

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ORDER OF THE SUPERVISOR OF WELLS

IN THE MATTER OF:

THE PETITION OF CORE ENERGY, LLC, FOR AN ORDER)
FROM THE SUPERVISOR OF WELLS FORMING A)
160-ACRE GUELPH DOLOMITE/RUFF FORMATION)
DRILLING UNIT AS AN EXCEPTION TO SPECIAL) CAUSE NO. 10-2012
ORDER NO. 1-73 AND COMPULSORY POOLING ALL)
INTERESTS INTO A DRILLING UNIT IN CHARLTON)
TOWNSHIP, OTSEGO COUNTY.)

OPINION AND ORDER

This case involves the Petition of Core Energy, LLC (Petitioner), for approval to drill and complete the Breer 22-1 well for oil and gas exploration within a drilling unit in the stratigraphic interval known as the Guelph Dolomite/Ruff Formation (formerly known as the Niagaran and Salina Niagaran Formations). The Petitioner is requesting a 160 acre drilling unit for the Breer 22-1 well as an exception to the drilling unit size of 80 acres established by Special Order No. 1-73. The proposed unit consists of the SW 1/4 of NW 1/4 and NW 1/4 of SW 1/4 of Section 1 and the SE 1/4 of NE 1/4 and NE 1/4 of SE 1/4 of Section 2, T30N, R1W, Charlton Township, Otsego County, Michigan. Not all of the mineral owners within the proposed drilling unit have agreed to lease or voluntarily pool their interests. In addition, the Petitioner has not obtained a commitment to the Proposed Unit from all of the lessees of oil and gas leases not owned by the Petitioner. Therefore, the Petitioner seeks an Order of the Supervisor of Wells (Supervisor) designating the Petitioner as operator of the 160-acre drilling unit and requiring compulsory pooling of all unleased tracts and uncommitted leases within that geographic area for which 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, 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. MCL 324.61502. To that end, the Supervisor may establish drilling units and compulsorily pool mineral interests and lessees' 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 November 8, 2012.

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 Special Order No. 1-73 by establishing a 160-acre drilling unit for the proposed Breer 22-1 well consisting of the SW 1/4 of NW 1/4 and NW 1/4 of SW 1/4 of Section 1 and the SE 1/4 of NE 1/4 and NE 1/4 of SE 1/4 of Section 2, T30N, R1W, Charlton Township, Otsego County, Michigan.
2. Requires compulsory pooling of all tracts, mineral interests, and lessees' interests within the proposed drilling unit that have not agreed to voluntary pooling.
3. Names the Petitioner as operator of the Breer 22-1 well.
4. Authorizes the Petitioner to recover certain costs and other additional compensation from the parties subject to the compulsory pooling order.
5. Authorizes the Petitioner to drill and complete the proposed Breer 22-1 well with a bottom hole location on oil and gas leases held by another company not committed to the unit, subject to obtaining a drilling permit.

The Administrative Law Judge determined that the Notice of Hearing was properly served and published. Four Answers to the Petition were filed. Answers were filed by Roberta Ricketts, Daniel and Kim Smith, husband and wife, Glen and Jane Smith, husband and wife, and Janet Wilkinson. The Answers expressed support for the

Petition, but these persons did not appear at the hearing. In addition, two appearances were filed and statements made in support of the petition on behalf of West Bay Exploration Company and Devon Energy Production. The Supervisor designated the hearing to be an evidentiary hearing pursuant to R 324.1205(1)(b) and directed evidence be presented in the form of oral testimony.

In support of its case, the Petitioner offered the testimony of Robert G. Mannes, president of Petitioner, landman; Wayne R. Goodman, owner of Northern Lights Energy, geologist; Allen Modroo, Core Energy, LLC, geophysicist; and Timothy J. Brock, Brock Engineering, engineer. Mr. Goodman was recognized as an expert in geology, Mr. Modroo was recognized as an expert in geophysics, and Mr. Brock was recognized as an expert in engineering.

I. Drilling Unit

The spacing of wells in Otsego County targeting the Guelph Dolomite/Ruff Formation is governed by Special Order No. 1-73. This Special Order establishes drilling units of 80 acres, more or less, formed by combining two governmental surveyed quarter-quarter sections of land with one common boundary of approximately 1,320 feet, with allowances being made for the difference in the size and shape of sections as indicated by official governmental survey plats. Under Special Order No. 1-73, it is presumed that one well will efficiently and economically drain the 80-acre unit of hydrocarbons. The Petitioner's proposed drilling unit is described as the SW 1/4 of NW 1/4 and NW 1/4 of SW 1/4 of Section 1 and the SE 1/4 of NE 1/4 and NE 1/4 of SE 1/4 of Section 2, T30N, R1W, Charlton Township, Otsego County, Michigan.

Mr. Modroo testified that based on his review of seismic data, it is his opinion that the proposed drilling unit is reasonably underlain by the interpreted structure (Exhibit 20). Mr. Modroo presented a time contour map of the top of the Guelph (Brown Niagaran) reef (Exhibit 20) which, in his opinion, shows the reef outline is entirely contained within the proposed unit and substantially underlies each of the 40-acre quarter quarter sections comprising the proposed unit.

Mr. Mannes testified that all holders of interests in the oil and gas leases in the proposed unit have either ratified the 160-acre Proposed Unit (Exhibit 8), or are subject to effective oil and gas leases containing 160-acre oil and 640-acre gas pooling clauses.

I find that formation of the proposed 160-acre drilling unit, as an exception to Special Order No. 1-73, will prevent waste and protect correlative rights and, as such, is approved for the proposed Breer 22-1 well.

II. Drilling Unit Operator

Mr. Mannes stated that the Petitioner owns or controls all oil and gas leases in the proposed drilling unit except for approximately 2.5 net acres unleased and 40 acres uncommitted to the proposed unit. Given this, the Petitioner seeks to be designated as the operator of the Breer 22-1 well. I find, as a Matter of Fact, the Petitioner is eligible to be designated operator of the Breer 22-1 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. Mannes testified the Petitioner controls all oil and gas interests within the SW 1/4 of NW 1/4 of Section 1, SE 1/4 of NE 1/4, and NW 1/4 of SE 1/4 of Section 2 except for 2.5 acres within the SW 1/4 of NW 1/4 of Section 1. The unleased acreage

in the proposed drilling unit is owned by James M. Tozser. The whereabouts of Mr. Tozser had not, as of the date of the hearing, been ascertained. Mr. Mannes stated lease offers equaling or exceeding the best terms paid to any owner in the unit will be offered to Mr. Tozser when and if his location is ascertained.

Mr. Mannes testified that MP Michigan, LLC; MEP III Michigan, LLC; and MEP D-III Michigan, LLC (Merit), hold oil and gas leases covering all interests in the SW 1/4 of NW 1/4 of Section 1. On September 7, 2012, Mr. Mannes began efforts to obtain an assignment, farmout, or participation of the Merit leases from the Merit entities. Negotiations occurred on various dates up to November 1, 2012. Mr. Mannes testified that he feels the Petitioner and Merit are close to reaching an agreement; but as of the date of the hearing, no formal written agreement had been prepared, circulated, and signed.

Mr. Tozser and Merit are individually referred to in this Order as "Pooled Owner," and collectively as "Pooled Owners."

Mr. Mannes testified the Petitioner's proposed Breer 22-1 well has its bottom hole location 168 feet east of the west boundary of the SW 1/4 of NW 1/4 of Section 1. That 40 acres is subject to three oil and gas leases executed in 1989 and now owned by Merit. An Antrim gas unit overlies the Merit leases, and the Merit leases are held in effect by Antrim production. The bottom hole location for the proposed Breer 22-1 well is shown on Exhibit 4 and was shown on Attachments A and B of the Petition. The Notice of Hearing for this cause notified all interested parties that the proposed well may be drilled through the subsurface of lands leased to another party who is uncommitted. Merit did not file an answer and did not appear at the hearing. Mr. Mannes testified that during his negotiations with Merit, no opposition was expressed to him concerning either the proposed 160-acre drilling unit or the proposed bottom hole location. Mr. Mannes testified that Answers were filed by the surface owners of the 40 acres leased to Merit, indicating that they consent to the wellbore traversing the subsurface of their land and consent to the bottom hole location beneath their land (Exhibit 6, Answers filed by David and Kim Smith; Glenn and Jane Smith). Mr. Mannes testified that approximately 80 percent of the ownership of the oil, gas, and

minerals in the 40 acres covered by the Merit leases filed Answers approving the bottom hole location (Exhibit 6). All mineral owners subject to Merit leases have ratified the 160-acre Pooling Agreement (Exhibit 8). The oil and gas leases held by Merit covering the 40 acres (listed in Exhibit 3) authorize drilling and development for oil and gas, including Antrim gas production.

Mr. Goodman and Mr. Modroo testified at length regarding the necessity for the bottom hole location of the Breer 22-1 well to be at center of the seismically interpreted crest of the reef. They both testified that to move the bottom hole location from the proposed location will increase the risk of a dry hole, or will increase the risk of a marginal well. They noted that based on 2D seismic, four dry holes have been drilled near the interpreted reef. Two, the Breer 1-2 (PN 55104) and Shell Coastal 5-1 (PN 43533) (Exhibit 9) had subtle near reef indicators, and two were regional dry holes (Exhibits 10, 11). Both witnesses testified that the development of the nearby Charlton 10 (Pontisso) reef indicates the importance of drilling the crest of the reef structure rather than a down-dip or edge portion of the reef structure (Exhibits 13, 19). Mr. Modroo testified that to take full advantage of the improved accuracy and reliability of 3D seismic as compared to 2D seismic, the test well should be located at the center of the crest of the reef as indicated on seismic, rather than being forced to drill away from the center of the interpreted structural high.

I find that the proposed bottom hole location of the Breer 22-1 well is reasonable to avoid waste or the potential for waste to occur and, therefore, should be approved.

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 160-acre Guelph Dolomite/Ruff Formation (Niagaran Formation) drilling unit except for the interests 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.
3. The bottom hole location of the proposed Breer 22-1 well should be approved, subject to issuance of a drilling permit.

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 well. The Petitioner's Authorization for Expenditure (AFE) form for the well (Exhibit 22) itemizes the estimated costs to be incurred in the drilling, completing, equipping, and plugging of the well. The estimated costs are \$812,838.00 for drilling; \$304,912.00 for completion; and \$673,800.00 for equipping. The total estimated producing well cost for the Breer 22-1 well is \$1,791,550.00. There is no evidence on this record refuting these estimated costs.

I find, as a Matter of Fact, the estimated costs in Exhibit 22 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. Because the cost of 3D Seismic has already been incurred, the Petitioner is authorized to recover each Pooled Owner's share of that actual cost only, and not additional compensation.

The next issue is the allocation of these costs. Part 615 requires the allocation be just and equitable. MCL 324.61513(4). Mr. Modroo testified that, in his opinion, allocation of drilling and production costs on a surface acreage basis is fair and equitable. Established practices and industry standards suggest this to be a fair and equitable method of allocation of production and costs. Therefore, I find, as a Matter of Fact, utilizing 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. However, 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 the cost of completing, and 100 percent of the cost of equipping the Breer 22-1 well.

Both Mr. Goodman and Mr. Modroo described the proposed Breer 22-1 as a wildcat well and indicated there is substantial risk of drilling a dry hole. Mr. Brock testified that since the proposed well is a directional well, there is the possibility of having surface failures, mechanical failures, and subsurface mechanical failures. These factors increase the risk of completion. Mr. Brock testified that if the well is completed but proves to be uncommercial, a large portion of surface equipping and labor costs are not recoverable.

I find, as a Matter of Fact, the risk of the proposed Breer 22-1 well being a dry hole supports additional compensation from the Pooled Owners of 300 percent of the actual drilling costs incurred (less seismic costs of \$110,000, which are not subject to additional compensation). 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 and lessees' 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 Breer 22-1 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 Otsego County to the Guelph Dolomite/Ruff Formation is 80 acres as set by Special Order No. 1-73. Exceptions to Special Order No. 1-73 may be granted by the Supervisor after a hearing.
6. MCL 324.61502 provides in part:

It is accordingly the declared policy of the state to protect the interests of its citizens and landowners from unwarranted waste of gas and oil and to foster the development of the industry along with most favorable conditions and with a view to the ultimate recovery of the maximum production of these natural products. To that end, this part is to be construed liberally to give effect to sound policies of conservation and the prevention of waste and exploitation.

7. MCL 324.61505 provides:

The supervisor has jurisdiction and authority over the administration and enforcement of this part and all matters relating to the prevention of waste and to the conservation of oil and gas in this state. The supervisor also has jurisdiction and control of and over all persons and things necessary or proper to enforce effectively this part and all matters relating to the prevention of waste and the conservation of oil and gas.

8. The Supervisor has jurisdiction over the subject matter and the persons interested therein.

9. 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 160-acre Guelph Dolomite/Ruff 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 160-acre Guelph Dolomite/Ruff Formation drilling unit is established, as an exception to Special Order No. 1-73, for the Breer 22-1 well comprising the following area: SW 1/4 of NW 1/4 and NW 1/4 of SW 1/4 of Section 1 and the SE 1/4 of NE 1/4 and NE 1/4 of SE 1/4 of Section 2, T30N, R1W, Charlton Township, Otsego 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 Breer 22-1 well. The Operator shall commence the drilling of the Breer 22-1 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 Breer 22-1 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 \$812,838.00 for estimated drilling costs (dry hole costs); \$304,912.00 for estimated completion costs; and \$673,800.00 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 Authorization for Expenditure (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. Each Pooled Owner's percentage of charges shall be based on the Pooled Owner's actual net mineral acreage in the drilling unit, and the actual acreage in the drilling unit as a whole, as determined by survey or title opinion.
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. All other applicable provisions of Special Order No. 1-73 shall remain in effect.
11. The Supervisor retains jurisdiction in this matter.
12. The effective date of this Order is January 2, 2013.

DATED: December 21, 2012



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