

accompanying your memorial with the report I have alluded to, in the view of having this restriction removed, so far as regards Young's paraffin oil.

James Arthur, Esq.

I have, &c.,
JAS. GALBRAITH.

APPENDIX C.

REPORT BY DR. STEVENSON MACADAM ON PARAFFIN OIL PROCURED FOR NEW ZEALAND LIGHTS.

Dr. STEVENSON MACADAM to Messrs. D. and T. STEVENSON, C.E.

New Zealand Oil.

Analytical Laboratory, Surgeons' Hall, Edinburgh,

15th February, 1866.

DEAR SIRS,—

I have carefully analyzed and tested the sample of New Zealand lighthouse paraffin oil, forwarded to me on the 4th instant, and have obtained the following results:—

Specific gravity of the oil (water=1000)	...	...	...	816.5
Consumption of oil per hour in Doty argand lamps:—				
By weight	...	...	...	1.951 ounces
By volume	...	...	...	2.389 "
				=0.0149 gallon

Photogenic or illuminating power of the light evolved during the combustion of the oil given in standard sperm candles, each consuming 120 grains of sperm per hour	23.66 candles
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Total value of the light capable of being obtained from the combustion of one gallon of the oil in pounds of sperm burned in standard candles	27.22 lbs.
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Flashing point of the oil in open test	155° F.
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Firing point of the oil in open test	172° F.
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Flashing point of the oil in close test	145° F.
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The above oil is of the best quality for lighthouse illumination, having the maximum flashing and firing points for burning oil and evolving the full amount of light known to be available from first-class oil.

Yours, &c.,

STEVENSON MACADAM, Ph.D.

Messrs. D. and T. Stevenson, C.E.

APPENDIX D.

No. 1.

REPORT ON NAVAL TRAINING SCHOOL, KOHIMARAMA.

Captain BRETON to the SECRETARY of CUSTOMS (Marine Branch).

SIR,—

Naval Training School, Kohimarama, 30th June, 1876.

I have the honor to transmit, for the information of the Hon. the Commissioner of Customs, the following report on the above-named institution for the past year.

The health of the boys has been very good. I append the report of Dr. Goldsbro', the medical officer of the institution.

Table A shows the educational progress of the boys. During the last five months there has been no schoolmaster, but the duties of that office have been very efficiently carried out by Mr. Ritchie Watt, one of the nautical instructors.

In seamanship, pulling in boats, and tailoring, the progress has been satisfactory. Table C contains a list of the clothing made and other work done in the school; and I have great pleasure in bearing testimony to the very efficient manner in which Mrs. Speight has carried out the duties of sewing instructress.

The admissions have been 51, the discharges 8, leaving 80 now in the school. See Table D.

Table B shows the visits made for the purpose of imparting religious instruction to the boys. The Rev. Dr. Kinder and Mr. George Cutts have attended very regularly for this purpose.

The conduct of the boys has been generally satisfactory, and I am glad to be able to state that they appear to have got over the foolish mania for absconding, which at one time existed.

During the entire year we have supplied ourselves with vegetables and with potatoes grown by hand labour for over three months, the crop, owing to the bad season, being a partial failure. The increased area of ground recently acquired will, I trust, after next season, enable us to supply our wants entirely in this respect.

The schooner attached to the school was taken out for short cruises until the state of the rigging compelled me to discontinue the practice. She is now used for berthing a portion of the boys, and for such nautical instruction as can safely be conducted on board her. I regret that the survey recently held on her hull has shown her to be in so unsound a condition as to render it unadvisable to refit her.