

State of New Mexico  
**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**  
Santa Fe, New Mexico 87505



**OIL CONSERVATION DIVISION**



June 27, 1995

**Merrion Oil & Gas Corporation**  
**P. O. Box 840**  
**Farmington, New Mexico 87499**

**Attention: George Sharpe**

*RE: Division Case Nos. 11327, 11328, and 11329  
Applications for high angle/horizontal directional drilling  
projects in the San Juan Basin of Northwest New Mexico.*

Dear Mr. Sharpe:

Per our telephone conversation yesterday concerning the subject applications, all three will now be considered under the provisions of revised Division General Rule 111, as promulgated by Division Order No. R-10388, see copy attached. The three cases already docketed for hearing on June 29, 1995 will be continued to the hearing scheduled for July 13, 1995, this will assure that these matters will be handled in a quick and prompt manner should a protest be filed or a glitch arise so that an administrative order could not be issued.

Should you have any questions or comments concerning this matter, please call me in Santa Fe at (505) 827-8185.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Stogner".

Michael E. Stogner  
Chief Hearing Officer/Engineer

cc: OCD - Aztec  
Files: Case No. 11327  
Case No. 11328  
Case No. 11329

**VILLAGRA BUILDING - 408 Galisteo**

Forestry and Resources Conservation Division  
P.O. Box 1948 87504-1948  
827-5830

Park and Recreation Division  
P.O. Box 1147 87504-1147  
827-7465

**2040 South Pacheco**

Office of the Secretary  
827-5950

Administrative Services  
827-5925

Energy Conservation & Management  
827-5900

Mining and Minerals  
827-5970

Oil Conservation  
827-7131

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

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 11274  
Order No. R-10388**

**APPLICATION OF MERIDIAN OIL INC. TO  
ESTABLISH A STATEWIDE ADMINISTRATIVE  
PROCEDURE FOR APPROVAL OF DIRECTIONAL  
DRILLING PROJECTS IN THE STATE OF  
NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on April 27, 1995, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 13<sup>th</sup> day of June, 1995, the Commission, a quorum being present, having considered the record and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) There was a consensus among industry and government that there is a need for revision of Rule 111 to provide for administrative approval for directionally drilled wells under certain circumstances, in particular intentionally deviated directional wells which have been approved only after notice and hearing or in certain pools with special provision contained therein.

(3) Although Meridian Oil Inc. was the applicant and all present agreed to the concept of administrative approval for directionally drilled wells, additional testimony was provided by Amoco Production Company, Marathon Oil Company, Mobil Exploration and Production, Phillips Petroleum Company, Permian Basin Petroleum Association, New Mexico Oil and Gas Association, and New Mexico Oil Conservation Division. Differences of opinion centered around an expanded version of the proposed rule change incorporating more definitions and greater reporting requirements for applicants and a shorter version with condensed definitions and reduced reporting requirements.

(4) The more condensed rule changes provide for greater efficiencies without sacrificing clarity or important documentation.

(5) Meridian Oil Inc. recommended rule provisions which would address correlative rights within affected proration units. Marathon Oil Company and Amoco Production Company supported a simplified rule which allows for operator decisions concerning the need for additional wells.

(6) Operational decisions and equity issues should be addressed under provisions of the operating agreement that deal with "operations by less than all parties" and not by regulations.

(7) The rule changes incorporated in Exhibit "A", attached hereto and made a part hereof, will not affect wells deviated intentionally for mechanical and/or operational reasons and will make the process for application and approval of directionally drilled wells more efficient and less costly without causing waste or impairing correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) Division Rule 111 be amended to read as shown on Exhibit "A" attached to and made part of this Order.

(2) Revised Rule 111 shall be effective on the date of this Order.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinafter designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Bill Weiss*

WILLIAM R. WEISS, Member

*G Carlson*

GARY CARLSON, Member

*William J. Lemay*

WILLIAM J. LEMAY, Chairman

**EXHIBIT "A"**  
**CASE NO. 11274**  
**ORDER NO. R-10388**

**RULE 111-Deviation Tests/Deviated Wells and Directional Wells:**

**A. Definitions:** The following definitions shall apply to this Rule:

(1) Deviated Well - means any wellbore which is intentionally deviated from vertical but not with an intentional azimuth. Any deviated well is subject to Rule 111-B and C.

(2) Directional Well - means a wellbore which is intentionally deviated from vertical with an intentional azimuth. Any directional well is subject to Rule 111-D.

(3) Vertical Well - means a well that does not have an intentional departure or course deviation from the vertical.

(4) Drilling Unit - 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 the Division and all non-standard such units previously approved by the Division.

(5) Wellbore - means the interior surface of a cased or open hole through which drilling, production, or injection operations are conducted.

(6) Project Well - means any well drilled, completed, produced or injected into as either a deviated well or as a directional well.

(7) Project Area - means one or more drilling units which are to be dedicated to the project well.

(8) Producing Area - 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 and produced in conformity with the setback requirements from the outer boundary of a standard spacing and proration unit for the applicable pool(s).

(9) Penetration Point - means the point where the wellbore penetrates the top of the pool from which it is intended to produce.

(10) Azimuth - means the deviation in the horizontal plane of a wellbore expressed in terms of compass degrees.

(11) Kick-off Point - means the point at which the wellbore is intentionally deviated from vertical.

(12) **Terminus** - means the farthest point attained along the wellbore.

(13) **Producing Interval** - means that portion of the wellbore drilled inside the vertical limits of a pool, between its penetration point and its terminus and within the producing area.

(14) **Lateral** - means any portion of a wellbore past the point where the wellbore has been intentionally departed from the vertical.

**B. Deviation Tests:**

Any well which is drilled or deepened shall be tested at reasonably frequent intervals to determine the deviation from the vertical. Such tests shall be made at least once each 500 feet or at the first bit change succeeding 500 feet. A tabulation of all deviation tests run, sworn to and notarized, shall be filed with Form C-104, Request for Allowable and Authorization to Transport Oil and Natural Gas. When the deviation averages more than five degrees in any 500-foot interval, the operator shall include the calculations of the maximum possible horizontal displacement of the hole and the Division Director may require that a directional survey be run to establish the location of the producing interval(s). Upon request from the Division Director, any well which was deviated in an indeterminate direction or toward the vertical shall be directionally surveyed.

**C. Deviated Wellbores:**

(1) The Supervisor of the appropriate Division District may approve the written request of an operator to drill a deviated wellbore or to deviate an existing wellbore to:

- (a) straighten a crooked hole by deviating towards the vertical;
- (b) side track junk in the hole by deviating in an indeterminate direction (no intentional azimuth);
- (c) side track an existing wellbore by deviating in an indeterminate direction (no intentional azimuth) for the purpose of recompleting into an existing producing formation or plugging the originally completed formation and recompleting into a different formation.

(2) The Supervisor of the appropriate Division District may require any request for a deviated well to be submitted for administrative approval by the Division Director.

(3) Applications for administrative approval for a deviated well shall:

- (a) be filed in duplicate and shall be accompanied by plats showing both the surface location of the subject well, its spacing unit and all adjoining spacing units;
- (b) state the reason(s) for deviating the subject well; and
- (c) shall include 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 or before 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 advising them that if they have an objection, it must be filed in writing within twenty (20) days of the date notice was sent.

(4) The bottomhole location of any deviated well shall be at an orthodox well location or an unorthodox location previously approved pursuant to Rule 104 and shall be considered acceptable if the actual subsurface location in the formation to be produced is orthodox or is no more than 50 feet from the approved subsurface location.

(5) The Division Director may approve the application for a deviated well upon receipt of waivers from all offset operators or owners of undrilled tracts or if no offset operator or owner has entered an objection to the project within 20 days after the application was received by the Director.

**D. Directional Wellbore:**

(1) The Division Director, shall have the authority without notice and hearing to administratively approve a directional wellbore project when:

- (a) the surface location of the proposed or existing project well is within the boundaries of the project area, consisting of a single or multiple drilling unit(s), substantially in the form of either a square or a rectangle, as applicable, being a legal subdivision of the U.S. Public Land Survey;
- (b) the producing interval of the wellbore(s) is totally confined to a 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 producing area;
- (c) the project area includes either a single drilling unit or multiple contiguous drilling units; and,

- (d) the project well includes either a single lateral or multiple laterals which conform to conditions (a) and (b) above.

(2) To obtain administrative approval to drill a directional well, the applicant shall file a written application in duplicate with the Division Director, copy to the appropriate OCD District Supervisor, which shall include:

- (a) a statement addressing the reason(s) for directionally drilling the subject well;
- (b) a plat indicating the section, township and range in which the well is to be drilled, the project area, the proposed surface location, the producing area for the project well, any existing wells in the applicable pool(s) in the proposed project area, all offsetting drilling units in the applicable pool(s) and their associated operator, and any wells in those units;
- (c) a vertically oriented plan view (cross-sectional view) for the subject well including the true vertical depth of the top and bottom of the subject pool, degree of angle to be built in the project wellbore(s), the true vertical and the measured depth of the estimated kickoff point, the estimated penetration point and the lateral length;
- (d) 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;
- (e) a type log section on which is identified the top and bottom of the subject pool; and,
- (f) 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 the applicable pool(s) in which the project is located and attesting that applicant, on or before 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 advising them that if they have an objection, it must be filed in writing within twenty (20) days of the date notice was sent.

(3) The maximum allowable assigned to the project area when dealing with prorated pools shall be based upon of the number of standard proration units (or approved non-standard proration and spacing units) for that pool any portion of which is within a distance of the producing lateral of the directional wellbore not greater than the footage setback distance for locating a vertical well from the outer boundary of a spacing unit for that pool.

**E. Requirements/Conditions of Administrative Approval:**

(1) The Division Director may approve the application upon receipt of waivers from all offset operators or owners of undrilled tracts or if no offset operator or owner has entered an objection to the project within 20 days after the application was received by the Director.

(2) Any order issued by the Director approving an application for a directional wellbore shall require that:

- (a) the applicant shall conduct a directional survey on the wellbore after 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,
- (b) the Supervisor of the appropriate Division District shall be notified of the approximate time all directional surveys are to be conducted. All directional surveys run on any well in any manner for any reason must be filed with the Division upon completion of the well. The Division shall not assign an allowable to a well until the operator has submitted an affidavit that all such directional surveys have been filed.

**F. Additional Matters:**

(1) The Division Director, at the request of an offset operator, may require any operator to make a directional survey of any well. The directional survey and all associated costs shall be at the expense of the requesting party and shall be secured in advance by a \$5,000 indemnity bond posted with and approved by the Division. The requesting party may designate the well survey company and the survey may be witnessed by the Division and the operator.

(2) The Division Director, may, at his discretion, set any application for administrative approval for public hearing.

(3) Permission to deviate or directionally drill any wellbore for any reason or in any manner not provided for in this rule shall be granted only after notice and hearing.