OVERVIEW

A major GOM operator asked Biota to provide production allocation between producing zones. The objective was to prove up a new source of production allocation that can be done non-invasively and cost effectively to provide more frequent perspectives on well productivity by zone. This Biota result was compared to a traditional production log to assess Biota’s solution.

PROCESS

Stored cuttings were obtained from the client for a well containing 3 stacked pay intervals. The cuttings were then processed in our state-of-the-art lab, and the resulting DNA sequences were analyzed by our industry leading Data Science and Reservoir Engineering teams. Biota used MDT samples of each individual zone and fluids from a commingled sample obtained at the production facility.
**RESULTS AND VALUE**

- The MDT fluid end-members were used to separate the commingled fluid end-members into respective pay intervals. As this is not a quantitative volumetric measurement, the data science output indicated the most likely composition along with an associated error bar.

- To further test our results, the client provided details from a production log run recently in the well. Figure 1 shows a comparison of estimated zonal contribution between the DNA results and the production log.

**POTENTIAL NEXT STEPS**

- Continual production allocation between the commingled zone is feasible at whatever time points add value to the client’s analysis of the reservoir. With no need for additional MDT samples, the surface collected produced fluids can be analyzed at more frequent intervals non-invasively and cost effectively between physical production logs.