

March 23, 1977

International Groundwater Consultants Ltd.,
1401 Bewicke Avenue,
North Vancouver, B.C. V7M 3C7

Attention: Mr. W. L. Brown, President

Dear Sir:

Re: Kingswood Well Retest - Saanich Peninsula

During a meeting last week with Mr. M. Williams of the Capital Regional District we were informed that your firm would be carrying out immediately a long term (10 days) winter test on the Kingswood well. As you know we were asked by the Water Rights Branch to review the results of a previous test carried out on this well and at that time we voiced our concern on the effects pumping from this well would have on nearby domestic wells. Because of our continued concern over this problem I instructed our groundwater section staff to set up a number of additional domestic wells in the area as temporary observation wells for the duration of the pumping test and recovery period on the Kingswood well.

However due to staff commitments and priorities I find we will be unable to continue this monitoring program for the duration of the test period. I would therefore request that you take up this matter with your clients, the Capital Regional District, with a view to your firm continuing the monitoring program we initiated.

As I outlined to you at our meeting yesterday we are prepared to let your personnel continue to inspect the recorder charts installed on our observation wells provided the continuous operation of these charts are not interrupted in any way and that the recorder boxes are locked after each inspection. In this regard we would also request that our office be advised of any malfunctions or problems detected in the recorder or chart operations so that the problem can be quickly remedied by our staff.

Mr. Hunter ~~29/3/77~~

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Mr. Hobart ^{APK}, Mr. Indersell ^{ELL2}

Mr. Hodge ^{not} Jim P

Mr. Jones & file ^{not}

In conclusion I should also note that continuous large scale pumping from the Kingswood well during the summer and fall periods of minimum to no recharge from precipitation may interfere with the operations of a number of domestic wells in the area. We are not sure at this time that a determination of a "safe" yield for the Kingswood well can be determined on the basis of a winter pumping test.

Attached is a summary of some details on the wells we would like to see monitored. Consideration should also be given to monitoring additional wells to the west and east of the Kingswood well.

We will make copies of all recorder charts for you as they become available.

Yours truly,



J. C. Foweraker, Head
Groundwater Section
Hydrology Division
Water Investigations Branch

JCF/dmc
Attach.

c.c. M. C. Williams, P. Eng.
Capital Regional District
524 Yates Street, Victoria, B.C.

b.c.c. J. W. Webber
Water Rights Branch

MONITOR WELLS - KINGSWOOD WELL PUMPING TEST

SAANICH PENINSULA

(see attached map for well locations)

I. Established observation wells with automatic water level recorders.

L. Vrebosch well

Owners address: 3339 Maplewood

Phone: 386-9772

This is one of our normal network observation wells. The recorder chart runs for 32 days on a metric scale. A response of about ~~2 1/2~~ 2 feet decline in water level every ~~36~~ hours has been noticed since pumping began on the Kingswood well. The following readings have been recorded from the tape on the recorder and show the change that has taken place in the water level. These readings are not adjusted to true depth of water below the well head datum.

	<u>Time</u>	<u>Readings</u>
March 18, 1977	14:40	1.16 m.
	18:10	1.23 m.
March 19, 1977	8:15	1.43 m.
	12:10	1.53 m.
March 20, 1977	8:35	1.87 m.
	14:10	1.97 m.
March 21, 1977	7:00	2.24 m.
	12:00	2.32 m.

Pemberton Holmes well

Owners address: c/o 1000 Government Street Phone: 384-8124
Attention: Mr. Bovey

This is one of our normal network observation wells. The recorder gear ratio has been changed from a 32 day chart to an 8 day chart for the duration of the Kingswood test period. A decline of water level of about 0.4 feet has been recorded since the beginning of the test period.

K. Jones well

Owners address: 5145 Cordova Bay Road

Phone: 658-5129

This is one of our normal network observation wells, which is manually read on a monthly basis. A recorder has been installed by the Section for the duration of the Kingswood well test. The recorder chart runs for 8 days. The water level appears to be still increasing in this well.

2. Temporary observation well with automatic water level chart recorder

G. Mailleue well

Owners address: 1310 Clayton Road

Phone: 656-3279

This well was set up by the Section as a temporary observation well for the duration of the Kingswood well test. A recorder with an 8 day chart has been installed and the water level in this well has shown a decline since the start of pumping on the Kingswood well.

3. Wells available for manual monitoring

K. N. Pleasance well

Owners address: 1216 Clayton Road

Phone: 656-6030

This well was formerly incorporated in our observation well network. (No. ~~WB-107~~ ^{WB-108}). However when Mr. Pleasance put his well into production we commenced reading the Vrebosch well on a permanent basis. Mr. Pleasance (see copy of his memo attached) is currently taking readings on the depth of water in his well. Measurements are being taken from the top of the well casing and have been taken at a time when the pump is not running. This well can be used by the Consulting Groundwater Engineer for monitoring purposes. Since the commencement of pumping on the Kingswood well on March 17th at about 1:00 p.m., the water level in the Pleasance well has declined 7½ feet.

	<u>Time</u>	<u>Readings (feet)</u>
March 18, 1977	11:00	14.94
	14:30	15.25
	18:00	15.64
March 19, 1977	08:10	17.10
	12:00	17.65
	18:45	18.19
March 20, 1977	08:30	19.02
	11:00	19.27
	14:10	19.60
	19:00	19.96
March 21, 1977	07:00	20.78
	11:45	21.40
	19:45	21.89
March 22, 1977	07:00	22.50

J. Marko well

Owners address: 1444 Walns Road

Our section staff have made initial contact with this owner. Permission has been given for manual readings to be taken every other day.

H. [redacted] gelsen well

Owners address: 1136 Clayton Road

Phone: 656-6760

This well is a good producer and it may show a significant drop in water level due to the Kingswood well pumping.

R. Stern well

Owners address: 1070 Wains Road

Phone: 656-7081

This is a new well not being used at the present time.

K. MacKay well (not shown on map attached)

Owner may be contacted at 387-3988. This is a new well located immediately to the southwest of the Pemberton Holmes well and on the west side of Saanich Road.

J C Fowler

MEMORANDUM

TO.....Dr. J. C. Foweraker, Head.....
.....Groundwater Section.....

FROM K. N. Pleasance, P. Eng.
Sr. Hydraulic Engineer
Water Supply Section.....

March 22 19 77

SUBJECT.....Observation Well for Kingswood well Testing.....

OUR FILE.....

YOUR FILE.....

The following are measurements taken on my well (formerly WR 106-72) since March 18, 1977. These measurements are from the top of my well casing to the observed water level in each case. All measurements have been taken during a period of time when my pump has not been running. If I observed my pump running at a time when I wished to take a reading, I waited for several minutes after the pump had stopped before taking my reading. Perhaps these readings will be of assistance in determining the pumping capacity of the Kingswood well. I shall continue to take readings for my own use, and would be pleased to submit these readings to you, or the Consultant performing the pump test, if requested. Also, the Consultant is welcome to use my well for monitoring purposes if desired.

<u>Date</u>	<u>Time</u>	<u>Reading</u>
March 18	1100	14.94
	1430	15.25
	1800	15.64
March 19	0810	17.10
	1200	17.65
	1845	18.19
March 20	0830	19.02
	1100	19.27
	1410	19.60
	1900	19.96
March 21	0700	20.78
	1145	21.40
	1945	21.89
March 22	0700	22.50

Ken Pleasance

K. N. Pleasance