



# Boomvang-Nansen Truss Spars

Driven anchor piles were selected for the world's first truss spars, Kerr-McGee's Nansen and Boomvang, using MENCK's unique MHU 500T MUP Deepwater Pile Driving System. Besides driving the piles to depth, the hammer was used as a lowering tool for the piles. MENCK's experienced service team, on 12-hour shifts, drove 18 piles with 84 in OD to a final penetration of 220 ft (67 m) on schedule at 3,890 ft (1,186 m) water depth. This set a new world water depth record for mooring piles. Lowering piles with the hammer was made possible with a patented pin locking system; one pile at a

time with chain and mooring line attached is connected to the hammer at deck level. The hammer lowers the pile to its location and positions it on the seabed. When positioned correctly and self weight penetration is reached, the pin system is re-released by an ROV and driving operations commence. When final penetration is reached, the hammer trips to surface, a new pile is attached to the hammer and the process is repeated. The hammer lifting appliances are designed to carry up to 290 metric tonnes payload.

<b>Project name</b>	Boomvang-Nansen
<b>Client (end customer)</b>	Kerr McGee
<b>Contractor</b>	J. Ray McDermott
<b>Location</b>	Gulf of Mexico
<b>MENCK operational start</b>	July 28th, 2001
<b>MENCK operational end</b>	September 7th, 2001
<b>Water depth</b>	3,890 ft – new world record (2001)
<b>Installation vessel</b>	DB-50
<b>Quantity of piles</b>	2 x 9
<b>Pile diameter</b>	84 in
<b>Number of blows per pile</b>	1,500
<b>Hammer</b>	MHU 500T
<b>Power pack</b>	MUP
<b>Mobilisation/demobilisation by</b>	J. Ray McDermott
<b>Mobilisation harbour</b>	Morgan City, Amelia
<b>Demobilisation harbour</b>	Morgan City, Amelia
<b>MENCK's scope</b>	Piling subcontract
<b>MENCK engineering</b>	Project management



Piles with pad eye



Anchor cable



MHU 500T with MUP

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