

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ORDER OF THE SUPERVISOR OF WELLS

IN THE MATTER OF:

THE PETITION OF JORDAN DEVELOPMENT)
COMPANY, LLC, FOR AN ORDER FROM THE)
SUPERVISOR OF WELLS FORMING A 63-ACRE)
DUNDEE FORMATION DRILLING UNIT AS AN) ORDER NO. 02-2013
EXCEPTION TO R 324.301, AUTHORIZING A BOTTOM)
HOLE LOCATION LESS THAN 330 FEET FROM THE)
UNIT BOUNDARY, AND COMPULSORY POOLING ALL)
INTERESTS INTO THE UNIT LOCATED IN)
PINCONNING TOWNSHIP, BAY COUNTY.)

OPINION AND ORDER

This case involves the Petition of Jordan Development Company, LLC (Petitioner) for approval to drill and complete the Teets 1-19 HD1 well for oil and gas exploration within a drilling unit in the stratigraphic interval known as the Dundee Formation. The Petitioner is requesting an approximately 63-acre drilling unit for the well as an exception to the drilling unit size of 40 acres established by general rule spacing (R 324.301). The proposed unit consists of the NE 1/4 of SE 1/4 of Section 24, T17N, R4E, and all that part of the N 1/2 of Govt Lot 3 of Section 19, lying upland of the ordinary high water mark of Saginaw Bay, T17N, R5E, Pinconning Township, Bay County, Michigan. The Petitioner also seeks approval of a bottom hole location less than 330 feet from the unit boundary as an exception to R 324.301. 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 63-acre drilling unit and requiring compulsory pooling of all tracts and interests 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 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 February 20, 2013.

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 R 324.301 by establishing a 63-acre drilling unit for the proposed Teets 1-19 HD1 well consisting of the NE 1/4 of SE 1/4 of Section 24, T17N, R4E, and all that part of the N 1/2 of Govt Lot 3 of Section 19, lying upland of the ordinary high water mark of Saginaw Bay, T17N, R5E, Pinconning Township, Bay 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. Authorizes a bottom hole location of the Teets 1-19 HD1 well less than 330 feet from the east boundary of the drilling unit.
4. Names the Petitioner as operator of the Teets 1-19 HD1 well.
5. 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 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 Mr. Ron Budros, Geologist and Geophysical Consultant; and Mr. Michael Flynn, Landman for Kosco Energy. Mr. Budros was recognized as an expert in the field of petroleum geology and geophysics.

I. Drilling Unit

The spacing of wells in the area subject to this Petition targeting the Dundee Formation is governed by R 324.301 (Rule 301). This rule establishes drilling units of 40 acres, more or less, comprised of governmental surveyed quarter-quarter sections of land, with allowances being made for the difference in the size and shape of sections as indicated by official governmental survey plats. It is presumed that one well will efficiently and economically drain the 40-acre unit of hydrocarbons. The Petitioner's proposed drilling unit is described as the NE 1/4 of SE 1/4 of Section 24, T17N, R4E, and all that part of the N 1/2 of Govt Lot 3 of Section 19, lying upland of the ordinary high water mark of Saginaw Bay, T17N, R5E, Pinconning Township, Bay County, Michigan.

Mr. Budros testified a drilling unit of approximately 63 acres is necessary to allow the Petitioner to drill the proposed lateral well. Based on Mr. Budros' interpretation of 3D seismic (reviewed but not retained as an exhibit), the Petitioner expects the majority of the lateral well bore to be in the pay zone, thereby resulting in more efficient drainage of the drilling unit. Mr. Budros testified drilling of the proposed lateral well will eliminate the need to drill a second vertical well within the proposed unit, thereby minimizing surface disruption. Mr. Budros explained that the Petitioner was unable to combine two 40-acre units into an 80-acre unit due to part of one unit containing Saginaw Bay bottomlands, which cannot be pooled or leased.

I find that formation of the Petitioner's proposed Dundee Formation drilling unit of approximately 63 acres, as an exception to R 324.301, will prevent waste and maximize recovery of oil from the reservoir and, as such, is approved for the proposed well.

II. Bottom Hole Location

The proposed bottom hole location of the well is 1,394 feet to the east of the surface location and 25 feet from the eastern boundary of the drilling unit, which is the ordinary high water mark of Lake Huron. Mr. Budros testified the orientation of the well

and the proposed bottom hole location in the unit was chosen to allow the well to fully evaluate the inferred reservoir.

Typically, for reservoirs of the type under consideration in this case, there is a 330-foot setback from the unit boundary to ensure that a well does not recover more than its fair share of the oil and/or gas from the drilling unit. In this case the Petitioner proposes to conform to a 330-foot setback from all unit boundaries except on the east. The Petitioner acknowledged it is not possible to include the Lake Huron bottomlands in the eastern portion of the proposed drilling unit because the Department of Natural Resources is precluded from leasing the bottomlands of the Great Lakes for oil and gas exploration under MCL 324.502.

I find an exception to the 330-foot setback from the eastern unit boundary should be granted since there is no potential for a well to be drilled to the east of the proposed unit. I find a setback of 25 feet from the unit boundary is reasonable and allows the Petitioner to recover the maximum amount of oil and will not cause waste.

III. Drilling Unit Operator

Mr. Flynn testified the Petitioner and its partners own or control all of the oil and gas leases in the proposed drilling unit except for 0.22 acres owned by the Saginaw Chippewa Indian Tribe of Michigan. Given this, the Petitioner seeks to be designated as the operator of the Teets 1-19 HD1 well. I find, as a Matter of Fact, the Petitioner is eligible to be designated operator of the Teets 1-19 HD1 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. Flynn testified the Petitioner controls all oil and gas interests within the proposed unit except for 0.22 acres within the NE 1/4 of SE 1/4 of Section 24. The unleased acreage in the proposed drilling unit is owned by the Saginaw Chippewa Tribe of Michigan. Mr. Flynn testified that he had been discussing a lease of this acreage since August of 2012 and that certain modifications to the proposed lease had been made at the request of the Tribal attorney. As of the hearing, however, a lease had not been executed. Mr. Flynn stated lease offers equaling or exceeding the best terms paid to any owner in the unit had been offered to the Saginaw Chippewa Indian Tribe of Michigan.

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 63-acre Dundee 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 well. The Petitioner’s Authorization for Expenditure (AFE) form for the well (Exhibit 5) itemizes the estimated costs to be incurred in the drilling, completing, equipping, and plugging of the well. The estimated costs are \$537,600.00 for drilling; \$495,000.00 for completion; and \$395,000.00 for equipping. The total estimated producing well cost for the Teets 1-19 HD1 well is \$1,427,600.00. There is no evidence on this record refuting these estimated costs.

I find, as a Matter of Fact, the estimated costs in Exhibit 5 are reasonable for the purpose of providing the pooled owner 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). It is Mr. Budros’ opinion that 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. I find that an owner’s share in production and costs should be in proportion to their net mineral acreage (also referred to as “surface 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 MR9, 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 Teets 1-19 HD1 well.

Mr. Budros described the proposed Teets 1-19 HD1 well and indicated there is the risk of drilling a dry hole and/or a well which is uneconomic. Mr. Budros testified there are a number of marginal Dundee Formation wells in the Pinconning area and that there was both the risk of a dry hole and the risk of drilling into marginal reservoir rock. Mr. Budros stated that since the proposed well is a directional well, there is the possibility of having mechanical and other failures. These factors increase the risk of completion. Mr. Budros testified that if the well is completed but proves to be uncommercial, a large portion of the surface equipping and labor costs are not recoverable.

I find, as a Matter of Fact, the risk of the proposed Teets 1-19 HD1 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 Teets 1-19 HD1 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 and bottom hole locations for wells drilled in Bay County to the Dundee Formation are set by R 324.301. An exception to the spacing and bottom hole location established by R 324.301 is appropriate for the proposed drilling unit. The Supervisor shall do whatever is necessary to prevent waste. MCL 324.61506(a). Exceptions to R 324.301 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 an approximately 63-acre Dundee Formation drilling unit is necessary to protect correlative rights and prevent waste.

NOW, THEREFORE, IT IS ORDERED:

1. A Dundee Formation drilling unit of approximately 63 acres is established, as an exception to R 324.301, for the Teets 1-19 HD1 well comprising the following area: the NE 1/4 of SE 1/4 of Section 24, T17N, R4E, and all that part of the N 1/2 of Govt Lot 3 of Section 19, lying upland of the ordinary high water mark of Saginaw Bay, T17N, R5E, Pinconning Township, Bay 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 Teets 1-19 HD1 well. The Operator shall commence the drilling of the Teets 1-19 HD1 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 Teets 1-19 HD1 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)&(iii).

7. For purposes of the Pooled Owners electing alternatives, the amounts of \$537,600.00 for estimated drilling costs (dry hole costs); \$495,000.00 for estimated completion costs; and \$395,000.00 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. No portion of the borehole of the Teets 1-19 HD1 well shall be located closer than 25 feet from the eastern boundary of the drilling unit.

9. 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.

10. 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.

11. The Supervisor retains jurisdiction in this matter.

12. The effective date of this Order is March 29, 2013.

DATED: March 22, 2013



HAROLD R. FITCH
ASSISTANT SUPERVISOR OF WELLS
Office of Oil, Gas, and Minerals
P.O. Box 30256
Lansing, Michigan 48909-7756