

# Inland Water Blowout and Fire Case Study



Wild Well Control (WWC) Personnel responded to a well control event on an inland water blowout and fire in the Sub-Saharan Africa region. The event was resolved without incident with the well turned back over to the client for post-event operations.

## EVENT SUMMARY

The cause of the incident was not made clear to WWC personnel. Initial efforts to intervene on the well had occurred when WWC was asked to assist with the ongoing operations. Personnel were dispatched to the wellsite to complete an initial assessment and provide a forward plan to remediate.

- The initial site assessment noted the following challenges:
- Surface fires abundant from the hydrocarbon fallout around the well.
- Narrow slot with limited access to the wellhead.
- Single entry and exit to the wellhead.
- Tidal changes created stagnant pools of hydrocarbons around the well.
- Predominant wind direction was not beneficial to the ingress/egress point – thus limiting the working time near the well.

Ultimately, WWC personnel were successful in accessing and preparing the wellhead for capping operations. The capping stack was installed using an Athey Wagon on a barge and the well was shut-in. A bullheading operation followed providing the final hydrostatic control element back into the wellbore and restoring the well to a normal operational environment.



# Inland Water Blowout and Fire

## Case Study



### OPERATIONAL SUMMARY

Most well control operations involve multiple phases to achieve the ultimate goal of regaining control of the well. The following operational phases were completed for this project to reach the final resolution.

### WELLHEAD ACCESS AND DEBRIS REMOVAL

The initial phase was to clear the remaining debris from around the wellhead in attempt to increase the visibility and work space at the wellhead. A track excavator was rigged up on a flat top barge and escorted into the well slot. WWC was able to successfully clear the debris, make additional assessments to the condition of the main wellhead, the adjacent well, all while battling the erratic surface fires. At this point in the operation, a wholesale cut had been made above an existing casinghead flange with an abrasive jet cutter. The forward plan was to remove this cut flange and cap on the upper flange of the existing wellhead.

### WELLHEAD PREPARATION

At the wellhead, all existing studs were removed and the flange was hot-bolted in preparation for removal. A flow tube assembly was modified with pad eyes around the tube for chain binder attachment points. A conventional Athey wagon moved this flow tube over the blowout and allowed WWC to drop additional studs with modified pad eyes to provide the second attachment point. With the chain binders now attached, the Athey wagon was able to pick up on the flange and remove from the wellhead. The wellhead upper flange was now inspected and approved for landing a capping stack.



### CAPPING AND KILL OPERATIONS

With the existing wellhead upper flange ready to receive a capping stack, the same Athey wagon was outfitted with the proper yoke assembly and the capping stack was moved in to position. Once the capping stack was lowered in to position and slipped over the casing stub, the studs were made up and all hydraulic closing unit lines were connected to the BOP. With the ability to shut this well in, the BOP was functioned closed and the bullheading operations commenced. Surface isolation had now been achieved. Further intervention efforts could not be completed under normal operational conditions.