

## OPTIS™ MEMORY HD

### VISUAL INTERVENTIONS BRING WELL BACK TO LIFE

EV's Memory Camera helps to avoid costly well work-over.

#### REVIVING SHUT-IN ASSETS

When assets are passed over from one operator to another, there may be a large contrast in the performance and condition of each field, or each well within a field. Information may also be incomplete or unclear.

Shut-in wells can lead to deferred production, well integrity issues and increased cost for remedial work. This was the case for an operator in S.E Asia with one particular well shut-in and containing three separate fish (Fig 1).

#### EFFECTIVE AND ECONOMICAL SOLUTIONS

Four unsuccessful fishing attempts were made between previous and current operators over the course of 21 years. However, with an estimated gain of 550 bopd, the idea of abandoning the well was not attractive and a work-over was approved.

Uncertainty around the condition of the fish and the unknown reasons for numerous failed fishing attempts led the operator to carry out a visual inspection prior to proceeding with the work-over. EV deployed the Optis™ Memory HD camera on slickline. With the capacity to record up to 5 hours of full colour, high definition video across programmable intervals, the Optis™ Memory HD camera offered the customer a cost effective and reliable solution.



Figure 1: Fish left in hole: W Slip Lock (left), Bulldog Spear (centre), B7 (right)

#### UNCOVERING THE PAST

The acquired video and images showed the W Slip Lock at a depth of 400 ft (Fig 2.). The clear images and confirmed fish position renewed interest in a more tailored fishing campaign.

Thanks to conclusive images and insight from the Optis™ Memory HD camera, all three fish were successfully retrieved from the well during a slickline operation spanning 22 days.



#### THE CHALLENGE

A customer in S.E Asia had identified a candidate well for work-over based on a potential uplift of 550 bopd. The well had been shut-in for 23 years due to three fish, from a previous operator, and four failed fishing attempts. Prior to proceeding with the work-over, the customer decided to utilise a camera to acquire a visual of the top of the fish.



#### THE SOLUTION

EV's Optis™ Memory HD camera was deployed on slickline to inspect the area of interest and confirm the depth, position and condition of the top fishing neck. The high definition, full colour, downview camera records up to 5 hours at 30 frames per second to provide a clear picture of the downhole environment.



#### THE RESULTS

The top of the fish was clearly identified as the W Slip Lock. This enabled the customer to modify the standard fishing assembly and successfully retrieve the items from the well. The result was that the well was brought back online at 1350 bopd and an expensive work-over was avoided.



Figure 2: Top of W Slip Lock at 400 ft

### LOW COST, HIGH VALUE SOLUTIONS

This example provides clear evidence of the value added when EV's solutions are included as an integral part of planned intervention activities. Rather than proceeding with the work-over, the customer decided to visually inspect the condition of the fish to assess if a more intelligent fishing campaign could be designed. The investment paid off and not only was an estimated \$7 million saved, by avoiding a work-over, but well production came on-line over target at 1350 bopd (Fig 4).

Figure 3: Slickline intervention objectives target high value results at a low cost

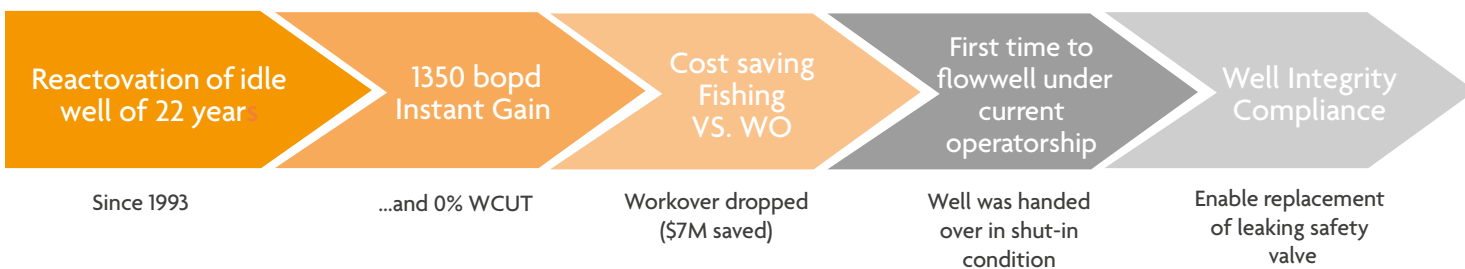
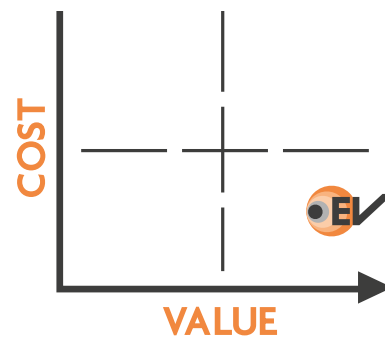


Figure 4: Results of successful intervention including significant cost savings compared to planned work-over