



July 17, 1996

Our File: 93G/15/42

Bob Radloff, P. Eng.
Manager, Environmental Services
City of Prince George
1100 Patricia Boulevard
Prince George, BC V2L 3V9

Re: PW624

Dear B. Radloff, P. Eng.

As requested, I have briefly reviewed the data that you sent me on the pumping test of production well PW624 and hereby provide some comments on the test results.

Based on the limited data supplied, I would agree that a significant amount of water is likely drawn from the river side during pumping of PW624. However, interference drawdown in the Yard well was likely also measured, indicating that water is also drawn from the Yard well side (see the drawdown and recovery plots enclosed). This makes sense because as PW624 (or any other well) begins pumping, the water level in the pumping well is lowered, which causes water to initially be drawn towards the well from ALL sides. The enclosed section shows the non-pumping water levels in the three wells (from left to right: Yard, PW624, and River wells) prior to pumping (with the main pump) and pumping water levels just prior to pump shut-off. The section shows a "cone of depression" in the water level exists during pumping to draw water from all sides of PW624. The fact that less drawdown was measured at the River well than at the Yard well (even though the River well is closer to PW624) suggests that the Fraser River is likely a major source of recharge to PW624 at this location, at the time of testing.

A pumping test of longer duration (to check if water levels stabilize), testing of water quality of the well and Fraser River during pumping (water chemistry ought to be very similar), and regular monitoring of the non-pumping water level elevations in all three wells (to determine the slope of the ambient hydraulic gradient) would firm up the interpretation. Regular monitoring of pumping and non-pumping water levels would confirm whether the Fraser River acts as a source of recharge year-round or just at certain times of the year.

APK / file



I hope this is of some help to you in understanding the hydraulic regime at PW624. If you have any questions about my comments, please don't hesitate to contact me to discuss (604-356-5062).

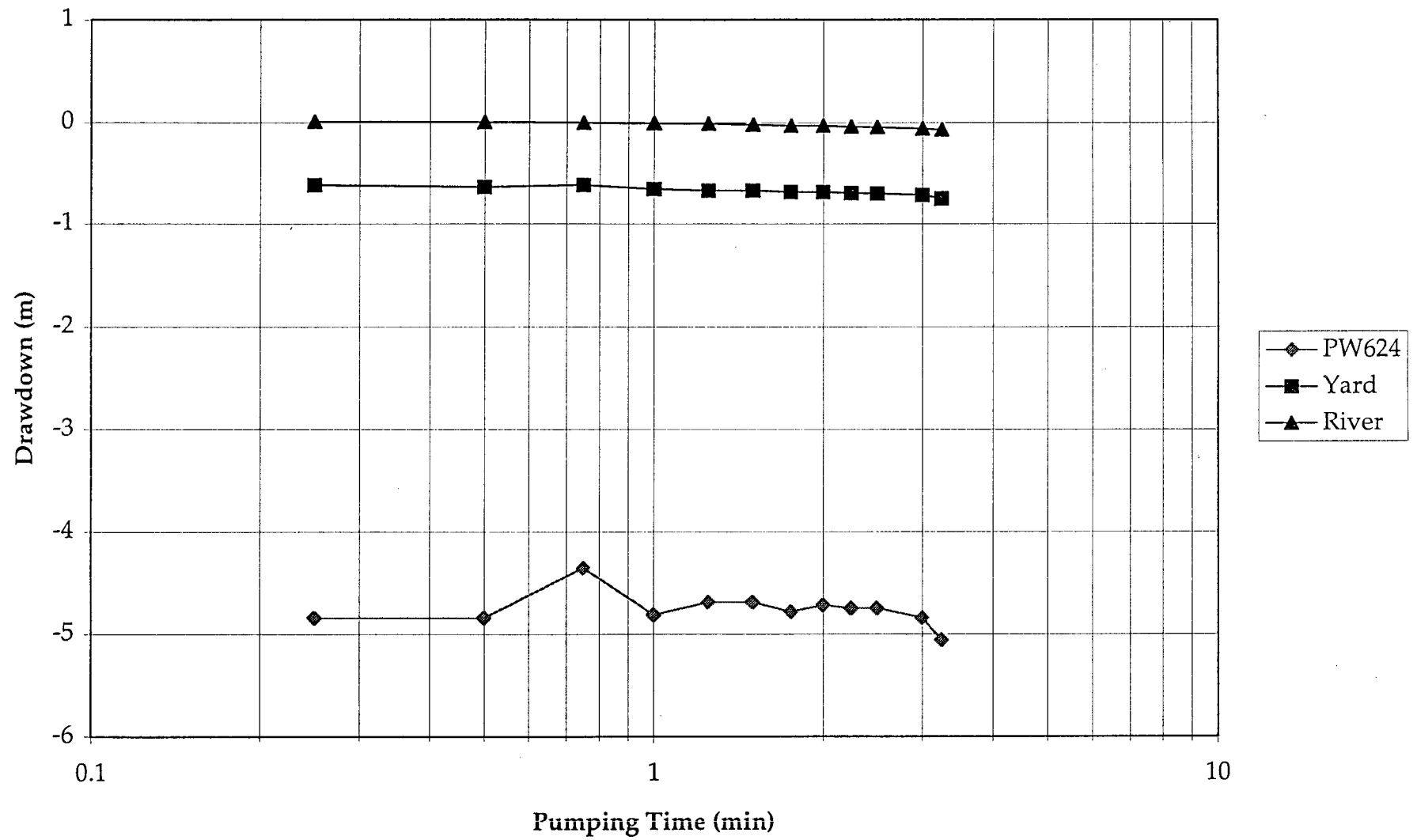
Sincerely,

A handwritten signature in black ink, appearing to read "MW".

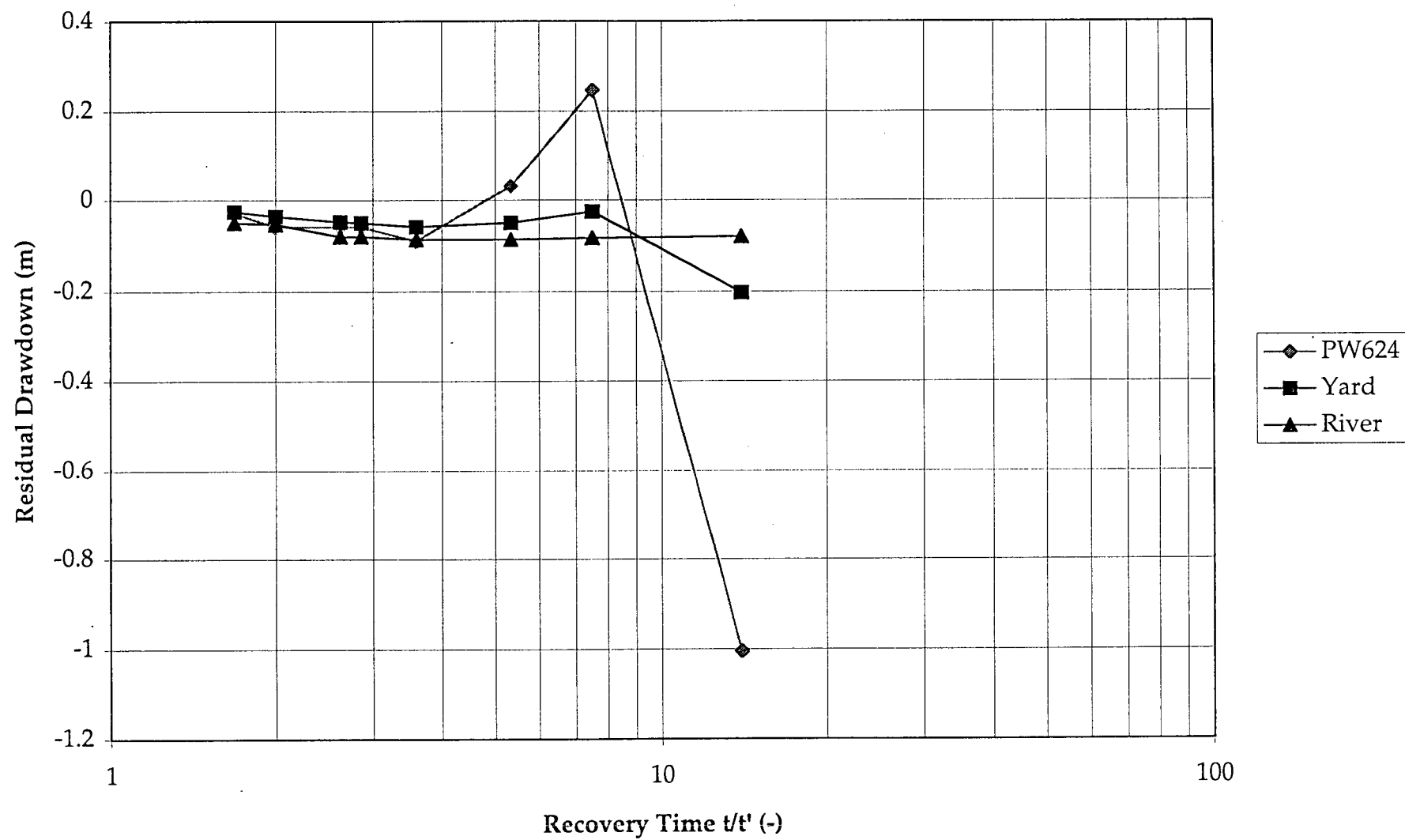
Mike Wei
Sr. Groundwater Hydrologist
Groundwater Section

Enclosures

Drawdown during brief pumping of PW624 (main pump), Prince George, BC



Recovery after brief pumping of PW624 (main pump), Prince George, BC



Section through Yard, PW624, and River wells, Prince George, BC

