

## In the Caspian Sea, Boots & Coots Services overcame multiple challenges while capping an offshore well from a derrick barge.



### OVERVIEW

While drilling a well in shallow water, to a depth of almost 20,000 feet deep, an influx occurred. After the operator shut in the well, a flange below the BOPs began leaking. When the Boots & Coots Well Control Engineer arrived, the fire height was approximately 70 meters high. On a subsequent visit, the flame height was measured at 100 meters high. This indicated the well was “cleaned up,” meaning obstructions in the flow path had been eradicated. Shortly thereafter, Boots & Coots was contracted to cap the well. A well control team was quickly mobilized and arrived at the location the following day.

Upon the team’s arrival, Boots & Coots faced multiple challenges such as language and interpretation complexities, high winds and heavy seas, improper or lack of equipment, improper positioning, and inadequate fireboat performance.

Nevertheless, even with forty percent of their working days shut down by inclement weather, Boots & Coots managed to:

- Cut debris from the platform and transfer it to a derrick barge
- Place a venturi tube over the well to move fire farther away, enabling specialists to get close to the well without high radiant heat exposure
- Perform a demonstration cut to the satisfaction of the operator of the abrasive jet cutter
- Construct a temporary working deck to place the jet cutter

The cutter was moved offshore and the 18-3/4” 10,000 psi WP head was cut off. The flange was removed and a capping stack was installed. Immediately after, the well was diverted and the team was released—all within 41 calendar working days.

### CHALLENGES

- The potential for important information to be misconstrued or “lost in translation”
- Non-dynamically positioned firefighting boats unable to stay on station resulting in less than adequate fireboat performance
- Hazardous weather and ongoing safety concerns

### SOLUTIONS

- Construction of a deluge system for fire protection on the boom of the derrick barge crane
- Construction of protective covers for firefighting pumps and high-pressure pumps
- Construction of a boom for the abrasive jet cutter added to the rig to ensure a steady platform from which to cut

### CONCLUSION

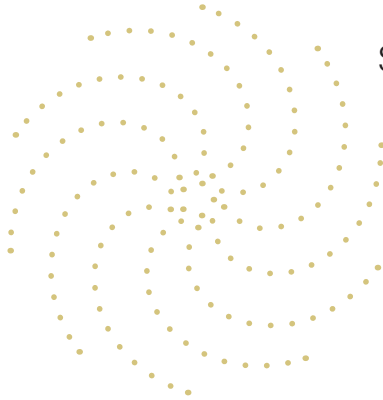
- Adversity can be overcome by constant collaboration and vigilance, particularly with others who may not be familiar with Halliburton’s total commitment to safety for all involved.

Water depth **90'**.  
Well depth **19,256'**  
deep when the kick  
was encountered.

Pore pressure of  
**18,000 psi**



Well flame  
**320 ft. high,**  
*producing over 200 million  
cubic feet per day*



Seawater and sand  
accelerated to  
**10,000 psi**  
and 4BPM  
cuts through  
forged steel  
**8-1/2"** thick



*Rough seas, high winds, temperature  
variances from  
100F to 40F*



#### **Well Control**

Boots & Coots has amassed a highly specialized team of degreed engineers, experienced in all phases of drilling and production operations. Our engineers apply their experience to solve the most complex or unique problems our clients encounter, helping them design and implement a safe and effective operation.

Boots & Coots is frequently recognized as the most experienced well response team on the planet. We use that experience to deliver the highest levels of efficiency and performance in some of the world's most challenging environments.



#### **Make Boots & Coots your trusted adviser.**

To every job and every operator, we bring pressure control and well control expertise and integrity that is unrivaled in the oil and gas industry. When we put our knowledge, people, and technology to work for you, you're gaining the advantage of more than 300 years of combined experience. Our experts have seen—and resolved—just about every well control problem there is. Let us become your trusted advisor.

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