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Sommario/riassunto	In the aftermath of the “Deepwater Horizon” oil spill in the Gulf of Mexico, the need arose for experimental data on oil and gas hydrodynamics and particle formation under deep-sea conditions. This work presents a new High-Pressure Test Center that allows for experimental oil spill research under artificial deep-sea conditions. It also contains experimental data on drop formation processes and oil drop size distributions generated within this test center and a modeling approach based on the turbulent energy dissipation that has been developed to predict the droplet sizes of an oil-and-gas jet under high pressure. About the Author Karen Malone studied Mechanical

Engineering at Hamburg University of Technology and Luleå University of Technology, specializing in product development. From 2013 to 2018, she worked as research associate at the Institute of Product Development and Mechanical Engineering Design at TUHH. During this time, she took part in the international research consortium C-IMAGE which investigated the Deepwater Horizon Oil Spill and its consequences in and for the Gulf of Mexico. Since 2019, she works as process and plant engineer in the chemical industry.