

Safety Alert

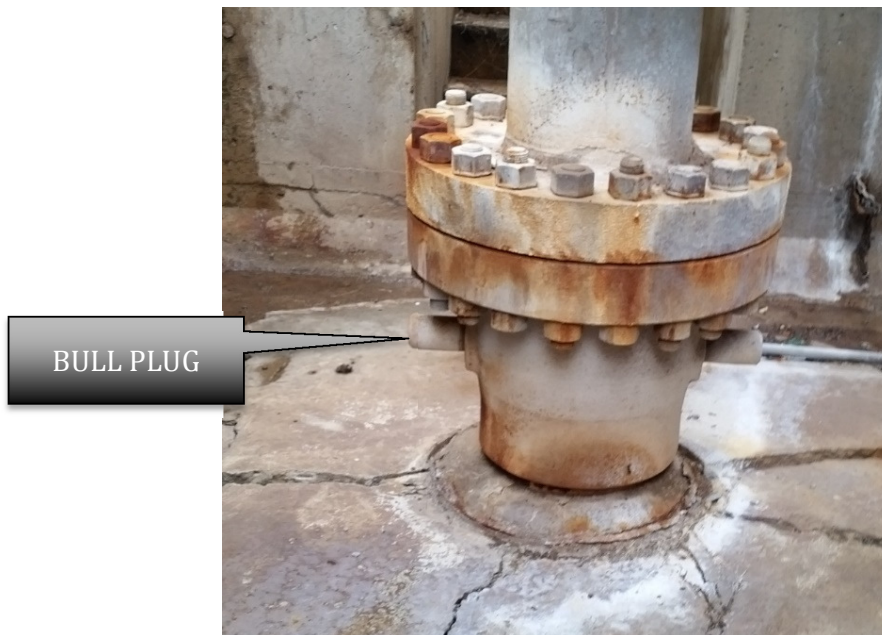


Date of Event: October 2017

Bull Plugs on Geothermal Wellheads

What happened?

Contact have a number of geothermal wellheads with bull-plugs installed. Bull plugs are threaded blind fittings installed into threaded ports on the Casing Head Flange (CHF).



During clean up of the wellhead after a the well had been abandoned, one of these bull plugs fell off due to indirect shock loading from hammering on the CHF. If the well had been in service, this would have led to a loss of well containment and serious risk to any personnel on the cellar.

We have identified other wellheads in service that have bull-plugs installed.

How did it happen?

The fracture surface of the bull plug shows signs of excessive stress at the first engage thread root. These plugs have no force upon them in-service apart from internal pressure, so the most likely explanation is that this damage was suffered on installation, by a combination of over-torque and sledge-hammering. This would have created a latent defect for the life of the well.

There is a risk that the bull plugs on remaining wells may be compromised in similar way.

Take 5! Stop. Check, Challenge, Change, Continue.

5 seconds, 5 minutes, 5 hours – however long it takes to do the job safely.

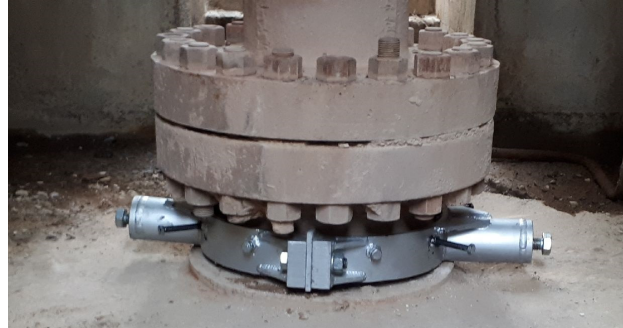
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What did we learn?

Contact engaged in a process of installing clamps on bull plugs identified in the field. The final solution looks like this;



These clamps serve to hold compressive force against well pressure and will retain the bull plug in the event of a failure.

How can we improve?

If any further wellheads are found with untreated bull plugs the procedure needs to be;

- Advise Drilling and Well Services Team and Steamfield Ops Teams
- Avoid unnecessary cellar access. Any personnel in the cellar must have a clear escape path and are to avoid placing their body between the bull plug and the cellar wall.
- Do not interfere with the bull plugs or put any shock loads (i.e hammering) on the wellhead.
- Untreated bull plugs need to be fitted with a clamp system in order to resume normal wellhead and cellar operations.
- Once installed, the bull plug clamp cannot have any weight or load applied to it – do not stand on it or use it for any hitching point.

Get in touch...

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