

RESMAN enabled Operator to assess the completion performance of a long horizontal well.

Identifies potential for improved completion in future wells and left-over oil reserves

Challenge

A customer wanted to assess the productivity of a long horizontal well. They were concerned that the well was too long, and therefore that the toe section would not produce. This information would affect the length of future production wells.

Solution

RESMAN RES•OIL tracer systems were installed in the well, and the productivity was monitored by analyzing the respective tracer signals over time.

Application

Tracer systems were installed in the well together with the completion, at five locations along the wellbore. Fig. 1 shows how the tracers were spaced out along the 9,300 ft long wellbore. Fig. 2 displays the tracer signals over time. It shows that there was insignificant contribution from the toe (from OS-3 downwards) until the last sample taken approximately 21 months since first production.

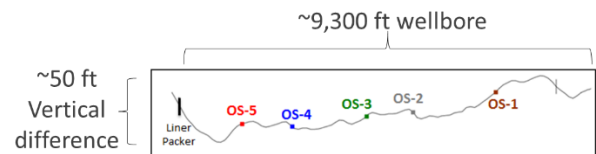


Fig. 1 – RES•OIL tracer systems (OS-#) placed along the wellbore

Results

The most likely scenario is that the toe sections of the well were improperly cleaned-up, indicating that in a worst-case scenario, toe sections might never produce.

- 1) Future wells should either be drilled shorter, or, if practically possible, more effort should be taken to clean up the toe of the well.
- 2) The reservoir segment at the toe-half of the well is a potential target for upcoming oil drainage strategy. Hence new producers or injectors, or a well intervention is necessary to clean the toe of the well.

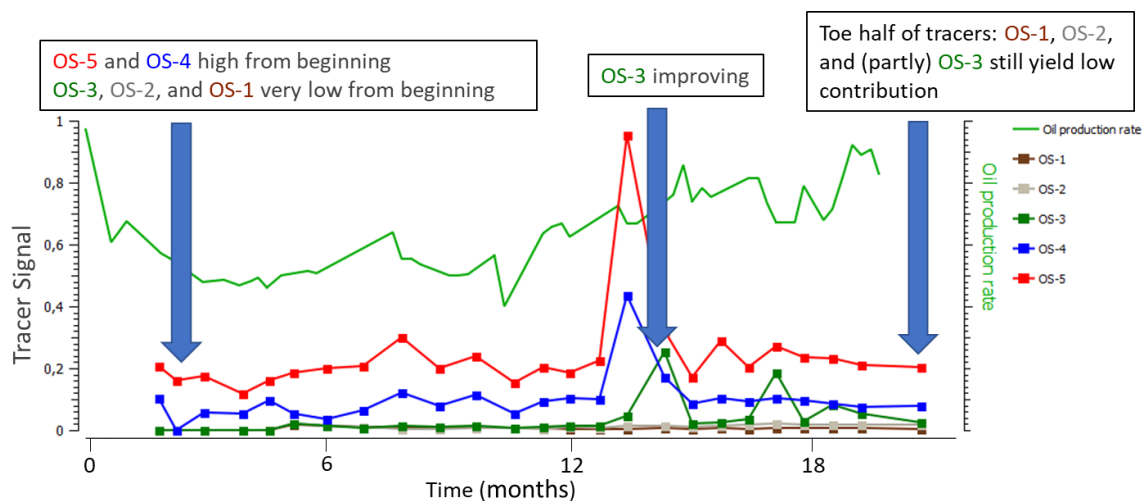


Fig. 2 – Tracer signals and oil production rate plotted against time.

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