

**STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
SUPERVISOR OF WELLS**

IN THE MATTER OF

THE PETITION OF WOLVERINE GAS AND OIL)	
COMPANY OF MICHIGAN, LLC, FOR AN ORDER)	
FROM THE SUPERVISOR OF WELLS)	
AUTHORIZING A CHANGED UNIT ALLOWABLE)	ORDER NO. 05-2023
AS AN EXCEPTION TO ORDER NO. 18-2007,)	
FOR THE SCHUG 31-1 HD1 WELL IN SECTION)	
31, CHARLESTON TOWNSHIP, KALAMAZOO)	
COUNTY, MICHIGAN.)	

OPINION AND ORDER

This case involves the Petition of Wolverine Gas and Oil Company of Michigan, LLC (Petitioner) requesting an exception to the production allowables established in Order No. 18-2007, authorizing the Schug 31-1 HD1 well to produce up to 400 barrels of oil per day (BOPD), and/or 400 thousand cubic feet of gas per day (MCFGPD) from the Trenton/Black River Formation. The drilling unit for the Schug 31-1 HD1 (PN 61607) is comprised of 160 acres and is described as the SE ¼ of Section 31, T2S, R9W, Charleston Township, Kalamazoo County, Michigan.

Jurisdiction

The development of oil and gas in this state is regulated under Part 615, Supervisor of Wells, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). MCL 324.61501 *et seq.* The purpose of Part 615 is to ensure the orderly development and production of the oil and gas resources in this state, with a view to the ultimate recovery of the maximum production of these natural resources. MCL 324.61502. To the end of maximizing recovery, the Supervisor of Wells (Supervisor) regulates the establishment of drilling units and regulates the daily quantities of oil and natural gas that may be produced. MCL 324.61513(1) and (2). The evidentiary hearing in this matter is governed by the applicable provisions of the Administrative Procedures Act, 1969 PA 306, as amended, MCL 24, 201 *et seq.* See 1996 AACS, R 324.1203. The evidentiary hearing in this matter was held on August 30, 2023.

FINDINGS OF FACT

By Petition dated June 26, 2023, the Petitioner requests approval from the Supervisor to increase production above the 200 BOPD and 200 MCFGPD allowables established by Order No. 18-2007 to 400 BOPD and 400 MCFGPD for the Schug 31-1 HD1, with a daily flaring limit of 200 MCFGPD. The Schug 31-1 HD1 well was drilled on a 160-acre drilling unit approved under R 324.303.

The Administrative Law Judge determined that the Notice of Hearing was properly served and published. No answers or objections to the Petition were filed with the Supervisor as to this Cause. Therefore, the Petitioner is the only Party to this case as to this Cause. The Supervisor designated this a joint meeting/joint hearing as to Cause No. 05-2023, 06-2023, 07-2023, and 08-2023 pursuant to R 324.1205(1)(b) and directed that testimony be presented in person at the hearing.

In support of its case, the Petitioner offered the testimony of Richard Moritz, Vice President of Land for the Petitioner, Emily Hartwick, Manager of Geology for the Petitioner, and Jordan Ritsema, Production Engineer for the Petitioner.

Mr. Moritz testified that a total of five (5) drilling units are connected to a common facility. The Schug 31-1 HD1 was completed on June 21, 2022, and began production on July 5, 2022. Mr. Moritz testified that the majority landowner of the land in the drilling units at issue and where the common facility is located consented to the relief requested in the Petition. The written consent is Exhibit B-1.

Ms. Hartwick testified the Schug 31-1 HD1 well is in the Trenton formation in Kalamazoo County, Michigan. Using models based on actual geologic data from pre-existing bore holes, Ms. Hartwick testified that the reservoir rock distribution and quality within the Trenton formation varies and is generally thinner and more localized than other productive Trenton formations in Michigan as shown in Exhibits D and E. Ms. Hartwick sponsored Exhibit E, which is a cross section based on the Schug 31-3 HD1 wellbore and shows that the widths of the non-pay zones (ranging from 40 to 555 feet) are much larger than the widths of the narrow Trenton pay zones (ranging from 8 to 116 feet) in this reservoir. As a result, Wolverine developed this field using horizontal wells to be able to intersect more reservoir dolomite and increase the likelihood of producing Trenton oil. Also, the horizontal drilling program decreases surface waste by avoiding additional wells,

surface facilities, roads, and other surface impacts. Ms. Hartwick also testified that by curtailing oil production to limit the flare to the current daily allowable of 100 MCFGPD, production of the Schug wells could be negatively impacted. Ms. Hartwick testified that it is her opinion that the Schug wells are producing gas associated with the oil and that no gas cap is present in this reservoir.

Mr. Ritsema testified that the Schug 31-1 HD1 and the Schug 31-2 HD1 would currently produce more than the flaring limit if allowed to do so as shown on Exhibit G. Further, the Petitioner states that the Schug 31-3 HD1 has previously exceeded the current allowable and anticipates that in the future that the gas production from the well will exceed the daily flaring maximum once planned well work is completed. Mr. Ritsema testified that by limiting oil production to avoid exceeding 100 MCFGPD of gas flared, production is not optimized from the various productive zones and the risk of crossflow between zones is present. Further, the testimony indicates that producing at the limited gas rate could allow one zone to produce more than another within the same well, which could decrease contribution from other zones and impact total production. Mr. Ritsema testified that the requested change in oil and gas allowables would allow for the most efficient reservoir management. Further, if the Schug wells are held to the standard oil and gas allowable, the plugging of the wells and remediation of the land will be delayed.

If the Schug 31-1 HD1 well had been drilled as a conventional vertical or short lateral well, additional wells would have been needed to drain the unit and each such well would have been granted a 200 BOPD and/or 200 MCFGPD allowable under Order No. 18-2007 as shown on Exhibit F. It is Mr. Ritsema's opinion that granting the increased allowable for the 160-acre drilling unit will protect the correlative rights of owners within the drilling unit and prevent waste.

Mr. Ritsema testified that the gas from the five Schug wells that is processed by the common facility cannot be sold economically. Exhibits H, I, J, K and L reflect that the estimated total cost for building a gas treatment plant and sales line to connect to the nearest gas pipeline far exceeds the revenue that would be realized from the gas sales. Future drilling in the area is not anticipated to justify the cost of construction of the gas plant and sales line. Further, there is no other beneficial use that could be instituted for the gas to avoid additional flaring at the facility.

I find that the Petitioner's development of the Trenton Black River Formation in this geographic location, using expanded drilling units and horizontal drilling, has been beneficial to ensuring the ultimate recovery and the drilling of unnecessary wells. I further find that the estimated costs presented for the construction of a gas treatment plant and installation of a gas sales line indicate that gas produced from wells producing to the Schug central production facility cannot be economically marketed at this time, and based upon the testimony and exhibits presented, an increased allowable of 400 BOPD and 250 MCFGPD, with a daily flaring limit of 200 MCFGPD, is reasonable and appropriate.

CONCLUSIONS OF LAW

Based on the Findings of Fact, I conclude as a matter of law:

1. The Supervisor may establish proration limits to prevent waste and to protect correlative rights. MCL 324.61513(2).
2. The Supervisor has jurisdiction over the subject matter and the persons interested therein.
3. Due notice of time, place, and purpose of the hearing was given as required by law and all interested persons were afforded an opportunity to be heard. 1996 AACS, R 324.611, and 2015 AACS, R 324.1204.
4. This Order is necessary to make a change in the proration allowable and the restriction on the flaring of gas established in Order No. 18-2007. 1996 AACS, R 324.611 and Order No. 18-2007.

DETERMINATION AND ORDER

Based on the Findings of Fact and Conclusions of Law, the Supervisor determines that an exception to Order No. 18-2007, is reasonable and appropriate, and will not result in waste.

NOW, THEREFORE, IT IS ORDERED:

1. Proration allowables for the Schug 31-1 HD1 are hereby established at 400 BOPD and 250 MCFGPD. The volume of gas flared is restricted to 200 MCFGPD and shall be the net volume of gas flared not including the volume of gas used for reasonable and necessary lease fuel purposes.

2. Gas production, lease use, and flaring volumes shall be metered and reported to the Supervisor of Wells pursuant to Order No. 18-2007, Section 10.
3. All other provisions of Order No. 18-2007 shall remain in effect.
4. The Supervisor retains jurisdiction in this matter.
5. This Order shall be effective immediately.



Dated: October 12, 2023

Adam W. Wygant
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