

Analyses of vein
graphite from
Buckingham.

Colour of the ash, light yellowish-grey; a portion placed upon moist turmeric paper manifested a strong alkaline reaction.

A portion of the foreign mineral matter in this graphite consisted of calcite; it may, therefore, be inferred, considering the small amount of water indicated on heating in the closed tube, that the "volatile matter" consisted largely of carbonic acid.

COMPOSITION OF ASH PER CENT.

Silica.....	45.729
Alumina.....	10.824
Sesquioxide of iron.....	1.230
Sesquioxide of manganese.....	0.467
Lime.....	34.744
Magnesia.....	0.952
Potash.....	0.522
Soda.....	5.403
	99.871

17. *Vein Graphite, var. Foliated.*

Analyses of vein
graphite from
Grenville.

From the north-half of the third lot of the second range of the Augmentation of Grenville. An exposure here was at one time mined to a small extent. At the opening of the excavation it showed a thickness of about ten inches, but the pure graphite was found to form a lenticular mass, which appeared to be separated from other masses of the same character by intervals, in which the graphite became intermixed with the limestone. The foregoing from information supplied by Mr. Charles Robb.

The specimen weighed about eight kilogrammes, and was one of great purity. The exposed faces of laminae had become tarnished with a reddish-brown coloured film; but, apart from this, and the contents of an occasional small fissure, it apparently contained very little foreign matter.

Structure massive, dense, made up of broad and thick laminae, closely interlocking each other at diverging angles, thus presenting a radiated arrangement, the sides of the vein forming the basal line. Colour, dark steel-grey. Lustre metallic. Specific gravity 2.2714 (containing 0.076 per cent. ash.) Heated in the closed tube this graphite gave off a little water, but not more than sufficient to form a mere film.

The material employed for analysis was carefully selected, and contained no visible foreign matter. Its composition was found to be as follows:—