
Services Performed

IRC conducted a reliability, availability, and maintainability (RAM) analysis of the Angostura oil project, offshore Trinidad, in 2002. In 2008, as new facilities were being added to provide for gas sales, an updated RAM study was completed for the Angostura Gas Project.

Objectives

- Develop a production availability model of the Angostura oil and gas facilities
- Identify design, operational, and maintenance considerations that will enable optimal production performance throughout field life

Project Description

BHP Billiton has expanded the Angostura field development, which originally used a central control platform for oil processing and gas reinjection, and several satellite wellhead protection platforms. A stand-alone platform for gas processing, compression, and export was being added as the project transitions from gas reinjection to gas sales.

The 2008 RAM study determined improved gas availability due to the dedicated gas processing platform and provision of additional compression capacity. Overall, compression and facility restarts continued to be major contributors to both oil and gas production losses.

The study recommended the purchase of a spare rotating assembly bundle for the gas export compressors. A significant improvement in overall availability by 0.7% and an estimated 5 bscf of deferred gas savings over facility life was projected.



Key Benefits to Client

- Understanding major contributors to production losses focuses facility resources on problem areas: plant restarts, compression, and producing wells
- Significant cost-benefit (approximately \$46 MM using 2008 average Henry Hub gas price) and deferred gas savings (approximately 5 bcf) can be achieved through the purchase of a spare compressor bundle