

Preliminary Ichnology, Sedimentology, and Stratigraphy of Maastrichtian Prince Creek and Upper Schrader Bluff Formations at Ocean Point, National Petroleum Reserve - Alaska

Dolores A. van der Kolk¹, Peter P. Flaig², and Stephen T. Hasiotis³

¹Texas State University

²Bureau of Economic Geology

³University of Kansas

ABSTRACT

Previous studies of Santonian-Paleocene successions in the Colville Basin have documented fluvial, lower-delta-plain, and coastal-plain deposits of the Prince Creek Formation (Fm) and deltaic, shallow marine, and proximal shelf deposits of the Schrader Bluff Fm. During reconnaissance along the Colville River in 2012, several high-resolution stratigraphic sections of the Maastrichtian Prince Creek and upper Schrader Bluff fms were measured at Ocean Point. This study summarizes the ichnology, sedimentology, and stratigraphy of 79 m of stratigraphic section across a 21 km (13-mile long) fence diagram for Ocean Point. Past field investigations indicate that Ocean Point strata record an overall transgression, with storm-dominated shallow bay deposits of the upper Schrader Bluff Fm overlying the coastal plain deposits of the Prince Creek Fm (Phillips 2003; Flaig et al. 2011, 2013, 2014). This study compares previously interpreted storm-dominated shallow bay deposits at Ocean Point to the interdistributary bay deposits that were recently described at Shivugak Bluffs (van der Kolk et al. 2016), and makes a case for storm-influenced, estuarine deposits at Ocean Point.