

CASE STUDY

COMPARISON OF DIFFERENT PLT METHODS APPLIED TO THE SAME WELL

Objective

Developing alternative PLT methods becomes more important in exploration of unconventional reserves. This case study compares two different production logging techniques for a tight gas well with a focus on fracturing and stimulation in Sichuan, in order to improve the development efficiency of unconventional oil and gas fields in the Sichuan Basin and optimize the design solutions for surrounding oil wells.

The improvement of logging engineering quality is beneficial for production companies to reduce costs and increase efficiency.



FIELD

SWOGC, China



WELL TYPE

15 STAGES MSHF



WELL CONDITION

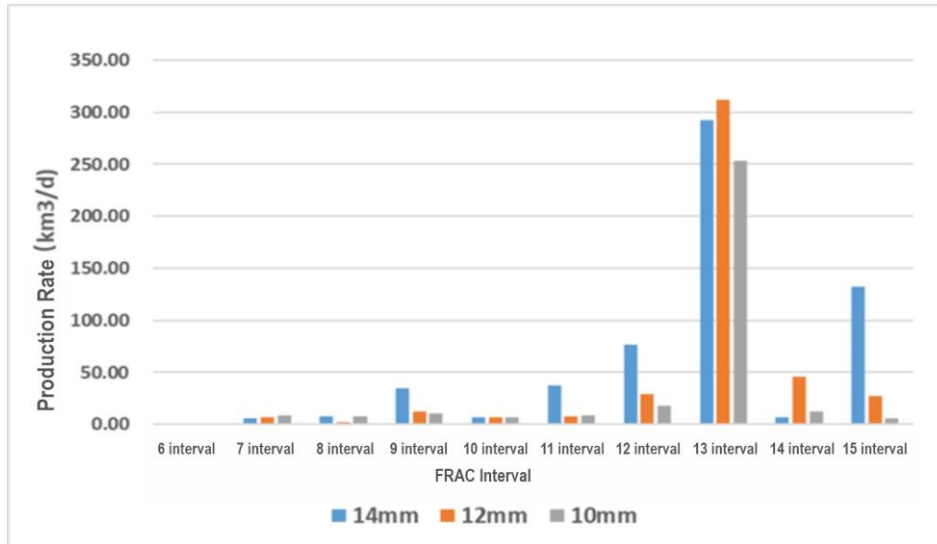
Geological uncertainty is high, reservoir structure is complex, and production rapidly decreases after multi-stage hydraulic fracturing



Solution

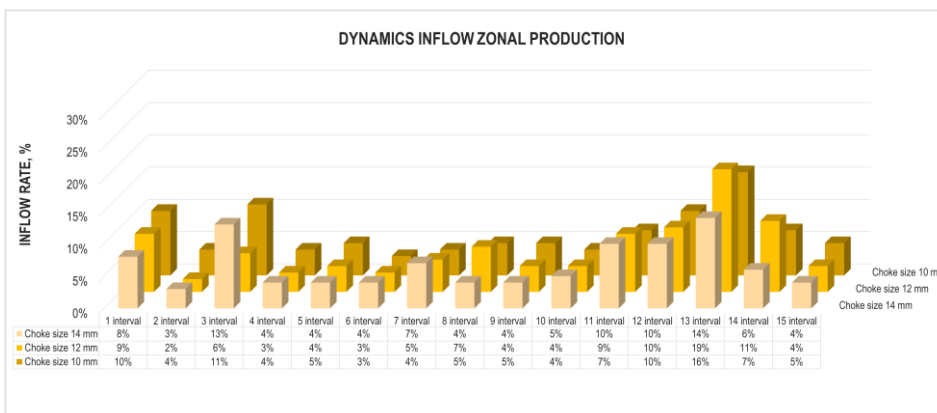
In the development of a large-scale unconventional oil and gas field in SWOGC, Southwest China, the client applied GEOSPLIT dynamic monitoring technology to monitor production of a fifteen-stage hydraulic fracturing horizontal well and compared it with the Fiber Optical PLT. Geosplit tracer system was deployed into the well in a form of tracer coated proppant with controlled release mechanism

Due to the restriction of the well entry with Fiber optical CT, it only obtained 9 stages production inflow profile. GEOSPLIT PLT obtained production inflow profile of each frac stage. Compared with two results, stage 13 made the best production contribution in this well and most active stages are from stage 11 to stage 14.



Result of Fiber Optical with CT

- Inflow profile data was obtained only for 9 stages
- Stage 13 made the highest production contribution



GEOSPLIT Quantum PLT results

- Inflow profile data obtained for all 15 stages
- Stage 13 made the highest contribution
- Heel segment leading the main contribution, which matches the geological logging data