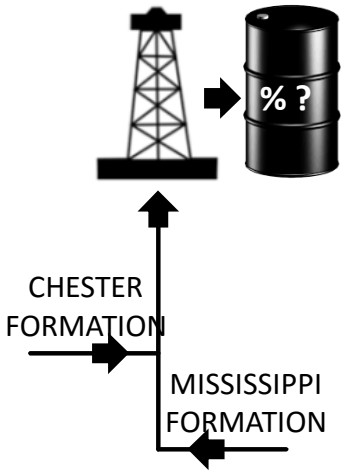
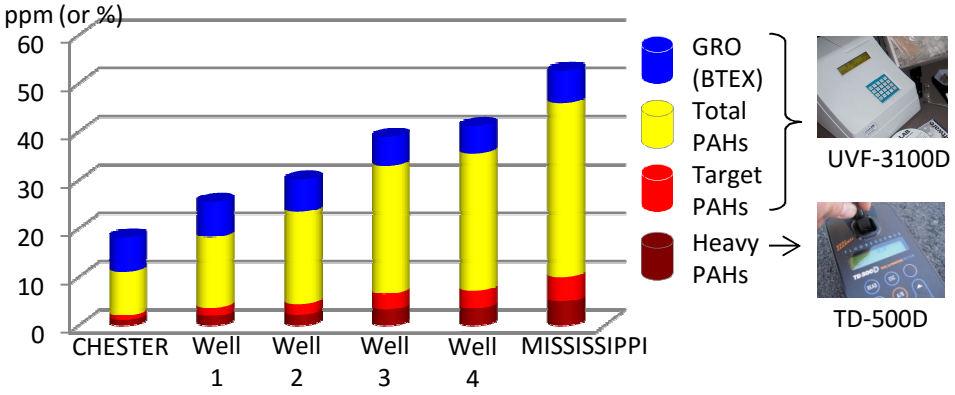
An oil company used Sitelab's laboratory to perform oil forensic analysis testing crude oils from different well sites to determine the percentage of oil content from two formations. The wells tap into these zones at different depths, thousands of feet below the ground. Knowing what type of oil being pumped is important.

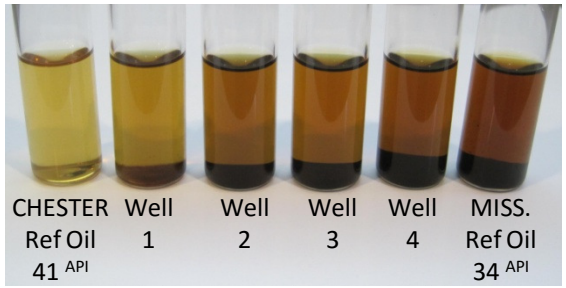


All six oil samples had similar GRO content, but the PAH content in the Chester and Mississippi reference oils are much different. PAHs in the four wells used for comparison fall in between and are commingled from the two formations.

In this case, oil pumped from Well 4 contains heavier crude mostly from the Mississippi zone, while the oil pumped from Well 1 contains lighter crude mostly from the Chester zone. This method provides a quick way to distinguish the two.

UVF Fingerprinting Analysis: Fluorescence Response showing GRO and PAH Concentrations in Oil at 100 ppm





Sitelab's Lab Service

- Cost per sample = $60
- Quick turnaround time

Oil sample extracts at 10,000 ppm (above) exhibit lighter and darker colors compared to the two reference oils and is consistent with the UVF data and API gravity of the oils. Oil samples only take a few minutes to analyze and can be easily performed in the field.

Using Data to Calculate % Content

Oils at 5 ppm	Total PAHs	%Chester	%Miss
Chester	0.45 ppm		
Well 1	0.76 ppm	77%	23%
Well 2	0.96 ppm	62%	38%
Well 3	1.32 ppm	36%	64%
Well 4	1.43 ppm	27%	73%
Mississippi	1.80 ppm		

Oils fluoresced the most for Total PAHs using the UVF-3100D calibrated to CAL-060 with EPH optics.

