APPENDIX 8

Analytical techniques used by Comalco, Amdel.

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1. STREAM SEDIMENT AND SOIL SAMPLES.

Cu, Pb, Zn, Bi, Mo, Co, Ni:

Determination by AAS after dissolution of 1 g sample in hot HCl + HNO_3 (Scheme 1).

Ag, Mo, Bi:

Determination by AAS after dissolution of 5 g sample in hot HNO_3. (Scheme 2).

Fluorine: (total)

Determination by specific ion electrode after fusion of 0.25 g sample with flux of Na_2CO_3, KNO_3, K_2CO_3, SiO_2 and water leach. (Scheme 8).

2. ROCK SAMPLES.

Cu, Pb, Zn, Bi, Mo, Co, Ni, Cr:

Determination by AAS after attack of 1 g sample in hot HCl + HNO_3 + $HClO_4$, evaporated to fuming $HClO_4$, and dissolution in HCl. (Scheme 3). Where silicates are suspected the method is the same but attack is by HF, HNO_3 + $HClO_4$. (Scheme 5).

Ag, Mo, Bi, Sb:

Determination by AAS after dissolution of 5 g sample in hot HCl + HNO_3. (Scheme 4).

W:

Fusion of 0.25 g sample with $KHSO_4$, leach with HCl, add $SnCl_2$ solution, determined with Zn-dithiol indicator in a spectrophotometer, compared with known solutions. (Scheme 7).

Au:

10 g of sample roasted, leached to dryness with HCl + HNO_3, dissolved in HCl, transfer to organic solvent and determine by AAS.

Fluorine:

As for stream sediment and soil samples.