PETEX 2021
TECHNICAL PROGRAMME

DAY ONE | **TUESDAY 23 NOVEMBER**

08:30 - 09:30	Conference, Exhibition and Registration Open	
09:30 - 10:00	**Keynote Address:** Phil Kirk | Harbour Energy	AUDITORIUM
10:00 - 10:30	**Keynote Address:** TotalEnergies Exploration for the Future | Emmanuelle Garinet, TotalEnergies	

10:30 - 11:15 | Refreshment Break & Exploring the Exhibition

	Exploration: UK	Multi-azimuth seismic	Machine Learning / Digital
11:15 - 11:45	A Pressure Cell Summary of the Highly Prospective Central North Sea HPHT Domain **Eva Zimmer, Oil & Gas Authority**	Multi-azimuth Acquisition and High-resolution Model Building and Imaging from Shallow to Deep Reservoir - A Case Study from Offshore Morocco **Andrew Furber, WesternGeco**	Mining Data at Scale Using Deep Learning **Chin Hang Lun, CGG**
11:45 - 12:15	Revealing the Zechstein Potential of the Mid North Sea High, UK **Neil Hurst, ION**		Leveraging Supervised Machine Learning for Rapid Lithology Prediction **Rebecca Head, Halliburton**
12:15 - 12:45	Characterising Basement and Calibrating Thermal History to Further the Understanding of Petroleum Systems in the Faroe-Shetland Basin **Julian Moore, Applied Petroleum Technology**	A Novel and Efficient Multi-azimuth Towed-streamer Solution to Address Complex Illumination Challenges, Established in the Viking Graben, North Sea **Bertrand Caselitz, PGS**	Petrographic Thin Section Analysis with Machine Learning **Edward Jarvis, CGG**

HALL 1 | HALL 2 | HALL 3

12:45 - 13:45 | Lunch & Exploring the Exhibition and Collaboration Showcase | MSc Winners' Presentations (Hall 3)

	Exploration: UK	OBN	Energy Transition: CCUS
13:45 - 14:15	The Ossian "Spur and Groove": A Buried Variscan Landscape **Phil Mollicone, pmoll-seismic Limited**	Reducing Structural Uncertainty in the Central North Sea with OBN Data **Gareth Jones, CGG**	Putting CO2 in its place: CCS challenges and solutions **Rajat Saxena, Halliburton**
14:15 - 14:45	Exporting North Sea Geology with the North Sea Core Initiative **Kirstie Wright, North Sea Core CIC**	High Resolution Velocity Model Building on Long Offset Ocean Bottom Node Data: North Sea, Utsira High **Simon Baldock, TGS**	Digital Pore Scale Assessment of Potential Subsurface Carbon Storage Reservoirs **Ryan L. Payton, Royal Holloway, University of London**
14:45 - 15:15	The Z2 Haupt Dolomite Play - The Up and Coming Star of Exploration on The MNSH **Peter Browning-Stamp, Horizon Energy**	Understanding the Effect of Ocean-bottom Node Sampling on PP and PS Seismic Reservoir Monitoring in the North Sea **Francesca Twynam, WesternGeco**	Revisiting Estimates of CO2 Storage Capacity and Injectivity of the Bunter Sandstone in the UK Southern North Sea **Bob Harrison, SI Ltd**

HALL 1 | HALL 2 | HALL 3

15:15 - 16:00 | Refreshment Break & Exploring the Exhibition

	Exploration: Africa	OBN	Reservoir Geology
16:00 - 16:30	TotalEnergies Southern African Exploration, Accelerated Exploration in Immature Basins **William Gordon Canning, TotalEnergies**	Optimizing Ocean-bottom Node Acquisition Parameters Using Complementary Forward Modelling **Mathieu Chapelle, WesternGeco**	Sand Injectite Fields: North Sea Reserves and a Geological Classification **Andrew Hurst, University of Aberdeen**
16:30 - 17:00	VENUS: Will a Successful Wildcat Witness the Birth of a Valuable New Southern African Play? **Tony Younis, Impact Oil and Gas Limited**	Nodes, Streamers and 7 Sources. Using the Full Seismic Toolbox to Unravel the Complexities of the Nordkapp Basin Salt Structures **Per Eivind Dhelie, Lundin Energy Norway**	A Mineralogical and Statistical Differentiation of Reservoir and Associated Injected Sandstones in the South Viking Graben **Joseph Emmings, CGG**
17:00 - 17:30	Horn of Africa: The Next Chapter in Its Petroleum Journey **Catherine Holley, CGG**	Seismic Interpolation with U-Net and Its Application to OBN Data **Zhaoyu Jin, CGG**	Quantifying how sensitive the stratigraphic architecture of distributive fluvial systems is towards changes in sediment supply and local base level **Swiad Snieder, University of Aberdeen**

HALL 1 | HALL 2 | HALL 3

17:30 - 19:30 | Exhibition Networking Evening

This programme is subject to change.

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TECHNICAL PROGRAMME

DAY TWO | WEDNESDAY 24 NOVEMBER

08:30 - 09:00	Conference, Exhibition and Registration Open	
09:00 - 09:30	**Keynote Address:** Geoscience 5.0 - The changing role of geoscience through the Energy Transition **Sophie Zurquiyah, CGG**	AUDITORIUM

	Digital	Seismic Sources	Exploration: The Future
09:30 - 10:00	Experimentation To Create Value: A Case Study Using TensorFlow and XGBoost for Shear Log Prediction **Samuel Eckford, Summit E&P Ltd.**	Single Sub-Array Sources in Marine Seismic Acquisition **James Wallace, PXGEO**	Global Exploration Performance 2016 - 2021 and Implications for the Future of High Impact Exploration **Graeme Bagley, Westwood**
10:00 - 10:30	Future Explortion Workflows Using Machine Learning **Daniel Stoddart, Earth Science Analytics**	Improved Velocity Model Building with Low-frequency Source Data **Ross O'Driscoll, ION**	Making the Most of the Next Phase of Hydrocarbon Exploration with Cloud-Based Seismic Data **Karyna Rodriguez, Searcher**
	HALL 1	HALL 2	HALL 3

10:30 - 11:15 | Refreshment Break & Exploring the Exhibition

	Machine Learning / Digital	Imaging	Exploration: Atlantic Margins
11:15 - 11:45	Deep Reinforcement Learning for Random Noise Attenuation **Ross O'Driscoll, ION**	Rays to Waves: Wave-equation Based Model Building and Imaging in the Central North Sea **Pawel Dubiel, CGG**	Hybrid turbidite-contourite reservoir deposystems on Gulf of Guinea and Guyana-Suriname margins **Bryan Cronin, Tullow Oil**
11:45 - 12:15	Seismic Processing Parameter Mining – Can the Past Help Us? **Didier Lecerf, PGS**	Waveform Inversion Methodology for Deep Structural Imaging Offshore Norway **Jeet Singh, ION**	The Hunt for the Next Superbasin on the Unexplored Margins of Gondwana **Edward Prescott, Impact Oil & Gas**
12:15 - 12:45	Cost-Effective High-Resolution Reservoir Property Modeling Using Physics-Based Deep Machine Learning **Pavel Didenko, CGG with GeoSoftware**	Resolving Complex Imaging Problems Using Time-Lag FWI **Paolo Gabrielli, CGG**	Providing a Regional Understanding for Exploration in the West African Transform Margin **Avril Burrell, PGS**
	HALL 1	HALL 2	HALL 3

12:45 - 13:45 | Lunch & Exploring the Exhibition and Collaboration Showcase | MSc Winners' Presentations (Hall 3)

13:45 - 14:15	**Collaboration Showcase | Keynote Address:** Energy Futures – A Low Carbon, Sustainable Earth? **Megge Long, Joiner Consultants**	AUDITORIUM

	Reservoir Geology	Source Rocks	Fluids in Africa & Rocks on Mars
14:15 - 14:45	Multi-proxy Sedimentary Provenance Approaches to Unravelling Complex Sand Dispersal Histories; Examples from the Black Sea and Barents Shelf **Stephen Vincent, CASP**	De-risking Source Rock and Hydrocarbon Potential Offshore Northwest Africa's Atlantic Margin by Means of Non-seismic Multibeam and Seafloor Sampling **Felicia Winter, TGS**	An Intergated Approach to Resolving Different Petroleum Types in Stacked Reservoirs **Mike Fawcett, Petrophase**
14:45 - 15:15	A Re-evaluation of the Biostratigraphy, Provenance and Sedimentology of the Skagerrak Formation CNS: Results from the Triassic Joint Industry Project **Adrian Hartley, University of Aberdeen**	An integrated approach to understanding the potential prospectivity of the Gabon South Basin and early AVO application. **Javier Martin, CGG**	The Hero in Jezero: Percy's Adventures in a 4Ga Clastic Delta **Neil Hodgson, Searcher**
	HALL 1	HALL 2	HALL 3

15:15 - 16:00 | Refreshment Break & Exploring the Exhibition

	Energy Transition	Imaging	Exploration: Africa
16:00 - 16:30	Geoscientists for the Energy Transition Worldwide – a New UK Leadership Initiative **Jonathan Redfern, University of Manchester**	Fulfilling the Full Resolution of Source-over-streamer Data in the Barents Sea through FWI Imaging **Paul Fallon, CGG**	Exploring for Deep-water Clastic Plays in Offshore Mozambique Channel **Deepak Rathee, Schlumberger**
16:30 - 17:00	Quantifying Greenhouse Gas Emissions for Oil and Gas Assets **Jason Canning, RPS Energy**	The Impact of Seismic Reprocessing and DHI Frequency Analysis in an Emerging Tertiary Gas Province, Offshore Morocco **Robert Fox, Chariot**	Stratigraphic Evolution of the Deepwater Niger Delta: Spatial and Temporal Variability of Depositional Environments and Trapping Mechanisms **Richard Wild, Equinor ASA**
17:00 - 17:30	Unlocking Key Learnings from Global Analogues for a More Effective Net Zero Strategy: Case Studies from the Farnsworth & Vacuum Fields **Joanna Hansford, C&C Reservoirs**	Combining Variable Depth Streamer and Multi-sensor Data for Enhanced DAZ Processing in the Northern Viking Graben **Federico Buriola, CGG**	Unlocking the Prospectivity of the Kwanza Shelf, Offshore Angola **Roberto Ruiz, PGS**
	HALL 1	HALL 2	HALL 3

17:30 - 19:30 | PETEX Social Event

PETEX 2021
TECHNICAL PROGRAMME

DAY THREE | THURSDAY 25 NOVEMBER

08:30 - 09:00	Conference, Exhibition and Registration Open	
09:00 - 09:30	**Keynote Address:** Racial diversity in UK geoscience: are we prepared for the future? **Professor Chris Jackson, University of Manchester**	AUDITORIUM

	Analogues		Geophysics		Uncertainty & Bias	
09:30 - 10:00	Quantitative Analysis of Sand Injection Complexes from Outcrop Analogues **Robert Waltham, University of Aberdeen**	HALL 1	3D Surface Related Multiple Attenuation for Land Data Using Least-squares Multiple Imaging **Brandon Li, CGG**	HALL 2	Favourability': Restoring Lost Heterogeneity and Correcting a Systematic Bias in our Production Forecasting **Karl Stephen, Heriot Watt University**	HALL 3
10:00 - 10:30	Outcrop Analog Studies as a Tool to Understand Reservoir Development in Igneous Rocks, Utsira High, Norwegian North Sea **Lars Riber, University of Oslo**		Towed Streamer EM: Efficient Mapping of sub-surface Resistivity for Resource Evaluation **Jon Nicholls, OFG Multiphysics**		Integrating Geology, Rock Physics and Seismic into Realistic Uncertainty Quantification Using Serverless Cloud Computing **Shervin Rasoulzadeh, CGG with GeoSoftware**	

10:30 - 11:15 | Refreshment Break & Exploring the Exhibition

	Shaping the Future	AUDITORIUM
11:15 - 11:45	The Ethics of Ethnic Diversity | **Nike Folayan, Association For BME Engineers**	
11:45 - 12:45	In Conversation with **Sir Mark Moody Stuart, Carla Riddell (Spirit Energy), Mark Lappin (Deltic Energy) & PESGB Young Professionals: Jade Metcalfe (CNOOC International) & Gerardo Gaitan (Royal Holloway University London)**	

12:45 - 13:45 | Lunch & Exploring the Exhibition and Collaboration Showcase | MSc Winners' Presentations (Hall 3)

13:45 - 14:15	**Collaboration Showcase | Keynote Address:** Sustainable Net Zero **Gioia Falcone, University of Glasgow**	AUDITORIUM

	Exploration: Insights		Reservoir Geology		Energy Transition: Geothermal	
14:15 - 14:45	Detachment Faulting, Successive Incision and Controls on Supradetachment Basin Formation at the Mid-Norwegian Rifted Margin **Julie Linnea Gresseth, Norwegian University of Science and Technology**	HALL 1	The Influence of Pore-Lining Chlorite in Preserving Exceptional Reservoir Quality in Deeply-Buried, Delta-Front and Delta-Fed Sandstones: Observations and Predictions **John Cater, Petrostrat Limited**	HALL 2	Subsurface Geological Challenges for the Development of Geothermal Resources in Sedimentary Basins **Saba Keynejad , CGG**	HALL 3
14:45 - 15:15	Improving Predictability of Changes in Tide-influenced Channel Morphology – Implications for Exploration and Reservoir Analogue Studies **Anna van Yperen, University of Oslo**		Aeolian Facies Distribution in Modern and Subsurface Arid Rift Basins **Sophie Behrendsen, University of Aberdeen**		Potential for Geothermally Heated Horticulture in England **William Nibbs, University of Glasgow**	

15:15 - 16:00 | Refreshment Break & Exploring the Exhibition

	4D		UK: Old & New		Exploration: International Opportunities	
16:00 - 16:30	Finding the Sweet Spot? Choosing the Right Seismic Monitoring Strategy for Your Field **Claudio Leone, WesternGeco**	HALL 1	Old Field, New Tricks: Alwyn OBN & 2GR Integration **Arindam Mitra, TotalEnergies**	HALL 2	Hydrocarbon Exploration Potential in Ecuador, Colombia, and Venezuela. Where to Go and Why? **Andres Mesa, Independent Exploration Consultant**	HALL 3
16:30 - 17:00	Locating the Remaining Oil by a Novel Hybrid Data-Driven Physics-Compliant Technique, Under 4D Seismic Constraints - A North Sea Case Study **Laurent Alessio, LEAP Energy Partners Sdn Bhd**					
17:00 - 17:30	Improved Reservoir Monitoring with PP & PS Time-lapse Imaging Utilising Up/Down Deconvolution: An OBC Case Study from the Edvard Grieg Field, North Sea **Francesca Twynam, WesternGeco**		Blackrock Operations Geology: Delivering a Successful Well in Complex Lithologies **Clayton Grove, Siccar Point Energy**		Potential Oil and Gas Opportunities Offshore Montenegro **Takis Konstantopoulos, Energean**	

17:30 | End of Conference

Collaboration Showcase Sessions

Technical Programme Sponsor | CGG