookdeo, Consultant, Baker Hughes

Thursday, 19 August 2021

0900–1100 // Room 202

Digital Networking for Professionals: Tips for Building Connections and Careers ●

Should you create and maintain a LinkedIn profile if you are happy in your job? What are some of the benefits beyond job search? How can you use your profile to expand your network and build connections with others in your industry? And if you are searching for a job, are there tips and tricks that can help you use LinkedIn? Join us for a session for behind the scenes information on making the most of your online presence.

Speaker:

Melanie Woods, Managing Partner, CGL Recruiting

Thursday, 19 August 2021

0930–1200 // Room 306

Subsea Power Generation ●

This panel session will explore new technologies, innovations, and execution methodologies that are being developed to generate and provide the power needed for emerging technologies such as subsea compression, boosting, sensing, and control. Panelists will include representatives who have been intimately involved with identifying, developing, commercializing, implementing and operating offshore power generation and distribution facilities.

Moderators:

Norman Carnahan, CEO, Carnahan
Hani Elshahawi, Managing Director, NoviDigiTech LLC

Speakers:

Paul Slorach, Business Development Director, EC-OG
Stig Olav Settemsdal, CTO and Global Head of Technology, Siemens Energy AS
Philipp Stratmann, Vice President, Business Development, Ocean Power Technologies Inc.
Stuart Davies, CEO, ORPC

Thursday, 19 August 2021

0930–1200 // Room 604

Center for Offshore Safety: Promoting a Culture of Safety Through Transparency and Knowledge Sharing ●

Safety Culture Panel: In the first of two panels, five Safety Culture Work Group Studies have been invited to participate. Those include: EMPOWER Safety Dashboards: Evaluate, Measure, and Promote Offshore Worker Engagement and Readiness; Measuring and Improving Blended Project-Safety Culture in Operations of Offshore Oil and Gas Facilities; Developing an Integrated Offshore Energy Industry Safety Culture Evaluation, Benchmarking, and Improvement Toolbox; Development of an Evidence-Based, Multi-Level Safety Culture Assessment Battery for the Offshore Industry; and National Academy of Science (NAS). Lifeboat Incidents and Learnings:

In the second panel, panelists will discuss learning and sharing from lifeboat incidents.

Moderators:

Julia FitzGerald, Center for Offshore Safety
Charlie Williams, Consultant, Center for Offshore Safety Retired
Donald Forgie, HSE/AMS Advisor Gulf of Mexico, Occidental Petroleum
Russell Holmes, Director, Center for Offshore Safety

Speakers:

Ivan Damjanovic, Professor, Texas A&M University
Stephanie Payne, Professor, Industrial/Organizational Psychology, Texas A&M University
Kevin McSweeney, CPE Manager, ABS
Scott Tannenbaum, President, The Group for Organizational Effectiveness, Inc.
Karina Khazmutdinova, PMP Program Manager, National Academies of Science, Engineering, and Medicine
Kyle Entzel, Regulatory Compliance and Process Safety, Shell Exploration & Production Company
Tim Connolly, Senior Investigate and Learn Specialist, Shell Exploration & Production Company
Chris Woodle, Regulatory Advisor, Chevron GOM Business Unit
Matthew Denning, Captain, United States Coast Guard

Thursday, 19 August 2021

0930–1120 // Room 606

Advances in Drilling Technology I ●

While offshore drilling activities may have been reduced in the last few years, the advance of drilling technology development has not stopped. This session gives an insight on what various parties (academia, operators, and service companies) have been working on recently. This session will present various of examples of novel techniques and approaches adopted to successfully improve operations' safety, reduce significantly drilling time and costs. Some papers will tackle the field development challenges around well placement and completion strategy to maximize recovery and productivity. New wellbore positioning model accuracy improvements to reduce uncertainties, special techniques to help optimizing the landing of horizontal wells and navigating within the reservoir section, as well as state-of-the-art reservoir-mapping and synthetic logging capability will be presented. Other papers will focus on well delivery from detailed engineering and planning to seedless execution. Examples of successful techniques used towards continuous improvement of gas kick detection, different MPD techniques and benefits of integrated, comprehensive and collaborative environment will be presented and illustrated by case studies, where execution teams were able to deliver highly productive wells with no safety related events and within the planned budget.

Session Chairpersons:

Ashutosh Dikshit, Engineering Manager—Completions (Screens and ICDs), Schlumberger

Philippe Rondy, Vice President, Field Development & Technology, Total E&P

0930 31195

Vertical To Horizontal-Ultra Deep Azimuthal Resistivity Tool (uhdr) Service Helping To Maximize Production

A.Z. EL Sedeq, D.N. Nketah, Schlumberger Norge AS; J. Denichou, Schlumberger; M.V. Eide, Schlumberger Norge AS; M.S. Dahroug, Schlumberger; N. Hughes, P. Byrski, D. Duranti, M. Gelhaus, T. Oian, Wintershall Dea

0952 31223

Triple Mpd Technique For Drilling And Intelligent Completion Deployment On An Abandoned Deepwater Well

A.A. Fernandes, E. Schnitzler, F. Fabri, M.V. Malfitani, W.M. Ascano, L. Grabarski, R.S. Roman, Petrobras

1014 31044

Next Generation High Definition Geomagnetic Model For Improved Wellbore Positioning, Incorporating New Crustal Magnetic Data

M. Nair, A. Chulliat, A. Woods, P. Alken, B. Meyer, CIRES, University of Colorado & NOAA's NCEI; B. Poedjono, Independent; N. Zachman, J. Hernandez, Schlumberger

1036 31248

A New Fundamental Understanding Of Gas In The Drilling Riser

C.P. Leach, Mulberry Well Systems LLC; A. Prosperetti, G. Wong, G. Zhou, University of Houston; R. Krishnamoorti, University of Houston/UH-GEM1; V. Denduluri, A. Amritkar, University of Houston

1058 31004

Driving Superior Performance In Brazilian Pre-salt - The Challenges, Solutions And Achievements Of Shell And Providers In Exploratory Pre-salt Wells In Brazil

R.R. Ribeiro, R.A. Pereira, R.A. Neves, T. Schimmelpfennig, Constellation Oil Services; R.A. Hartmann, E. Barrios, R. Santos, V. Pessanha, Shell Brasil Exploration and Production

Thursday, 19 August 2021

0952–1142 // Room 610

Advanced Developments in Subsea Production Systems ●

The practice of locating subsea production equipment on the seabed continues to gain momentum. In this subsea production systems session, several successful projects will be presented that deliver on the long-promised goal of increased production and reliability. In addition, attendees will see the very latest in subsea production technology that promises further gains in cost, efficacy, and reliability.

Session Chairpersons:

Andrew Grohmann, Engineering Manager—Analysis, Dril-Quip, Inc.

Art Schroeder, President, Energy Valley Inc.

0952 30943

Comprehensive Approach To Tackle Systemic Failure In Gas Lift Valves In Pre Salt Wells

E.D. Real, T.G. Silva, O.C. BORGES, T. Sanomya, Petrobras

1014 31290

A Subsea Chemicals Storage Solution Based On Liquid Barriers

M. Simionato, C. Giudicianni, Saipem

1036 31164

Experience With Chemical Injection And Umbilicals In Pre Salt Fields

S.G. Da Silva, PETROBRAS SA

1058 31122

Qualification Of Barrier Fluidless, Sealless Seawater Canned Motor Pumps

D. Stover, Curtiss-Wright Corporation; C.F. Pagani, SAIPEM SpA

1120 31022

Legacy Field Upgrades—Production Control System Lessons Learnt

S. Moe, D. Pham, TechnipFMC

Thursday, 19 August 2021

0952–1142 // Room 600

Impact of Digital Twins in Enhancing Offshore Activities

Digital twinning is already having significant impact to the offshore oil and gas producing assets in its life cycle management. This technical session will address some of the prominent issues, like production improvement, pipeline corrosion monitoring, hull condition monitoring, process equipment condition monitoring, and mooring line failure using digital twins/artificial intelligence. Presentations will be representative of the best in their respective field and based on the real-life scenarios.

Session Chairpersons:

Vikrant Joshi, Sr. Advisor Project, ConocoPhillips Co

Cesar Jose Moraes Del Vecchio, Senior Staff Consultant, Stress Engineering Services Inc

0952 31296

Digital Twin For Offshore Pipeline Corrosion Monitoring: A Deep Learning Approach

S. Bhowmik, McDermott International

1014 30977

Hull Condition Monitoring And Life Time Estimation By The Combination Of On Board Sensing And Digital Twin Technology

T. Sugimura, S. Matsumoto, Mitsubishi Heavy Industries,Ltd; S. Inoue, S. Terada, S. Miyazaki, Mitsubishi Shipbuilding Co.,Ltd.

1036 31120

An AI-Based Detection System For Mooring Line Failure

D.E. Sidarta, Genesis; N. Tcherniguin, Technip Energies; P. Bouchard, Technip Energies Cybernetix; H. Lim, Genesis; M. Kang, A. Leridon, Technip Energies

1058 31036

Mooring Integrity Management Through Digital Twin And Standardized Inspection Data

S. Matsumoto, Mitsubishi Heavy Industries, Ltd.; V. Jaiswal, DNV GL Group; T. Sugimura, S. Honjo, Mitsubishi Heavy Industries; P. Szalewski, DNV

1120 30980

Predictive Maintenance Using The Executable Digital Twin (xdt)

K. Goodheart, Siemens Industry Software Inc; P. Mas, M. Ismail, M. Farrall, U. Badiali, Siemens Industry Software Inc; W. Hendicx, Siemens Industry Software SAS

Thursday, 19 August 2021

1014–1204 // Room 602

SURF Key Challenges and Innovative Solutions

Innovation within the deepwater SURF (subsea, umbilicals, risers, and flowlines) sector have enabled offshore field developments to extend into deeper, harsher environments with more demanding fluid properties, and prolong the usefulness of the assets far past its intended design life. However, challenges associated with corrosion, fatigue, and buckling of these systems continue to threaten deepwater oil and gas sustainability. Advancements in operational methods, inspections, and simulations have already begun to fundamentally transform how we approach the exhaustive lifecycle process from the early design phase to late-stage integrity management. This session highlights those key improvements in the field of AI, residual curvature applications, inspection techniques, and other novel best practices.

Session Chairpersons:

Steve Louis, Managing Director, Eternal Energy

Olivier Lodeho, Head of Technology Group, Subsea 7

Paul Hughes, Country Manager—GOM, Subsea 7

1014 31037

Feasible SCR Configuration From FPSO With Large Motions, By Applying Residual Curvature Methods

A.A. Ramiro, A.P. Orimolade, D.N. Karunakaran, Subsea 7

1036 30969

Lateral Buckling Mitigation In Deep Waters - A Total Installed Costs Comparison

H. Priyadarshi, M. Fudge, S. Jose, M. Brunner, C. Weakly, TechnipFMC

1058 30949

InspectTMComputed Tomography For NDT Of Subsea Pipelines

A. Surowiec, I. Pettigrew, Sonomatic Inc

1120 31135

Flexible Pipes Subjected To Scc Co2: Review And Means To Increase Reliability On Service Life Applied To Brazilian Pre-salt Fields

M.O. Brandao, F. Pires, I. Poloponsky, F. Santos, D. Lopes, Baker Hughes

1142 31026

Qualification Of Polymer Materials For Dynamic Riser Service

C. McCord, C. Jones, Subsea 7

Thursday, 19 August 2021

1014–1204 // Room 312

Subsea Electrical Applications ●

This session is about efficient electrical field architectures, electrical technologies, and innovative solutions applied to the subsea realm. Presentations will include an innovative model of subsea manifolds for the remote electrical operation of valves in pre-salt fields, efficient field architectures adapted to operate remote long tie-backs with different combinations of subsea electrical power distribution and remote power generation. There will be also many first, such as the delivery of the first Electrically Heat Traced Flowline in the deep waters of the Gulf of Mexico, the first feasibility study of deploying a novel semi-static electrical cable for the power take-off from a TLP-type Floating Offshore Wind Turbine, and the first deployed installation of an all-Electric intelligent completion with distributed fiber optic monitoring in a complex mature injector well. Presenters will also review second generation of qualified electrical double barriers penetrator system for active heating of subsea flowlines and novel subsea electric actuator specially designed for rotary small-bore valves.

Session Chairpersons:

Francois Auzerais, CFO, Job-Set LLC
Inchul Jang, Staff Engineer, MOOG Inc.
Ahmed Tahoun, MIT Technologies

1014 31003

First Full-electric Shared-actuation Control For Subsea Manifolds In Brazilian Ultra-deep Waters: A Discussion Of The Technological Development Up To Field Commissioning

A. Rabello, E. Seraco, D. Natal, E. Coelho, W. Destro, Petrobras; A. Labes, G. Rodriguez, N. Cuellar, E. Lacher, D. Marcos, V.C. Coelho, N. Noriega, TechnipFMC

1036 31323

World First All-electric Intelligent Completion System With Permanent Monitoring To Evaluate Injection Performance In A Mature Injector Well.

W. Sanchez, I. Coronel, E. Mora, C. Giosa, M. Satizabal, J. Leal, P. Solorzano, L. Castaneda, Ecopetrol; G. Mantilla, P. Nazarenko, O. Avella, P. Joseph, Baker Hughes

1058 31083

A Novel Subsea Actuator To Electrify Small-Bore Valves

A. Orth, G. Hendrix, M. Kubacki, J. Duarte da Silva, Bosch Rexroth; V. De Negri, LASHIP - UFSC

1120 31211

The World Deepest Electrically Heat-Traced Flowline

F. Hurault De Ligny, T. Cuau, S. Immel, Subsea 7

1142 31130

Longer Tiebacks By Electrification And Remote Power

J. Verdeil, J. Manach, Subsea 7

Thursday, 19 August 2021

1230–1345 // Room 202

Offshore Aquaculture ●

This session will cover the advancements in offshore aquaculture, where farms are located in deeper waters with stronger ocean currents than coastal waters. Discussion topics will include aquaculture research, biology, policy, business development, and management. The potential to convert oil and gas platforms to aquaculture, marine science, and renewable energy uses will also be addressed.

Moderator:

Roy Robinson, CEO, Excipio Energy

Speakers:

Todd Sink, Director AgriLife Extension Aquatic Diag, Texas A&M AgriLife Extension Service

Kent Satterlee, Executive Director, Gulf Offshore Research Institute (GORI)

Thursday, 19 August 2021

1230–1345 // Room 204

Center for Offshore Safety: Safety and Environmental Management Regulatory Perspective ●

A panel of regulatory leadership representing BSEE and USCG will discuss safety and environmental management in their respective regulatory regime. The focus will be on what has been implemented to date, what is underway, and what they see for the future. The panelists will discuss how they have progressed safety and environmental management in their jurisdictions. They will also discuss their experiences and performance.

Moderators:

Julia FitzGerald, Center for Offshore Safety

Russell Holmes, Director, Center for Offshore Safety

Speakers:

Rear Admiral John Mauger, United States Coast Guard

Lars Herbst, Director, Gulf of Mexico OCS Region, Bureau of Safety and Environmental Enforcement

Thursday, 19 August 2021

1400–1630 // Room 306

Best Practices in Dealing with a Pandemic such as COVID-19 in the Offshore Industry ●

Since March 2020, industries in all sectors have been impacted by COVID-19 in a variety of ways. Many have made significant operational adjustments to continue operating. The members of this panel will discuss the best practices from their own experiences and that of their companies, with special focus on process safety in offshore operations. The panel will bring global view from the Gulf of Mexico, Brazil, North Sea, and others.

Moderator:

Anil Gokhale, Senior Director, CCPS Projects, AIChE

Speakers:

Raphael Moura, Operational Safety & Environmental Superintendent, ANP

Adam Moilanen, Vice President, Health, Safety, Quality & Environment, ABS

Lori Knutson, Vice President, Production, bp; **Bob Fryklund**, Chief Strategist, Upstream, IHS Markit

Matt Kirk, Senior Vice President, Specialist Engineering & Consulting, Wood

Summer Condarco, Vice President, HSE, Service Quality & Continuous Improvement, Halliburton

Thursday, 19 August 2021

1400–1550 // Room 604

Well Abandonment and Facilities Decommissioning

With the maturing of offshore fields comes the end stage, responsibly ceasing operations and dismantling whatever was installed to allow the production of oil and gas. This session discusses the technologies that are being developed to abandon the wells safely and remove the structures that were placed on the seabed and at the waterline.

Session Chairpersons:

Murray Brown, President, CMB Consulting Limited

Han Tiebout, Consultant, GustoMSC BV

1400 31006

Decommissioning Offshore Structures By Extraction Of Foundation (mono)piles Applying A Vibratory Hammer

R. van Dorp, Allnamics Geotechnical and Pile Testing Experts; P. Middendorp, Allnamics; M. Bielefeld, Allnamics Geotechnical and Pile Testing Experts; G.E. Verbeek, Verbeek Management Services

1422 31319

Using Third Interface Echo (TIE) Response Through Inner Casing To Enucleate The Outer Casing Geometry In 3D View

S. Dutta, A. Kumar, G. Agrawal, K. Singh, P. Bansal, SCHLUMBERGER

1444 31062

Solving Decommissioning And Abandonment Problems When Planning To Shear 9 5/8-inch Casing In A 13 5/8-inch X 10k Ram BOP

D.E. Cain, Axon Energy Services; K.A. Klopfenstein, J.R. McMullan, Axon Energy Systems

1506 31132

Critical Review Of The Thai And Malaysian Decommissioning Landscapes

A. Tung, University of Aberdeen; W. Wanarunwong, Robert Gordon University; P. Vuttipittayamongkol, Mae Fah Luang University

1528 30938

Plug And Abandonment Materials—Technology Landscape

F. Ars, Schlumberger Oilfield UK Plc; R.O. Rios, Vysus Group

Thursday, 19 August 2021

1400–1550 // Room 606

Advances in Drilling Technology II

Technological advancements in drilling have allowed operators to save time, reduce operational costs, and lessen their environmental impact. This session highlights improvements in safety and efficacy of drilling operations through state-of-the-art technologies and machine learning while particularly focusing on what the drilling equipment and services providers have developed recently to enable the safe and cost-effective drilling of offshore wells.

Session Chairpersons:

Abram Hudson, Systems Engineer, Barrios Technology

Mohammed Doopy, Deepwater Cementing Design/Technical Engineer, Schlumberger

1400 31217

Significant Performance Improvement With MPD in HPHT Narrow Drilling Window Campaign In The North Sea

B. Kamal, A. Saboor, G. MacFarlane, F. Kerneche, Weatherford UK Ltd.

1422 31329

Friction Reduction Technology Tailored To Extreme Flow Rates

K.Q. Trinh, Y.S. Xia, S. Franco Tamara, D. Perez, C. Emuchay, R.V. Che, National Oilwell Varco

1444 31265

Significant Reduction Of Well System Fatigue By Use Of Reactive Flex Joint With Integrated Monitoring System

K. Sønåsen, P. Moe, M. Hansen, D. Fjeldstad, H. Gustad, A. Sadegi, A. Hille, TechnipFMC; A. Bjørset, Equinor

1506 31245

Industry's First Sidetrack In 12-1/4-in Casing Enables Operator To Re-establish Production In GOM

T. Emelander, Weatherford International Ltd.

1528 31047

Mitigating Wellhead Fatigue While Reducing HSE Risk, Deck Spread, Deployment Time, And Crew Size

G. Ulland, Oceaneering International, Inc.; G. Hilsen, S. Croatto, Oceaneering International

Thursday, 19 August 2021

1422-1612 // Room 610

Improved Reservoir Description for Production Optimization

This session presents new technologies, perspectives, and methods for improved reservoir description and production optimization including well control, inflow performance, recovery mechanisms, reservoir property mapping, and optimization methods.

Session Chairpersons:

Mariela Araujo Fresky, Commercial Delivery Manager, Shell
Yani Araujo De Itriago, Global Manager EOR Laboratory Services, SGS North America

1422 31185

Water Disposal Wells Injectivity Enhanced By Well Treatment Optimization

W. Mei, Saudi Aramco NA00; A.F. Al-Anazi, K. Yateem, Saudi Aramco

1444 31193

The Autonomous Inflow Control Valve Design And Evaluation Criteria Along With Well Performance Review For Multiple Installations Across The Globe

T. Kalyani, H. Aakre, V. Mathiesen, InflowControl

1506 31190

Development And Trial Of Technology For Open Hole Wells Performance Enhancement In GoM

L. Peixoto, Shell Exploration & Production Co; W. Provost, J.T. Gerber, Baker Hughes Company

1528 31191

A Numerical Investigation Of Low Salinity Polymer Flooding Effects From A Geochemical Perspective

O. Chaabi, E.W. Al Shalabi, W. Al Ameri, Khalifa University of Science and Technology

1550 30982

Real-time Water Injection Monitoring With Distributed Fiber Optics Using Physics-informed Machine Learning

T. Sadigov, bp; C. Cerrahoglu, J.C. Ramsay, Lytt; L. Burchell, T. Watson, S. Cavaleiro, bp; P. Thiruvenganathan, M. Sundin, Lytt

Thursday, 19 August 2021

1422-1612 // Room 600

Advances in Digital Technologies for Driving Innovation and Transformation

Data has become a critical asset with the rise of digitalization in the oil and gas industry. Operator companies, oil field services companies, EPCI contractors, and vendors have been developing their own internal digital technologies to increase their digital presence. Digital technologies (such as digital platforms, IOTs, Cloud computing, AI/ML etc.) create an enhanced experience for customers, contractors, employees and vendors. Soon, such technologies will enable to execute projects and also to share data between companies digitally. A key benefit of these digital technologies is the opportunity for streamlining operational costs. Post Covid-19, such initiatives will become even more attractive to operators, service providers and vendors. In this session, authors will present their successful projects or issues with data governance or implementation concerns, Machine Learning and Artificial Intelligence applications, and other related topics.

Session Chairpersons:

Sachin Mathakari, Digital Project Lead, TechnipFMC
Jason Taylor, Owner/Consultant, J&A Taylor LLC

1422 31149

Sensor Ball: Autonomous, Intelligent Logging Platform

E. Buzi, H.R. Seren, M. Deffenbaugh, Aramco Services Company; A. Bukhamseen, Saudi Aramco; M. Larbi Zeghlache, Saudi Aramco PE&D

1444 31126

Enhanced Use Of Digital Solutions To Enable New Health Care Services On Calm Buoys

A. Jeannin, R.V. Castro, S. de Tessieres, J. Peter, SBM Offshore Inc.

1506 31231

Requirements Management For Data Driven Requisitions

D. McLachlan, io consulting; C. Ee, J. Veen, Shell; F. Cochet, T. Olivieri, D. Tomassi, Baker Hughes; J. Stroh, McDermott International

1528 31046

Value Tracking Thru Digital Fields Country-wide Solution; Big Data Analytics Project

A. Karim, H. Abu Hassan, S.I. Muslimin, PETRONAS; R.C. Fuenmayor, A. Kamarulzaman, M. Mokhlis, Schlumberger WTA Malaysia Sdn Bhd

1550 30963

Simulated Full Lifetime Response Data Of A Turret-moored FPSO For Training AI Using HPC

H. Lim, H. Kim, B. Koo, D.E. Sidarta, Genesis

Thursday, 19 August 2021

1444–1634 // Room 602

Innovations in Riser Systems

This session highlights recent innovations in riser systems, both for production and drilling risers. Presentations will describe advances in installation, design/analysis, decommissioning, and materials for risers. The global riser behavior in challenging regimes as well as riser components are addressed in this session.

Session Chairpersons:

Puneet Agarwal, Research Engineer, ExxonMobil Upstream Integrated Solutions Co

Amir Rahim, Principal Engineer, NGI Inc.

1444 31325

Increasing The Cost Effectiveness Of Mechanically Lined Pipe For Risers Installed By Reel-lay

R.L. Jones, Subsea 7; G.A. Toguyeni, J. Hymers, P. Tanscheit, N.B. Romeu, Subsea7; V. Rao, Subsea 7; J. Banse, Butting

1506 30922

Slugging Fatigue Assessment For Steel Lazy Wave Risers

B. Campbell, ExxonMobil Upstream Research Company; P. Agarwal, ExxonMobil Upstream Integrated Solutions Co; C. Curtis, Contractor; G. Yang, A. Singha, ExxonMobil; K. Casstevens, Exxon Mobil Corporation; G. Ersoy Gokcal, ExxonMobil Upstream Integrated Solutions

1528 31029

Unconventional Approach Simplifies Steel Catenary Riser Decommissioning

A. Orr, S. Olmos, D. Cheek, Oceaneering International, Inc.; M. Coyne, Y. Park, D. Seal, N. Tatineni, Williams

1550 31014

Cost-effective Upgrades Of Drilling Risers To 20,000 Psi Applications Through Composite-reinforced Steel Choke And Kill Lines

E. Persent, F. Grosjean, D. Averbuch, E. Roguet, IFP Energies Nouvelles

1612 31069

A Novel Approach For Designing Boltless Connectors—Example On A New Drilling Riser Connector

E. Roguet, E. Persent, D.C. Averbuch, IFP Energies Nouvelles

Thursday, 19 August 2021

1444–1634 // Room 312

Subsea Fields of the Future

The deepwater subsea business activity is recovering amid the extended oil and gas low point and the COVID-19 pandemic shutdown. However, field operators continue to invest in new technology developments leading to technical innovations, adding new capabilities, and enabling access to resources that otherwise would not have been feasible or economical before. In addition, new breakthroughs in parallel industries added a fleet of new solutions, tackling areas such as artificial intelligence, machine learning, automation, unmanned structures, energy storage, and underwater autonomy, modified the vision of what things may look like in the future. This session provides a broad insight into new innovations, technical solutions, new applications, and enablers from various stages along a hydrocarbon asset life cycle of subsea fields.

Session Chairpersons:

Hosam Abu Zeid, Subsea Production PetroTechnical Lead, OneSubsea LLC

Joerg Meyer, Director Petrotechnical Services, Schlumberger

1444 30954

Troll Phase 3: The Next Step For A Groundbreaking Giant

B. Laastad, K. Ellevog, R. Jensen, E. Torgriksen, I. Jensen, T. Tveit, Equinor ASA

1506 31027

Development Of Failure Prediction Models For Subsea Blowout Preventers Using Data Analytics And AI

R.C. Machado, Ocyan; A. Albuquerque, Delfos IM; F. Leite, C. Xavier, Ocyan; S. Lima, G. Carvalho, Delfos IM

1528 31294

Subsea Liquid Energy Storage—The Bridge Between Oil And Energy/hydrogen

K. Mikalsen, National Oilwell Varco; J. Lund, NOV Subsea Products AS

1550 31033

Novel THOR Technology For Orientation Of Vertical XT To Completions

P.D. Pathak, N. Katsounas, D. Quates, G. Moss crop, Schlumberger

1612 31298

Novel Active Slug Control In Angola—Development & Field Results

L. Brenskelle, M. Morles, L. Flores, Chevron



Spotlight on New Technology Awards

OTC shines the spotlight on the latest innovations in the offshore energy industry. Congratulations to the 2021 award recipients!

<u>Company Name</u>	<u>Booth#</u>
Dril-Quip Inc.	Virtual
Halliburton	Virtual
Halliburton and TechnipFMC	Virtual
HYTORC	2241
INGU	Canada Pavillion
Oil States Industries	1234
Oliden Technology	1117
Rocsole	Virtual
Saipem	2441
Schlumberger	Virtual
SIEMENS (2 awards)	Virtual
Subsea7 / Xodus	Virtual
Techni	2641

2021 Spotlight on New Technology Award Recipients

Please visit the 2020 and 2021 SONT winners' booths, they are all recognized with an official SONT banner placed above or next to the booth and noted on the virtual platform.



Virtual

Dril-Quip BADGeR™ Connector

The Dril-Quip® BADGeR™ Specialty Casing Connector reduces HSE risks by removing rig personnel from the red zone and lowers operating costs. Part of the e-Series family of products, the BADGeR™ features an automatic hands-free anti-rotation device that enables remote make-up operations, provides superior fatigue performance, and integrates a metal seal reducing environmental risks. www.dril-quip.com



HALLIBURTON Virtual

DynaTrac™ Real-time Wireless Depth Correlation System

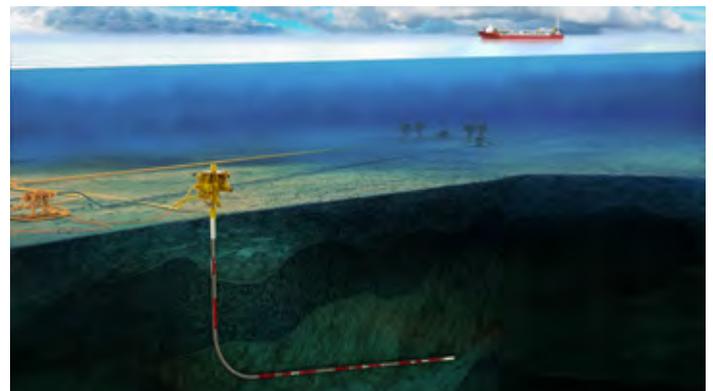
The DynaTrac™ Real-time Wireless Depth Correlation System increases efficiency during operations that require accurate bottomhole assembly depth or position with on-demand positioning throughout operations. The DynaTrac™ system eliminates uncertainty in tool position without the need for wireline or workstring manipulation while tracking movement of the bottomhole assembly. www.halliburton.com



Virtual

Odassea™ Subsea Fiber Optic Solution

Halliburton and TechnipFMC's Odassea™ Subsea Fiber Optic Sensing Solution is the industry's first subsea distributed acoustic sensing (DAS) solution capable of sensing both upper and lower completions with data quality and fidelity equivalent to existing dry-tree installations but independent of tie-back distance, enabling both seismic imaging and reservoir diagnostic applications. www.halliburton.com and www.technipfmc.com





HYTORC

Booth 2241

HYTORC J-Washer

The HYTORC J-WASHER is an innovative lock washer used to maintain joint integrity under dynamic conditions such as thermal cycling, rotating machinery, and transportation. The patented J-Washer provides all the safety, quality and speed benefits of the standard HYTORC Reaction Washer and now offers the ability to lock fasteners tight.

<http://www.hytorc.com>

INGU

Canada Pavillion

Pipers® 2.8

INGU's Pipers® 2.8 give offshore oil & gas operators unprecedented insight into pipeline condition and performance. The self-serve, free-floating, micro multi-sensor solution works in operational conditions, delivering conditional-critical data related to leaks, deposits and wall condition. Pipers® improve planning, decision-making, and operational control, while reducing the risk of failure. www.ingu.com



Booth 1234

Merlin™ Deepsea Mining Riser System

Oil States has developed the Merlin™ Deepsea Mining Riser System, a robust, fast, hands-free, mining riser system with remote monitoring that enables access and recovery of deepsea minerals used to support the energy transition. Oil States with partners has become an integrator of complete mining systems from harvester to vessel.

www.osiminerals.com

Spotlight on New Technology Recipients



Booth 1117

LithoFusion Azimuthal Density and Porosity LWD Tool

The Logging While Drilling LithoFusion tool delivers azimuthal density, neutron porosity, and borehole images. High vertical resolution logs and imaging provide the best insights for quantitative fluid and mineralogy analysis, geological structures, borehole stability, and well placement. This innovative tool completes the triple combo suite offered by Oliden Technology. <https://olidentechnology.com>



LithoFusion
Azimuthal Density and Porosity LWD Tool



Virtual

Deposition In-Line Inspection (DILI)

Rocsole's Deposition In-Line Inspection (DILI) systems use a non-nuclear tomographic technology to inspect pipelines for deposition build-up thickness, type and location. This safe and non-invasive sensor works in various process environments allowing production to continue without interruption and enabling fast reporting of results with AI/ML-based data processing. <http://www.rocsole.com>



Booth 2441

Hydrone-R

Hydrone-R is an underwater intervention drone (UID), capable of performing both inspection and intervention missions and conceived to offer Life of Field services with a focus on guaranteeing safety and productivity of Offshore Energy fields (Oil & Gas and Renewables) while minimizing operational costs. <https://www.saipem.com/en>





Schlumberger

Virtual

DrillPlan* coherent well construction planning solution

The DrillPlan coherent well construction planning solution is a collaborative space providing automated end-to-end workflows, instantly validating engineering and delivering smarter designs faster. The discovery and consumption of offset knowledge empowers data-driven insights and accelerates the delivery of an efficient and optimal drilling program that is automatically generated in minutes.

www.slb.com/drillplan

SIEMENS ENERGY

Virtual

APM4O&G

Using Siemens Energy's domain know-how, APM4O&G delivers a diagnostic and decision-support solution for O&G equipment, enabling a step-change in how offshore operators manage their assets. By continuously comparing real-time equipment operational data against models and running automated diagnostics, operators can forecast performance, pre-empt failures, and conduct reliability-centered maintenance.

www.siemens-energy.com/apm4og



SIEMENS ENERGY

Virtual

MyFleetRisk

MyFleetRisk is a data-driven, collaborative risk management platform that leverages real-world engineering expertise to quantify and visualize risk profiles of our oil and gas customers' gas turbine fleets. Its transparent delivery of risk and criticality information empowers offshore operators with actionable insights, without the need for connectivity in a challenging environment. www.siemens-energy.com/myfleetrisk

Spotlight on New Technology Recipients

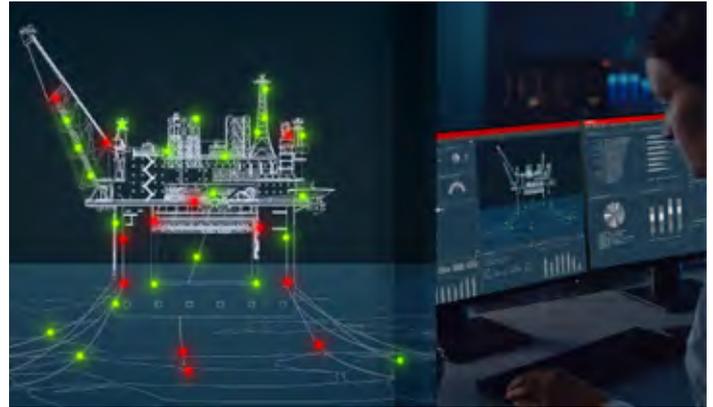


Subsea 7 in collaboration with Xodus Group,
an autonomous subsidiary of Subsea 7

Virtual

Subsea 7 NESP – Nano Engineered Sensor Platform

Subsea 7 NESP – Nano Engineered Sensor Platform is a transformative solution developed in collaboration with Xodus, an autonomous subsidiary of Subsea 7, to continuously monitor fatigue and corrosion offshore, reducing OPEX. The wireless nano-technology sensor requires no power supply/batteries, is zero-maintenance, scalable and can extend life and improve uptime. www.subsea7.com



Booth 2641

TECHNI PACT - One step closer to autonomy

A technology platform for autonomous, all-electric based well control. Extremely light weight, low energy consuming drop-in-replacement actuation system. It comes with a with the fastest failsafe mechanism ever, this patent pending technology will ensure safety in all modes of operation. www.techni.no

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Thank You to Our Outgoing Board Member

OTC would like to recognize the contributions made by this year's outgoing board member. Here's what Cindy Yeilding said about her involvement with OTC.



Cindy Yeilding
Board Chairperson
 American Association of
 Petroleum Geologists

Tell us a little about your involvement with OTC.

I joined the OTC Board as the AAPG delegate in 2011 and believe that I have chaired every committee and held almost every role a board member can have. I love that we are a not-for-profit organization, and by volunteering for OTC I'm able to help support AAPG and the other sponsoring organizations. I also really appreciate the can-do approach of "Team OTC," the professional staff and volunteers who plan and deliver the event. Their openness to trying new programming and events has been so impressive and I think their willingness to innovate is what keep OTC fresh and current.

What has OTC meant to you personally and/or professionally?

It's been a career highlight serving on the Board and I have learned so much through the excellent programming and amazing events hosted during OTC. I've also made so many new friends and colleagues from around the world. And I've learned a heck of a lot!

What is the initiative or project that you worked on and feel most proud of?

I have to say that I am most proud of conceiving, implementing and executing the OTC Energy Challenge, our STEM competition for High School Students. At times it was a labor of love but meeting the teams and seeing their innovative solutions to real-world energy issues has been amazing! I love that they get to be a part of the formal OTC program and that OTC participants from all over the world come to see and hear their presentations!

What would you say to someone who wants to become more involved with OTC?

Jump right in! There are so many opportunities to participate in and contribute to OTC. Be sure to take advantage of all of the opportunities that the OTC has to offer, especially touring the show floor!

What was your favorite aspect of being involved with OTC?

About 5-6 years ago, as a Board we decided to be very proactive about embracing the energy transition and the Board, Program Committee and OTC Staff have worked tirelessly to assure that we feature programming that highlights all forms of offshore technology and energy.

BEST... TEAM... EVER! I will miss you all! Big hugs, Cindy



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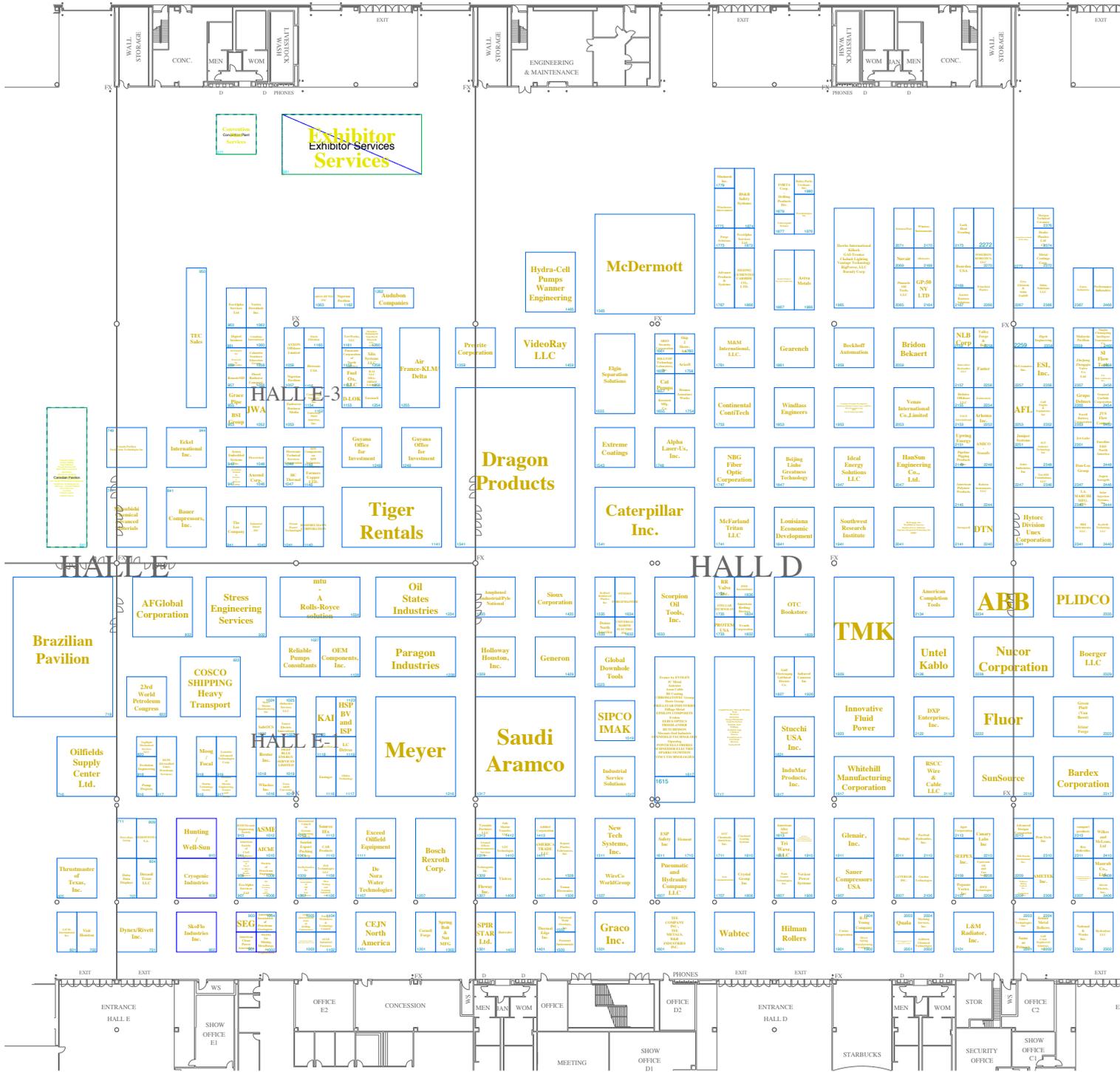
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