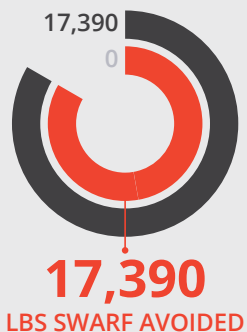
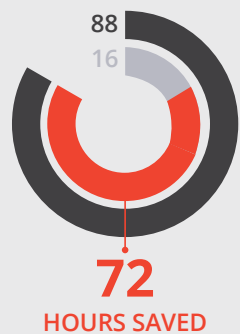


# DE-RISKING OPEN HOLE CASING RECOVERY



Down Hole Power Tool (DHPT) pulls 113m of stuck casing from open hole at 54 degrees in a single trip

## IN NUMBERS



## CONTINGENCY PLANNING AVOIDS HIGH ANGLE MILLING

### THE OPERATION

A major operator mobilised a DHPT as contingency equipment for a multi-well P&A campaign on a semi submersible rig offshore Australia.

The operation required the 9-5/8" casing to be recovered 102m outside the 13-3/8" shoe at an inclination of 54 degrees. The remaining casing piece was 113m long.

An attempt to recover the casing with a conventional spear was conducted, pulling to a maximum of 920,000 lb force, but was not able to pull casing free.

### THE CHALLENGE

Why did the conventional spear fail?

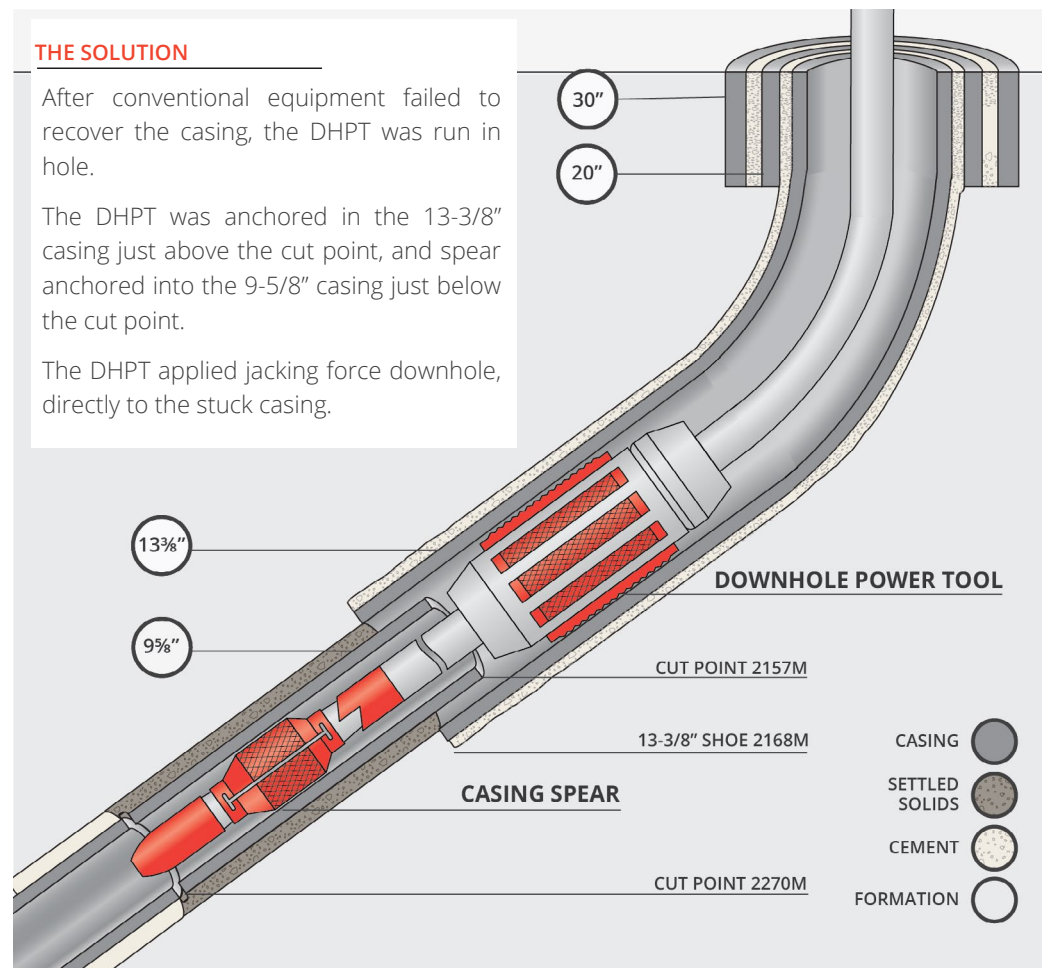
- The 54 degree inclination of the well caused a substantial amount of pulling force to be lost in friction.
- Settled solids and formation pressure held the casing downhole
- The rig did not have sufficient pulling force to free the casing at depth.

### THE SOLUTION

After conventional equipment failed to recover the casing, the DHPT was run in hole.

The DHPT was anchored in the 13-3/8" casing just above the cut point, and spear anchored into the 9-5/8" casing just below the cut point.

The DHPT applied jacking force downhole, directly to the stuck casing.



## THE RESULT

The DHPT generated upward pulling force of 550,000 lb to pull the casing free. The force was applied downhole directly to the stuck casing with no friction losses.

After 16 strokes with the DHPT the casing was freed, and the rig was able to take over and recover the casing to surface.

Click [here](#) to see the DHPT in action.

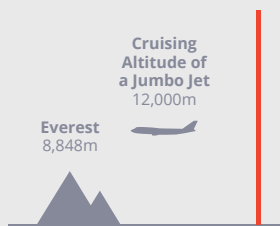


Downhole Power Tool Slips

## DHPT RUN HISTORY



**581**  
RUNS OF DHPT



**27,761m**  
PULLED WITH DHPT

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## DESCRIPTION & OPERATION

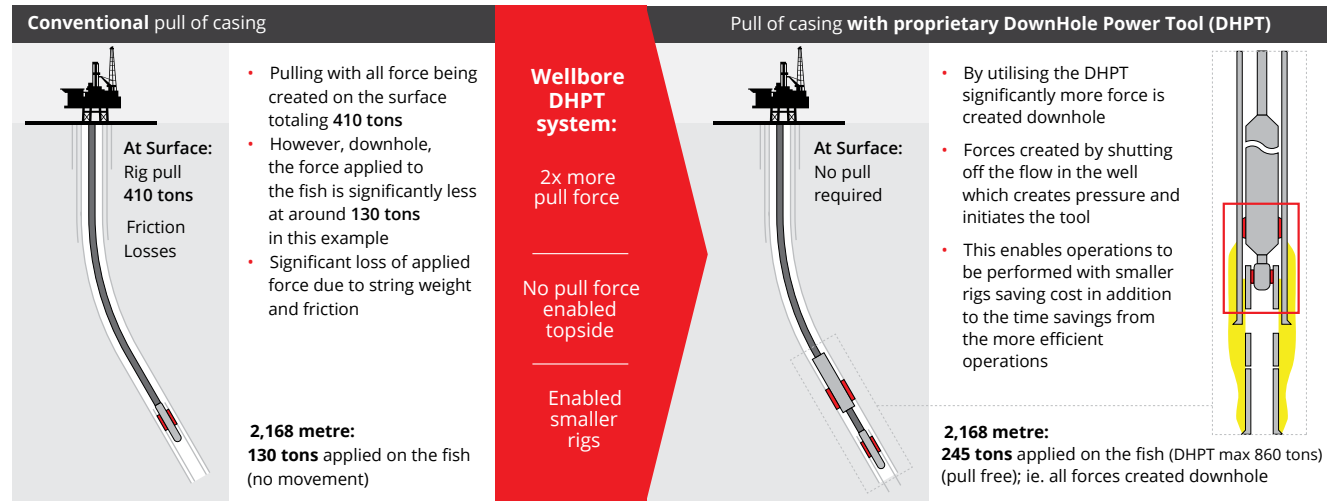
The Down Hole Power Tool (DHPT) retrieves casing/fish in applications where the drilling rig or work string does not have sufficient capacity.

After the casing has been located and engaged, hydraulically-set mechanically releasable slips anchor the DHPT to the wall of the larger ID casing above.

Pressure is applied to begin the upward movement of the fish, with the DHPT multi-stage hydraulic actuator functioning as a downhole hydraulic jack.

After the stroke is completed, the anchor is released. The power section can be reset and the anchor re-engaged as many times as required.

\*The DHPT is supplied to Ardyne by TIW, a Drill-Quip company.



## FLEXIBLE CONFIGURATION



(RUN HISTORY)

## ABOUT ARDYNE

Ardyne develops and supplies specialised technology and services to the global energy industry, focusing on reducing rig time spent on downhole casing removal in Slot Recovery and Plug & Abandonment operations. Technology advancement lies at the core of Ardyne, combined with decades of operational experience and responsive, client-focused delivery.