Because of our acreage in the E½ of the NW of Sec. 31-14S-14W, the residues on three offset tests were run. The tops given below are the same as reported by Carmody and Brooks.

	Hartman & Blair #1 Rexroot NE NW NW 31-14S-14W	Phillips #1 Rex SE SW SW 30-14S-14W	Darby #1 Rexroot SW SE SW 30-14S-14W
Sinkhole Slump		[illegible]	3186-3199
Post-Boyce		3160-3168½	
Boyce Sdy. Dol.	3168-3185		3199-3215

None of the three have real Pennsylvanian congomerate, but coarse sand containing rare feldspar and quartzite fragments are scattered through the lower few feet of the Pennsylvanian limes and shales.

The highest well, -1403', is the Phillips #1 Rex, SE SW SW, 30-14S-14W. [illegible] It has a penetration of 6½' of sand-free, coarse, white, dolomite which belongs to the Post-Boyce member of the Pre-Cotter.

The Hartman & Blair #1 Rexroot, NE NW NW, 31-14S-14W, had top of Arbuckle at -1424'. Seventeen feet of medium to coarse, white, sandy, dolomite was drilled. This is a part of the Boyce Sandy Dolomite member of the Pre-Cotter.

Darby #1 Rexroot, SW SE SW, 30-14S-14W, [illegible] had top of dolomite at -1428' and top of porosity somewhere below -1441'. Cuttings from 3186-3199' show a mixture of white, coarsely crystalline, dolomite; [illegible] pink, much-weathered, fine to medium crystalline dolomite; and abundant chert, ~~from 3186-3199'~~. The cherts are varied in type, Cotter being most common, but some are undoubtedly Viola. Green shale and sandy green clays are also present. This [illegible] assortment of material is probably filling of a "fossil" sinkhole o r cavern, that is, a cavern which was formed when the whole Arbuckle section was intact and which has now been exposed by erosion. [illegible]
From 3199-3212' there is white sandy dolomite of the Boyce member of the Pre-Cotter. The wide gap between Cotter and Boyce precludes the possibility of Cotter residuum in place.

The pre-Pennsylvanian surface of this immediate area is Boyce [illegible] or Post-Boyce, the latter being present in spots which were topographically high. The areal trace of the contact will be highly irregular, due to topography. Not enough work has been done in nearby areas to delineate the regional and local positions of this boundary. The Phillips #2 Rex, in the NW SW SW, [illegible]14S-14W, was reported by Carmody as having Cotter residuum from 3196-3209', below which point samples were not available. It is probable that this Cotter residuum is similar to the sink filling in the above-described Darby test.

Our lease in the E½ of the NW of 30-14S-14W is likely to have spotty production because of the presence of three types of lithology, the Boyce, Post-Boyce, and the sinkhole filling. The distribution will be strongly influenced by local topography and is unpredictable. The areal extent of the sinkhole filling should be relatively small,but its presence impairs the possiblities of the northernmost twenty acres. As the regional dip of the Arbuckle should be to the south and southeast, there is greater possibility of production from the Post-Boyce dolomite on the south end of the lease. Inasmuch as the Post-Boyce normally has better reservoir capacity than the Boyce sandy dolomite, the south end of the lease has the best possibilities.

March, 1940.

Darby #1 Rexroot,
SW SE SW, 30-14S-14W,
Elevation 1758'

Pennsylvanian conglomerate 3174-3186'

3174-3186 Coarse sand included in lime and shale.

Arbuckle Top 3186' Penetration 29' Sub-sea, minus 1428'.

3186-3199 Dolomites, mixed white coarse and pink medium to fine, the latter much weathered. Chert is abundant, amounting to as muchas 50% in some samples. Much of the chert is Cotter but gray-brown chert containing cruciform sponge spicules characteristic of the Viola is common. Also some green shales and light green shaly clay.
This material is probably filling of an old sinkhole which was formed at a time when the Arbuckle section was intact. Later erosion has left it at the surface.

3199-3212 Sandy dolomite. Boyce member of the Pre-Cotter.
3212-3215 No samples.

Later called 3201 Top Boyce

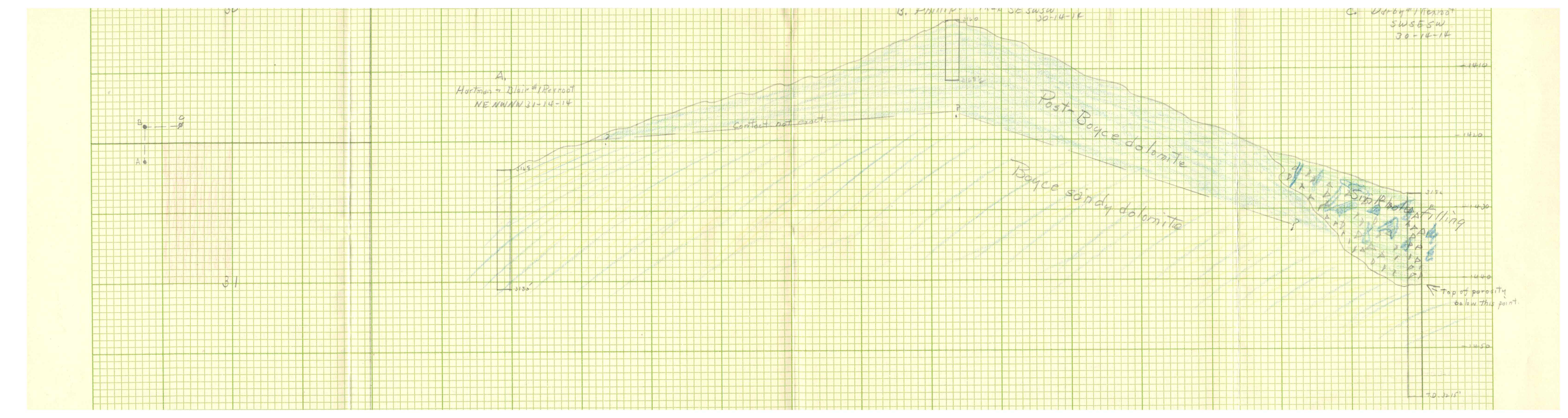
July, 1942.

Supplementary sheet on

Darby #1 Rexroot,
SW SE SW, ~~31~~ 30-14S-14W
reported on sheet of March, 1940.

On discussion of interval from 3186-99' add comment that this interval is dolomite of the Post-Boyce member of the Pre-Cotter. It is apparent that this sinkhole or underground channel is in Post-Boyce. On discussion of interval from 3199-3212' add comment the 3199-3207' is Post-Boyce and that the top of the Boyce is questionably placed at 3207'. The restored top of Pre-Cotter is estimated at -1374', and is also questionable.

ML


A
B
C
A.
Hartman & Blair #1 Perrodt
NE NW NW 31-14-14
Contact not exact.
Post-Bogce dolomite
Bogce sandy dolomite
Top of porosity
below this point.
TD 3315'


Cutler
sinkhole
Post-Boyce
Boyce
Pre-Penn erosion surface.