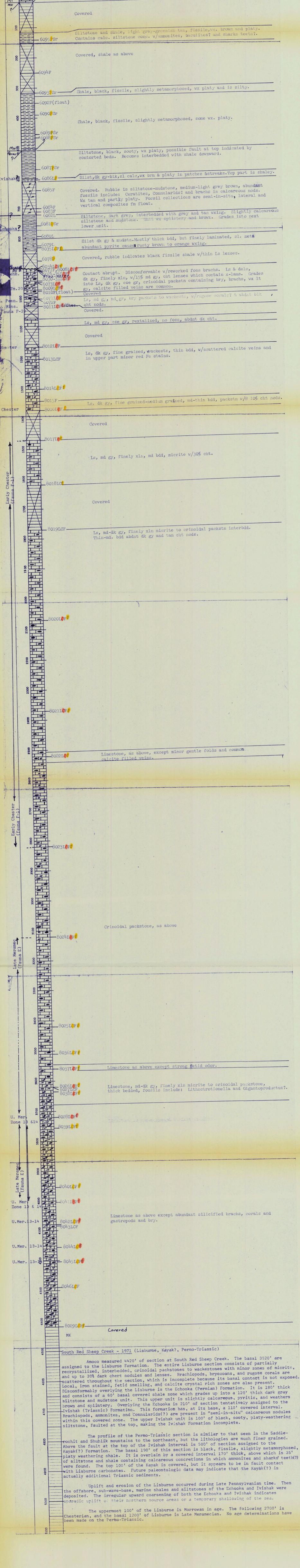
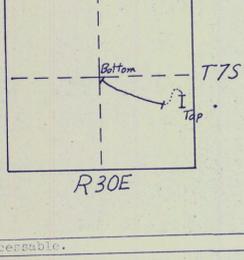


Amoco Production Company
Surface Log

Name SOUTH RED SHEEP CREEK SECTION
 COUNTY SE BROOKS RANGE STATE ALASKA
 MEASURED BY Fehlmann, Hankinson, Lane, Self DATE 6/22-23/71
 INTERVAL Lisburne-Permo Triassic-Kayak?
 REMARKS Kayak is faulted over top of Permo-Triassic section. Lisburne section is almost completed but lacks a contact at the base.



South Red Sheep Creek - 1971 (Lisburne, Kayak?, Permo-Triassic)

Amoco measured 4420' of section at South Red Sheep Creek. The basal 3520' are recrystallized to the Lisburne Formation. The entire Lisburne section consists of partially recrystallized, interbedded, crinoidal packstones to wackeestones with minor zones of micrite, and up to 30% dark chert nodules and lenses. Brachiopods, bryozoans, and rugose corals are scattered throughout the section, which is incomplete because its basal contact is not exposed. Local, iron stained, fetid smelling, and calcite crystal rich zones are also present. Disconformably overlying the Lisburne is the Echoka (Permian) Formation. It is 180' thick and consists of a 60' basal covered shale zone which grades up into a 120' thick dark gray siltstone and mudstone unit. This upper unit is slightly calcareous, pyritic, and weathers brown and splintery. Overlying the Echoka is 210' of section tentatively assigned to the Ivishak (Triassic) Formation. This formation has, at its base, a 110' covered interval. Brachiopods, ammonites, and Conulariids(?) are present in "semi-in-situ" calcareous nodules within this covered zone. The upper Ivishak unit is 100' of black, sooty, platy-weathering siltstone, faulted at the top, making the Ivishak formation incomplete.

The profile of the Permo-Triassic section is similar to that seen in the Saddle-rochit and Shublik mountains to the northeast, but the lithologies are much finer grained. Above the fault at the top of the Ivishak interval is 500' of section assigned to the Kayak(?) Formation. The basal 190' of this section is black, fissile, slightly metamorphosed, platy weathering shale. It is overlain by a covered interval 170' thick, above which is 35' of siltstone and shale containing calcareous concretions in which ammonites and sharks' teeth(?) were found. The top 100' of the Kayak is covered, but it appears to be in fault contact with Lisburne carbonates. Future paleontologic data may indicate that the Kayak(?) is actually additional Triassic sediments.

Uplift and erosion of the Lisburne occurred during Late Pennsylvanian time. Then the offshore, sub-wave-base, marine shales and siltstones of the Echoka and Ivishak were deposited. The irregular upward coarsening of both the Echoka and Ivishak indicates tectonic uplift of their northern source areas or a temporary shallowing of the sea.

The uppermost 100' of the Lisburne is Morawan in age. The following 2700' is Chesterian, and the basal 1200' of Lisburne is Late Meramecian. No age determinations have been made on the Permo-Triassic.