



## Tenure Matters



*A column by Sue Slater, Senior Advisor Petroleum, RLMS*

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Welcome back. This month I want to talk about well completion reporting and pose the question:

Well completion reports - an anachronism in the digital age?

Geology is an interpretive science, we should not forget that. No matter how many tests and tools we have at our disposal, at the end of the day we are interpreting data from a variety of sources, some better than others, putting it into a framework of existing knowledge and experience, to come up with an 'answer'. Is it important to know what someone else thought? Yes absolutely, because most of the time each subsequent interpretation builds upon the previous ones - even when the previous interpretation doesn't agree with our own, it can test us and make us question our own interpretation thereby making it more robust.

Well data is particularly valuable - especially here in Queensland where most of our producing basins are hidden underneath metres and metres of tertiary sediments or basalt or laterite. A well costs a lot of money to drill, we should aim always to maximise the value that can be extracted. Obviously in these days of cost-cutting and having to justify each dollar of expenditure this might not be possible at the time of drilling. But we can save the data, the core or at least record everything as fully as possible so that we, or future geologists, have the maximum chance of extracting more useful data at a later date.

We don't have the ability of foresight and we cannot know what advances in technology may come, or what plays may become economic as a result. The value of data from previous drilling and seismic cannot be underestimated in determining whether further investigation is justified and more expense warranted. This data has been used countless times by industry, government and research organisations.

An example of the importance of maintaining data and samples, that we can all understand, is how advances in DNA technology have allowed the solving of old crimes, or identification of victims of war or natural disasters, because, at least some of the time, the evidence was kept and stored securely, even though no-one might have foreseen the technological advances that would come.

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So far the discussion has been about the data itself, but what about the actual information on how the well was drilled? Again this is critical for so many reasons. First of all, the government inherits responsibility for every well once the tenure is relinquished, even those that are plugged and abandoned. The only exception is where there has been a sanctioned conversion and transfer to a landholder; or in some circumstances to another tenure holder. So it is critical that there are sufficient unambiguous records of casing, cementing, perforations etc. so that if there is a subsequent incident, there is sufficient information to know how best to handle it. Current or future overlapping tenures may need to know if the area can be safely mined, or if a future resource can be extracted by some means we don't yet fully understand.

The government also has responsibility for managing the state's resources - this includes not only mineral and energy resources but water. Our industry operates in the same parts of the state where water is so critical and commonly accessed by drilling water bores. Our producing projects have the potential to impact on these water resources both now and into the future. The state must understand how wells have been constructed in order to assess possible future leaks or co-mingling of aquifers, investigate drawdowns or reducing water resources. The well construction and the well data contribute to this ongoing responsibility.

So should a well completion report be reduced to a series of 1's and 0's? Does someone always only want raw data? Of course the raw data is critical, so it can be reprocessed and subsequently reinterpreted. But not every use of well data requires that level of effort, at least initially. How many of us have read and reviewed well completion reports searching for that nugget of information that may hold the key to a question we have, that may indicate to us we are on the right or wrong track with our interpretation or our search for a new play? When we find that nugget aren't we grateful that the person who wrote the report was thorough enough to record as much as possible even though it may not have had immediate significance at the time? And when or if we do find that nugget, then the time and effort to reprocess raw data becomes justified.

We live in a digital age, and everyone is looking for the most cost effective and efficient way to do everything, including recording and storing data. There is no doubt that there have been some great advances in technology, and many processes can be or have been automated. But we should not lose sight of what geology is and of how geological advances are made. Yes sometimes by the bolt of lightning idea from nowhere; but more commonly by building on the work of others, questioning the interpretations made previously, proposing our own interpretations, testing them against previous data, and acquiring our own new data.

We also live in a 'throw away' age, where everyone is quick to question the value and need of retaining anything. But some things are worth preserving and maintaining, because the value for the future cannot be truly and fully assessed, and the cost of reacquisition (both in dollars and cost to the environment or society) may be too high.

I may well be a dinosaur but in my view, a well-written well completion report is a thing of beauty that a series of 1's and 0's will never be, and a valuable record not just for the present but for the future. Geology is the science of understanding the earth; let's not cripple future geologists by not doing our job as well as we can.

I am happy to hear suggestions about topics you would like covered. Feel free to email me at [sue.slater@rlms.com.au](mailto:sue.slater@rlms.com.au) with the subject heading Tenure Matters.

In the meantime, remember "Tenures make the Project; the Project doesn't make the Tenures".

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