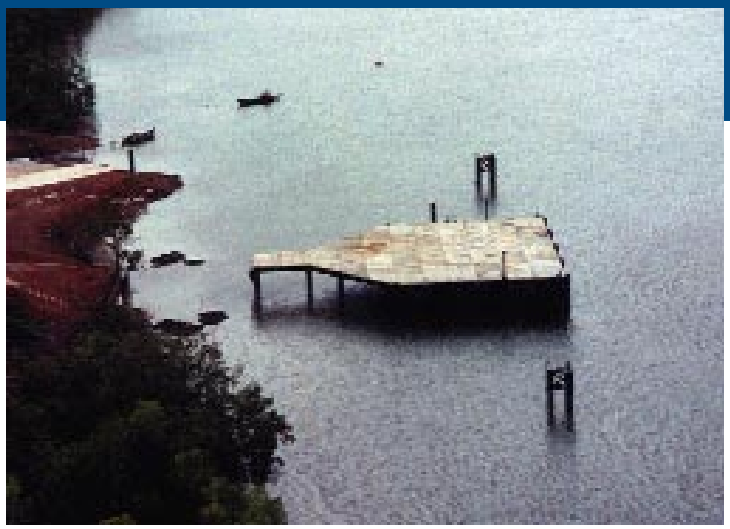
GEOCEAN
REFERENCES

WHARF CONSTRUCTION



About 1500 T of steel and concrete installed by GEOCEAN *in the remote Heinze river near TAVOY, Myanmar.*

YADANA GAS DEVELOPMENT PROJECT

UNION OF MYANMAR

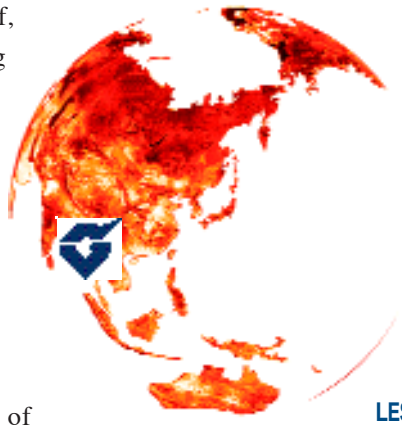
In the frame of the TOTAL YADANA gas development and transportation project in Myanmar, GEOCEAN was awarded, as a subcontractor to BEC Freres, the contract for the marine part of the Onshore Logistic Base.

The contract included:

- Engineering, procurement, construction and installation of a steel piles founded wharf, with two mooring dolphins and a floating pontoon.
- Transport and installation of steel piles and sheet piles for the piers foundations of two bridges on the Heinze and Tavoy rivers.
- Transport and installation of navigational buoys for the access channel from open sea to the wharf.
- Procedures, procurement and execution of underwater blasting and subsequent dredging of rock outcrops in the vicinity of the wharf.

The whole project has been managed by GEOCEAN's office in Singapore, while the engineering was done in our main office in Aubagne, France. Thanks to an innovative construction concept, GEOCEAN delivered the wharf in less than 5 months from order.

A REMOTE SITE, IN THE MIDDLE OF NOWHERE.



A DIFFICULT SITE, WITH 7 M TIDE RANGE AND 2 KNOTS CURRENT.

AN INNOVATIVE PREFABRICATION METHOD TO REDUCE DELIVERY TIME AND COSTS.

LESS THAN 5 MONTHS TO COMPLETE ENGINEERING, PROCUREMENT AND CONSTRUCTION.

YADANA WHARF CONSTRUCTION

30 inches piles driven with diesel hammer.

200 tonnes construction barge at work in the Heinze river.

Concrete slabs weight up to 40 tonnes.

Innovative Engineering

GEOCEAN engineered an innovative construction method to significantly reduce costs and completion time. Large prefabricated steel deck elements and concrete slabs were delivered on site in cargo barges and installed in a record 40 day time.

Quality Assurance/Quality Control

Very strict QA/QC procedures were followed, as required by TOTAL and routinely implemented by GEOCEAN. Pile capacities have been controlled by using the pile monitoring system commonly used in large offshore piling projects.

Large Offshore Operation

All materials for the construction were purchased in Malaysia, Indonesia and Singapore, then transported to Myanmar site with cargo barges.
The project involved one 200 tonnes construction barge, with 85 accommodations, 3 cargo barges, one LCT, one blasting/dredging barge, 6 tugs and more than 100 people on site.

MAIN CHARACTERISTICS

WHARF

Total area: 1428 m^2
Concrete slabs: 428 m^2 (1060 tonnes)
Steel structure: 188 tonnes
30” piles: 816 m (203 tonnes)

Total steel: 390 tonnes
Total concrete: 1060 tonnes
Award: 3rd November 1995
Delivery: 28 March 1996

BRIDGES FOUNDATIONS

30” piles: 30 Nb
Total meterage: 283 m

RIVER ACCESS CHANNEL

Installation of 23 navigational buoys.
Dredging of 950 m^3 of material after blasting with 1000 kg of explosives.

GEOCEAN

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