

TOTAL MLJ South Brunei

Interactive Operating Manuals & OPERGUID procedures



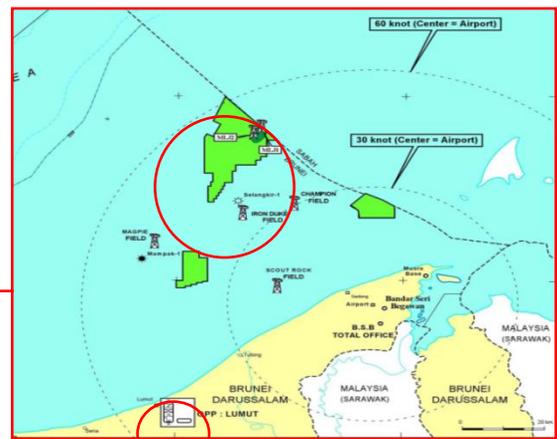
Operator/ Client: Total E&P Borneo B.V. (TEPB)
Project/ Location: Maharaja Lela Jamalulalam (MLJ) South, South China Sea, Brunei
Scope of Services: Interactive Operating Manuals & OPERGUID procedures

CONTEXT

The Maharaja Lela Jamalulalam (MLJ) field was discovered in 1990 and has been producing gas and condensates since 1999. In 2015, the Maharaja Lela Jamalulalam South (MLS) project has been launched, with the integration of a third offshore platform and an extensive debottlenecking of the onshore processing facilities (OPP), increasing the gas production to 5.7 MMSm³/d and the condensate production to 2800 m³/d.

LOCATION

Total E&P Borneo B.V. (TEPB) operates the MLJ field in the Block B Joint Venture (BBJV), located in the South China Sea at approximately 55 km from the Brunei shoreline at around 60 m water depth.



MLJ field location

MLJ facilities at a glance:

- ▲ 3 unmanned offshore platforms featuring wellheads, well testing facilities, utilities, emergency and telecommunication systems.
- ▲ Onshore processing facilities featuring:
 - Gas processing: receiving facilities, separation, gas treatment (CO₂, H₂S and Mercury removal), metering and export to BLNG, HP & LP Flares,
 - Liquid processing: condensate separation, stabilisation and metering, produced water metering, and export to SCOT, closed drain and open drain,
 - Utilities: steam generation and condensate return, fuel gas, instrument and service air, firewater, demineralised water, service water and potable water, diesel storage and pumping, chemical injection, amine storage, make-up, filtration and drain.
- ▲ Condensate receiving facilities at Seria Crude Oil Terminal (SCOT)
- ▲ Gas receiving facilities at Brunei Liquefied Natural Gas (BLNG)
- ▲ Multiphase offshore pipeline
- ▲ Interconnecting onshore pipelines



Aramis' Scope of Work

▲ As-building of existing Operations Manual

- Site visits to identify all modifications since first gas in 1999, integration in the existing operation manual and reformatting as per company rules requirements,
- Updating existing operating procedures, and reformatting in compliance with the OPERGUID methodology requirements,

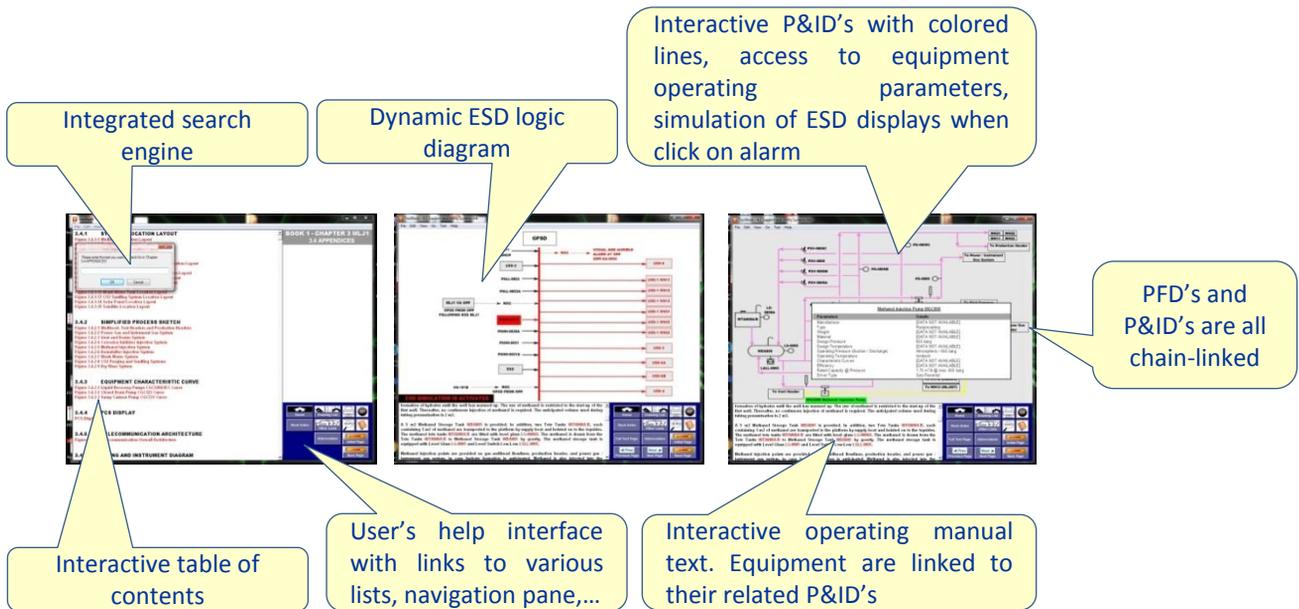
▲ Integration of the MLS project

- Integration of the new MLJ3 offshore platform in the operating manual,
- Integration of the modifications and new equipment in the operating manual,
- Development of operating procedures (OPERGUID) for new onshore/offshore equipment.



▲ Interactive format

- Packaging of the updated operating manual into an interactive format featuring ESD dynamic simulations, chain-linked PFD's and P&ID's, access to engineering and vendor documentation, equipment photos,... Aramis e-learning software was used.



Integrated search engine

Dynamic ESD logic diagram

Interactive P&ID's with colored lines, access to equipment operating parameters, simulation of ESD displays when click on alarm

PFD's and P&ID's are all chain-linked

Interactive table of contents

User's help interface with links to various lists, navigation pane,...

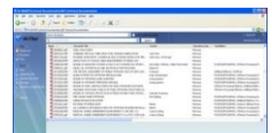
Interactive operating manual text. Equipment are linked to their related P&ID's

▲ Tools

Other Aramis tools have been used to support the performance of the project such as APMS for project management and ADMS for the documentation management.



APMS



ADMS

▲ Project data

Approximately 10,000 man-hours expanded by the Aramis permanent team, including operations, HSE, process, control system, E/I and mechanical engineers, at Aramis engineering facilities in Kuala Lumpur.