



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**  
Governor  
**Joanna Prukop**  
Cabinet Secretary

**Mark E. Fesmire, P.E.**  
Director  
Oil Conservation Division

October 13, 2004

**Marathon Oil Company**  
P. O. Box 3487  
Houston, Texas 77253-3487

**Attention: Mark Mick**  
**Operations Engineer**  
*msmick1@yahoo.com*

*Administrative Order NSL-4649-B (BHL) (SD)*

Dear Mr. Mick:

Reference is made to the following: (i) your application filed with the New Mexico Oil Conservation Division ("Division") on September 15, 2004 (*administrative application reference No. pSEM0-425948610*); (ii) the Division's initial response by e-mail on Tuesday, October 12, 2004 from Mr. Michael E. Stogner, Chief Hearing Officer/Engineer with the Division in Santa Fe requesting verification of certain data submitted; (iii) your reply by e-mail on Wednesday, October 13, 2004 with the necessary explanation to complete your application; and (iv) the Division's records in Santa Fe, including the files on Division Administrative Orders NSL-4649 (BHL) and NSL-4649-A (BHL) (SD): all concerning Marathon Oil Company's ("Marathon") request for an exception to Rule 2 (b) of 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, R-9922-D, and R-9922-E 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, for its proposed Indian Hills Unit Well No. 59 to be drilled as an upper Pennsylvanian infill well to an unorthodox subsurface location within an existing standard 320-acre stand-up spacing and proration unit comprising the W/2 of Section 21, Township 21 South, Range 24 East, NMPM, Indian Basin-Upper Pennsylvanian Associated Pool (33685), Eddy County, New Mexico.

This unit is currently simultaneously dedicated to Marathon's:

- (i) Indian Hills Unit Well No. 1 (API No. 30-015-10066), located on the surface 416 feet from the South line and 176 feet from the West line (Unit M) of Section 21 and completed within the Indian Basin-Upper Pennsylvanian Associated Pool at an unorthodox bottom-hole location that is 427 feet from the South line and 30 feet from the West line (Unit M) of Section 21, see Division Administrative Order NSL-4649 (BHL), dated October 3, 2001;

(ii) Indian Hills Unit Well No. 31 (API No. 30-015-31534), located on the surface 1093 feet from the North line and 663 feet from the East line (Unit A) of Section 20, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, and completed within the Indian Basin-Upper Pennsylvanian Associated Pool at a bottom-hole infill location within Unit "F" of offsetting Section 21 that is 1327 feet from the North line and 1510 feet from the West line of Section 21, see Division Administrative Order NSL-4649-A (BHL) (SD), dated April 23, 2004, as corrected administratively by order also dated April 23, 2004; and

(iii) Indian Hills Unit Well No. 36 (API No. 30-015-32140), located on the surface 429 feet from the South line and 506 feet from the West line (Unit M) of Section 21, and completed within the Indian Basin-Upper Pennsylvanian Associated Pool at a bottom-hole infill location within Unit "K" of Section 21 that is 1708 feet from the South line and 1608 feet from the West line of Section 21.

It is the Division's understanding that Marathon's proposed Indian Hills Unit Well No. 59, because of topographic reasons and to utilize the same well pad as its above-described Indian Hills Well No. 31, will be spud at a surface location 1117 feet from the North line and 641 feet from the East line (Lot 1/Unit A) of Section 20, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico and drilled directionally to the southeast to a targeted-bottomhole location within the Mississippian formation at an approximate depth of 11,124 feet (MD) 2349 feet from the South line and 1043 feet from the West line (Unit L) of Section 20, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico. The wellbore is to intersect the top of the Indian Basin-Upper Pennsylvanian Associated Pool at an approximate depth of 8,006 feet (MD), or 7,790 feet (TVD), 2293 feet from the North line and 361 feet from the West line (Unit E) of Section 21, and exit the base of the Indian Basin-Upper Pennsylvanian Associated Pool at an approximate depth of 8,735 feet (MD), or 8,493 feet (TVD), 2429 feet from the North line and 479 feet from the West line (Unit E) of Section 21. The proposed wellbore will be unorthodox throughout the entire Indian Basin-Upper Pennsylvanian Associated Pool since the borehole will be closer than the standard setback distance of 660 from the West line of Section 21. Further, this bottom-hole location has been chosen by Marathon to optimize reservoir drainage in the Upper-Pennsylvanian interval and minimize geological risk in the upper and lower Pennsylvanian and the deeper Mississippian interval.

This application has been duly filed under the provisions of Division Rule 104.F and Rule 2 (c) of the Division's associated pool rules.

By the authority granted me under the provisions of Division Rule 104.F (2) and the applicable provisions of the special rules governing the Indian Basin-Upper Pennsylvanian Associated Pool, the above-described unorthodox sub-surface location for the Indian Hills Unit Well No. 59 within the W/2 of Section 21 is hereby approved.

Further, 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.

Marathon is hereby authorized to simultaneously dedicate production attributed to the Indian Basin-Upper Pennsylvanian Associated Pool from the aforementioned Indian Hills Unit Wells No. 1, 31, 36, and 59. Furthermore, Marathon is permitted to produce the allowable assigned the subject 320-acre spacing and proration unit from all four wells in any proportion.

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

Sincerely,



Mark E. Fesmire, P. E.  
Director

MEF/ms

cc: New Mexico Oil Conservation Division - Artesia  
U. S. Bureau of Land Management - Carlsbad  
File:  NSL-4649 (BHL)  
NSL-4649-A (BHL) (SD)