

Integrating BRASS and AFS would facilitate financial reporting by having one set of data reflecting RMP's financial records. This integration also should eliminate the current duplicate processing performed with BRASS payments. The new financial system would provide more flexibility so that future changes to the bonus and rental processing can be handled more easily. This integration also will eliminate the remaining VAX processing.

## **REMAINING PROBLEMS WITH AFS**

In March and April 1988, the DOI Office of the Inspector General (OIG) issued a series of Audit Reports on Mission Accomplishment for various divisions of the Royalty Management Program.<sup>30</sup> On May 23, 1988, those reports were the subject of hearings held by the Senate Committee on Energy and Natural Resources, Subcommittee on Mineral Resources Development and Production.

In their report on the Fiscal Accounting Division (FAD), which operates AFS, OIG found that improvement was needed in collecting, disbursing, and accounting for Federal and Indian mineral revenues. Specifically, OIG found:

1. FAD had not determined the proper disposition of reported over-recoupments on Indian leases because the work was considered low priority. Subsequently, the Division upgraded the priority to resolve this problem.
2. FAD had not dedicated adequate resources to reconcile payer account balances. OIG found 1300 payor accounts that were not reconciled, and had not implemented adequate procedures to resolve reported underpayments.
3. FAD did not assess liquidating damages against payers for erroneous reporting that qualified as warning errors and did not prevent disbursement of royalties.
4. FAD did not disburse some royalties in a timely manner, resulting in a loss of interest to coastal States.

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<sup>30</sup>DOI, *supra* note 6.

At the hearings on those reports, Senator Melcher, as Subcommittee Chairman, expressed concern that, although FOGRMA established a comprehensive Federal system for royalty management in 1982, MMS had taken seven years to establish such a system. Moreover, Melcher noted that according to the OIG reports, MMS' efforts still fell short of the requirements of the Act. According to the testimony during the hearing, there is no evidence of overt theft, but there is poor collecting of reported underpayments, and poor disbursements of receipts to the States and Indian Tribes.\*

The Honorable James R. Richards, Inspector General of DOI, testified that MMS is making a major commitment to resolving the outstanding problems. OIG'S continuing concerns related to: 1) DOI'S delay in issuing final regulations under FOGRMA; 2) royalty compliance, including inadequate lease coverage, the lack of a comprehensive lease audit plan, and the inordinate amount of time and money spent investigating alleged overpayments; 3) poor disbursement of receipts to States and Tribes; and 4) the shortfalls in cost effectiveness and efficiency in expanding PAAS to include onshore leases.

Senator Melcher also expressed concern about the expense of converting the AFS system to the IBM mainframe, and asked whether the resulting benefits in royalty collection justified that cost. William Bettenberg, then Director of MMS, responded that MMS could not really quantify the benefits. He noted that the overall system essentially remains unchanged, in the sense that the reporting software is the same, but the operating environment is much better.

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\* The Federal Onshore Oil and Gas Leasing and Reform Act of 1987 amended the Mineral Leasing Act to add extensive provisions for preventing fraud in the sale of Federal oil and gas leases. These provisions deal with schemes by which noncompetitive leases were being segmented into small parcels, each of which was sold for substantial prices.

In terms of MMS' conversion efforts, Bettenberg testified that the task of cleaning up the databases (reformatting all the data for the new system) is complete. To eliminate dual databases and inconsistencies, responsibility for the receipt, entry, edit, correction, and distribution of onshore production data was transferred from BLM to MMS in 1988, and the transition should be complete sometime in FY89. According to Bettenberg, the remaining database problems are primarily due to errors in payment and reporting, which should be alleviated through MMS' training efforts.

The concerns raised in the OIG reports led to the Senate Committee on Energy and Natural Resources request that OTA undertake a study of the technological opportunities for improving royalty collection. In particular, the Committee requested an assessment of the adequacy of the AFS hardware and software to ensure maximum cost-efficient recovery of royalty revenues.

OTA found that the current AFS hardware (IBM 3081 mainframe) and operating system remedy most of the problems that **arose** with the previous VAX minicomputer system. For the most part, the AFS operating environment is adequate for the size and complexity of the workload.

The principal remaining problems **are** data and software-related, primarily due **to** multiple data **sets** and data inconsistencies. While internal validation of the database, payor training, and other efforts have reduced the input error rate to 4 percent, the different databases and update files significantly reduce MMS' ability to ensure accurate royalty reporting and payment. For example, AFS verifies its accounting and disbursement through cross-checks with PAAS, IDVS, and other databases and through internal reporting/payment comparisons. Yet AFS, PAAS, BRASS and the other databases all maintain separate lease/agreement data and the different RMP units use different definitions and meanings of data fields.

Moreover, data were processed and updated daily, weekly, monthly, or interactively, giving different values to different copies of the data. The processing and update rules also were different for the various copies of the data. Finally, most internal controls are performed with manual processes.

The various data integrity problems increase the difficulty of reconciling data from its different sources. The large amounts of redundant data also mean high operating costs and slow processing.

MMS' system improvement plan includes projects that will remedy these problems. They plan to eliminate three of the database updates currently in the system, aggregate the lease/agreement data for RMP systems, and reduce redundant data storage. Although their long-range plans still call for five database structures for royalty financial processing, those structures are planned to be internally consistent and integrated. Not only would the planned improvements eliminate data integrity problems with system cross-checks, they would improve the audit and appeals processes. Over the long term, database integration also would provide a management information system for easier information retrieval and reporting.

A remaining concern about **MMS' long-term** plans is that the capacity of the IBM 3081 mainframe is expected to be exceeded around 1991. This coincides with the target date for completion of all elements of the system improvement plan. With the rapid advance in computing and operating system technology, there is a danger that MMS could once again find itself having to convert to an entire new system, with the attendant delays in coming online and the resulting possibility that there would be yet another gap in accurate and timely royalty processing. Care should be exercised in improving the operating system and in choosing a larger computer to ensure that the **system can be** converted to the new technology without a loss in processing capability.

MMS recognizes these problems. Their acquisition plan currently calls for IBM-compatible equipment and operating systems. Upgrades must be able to run all existing software without modification. If followed, this plan should preclude any massive conversion effort similar to that when AFS moved from the VAX to the IBM.

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