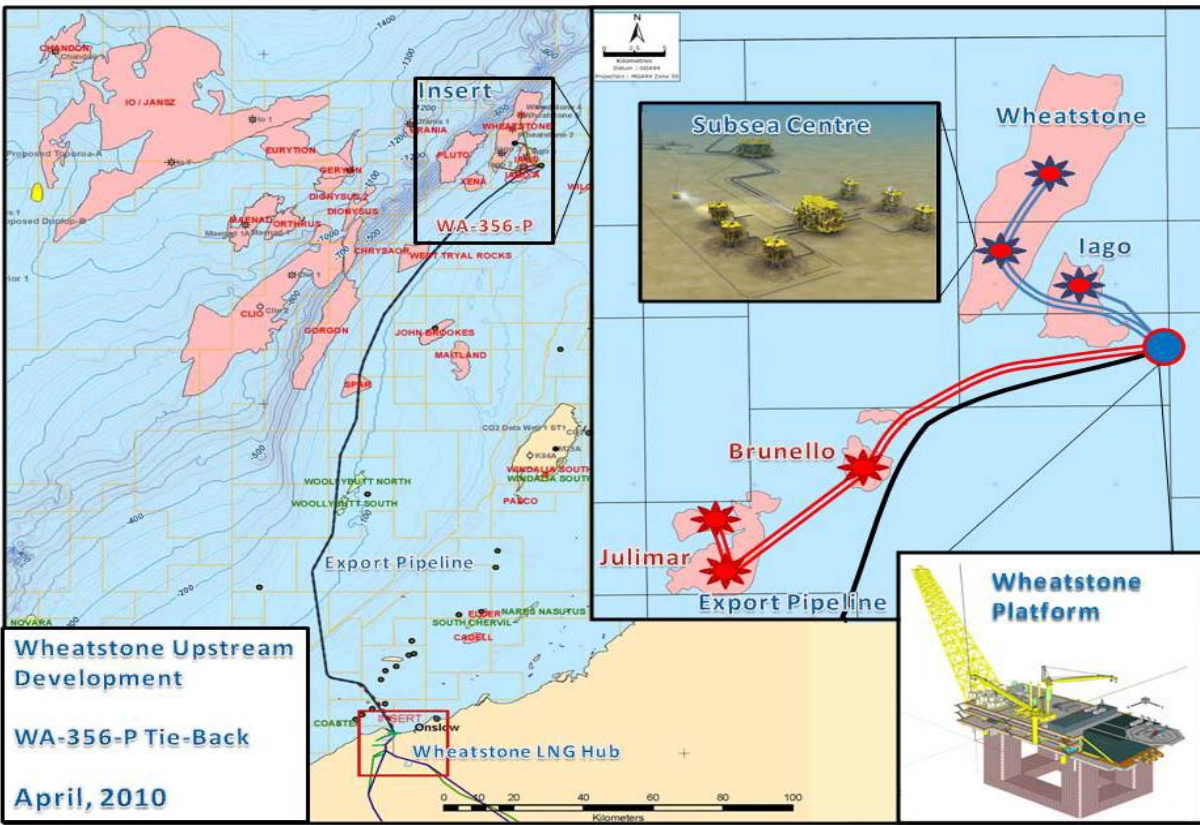


Upstream Scope

David Kempkes
Wheatstone Upstream Project Manager



Development Concept



Wheatstone Upstream Development

WA-356-P Tie-Back

April, 2010

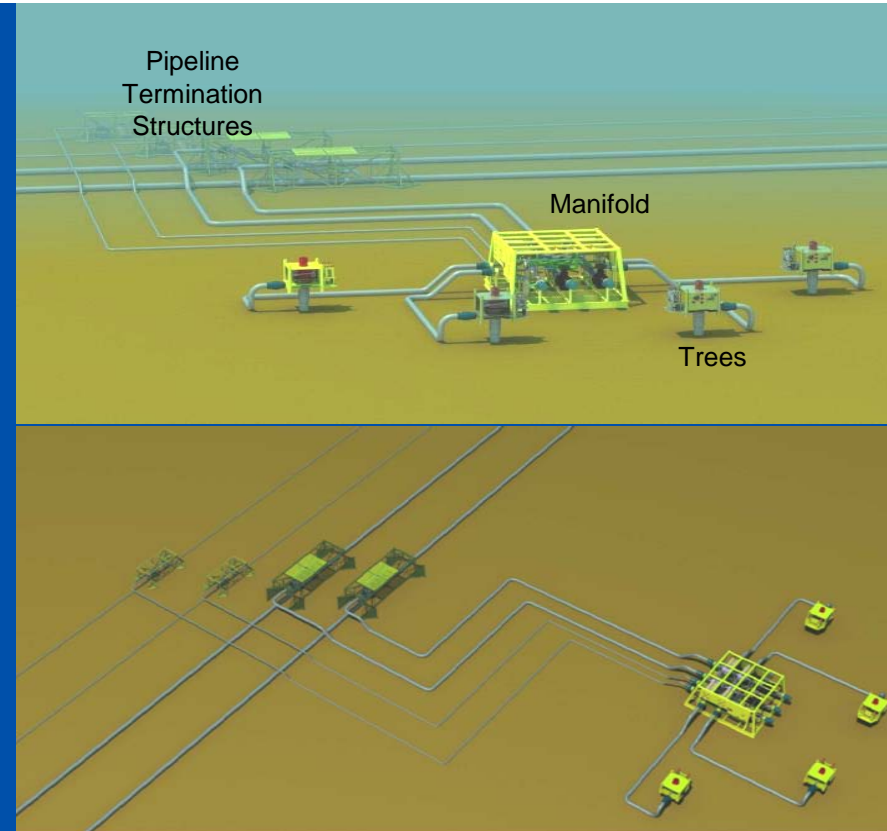
Front End Engineering & Design (FEED)

- FEED contractors
 - IntecSea (Subsea, Flowlines, and Trunkline)
 - Technip (Wheatstone Platform)
- Primary work scope:
 - Define technical scope of work for tender packages
 - Support preliminary procurement activities
 - Prepare cost estimates for execution phase
- Current status
 - Engineering ~40% complete
 - Market engagement for procurement and contract activities in progress



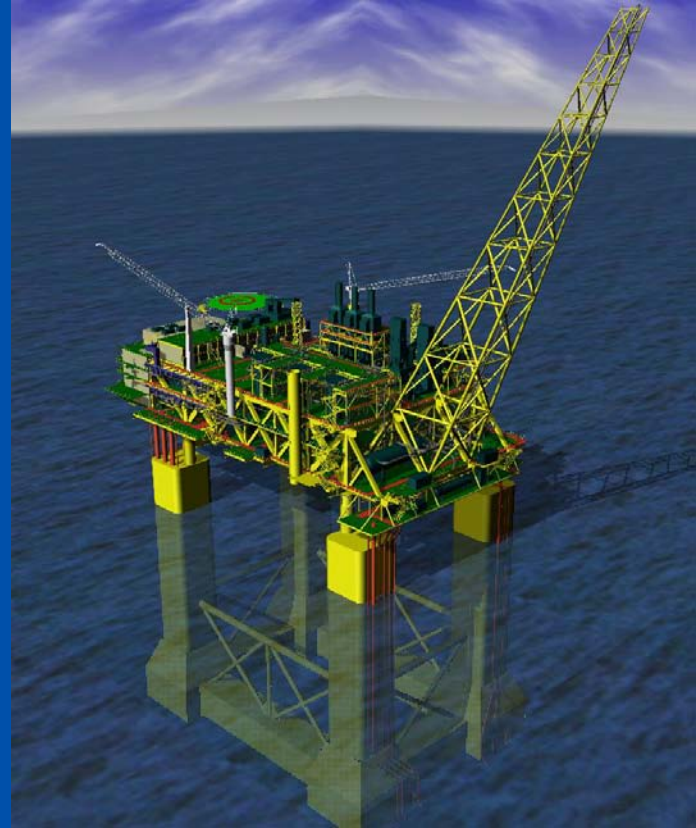
In-Field Sub-Sea Facilities

- 4-slot subsea manifolds in water depths from 100 to 260m
- Deviated well construction – with bottom hole locations up to 2.5 km radius from manifolds
- Flow lines connecting manifolds to Wheatstone Platform



Wheatstone Platform - Topsides

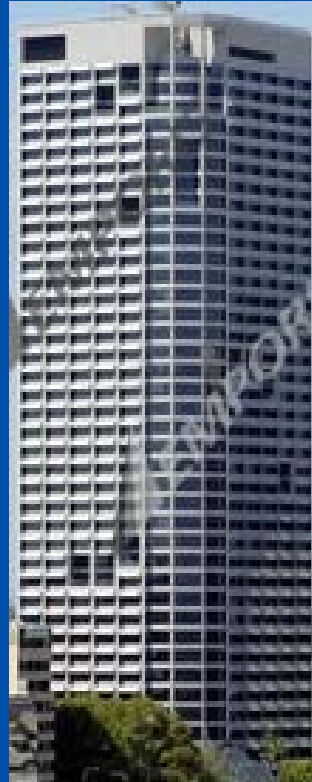
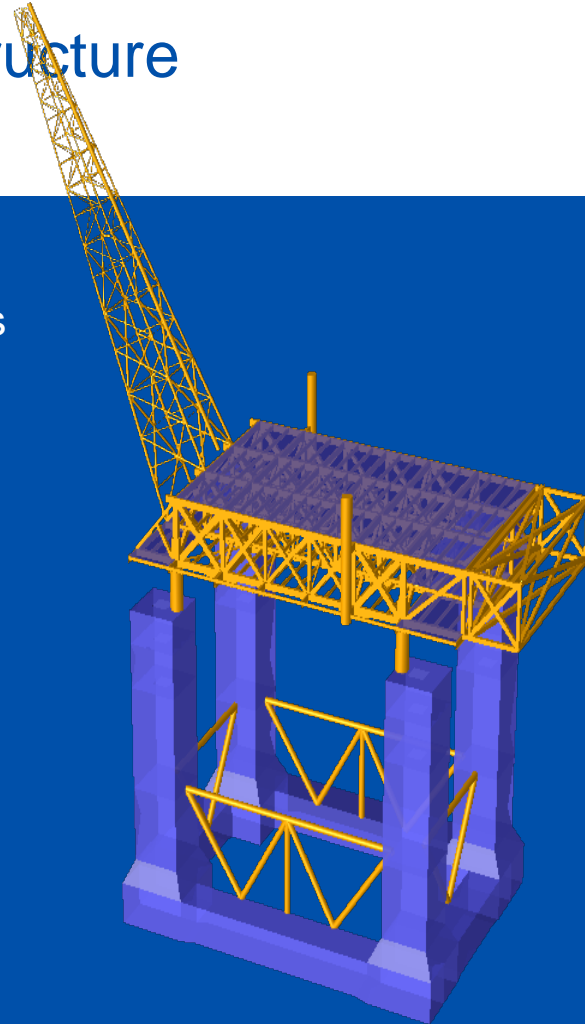
- Topsides weight - 35,000 MT
- Total deck area of 2½ soccer fields
- 2 Bcfd gas processing
- Gas/Liquid separation, dehydration and compression
- Utility systems including power generation
- 100 person capacity Living Quarters



Wheatstone Platform – Sub-Structure



- Steel gravity substructure (SGS)
- Square columns and rectangular ring pontoons
- Dry weight of 22,000MT, 155m tall
- Designed for 12-story cyclonic wave heights

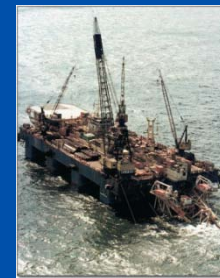


Trunkline

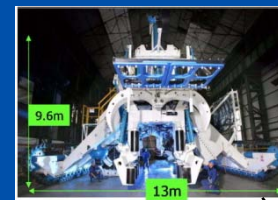


- 44" OD trunkline
- 225 km from platform to onshore plant
- Approximate 200,000 MT of line pipe
- 40 km shallow water approach requiring stabilization
- Micro-tunnel shore crossing

Pipe-lay Barge



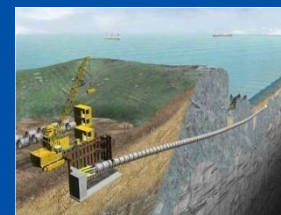
Mechanical Trencher



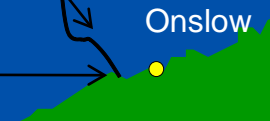
Barrow Island



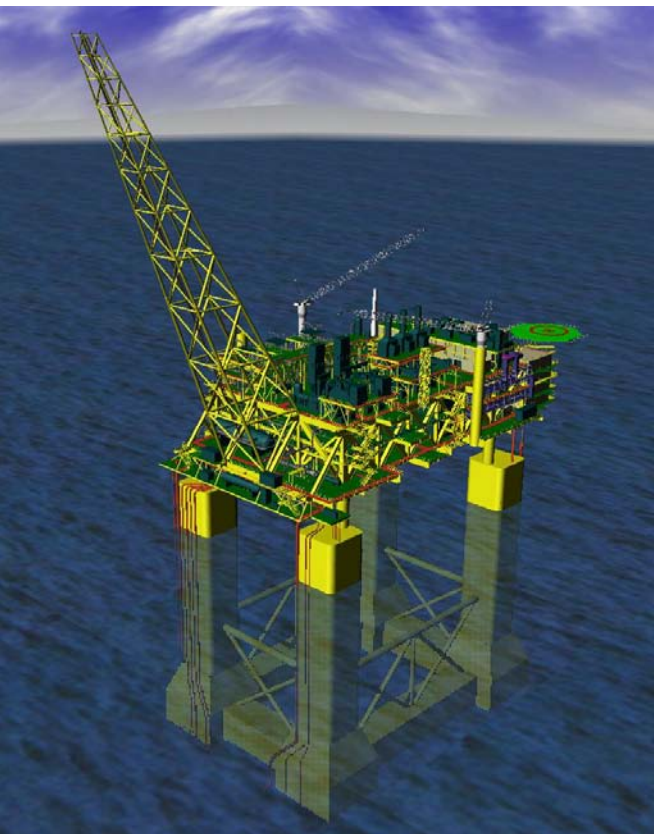
Micro-tunnel Shore Crossing



Onslow



Primary Upstream Contract Packages



Facility	Contract Scope Summary
Wheatstone Platform	Engineering, procurement, fabrication, transportation and installation (EPCI) - topsides and substructure
	Offshore hook-up, commissioning and start-up support
Trunkline	Installation
	Micro-tunnel shore crossing EPCI
	Near-shore secondary stabilization - rock dumping
	Near-shore secondary stabilization - trenching
	Commissioning (de-watering, drying, inerting)
In-field Flowlines	Installation
Subsea installation	Subsea equipment installation, umbilicals installation, pipeline tie-ins to platform



Procurement Postings on *ProjectConnect*

Heavy Wall Pressure Vessels

Gas Dehydration Package

Dehydration Inlet Cooler (PCHE)

Light Wall Pressure Vessels

Flare Drums

Air Cooled Heat Exchanger

Waste Heat Recovery Unit

Shell & Tube Exchangers

Plate Heat Exchanger

Pig Launcher & Receivers

VHF & UHF Trunked Radio System

Air Compressor and Dryer Package

Flare Tips HP LP and Ignition Package

Sea Water Filters

Diesel Treatment Package

Chemical Injection Package

VSAT Satellite Terminal Station

AIS & Radar Systems

Voice and Data Network

Public Address & General Alarm System

Meteorological Station

Entertainment System

Lifeboats

Potable Water & RO Package

Nitrogen Generator

Pedestal Cranes

Hypochlorite Generation Package

Firewater Pumps

Seawater Lift Pumps

Produced Water Degasser

Process Electrical Heater

Emergency Diesel Generator



Wheatstone Project

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