

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

ORDER OF THE SUPERVISOR OF WELLS

IN THE MATTER OF

THE PETITION OF DART OIL & GAS CORPORATION)
FOR AN ORDER FROM THE SUPERVISOR OF WELLS)
GRANTING AN EXCEPTION TO THE WELL) ORDER NO. 15-2008
LOCATION PROVISIONS OF R 324.301 FOR WELLS)
IN EACH OF SEVEN DRILLING UNITS.)

OPINION AND ORDER

This case involves the Petition of Dart Oil & Gas Corporation (Petitioner). The Petitioner proposes to drill and complete oil and gas development wells in the Richfield Member of the Lucas Formation in the relative center of seven 40-acre drilling units, not less than 330 feet from the drilling unit boundary. Without a special spacing order, the location of development wells would have to follow the same pattern as the location of the first well successfully drilled, consistent with R 324.301. Petitioner's proposed drilling units consist of the SE 1/4 SE 1/4 of Section 1, T20N, R6W, Winterfield Township, Clare County, Michigan; NW 1/4 SE 1/4 of Section 2, T20N, R6W, Winterfield Township, Clare County, Michigan; SE 1/4 NE 1/4 of Section 12, T20N, R6W, Winterfield Township, Clare County, Michigan; SW 1/4 SW 1/4 of Section 6, T20N, R5W, Summerfield Township, Clare County, Michigan; NE 1/4 NE 1/4 of Section 12, T20N, R6W, Winterfield Township, Clare County, Michigan; NE 1/4 SW 1/4 of Section 2, T20N, R6W, Winterfield Township, Clare County, Michigan; and NE 1/4 NW 1/4 of Section 2, T20N, R6W, Winterfield Township, Clare 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 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 Richfield Member of the Lucas Formation in Winterfield and Summerfield Townships, Clare County are subject to R 324.301. The well spacing pattern specified in R 324.301 can only be modified after an evidentiary hearing. 1996 MR 9 R 324.302. 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 May 20, 2008.

FINDINGS OF FACT

Petitioner specifically requests that the Supervisor issue a special spacing order that authorizes a well location within a 10-acre square located in the relative center of the drilling unit, provided the bottom hole location is not less than 330 feet from the drilling unit boundary.

The Administrative Law Judge determined the Notice of Hearing was properly served and published. An answer was filed by Mr. Hermann Karl Fleischer, a surface owner in one of Petitioner's proposed drilling units. Mr. Fleischer did not appear at the hearing but submitted a letter requesting no well be drilled on his property. 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 Mr. Daniel Orr, Geologist, and Ms. Pamela Hardy, Landman. Mr. Orr was recognized as an expert in the area of petroleum geology.

The Petitioner proposes to drill seven wells, one each on the following 40-acre drilling units:

Unit 1: SE 1/4 of SE 1/4, Section 1, T20N, R6W
Winterfield Township, Clare County, Michigan

Unit 2: NW 1/4 of SE 1/4, Section 2, T20N, R6W
Winterfield Township, Clare County, Michigan

Unit 3: SE 1/4 of NE 1/4, Section 12, T20N, R6W
Winterfield Township, Clare County, Michigan

Unit 4: SW 1/4 of SW 1/4, Section 6, T20N, R5W,
Summerfield Township, Clare County, Michigan

Unit 5: NE 1/4 of NE 1/4, Section 12, T20N, R6W
Winterfield Township, Clare County, Michigan

Unit 6: NE 1/4 of SW 1/4, Section 2, T20N, R6W
Winterfield Township, Clare County, Michigan

Unit 7: NE 1/4 of NW 1/4, Section 2, T20N, R6W
Winterfield Township, Clare County, Michigan

Petitioner has filed an Application for Permit to Drill for the T. Werts Trust 4-1 well, located in the center of the SE 1/4 of SE 1/4 of Section 1 (Exhibit 7). If a well is drilled in the center of a 40-acre unit, a hearing is necessary, pursuant to R 324.301(b) (iii), to adopt a special spacing order before the drilling of development wells.

Mr. Orr discussed the history of the development of the Cranberry Lake Field. The Michigan Stray Sandstone is utilized for gas storage. The Richfield Member of the Lucas Formation has been productive for approximately 50 years. The Richfield Waterflood Unit has been in effect since 1969. Mr. Orr's geologic reviews, investigations, and studies indicate that productive portions of the Richfield Member of the Lucas Formation reservoir may exist outside the boundaries of the Richfield Waterflood Unit (Exhibit 1). Petitioner seeks to test this interpretation by drilling up to seven wells on seven stand-alone, 40 acre quarter-quarter section drilling units depicted on Exhibit 1. Mr. Orr described the character of the reservoir by reference to a type log (Exhibit 2). Exhibit 3, a structural cross section, demonstrates the continuity of the formation tops across the field. Mr. Orr testified that flexibility in locating wells on the seven 40-acre drilling units will assist in locating the well

on the structurally highest portion of the reservoir, beneath the drilling unit. Mr. Orr testified that maintaining a distance of at least 660 feet between wells will avoid interference and protect correlative rights

Ms. Hardy testified that numerous surface concerns exist which make the current well location requirements untenable. First, the mineral rights beneath the units are frequently severed and the surface owners sometimes oppose and resist drilling activities on the surface. Second, there are existing structures on many of the units, such as homes, barns, and hunting cabins which make well locations problematic under rigid well location requirements. Third, some of the units have wetlands which must be avoided in well placement. Finally, there are gas storage wells, facilities, and gas flow lines on the units which also have to be considered and avoided in well placement. Ms. Hardy testified that a 10 acre drilling "window" will best provide latitude to accommodate the concerns of surface owners while providing a suitable surface location for the operator to drill. The placement of wells at surface locations acceptable to the surface owners and to avoid pre-existing structures, facilities, and wetlands on the units requires an exception to the well location provisions of R 324.301.

I find as a matter of fact that a well location within the relative center of Petitioner's seven proposed 40-acre drilling units, no less than 330 feet from the drilling unit boundary, allows opportunities to accommodate other surface concerns, provides for reasonable development, protects correlative rights, and avoids waste. Further issues involving surface location of specific wells, including the concerns expressed by Mr. Fleischer, are properly addressed as part of the permit application review process. This Order is not the proper forum for addressing those issues.

CONCLUSIONS OF LAW

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

1. An exception to the Rule 301 well spacing pattern is appropriate for the seven proposed drilling units. Exceptions to R 324.301 may be granted by the Supervisor after a hearing. 1996 MR 9, R 324.302

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 an exception to R 324.301 will prevent waste and protect correlative rights.

NOW, THEREFORE, IT IS ORDERED:

1. An exception to R 324.301 is granted for the following drilling units:
 - Unit 1: SE 1/4 of SE 1/4, Section 1, T20N, R6W
Winterfield Township, Clare County, Michigan
 - Unit 2: NW 1/4 of SE 1/4, Section 2, T20N, R6W
Winterfield Township, Clare County, Michigan
 - Unit 3: SE 1/4 of NE 1/4, Section 12, T20N, R6W
Winterfield Township, Clare County, Michigan
 - Unit 4: SW 1/4 of SW 1/4, Section 6, T20N, R5W,
Summerfield Township, Clare County, Michigan
 - Unit 5: NE 1/4 of NE 1/4, Section 12, T20N, R6W
Winterfield Township, Clare County, Michigan
 - Unit 6: NE 1/4 of SW 1/4, Section 2, T20N, R6W
Winterfield Township, Clare County, Michigan
 - Unit 7: NE 1/4 of NW 1/4, Section 2, T20N, R6W
Winterfield Township, Clare County, Michigan

2. The drilling unit for any well drilled in the excepted areas listed in the Determination and Order paragraph 1 above targeting the Richfield Member of the Lucas Formation, shall consist of a quarter-quarter section of land containing 40 acres, more or less, pursuant to R 324 301(1) (a) Within each 40-acre drilling unit, each well may be drilled within a 10-acre square in the relative center of each drilling unit, provided no well shall be drilled closer than 330 feet from the unit boundary.

3 The Supervisor retains jurisdiction in this matter.

4. This Order shall be effective immediately.

DATED: *July 10, 2008*



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

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SUPERVISOR OF WELLS

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NOTICE OF HEARING

Take notice that a hearing will be held before the Supervisor of Wells (Supervisor) in the city of Lansing, Michigan, on the TWENTIETH DAY OF MAY (20) 2008, BEGINNING AT 9:00 A.M., AT THE DEPARTMENT OF ENVIRONMENTAL QUALITY STEPHEN NISBET HEARING ROOM, ATRIUM LEVEL, SOUTH TOWER, CONSTITUTION HALL, 525 WEST ALLEGAN STREET, LANSING, MICHIGAN. The hearing will be conducted pursuant to Part 615, Supervisor of Wells, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.61501 et seq.; the administrative rules, 1996 AACS, 2001 MR 2, 2002 MR 23, R 324.101 et seq.; and the Administrative Procedures Act, 1969 PA 306, as amended, MCL 24.201 et seq.; MSA 3.560(101) et seq.

The hearing is for the purpose of receiving testimony and evidence pertaining to the need or desirability of issuing an order in the matter of the petition of Dart Oil & Gas Corporation (Petitioner).

Petitioner seeks an order of the Supervisor granting an exception to the well spacing pattern of R 324.301 for seven 40-acre drilling units in the Lucas Formation, with the location of wells to be at any location not less than 330 feet from the drilling unit boundary. The seven drilling units are the SE 1/4 of SE 1/4 of Section 1; NW 1/4 of SE 1/4 of Section 2; SE 1/4 of NE 1/4 of Section 12; SW 1/4 of SW 1/4 of Section 6; NE 1/4 of NE 1/4 of Section 12; NE 1/4 of SW 1/4 of Section 2; and NE 1/4 of NW 1/4 of Section 2, T20N, R6W, Winterfield Township, Clare County, Michigan.

You can obtain a copy of the written petition by requesting it in writing from Ms. Pamela J. Hardy, 600 Dart Road, Mason, Michigan, 48854, telephone number 517-676-2900.

Take note that if you wish to participate as a party in the hearing by presenting evidence or cross-examining witnesses, you shall prepare and mail or otherwise deliver to the Petitioner and Supervisor, not less than 5 days before the hearing date, an answer to the petition in the manner set forth in R 324.1204(6). Proof of mailing or delivering the answer shall be filed with the Supervisor on or before the date of the hearing. The answer shall state with specificity the interested person's position with

regard to the petition. Failure to prepare and serve an answer in a timely manner shall preclude you from presenting evidence or cross-examining witnesses at the hearing. If an answer to the petition is not filed, the Supervisor may elect to consider the petition and enter an order without oral hearing. Mail the answer to the petition to Ms. Pamela J. Hardy at the above address, and to the Supervisor in care of the Assistant Supervisor of Wells, Mr. Harold R. Fitch, Office of Geological Survey (OGS), P.O. Box 30256, Lansing, Michigan 48909-7756.

Questions regarding Notice of Hearing should be directed to Ms. Susan Maul, OGS, Michigan Department of Environmental Quality, P.O. Box 30256, Lansing, Michigan 48909-7756, phone 517-241-1552. Persons with disabilities needing accommodations for effective participation in this hearing should call or write Ms. Maul at least a week in advance of the hearing date to request mobility, visual, hearing, or other assistance.

Dated: *Apr. 7, 2008*



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