

Weber sandstone. The lower part of the Woodside is the time equivalent of the upper Park City (Phosphoria). The Woodside is cut by an unconformity, above which lies a conglomerate. The conglomerate was questionably classed as the basal member of the Ankareh by Sears (1926). The upper part of the Ankareh (?) of Sears consists of varicolored shales and sandstones and is directly overlain by the massive Navajo sandstone.

The conglomerate and the overlying varicolored beds are readily recognized from one end of the range to the other and constitute an unnamed lithologic unit which lies unconformably above the type Ankareh and below the restricted Nugget at the western end of the mountains, and unconformably above the Woodside and below the Navajo at the eastern end of the range. This unit is here named the Stanaker formation and the basal conglomerate, or grit, is named the Gartra grit member of the Stanaker formation. They are probably Upper Triassic in age.

The Jurassic formations of the western Uinta Mountains, from base upward are (1) Nugget sandstone, (2) Twin Creek limestone, (3) Preuss redbeds, (4) Stump sandstone, and (5) Morrison formation. Eastward along the mountains (1) the Nugget sandstone persists but is called Navajo to the east, (2) the Twin Creek limestone intertongues with the Carmel redbeds, (3) the Preuss redbeds grade into the cross-bedded Entrada sandstone, (4) the Stump sandstone grades into Curtis shales and limestones, and (5) the Morrison thins and becomes less conglomeratic. At the eastern end of the Uinta Mountains the Carmel redbeds thin out so that the Navajo is directly overlain by the Entrada, forming a single cross-bedded sandstone unit.

N. L. TALIAFERRO, University of California, Berkeley.

W. F. BARBAT, Standard Oil Company of California, Taft. Notes on the Geology of the Deep Coles Levee Well, Kern County, California.

The Standard Oil Company of California's well K.C.L. 20-13 attained a depth of 16,246 feet in 1944. The section penetrated includes 3560 feet of combined Tulare and San Joaquin formations, 3110 feet of Etchegoin formation, 1630 feet of the Reef Ridge shale, 1000 feet of McLure shale above the Stevens sand, 880 feet of Stevens sand, and 1875 feet of McLure shale below Stevens and above *Pulvinulinella gyroidinaformis*. The interval from *P. gyroidinaformis* at 12,056 feet to the top of the Santos shale at 15,230 feet consists mostly of cemented sandstone and firm, nearly barren, silty shale. Middle Miocene foraminifers were found at 13,423 feet and the Olcese and Rio Bravo-Vedder sand zones are recognized in the intervals 13,906-14,073 and 14,900-15,230 feet respectively. The Santos shale is very hard and dense below 15,800 feet where the electric-log character changes. A decrease of about 25 millivolts from the normal shale line and an increase in resistivity of 2 to 3 times that of the overlying shale are noted. Shale porosities drop from 3.4% and 2.3% at 15,539 feet and 15,651 feet to 1.03% and 0.29% at 15,981 feet and 16,166 feet. Petrographic studies by Taliaferro are incomplete and can not be reported in time for this presentation.

Core dips are low (3° - 10°) to 13,000 feet, then gradually rise to 65° at 16,166 feet. The maximum temperature at 16,186 feet was 400° F.

Subject to possible modification by the petrographic study, it is tentatively concluded that no metamorphic minerals have been formed by the load and shearing stresses of folding involved, but the rock at bottom is approaching the limit to which fine-grained sediments can be compressed without such changes.

EDWARD C. H. LAMMERS, Standard Oil Company of California, Los Angeles. Notes on Rocky Mountain Thrust Faults.

The low-angle thrust faults of the central Rocky Mountains are of two types. The faults along the Idaho-Wyoming border were formed when the exceptionally thick Paleozoic and Mesozoic strata of the Cordilleran geosyncline were intensely compressed during