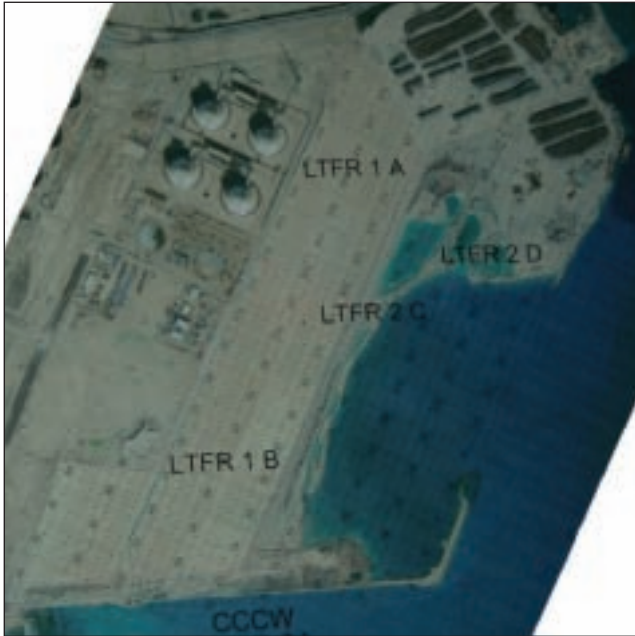




# PROJECT REPORT

## RAS LAFFAN PORT EXTENSION - QATAR

<b>EQUIPMENT:</b>	RIC 9000 / RIC 12000
<b>PROJECT:</b>	RAS LAFFAN PORT EXTENSION
<b>LOCATION:</b>	RAS LAFFAN - QATAR
<b>PURPOSE:</b>	RECLAMING AND CONSOLIDATING LAND FOR EXPANSION OF GAS PROCESSING PLANT



Aerial view of Ras Laffan Port extension



BSP RIC 12000 mounted on CAT 365C

A major expansion of the gas terminal at Ras Laffan, commissioned by Qatar Petroleum, meant that sand dredged from the Gulf sea became the ideal local raw material being used to reclaim land from the sea.

A joint venture between Jan De Nul and Royal Boskalis is overseeing the work. As well as the gas facilities to be made, including a large tank farm area; there is around 25km of surrounding breakwaters to be constructed. A total area of 350 Hectares (1.35 sq miles) needs compaction.

The sand dredged, filtered and hydraulically laid is relatively silt-free, but was high in calcareous deposits - for which the degree of compaction achievable was unknown.

The fill base is at around -4m CD and is laid to +2m giving a typical compaction depth of 6m, some areas of the project are deeper and 7-8m strata will be compacted.

BSP responded to a request for trials by the Joint Venture and in mid 2006 shipped an RIC 9000 to Dubai for trials on similar reclamation work on the Jebel Ali Palm Island (see separate report).

The Tests were successful and lead to a total of five machines being ordered to complete the compaction in time to meet the milestones set by the client.

Two of the machines were of the RIC9000 size mounted on CAT 345C excavators.

A further three machines were ordered of the RIC12000 size.

**These are the largest RIC machines yet built, increasing the energy per blow by 60% compared to the RIC 9000.**

A larger carrier was needed and the CAT 365C made an ideal match.

The increased energy-per-blow enabled both faster coverage of the thinner layers and an increase in the Depth-of-Influence where the layers are deeper.

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