

***Mineralogy and organic petrography of the lower transitional part of the Green River Formation oil shale, Piceance Basin, Colorado***

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The lower part of the Eocene Green River Formation oil-shale sequence in the Piceance Basin in northwest Colorado, consisting of the alternating organic rich zones, R-0, R-1, R-2, and R-3 and organic lean zones, L-0, L-1, and L-2, was deposited in Lake Uinta in waters that transitioned from mildly alkaline to strongly saline and alkaline. Evidence of this transitional phase of the lake is reflected by systematic changes in the mineralogy and lithology upward through this 100-meter-thick sequence of oil shale. An objective of this study is to determine if increasing lake-water salinity and alkalinity is also reflected by changes in the appearance of the organic matter as viewed in polished drill core specimens under blue fluorescence microscopy. If so, it may have implications in experiments to increase oil yields from aquatic organic matter.