

# Boots & Coots Successfully Kills Leaking Well in Remote Field

## TEAM SOLVES CHALLENGING LOGISTICS TO STOP GAS LEAK PRIOR TO WELL ABANDONMENT

LOS MONOS FIELD, BOLIVIA

### CHALLENGES

- » Control a gas leak in a remotely located well, despite challenging logistics that included poor road access
- » Replace the wellhead prior to well abandonment operations

### SOLUTIONS

- » Determine logistics for overcoming challenges of remote location
- » Select appropriate equipment and response plan for regaining control of the well
- » Pump kill fluid to stop gas leak
- » Replace wellhead prior to well abandonment operation

### RESULTS

- » Boots & Coots team regained control of the well, then replaced wellhead prior to well abandonment.
- » The successful operation meant that no local evacuation was required.

### OVERVIEW

An exploration well, originally drilled in 1976 and located in the remote Los Monos field in Bolivia, had penetrated two gas zones, and a dual-string completion had been installed to access both zones. However, due to the remoteness of the location, the well had been temporarily suspended and had never been connected into a pipeline for active production.

### CHALLENGES

The operator contacted Boots & Coots after a gas leak through one leg of the completion string was reported. Well control specialists were immediately mobilized to the location, and they performed the initial site inspection while simultaneously organizing a well control response plan for the incident. The main obstacle for organizing and executing any emergency response plan was the inaccessibility of the well location.

The wellsite was situated in a mountainous area, far away from main access roads, with sections of the original road to the well covered by heavy vegetation. The access road also passed through a seasonal river bed, further hampering access to the wellsite. A detailed logistics plan was necessary for mobilizing equipment and resources in the most efficient and expedient manner.

### SOLUTIONS

The quickest solution was to build a temporary access road to the location while all the required equipment and resources were being secured; however, the road capacity imposed limitations on the size and weight of the vehicles and the necessary equipment. Therefore, all equipment had to be selected with this consideration in mind, without compromising the requirements of the well control operation.



*The remote well was leaking through the wellhead via the short string of a dual completion.*

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## CASE STUDY

It took approximately 240 bbl of kill fluid to control the well and to stop the leak by displacing the gas out of the well.

The safety procedures also included a plan for emergency evacuation; due to the road conditions and the distance to the nearest hospital, transportation by road would have taken an inordinately long time. To solve this issue, a helicopter pad was prepared close to the wellsite specifically for emergency evacuation. Helicopter pilots were ready in Villamontes to respond to any emergency within 10 minutes.

Once all the required equipment had arrived on site, it was laid out in a safe distance away from the gas leak. As a standard precaution, the air quality was measured continuously. The leak was eventually discovered to be through the short string of the dual completion, and Boots & Coots engineers designed a stinger to fit into the string in order to be able to pump the kill fluid. Subsequently, the gantry extension that held the stinger string was supported by a bulldozer, enabling it to be placed a safe distance from the wellhead. A water supply was sourced and a deluge system was installed around the location as a safety precaution to protect personnel and equipment during the kill operation.

### RESULTS

Once the Boots & Coots well control specialists maneuvered the stinger over the leaking completion string and safely connected it to the top of the completion y-block, they were able to pump kill fluid into the well. It took approximately 240 bbl of kill fluid to control the well and to stop the leak by displacing the gas out of the well. Once control of the well had been successfully regained, a new wellhead was installed prior to well abandonment operations.



*Prior to killing the leaking well, the Boots & Coots team had to first regain control of the well.*



*After regaining control of the well, the Boots & Coots team installed a new wellhead.*

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