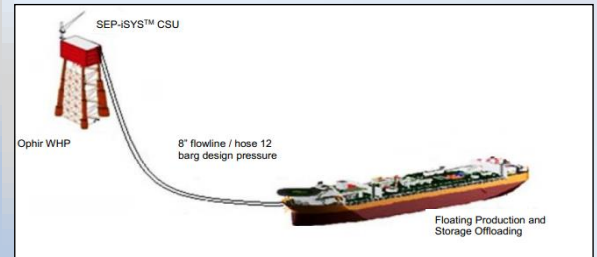


Introduction

Ophir field is located in Block PM315, off East Coast of Peninsular Malaysia. The Ophir WHP Platform has Three (3) drilling unit, the commingled fluid shall then be flowed via a (10") flow line to spread moored FPSO for separation into three (3) phases, which is gas, oil and produced water.

Scope

To Perform Concept Study & Detail Design of Wellhead Platform for In-service and Accidental scenarios



Particulars

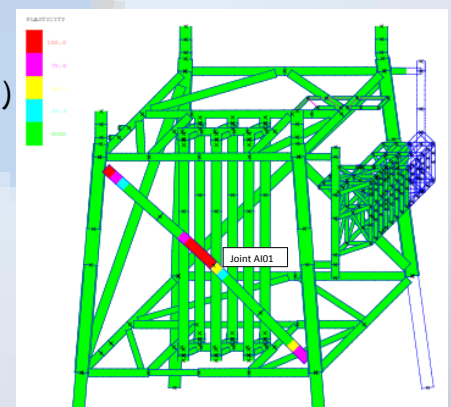
- 4 Leg single hook Lift Installed Jacket
- Top of Jacket Leg Spacing dimensions are 15m x 13m;
- Bottom of Jacket Leg spacing dimensions are 28m x 21m;
- Water Depth 72.85m MSL;
- 4 No. 36" OD Pile will be used;
- 6 No. 30" OD Conductor (3 future);
- 2 No. 10" OD Flexible Risers connected with FPSO.
- Jacket weight 800 t and Topside weight 1000 tonnes.
- Jacket Height is 81 m.
- Design Life of 10years

Project Activities and Constraints

- 4 months Project Timeline from Concept to AFC
- Erratic Soil Stiffness below mudline up to 15m

Outputs

- Jacket Concept Design (Layout , Batter, Bay Height, Framing Type, Etc.)
- In-service Analysis (In-place, Extreme Wave, Spectral Fatigue)
- Accidental Analysis (Ship Impact)
- Pushover Analysis
- Boat Landing Design and FEA of Stabbing Pin Guide
- Conductor guide and Conductor design
- Pile & Conductor Makeup
- AFC Drawings



Introduction

The Iranian Offshore Oil Company (IOOC) is undertaking an integrity assessment program to ensure their immediate and future structural integrity and to check their fit for purpose during the intended design lives or beyond. The existing Reshadat oilfield is located in the Iranian territorial water of the Persian Gulf, approximately 110km south west of Lavan Island. R4 is a self contained wellhead platform. R4 platform has been on stream since October 1969.

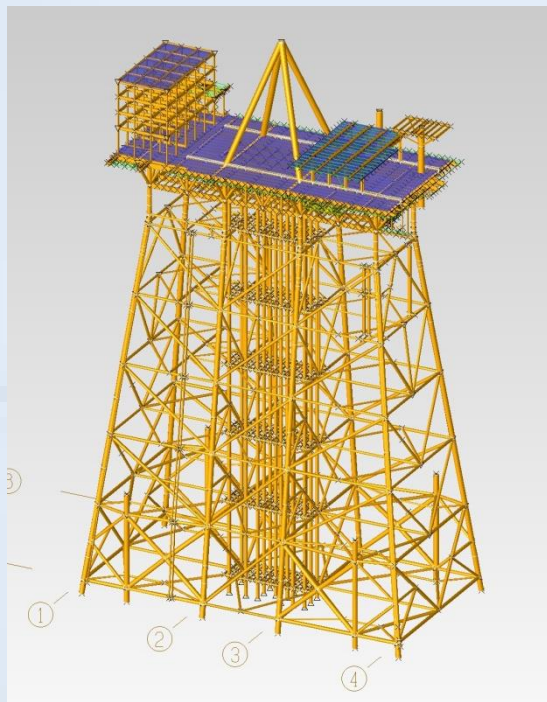
Scope

To perform detailed structural assessment of the R4 drilling platform



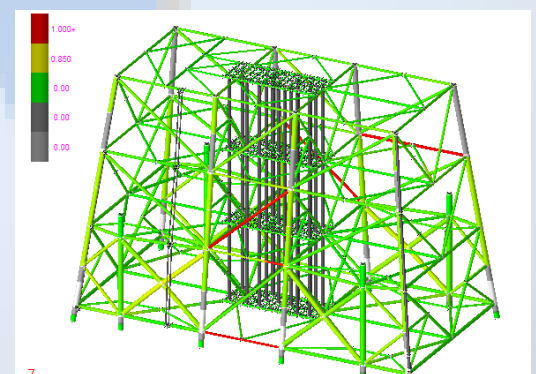
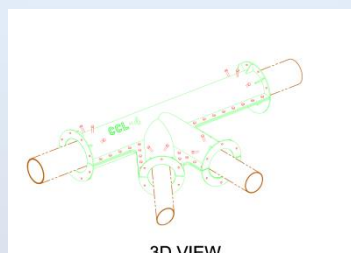
Particulars

- 8 Leg with 8 main piles and 4 skirt piles
- Four corner legs are double battered at 1:8 and four legs are single battered at 1:8
- Working point Leg spacing 41.15m x 13.72m;
- Water Depth 61.50m MSL;
- 12 No. 36" OD Pile will be used;
- 15 No. 30" OD Conductor;
- Risers - 1 No. 18" and 1 No. 6"
- Caissons- 1 No. 26" and 2 No. 18"
- J-Tubes – 2 No. 8"
- Jacket weight is 2000t & Topsides weight is 2600t.
- Jacket Height is 66 m.
- Design Life extension of 25years



Outputs

- In-service Strength Analysis
- In-service Spectral Fatigue Analysis
- Accidental Analysis (Ship Impact)
- Pushover Analysis
- Seismic Analysis
- Clamp Design

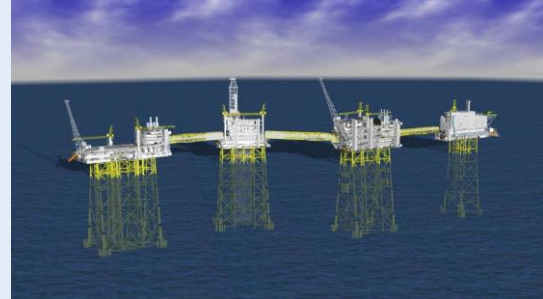


Introduction

The Johan Sverdrup Field is an oil discovery located in the Norwegian sector of the North Sea.

The field centre comprises the following platforms;

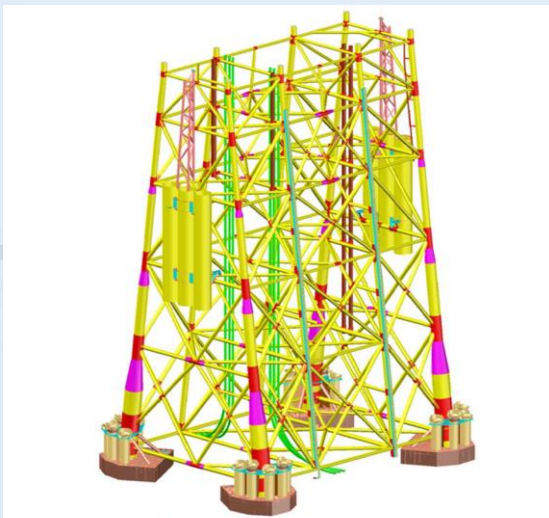
- Living Quarter (LQ) platform with Utility module
- Drilling platform (DP) with production/injection manifolds
- Processing platform (P1)
- Riser Platform (RP)



Scope

To review FEED work attributed to P1 and LQ Jacket for SNCL,UK

- Review and comment on drawings, design report, premise and interface documents for P1 & LQ.
- Support SNCL in suggesting design optimizations, improved details for fabrication etc.
- Provide input to high level schedule and manpower planning.
- Consider risks to installation

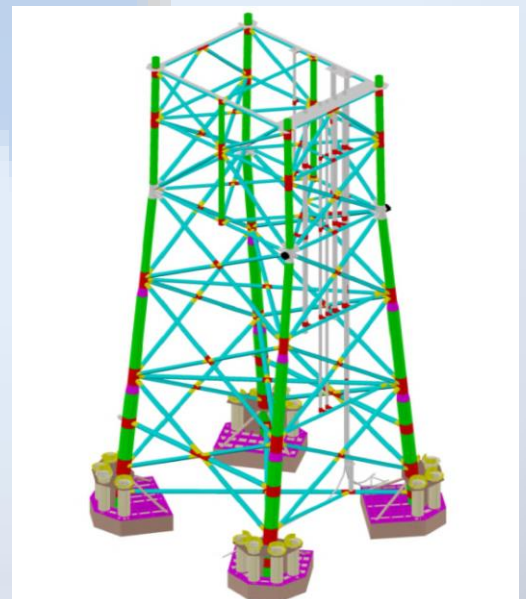


P1 Jacket Particulars

- 8 Leg barge launched jacket
- Jacket weight 18,000 t & Topside weight 43,000t
- Water Depth 113.4m MSL;
- Jacket dimensions(80m x 28m top & 80m x 60m bottom)
- 20 No. 108" OD Pile, driven to 65m;
- Appurtenance – 5 Caisson & 6 J-tubes
- Jacket Height is 140 m.
- Design Life of 50years
- 6 Buoyancy Tanks

LQ Jacket Particulars

- 4 Leg double hook lift jacket
- Jacket weight 8100t & Topside weight 28,000t
- Water Depth 113.4m MSL;
- Jacket dimensions(40m x 28m top & 45m x 45m bottom)
- 16 No. 96" OD Pile, driven to 60m;
- Appurtenance – 7 Caisson & 3 J-tubes
- Jacket Height is 140 m.
- Design Life of 50years
- 4 Cast nodes



Outputs

- LQ Jacket FEED Review Report
- P1 Jacket FEED Review Report

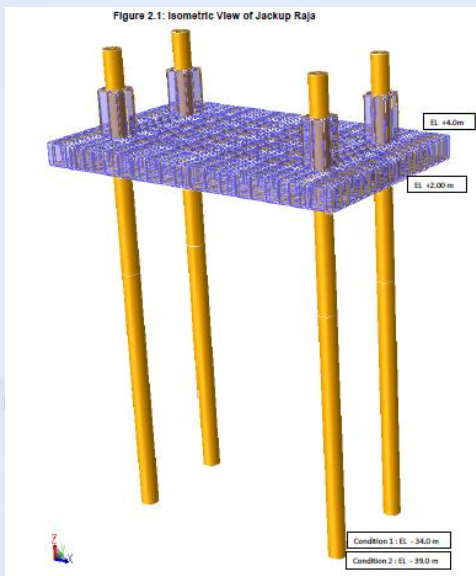
Introduction

This project emphasizes on an engineering assessment to establish capacity of a Jack up barge Raja in elevated condition for piling rig in specified site conditions. This assessment addresses two basic aspects concerning effectiveness of leg strength and evaluation of coupling strength during piling operation. The Jack up is assessed to define stress levels in legs and coupling.

A temporary piling rig of 135 T on the deck of Raja Jack up barge is to be used. The operational scenario involves lifting 45 T pile and perform piling operations by using suitable hammer. The piling will be done through guide frame.

Scope

To check the structural integrity of the jack up leg and couplings that connects different pontoons.



Particulars

- Barge Length (LOA) is 29.0m, Breadth 18.0m, Depth 2.0m
- 4 Cylindrical Legs of 52.5m length
- Hydraulic Cylinders with Locking Arrangement with Support Block
- Classification - IRS-Jack Up Barge, Restricted.
- Non Propelled with maximum operating water depth of 24.0m
- The jack up barge support mobile piling rig, fabricated from 18 pontoons which are connected by couplings with pin arrangement.

Outputs

- Jacket Concept Design (Layout , Batter, Bay Height, Framing Type, Etc.)
- In-service Analysis (In-place, Extreme Wave, Spectral Fatigue)
- Accidental Analysis (Ship Impact)
- Pushover Analysis
- Miscellaneous Steel Design (Conductor & Conductor Guide, Boat Landing)
- Pile & Conductor Makeup
- AFC Drawings