



VI CONFERENCIA HEMISFÉRICA SOBRE LOGÍSTICA, INNOVACIÓN Y COMPETITIVIDAD

Actividad: innovación en la industria offshore

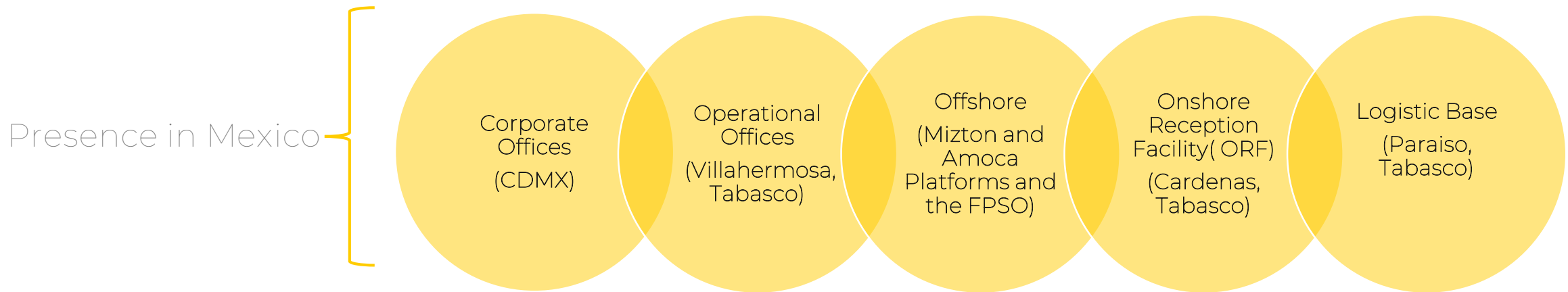
Panelist: Armando Gorlani, District Manager Villahermosa

Veracruz, 17th January 2024

Eni Mexico overview



- Incorporated in accordance with Mexican laws on October 1, 2015 for Exploration and Production activities.
- Direct subsidiary of ENI International B. V.
- One of the main private producers in the country, with participations in 8 Areas offshore in the Gulf of Mexico, out of which 7 Areas as an operator.



Main Highlights



1st Oil Production
June 30th 2019
11 months after POD
approval



FPSO Start up
February 2022
1st one privately operated in
Mexico



\$9.2 B USD
Total Project Expenditure
Full Life

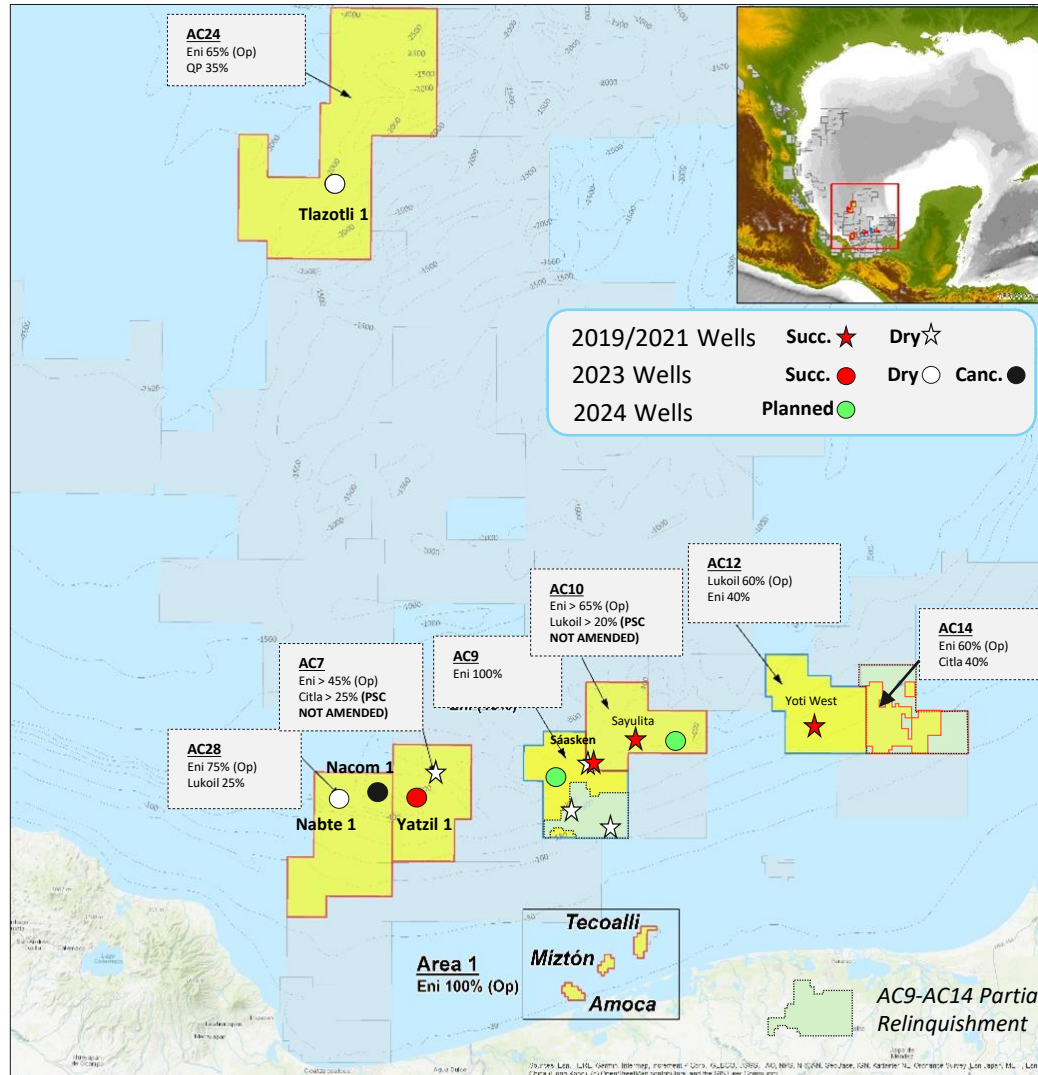


35 kboed
2023 Area-1 avg. gross
production



1st Foreign Oil
Company
To produce after the
new "Reforma
Energética"

Eni – Presence in Mexico and Exploration Assets



Total Area 4,941 km²
6 Operated Blocks – 1 Non-Operated Block
Total Eni share (66.4%)

Operated Assets

- Area 1 - Eni 100% (67 sqkm)
- Area 7 - Eni 45%, Cairn 30%, Citla 25% (591 sqkm)
- Area 9 - Eni 100% (PSC amended 6th Oct) (338 sqkm)
- Area 10 - Eni 65%, Lukoil 20%, Cairn 15% (533 sqkm)
- Area 14 - Eni 60%, Citla 40% (228 sqkm)
- Area 28 - Eni 75%, Lukoil 25% (808 sqkm)
- Area 24 - Eni 65%, QE 35% (1,922 sqkm)

Non-Operated Exploration Assets

- Area 12 - Lukoil 60% Op., Eni 40% (521 sqkm)

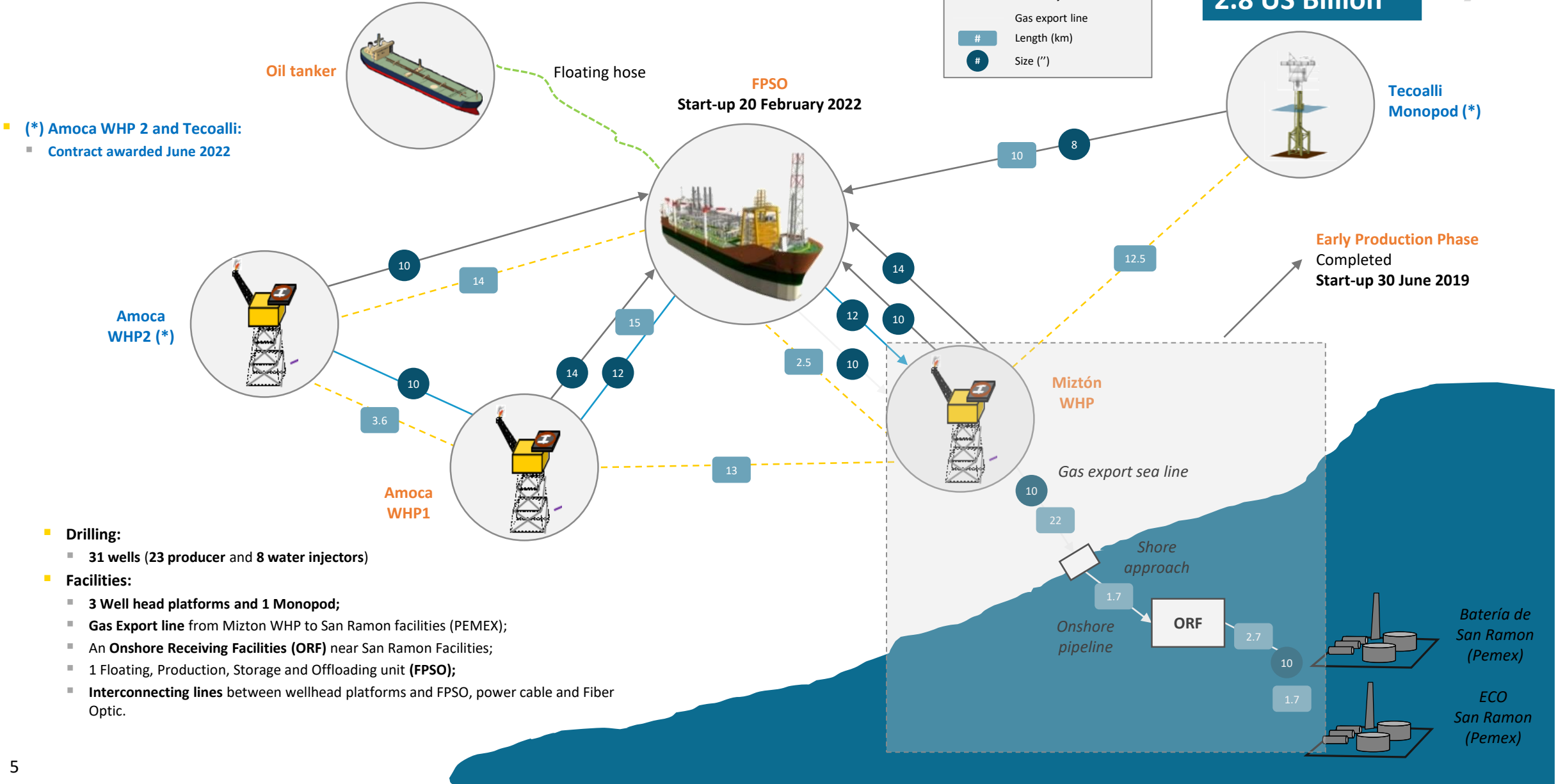
| | | |
|---|--|---|
| <p>Unit : Metre Geodetic CRS : WGS 84 Datum : World Geodetic System 1984 Ellipsoid : WGS84 Prime Meridian : Greenwich</p>  | <p>Legend</p> <ul style="list-style-type: none"> Eni Operated Assets Eni Non-Operated Assets Other Areas | <p>July 2023</p>  <p>Eni México Asset Portfolio</p> |
|---|--|---|

Area 1 - Full Field Configuration

TOTAL COST OF THE PROJECT
2.8 US Billion



| Legend | |
|--------|------------------------------|
| | Power & fiber optic cable |
| | Multiphase intra-field lines |
| | Water injection line |
| | Gas export line |
| # | Length (km) |
| ⊘ | Size (") |



- (*) Amoca WHP 2 and Tecoalli:
 - Contract awarded June 2022

- Drilling:**
 - 31 wells (23 producer and 8 water injectors)
- Facilities:**
 - 3 Well head platforms and 1 Monopod;
 - Gas Export line from Mizton WHP to San Ramon facilities (PEMEX);
 - An Onshore Receiving Facilities (ORF) near San Ramon Facilities;
 - 1 Floating, Production, Storage and Offloading unit (FPSO);
 - Interconnecting lines between wellhead platforms and FPSO, power cable and Fiber Optic.

WHPs and ORF Photos



Mizton WHP

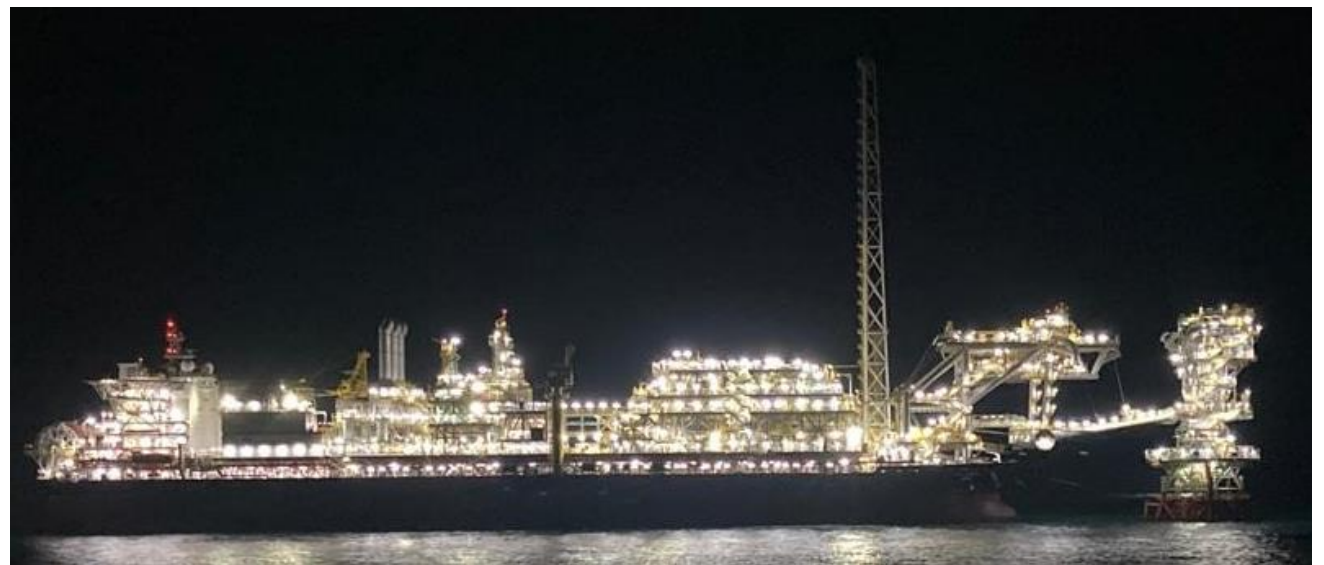
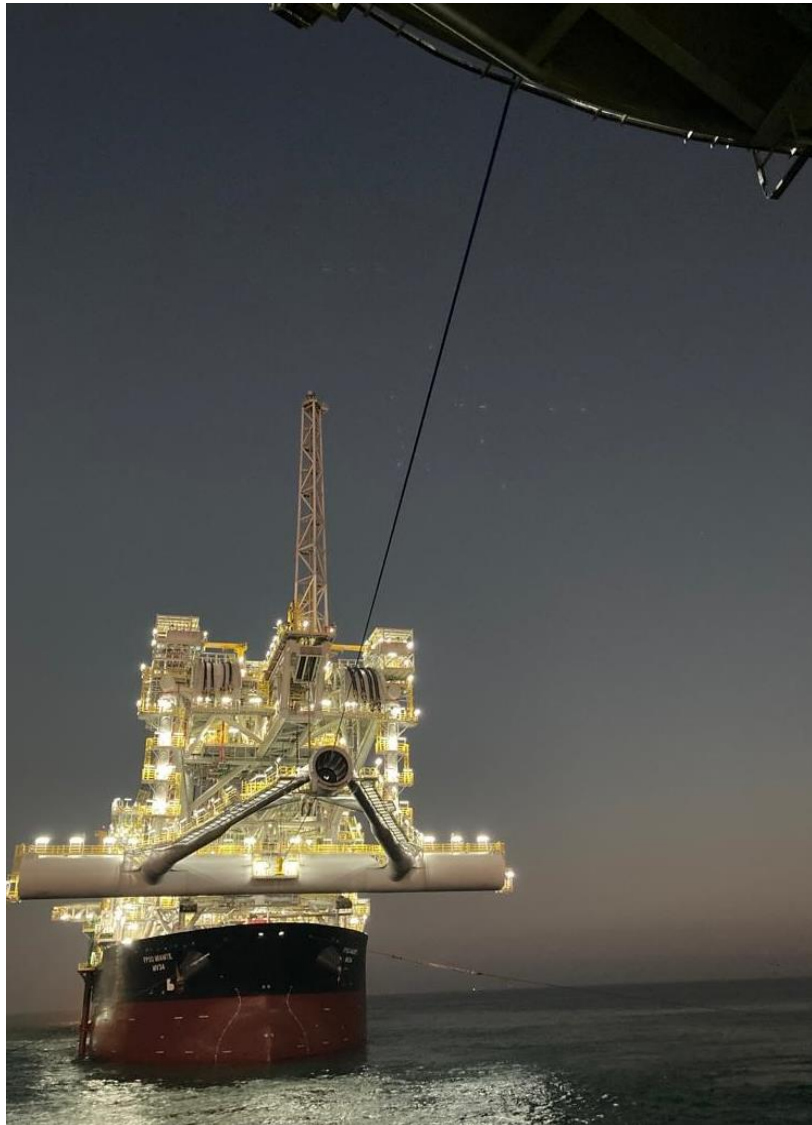


Amoca 1 WHP

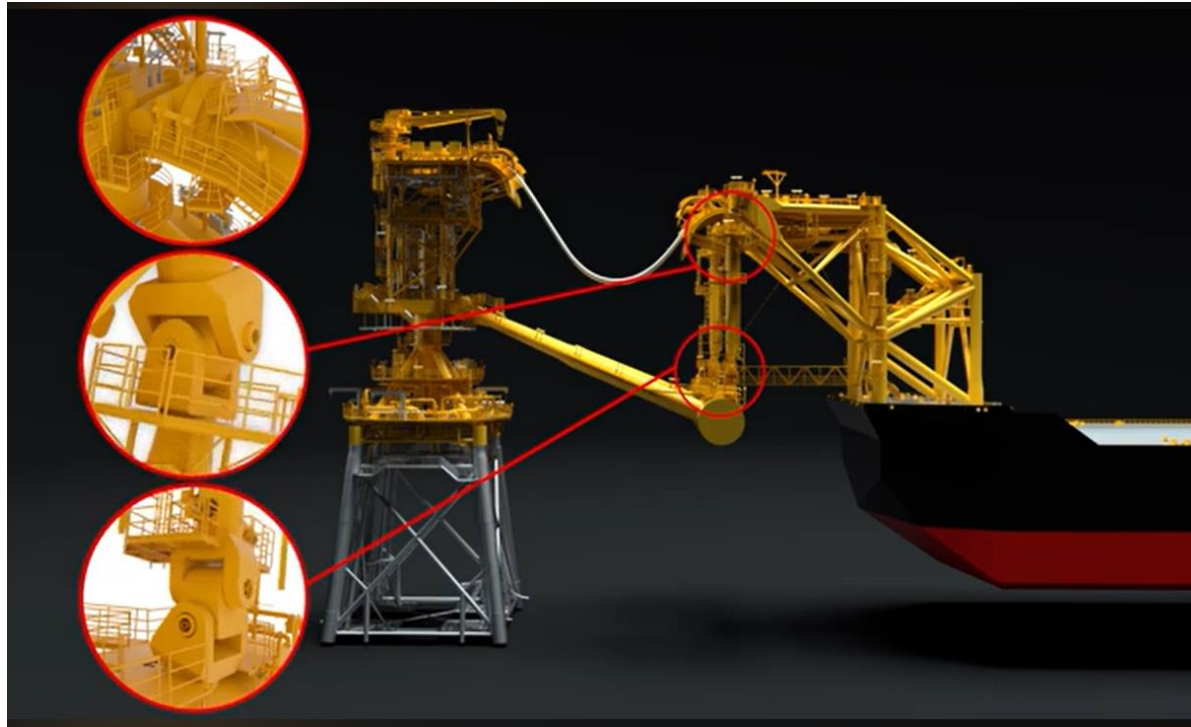


Onshore Receiving Facility (ORF)

Area 1 Development – FPSO Photos



FPSO Disconnectable system



The YOKE system

A “mooring tower”, grounded to the seabed by means of piles, upon which a 360 degrees rotating swivel is installed, connected to the FPSO by means of 3 couples of joints allowing the system 6 degrees of freedom and constituting a real **weathervane** at the same time, minimizing the stresses which could be potentially induced to the system by the combination of sea states, wind and current.

The transversal ballast pipe, filled by sea water, acting as gravity dumper contributes to restoring the condition of rest counterbalancing the inertia of the ship.

Eni Mexico

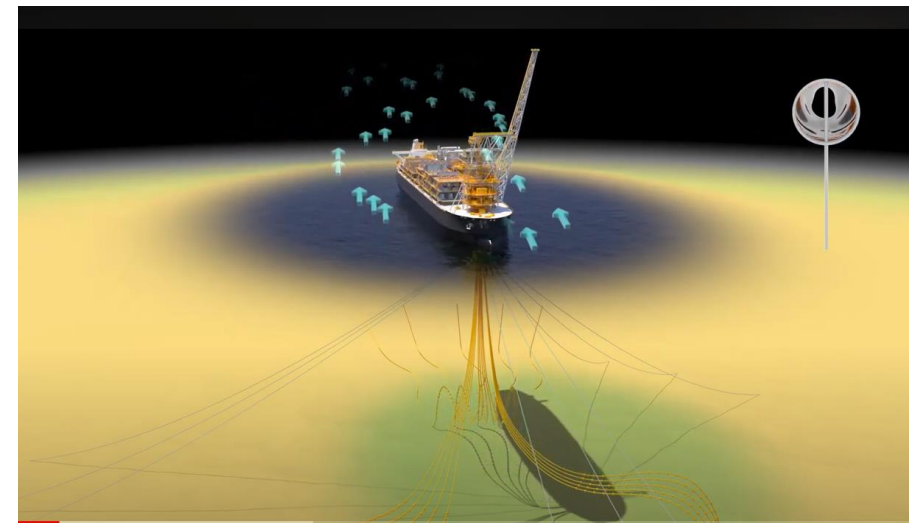
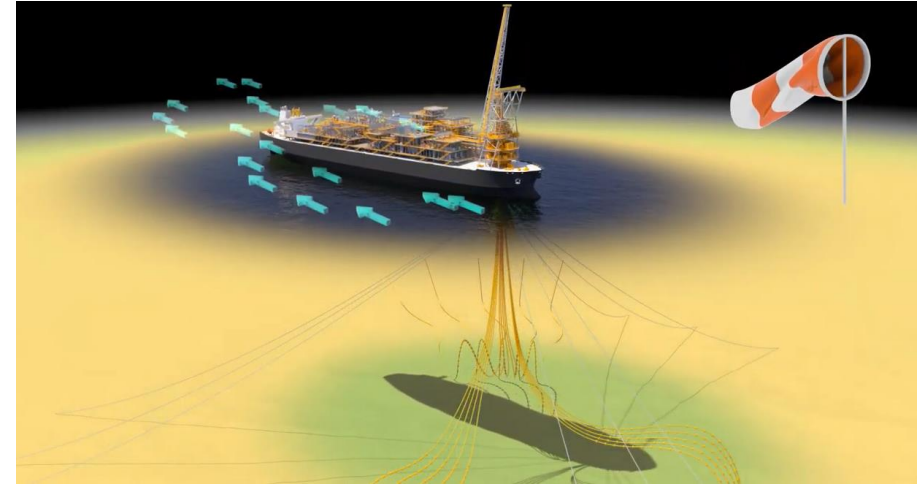


FPSO Weathervane Concept

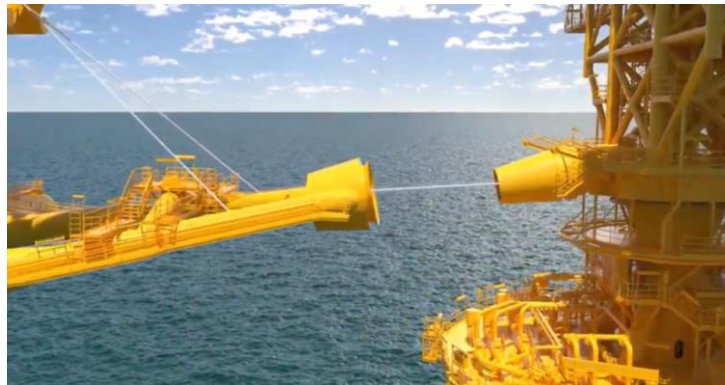


The turret concept to free weathervane moor vessel-based floating production and storage systems (FPSOs/FSOs) was pioneered in the early 1980s by SBM Offshore. Since then, that idea has evolved to meet more rigorous operations demands, such as FPSO Miamte.

[Turret moorings evolve to accommodate complex subsea spreads, harsher environments | Offshore \(offshore-mag.com\)](#)



FPSO Disconnection - Connection



The MOORING system

After having secured the production lines, via retrieving the electrical and production jumpers, the disconnection of the FPSO from her YOKE may take place. Hydraulic mooring system are activated to execute the physical separation as showed above. The mooring is facilitated by means of mooring lines which allows to correctly positioning the anchoring post reconnecting the FPSO to her YOKE. The Yoke is provided with boat landing, to allow personnel to access it during such times when FPSO is disconnected.

Area-1: Integrated logistics



Dos Bocas Logistics base and storage areas Offshore supporting vessels



FPSO Miamte MV34:
 AHTS CINDY TIDE BP 90 TON
 ASD RPM CUYUTLAN BP 80 TON



GEMA O&M warehouse/yard



Helicopter service



AW 139 helicopter
(12pax)

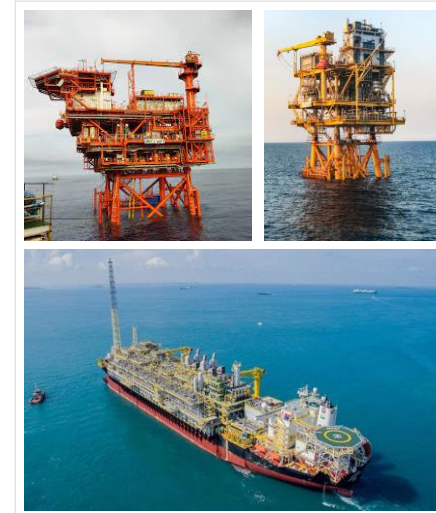
Rig Jindal Pioneer:
 PSV PUNTA DELGADA
 PSV Enav Agave
 FS/ISLA SAN LUIS



Rig Ralph Coffman:
 PSV Enav Peregrina
 PSV Felton Tide



Innovation in Eni Mexico – Digital Plant



Eni Mexico & Digital Plant

- Complex asset for production and reservoir management
- Introduction of solutions such as Digital Plant to enhance Asset Operator Coordination
- Increase local skills for managing Digital tools and reading outputs

Asset Operations & Integrity

- Structured and Systematic approach enabled by a **Production Optimization tool** (scenarios & simulations)
- Monitoring of **Asset Integrity & Safety**



Advanced Analytics Focus & Contribution

Achieve **Operational Efficiency** through advanced analytics and predictive modeling algorithms:

- **Reliability** (Produced and Sea Water Treatment, ESP/VSD, Fuel Gas System)
- eDEA for **energy management**
- Phoenix for **Critical Machinery**
- **Smart Alarm & Maintenance**

Center of Excellence (CoE)

- Center of Excellence (CoE) oriented to the use of the **Advanced Analytics** and valorization of Human Capital & Upskills



Eni Mexico Digital Transformation Pillars and Drivers



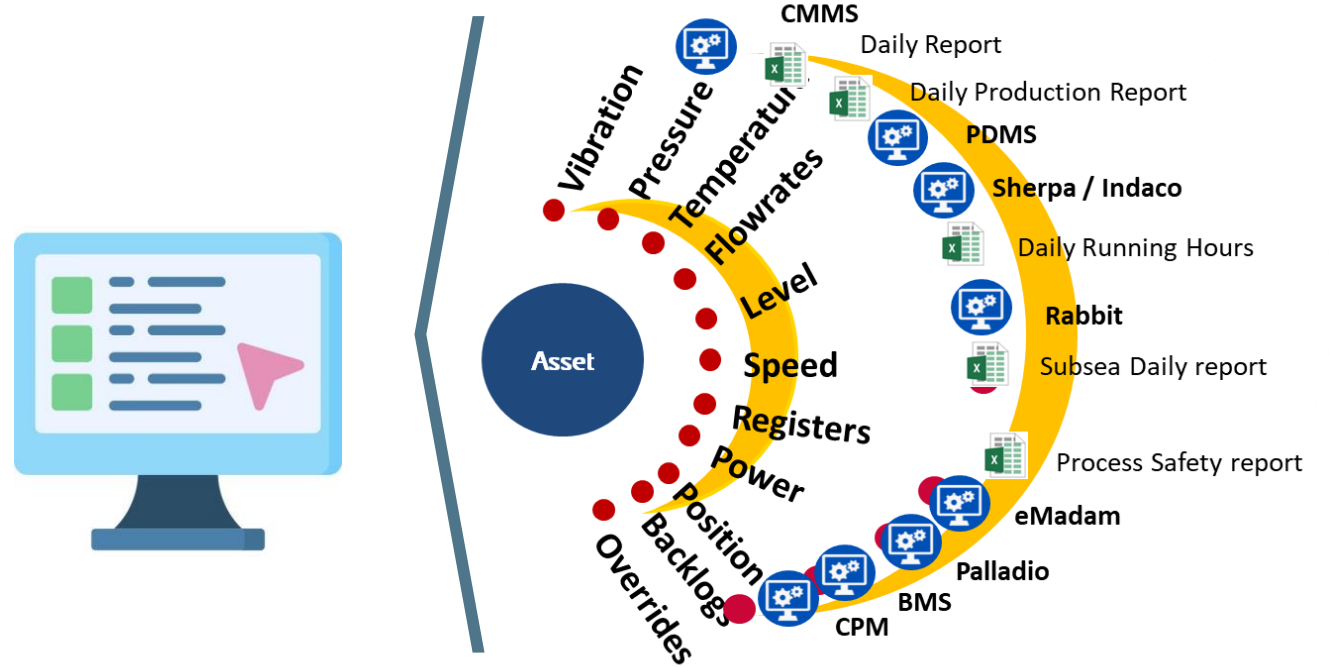
Business Continuous Improvement

Enable the cross functional **continuous improvement** by introducing a real-time monitoring **dashboard** for a set of KPIs and facilitate the timely addressing of actions.

Innovation in Eni Mexico – Digital Plant



Mexico Area-1



- First single source of truth tool with predictive and Advanced Analytics models
- Multidisciplinary and comprehensive asset monitoring
- Impacts on Asset Integrity, emissions, production



Innovation in Eni Mexico logistics operations

Use of offshore baskets CCU for the shipment of materials



Load Test to identify the correct loads distribution and inclination offset



Safe and Smart Port ERP (Puerto Inteligente y seguro PIS) Implemented by ASIPONA

Digital transportation system

LOTA: Marine audits technical assurance
Mates.-Support vessel standardized specifications Implementation of additional decarbonization requirements to raise the scoring during the tender evaluation phase

| Specification Id | Review |
|-------------------------------------|--------|
| 162-Marine-PSV-Eni-Indonesia-012024 | 0 |
| 158-Marine-OTH-Eni-Mexico-122023 | 0 |
| 158-Marine-OTH-Eni-Mexico-112023 | 0 |
| 157-Marine-PSV-Eni-Mexico-112023 | 0 |
| 156-Marine-AHTS-Eni-Mexico-112023 | 0 |
| 151-Marine-OTH-Eni-Mexico-102023 | 0 |
| 150-Marine-AHTS-Eni-Vietnam-092023 | 0 |
| 148-Marine-AHTS-Eni-Vietnam-092023 | 0 |
| 148-Marine-PSV-Eni-Mexico-092023 | 0 |

Eni management system implementation

Environmental Golden Rules in all stages of the operation



Safety Golden Rules and Principles



Innovation in Eni Mexico to improve safety in offshore operations



Lifting Information Systems (LIS)

Electronic Permit to Work - eWP

LIS 6.1.05.26



LIS - Lifting Information System

- Lifting Appliances
- Lifting Operative Personnel
- Lifting Accessories
- Lifted Equipment
- Lifting Events
- Lifting Plan
- Lifting KPIs
 - KPI GUs
 - KPI LTA
- Attachments Drop-Off
- Dashboards
- Manuals & Templates Download
- TEST - Lifting Operations
- Site Contents

GU Lifting Info

Country: MEXICO Affiliate: ENI MEXICO

MEXICO - ENI MEXICO

Lifting Community

Lifting Technical Authority - LTA: MASSIMO CIARAMELLA -LOGIS MANAGER- VILLAHERMOSA TEL +525625640548

Lifting Operational Advisor - LOA: EDSON ALVAREZ - VILLAHERMOSA TEL +525580042307

Lifting Operational Engineer - LOE: AUGUSTO POZO-BASE MANAGER API DOS BOCAS TEL +525539332657

Lifting Procedure

Issuance date: 20/07/2021

Updated to L&H Manual 2018: Yes

Local Lifting Procedure: pro eni mex log 002 ...

LMS

Score [%]: -

Note: -

News

Country: MEXICO Affiliate: ENI MEXICO

MEXICO - ENI MEXICO Monthly Lifting Activities April 2023

Eni Mexico Lifting Activities Records up to April 2023

Attachment: MONTHLY LIFTING ACTL...

mjeni your intranet

AUGUSTO BOLIVAR POZO ROCHA - AUTHORIZING_AUTHORITY - MOA - DESKTOP - (INTRANET)

e-WP electronic - Work Permit

Home Activity Workflow Management Monitoring

Work permits

- Open work permits
- Historicized work permits
- Risks assessment certificates
- All risks assessment
- Risks assessment historicized
- Job safety analysis certificates
- JSA archived
- JSA Waiting for approbation
- JSA historical
- Energy isolation certificate
- Energy isolation certificates Open
- Archive Energy isolation certificate

Historical work permits

PTW Number: [input]

Issuing date (From): Dec 26, 2023

Issuing date (To): Jan 10, 2024

Closure date (From): Dec 26, 2023

Closure date (To): Jan 10, 2024

Status: Completed Canceled Forcefully closed Closed in AM

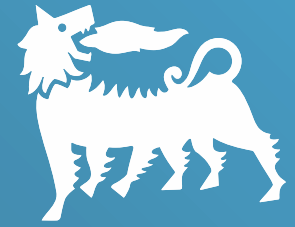
Search Export

| Number | Issuing date | Closure date | Work type | Work description | Work site | Start date | Status | Functionality |
|---------------------|--------------|--------------|-----------|--|-----------|--------------|-----------|---------------|
| MEX.MOA.2024.000045 | Jan 03, 2024 | Jan 05, 2024 | Cold | MANIOBRAS E IZAJES DE EQUIPOS, CCU'S, TUBERÍAS DE DIFERENTES DIÁMETROS Y CONTRAPESOS CON APOYO DE GRÚA MÓVIL 250, 120, 90 TON, MONTACARGAS 05 Y 15 TON. CAMIONES TIPO PLANA. (PATIO ENI) | DOS_BOCAS | Jan 04, 2024 | Completed | |
| MEX.MOA.2024.000044 | Jan 03, 2024 | Jan 05, 2024 | Cold | MANIOBRAS E IZAJES DE EQUIPOS, CCU'S, TUBERÍAS DE DIFERENTES DIÁMETROS Y CONTRAPESOS CON APOYO DE GRÚA MÓVIL 250, 120, 90 TON, MONTACARGAS 05 Y 15 TON. CAMIONES TIPO PLANA. (PATIO ENI) | DOS_BOCAS | Jan 04, 2024 | Completed | |
| MEX.MOA.2024.000037 | Jan 03, 2024 | Jan 05, 2024 | Cold | MANIOBRAS E IZAJES DE EQUIPOS, CCU'S, TUBERÍAS DE DIFERENTES DIÁMETROS Y CONTRAPESOS CON APOYO DE GRÚA MÓVIL 250, 120, 90 TON, MONTACARGAS 05 Y 15 TON. CAMIONES TIPO PLANA. (TUM .. | DOS_BOCAS | Jan 03, 2024 | Completed | |

Accesorios de izaje – Lifting Accesories

- Grilletes - Shackle
- Estrobos - Wire Rope
- Orejas de izaje - Padeyes
- Eslingas - Sling
- Balancín - Spreader Bar
- Anillos de Enlace – Master Link





Thank You
