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THE HEEMSKIRK DEPOSITS

Extract from letter from D. Ostle, United Kingdom Atomic Energy Authority, 16.3.56

As we suspected in the field, the radioactivity at the two prospects on the West Coast is due to uranium in the iron minerals and not, as I advanced as a possibility, to residual daughter products remaining after leaching of the uranium. Although I have done no quantitative analyses, tests show strong positive reactions for uranium in crystals of haematite, from the first prospect visited, and in limonitic matter from both prospects. The uranium is therefore apparently included in the structure of, or absorbed on, the iron minerals. The slight enrichment which occurs in the limonitic phase may be due to residual concentration of uranium during weathering of a haematitic zone, or to fixation of traces of uranium from ground water. Which ever is the explanation it is almost certain that values will not increase in depth and the limited costeaning which might have been done under different circumstances is hardly justifiable. Assays of the limonitic matter from both prospects are low, being 0.04 and 0.03 per cent equivalent U_3O_8 from the first and second prospects respectively.