MULTIPLE ZONE WATER SHUTOFF ALLOWS OPERATOR TO MAXIMIZE PRODUCTION

FREECAP® Swellable Packers Combined with Scab Liner in a Horizontal Wellbore Enables Independent operator to isolate early water breakthrough and improve production.

CHALLENGES: An Independent US operator recognized significant increases in their water/oil ratio from one of their primary producers within the field. Upon completing a thorough evaluation of the wellbore and associated production response they determined that they needed to isolate two major sections towards the heel of the horizontal wellbore. The client needed a cost effective solution that would allow them to successfully isolate these two sections without restricting production from above and below.

RESULTS AND BENEFIT: $4.5 Million

The economic value created from the successful deployment and desired isolation equated to more than $4.5 million USD. The cost to replace a horizontal wellbore to these depths is in excess of $3 million USD. By applying TAM’s solution the operator was able to produce at higher flow rates and lower water cuts which equated to an additional production value of $1.5 million over a 6 month period.

SOLUTION: TAM International worked with the client to determine the best corrective action for the challenge at hand. One of the major technical hurdles was to successfully deploy two thru-tubing scab liner assemblies without restricting oil production from the six major producing intervals below. The 4.38” OD FREECAP water swell packers combined with two scab liner sections were successfully deployed; each assembly being set across the desired interval. The well was shut-in for 5 days in order to allow the water swell packers to swell and seal to isolate the unwanted production intervals. The first assembly isolated a 90 foot section of water producing interval and the second assembly isolated a 103 foot water producing interval. The well was brought back online and is producing at 50% lower water cut as compared to the water oil ratio prior to the work over.