If we assume that the iron is combined with sulphur in the form of pyrite and the cobalt with arsenic in the form of smaltite, the recalculation gives a nearly pure proustite with a small excess of arsenic as follows:

Element	Ag	As	S	Sb	Fe	Co
Per cent.	64.12	15.90	19.28	.08	.25	.12
Mol. Ratio	.5943	.2120	.6013	.0007	.0045	.0020
Pyrite	....	....	.0090	....	.0045	....
Smaltite	....	.0040	....	....	....	.0020
Proustite	.5922	.1974	.5922	....	....	....
Pyrargyrite	.0021	....	.0021	.0007	....	....
Arsenic excess	....	.0106	Deficiency of S = .0020	....	....	....

Converting these ratios into percentages the following result is obtained:

	Proustite	Pyrargyrite	Smaltite	Pyrite	Arsenic excess	Insol.	Total
Per cent	97.69	.39	.42	.53	.79	.38	100.19
						Less S added	.06
							100.13

Owing to an error in calculating the molecular ratio for antimony in the original paper, the percentages of the mineral constituents given here differ slightly from those tabulated in the paper by Mr. Parsons.

Polybasite Crystals, O'Brien Mine

Polybasite has long been supposed to be present in the Cobalt ores, but hitherto has not been positively identified by crystallographic measurements or chemical analysis.

Several years ago M. T. Culbert, of the O'Brien mine, presented to the museum of the University of Toronto, a specimen of argentite, showing a few minute crystals, which he believed to be polybasite, because of the triangular striations to be seen on some of the faces.

The writer examined this specimen with a view to extracting crystals for measurement. The minute, brilliant, thin tabular crystals, reaching a maximum diameter of perhaps two millimetres, are always firmly attached to the argentite, either by the large basal pinacoid or by one side, and had to be very carefully cut away. Finally, about ten crystals, together with some broken material, were