

Matières bitumineuses et traces de matières azotées. .	77.00
Silicate d'alumine. . . . .	20.50
Chaux, magnésie et traces de sulfure de fer. . . . .	1.67
Eau. . . . .	0.83

100.00

D'après O. Mather, le Boghead renferme :

C.	H.	N.	S.	H <sub>2</sub> O.	SiO <sub>2</sub> .	Al <sub>2</sub> O <sub>3</sub> .	Fe <sub>2</sub> O <sub>3</sub> .	CaO.
60.85	9.185	0.780	0.320	0.395	13.19	9.50	1.22	0.270 = 100.05 "

and, finally, the residue of distillation of the same for oil for 12 hours contains, according to Wurtz (*Dict.*, p. 639) :—

C.	SiO <sub>2</sub> .	Al <sub>2</sub> O <sub>3</sub> .	MgO and CaO.	Fe <sub>2</sub> O <sub>3</sub> .
33.00	39.70	26.75	0.15	0.40 = 100.00

It will be observed that there is a decided contrast between the relative amounts of the constituents, and those of undisputed coals, and it may be conveniently noted here, that "almost all the more eminent chemists on the Continent are agreed, that the Torbanhill mineral is a shale" (*Chemical News*, iii, 129).

The substance most analogous in character to Torbanite is, perhaps, the stellarite of New Glasgow, in this province, which I originally described (*Edin. N. Phil. Jnl.*, July, 1860) in 1860, and which has been frequently referred to since (*Mineralogy of Nova Scotia*, p. 24, *et seq.*; also *Trans. N. S. Inst.*, 1868—69), sometimes (*Geology of Canada*, 1863—69, p. 377, *et seq.*) in connection with "oil-coals" resembling it, found in the same district. The ash of the first quality of mineral consists essentially of insoluble sandy clay; acid dissolves a little iron and alumina, little or no lime, traces of sulphuric acid, and some little magnesia. The ash of the second quality is much more abundant, and consists chiefly of sandy clay, but it gives to acid a notable amount of ferric oxide; sulphuric acid and lime are also present in decided quantity. The substance is called by Dawson (*Acadian Geology*, 2nd edition, p. 339) "a fossil swamp-muck or mud," and this he speaks of in another place (*Jour. Geol. Soc.*, xxii, p. 95) as being the nature of earthy bitumens and highly bituminous shales of the coal-formation generally.

An examination of some fire-clays from the neighbourhood of the New Glasgow locality of stellarite, afforded me results quite similar to those from the ash of the mineral; that is to say, besides the sandy clay itself, the soluble portion contained ferrous carbonate, ferric oxide, and alumina, scarcely a trace of lime, a little sulphuric acid, and apparently more magnesia, and this I have very little doubt would be found to be the case with the ash of the "oil coals" of the district generally, except, of course, as to the ferrous carbonate.