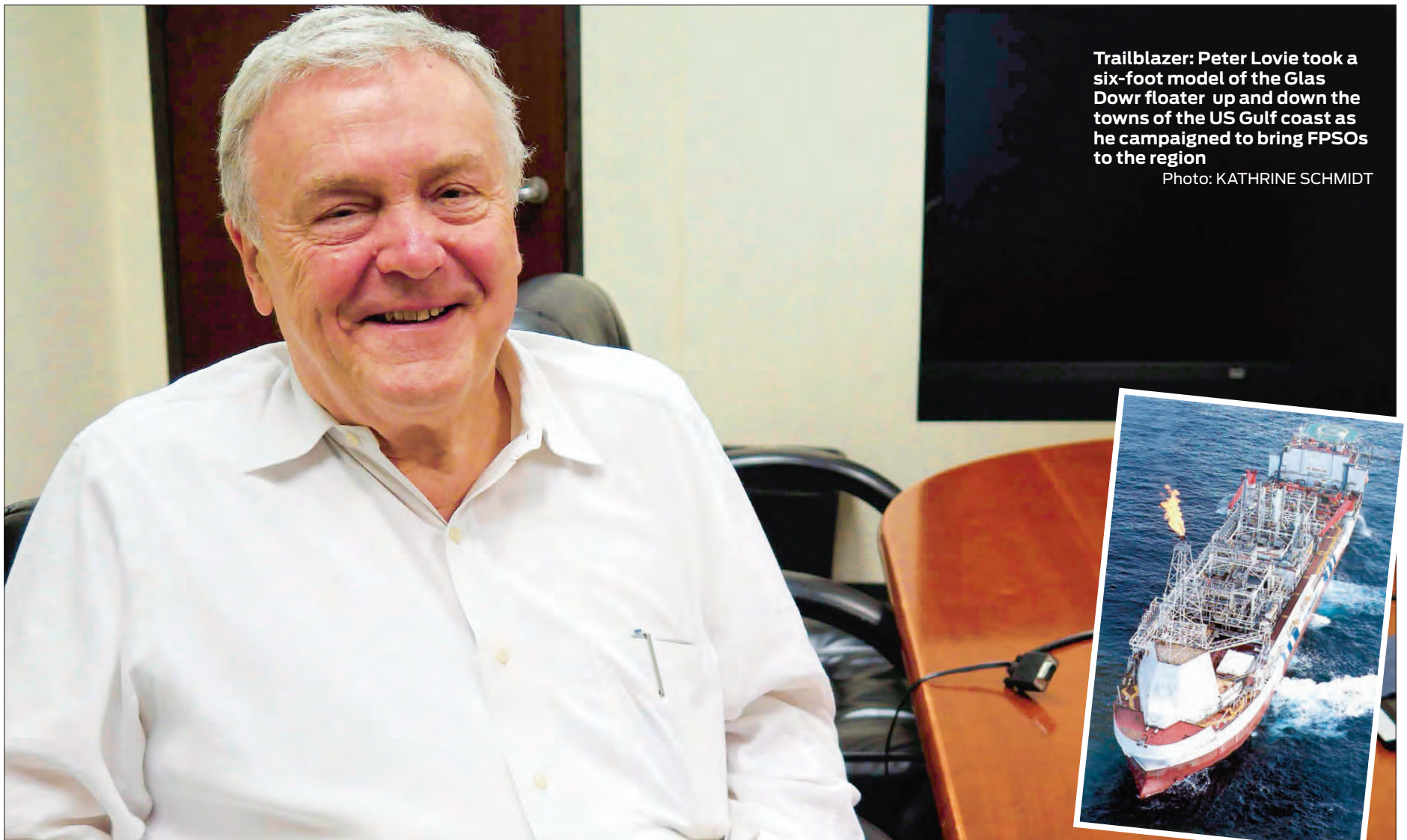

Trailblazer: Peter Lovie took a six-foot model of the Glas Dowr floater up and down the towns of the US Gulf coast as he campaigned to bring FPSOs to the region
Photo: KATHRINE SCHMIDT

FPSOs — a labour of Lovie

Meet the man who brought **FPSOs to the US offshore** — by **dragging a six-foot model of one** up and down the coast

KATHRINE SCHMIDT
Houston

PETER Lovie remembers well his late 1990s road trips to the towns of the US Gulf coast with an unusual companion — a six-foot model of the Glas Dowr floating production, storage and offloading unit.

The veteran engineer took the unit on the back of a truck to places from Corpus Christi to Lafayette as a key part of an environmental impact study that paved the way to bring FPSOs to the US offshore.

Bringing the technology to the region has been a long and winding road, a tale that Lovie recently wrote in a history entitled "Two FPSOs in the Gulf of Mexico: A 20-year saga".

The industry's effort over time culminated in the start-up of the Petrobras-operated Cascade-Chinook development in 2012 and Shell's Stones project, which is due on line soon.

"It's the kind of project that makes one proud to be an engineer," he says. "It's something inspiring to the industry."

A native of Fife, Scotland, Lovie took a civil engineering degree at the University of Glasgow and a master's at the University of Virginia as a Fulbright scholar.

Cameron recruited him to work in Houston, where he moved to a position at the predecessor to Transocean and ran engineering outfits focused on jack-up rig design and later subsea processing.

In 1995 Lovie joined FPSO provider Bluewater and was tasked with business development in the US Gulf.

Pioneering vessels By then, about 50 units were active around the world as pioneering vessels such as the Castellon off Spain in 1977 gave way to harsh-environment units in the North Sea.

In 1996, Texaco considered one of the first US Gulf FPSO projects for its Fuji prospect, then a remote deep-water well in about 1700 feet of water.

However, regulators first wanted an environmental impact study on the field development model amid concern following the 1989 Exxon Valdez spill in Alaska.

Industry collaborated through the DeepStar technology alliance to complete the document, which took $3 million and five years.

Following his Bluewater post, Lovie began working on FPSO projects from another perspective, in 2002 joining American Shuttle Tankers, later acquired by Teekay.

In his various roles, Lovie had a front-row seat for the ongoing field development discussions on projects that considered FPSOs.

From 1998 to 1999 Shell weighed up the options for its Na Kika development, but ultimately opted for a semi-submersible design.

The operator struggled to crack the problem of risers, later mastered in Brazil's BM-S-10 block with the lazy wave steel catenary design.

In 2000, BP considered a shuttle-tanker option for what later became the Mardi Gras pipeline system for its flagship fields in Mississippi Canyon and Green Canyon, such as Thunder Horse, Mad Dog and Atlantis.

Shell in 2004 also contemplated an FPSO at its Great White discovery, which later became the Perdido spar.

However, it finally selected the FPSO model for its Stones development, which is set to be produced by the SBM Offshore Turritella unit, poised to become the world's deepest production facility in 9500 feet of water.

The shuttle tanker question was central as operators contemplated the FPSO model, and was complicated in the US by the Jones Act, which requires goods transported between two US ports to be carried by US built, flagged and staffed vessels.

US tankers were more expensive to build, and there was no guarantee that the life of the field would correspond with the life of the vessel, factors that weighed on development economics.

Disconnectable turret The 2005 hurricanes Katrina and Rita forced an industry rethink of design properties on offshore facilities and, in the case of FPSOs, spurred the idea of a disconnectable turret to avert collisions and spills during storms.

In 2006, Lovie joined US independent Devon Energy to work on its Lower Tertiary deep-water developments, where it was partnered with Brazilian state oil company Petrobras on Cascade-Chinook in the Walker Ridge area.

The FPSO concept won the day amid uncertainty about how the Lower Tertiary find might produce over time.

The company also handled tanker economics by learning to live with a higher dayrate and constructing vessels with some, but not all, of the manoeuvrability of top-flight dynamic positioning units. The BW Pioneer FPSO began producing at the fields in 2012 after the Macondo disaster, at the time the world's deepest such development in 8200 feet of water.

Lovie left Devon in 2009 and has since worked as an independent consultant.

He has also led and moderated dozens of offshore conferences over the years, and led a US Department of Energy research paper on deep-water offloading.

Despite the progress, Lovie sees an uncertain outlook for future FPSOs. Redeployment of existing units can be harder than it looks, and operators tend to underestimate the costs of adaptation.

"Each... has been built for a particular oilfield, and each oilfield is different," he says.

Lovie lives in Houston with his wife and has a grown son. He likes to delve back to his roots by travelling back to Scotland or savouring a good single malt such as Laphroaig or Talisker.

However, he has also fully embraced his American home and became a US citizen in 2008.

To celebrate, he ordered a pair of customised Western boots with the US seal that he proudly wears to business meetings.

He recalls the citizenship ceremony alongside 2500 others, all dressed in their best, representing about 100 nationalities and speaking myriad languages.

"A truly unforgettable experience, moving," he says.

> *To celebrate becoming a US citizen, he ordered a pair of customised Western boots with the US seal.*