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 FORMING AN 80-ACRE TRENTON FORMATION DRILLING UNIT BY COMPULSORY POOLING ALL INTERESTS INTO THE DRILLING UNIT IN NAPOLEON TOWNSHIP, JACKSON COUNTY, MICHIGAN.	) ORDER NO. 14-2014

OPINION AND ORDER

This case involves the Petition of West Bay Exploration Company (Petitioner) to drill and complete the St. Napoleon & WBE 1-24 well for oil and gas exploration within a drilling unit in the stratigraphic interval known as the Trenton Formation. The Petitioner is requesting a nominal 80-acre drilling unit for the St. Napoleon & WBE 1-24 well as an exception to the 40-acre drilling unit size established by Supervisor's Order No. 18-2007. The proposed unit consists of the S 1/2 of SE 1/4 of Section 24, T3S, R1E, Napoleon Township, Jackson County, Michigan. Since not all of the mineral owners within the proposed drilling unit have agreed to voluntarily pool their interests, the Petitioner also seeks an Order of the Supervisor of Wells (Supervisor) designating the Petitioner as Operator of the proposed drilling unit and requiring compulsory pooling of all tracts and interests within that geographic area that the owners have not agreed to voluntary pooling.

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, Michigan Compiled Laws 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. MCL 324.61502. To that end, the Supervisor may establish drilling units and compulsorily pool mineral interests within said units.

MCL 324.61513(2) and (4). However, the formation of drilling units by compulsory pooling of interests can only be effectuated after an evidentiary hearing. 1996 MR 9, R 324.302, and R 324.304. 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 held on August 14, 2014.

FINDINGS OF FACT

The Petitioner specifically requests that the Supervisor issue an Order that:

1. Grants an exception to the drilling unit size established by Supervisor's Order No. 18-2007 by establishing a nominal 80-acre drilling unit for the proposed St. Napoleon & WBE 1-24 well consisting of the S 1/2 of SE 1/4 of Section 24, T3S, R1E, Napoleon Township, Jackson County, Michigan.
2. Requires compulsory pooling of all tracts and mineral interests within the proposed drilling unit that have not agreed to voluntary pooling.
3. Names the Petitioner as Operator of the St. Napoleon & WBE 1-24 well.
4. Authorizes the Petitioner to recover certain costs and other additional compensation from the parties subject to the compulsory pooling order.

The Administrative Law Judge determined that the Notice of Hearing was properly served and published. No answers to the Petition were filed. Therefore, the Petitioner is the only Party to this case. The Supervisor designated the hearing to be an uncontested evidentiary hearing pursuant to R 324.1205(1)(c) and directed evidence to be presented in the form of verified statements.

In support of its case, the Petitioner offered the verified statements of Mr. Matthew A. Johnston, Exploration Geophysicist; Timothy L. Baker, Vice President of Engineering & Operations; and Mr. Patrick Gibson, Vice President Land.

I. Drilling Unit

The spacing of wells in Jackson County targeting the Trenton Formation is governed by Supervisor's Order No. 18-2007. This Order establishes drilling units of 40 acres, more or less, in the form of a square, assembled by combining two 20-acre parcels, each of which consist of the north and south, or east and west halves of a quarter-quarter section or of adjacent quarter-quarter sections. Under Order No. 18-2007, it is presumed that one well will efficiently and economically drain the 40-acre drilling unit of hydrocarbons. The Petitioner's proposed nominal 80-acre drilling unit is described as the S 1/2 of SE 1/4 of Section 24, T3S, R1E, Napoleon Township, Jackson County, Michigan.

Mr. Johnston stated the seismic data indicated a Trenton Formation anomaly underlies the proposed drilling unit. Based upon his review of the geophysical data, there are anomalous conditions in the Trenton interval that are indicative of Trenton reservoir in the S 1/2 of SE 1/4 of Section 24 of Napoleon Township (Exhibit A to Mr. Johnston's verified statement). Mr. Johnston reviewed a seismic line across the proposed unit (Exhibit B to his verified statement) that indicated anomalous characteristics in the Trenton Formation. It is both Mr. Johnston's and Mr. Baker's opinion that the proposed drilling unit is reasonably underlain by the inferred reservoir and that allocation of costs and production on a surface acreage basis is appropriate. Mr. Baker states that an exception to Order No. 18-2007 for an 80-acre drilling unit eliminates the drilling of an unnecessary well and will minimize surface waste.

I find that formation of the proposed nominal 80-acre drilling unit, as an exception to Order No. 18-2007, will prevent waste and protect correlative rights and, as such, is approved for the proposed St. Napoleon & WBE 1-24 well.

II. Drilling Unit Operator

Mr. Gibson states that the Petitioner owns oil and gas leases for a majority of the mineral interests in the proposed drilling unit. Given this, the Petitioner seeks to be designated as the Operator of the St. Napoleon & WBE 1-24 well. I find, as a Matter of Fact, the Petitioner is eligible to be designated Operator of the St. Napoleon & WBE 1-24 well.

III. Compulsory Pooling

The Petitioner was unable to obtain the agreement of all mineral owners to gain full control of the proposed unit. The Petitioner may not produce a well on the drilling unit without first obtaining control of all the oil and gas interests. In cases like this, it is necessary for the Petitioner to request compulsory pooling from the Supervisor. As discussed, a mineral owner who does not agree to voluntarily pool his or her interest in a drilling unit may be subject to compulsory pooling. 1996 MR 9, R 324.304. The compulsory pooling of an interest must be effectuated in a manner that ensures "each owner ... is afforded the opportunity to receive his or her just and equitable share of the production of the unit." *Id.* In addition to protecting correlative rights, the compulsory pooling must prevent waste. MCL 324.61502. An Operator must first seek voluntary pooling of mineral interests within a proposed drilling unit prior to obtaining compulsory pooling through an Order of the Supervisor.

Mr. Gibson indicated Petitioner calculates the proposed drilling unit is comprised of 75.2673 acres and as of the date of the hearing the Petitioner controlled 73.1414 net acres of oil and gas interests within the proposed drilling unit. Exhibit D to Mr. Gibson's verified statement outlines the Petitioner's numerous attempts to obtain oil and gas leases from the unleased owners. The owners of oil and gas interests that are not leased are:

Name	Tax Parcel	Net Mineral Acres
Jeffrey Vincent	075-14-24-476-015-01	0.9880
Dae L. Abram	076-14-24-476-008, 9	0.6136
Tyler Abram	076-14-24-476-010-00	0.5243
Total:		2.1259

The number of unleased acres and the number of acres in the drilling unit are subject to revision following a survey or final title opinion.

Based on the foregoing, I find, as a Matter of Fact:

1. The Petitioner was able to voluntarily pool all of the mineral interests in the proposed nominal 80-acre Trenton Formation drilling unit except for the acreage described above.
2. Compulsory pooling is necessary to form a full drilling unit, to protect correlative rights of unpooled lease owners, and to prevent waste by preventing the drilling of unnecessary wells.

Now that it has been determined compulsory pooling is necessary and proper in this case, the terms of such pooling must be addressed. When pooling is ordered, the owner of the compulsorily pooled lands (Pooled Owner) is provided an election on how he or she wishes to share in the costs of the project. 1996 MR 9, R 324.1206(4). A Pooled Owner may participate in the project or, in the alternative, be "carried" by the Operator. If the Pooled Owner elects to participate, he or she assumes the economic risks of the project, specifically, by paying his or her proportionate share of the costs or giving bond for the payment. Whether the well drilled is ultimately a producer or dry hole is immaterial to this obligation. Conversely, if a Pooled Owner elects not to participate, the Pooled Owner is, from an economic perspective, "carried" by the Operator. Under this option, if the well is a dry hole, the Pooled Owner has no financial obligation because they did not assume any risk. If the well is a producer, the Supervisor considers the risks associated with the proposal and awards the Operator compensation, out of production, for assuming all of the economic risks.

In order for a Pooled Owner to decide whether he or she will "participate" in the well or be "carried" by the Operator, it is necessary to provide reliable cost estimates. In this regard, the Petitioner must present proofs on the estimated costs involved in drilling, completing, and equipping the proposed St. Napoleon & WBE 1-24 well. The Petitioner's Authorization for Expenditure (AFE) form for the well (Exhibit C to Mr. Baker's verified statement) itemizes the estimated costs to be incurred in the drilling, completing, equipping, and plugging of the well. The estimated costs are $1,367,316.00 for drilling; $574,000.00 for completion; and $1,277,000.00 for equipping. The total estimated producing well cost for the St. Napoleon & WBE 1-24 well is $3,218,316.00. There is no evidence on this record refuting these estimated costs.

I find, as a Matter of Fact, the estimated costs in Exhibit C are reasonable for the purpose of providing the pooled owners a basis on which to elect to participate or be carried. However, I find actual costs shall be used in determining the final share of costs and additional compensation assessed against a Pooled Owner.

The next issue is the allocation of these costs. Part 615 requires the allocation be just and equitable. MCL 324.61513(4). The Petitioner's witnesses stated the inferred reservoir substantially underlies the drilling unit. The Petitioner requests the actual well costs and production from the well be allocated based upon the ratio of the number of surface acres in the tracts of various owners to the total number of surface acres in the drilling unit. Established practices and industry standards suggest this to be a fair and equitable method of allocation of production and costs, and as used here, surface acreage refers to net mineral acreage. Therefore, I find, as a Matter of Fact, utilizing surface acreage is a fair and equitable method to allocate to the various tracts in the proposed drilling unit each tract's just and equitable share of unit production and costs. I find that an owner's share in production and costs should be in proportion to their net mineral acreage.

The final issue is the additional compensation for risk to be assessed against a Pooled Owner who elects to be carried. The administrative rules under Part 615

provide for the Supervisor to assess appropriate compensation for the risks associated with drilling a dry hole and the mechanical and engineering risks associated with the completion and equipping of wells. 1996 MR 9, R 324.1206(4)(b). The Petitioner requests additional compensation of 300 percent for the costs of drilling, 200 percent of completing, and 100 percent of equipping the St. Napoleon & WBE 1-24 well.

Mr. Baker's testimony indicated, in addition to seismic risk, there is a reservoir risk in that the Trenton Formation may not be sufficiently dolomitized, leading to limited porosity and poor reservoir rock. In addition, with the drilling of directional wells, there is a risk in potential loss of down hole tools and that the unique geometry results in increased torque and drag on the drill string sometimes resulting in a parted drill string. Mr. Baker stated that parted strings, in directional wells, can be difficult to recover and can result in the need to sidetrack or drill a new hole. Mr. Baker further indicated that due to the unique geometry of a directional well, specialized tools must be employed to provide offset when cementing, and if the cement job is not successful, water can be produced from producing intervals, which is cost intensive to remedy, sometimes requiring a cement squeeze and a new completion.

Mr. Baker testified that there are significant costs associated with equipping a well with the necessary surface facilities required to bring oil and gas to market. In the event commercial production is not established, the equipment must be removed and a large portion of surface equipping costs are labor and services to construct the facilities, which are unrecoverable.

The Petitioner did present substantial evidence to show that the risks associated with drilling the well justify a 300 percent penalty. Moreover, past experience shows that drilling results are not always a reliable indicator of whether completing and equipping costs can be fully recovered from eventual production revenues.

I find, as a Matter of Fact, the risk of the proposed St. Napoleon & WBE 1-24 well being a dry hole supports additional compensation from the Pooled Owners of 300 percent of the actual drilling costs incurred. I find the mechanical and engineering risks associated with the well support additional compensation of 200 percent of the

actual completing and 100 percent of the actual equipping costs incurred. Operating costs are not subject to additional compensation for risk.

CONCLUSIONS OF LAW

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

1. The Petitioner was unable to voluntarily pool all mineral interests within the proposed drilling unit. The Supervisor may compulsorily pool properties when pooling cannot be agreed upon. Compulsory pooling is necessary to prevent waste and protect the correlative rights of the Pooled Owners in the proposed drilling unit. MCL 324.61513(4).
2. This Order is necessary to provide for conditions under which each mineral owner who has not voluntarily agreed to pool all of their interest in the pooled unit may share in the working interest share of production. 1996 MR 9, R 324.1206(4).
3. The Petitioner is an owner within the drilling unit and, therefore, is eligible to drill and operate the St. Napoleon & WBE 1-24 well. 1996 MR 9, R 324.1206(4).
4. The Petitioner is authorized to take from each nonparticipating interest's share of production the cost of drilling, completing, equipping, and operating the well, plus an additional percentage of the costs as identified in the Determination and Order section of this Order for the risks associated with drilling a dry hole, and the mechanical and engineering risks associated with the completion and equipping of the well. 1996 MR 9, R 324.1206(4).
5. Spacing for wells drilled in Jackson County to the Trenton Formation is 40 acres as set by Order No. 18-2007. Exceptions to Order No. 18-2007 may be granted by the Supervisor after a hearing.
6. The Supervisor has jurisdiction over the subject matter and the persons interested therein.

7. 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 compulsory pooling to form a nominal 80-acre Trenton Formation drilling unit is necessary to protect correlative rights and prevent waste by the drilling of unnecessary wells.

NOW, THEREFORE, IT IS ORDERED:

1. A nominal 80-acre Trenton Formation drilling unit is established, as an exception to Order No. 18-2007, for the St. Napoleon & WBE 1-24 well comprising the following area: the S 1/2 of SE 1/4 of Section 24, T3S, R1E, Napoleon Township, Jackson County, Michigan. All properties, parts of properties, and interests in this area are pooled into the drilling unit. This pooling is for the purpose of forming a drilling unit only.
2. Each Pooled Owner shall share in production and costs in the proportion that their net mineral acreage in the drilling unit bears to the total acreage in the drilling unit.
3. The Petitioner is named Operator of the St. Napoleon & WBE 1-24 well. The Operator shall commence the drilling of the St. Napoleon & WBE 1-24 well within ninety (90) days of the effective date of this Order, or the compulsory pooling authorized in this Order shall be null and void as to all parties and interests. This pooling Order applies to the drilling of the St. Napoleon & WBE 1-24 well only.
4. A Pooled Owner shall be treated as a working interest owner to the extent of 100 percent of the interest owned in the drilling unit. The Pooled Owner is considered to hold a 1/8 royalty interest, which shall be free of any charge for

costs of drilling, completing, or equipping the well, or for compensation for the risks of the well or operating the proposed well including post-production costs.

5. A Pooled Owner shall have ten (10) days from the effective date of this Order to select one of the following alternatives and advise the Supervisor and the Petitioner, in writing, accordingly:
   a. To participate, then within ten (10) days of making the election (or within a later date as approved by the Supervisor), pay to the Operator the Pooled Owner's share of the estimated costs for drilling, completing, and equipping the well, or give bond to the Operator for the payment of the Pooled Owner's share of such cost promptly upon completion; and authorize the Operator to take from the Pooled Owner's remaining 7/8 share of production, the Pooled Owner's share of the actual costs of operating the well; or
   b. To be carried, then if the well is put on production, authorize the Operator to take from the Pooled Owner's remaining 7/8 share of production:
      (i) The Pooled Owner's share of the actual cost of drilling, completing, and equipping the well.
      (ii) An additional 300 percent of the actual drilling costs, 200 percent of the actual completion costs, and 100 percent of the actual equipping costs attributable to the Pooled Owner's share of production, as compensation to the Operator for the risk of a dry hole.
      (iii) The Pooled Owner's share of the actual cost of operating the well.
6. In the event the Pooled Owner does not notify the Supervisor, in writing, of the decision within ten (10) days from the effective date of this Order, the Pooled Owner will be deemed to have elected the alternative described in Paragraph 5(b). If a Pooled Owner who elects the alternative in Paragraph 5(a) does not, within ten (10) days of making their election (or within any alternate date approved by the Supervisor), pay their proportionate

share of costs or give bond for the payment of such share of such costs, the Pooled Owner shall be deemed to have elected the alternative described in Paragraph 5(b), and the Operator may proceed to withhold and allocate proceeds for costs from the Pooled Owner's 7/8 share of production as described in Paragraph 5(b)(i),(ii), and (iii).

7. For purposes of the Pooled Owners electing alternatives, the amounts of $1,367,316.00 for estimated drilling costs (dry hole costs); $574,000.00 for estimated completion costs; and $1,277,000.00 for estimated equipping costs are fixed as well costs. Actual costs shall be used in determining the Pooled Owner's final share of well costs and in determining additional compensation for the risk of a dry hole. If a Pooled Owner has elected the alternative in Paragraph 5(a) and the actual cost exceeds the estimated cost, the Operator may recover the additional cost from the Pooled Owner's 7/8 share of production. Within sixty (60) days after commencing drilling of the well, and every thirty (30) days thereafter until all costs of drilling, completing, and equipping the well are accounted for, the Operator shall provide to the Pooled Owner a detailed statement of actual costs incurred as of the date of the statement and all costs and production proceeds allocated to that Pooled Owner.
8. The Operator shall certify to the Supervisor that the following information was supplied to each Pooled Owner no later than the effective date of the Order:
   a. The Order.
   b. The AFE.
   c. Each Pooled Owner's percent of charges from the AFE if the Pooled Owner were to choose option "a" in Paragraph 5, above.
9. A Pooled Owner shall remain a Pooled Owner only until such time as a lease or operating agreement is entered into with the Operator. At that time, terms of the lease or operating agreement shall prevail over terms of this Order.

10. The Supervisor retains jurisdiction in this matter. In the event Petitioner desires to drill a second well in the drilling unit, the Supervisor may consider the request without a hearing.
11. The effective date of this Order is Nov. 10, 2014.

DATED: Oct. 29, 2014

Harold R. Fitch

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