

## Expro Excellence

# Expro's annulus intervention technology intervenes in the A annulus

## Well Intervention



### Customer challenge

- Chevron in Thailand approached Expro on utilising our Annulus Intervention technology for remediating an annulus integrity issue. They wanted to enter and displace the separated base oil in the A annulus to water, preparing the annulus for resin placement. Our Annulus Intervention technology was selected as it enabled pumping to be completed inside the annulus
- The customer was looking for the annulus to be prepared for pumping the resin by displacing the base oil with fresh water
- By utilising this available technology, the production tubing can remain intact and no additional intervention is required for creating any communication from production tubing to the A annulus, meaning the barrier is intact between the reservoir and the A annulus

### Expro Excellence

- An annulus intervention system was run in the A-annulus to 70 meters depth to create circulation
- The customer wanted to ensure the complete displacement of the base oil to freshwater in the A annulus. This was executed by displacing from bottom to top instead of using the lube and bleed conventional method reducing time, cost, and POB
- During the operation lasting three days, 4,392 litres of base oil was displaced, this was 1 m<sup>3</sup> more than the expected theoretical volume. A lube & bleed operation was considered as part of a longer operation
- The footprint of this technology is very small compared to a conventional pumping unit. There is a reduction of risk associated with lifting & rigging this equipment, including the personnel on board - a three man crew from Expro was required to execute the operation. The system enabled us to collect the disposal in a closed loop without having to expose the base oil to the atmosphere as we can collect it through our system

### Value to the client

- Expro displaced the base oil by pumping fresh water through our 6.9 mm Annulus Intervention Unit
- Our technology enabled the displacement to be done inside the A annulus at 70 meters instead of using the lube and bleed method or the need to punch the well. This displacement inside of the annulus ensured that the volume was effectively displaced by creating a fluid-displacement in the annulus
- The main challenge in the A annulus is the limited clearance for accessibility to convey the hose into the annulus, and this was the first time Expro had carried out this type of operation. A 6.9mm hose was used successfully
- Expro's technology ensured that the Annulus could be well prepared for pumping resin and ensured the higher percentage of efficiency for resin placement
- The volume of displacement could be measured as the circulation using hose inside the annulus was completed in the close system

### World's first



### Environment



### Contact

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