

5/35-1
Umatilla

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GROUND WATER BRANCH
Box 3418 - 623 Post Office Building
Portland 8, Oregon

March 30, 1951

Mr. Robert L. Brunton, City Manager
City Hall
Milton-Freewater, Oregon

RECEIVED
APR 2 1951
STATE ENGINEER
SALEM, OREGON

Dear Mr. Brunton:

In regard to your March 23 inquiry for records bearing on your plan to secure more water from the wells of the former city of Freewater by increasing the pump capacity:

Of the two city wells, excluding the recent nonproductive "fault-zone" well, this office has some records on the younger "Main Street" well, but little data on the older "City Hall" well. Of the older well I could not even learn the depth, casing, diameter, or driller, though I have it on my list for additional canvassing. I believe Durand drilled it years ago and I have meant to ask him about it. It was equipped with a pump of 250-gallons-per-minute capacity when I saw it, but I could not determine its pumping water level and static water level from the pumpman or by entry into the well myself.

On the newer well we have a log taken from the driller's record. A copy is enclosed in case you do not have one. I did not get the static water level but from known static water levels of wells in that vicinity, I assumed it was somewhere near 40 feet during the winter months. A pumping test run at this time the well was finished in 1936 showed 750 gallon per minute with water level drawn down to 47 feet below the surface and 1,025 gallons per minute with water level drawn down to 68 feet below the surface. A pump of 850-gallons-per-minute capacity was on the well when I visited it 2 years ago. Though that observation may partially answer your question, it would probably be necessary to run pump tests to obtain the correctly designed pump for the greater yield you contemplate.

There is some interference, I understand, between your Main Street "younger" well and the Utah Canning Co. well 500± feet to the northeast. The logs of the wells are similar. The Utah Canning Co. well shows that the basalt contained water whose static level was only 15 feet below the surface until the zone at 468-528 feet depth was penetrated; at that time the static water level dropped to 41 feet from the surface. If such is the case in your well, some water may run from the higher strata down the well and out the lower zone. It is suggested that the amount of such change, if any in your well, should be determined as a

matter of planning for a new pump. This office has a well-current meter with which we can measure interchange; if you will notify us when the well is to be clear of pumping equipment. Such an interchange measurement is of value as data applying to well construction over the entire Columbia River basalt area of Oregon and Washington.

I hope this information will answer some of your questions.

Sincerely yours,

R. C. Newcomb
District Geologist

RCN:rls
Enclosure - 1 log

CC: Mr. Chas. E. Stricklin ✓