PERFORMANCE AUDIT
OF

OIL AND NATURAL GAS PRODUCTION REPORTING

July 1998

75-700-97

EXECUTIVE DIGEST

OIL AND NATURAL GAS PRODUCTION REPORTING

INTRODUCTION	This report, issued in July 1998, contains the results of our performance audit* of Oil and Natural Gas* Production Reporting.
AUDIT PURPOSE	This performance audit was conducted as part of the constitutional responsibility of the Office of the Auditor General. Performance audits are conducted on a priority basis related to the potential for improving effectiveness* and efficiency*.
BACKGROUND	Oil and natural gas producers report information on production in Michigan to four State agencies: the Real Estate Division, Department of Natural Resources (DNR); the Motor Fuel, Tobacco, and Miscellaneous Taxes Division, Department of Treasury; the Geological Survey Division, Department of Environmental Quality (DEQ); and the Public Service Commission, Department of Consumer and Industry Services (DCIS). DNR uses production information to verify the amount of royalties* paid to the State for production from State-owned mineral rights. The Department of Treasury uses

* See glossary on page 30 for definition.

production information in connection with its administration of the Michigan Severance Tax Act. DEQ uses oil and natural gas production information to monitor production from prorated oil wells*. DEQ also uses the information for geological and environmental purposes. DCIS uses gas production information to monitor production from all gas wells* and casinghead gas* fields.

AUDIT OBJECTIVES, CONCLUSIONS, AND NOTEWORTHY ACCOMPLISHMENTS

Audit Objective: To determine the effectiveness of controls over State oil and natural gas mineral rights leasing, royalty payments due the State for oil and natural gas production, and severance tax and surveillance fee payments for oil and natural gas produced in Michigan.

Conclusion: We concluded that the controls over State oil and mineral rights leasing, royalty payments due the State for oil and natural gas production, and severance tax and surveillance fee payments for oil and natural gas produced in Michigan were not effective. We noted reportable conditions* relating to coordination of roles, royalty production reporting, monitoring of royalty remittances, revenue verification, DNR audits, the Real Estate Information System, and monitoring of severance tax collection (Findings 1 through 7).

Noteworthy Accomplishments: In 1996, DNR began conducting audits of post-production costs* claimed by the operators* of Antrim natural gas* wells in which the State had a royalty interest. At the time of our audit, audits of five operators had been completed. As a result of these audits, DNR had recovered $480,926 of improper post-production costs. Three additional audits were in process. DNR's plan is to audit all operators of Antrim natural gas wells in which the State has a royalty interest.

* See glossary on page 30 for definition.

Audit Objective: To assess the completeness and accuracy of reported oil and natural gas production data.

Conclusion: We concluded that the oil and natural gas production data reported to each of the departments was reasonably complete and accurate. We noted reportable conditions relating to royalty production reporting (Finding 2) and monitoring of royalty remittances (Finding 3). These findings are reported under the effectiveness of controls objective of this report.

Audit Objective: To determine the efficiency of the State system for receiving oil and natural gas production data.

Conclusion: We concluded that the State system for receiving oil and natural gas production data was not efficient. We noted one material condition* :

- Oil and natural gas producers reported production data separately to each of the four departments involved in oil and natural gas matters in a hard copy (paper) format. As a result, some data was reported to each department and other information that could have been used by several agencies was reported to only one. In addition, each department maintained its own data base and little comparison or sharing of reported data between departments occurred (Finding 8).

  All four departments agreed with this recommendation.

AUDIT SCOPE AND METHODOLOGY

Our audit scope was to examine the program and other records of the Real Estate Division, Department of Natural

* See glossary on page 30 for definition.

Resources; the Motor Fuel, Tobacco, and Miscellaneous Taxes Division, Department of Treasury; the Geological Survey Division, Department of Environmental Quality; and the Public Service Commission, Department of Consumer and Industry Services, relating to oil and natural gas production. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Our audit procedures included examinations of program records and activities for the period October 1, 1994 through June 30, 1997.

We reviewed and evaluated internal controls related to royalty payments, severance tax payments, and surveillance fee payments. We reviewed the DNR lease* to determine if the lease provisions adequately protect the State's interests. We tested records for selected production units to determine that production was reported consistently to each department and that royalties, severance taxes, and surveillance fees were paid based on reported quantities.

AGENCY RESPONSES

Our audit report contains 8 findings and 10 related recommendations. DNR agreed with the 9 recommendations which applied to it. The Department of Treasury agreed with the 4 recommendations which applied to it. DEQ agreed with the 3 recommendations which applied to it. DCIS agreed with the 3 recommendations which applied to it.

* See glossary on page 30 for definition.

Mr. Keith J. Charters, Chairperson
Natural Resources Commission
Stevens T. Mason Building
Lansing, Michigan

Mr. Russell J. Harding, Director
Department of Environmental Quality
Hollister Building
Lansing, Michigan

Mr. Douglas B. Roberts
State Treasurer
Treasury Building
Lansing, Michigan

Ms. Kathleen M. Wilbur, Director
Department of Consumer and Industry Services
G. Mennen Williams Building
Lansing, Michigan

Dear Mr. Charters, Mr. Roberts, Mr. Harding, and Ms. Wilbur:

This is our report on the performance audit of Oil and Natural Gas Production Reporting.

This report contains our executive digest; description of program; audit objectives, scope, and methodology and agency responses; comments, findings, recommendations, and agency preliminary responses; and a glossary of acronyms and terms.

Our comments, findings, and recommendations are organized by audit objective. The agency preliminary responses were taken from the agencies' responses subsequent to our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agencies develop a formal response within 60 days after the release of the audit report.

We appreciate the courtesy and cooperation extended to us during this audit.

AUDITOR GENERAL

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GLOSSARY

Description of Program

Information on the production of oil and natural gas in Michigan is reported to four State agencies: the Real Estate Division, Department of Natural Resources (DNR); the Motor Fuel, Tobacco, and Miscellaneous Taxes Division, Department of Treasury; the Geological Survey Division, Department of Environmental Quality (DEQ); and the Public Service Commission, Department of Consumer and Industry Services (DCIS).

DNR uses production information to verify the amount of royalties paid to the State for production from State-owned mineral rights. The Department of Treasury uses production information in connection with its administration of the Michigan Severance Tax Act. DEQ uses oil and natural gas production information to monitor production from prorated oil wells. DEQ also uses the information for geological and environmental purposes. DCIS uses gas production information to monitor production from all gas wells and casinghead gas fields.

In 1996, approximately 245 billion cubic feet of natural gas and 10 million barrels of oil were produced in Michigan, resulting in $37 million in severance taxes paid to the State. According to DNR records, approximately 115 billion cubic feet of natural gas and 2.9 million barrels of oil were produced from State-owned lands, resulting in $33.5 million in royalties paid to the State.

Audit Objectives

Our performance audit of Oil and Natural Gas Production Reporting had the following objectives:

1. To determine the effectiveness of controls over State oil and natural gas mineral rights leasing, royalty payments due the State for oil and natural gas production, and severance tax and surveillance fee payments for oil and natural gas produced in Michigan.

2. To assess the completeness and accuracy of reported oil and natural gas production data.

3. To determine the efficiency of the State system for receiving oil and natural gas production data.

Audit Scope

Our audit scope was to examine the program and other records of the Real Estate Division, Department of Natural Resources (DNR); the Motor Fuel, Tobacco, and Miscellaneous Taxes Division, Department of Treasury; the Geological Survey Division, Department of Environmental Quality (DEQ); and the Public Service Commission, Department of Consumer and Industry Services (DCIS), relating to oil and natural gas production. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Audit Methodology

Our audit procedures were conducted during the months of April through October 1997 and included examinations of program records and activities for the period October 1, 1994 through June 30, 1997.

We reviewed and evaluated internal controls related to royalty payments, severance tax payments, and surveillance fee payments. We also reviewed and evaluated the controls in the Real Estate Information System as they relate to oil and gas leases and the corresponding rental and royalty payments.

We examined the DNR lease to determine if the lease provisions adequately protect the State's interests. We compared the lease to leases used by other states.

We tested the completeness of DNR records of wells that the State has an interest in. We compared producers reporting to DNR, DEQ, and DCIS to severance tax records to determine if severance taxes and surveillance fees are paid for all producers. We tested records for selected production units to determine that production was reported consistently to each department and that royalties, severance taxes, and surveillance fees were paid based on reported quantities. We did not verify sales prices and post-production costs to producer records.

We evaluated DNR's process for selecting its contractual auditors and the operators and production units to be audited. We reviewed the completed audits and compared their results to the costs of doing the audits.

We evaluated options available to the State for the marketing of its royalty share of oil and gas production.

We determined what production-related information was reported to each department. We assessed the efficiency of the reporting system.

Agency Responses

Our audit report contains 8 findings and 10 related recommendations. DNR agreed with the 9 recommendations which applied to it. The Department of Treasury agreed with the 4 recommendations which applied to it. DEQ agreed with the 3 recommendations which applied to it. DCIS agreed with the 3 recommendations which applied to it.

The agency preliminary response which follows each recommendation in our report was taken from the agencies' written comments and oral discussion subsequent to our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and Department of

Management and Budget Administrative Guide procedure 1280.02 require DNR, the Department of Treasury, DEQ, and DCIS to develop a formal response to our audit findings and recommendations within 60 days after release of the audit report.

COMMENTS, FINDINGS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

EFFECTIVENESS OF CONTROLS

COMMENT

Background: State-owned mineral rights may be identified for leasing by the Department of Natural Resources (DNR) or nominated by individuals in the oil and gas industry. The DNR Real Estate Division reviews all lands considered for leasing to verify that the State owns them. Also, the Real Estate Division classifies the lands as nonleasable, nondevelopment, or development. DNR schedules periodic public lease auctions* of State-owned mineral rights. Leases are awarded to the bidder offering the highest bonus* payment, in addition to the standard rent* and royalty payments. Before development* can begin, the lessee must hold leases on all mineral rights (publicly or privately owned) within a drilling unit. The lessee makes annual rent payments to DNR during the development period.

Before drilling may begin, the lessee must obtain a drilling permit and file a conformance bond with the Geological Survey Division, Department of Environmental Quality (DEQ), which regulates all drilling. When the well is completed, completion* records are filed with DEQ. When a gas well is completed and ready for operation, it must be connected to a pipeline, which requires a well connection permit from the Public Service Commission (PSC), Department of Consumer and Industry Services (DCIS).

Meters are also installed to account for production. Gas wells may be metered individually or by using an allocation meter which accounts for production for several wells in a production unit. From this point, gas enters a gathering line* which takes it to a central processing facility. Typically, there are meters at the inlet and outlet of the central processing facility. The central processing facility removes water and compresses the gas so it is ready to enter the pipeline. The gas enters the pipeline through a receipt meter station. This meter is the meter that is considered "accurate,"

* See glossary on page 30 for definition.

and most reporting is done using information from it. Receipt meters are installed and maintained by the pipeline company.

Once a well is producing, rentals are abated and royalty payments (at rates of 1/8 to 1/6 of the value of the oil or gas produced) begin. The DNR lease requires that royalty payments be received within 25 days after the end of the month in which the product is sold. Payments are received by the DNR cashier and are entered into the Real Estate Information System (REIS) for tracking.

The DNR Real Estate Division has a Revenue Verification Unit, which is responsible for verifying that producers have remitted the State's royalty share for each producing well on a monthly basis. In addition, in 1996, DNR began conducting audits of post-production costs claimed by the operators of Antrim natural gas wells in which the State had a royalty interest. Antrim natural gas wells were selected as the initial focus of the audit program because they were considered the highest risk. Antrim natural gas is considered the highest risk because it has more impurities requiring more processing to be sold and is produced from large numbers of lower producing wells. Individual units and producers audited were also selected based upon a risk assessment. Scheduling audits based upon perceived risk is consistent with the way other audit agencies schedule their audits.

Severance taxes and surveillance fees are also due once a well is producing. Severance taxes are paid at a rate of 6.6% of the gross cash market value of regular oil, 4.0% of the gross cash market value of marginal oil, and 5.0% of the gross cash market value of natural gas. Gross cash market value is calculated at the wellhead. Severance taxes are due to the Department of Treasury by the twenty-fifth day of each month for oil and gas received, purchased, stored, or transported during the preceding month. Severance taxes may be paid by the producer, the transporter, or the purchaser. Surveillance fees, which support the DEQ Geological Survey Division, are paid with severance taxes at a rate not to exceed 1.0% of the gross cash market value of oil and natural gas. Oil and gas production attributable to the State or federal government is exempt from severance taxes and surveillance fees.

Audit Objective: To determine the effectiveness of controls over State oil and natural gas mineral rights leasing, royalty payments due the State for oil and natural gas

production, and severance tax and surveillance fee payments for oil and natural gas produced in Michigan.

Conclusion: We concluded that the controls over State oil and natural gas mineral rights leasing, royalty payments due the State for oil and natural gas production, and severance tax and surveillance fee payments for oil and natural gas produced in Michigan were not effective. We noted reportable conditions relating to coordination of roles, royalty production reporting, monitoring of royalty remittances, revenue verification, DNR audits, REIS, and monitoring of severance tax collection.

Noteworthy Accomplishments: In 1996, DNR began conducting audits of post-production costs claimed by the operators of Antrim natural gas wells in which the State had a royalty interest. At the time of our audit, audits of five operators had been completed. As a result of these audits, DNR had recovered $480,926 of improper post-production costs. Three additional audits were in process. DNR's plan is to audit all operators of Antrim natural gas wells in which the State has a royalty interest.

FINDING

1. Coordination of Roles

The State has not established a mechanism to coordinate the varying roles of the departments involved in the oil and gas industry to respond to a changed and complex industry.

The departments' roles include lessor*, buyer, and regulator. The State's energy resources are being developed and marketed within a far more complex market than that which previously existed. Crude oil prices are now established in the global market. The gas markets have undergone a complete transformation over the last 20 years because of deregulation. The 1978 Natural Gas Policy Act deregulated wellhead prices, opened markets between jurisdictions, and supported development of unconventional gas supplies. Other changes include pipeline conversion to common carriers and spot market* development.

* *See glossary on page 30 for definition.*

During our audit, we identified the following situations:

a. DNR Post-Production Costs and Department of Treasury Marketing Costs

DNR, in conjunction with the Michigan Oil and Gas Association, developed a letter of understanding dated November 10, 1993 that outlines the nature and extent of post-production cost deductions from royalty payments on State leases. In response to widespread concern expressed by the general public at the appropriateness of the deductions, the DNR director rescinded the letter of understanding in May 1996 and subsequently revised the State lease to allow some post-production cost deductions. However, the Department of Treasury permits similar deductions, known as "marketing costs," to arrive at taxable value for gas severed from the land for severance tax purposes. Revenue Administrative Bulletins, such as 89-19 and 92-5, specify allowable deductions for marketing costs to arrive at the wellhead value of gas when the market is away from the wellhead. The State does not have a mechanism to ensure that decisions regarding post-production and marketing cost deductions are coordinated and that both departments consider the impact of such deductions.

b. DMB Spot Market Buying and DNR Leasing of State Resources

The Office of Purchasing, Department of Management and Budget (DMB), annually contracts to purchase approximately 3 billion cubic feet of gas on the spot market for use at certain State facilities. At the same time, producers operating under leases with DNR sell the State's share of gas production on the same market in exchange for royalty payments. Prior to 1995, the State's lease had no provision for the State to take its gas in-kind. At the request of DMB, DNR amended the State's lease to allow gas in-kind as an option. The State does not have a mechanism to determine the feasibility and overall impact to the State of using its own gas in State facilities.

c. PSC Gas Marketer Regulation and State Roles as Buyer and Lessor

Deregulation in the natural gas industry impacts the PSC's role as regulator. Gas marketers now compete with local utility companies to provide service for commercial and industrial customers within the utility companies service territories. In addition, pilot transportation programs approved by the PSC permit some residential customers to choose gas suppliers. Marketers buy

and then transport gas for these customers on the same systems owned by the local utility companies. There are no regulations governing the activities of local utility companies' marketing affiliates. These marketing affiliates can acquire an advantage in the competitive marketplace as a result of the affiliation through preferences given or information provided, such as unequal access to customer information and utility company monopoly services, and requirements that customers work through the affiliate for services.

The Federal Energy Regulatory Commission (FERC) through FERC Order 497 and several state public utility commissions recognized the need for standards of conduct between local utility companies and their marketing affiliates. Michigan's PSC has adopted a voluntary approach to this issue and is attempting to incorporate Transportation Standards of Conduct in various cases heard before the PSC. If the marketplace is not competitive and the dominant service provider in a territory is the utility company's marketing affiliate, there is the potential for excessive customer rates or inferior service. Transportation Standards of Conduct have been adopted for about half of the gas utilities in Michigan. The State does not have a mechanism to evaluate the impact of the nonregulated marketing affiliates on its role in the marketplace as a gas buyer and lessor.

The State's various departments independently pursue their designated roles in the oil and gas market in accordance with their legislatively mandated roles. However, there is no mechanism to coordinate these roles to ensure the overall best interests of the State are attained. Such a mechanism could be established through executive branch action, such as establishing a coordinating panel, or through legislative branch action, such as approving statutory requirements.

RECOMMENDATION

We recommend that the State establish a mechanism to coordinate the varying roles of the departments involved in the oil and gas industry.

AGENCY PRELIMINARY RESPONSE

Department of Natural Resources

DNR agrees in principle but notes that a mechanism exists and is being utilized by DNR to coordinate roles. Memorandums of understanding are in place with DEQ

and one has been provided to DMB for signature to formalize various areas of responsibility. DNR will continue to utilize formal agreements as need arises with other departments.

Additionally, DNR has a procedure in place to review and approve applications from State agencies for the taking of oil and gas in kind. Pilot projects are under way at the federal level and in selected states. DNR anticipates initiating pilot projects following an evaluation of those projects.

Department of Treasury

The Department of Treasury agrees. The policies of each agency should be closely coordinated. We propose that an interdepartmental steering group be established for this purpose. Post-production costs for severance tax are calculated on cents per million cubic feet basis.

Department of Environmental Quality

DEQ agrees. This recommendation relates to the respective roles of the DNR as lessor, Department of Treasury as revenue collector, DMB as gas purchaser, and Michigan's PSC as regulator of gas marketing arrangements. DEQ believes there should be more coordination between these roles to ensure sharing of information and uniformity of procedures. DEQ also believes that its Geological Survey Division should be involved in this coordination because of the relationship of surveillance fee collection to severance tax collection.

Department of Consumer and Industry Services

PSC agrees and will work with the appropriate agencies to coordinate the varying roles in this situation.

FINDING

2. Royalty Production Reporting

The Real Estate Division did not establish standard requirements for the reporting of oil and natural gas production to help ensure that it received complete and accurate royalty production information. Our review disclosed:

a. The Real Estate Division did not require that operators submit their royalty production information in any specific format or require that specific information be included. Although the Division had a royalty reporting form, the form was used by only a few remitters. We found that one operator reported production using its own field names and property numbers and, until the time of our audit, had not provided a crosswalk to the Division's lease numbers. The Division recorded all royalty payments (approximately $2.2 million since October 1994) from this operator in one royalty reporting unit because it could not identify which lease or leases the payments related to. Our discussions with five other states disclosed that all five states require producers to report on a standard form.

b. The Real Estate Division did not require a specific measurement basis for production reporting. The most common unit of measurement for natural gas is mcf (thousand cubic feet), and the most common pressure base and temperature are 14.73 psi (pounds per square inch) at 60 degrees Fahrenheit. Natural gas production for 1 of our 12 sample items was reported in MmBtu's (million British thermal units*) rather than mcf. For 10 of our 12 sample items, we could not readily determine what measurement basis was used for reporting. The PSC and the Geological Survey Division both require reporting in mcf at 14.73 psi at 60 degrees Fahrenheit. Three of the five states we surveyed also require this measurement basis for production reporting.

Without standard requirements for the reporting of oil and natural gas production, the Real Estate Division cannot be assured that it receives complete and accurate royalty production information. In addition, production which is not reported in mcf

* See glossary on page 30 for definition.

at 14.73 psi at 60 degrees Fahrenheit cannot easily be verified to production reported to the PSC or the Geological Survey Division.

RECOMMENDATION

We recommend that the Real Estate Division establish standard requirements for the reporting of oil and natural gas production.

AGENCY PRELIMINARY RESPONSE

DNR agrees and will comply. The development of standard requirements for the reporting of oil and natural gas production has been initiated inside the DNR. Staff are working with industry groups to develop reporting standards, and DNR anticipates recommendations by the end of the fiscal year and initiation of standard requirements by the end of the calendar year 1998.

FINDING

3. Monitoring of Royalty Remittances

The Real Estate Division did not have adequate internal controls over royalty payments to identify royalty remitters who were remitting incorrect amounts or to identify producing wells for which royalties were not received.

The Division is charged with administering leases of State mineral rights and receiving rent and royalty payments. Natural Resources Commission Policy 2306 states: "Oil and gas leasing and development of State-owned minerals shall be established in a manner to assure . . . optimum economic return to the State. . . "

We reviewed records for 7 wells with production reported to DEQ and PSC, but no revenue recorded in REIS. Our review disclosed one instance in which royalty payments should have begun in 1991 but had not yet begun at the time of our audit. The Division was not aware that royalty payments were due for this well. After we brought this to the Division's attention, steps were taken to collect the royalties, along with appropriate penalties and interest. The Division estimated the State's share of royalties was approximately $4,500.

Because the Division did not have in place adequate internal controls over royalty remittances, it was unable to effectively monitor the correctness or the completeness of those receipts. The Division's primary control for identifying incorrect or missed royalty payments is the decimal interest* report. As noted in Finding 6, this report was over 400 pages each month and was not used for its intended purpose by Division staff during our audit.

RECOMMENDATION

We recommend that the Real Estate Division strengthen internal controls over royalty payments to identify royalty remitters who remit incorrect amounts and to identify producing wells for which royalties are not received.

AGENCY PRELIMINARY RESPONSE

DNR agrees and will comply. Changes are being implemented to ensure postings of royalty remittances are current and the decimal interest report is being used in part for monitoring royalty payments. Additionally, the Statewide Land Data Base (SWLDB) effort that is underway will also help to correct this issue.

The well identified in the audit has a Michigan Department of Transportation (MDOT) parcel in the drilling unit. MDOT parcels are not part of the current REIS database. The SWLDB effort that is underway will address this finding.

Development of the SWLDB will result in the integrated management of land and related assets. The database will allow State land management agencies to identify common information requirements and use modern information technology to gather, organize, and make accessible this common information.

In the interim, the decimal interest report is now being utilized for monitoring revenue from 300 of about 1000 wells/unitized areas. Improvements are being made as staff time allows.

* See glossary on page 30 for definition.

FINDING

4. Revenue Verification

The Real Estate Division did not have sufficient procedures in place to monitor, review, and verify lease revenue to help ensure that all royalties that were due on oil and natural gas produced from State leases were accurately computed and received.

In late 1990, the Division had a staff of four (three accountants and a secretary) monitor, review, and verify lease revenue due the State for rents and royalties. For fiscal year 1991-92, revenue verification activities resulted in collection of over $940,000 in additional royalties due the State. For fiscal year 1992-93, these activities resulted in the collection of over $500,000 in additional royalties. Beginning in fiscal year 1993-94, revenue verification activities decreased as a result of vacancies and the assignment of staff to other responsibilities. Additional royalties collected averaged approximately $200,000 per year in fiscal year 1993-94 and 1994-95. At the time of our audit, one staff person spent less than half of his time on revenue verification activities.

Our review of 12 production units disclosed that the State did not receive approximately $48,000 in royalty payments for natural gas production for one of our sample items during October, November, and December 1996. Staff responsible for revenue verification activities were not aware of these missed payments.

To help ensure that the State receives all revenue due it, the Division should be more active in monitoring, reviewing, and verifying lease revenue. Our discussions with other states disclosed that they routinely perform "desk audits" of royalty payments.

RECOMMENDATION

We recommend that the Real Estate Division increase procedures to monitor, review, and verify lease revenue to help ensure that all royalties that are due on oil and natural gas produced from State leases are accurately computed and received.

AGENCY PRELIMINARY RESPONSE

DNR agrees. A revenue verification unit was re-established in 1998 after several personnel changes occurred in the unit. The unit supervisor position and one permanent accountant position have been filled. DNR is also in the process of hiring an additional accountant.

Changes have been implemented to ensure postings of royalty remittances are current and the decimal interest report is used in part for monitoring royalty payments.

FINDING

5. DNR Audits

DNR did not conduct audits of royalties received from oil, non-Antrim natural gas, sand, stone, and gravel produced from State-owned mineral rights.

At the time of our audit, DNR spent its resources verifying royalties from a limited number of Antrim natural gas wells and the associated post-production costs charged to the State. DNR had not focused verification efforts on oil or other mineral rent or royalty payments and the deductions charged the State.

DNR does not have any assurance that it is receiving the correct amount of royalties due the State for mineral production, other than Antrim natural gas. Sound management practices dictate that post-production verification be conducted on royalties due the State for all types of mineral production. There are approximately 1,400 oil-producing wells which generate $8.5 million in royalties each year.

RECOMMENDATION

We recommend that DNR expand its audit efforts to include audits of royalties received from all types of minerals produced from State-owned mineral rights.

AGENCY PRELIMINARY RESPONSE

DNR agrees and will comply. Due to limited resources, priorities were established based on highest overall risk. Lease bonus payments were increased by $3 per

acre for the December 1997 lease auction to cover the costs of additional oil and gas audits. Futhermore, specific lease language was incorporated for the December 1997 auction and future leases which will require the lessees to pay for audits when found in noncompliance with their leases.

Audits of other program areas will be expanded as needed and as resources are available for audit efforts. DNR management recognizes the need to expand this internal program, and the Office of Internal Audits is in the process of hiring an internal auditor for oil and gas purposes.

FINDING

6. Real Estate Information System (REIS)

The Minerals Lease Management Subsystem of the Real Estate Division's REIS contained inaccurate and incomplete data relating to State oil and natural gas leases. Our review disclosed:

a. The Division did not have adequate controls and procedures in place to help ensure that information converted to REIS during implementation and information subsequently entered into REIS was accurate and complete. Our review of 12 oil and natural gas wells disclosed 3 wells (25%) in which the State had a mineral interest that was not appropriately recorded in REIS. Also, our testing of 12 production units disclosed that 61 (12%) of 522 records reviewed contained errors.

b. Inaccurate information in REIS could not be corrected in one entry. Rather, each table containing the inaccurate information had to be corrected individually. Because REIS contains approximately 170 tables, this can be a lengthy task. If all tables containing the inaccurate information are not updated, inaccurate and inconsistent data remains in REIS.

c. REIS contained few system edits. For example, rather than computing the remittance amount based on reported volume, price, deductions, and the State's decimal interest, REIS requires the data entry staff to manually enter the remittance amount. Such a computation could serve as a check of the amount actually remitted.

d. The decimal interest report, a monthly exception report generated from REIS, was over 400 pages long each month. Division staff informed us that they did not use the report to help identify missing or incorrect royalty payments. Our review of 10 exceptions appearing on the decimal interest report disclosed that only 1 was the result of an incorrect royalty payment. Six of the exceptions related to inaccurate information in REIS, 2 related to a system limitation relating to split payments, and 1 was a data entry error.

REIS and its decimal interest report are a major part of the Division's internal controls relating to royalty payments. However, the inaccurate and incomplete information in REIS renders it ineffective as a control. If the information in REIS was accurate and complete, REIS could be a valuable tool in revenue verification functions. In addition, being able to rely on REIS, rather than hard copy files, would increase efficiency. Several Division staff members informed us that they did not rely on REIS at the time of our audit because of the inaccurate and incomplete data.

RECOMMENDATIONS

We recommend that the Real Estate Division establish appropriate controls and procedures to help ensure that information relating to State oil and natural gas leases entered into the Minerals Lease Management Subsystem of REIS is both accurate and complete.

We also recommend that the Real Estate Division allocate the necessary resources to identify and correct inaccurate and incomplete information contained in the Minerals Lease Management Subsystem of REIS.

AGENCY PRELIMINARY RESPONSE

DNR agrees and recognizes that REIS does not meet current business needs.

Early retirement savings are being used to improve technology in DNR and a portion of the funding is being utilized for REIS improvements. DNR has already taken major steps to improve the system by moving it to a new mainframe and placing a new operating system on that mainframe.

Procedures and training related to data entry into the Minerals Management Subsystem have been implemented to improve the accuracy of information. Query Management Facility reports are being generated to list edit problems or incorrect or inconsistent information that can then be reviewed and corrected by staff.

FINDING

7. Monitoring of Severance Tax Collection

The severance tax unit, Department of Treasury, did not have an adequate internal control structure to help ensure that all severance taxes due the State were identified and collected. Our review disclosed:

a. The severance tax unit had no measures in place to identify who should be paying severance taxes. As a result, there was no assurance that everyone who should be paying severance taxes was actually paying.

b. The severance tax unit had not developed a system for comparing oil and natural gas production reported on severance tax returns with the production reported to other State agencies. Such a comparison would provide assurance that severance taxes are paid on accurate volumes and for all producing wells. We looked for tax payments for 12 selected items (production units, projects, and individual wells) that had production reported to other departments. We found that three months of payments had been missed by a major company on one well.

c. The severance tax unit could not readily determine which taxpayers were deducting marketing costs related to natural gas production because this information was not included on the severance tax return. Marketing cost deductions are netted against the value of gas sold. As a result, the severance tax unit could not verify that marketing cost deductions were properly approved as required by Revenue Administrative Bulletin 89-19. In addition, we sought marketing cost approvals for 5 companies identified through DNR audits as taking marketing cost deductions. The severance tax unit could not locate approvals for 2 of the 5 companies.

d. There were no routine audits of severance tax returns. The only audits conducted during our audit period were of companies that requested refunds based on previously unclaimed marketing costs.

Sound management practices dictate that strong internal control structures should exist for revenue collection functions. Strong internal control structures help to provide greater assurance that revenues are maximized.

RECOMMENDATION

We recommend that the severance tax unit strengthen its internal control structure over severance tax collection.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agrees. The Severance Tax Act requires the first purchaser to withhold the severance tax from the purchase price and remit the tax. The cited one well exception involved a change in who was the first purchaser and has been corrected.

COMPLETENESS AND ACCURACY OF REPORTED DATA

Audit Objective: To assess the completeness and accuracy of reported oil and natural gas production data.

Conclusion: We concluded that the oil and natural gas production data reported to each of the departments was reasonably complete and accurate. We noted reportable conditions relating to royalty production reporting and monitoring of royalty remittances. These findings are reported under the effectiveness of controls objective of this report.

SYSTEM EFFICIENCY

Audit Objective: To determine the efficiency of the State system for receiving oil and natural gas production data.

Conclusion: We concluded that the State system for receiving oil and natural gas production data was not efficient. We noted one material condition. Oil and natural gas producers reported production data separately to each of the four departments involved in oil and natural gas matters in a hard copy (paper) format. In addition, each department maintained its own data base and little comparison or sharing of reported data occurred among the departments.

FINDING

8. Reporting

Oil and natural gas producers reported production data separately to each of the four departments involved in oil and natural gas matters in a hard copy (paper) format. In addition, each department maintained its own data base and little comparison or sharing of reported data occurred among the departments.

In 1986, in response to an Office of the Auditor General audit recommending that the Department of Treasury use data available from other departments to verify data reported for severance taxes, the departments formed the Committee for Uniform Reporting of Oil and Gas Production. After considerable research, the Committee developed a proposal for a centralized reporting package and the creation and maintenance of a shared data base. However, when the committee's requests for funding were turned down for both fiscal years 1990-91 and 1991-92, no further action on the proposal was taken.

As a result, oil and natural gas producers continued to separately report to each department. Some data was reported to each department and other information that could have been used by several agencies was reported to only one. Each department maintained its own data base. Sharing of data continued to be limited.

Establishing centralized reporting and a shared data base would be beneficial to all four departments, as well as to the producers. Efficiency would be increased by maintaining only one data base. Having more data available to each department would allow the departments to more effectively perform their respective functions. This would be especially beneficial to DNR's and the Department of Treasury's efforts to verify that proper amounts of royalties and severance taxes have been paid. The producers would benefit by having to report data only once. In addition, electronic reporting would further reduce the time required for data entry.

We surveyed the departments to determine if they felt that the Committee's proposal for centralized reporting and a shared data base was viable and useful. All four departments felt that such a project would be viable and were generally supportive of the concept. In addition, one department felt that electronic reporting would provide additional benefits.

RECOMMENDATIONS

We recommend that the departments involved in oil and natural gas production reporting develop an updated proposal for centralized reporting and a shared data base.

We also recommend that the departments consider the viability of implementing electronic reporting of oil and natural gas production data.

AGENCY PRELIMINARY RESPONSE

Department of Natural Resources

DNR continues to fully support the need for a recommendation to develop a centralized reporting system for production data and a shared database that would meet the needs of all the agencies involved. Data should be submitted electronically to streamline the submittal process and eliminate the potential for posting errors by the receiving agencies.

Department of Treasury

The Department of Treasury agrees and is currently exploring this issue with DEQ. DEQ is contracting for development of a new electronic reporting system.

Department of Enviromental Quality

DEQ agrees. Centralized reporting would result in improved efficiency for the State, reduced reporting burdens for the industry, and less confusion over production volumes. The DEQ Geological Survey Division is currently implementing an oil and gas reporting system based on a client server computer platform and plans to incorporate optional electronic reporting. DEQ's Geological Survey Division and PSC have agreed on the format for reports and on sharing the database in their respective programs. DEQ has invited input from DNR and the Department of Treasury but those agencies have not agreed on sharing data.

Department of Consumer and Industry Services

PSC supports the recommendations that the four departments involved in oil and natural gas reporting develop a proposal for centralized reporting and a shared data base and that they consider the viability of implementing electronic reporting of oil and natural gas production data.

Glossary of Acronyms and Terms

Antrim natural gas	Natural gas produced from an organic rich black shale, known as the Antrim Shale Formation.
bonus	The cash consideration paid to the lessor by the successful bidder for a mineral lease. The payment is made in addition to the rent and royalty obligations specified in the lease.
British thermal unit (Btu)	The amount of energy required to raise the temperature of one pound of water one degree Fahrenheit. An average Btu content of fuel is a heat value per unit quantity of fuel, determined from tests of fuel samples.
casinghead gas	Gas produced from an oil well as distinguished from gas produced from a gas well. The casinghead gas is taken off at the top of the well or at the separator.
completion	Installation of downhole equipment to place a well into producing status for oil, gas, or service use from a single zone or reservoir. If separate zones are commingled in the well bore, it is considered a single completion.
DCIS	Department of Consumer and Industry Services.
decimal interest	A royalty owner's proportionate share of production from a production unit. Decimal interest is typically calculated as: (acres owned ÷ total acreage of production unit) x royalty rate.
DEQ	Department of Environmental Quality.

development Activities following exploration, including the installation of facilities and the drilling and completion of mines or wells for production purposes.

DMB Department of Management and Budget.

DNR Department of Natural Resources.

effectiveness Program success in achieving mission and goals.

efficiency Achieving the most outputs and outcomes practical for the amount of resources applied or minimizing the amount of resources required to attain a certain level of outputs or outcomes.

FERC Federal Energy Regulatory Commission.

gas well A well completed for the production of natural gas from one or more gas zones or reservoirs.

gathering lines Pipelines and other equipment normally used to transport oil or gas from a well on a lease to a central accumulation point on or near the lease site where production is measured for royalty purposes. An oil gathering system includes oil and gas separators, emulsion treaters, gathering tanks, and similar equipment. Gas gathering lines collect gas from the wells under fluctuating pressures. The gas passes through compressors to regulate pressure before the gas is introduced into trunk or transmission lines. A gas gathering system generally includes regulators, compressors, dehydrators, and associated equipment.

lease A legal document executed between a landowner, as lessor, and a company or individual, as lessee, that conveys the

right to exploit the premises for minerals or other products for a specified period of time over a given area.

lessor The owner of the leased land or mineral rights. The lessor typically retains a reserved royalty interest and a reversion upon expiration of the lease.

material condition A serious reportable condition which could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the opinion of an interested person concerning the effectiveness and efficiency of the program.

mcf thousand cubic feet.

MDOT Michigan Department of Transportation.

MmBtu Million Btu's.

natural gas A compressible and expansible mixture of hydrocarbons having a low specific gravity and occurring naturally in a gaseous form. Natural gas ordinarily consists principally of methane and heavier entrained hydrocarbons and may contain appreciable quantities of nitrogen, helium, carbon dioxide, and contaminants, such as hydrogen sulfide and water vapor. Some of the gases may be found either in a gaseous state or as liquids under suitable conditions of temperature and pressure.

oil well A well completed for the production of crude oil from one or more zones or reservoirs. Oil wells typically produce casinghead gas.

operator The individual, partnership, firm, or corporation having control or management of operations on a leased area or a portion thereof. The operator may be a lessee, designated

agent of the lessee, a holder of rights under an approved operation agreement, or an agent of an operating rights holder.

performance audit An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate decision making by parties responsible for overseeing or initiating corrective action.

post-production costs Those costs incurred in handling gas from the wellhead to the point of sale, including capital costs for various items, such as gathering lines, compressors, and dehydrators; costs to operate the capital equipment; and third party costs, such as pipeline transportation. Post-production costs are deducted from the sales price of gas to arrive at the value of the gas at the wellhead.

PSC Public Service Commission.

psi pounds per square inch.

public lease auction A process conducted by the DNR Real Estate Division for State-owned mineral rights in which leases of certain mineral tracts are offered for lease by competitive bidding and during which bids are received, announced, and recorded.

REIS Real Estate Information System.

rent Periodic payments made by the holder of a lease, during the primary lease term, for the right to use the land or resources for purposes established in the lease.

reportable condition	A matter coming to the auditor's attention that, in his/her judgment, should be communicated because it represents either an opportunity for improvement or a significant deficiency in the design or operation of the internal control structure or in management's ability to operate a program in an effective and efficient manner.
royalty	Payment, in value (money) or in kind (a volume of the commodity), of a stated proportionate interest in production from mineral deposits by the lessees to the lessor. A royalty is due when production begins. Royalty payments represent a stated share or percentage of the amount or the value of the mineral produced.
spot market	The trading in crude oil and petroleum products that occurs in international commerce, setting the prices that are widely published.
SWLDB	Statewide Land Data Base.