



Summary

Tasman Oil Tools was contacted by a valued customer in the Australian CSG¹ market to cut and pull a shallow gravel-packed liner. Due to limitations of the rig package and the shallow depth of the liner top, conventional cut and pull operations, employing a Jar, were not possible due to safety concerns. However, Tasman’s fishing department deployed the 3 1/8” Impulse Downhole ActiPulse® FRT² as an alternative to a conventional jarring BHA.

The 3 1/8” ActiPulse® FRT sends a harmonic frequency through the fish allowing the liner to move up hole by reducing the friction of the gravel pack. At a low frequency of approximately 4Hz, the tool successfully recovered 70m (230 ft) of gravel-packed 6-5/8” liner from a shallow depth of 33mGL (108 ft). The ActiPulse® FRT mitigates jarring damage to the rig package and ensures personnel safety by eliminating one of the oilfield’s most dangerous operations.

Run Information

After liner cutting operations, a Spear BHA³ was RIH⁴, and overpulls were staged up from 5,000 lbs to 40,000 lbs of overpull to the liner without any movement to the liner. The spear was released, and the ActiPulse FRT was added to the BHA in the configuration shown in Table 1 (right). Once engaged, the flow rate was increased in 15 GPM increments up to 85 GPM allowing the FRT to begin vibrating the stuck liner. After 20 minutes of pumping and working the string with 15,000 – 35,000 lbs of overpull, the liner was freed, and the entire 70m (230 ft) casing section was pulled to the surface (Figure 1, far right).

Table 1 – BHA Configuration

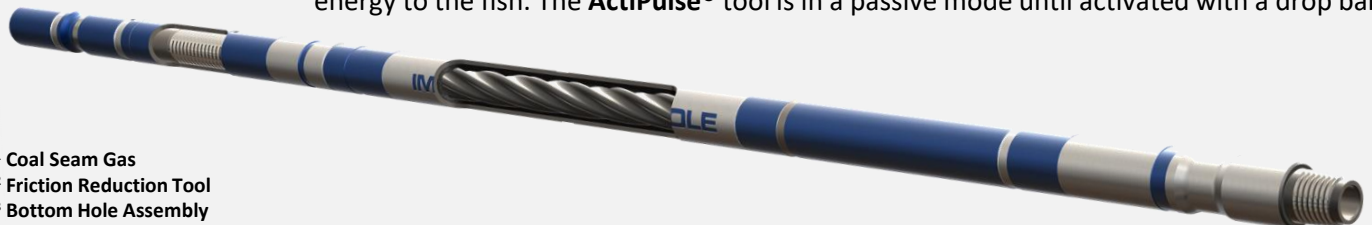
BHA Configuration
Crossover
Crossover
Impulse ActiPulse 313 SS FRT
Crossover Sub
Crossover Sub
Lub. Bumper Sub
Stop Sub
Spear
Bullnose

Figure 1 – Retrieved Liner Casing



Tool Overview

A **313 SS** Friction Reduction Tool was used for this project. A Positive Displacement Motor (PDM) Power Section turns the tool’s Rotating Valve. The Rotating Valve generates pressure pulses at a low frequency. The pressure pulse provides a differential pressure that creates axial forces, moving the dual-acting Shock Tool, transferring the energy to the fish. The **ActiPulse®** tool is in a passive mode until activated with a drop ball.



¹ Coal Seam Gas
² Friction Reduction Tool
³ Bottom Hole Assembly
⁴ Run In Hole