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SANTA FE. NEW MEXICO 87504-2265

February 21, 1995

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W. THOMAS KELLAHINS

"NEW MEXICO BOARD OF LEGAL SPECIALIZATION

RECOGNIZED SPECIALIST IN THE AREA OF

NATURAL RESOURCES-OIL AND GAS LAW

Mr. William J. LeMay, Chairman Oil Conservation Commission 2040 South Pacheco Santa Fe, New Mexico 87504

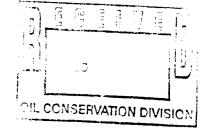
Re: Proposed Administrative Rules for High Angle-Horizontal Wells

Dear Mr. LeMay:

Alan Alexander of Meridian Oil Inc. and I have prepared the enclosed application which we request be set on the next available Commission docket to begin the formally hearing process towards adoption of an administrative procedures for "high angle/horizontal/ directional drilled wells."

Last year, Michael Stogner of the NMOCD told me that he thought that the Division had held enough hearings dealing with high angle horizontal wells that a practical administrative procedure for such projects could be adopted. In addition to initiating our efforts, Mr. Stogner also has provided a number of suggestions to our first draft.

We then reviewed all of the NMOCD orders for those project from which we developed a first rule draft which we circulated to those members of the oil & gas industry who had previously been involved with OCD hearings on this topic. That list is enclosed.



Mr. William J. LeMay February 21, 1995 Page 2

In response, we received thoughtful and specific suggestions from the following:

Bill Hawkins of Amoco Production Company
John Roe of Dugan Production Corp
Ken Schramko of Phillips Petroleum Company
David Boneau of Yates Petroleum Corporation
Dow Campbell of Marathon Oil Company
Sally McDonald of Meridian Oil Inc.
David Poage of Meridian Oil Inc.

While all of these individuals/companies support the concept of an administrative rule, please be advised that their cooperation and our use of a number of their suggestions and recommendations does not mean that they each support all of the specific items included or excluded from this application.

For example, a number of companies desired a "bonus allowable" to be assigned to a high angle/horizontal well simply as in incentive for this drilling technique. Our failure to include such a bonus allowable only reflects the fact that in the following cases the Division already has denied such a bonus allowable:

NMOCD Case 10325 Order R-9607 issued November 4, 1991 NMOCD Case 10487 Order R-9691 issued July 13, 1992 NMOCD Case 10488 Order R-9692 issued July 13, 1992

In addition, on March 22, 1990, the Commission denied such a bonus allowable in Cases 9764 & 9765. See DeNovo Order R-9037-A.

We think the time has come to docket this matter for consideration by the Commission and let the industry submit additional suggestions, comments or objections.

W. Thomas Kellahin

Very truly yours

cc: Alan Alexander (Meridian Oil Inc.-Farmington)

NOTICE LIST OF POTENTIALLY INTERESTED PARTIES TO PARTICIPATE IN PROPOSED ADMINISTRATIVE PROCEDURES TO BE ADOPTED BY THE NMOCC FOR HIGH ANGLE/HORIZONTAL/DIRECTIONAL WELLS

Michael E. Stogner Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87504

Meridian Oil Inc
P. O. Box 4289
Farmington, New Mexico 87499-4289
Attn: Mr. Alan Alexander

Meridian Oil Inc.
P. O. Box 51810
Midland, Texas 79710-1810
Attn: Richard Smiley

Marathon Oil Company
Box 552
Midland, Texas, 79702
Attn: Thomas C. Lowry, Esq.

Conoco Inc. 10 Desta Drive West Midland, Texas 79705 Attn: Jerry Hoover

Kinlaw Oil Corporation
3301 Northland, Suite 102
Austin, Texas 78731
 Attn: Mr. Michael R. Hill

Benson-Montin-Greer Drilling Corp. 221 Petroleum Center Building Farmington, New Mexico 87401 Attn: A. R. Greer Chevron USA Inc.
P. O. Box 1150
Midland, Texas 79702
Attn: Al Bohling

Collins & Ware, Inc.
303 West Wall Avenue, Suite 2200
Midland, Texas 79701
Attn: Curtis Anderson

Yates Petroleum Corporation 105 S. Fourth Street Artesia, New Mexico 88210 Attn: Mr. Randy Patterson

William F. Carr, Esq. P. O. Box 2208 Santa Fe, New Mexico 87504

James Bruce, Esq. P. O. Box 2068 Santa Fe, New Mexico 87504

Amoco Production Company P. O. Box 800 Denver, Colorado 80201 Attn: Bill Hawkins

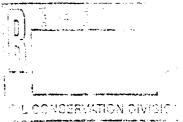
John Roe Dugan Production Corp. Box 420 Farmington, New Mexico 87499

Robert G. Stovall, Esq. Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87504

Richard Foppiano OXY USA INC P. O. Box 50250 Midland, Texas 79710

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF MERIDIAN OIL INC. TO ESTABLISH A STATEWIDE ADMINISTRATIVE PROCEDURE FOR APPROVAL OF HIGH ANGLE/HORIZONTAL/DIRECTIONAL DRILLING PROJECTS, NEW MEXICO.



CASE:

APPLICATION

COMES NOW MERIDIAN OIL INC. by and thorough its attorneys, Kellahin & Kellahin, and applies to the New Mexico Oil Conservation Commission to establish a statewide administrative procedure for approval of High Angle/Horizontal/Directional Drilling Projects in the State of New Mexico and in support thereof states:

- (1) The New Mexico Oil Conservation Division has now issued numerous orders approving High Angle-Horizontal-Directional Drilling Pilot Projects in the State of New Mexico.
- (2) Those individual cases, each conducted after notice and hearing, now constitute a substantial volume of technical information from which administrative rules and regulations can be formulated.
- (3) That the granting of this type of application has been accomplished usually without opposition and has become a matter of routine.
- (3) Based upon its experience, Applicant recommends that the Commission adopt the following new rules:

RULE 111-A - HIGH ANGLE/HORIZONTAL/DIRECTIONAL DRILLING PROJECTS

- A. The following definitions shall apply to this Rule:
- (a) $\underline{\text{NMOCD}}\text{-means}$ the New Mexico Oil Conservation Division
- (b) <u>Drilling Unit</u>-means the surface acreage assigned to a vertical wellbore in accordance with NMOCD Rule 104. Included in this definition is a "unit of proration for oil or gas" as defined by NMOCD and all non-standard such units previously approved by the NMOCD.
- (c) <u>Wellbore</u>-means the interior surface of a cased or open hole through which drilling, production, or injection operations are conducted.
- (d) <u>Project Well</u>-means any well drill, completed or produced as either a horizontal, high angle or directional drilled well.
- (e) <u>Project Area</u>-means one or more drilling units which are to be dedicated to the project well.
- (f) <u>Penetration Point</u>-means the point where the wellbore penetrates the top of the pool from which it is intended to produce.
- (g) <u>Terminus</u>-means the farthest point attained along the horizontal lateral or high angle portion of the wellbore.
- (h) <u>Vertical well</u>-means a well that does not have a departure or course deviation from the vertical.
- (i) <u>Horizontal well</u>-means a wellbore that has a departure or course deviation from the vertical equal to or greater than 85 degrees and whose lateral runs approximately parallel (within practical limits) to formation dip with its penetration point and terminus being within a single formation or pool.

- (j) <u>High Angle Well</u>-means a wellbore that has a departure or course of deviation from vertical of less than 85 degrees and whose lateral does not run approximately parallel with formation dip.
- (k) <u>Directional drilled well</u>-means a well which is intentionally deviated from vertical with an intentional azimuth.
- (1) <u>Lateral</u>-means any portion of a wellbore which has intentionally departed from the vertical point directly beneath the surface location.
- (m) <u>Ultra Short Radius Lateral</u>-means the measured departure of a wellbore from vertical that has an angle of build rate of between 45 degrees and 90 degrees per foot within a 1-2 foot radius and with up to 200 feet of horizontal section.
- (n) Short Radius Lateral-means the measured departure of a wellbore from vertical that has an angle of build rate between 1.5 degrees per foot and 3.5 degrees per foot within a 20-40 foot radius and with up to 750 feet of horizontal section.
- (0) Medium Radius Lateral-means the measured departure of a wellbore from vertical that has an angle of build rate of between 8 degrees to 20 degrees per one hundred feet and with up to 3500 feet of horizontal section.
- (p) Long Radius Lateral-means the measured departure of a wellbore from vertical that has an angle of build less than 8 degrees per one hundred feet within a 1000 foot to 3000 foot radius and with up to 5000 feet of horizontal section.
- (q) <u>Drilling-Producing Area</u>-means all points that lie along a rectangular or square window formed by plotting the measured distance from the North, South, East and West boundaries of a project area inside of which a vertical wellbore can be drilled in conformity with the setback requirements from the outer boundary of a standard spacing and proration unit for the applicable

pool, or applicable pools in the case of dually completed
or commingled wellbore(s).

- (r) <u>Producing Interval</u>-means that portion of the wellbore drilled inside the vertical limits of a pool, between its penetration point and its terminus (farthest point) and within the drilling-producing area.
- (s) <u>Azimuth</u>-means the measured departure or course deviation of a lateral expressed in terms of compass degrees.
- (t) <u>Kick-off Point-means</u> the point at which the wellbore is intentionally deviated from vertical.
- B. The Division Director shall have the authority to administratively approve a high angle/horizontal/directional drilling pilot project when:
- (1) the surface location of the proposed or existing project well (a) is within the boundaries of the project area, consisting of a minimum 40 contiguous surface acres, more or less, substantially in the form of either a square or a rectangle, as applicable, being a legal subdivision of the U.S. Public Land Survey; and
- (2) the producing interval of the wellbore(s) is totally confined to a drilling-producing area. The wellbore(s) may be re-oriented to any azimuth based upon a change in conditions either geologic or mechanical, which is encountered either before or after the commencement of a project, but only insofar as the producing interval(s) remains totally confined to the drilling-producing area.
- (3) The project area includes either a single or multiple contiguous drilling units.
- (4) The project well includes either a single lateral or multiple laterals which conform to conditions 1 and 2 above.

- (5) The project area may includes one or more non-standard drilling unit(s) which consist of not less than 70 percent nor more than 130 percent of a standard drilling unit for the applicable pool(s).
- C. To obtain administrative approval to drill a High Angle/Horizontal/Directional well, the applicant shall file such application in duplicate with the Division Director, copy to the appropriate OCD District Supervisor, which shall include:
- (1) A 9 (nine) section plat indicating the section, township and range in which the well is to be drilled, the project area, the proposed surface location, the drilling-producing area for the subject well, any existing wells in the proposed project area, all adjoining sections, all offsetting drilling units in the applicable pool(s) and their associated operator, well, well location and spacing unit;
- (2) A designation of the project well as having a lateral which is characterized as either a ultra-short radius, short radius, medium radius, long radius or directionally drilled well as defined above;
- (3) a vertically oriented plan view for the subject well including the true vertical depth of the subject pool, true vertical depth, lateral length, estimated kickoff point (TVD)(MD), penetration point (TVD)(MD) and degree of angle to be built in the project wellbore(s);
- (4) a horizontal plan view for the subject well and its spacing unit showing the drilling unit and drilling-producing window, including the estimated azimuth and maximum length of the lateral(s) to be drilled;
- (5) A type log section on which is identified the top and bottom of the subject pool and the anticipated kickoff point(s) for the wellbore;

- (6) a written summary of the proposed drilling, casing and completion program including the fracture stimulation procedure (if any) for the wellbore(s);
- (7) A written summary of the procedure and materials to be used by the applicant to plug and abandon the wellbore(s) in the event the project is not successful in establishing oil or gas production;
- (8) The proposed allowable for the project area and how that allowable will be allocated among any other existing well(s), if any, within the project area;
- (9) In the event there are any existing wells within the project area producing from the same pool from which the project well is intended to produce, then applicant shall submit engineering and geologic data including a written summary which demonstrates why any existing wells are unable to effectively and efficiently drain the project area;
- (10) A copy of the proposed AFE for the proposed project well including an affidavit that all working interest owners have consented to the drilling of the subject well;
- (11) A statement or plat showing the names and addresses of all interest owners (working interest and royalty) within the project area spacing units and attesting that applicant, on the same date the application was submitted to the Division, has sent notification to all those parties by submitting a copy of the application to them by certified mail return receipt requested; and
- (12) A statement or plat showing the names and addresses of all operators of spacing units, or working interest owners of undrilled spacing units offsetting the unit in which the project is located and attesting that applicant, on the same date the application was submitted to the Division, has sent notification to all those parties by submitting a copy of the application to them by certified mail return receipt requested.

- D. The Division Director may approve the application:
 - (a) upon receipt of waivers from all offset operators or owners of undrilled tracts or (b) if no offset operator or owner has entered an objection to the project within 20 days after the Application was received by the Director; and
 - (c) upon receipt of waivers from all owners within the project area or (b) if no owner has entered an objection to the project within 20 days after the Application was received by the Director.
- E. The maximum allowable assigned to the project when dealing with prorated pools shall be based upon a multiplier consisting of the number of standard proration units (or approved non-standard proration and spacing units) for that pool actually contacted by the producing interval of the wellbore times the allowable for a single proration unit for the applicable pool less any portion of the allowable attributed to any existing well in the project area. The maximum allowable assigned to the project when dealing with NMOCD Rule 505 depth bracket allowable oil pools shall be based upon the number of spacing units described in Rule 505 which are actually contacted by the producing interval of the wellbore times the applicable depth bracket oil allowable.
- F. In the event there are any existing wells within the project area producing from the same pool from which the project well is intended to produce, then the Director shall determine if the project well is necessary in order to effectively produce reserve from that pool and if so shall determine how to allocate the project allowable between or among all wells in the project area so as to protect the correlative rights of owners within the project area and the correlative rights of any offsetting interest owners.

- G. In the event there are any existing wells within the project area then the project well, if and when approved by the Division, shall constitute a special exception to the then existing well spacing pattern established by the Division for that pool.
- I. Any order issued by the Director approving an application shall required that:
- (1) that the applicant shall conduct a directional survey on the wellbore subsequent to directional drilling operations in order that the direction, extent and terminus of said wellbore may be determined to be in compliance with the provision of any order with copies submitted to the Santa Fe NMOCD and to the NMOCD-district office in which the well is located; and
- (2) the applicant shall notify the supervisor of the NMOCD-district office of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.
- H. The Division Director may, at his discretion, set any application for administrative approval for public hearing.

WHEREFORE, Applicant requests that this application be set for hearing before the New Mexico Oil Conservation Commission on 27 day of April, 1995 and that after notice and hearing the application be approved.

Respectfully submitted:

W. THOMAS KELLAHIN Kellahin & Kellahin

P. O. Box 2265

Santa Fe, New Mexico 87504-2265