



# OIL AND GAS

## KUTUBU PNG

### Micropiling Works

## PAPUA NEW GUINEA



Installation of Ø177.8mm Casing installed in 3m sections

#### Owner

Exxon Mobil

#### Engineer

N/A

#### General contractor

Spiecapag

#### Period of works

August 2012-December 2012

### Main figures

#### Micropiles

264no. micropiles with an outer diameter of 177.8mm



Rig on Nights preparing for next new pile and casing section



### Project description

This major project known as Papua New Guinea Liquefied Natural Gas (PNG LNG) consisted in the construction of processing plants, storage facilities and pipelines through the jungles to the new and existing facilities onshore from Port Moresby to as far as Juha of Papua New Guinea. It included over 700 kilometres of pipelines connecting all structures to facilitate the demand of 6.6 million tonnes of gas per year.

### Ground conditions

Menard was engaged for the design & construction of 264no. micropiles with an outer diameter of 177.8mm series of permanent casing works of Micropile columns for all structures, pipe supports and road crossings for the Kutubu Central Processing Facility (KCFP).

The micropiles were designed to act as foundation piles in compression and lateral loads specified by the Principal Contractor using the Symmetrix Drilling System. This system was utilized due to the loose unconsolidated material of the ground conditions, and its capacity to overcome most unforeseen obstructions or void issues. It was also posing simple installation techniques allowing for efficient and effective installation given both the time restrictions and remote isolation considerations of this project.

### Solution

The logistics of the project consists of 28No. 20ft and 40ft containers and flat racks carrying gear, supplies and most importantly drilling rigs with the restrictions of not exceeding over 40 tonnes in weight. Supplies and gear was sent to PNG from all over the world to commence on this project.

With teams sent from Portugal, Hungary and Australia, and the supply of local workers, plant operators and welders, 13 different nationalities worked together to deliver this project, which was successfully achieved despite the occasional disruptions due to limited water resources, logistics in bringing gear and supplies to site, as well as the occasional natural phenomenon of floods, earthquakes and landslides common to Papua New Guinea.