Office of the Auditor General
Performance Audit Report

Oil and Gas Management
Department of Natural Resources

July 2015

State of Michigan Auditor General
Doug A. Ringler, CPA, CIA

751-0700-14

The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.

Article IV, Section 53 of the Michigan Constitution

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Report Summary

Performance Audit

Oil and Gas Management

Department of Natural Resources (DNR)

Report Number:
751-0700-14

Released:
July 2015

DNR offers State-owned oil and gas mineral rights through public lease auctions and direct leases. DNR receives bonus payments to acquire the lease rights, rental payments for the acreage leased, and royalty payments on the sale of oil and gas when production begins. At the end of fiscal year 2014, DNR had 11,906 oil and gas leases outstanding and had collected $47.5 million in oil and gas revenue for the year, of which approximately 90% was attributable to royalties.

Audit Objective	Conclusion
Objective #1: To assess DNR's efforts to ensure the accuracy of State-owned oil and gas royalties and lease revenue.	Effective

Findings Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
DNR needs to strengthen its oil and gas mineral rights revenue verification process to increase assurance that the State consistently receives proper rent and royalties from leases. Lease and royalty revenue verification policies and procedures were not comprehensive (Finding #1).		X	Agrees

Observations Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
The State does not have a coordinated effort in place to share oil and gas production, transport, and sales information received by DNR, the Department of Environmental Quality, the Michigan Public Service Commission, and the Department of Treasury to help ensure that the State receives the maximum benefit from its oil and gas interests (Observation #1).	Not applicable	Not applicable	Not applicable

A copy of the full report can be
obtained by calling 517.334.8050
or by visiting our Web site at:
http://audgen.michigan.gov

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Doug A. Ringler, CPA, CIA
Auditor General

July 15, 2015

Mr. Keith Creagh, Director
Department of Natural Resources
Constitution Hall
Lansing, Michigan

Dear Mr. Creagh:

I am pleased to provide this performance audit report on Oil and Gas Management, Department of Natural Resources.

Your agency provided a preliminary response to the recommendation at the end of our fieldwork. The *Michigan Compiled Laws* and administrative procedures require an audited agency to develop a plan to comply with the recommendations and submit it within 60 days of the date above to the Office of Internal Audit Services, State Budget Office. Within 30 days of receipt, the Office of Internal Audit Services is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

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

Sincerely,

Doug Ringler

Doug Ringler
Auditor General

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AUDIT OBJECTIVES, CONCLUSIONS, FINDINGS, AND OBSERVATIONS

ENSURING THE ACCURACY OF STATE-OWNED OIL AND GAS ROYALTIES AND LEASE REVENUE

BACKGROUND

The Department of Natural Resources (DNR) offers State-owned oil and gas mineral rights through public lease auctions* twice each year. Successful bidders pay DNR a bonus* amount to acquire the lease* rights and the first year's rental payment at the time of the auction. Lessees then make an annual rental payment to DNR during the development* period. When oil and gas production and sales begin, a monthly royalty* payment based on the amount produced and sold becomes due to DNR. Approximately 90% of the $47.5 million in oil and gas revenue that DNR received during fiscal year 2014 was attributable to royalties.

Oil and gas royalty remitters submit monthly payments to DNR along with reports identifying the volume of oil or gas sold, the sales price, the gross sales amount, the decimal interest*, the State's gross royalty, the post-production costs*, and the net royalty submitted.

DNR generated and reviewed monthly exception reports to identify missed rental and royalty payments. Also, DNR contracted audits of the post-production costs deducted from royalties of four larger producers. In addition, DNR relies upon the institutional knowledge and experience of DNR staff who process oil and gas royalties and lease revenue to help ensure accuracy.

AUDIT OBJECTIVE

To assess DNR's efforts to ensure the accuracy of State-owned oil and gas royalties and lease revenue.

CONCLUSION

Effective.

FACTORS IMPACTING CONCLUSION

- Correlation of the gross production amounts reported to DNR for royalties due and the gross production amounts reported to the Department of Environmental Quality (DEQ) for the production, purchase, or transport of oil or gas from the well for 94% of royalty remittances reviewed.
- Reported sales prices that lessees used to calculate royalties due corresponded to published market prices for 96% of royalty remittances reviewed.
- Stability in the gross production amounts reported to DNR for oil and gas wells.

** See glossary at end of report for definition.*

- Consistency of monthly royalty payments and annual rental payments submitted to DNR for known producing wells.

- Limited number and low dollar impact of errors identified in royalty and rental payments reviewed.

- Timely commencement of royalty payments to DNR for all newly producing wells reviewed.

- Relatively small error amounts noted in DNR's contracted audits of the three larger oil and gas producers that we reviewed.

- Reportable condition* related to DNR's revenue verification process.

- Observation* related to the absence of a coordinated effort between DNR, DEQ, Michigan Public Service Commission (MPSC), and the Department of Treasury to share oil and gas information (see Observation #1).

** See glossary at end of report for definition.*

FINDING #1

A stronger revenue verification process could help the State ensure that it receives appropriate rent and royalties.

DNR needs to strengthen its revenue verification process to increase assurance that the State consistently receives proper rent* and royalties from leasing oil and gas mineral rights.

DNR's Minerals Management Procedures require that DNR ensure optimum economic return to the State in the management of State-owned minerals. DNR is responsible for ensuring that lessees of State-owned oil and gas rights remit the appropriate amounts to the State for rent on leased acreage and royalties on the sale of oil and gas. We noted:

DNR had not developed comprehensive practices or formalized its procedures.

a. DNR had not fully developed its revenue verification policies and procedures to maximize its identification of potentially underreported or nonreported oil and gas rent and royalties due the State. For example, DNR could improve its verification methods by:

- Developing written policies and procedures for rent and royalty revenue verification.

- Requiring documentation of the procedures that DNR staff complete to verify the accuracy and completeness of the monthly revenue received.

- Requiring explanations and instituting time limits for all adjustments to amounts previously reported to DNR to assist DNR in determining the validity of adjustments.

- Conducting periodic trend reviews of each production unit's reported sales prices, market selling prices, and sales volume to help identify unexplained variances that may not be identifiable in monthly reviews.

  DNR informed us that it performs a visual inspection of the information submitted for each production unit monthly to determine reasonableness; however, DNR did not maintain documentation of the monthly reviews.

- Reconciling the yearly summary of post-production costs to the actual amounts deducted from monthly royalty payments throughout the year.

- Establishing automated mathematical checks of remittance information entered by key punch operators and/or implementing a process for remitters to electronically submit information to reduce the opportunity for keying errors.

** See glossary at end of report for definition.*

DNR became aware of newly producing wells only when lessees self-reported production and submitted a royalty payment.

- Improving communications with other State departments to identify newly producing wells.

  During our audit period, DNR became aware of a newly producing well only when the lessee self-reported sales of oil or gas and remitted an initial payment (see observation and supplemental information).

Because DNR staff performing the oil and gas revenue verification procedures had over 20 years of experience performing those job duties, DNR placed a heavy reliance on this experience and expertise to identify potentially underreported or nonreported oil and gas rent or royalties rather than developing more structured procedures.

b. DNR should continue developing its procedures for conducting in-house audits of smaller producers to ensure the accuracy of sales amounts reported and deductions for post-production costs.

   In September 2013, DNR hired a staff person to monitor contracted audits of larger producers and to develop procedures for performing in-house reviews of post-production costs for smaller producers. As of February 28, 2015, DNR had not yet completed any in-house reviews or created procedures for these reviews. DNR informed us that the staff person had dedicated time to other duties, such as preparing a new request for proposal for the contracted audits, working on closing out audits that had been open for 1 to 6 years, and awarding a contract for an audit of a larger producer that began during the last quarter of calendar year 2014.

RECOMMENDATION

We recommend that DNR strengthen its revenue verification process to increase assurance that the State consistently receives proper rent and royalties from leasing oil and gas mineral rights.

AGENCY PRELIMINARY RESPONSE

DNR provided us with the following response:

DNR agrees with the recommendation to strengthen and improve its oil and gas rights revenue verification process to ensure that the State consistently receives its proper share of rent and royalties. Current procedures, processes and resources will be reviewed to determine the feasibility of implementing the suggested improvements. Written procedures and desk processes are being drafted and will be completed by July 31, 2016.

OBSERVATION #1

The State does not have a coordinated effort in place to share oil and gas production, transport, and sales information received by DNR, DEQ, MPSC, and the Department of Treasury.

DNR, DEQ, MPSC and the Department of Treasury each independently pursue their legislatively mandated roles within Michigan's oil and gas market. Currently, the State does not have a mechanism in place to coordinate the agencies' roles or to provide for sharing the information each receives related to oil and gas. The key role(s) of each agency related to production, transport, and/or sales of oil and gas and the associated information each agency receives is summarized below (also see supplemental information):

AGENCY	ROLE IN OIL AND GAS MARKET	INFORMATION RECEIVED
DNR	Section 324.502(3) of the *Michigan Compiled Laws* permits DNR to collect a royalty on the production of minerals, oil, and gas from State-owned lands.	Oil and gas royalty remitters submit payments to DNR and monthly reports identifying volume sold, sales price, gross sales, decimal interest, State's gross royalty, post-production costs, and net royalty submitted.
DEQ	*Michigan Administrative Code* R 324.201 requires a person to obtain a permit prior to performing any drilling activities. In addition, *Michigan Administrative Code* R 324.610 requires a person who is producing, purchasing, or transporting oil or gas to report to DEQ the amount purchased within 45 days after the month of production.	The application for a permit to drill identifies characteristics such as the exact location of the well and the depth and direction of the drilling. In addition, oil and gas producers and transporters report to DEQ units of gas sold.
MPSC	Section 483.110 of the *Michigan Compiled Laws* and *Michigan Administrative Code* R 460.866 require operators to file production reports with MPSC for each gas well or unitized area.	The common purchaser of the gas files a schedule of the rates and price at which the common purchaser will receive the gas and reports monthly to MPSC the rates at which the common purchaser will deliver the gas. In addition, the operators report the volume of well production monthly.
Department of Treasury	Section 205.303 of the *Michigan Compiled Laws* requires an oil and gas producer or transporter to pay a severance tax to the Department of Treasury based on the gross cash market value of the total production of oil and gas.	Oil and gas producers or transporters report the volume and value of taxable production and the volume and value of production exempt from the severance tax.

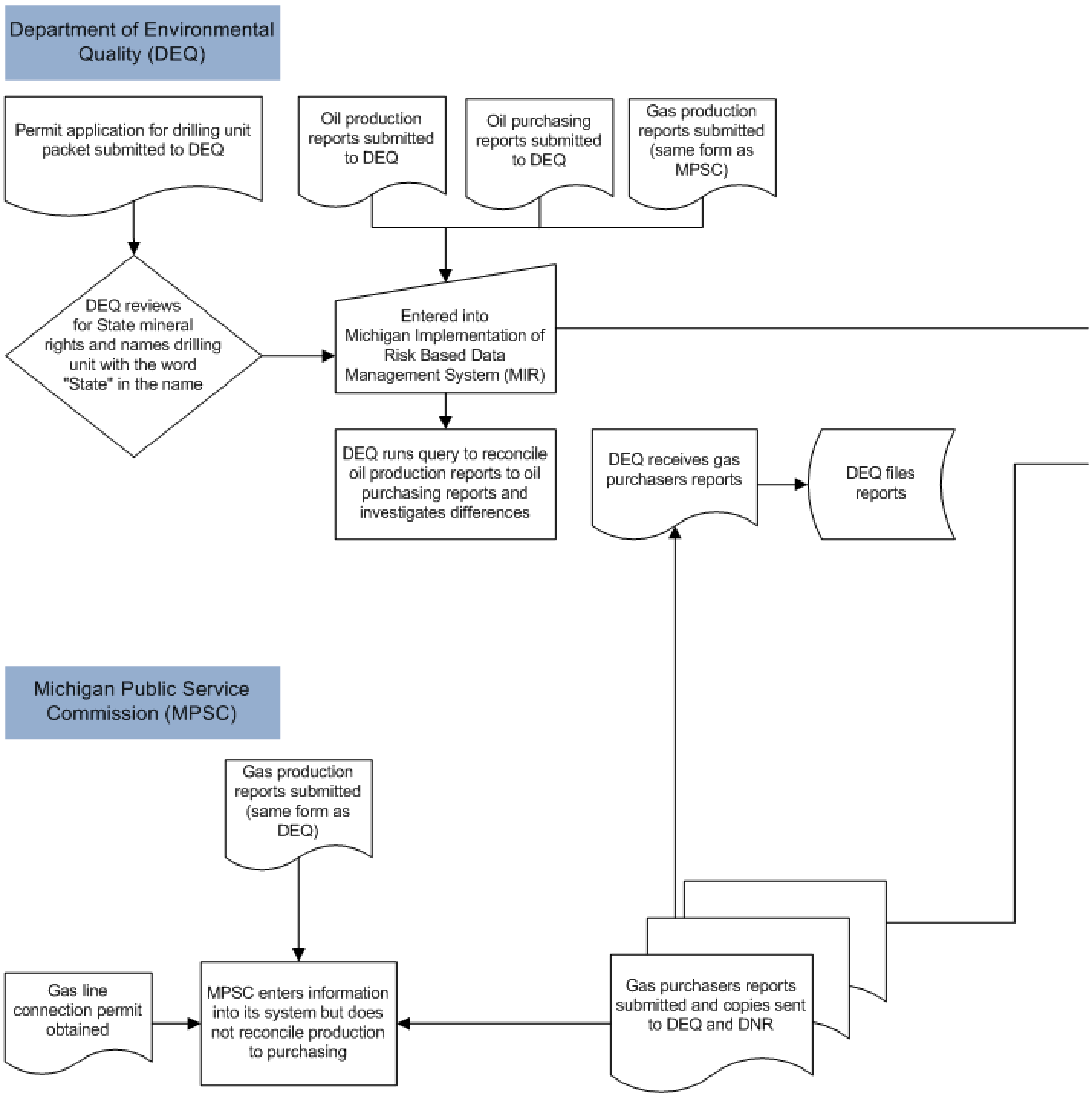
Sharing production and sales information could potentially help the State identify inaccurate reporting of oil and gas production, royalties, and severance tax information.

DNR, DEQ, MPSC, and the Department of Treasury all receive production and/or sales information from oil and/or gas producers; however, the agencies generally do not coordinate a sharing of the information each receives to ensure that the amounts reported to all agencies reconcile. A Statewide coordination of efforts and provisions to share the information received could potentially help the State identify instances when oil and gas producers, purchasers, and/or transporters have reported inaccurate production, royalty, and/or severance tax amounts to the State.

SUPPLEMENTAL INFORMATION

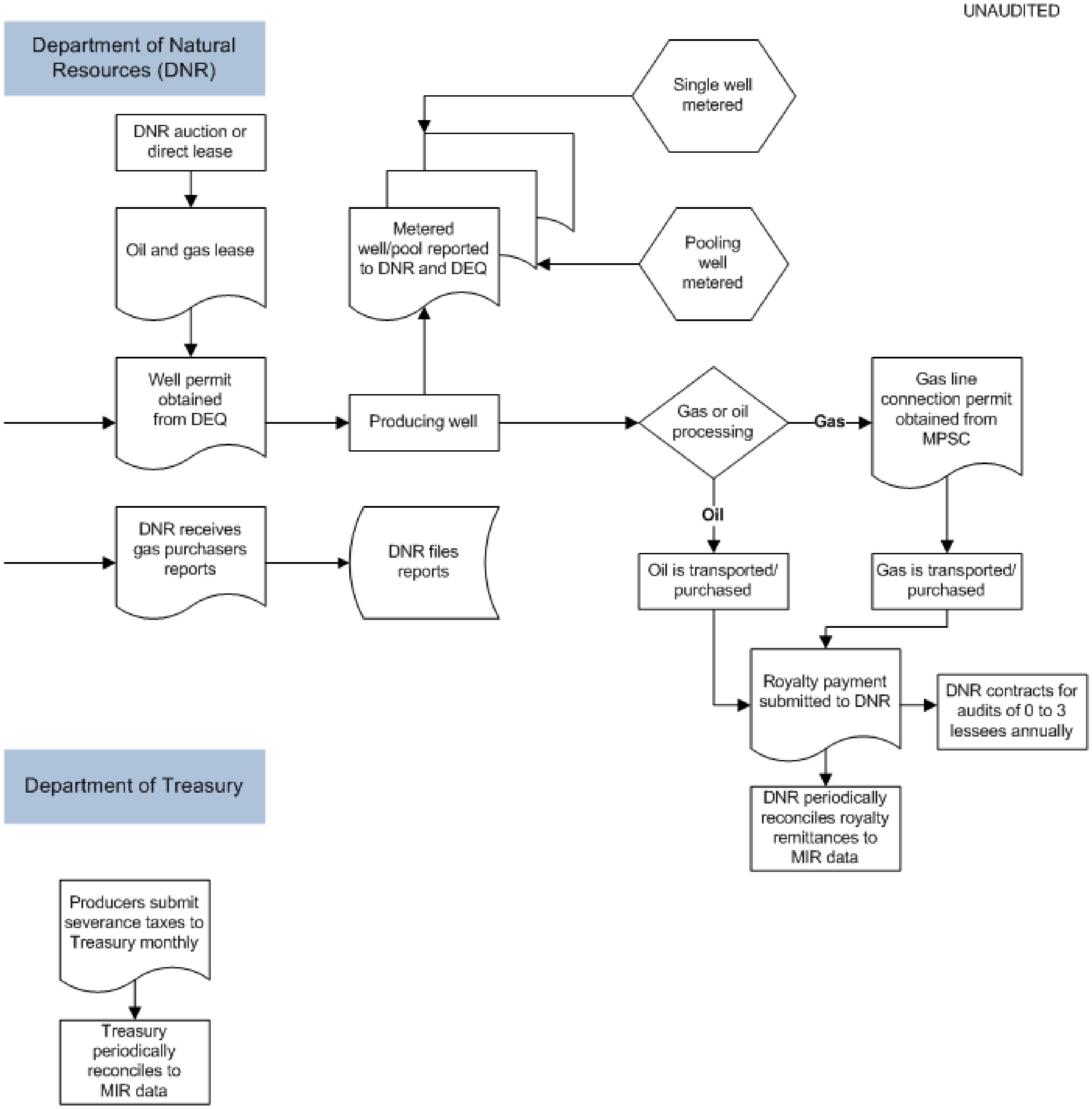
OIL AND GAS MANAGEMENT

Overview of Statewide Oil and Gas Reporting Processes
As of October 17, 2014



Source: The Office of the Auditor General prepared this flow chart using unaudited information.

UNAUDITED



Department of Natural Resources (DNR)
DNR auction or direct lease
Oil and gas lease
Well permit obtained from DEQ
Producing well
Metered well/pool reported to DNR and DEQ
Single well metered
Pooling well metered
Gas or oil processing
Gas
Gas line connection permit obtained from MPSC
Oil
Oil is transported/ purchased
Gas is transported/ purchased
Royalty payment submitted to DNR
DNR contracts for audits of 0 to 3 lessees annually
DNR periodically reconciles royalty remittances to MIR data
DNR receives gas purchasers reports
DNR files reports
Department of Treasury
Producers submit severance taxes to Treasury monthly
Treasury periodically reconciles to MIR data

DESCRIPTION

DNR reported the following lease, revenue, and expenditure information for oil and gas activities for fiscal years 2012 through 2014:

	Fiscal Year 2012	Fiscal Year 2013	Fiscal Year 2014
Number of leases	14,590	14,355	11,906
Number of acres leased	1,486,905	1,422,219	1,202,247
Total revenue	$ 42,709,217	$ 41,009,170	$ 47,542,538
Total expenditures	$ 1,995,118	$ 2,123,884	$ 2,017,503

As of December 31, 2014, DNR had 14 full-time equated employees who performed mineral and oil and gas management activities.

AUDIT SCOPE, METHODOLOGY, AND OTHER INFORMATION

AUDIT SCOPE

To examine the program and other records related to DNR's oil and gas mineral management activities. We conducted this performance audit* in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our finding and conclusion based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our finding and conclusion based on our audit objective.

PERIOD

Our audit procedures, which included a preliminary survey, audit fieldwork, report preparation, analysis of agency response, and quality assurance, generally covered the period October 1, 2011 through December 31, 2014.

METHODOLOGY

We conducted a preliminary survey of DNR's processes to formulate a basis for establishing our audit objectives and defining our audit scope and methodology. We:

- Interviewed DNR personnel regarding their roles in the receipt of rent and royalty revenue from State-owned oil and gas mineral rights.
- Reviewed the Natural Resources and Environmental Protection Act; other applicable laws, regulations, policies, and procedures; and other pertinent information.
- Analyzed available DNR records, data, and statistics related to oil and gas rent and royalty revenue.
- Obtained an understanding of DNR's leasing and revenue recording processes.

OBJECTIVE #1

To assess DNR's efforts to ensure the accuracy of State-owned oil and gas royalties and lease revenue.

To accomplish this objective, we:

- Reviewed and observed DNR's procedures for receiving, validating, recording, and reconciling rent and royalty revenue from the leasing of State-owned oil and gas mineral rights.
- Compared reported sales volumes recorded in DNR's Land Ownership and Tracking System (LOTS) with similar

** See glossary at end of report for definition.*

information reported to DEQ and recorded in its Michigan Implementation of Risk Based Data Management System (MIR) for 18 judgmentally selected royalty remittances.

- Compared gas sales volumes reported to DNR and recorded in its LOTS with production volumes reported in MPSC's Annual Gas Production Summary for 4 judgmentally selected royalty remittances.

- Compared the selling prices reported to DNR with the published market prices for the same month for 73 judgmentally selected oil and gas royalty remittances.

- Identified 50 newly producing wells using DEQ's MIR information and traced information for 8 of the wells to DNR's royalty payments information.

- Reviewed 3 of DNR's 4 contracted audit reports of larger producers to obtain an understanding of the methodology used to verify the accuracy of royalty revenue that DNR received and the post-production costs claimed and to analyze the significance of identified errors.

- Performed analytical review to evaluate the consistency and reasonableness of royalty amounts remitted to DNR for known producing wells.

CONCLUSIONS

We base our conclusions on our audit efforts and the resulting material conditions* and reportable conditions.

When selecting activities or programs for audit, we direct our efforts based on risk and opportunities to improve State government operations. Consequently, we prepare our performance audit reports on an exception basis.

AGENCY RESPONSE

Our audit report contains 1 finding and 1 corresponding recommendation. DNR's preliminary response indicates that it agrees with the recommendation.

The agency preliminary response that follows the recommendation in our report was taken from the agency's written comments and oral discussion at the end of our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100) require an audited agency to develop a plan to comply with the recommendation and submit it within 60 days after release of the audit report to the Office of Internal Audit Services, State Budget Office. Within 30 days of receipt, the

** See glossary at end of report for definition.*

Office of Internal Audit Services is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

SUPPLEMENTAL INFORMATION

Our audit report contains supplemental information that we prepared. Our audit was not directed toward expressing a conclusion on this information.

GLOSSARY OF ABBREVIATIONS AND TERMS

bonus	The cash consideration paid to the State by the successful bidder for an oil and gas mineral lease. The payment is made in addition to the rent and royalty obligations specified in the lease.
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.
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.
DNR	Department of Natural Resources.
lease	A legal document executed between a landowner, as lessor, and a company or an individual, as lessee, that conveys the right to remove minerals or other products from the premises for a specified period 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.
LOTS	Land Ownership and Tracking System.
material condition	A matter that, in the auditor's judgment, is more severe than a reportable condition and could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the judgment of an interested person concerning the effectiveness and efficiency of the program.
MIR	Michigan Implementation of Risk Based Data Management System.

MPSC	Michigan Public Service Commission.
observation	A commentary that highlights certain details or events that may be of interest to users of the report. An observation differs from an audit finding in that it may not include the attributes (condition, effect, criteria, cause, and recommendation) that are presented in an audit finding.
performance audit	An audit that provides findings or conclusions based on an evaluation of sufficient, appropriate evidence against criteria. Performance audits provide objective analysis to assist management and those charged with governance and oversight in using the information to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.
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.
public lease auction	A process conducted by DNR for State-owned mineral rights in which certain mineral tracts are offered for lease by competitive bidding and during which bids are received, announced, and recorded.
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 that, in the auditor's judgment, is less severe than a material condition and falls within any of the following categories: an opportunity for improvement within the context of the audit objectives; a deficiency in internal control that is significant within the context of the audit objectives; all instances of fraud; illegal acts unless they are inconsequential within the context of the audit objectives; significant violations of provisions of contracts or grant agreements; and significant abuse that has occurred or is likely to have occurred.
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 lessee to the lessor. A royalty is due when production begins.

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