78-092

1984 04 12

A & A Plumbing & Heating Ltd.
1502 Boundary
Burnaby, B.C.
V5K 4V4

ATTENTION: Mr. Jim Linn

SUBJECT: **Test Pumping of Irrigation Well**
(Test Well No. 2)
Eagle Ridge Hospital

Dear Sirs:

The well at the Eagle Ridge Hospital that is to be used for lawn irrigation was completed in October of 1979 and has been idle since that time. The results of pumping tests run when the well was drilled indicated an optimum pumping rate of 75 to 100 Igpm.

To determine the present capacity of the well, Mr. R.B. Erdman of this office ran a pumping test on April 5, 1984. The well had been measured by A & A personnel to be 112 feet deep. The original constructed depth of the well was 114 feet. The difference in the two figures may be caused by a difference in measuring points or there may be two feet of material in the bottom of the screen. The presence of two feet of material will not markedly reduce the productive capacity of the well.

Water level mesurements taken before the start of pumping shows a static water level of twenty feet. The static water level when the well was constructed was twenty-one feet. The near same static water level would indicate that the aquifer is not being depleted.

At the start of pumping, a black coloured water was pumped from the well for less than one minute.

Continued...

A plot of the drawdown information obtained from the April 5 test when the well was pumping at a rate of 100 Igpm indicates that no or very little deterioration has taken place in the well. After one hour of pumping, the water level in the well had reached a depth of 72.16 feet. The top of the well screens are at 94 feet so that there is an additional 22 feet that the water level could be lowered in the well.

It is recommended that the well not be pumped at more than 75 Igpm to allow ample safety for dry summer weather which, coupled with high usage will cause additional demands on the well.

The performance curve supplied with the pump shows that with a pressure of 50 psi at surface the pump will supply 75 Igpm. The gate valve should be used to maintain this pressure or to keep the well from being overpumped.

It is our understanding that three probes are to be placed in the well. A low level alarm probe, a cut-off probe and a restart probe. It is recommended that the low level alarm probe be set at 94 feet (at the top of the well screen). The cut-off probe should be set at 92 feet and the restart probe at approximately 60 feet. The alarm and cut-off probes are set above the well screen so that the water levels in the well will not be pumped down below the top of the well screen. The probes should be attached to the pump column otherwise the exact depth of their settings cannot be assured.

If any of the above needs clarification or amplification, please do not hesitate to contact us.

Yours very truly,

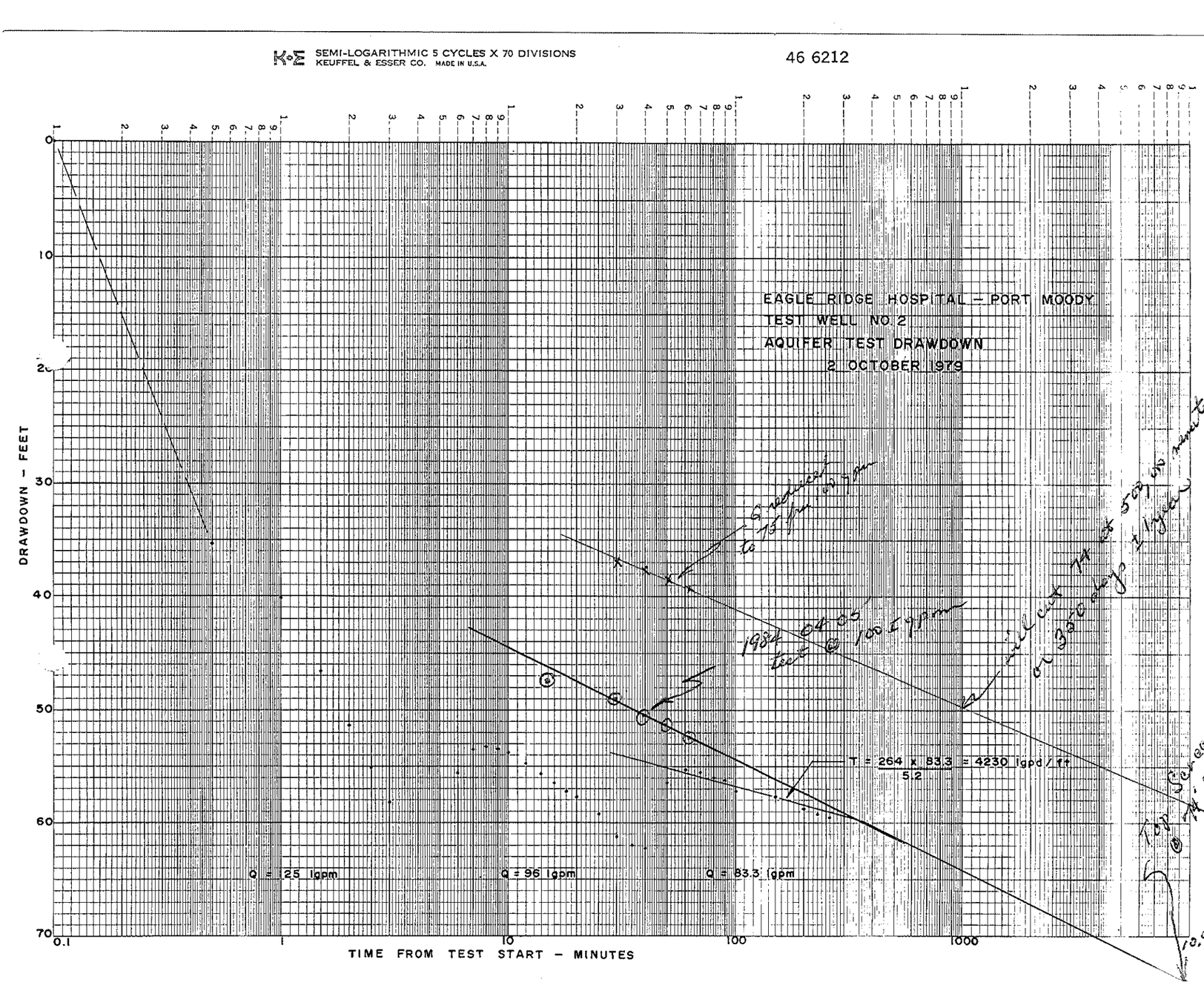
BROWN, ERDMAN & TURNER LTD.

W.L. Brown, P. Eng.

RBE/sy

K&E SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 6212



BROWN, ERDMAN & ASSOCIATES LTD.
1401 BEWICKE AVENUE, NORTH VANCOUVER, BRITISH COLUMBIA V7M 3C7
TELEPHONE 986-1557

78-092

October 4, 1979

Paul Smith and Associates,
Architects,
2425 Quebec Street,
Vancouver, B.C.
V5T 4L6

Attention: Mr. Michael Weller

Subject: Eagle Ridge Hospital - Production Well

Dear Sirs:

The subject production well was drilled and tested during September and October, 1979. Enclosed are a well lithology and construction diagram, time drawdown plots of pumping tests, field data collected during pumping tests, and the chemical analysis of the groundwater.

During drilling, a series of sands and sands and gravels, underlying 33 feet of glacial till, was encountered to depths of 114 feet. Twenty feet of 8 inch telescopic stainless steel well screens were installed in sandy gravels occurring between 94 and 114 feet. The static water level for these gravels is 21 feet below ground surface. The well was then developed and pump tested on September 17, 1979. On analyzing the results of this pump test, it was thought that further development would enhance the yield of the well. The well was, therefore, re-developed and another short pump test conducted on October 2, 1979.

Results of these pumps tests are shown on the enclosed time drawdown plots. In summary, these pump tests indicate that the aquifer encountered has a transmissivity of between 4,000 and 7,000 igpd/ft. and that the well has a specific capacity of between 1 and 2 igpm per foot of drawdown. In addition, the time-drawdown plots indicate that a negative hydraulic boundary was encountered during testing which shows that the migrating cone of depression reached the physical edge of the aquifer. The presence of this aquifer boundary naturally increases drawdown when compared to the response of an infinite aquifer. With an available drawdown of 70 feet and considering the values and conditions mentioned above, we consider that the production well has an optimum pumping rate of 75 to 100 igpm.

cont....2/

As can be seen from the enclosed chemical analysis, the groundwater is potable and all constituents tested are within acceptable concentrations. The temperature of the groundwater is 9.5°C. The borderline values of phosphate and manganese should not cause any problems.

Although no invoices have been received to date, the approximate cost of this production well is $12,000.00. We recommend that one further attempt should be made to obtain your required volume of 375 igpm from groundwater sources. This would entail the drilling of a 250 feet, 8 inch production water well located in the South West corner of the property near the Ioco Road. This well would be designed to obtain groundwater from the shallower aquifer encountered in the present well and also from the deeper aquifer described in our letter of June 20, 1978. We estimate that the chances of drilling an entirely successful production well (i.e. one that would supply 250 to 300 igpm) are about 65%, while the chances for obtaining 150 to 200 igpm are about 90%. The approximate cost for this well would be:

Mobilization and Demobilization			$ 250.00
Drill and case, 8 inch well,	250 feet	@ $40	10,000.00
Well screens,	40 feet	@ $80/ft.	3,200.00
Development,	25 hours	@ $55/hr.	1,375.00
Other hourly work,	10 hours	@ $85/hr.	850.00
Test pumping,	30 hours	@ $32/hr.	960.00
Mobilization and demobilization, test pump			200.00
	TOTAL:		$ 16,835.00
	or about		$ 17,000.00

If any of the above needs amplification or clarification, please do not hesitate to contact us.

Thank you for the opportunity to be involved in this project.

Yours truly,

BROWN, ERDMAN & ASSOCIATES LTD.

R.I.J. Vogwill
Sr. Hydrogeologist

RIJV/lc.

BROWN, ERDMAN & ASSOCIATES LTD.
NORTH VANCOUVER, BRITISH COLUMBIA

FIRST PUMP TEST.

WELL OWNER EAGLE RIDGE HOSPITAL
LOCATION PT. MOODY

WELL NO. 2
JOB NO. 78-092

DRAWDOWN ☑
RECOVERY ☐

DATE	TIME	ELAPSED TIME MINUTES	DEPTH TO WATER (FT)	Q / I / GPM	DRAWDOWN (FT)	REMARKS
Sept. 17/79	15:00	—	21.63			Static Water Level.
		0.5	46.37	125	24.74	Pump suction ± 87 ft; 3"x4" orifice
		1	50.62		28.99	
		1.5	54.38		32.75	
		2	59.22		37.59	
		2.5	59.85		38.22	
		3	62.84		41.21	
		3.5	63.76		42.13	
		4	65.39		43.76	
		4.5	66.88		45.25	
	15:05	5	68.22		46.59	
		6	70.28		48.65	
		7	72.61		50.98	
		8	74.54		52.91	
		9	75.95		54.32	
	15:10	10	77.28		55.65	
		12	79.46		57.83	
		14	81.36		59.73	
		16	83.15		61.52	
		18	84.56		62.93	
	15:20	20	86.92	125	65.29	Cut back discharge at 22 min.
		25	81.54	108	59.91	
	15:30	30	81.84		60.21	
		35	82.45		60.82	
	15:40	40	83.38		61.75	
		45	84.26		62.63	
	15:50	50	84.96		63.33	
	16:00	60	86.36	108	64.67	Cut back discharge at 65 min.
	16:10	70	81.34	96	59.71	
	16:20	80	80.51		58.88	
	16:30	90	80.57		58.94	

BROWN, ERDMAN & ASSOCIATES LTD.
NORTH VANCOUVER, BRITISH COLUMBIA

FIRST PUMP TEST

WELL OWNER EAGLE RIDGE HOSPITAL
LOCATION PT. MOODY

WELL NO. 2
JOB NO. 78-092

DRAWDOWN ☑
RECOVERY ☐

DATE	TIME	ELAPSED TIME MINUTES	DEPTH TO WATER (FT)	Q / I / GPM	DRAWDOWN (FT.)	REMARKS
Sept. 17/79	16:50	110	80.96	96	59.33	
	17:00	120	81.30		59.67	
	17:10	130	81.46		59.83	
	17:20	140	81.67		60.04	
	17:30	150	81.89		60.26	
	18:20	200	82.75		61.12	
	19:10	250	83.53		61.90	
	20:00	300	84.08	96	62.45	Cut back discharge at 300 min.
	20:10	310	77.54	83.3	55.91	
	20:20	320	76.58		54.95	
	20:30	330	75.96		54.33	
	20:40	340	75.67		54.04	
	20:50	350	75.50		53.87	
	21:40	400	75.04		53.41	
	22:30	450	75.00		53.37	
	23:20	500	75.00		53.37	
Sept 18/79	00:10	550	75.00		53.37	
	01:00	600	74.95		53.32	
	01:50	650	74.94		53.31	
	02:40	700	75.00		53.37	
	03:30	750	74.99		53.36	
	04:20	800	75.10		53.47	
	05:10	850	75.18		53.55	
	06:00	900	75.29		53.66	
	06:50	950	75.31		53.68	
	07:40	1000	75.38		53.75	
	08:30	1050	75.43		53.80	
	09:20	1100	75.54		53.91	
	10:10	1150	75.63		54.00	
	11:00	1200	75.64	83.3	54.01	
	11:50	1250	75.63		54.00	

FIRST PUMP TEST

BROWN, ERDMAN & ASSOCIATES LTD.
NORTH VANCOUVER, BRITISH COLUMBIA

WELL OWNER EAGLE RIDGE HOSPITAL
LOCATION PT. MOODY.
WELL NO. 2
JOB NO. 78-092
DRAWDOWN ☑
RECOVERY ☐

DATE	TIME	ELAPSED TIME MINUTES	DEPTH TO WATER (FT)	Q / I / GPM	DRAWDOWN (FT.)	REMARKS
Sept 18/79	13:30	1350	75.67	83.3	54.04	
	14:20	1400	75.70		54.07	
	15:10	1450	75.79		54.16	
	16:00	1500	75.84		54.21	Water sample taken
	16:50	1550	75.89		54.26	

BROWN, ERDMAN & ASSOCIATES LTD.
NORTH VANCOUVER, BRITISH COLUMBIA

SECOND PUMP TEST

PAGE 1

WELL OWNER EAGLE RIDGE HOSPITAL
LOCATION PT. MOODY

WELL NO. 2
JOB NO. 78-092

DRAWDOWN ☑
RECOVERY ☐

DATE	TIME	ELAPSED TIME MINUTES	DEPTH TO WATER (FT.)	Q I GPM	DRAWDOWN (FT.)	REMARKS
Oct. 2/79	9:10	—	22.85	—	—	STATIC WATER LEVEL; PUMP SUCTION ± 84 FT
		0.5	58.14	125	35.29	3"x4" orifice
		1	62.96		40.11	
		1.5	69.53		46.68	
	09:12	2	74.22		51.37	
		2.5	77.91		55.06	
		3	80.99		58.14	
		3.5	—		—	
		4	—		—	
		4.5	—		—	
	09:25	5	—	125	—	
		6	78.51	96	55.66	Cut back discharge at 6 mins.
		7	76.36		53.51	
		8	76.09		53.24	
	09:29	9	76.32		53.47	
	09:20	10	76.70		53.85	
		12	77.65		54.80	
		14	78.47		55.62	
		16	79.25		56.40	
		18	80.00		57.15	
	09:30	20	80.61		57.76	
		25	82.05		59.20	
	09:40	30	84.00		61.15	
		35	84.85		62.00	
	09:50	40	85.02	96	62.17	Cut back discharge at 40 mins.
	10:00	50	79.33	83.3	56.48	
	10:10	60	78.10		55.25	
	10:20	70	78.38		55.53	
	10:30	80	78.86		56.01	
	10:40	90	78.94		56.09	
	10:50	100	80.10		57.25	
[illegible] /79	[illegible]		[illegible]		[illegible]	

SECOND PUMP TEST

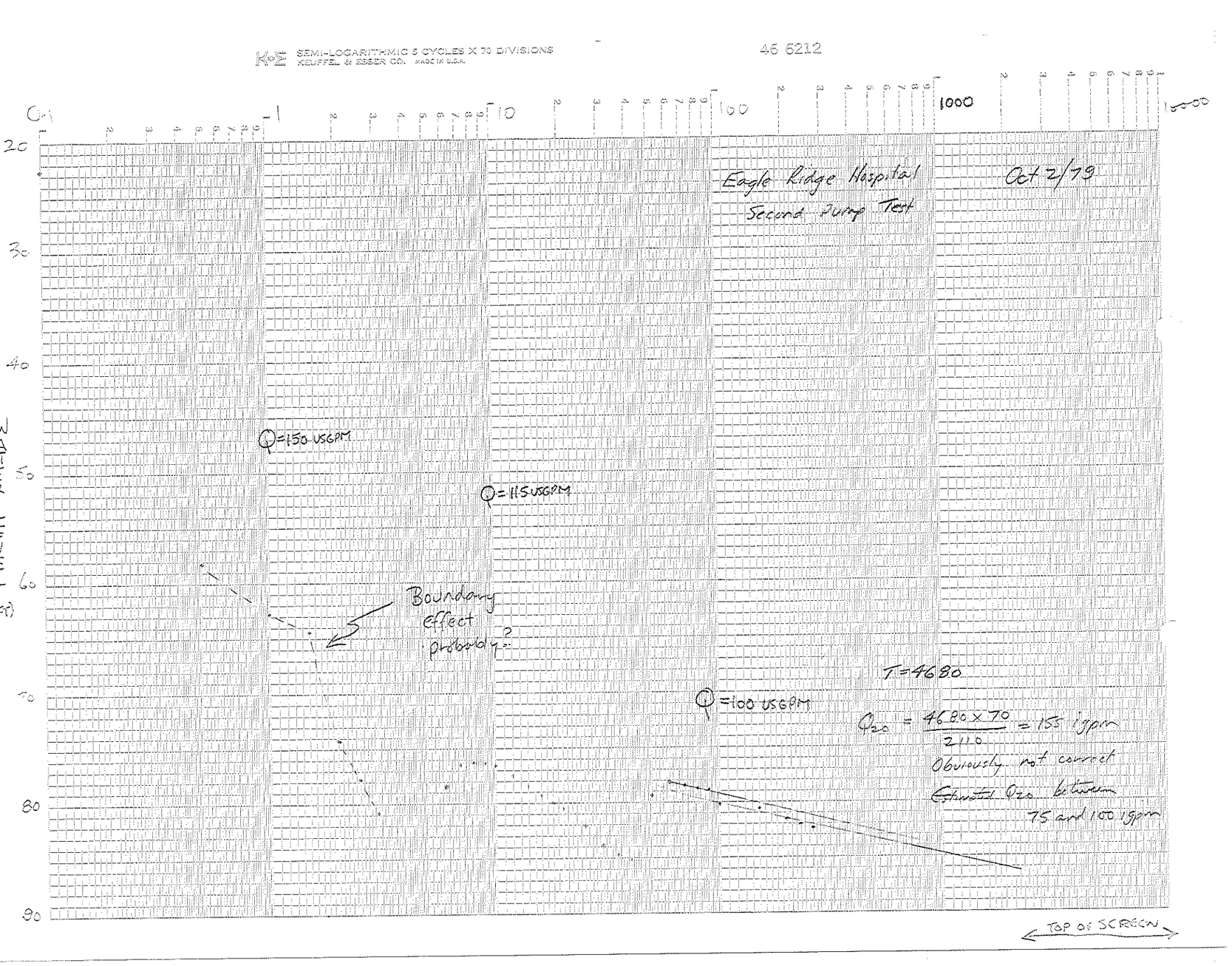
BROWN, EROMAN & ASSOCIATES LTD.
NORTH VANCOUVER, BRITISH COLUMBIA

PAGE 2

WELL OWNER EAGLE RIDGE HOSPITAL WELL NO. 2 DRAWDOWN ☑
LOCATION PT. MOODY JOB NO. 78-092 RECOVERY ☐

DATE	TIME	ELAPSED TIME MINUTES	DEPTH TO WATER (FT.)	Q I GPM	DRAWDOWN (FT.)	REMARKS
Oct 2/79	12:30	200	81.63	83.3	58.78	
	13:00	230	82.06		59.21	
	13:30	260	82.34	83.3	59.49	

46 6212



(0600 - 1560)

PACIFIC WATER WELLS (1969) LTD. - PUMP TEST

WELL OWNER: EAGLE RIDGE HOST DATE: OCT. 2/79 SIZE OF ORIFICE: 3"
LOCATION: ICCO STATIC LEVEL: 22.85 SIZE OF PIPE: 4"

TIME	DEPTH TO WATER	MIN PUMPED	US GPM	TIME	DEPTH TO WATER	MIN PUMPED	US GPM		REMARKS
9:15	22.85			12:30	81.63	200	100		
.5	58.14	.5	150	1:00	82.06	230			
9:11	62.96	1		1:30	82.34	260			
5	69.53	1.5							
9:12	74.22	2							
.5	77.41	2.5							
9:13	80.99	3	150						
.5		3.5							
9:14	CHANGE	4							
.5	SETTING	4.5							
9:15		5							
9:16	78.51	6	115						
9:17	76.36	7							
9:18	76.09	8							
9:19	76.32	9							
9:20	76.70	10							
9:22	77.65	12							
9:24	78.47	14							
9:26	79.25	16							
9:28	80.00	18							
9:30	80.61	20							
9:35	8205	25							
9:40	84.00	30							
9:45	84.85	35							
9:50	85.02	40	115						
10:00	79.33	50	100						
10:10	78.10	60							
10:20	78.38	70							
10:30	78.86	80							
10:40	78.94	90							
10:50	80.10	100							
11:40	80.67	150	100						

RIG No: _____ DRILLER: _____

can test ltd.
1650 PANDORA STREET, VANCOUVER, B.C. V5L 1L6 • TELEPHONE 254-7278 • TELEX 04-54210

Report On Analysis of Water Samples

File No. 2374 D

Report No.

Reported To Brown Erdman & Associates Ltd.

P.O. # October 3, 1979

1401 Bewicke Avenue,

Date

North Vancouver, B.C.

Attention:

We have tested the sample of water submitted by you on Sept. 18, 1979 and report as follows:

SAMPLE IDENTIFICATION:

The sample submitted was in a plastic bottle labelled:

Eagle Ridge Hospital
78-092
Pt. Moody
18/9/79 1260 mins 9.5°C

METHOD OF TESTING:

The analyses were carried out in accordance with procedures described in:

"Standard Methods for the Examination of Water and Wastewater (14th Edition)" published by the American Public Health Association, 1975.

RESULTS OF TESTING:

TEST		EAGLE RIDGE HOSPITAL
Physical Tests		
pH		8.05
Conductance (umhos/cm)		117.
Colour	(CU)	L5.
Turbidity	(JTU)	0.13
Total Dissolved Solids	(mg/L)	104.
Total Suspended Solids	(mg/L)	L0.2
Dissolved Anions (mg/L)		
Alkalinity		
Bicarbonate	HCO_3	55.0
Carbonate	CO_3	NIL
Chloride	Cl	L0.5
Sulfate	SO_4	L5.
Nitrate & Nitrite	N	L0.001
Phosphate	PO_4	0.36*
Fluoride	F	0.096
Silica	SiO_2	27.8
Dissolved Cations (mg/L)		
Total Hardness	$CaCO_3$	38.1
Calcium	Ca	10.7
Magnesium	Mg	2.78
Sodium	Na	4.93
Potassium	K	1.88
Iron	Fe	0.030
Manganese	Mn	0.077
Cadmium	Cd	L0.001
Copper	Cu	0.002
Lead	Pb	L0.001
Zinc	Zn	0.003
Others (mg/L)		
Total Iron	Fe	L0.030
Total Manganese	Mn	0.078

L = Less than, mg/L = milligrams per liter (or parts per million for drinking water)

* Rechecked and verified.

REMARKS:

The water represented by the sample submitted can be characterized as a moderately soft water, moderate with respect to dissolved mineralization. For the parameters tested the sample met the limits set by the Canadian Drinking Water Standards and Objectives, 1968 with the exception of dissolved phosphates (limit = 0.2mg/L) and dissolved manganese (limit = 0.05 mg/L).

Both of these parameters are limited for aesthetic reasons. Phosphates, especially in open reservoirs, may promote the growth of photosynthetic organisms (algae), which may then cause odour and taste problems. High manganese, especially in conjunction with high iron, may cause staining.

CAN TEST LTD.

Judi M. Mitchell, B.Sc.
Chemist

can test ltd.
1650 PANDORA STREET, VANCOUVER, B.C. V5L 1L6 • TELEPHONE 254-7278 • TELEX 04-54210

Report On Analysis of Water Samples

File No. 2374 D

Report No.

Reported To Brown Erdman & Associates Ltd.

P.O. # October 3, 1979

1401 Bewicke Avenue,

Date

North Vancouver, B.C.

Attention:

We have tested the sample of water submitted by you on Sept. 18, 1979 and report as follows:

SAMPLE IDENTIFICATION:

The sample submitted was in a plastic bottle labelled:

Eagle Ridge Hospital
78-092
Pt. Moody
18/9/79 1260 mins 9.5°C

METHOD OF TESTING:

The analyses were carried out in accordance with procedures described in:

"Standard Methods for the Examination of Water and Wastewater (14th Edition)" published by the American Public Health Association, 1975.

RESULTS OF TESTING:

TEST		EAGLE RIDGE HOSPITAL
Physical Tests		
pH		8.05
Conductance (umhos/cm)		117.
Colour	(CU)	L5.
Turbidity	(JTU)	0.13
Total Dissolved Solids	(mg/L)	104.
Total Suspended Solids	(mg/L)	L0.2
Dissolved Anions (mg/L)		
Alkalinity		
Bicarbonate	HCO_3	55.0
Carbonate	CO_3	NIL
Chloride	Cl	L0.5
Sulfate	SO_4	L5.
Nitrate & Nitrite	N	L0.001
Phosphate	PO_4	0.36*
Fluoride	F	0.096
Silica	SiO_2	27.8
Dissolved Cations (mg/L)		
Total Hardness	$CaCO_3$	30.1
Calcium	Ca	10.7
Magnesium	Mg	2.78
Sodium	Na	4.93
Potassium	K	1.88
Iron	Fe	0.030
Manganese	Mn	0.077
Cadmium	Cd	L0.001
Copper	Cu	0.002
Lead	Pb	L0.001
Zinc	Zn	0.003
Others (mg/L)		
Total Iron	Fe	L0.030
Total Manganese	Mn	0.078

L = Less than, mg/L = milligrams per liter (or parts per million for drinking water)

* Rechecked and verified.

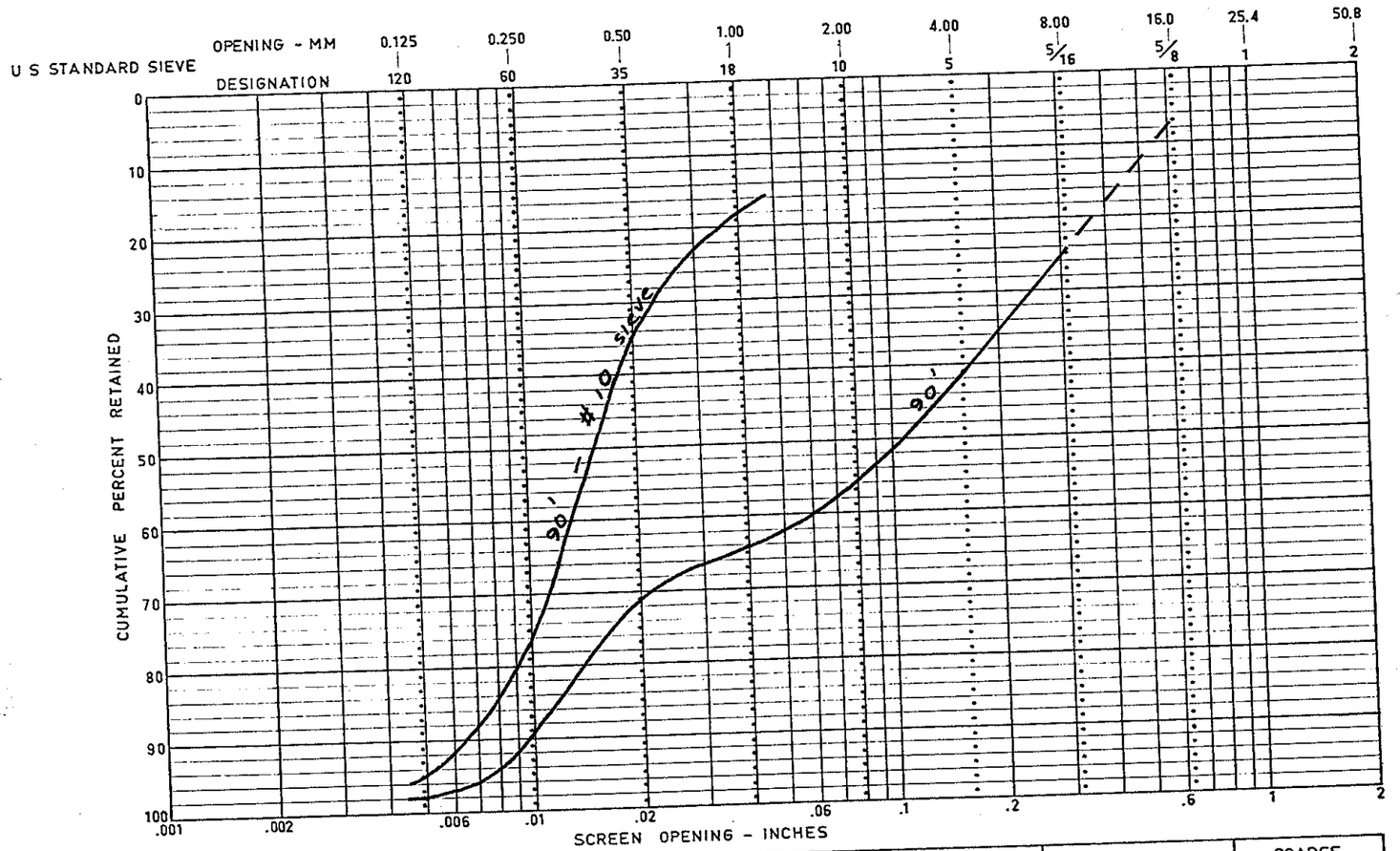
REMARKS:

The water represented by the sample submitted can be characterized as a moderately soft water, moderate with respect to dissolved mineralization. For the parameters tested the sample met the limits set by the Canadian Drinking Water Standards and Objectives, 1968 with the exception of dissolved phosphates (limit = 0.2mg/L) and dissolved manganese (limit = 0.05 mg/L).

Both of these parameters are limited for aesthetic reasons. Phosphates, especially in open reservoirs, may promote the growth of photosynthetic organisms (algae), which may then cause odour and taste problems. High manganese, especially in conjunction with high iron, may cause staining.

CAN TEST LTD.

Judi M. Mitchell, B.Sc.
Chemist

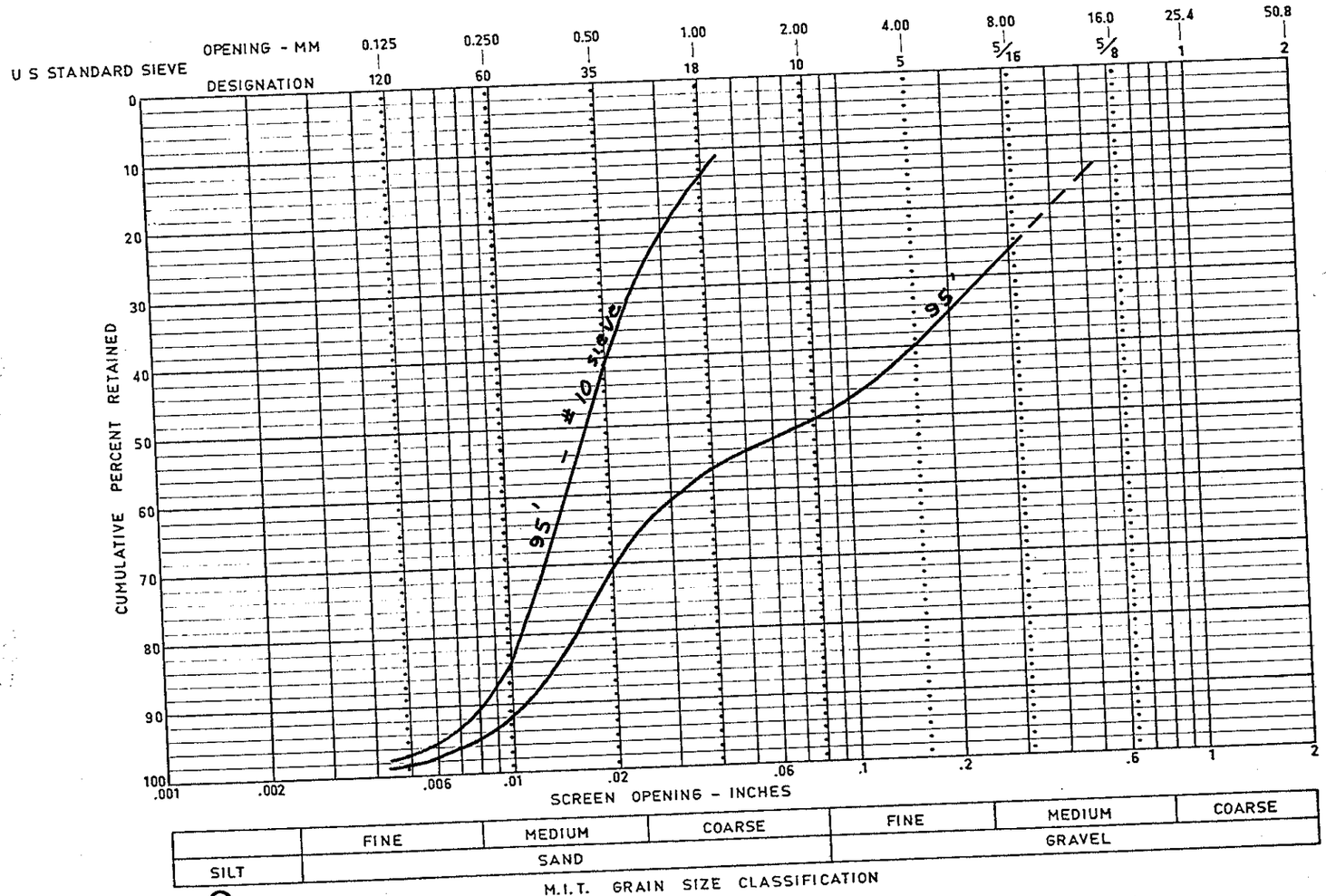


	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
SILT	SAND			GRAVEL		

M.I.T. GRAIN SIZE CLASSIFICATION

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL	GRAIN SIZE ANALYSIS	BY: HWR	DATE: 8-9-79
PORT MOODY		JOB: 78-092	DWG:

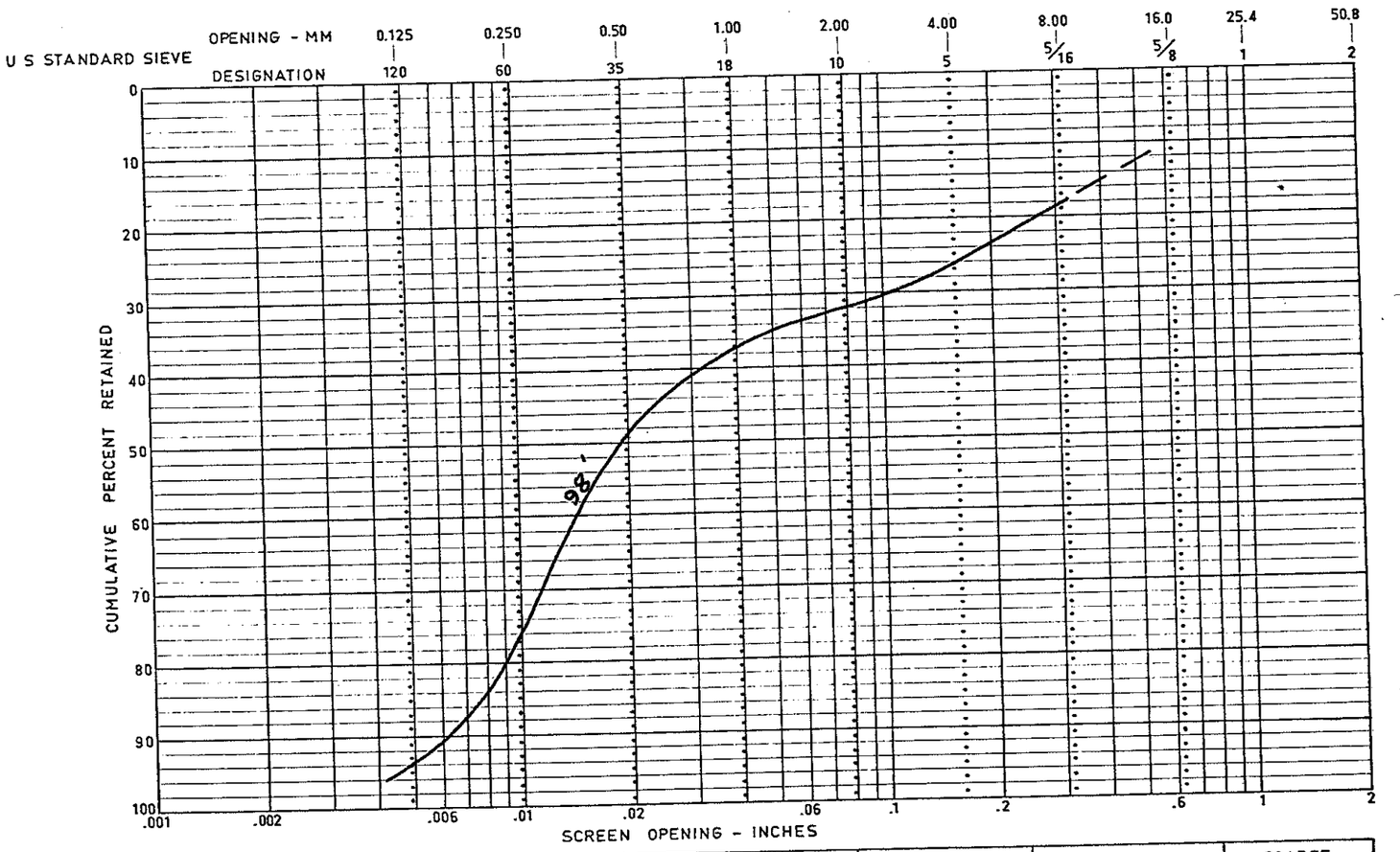


	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
SILT	SAND			GRAVEL		

M.I.T. GRAIN SIZE CLASSIFICATION

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL	GRAIN SIZE ANALYSIS	BY: HWR	DATE: 8-9-79
PORT MOODY		JOB: 78-092	DWG:

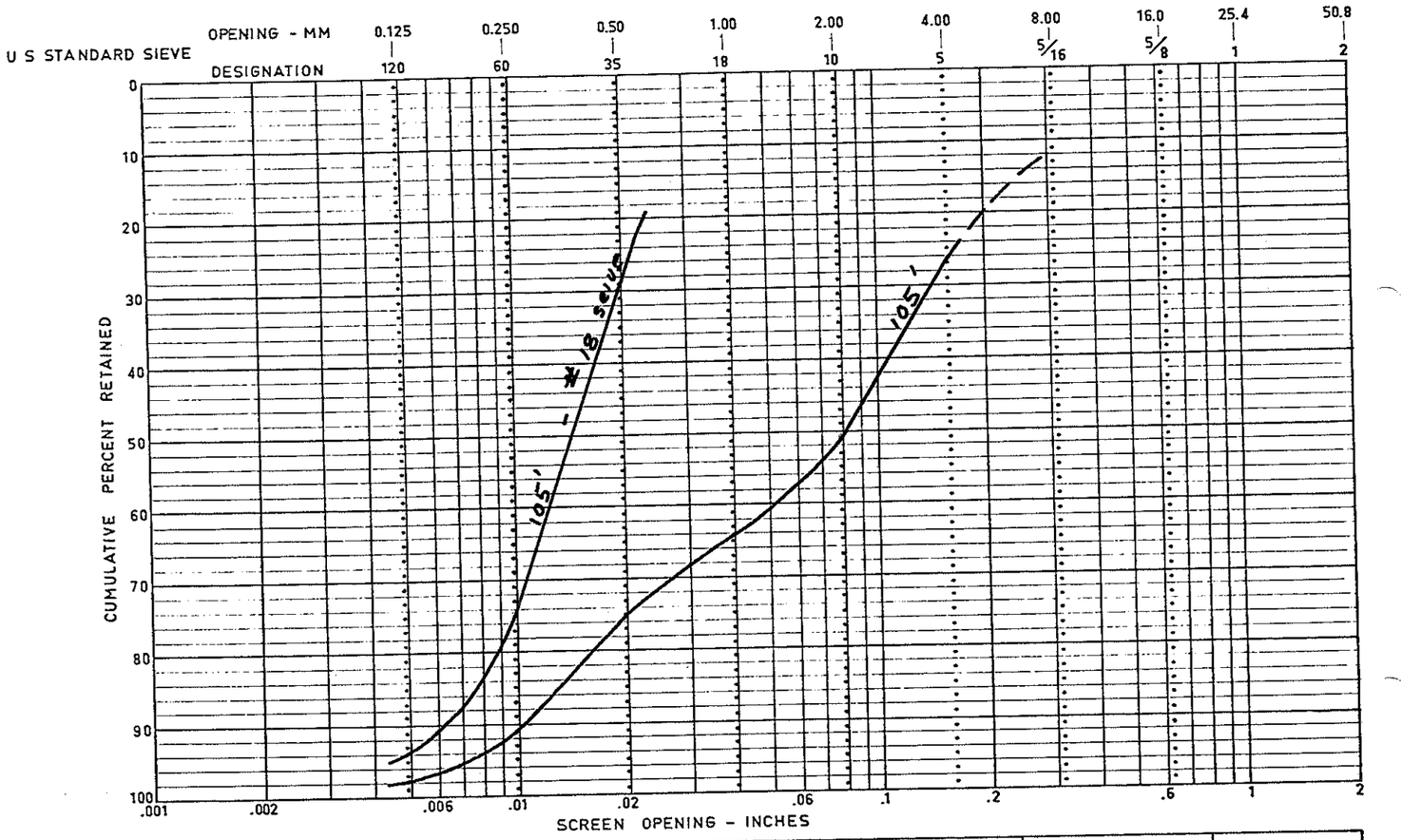


	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
SILT	SAND			GRAVEL		

M.I.T. GRAIN SIZE CLASSIFICATION

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL PORT MOODY	GRAIN SIZE ANALYSIS	BY: HWR	DATE: 8-9-79
		JOB: 78-092	DWG:

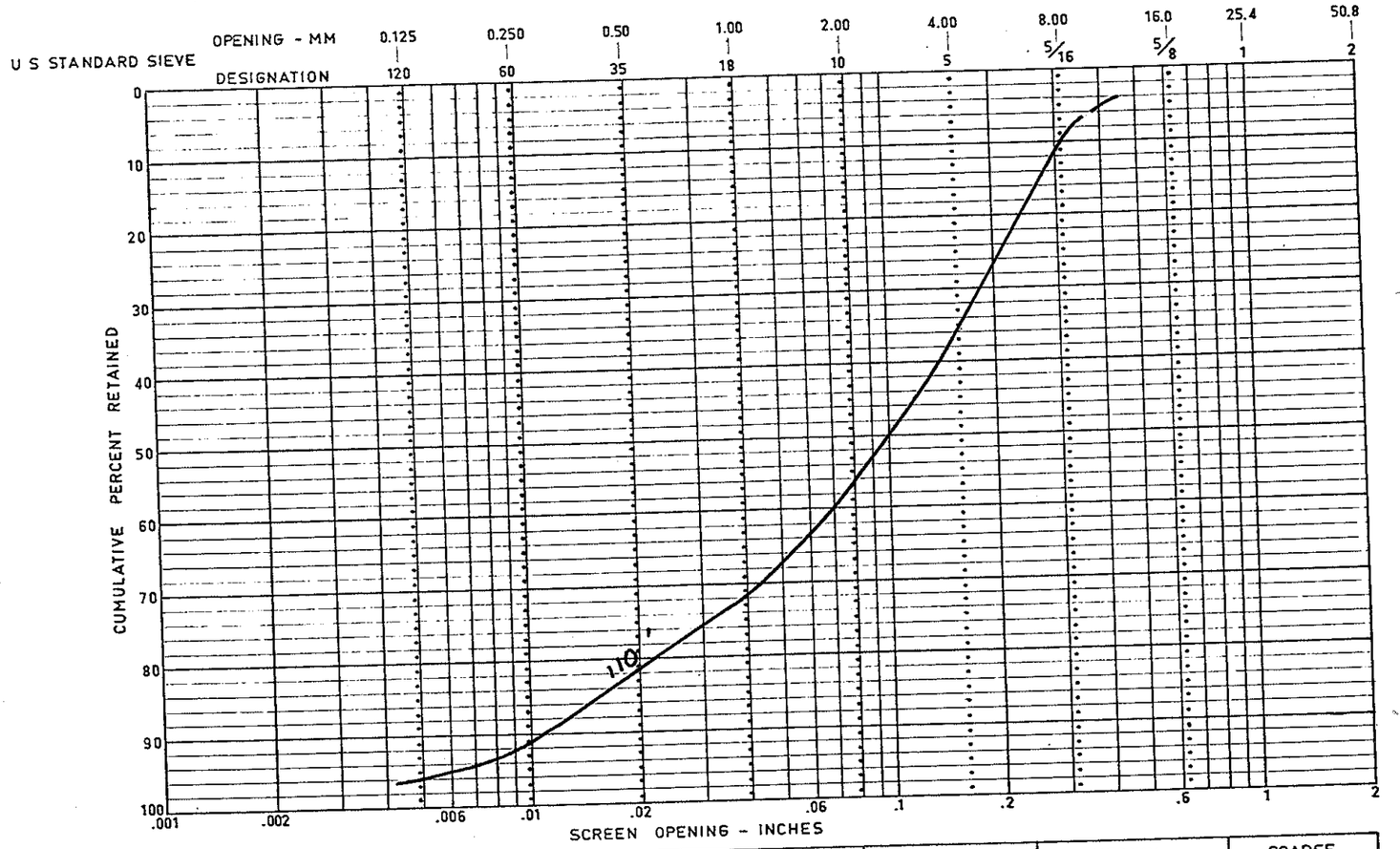


	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
SILT	SAND			GRAVEL		

M.I.T. GRAIN SIZE CLASSIFICATION

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL PORT MOODY	GRAIN SIZE ANALYSIS	BY: HWR	DATE: 8-9-79
		JOB: 78-092	DWG:



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
SILT	SAND			GRAVEL		

M.I.T. GRAIN SIZE CLASSIFICATION

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL	GRAIN SIZE ANALYSIS	BY: HWR	DATE: 8-9-79
PORT MOODY		JOB: 78-092	DWG:

HOLE NO. 2
SAMPLE NO.
DEPTH 90'
TARE NO. 90

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
		- Discard 3/4"	+ —	
8	5/16"	223.9	223.9	24.41
4	5	154.5	378.4	41.25
2	10	136.3	514.7	56.11
1	18	74.4	589.1	64.22
0.500	35	67.5	656.6	71.58
0.250	60	168.7	825.3	89.97
0.125	120	71.7	897.0	97.79
PAN		20.3	917.3	100
TOTAL		917.3		

HOLE NO. 2
SAMPLE NO.
DEPTH 90'
TARE NO.

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
8	5/16"			
4	5			
2	10	- Discard	#10 +	—
1	18	74.4	74.4	18.5
0.500	35	67.5	141.9	35.2
0.250	60	168.7	310.6	77.1
0.125	120	71.7	382.3	95.0
PAN		20.3	402.6	100
TOTAL		402.6		

HOLE NO. 2
SAMPLE NO.
DEPTH 95'
TARE NO. 85

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
		+ Discard	3/4"	+ —
8	5/16"	242.4	242.4	25.74
4	5	132.8	375.2	39.84
2	10	97.1	472.3	50.15
1	18	65.1	537.4	57.06
0.500	35	134.5	671.9	71.34
0.250	60	199.3	871.2	92.50
0.125	120	57.5	928.7	98.61
PAN		13.1	941.8	100
TOTAL		941.8		

HOLE NO. 2
SAMPLE NO.
DEPTH 95'
TARE NO.

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
8	5/16"			
4	5			
2	10	- Discard	#10 +	—
1	18	65.1	65.1	13.87
0.500	35	134.5	199.6	42.51
0.250	60	199.3	398.9	84.96
0.125	120	57.5	456.4	97.21
PAN		13.1	469.5	100
TOTAL		469.5		

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL
PORT MOODY

GRAIN SIZE ANALYSIS

BY: HWR
DATE: 8-9-79
JOB: 78-092
DWG:

HOLE NO. 2
SAMPLE NO.
DEPTH 98'
TARE NO. 2.

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
		— Discard 3/8" +		
8	5/16"	157.2	157.2	18.27
4	5	71.0	228.2	26.52
2	10	46.3	274.5	31.90
1	18	44.4	318.9	37.06
0.500	35	103.6	422.5	49.11
0.250	60	236.6	659.1	76.60
0.125	120	150.8	809.9	94.13
PAN		50.5	860.4	100
TOTAL		860.4		

HOLE NO. 2
SAMPLE NO.
DEPTH 105'
TARE NO. 3

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
8	5/16"	— Discard 5/16" +		—
4	5	287.3	287.3	26.73
2	10	258.4	545.7	50.77
1	18	149.8	695.5	64.71
0.500	35	113.8	809.3	75.30
0.250	60	169.5	978.8	91.07
0.125	120	73.2	1052.0	97.88
PAN		22.8	1074.8	100
TOTAL		1074.8		

HOLE NO. 2
SAMPLE NO.
DEPTH 105'
TARE NO.

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
8	5/16"			
4	5			
2	10			
1	18	— Discard #18 +		—
0.500	35	113.8	113.8	30.00
0.250	60	169.5	283.3	74.69
0.125	120	73.2	356.5	93.99
PAN		22.8	379.3	100
TOTAL		379.3		

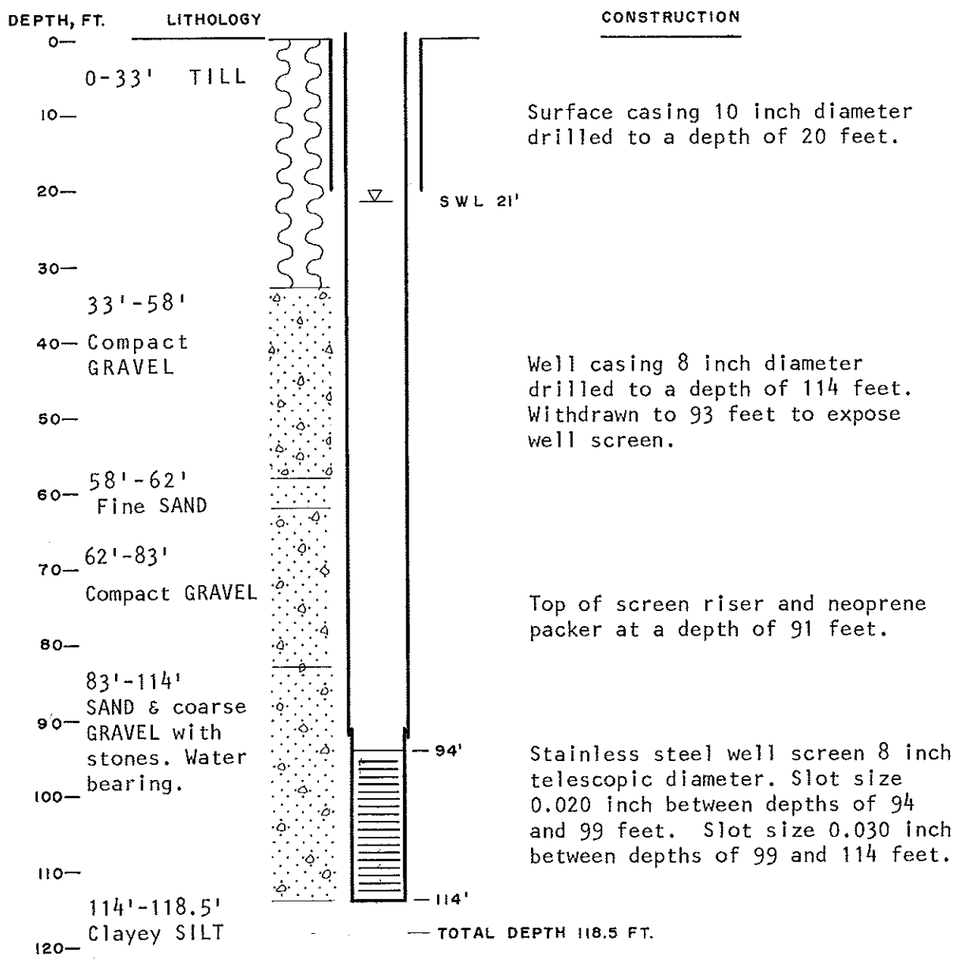
HOLE NO. 2.
SAMPLE NO.
DEPTH 110'
TARE NO. R

SIEVE OPENING MM	US STANDARD SIEVE	WEIGHT RETAINED G	WEIGHT RETAINED SUM	PERCENT RETAINED
		— Discard 3/4" +		
8	5/16"	108.4	108.4	10.11
4	5	274.2	382.6	35.68
2	10	228.9	611.5	57.03
1	18	141.1	752.6	70.19
0.500	35	118.0	870.6	81.20
0.250	60	109.3	979.9	91.39
0.125	120	50.7	1030.6	96.12
PAN		41.6	1072.2	100
TOTAL		1072.2		

BROWN, ERDMAN & ASSOCIATES LTD.

EAGLE RIDGE HOSPITAL PORT MOODY	GRAIN SIZE ANALYSIS	BY: HWR	DATE: 8-9-79
		JOB: 78-092	DWG.:

WTN 71239

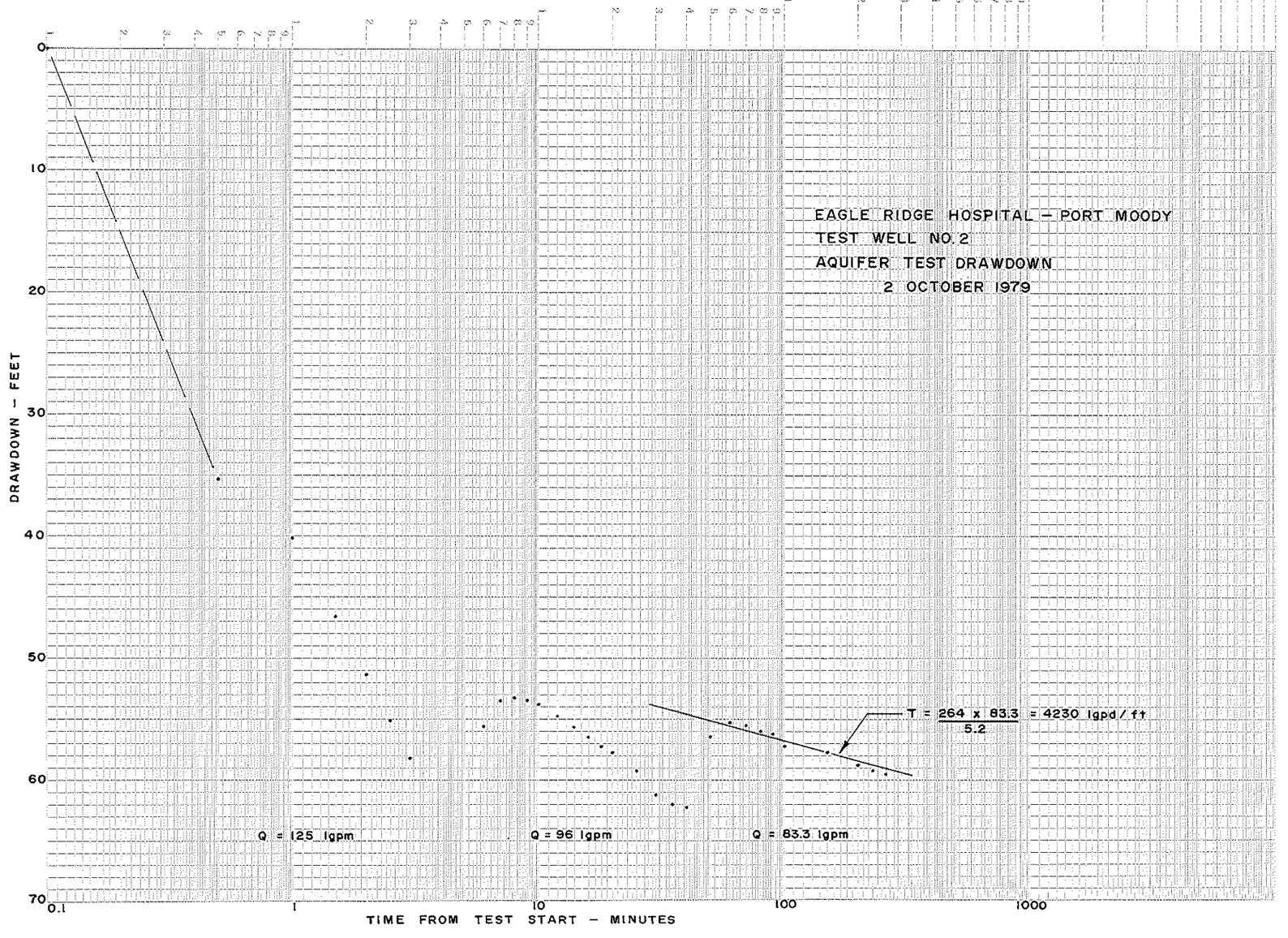


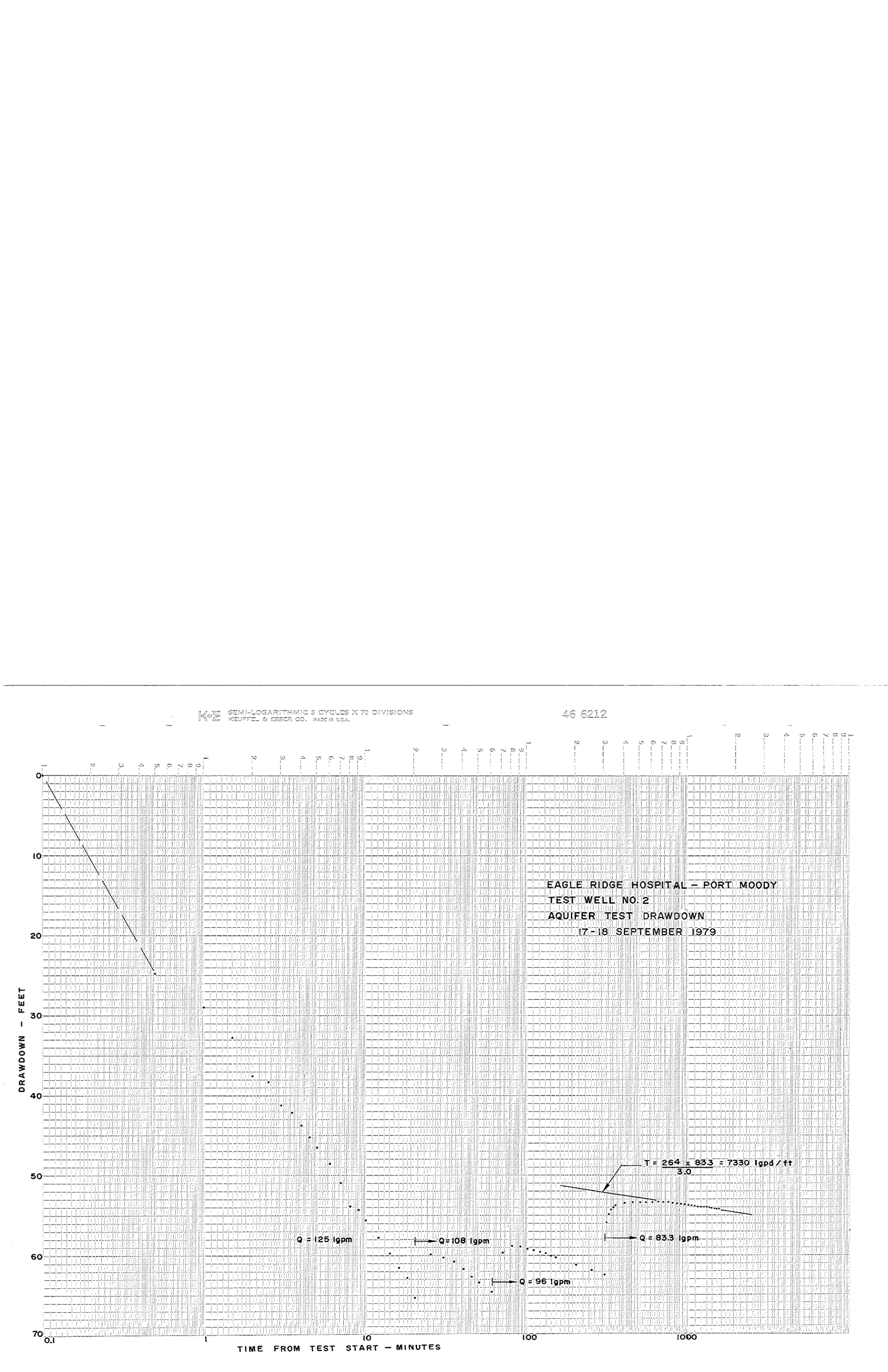
EAGLE RIDGE HOSPITAL

TEST WELL NO. 2

BROWN, ERDMAN & ASSOCIATES LTD.

4-10-79 . HWR 78-092




K+E SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 6212
EAGLE RIDGE HOSPITAL – PORT MOODY
TEST WELL NO. 2
AQUIFER TEST DRAWDOWN
17-18 SEPTEMBER 1979
T = 264 x 83.3 = 7330 Igpd / ft
3.0
Q = 125 Igpm
Q = 108 Igpm
Q = 96 Igpm
Q = 83.3 Igpm
DRAWDOWN – FEET
TIME FROM TEST START – MINUTES
0
10
20
30
40
50
60
70
0.1
1
10
100
1000

Province of British Columbia Ministry of Environment Water Investigations Branch

WATER WELL RECORD

Date YR MO DY

Legal Description & Address

Descriptive Location

Owners Name & Address Greater Vancouver Regional Hospital District, 2294 West Tenth Avenue

NTS MAP ELEV WELL No.

UTM Z E N Date 19

1. TYPE OF WORK 1 ☐ New Well 2 ☐ Reconditioned 3 ☐ Deepened 4 ☐ Abandoned

2. WORK METHOD 1 ☐ Cable tool 2 ☐ Bored 3 ☐ Jetted 4 ☐ Rotary a ☐ mud b ☒ air c ☐ reverse 5 ☐ Other

3. WATER WELL USE 1 ☐ Domestic 2 ☐ Municipal 3 ☐ Irrigation 4 ☐ Commercial & Industrial 5 ☐ Other

4. DRILLING ADDITIVES

5. MEASUREMENTS from 1 ☐ ground level 2 ☒ top of casing

FROM ft	TO ft	6. WELL LOG DESCRIPTION	SWL ft
0	33	Bouldery glacial till	
33	40	Very compact sand gravel & boulders	
40	53	Compact gravelly sand some water	
53	58	Compact sandy gravel	
58	62	Fine to medium sand some gravel	
62	68	Compact sandy gravel lots of boulders not much water	
68	81	Medium to coarse sand	
81	115	Compact medium to coarse sand and gravel good yield of water	
115	118	Compact gravel & clay no water	

7. CONSULTANT

Address

8. WELL LOCATION SKETCH

9. CASING: Materials 1 ☒ Steel 2 ☐ Galvanized 3 ☐ Wood 4 ☐ Plastic 5 ☐ Concrete 6 ☐ Other

							units
Hole Diameter							ins
Diameter	8						ins
from	0						ft
to	91						ft
Thickness	.322						ins
Weight	28.4						lb/ft

Pitless unit ft 1 ☐ above 2 ☐ below ground level

1 ☒ Welded 2 ☐ Cemented 3 ☐ Threaded 4 ☒ New 5 ☐ Used

Perforations:

Shoe(s): Bull

Open hole, from to ft Diameter ins

Grout:

10. SCREEN: 1 ☐ Nominal 2 ☐ Pipe Size

Type 1 ☒ Continuous Slot 2 ☐ Perforated 3 ☐ Louvre 4 ☐ Other

Material 1 ☒ Stainless Steel 2 ☐ Plastic 3 ☐ Other

Set from 91 to 114 ft below ground level

SCREEN & BLANKS						units
Length						ft
Diam. I D						ins
Slot Size	3 slot # 10 - 1 slot # 20					ins
from						ft
to						ft

Fittings, top Type "X" bottom Bull

Gravel Pack

11. DEVELOPED BY: 1 ☒ Surging 2 ☐ Jetting 3 ☐ Air 4 ☐ Bailing 5 ☐ Pumping 6 ☐ Other

12. TEST 1 ☐ Pump 2 ☐ Bail Date YR MO DY

Rate 100 USgpm Temp 9 °C SWL before test 21 ft

ft after test of 26 hrs mins

TIME in mins & DRAWDOWN in ft				TIME in mins & RECOVERY in ft			
mins	WL	mins	WL	mins	WL	mins	WL

13.

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING ft	RECOMMENDED PUMPING RATE USgpm

14. WATER TYPE: 1 ☒ fresh 2 ☐ salty 3 ☐ clear 4 ☐ cloudy

colour smell ; gas 1 ☐ yes 2 ☐ no

15. WATER ANALYSIS: 1 ☐ Hardness mg/l

2 ☐ Iron mg/l 3 ☐ Chloride mg/l

4 ☐ pH Field Date

SITE I D No Lab Date YR MO DY

16. FINAL WELL COMPLETION DATA

Well Depth 114 ft Water Flowing USgpm

Static Water Level 21 ft Pressure Head ft

Back filled No

Well Head Completion See Consultant

17. DRILLER PLEASE PRINT SURNAME FIRST NAME

Signature

18. CONTRACTOR, Address

RURAL WELL DRILLERS LTD.
13117-116th AVE.
SURREY, B. C.
V3R 2S8

Member, BCWWDA ☐ yes ☐ no ;