

One Shot Cementing System



One Shot Cementing System:

This system offers a one shot screen & casing running and cementing operation. Typically, the well is drilled to TD and casing is run with an inflatable casing packer and cementing valve and either with or without inline screen. A mechanical setting tool is run inside the casing on a cementing string to seat inside the packer. Initially pressuring up this tool inflates the packer to a pre-set shear pin pressure. After shear, the tool shifts to access the annulus above the inflated packer via the cementing valve and cement is pumped as required. Packer inflation pressure is maintained by check valves.

Applications:

- ◆ Off bottom cementing – casing installation, casing/screen installation, cemented liner application
- ◆ Casing re-lining operations
- ◆ Cementing casing in boreholes drilled into underground workings (breakthrough well bore)

Benefits:

- ◆ The bore may be drilled to TD in a single run at a single size
- ◆ Casing toe location can be decided based on actual aquifer depth
- ◆ Casing and screen are run in-line in a single operation
- ◆ The casing is cemented in one operation
- ◆ Fewer pipe trips into and out of the well compared to standard float shoe cementing operations
- ◆ Can easily be adapted to casing re-lining operations
- ◆ The aquifer is fully sealed against cement contamination by an inflatable packer
- ◆ No drill out required

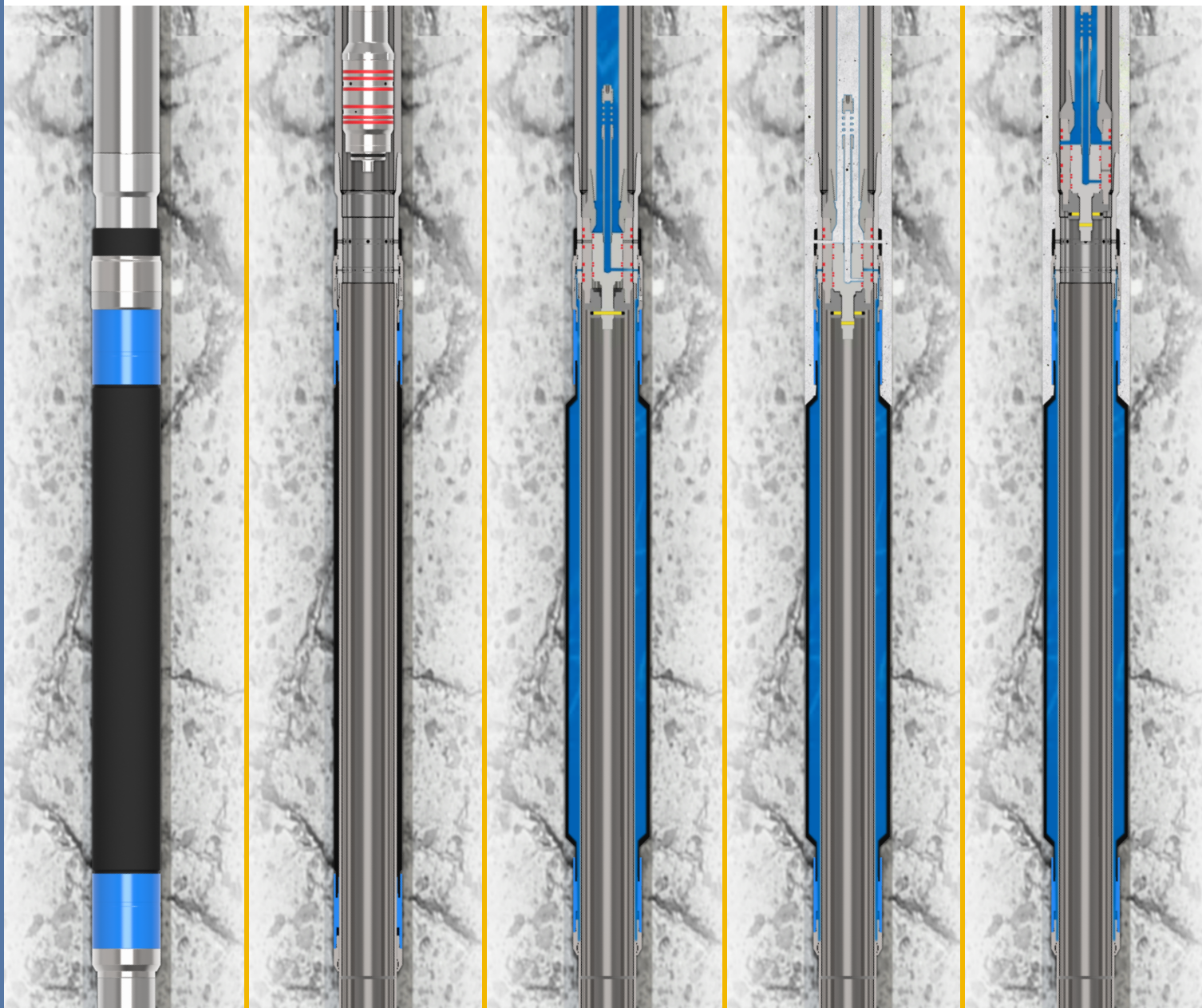
Options:

- ◆ To clear cement from the string the options of over-displacing or pumping a wiper can be employed
- ◆ Alternatively a wiper style extension on the stab-in tool can be used. This allows the tool to be raised clear of the grout valve for flushing of the string and casing while the wiper section continues to seal the lower portion of the casing against contamination
- ◆ Setting tool can incorporate a drag spring actuated latch to match a profile in the casing packer for accurate landing of the tool when slight casing ID reduction is impermissible (typically 1/8" to 1/4")



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Installation: Open Hole Completion:



**Run In Casing
 with BHA**

**Run In Setting
 Tool on pipe to
 seat in packer**

**Pump water to inflate
 Packer and shear Setting
 Tool to cementing position**

**Perform
 cement job**

**Pull back Setting tool,
 circulate excess cement
 and pull out**

