

development proceeds, large bodies of mineral of high grade are exposed, and the deposits are sufficiently extensive to warrant the improvements which are in progress on the property

THE "MCLAURIN" MINE

in Templeton, is among the oldest and most developed mines in Ottawa County, and its owners should be well satisfied with the profits they have derived from working it. The reputation of the ore forwarded from this mine is well established, and analyses of shipments have proved it to be uniformly of a high percentage, so that the shippers invariably realize the highest price for the annual output.

THE "POST" MINE,

also in Templeton, is developing satisfactorily, and continues to increase in value. A quantity of ore has been delivered at East Templeton, and teams are steadily engaged in hauling it from the mine.

OTHER MINES

throughout the county are being vigorously worked. The American Phosphate Company's, the Jackson Rae, the Haldane and the Gemmill Mines, as well as one in Wakefield, under lease to Mr. Isaac Moore, are all yielding well. Recent reports received from the latter property are of a very encouraging nature, about 600 tons of phosphate have already been mined by Mr. Moore, and several new and extensive veins have been opened within the past few weeks, some of them measuring very wide and running for long distances.

Reviewing this summer's work at the mines in the County of Ottawa, the developments prove to be of almost incredible magnitude, which augurs well for the future of the phosphate industry.

Phosphate Quotations.

During the past month there has been a marked depression in the market, and the price of phosphate has declined. It is now quoted in London at 1s. 1d. for 75 per cent., and Montreal buyers are not anxious to purchase. There is every reason, however, to think that this is merely a temporary dullness, and that contracts for next season's delivery will be made at much higher figures. The crops abroad are said to be abundant, and a prosperous season among farmers is invariably followed by increased demand for fertilizers, which has the effect of enhancing the value of the raw material, and so causing a rise in price for Canadian apatite.

COMPARATIVE ANALYSES OF CANADIAN AND EUROPEAN APATITE.

The analyses as given in Table No. 1, were made from samples which were in all cases good sized hand specimens taken from large heaps, such pieces being selected as were most free from foreign mineral admixture, and as a rule the analyses may be said to represent, in a measure, the composition of the mineral of the several localities in its greatest practically attainable state of purity; such, indeed, as might be secured by careful clobbering.

TABLE I.—SHOWING THE COMPOSITION OF CERTAIN CANADIAN FLUOR-APATITES

	1	2.	3.	4.	5.	6.	7.	8.
Phosphoric acid [*]	40.373	41.080	39.046	41.139	40.868	40.518	34.032	40.812
Fluorine†.....	3.311	3.474	3.791	3.863	3.731	3.377	2.855	3.554
Chlorine‡.....	0.438	0.260	0.476	0.229	0.428	0.086	0.101	0.040
Carbonic acid§.....	0.026	0.370	0.096	0.223	0.105	0.855	2.848	0.518
Sulphur||.....	.....	.....	.....	.....	.....	.....	3.507	.....
Lime.....	47.828	49.161	46.327	49.335	48.475	49.041	44.198	49.102
Calcium.....	3.732	3.803	4.258	4.195	4.168	3.603	3.062	3.763
Magnesia.....	0.151	0.158	0.548	0.180	0.158	0.205	0.422	0.620
Allumina.....	0.609	0.705	1.190	0.566	0.835	0.267	1.979	0.565
Nickel, cobalt and Copper.....	.....	.....	.....	.....	.....	.....	not det'd	.....
Iron.....	.....	.....	.....	.....	.....	.....	5.370	.....
Sesquioxide of Iron.....	0.151	0.125	1.290	0.094	0.905	0.083	0.120	0.125
Alkalies—presence not ascertained.....	?	?	?	?	?	?	?	?
Insoluble residue.....	3.890	0.370	3.490	0.060	1.150	1.630	2.050	0.630
	100.509	99.506	100.512	99.884	100.823	99.665	100.544	99.729
Specific gravity.....	3.1393	3.1493	3.1603	3.1884	3.1641	3.1676	3.2441	3.1750
* Equal to tribasic phosphate of lime.....	88.138	89.682	85.241	89.810	89.219	88.455	74.295	89.098
† Equal to fluoride of calcium.....	6.796	7.131	7.781	7.929	7.658	6.932	5.860	7.295
‡ Equal to chloride of calcium.....	0.685	0.406	0.744	0.358	0.669	0.134	0.158	0.062
§ Equal to carbonate of lime.....	0.059	0.840	0.218	0.507	0.239	1.943	6.473	1.177
|| Equal to Pyrrhotite.....	.....	.....	.....	.....	.....	.....	8.877	.....

1. Township of Storrington.
2. Township of Buckingham.
3. Township of North Burgess.
4. Township of Portland West.

5. Township of Loughborough.
6. Township of Portland East.
7. Township of Buckingham.
8. Township of Templeton.

NOTE.—The specimens from which analysis No. 7 has been determined was fine granular, with occasional imbedded rounded fragments of semi-transparent sea green apatite, which fragments were excluded, the object being to ascertain the composition of the granular matrix. Their presence would have raised the percentage of tribasic phosphate.

TABLE II.—SHOWING THE COMPOSITION OF CERTAIN EUROPEAN FLUOR-APATITES.

	A.	B.	C.	D.	E.	F.	G.	H.
Phosphoric acid ¹	42.229	42.172	42.215	40.120	34.630	34.480	41.990	41.980
Fluorine ²	3.415	3.434	3.746	2.160	3.313	3.450	4.200	4.020
Chlorine ³	0.512	0.566	0.596	0.060	.....	.....	0.010	0.110
Carbonic acid ⁴.....	.....	.....	.....	.....	.....	1.510	.....	.....
Lime.....	49.960	49.894	49.945	50.269	41.150	40.705	49.752	49.898
Calcium.....	3.884	3.934	3.998	2.308	3.487	3.632	4.427	4.294
Magnesia.....	.....	.....	.....	.....	.....	0.160	.....	.....
Allumina.....	.....	.....	.....	.....	.....	1.080	.....	.....
Sesquioxide of iron.....	.....	.....	.....	0.610	3.800 ^b	6.420	.....	.....
Alkalies.....	.....	.....	.....	.....	.....	1.000 ^c	.....	.....
Silica.....	.....	.....	.....	3.100 ^a	12.370	4.830	.....	.....
Water.....	.....	.....	.....	.....	1.250	2.450	.....	.....
	100.000	100.000	100.000	98.627	100.000	99.717	100.379	100.302
1 Equal to tribasic phosphate of lime.....	92.189	92.066	92.160	87.586	75.601	75.273	91.668	91.646
2 Equal to fluoride of calcium.....	7.010	7.049	7.690	4.434	6.800	7.082	8.621	8.252
3 Equal to chloride of calcium.....	0.801	0.835	0.150	0.094	.....	.....	0.016	0.172
4 Equal to carbonate of lime.....	.....	.....	.....	.....	.....	3.432	.....	.....

- A. From Arendal, Norway, by G. Rose.
- B. From Murcia, Spain, by G. Rose.
- C. From Greiner, Tyrol, by G. Rose.
- D. From Estramadura, Spain, by Garzo and Penuelas.

- E. From Estramadura, Spain, by P. Thibault.
- F. From Staffel, Nassau, Germany, by Foster.
- G. From Tokovaia, Ural, Russia, by Pusirevski.
- H. From Sludianka, Russia, by Pusirevski.

a. With alumina.—b. With some alumina, magnesia, iodine (traces) and carbonic acid (by difference).
—c. Consisting of potash 0.58 and soda 0.42.