

KCI e-news bulletin: *April 2016*

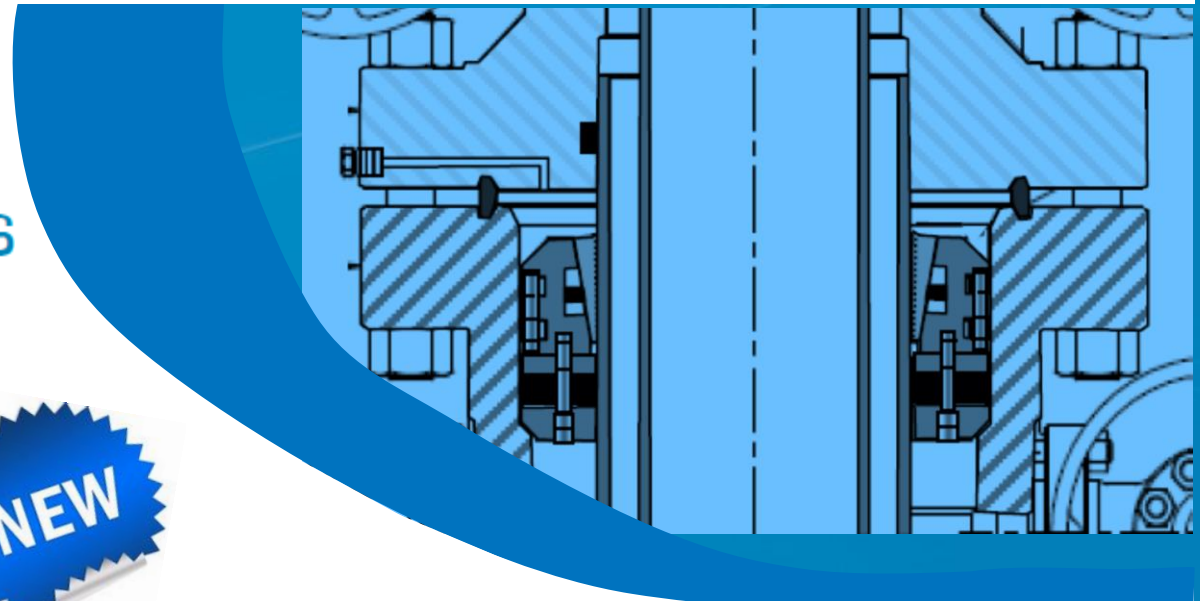


Kinetics Controls
& Innovation Ltd

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MAC-SEAL Leak Sealing Solution



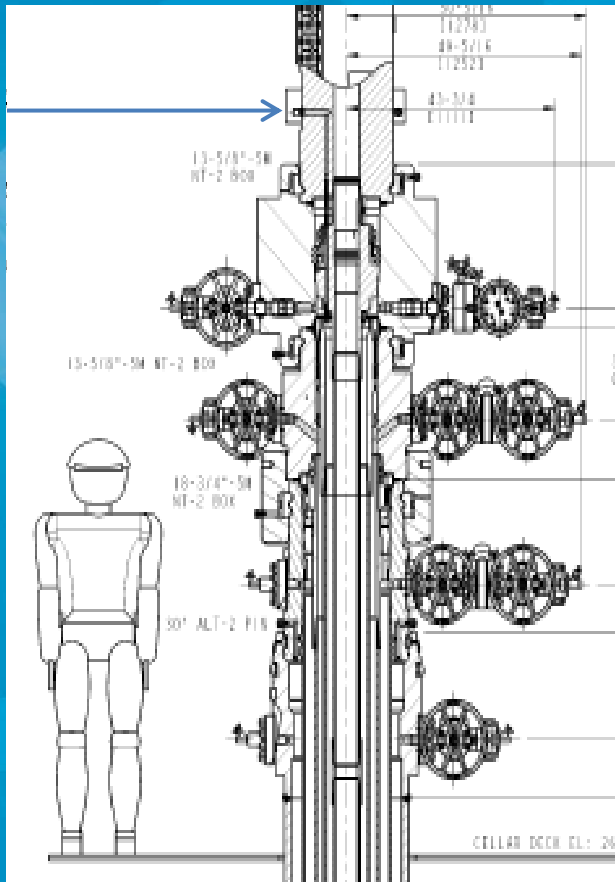
*“3 Successful Control Line Isolations on a
Single North Sea Wellhead Using Mac-Seal”*

3 x 1/4" Control Line Isolation using Mac-Seal 02

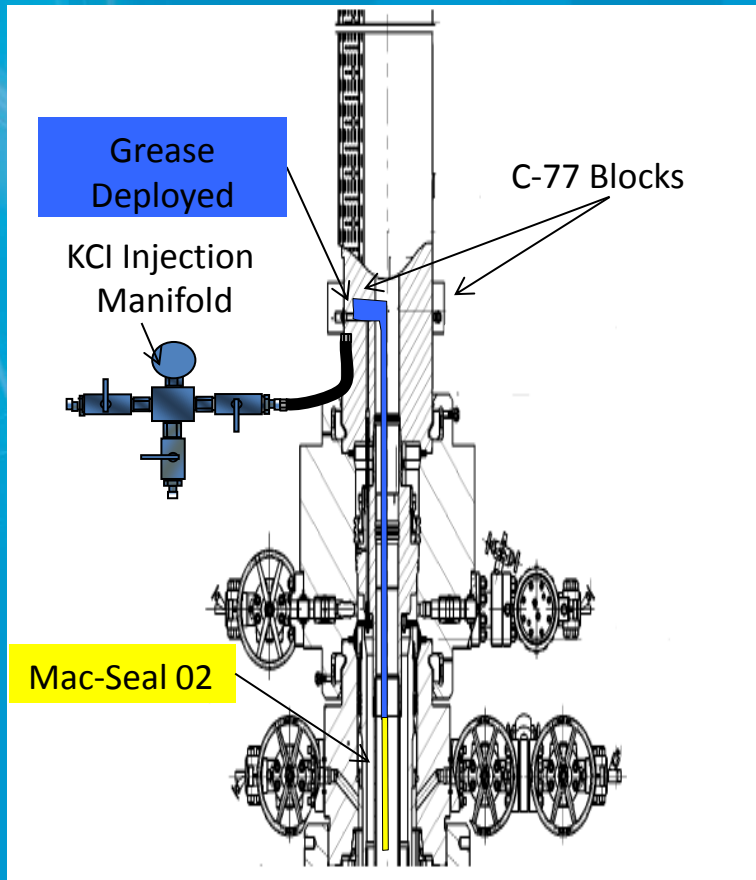
Background

- ❑ KCI were asked by a major Oil and Gas producer in the UK to provide an isolation on 3 leaking control lines on 1 well which operate downhole injection valves.
- ❑ The 3 control lines were severed at 6,800ft due to High Pressure water injection flow.
- ❑ The reservoir pressure was 3,000psi.
- ❑ A C-77 block valve with a double isolation is fitted to the wellhead and control lines.
- ❑ KCI task was to create a second isolation and to clear the C-77 block valves of sealant so that essential wellhead maintenance could be carried out in the future.

3 x Control Lines & C-77 Blocks on Tubing Bonnet



3 x ¼” Control Line Isolation using Mac-Seal 02



Deployment Detail

- ❑ The control lines were flushed with Transaqua HT2 to remove any obstructions to ensure injectivity and to determine if the lines held any pressure.
- ❑ 500ml of Mac-Seal 02 was used on each control line creating a 140ft plug to isolate the lines.
- ❑ A viscous fully synthetic grease was injected behind the Mac-Seal 02 to displace the sealant past all working parts of the C77 block valves and tubing bonnet stabs.
- ❑ The Mac-Seal and the fully synthetic grease were injected within 2 hours and left to cure over-night.
- ❑ Once the 3 Control lines were injected with Mac-Seal and completely cured the lines were pressure and leak off tested.
 - ❑ A low pressure test of 500psi for 5 minutes
 - ❑ A high pressure test of 5,000psi for 10 minutes
 - ❑ All lines were vented and no pressure build up witnessed
- ❑ Pressure tests on all 3 control lines confirm no leaks.
- ❑ All isolations successful.