| | | | | | | | P . | <u>P.</u> E. |
|---|--------|---------|------------------------------------|-------|--|---|------------|-----------------|
| Portion insoluble in hydrochloric acid, | | | | | | | 5.76 | |
| Total water (H,O), | 30 | | | | | | 9.77 | |
| Manganous oxide (M | (nO). | | | | | | 20.22 | |
| Loose oxygen (O), . | // | | | 200 | | | 3.49 | |
| Ferric oxide (Fe ₂ O ₃), | | | | | | | 6.54 | |
| Alumina (AlaO ₈), . | | | | | | | 1.66 | |
| Lime (CaO), . | | 120 | | | | | 19.71 | 0.7039 |
| Magnesia (MgO), . | | | | | | | 7.42 | 0.3710 |
| Potash (K,O), | | | | | | | 0.55 | |
| Soda (Na ₂ O), . | | | | 2 | | | 1.12 | |
| Phosphoric acid (P.C |).). | 525 | • | 10 | | | 18.59 * | 0.7860 |
| Carbonic acid (CO ₂), | 20/1 | | - | | | | 3.87 | 0.1759 |
| Traces of copper, chi | orine, | fluorin | ie, and | loss, | | · | 1.30 | |
| | • | | gross - errold No. 0440 | | | | 100.00 | |

The manganese is probably present mostly as binoxide, combined chemically with water and part of the protoxides.

No. 3. Half of Earbone of Balana. Station 286; 2335 fathoms, South Pacific.

One corner of this specimen had a considerable cavity, which was pretty well filled with a brownish black, friable substance. This substance was scraped out and preserved as "3. (1)." The remainder consisted partly of a black coating (which was separated as far as possible and kept as "3. (2)") and partly of a very white siliceous looking core (which was put aside as "3. (3)"). Portions "3. (3)" and "3. (1)" were analysed.

Portion "3. (1)." Contents of Cavity.

Note.—The analysis of this substance was all but completed when it was found that it contained a small admixture of an "oil," which had no doubt become mixed with it accidentally in the cutting of the original specimen. The greater part of the substance dissolved readily in hydrochloric acid, with evolution of chlorine. Only the solution was analysed.

| | | | | | | Р. | |
|---|--------|----------|-------|----|---|--------|-------------------------------|
| Portion insoluble in l | hydroc | hloric a | cid,+ | | | 13.66 | |
| Total water (H ₂ O), | | | | | | 27.00 | |
| Manganous oxide (Mr | 10), | | | 1 | | 27.13: | $MnO = 0.764 \div 0.764 = 1$ |
| Loose oxygen (O), | | | | 29 | | 3.13: | $O = 0.398 \div 0.764 = 0.52$ |
| Ferric oxide (Fe ₉ O ₈), | | | | 6 | | 8.34 | |
| Lime (CaO), . | | • | • | | | 4.34 | |
| Magnesia (MgO), | | | | | | 4.03 | |
| Alumina (Al ₂ O ₈), | | • | | | | 6.54 | |
| Silica (SiO ₉), . | | 50 50 | | | | 1.31 | |
| Phosphoric acid (Po) | 5), | | • | | • | 2.39 | |
| Potash (K ₂ O), | | • | | | | 1.07 | |
| Soda (Na ₂ O), . | | | | 8 | | 2.39 | |
| Nickel and copper, | • | | | | • | traces | |
| | | | | | | 101.00 | |
| | | | | | | 101 33 | |

^{*} Equal to 40.90 per cent. tricalcic phosphate.

[†] Apparently all amorphous silica.