

Babbage Field Development Detailed Design

GAS

E.ON Ruhrgas/ Technip UK Limited

The Babbage field is located in the north-west of the UK SNS in UK Block 48/2, Licence P456, approximately 80km northeast of Dimlington (Easington). The field is in 40-45m of water and is approximately 28km northwest of the BP-operated West Sole WB platform. It is planned to develop the field through a North West platform location with the potential for further wells tied-back from the South East of the reservoir or third party fields.

The Babbage development involves five platform drilled horizontal wells, supported on a Minimum Facilities Platform (MFP), tied back to the West Sole System (WSS).

Volumetric calculations indicate Gas Initially In Place (GIIP) is estimated at 420 Billion Cubic Feet (BCF) with a possible range of 308 to 659 BCF. The base case recoverable reserves expectation is 200 BCF for production until 2029, although this could be constrained by the cessation of processing facilities at West Sole in 2025. First gas is expected in Q4 2009.

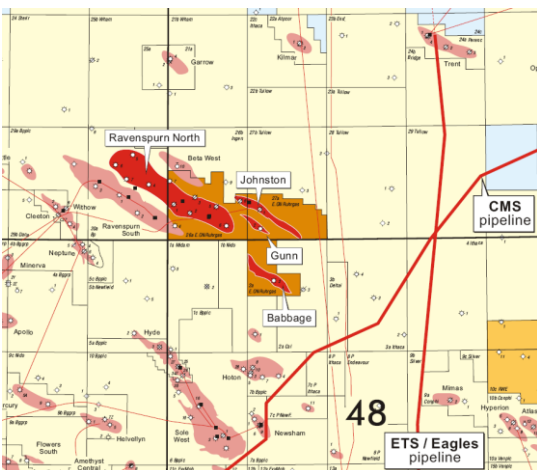
A new 28km 12-inch Nominal Bore (NB) carbon steel export pipeline will be installed from the Babbage platform to connect to the existing West Sole Bravo subsea tee via a new Pigging Skid and interconnecting flexible spools.

The Babbage production will be commingled with the production from Hoton and Hyde at the existing West Sole subsea tee. From West Sole, the gas will be exported to BP Dimlington Terminal via the existing 24-inch gas export pipeline.

Technip have been awarded the contract for the complete subsea field development and have in turn awarded detailed design of the rigid pipeline and Pigging Skid to Andrew Palmer & Associates.

Andrew Palmer & Associates scope of work:

- Materials Selection & Internal Corrosion Assessment
- Wall Thickness Assessment
- External Coating and Cathodic Protection Analysis
- Pigging Skid Weight Take Off, Structural and Pipework Design
- Bottom Roughness Analysis
- Pipeline On-Bottom Stability, Expansion and Free Span Analysis
- Field Layout & Mechanical Protection
- Pipeline Crossing and Material Take Off
- Operational Stress and Predictive Upheaval Buckling Analysis



Location:	Southern North Sea, UK			
Block:	48/2			
Water depth:	40-45m			
Duration:	24 weeks			
Contract:	Lump Sum			
Manhours:	<500	500-5000	5000-10,000	>10,000
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Penspen Value:	<\$100k	\$100k-500k	\$500k-1,000k	>\$1,000k
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