

*Marathon Exhibits 1 through
Complete Set*

- Active Devonian Well
- Inactive Devonian Well

Before The Oil Conservation Division
Santa Fe, New Mexico

Case No. 11274
Exhibit No. 1
Submitted by Marathon Oil Company
April 27, 1995

MARATHON OIL COMPANY

J. M. Denton Lease
Lea County, New Mexico

SOUTHWEST

NORTHEAST

C

C'

SUBSEA
DEPTH

-7200
-7300
-7400
-7500
-7600
-7700
-7800
-7900
-8000
-8100
-8200
-8300
-8400
-8500
-8600
-8700
-8800
-8900
-9000

SUBSEA
DEPTH

-7200
-7300
-7400
-7500
-7600
-7700
-7800
-7900
-8000
-8100
-8200
-8300
-8400
-8500
-8600
-8700
-8800
-8900
-9000

MOC
DENTON
NO. 5

MOC
DENTON
#4

TOP OF DEVONIAN

NEUTRON

HORIZONTAL
BOREHOLE

"TIGHT" CAP
PROPOSED HORIZONTAL WELL
(projected 1000', N 15° E)

RESERVE
REFERENCE
DATUM

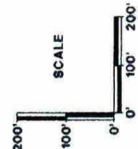
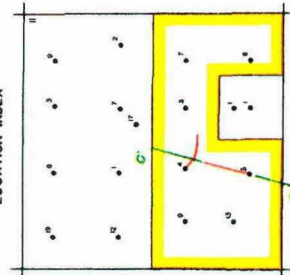
RESERVE
REFERENCE
DATUM

PROPRATION UNIT BOUNDARY
WELL NO. 4 & WELL NO. 5

T.D.
PRODUCTION TO DATE
1,142,977 BO
451,686 MCFG
AS OF 9/93
INACTIVE

T.D.
CPTD
1,628 MBO - 1,793 MMCFG

LOCATION INDEX



BEFORE THE OIL CONSERVATION DIVISION
SANTA FE, NEW MEXICO

CASE NO. 11274

EXHIBIT NO. 2

SUBMITTED BY MARATHON OIL COMPANY
APRIL 20, 1995

MARATHON OIL COMPANY	MED. CONTINENT REGION
DENTON FIELD	
LEA COUNTY, NEW MEXICO	
STRUCTURAL CROSS-SECTION SHOWING PROPOSED MARATHON J.M. DENTON #5A MEDIUM RADIUS LATERAL SE SW 11-15S-37E	
ORIGINAL SCALE	DATE: 4/95
AUTHOR: VJTT	REVISED:
DRAWN BY:	FILE NO. DENTON SEC. 15N.

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

A. The following definitions shall apply to this Rule:

- (a) NMOCD - means the New Mexico Oil Conservation Division.
- (b) 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 NMOCD and all non-standard such units previously approved by the NMOCD.
- (c) Wellbore - means the interior surface of a cased or open hole through which drilling, production, or injection operations are conducted.
- (d) Project Well - means any well drilled, completed or produced as ~~either a horizontal, high angle or directional drilled well.~~
- (e) Project Area - means one or more drilling units which are to be dedicated to the project well.
- (f) Penetration Point - means the point where the wellbore penetrates the top of the pool from which it is intended to produce.
- (g) Terminus - means the farthest point attained along the ~~horizontal lateral or high angle portion of the wellbore.~~
- (h) Vertical Well - means a well that does not have a departure or course deviation from the vertical.
- ~~(i) Horizontal Well - 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) High Angle Well - 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.~~
- (i) ~~(*)~~ Directional Drilled Well - means a well which is intentionally deviated from vertical with an intentional azimuth.

~~(j)-(l)~~Lateral - means any portion of a wellbore which has ~~past the point where the wellbore has been~~ intentionally departed from the vertical point ~~directly beneath the surface location~~.

~~(m)~~ Ultra Short Radius Lateral - 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 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.

~~(o)~~ Medium Radius Lateral - means the measured departure of a wellbore from vertical that has an angle of build 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.

~~(k)-(q)~~Drilling-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 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).

~~(l)-(r)~~Producing Interval - 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.

~~(m)-(s)~~Azimuth - means the measured departure or course deviation in the horizontal plane of a lateral expressed in terms of compass degrees.

~~(n)-(t)~~Kick-off Point - means 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 include 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, with a 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 project well, any existing wells in the applicable pool(s) in the proposed project area, ~~all adjoining sections~~, all adjoining drilling units in the applicable pool(s) and their associated operator, ~~well, well location and spacing unit and any wells in those units~~;

~~(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;~~

~~(2)(3)~~ a vertically oriented plan view for the subject project well including the true vertical depth of the top and bottom 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);

(3)(4) a horizontal plan view for the ~~subject project~~ 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, the 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;~~

(4)(11) 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, a statement or plat showing the names and addresses of all working 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

(5)(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

~~(b)(e) in the case of existing wells producing from the same pool(s) within the project area upon receipt of waivers from all working interest 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 equal to~~ 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 NMOC 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(s) 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 project allowable may be produced in any proportion by all the wells in the project area.~~

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.

H ~~±~~. 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 NMOC District and to the NMOC 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.

I H. The Division Director may, at his discretion, set any application for administrative approval for public hearing.