It remains to reconcile Short's determination of optical isotropism with a non-cubic diffraction pattern and specifically with the known rather strong anisotropism of löllingite (clearly evident in a polished section of the Reichenstein löllingite check). While the writer did not examine polished sections of Foshag and Short's arsenoferrite, a binocular examination of the coarse powder at his disposal indicated an extremely fine grain. The material has an appearance suggesting broken porcelain. There is *x*-ray evidence to the effect that the material is indeed extremely fine, for the high θ lines on the powder photograph are relatively weak, and the doublets in this region are unresolved. If sufficiently fine grained, the material would appear isotropic in aggregate, although the individual crystals would be anisotropic.

Since Foshag and Short's evidence for the existence of Baumhauer's[2] hypothetical "arsenoferrite" was the only direct evidence extant, it seems desirable to discontinue the use of the term.

[2] Baumhauer, H., Arsenoferrit, ein neues Glied der Pyritgruppe: *Zeit. Krist.*, vol. **51**, pp. 143–145, 1912.

CORRECTIONS

X-RAY POWDER DIFFRACTION DATA FOR ANTLERITE AND BROCHANTITE

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Dr. George Tunell of the Geophysical Laboratory has kindly brought to my attention the fact that incorrectly identified material was used in securing the *x*-ray data erroneously called antlerite in my paper entitled "Identification of the copper ore minerals by means of *x*-ray powder diffraction patterns"; this Journal, August issue, 1935. By means of optical methods I have checked the supposed antlerite that I used, and find it to be brochantite. I also find that the data obtained from this specimen of brochantite check the original data of Posnjak and Tunell (*Am. Jour. Sci.*, vol. **18,** pp. 12–24, 1929) better than the brochantite record published in my article cited above. For purposes of comparison I am listing the three records for brochantite in Table 1.

X-ray powder diffraction data from analyzed artificial crystals of antlerite the three refractive indices of which were measured, as well as other optical properties, and on which angular measurements were also made, were published by Posnjak and Tunell (*Am. Jour. Sci.*, vol. **18,** pp. 12–24, 1929). Dr. Tunell has pointed out also that more complete data for the *x*-ray diffraction pattern of tenorite have recently been published by Tunell, Posnjak, and Ksanda (*Zeit. Krist.*, vol. **90,** pp. 138–139, 1935).

TABLE 1

Posnjak and Tunell		Waldo			
Brochantite		Supposed Antlerite; really Brochantite		Brochantite	
Spacing	Intens.	Spacing	Intens.	Spacing	Intens.
6.20Å	7	This line not registered on cassettes used			
5.25	7			5.35Å	m
3.83	9	3.85Å	s	3.91	s
3.14	4	3.17	w	3.20	m
2.88	2	2.90	ew	2.93	w
		2.80	ew	2.82	ew
2.65	7	2.66	m	2.68	m
2.58	1			2.60	vw
2.49	10	2.51	s	2.52	s
2.44	1	2.45	m	2.47	m
2.36	1	2.37	vw	2.39	w
				2.30	vw
2.26	2			2.27	vw
2.17	3	2.18	w	2.19	m
2.12	1	2.13	w	2.14	w
2.06	2	2.07	ew	2.08	w
2.00	1	2.00	ew	2.01	vw
1.95	2	1.949	ew	1.965	w
				1.918	vw
1.88	1			1.885	vw
1.81	1	1.810	w	1.822	w
				1.787	w
1.73	5	1.733	m	1.740	m
1.70	1	1.701	ew	1.712	w
1.66	1	1.668	ew	1.675	w
1.62	2	1.628	vw	1.635	w
1.59	1	1.591	vw	1.595	w
1.56	2	1.558	w	1.563	m
1.53	2	1.532	w	1.537	m
1.50	3	1.500	w	1.505	m
1.46	1	1.454	ew	1.463	w
1.42	1	1.425	ew	1.434	w
1.39	2	1.400	ew	1.405	w
1.33	1	1.337	ew	1.338	w
1.31	2	1.311	ew	1.312	w
1.28	1	1.260	ew	1.282	w
				1.093	ew
				1.077	ew
				1.058	ew
				1.015	ew
				1.000	ew
				0.904	ew
				0.819	ew

I also desire to record here as applying to my results, that with molybdenum radiation, which was employed throughout my work, and with the cassettes which I used, diffraction lines corresponding to spacings greater than 6.0 Å could not be obtained.

ANALYSES OF THULITE

STUART A. NORTHROP, *University of New Mexico.*

In an article in the November 1935 issue of this Journal the writer reported that he had found only one other analysis of thulite (from Norway).[1] He has recently discovered an analysis, made by L. G. Eakins,[2] of material recorded not as thulite but as "rose-red zoisite," from James's mica mine, Yancey County, North Carolina. The specific gravity of the North Carolina material is much higher than the average (North Carolina 3.352; Connecticut 3.19; New Mexico 3.15; Norway 3.124).

The analysis of the North Carolina material follows: SiO_2 38.98; Al_2O_3 31.02; Fe_2O_3 4.15; CaO 23.80; MnO 0.23; H_2O 2.03; total 100.21. The silica here is much lower, and the lime much higher, than in either the Norway or New Mexico material. Manganese was not reported in the Norway material but was given in that from both North Carolina and New Mexico.

[1] Northrop, Stuart A., Thulite in New Mexico: *Am. Mineral.*, vol. **20,** p. 807, 1935.
[2] Clarke, F. W., *U. S. Geol. Survey,* Bull. **220,** p. 49, analysis B, 1903.

NOTICE

Report of the Committee on the Measurement of Geologic Time.

Professor Alfred C. Lane, Chairman of the Committee on the Measurement of Geologic Time, announces that the report for 1935 is ready for distribution and will be sent without charge to those interested in the work and able to assist through the furnishing of information or specimens.

Requests for the report should be addressed to the Division of Geology and Geography, National Research Council, 2101 Constitution Ave., Washington, D. C., and inquiries regarding the work of the Committee to Professor Alfred C. Lane, Barnum Museum, Tufts College, Medford, Massachusetts.