

L09 Detailed Design

Nederlandse Aardolie Maatschappij BV (NAM)

GAS

NAM undertook the development of the L09-FA and FB gas Fields located in the Dutch sector of the Southern North Sea. The block is operated by NAM (50% equity) in partnership with the Dutch Government (EBN) (50%). Shell UK Exploration and Production (Shell Expro) provided design and procurement support for the development. The proposed field development is presented below.

The development for the L09 Area development consisted of two platforms L09-FA and L09-FB, evacuating well fluids via one pipeline to the existing host facility L09-FF. It is anticipated that a maximum of 8 development wells (6 on FA and 2 on FB) will eventually be drilled.

The L09-FA and FB fields were developed from a single drill centre each via a 6 and 4 (respectively) well slot Trident Monotower installation.

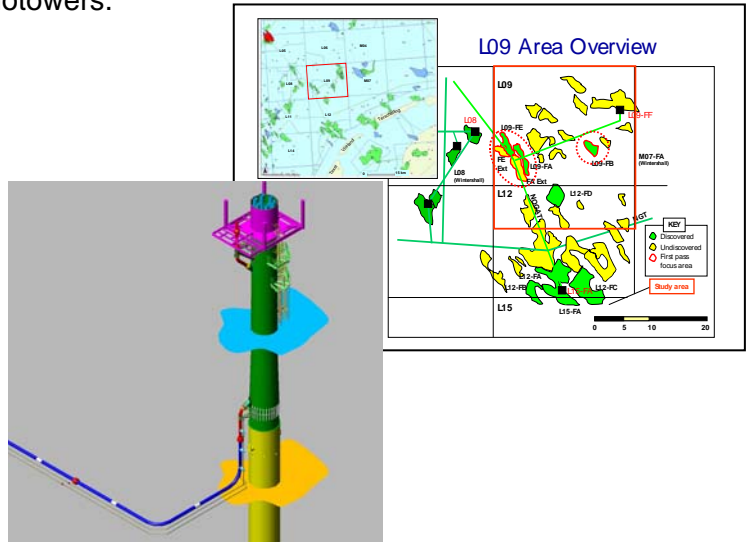
The Trident Monotower platforms are minimum facility, normally unattended marine access platforms with no gas processing facilities. Electrical power is provided by means of a hybrid renewables package, comprising solar PV panels, wind turbines and batteries.

Total wellstream fluids from the L09-FA are exported via a 16" 350 barg 19km pipeline to L09-FF. L09-FB fluids tie into this pipeline approximately half way along its length via a piggable Y-piece. At L09-FF the fluids will be processed and then exported via the NOGAT pipeline to the Den Helder Gas Plant.

Flow assurance will be provided by the injection of a mixture of Mono Ethylene Glycol (MEG) and pH stabilisation chemicals, supplied from L09-FF via a piggyback pipeline. An additional piggyback pipeline shall provide wash water to the L09-FA and FB monotowers.

Andrew Palmer & Associates scope of work:

- 16" L09-FB Wye
- 16" Production pipeline, 2" MEG/ CI and 2" Water Wash pipeline and spoolpieces from L09-FA to L09-FF (via L09-FB)
- 16" Production, 2" MEG/ CI and 2" Water Wash at L09-FA and L09-FB
- Retrofit 16" Production/ 2" MEG/ CI/ 2" Water Wash piggy-backed risers at L09-FF
- Cathodic protection of the 16" and 2" pipelines
- Thermal/ Hydraulic analysis of the 16" and 2" pipelines



Location:	Southern North Sea, The Netherlands	Contract:	Reimbursable			
Block:	L09	Manhours:	<500 <input type="checkbox"/>	500-5000 <input type="checkbox"/>	5000-10,000 <input type="checkbox"/>	>10,000 <input checked="" type="checkbox"/>
Water depth:	30m	Penspen Value:	<\$100k <input type="checkbox"/>	\$100k-500k <input type="checkbox"/>	\$500k-1,000k <input type="checkbox"/>	>\$1,000k <input checked="" type="checkbox"/>
Duration:	100 weeks					

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