



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

BETTY RIVERA

Cabinet Secretary

July 3, 2002

Lori Wrotenberg

Director

Oil Conservation Division

Marathon Oil Company  
c/o W. Thomas Kellahin  
P. O. Box 2265  
Santa Fe, New Mexico 87504-2265

Telefax No. (505) 982-2047

*Administrative Order NSL-4755 (BHL)*

Dear Mr. Kellahin:

Reference is made to the following: (i) your application (*application reference No. pKRV0-201555225*) on behalf of the operator, Marathon Oil Company ("Marathon"), that was submitted to the New Mexico Oil Conservation Division ("Division") on January 14, 2002; (ii) the Division's initial response by letter dated February 14, 2002 from Mr. Michael E. Stogner, Engineer/Chief Hearing Officer in Santa Fe requesting verification and additional data to support your application; (iii) your response by letter dated February 28, 2002 with attachments; (iv) your conversation with Mr. Stogner on March 27, 2002 whereby Marathon was given verbal approval to commence drilling the well that is the subject to your request; (v) your e-mail message to Mr. Stogner of May 8, 2002; (vi) Mr. Walter Dueease's meeting in Santa Fe with Mr. Stogner in Santa Fe on May 20, 2002; (vii) Mr. Dueease's telephone conversation with Mr. Stogner on June 24, 2002; (viii) Mr. Dueease's e-mail of June 27, 2002 that contained an amendment to the original application and included attachments to complete this filing; (ix) Mr. Stogner's two e-mail messages to Mr. Dueease on June 27, 2002; (x) Mr. Dueease's reply by e-mail on June 28, 2002; (xi) two other e-mail messages from Mr. Stogner to Mr. Dueease on July 2, 2002 seeking clarification of the amended data; (xii) Mr. Dueease's three e-mails to the Division submitted on July 2, 2002 with the required information necessary to complete this filing; and (xiii) the Division's records in Santa Fe and Artesia: all concerning Marathon's request for a non-standard subsurface well location to be applicable to the Wolfcamp formation and the Undesignated Indian Basin-Upper Pennsylvanian Associated Pool (33685) for its recently drilled Indian Hills Unit Well No. 42 located on the surface 475 feet from the North line and 2522 feet from the East line (Lot 2/Unit B) of Section 20, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico. The S/2 equivalent of Section 17 (Lots 1 through 8), Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, being a standard 343.86-acre lay-down spacing and proration unit for both intervals is to be dedicated to this well.

## The Division Director Finds That:

(1) Marathon is the current operator of the Indian Hills Unit Area (see Division Order No. R-2420, issued in Case No. 2748 on February 6, 1963) comprising the following described 4,480.00 acres, more or less, of Federal (3,640 acres, 81.25 %) and State (840 acres, 18.75 %) lands in Eddy County, New Mexico:

### TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Sections 16 and 17:	All
Sections 20 and 21:	All
Sections 28 and 29:	All
Section 33:	All.

(2) The Indian Basin-Upper Pennsylvanian Associated Pool currently comprises the following described area in Eddy County, New Mexico:

TOWNSHIP 21 SOUTH, RANGE 23 EAST, NMPM

Section 36: E/2

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM

Section 16: W/2

Sections 20 and 21: All

Section 27: S/2

Sections 28 through 34: All

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM

Section 1: E/2

Section 12: E/2

Section 13: E/2

TOWNSHIP 22 SOUTH, RANGE 24 EAST, NMPM

Sections 2 through 10: All

Section 11: N/2

Sections 16 through 18: All.

(3) The area encompassing the Indian Basin-Upper Pennsylvanian Associated Pool and the upper-Pennsylvanian interval (Cisco and Canyon formations) within one-mile is currently governed by the "*Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool*", as promulgated by New Mexico Oil Conservation Division ("Division") Order Nos. R-9922, R-9922-A, R-9922-B, R-9922-C, and R-9922-D and the "*General Rules and Regulations for the Associated Oil and Gas Pools of Northwest New Mexico and Southeast New Mexico*", as promulgated by Division Order No. R-5353, as amended, which require standard 320-acre oil and gas spacing units with wells to be located no closer than 660 feet from the outer boundary of the proration unit nor closer than 330 feet from any quarter-quarter section line or subdivision inner boundary, and no more than one well per 80-acre tract shall be drilled or produced on a standard proration unit.

(4) The subject 343.86-acre spacing unit for this well comprising the S/2 equivalent of Section 17, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, is: (i) within one mile of the Indian Basin-Upper Pennsylvanian Associated Pool, which is the primary zone of interest for Marathon's Indian Hills Unit Well No. 42; and (ii) is considered to be "wildcat" in the Wolfcamp formation.

(5) The secondary Wolfcamp zone is currently subject to Division Rule 104.C (1), which provides for: (i) 320-acre spacing; and (ii) for the initial well to be no closer than 660 feet to any quarter section line nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary.

(6) Marathon initially spud the Indian Hills Unit Well No. 42 on April 4, 2002 and directionally drilled to a depth of 8985 feet. The estimated top of the Strawn was found at a depth of 8938 feet. During

drilling, severe lost circulation problems were encountered at 8258 feet. While attempting to log the well to TD the logging tools became stuck at 8854 feet. After an unsuccessful attempt to wash over the logging tools, the FMI, density, receptivity tools, as well as two joints of washpipe were left in the hole. At this point, Marathon elected to plug back the initial directional wellbore and sidetrack a new hole; however, while setting plugs on top of the washpipe and logging tools, Marathon again stuck the drill string at 8600 feet and left behind seven joints of heavy walled drill pipe and three joints of 2-7/8 inch AOH tubing. An abandonment plug was finally set at 7815 feet (presumably in a manner that meets with approval by the Division, the appropriate agency of the U. S. Department of the Interior, and the U. S. Department of Energy) and a kick-off plug was set at 5945 feet. This second sidetracked hole was kicked-off at a depth of 6170 feet in an east-northeasterly direction and TD'ed at 8935 feet. Due to severe circulation losses encountered at a depth of 8239 feet and expenses incurred on the well thus far, Marathon elected to TD the well at the base of the upper-Pennsylvanian interval (Canyon formation) and not pursue the Strawn as originally planned.

(7) The actual subsurface location of the current direction wellbore at:

- (i) the top of the Wolfcamp formation at a measured depth of 7395 feet is 6 feet from the South line and 761 feet from the East line (Lot 8/Unit P) of Section 17, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico; and
- (ii) the top of the Upper-Pennsylvanian interval (Cisco formation) at a measured depth of 8227 feet is 46 feet from the South line and 511 feet from the East line (Lot 8/Unit P) of Section 17.

(8) The geologic interpretation submitted with this application indicates that the well drilled in this manner served to penetrate the Undesignated Indian Basin-Upper Pennsylvanian Associated Pool at a more favorable geologic position than a well drilled at a location considered to be standard within the S/2 equivalent of Section 17; furthermore, it is economically practical to utilize a single wellbore to test the secondary Wolfcamp interval.

(9) The subject application for Marathon's proposed Indian Hills Unit Well No. 42 has been duly filed under the provisions of: (i) Division Rule 104.F; (ii) Division Rule 1207.A; (iii) 111.C (2); and (iv) Rule 2 (c) of the aforementioned associated oil and gas pool rules.

**It Is Therefore Ordered That:**

(1) By the authority granted me under the provisions of Division Rules 104.F (2), as revised, and the applicable provisions of the rules governing the Indian Basin-Upper Pennsylvanian Associated Pool, Marathon Oil Company's ("Marathon") request for an unorthodox subsurface location in both the Wolfcamp formation and Undesignated Indian Basin-Upper Pennsylvanian Associated Pool (33685), as further described in Finding Paragraphs No. (6) and (7) above, for its Indian Hills Unit Well No. 42, located at a surface location 475 feet from the North line and 2522 feet from the East line (Lot 2/Unit B) of Section 20, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, is hereby approved.

(2) Lots 1 through 8 (S/2 equivalent) of Section 17, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, being a standard 343.86-acre lay-down spacing and proration unit for both the Wolfcamp formation and the Undesignated Indian Basin-Upper Pennsylvanian Associated Pool, is to be

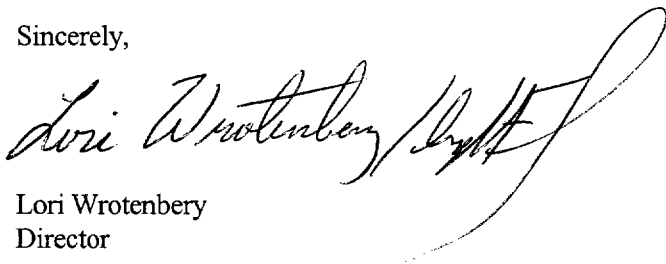
dedicated to this well.

(3) The aforementioned well and spacing unit will be subject to all existing rules, regulations, policies, and procedures applicable to the Indian Basin-Upper Pennsylvanian Associated Pool.

(4) Further, Marathon shall comply with all provisions of Division Rule 111 applicable in this matter.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Lori Wrotenberg", followed by a large, stylized flourish or initial.

Lori Wrotenberg  
Director

LW/MES/kv

cc: New Mexico Oil Conservation Division - Artesia  
U. S. Bureau of Land Management - Carlsbad  
New Mexico State Land Office - Santa Fe  
Walter Dueease - Marathon Oil Company, Midland