109080

BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

09094

Oil And Gas Royalty Collections-- Serious Financial Management Problems Need Congressional Attention

The Geological Survey collected about $1.2 billion for oil and gas removed from Federal and Indian lands in 1977. However, the Survey is not collecting all that is owed by the oil and gas industry because the Survey's accounting and collection procedures are inadequate to identify all royalties due. In addition, $359 million of the payments received in 1977 were past due.

Many factors beyond the control of the Geological Survey contributed to the breakdown in the Survey's financial management system. This report examines the impact of these factors on the system, recommends corrective action that can be taken quickly, and discusses alternatives available to alleviate certain of these external factors.

004939

FGMSD-79-24

APRIL 13, 1979

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-118676

To the President of the Senate and the
Speaker of the House of Representatives

This report discusses serious financial management problems with the system used to collect royalties from entrepreneurs for oil and gas removed from Federal and Indian lands. In 1977, the Geological Survey collected about $1.2 billion, but it is not collecting all that is due from the oil and gas industry because its accounting and collection procedures are inadequate to identify all royalties due. In addition, the Geological Survey received late payments of $359 million in 1977.

We made this review because of extensive congressional interest in the Government's debt collection procedures in general. Also, the question of whether the Geological Survey's collection system is operating adequately to assure that the Government is receiving all money to which it is entitled has generated congressional interest.

We are sending copies of this report to the Director, Office of Management and Budget and to the Secretary of the Interior.

Comptroller General
of the United States

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

OIL AND GAS ROYALTY COLLECTIONS--SERIOUS FINANCIAL MANAGEMENT PROBLEMS NEED CONGRESSIONAL ATTENTION

D I G E S T

A large percentage of the oil and gas produced in the United States comes from Government and Indian lands leased to the private sector. During 1977 the Geological Survey, which has the responsibility for collecting rents, royalties, and other payments on these leased lands, collected about $1.2 billion in from the oil and gas industry. As the value of oil and gas increases, these leases will also become more valuable. p 46

However, GAO found serious deficiencies in the way the Geological Survey maintained records of amounts due the Government under the terms of these leases. The deficiencies, which have resulted in losses of millions of dollars, included:

--Statements of lease accounts, which show accounts receivable, contained numerous errors and omissions and could not be relied upon to manage royalty collection effectively. (See p. 8.)

--All data used in the royalty collection system originated with the oil and gas industry. Production data which could be verified to some extent by Geological Survey personnel was not matched against reported sales data. (See p. 9.) Because the Geological Survey was not performing adequate numbers of lease account reconciliations and audits, it had to rely upon unverified data from the oil and gas industry to compute and collect royalties due. (See p. 12.)

Since the statements of lease accounts could not be effectively used to determine if amounts due the Government were properly computed and paid, the money that was collected was not always collected when due, and the amount of money which was never collected is unknown. However, after GAO identified

Tear Sheet. Upon removal, the report cover date should be noted hereon.

underpayments and made other suggestions, the Geological Survey collected an additional $2.6 million. The Survey also collected $7.5 million as a result of a limited number of lease account audits.

A lack of interest charge provisions resulted in the delayed receipt of about $359 million in royalty payments during 1977. To the extent the delayed payments caused additional borrowing by the Department of the Treasury, they generated additional interest cost.

GAO recognizes that many factors beyond the control of Geological Survey management (the increasing number of lease interests, varying royalty rates, complex oil and gas valuation factors, royalty-in-kind programs, etc.) contributed to the breakdown in the royalty collection system. The impact of these factors on the collection system is discussed in chapter 3 of this report.

Geological Survey management has recognized that action must be taken to make the collection system work with fewer people. Understaffing is a chronic condition. The accounting staff has increased both in number and professional qualifications, but the number of leases administered by the Geological Survey has also increased. If the present system is continued, additional staff will be required.

ALTERNATIVES TO THE EXISTING COLLECTION SYSTEM

SEN 06300

The Chairman of the Senate Committee on Energy and Natural Resources asked GAO to provide the Committee with several alternatives to the existing collection system that the Committee could consider in deciding what should be done about these problems. The alternatives which GAO has identified, including revision of reporting frequency, consolidation of reporting and paying responsibilities, and adoption of industry accounting and reporting practices, are discussed in chapter 4 of this report.

Concurrent with the GAO review, the Geological Survey has recognized the fact that the objectives of the system used to collect royalties were not being met, and it has formed a task force to recommend system improvements. This task force was formed on October 4, 1978, with a goal of recommending options to management for a revised system that will be effective and efficient and less labor intensive in carrying out responsibilities for the collection of money due the Federal Government and Indians for rentals and royalties.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

Because the need for major changes in the royalty collection system is well recognized, GAO is making both short- and long-range recommendations. The short-range recommendations can be rapidly implemented without making extensive system changes. These actions should be implemented regardless of the extent of eventual modification or redesign of the collection system. The long-range recommendations should be implemented as part of the system's modification or redesign.

For the short range, the Secretary of the Interior should require the Director of the Geological Survey to:

--Inform field inspection personnel of the need to assist accounting personnel in verifying sales data by determining the reasonableness of inventory and sales data shown on production reports. Accounting personnel should be informed of any discrepancies noted.

--Require that codes identifying reasons for account adjustments be included on lease account records.

--Provide for and charge appropriate administrative fees for late or erroneous reporting. Interest should be charged on delinquent accounts to encourage timely reporting and paying.

--Intensify efforts to encourage companies having computer capabilities to provide report data by direct magnetic tape input.

--Use computer-prepared exception reports to follow up and resolve deficiencies to increase the value of the accounts as controls and to reduce the effort currently involved in auditing the accounts.

For the long range, the Secretary of the Interior should require the Director of the Geological Survey to:

--Modify or redesign the collection system to reduce the volume of reports submitted by the oil and gas industry to the Geological Survey for processing. In turn, this reduction will enable the Geological Survey to place increased emphasis on lease account reconciliations and audits.

--Consider not only the volume of annual royalties generated by the leases, but also the dependability of the lessees and their prior reporting and paying record in selecting accounts for reconciliation and audit.

--Provide for cross-service audit agreements between the Department of Energy and the Geological Survey when both are auditing the same commercial enterprise.

--Standardize the system used to control royalty collections by designating one office as responsible for establishing agencywide collection policies.

--Periodically advise the Senate Committee on Energy and Natural Resources of the status of actions taken to modify or redesign the collection system.

AGENCY COMMENTS

The Department of the Interior concurred with the report and agreed that the collection of oil and gas royalties was a problem of serious proportion. The Department commented that a way must be found to reduce paperwork and concentrate more effort on the substantive aspects of royalty collection. The detailed comments provided are attached as appendix I. (See p. 47.)

The Department commented that action is being taken to implement those recommendations which can be rapidly implemented without making extensive system changes. Also, a Geological Survey task force has concluded that a completely new system should be implemented due to problems in organization, management, personnel, system design, and other deficiencies. A proposed new royalty collection system has been developed and is being reviewed and evaluated by departmental officials.

GAO is encouraged by the Geological Survey's recent efforts to develop an improved collection system. However, as this system has not been fully developed and will not be implemented for some time, GAO cannot comment on the efficiency and effectiveness of the proposed system.

C o n t e n t s

ABBREVIATIONS

BTU British Thermal Unit

GAO General Accounting Office

CHAPTER 1

INTRODUCTION

Most energy used in the United States is produced from oil and gas. A significant portion of U.S. energy resources are located on Federal and Indian lands. In fiscal 1977 more than 16 percent of domestically produced oil and 24 percent of all natural gas came from these lands. The value of oil and gas produced from Federal and Indian lands in 1977 was $8.2 billion, and the Government and Indian's share of the oil and gas amounted to $1.2 billion in royalties. Royalty collections have been increasing over the years, and this trend can be expected to continue.

LEASING OF FEDERAL AND INDIAN LANDS FOR OIL AND GAS EXPLORATION AND EXTRACTION

The Congress gave the Department of the Interior, through the Mineral Leasing Act of 1920, as amended, the responsibility for managing oil and gas resources on public lands. This responsibility was extended to submerged and outer continental shelf lands in 1953. In addition, under the provisions of 25 CFR 171 and 172, the Department of the Interior has a trust responsibility for Indian lands.

AGC 00008 AGC 00215 AGC 00006

The Bureau of Land Management, the Bureau of Indian Affairs, and the Geological Survey share primary management responsibility for oil and gas leasing on Federal and Indian lands. The Bureau of Land Management and the Bureau of Indian Affairs are responsible for leasing these lands for the development of oil and gas resources. DOE AGC 00912

When operation and production starts on these leases, it becomes the Geological Survey's responsibility to:

- --Monitor leases for compliance with statutes, operating regulations, and lease provisions.
- --Obtain required reports on lease operations and sales.
- --Record and collect rentals, royalties, and other payments due the Government or the Indians.

Operating regulations governing the development and production of oil and gas from Federal and Indian lands are implemented and enforced by the Geological Survey. This implementation includes supervising the computation and collection of royalty and rental revenues. Most revenues from producing leases are collected by the Geological Survey.

Revenue collections are influenced by the Department of Energy which, through its regulatory powers, controls prices of oil and gas produced from public and private lands. The Department of Energy Organization Act in August 1977 (91 Stat. 578) transferred to the Secretary of Energy from the Secretary of the Interior the responsibility for establishing regulations to foster competition for Federal leases and to develop alternative bidding systems for awarding Federal leases.

SYSTEM OF COLLECTING OIL AND GAS LEASE ROYALTIES

Royalty and rental payments are usually provided for in lease provisions. An annual rental fee is normally required until oil and gas production occurs on the leased land, after which minimum royalty payments are required in lieu of the annual fees. Once a lease enters production status, the lease is normally perpetuated for as long as production continues.

Royalties owed are required to be paid on or before the last day of the month following the month the oil and gas was produced. Royalties are usually 12-1/2 percent of the value of the products produced and sold from onshore leases and 16-2/3 percent from offshore leases. However, some onshore leases contain royalty rates ranging from 5 to 32 percent. In 1968, the Geological Survey collected royalties of about $310 million; in 1977, royalties were about $1.235 billion--an increase of $925 million. The increase in royalties collected is primarily attributable to oil and gas price increases as shown by the following schedule.

	1968	1977	Percent of increase
Oil (cost per barrel):			
Selling price	$2.89	$8.47	193
Royalty value	.45	1.30	189
Gas (cost per MCF) a/			
Selling price	.173	.744	330
Royalty value	.026	.114	338

a/MCF = thousand cubic feet

During this same period, oil production remained relatively stable while natural gas, gasoline, and liquid products production increased, as detailed on the following page.

Products	Production from Federal and Indian leases 1968	1977	Percent of increase (decrease)
Oil and condensate (note a) (barrels)	520,475,660	493,448,343	(5.2)
Natural gas (MCF)	2,603,945,807	4,904,225,951	88.3
Gasoline and liquids (gallons)	569,929,209	2,354,892,895	313.19
Number of producing leases	11,127	15,115	35.8

a/Condensate = Liquids which are separated from natural gas at the lease and sold in much the same manner as crude oil.

Royalties from natural gas production have taken on increased importance in the last decade. For example, oil royalties provided 76 percent of the revenues in 1968 but only 52 percent in 1977.

States, Indians, and the Federal Government receive royalties collected by the Geological Survey. Revenues collected from oil and gas leases on Indian lands are distributed to the Indians. Royalties from oil and gas leases on the outer continental shelf are required (43 U.S.C. 29) to be deposited in the U.S. Treasury as miscellaneous receipts. During 1977, the States received $129 million, Indians $48 million, and the Federal Government $1.058 billion from royalty receipts.

The Geological Survey's Conservation Division is responsible for collecting oil and gas royalties. Its collection system is based on data reported to the Geological Survey by various lease interests.

The objectives of this collection system are to:

--Accurately determine the value of lease production to assure proper royalty income to the Federal Government, States, and Indians.

--Assure accurate measurement of lease production to provide proper royalty income to the Government.

--Assure timely collection of royalties from all Federal and Indian leases.

--Produce uniform and accurate records of all accounting matters.

To accomplish these objectives the Geological Survey has a decentralized royalty collection system with accounting sections in all seven offices. These accounting sections are under the control of the area oil and gas supervisor. However, the final decision on determining and collecting royalties owed from selling oil and gas produced from Federal and Indian leased land remains the responsibility of the chief of the Conservation Division.

The area accounting staffs receive monthly reports and payments from the lease interests from which they provide input to an accounting group located at the Geological Survey headquarters in Reston, Virginia. This data is then used to prepare computerized statements of account (summaries of royalties owed and paid) which are then sent to the appropriate area offices and lease interests.

The staff involved in the royalty accounting function has been expanded as shown below.

	Number of personnel involved in accounting functions			Staff increases (decreases) for the period
Location	1975	1976	1977	
Reston, Va.	4	6	7	3
Casper, Wyo.	27	32	42	15
Los Angeles, Calif.	5	5	4	(1)
Metairie, La.	20	18	23	3
Roswell/ Albuquerque N. Mex.	20	43	45	25
Tulsa, Okla.	13	13	20	7
Washington, D.C.	0	2	2	2
Total	89	119	143	54

CONGRESSIONAL INTEREST IN OIL AND GAS ROYALTY COLLECTIONS

The Senate Committee on Energy and Natural Resources is interested in the problems noted with the system used to collect oil and gas royalties. These problems have been the subject of several GAO and Department of the Interior audit reports as well as a report by the staff of the Senate Committee. We met with the Committee staff and agreed to identify alternative methods for controlling and collecting oil and gas royalties because for several years the present method of collecting oil and gas lease royalties has been troublesome.

CHAPTER 2

SERIOUS BREAKDOWN IN FINANCIAL MANAGEMENT

RESULTING IN LOSSES OF MILLIONS OF DOLLARS

The Geological Survey's financial management system is inadequate to collect the $1.2 billion in royalties due annually from the oil and gas industry. As a result, many royalties due are not being collected in full and other royalties are not being collected on time.

Our review of the system used to collect royalties from the oil and gas industry disclosed serious deficiencies in the way the Geological Survey maintains lease account records showing the amount due the Government. These deficiencies resulted in the delayed receipt of about $359 million in royalty payments during 1977 which, to the extent the delay involves additional borrowing by the Department of the Treasury, generated unnecessary interest costs. During our review, the Geological Survey collected additional royalties of $2.6 million by following up on errors we identified in the financial records and on other suggestions we made. In addition to our findings, a Department of the Interior audit report in June 1977 identified royalty losses of over $12 million.

Many factors which are beyond the control of the Geological Survey--such as proliferation of lease interests, varying royalty rates, complex oil and gas valuation factors, and royalty-in-kind programs--contribute to this breakdown in the royalty collection system, and their impact is discussed in chapter 3. However, other contributing factors exist which can be controlled by the Survey.

NEED FOR ACCURATE RECORD OF AMOUNTS DUE

The Mineral Leasing Act of 1920, as amended, assigns the Secretary of the Interior certain responsibilities for collecting and accounting for rentals and royalties due from leasing or developing Federal lands. These responsibilities are then delegated to the Geological Survey, which must, according to accounting procedures implementing this act

--maintain individual lessee accounts,

--prepare bills for rentals and royalties for lessee accounts, and

--review lessee accounts to determine those that are delinquent.

Proper accounting for financial and other resources entrusted to an agency is an inherent responsibility of the managers of that agency. The Accounting and Auditing Act of 1950 (31 U.S.C. 66a) makes each agency responsible for effective control over all funds, property, and other assets for which the agency is responsible. Collecting money for sales of oil and gas extracted from Federal lands is a responsibility of the Geological Survey.

Guidance for developing required accounting procedures is included in Title 2 of the GAO Policies and Procedures Manual for Guidance of Federal Agencies. Title 2 states:

> "A specific objective of a Federal agency's system of control should be to provide all reasonable assurance that the revenues applicable to the agency's operations or its assets are collected or otherwise accounted for.
>
> "Adequate control over revenues includes (1) effectively recording all revenues to which an agency is entitled as soon as they are earned and (2) collecting such revenues as promptly as possible.
>
> "In addition, agencies are required by this manual to have a carefully planned organizational structure where responsibility for the performance of all duties necessary to carry out the agency's functions is clearly defined and specifically assigned and appropriate authority for such performance is delegated."

Basic to establishing and maintaining effective financial control is the requirement that accounts, including receivables, be accurately recorded. Accurate accounting for receivables is a crucial first step in assuring that monies owed the Government are collected in full and on time.

INADEQUATE CONTROL OVER ROYALTIES DUE FROM THE OIL AND GAS INDUSTRY

The statements of lease accounts maintained by the Geological Survey to control collection of royalties due the Government are not accurate. In addition, the collection system does not have adequate internal controls to provide reasonable assurance that all royalties due are collected.

Lease account records are not accurate

The statements of lease accounts showing accounts receivable contain numerous errors and data omissions and cannot be relied upon to effectively manage royalty collections. As a result, the Survey and the oil and gas industry cannot use these records to determine if royalties were properly computed and paid.

The Geological Survey maintains lease account records for oil and gas leases on Federal and Indian lands. Royalties earned and payments made are recorded in the lease accounts maintained by the Survey's computer using data reported by lease interests. If the recorded amounts for royalties due the Government and the royalties paid do not agree with each other, rather than clearing the account, the computer will show a balance. Account balances normally result when lessees

--make an error in computing the amount of royalties owed or amounts paid,

--make an error in reports submitted and used to compute royalties owed or in paying royalties due,

--fail to pay royalties owed, or

--fail to report the data used to compute and record royalties owed or paid.

However, the Geological Survey can also create erroneous account balances by recording charges or payments in the wrong account and by making other clerical errors.

On July 31, 1978, the Geological Survey maintained 22,735 lease accounts. Of these accounts only 6,569 did not have a balance. Of the accounts with a balance, 9,497 indicated that the amount paid was greater than the royalties due the Government. Although this condition can result from overpayments to the Government by the oil and gas companies, it occurred more frequently because royalties due the Government were understated when company reports were not received and charges were not properly entered in the accounts. The balance of these 9,497 accounts was $49.8 million. The remaining 6,669 accounts indicated that royalties of $38.8 million were due because the amount collected was less than the amount computed as due.

To determine the accuracy of these accounts, we reviewed 714 randomly selected lease accounts for June, July, and August 1977. We noted the following deficiencies which contributed to the inaccuracy of these basic accounting records.

--In 137 cases royalty payments totaling $258,000 were recorded in the accounts without corresponding amounts being recorded as due.

--In 245 cases royalties totaling $471,000 were recorded as due without corresponding royalty payments being recorded.

--In 469 cases the royalties due did not equal the royalties paid. Royalties paid exceeded the amounts recorded as due by $122,000.

Because of the incomplete and inaccurate data entered in these accounts concerning royalties paid and royalties due, we concluded that these account statements could not be used to adequately manage royalty collection activities. Geological Survey personnel were aware of this condition and confirmed that they could not rely on these accounts. We also discussed this matter with representatives of several oil and gas companies. These representatives also stated that they could not and generally did not rely on the accuracy of these statements to evaluate the status of their accounts.

Collection system lacks basic controls

Basic internal controls are not functioning in the system used to record and collect royalties due the Government. All input to the system used to collect royalties originates with the oil and gas industry. In addition, production data which could be verified to some extent by Geological Survey personnel is not entered into the Survey's computer and matched against sales data.

Sales data not verified

By matching production data entered into the computer against sales data, the Geological Survey could compare production data to sales data to determine if all oil and gas produced was reported as sold. This matching is not currently being done. Although this process has limitations because of difficulties in matching production volume to sales volume, and because in most instances the same company prepares both reports, there are certain advantages. The major advantage is that the Geological Survey personnel who periodically inspect the well sites can evaluate the reasonableness of the production data. Also, the production reports show the quantity currently on hand and the reports can be analyzed to detect sudden changes in production quantities, thereby reducing the Geological Survey's reliance on the oil and gas industry reports.

The field inspection personnel who were responsible for monitoring oil and gas well operations were not generally aware of the importance of the production report to the verification of sales quantities. As a result, inconsistencies in reporting frequently were not detected. (For example, we noted cases in which the number of barrels of oil on hand at the start of one month did not agree with the number on hand at the end of the previous month.) Unless these reports are adequately monitored by Geological Survey field personnel, their value for verification of sales data is limited.

Production data now is manually matched against sales data only when an account is audited. The value of regularly comparing this data is evidenced by a lease we reviewed which was part of a unit consisting of 27 leases. Reported gas production did not equal the amount of gas reportedly sold, and after examining the error in greater detail, the Survey was able to collect $156,441 in additional royalties.

Adjustments to accounts receivable records not adequately controlled

The Geological Survey does not have sufficient internal management controls to preclude (1) its personnel from making improper or unauthorized financial accounting entries in the royalty collection records or (2) the oil and gas industry from effecting entries by filing amended reports. Without such internal management controls, the Geological Survey does not have assurance that all royalties due are collected.

The Geological Survey makes and processes thousands of adjustments to lease accounts each month. Adjustments are made for numerous reasons, including errors in original input, price changes, volume changes, and differences in charges and payments due to rounding of computations. An erroneous adjustment would alter the amount shown as due the Government.

Adjustments made by Geological Survey employees are not required to be reviewed by supervisors before the adjustments are fed into the automatic data processing system. The employees also are not required to code adjustments explaining the reasons for the adjustment appearing in the monthly lease account statements, even though Department of the Interior auditors recommended this explanation in their 1975 report. The system also does not provide for the person making an adjustment to be identified. This lack of explanation and identification virtually eliminates any control over adjustments and creates a greater burden for those analyzing lease accounts to determine if royalties are owed.

The oil and gas industry also can make adjustments to the accounting records by processing corrected reports which need not be explained to the Geological Survey. As a consequence, the Survey has little control over the adjustments and is, in effect, relying totally on the lease interests to make proper adjustments.

The Geological Survey should require that supervisors review adjustments to lease accounts as well as require that codes be used to explain adjustments appearing in the accounts. These requirements would help prevent erroneous adjustments and reduce the possibility of fraud, either of which could remain undetected until the accounts are audited. At a minimum, the adjustment procedures should provide for a detailed review of support documents so that the adjustment can be determined to be proper.

Need for management supervision of lease accounts

At most Geological Survey offices visited, no one person was responsible for overseeing the handling of individual lease accounts. The separation of duties appeared to be adequate since charges were normally handled by one person, payments by another person, and reconciliations or audits, when performed, by another person. However, supervision was not adequate to monitor individual accounts to assure early detection and resolution of royalty collection problems. We believe this is a particularly important control deficiency when it is combined with a lack of other internal collection controls. Many of the problems in the lease accounts we identified during our review would have been corrected if the accounts had been adequately monitored.

In addition, we believe that better supervision would have resulted in many obvious errors being detected. For example, we noted one instance in which an employee did not identify and record payments in accordance with documentation provided by the lessee. In another lease account handled by the same employee, payments identified by the lessee as being for one month's production were applied to another month.

Attempting to justify the changes, the employee stated that the data provided by the lessee was usually incorrect. However, the employee could not explain the nature of the error nor give a reason why he made the changes. Payment data in this case was misapplied in 14 of the 16 instances reviewed. Situations such as this make analyses of lease accounts very difficult.

Inadequate reconciliation and audit of lease accounts

The Geological Survey is not performing enough account reconciliations and audits to effectively control the accuracy of accounting records. Without enough lease account reconciliations and audits, the Survey puts itself in the position of relying upon unverified data reported by lease interests--the oil and gas industry--to compute and collect royalties due.

As far back as 1975, the Department of the Interior internal audit staff recognized the need for account reconciliations and audits and recommended that increased emphasis be placed on this area. 1/ The Geological Survey recognized the importance of conducting comprehensive audits and recommended that they be performed at intervals ranging from once a year to once every 5 years. The intervals recommended are based upon the amount of annual royalties paid for the leases.

The review process set forth in the Geological Survey manual consists of three parts:

1. Audit. A systematic and indepth investigation and appraisal of the lessee/operator reports of production and sales; the values reported on such production and sales; the royalties and rentals paid; the compliance with the lease terms, oil and gas operating regulations, prescribed notices to lessees and operators, and requests from supervisors.

2. Reconciliation. An analysis of financial entries in a lease's statement of account over a period of time. The basic objective is to identify

---

1/"Review of Royalty Accounting System for Onshore Oil and Gas Leases--Geological Survey"; U.S. Department of the Interior, Office of Audit and Investigations; June 9, 1975.

misapplied or missing charges, payments, and overpayments that appear or should appear in the account.

3. Lease account analysis. A cursory examination of the automatic data processing coding, value, volumes, and well-count reported by the lessee/operator.

While the Geological Survey manual does not recommend specific intervals for reconciling the accounts, it does recommend intervals for audits and analysis, as shown below.

Total annual royalties	Established frequency Audits	Analysis
Over $50,000	Once a year	Monthly
$25,000 to $50,000	Every 2 years	Every 3 months
$5,000 to $25,000	Every 3 years	Every 6 months
Less than $5,000	Every 5 years	Random, as time and need dictate

Although the Geological Survey recognizes the need for lease account reconciliations and audits and has established audit units in several offices, it does not adequately emphasize this area. Geological Survey officials said that they could not comply with the recommendations because audit unit personnel would have to be diverted to other functions, and additional work related to the adoption of new report forms would be required. They estimated that it would take until 1981 to reconcile all lease accounts using their present accounting staff.

Although the Geological Survey maintains thousands of lease accounts at the four offices included in our review, only one office had performed any detailed reviews. This office had started 25 audits between January and September 1978 but had completed only 8.

The reconciliation and audit process is very time consuming and costly but can be very cost beneficial. As discussed in chapter 3, many factors are involved in determining royalties owed. In addition, financial transactions which have occurred over several years are involved in the process.

To help reduce the amount of time required for the audit and reconciliation process, beginning with January 1977 data, the Geological Survey now includes more detailed transaction history data for each lease account, thus reducing the need for some account research from the computer.

In summary, the Geological Survey needs to strengthen its system of accounting, reconciliation, and audit of royalty accounts, as well as improve its organization and supervision of the accounting function. This action should be taken as soon as practicable to assure that all oil and gas royalties due the Government and Indians are recorded and collected.

ROYALTIES ARE COLLECTED LATE AND NOT COLLECTED IN FULL

Not all the royalties that are due are being collected; royalties that are being collected are not collected when due. The Geological Survey collects about $1.2 billion annually but that amount does not represent all the royalties due the Government. Suggestions we made as a result of our work resulted in additional collections of $2.6 million. Also, the Geological Survey received late payments of $359 million in 1977.

Royalties not collected in full

The need for effective financial management over lease accounts can be measured by the additional royalties which can be collected. For example, we suggested that the Geological Survey attempt to collect some of the larger amounts which the accounts showed as due. The Geological Survey sent collection letters to those lease interests with accounts which had balances indicating that royalties due were in excess of $20,000. The results of this effort have been significant. Two area offices with a total of 170 accounts showing royalties due of $20,000 or more each, and which totaled $8.7 million, had collected additional royalties amounting to $977,286 by September 1978. In addition, other corrections and adjustments totaling about $4.9 million were made in the accounts, and the effort was continuing. Geological Survey officials said that about 257 accounts nationwide had balances of $20,000 or more. The Geological Survey plans to expand this effort to include lease accounts with balances owed of $10,000 or more, anticipating collections of additional royalties due.

In addition to collecting royalties based upon the balances shown by the lease accounts, detailed reviews of lease accounts also must be performed before effective financial management over royalties can be achieved. We discovered several cases where such reviews proved very rewarding.

In one case, a lessee had not complied with a Geological Survey directive rescinding a transportation allowance the lessee had been taking. The lessee, notified of the decision in December 1976, was still taking the allowance 4 months later. In addition, the Geological Survey employee computing the royalties for this lessee had also continued to include the allowance when computing the lessee's royalties. After we brought this situation to the attention of Geological Survey officials, they contacted the lessee and collected about $58,000 in additional royalties.

The lessee in a second case had made additional royalty payments during a 4-month period beginning in January 1977 because the price of gas was increased retroactively to July 27, 1976. However, the lessee had failed to adjust his royalty payments retroactively. After we brought this situation to the attention of Geological Survey officials, they contacted the lessee and collected about $49,000 in additional royalties.

The balance of another lease account had risen sharply. Upon analyzing the account, we found that it was part of a unit consisting of four leases and that oil being produced had been delivered to a refinery under a royalty oil contract. However, on June 30, 1977, the contract had expired and the lessees had failed to begin making royalty payments. The situation was noted by the Geological Survey, the lessees were informed that royalty payments were due, and the royalty was paid for July 1977. However, the royalty payments were not continued, and at the time we analyzed the lease accounts, royalty payments for August through November 1977 were past due. After we brought the situation to the attention of Geological Survey officials in February 1978, they collected $1.4 million.

The need for adequate account reconciliation and audit of lease accounts is illustrated by the results of work performed at the Metairie, Louisiana, office. This office was the only one of the four offices included in our review where any comprehensive audits had been performed by office staff. A limited number of account reconciliations were performed at the other offices. Metairie had completed eight audits of lease accounts in the 9 months ending September 30, 1978, and these audits resulted in additional collections of $7.5 million.

Also, during fiscal 1978, Metairie partially or fully reconciled 88 lease accounts. These reconciliations resulted in additional collections of almost $1 million. In addition, adjustments of $1.9 million were made to correct account balances.

Although we could not determine the exact amount of additional royalties the Geological Survey could collect by performing account reconciliations and audits, the examples disclosed during our review plus the experience of a large private oil and gas company which audits oil and gas leases led us to believe that additional royalties can be collected. Audits conducted by the private oil and gas company show that royalites due are normally understated by 7 to 10 percent.

In addition, the Department of the Interior audit staff has found that oil and gas royalties are not always collected. In a June 1977 report, the audit staff identified $1.4 million of uncollected royalties. Most of these unpaid royalties should have been detected by comprehensive lease account reviews.

Delayed collection of royalties

In 1977 the Geological Survey did not collect about $359 million in royalties when payment was due. Payments were not received within the timeframes specified by the leases because

--the Geological Survey did not adequately enforce provisions concerning the timely payment of royalties,

--the Survey did not impose appropriate administrative fees or interest charges on those making late payments, and

--the oil and gas companies were unable, in some cases, to comply with the requirement for timely royalty payments.

The Geological Survey did not impose any interest charges or administrative fees on those enterprises which paid royalties late, because Geological Survey regulations and lease agreements do not contain provisions for charging interest or administrative fees. However, oil and gas lease provisions require royalties to be paid by the end of the month following the month in which the oil and gas was sold.

The Department of the Treasury's March 31, 1978, revision to its Fiscal Requirements Manual established an interest rate of three-fourths of one percent of the overdue payment for each 30-day period or portion thereof that payment is delayed. Such charges for late payment are now required to be specified in all contracts, agreements, or other formal payment arrangements.

Geological Survey management was aware of the importance of charging interest for late payment but had not effectively corrected the problem. In 1975, the Department of the Interior audit staff reported on this problem. To strengthen its ability to enforce submission of timely royalty payments, the Geological Survey included in a proposed regulation provisions for charging interest of one percent per month for late payments. This proposed revision was published in the Federal Register in June 1977. Oil and gas industry responses to the proposed regulations caused the Survey to delay implementing them and, as of November 1978, the regulations had not been adopted.

In enforcing timely royalty collections, the Geological Survey is hampered by inaccurate account balances. If the amount due is unknown, enforcing charges for late payments becomes difficult. Management was aware of this problem and the delay in implementing the proposed regulations can be partially attributed to this awareness.

We discussed the problem of late royalty payments with representatives of five oil and gas firms. These representatives stated that they often do not have information needed to accurately compute amounts due because they often have to wait for the information to be submitted by other companies. Delays in obtaining the needed information generally occur when gas is being processed by gas plants.

It was common for late payments to occur. Our review of the 714 statistically selected lease accounts disclosed that 988 royalty payments amounting to $13.5 million were submitted late. Over 400 of the late payments, totaling $1.6 million, were received more than 10 days late and 92 of the payments were more than 1 month late.

Statistical sample projections of the 988 late payments indicate that late payments totaling about $359 million were made in 1977. To the extent the delayed collections involved additional borrowings by the Department of the Treasury, additional interest costs were generated. Using the average Treasury borrowing cost of 6.424 percent, this combined interest loss may have been as much as $360,000 in 1977.

MORE MANAGEMENT ACTION NEEDED TO ASSURE EFFECTIVE RECORDING AND COLLECTION OF ACCOUNTS RECEIVABLE

The system used to collect oil and gas royalties can be improved to achieve more effective recording and collection of accounts receivable. Geological Survey lease accounts contain many errors which could either be eliminated, reduced, or identified through the use of computer edits and other computer utilization techniques. Also, increased management emphasis should be placed on standardizing accounting for royalty collections.

Better computer utilization would reduce workload

Computers that are given adequate and accurate information and that are programmed fully can perform a vital function in helping assure the validity and correctness of information entered in a collection system. The amount of manual processing that must be performed would necessarily be reduced as well. Also, computer edits can be developed which prevent the system from accepting invalid information.

Much of the input used by the Geological Survey's computer to prepare lease accounts comes from data which is compiled manually in the various Survey area offices. However, some of the input originates from magnetic tape sent by oil and gas companies to the Geological Survey in Reston, Virginia. When data is sent to the Survey on magnetic tape, the area offices do not need to manually process the data, thus reducing the chance for input errors. This direct magnetic tape input is the most efficient method currently available for entering transactions into lease accounts.

Department of the Interior auditors recommended in their 1975 audit report that the Geological Survey give priority attention to encouraging oil and gas companies to report by magnetic tape. At that time, 6 companies were reporting by magnetic computer tape and 15 other companies with potential to report by magnetic tape had been identified. These 21 companies account for approximately 50 percent of the Geological Survey's leases.

As of January 1978, (nearly 2-1/2 years after the Department of the Interior auditors recommended magnetic tape reporting) only three more companies were reporting by tape, bringing the total companies reporting on tape to nine. Another 12 companies had the potential for reporting by magnetic computer tape. We reviewed the files maintained for

7 of the 12 companies to determine the actions taken by the Geological Survey to encourage magnetic tape reporting. (We did not locate any files for the remaining five companies with magnetic tape reporting potential.) We believe that the Geological Survey could do more to encourage companies to report by magnetic tape.

Once data was entered into the computer, the functions performed were very basic and did not include many rather simple control checks or edits needed to prevent errors in accounts or to identify problems requiring prompt followup. As an example, the computer was not programmed to:

--Identify those instances where companies have not included reports for all their leases.

--Produce lists of leases for which royalty payments and charges were not made (indicating that someone did not report), or for which charges and payments did not agree. These types of listings would enable the Geological Survey to perform effective followup on nonpayments, late payments, lack of reporting, and erroneous reporting.

--Match names of those making payments and charges with those who should be paying and reporting on leases. This type of control would help prevent payments and charges from being posted to inappropriate lease accounts.

The desirability of computer edits was demonstrated by our statistical sample results, which showed the frequent occurrence of charges and payments either not appearing in the lease accounts or disagreeing when they did appear. (See p. 8). In addition, Geological Survey officials said that charges and payments were often entered into the wrong account. Such was the case at one Geological Survey office where we identified a number of items totaling $539,000 which were entered into wrong accounts.

The computer also was not producing listings which could help the Geological Survey effectively follow up on late payments. The need for effective followup was illustrated by the results of our statistical sample which revealed that late royalty payments often occurred.

Geological Survey officials agreed that computer edits of the type mentioned above would assist them in establishing and collecting royalties. In addition, they said they were working to establish a computer "screen" which would identify persons who had not reported, had reported incorrectly, or had not paid royalties. However, this effort is being hindered by the Survey's inability to identify at the outset exactly who should be paying and reporting royalties on the various leases. (See p. 24.)

Standardization would improve the royalty collection system

In addition to the need for better computer utilization, the Geological Survey also needs to standardize the system it uses to control royalty collections. This standardization can best be accomplished by establishing uniform policies or practices to be observed by all offices in determining royalties due the Government.

The royalty collection system used by the Geological Survey is a decentralized system. Area oil and gas supervisors operating under the direction of the chief of the Conservation Division are responsible for royalty collections on leases under their office's jurisdiction. Essentially, the chief of the Conservation Division, on the advice of the chief accountant, transmits policy and instructions to the Eastern, Central, Western, and Gulf of Mexico Outer Continental Shelf Operations regional offices. These offices then transmit the policy and instruction to the area offices. In turn, each area office oil and gas supervisor transmits the policy and instructions to the area petroleum accountant in charge of royalty collections.

The Geological Survey royalty collection system consists essentially of two systems--one for the offshore Gulf of Mexico leases and one for the onshore leases. The Metairie office handles most offshore leases administered by the Geological Survey. The onshore leases are handled by several area offices that operate under three regional offices. This organization forces oil and gas companies to deal with several offices in different parts of the United States when reporting and paying royalties.

Because the Geological Survey does not have a standardized system to collect royalties, the practices followed by the area accountants are not always consistent. For example, the area offices determined manufacturing allowances for gas processing in different ways, thus altering the rate at which royalties are computed since the sales price is reduced by the manufacturing allowance.

In their June 1977 audit report, Department of the Interior auditors estimated that $12 to $13 million was lost because the Metairie office was not properly determining manufacturing allowances. We believe that a standardized system of handling manufacturing allowances for both onshore and offshore royalties could have prevented this loss of royalties.

The need for standardized and definitive policies for determining royalties due the Government was recognized in our 1972 report to the Congress. 1/ This report pointed out that, in the absence of prescribed guidelines and procedures for uniform application by the regional oil and gas supervisors, reliance is based primarily on the individual supervisor's judgment. The need for specific agencywide policies and procedures continues because the chief accountant, the only Geological Survey official whose duties and responsibilities are solely concerned with the royalty collection function agencywide, serves only as an advisor.

CONCLUSIONS

Accurate accounting for receivables is an important form of control over agency resources. Because the Geological Survey cannot promptly and accurately identify amounts due the Government, this important control is missing. Also, late reporting and paying is not being effectively curtailed due to a lack of appropriate administrative fees and/or interest provisions. Effective control over royalty collections is hampered further by the need for specific policies and procedures governing collection activities agencywide.

ALTERNATIVES TO THE EXISTING COLLECTION SYSTEM

The Chairman of the Senate Committee on Energy and Natural Resources asked us to provide the Committee with several alternatives to the existing collection system that the Committee could consider in deciding what should be done about these problems. The alternatives which we have identified, including revising reporting frequencies, consolidating reporting and paying responsibilities, and adopting industry accounting and reporting practices, are discussed in chapter 4 of this report.

1/"More Specific Policies and Procedures Needed for Determining Royalties on Oil From Leased Federal Lands," B-118676, Feb. 17, 1972.

Concurrent with our review, the Geological Survey has recognized that the objectives of the system used to collect royalties were not being met and has formed a task force to recommend system improvements. This task force was formed on October 4, 1978, with the goal of recommending options to management for a revised system that will be effective and efficient and less labor intensive in collecting the money due the Federal Government and the Indians for rentals and royalties.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

Because the need for major changes in the royalty collection system is well recognized, the recommendations which follow are limited to those which can be rapidly implemented without making extensive system changes. These recommended actions should be adopted regardless of the extent of eventual modification or redesign of the collection system.

We recommend that the Secretary of the Interior require the Director of the Geological Survey to:

--Inform field inspection personnel of the need to assist accounting personnel in verifying sales data by determining the reasonableness of inventory and sales data shown on production reports. Accounting personnel should be informed of any discrepancies noted.

--Require that codes identifying reasons for account adjustments be included on lease account records.

--Provide for and charge appropriate administrative fees for late or erroneous reporting. Interest should be charged on delinquent accounts to encourage timely reporting and paying.

--Intensify efforts to encourage companies having computer capabilities to provide report data by direct magnetic tape input.

--Use computer-prepared exception reports to follow up and resolve deficiencies to increase the value of the accounts as controls as well as to reduce the effort currently involved in auditing the accounts.

AGENCY COMMENTS

The Department of the Interior agreed with the recommendations and has initiated the following actions:

- --Instructions will be issued informing field personnel of the need to assist accounting personnel in verifying sales data by determining the reasonableness of data shown on production reports.

- --Codes identifying reasons for account adjustments have been programmed. Instructions for their use will be issued when these codes are tested on the computer.

- --Action will be taken to provide for meaningful administrative fees and interest charges for late reporting and paying.

- --The Geological Survey has increased the number of direct tape input entries from about 16,000 to about 40,000 and is currently working with other companies to increase the figure.

- --An exception report is being developed for use in following up and resolving deficiencies. This report also will reduce the effort involved in auditing accounts.

CHAPTER 3

FACTORS MAKING EFFECTIVE FINANCIAL MANAGEMENT DIFFICULT TO ACHIEVE

Achieving effective financial management over the collection of oil and gas royalties is difficult because many factors are involved in determining the amount of royalties owed and who owes them. A failure to consider these factors or an error in them can affect many lease accounts and resolving the problems that result can be difficult and time consuming. The many factors involved in determining and collecting royalties owed has also resulted in the Geological Survey having to impose extensive reporting requirements for Federal and Indian leases and to handle a large volume of reports.

REPORTING WORKLOAD HAS AN IMPACT ON EFFECTIVE FINANCIAL MANAGEMENT

The Geological Survey is limited in how much effort it can devote both to determining the amount of royalties owed and to collecting them because of the time required to process lease reports. The data that the Geological Survey requires of lease interests to determine royalties due on Federal and Indian leases is extensive. This workload resulting from processing reports is increased by creating and transferring lease interests, assigning and/or selling all or a portion of a lease, and combining all or a portion of several leases under unit agreements. In addition, several types of leases containing a variety of royalty provisions are administered by the Geological Survey.

Reporting workload increased by lease interest proliferation

The Geological Survey's workload is greatly increased by the proliferation of lease interests, which results primarily from creating or transferring lease interests and assigning or selling all or a portion of a lease.

Once a Federal or Indian lease has been awarded to a lessee it is common for other parties to be involved in or responsible for various activities associated with producing and selling oil and gas from the lease. For example, the lessee may enter into an agreement with another party to develop the lease and manage the resulting oil and gas production in exchange for a percentage of the oil and gas revenues. Because of the risks and high costs associated with developing the lease (drilling oil and/or gas wells), the party may develop the lease so that additional agreements with others can be entered into to obtain funds or to share the risk. As a result, several lease interests can be associated with a lease.

Lease interests take on different forms. For example, the lease interests can be a percentage of the

--lease's profits or revenues which result from the sale of oil and gas,

--total lease production in the form of oil and/or gas,

--profits or revenues from the sale of gas and oil from a specific well located on the lease, or

--oil and/or gas produced by one or more of the wells on the lease.

Lease interests can also be a combination of the above. This creation of lease interests is authorized by 30 U.S.C. 187 and 275 as described in 43 CFR 3106. The Bureau of Land Management must approve all such lease agreements.

These combination lease interests affect the Geological Survey's financial management when the various lease interests elect to sell and report on their portion of the lease production separately. This practice can result in different prices on oil and gas produced from the same lease. As a result, the number of reports required and processed by the Geological Survey increases--sometimes dramatically. How this occurs can be illustrated by the following hypothetical example.

A lessor enters into an agreement with a company to develop and manage a lease (lease operator). The lessor is to receive 12-1/2 percent of the revenues the lease generates from oil and gas sales. The lease operator is to pay for all costs out of the remaining revenues (87-1/2 percent). The lease operator, in turn, enters into agreements with two other companies to share exploration, drilling, and other production costs. Each company has the right to take a portion of the oil and gas produced and to sell it separately. As a result, three lease interests are now directly involved in selling oil and gas and reporting to the Geological Survey. This proliferation could result in the monthly submission of reports and payments as shown on the following page.

Type of report or document submitted monthly	Lessee	Lease interest #1	#2	#3	Total
Production report	None	1	-	-	1
Sales report (note a)	None	2	2	2	6
Purchase report (note a)	None	2	2	2	6
Remittance statement (note a)	None	1 or 2	1 or 2	1 or 2	3 to 6
Check (note a)	None	1 or 2	1 or 2	1 or 2	3 to 6
Total	None	7 to 9	6 to 8	6 to 8	19 to 25

a/Most companies report oil and gas sales separately and may pay royalties separately as well. It is also possible that a purchaser may pay royalties for the lease interests' owners.

Geological Survey officials have stated that for as many as eight interests to be involved on a lease is not unusual. A separate lease account is required for each ownership interest when ownership becomes multiple. When multiple lease interests take and sell their portion of the oil and gas produced, they must report to the Geological Survey. Under present lease terms, owners of each new lease or lease portion, whether they sell produced gas or oil or not, can choose to report and pay separately, as well. This proliferation of reports creates a paperwork blizzard for the Geological Survey.

Since multiple lease interests result in a high volume of additional reports having to be processed, Geological Survey officials said that an inordinate number of employees are used merely to process them. Little time has been available to insure accuracy or completeness of information. Survey officials estimated that multiple lease interests cause about 12,500 reports to be submitted and 10,000 statements of accounts receivable to be prepared and mailed each month.

Additional leases to be administered by the Geological Survey are created when all or a divisible portion of an existing lease is assigned to another party. This further complicates royalty collections.

In 1976, about 32,000 assignments and transfers involved Federal oil and gas leases. However, many of these assignments and transfers were for nonproducing leases and thus did not affect the royalty collection system.

Unit agreements create reporting and accounting problems

Determining and collecting royalties is also complicated by unit agreements where holders of different leases agree to combine production efforts. Geological Survey data shows that as of December 31, 1977, 1,095 unit agreements were in effect. About 40 percent of the oil and 24 percent of the gas produced from Federal and Indian leases in the United States involve unit agreements. Unit agreements compound the problems faced by the Geological Survey because they

--introduce more multiple lease interests that may or may not be responsible for reporting oil and gas sales and paying royalties,

--generate additional leases,

--necessitate changes in allocating the oil and gas available to the various lease interests to sell, and

--introduce different royalty rates.

When land included in a lease is part of a unit, two potential conditions may further complicate the task of the Geological Survey in collecting royalties owed. First, all land included in the lease may not be involved in the unit agreement. When this occurs, the lease is segregated into two portions--land that is part of the unit and land that is not. The Geological Survey then must keep financial transactions for the two portions separate in the accounting records. In effect, this situation results in two leases. All or part of the land not part of the original unit agreement can also become part of another unit agreement. Geological Survey officials said that such an occurrence is not unusual.

The second situation which complicates determining and collecting royalties due occurs when all land in a unit is not a part of the unit's participating area. A participating area is that part of a unit to which production is allocated under the terms of the unit agreement. More than one participating area may be a part of a unit. As a unit is developed, the lands included in the participating area increase; with each increase, allocation of the oil and gas produced by the unit changes. Geological Survey officials said they have units involving more than 100 leases and as a result, a change or a reporting error could affect more than 100 leases.

Leases have different royalty provisions

Several types of leases containing a variety of royalty provisions are administered by the Geological Survey. These add another dimension to the complexities faced by the Geological Survey because the various royalty provisions must be taken into account when the royalty due is determined.

Most leases provide for upward adjustments of royalty rates as oil and/or gas production increases. However, the rates to be used and production levels where the rates change as well as methods for determining the production levels are often different. This lack of standards could force the Geological Survey to use different royalty rates when computing the royalties owed for leases with the same production. Further complicating the calculation of royalties is the possibility that the same royalty rate may not be used. For example, three leases, each having two gas wells and the same total gas production, can have the same or different royalty rates, as shown below.

Daily gas production from lease (MCF)	Applicable royalty rate(percent) Lease A	Lease B	Lease C
2,500	12-1/2	12-1/2	5
3,500	16-2/3	12-1/2	5
11,000	16-2/3	16-2/3	5

In the above example, lease A's royalty rate changed once the total production exceeded 3,000 MCF per day. Lease B's royalty rate did not change until the 11,000 MCF daily production cut-off since its rates do not change until the daily gas production exceeds 5,000 MCF per well. Lease C's rates did not change because its lease terms do not provide for increases in royalty rates.

According to Geological Survey officials, since leases do not contain uniform royalty rates, leases that are part of units often contain different royalty rates. This inconsistency introduces another complexity into the Geological Survey's responsibilities to collect royalties due.

A simple error can affect a large number of leases when the error involves a lease that is a part of a unit. According to Geological Survey officials, the following simplified example is typical and illustrates the effect an error may have on determining royalties due.

One lessee agreed to report all sales and pay all royalties for a unit consisting of four leases. Three of the leases carry royalty rates of 12-1/2 percent and the fourth carries a rate of 5 percent. Under the terms of the unit agreement all sales are divided equally among the leases. When the lessee reported the sales, the Geological Survey computer followed normal procedures and allocated the sales equally and established the royalties owed based on the royalty rate carried by each particular lease. However, the lessee made an error when making the royalty payment. While the amount of the payment was correct as charged, the payment was erroneously identified as belonging only to the lease with the 5-percent royalty rate, and the Geological Survey's computer credited the payment to that lease alone. If the payment had been identified as being for all four leases in the unit, the Geological Survey's computer would have correctly applied the payment to each lease account, royalty charges and payments would have been in balance, and the four lease accounts would have been correct.

As a result of the above events, the accounts receivable records for the four leases indicated that a royalty was owed for the three leases carrying the 12-1/2-percent royalty rates and that the lease with the 5-percent royalty rate had overpaid its royalties.

While detecting the error in this example seems rather simple, detection and correction becomes difficult in actual practice. The difficulty exists, in part, because the Geological Survey must determine what lease responsibilities exist for reporting sales and for paying royalties. Also causing difficulty are the numerous financial transactions, estimated by the Geological Survey to approximate 2 million a year, that may have to be examined to detect the problems.

Geological Survey officials stated that other common errors occur that are difficult to detect. For example, Geological Survey officials said that lease interests often make errors in counting wells. The well count is an important factor in determining and making royalty payments for competitive leases. If this error occurs on a lease involved in a unit agreement, several leases can be affected and incorrect royalty determinations and payments made.

Under these types of competitive leases, the royalty rate for oil and gas depends on the number of wells which produced during the month, the number of days they produced, and their total production. Low production rates result in lower royalty rates. ("A producing well" is defined in 30 CFR 221.49.) Generally, a well must have produced for 15 days during the month to be included; however, other wells can be counted if approved by the Geological Survey.

As an example, an injection well 1/ operating for 15 days or more in a month or a well which has been "shut-in" and is no longer producing oil and gas for conservation reasons can be included in the well count if approved by the Geological Survey.

COMPLEX FACTORS MUST BE CONSIDERED IN DETERMINING OIL AND GAS VALUES

To establish the value of oil and gas upon which royalties are calculated, several factors must be considered, and detailed accounting records must be maintained. The primary reason the value of oil and gas must be established is that the price at which oil and gas is sold may not represent its market value. The process is made more complex by (1) various factors interacting with each other, (2) complications introduced by the effects of Government price controls, and (3) long-term sales contracts between lease interests and purchasers.

One factor that the Geological Survey must consider in establishing value is the margin included in the sales price for expenses incurred by lease interests in selling the oil and gas once it has been removed from the leased land. Under the authority granted by law (30 U.S.C. 181), the Geological Survey has directed that the value of oil and gas be established at the place where the oil and gas is produced--the well site. However, if the actual sale of the oil and gas takes place somewhere other than the well site, the well-site value would not reflect the added costs that would be incurred by the lease interests in bringing the products to market.

Also, the sales price may reflect a higher value for the oil and gas when the oil and gas have been refined or put through other processes which increase the value of the oil and gas. In short, the sales price may reflect a higher value than the product had at the well site because costs have been added.

Government price controls may also affect the valuation of oil and gas. Since oil prices are controlled by the Department of Energy, the price of the oil depends upon the

---

1/An injection well is used to create pressure in an oil-producing formation. Gas, water, or chemicals are pumped through it into the formation to aid oil trapped in the formation to flow and to be produced out of another well.

date the well producing the oil was completed and production began, and the amount of oil being produced by the well. Gas prices are also controlled by the Department of Energy if the gas will be sold on the interstate market. However, unlike oil, gas may be sold on a long-term contract and, accordingly, the price of the gas may not reflect current price levels.

Quality also affects the value of oil and gas. For example, the level of such liquids as butane and gasoline in gas may make the gas unacceptable for transport in natural gas pipelines. On the other hand, valuable liquids may be present in such quantities that the value of gas does not reflect their real value. If the gas cannot be transported to market because of liquids contained in it, the gas has little value. If the gas had valuable quantities of liquids in it, then a price for gas alone would be understating the value of the gas produced at the lease.

The various influences on the value of oil and gas used to determine royalties have resulted in the Geological Survey allowing deductions to be made from the price of oil and gas under certain conditions. The cost of transporting oil to the sales point may be deducted from the price of the oil if the purchaser is not willing to absorb the transportation costs. The cost of extracting the liquids contained in the gas produced may be deducted from the price of the liquids. Some of the gas containing the liquids may be used in the plant extracting the liquids without paying royalties on such gas.

Because of price differences and the various deductions which may be allowed, the Geological Survey must have a system capable of considering all factors in arriving at the value of the oil and gas. Accordingly, the Geological Survey requires lease interests to provide information showing

--how much oil and gas was produced,

--what lease or well produced the oil and gas,

--the quality of the oil and gas produced,

--the cost of transporting the oil to the sales point,

--how much oil, gas, and liquids was sold and to whom, and

--the sales price of the oil, gas, and liquids.

The information required is provided to the Geological Survey in the form of sales contracts (showing gas prices), gas purchase reports (showing quantities purchased), production reports (showing how much oil and gas was produced on the lease), gas run statements (showing how much gas was transported), plant statements (showing how much gas was processed and the products extracted from it), and reports showing the cost of extracting products from gas. Other documents also may be furnished by lease interests if required by the Geological Survey.

Further complicating the Geological Survey's task of determining oil and gas values is its need to be assured that the factors used to decrease the prices of the oil and gas are reasonable. For example, to determine if the allowance given for extracting liquids from gas is reasonable, the Geological Survey must obtain the data for costs incurred to extract the liquids. Reaching this decision can be troublesome because the actual costs incurred by a gas plant to extract the liquids may not represent the cost which the lease interests incurred. This places the Geological Survey in the position of deciding which cost should be used.

The Geological Survey has attempted to minimize the problems associated with gas processing costs. As of June 1, 1977, it began adjusting some gas values by a quality factor without allowing a specific deduction for manufacturing costs. This adjustment is accomplished by expressing the quality of the gas in British Thermal Units (BTUs) which are a measure of the heat that the unprocessed gas will generate when burned. The amount of heat that unprocessed gas will generate increases as the quantity of liquids in the gas increases. Using this method, the Geological Survey is able to value unprocessed gas without separately valuing the gas and the liquids in it. However, adjusting the values of gas by its BTU rating is appropriate only when the BTU rating is within certain limits. When the limits are exceeded, the gas and liquids must be valued separately or royalties will be lost.

Effective financial management by the Geological Survey is also made difficult when other factors are introduced affecting the value of oil and gas. For example, a primary policy followed by the Geological Survey in determining oil and gas values is that their value will be no less than the amount that lease interests derive from sales of the lease's production. However, a conflict between the Geological Survey and the Department of Energy, formerly the Federal Energy Administration, arose over this valuation policy when the Department of Energy relieved several lessees from the provision of 10 CFR 212 which establishes ceiling prices on old oil. The lessees were allowed to sell oil at prices higher than the ceiling prices but were not required to share the resulting increase in revenues with royalty owners. The Geological Survey is attempting to collect royalties based on the amount of money actually received, and, based on the Energy Department's actions, lessees and refiners have filed actions protesting the Geological Survey's attempts to collect.

ROYALTIES MAY BE COLLECTED IN MONEY OR PRODUCTS

Instead of the Government collecting monetary royalties directly from lease interests, the Geological Survey is using a significant amount of its staff resources to collect money from the sale of oil which is taken and sold to refineries. As a result of this effort, the Geological Survey has less time available to compute and collect royalties due from the sale of oil and gas from Federal and Indian leases.

Under the provisions of the Mineral Leasing Act of 1920 as amended (30 U.S.C. 192), a share of the oil and gas produced by a Federal lease can be taken by the Government in lieu of receiving money for a royalty payment. Oil so taken is known as royalty oil and, in accordance with the provision of 30 CFR 225, is offered under 3-year contracts to small refineries not having their own crude oil supply source. The refineries are charged the same price that the lease which produced the oil receives plus an administrative charge. About $20-$30 million is collected every month by the Geological Survey for royalty oil sales.

Geological Survey officials identified the royalty oil program as a problem, primarily because the program requires them to perform additional duties which detract from their ability to determine and collect royalties. Geological Survey officials estimated that about 3,100 hours (about 388 staff-days a month) are required to administer the royalty oil program, which includes

--preparing and sending estimated billing invoices to the refineries for oil delivered to them from hundreds of leases,

--monitoring payments to assure that the refineries are paying for the oil promptly, and

--preparing adjusted bills to reflect actual values and quantities upon receipt of the information from those providing the royalty oil.

Geological Survey officials estimated in September 1978 that royalty oil involving about 1,550 leases is being delivered under royalty oil contracts each month.

CONCLUSIONS

The Geological Survey's management of oil and gas royalties is complex because of the factors involved in determining and collecting royalties on oil and gas produced and sold from leased Federal and Indian lands. Many factors which the Geological Survey has to consider but over which it has no control (i.e., oil and gas prices, lease interest charges, differing royalty rates), affect its determination of what royalties are owed and the collection of them. Consequently, the Geological Survey requires comprehensive reporting by oil and gas lease interests and also has to maintain a collection system capable of dealing with the complex royalty transactions. Law suits and reports have continually focused on the Geological Survey's difficulties with properly considering all factors in determining royalties.

CHAPTER 4

POSSIBLE COURSES OF ACTION TO ELIMINATE OR ALLEVIATE BASIC PROBLEMS IN COLLECTING OIL AND GAS ROYALTIES

As requested by the Chairman, Senate Committee on Energy and Natural Resources, we are presenting in this chapter some possible courses of action for either eliminating or alleviating the Geological Survey's problems in collecting for oil and gas royalties. The actions proposed in this chapter, in combination with the recommendations in chapter 2, are intended to simplify the Geological Survey's task in performing its responsibilities as they relate to collecting oil and gas royalties which amount to over $1 billion a year. In some instances, our proposals will also simplify or reduce the effort currently demanded of the oil and gas industry.

While we have not attempted to assess the full impact that these actions may have upon royalty collections, most have been discussed with oil and gas industry officials. Their comments and opinions along with those of the Geological Survey have been considered in preparing the proposed concepts.

Geological Survey management has recognized that significant actions must be taken to make the collection system work with fewer people than are now employed. Although the number of professional accounting staff members has increased, so has the number of leases administered by the Geological Survey. As a result, understaffing has become a chronic condition. As the number of leases continues to grow in the future under the present system, additional staff will be required.

The Geological Survey, recognizing the fact that the objectives of the system used to collect royalties were not being met, formed a task force on October 4, 1978, to recommend system improvements. The task force's goal is to recommend options to management for an accounting system that will be effective and efficient and less labor intensive in collecting money due the Federal Government and Indians for rentals and royalties.

We believe that the courses of action considered by the Geological Survey task force should include either modifying or replacing the existing collection system. We recognize that legislation may be necessary to implement certain changes discussed in this report (e.g., require consolidated submission of royalty payments for existing leases).

MODIFICATION OF EXISTING SYSTEM FOR COLLECTING ROYALTIES

In this report we have noted that the Geological Survey:

--Is monthly receiving thousands of reports, processing or otherwise handling them, and producing thousands of accounts receivable statements. (See p. 24.)

--Has a history of problems determining the value of oil and gas to use for royalty computation purposes. (See p. 30.)

--Has not been receiving royalty payments in a timely manner. (See p. 16.)

--Has received incomplete and incorrect reports upon which the amounts of royalties owed must be established. (See p. 7.)

These collection system problems have resulted in or have contributed to royalty revenue losses by making it difficult or time consuming for Geological Survey management to establish and maintain accounting control over royalty collections. We believe these conditions could be alleviated if action could be taken to

--reduce the number of reports required to be processed by the Geological Survey,

--require the primary lessee or a designated party to report production and sales data on the lease and to submit the required royalty payments.

Reduce the frequency of reports

The existing monthly requirement for reporting oil and gas production on leases could be reduced. Reducing the reporting frequency would reduce the number of reports submitted by the oil and gas industry, thus enabling the Geological Survey to spend less effort on report processing and filing.

The Geological Survey could require oil and gas production and sales information to be reported quarterly, semi-annually, or annually, or could base the frequency of reporting upon the amount of annual revenues generated by the lease. An example of such a schedule of reporting follows.

Annual royalty revenues	Frequency of reports
Over $50,000	Monthly
$25,000 to 50,000	Quarterly
$5,000 to 25,000	Semi-annually
less than $5,000	Annually

Monthly payments, however, would continue. The payments could be based on estimates and adjusted to reflect actual amounts as production and sales information is reported.

Several benefits could result from reducing the required frequency of reporting. Most important would be that the number of reports to be handled and prepared by both the Geological Survey and the oil and gas industry would be reduced. This would reduce the effort and expense required of the oil and gas industry to prepare and mail the reports, and the Geological Survey would reduce the effort now required to enter the sales data into the computer for the accounts receivable and to file the numerous reports received. Additionally, fewer reports for the Geological Survey would mean fewer individual statements of accounts receivable to prepare for each lease, and fewer statements to mail and file for the various leases. The oil and gas industry would benefit as well because it would not have to handle as many statements.

Lessening the reporting frequency would also give the oil and gas industry more time to correct the data included in the various reports before sending them to the Geological Survey. In turn, the need for the Geological Survey to process many adjustments would be eliminated and information shown on the statements of accounts receivable would be further clarified.

Finally, the timeliness of royalty payments and reports should also improve. Since royalty payments would be estimated, the oil and gas industry would not have to wait for all information to be present before making payment. Report submission could be improved as well because the deadline for report submission could be extended without having an adverse impact on the cash flow to the Government.

Reducing reporting frequency is not without some disadvantages. Although the oil and gas industry would favor extending the time allowed for report preparation, there would be some opposition to changing the reporting frequency since the oil and gas industry would have to modify its existing accounting systems to accumulate consolidated accounting information. Without such modifications, the Geological Survey would receive just as many reports and thereby would not enjoy the advantage of processing smaller numbers of transactions, and the accounts receivable statements would not be simplified.

Another problem that could result from reducing the reporting frequency is unreasonably low royalty payments because they would be based on estimates. Accordingly, procedures and criteria for detecting and penalizing those making such payments would have to be implemented by the Geological Survey. Unless this was done, the cash flow to the Government and Indians could be adversely affected.

Require consolidated reporting and paying

Action could be taken to require that all reporting and paying of royalties be performed by one lease interest. One report showing all sales information would be required and the royalty payment would accompany it. Consolidated reporting would reduce the number of reports forwarded to the Geological Survey for processing and would eliminate problems currently encountered in cross-referencing reports.

Currently, the Geological Survey obtains reports and royalty payments from a variety of sources for a given lease. It is not uncommon for each of the following to be the responsibility of different offices or companies:

--Production reports.

--Oil sales reports.

--Gas and miscellaneous sales reports.

--Oil royalty payments.

--Royalty payments for gas and products extracted from gas.

Under these circumstances it is difficult for the Geological Survey to assure that all reports and payments for a given lease are received. The difficulty is compounded when the lease is part of a unit and the unit is changing.

In their 1975 audit report, Department of the Interior auditors recommended that the Geological Survey require package reporting. This recommendation was not implemented by the Geological Survey because, although the Department of the Interior Solicitor stated that sufficient legal authority existed to require consolidated reporting for existing leases, the Solicitor stated that package submission of royalty payments could not be required for existing leases.

Because of this legal limitation, Geological Survey management has not implemented consolidated reporting and paying. However, provisions could have been included in all leases awarded since 1975 which would have required consolidated reporting and paying. We understand that the Solicitor's office is presently re-examining the legal implications of and possible ways to require consolidated reporting and paying.

Several advantages could result from a consolidated reporting and paying requirement. The Geological Survey could more easily obtain control over the reporting and paying of oil and gas royalties. Corrections would be easier to accomplish because Geological Survey personnel would have to work with only one person or company to resolve problems. In addition, those reporting and paying royalties would be able to review all data before sending it to the Geological Survey and thereby reduce errors. Overall, it has been estimated by responsible personnel that this consolidation of reporting and paying would reduce the Geological Survey's workload by 10 percent.

The disadvantage to this package reporting and paying concept is that some oil and gas companies are not organized so that they could readily comply with such a requirement. As an example, a company's production department might be located in one city and its accounting department and treasurer (who makes the royalty checks) in another. Such a requirement would mean that the company would have to send all of its reports for a lease to one location before sending them to the Geological Survey. This would make it difficult to meet reporting and paying deadlines, and the problem would become more complex when more than one company or individual was involved in the reporting and royalty payment process. One solution to this problem would be to require estimated royalty payments to be made and to change the dates for reports to be submitted to the Geological Survey.

REPLACING EXISTING SYSTEM FOR COLLECTING ROYALTIES

The Geological Survey must rely upon the information submitted by various lease interests to compute and collect royalties. Attempts are made to verify the sales information which forms the basis for the royalty calculations of the Geological Survey. However, close business relationships and similar ownerships of leases, production, transportation facilities, and extraction facilities (gas plants) can cast a shadow over how much reliance can be placed on an accounting system which depends upon reports from such sources without verifying the accuracy of the data reported. In addition, the present accounting system puts a great deal of responsibility on the Geological Survey by requiring it to maintain accounts receivable for Federal and Indian oil and gas leases. Replacing the existing accounting system with another system for collecting revenues could eliminate the problems currently being encountered by the Geological Survey. A substitute method for collecting oil and gas revenues would be to adopt industry accounting practices.

Adopt industry accounting and collection practices

Many elements of the Geological Survey's collection system could be eliminated if the Geological Survey adopted an accounting and collection system similar to those used by the oil and gas industry. Under this type of system, the lease interest would be responsible for calculating the proper royalty due the Government. Documents supporting royalty calculations would be retained by lease interests and would be subject to Federal audits. Lease interests would only be required to report lease production and monthly royalty payments, and to periodically provide settlement statements. The Geological Survey's accounting function would include maintaining a record of royalty payments received and, using audit techniques, evaluating the adequacy of the amounts received.

Royalty income accounting and collection systems used in the oil and gas industry are generally designed to accomplish three primary objectives:

--Provide control over cash received from oil and gas sales.

--Evaluate the adequacy of amounts received from oil and gas sales.

--Provide reliable oil and gas sales data that can be used in preparing financial reports.

The Geological Survey needs an accounting and collection system that accomplishes these objectives.

The Geological Survey could adopt a petroleum industry type of system which would accomplish these objectives. However, the Geological Survey's existing system would need to be replaced and the following procedures adopted.

--Statements of account showing data by lessee would not be maintained. Instead, data on production would be accumulated and retained for audit purposes by field inspection personnel, and royalties received would be recorded for each well by account offices.

--Estimated payments would be received monthly for each well.

--A system of control over cash receipts designed to insure the timely deposit of all receipts would be established. The duties of those individuals handling cash would be separated from those who maintain accounting records. No one in the Geological Survey should be able to draw cash from the system and simultaneously alter the control records so that the cash withdrawal goes undetected.

--The oil or gas company would periodically provide a settlement statement. The Geological Survey would use this statement to verify the adequacy of the amount received by using the following procedure.

1. The mathematical accuracy of the settlement statement would be verified by the Geological Survey.

2. The volume produced would be reviewed for reasonableness by field inspection personnel who would consider available geological information and prior production figures. Unusual declines or increases in production figures would be investigated and supporting evidence, such as transportation or delivery tickets, would be obtained when differences were significant.

3. The value would be checked for reasonableness by comparing it to contract prices, posted market prices for the area, regulated prices applicable to the lease, etc.

4. The lessee's interest would be verified.

5. The Geological Survey would develop a cross-check to assure that settlement statements were received for all wells.

6. Settlement statements would be selected for audit. The selection process would consider criteria such as annual royalties generated, prior experience with the lessee, and dependability of the lessee or operator. A system could be developed using generally accepted statistical sampling techniques through

which, based on a random sampling of settlement statements, a decision could be made as to the acceptability of all such statements submitted by the lessee.

7. The Geological Survey and the Department of Energy, both of which are now auditing the oil and gas industry, would develop cross-service auditing arrangements. Such an arrangement should conserve staff-years, promote efficiency, and minimize the impact of audits on the oil and gas industry.

8. This system would provide reliable financial information on which financial reports could be prepared. Data on collections and other transactions would be summarized and recorded on a cash basis.

The primary advantage of this alternative would be that the Geological Survey and various oil and gas companies involved with the Federal and Indian leases would no longer have to handle or prepare thousands of reports and lease statements each month. Mailing, filing, and storage costs would be reduced, along with the costs of producing the various reports and lease statements.

Another advantage of this approach is that Geological Survey personnel could initially direct their efforts toward clearing up existing collection problems. Although settlement statements would be required on a staggered basis throughout the year, there would be a specified period before the first such statements were received. During this period, the Geological Survey could direct its efforts toward reviewing the account balances produced by the existing accounting system and by collecting royalties. In addition, Geological Survey personnel could expand their efforts to train the staff to audit oil and gas company records to assure that the proper royalties are being paid.

This system has some disadvantages, however. A major disadvantage of auditing in lieu of requiring companies to submit reports would be the difficulty encountered in auditing all parties to a lease with production, sales, and royalty payment responsibilities. While it would be possible to audit all lease interests, such a procedure could result in audit inefficiencies (such as having an auditor travel to a company that pays small royalty amounts).

Auditing companies could also lead to some audit inefficiencies when it becomes necessary to go to several locations to audit one company. Also, this system could necessitate some physical realignment of employee assignments. However, certain of these audit inefficiencies could be reduced through comprehensive planning and coordination of audit efforts with reliance on adequate cross-service audit arrangements.

IMPACT ON THE ROYALTY OIL PROGRAM

Problems may be created by handling the royalty oil program according to some of the actions proposed in this chapter. Solving these problems involves modifying the royalty oil program.

Reducing the reporting frequency may cause a problem for the Geological Survey because it would have difficulty establishing the amount to charge for oil taken from leases in lieu of royalties paid on a monthly basis. Consolidated reporting could result in billing delays. If the Geological Survey relied upon the lease interests to properly calculate and pay royalties, amounts charged under the program could not be relied upon until audits had been performed.

We believe that at least two methods exist for modifying the royalty oil program which could be used to solve the anticipated problems:

--Require the existing system to be used for those leases where the Government is requiring royalties to be paid in oil.

--Have the Government issue "entitlement credits" to qualified independent refineries. These entitlements would permit refiners to share the benefits associated with access to price-controlled crude oil. The refiners could use these entitlements to claim established quantities of oil produced on Federal and Indian leases. The lessees would still be responsible for paying the royalties on the oil sold from the leases. This method would be feasible for all proposed actions discussed in this report.

CONCLUSION

We believe that the courses of action discussed in this chapter, in combination with the other courses of action and recommendations made in chapter 2, would assist the Geological Survey to improve its financial management over the complex and difficult task of collecting oil and gas royalties. While we have not attempted to assess the full impact that the actions may have upon royalty collections, most have been discussed with oil and gas industry officials. Their comments and opinions along with those of the Geological Survey have been considered in the concepts being expressed.

As brought out in chapter 2, the Geological Survey can do several things now to improve royalty collection procedures. However, because of factors beyond the control of the Survey, such as proliferation of lease interests, varying royalty rates, royalty-in-kind programs, etc., a major modification or redesign of the collection system is needed. The Geological Survey's formation of a task force is a step in the right direction. When this task force effort is concluded, prompt management action will be needed to develop royalty collection procedures which are efficient, effective, and less labor intensive in carrying out responsibilities for the collection of money due the Government and the Indians for rentals and royalties.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

We recommend that the Secretary of the Interior require the Director of the Geological Survey to:

- --Modify or redesign the collection system to reduce the volume of reports submitted by the oil and gas industry to the Geological Survey for processing. In turn, this reduction will enable the Geological Survey to place increased emphasis on lease account reconciliations and audits. Both the task force recommendations and the courses of action discussed in this chapter should be considered in modifying or redesigning the collection system.

- --Consider not only the volume of annual royalties generated by the leases in selecting accounts for reconciliation and audit, but also the dependability of the lessees and their prior reporting and paying record.

- --Provide for cross-service audit agreements between the Department of Energy and the Geological Survey when both are auditing the same commercial concern.

- --Standardize the system used to control royalty collections by making one office responsible for establishing agencywide accounting policies.

--Periodically advise the Senate Committee on Energy and Natural Resources of the status of actions taken to modify or redesign the collection system.

AGENCY COMMENTS

The Department of the Interior concurred with the basic thrust of this report and agreed that the collection of oil and gas royalties was a problem of serious proportion. The Department commented that a way must be found to reduce paperwork and to concentrate more effort on the substantive aspects of royalty collections.

A Geological Survey task force was established. This task force considered modification of the existing royalty collection system. However, the task force concluded that a completely new system should be implemented due to problems in organization, management, personnel, system design, and other deficiencies. As a result of this task force study, a proposed new royalty collection system has been developed and is being reviewed and evaluated by departmental officials.

We are encouraged by the Geological Survey's recent efforts to develop an improved collection system. However, as this system has not been fully developed and will not be implemented for some time, we cannot comment on the efficiency and effectiveness of the proposed system.

CHAPTER 5

SCOPE OF REVIEW

Our objective was to evaluate the collection system and its related controls used by the Geological Survey to calculate and collect royalties due the Government from the sale of oil and gas produced from Federal and Indian leases. We reviewed pertinent laws, regulations, policies, and procedures. In addition, selected oil and gas lease accounts were examined to determine the accuracy of the financial transactions contained in them. We interviewed Survey employees that supervise and administer lease accounts and contacted officials of the oil and gas industry familiar with royalty collection procedures and practices. We discussed our work with the internal audit staff at the Department of the Interior and considered the results of their internal audit reports pertaining to the royalty collection program.

Our review was conducted at the following U.S. Geological Survey locations:

--Headquarters, Reston, Virginia.

--Northern Rocky Mountain Area Office, Casper, Wyoming.

--Southern Rocky Mountain Area Office, Albuquerque and Roswell, New Mexico.

--Mid-Continent Area Office, Tulsa, Oklahoma.

--Western Area Office, Los Angeles, California.

--Gulf of Mexico - OCS Operations Area Office, Metairie, Louisiana.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 16 1979

Mr. D. L. Scantlebury
Director, Division of Financial
and General Management Studies
General Accounting Office
Washington, D.C. 20548

Dear Mr. Scantlebury:

We appreciate the opportunity to comment upon the GAO draft report entitled "Oil and Gas Royalty Collection--Serious Financial Management Problems Need Congressional Attention." The Department concurs with the basic thrust of the GAO report and agrees that the collection of oil and gas royalties is a problem of serious proportion. We must find a way of reducing paperwork and of concentrating more effort on the substantive aspects of royalty collection.

Enclosed are detailed comments prepared by the Geological Survey (GS). The GS has proposed a new system for managing royalty collections. At this time there have been no final decisions made on system specifications or organizational structure. Geological Survey proposes, in its comments, to perform what it calls internal and external audit activities. The term "internal audit" refers to an operational responsibility. Any external audit function in the Geological Survey would be contingent upon approval by the Secretary.

Sincerely,

LARRY E. MEIEROTTO
Deputy Assistant Secretary -
Policy, Budget and Admininstration

Enclosure

COMMENTS ON GAO DRAFT REPORT OF JANUARY 23, 1979, ENTITLED "OIL AND GAS ROYALTY COLLECTIONS -- SERIOUS FINANCIAL MANAGEMENT PROBLEMS NEED CONGRESSIONAL ATTENTION"

DIGEST, pages i-vii

COMMENT

The first sentence on page i, states that the EGS leases Government and Indian lands. The first sentence should be corrected to show that the Bureau of Land Management and the Bureau of Indian Affairs lease Government and Indian lands.

The last sentence on page i and continued on page ii is missing the word "performing."

I. CHAPTER I, INTRODUCTION, pages 1-6.

A. LEASING OF FEDERAL AND INDIAN LANDS FOR OIL AND GAS EXPLORATION AND EXTRACTION, pages 1 and 2.

Page 1, second paragraph, third sentence, states "In addition, under the provisions of 25 CFR 171 and 192, the Department of the Interior has a trust responsibility for Indian Lands."

COMMENT

The reference to 25 CFR 171 and 192 is incorrect and should be changed to 25 CFR 171 and 172.

B. SYSTEM OF COLLECTING OIL AND GAS LEASE ROYALTIES, pages 3-6.

COMMENT

None.

C. CONGRESSIONAL INTEREST IN OIL AND GAS ROYALTY COLLECTIONS, page 6.

COMMENT

None.

II. CHAPTER 2, SERIOUS BREAKDOWN IN FINANCIAL MANAGEMENT RESULTING IN LOSSES OF MILLIONS OF DOLLARS, pages 7-30.

A. NEED FOR ACCURATE RECORD OF AMOUNTS DUE, pages 8 and 9.

COMMENT

The Geological Survey (EGS) agrees with this well established accounting principle that records of amounts due must be accurate.

B. INADEQUATE CONTROL OVER ROYALTIES DUE FROM THE OIL AND GAS INDUSTRY, pages 9-18.

1. Lease account records are not accurate, and collection system lacks basic controls, pages 9-12.

COMMENT

The EGS Task Force report of December 15, 1978, addressed this problem by recommending that the present outdated royalty accounting system be replaced with a modernized, highly automated (ADP), interactive system. The new system would accept reports and payments as computed by the lessees/ operators with appropriate edits and controls built into the entry procedure. This process would feature balancing entries so that no outstanding balances exist unless EGS enters balances. Statements would only be sent when a true accounts receivable has been established and placed in the system after audit by EGS personnel. Production data would be entered into the new ADP system and matched against sales data.

2. Sales data not verified, page 12 and 13.

COMMENT

Under the new ADP royalty accounting system recommended by the Task Force production data would be entered and matched automatically against sales data. Sudden changes in production, and material differences between sales and production data would print out as an exception report for audit review and verification by inspection personnel.

3. Adjustments to accounts receivable records not adequately controlled, pages 13-15.

COMMENT

The new royalty accounting system recommended by the EGS Task Force includes controls so that adjustments to accounts receivable records are not entered unless verified by EGS personnel. This accounting system will emphasize double entry accounts and contain sufficient controls to reduce the possibility of manipulation or fraud. Companies will not be allowed to directly enter data into the accounts. All refunds will be approved by the accounting supervisor subject to review by internal audit.

4. <u>Need for management supervision of lease accounts, pages 15 and 16</u>.

<u>COMMENT</u>

Under the new proposed royalty accounting system (1) the accounting management systems and policy unit will provide uniform and timely policy guidance including internal controls; (2) the internal audit unit will receive audit schedule from systems policy and evaluate effectiveness and implementation; and (3) the external audit unit will receive the audit schedule from systems policy unit and perform audits and forward audit reports through the system policy unit to the lessees.

5. <u>Inadequate reconciliation and audit of lease accounts, pages 16-18</u>.

<u>COMMENT</u>

Page 17 refers to the frequency of analysis as every 3 years and every 6 years. This reference should be corrected to every 3 months and every 6 months.

The EGS agrees that it needs to strengthen and improve its system of accounting, reconciliation, and audit of royalty accounts, as well as improve its organization and supervision of the accounting function. The EGS Task Force recommendations for a new royalty accounting system address all these areas.

C. <u>ROYALTIES ARE COLLECTED LATE AND NOT COLLECTED IN FULL, Pages 18-23</u>.

<u>Royalties not collected in full, and delayed collection of royalties, pages 18-23</u>.

<u>COMMENT</u>

The lessees, operators, and purchasers of lease production submit about 300,000 reports per year resulting in approximately two million annual entries which are processed through the royalty accounting system. This workload is increasing due to various factors such as (1) multiple lease interests which occur primarily due to creating or transferring lease interests, and assigning or selling all or a portion of a lease; (2) various operators, lessee owners and payors on the same lease having reporting and/or paying responsibilities; (3) the producing leases increase at an annual rate of about 5 to 7 percent; (4) determination of oil prices by well (old and new oil prices on the same lease); and (5) determination of gas prices by well on a BTU value in accordance with the Natural Gas Policy Act.

Determining and collecting royalties are also complicated by unit agreements where holders of different leases agree to combine production efforts and allocate royalties on production to Federal and private land leases. About 39 percent of the oil and 24 percent of the gas produced from Federal leases is under unit agreements. Unit agreements introduce more multiple lease interests, create additional leases, and introduce a variety of different royalty rates.

Several different types of leases containing different royalty provisions add to the complexities that must be considered in determining royalties and other payments due. For example, Federal onshore oil and gas competitive leases provide for upward adjustments of royalty rates as oil and gas production increases. The royalty rate is normally dependent upon production per well per day for the calendar month. These royalty provisions are referred to as step scale or sliding scale royalty rates. The royalty rates vary depending upon the lease date due to the various amendments to the Mineral Leasing Act of February 25, 1920.

Actions to Assure Accurate and Timely Payment of Royalties - Various actions have been completed and/or are underway to improve and strengthen the revenue accountability to assure accurate and timely payment of royalties. Some of the most important actions follow:

1. Reorganizing Accounting Sections - During the past 3 years, the oil and gas accounting sections have been and are in the process or reorganizing on a functional basis which includes units to (1) enforce compliance with lease terms, (2) determine delinquent accounts, (3) review payments, (4) determine product values, and (5) audit and reconcile royalty data.

2. Manual Releases - The major manual releases that apply to the policies and procedures for the collection of royalties on onshore oil and gas leases were completed as of March 7, 1977. One of the issued manual releases covers audits and reconciliations which pertain to postaudit review, and it standardizes audit techniques and guidelines for verifying that production is properly accounted for and that royalties are timely collected. The major manual releases that apply to the policies, accounting procedures, and audits and reconciliations for the collection of royalties on OCS oil and gas leases were drafted, reviewed, modified, and are being prepared for final release.

3. Reporting Forms - In order to improve the operating efficiency and to provide for uniform reporting and instructions to lessees and operators concerning the due dates for submission of reports,

payments, and other pertinent matters, the onshore and OCS oil and gas monthly reports of sales and royalty and collections were revised, approved, and became operational during Fiscal Years 1977 and 1978.

4. Professional Accountants and Auditors - The mix of staff of professional accountants and auditors has been increased in order to manage the complex elements of the royalty accounting system and to perform royalty account postaudits and reconciliations.

5. Additional Payments from Auditing and Reconciling Royalty Accounts - The additional payments as a result of auditing reported data and reconciling charges and payment data for Fiscal Years 1977 and 1978 amounted to $2,693,568.23 and $14,013,426.59, respectively. The amount not collected from these actions amounted to about $6,551,610.66. This amount represented errors which were corrected.

6. Royalty Accounting System - The EGS royalty accounting system has been audited many times by the General Accounting Office and by the Department's internal audit staff. Although many improvements have been made, the EGS has for some time recognized that many problems and shortcomings still exist in the current royalty accounting system. On October 10, 1978, on its own initiative, the EGS formed a task force to recommend to management an accounting system that would be effective and efficient and less manpower-intensive in carrying out the responsibilities as required by law, regulation, and Departmental policy. On December 15, 1978, the task force submitted proposals for a totally new royalty accounting system.

D. MORE MANAGEMENT ACTION NEEDED TO ASSURE EFFECTIVE RECORDING AND COLLECTION OF ACCOUNTS RECEIVABLE, pages 24-28.

1. Better computer utilization would reduce workload, pages 24-26.

COMMENT

Currently ten companies are reporting production sales and collection data by direct tape amounting to about 40,000 monthly input entries. This eliminates the manual preparation of about 29 percent of the production sales and collection input. We are currently testing magnetic tape data for another major oil and gas company, and will receive test tape data within 2 months from another major oil and gas company. The number of companies reporting by direct tape is not important, but the number of input entries are relevant to the workload. Since the Departmental audit report of 1975, the number of input entries have increased from about 16,000 to 40,000.

We believe that significant progress has been made and we currently have a full-time programmer, who along with other duties, assists the major oil and gas companies in converting to direct tape processing. We have no legal authority to require the submittal of direct tape data. Quality of the input by direct tape data is a must. During 1977 one company discontinued submittal of direct tape data. The EGS identified many problems and errors on a continuing basis with this one company. More time was devoted in corrections affecting hundreds of royalty accounts than was required to manually prepare the input data.

The EGS is currently programming an exception report that will print out (1) the lease account number if no charge or payment is entered for the month; (2) "No Report" if no charge is entered for the lease account; (3) "No Payment" if no payment is entered for the lease account; and (4) the charge and payment if the difference is greater than $1.00.

2. Standardization would improve the royalty collection system, pages 26-28.

COMMENT

The EGS Task Force Report recommends complete standardization of the royalty accounting system. Additional comments are shown on the recommendations at the end of Chapters 2 and 4.

E. CONCLUSIONS, page 28.

COMMENT

None.

F. ALTERNATIVES TO THE EXISTING SYSTEM, page 29.

COMMENT

None.

G. RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR, pages 29 and 30.

Pages 29 and 30 of the report recommend that the Secretary of the Interior require the Director, Geological Survey to:

1. "--Inform field inspection personnel of the need to assist accounting personnel in verifying sales data by determining reasonableness of inventory and sales data shown on production reports. Accounting personnel should be informed of any discrepancies noted."

COMMENT

The EGS agrees with the recommendation. Instructions will be issued to the appropriate field personnel. However, we believe that material benefits will be derived under the new ADP royalty accounting system recommended by the Task Force. Under that system production data would be entered and matched automatically against sales data. Sudden changes in production, and material differences between sales and production data would print out as an exception report for audit review and verification by inspection personnel.

2. "--Requires codes identifying reasons for account adjustments and the person originating the adjustments to be included on lease account records."

COMMENT

The EGS agrees with the recommendation. The codes and reasons for account adjustments have been programmed. The program is currently being tested and debugged. Instructions will be issued immediately upon completion of the testing.

3. "--Provide for and charge appropriate penalties for late or erroneous reporting and paying. Interest should be charged on delinquent accounts in order to encourage timely reporting and paying."

COMMENT

The EGS agrees with the recommendation. Section 24 of the September 18, 1978, Outer Continental Shelf Lands Act Amendments provides for a civil penalty of not more than $10,000 per day for failure to comply with any term of an offshore lease. Action will be taken to finalize the oil and gas onshore regulations under 30 CFR 221 to provide for meaningful damages and interest for late reporting and paying.

4. "--Intensify efforts to encourage companies having computer capabilities to provide report data by direct magnetic tape input."

COMMENT

The EGS agrees with the recommendation, and as stated in our earlier comments (1) the number of input entries has increased from about 16,000 (1975), to 40,000 (1979); (2) a computer programmer assists the oil and gas companies in converting to direct tape reporting; and (3) we are currently working with other companies having a significant number of input entries.

5. "--Use computer prepared exception report to followup and resolve deficiencies to increase the value of the accounts as controls as well as to reduce the effort currently involved in auditing the accounts."

COMMENT

The EGS agrees with the recommendation, and as stated in our earlier comments, an exception report is being programmed to be used in followup and resolve deficiencies and to reduce the effort in auditing the accounts.

III. CHAPTER 3, FACTORS MAKING FINANCIAL MANAGEMENT DIFFICULT TO ACHIEVE, pages 31-45.

COMMENT

Page 37, fifth paragraph, second sentence, the word "caries" needs to be corrected to read "carries."

IV. CHAPTER 4, POSSIBLE COURSES OF ACTION TO ELIMINATE OR ALLEVIATE BASIC PROBLEMS IN COLLECTING OIL AND GAS ROYALTIES, pages 46-59.

Pages 46-47

COMMENT

None.

A. MODIFICATION OF EXISTING SYSTEM FOR COLLECTION OF ROYALTIES, pages 47 and 48.

COMMENT

The EGS Task Force considered modification of the existing royalty accounting system, but concluded that a completely new system should be implemented due to problems in the current system that involve organization, management, personnel, system design, legislation and regulation deficiencies, and inadequate ADP practices. In addition, there are problems inherent in the system because of the uniqueness of the different minerals and mineral industries.

1. Reduce the frequency of reports, pages 48-50.

COMMENT

Insofar as reducing the numbers of reports required to be processed by EGS, the Task Force agreed, and recommended: (1) that each lease working interest owner (LWIO) should be required to assume responsibility for both reporting and paying; (2) simplify the LWIO reporting by combining into one form the sales and collection forms in order to reduce the number of reports; and (3) encourage direct tape reporting. In establishing a new royalty accounting system, the EGS will consider the feasibility of reducing the frequency of reporting based upon the annual lease account revenues.

2. Require consolidated reporting and paying, pages 50-52.

On August 18, 1978, the EGS requested the Department's Solicitor's Office to furnish an opinion regarding the legality of requiring joint lessees to designate a single lessee to (1) report all production from a single lease, and (2) pay the royalty on all production thereon, in order to substantially reduce the number of reports currently submitted by each individual joint lessee.

The request also asked what method should be used in implementing the proposed changes (1) should the change be imposed upon all outstanding leases or should it be limited to new leases issued after the effective date of the change; (2) should the change be implemented by including the new requirement as a provision or stipulation in all the pertinent new leases; or (3) should the new requirement be implemented by a new regulation or statute. The Solicitor's Office has requested additional information, has been in contact with the Federal Trade Commission, and is currently determining the legal ramifications of the request.

B. REPLACING EXISTING SYSTEM FOR COLLECTING ROYALTIES, page 52.

COMMENT

The EGS Task Force recommended a completely new royalty accounting system due to the many problems inherent in the current system.

Adopt industry accounting and collection practices, pages 53-56.

COMMENT

The EGS Task Force has recommended a new royalty accounting system similar to the petroleum industry that includes objectives to (1) provide control over cash received from all mineral lease sales; (2) evaluate the adequacy of amounts received from mineral sales; and (3) provide reliable mineral sales data that can be used in preparing financial reports.

C. IMPACT ON THE ROYALTY OIL PROGRAM, pages 56 and 57.

COMMENT

The EGS Task Force recommendations for a new royalty accounting system take into account the royalty oil program.

D. <u>CONCLUSION, pages 57 and 58</u>.

<u>COMMENT</u>

None.

E. <u>RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR, pages 58 and 59</u>.

On pages 58 and 59 of the report it is recommended that the Secretary of the Interior require the Director of the Geological Survey to:

"--Modify or redesign the collection system to reduce the volume of reports submitted by the oil and gas industry to the Geological Survey for processing. In turn, this reduction will enable the Geological Survey to place increased emphasis on lease account reconciliations and audits. Both the task force recommendations and the courses of action discussed in this chapter should be considered in modifying or redesigning the collection system.

"--Consider not only the volume of annual royalties generated by the leases, but also the dependability of the lessees and their prior reporting and paying record in selecting accounts for reconciliation and audit.

"--Provide for cross-service audit agreements between the Department of Energy and the Geological Survey when both are auditing the same commercial concern.

"--Standardize the system used to control royalty collection by having one office responsible for establishing agencywide accounting policies.

"--Periodically advise the Senate Committee on Energy and Natural Resources of the status of actions taken to modify or redesign the collection system."

<u>COMMENT</u>

The EGS agrees with the recommendations. The proposed new royalty accounting system recommended by the EGS Task Force is being reviewed and evaluated by the Director and other Departmental officials. The proposed new royalty accounting system for oil and gas also covers all leasable minerals (coal, potash, sodium, phosphate, etc.). The following are some of the features or recommendations for the new royalty accounting system prepared by the EGS Task Force:

Reduce the number of reports by consolidating the sales and collection reports.

Require each lease working interest owner (LWIO) to assume responsibility for both reporting and paying.

Accept reports and payments as computed by the LWIO with appropriate edits and controls built into the ADP entry procedure.

Accounts would be subject to audit on a management selected priority basis.

Statements would only be sent when a true accounts-receivable balance has been established by audit and entered into the system by EGS personnel.

The accounting system should be flexible to allow reporting at the appropriate marketing arrangement level (i.e., well interest owner, lease interest owner, etc.).

Adopt a simple, uniform settlement basis for natural gas on a BTU basis in accordance with the Natural Gas Policy Act.

The accounting system must be flexible to allow for growth in the number of leases and to accommodate variations generated by different lease provisions under the amendments to the Mineral Leasing Act of February 25, 1920.

Prepare and distribute simplified instructions on how to report production sales, and pay royalties. Where reports are not valid because the necessary data is not timely available, an estimated payment procedure will be allowed. An estimated payment procedure is desirable in some situations but impractical in others. The present system of requiring actual payments on a monthly basis is preferable, with estimated payments a permissable option. This will provide a better cash flow, and provide the lessees with a procedure to make timely payments.

The accounting system should emphasize double entry accounting and contain sufficient internal controls to make manipulation or fraud very difficult. Companies will not be allowed to enter data directly into the royalty accounts. All refunds and material adjustments should be approved by an accounting supervisor subject to review by internal audit.

Centralization of the general accounting functions for all collections, reports receiving, product valuations, etc., should be implemented insofar as practical. The audit functions should be directed from a central source to provide control and prevent duplication of effort. External audit offices, however, should be located near the headquarters of the lessees that report significant production and sales and pay royalties.

A new interactive ADP system will use display terminals and be connected to the systems policy unit, internal audit unit, external audit unit, royalty in kind unit, etc. It will contain the royalty data file, royalty in kind file, and product price model. It will include a reports screening process and will produce exception reports for the nonreceipt of production, sales reports, and payments, late payments, over and under payments, etc. The information entered into the royalty data file from the lessees will be automatically compared with the data contained in the product price model. Variations in product prices will be identified on an exception report for auditing.

Provide a separate policy and procedures manual for royalty accounting.

One office will provide uniform and timely systems policy guidance for all accounting functions in order to achieve standardization and internal control. This office will initiate (1) proposals for new legislation, regulations, orders, etc.; and (2) audit scheduling, including statistically valid sample selection for both internal and external audits. This office will receive data and exception reports from the ADP reports screening process by terminal.

The internal audit unit will receive the audit schedule from the systems policy office. This unit will (1) evaluate the work in terms of effectiveness and proper implementation of policy; and (2) report audit findings, including recommendations for changes to systems policy. This unit will receive data from the ADP royalty data file by terminal.

The external audit unit will receive the audit schedule and requests for special audits from the systems policy office. This unit will (1) coordinate specific timing of company audits; (2) forward the audit report through systems policy to auditee; and (3) initiate entries creating receivables or payables verified by audit.

The royalty in kind unit will (1) consumate contracts for the sale of production royalty taken in kind; (2) determine, prepare, and submit to the purchaser the preliminary billing based upon estimated volumes and values of royalty

taken in kind; (3) determine, prepare and submit the final billing; and (4) monitor payment and take action to terminate the contract for purchasers' failure to comply with the contract.

Other units will provide the (1) balance and control of revenues; (2) product value determinations; and (3) entering of data for ADP processing.

V. CHAPTER 5, page 60.

COMMENT

None.

GAO note: Page numbers in this appendix refer to the draft report and may not correspond to this final report.

(901260)

Single copies of GAO reports are available free of charge. Requests (except by Members of Congress) for additional quantities should be accompanied by payment of $1.00 per copy.

Requests for single copies (without charge) should be sent to:

U.S. General Accounting Office
Distribution Section, Room 1518
441 G Street, NW.
Washington, DC 20548

Requests for multiple copies should be sent with checks or money orders to:

U.S. General Accounting Office
Distribution Section
P.O. Box 1020
Washington, DC 20013

Checks or money orders should be made payable to the U.S. General Accounting Office. NOTE: Stamps or Superintendent of Documents coupons will not be accepted.

PLEASE DO NOT SEND CASH

To expedite filling your order, use the report number and date in the lower right corner of the front cover.

GAO reports are now available on microfiche. If such copies will meet your needs, be sure to specify that you want microfiche copies.

AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES
GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE,$300

POSTAGE AND FEES PAID
U. S. GENERAL ACCOUNTING OFFICE

U.S. MAIL

THIRD CLASS