

Bathymetric, Geophysical, Geotechnical, and Metocean Surveys in Timor-Leste

2008 to 2012

- Timor Sea Bathymetric Survey:.....slide 2*
- Suai, Kammanasa and Beaco Surveys:.....slide 10*
- Beaco LNG Survey:.....slide 24*

Timor Sea Bathymetric Survey

March 2008 to February 2009

CLIENT: GOVERNMENT OF TIMOR-LESTE – SAMSUNG – STX
KOGAS – GS CALTEX

Contract value: \$5,200,000

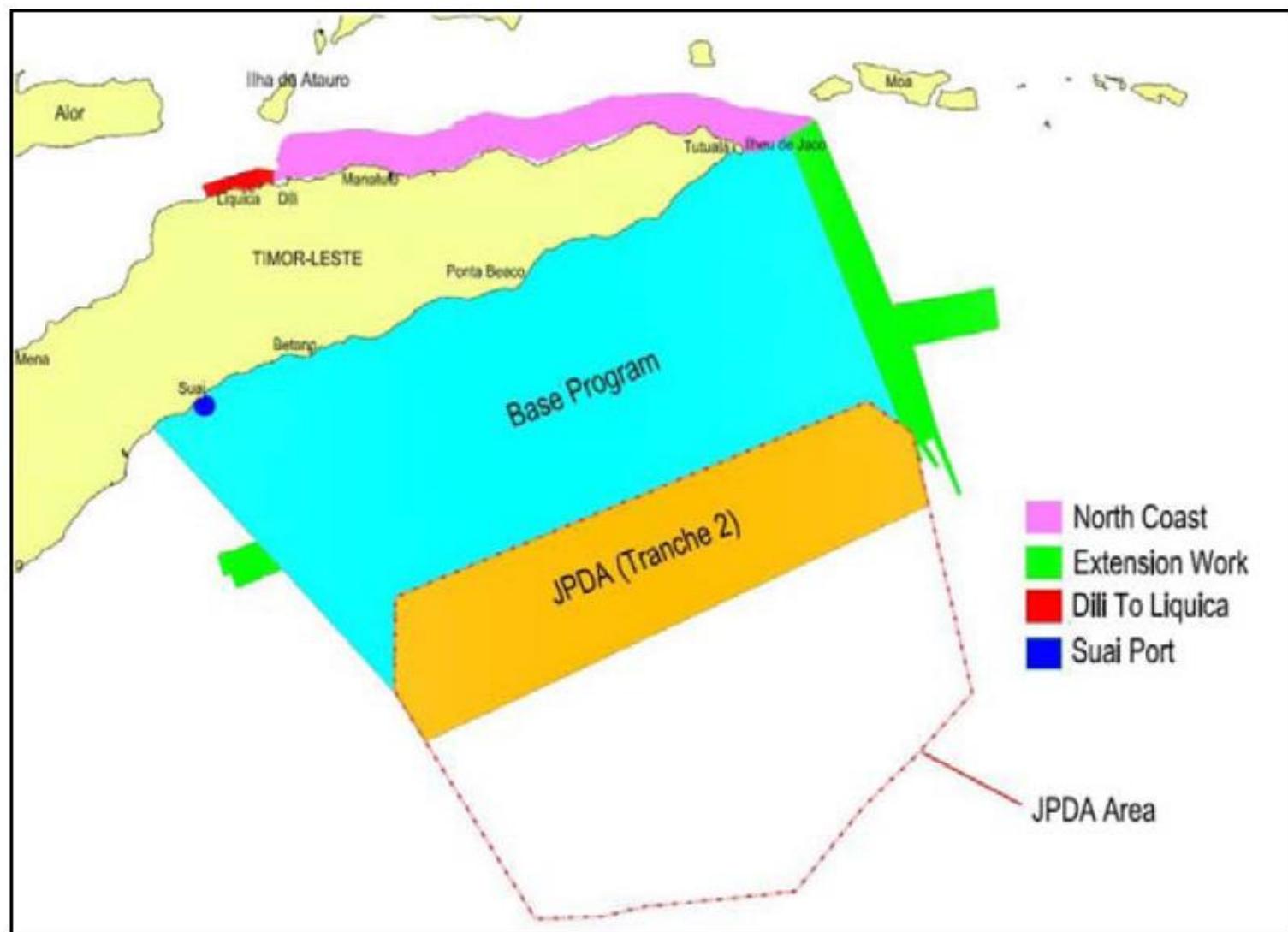
The object of the project was to survey the Timor-Leste Offshore Exclusive Economic Zone plus a portion of the marine area held in common by Timor-Leste and Australia.

The survey was used to study the feasibility of a heavy deep pipeline across the Timor Sea.

The total surface area of the survey exceeded 43,000 sq. km (17,000 sq. mi.), making it one of the largest such survey to date. Water depths reached 3,300 m (11,000 ft).

Three survey ships were used, S/V's Ridley Thomas, Northern Light and Northern Prince.

A total of about 35 workers were present at any given time.



Bathymetric Survey Scope of Works



S/V Ridley Thomas, used from June to July 2008



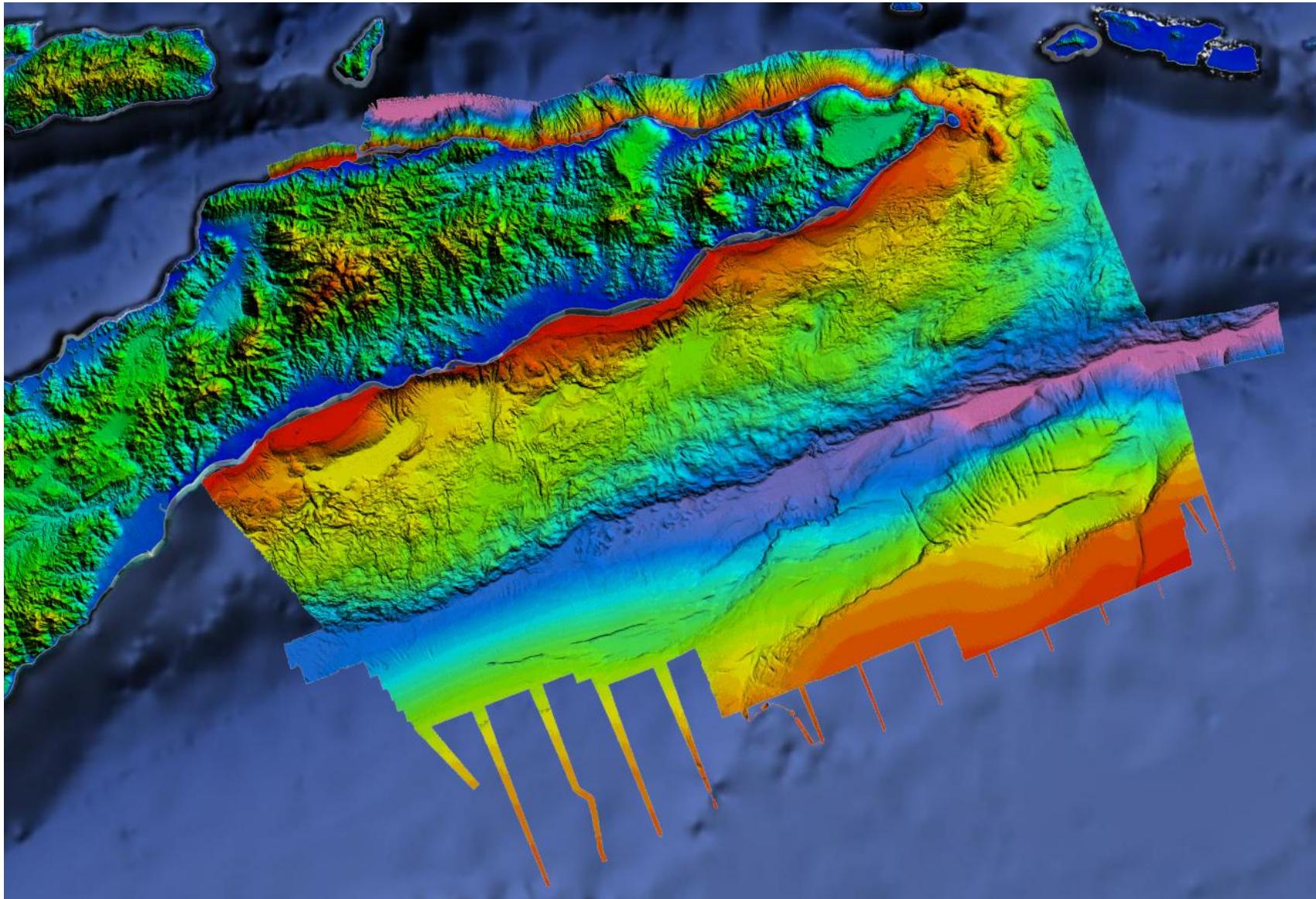
S/V Northern Light, used from July to August 2008



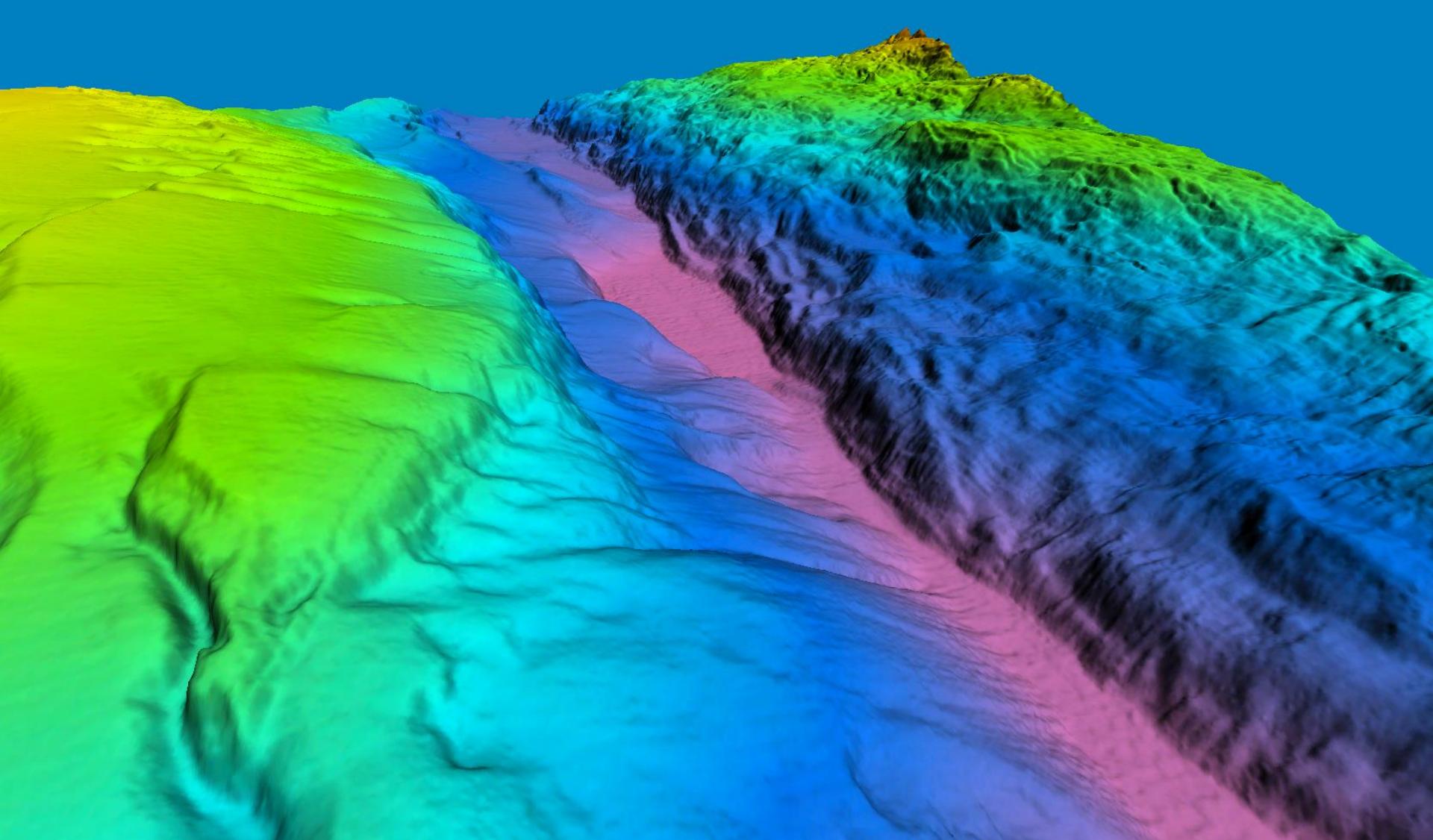
S/V Northern Prince, used from October 2008 to February 2009



S/V Northern Prince, grounded on Suai reef between July 31 and August 17, 2008



Bathymetric Survey



3D Visualization of part of the Bathymetric Survey

Suai, Kammanasa and Beaco Geophysical and Geotechnical Survey

November 2009 to March 2010

CLIENT: GOVERNMENT OF TIMOR-LESTE

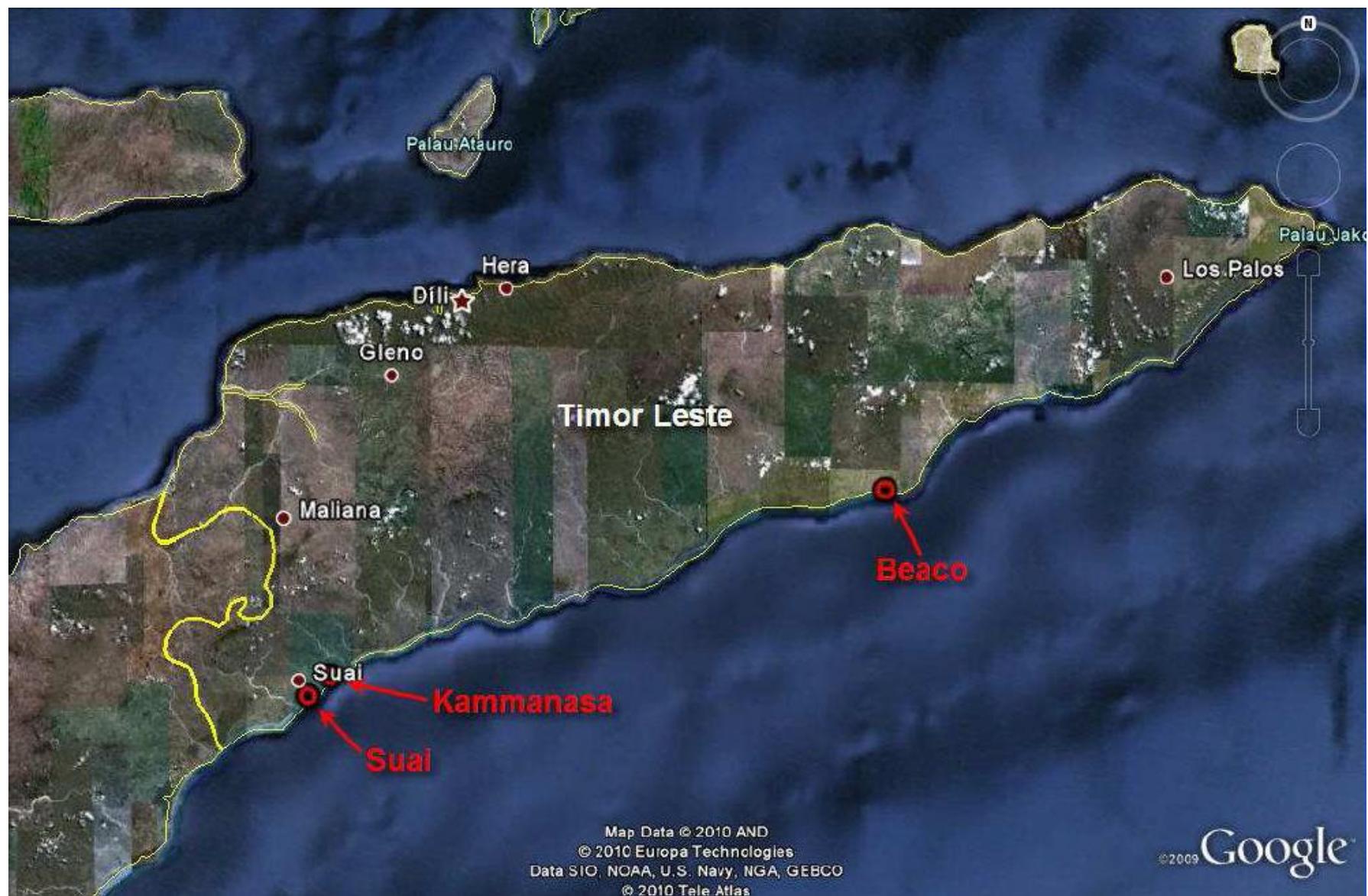
Contract value: \$3,000,000

The purpose of the survey was to study the feasibility of ports in three locations, Suai, Kammanasa and Beaco.

9 land boreholes and 8 marine boreholes were drilled to 200 ft depth.

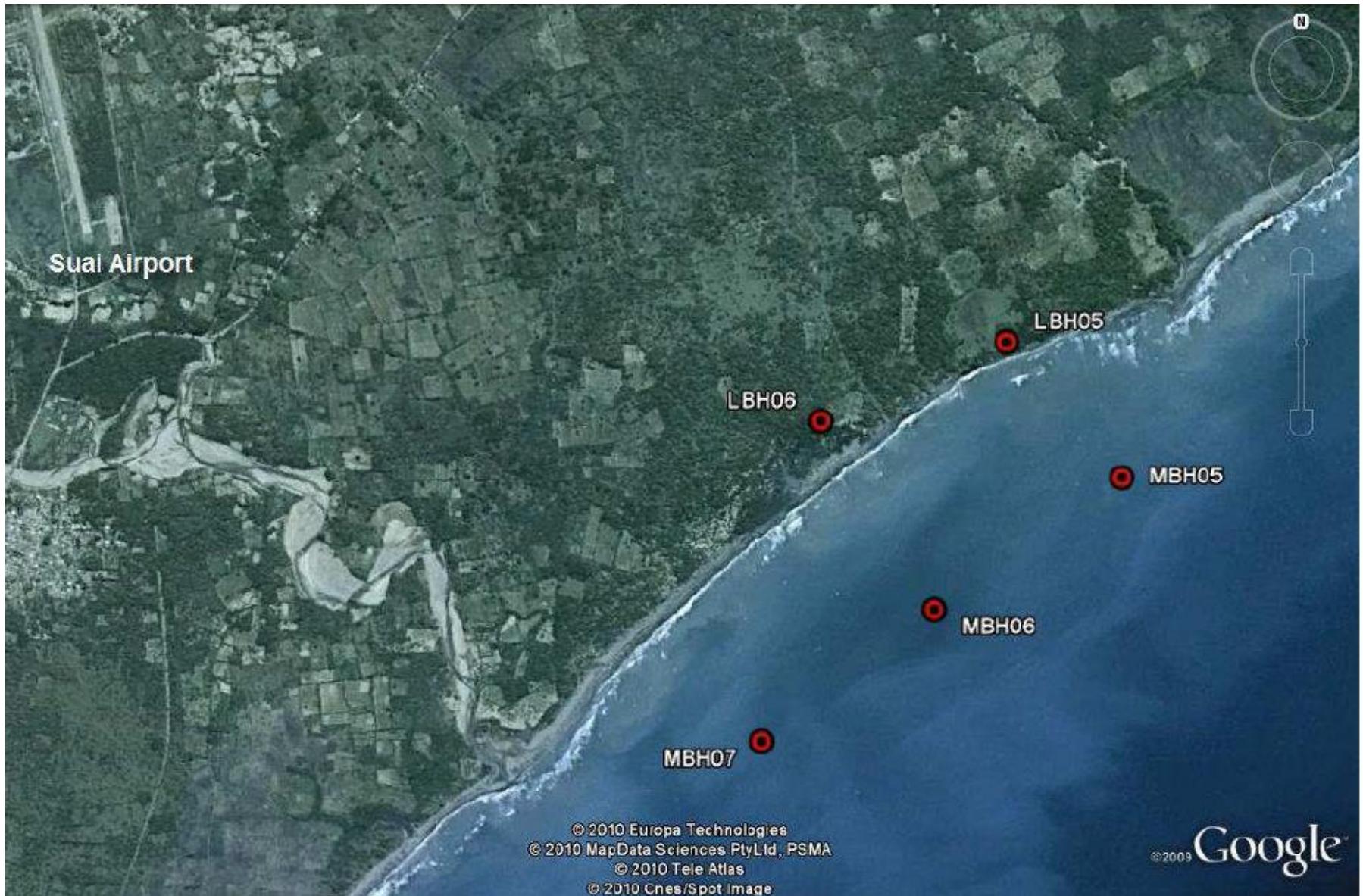
Two mobile drilling rigs were used onshore and a jack-up barge offshore, together with two assistance boats. Two LCT ships were used for transportation.

A total of 75 workers were present at any given time.

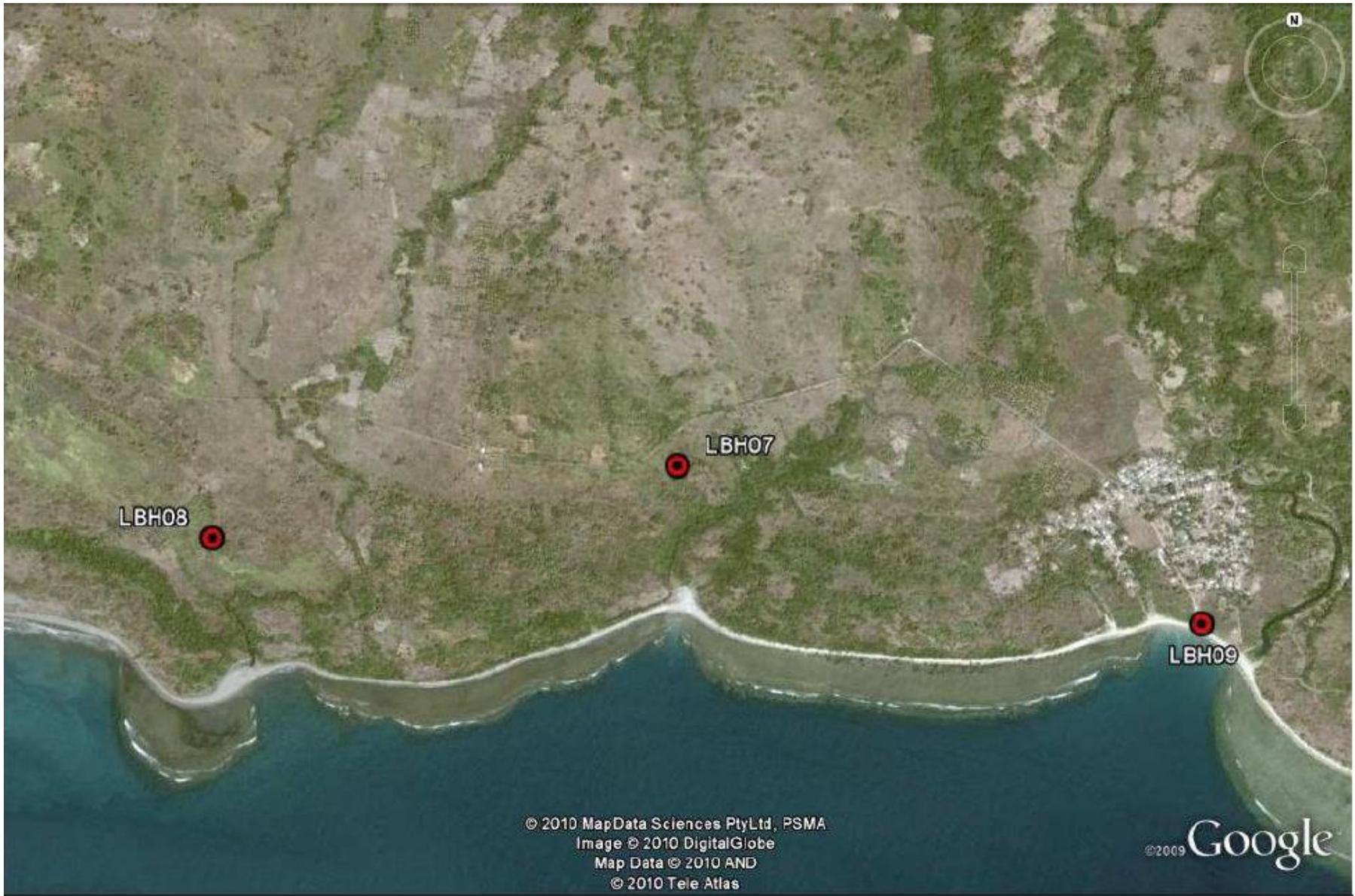




Suai: Marine Boreholes (MBH) and Land Boreholes (LBH)



Kammanasa: Marine Boreholes (MBH) and Land Boreholes (LBH)



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Beaco: Land Boreholes (LBH)



Crane on LCT ship helps assemble Jack-Up Barge



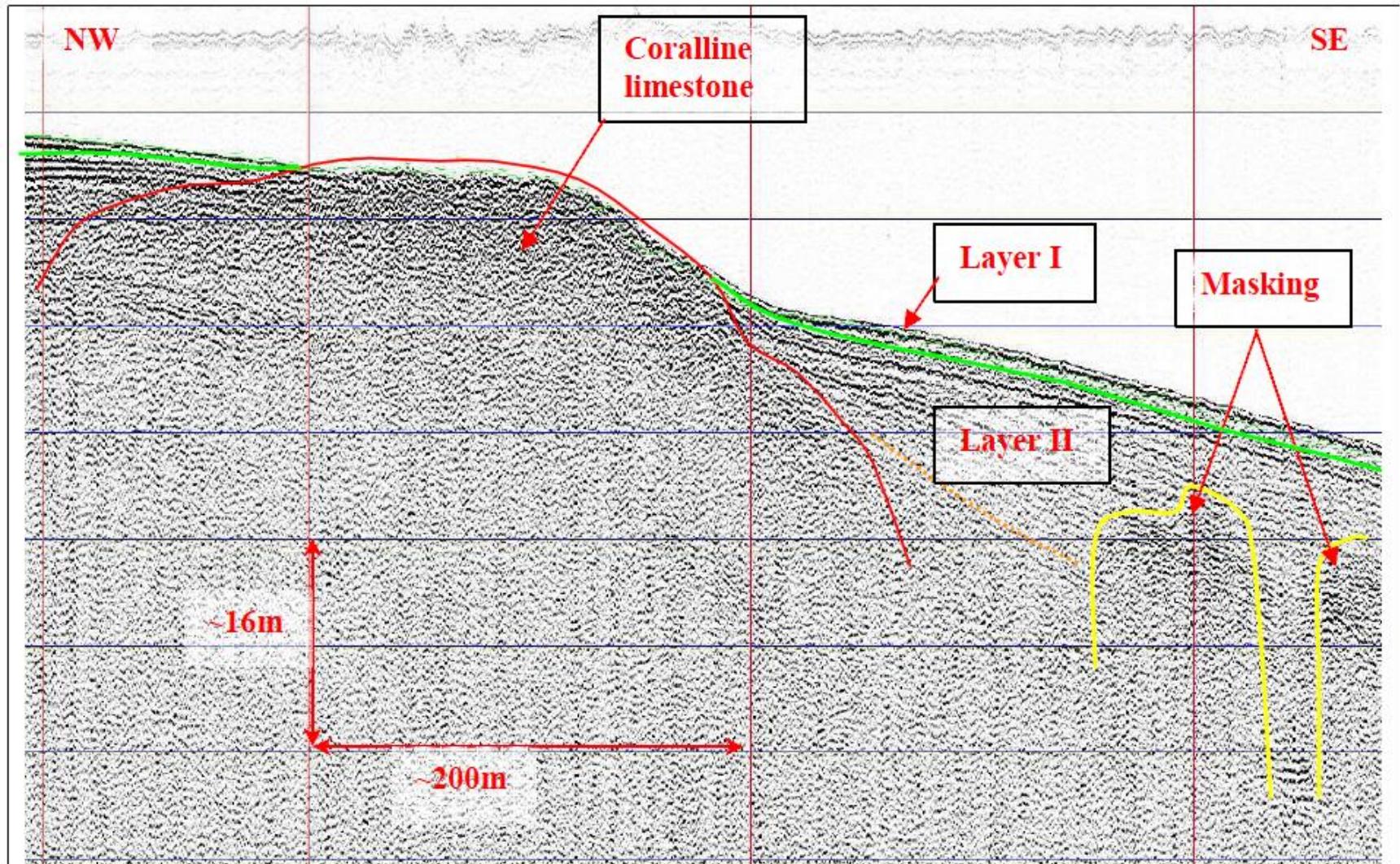
Jack-Up Barge used to drill marine boreholes



Jack-Up Barge used to drill marine boreholes



A mobile land drill rig



A sample of the seismic investigation offshore Suai



Earth works in Suai



Loading an LCT ship in Suai



Loading an LCT ship in Suai

Beaco LNG Geophysical, Geotechnical and Metocean Survey

November 2010 to June 2012

CLIENT: GOVERNMENT OF TIMOR-LESTE

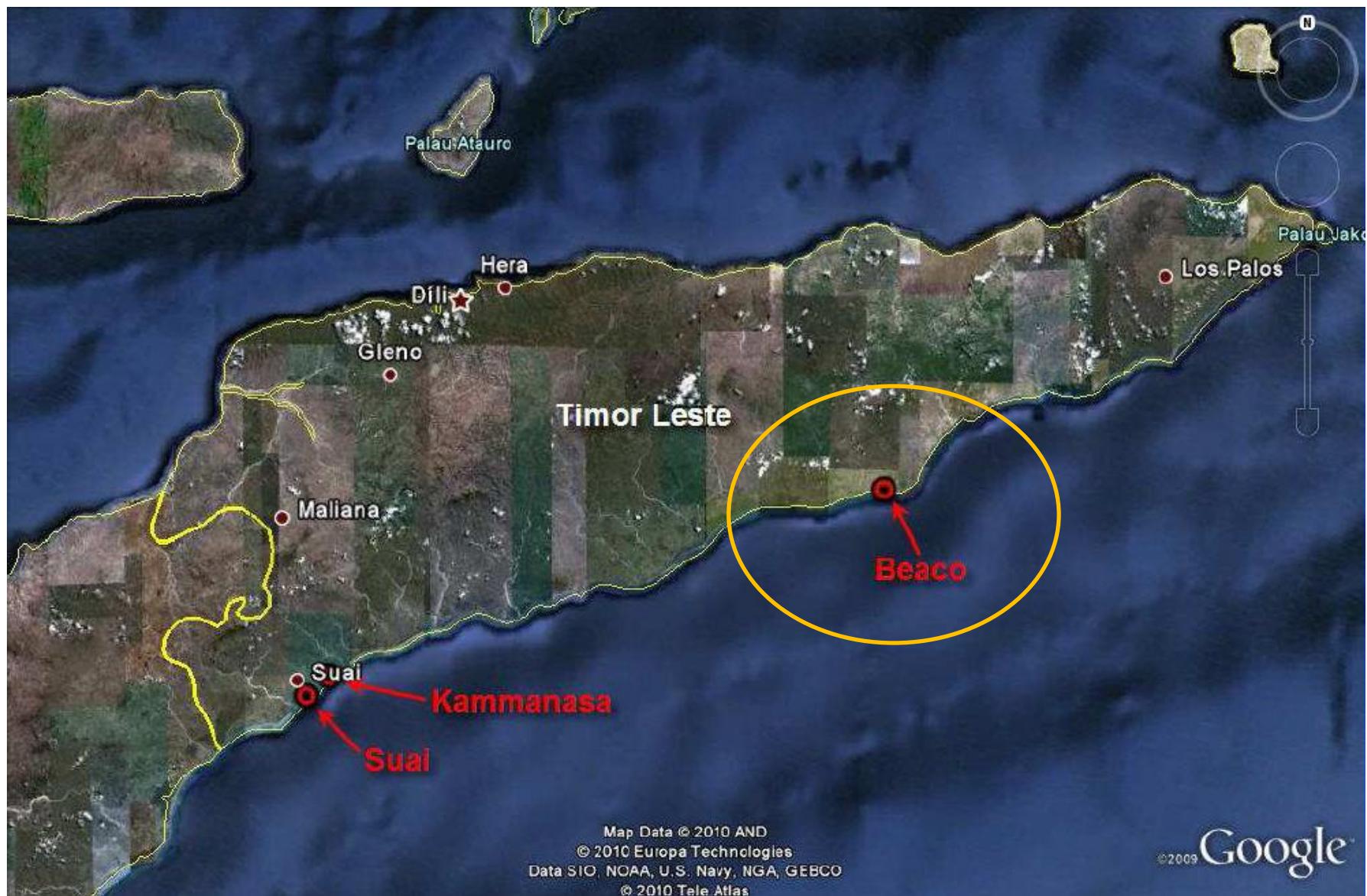
Contract value: \$6,700,000

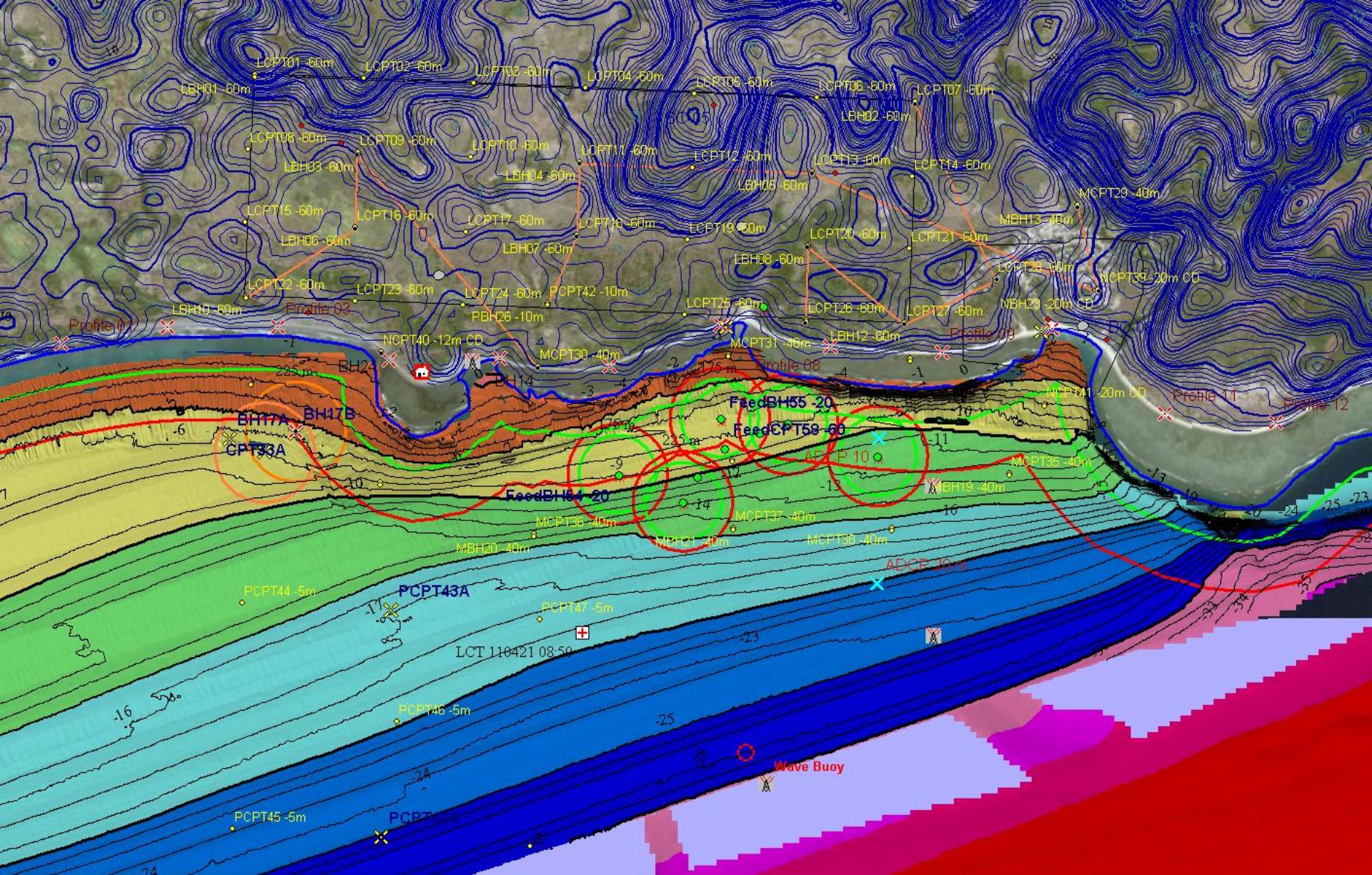
The object of the Beaco project was to investigate the feasibility of a Liquefied Natural Gas (LNG) plant.

The scope of work included a large geotechnical survey, the drilling of 30 land boreholes and CPT's (Cone Penetration Testing) and 24 marine boreholes and CPT's, a complete geophysical investigation and an extensive Metocean (metorological and oceanographic) survey.

Marine operations were conducted using a 4 points anchored ship and 4 assistance boats. Land operations used 3 mobile drilling rigs and a 20 tons CPT laboratory truck. In addition, a nearshore drilling jack-up platform was used on the reefs.

A total of 150 workers were present on the project at any given time.





Beaco Survey Area and Scope of Works



4 Points Mooring Drill-CPT Ship



Drilling Tower (left) and CPT System (yellow) with 80 ton crane



CPT System (yellow) and Drilling Tower (orange)



Deck of Drillship at dawn



Land Drilling Rig in Beaco



CPT Truck



Metocean station



3 of the 4 Assistance Boats and Metocean Deployment Unit



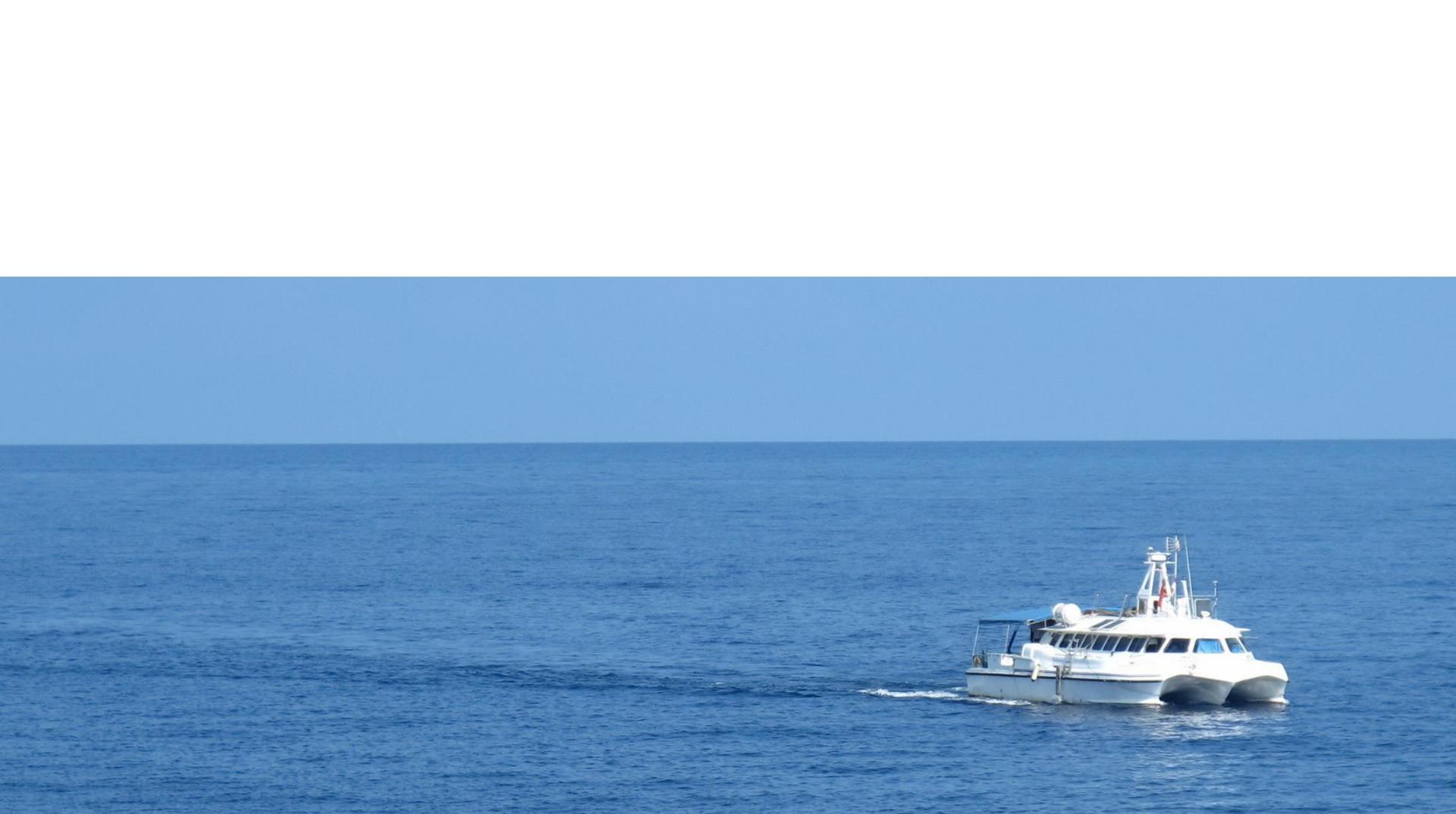
Nearshore Drilling Jack-up Platform on reef



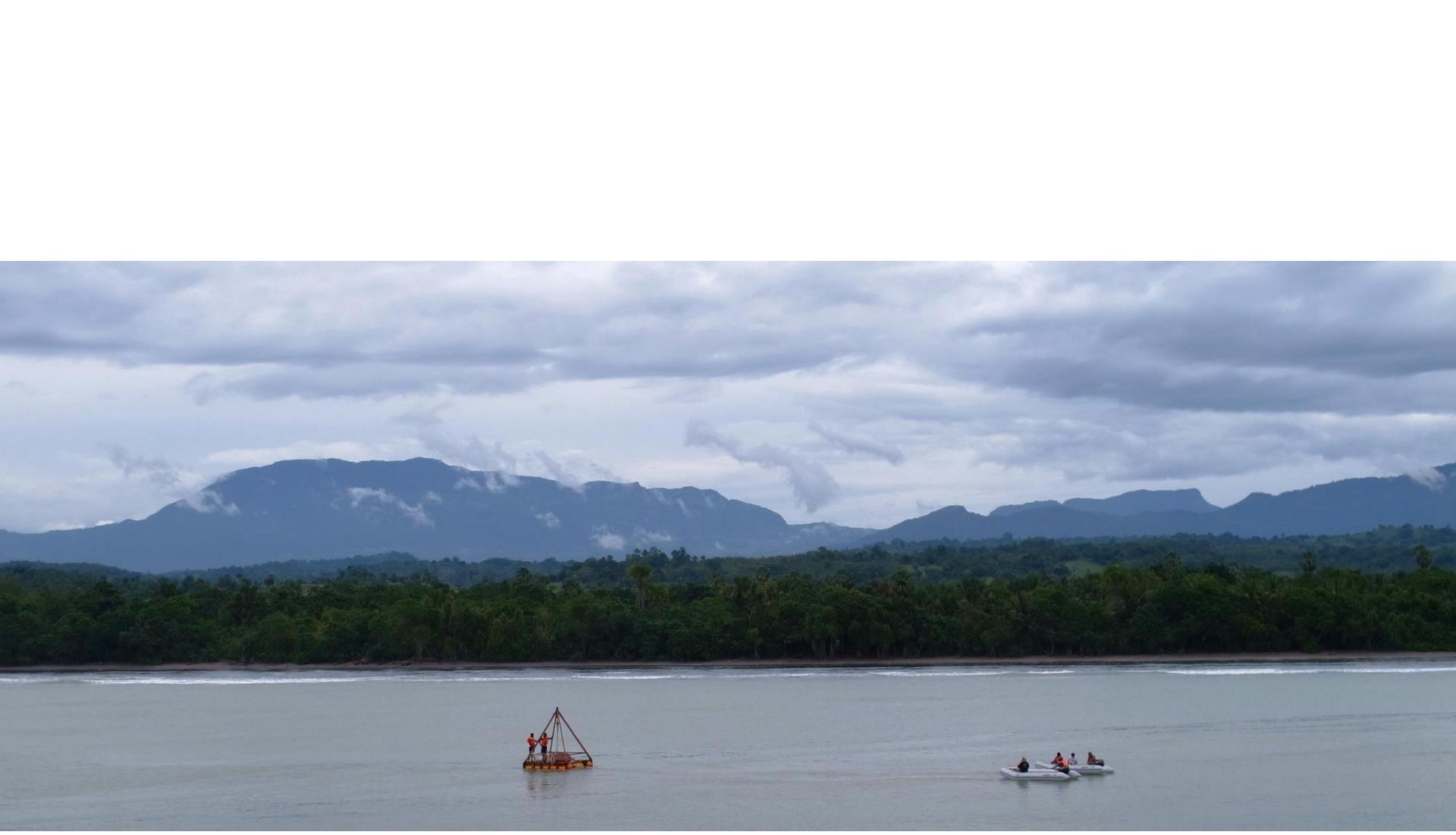
Base Camp and Boat Launch Area



Management cabin



S/V Amertha used to conduct geophysical activities



Deployment of Metocean Equipment



An early visitor (*Crocodylus porosus*)