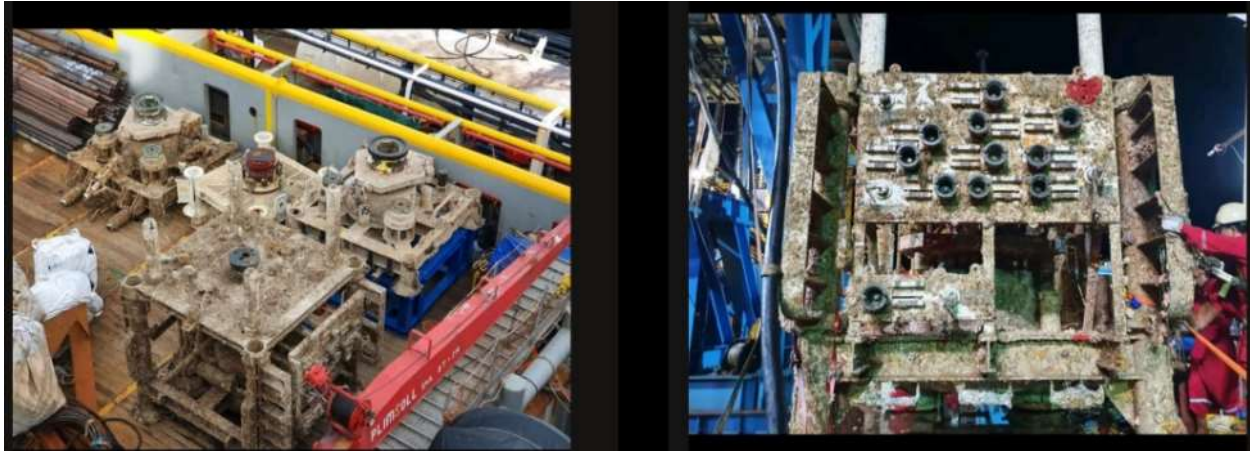


## Single Trip Vessel Deployed Cut and Retrieval of Subsea Wellheads by Grant Pierce



A while ago a conversation came up identifying the companies involved in subsea wellhead cut and retrieve and their specific tools so I thought why not write up a quick summary on what I could find that is currently in the market, specifically vessel deployed single trip systems. Yes, there are more systems available, but they aren't single trip or they require a rig with drillpipe to deploy.

What I came up with are the following systems: Acteon Multi-String Cutting Tool/Multi-Wellhead Retrieval Tool, Baker Hughes Terminator, James Fisher Decommissioning Internal Cut and Lift Tool (ILCT), Oceaneering Wellhead Picker (WHP), & Sapura Energy Well Services AXE Cutting System. \*If I have missed any technologies or if corrections (additions) are needed, please comment below and I will correct/add.\*

What are the similarities in these tools? They are all single trip cut and retrieve, and all vessel capable, so they don't require a rig on location.

What are the differences in these systems? The differences are the way that they cut whether that be abrasive waterjet or mechanical powered by hydraulics.

Here are the systems listed below:

1. Acteon (Claxton) Multi-String Cutting Tool & Multi-Wellhead Retrieval Tool. The MSC is a proven and reliable cutting method that can sever all strings in one deployment; ranging from 7 inch inner casing up to 30 inch. Combined with the multi-wellhead retrieval tool the ability to perform recovery directly after cutting is possible.
2. Baker Hughes Terminator - Mechanical **Hercules™** cutter with hydraulic motor including wellhead connector. Terminator has no depth limitations, system footprint is small so can be mobilized quickly, and it only requires two personnel to operate. Once the Terminator is deployed subsea, there is no more equipment remaining on deck. The cutting time is less than an hour for single cuts and within a few hours for multi-casing cuts.

3. James Fisher Decommissioning ICLT - Collaboration with First Subsea has led to the development of a one-component system, Internal Cut and Lift Technology (ICLT), which merges market-leading cutting and lifting tooling, optimized with Ballgrab gripping technology, to provide a simple, flexible and quick mechanism to remove retired subsea assets and tubulars. ICLT offers a simple solution that streamlines the number of contractors, operations and personnel required on offshore platform operations.
4. Oceaneering Subsea Wellhead Picker - Abrasive Waterjet cutter, Internal Multistring Cutting Tools (IMCT) including wellhead connector. The Subsea Wellhead Picker is a combination of a connector that latches onto the wellhead and the Internal Multistring Cutting Tool (IMCT). The IMCT uses the extremely effective Abrasive Waterjet Cutting method to sever all the layers of casing in one go. It can cut from 7 - 36 inches.
5. Sapura Energy Well Services AXE Cutting System - Abrasive Waterjet cutter, Multistring Cutter including wellhead connector. The AXE uses entrained grit water, at 10,000 - 14,000 psi system pressure, as a cutting medium. The standard cutting tool is capable of entering and cutting wellheads with 7 inch, or larger, casing and severing through multiple casings of 7, 9<sup>5</sup>/<sub>8</sub>, 13<sup>3</sup>/<sub>8</sub>, 20 and 36 inches in a single pass cut. An optional four inch cutting tool is able to provide a solution for smaller bore applications.