

Oral Presentations | Wednesday 21 November

THE SUMMIT	
08:00	Registration
08:45	Welcome address
Characterization, Risk and Impact Assessment	
09:00	We CO2 01 - High Resolution Modelling And Steady-State Upscaling Of Large Scale Gravity Currents In Heterogeneous Sandstone Reservoirs - S. Jackson ^{1*} , I. Mayachita ¹ , S. Krevor ¹ ¹ Imperial College London
09:30	We CO2 02 - Identifying Hidden Risk Elements For CO₂ Storage From Reprocessed Seismic Data - S. Carpentier ^{1*} , H. Abidin ² , P. Steeghs ¹ , H. Veldkamp ¹ ¹ TNO, ² Utrecht University
10:00	We CO2 03 - Petrophysical Analysis And Rock Physics Diagnostics Of Sognefjord Formation In The Smeaheia Area, Northern North Sea - N.H. Mondol ^{1,2*} , M. Fawad ¹ , J. Park ² ¹ University of Oslo, ² Norwegian Geotechnical Institute (NGI)
10:30	Coffee break / Poster Session 1
Poster Session 1	
10:30	We CO2 P01 - Quantifying The Risk Of CO₂ Leakage Along Fractures Using An Integrated Experimental, Multiscale Modelling And Monitoring Approach - K. Bisdom ^{1*} , M. Dean ¹ , J. Snippe ¹ , N. Kampman ¹ , A. Busch ² , S. Zihms ² , F. Doster ² , R. March ² , P. Bertier ³ , H. Claes ³ , R. Fink ³ , B. Krooss ³ , S. Hurst ⁴ , A. Lidstone ⁴ , P. van Rossum ⁴ ¹ Shell Global Solutions International B.V., ² Heriot Watt University, ³ RWTH Aachen University, ⁴ Risktec Solutions
	We CO2 P02 - Feasibility Study Of Quantifying Porosity From Seismic Data In Smeaheia - R. Dehghan-Niri ^{1*} , R. Prakash Srivastava ¹ ¹ Equinor ASA, Research and Technology Centre
	We CO2 P03 - Monitoring Of CO₂ Leakage Using High-Resolution 3D Seismic Data – Examples From Snøhvit, Vestnesa Ridge And The Western Barents Sea - B. Bellwald ^{1*} , M. Waage ² , S. Planke ^{1,3,4} , N. Lebedeva-Ivanova ¹ , S. Polteau ¹ , A. Tasianias ² , S. Bünz ² , A.A. Plaza-Faverola ² , C. Berndt ⁵ , H.H. Stokke ⁶ , J. Millett ¹ , R. Myklebust ⁷ ¹ Volcanic Basin Petroleum Research (VBPR) AS, ² Centre for Arctic Gas Hydrate, Environment, and Climate (CAGE), The Arctic University of Norway, ³ Centre for Earth Evolution and Dynamics (CEED), University of Oslo, ⁴ Research Centre for Arctic Petroleum Exploration (ARCEX), The Arctic University of Norway, ⁵ GEOMAR, Helmholtz Centre for Ocean Research Kiel, ⁶ P-Cable 3D Seismic AS, ⁷ TGS
	We CO2 P04 - Investigating The Impact Of Relative Permeability Curves On Cold CO₂ Injection - M. Abbaszadeh ^{1*} , S. Shariatipour ¹ ¹ Fluid and Complex Systems Research Centre, Coventry University
	We CO2 P05 - Opening Versus Self-Sealing Behaviour Of Single Fractures In Mudstone Caprocks During CO₂ Migration - N. Kampman ^{1*} ¹ Shell Global Solutions International
	We CO2 P06 - Control Of Pressure Propagation In A Heterogeneous CO₂ Storage Reservoir Using Water Production - H. Vosper ¹ , J. White ¹ , C. Gent ^{1*} ¹ British Geological Survey

Characterization, Risk and Impact Assessment	
11:00	We CO2 04 - Impact Of Time-Dependent Wettability Alteration On Dynamic Capillary Pressure - A. Kassa ^{1*} , S. Gasda ¹ , K. Kumar ² , F. Radu ² ¹ Uni Research, ² University of Bergen
11:30	We CO2 05 - The Longyearbyen CO₂ Lab Project: Lessons Learned From A Decade Of Characterizing An Unconventional Reservoir-Caprock System - S. Olaussen ^{1*} , K. Senger ¹ , T. Birchall ¹ , A. Braathen ² , S. Grundvåg ³ , Ø. Hammer ⁴ , M. Koevoets ⁴ , L. Larsen ⁵ , M. Mulrooney ² , M.B. Mørk ⁶ , K. Ogata ⁷ , S. Ohm ⁸ , B. Rismyhr ⁸ ¹ University Centre in Svalbard, ² University of Oslo, ³ University of Tromsø, ⁴ Natural History Museum, ⁵ University of Stavanger, ⁶ NTNU, ⁷ VU Amsterdam, ⁸ University of Bergen
12:00	We CO2 06 - Norway CCS Demonstration Project: Evaluation Of Jurassic Reservoirs For Safe CO₂ Injection And Storage - F. Riis ^{1*} ¹ Norwegian Petroleum Directorate
12:30	Lunch break
Reservoir Management	
13:30	We CO2 07 - Reactive Transport Modeling For CO₂ Sequestration With A Dual Mesh Method - D. Guérrillot ^{1*} , J. Bruyelle ² ¹ Texas A&M University at Qatar, ² Terra 3E
14:00	We CO2 08 - Numerical Study Of Microbially Induced Calcite Precipitation As A Leakage Mitigation Solution For CO₂ Storage - S. Tveit ^{1*} , S.E. Gasda ¹ , H. Hægland ¹ , G. Bødtker ¹ , M. Elenius ² ¹ Uni Research CIPR, ² Swedish Meteorological and Hydrological Institute
14:30	We CO2 09 - Smeaheia, A Potential Northern North Sea CO₂ Storage Site: Structural Description And De-Risking Strategies - M.J. Mulrooney ^{1*} , J. Osmond ¹ , E. Skurtveit ^{1,2} , L. Wu ³ , A. Braathen ¹ ¹ Department of Geosciences, University of Oslo, ² Norwegian Geotechnical Institute, ³ Equinor ASA
15:00	Coffee break
15:30	We CO2 10 - Experimental And Theoretical Investigation Of Natural Convection In CCS: Onset Time, Mass-Transfer Rate, Capillary Transition Zone, And Heat Of Dissolution - A.A. Eftekhari ^{1,2*} , R. Farajzadeh ² , H. Bruining ² ¹ Technical University of Denmark, ² Delft University of Technology
16:00	We CO2 11 - CO₂ Flow, Alteration And Geomechanical Response In Confining Units – An Experimental Approach - E. Skurtveit ^{1,2*} , A. Sundal ² , M. Soldal ¹ , G. Sauvin ¹ , T.I. Bjørnarå ¹ ¹ NGI (Norwegian Geotechnical Institute), ² UiO (University of Oslo)
16:30	We CO2 12 - Laboratory-Scale Study On The Swelling Behaviour Of Coal Due To CO₂ Injection - F. Bertrand ^{1,2*} , O. Buzzi ² , F. Collin ¹ ¹ University of Liège, ² University of Newcastle
17:00	We CO2 13 - Time-Lapse Separation Of Fluid And Pressure Effects With An Arbitrary Fluid Mixing Law - F. Borges ^{1*} , M. Landrø ¹ ¹ NTNU
17:30	We CO2 14 - Reservoir Characterisation Of Johansen Formation As Potential CO₂ Storage Reservoir In The Northern North Sea - M. Fawad ^{1*} , N.H. Mondol ^{1,2} ¹ University Of Oslo (UiO), ² Norwegian Geotechnical Institute (NGI)
18:00	End of Day 1

Oral Presentations | Thursday 22 November

THE SUMMIT	
Reservoir Management	
09:00	Th CO2 01 - Analysis Of The Use Of Superposition For Analytic Models Of CO₂ Injection Into Reservoirs With Multiple Injection Sites - S. De Simone ^{1*} , S.J. Jackson ¹ , R.W. Zimmerman ¹ , S. Krevor ¹ ¹ Imperial College London
09:30	Th CO2 02 - Svelvik CO₂ Field Lab: Upgrade And Experimental Campaign - P. Eliasson ^{1*} , C. Ringstad ¹ , A. Grimstad ¹ , M. Jordan ¹ , A. Romdhane ¹ ¹ SINTEF
10:00	Th CO2 03 - Predictive Modelling Of CO₂ Storage In Aquifers: Integrating The Effects Of Boundary Conditions And Saturation Functions - M. Onoja ^{1*} , S. Shariatipour ¹ ¹ Centre for Fluid & Complex Systems, Maudsley House
10:30	Coffee break / Poster Session 2
Poster Session 2	
10:30	Th CO2 P01 - Foam Stability Enhanced Technology For Mobility Control Of CO₂ EOR - H. Yonebayashi ^{1*} , K. Takabayashi ¹ , Y. Miyagawa ¹ , T. Watanabe ¹ ¹ INPEX - Tech. Division Technical Research Center
	Th CO2 P02 - Ensuring Integrity Of CO₂ Storage: An Overview Of Ongoing Experimental Activity - N. Opedal ^{1*} ¹ SINTEF Industry
	Th CO2 P03 - Effects Of Gravity On Flow Behaviour Of Supercritical CO₂ During Enhanced Gas Recovery (EGR) By CO₂ Injection And Sequestration - M. Abba ^{1*} , A. Abbas ¹ , B. Saidu ¹ , G. Nasr ¹ , A. Al-Otaibi ¹ ¹ University Of Salford
	Th CO2 P04 - Numerical Analysis Of Immiscible/ Near-Miscible CO₂-WAG Displacement, Incorporating Compositional And Interfacial Tension Effects - G. Wang [*] , G. Pickup, K. Sorbie, E. Mackay ¹ Heriot-Watt University
	Th CO2 P05 - Influencing The CO₂-Oil Interaction For Improved Miscibility And Enhanced Recovery In CCUS Projects - R. Rommerskirchen ^{1*} ¹ Sasol Germany GmbH
	Th CO2 P06 - CO₂ Storage Potential Of The Neogene Stratigraphy In The North Viking Graben - C. Lloyd ^{1*} , M. Huuse ¹ ¹ University of Manchester
	Th CO2 P07 - Simulated Fluid-Rock Interactions During Storage Of Temporally Varying Impure CO₂ Streams - S. Fischer ^{1*} , L. Wolf ² , L. Fuhrmann ³ , H. Gahre ⁴ , H. Rütters ³ ¹ Federal Institute for Geosciences and Natural Resources (BGR), ² University of Applied Sciences and Arts (HsH), ³ Federal Institute for Geosciences and Natural Resources (BGR), ⁴ Friedrich-Schiller University, Analytical Mineralogy of Micro- and Nanostructures

CO ₂ EOR	
11:00	Th CO2 04 - Opportunities For A CO₂-Enhanced Oil Recovery Project In The North Sea: Analysis Of Profitability And Environmental Impact - K. Welkenhuysen ^{1*} , T. Compennolle ³ , B. Meyvis ¹ , M. Moretti ^{4,5} , K. Piessens ¹ , P. Roefs ³ , R. Swennen ² ¹ Royal Belgian Institute of Natural Sciences - Geological Survey of Belgium, ² KU Leuven - Department of Earth and Environmental Sciences, ³ University of Antwerp - Department of Economics, ⁴ Hasselt University - Centre of Environmental Sciences, ⁵ University of Liege - Gembloux Agro-Bio Tech, Economy and Rural Development Unit
11:30	Th CO2 05 - Assessing Potential Influence Of Nearby Hydrocarbon Production On CO₂ Storage At Smeaheia - H. Lauritsen ^{1*} , S. Kassold ¹ , R. Meneguolo ¹ , A. Furre ¹ ¹ Equinor
12:00	Th CO2 06 - Field-Scale Implications Of Density-Driven Convection In CO₂-EOR Reservoirs - S.E. Gasda ^{1*} , M.T. Elenius ² , R. Kaufmann ¹ ¹ Uni Research CIPR/NORCE Energy, ² Swedish Meteorological and Hydrological Institute
12:30	Lunch break
Infrastructure and CO ₂ Impurity Implications	
13:30	Th CO2 07 - Low Salinity Surfactant Nanofluids For Enhanced CO₂ Storage Application At High Pressure And Temperature - N.K. Jha ^{1,2*} , M. Ali ^{1,3} , M. Sarmadivaleh ¹ , S. Iglauer ³ , A. Barifcani ¹ , M. Lebedev ¹ , J. Sangwai ² ¹ WASM: Minerals, Energy and Chemical Engineering, Curtin University, ² Petroleum Engineering Program, Department of Ocean Engineering, Indian Institute of Technology Madras, ³ School of Engineering, Edith Cowan University
14:00	Th CO2 08 - CO₂ Injection In Low Pressure Depleted Reservoirs - A. Twerda ^{1*} , S. Belfroid ¹ , F. Neele ¹ ¹ TNO
14:30	Th CO2 09 - Huff-n-Puff Test For Minimum Miscibility Pressure Determination For Heavy Oil - E. Shilov ^{1*} , A. Cheremisin ¹ ¹ Skolkovo Institute of Science and Technology
15:00	Coffee break
Storage Monitoring and Remediation	
15:30	Th CO2 10 - Chimneys And Channels: History Matching The Growing CO₂ Plume At The Sleipner Storage Site - G. Williams ^{1*} , A. Chadwick ² ¹ British Geological Survey, The Lyell Centre, Research Avenue South, ² British Geological Survey, Nicker Hill
16:00	Th CO2 11 - Using Well Operation Noise To Estimate Shear Modulus Changes From Measured Tube Waves - A Feasibility Study - D. Wehner ^{1*} , F. Borges ¹ , M. Landrø ¹ ¹ Norwegian University of Science and Technology
16:30	Th CO2 12 - Reservoir Simulation And Feasibility Study For Seismic Monitoring At CaMI.FRS, Newell County, Alberta - M. Macquet ^{1*} , D. Lawton ^{1,2} ¹ University of Calgary - CREWES, ² CMC Research Institutes Inc
17:00	Th CO2 13 - Results From The Second Monitor DAS VSP At Quest CCS - A. Halladay ¹ , V. Orpeza Bacci ¹ , S. O'Brien [*] , K. Hindriks ² ¹ Shell Canada, ² Shell
17:30	End of Day 2

Oral Presentations | Friday 23 November

THE SUMMIT	
Storage Monitoring and Remediation	
09:00	Fr CO2 01 - Mapping CO₂ And CH₄ Emissions: Field-Trial Evaluation Of LightSource For Remotely Estimating The Locations And Mass Emission Rates Of Sources - B. Hirst ^{1*} , D. Randell ¹ , M. Jones ¹ , D. Weidman ² , M. Dean ¹ ¹ Shell Global Solutions International, ² MIRICO Ltd, Rutherford Appleton Laboratory
09:30	Fr CO2 02 - Fault Leakage Detection From Pressure Transient Analysis - A. Shchipanov ^{1*} , L. Kollbotn ¹ , R. Berenblyum ¹ ¹ IRIS
10:00	Fr CO2 03 - Quantifying Efficiency Of Field-Wide Geophysical Surveys For Verifying CO₂ Plume Conformance During Storage Operations - E. Barros ^{1*} , O. Leeuwenburgh ¹ , S. Carpentier ¹ , F. Wilschut ¹ , F. Neele ¹ ¹ TNO
10:30	Coffee break / Poster Session 3
Poster Session 3	
10:30	Fr CO2 P01 - Exploring Geophysical Applications For Distributed Acoustic Sensing (DAS) Using A Flexible Interrogator Research Platform - P. Thomas ^{1*} , E. Kolltveit ¹ , Y. Heggelund ¹ , M. Wilks ² , A. Wuestefeld ² , K. Midttømme ¹ ¹ NORCE, ² NORSAR
	Fr CO2 P02 - CO₂ Sequestration: Studying Caprock And Fault Sealing Integrity, The CS-D Experiment In Mont Terri - A. Zappone ^{1,2*} , A.P. Rinaldi ² , M. Grab ¹ , A. Obermann ² , M. Claudio ¹ , C. Nussbaum ³ , S. Wiemer ² ¹ ETH Zurich, ² Swiss Seismological Service, ³ Swisstopo
	Fr CO2 P03 - CO₂ Monitoring At The Ketzin Pilot Site With Joint Inversion: Application To Synthetic And Real Data - M. Jordan ^{1*} , D. Rippe ^{1,2} , A. Romdhane ¹ , C. Schmidt-Hattenberger ² ¹ SINTEF Industry, ² GFZ German Research Centre for Geosciences
	Fr CO2 P04 - Pre-Operational Considerations In A Poro-Elastic Site Assessment For The Svelvik Field Lab - W. Weinzierl ^{1*} , B. Wiese ¹ , M. Jordan ² , C. Schmidt-Hattenberger ¹ , P. Eliasson ² , C. Ringstad ² , S. Lüth ¹ , A. Grimstad ² ¹ GFZ German Research Centre for Geosciences, ² SINTEF Industry
	Fr CO2 P05 - Bayesian Inference In CO₂ Storage Monitoring: A Way To Assess Uncertainties In Geophysical Inversions - B. Dupuy ^{1*} , A. Romdhane ¹ , P. Eliasson ¹ ¹ SINTEF
	Fr CO2 P06 - On The Estimation Of Phase Behavior Of CO₂-Based Binary Systems Using ANFIS Optimized By GA Algorithm - M. Motie ^{1*} , A. Bemani ² , R. Soltanmohammadi ³ ¹ School of Chemical, Petroleum and Gas engineering, Iran University of Science and Technology, ² Department of petroleum engineering, Petroleum University of Technology, ³ Department of Environment, Land and Infrastructure Engineering, Polytechnic University of Turin

Storage Monitoring and Remediation	
11:00	Fr CO2 04 - Forensic Mapping Of Spatial Velocity Heterogeneity In A CO₂ Layer At Sleipner Using Time-Lapse 3D Seismic Monitoring - A. Chadwick ^{1*} , G. Williams ¹ ¹ British Geological Survey
11:30	Fr CO2 05 - Feasibility Of Permanent Seismic Monitoring Of A CO₂ Storage Site Offshore Norway - A. Furre ^{1*} , R. Bakke ¹ , P. Ringrose ¹ ¹ Equinor ASA
12:00	Lunch break
Demonstration Cases and The Future	
13:00	Fr CO2 06 - Impact Of CO₂-WAG Design Optimisation On Coupled CO₂-EOR And Storage Projects In Carbonate Reservoirs - H. Rodrigues ^{1*} , E. Mackay ¹ , D. Arnold ¹ ¹ Heriot-Watt University
13:30	Fr CO2 07 - 13 Years Of Safe CO₂ Injection At K12-B - V. Vandeweyer ^{1*} , C. Hofstee ¹ , H. Graven ² ¹ TNO, ² Neptune Energy Netherlands B.V.
14:00	Fr CO2 08 - Lessons Learned From Development Of The First Norwegian CSS Project - K. Rørvik ^{1*} , S. Eggen ¹ , M. Carpenter ¹ , N.P. Christensen ¹ Gassnova
14:30	Fr CO2 09 - Quantitative Prediction Of Injected CO₂ At Sleipner Using Wave-Equation Based AVO - P. Haffinger ^{1*} , F. Jedari Eyvazi ³ , P. Steeghs ² , P. Dougeris ¹ , D. Gisolf ¹ , E. Verschuur ⁴ ¹ Delft Inversion, ² TNO, ³ GESciTech, ⁴ Delft University of Technology
15:00	Coffee break
15:30	Fr CO2 10 - Scaling Technologies To Enable Giga-Tonne/Year CO₂ Storage - M. Dean ^{1*} , S. Bourne ¹ , D. Smit ¹ , O. Tucker ² , J. Snippe ¹ , K. Hindriks ¹ ¹ Shell Global Solutions International, ² Shell Global Solutions United Kingdom
16:00	Fr CO2 11 - The European CCS Research Laboratory Infrastructure (ECCSEL) And Its Contribution To Future Geological CO₂ Storage In Europe - H. Taylor ^{1*} , M. Vellico ² , C. Vincent ¹ , I. Czernicowski ³ , K. Bateman ¹ , R. de Klerk ⁴ , C. de Vittor ² , S. Dupraz ³ , J. Pearce ¹ , S. Quale ⁵ , V. Röhling ⁵ ¹ British Geological Survey (BGS), ² Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS), ³ Bureau de Recherches Géologiques et Minières (BRGM), ⁴ TNO, ⁵ ECCSEL ERIC
16:30	Fr CO2 12 - Three Years Of Safe Operations At The Quest CCS Facility, Fort Saskatchewan, Alberta, Canada - A. Halladay ¹ , S. O'Brien ^{1*} , O. Tucker ² , J. Duer ¹ ¹ Shell Canada, ² Shell
17:00	Closing remarks
17:30	End of Workshop