

92G/2W

008237

(Excerpt from report on Vancouver Mining Division  
by V. L. Eardley-Wilmot.)

FROM EMPR INDUSTRIAL MINERAL FILES

"Burnaby Lake New Westminster. This crescent-shaped lake, 2½ miles long by almost half a mile wide, or about 700 acres, lies between the B.C. Electric and Great Northern Railways, 8 miles east of central Vancouver City. The whole lake is almost entirely filled up with liquid diatomite mud, there being particularly during the fall of the season, only a few inches of clear water on the top. Many of the 60 samples taken by Mr. N.L. Armstrong of G.S. Eldridge and Company, Vancouver, showed depths of 25 feet of mud. The consistency and diatom structure is similar to that of Trout lake, described above, though the density of the Burnaby diatomite is slightly less.

The calcined material is pink-buff in color and there is an appreciable amount of ash and fine grit. The small cylindrical Melosira diatoms predominate but there are, particularly on the top portion, a fairly high percentage of large diatoms as well as some long thin forms. The results of physical examination of a few samples taken by the author during October, 1932, are shown in Table XIIA.

Careful treatment of the top 6 to 8 feet of the mud in both the above lakes should yield an efficient sugar filter-aid.

During December, 1932, a few tons of the mud were excavated from Burnaby lake and dried by Mr. W.A. Bickell of the Coast Quarries Limited, Vancouver. One ton was shipped to the Mines Branch, Ore Dressing Laboratories, Ottawa, for treatment tests."

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Burnaby lake Diatomite

74 2671

1. k b s | 1. k b s | 1. k b s | 1. k b s

(Excerpt from V.L. Eardley-Wilmot's letter  
of May 20th, 1933, Mines Branch, Ottawa.)

"We have had a lot of trouble with Bickle's diatomite from Burnaby lake. It is very gritty and so far we have not been able to remove enough of it by air separation, hence the long delay. Unless the grit be removed, it will not be good enough to compete with the California for sugar filtration, which is said to be the main use for Bickle's diatomite."

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(Excerpt from letter of January 30th, 1933,  
from W.A. Bickell, Coast Quarries, Ltd.)

"With reference to information for your forthcoming report. We have been officially informed that a lease to Burnaby lake has been granted to W.E. Hind, who in turn is under agreement to us. The City of Vancouver has granted us the right to remove material from Trout lake. We have shipped several hundred pounds of sample to Germany, also other samples to American equipment manufacturers. The only other official information was contained in the copy of report by Eardley-Wilmot forwarded to you."

|| d. rux | d. rux | d. rux | d. rux

Location of deposit and sample (Oct. 1932)	Shrinkage of wet mud in place to bone dry crude.	Total shrink. of wet mud to calcined product.	Wet mud in place contains:				Consistency and color of:		Weight per cubic foot of calcined.	Tons of recoverable per-ft. of mud in place.
			Water	Volatiles	Calcined product	Volatiles in bone-dry mud.	Bone-dry mud.	Calcined (at 700° C.)		
	%	%	%	%	%	%		Lbs.	Tons.	
Burnaby Lake. Vancouver, B. C. Hole 1. Entrance to slough; west end of Lake 2' to 6'.	65.0	70.00	91.1	4.0	4.9	44.5	Grey brown Med. Hard.	Pale pink buff. Med. soft.	11½	74
Burnaby Lake. Hole 1. 6' to 9'.	59.0	67.0	89.0	4.4	6.6	40.0	Grey brown Med. Hard	Pink buff Med. soft	11½	100
Burnaby Lake. Hole 1. 11' to 14'	42.0	50.0	86.0	2.9	11.1	21.0	Grey brown Med. Hard	Pink buff Med. soft.	18	176

Consistency and color of mud.	Calined (at 700° C.)	Weight per cubic foot of calcined.	Tons of Calc. recoverable per ft. acre of mud in place.	Classification.	Microscopic Report of Calcined.
dry	Calined (at 700° C.)				
		Lbs.	Tons.		
ey brown d. Hard.	Pale pink buff. Med. soft.	11½	74	F.G.	Fair proportion of large W.P. including Surirella, Pinularia, Eunotia, Stauroneis, Tabellaria and some Neidium, Epethemia, Gomphonema, etc. Medium large Melosira predominates, there are also some squat cruciform types (tetracyclus inflata?) Few S.S. Fairly high in ash and appreciable fine grit.
ey brown d. Hard	Pink buff Med. soft	11½	100	F.G.	Similar to above but less varieties and slightly more Surirella and more cylindrical Melosira, slightly less ash but slightly more fine grit.
ey brown d. Hard	Pink buff Med. soft.	18	176	F.	Only a few large diatoms, mainly small Melosira and small types with many broken. Fairly high in grit and ash.

MICROSCOPIC REPORT OF CALCINED.

(Note: W.P. = Well preserved - i.e. not broken; S.S. - Sponge Spicules.)