March, 1943

Derby, # 4 Bernsdorf-Jankee
Sec. 33-14s-14w, SE NE
Elev. 1938'

Rotary dry hole

Pennsylvanian conglomerate 3370'-3378'

3370-3378 Marine limes and gray-green clay shales. Samples include small amounts of orange granular limestone; some colonial coral fragments; and about 5% loose chert fragments, white, pink, and red, of Cotter types. Marine conglomerate.

Land Wash 3378'-3388' Top, Subsea -1440'

3378-3388 Chert and red clay. Weathered cherts, both flinty and quartzose, showing red clay contacts. Cotter material probably as local land wash, possibly residuum. The pre-Pennsylvanian surface is approximately 3378'.

Residuum of Arbuckle 3388'-3406'

3388-3400 White cherts showing red clay contacts. Cherts are fresher, whiter than those above. Quartzose cherts lacking. Top arbitrary within a few feet. Probably residuum of upper Post Boyce.

3400-3406 Red clay, waxy, very sandy, with included green areas and some dark glauconite. Residuum of lower Post Boyce.

Arbuckle Top 3406' Penetration 24' Subsea -1468'

3406-3430 Dolomite, white, sandy, largely fine to medium but ranges from fine to coarsely crystalline. Sand grains medium ½ø and coarse, rarely plus 1 mm. Few red grains. Some sandy quartzose chert in upper part. Pre Cotter, Boyce sandy dolomite member.

Remarks: The restored top of the Pre Cotter cannot be accurately estimated because in this township the basal sandy facies of the Pre Cotter, here showing Boyce lithologic characteristics, is known to be an overlap facies related to the Pre Cambrian surface. This sandy facies may climb in the section as high as the upper part of the Post Boyce. At this location there should be 50' to 80' of Post Boyce section (restored thickness) making the restored top of the Pre Cotter between -1420' and -1390'.

RFW

Well was deepened by Derby in March 1947
reporting Granite Wash 3622 and Quartzite at 3662
TD 3664 Took 450 BWPH