

Fifty Years Ago, *LIFE* Magazine Features Well Control Specialists' Battle with Blowout Fire in Iran

RED ADAIR TEAM EXTINGUISHES BLOWOUT FIRE DESPITE LOGISTICAL CHALLENGES

TANG-E-BIGAR FIELD, IRAN

CHALLENGES

- » The Red Adair team had to overcome the logistical and technical difficulties of working in 1960s Iran.
- » It was the largest land drilling rig blowout ever worked on by Richard Hatteberg – even larger than the Devil's Cigarette Lighter blowout in 1961 that was estimated at 55 million cubic feet of gas a day.
- » Technological limitations made real-time communications with the Houston team impossible.

SOLUTIONS

- » To fix the problem, Red Adair Company sent its most experienced well control specialists.
- » A 53,000-barrel-capacity pit was dug to hold water that would provide 2,600 gallons of water to specialized water cannons.
- » Approximately 600 pounds of explosives were used to remove the wellhead and BOPs from the blowout well.
- » Approximately 1,100 pounds of explosives were used to snuff out the fire just prior to capping the well.

RESULTS

- » The well was capped and under control 90 days after it blew out.
- » No injuries or deaths occurred on location after Red Adair Company personnel arrived on location.



Figure 1. The blowout well in Iran. Courtesy of R. Hatteberg and *LIFE* Magazine

OVERVIEW

The February 18, 1966, issue of *LIFE* Magazine printed an article about a large drilling well blowout in Iran titled "Assault on a Pillar of Fire." The article, written by Lee Hall, described the blowout response by a team of Red Adair Company well control specialists. The team was led by one of the founders of the Boots & Coots company, Asger "Boots" Hansen. On Hansen's team, and working on his first blowout well, was 28-year-old Richard Hatteberg. Fifty years later, Hatteberg is a recognized Well Control Specialist and is still leading the blowout response teams for Boots & Coots.

The blowout well, containing high amounts of hydrogen sulfide (H_2S), was located in the Tang-e-Bijar field in Iran. Prior to the blowout occurring, three people had died on location and one man had lost a leg. Many locals believed the well had been cursed.





Figure 2. Asger “Boots” Hansen directs workers on the job. Courtesy of R. Hatteberg and *LIFE Magazine*.

The well blew out on December 31, 1965, and a wire requesting immediate help was sent to Red Adair Company. After three days of travel, Hansen arrived on location and began directing the spooked locals to remove equipment from the wellsite.

On January 5, a random spark had set the blowout on fire. In just six minutes, the 350-foot (107-meter) drilling rig was reduced to a tangle of junk. Specific equipment was necessary to control the blowout and fire, so Hansen departed Iran on January 8 to retrieve the equipment in Houston. While Hansen was gone, the Iranian local workers dug a 53,000-barrel-capacity pit to hold water for use in handling the blowout.

Hansen returned to the well location on January 18 to inspect how things were progressing. Water cannons capable of putting up to 2,600 gpm were set up. The water cannons had two main functions: to cool off well control specialists who were working near the fire and to prevent ignition of any flammable gases near the wellbore. Under the cover of sprayed water, operations began to remove the destroyed drilling rig that had collapsed on top of the well.

Hatteberg and Raymond Henry, another well control specialist for Boots & Coots, arrived on location on January 25 to assist with rig-clearing operations. Coincidentally, Hatteberg’s first job was also his largest. He described the blowout as being the largest drilling rig blowout he had ever seen in his 50-year career. At the time, Hansen also told Hatteberg that the blowout was larger than the historically famous Devil’s Cigarette Lighter natural gas well fire and blowout at the Gassi Touil field in the Sahara Desert of Algeria, which, after burning almost six months in 1961–1962, was finally extinguished by Red Adair.

The blowout in Iran was larger than the historically famous Devil’s Cigarette Lighter blowout in Algeria that Red Adair extinguished in 1962.

CASE STUDY

A 600-pound bundle of explosives was used in a second attempt to remove the wellhead and BOPs.

When the rig debris in the Tang-e-Bijar field was finally cleared, 200 pounds of explosives were used on January 29 in an attempt to blow the wellhead and blowout preventers (BOPs) off the blowout well. This would expose fresh casing to be used in the capping process. The first attempt at removing the wellhead and BOPs failed.



Figure 3. Athey wagon with 1,100 pounds of explosives. Courtesy of R. Hatteberg and *LIFE* Magazine.



Figure 4. Blowout fire being snuffed out by 1,100 pounds of explosives. Courtesy of R. Hatteberg and *LIFE* Magazine.

Next, a 600-pound bundle of a stronger explosive was used in a second attempt to remove the wellhead and BOPs. Hansen guided the Athey wagon (a track-mounted boom with a hook on the end to deliver the explosives), which had been built on site, to a position next to the wellhead. The resultant explosion worked, ripping the wellhead and BOPs off the well's casing.

The massive explosion removed all the oxygen near the flame, causing the fire to go out and allowing the well control specialists to move in and cap the well.

Seven days were spent repairing damage to the Athey wagon that was sustained in the explosion to remove the wellhead and BOPs. After the repairs were finished, 1,100 pounds of explosives were used to snuff out the fire on February 5.

After snuffing out the fire, Hansen, Henry, and Hatteberg moved in under the cover of water cannons to install a new wellhead on the blowout well. After this task was successfully completed, new BOPs were installed and the blowout well was shut in and contained on February 12, 1965 – 90 days after it first blew out. The Red Adair team successfully extinguished the blowout fire without any injuries or loss of life.

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