

## CASE STUDY

# M-Bubble Bridge Plug delivers 244% OD transformation in a highly deviated well in a water shut-off application offshore Australia.

## PROJECT

A major international operator was seeking to reduce water cut in a highly deviated oil well offshore Australia. The operator had previously endeavored to set a high expansion plug twice without success, so had approached DTI for a solution.

The client was seeking a bridge plug that would pass through 4.5-inch tubing with a 3.26-inch restriction and set and seal with up to 500 psi differential in a 7.625-inch, 26.4 lb/ft liner. DTI's high OD delta M-Bubble Bridge Plug is ideally suited to such challenges.

## RESULTS

This was a non-standard size requirement, so DTI designed, manufactured, tested and delivered a new M-Bubble Bridge Plug with a 3.125-inch OD, received by the client in Australia in just twelve weeks.



Less than six weeks later the plug had been successfully run through tubing on electric line using a powered setting tool and DTI's 3.125-inch Hydromechanical Setting Assembly. It was set in a 7.625-inch liner with a deviation of 65° at a depth of 1,954m.

Several weeks later the well was flow tested, which demonstrated the technology was successfully installed and water production had been isolated.

The M-Bubble Bridge Plug had delivered an impressive 244% OD downhole transformation and provided a reliable wellbore seal.

## QUICK FACTS

- Water shut-off application in a highly deviated well offshore Australia.
- Develop, prototype, test and manufacture a new size of M-Bubble and supply from UK to Australia in 12 weeks.
- Non-standard 3.125" running OD for upper completion, to set in 7.625", 26.4 lb/ft liner at a depth of c. 2,000m. with 244% OD transformation.
- Successful installation in troublesome well.
- 500-psi pressure differential.

## FEATURES & BENEFITS

DTI's Ultra-High Expansion (UHX) Packers and M-Bubble Plugs incorporate an additive manufactured expanding metal element and are the result of four years of research and development. They offer the industry an unrivalled combination of high expansion (up to 300%), pressure rating and temperature rating and have built an excellent track record in the field.

These products have the strength and durability for serious high-pressure sealing and can isolate pressured and flowing zones in a fast and cost-effective single run.

They help to solve a range of complex plugging, sealing and isolation challenges in a variety of wells and are typically used in applications where the tool is required to pass through the completion string and set and seal in the casing or liner below. They are suitable for water shut off, zonal isolation, plug and abandonment and CCUS applications.

A standard UHX M-Bubble is designed for 2-1/8" OD tools and will set and seal in up to a 6-5/8" casing/liner. 2-5/8" OD tools will set and seal in up to a 7" casing/ liner. Multiple other sizes, temperatures and pressure variants are in development.



## PRODUCT DETAILS

- Unrivalled 300% expansion.
- In-flow, thru-tubing, high-pressure deployment.
- Applications include permanent plugging, zonal isolation, cement retainer, hanger, well workover, abandonment.
- Flexibility in the design of the packers, packoffs and plugs makes the range suitable for a variety of well configurations and tubing/ casing/ liner sizes.
- Can be run on either slickline or electric line and set using powered setting tools or run on coiled tubing and set using flow activated running tools.