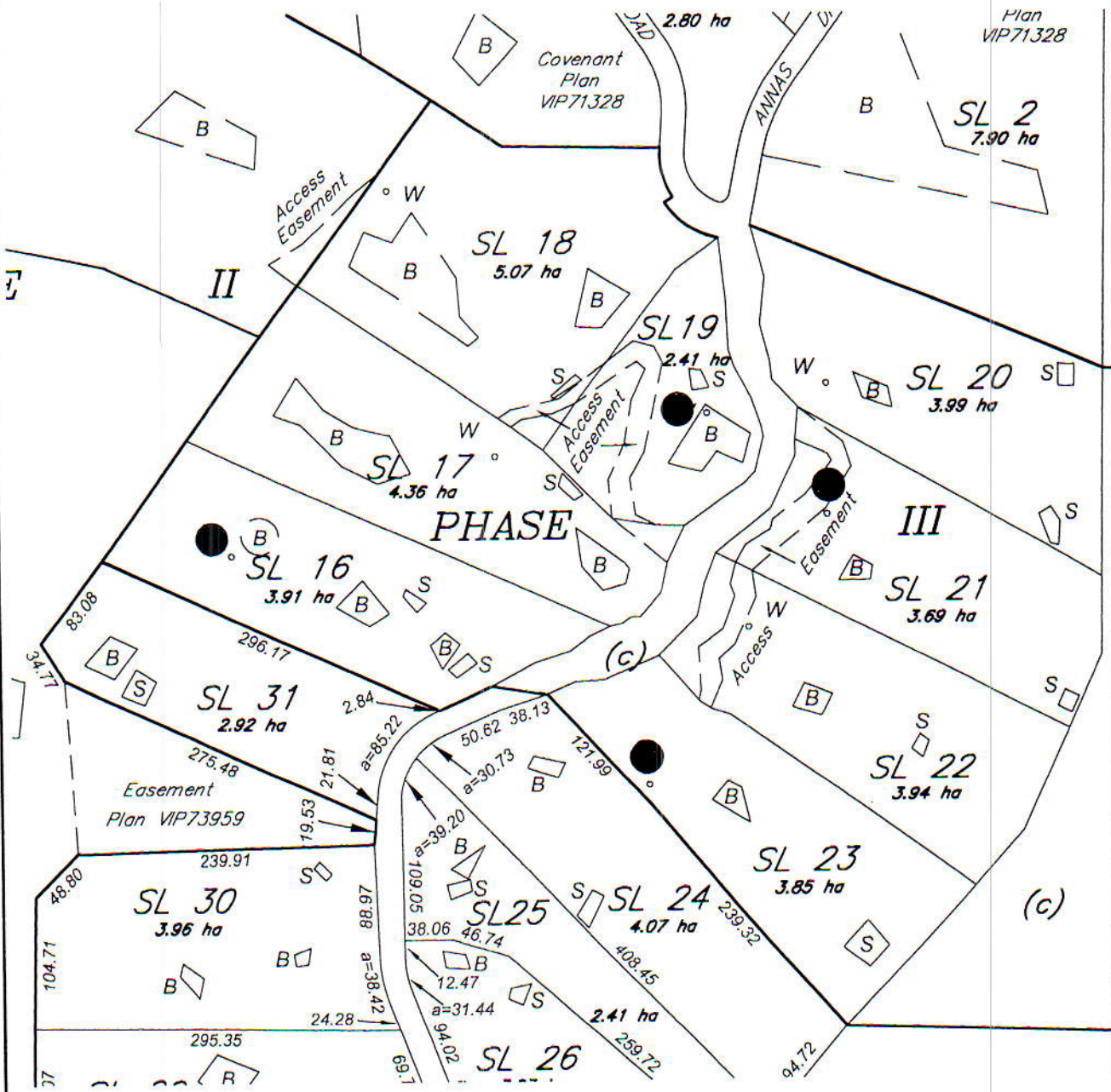


BARE LAND STRATA DEVELOPMENT OF LOT A, SECTIONS 38, 42 AND 43, SOUTH SALT SPRING ISLAND, COWICHAN DISTRICT, PLAN VIP69725
 - STRATA PLAN VIS5021 - PHASE 3
 BCGS Map Sheet 92B.073



Scale 1:5000

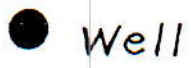


All distances are in metres unless otherwise noted

Legend

- S denotes approximate location of proposed septic field
- B denotes location of approved building site
- W denotes approximate location of drilled well

Figure 1



Polaris Consulting Ltd.

Box 324
 #110 - 174 Wilson Street
 Victoria BC V9A 7N7
 Telephone: (250) 360-7398
 Facsimile: (250) 414-4946
 Email: btaylor@polarisconsulting.bc.ca

April 12, 2004
 Drawing: 0004-MTUAM-PCL004-PLA6
 File: 0004/MTUAM-PCL004

4.2 Well Drilling Results

Four wells, located on lot numbers 16, 19, 21, and 23, have been drilled in 2004 for Phase 3 of the subdivision. The well logs are attached at Appendix A. The well logs show a relatively thin overburden layer over bedrock which is described in Section 3.0.

The rock unit becomes fractured at a minimum depth of 19 m. and the well yield increases down to a maximum depth of 134 m. The driller's reported well yields were as follows:

Lot No.	Well Depth (m)	Driller's Well Yield	
		GPM	L/d
16	68.5	3.5	22,910
19	114.3	1.0	6,546
21	137.2	1.0	6,546
23	76.2	5.0	32,730

4.3 Pumping Test Results and Well Yields

The five wells were pumped to confirm their respective yields. The pumping tests were carried out between the 15th and 19th of March, 2004. Water levels were recorded in the pumping wells during the entire pumping period. The pumping test rate was set at 2.275 to 4.55 L/min (0.5 to 1.0 Igpm), an adequate level to prove a viable supply for a single family residence. Also the pumping rate was held constant for the duration of the test. The pumping test data is enclosed at Appendix B, and water level drawdown plots are provided in Appendix C. The pumping test data can be summarized as follows:

Well I.D.	Pumping Rate L/min	Start Water Level (m)	End Water Level (m)	*Available Drawdown (m)	**Calculated Safe Yield	
					Igpd	L/d
16	4.55	2.97	32.37	57.02	1211	5,507
19	2.27	5.01	24.99	93.99	946	4,301
21	2.27	23.6	35.23	103.4	2263	10,287
23	4.55	2.26	6.98	57.74	971	4,414

* Available drawdown = Depth to main fracture - depth to static water level.

** Yield calculated by graphical method of extrapolating drawdown curve for 100 days and assuming no recharge.

According to Saltspring Island Land Use Bylaw No. 355, provided by the Island's Trust Office in Ganges, each subdivision property (3 ha. or less in size) must have a proven water supply of 700 Imperial gallons per day (Igpd) or 3,180 litres per day (L/d). The Mt. Tuam Developments Ltd. subdivision wells on Lot 16, 19, 21, and 23 exceed this requirement. The guidelines also indicate that summer time testing for yield is preferred. These well yields, mostly tested during the spring time, have been calculated by a conservative method and variable seasonal water levels have been accounted for. Therefore, the well yield estimates are considered to be safe.

5.0 GROUNDWATER RESOURCE IMPACTS OF DEVELOPMENT

5.1 Well Water Abstraction Rate vs. Recharge Rate and Amount in Storage

The annual groundwater recharge rate is estimated at 160 mm/year. This rate produces a quantity of 1,600 m³/ha/yr. replenished into the groundwater system. Considering the approximate residential density of one house per three hectares and average daily water usage of 1.7 m³/d (375 Igpd) per house, the usage rate is 207 m³/ha./yr. (1.7/3 x 365). Therefore the usage rate is estimated to be 13% (207/1,600) of the recharge rate. Then the proposed Mt. Tuam Developments Ltd. subdivision is sustainable with regard to the "renewable" groundwater resource.

Lot 16 – Tuam Estates

Driller: Albert Kay &
Sons Drilling Ltd.

Date Drilled: February 4, 2004

Feet		Geologic Formation
From	To	
0	2	Overburden
2	28	Slate
28	275	Granite and Quartz
		Fractures: 70, 81, 117, 172, 198 ft.
		Water: ½ gpm @ 69 ft., ½ gpm @116 ft. and 164 ft. and 2 gpm @197 ft.
		Total Est. Yield: 3 ½ gpm.
		Casing: 10 ft.
		Liner: No.
		Bentonite Seal: No.

Tuam Estates - Lot 16
Date of Test = March 19, 2004

SWL = 9.74 ft or 2.97 m
Pumping Rate = 1 lgpm

<u>Time in</u> <u>Minutes</u>	<u>Drawdown</u> <u>in Metres</u>
0	0
1	0.32
2	0.38
3	0.75
4	1.18
5	1.33
6	1.66
7	2.12
8	3.01
9	3.46
10	3.92
12	4.44
14	4.93
16	5.26
18	5.63
20	6.21
25	6.97
30	7.91
35	8.58
40	9.16
45	9.68
50	10.32
55	11.08
60	11.94
90	12.64
120	13.37
150	14.13
180	15.08
210	16.02
240	17
270	17.06
300	18.76
360	21.99
420	24.34
480	26.11
540	28
600	28.49
660	29.13
720	29.4



Date: March 03, 2004

827 FORT STREET
VICTORIA, B.C.
V8W 1H6
www.jblabs.ca

ph: (250) 385-6112
fax: (250) 382-6364
tol free: 1-866-385-6112
jblabs@islandnet.com

Job No.: 1735

LR No.: 39278

LR Sub No.: 1

Client: ALBERT KAYE & SONS DRILLING LTD
200 MUSGRAVE RD
SALTSPRING ISLAND BC V8K 1V5

Attn: Albert Kaye

Analyses performed according to "A Laboratory Manual for the Chemical Analysis of Water, Wastewaters and Biological Tissues", Chemistry Laboratory, Water Resource Service and/or "Standard Methods / Water and Wastewater", American Public Health Association.

Sampling Agent: Client

The sample(s) submitted by the agent have been tested as requested and we report as follows:

Sample #01 - 2004/02/24 : Tuam Estates: Lot 16

		Sample #01
Total Coliform	CFU/100ml	<1
Faecal Coliform	CFU/100ml	<1
Non-coliform bacteria	CFU/100ml	<1
Tot Dissolved Solids	mg/L	494
Conductivity	µS/cm	747
pH	pH	9.5*
Alkalinity, Total	mg/L CaCO3	120
Hardness	mg/L CaCO3	51
Calcium	mg/L	19
Magnesium	mg/L	0.8
Iron	mg/L	1.9*
Manganese	mg/L	0.05
Sodium	mg/L	146
Chloride	mg/L	178
Sulphate	mg/L	14
Fluoride	mg/L	0.14
Nitrite	mg/L N	<0.002
Nitrate	mg/L N	0.24
Arsenic	mg/L	<0.001

If an * appears beside a result then that result does not comply with "Guidelines for Canadian Drinking Water Quality" and/or "BC Health Act - Safe Drinking Water". If present; < means "less than" and > means "greater than".

Report prepared by:

Barbara M. Klassen, B.Sc.

JB Laboratories Ltd.

water/wastewaters



Apr. 11 2004 08:26PM P1

FAX NO. :

FROM: ALBERT KAYE SONS*DRILLING