

CASE STUDY

Application: **Characterize Reservoir Drainage Height**

Location: Permian Basin

CHALLENGE

In order to optimize future well spacing, operator needed insight into vertical reservoir drainage characteristics.

EVALUATION

- Well cuttings from vertical section were collected during drilling.
- DNA markers from well cuttings were extracted and analyzed with the top 10 most frequently encountered DNA markers shown in the graph.
- Produced fluids were collected at the wellhead during the first 2 months of production without operational interruptions (separator samples work too).
- DNA from produced fluids was compared to DNA from cuttings to estimate the reservoir drainage height.

RESULTS AND VALUE

- An estimated reservoir drainage height was provided to the operator as shown in the graph.
- Based on Biota's results, the operator refined their reservoir model and further optimized their field development plans.
- Biota's additional production fluid sampling over time enables the operator to continue field optimization.

COMPARISON OF THE MOST FREQUENTLY FOUND DNA MARKERS IN WELL CUTTINGS VS. PRODUCED FLUIDS

