

WELL INTERVENTION – A BAD NAME FOR A GOOD ACTIVITY?

Could well intervention do a lot more to maximise economic recovery?

Andrew Paterson
Managing Partnerx, **OFS Partners**



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Could well intervention be doing a lot more to maximise economic recovery?

If you're intervening, generally something's wrong and it's only going to get worse unless you do something about it. Is there something in the very name and nature of well intervention that is undermining its true potential in the North Sea and the wider global market? Let's explore why interventions typically take place, what is done and what could be done differently.

Reactive remediation

If we look at a list of specific triggers for well intervention activity, they are almost all associated with remedial action. Something noticeable has happened or is happening and this forces the expenditure decision. Leading activities at present include mechanical repair (e.g. valve repair, choke change out or seal failure) and relatively little in the way of true proactive well servicing, be it data acquisition or performance related wireline or coiled tubing interventions (e.g. zone isolation, scale squeeze and stimulations).

Proactive performance measures

Instead, if we were to think creatively about all of the proactive production enhancement measures that could be undertaken on a field-wide basis, we might be able to find reasons to justify a different set of activities at different times in the life of the field. Here the decision would be to invest and grow to improve and achieve excellence, rather than spend money only to solve a problem – stimulated by the pressure of being branded reckless for doing nothing. We are currently a little too focused on “catastrophe aversion” instead of thinking in terms of “proactive production enhancement”. Reaction, not action.

Basis for the market is there

For a well-known global operator, the average lifting costs per barrel across the portfolio sits at around USD 30. When there is already enough evidence to suggest incremental barrels brought onstream as a result of well intervention activity sit at around 5 USD or less, the argument should be compelling to undertake more well servicing and proactive performance measures more frequently. The reasons for not doing this are manifold, and partly due to a shareholder emphasis on new fields and discoveries above and beyond what could be dismissed as less than newsworthy tinkering on older well stock. However, as the British Cycling team proved, a lot of small tinkering can sum up to great gains overall. Can we apply the same logic across a field and portfolio of producing assets? The result would then be an emphasis on overall performance improvement rather than individual star results of individual fields or new discoveries.

Increasing success: programme vs campaign

There is a dated argument that says any given intervention on a specific well is no more than 50% likely to succeed. While it is certainly true that not all given intervention activities are guaranteed to succeed, conditions downhole being so complex and variable, it still isn't fair to judge the merit of interventions on a well by well basis. Building the business case for a given campaign is often based on a remediation, as already described. However, if we expand the picture to a whole field basis, it becomes possible to design and justify a proactive programme across multiple wells over a longer timeframe that dramatically increase the chances of a favourable return. Where given actions on specific wells don't succeed, a capable contractor can use the well access to log, survey and sample such that the programme is dynamic and adapted accordingly based on the new information coming out of the experience. Put simply, if at first you don't succeed, use the data acquired to perfect the action and location, ever increasing success rates, and try try again.

Bringing programmes into reality: operator partnering

Fundamentally, the opportunity for supply chain companies is not to develop something internally that seems to make practical sense and simply wait for the RFQs to come in. Any investment or development needs to be anchored to the specific needs of a given operator or range of operators. There needs to be a very careful assessment of operator needs against company capability, and when that's done, the decision of who to invest in a relationship with becomes easier. There is no "slam-dunk" technique or technology, or even light or heavy vessel out there. Winners and losers will be separated based on the strength of the relationships that can be established, the level of understanding of the situation and evidence base for the solution, as well as the quality of support that can be given to drive the business case within the operator on behalf of the direct contact.

Executing the programmes: technology and vessel of operation

There are plenty of ideas, as well as plenty of early stage but proven techniques that make the efficiency and effectiveness of well intervention operations all the greater. Some methods, and vessel solutions, are somewhat predicated on a highly active drilling market, meaning using a heavy drilling asset (e.g. a full capability semi-sub or jackup) is so expensive that it creates an incentive to explore a lighter alternative (e.g. a mono-hull dedicated well intervention vessel). While that incentive may have been reduced in this lower for longer oil price environment, there are still benefits to be found in using nimbler alternatives. For those who will always want the full capability, the technology is there to enable interventions cheaper than ever. In the current market, general cash constraints make the case for doing anything a big challenge so the main focus needs to be proving the case for doing anything at all, by any means, according to alignment with the operators' needs and preferences.

Winning: 3 common key principles and the fit to well intervention

Across the whole oilfield services value chain, there are many repeating principles that work in terms of winning work. One is hassle reduction and reducing interfaces. Another is security of supply – offering something no one else has. Finally, perhaps the most compelling of them all, is offering a net saving proposition. Somehow what you are doing saves measurably more money elsewhere – thus creating a very happy client and reducing the focus and scrutiny on your own margin. For well intervention, some of these dynamics apply – bringing together multiple services would be of perceived value and proving the case for doing the work in the first place against not doing it or waiting (the net saving angle) would be the leading principles.

Intervene to Maximise Economic Recovery

So in summary, this intervention is two fold: firstly to raise the profile and perceived value for proactive programmes of well interventions such that there is as much pull from operators to consider these as there is push from the supply chain to offer them. Secondly, to realise the benefits of actually doing the work, bringing the incremental barrels onstream and conducting late life operations in the most efficient way possible. When we can see proactive diagnostic interventions directly driving actual well performance improvement work on an industry wide basis, we will know the market is finally coming to maturity and the efforts of all to intervene has been successful.