



Tower of power: Hess' North Malay Basin project contains more than 1.5 trillion cubic feet of gas and more than 20 million barrels of condensate – enough energy to power a city the size of Kuala Lumpur for more than 30 years Photo: AFP/SCANPIX

# Sun comes up on a bright future for Hess - and Malaysia

Why first production from North Malay basin is a win-win for company and country

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US independent Hess recently generated first production from the full-field phase of its \$5 billion North Malay Basin gas and condensate project in Malaysia, but start-up signifies more to Hess than just another successful field development.

Firstly, the project has become an important growth asset for Hess, and secondly the company is making a big contribution to Peninsular Malaysia's security of gas supply.

Gerbert Schoonman, Hess' vice president for global offshore production, adds that the North Malay project has transitioned from being "a large capital investment to being a significant cash generator moving forward".

North Malay currently equates to net production of about 25,000 barrels of oil equivalent per day and, within the context of Hess' global portfolio, represents a major increase.

Along with a planned ramp-up in production in the Bakken shale play in the US area, North Malay is a key growth story for Hess, Schoonman says.

The company has long had a presence in South-East Asia, and is not a newcomer to Malaysia, having bought an interest about two decades ago in the prodigious Block A-18 production asset in the Malaysia/Thailand joint development area.

Block A-18 is operated by the Carigali Hess Operating Company, and it is the long experience garnered through this joint operatorship that gave Hess the skills and know-how to embark on the North Malay project.

The North Malay area is immediately south of Block A-18, where Schoonman says Hess had learned how to “optimise gas production from these types of reservoirs”.

Water depths in the North Malay area average 55 metres, and there are multiple gas-bearing zones at depths of between 1000 metres and 3000 metres.

In 2011, there were concerns about gas shortages in Peninsular Malaysia, which is where about 80% of Malaysia’s population resides.

Hess quickly identified a commercial opportunity to move ahead with a fast-track gas development, but the company only had one permit at that time, PM302, which contained the Kamelia field.

Everything changed in mid-2012 when Hess and Petronas signed a series of agreements to create the North Malay Basin Integrated Gas Development project, with Hess and Petronas Carigali on a 50:50 equity basis and Hess as operator.

Block PM302 was enlarged to include nine discovered gas fields, while two exploration permits — PM325 and PM326B — were awarded to Hess and Petronas Carigali.

The nine discoveries were made more than a decade previously by Petronas Carigali and a Shell-Petronas Carigali joint venture, but by themselves were not economic to develop — integrating them was the key to unlocking them.

Hess swung into action with the Kamelia project, for which it already had a field development plan. Kamelia, therefore, became the initial phase, or early production system.

The concept for Kamelia was a wellhead platform that was based on a design similar to those platforms in Block A-18, and the leased floating production, storage and offloading vessel Perisai Kamelia (formerly the Lewek Arunothai).

Kamelia was brought on stream in October 2013, and since then is understood to have generated about 40 million cubic feet per day of gas production net to Hess. All North Malay gas is sold at an oil-indexed price into Peninsular Malaysia.

A 300-kilometre pipeline transports the gas to the Terengganu Gas Terminal in Kertih, which Petronas has said uses a proprietary membrane technology for carbon dioxide removal.

Meanwhile, the US operator moved ahead rapidly with the full-field development – a major undertaking comprising a central processing platform, multiple wellhead platforms and a newbuild floating storage and offloading vessel.

All the engineering, procurement, construction, installation, hook-up and commissioning contracts were finalised by early 2015. The final major undertaking – the development drilling contract – was awarded in 2016.

Full-field production began on 10 July 2017. All of the offshore facilities except the FSO are in operation, and Schoonman says gas production will soon reach the target of a net 165 MMcfd.

The FSO missed an installation window, so Hess has instead deployed a trading tanker for condensate storage. The FSO will remain in the yard in Johor to be completed, and Hess will go through the winter with the trading tanker.

“From a safety perspective you do not want to be installing facilities in the monsoon season between September and February,” says Schoonman. “And from an operating cost there is no difference because the FSO is not on contract.”

Malaysian services companies including Sapura Energy, Malaysia Marine & Heavy Engineering, EA Technique and UMW Oil & Gas played significant roles in the project execution, as did overseas contractors Hyundai Heavy Industries and Sofec.

“We are very grateful to all our contractors for the way they performed and delivered for us in this project,” says Schoonman, who joined Hess in 2011 following about 20 years working for Shell.

Malaysia’s skilled contractors, he adds, are one of the attractions in investing in Malaysia along with the country’s “world-class resource base and mature energy sector”.

The project’s nine gas discoveries contain more than 1.5 trillion cubic feet of gas and more than 20 million barrels of condensate – this, says Hess, is enough energy to power a city the size of Kuala Lumpur for more than 30 years.

Hess says it has annual net sales commitments from North Malay of about 50 billion cubic feet per year from the completion of the full-field development through until 2024.

Schoonman says the largest of the fields is Bergading, and that is where the CPP is located. In the first years of the full-field development the focus is on the Bergading shallow section, and the deeper sections of the field — along with tie-ins to the satellite fields – will come later.

Future phases of the full-field development are planned, and a five-well appraisal campaign is necessary to provide information on optimising and enhancing those future opportunities.

“This is the really exciting thing, because we’re still appraising some of these fields and it’s a prolific basin. So we’re hoping for extensions beyond the 20-year gas sales agreement.”

