

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ORDER OF THE SUPERVISOR OF WELLS

IN THE MATTER OF:

THE PETITION OF ARBOR OPERATING, LLC, FOR AN)
ORDER FROM THE SUPERVISOR OF WELLS FOR AN)
EXCEPTION TO THE NO FLARE ORDER PROVISIONS) ORDER NO. 08-2011
OF SPECIAL ORDER NO. 3-71 IN BLAIR TOWNSHIP,)
GRAND TRAVERSE COUNTY, MICHIGAN.)

OPINION AND ORDER

This case involves the Petition of Arbor Operating, LLC (Petitioner). The Petitioner drilled and completed an oil and gas well (Norton Woods 1-20A HD1) in the Guelph Dolomite Formation. The Petitioner asserts it is not economically feasible to construct a pipeline to provide a gas market connection. Under Special Order No. 3-71, any Guelph Dolomite well in Grand Traverse County not having a gas market connection shall be closed in until a market connection is achieved or an exception is granted. The Petitioner received a written exception to Special Order 3-71 from the Supervisor's staff restricting oil production to 28 barrels of oil per day or less, for the purpose of limiting gas production to a maximum of 40 thousand cubic feet (Mcf) per day. The Petitioner seeks an Order from the Supervisor of Wells (Supervisor) authorizing it to flare up to 100 Mcf of gas per day at the Norton Woods 1-20A HD1 well, as an exception to Special Order No. 3-71. The 80-acre drilling unit for the Norton Woods 1-20A HD1 well consists of the SE 1/4 of SE 1/4 of Section 20, and the SW 1/4 of SW 1/4 of Section 21, T26N, R11W, Blair Township, Grand Traverse 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, MCL 324.61501 *et seq.* The purpose of Part 615 is to

foster the orderly development and production of the oil and gas resources of this state, while preventing waste. MCL 324.61502. To that end, the Supervisor may issue orders necessary to enforce rules promulgated under Part 615. MCL 324.61506(a). Part 615 provides that a person shall not commit waste in the production of oil or gas. MCL 324.61504. Waste includes the unnecessary or excessive loss of gas. MCL 324.61501. Special Order No. 3-71 provides for a public hearing upon filing of a petition to resolve factors of exception. The evidentiary hearing 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 initially scheduled for July 7, 2011; but was rescheduled and held on August 16, 2011, at Petitioner's request.

FINDINGS OF FACT

The Administrative Law Judge determined the Notice of Hearing was properly served and published. No answers to the Petition were filed and no one other than the Petitioner appeared at the hearing. The Supervisor designated the hearing to be an evidentiary hearing pursuant to R 24.1205(1)(b) and directed evidence be presented in the form of oral testimony.

The Petitioner specifically requests that the Supervisor issue an order that authorizes an exception to the No Flare Order, Special Order No. 3-71, allowing it to flare up to 100 Mcf of gas per day at the Norton Woods 1-20 HD1 well. The Petitioner is the operator of the Norton Woods 1-20 HD1 (PN 35574) well, which was completed as an oil and gas well in the Guelph Dolomite Formation. In support of its case, the Petitioner offered the testimony of Mr. Timothy J. Brock, President of Brock Engineering, L.L.C. Mr. Brock was recognized as an expert in the area of petroleum engineering.

Mr. Brock testified the Norton Woods 1-20A HD1 well is located in the SE 1/4 of SE 1/4 of SE 1/4 of Section 20, T26N, R11W, Blair Township, Grand Traverse County, Michigan, in the laydown 80-acre drilling unit described above (Exhibit A).

Mr. Brock testified as to the reservoir characteristics and the historical development of the Blair 20 Field in T26N, R11W, noting that the Norton Woods 1-20A HD1 well is the sole remaining well in this reservoir (Exhibit B). Mr. Brock also testified that the cumulative production from the original completion of the Norton Woods 1-20A through June 2011 (after the recompletion of the Norton Woods 1-20A HD1 well) is 57,355 barrels of oil. The cumulative production for the Norton Woods 1-20A HD1 well is 13,708 barrels of oil (Exhibit C). Mr. Brock estimated there are approximately 10,000 barrels of recoverable oil and between 21,000 Mcf to 28,000 Mcf of gas remaining in the reservoir.

Mr. Brock testified the Petitioner would need to install a compressor, a natural gas dehydrator, measurement equipment, and all associated piping. He stated there are a number of heavy components in the natural gas at the Norton Woods 1-20A HD1 well that would require its processing prior to being sold. In addition, the Petitioner would need to install 1.5 miles of pipeline to get the gas to an existing MichCon pipeline tap site.

Mr. Brock reviewed the Petitioner's economic analysis related to the installation of a new pipeline from the Norton Woods 1-20A HD1 well to the MichCon pipeline tap site. The estimated capital costs were \$330,500; total estimated incremental operating costs of \$1,950 per month for the remaining gas to be produced from the Norton Woods 1-20A HD1 well; and \$129,417 estimated value of gas reserves. Mr. Brock stated that he believed that the Petitioner's estimated capital costs were on the conservative side and that his own estimate of costs for a 1.5 mile pipeline would be in excess of the costs estimated by the Petitioner. Based on this economic analysis, it is Mr. Brock's opinion that it is not economical for the Petitioner to install a pipeline and to do so would be economic waste. (Exhibit I).

Mr. Brock further testified that the Petitioner considered reentering the Tucker 1-21 well to the north, for the purpose of reinjecting gas, as a third option to flaring or selling the gas, but determined it would not be economically viable.

Mr. Brock testified that the Petitioner is currently recovering 28 barrels of oil per day and 40 Mcf per day. The Petitioner is seeking to produce 70 barrels of oil per day

and to flare 100 Mcf per day. In Mr. Brock's opinion, 100 Mcf per day was more consistent with Supervisor's Order 18-2007 (the Trenton Black River spacing order), and the higher rate allows depletion of the reservoir, more rapidly resulting in the equipment being removed sooner. Mr. Brock also testified that, in his opinion, flaring 100 Mcf of gas per day will result in minimal increase in noise or odors at the well site. The consequences of denying the Petition are either an extended well life and lower economic value due to incurring operational costs over a longer period of time or lower economic value due to the installation of a gas line and equipment that cannot be justified by the potential gas reserves.

I find as a matter of fact that to allow the Petitioner to flare up to 100 Mcf of gas per day from the Norton Woods 1-20A HD1 well will not cause waste.

CONCLUSIONS OF LAW

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

1. Exceptions to the No Flare Order, Special Order No. 3-71, may be granted by the Supervisor after a hearing upon his option or by petition in a contested case.

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 the Petitioner's request for an exception to the No Flare Order, Special Order No. 3-71, is granted.

NOW, THEREFORE, IT IS ORDERED:

1. The Petitioner is granted an exception to the No Flare Order, Special Order No. 3-71, and is authorized to flare up to 100 Mcf of gas per day from the Norton Woods 1-20 HD1 well.

2. Within 30 days of the date of issuance of this Order, the Petitioner shall shield the flare so as to decrease its visibility.

3. Within 30 days of the date of issuance of this Order, the Petitioner shall install an automatic shut-off device at the Norton Woods 1-20A HD1 well flare for the purpose of shutting off the gas stream in the event of a flare outage.

4. The Petitioner shall report the average daily volume of gas flared as a supplement to its monthly production report, filed with the Office of Geological Survey.

5. The Supervisor retains jurisdiction in this matter.

6. This Order shall be effective immediately.

DATED: *Oct. 13, 2011*


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