



ANOTHER MYTH BUSTED!

“PBL Tool can be activated in Zero Circulation Condition to Re-establish Circulation to Annulus, True or False?”

Introduction

Drilling of oil and gas wells are, at best, full of the unknowns. Engineers always have to go through serious and rigorous investigations during the planning phase taking into consideration any and all possible scenarios that they may encounter during the drilling phase of the well. The scenarios considered are often broadly classed under two categories, the “known risks” and the “unknown or potential risks”.

The known risks are generally identified by examining the data from the offset wells, if available. If such information is not available or if the well is a wildcat well, then the engineers have a lot of unknowns to deal with. The unknown or “potential risks” are those that require a great degree of experience on Engineers’ part to mitigate. Risk assessment and formulation of mitigation strategies is an art form and it invariably involves multitude of considerations or should we say, looking for answers or possible solutions to multitude of “What if” questions.

In reality, many of these “What ifs” may never be experienced during the drilling phase, nevertheless, these will all need to be considered and addressed during the planning phase or else, the Engineers will have a lot to answer for since any shortcomings during the planning phase may not only have financial implications but more importantly may have safety implications which could have dire consequences.

One may say, what has all this got to do with PBL tools? Please bear with us as the punch line will come soon.

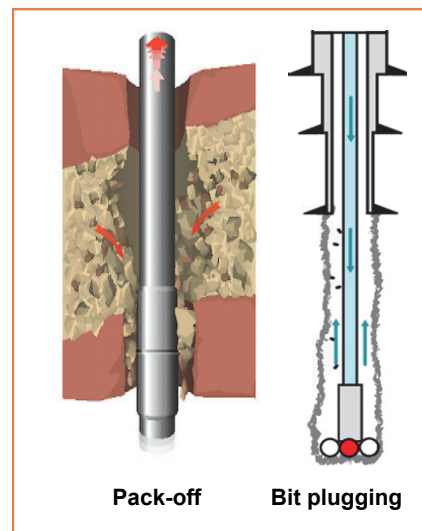


Argument

Many of the known issues experienced in the offset well/s can be planned for when planning a new well and these could include, fractured zones, formations with high permeability, unstable formations, downhole torque and drag, and so forth. The more challenging task is to consider the unknown risks and plan for such contingencies.

These unknowns are the main reason for the “What if” questions and here, we aim to tackle one of these questions. The question being, **What if we lose circulation due to BHA pack-off or Bit nozzle plugging?** How can we re-establish circulation?

Normally, the presence of a reliable bypass system such as PBL circulating sub appears to be the solution. But the question is, how do we activate the bypass tool to re-establish circulation? Whether ball, dart or flow activated type bypass systems, these all depend on circulation to activate. So, the flow activated tools would seem to be out of the picture in such scenario! Now, we are left with ball or dart activated tools, of which PBL can do both.



BYPASS SYSTEMS
BY DSI



Getting the ball or dart to land on the ball/dart seat is one thing but to overcome the resistance of the fluid column beneath the seat is a huge task in itself. So, unless there is some circulation possible, i.e. some means of escape for the fluid below the Circulating Sub seat, then the chances of successful activation are almost none.

It is in such circumstances that DSI PBL, once again, offers solutions.

Solution

DSI PBL Multiple Activation Bypass Systems can now be supplied with specialised Ball Catcher Sub that incorporate our Burst Disc Technology if requested by our clients. As stated earlier, whether a ball, a dart or a flow activated bypass system is deployed, the full and complete activation of the tool can only occur if there is circulation. Great majority of circulating tools work on the principle of a sliding sleeve which means, the sleeve must be forced down to a position whereby the inner and outer ports are aligned, and circulation to annulus is established. In all these devices, the fluid flow is essential to force the sleeve to move downward and this is achieved by either the fluid pressure build up behind the ball, or dart or the flow through a restricted ID. Without circulation, this is not possible, hence our reason for the introduction of the Burst Disc PBL Subs.

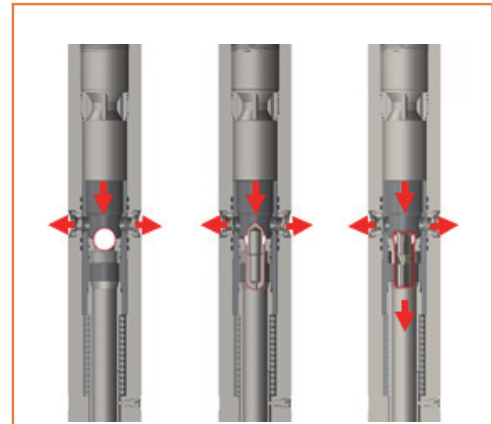
Building on its reputation of being the best known, most reliable, widest application circulation tool on the market, the PBL® Multiple Activation Bypass Tool now gives operators even more flexibility. With the incorporation of a high pressure/ high temperature Burst Disc into the lower section of the PBL® tool, BHA and bit pack-off issues can be easily remediated by allowing an alternate flow path to re-establish circulation and regain well control through activation of the PBL® tool.

Tool Feature:

- No effect on PBL tool operation
- No additional sub length; incorporated into existing tool components
- High back pressure capability (5,000 PSI) to allow running tools in hole without filling pipe if desired
- Numerous application-specific pressures and temperatures available
- Large flow diameter to accommodate high flow rates if required
- Simple replacement once utilized
- Available in tool sizes 4.75" and larger

Justification / Conclusion

DSI PBL Bypass System is arguably the most reliable Multiple Activation Circulating Tool around. The features, benefits, and high degree of operational success of PBL Bypass Systems are well known in our industry and are well documented. Nevertheless, DSI always strives to excel in everything it does and when its customers demand additional features, we do not argue the case instead, **WE SIMPLY DELIVER** what our customers want. Therefore, when we were faced with the question; **“What If there is no circulation possible, how can we activate the PBL tool?”**, we took on the challenge. We did not come up with EXCUSES, rather we came up with SOLUTIONS. It is that simple.



Whether Ball, Dart, Split-Flow Dart or Flow Activated tools are used, the successful activation of the tool is contingent to having circulation through to annulus prior and during the activation process.



DSI PBL Multiple Activation Bypass System incorporating Burst Disc Technology

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So, in order to offer our customers peace of mind, whenever they express concerns about possible BHA pack-off or Bit Plugging, we offer them the same reliable, simple to operate, and high quality PBL tool but with Ball Catcher Sub that incorporates Burst Disc Technology.

For further details, please feel free to contact us on:

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