

# ConocoPhillips Belanak FPSO

## Maintenance & Reliability Optimization



Operator/ Client: ConocoPhillips Indonesia (COPI)  
Project/ Location: Belanak FPSO, Natuna Sea, Indonesia  
Scope of Services: Maintenance & Reliability Optimization

### Belanak FPSO at a glance:

- Floating Production Storage and Offloading facility (FPSO) producing:
  - 100,000 bbls/day of oil
  - 29,000 bbls/day of LPGs
  - 500 MMSCFD of gas
- World first FPSO based LPG plant
- 935 ft vessel stores up to 1 million barrels of oil





Aramis scope of work:

- Develop specific Maintenance Strategy and Tactics:
  - Use OREDA methodology/database
  - Define common failures modes and effects
  - Define recommended maintenance tasks and frequency
- Develop Standard Job Plans:
  - Define detailed maintenance activities, duration, resources, materials and special tools required
- Conduct a Criticality Study
- Review, update and develop the Preventive Maintenance Program
- Improve Bill of Materials
- Conduct information sessions for each offshore crew and each discipline:
  - Inform on the above activities and methodologies used
  - Present the main changes on PMs for “bad actors”
- Develop Service Books

Assets Management System by ARAMIS

| Tag    | Description                    | Class | SubClass | Target | Mark Group | BOV-0441 |
|--------|--------------------------------|-------|----------|--------|------------|----------|
| GS4101 | VALVE SERVICE AND VISUAL CHECK | VALVE | BALL     |        | PM Job     | PM_NEW   |
| GS4102 | VALVE FUNCTION TEST            | VALVE | BALL     |        | PM Job     | PM_NEW   |

AMS

CMMS

Technical data sheet Templates

Vendor data sheet Templates

Asset Register

Inspection Plan Templates

Criticality assessment Templates

Maintenance Plan Templates

Spares parts Templates

Vendors

EPC

ARAMIS

SPIL

RCM

Project reports Data control Progress curve...

Assets Management System by ARAMIS

| Unit | System | Description                    | Class | SubClass | Dis | Soft Tag |
|------|--------|--------------------------------|-------|----------|-----|----------|
| HCP  | 00     | DRILLING                       |       |          |     |          |
| HCP  | 01     | WELLHEADS                      |       |          |     |          |
| HCP  | 04     | FLOWLINES AND MANIFOLDS        |       |          |     |          |
| HCP  | 20     | GAS/CONDENSATE SEPARATION      |       |          |     |          |
| HCP  | 22     | GAS DEHYDRATION                |       |          |     |          |
| HCP  | 24     | GAS COMPRESSOR TRAIN "A"       |       |          |     |          |
| HCP  | 25     | GAS COMPRESSOR TRAIN "B"       |       |          |     |          |
| HCP  | 26     | GAS METERING                   |       |          |     |          |
| HCP  | 29     | GAS IMPORT/EXPORT              |       |          |     |          |
| HCP  | 30     | CONDENSATE DEHYDRATION TRAIN A |       |          |     |          |
| HCP  | 31     | CONDENSATE DEHYDRATION TRAIN E |       |          |     |          |
| HCP  | 32     | CONDENSATE DEHYDRATION TRAIN I |       |          |     |          |
| HCP  | 33     | CONDENSATE EXPORT/IMPORT       |       |          |     |          |
| HCP  | 34     | CONDENSATE STABILIZATION       |       |          |     |          |
| HCP  | 41     | SEAWATER SYSTEMS               |       |          |     |          |
| HCP  | 42     | PRODUCED WATER TREATMENT       |       |          |     |          |
| HCP  | 45     | SAFEGUARDING SYSTEMS (ASD)     |       |          |     |          |
| HCP  | 46     | PLANT CONTROL SYSTEMS          |       |          |     |          |
| HCP  | 47     | COMPUTER AIDED OPERATIONS      |       |          |     |          |
| HCP  | 48     | PLATFORM ALARMS                |       |          |     |          |
| HCP  | 50     | HVAC                           |       |          |     |          |
| HCP  | 51     | SERVICE WATER                  |       |          |     |          |
| HCP  | 52     | POTABLE WATER                  |       |          |     |          |
| HCP  | 53     | FROD FIREWATER SYSTEM          |       |          |     |          |