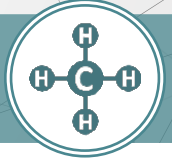


WORKING IN NOVEL HYDROCARBON EXTRACTION* INNOVATION ACTIVITIES AND SKILLS FOR REDUCING ENVIRONMENTAL FOOTPRINT



KEY ACTIVITIES	<p>LABORATORY TESTING AND DEVELOPMENT <i>Mitigating technical and reservoir risks</i></p> <ul style="list-style-type: none"> • Stage-gate technology development • Experimentation to improve the concept in a laboratory environment • Identify critical mechanisms and possible failure factors • Design, plan and conduct lab experiments • Develop prototypes to simulate the operational environment • Integrate and test new components and technologies in the laboratory • Design and perform scaled prototype experiments • Conduct numerical modelling and economic analysis • Assess field readiness and design criteria for choosing the appropriate field pilot • Build partnerships with industry, academics, technology developers and research institutions • Communicate and share successes and failures • Build the business case for pilot demonstrations 	<p>FIELD PILOTING AND DEMONSTRATIONS <i>Larger scale field pilot of laboratory tests</i></p> <ul style="list-style-type: none"> • Select an appropriate field pilot site • Integrate and test basic components in the field that were simulated in the lab • Train operators to deploy and assess technology • Analyze and solve design, engineering and process challenges • Assess and develop potential routes to scale technology adoption • Measure field results against anticipated production and environmental performance results • Adhere to regulatory requirements • Build partnerships with industry, academics, technology developers and research institutions • Engage with community stakeholders • Communicate and share successes and failures 	<p>FIELD DEPLOYMENT <i>Commercial pilot and assessment of upscale potential</i></p> <ul style="list-style-type: none"> • Build partnerships with industry • Select an appropriate commercial pilot site • Integrate and test basic components from the field pilot into an upscaled commercial pilot • Train operators to deploy and assess technology • Evaluate and develop potential routes to further scale technology adoption • Address regulatory requirements • Engage with community stakeholders • Communicate and share successes and failures • Develop a business and marketing plan • Attract investors • Secure supply chain(s) • Business development and sales pipeline management

*Accessing and producing hydrocarbons