

1984 Luncheon Meetings

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**The Flasher: A New Potential Tool for Petroleum Exploration;
Initial Studies from the Overthrust Belt**

The idea that sulfur-containing gases might be useful in the location of petroleum reservoirs is not new. However, previous evaluation of this exploration possibility has not been feasible because of rigid constraints on existing

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analytical technology. An adaptation of a novel patented analytical technique developed in our laboratory has for the first time removed these former measurement constraints and has permitted meaningful testing of these hypotheses concerning geochemical exploration via sulfur gas responses from soil samples. In our technique, sulfur gases absorbed onto soil samples collected in the vicinity of the potential hydrocarbon reservoir are potential hydrocarbon reservoir are thermally desorbed and measured with the use of an unique metal foil collection/flash vaporization/sulfur selective detection (MSF/FV/SSD) system, *i.e.*, "The Flasher."

For the past two years this thermal soil desorption (TSD)

MFC/FV/SSD procedure has been used for the rapid, sensitive, and reproducible analyses of sulfur gases contained in near-surface soil samples from the S.W. Wyoming Overthrust Belt. These initial reconnaissance surveys were performed in the Pineview, Patrick Draw, Brady, and Baxter Fields.

This presentation will briefly describe our TSD/MFC/FV/FPD methodology, its overall performance characteristics on geological samples, and then focus on our initial petroleum exploration data from the Overthrust Belt samples. Sufficient time will also be allotted for discussions of our present results and potential areas for future exploration surveys with "The Flasher."