

MAILGRAM

TO BE ANSWERED BY WIRE

Wichita, Kansas,
September 14, 1936.

Bernard - Tulsa
Price - Chase
Littlefield - Tulsa

Price has asked that we furnish you information on two water disposal wells, namely, Empire, No. 3 Proffitt, SW/c NW SE 6-20S-9W, and Empire, No. 1 Malone, SW/c SE NW 19-20S-9W. Carmody has examined these samples today and reports the following tops:

Empire, No. 3 Proffitt:

3240 feet	Base Kansas City
3250 feet	Top Simpson
3282 feet	Top Siliceous lime
3617 feet	Total depth

Empire, No. 1 Malone:

3320 feet	Base Kansas City
3333 feet	Top Pennsylvanian basal conglomerate
3335 feet	Top Simpson
3374 feet	Top Siliceous lime
3631 feet	Total depth

Carmody believes that both wells start in Miller-Purcell and that both wells stop in Cotter. Empire, No. 1 Malone set 8-inch at 3400 feet and no further pipe was set. At 3565 feet it took 50 barrels of water per hour under gravity and was then drilled to 3631 feet, total depth, and the entire interval from 3565 to 3631 feet was then acidized with 1,000 gallons, and after acidization the test took 75 barrels of water per hour. It is estimated that the test is capable of taking from 1500 to 1800 barrels of water a day. Empire, No. 3 Proffitt set 8-inch pipe at 3282 feet and set 213 feet of 6-inch liner at 3313 feet, which was cemented with 20 sacks. All of the water from the Proffitt lease is now run into ponds and the test is only used occasionally so that no real test of its capabilities has been made, but the Empire office believes that it is capable of only taking from 300 to 350 barrels of water per day.

Carmody has also examined another water disposal hole in this area besides Phillips, No. 6 Link, which is taking water from pre-Cotter sand, and on which Price reported, namely, Empire, No. 4 Myers, NW/c SE SW 21-19S-9W. His tops are:

3182 feet	Base Kansas City
3211 feet	Top Siliceous lime
	(with no Simpson and with no Penn. basal congl. present)
3616 feet	Total depth

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(Continued)

This test set 8-inch pipe at 3154 feet and cemented 425 feet of 6-inch liner at 3338 feet. At the total depth it had not penetrated either the Everleigh or the basal sand. At 3460 feet it took 41 barrels of water in $1\frac{1}{2}$ hours, and at 3606 feet it took 130 barrels of water in 2 hours.

Based on our information, Phillips, No. 6 Link is the only test in this area to have reached pre-Cambrian, and is the only test in which the pre-Cotter Everleigh-basal sand is the water intake horizon. The other three tests all take their water higher in the Siliceous lime, and Carmody is inclined to believe that all of their intake horizons are in the Cotter, with the exception of the horizon at 3606 feet in Empire, No. 4 Myers, which he thinks is in pre-Cotter dolomite.

Your attention, however, is called to the fact that if in the case of Empire, No. 3 Proffitt the total depth is still in Cotter, and if Littlefield's interval of 300 feet for the pre-Cotter holds in this township, then this test would not reach pre-Cambrian until about 3950 feet. As far as we know, Littlefield has not examined samples on any of these four wells, but he has samples on all of these wells in his files.

Should there be any further information which you desire, please let me know.

Anthony Folger

AF:AS