

# BALNAVES DEVELOPMENT PROJECT

**JUNE 2012** 

The Balnaves Development Project will enable the extraction of oil from the Balnaves reservoir, an isolated reserve located in the Northern Carnarvon Basin, about 180km offshore north Western Australia.

A joint venture between Apache and the Kuwait Foreign Petroleum Exploration Company (KUFPEC), the subsea development will process liquids from the field for export via a dedicated Floating Production Storage and Offloading vessel (FPSO).

# ABOUT THE BALNAVES DEVELOPMENT PROJECT

The Balnaves development is located adjacent to the large reservoirs of the Brunello gas field in Production License WA-49-L approximately 180 kilometres west northwest of Dampier in Western Australia.

The oil field was discovered by Apache in 2009 during exploration and appraisal drilling in the Julimar-Brunello complex.

Apache is responsible for operating and managing the Balnaves Development Project including drilling of the wells and installation of all subsea facilities for tie back to the FPSO Armada Claire.

Operating in water depths of approximately 135 meters, the project will consist of four subsea wells connected to a single manifold. A disconnectable riser turret mooring system will connect the FPSO to the subsea facilities.

Oil from two production wells will be transported though the manifold and flexible flowlines and risers to the FPSO for separation and treatment. Produced water will be reinjected into the reservoir via a water injection well and produced gas will be compressed onboard the FPSO and re-injected to an overlaying reservoir via a gas injection well.

Re-injected gas will be available for future production through the Apache operated Julimar Development Project that feeds into the Chevron-operated Wheatstone Project.

The FPSO servicing Balnaves, the *Armada Claire* is owned by Bumi Armada and will be leased to Apache for the duration of the project.

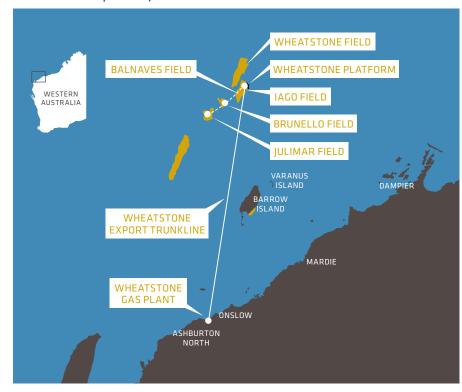
Specifically designed with topside facilities for oil and gas separation, stabilization and dehydration, the vessel will feature a disconnectable riser turret mooring system to connect the FPSO to the subsea oil field facilities. Produced oil will be stored in cargo tanks prior to export via a shuttle tanker.

Apache and its joint venture partner KUFPEC have, through innovative and cost effective development strategies, unlocked the potential of this relatively small and isolated reservoir.

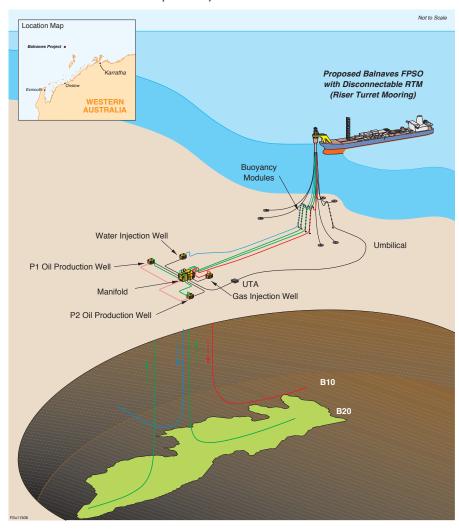
Artist's impression: installation of the Riser Turret Mooring



The Balnaves Development Project is located in the Carnarvon Basin offshore Western Australia



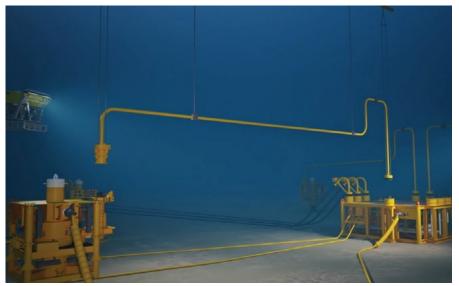
### Illustration of the Balnaves Development Project



## **KEY FEATURES**

- Apache operated (Apache 65% / KUFPEC 35%).
- The Project will consist of four subsea wells connected to a single manifold with a link to the FPSO.
- The FPSO, the Armada Claire, is owned by Bumi Armada and leased to Apache for the duration of the Project.
- First production from the Balnaves Development Project is scheduled by end first quarter 2014.
- The Balnaves Development Project has a field life of approximately 5 years.
- Gross production will peak at approximately 30,000 barrels of oil per day and the estimated gross recoverable resource is 17 million barrels of oil and 30 billion cubic feet of gas.
- The Armada Claire has production capacity of 30,000 barrels of oil per day, 60,000 barrels of water per day and 50 million standard cubic feet of gas per day.
- Balnaves is a light, sweet oil accumulation in a separate reservoir in the Triassic Mungaroo formation, located adjacent to the large reservoirs of the Brunello gas field.

# Artist's impression: installation of the Balnaves subsea equipment



MILESTONES	
2009	Balnaves oil field discovered
SEP 2011	Final Investment Decision (FID)
JUN 2012	All contracts secured





For more information on Apache Energy please contact:

