Detailed analytical data from select segments of a Green River Formation oil shale core

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A number of different analyses have been completed on three one foot sections of a well-defined, well-controlled, fresh oil shale core taken from the Green River Formation in the Uinta Basin in order to characterize the chemical and geological nature of both the shale and the kerogen isolated from the oil shale. The first segment was at the peak organic content of the Mahogany zone; the second was also from the Mahogany zone but at a lower organic content; the third was of a similar organic content as the second, but from the upper R-6. In addition, these same measurements were completed on the kerogen isolated from these segments. The analytical techniques that have been used to study the chemical structure include geological characterization including a visual analysis and X-ray fluorescence (XRF), solid state ^{13}C NMR, small and wide angle X-ray scattering (SAXS and WAXS), atomic pairwise distribution function (PDF) measurements, and mass spectrometry (MS). Each of these experimental techniques provides distinct information as to the composition and/or structure of the sample and will provide valuable information about the similarities and differences in both the shale and the organic matter in the different segments. This poster will present details about the core and the experimental data obtained on the chosen segments.