

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT

ORDER OF THE SUPERVISOR OF WELLS

IN THE MATTER OF

THE PETITION OF WHITING OIL AND GAS CORPORATION)
FOR AN ORDER FROM THE SUPERVISOR OF WELLS)
APPROVING AN EXCEPTION TO THE WELL SPACING)
PATTERN ESTABLISHED BY SPECIAL ORDER NO. 1-86 FOR) CAUSE NO. 11-2009
A 665.86-ACRE PRAIRIE DU CHIEN GROUP DRILLING UNIT IN)
RIVERSIDE TOWNSHIP, MISSAUKEE COUNTY AND MARION)
TOWNSHIP, OSCEOLA COUNTY.)

OPINION AND ORDER

This case involves the Petition of Whiting Oil and Gas Corporation (Petitioner). The Petitioner seeks an Order from the Supervisor of Wells (Supervisor) establishing a 665.86-acre Prairie du Chien Group drilling unit for the proposed Riverside 14-36 well as an exception to the drilling unit size and configuration requirements of Special Order 1-86. Without a special spacing exception, the size and shape of the drilling unit would have to follow a pattern established by the Clam Union 1-31 well, as required by Special Order No. 1-86. The proposed drilling unit consists of:

T21N R7W Riverside Township Missaukee County Section 35: SW 1/4 of SE 1/4 and E 1/2 of SE 1/4. Section 36: SW 1/4 and W 1/2 of SE 1/4.	and	T20N R7W Marion Township Osceola County Section 1: Gov't. Lot 4. Section 2: NE/4.
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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 well spacing. MCL 324.61513(2) and (5). The spacing and location of wells completed in the Prairie du Chien Group in Missaukee and Osceola Counties are subject to Special Order No. 1-86. Under Special Order No. 1-86, exceptions to the spacing and location requirements of that Order can only be approved after an evidentiary hearing. 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 December 10, 2009.

FINDINGS OF FACT

Petitioner specifically requests that the Supervisor issue an Order granting an exception to the spacing pattern drilling unit size otherwise required by Special Order No. 1-86 for the proposed Riverside 14-36 well to be drilled to and completed in the Prairie du Chien (PdC) Group.

The Administrative Law Judge determined the Notice of Hearing was properly served and published. No answers to the Petition were filed. Only the Petitioner appeared at the hearing. Therefore, the Petitioner is the only Party in this matter. 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.

In support of its case, the Petitioner offered the testimony of Ms. Janet E. DeFur, Landman and Mr. Stephen P. Gardner, Geologist and Geophysicist. Mr. Gardner was recognized as an expert in the areas of geology and geophysics.

The spacing of wells targeting the PdC Group is governed by Special Order 1-86. This order establishes drilling units of 640 acres, more or less, consisting of four contiguous governmental-surveyed quarter sections of land in a square, with allowances being made for the size and shape of irregular and correction government-surveyed quarter sections. Under Special Order 1-86, it is presumed that one well will efficiently and economically drain hydrocarbons beneath the entire 640-acre unit. Once a discovery well has been drilled, Special Order No. 1-86 provides that like spacing shall be applicable to the eight contiguous 640-acre units, forming a spaced area of nine square miles in the shape of a square. The pattern in the area of Petitioner's proposed well was established by the Clam Union 1-31 well. The drilling unit for the Clam Union 1-31 well, which remains in effect, consists of all of Section 31, T21N, R6W, Clam Union Township, Missaukee County.

The VandePol 1-36 well (Permit Number 42339) was drilled as the west 640-acre offset drilling unit to the Clam Union 1-31 well. The drilling unit is all of Section 36, T21N, R7W. The VandePol 1-36 was completed as a dry hole in September 1989. The well showed the PdC to be structurally low, relative to the Clam Union 1-31 and 1-30 wells. No PdC structure or reservoir was encountered.

Petitioner conducted investigations of the PdC Group beneath the Proposed Unit and has ascertained the possibility of the existence of a PdC structure beneath the Proposed Unit. Petitioner asserts that the nine square mile drilling unit pattern and square 640-acre units do not accommodate the interpreted areal extent of the structure sought to be tested.

Ms. DeFur testified that Petitioner owns or controls all of the oil and gas leases within the Proposed Drilling Unit, and that all of the oil and gas interests within the Proposed Unit are subject to currently effective oil and gas leases (Exhibits 1 and 2). She testified that Petitioner filed the Petition to obtain a drilling unit description that better conformed to the interpreted seismic anomaly sought to be tested than would occur if the spaced Sections 1 and 36 were controlling.

Ms. DeFur testified that Petitioner holds drilling permits in Section 36, T21N, R7W (Permit Number 59811) and in Section 2, T20N, R7W (Permit Number 59572). Based on Petitioner's seismic analysis, it was determined that drilling units consisting of either all of Section 36, T21N, R7W, or all of Section 2, T20N, R7W, would be unsatisfactory. Both such units would contain significant amounts of non-underlain acreage, and the limited size of the anomaly sought to be tested may not justify the drilling of two wells. Therefore, Petitioner designed the Proposed Drilling Unit and proposes, for the time being, drilling only the proposed Riverside 14-36 well (Permit Number 59811). Petitioner proposes such development actions to prevent waste and protect correlative rights.

Petitioner has conducted a 3-D seismic survey over the area of the Proposed Drilling Unit and in the surrounding area. The seismic and existing well control has been analyzed by Mr. Gardner, who presented two arbitrary seismic lines extracted from the 3-D seismic data showing the NW-SE and SW-NE limits of the structure, based on seismic interpretation (Exhibits 7 and 10). Mr. Gardner testified the VandePol 1-36 well was 50 feet low to the Forward PdC pool structure, and he expects the proposed Riverside 14-36 well to encounter a reservoir separate and distinct from the Forward PdC pool. The reservoirs are expected to have similar characteristics. The presence of the dry VandePol 1-36 well and the seismic data establish that the PdC pool and the seismic anomaly does not underlie large portions of Section 36, T21N, R7W. Mr. Gardner's Exhibit 13 defined the seismic anomaly sought to be tested, based on seismic data. It is Mr. Gardner's opinion that the proposed drilling unit is an appropriate drilling unit.

I find the proposed drilling unit for the Riverside 14-36 well, goes against the concept of orderly development. I find a drilling unit consisting of the SE 1/4 of Section 35 and SW 1/4 of 36, T21N R7W, Riverside Township, Missaukee County and N 1/2 of Section 2, T20N, R7W, Marion Township, Osceola County, is a reasonable alternative drilling unit configuration that provides equity, adheres to Special Order No. 1-86 requirement to construct drilling units from four quarter sections of land in the form of a square, and honors the intent of Part 615 to provide for orderly development.

CONCLUSIONS OF LAW

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

1. Special Order 1-86 states that a PdC Group drilling unit in Missaukee and Osceola Counties shall consist of four quarter sections of land joined together to form a square.
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 Petitioner's proposed drilling unit for the Riverside 14-36 well does not provide for orderly development.

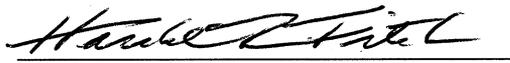
NOW, THEREFORE, IT IS ORDERED:

1. An exception to Special Order No. 1-86 authorizing a 665.86-acre drilling unit for the Riverside 14-36 well consisting of the following acreage is denied:

T21N R7W Riverside Township Missaukee County Section 35: SW 1/4 of SE 1/4 and E 1/2 of SE 1/4. Section 36: SW 1/4 and W 1/2 of SE 1/4.	and	T20N R7W Marion Township Osceola County Section 1: Gov't. Lot 4. Section 2: NE/4.
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2. The Supervisor retains jurisdiction in this matter.
3. This Order shall be effective immediately.

DATED: *Feb. 24, 2010*


HAROLD R. FITCH
ASSISTANT SUPERVISOR OF WELLS
Office of Geological Survey
P.O. Box 30256
Lansing, MI 48909

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DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT

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TOWNSHIP, OSCEOLA COUNTY.)

AMENDED OPINION AND ORDER

at a session of the Department of Natural Resources and
Environment held at Lansing, Michigan, Harold R. Fitch,
Assistant Supervisor of Wells, Presiding

On February 25, 2010, Petitioner, Whiting Oil and Gas Corporation filed a Motion to Amend Order No. 11-2009, effective February 24, 2010. Order No. 11-2009 denied Petitioner's request for a 665.86-acre drilling unit for the Riverside 14-36 well consisting of the following acreage:

T21N R7W Riverside Township Missaukee County Section 35: SW 1/4 of SE 1/4 and E 1/2 of SE 1/4. Section 36: SW 1/4 and W 1/2 of SE 1/4.	and	T20N R7W Marion Township Osceola County Section 1: Gov't. Lot 4. Section 2: NE/4.
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Order No. 11-2009 also provided that the Supervisor would consider a reasonable alternative drilling unit, consisting of the SE 1/4 of Section 35 and SW 1/4 of Section 36, T21N, R7W, Riverside Township, Missaukee County; and the N 1/2 of Section 2, T20N, R7W, Marion Township, Osceola County, Michigan.

Petitioner, in its Motion to Amend Order, states that it is in agreement with the reasonable alternative drilling unit and requests the Supervisor establish such unit. Petitioner is the only party to this Cause and entry of the proposed Amended Opinion and Order requested by Petitioner will not prejudice any party.

DETERMINATION AND ORDER

I have reviewed the Motion to Amend Order submitted by Petitioner and have determined that Order No. 11-2009 should be amended.

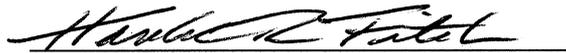
NOW, THEREFORE, IT IS ORDERED THAT:

The Determination and Order section of the original Opinion and Order effective February 24, 2010, in Cause No. 11-2009 is hereby amended by adding paragraph 4 to provide as follows:

4. Petitioner has advised the Office of Geological Survey that it is in agreement with the alternate drilling unit configuration set forth in the last unnumbered paragraph on Page 3 of the Findings of Fact, Opinion and Order No. 11-2009. Accordingly, an exception to Special Order No. 1-86 is hereby granted, establishing a Prairie du Chien Group drilling unit consisting of the SE 1/4 of Section 35 and SW 1/4 of Section 36, T21N, R7W, Riverside Township, Missaukee County; and the N 1/2 of Section 2, T20N, R7W, Marion Township, Osceola County, Michigan.

All other provisions of the Special Order No. 1-86 shall apply to the drilling unit established by this Order.

DATED: March 1, 2010


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