Uppermost Lance and lowermost Fort Union Formation sediments are found in outcrop in the southern portion of the Jim Bridger coal field, located on the northeast flank of the Rock Springs Uplift in Sweetwater County, Wyoming. Twenty-nine surface sections and 581 subsurface (borehole) sections were evaluated and used to construct a stratigraphic model.

Stratigraphic correlations with economically mineable coal seams in the Fort Union Formation north and south of the study area combined with definition of questionable local formational boundary locations are significant objec-
tives of this investigation.

Sandstone (60%), claystone (17%), siltstone (11%), coal (10%), and limestone (2%) are found to be the most abundant lithologic units and exhibit a high degree of lateral and vertical variability. Lateral continuity of major coal seams is shown to be useful for informal chronostratigraphic purposes.

Fossil flora examined in and near the study area indicate accumulation under warm temperate to subtropical conditions. Flora identified include *Cornus nebrascensis* (dogwood), *Selaginella* (fern), *Salvinia* (floating fern), *Cercidiphyllum* (katsura), and *Sabalites* (palm).

The Lance-Fort Union contact is mapped immediately above a distinctive fossil soil horizon up to 2.2 meters (7.2 feet) thick, but multiple paleosols exist within the lower Fort Union, so the formational contact is placed below the lowest significant coal, where present. High sandstone percentages and a noticeable lack of lateral accretion surfaces are interpreted to define sedimentation in low sinuosity, perhaps braided, stream environments. Raised peat swamps and high annual precipitation contributed to an elevated water table which inhibited clastic influx and promoted floral development and channel stability. Paleocurrent directions infer a northerly source, probably the Wind River Range.