



Harbour



Motorway



Rail



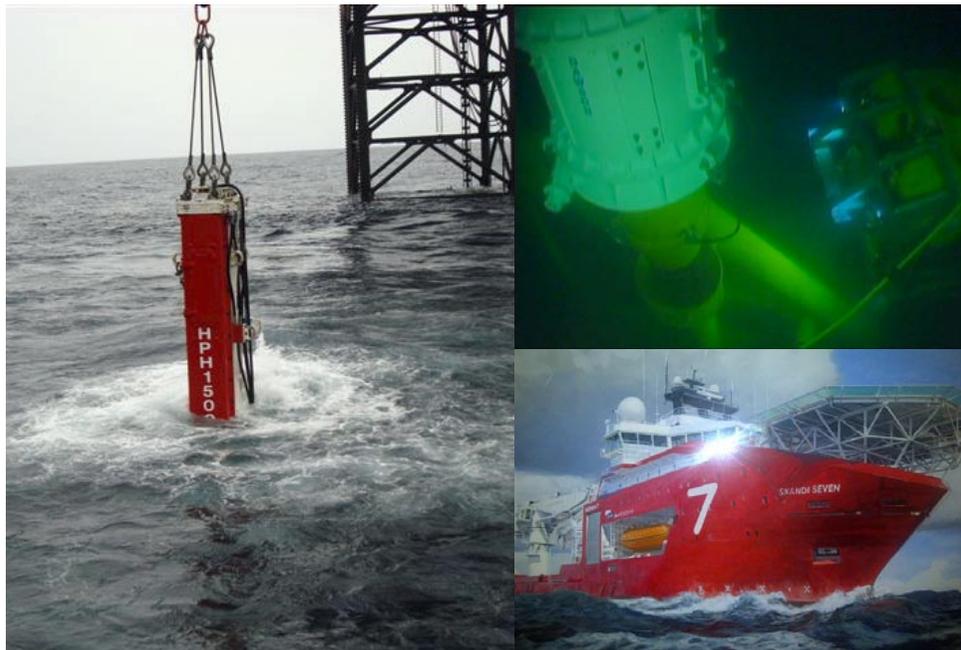
Basement



Sustainable
Foundation



Specialist Work >



UNDERWATER PILE DRIVING

E.On Huntingdon field - NORTH SEA (2011)

▼ Eon Ruhrgas intend to develop the Huntingdon field as a tie-back to a new FPSO Sevan Voyageur. The Huntingdon field is located in a water depth of -90m in Block 22/14b of the UK sector of the Central North Sea. The base case is for six wells (four production two water injection) to be drilled from a single drilling template located approximately 2Km south of the FPSO. The four producing wells will be tied-in to a production manifold, which in turn, will be tied back to the FPSO by a 10" production flowline, a 4" gas lift flowline and a 6" control/chemical injection umbilical. An 8" water injection flowline will connect the water injection wells to the FPSO. Gas will be exported from the FPSO via a new 8" export pipeline which will connect the FPSO to the CATS pipeline, via a tee structure tied into an available tie-in point on the BP

Andrew valve support structure, which is located approximately 12Km NNE of the FPSO.

As part of the offshore pile driving operations, Dawson Contract Piling was to supply a complete spread with all associated equipment, airline supply to a double acting hydraulic impact hammer with a minimum impact energy of 120 kNm. This should include offshore support personnel to a SUBSEA 7 nominated vessel for the purposes of pile installation for the preinstalled Production Manifold Structure. 4x Ø24" piles were driven to target penetration depth of 12metres through the manifold pile guides.

Technical Specifications

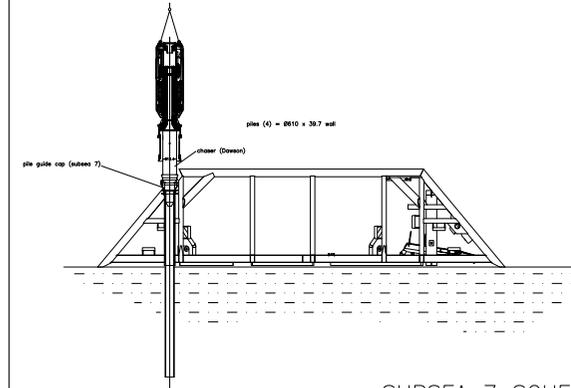
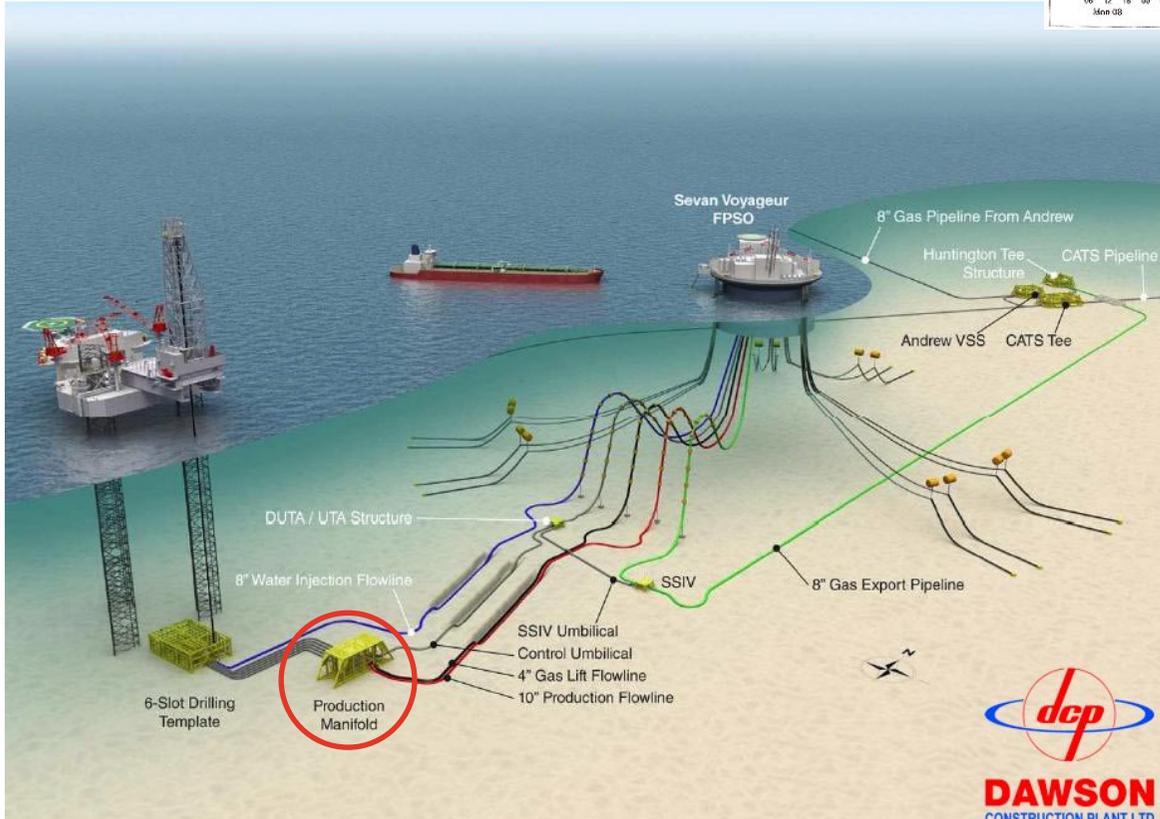
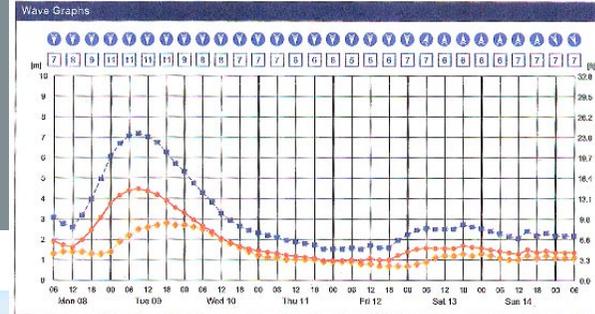
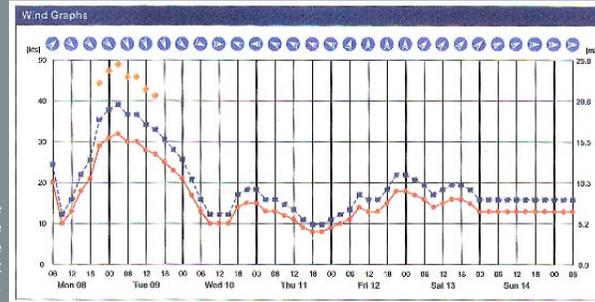
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The Production Manifold structure was secured with four tubular piles of Ø24x1.56" and total length approximately 16.75m. The required penetration was approximately 12m. The first structure was piled commencing 15th August 11. The primary hammer, a Dawson HPH15000, successfully drove all 4 piles to the required penetration in upto 90 metres of water.

Geology	Unit	Depth below seabed (m)	Description
Holcene Sediment	I	0.0 - 0.3	LOOSE to DENSE, silty to clayey, fine SAND, with sand to gravel-size shell fragments and medium gravel of mixed lithology
Coal Pit Formation	II	0.3 - 0.7	FIRM sandy CLAY
Fisher Formation	III	0.0 to 0.7 20.2 to 30.2	Interbedded MEDIUM DENSE to VERY DENSE slightly silty to silty, locally clayey, fine to coarse SAND and FIRM to VERY HARD slightly sandy to sandy foliated to platy clay with closely spaced thin sand-size to medium gravel-size shell fragments. closely spaced partings of silt and discontinuous slickensides.

Wind and wave graphs at the location of the manifold structure show the difficulty and importance to take advantage of the right conditions to work.

Summary of Soil Conditions at the structure



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