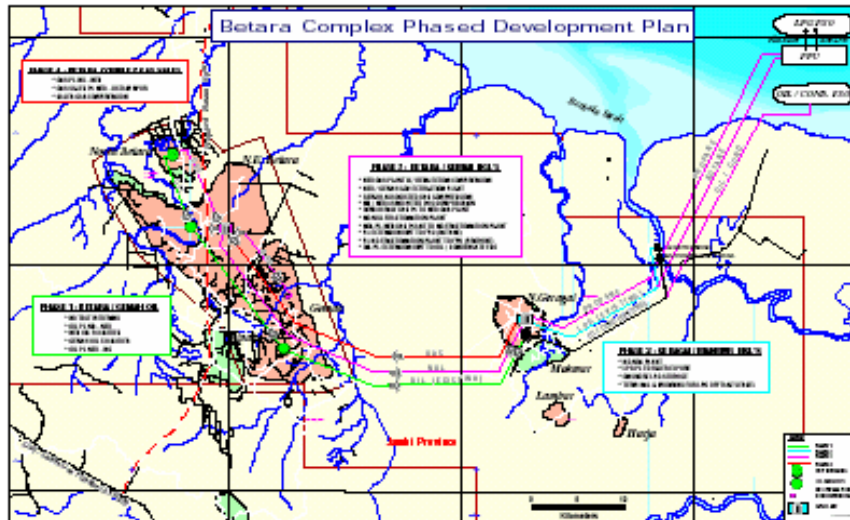


PROJECT:

BETARA COMPLEX DEVELOPMENT (Sheet 1/5)



OPERATOR:

PETROCHINA INTERNATIONAL JABUNG LTD.
(INDONESIA)

PROJECT VALUE:

TOTAL PROJECT US\$ 340 MILLION

PROJECT DESCRIPTION:

In the BCD Project, five (5) additional on-shore fields will be developed and the refined products gas and condensate will be exported via offshore terminal.

The project includes gathering lines, refining and fractionating units, onshore trunk lines, horizontal drilling at shore approach, submarine pipelines and two (2) marine offloading terminals. The EPCI contractors were Chiyoda and SembCorp. Chiyoda's scope of work was the building of the refinery whilst SembCorp undertook all the pipelines and the offshore facilities.

Date: 2004

CLIENT:

PT. SEMBCORP (INDONESIA)

CONTACT PERSON:

Mr. M. Subramaniam
Tel: (65) 91180145
Mr. C.Y Ng
Tel: (65) 96196137

ZEE'S SCOPE OF WORK:

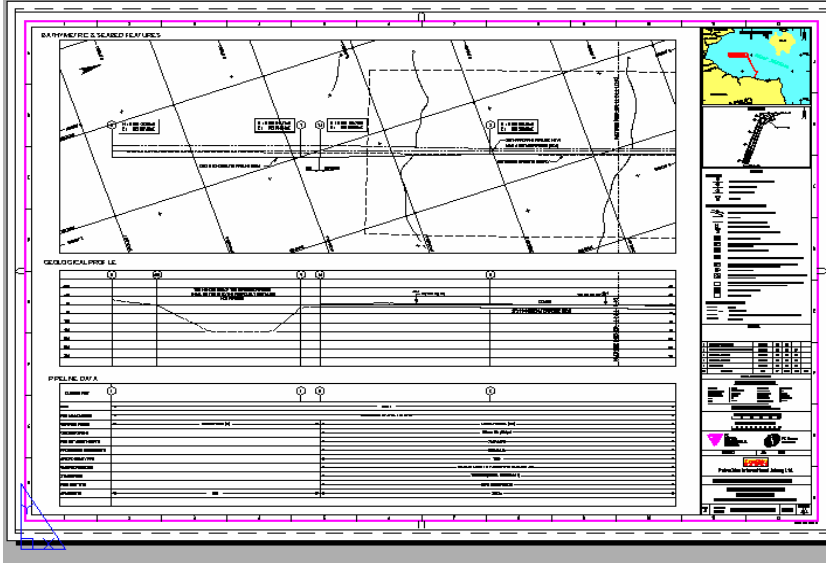
The offshore facility design including

- 3 Submarine Pipelines - (sheet 2)
- Processing Platform, Dolphins and the Anchor Piles - (sheet 3)
- Mooring Analysis / Design - (sheet 4)
- Model Testing of F.S.O.

ZEE'S VALUE OF WORK: TOTAL US\$ 1.5 MILLION

PROJECT:

BETARA COMPLEX DEVELOPMENT
(Sheet 2/5)



OPERATOR:

PETROCHINA INTERNATIONAL JABUNG LTD.
(INDONESIA)

PROJECT VALUE:

TOTAL PROJECT US\$ 340 MILLION

PROJECT DESCRIPTION:

Refer to Sheet 1

CLIENT:

PT. SEMBCORP (INDONESIA)

CONTACT PERSON:

Mr. M. Subramaniam
Tel: (65) 91180145
Mr. C.Y. Ng
Tel: (65) 96196137

ZEE'S SCOPE OF WORK:

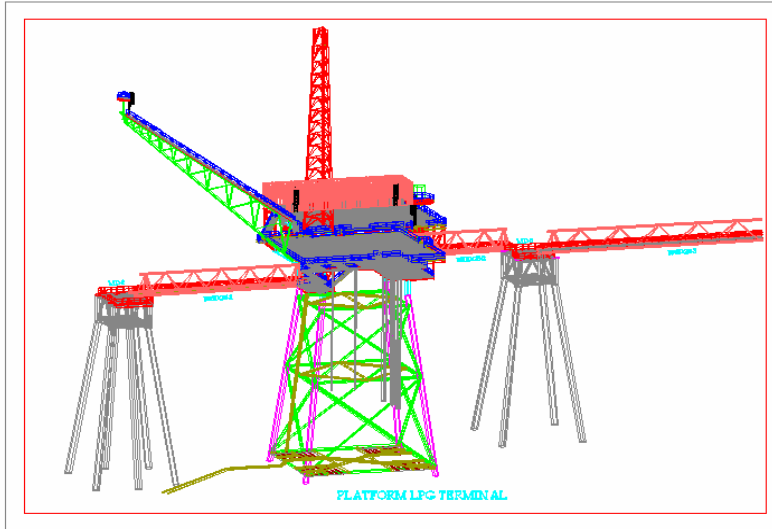
Related to three (3) Subsea Pipelines – 10 inch Condensate, 8 inch Propane and 6 inch Butane.

- In-place design – sizing, spanning, stability, shore approach etc.
- Installation Engineering
- Specifications
- Assisting in Vendor selection and leasing
- Assisting in certification by third parties

ZEE'S VALUE OF WORK: TOTAL US\$ 1.5 MILLION

PROJECT:

**BETARA COMPLEX DEVELOPMENT
(Sheet 3/5)**



OPERATOR:
PETROCHINA INTERNATIONAL JABUNG LTD.
(INDONESIA)

PROJECT VALUE:
TOTAL PROJECT US\$ 340 MILLION

PROJECT DESCRIPTION:

Refer to Sheet 1

CLIENT:
PT. SEMBCORP (INDONESIA)

CONTACT PERSON:
Mr. M. Subramaniam
Tel: (65) 91180145
Mr. C.Y. Ng
Tel: (65) 96196137

ZEE'S SCOPE OF WORK:

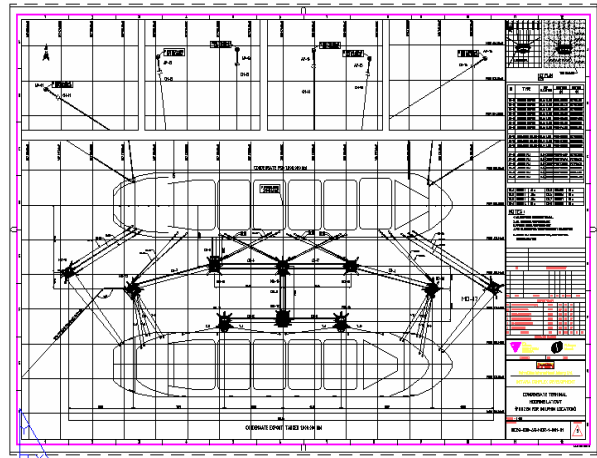
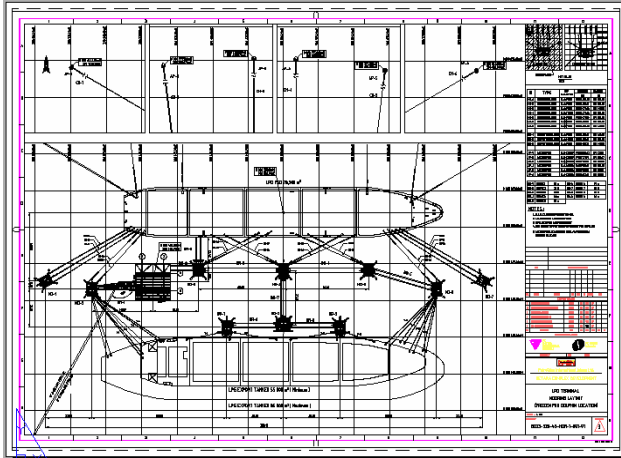
Related to the Design of the Process Platform, Dolphin and Anchor Piles.

- Conceptual and Detail Design
- Installation Engineering
- Specification
- Vendor Selection
- Liaising with the fabricators
- Assistance in certification by third parties.

ZEE'S VALUE OF WORK: TOTAL US\$ 1.5 MILLION

PROJECT:

BETARA COMPLEX DEVELOPMENT
(Sheet 4/5)



OPERATOR:
PETROCHINA INTERNATIONAL JABUNG LTD.
(INDONESIA)

PROJECT VALUE:
TOTAL PROJECT US\$ 340 MILLION

PROJECT DESCRIPTION:

Refer to Sheet 1

CLIENT:
PT. SEMBCORP (INDONESIA)

CONTACT PERSON:
Mr. M. Subramaniam
Tel: (65) 91180145
Mr. C.Y. Ng
Tel: (65) 96196137

ZEE'S SCOPE OF WORK:

- Related to Mooring Design
- Carried out full time Domain Mooring Analysis
 - Design of Mooring Chains, Hawsers, and attachments
 - Supervised model testing of the system
 - Specification
 - Assisting in certification by third parties.

ZEE'S VALUE OF WORK: TOTAL US\$ 1.5 MILLION

PROJECT:

BETARA COMPLEX DEVELOPMENT
(Sheet 5/5)



OPERATOR:
PETROCHINA INTERNATIONAL JABUNG LTD.
(INDONESIA)

PROJECT VALUE:
TOTAL PROJECT US\$ 340 MILLION

PROJECT DESCRIPTION:

Refer to Sheet 1

CLIENT:
PT. SEMBCORP (INDONESIA)

CONTACT PERSON:
Mr. M. Subramaniam
Tel: (65) 91180145
Mr. C.Y. Ng
Tel: (65) 96196137

ZEE'S SCOPE OF WORK:

Related to Model Testing.

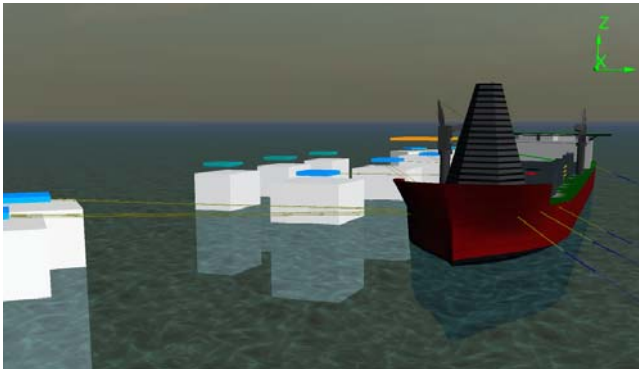
Was in charge of the model testing which was carried out at Indonesian Hydrodynamic Laboratory (Surabaya, Indonesia).

- Selection of facilities
- Compiling Specification
- Supervising the Testing
- Verification of Test Results

ZEE'S VALUE OF WORK: TOTAL US\$ 1.5 MILLION

PROJECT:

BETARA COMPLEX DEVELOPMENT



OPERATOR:
PETROCHINA INTERNATIONAL JABUNG LTD

PROJECT VALUE:
US\$ 340 M

PROJECT DESCRIPTION:

3D Time Domain, Random Wave simulation of two (2) Offloading Terminal namely the Condensate Terminal and LPG Terminal. Project was undertaken utilizing OrcaFlex v8.4 software.

CLIENT:
PT. SEMBCORP (INDONESIA)

CONTACT PERSON:
Project Manager
Mr. M. Subramaniam
TEL : +(65)-91180145

ZEE'S SCOPE OF WORK:

Complete 3D Time Domain simulation of the moored FSOs and Tankers in Random Sea to comply with DnV's Ultimate (ULS), Accidental (ALS) and Fatigue (FLS) Limit states. Scope included validation of the Time Domain simulated results with results obtained from Model Test.

ZEE'S VALUE OF WORK: TOTAL US\$ 120 K