



# ARDYNE CEMENT RESTORATION TOOL

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ORIGINAL INSIGHT

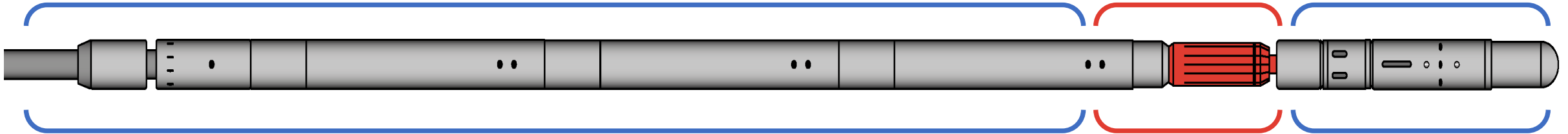
# THE ARDYNE CEMENT RESTORATION TOOL



**Modified Ardyne DHPT Downhole Power Tool  
(>1200 Runs)**

**Expander  
Assembly**

**Ball Sub or  
Bullnose**



## CEMENT RESTORATION BHA:

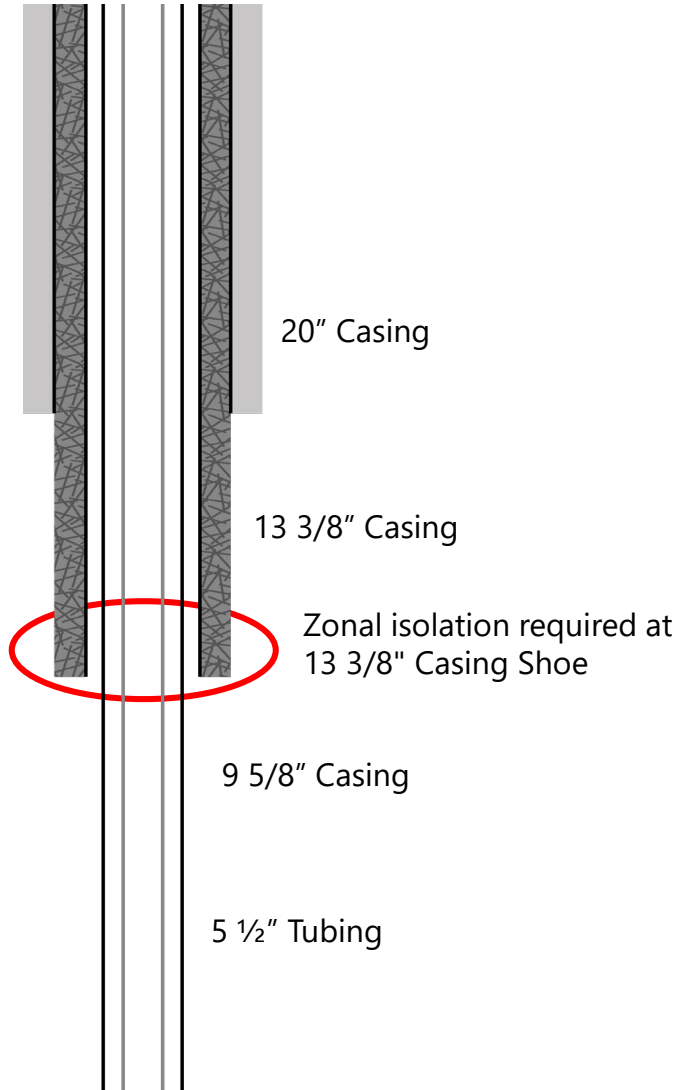
- **DHPT - Downhole Power Tool**
- **Expansion Head**
- **Ball Sub**
- The DHPT provides controlled linear force to actuate the Expander cone assembly with application of Pressure against either a bullnose or shearable ball sub.
- Multiple repeated expansions as required can be applied for a given Well scenario.



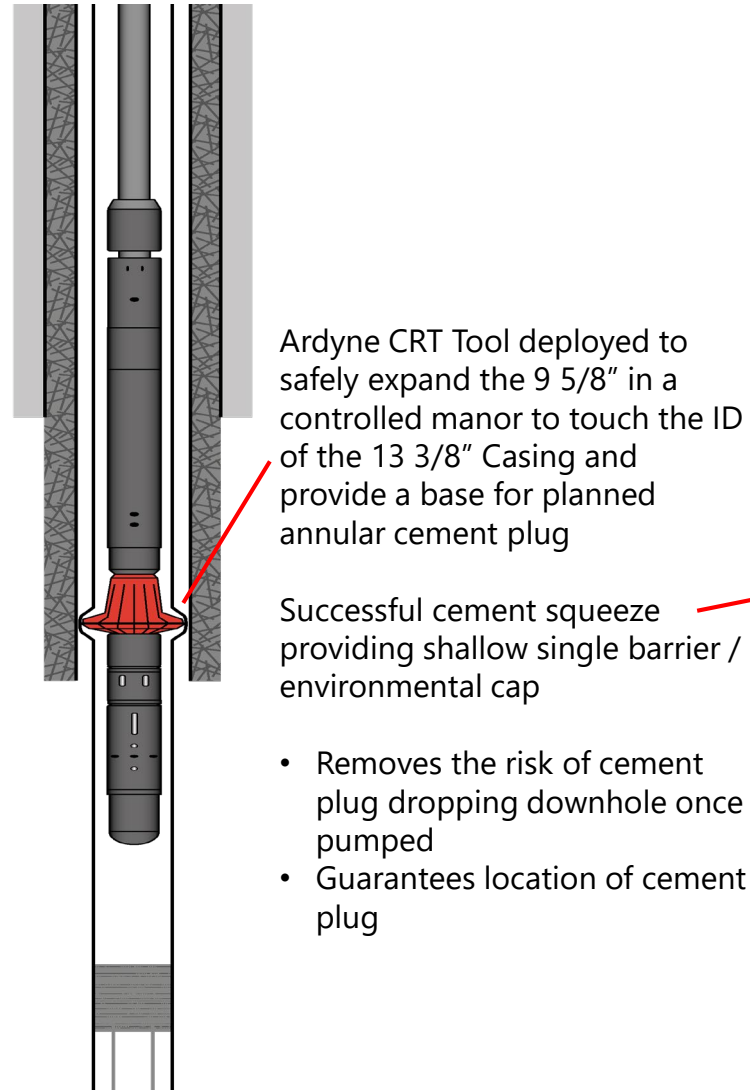
# ENSURING SUCCESS OF ANNULAR CEMENT PLUG FOR ZONAL ISOLATION



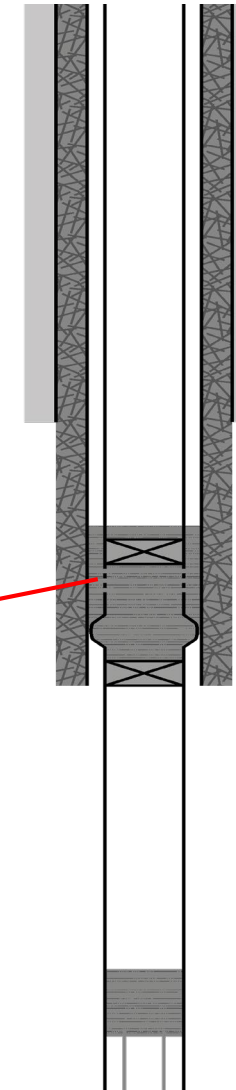
Current Well Status



CRT Operation



Well P&A Status



- Successful cement squeeze providing shallow single barrier / environmental cap
- Removes the risk of cement plug dropping downhole once pumped
- Guarantees location of cement plug

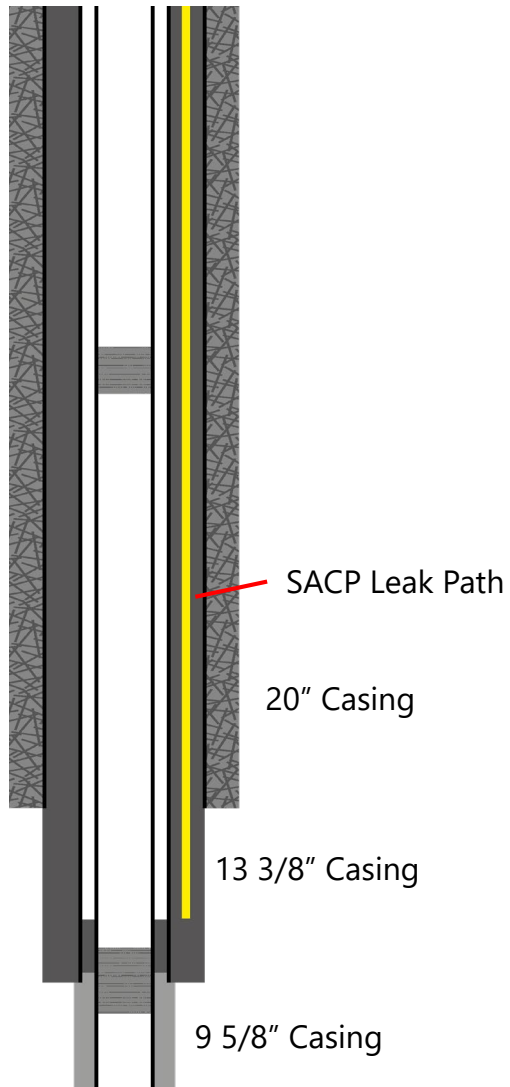
Expanded Casing



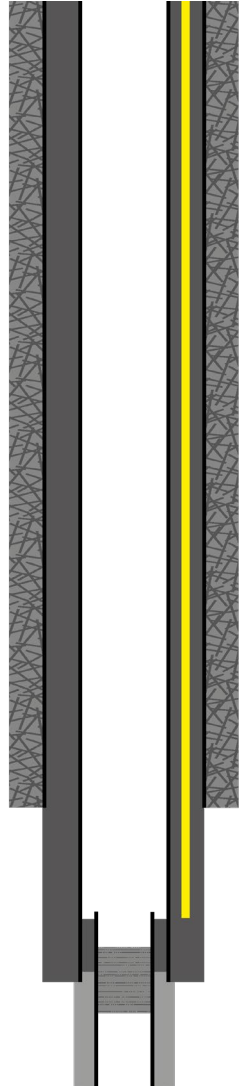
# ANNULAR CEMENT RESTORATION FOR SUCCESSFUL P&A



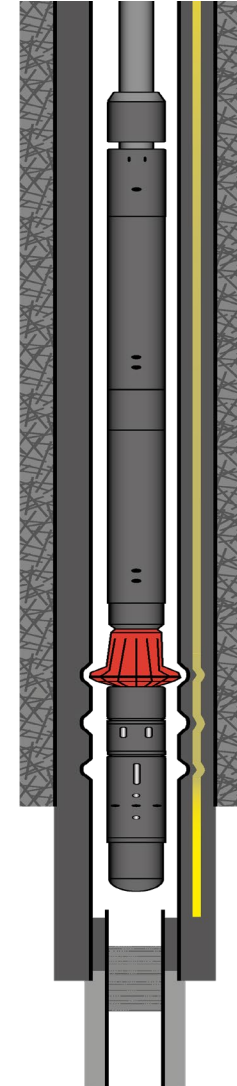
Current Well Status



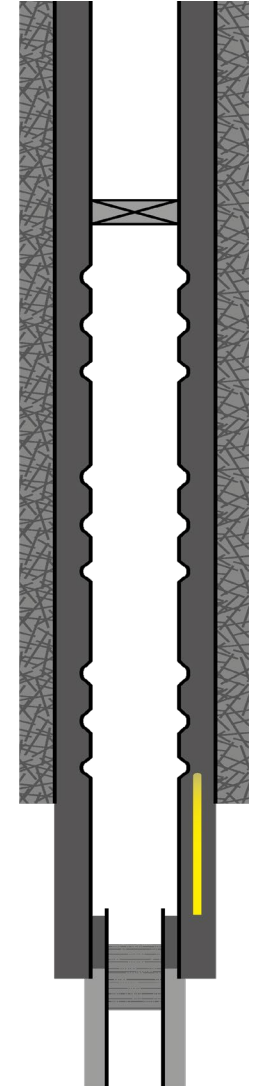
Cut & Recover 9 5/8" Casing



CRT Operation



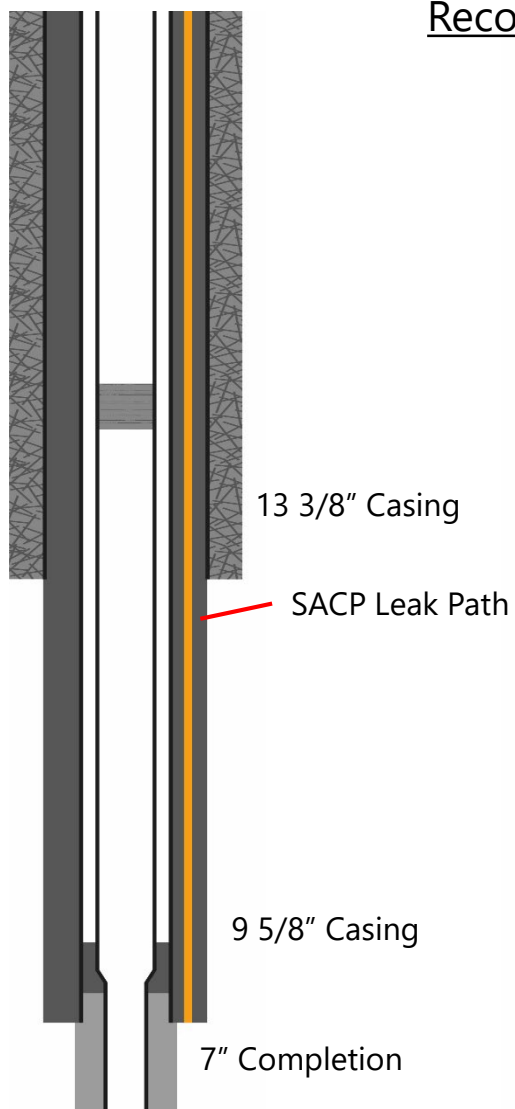
Well P&A Status



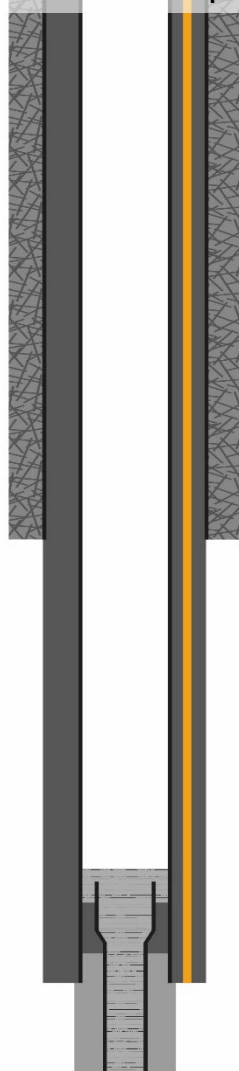
# ANNULAR CEMENT RESTORATION TO ALLOW RE-COMPLETION / SIDETRACK



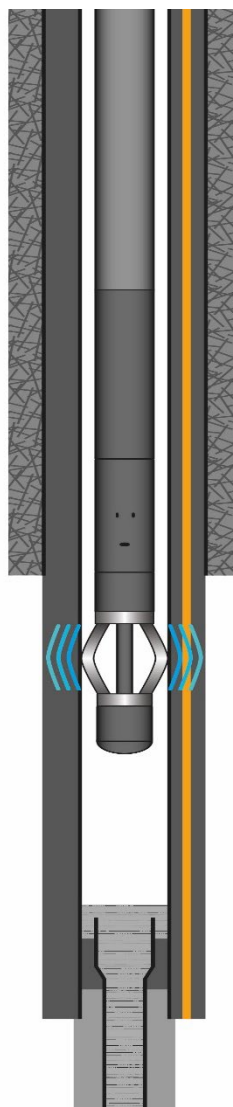
Current Well Status



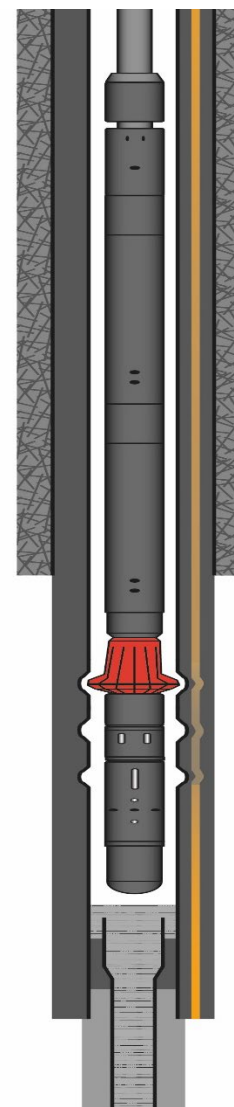
P&A Reservoir and Cut & Recover 7" Completion



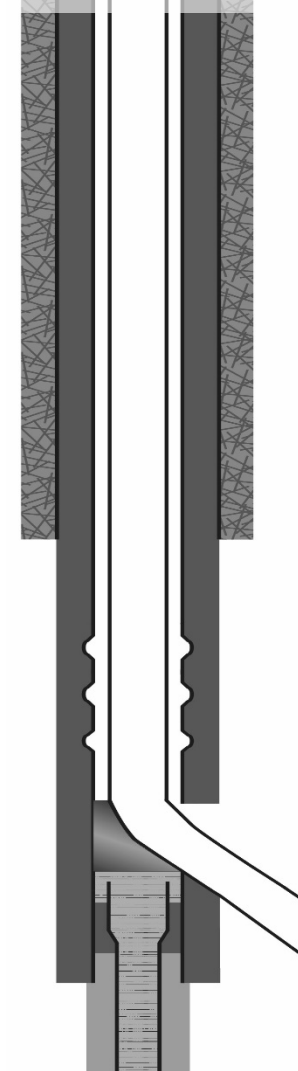
CBL Run



CRT Operation



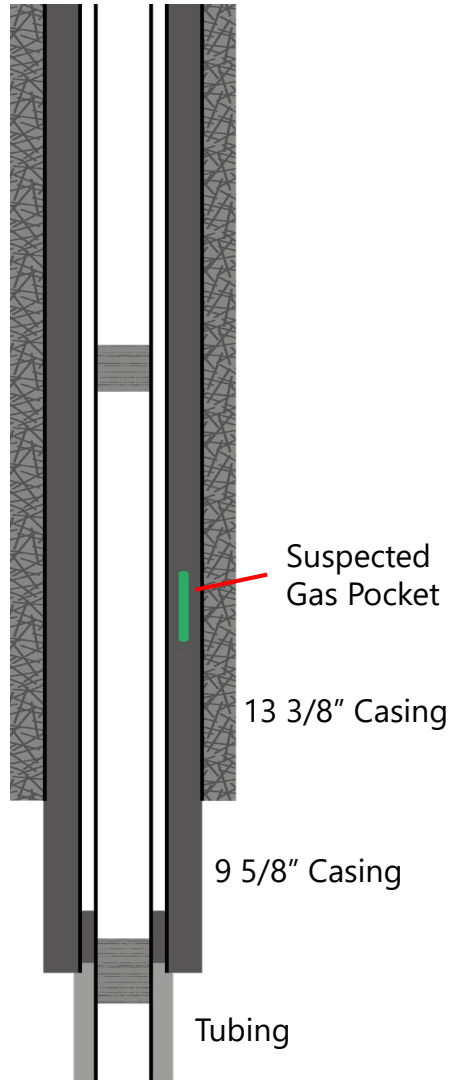
Set Whipstock & Redrill 8 1/2" section



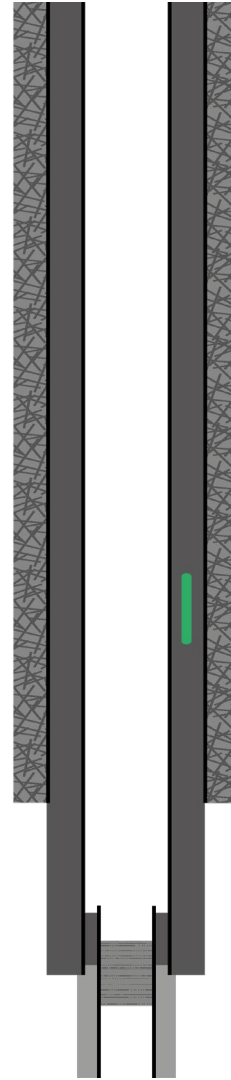
# ANNULAR CEMENT RESTORATION FOR PRE P&A DIAGNOSTICS



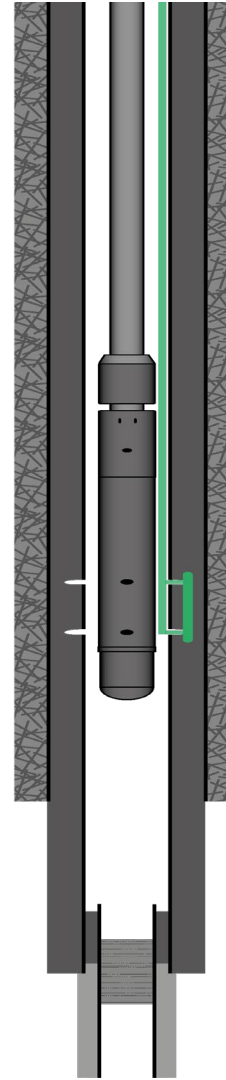
Current Well Status



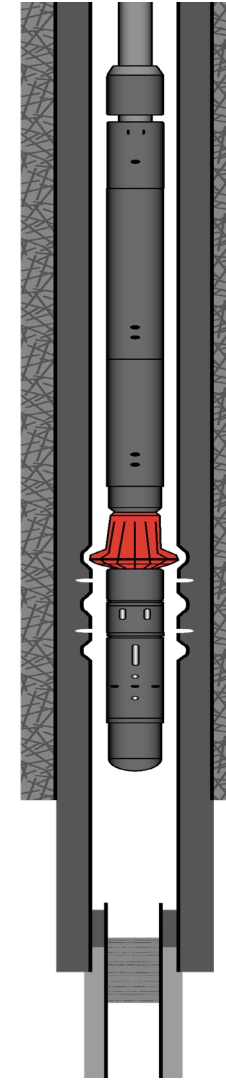
Cut & Recover Tubing



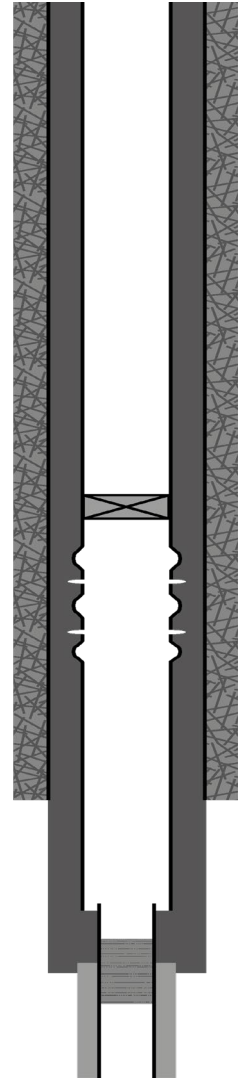
Punch casing to confirm  
origin of leak/gas

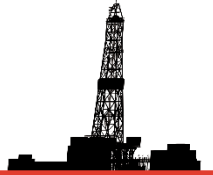


CRT Operation



Suspend Well





**FASTER. SIMPLER. BETTER.**

RESETTING THE STANDARD IN **CASING RECOVERY**