

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ORDER OF THE SUPERVISOR OF WELLS

IN THE MATTER OF:

THE PETITION OF WEST BAY EXPLORATION COMPANY)
FOR AN ORDER FROM THE SUPERVISOR OF WELLS)
APPROVING AN INCREASED ALLOWABLE FOR THE) ORDER NO. 11-2012
JENNINGS 1-32 HD1 WELL IN SECTION 32, NAPOLEON)
TOWNSHIP, JACKSON COUNTY, AS AN EXCEPTION TO)
ORDER NO. 18-2007.)

OPINION AND ORDER

This case involves the Petition of West Bay Exploration Company (Petitioner) requesting an exception to the production allowables established in Order No. 18-2007, authorizing the Jennings 1-32 HD1 well to produce up to 400 barrels of oil per day (BOPD) or 300 thousand cubic feet of gas per day (MCFGPD) from the Trenton Formation. The drilling unit for the Jennings 1-32 HD1 well (PN 59911) is comprised of 80 acres and is described as the E 1/2 of NW 1/4 of Section 32, T3S, R2E, Napoleon Township, Jackson 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 of 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 MR 9, R 324.1203. The evidentiary hearing in this matter was held on January 25, 2013.

FINDINGS OF FACT

By Petition dated November 7, 2012, 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 300 MCFGPD (The Petitioner requested an increase to 400 MCFGPD at the hearing). The Jennings 1-32 HD1 well was drilled on an 80-acre drilling unit approved under R 324.303.

In support of its case, the Petitioner offered the testimony of Mr. Bill Van Sickel, geologist for the Petitioner; Mr. Matthew Johnston, geophysicist for the Petitioner; Mr. Timothy Brock, President Brock Engineering, petroleum engineering consultant; and Mr. Timothy Baker, Vice President of Engineering Operations for the Petitioner. All of the Petitioner's witnesses were recognized as experts in their respective fields.

The Administrative Law Judge determined the Notice of Hearing was properly served and published. No answers or objections to the Petition were filed with the Supervisor. Therefore, the Petitioner is the only Party to this case. The Supervisor designated the hearing to be an evidentiary hearing pursuant to R 324.1205(1)(b) and directed substantive evidence be presented in the form of oral testimony.

Mr. Van Sickel testified the Jennings 1-32 HD1 well is in the Napoleon Field, which consists of a northwest/southeast trend in the southeast part of the state, including southeast Jackson County and part of Lenawee County. Using models based on real geologic data from pre-existing bore holes, Mr. Van Sickel testified there is a high probability of dolomitization in the targeted reservoir. Exhibits 2-4. He stated dolomite occupies less volume so it creates a void space or porosity, which allows for the storage of hydrocarbon accumulation.

Mr. Johnston testified he used a 3D seismic survey to outline the extent of the Trenton reservoir in the Napoleon Field (Exhibit 5). The seismic was retained by Petitioner as proprietary information. Mr. Johnston interpreted the reservoir outline based on the 3D seismic, and it is his opinion that the Jennings 80-acre drilling unit is substantially underlain by dolomite.

Using a computer processed PDK log from the Jennings 1-32 HD1 well, Mr. Brock testified as to the presence of dolomite and increased porosity, which is indicative of the presence of hydrocarbons in the reservoir (Exhibit 6). If the Jennings 1-32 HD1 well had been drilled as a conventional vertical or short lateral well in the south 40 acres of the drilling unit and a second well had been drilled in the north 40 acres, each well would have been granted a 200 BOPD and/or 200 MCFGPD allowable under Order No. 18-2007. It is Mr. Brock's opinion that granting the increased allowable for the 80-acre drilling unit will protect the correlative rights of owners within the drilling unit and prevent waste.

Mr. Brock testified that during a test period from June 2012 – August 2012, oil production at the Jennings 1-32 HD1 well fluctuated between 200 and 300 BOPD but the gas-oil ratio did not increase. In his opinion, this indicates increasing oil production from this well does not harm the reservoir in the vicinity of the well. In addition, Mr. Brock testified he reviewed production data for several offset wells and does not see a negative impact on offsetting wells as a result of the Jennings 1-32 HD1 producing at a higher rate (Exhibits 9-12).

Mr. Baker testified in his opinion the Petitioner's request meets the three criteria he believes are relevant for an increased allowable: both 40-acre units are underlain by and contributing to the reservoir; correlative rights of both offset owners and unit owners are considered; and a horizontal well, drilled to maximize efficiency, will increase recovery through drawdown. Mr. Baker stated the Jennings 1-32 HD1 well uses a gas lift system (Exhibit 13) that creates a normalized pressure differential and a uniform drawdown, thus decreasing likelihood of impacting offset 40-acre units.

Mr. Baker stated that since both 40-acre units are underlain and contributing, if the allowable was not increased, the owners of the expanded unit would be penalized since offset owners are allowed to enjoy the full allowable production rates. Mr. Baker further testified that in order to fully protect the correlative rights of owners in the Jennings 1-32 HD1 unit, the Petitioner now requests an increased allowable of 400 MCFGPD instead of 300 MCFGPD, as was stated in its Petition.

I find, as a Matter of Fact, that an increased allowable for the Jennings 1-32 HD1 well will protect the correlative rights of owners within the 80-acre drilling unit and not

adversely affect the correlative rights of owners in offsetting units. I find that, based on the testimony and exhibits presented, an increased allowable of 400 BOPD and 400 MCFGPD is reasonable and appropriate.

CONCLUSIONS OF LAW

Based on the findings of fact, I conclude, as a matter of law:

1. Exceptions to Order No. 18-2007 may be granted by the Supervisor after notice and hearing.
2. The Supervisor has jurisdiction over the subject matter and the persons interested therein.
3. Due notice of the 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 MR 9, R 324.1204.

DETERMINATION AND ORDER

Based on the Findings of Fact and Conclusions of Law, the Supervisor determines that increasing the gas allowable for the Jennings 1-32 HD1 well will not result in waste.

NOW, THEREFORE, IT IS ORDERED:

1. Petitioner is authorized to produce the Jennings 1-32 HD1 well at a rate of 400 BOPD and 400 MCFGPD as an exception to Order No. 18-2007.
2. All other provisions of Order No. 18-2007 shall remain in effect.
3. The Supervisor retains jurisdiction in this matter.

4. This Order shall be effective immediately.

DATED: *March 21, 2013*



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