Province of British Columbia

MEMORANDUM

To: A. P. Kohut
Senior Geological Engineer
Groundwater Section

Date: June 20, 1978

File: 92-B-14

Re: Scott Point Waterworks District - Water Supply

Introduction

At the request of the Community Water Supply Division, Water Rights Branch, on behalf of the Scott Point Waterworks District, I supervised the drilling of a test/production well at Site C located on the right-of-way of the Long Habour-Vesuvius Bay Highway, approximately 1/4 mile west of the Long Harbour ferry terminal (see enclosed map). The following report is a summary of the drilling operation, general observations, conclusions and recommendations.

Drilling Operation

On May 29, 1978, Ken's Drilling Co. Ltd. arrived on the site with an air rotary drill rig, operated by Hardy Jorgensen and Ben Schulz, and commenced to drill a six-inch diameter test/production well. By the end of the day, they had penetrated approximately 12 feet of surficial material and eight feet of shale bedrock. A 20-foot section of casing was lowered down the hole, leaving one-foot sticking up above the ground level. The hole to this depth was dry. On May 30, drilling continued to a depth of 250 feet. Very little water (approximately 10 gph) was encountered. After a discussion with several Scott Point trustees, it was decided to drill deeper in the hope of encountering a permeable water-bearing fracture zone. On May 31, prior to further drilling, it was noticed that the well had filled with water overnight. After the hole was flushed, drilling continued to a depth of 350 feet. Other than a thin fracture zone (between 276-278 feet) which yielded approximately 20 gph, the last 100 feet of drilling (250-350 feet) proved unsuccessful. The estimated total yield of the well at the end of drilling was 1/2 gpm.

Conclusions

1. The drilling of the test/production water well to a depth of 350 feet was unsuccessful in proving a required 15 gpm yield for the Scott Point Waterworks District.

2. The log of the hole is as follows:

Depth (ft.)	Description
0-12	- Gravel, silty, shaley, subrounded, medium, dry
12-350	- Shale, dark grey-blue, massive - Water at 127' (estimate 10 gph) - Water at 276' (estimate 20 gph)

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3. It was thought that the shale would be more fractured in this area since an aerial photograph analysis (Zubel, 1978) indicated a possible fault zone in the vicinity of the test well. The results of drilling indicated that the shale was massive, with very few open fractures.

4. The surficial materials encountered during drilling (0-12 feet) were not water-bearing at this location.

Recommendations

The results of drilling indicate that the shale in this area is a poor aquifer (0-4 gpm). It is recommended that there be no further groundwater exploration in the shale in this area. Future explorations for groundwater should consider sandstone bedrock areas.

Marc Zubel

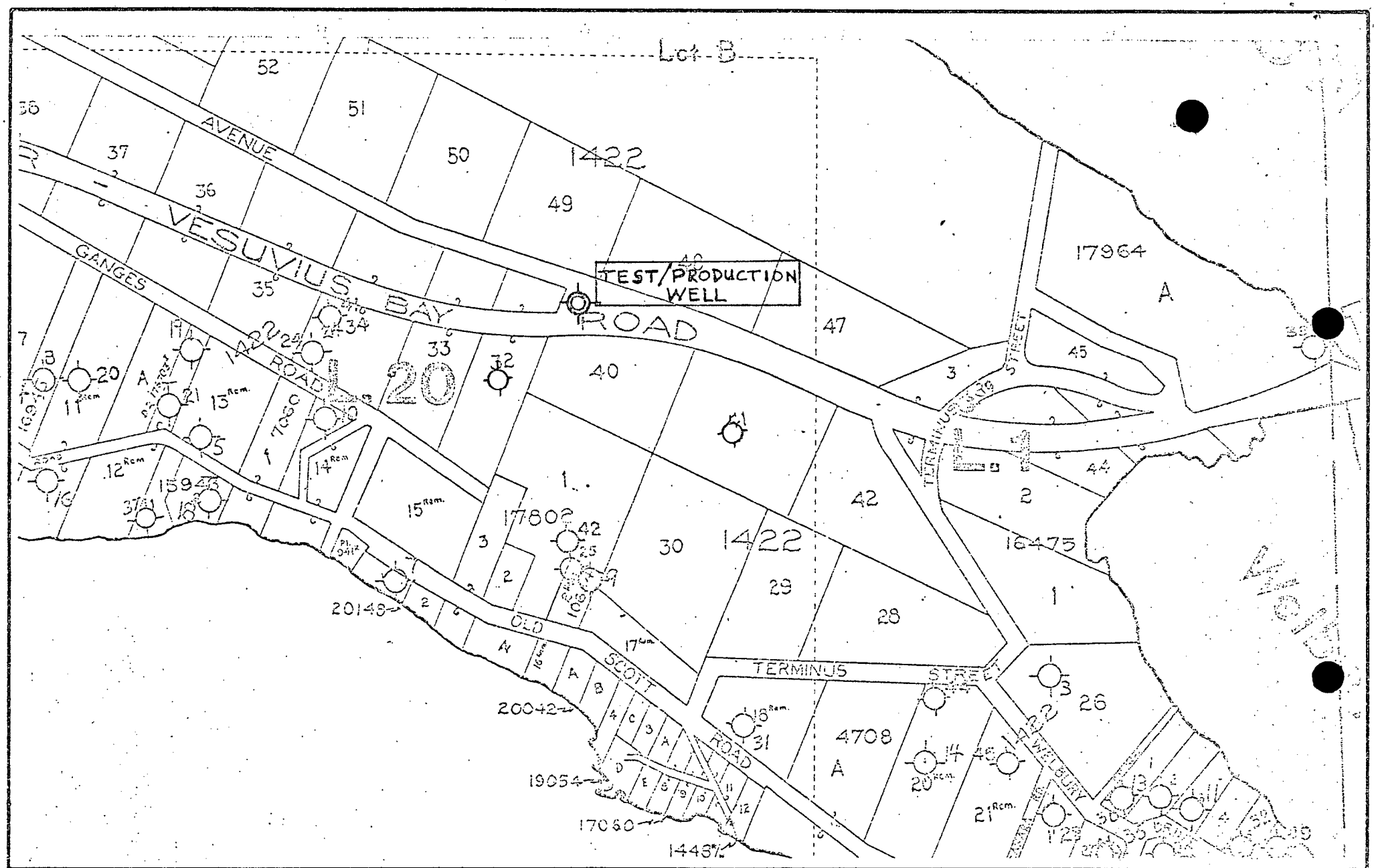
M. Zubel
Geological Engineer
Groundwater Section

MZ/bmg

Attach.

Reference

Zubel, M. (1978) "Scott Point Waterworks District - Water Supply". Groundwater Section Memorandum, February 3, 1978.



BRITISH COLUMBIA
MINISTRY OF THE ENVIRONMENT
ENVIRONMENTAL AND ENGINEERING SERVICES
WATER INVESTIGATIONS BRANCH

TO ACCOMPANY REPORT ON

Scott Point Waterworks District - Water Supply

SCALE: VERT.
HOR. 1" = 500'

DATE
JUNE, 78

M. ZUBEL ENGINEER

FILE No. 92-B-14 DWG. No.