

CASE STUDY

# THE **IRON FIST** ADVANTAGE: A CASE STUDY

*A case study on how the Iron Fist met the  
challenge of a rocky project.*







## SITUATION

Jason Leatherman of Paramount Communications was working on a project in Richland, WA where the ground formations were a challenge. The drilling was right up against a very narrow right of way, located primarily in backyard easements where it encountered river cobble and abrasive, chunky sand.



## CHALLENGE

The drilling crew was challenged with finding the right tooling that would hold up in both the river cobble and the abrasive, chunky sand. They had gone through 5 or 6 Trihawk bits that had a price tag of \$2,000 each (about \$10 – 12,000 in bits). Leatherman decided to look for a bit that would be more cost effective and would be a better match for the ground conditions they were dealing with.



# CHECKING WITH HDD EXPERTS

In an effort to find the ideal bits at the right price, Leatherman visited the Facebook page, “People of HDD” to get feedback on what bits drillers were using in similar types of ground conditions. After discussing the bits, ground conditions, and conditions of the tooling, Leatherman was pointed to Melfred Borzall’s Iron Fist by Tony Paraspolo of Intermountain Drilling Supply.

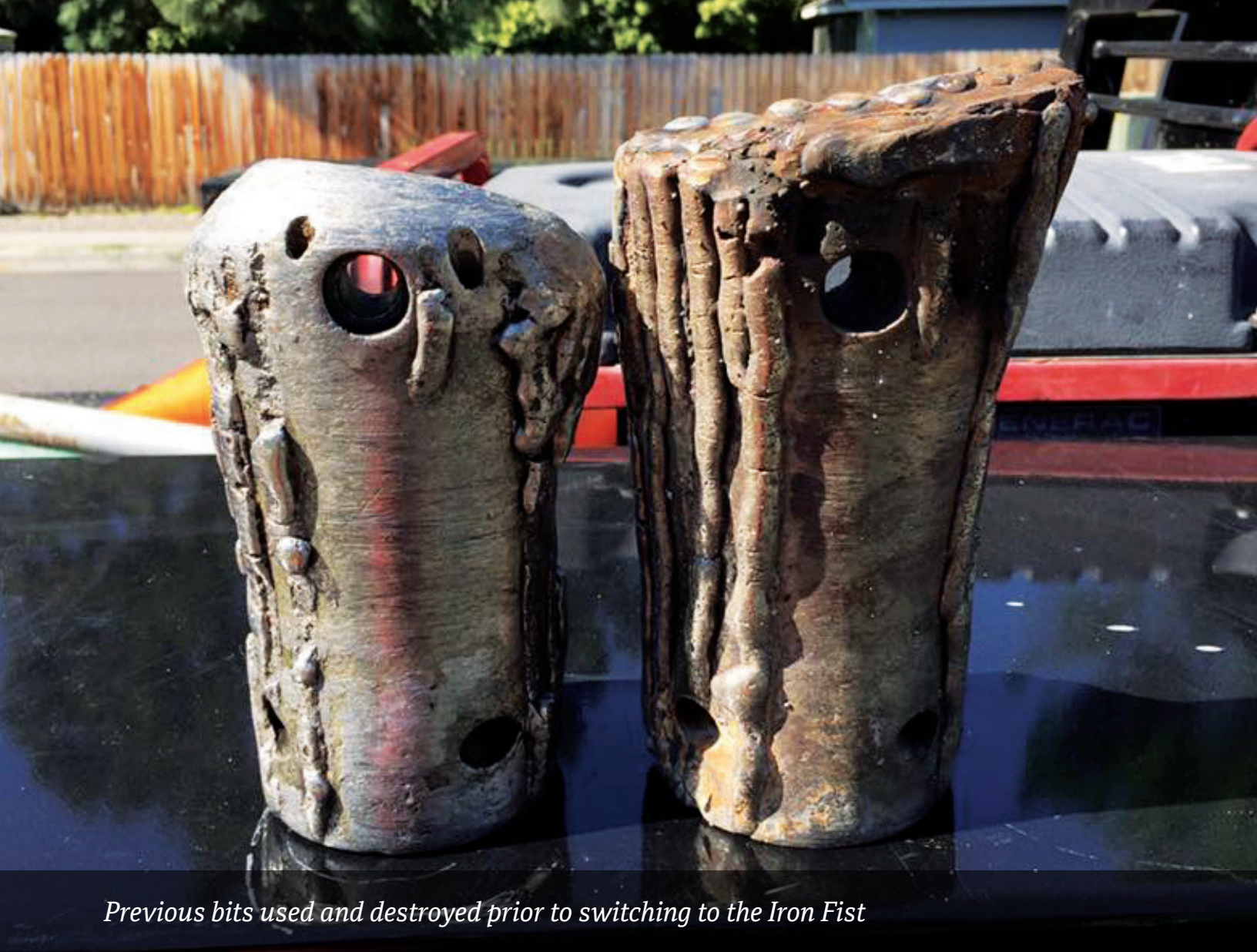
Paraspolo shared that the Trihawk housing could be changed to the standard box X box housing, which would easily accommodate the Iron Fist. The drill rod was worn out, so Leatherman purchased a new Borzall side-load, box X box housing and the Iron Fist with domed cutters (vs. the Iron Fist with aggressive cutters).

## APPLYING THE IRON FIST

The bit and housing arrived at the tail end of the drilling on the project. The drilling team had one very challenging shot left to complete the project. The shot involved starting out in a yard approximately 80 feet from the road and crossing the main road that, in previous attempts by other companies to drill it, had met with problems including an inability to maintain depth and to keep pitch under control.







*Previous bits used and destroyed prior to switching to the Iron Fist*

## THE KICKER

There was also a kicker to this shot that made it even more difficult. There was an AC water main in the roadway that was unable to be located and that had been in the ground since the early 60's. The AC water main fed the Hanford nuclear reservation and if hit would cause substantial damage due to its size (12") and affect the DOE site. The team windowed the road where the main was supposed to be and potholed for a full day to find it. They went down 5 feet and 6 feet across and were not able to locate it. After meeting with the city, Leatherman and the crew decided they would drill across the road at a depth of three feet and have monitors watching the bit go through the window.

# DRILLING ON THROUGH

When the crew started drilling, Leatherman noticed how responsive the bit was even in extremely rocky conditions. His crew drilled across the sidewalk before the road at 3'6" to compensate for the upcoming drop in depth once they crossed into the road, they were dead flat at 0 percent as they crossed into the road. The crew was able to maintain 3' deep through the entire bore and through the window. The total length of the bore was 160', which may seem short in terms of bore crossings, however, the shot was not easy by any means.

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# THE RIGHT TOOL FOR THE JOB

The Iron Fist came through for Leatherman and his crew on this project and because of its design enabled them to complete the bore, and more like it, with minimal wear to the bit itself.

**“The Iron Fist is my go to tool of choice here in the Northwest because it just works, plain and simple. The company that I was working for still uses the original bit that we purchased back in June of 2016, and just last week called me to pick it up so that I could send it to Melfred Borzall to be rebuilt. That’s almost 9 months of use before needing a rebuild.” -Jason Leatherman**



# TALK TO THE EXPERTS

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