

Annulus Pressure Relief System

Testimony – Erik Jakobsen

An American operator used the Annulus Pressure Relief System (APRS) successfully during several campaigns in the North Sea offshore Denmark. The APRS was used in more than 14 wells with almost 200 hydraulic acid fractures. The APRS system proved highly reliable for offshore operations. It was easy to install prior initiating operations and leaving very few possibilities for human errors when executing operations.

For all the campaigns the APRS was considered as part of the default rig-up for the well. The APRS worked as designed the few times it was required to relieve pressure as designed. The APRS is designed to relieve the after flow when the electronic pump kick outs have been activated. The APRS system was working as expected. The APRS disks were installed in parallel so little time was spent between one disk bursts and we are ready to resume operations.

With spring loaded valves there is always the possibility of human errors, when having to reinstate a system after a high-pressure trip. With the APRS you just switch to the other disk and you know that you are always within +/- 5% of pressure relief value, which is great for ensuring operational safety for both the people involved in the operation but also the well integrity.

My experience with APRS is limited to well stimulation operations, but there is no limiting it to this type of operations; any high-pressure relief system during other interventions or drilling/completion operations may benefit from the system.

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