Advantages of Inflatable Packer Technology for Temporary or Permanent Well Abandonment in the Gulf of Mexico

Abstract

With so many wells operated in the Gulf of Mexico, one would think that the process of eventually abandoning these wells temporarily (during hurricane season), or permanently plugging and abandoning (P&A) them is by now more routine. Certainly, there are years worth of procedures and case studies on the subject, yet there are always “special cases” that require more specialized planning and equipment. For instance, toppled rigs present the challenge of “kinked” tubing, while other wells have several tubing or casing strings through which a plug must pass before setting in a larger diameter opening.

For these non-routine operations, inflatable packer technology presents several significant advantages: small restriction clearances and high expansion ratios as compared to traditional mechanical bridge plugs. Additionally, inflatable plugs are incredibly versatile in that they can be conveyed to depth using either coil tubing, threaded tubing, even slickline and wireline. Finally, inflatable plugs do cover a wide range of hole conditions (temperature, washouts, etc), and are therefore robust enough for most well decommissioning jobs.

This paper will present the unique advantages of inflatable packer technology in these decommissioning operations and will illustrate these advantages using job examples and case studies. The examples and cases used will be limited to the Gulf of Mexico, yet the advantages of these technologies can be applied to any well worldwide.

Complete paper