

Plug & Abandonment

ABANDONMENT SYSTEMS

Complete P&A Solutions:

- Cased Hole (all sizes)
- Reservoir
- Section Milled Open Hole
- Thru-Tubing
- Well Kill / Annular Displacements

Deployed On:

- Drill Pipe / Tubing
- Coiled Tubing
- Slickline
- Electric Line



TAM INTERNATIONAL



Plug and abandonment operations can be challenging due to well restrictions, inadequate cementation, damaged casing, or circumstances when conventional mechanical packers can't do the job.

When the situation is critical, operators call TAM.

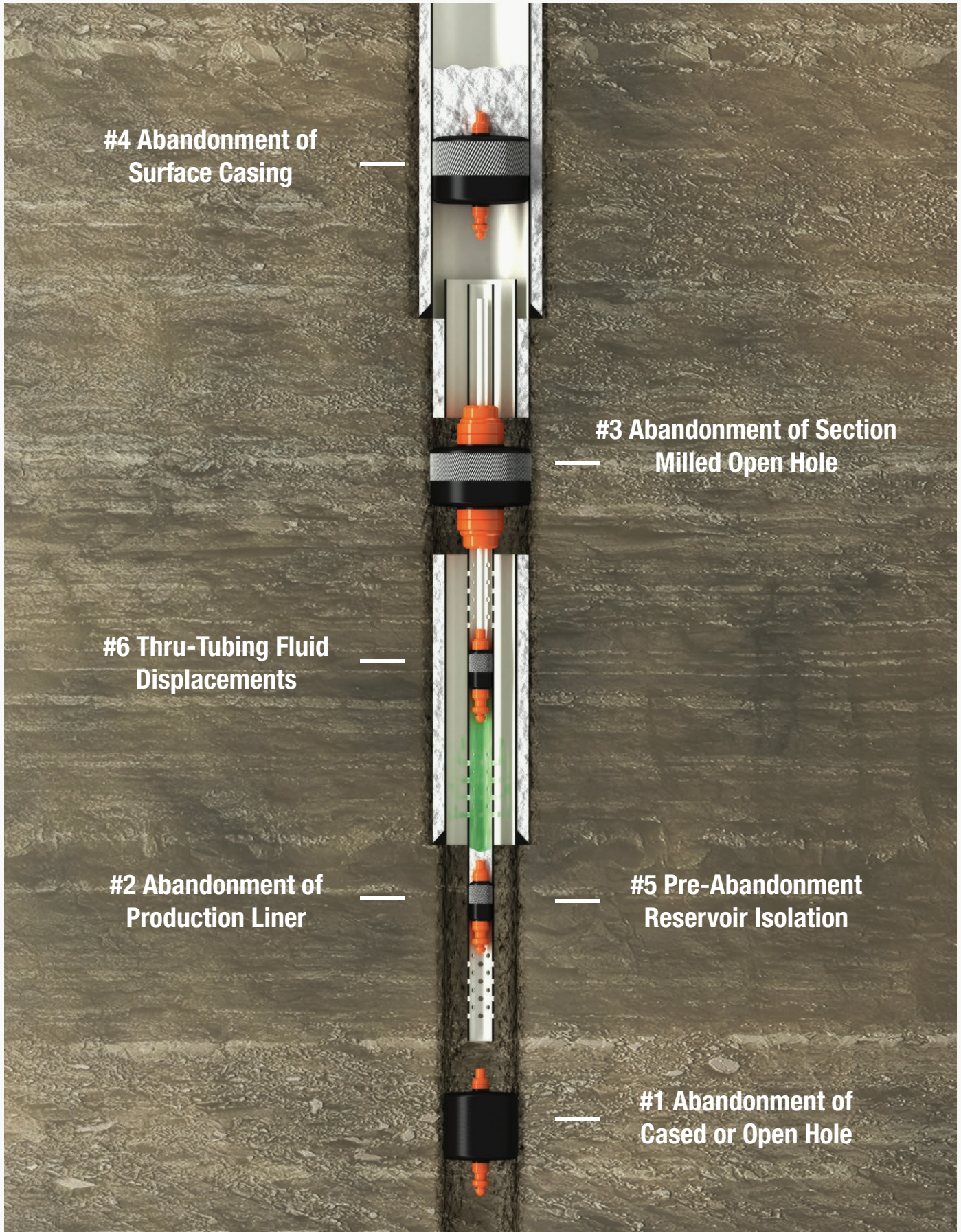
Because TAM packers provide maximum flexibility, our experts can deploy packers at the site with a minimum number of tools to provide the maximum efficiency for your operation. TAM packers and elements are sized to operate in IDs from 2 in. to 30 in. If you have to test it, pump through it, or squeeze it, in single- or multi-well projects, TAM has the tools and expertise to do it safely and efficiently.

Solutions – Bridge Plug, Cement Retainer, Squeeze Packer, Test Packer

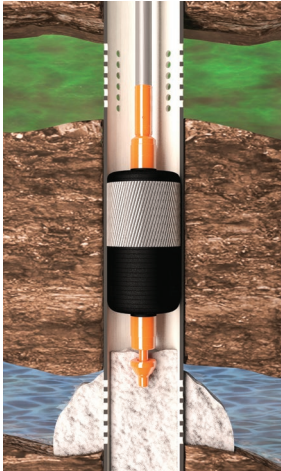
Applications	Bridge Plug	Cement Retainer	Squeeze Packer	Test Packer
#1 Abandonment of Cased or Open Hole				
#2 Abandonment of Production Liner				
#3 Abandonment of Section Milled Open Hole				N/A
#4 Abandonment of Surface Casing		N/A		
#5 Pre-Abandonment Reservoir Isolation				N/A
#6 Thru-Tubing Fluid Displacements		N/A		N/A

Drill Pipe, Coiled Tubing	Slickline, Electric Line, Braided Line	N/A = Not Applicable
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Plug & Abandonment Applications



CASE HISTORIES



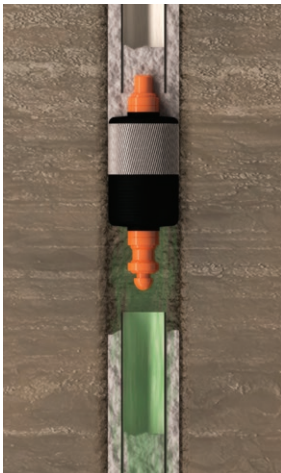
PERMANENT ZONAL ISOLATION

Challenge: UK operator required platform abandonment.

TAM Solution: Deep set Inflation Bridge Plug at 2,540 m, perforate tubing, set Inflation Cement Retainer at 2,519 m, and squeeze cement.

Result: Successfully cemented tubing / annulus and retrieved squeeze packer from well.

Value Added: Flexibility of using inflatable solutions gave operators confidence to position / place cement and complete job in uncertain environment.



ELIMINATE GAS MIGRATION

Challenge: Prevent gas migration in well that was to be permanently abandoned.

TAM Solution: Set 11 in. (279 mm) Inflation Bridge Plug in 18.5 in. (457 mm) underreamed open hole, using cement abandonment plug to prevent gas migration.

Result: Successfully prevented gas migration and allowed cement plug to be set for subsequent plug and abandonment operation.

Value Added: TAM's system allowed well to overcome issues associated with debris from section milling and provide isolation against virgin formation.



RIGLESS INTERVENTION

Challenge: Platform belonging to USA operator in Gulf of Mexico experienced damage due to hurricane; platform lifted and twisted before settling on seabed.

TAM Solution: Platform required complete P&A and removal. Seabed had to be excavated with jetting equipment on ROV to allow bends in conductors / casing, etc., to be removed.

Result: Successfully completed P&A and removed platform.

Value Added: Using Inflation Bridge Plug allowed solid base to be placed in well as platform for abandonment. Surface equipment footprint was small in congested deck area. Slickline deployment offered economical benefits on equipment spread rates.