remedies seemed reasonably clear to us in the field. On that date, over my signature as Regional Administrator, we sent by telegram a "statement submitted for oil shale justification." It is best summarized by quoting the first portion:

"Inadequate ownership information and failure to investigate validity of unpatented claims are obstructing development of an oil shale industry. The ownership pattern is so confused that neither government leasing of shale lands nor development of private holdings is feasible. The U.S. Geological Survey has outlined the bodies of oil shale deposits; the Bureau of Mines has proved the feasibility of extracting oil from shale; oil companies are attempting to block shale holdings, as well as doing experimental work. The President's Materials Policy Commission has indicated that oil shale development is not only inevitable but imminent; but, if the ownership problem is not cleared up in advance, confusion as to ownership can block oil shale development in a period when time

"The principal oil shale deposits are located in Colorado, Utah, and Wyoming. The area of highest potential industrial development and of highest present interest is in Colorado. The deposits are principally on public lands. Except for those areas subject to mining claims, the government has withdrawn all oil shale lands from access and development. The problem is to determine which lands are subject to valid mining claims and to block private and public holdings.

"The BLM is the agency responsible for solving the problem. Specifically the steps which would be taken are: first, collect data to allow determination of Federal and non-Federal ownership claims. This would involve: (1) obtaining from BLM land office records information to identify mineral ownership retained by U.S. on lands; (2) obtaining from other Federal agencies and county records the record of lands re-acquired by the U.S.; (3) obtaining from BLM Archives, and other files complete record of all withdrawals and restoration orders which affected availability of public land for mineral entry; (4) obtaining from BLM offices records of any other action which segregated lands from mineral entry; and (5) obtaining from county recorder's office record of all unpatented mining claims in the area.

"Second: Clarify land descriptions by (1) as necessary, completing cadastral surveys, either original or re-survey; (2) processing mineral surveys; and (3)

verifying location of mining claims by field check of monuments.

"Third: Accelerate processing of claims to patent by (1) comparing claim with withdrawal and other segregation records to determine the validity of claim at time of filing; (2) making field check of discovery and of necessary development work; and (3) issuance of patents. "Fourth: Cancelling invalid claims, as required.

"Fifth: Blocking public and private oil shale holdings by (1) analyzing and mapping land ownership pattern in shale area; (2) initiating and processing exchanges of mineral lands to achieve solid blocks of holdings under private or public ownership; and "Sixth: Issuance of leases for shale lands as requested."

Even earlier, by August 22, 1952, Howard J. VanderVeer, then Regional Chief for Minerals, and others of my staff had already prepared, and without undue difficulty persuaded me to sign and submit, a "Proposed Project to Remove Public Land Obstacles to Oil Shale Development." On that date such a proposal, consisting of some seventeen pages and fourteen separate exhibits, was forwarded to the Director of the Bureau of Land Management in Washington, D.C. For various reasons the project was never approved, nor even, so far as my knowledge goes, presented to the Budget Bureau or Congress.

In early 1954, my area of jurisdiction as a Bureau of Land Management field administrator was changed to exclude Colorado, but to add to Utah the States of Idaho, Nevada, and Arizona. Nevertheless, my interest in oil shale continued to be one of active participation as to all states because of membership on the Interior Department Colorado River-Great Basin Field Committee. Service as BLM (Bureau of Land Management) representative on that Committee ran from January, 1947, until my government service ended in February, 1955. The frequent meetings and annual study reports of that Committee placed steadily increasing emphasis on oil shale. There were coordinated presentations by representatives of the Bureau of Mines, U.S. Geological Survey, Mines Mine Reclamation, the Bureau of Land Management, and to some extent by other agencies of Interior. The inevitability of an oil shale industry was not doubted.

<sup>&</sup>lt;sup>4</sup>E.g., Pacific Southwest Field Committee, Program for the Pacific Southwest Region, 1956-1961, March 1954, p. 3.