

DISCUSSION

The Que River TEM Case-Study

G. Staltari

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R. J. Henderson

(Geoinstruments Pty. Ltd., 18 Gertrude Street, Arncliffe NSW 2205):

I find it disappointing that this paper appearing as it has in 1987 should distinguish different commercial types of TEM on the basis that each is only capable of certain types of loop geometry. The reasons given for the success of UTEM in detecting the P lens (as slim as the evidence may be), stem only from its use in the large fixed transmitter loop geometry. SIROTEM has been capable of operating in this particular geometry since 1983. Unless the paper is to be only of historical interest it should reach conclusions appropriate at the time of writing. The author has stated to me in writing "I feel that any high power impulse system fixed loop survey would have detected the P lens." (Staltari, 1987, pers. comm.). It is unfortunate that something to this effect was not included in the paper.

REPLY

G. Staltari:

I had considered my paper to be balanced in its approach to reconciling the differences in response for the two systems/field configurations used. However I can appreciate that these differences may cause some workers concern. In general, the paper was intended as an historical account and should in

no way be taken as an indictment on the capabilities of any particular system. The fact is that the interpretation of the UTEM data in 1978/79 resulted in a conclusion that the P lens was detected. The interpretation of the SIROTEM data during the same period resulted in the conclusion that the P lens was not distinguishable in the results. Readers should, however, be aware that all TEM systems have undergone considerable changes since 1978 and in particular, many systems are capable of being employed under different transmitter loop-receiver configurations. In particular, SIROTEM has been capable of operating in the fixed loop mode for some time. This is not to say that all fixed loop systems are equally capable in respect of field portability, signal-to-noise efficiency, bandwidth, etc. For example, to this day, UTEM is preferred by most mining companies in the Que River district because of its superior field portability in the rugged terrain. On the other hand, SIROTEM is preferred by most mining companies in certain other parts of Australia because of its ability to work in the moving loop configuration. I am interested in R. Henderson's inference that the evidence for the detection of the P lens by UTEM is 'slim'. I think it would be more beneficial for him to outline his reasons for such an inference, particularly in view of the fact that an even more subtle anomaly led to the discovery of the Hellyer ore deposit. Any alternative interpretation would be very welcome, particularly by those geophysicists who are still attempting to locate new ore bodies in Western Tasmania.