

# Successful Gator Perforator Performance in a Gulf of Thailand Well Abandonment Campaign



Lee Energy Systems' Gator Mechanical Perforator was successfully introduced and used in six wells to remediate sustained casing annulus pressure during an active plug and abandonment campaign.

## CHALLENGE

- Provide an efficient method to perforate 7 inch casing with SCP anticipated.
- Circulate and clear SBM behind casing annulus to facilitate a good quality cementing operation.
- Ensure integrity maintained in outer 9 5/8 inch casing.

## SOLUTION

- The Gator perforator was selected as the ideal perforating tool as it offered an efficient solution to create large TFA perforations in the 7 inch casing and eliminate the risk of damaging the outer 9 5/8 inch casing.
- The large TFA of the cuts also ensured thorough cleaning to remove residual SBM allowing a high quality cement job.

## RESULTS

- Six wells were completed successfully with no NPT incurred
- A High volume of SBM was observed during annular circulation, as a result of the large TFA cuts created by the Gator.
- The integrity of the 9 5/8 inch casing was maintained after perforating the 7 inch casing.

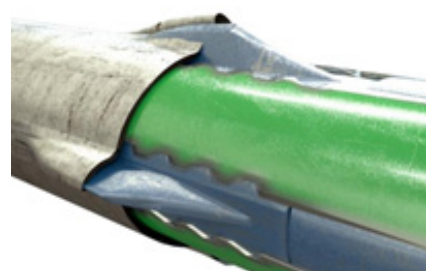
## Wellbore Integrity Solutions (WIS) and Lee Energy Systems (LES) planned and successfully utilized the Gator perforator to create multiple perforations in 7 inch casing while maintaining the integrity of the 9 5/8 inch outer casing.

A client in Thailand, awarded WIS a series of wells to remediate where Sustained Casing Annulus Pressure (SCP) was anticipated. In addition to creating multiple, generous TFA perforations to remediate the SCP, annular circulation was provided to clear residual Synthetic Based Mud (SBM) before the placement of cement barriers.

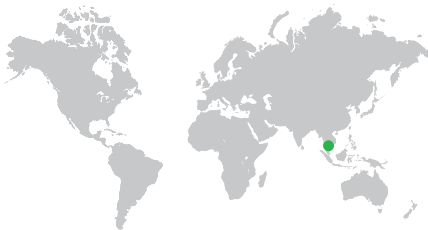
An essential requirement of the perforation process was also to maintain the integrity of the outer 9 5/8 inch casing while perforating the 7 inch casing.

The 570PPT Gator Perforator was chosen as the ideal solution. When activated, four symmetrical, large TFA perforations are created, and the depth control feature ensures no damage to the outer casing.

Operationally, the project was executed by local WIS field personnel with remote technical support from LES subject matter experts and WIS staff. Close communication was maintained with the client at all times to ensure operational compliance.



Large TFA Perforations from the Gator Perforator



**6**  
WELLS  
flawlessly completed

**9**  
SETS  
of Gator cuts

**1600**  
PSI  
average cut pressure

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