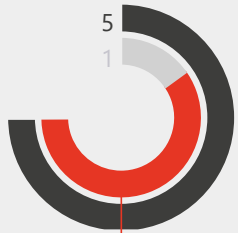
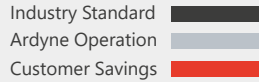


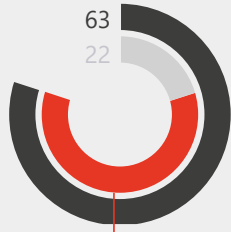
COST EFFECTIVE OPENHOLE CASING RECOVERY



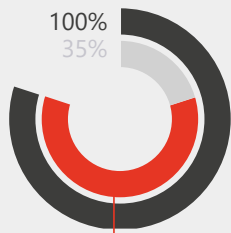
The TITAN™ System delivers a 41 hour time efficiency in open hole casing recovery



4
TRIPS SAVED



41
HOURS SAVED



65%
EFFICIENCY GAIN

TITAN SYSTEM

The TITAN System unifies casing cutting and recovery with a downhole hydraulic power tool, in a single trip operation.

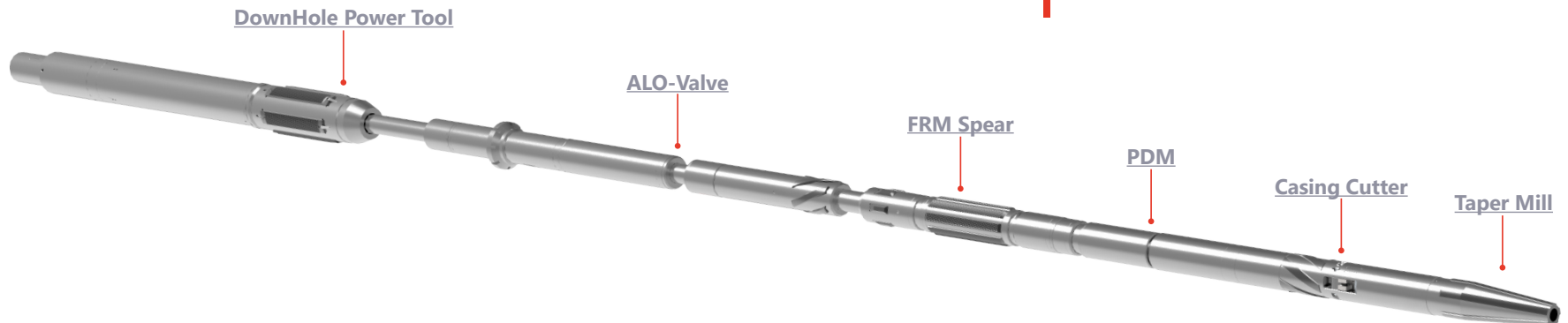
The downhole adaptability of the TITAN System ensures and maximises the recoverable casing in challenging circumstances by utilizing the pulling capacity of the hydraulic power tool with added repeatable casing cutting capability.

THE OPERATION

The TITAN System was deployed on a semi-submersible rig in the North Sea for a slot recovery operation where the operator required the 9 5/8" casing to be pulled approximately 50m below the 13 3/8" shoe into the openhole.

Experience from the field has shown that it has frequently not been possible to recover casing from the openhole using conventional methods.

THE SOLUTION



41 HOURS
SAVED BY THE
TITAN SYSTEM

-
A BOEING 787
TAKES 41 HOURS TO
CIRCLE THE GLOBE



FRM SPEAR

RESETTING THE STANDARD FOR
OPENHOLE CASING RECOVERY

SINGLE TRIP SEQUENCE - 41 HOURS SAVED



Breakdown of operational sequence for single trip operation with TITAN System

BHA
(Bottom Hole Assembly)

DownHole Power Tool
(DHPT)

ALO-Valve

13 3/8" Casing

FRM Spear

PDM

Casing Cutter

Taper Mill

Hover for further details on the full slot recovery operation

1. Rig pull with 250 tonnes - no go
2. Activate TITAN and pull 433 tonnes - no go
3. Relocate to cut casing
4. Rig pull with 230 tonnes - no go
5. Activate TITAN and pull 433 tonnes - no go
6. Relocate to cut casing
7. Rig pull casing free with 247 tonnes
8. Recover casing to surface
9. Recover remaining pieces
10. Open hole sidetrack

