

Internal Cutting of Downed Hurricane Damaged Conductors

Summary

NCA successfully performed a conductor removal campaign involving the removal of 20 subsea conductors from a downed platform in the Gulf of Mexico that belongs to Pioneer Natural Resources.

The challenges that faced NCA from the onset were:

- Working from a dive support barge rather than a fixed platform
- Subsea wells with the wellheads already removed
- Damaged conductors that were bent and perhaps kinked
- Evacuation due to named Category 2 Hurricanes

The original scope of the project was 23 subsea conductors, but one of the wells, A4, was unable to be plugged successfully while NCA was on location and the other two wells A16 & A17 had poor annuli conditions that inhibited the proper environment beneath the tool for a successful cut. Since the conductors were subsea, mitigation for the annuli on the aforementioned conductors was insurmountable.

The project was completed in a total of 40 days, but the severing of the 20 conductors only took 12 days. The conductors were badly bent due to Hurricane Rita but the application of Abrasive Water Jet Cutting (AWJC) with the Internal Multistring Cutting Tool (IMCT) proved to be very effective.

Project Facts

Location: Gulf of Mexico
East Cameron 322, Water Depth 227'
Platform: 8 Pile installed in 1974
23 wells total, 13 producing prior to Hurricane Rita
Timing: August & September 2008
Client: Pioneer Natural Resources

Scope of Work

The scope of work was to abrasively cut and retrieve 23 subsea wells that were bent an estimated 10-15 degrees and extended anywhere from 15-20' above mud line. The cuts were to be performed at least 15ft below mudline when possible. Some conductors were too bent or kinked to allow the tool to reach that depth. Instances such as these were to receive MMS concessions for a lesser cutting depth below mudline or perhaps dredging and then external cutting.

Casing Configurations ranged from:

- 7-5/8" x 10-3/4" x 26"
- 7-5/8" x 10-3/4" x 16" x 26"
- 10-3/4" x 26"
- 10-3/4" x 16" x 26"



Project Execution

NCA used Abrasive Water Jet Cutting (AWJC) with the Internal Multistring Cutting Tool (IMCT) for severance of the wells. All the conductor casings were cut from inside of the inner string out to the drive pipe. This is proven technology with a track record of more than 100 conductors cut, ranging from conductors on 30 meters water depth to 5 string conductors on 300 meters water depth.

The operation was done from a well intervention – dive support barge named the Frontier that belongs to the International Construction Group which is a subsidiary of International Offshore Services. The cutting and retrieval of the conductors were done using a barge's 50T crane through the vessel's moon pool. Epic Divers and Oceaneering provided dive and ROV support, respectively, during the entire conductor cutting campaign.

The project consumed 40 total days of full personnel. Of those 40 days, 10 days were spent waiting for P&A operations to complete, 7 days were spent demobilized for Hurricane Gustav, and 6 days were spent demobilized for Hurricane Ike. In the remaining 17 days, NCA was able to remobilize personnel, twice, under extreme circumstances; repair NCA hurricane damaged equipment when necessary; work through the normal downtime of equipment maintenance by all contracting parties; and successfully cut 20 subsea conductors.

Achievements

- ✓ The 20 conductors were successfully cut in 12 days.
- ✓ On two occasions, NCA was able to cut 3 conductors in a 24 hour period.
- ✓ NCA completed their 100th successful conductor cut with the IMCT while on this project.
- ✓ Technicians were able to overcome 2 natural disasters during the conductor cutting campaign.
- ✓ Pioneer was the first to award NCA Inc this many conductors at 1 location
- ✓ Were able to run the IMCT below the conductor bends and sever

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