

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

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

**CASE NO. 13976  
ORDER NO. R-9976-E**

**APPLICATION OF MCKAY OIL  
CORPORATION TO AMEND THE SPECIAL  
RULES AND REGULATIONS FOR THE  
WEST PECOS SLOPE-ABO GAS POOL,  
CHAVES COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on August 23, 2007, at Santa Fe, New Mexico, before Examiners David K. Brooks and William Jones.

NOW, on this 3<sup>rd</sup> day of January, 2008, the Division Director, having considered the testimony, the record and the recommendations of the Examiners,

**FINDS THAT:**

(1) Due notice has been given, and the Division has jurisdiction of the subject matter of this case.

(2) By this application, McKay Oil Corporation ("Applicant") seeks an order amending the Special Rules and Regulations for the West Pecos Slope-Abo Gas Pool to reduce the setback distance for wells from the outer boundaries of spacing units from 660 feet to 330 feet, allow up to four wells per spacing unit and authorize administrative approval of exceptions to the maximum number of wells per spacing unit, pursuant to Division Rule 104.D(3).

(3) The West Pecos Slope-Abo Gas Pool was established by Order No. R-6876, issued in Case No. 7447 on January 22, 1982, and now consists of the following lands in Chaves County, New Mexico:

Township 5 South, Range 21 East, NMPM

Section

25	NE/4
27	SW/4
30-34	All
35	SW/4

Township 5 South, Range 22 East, NMPM

Section

7	SW/4
18	W/2
19	W/2
25	SE/4
27	SW/4
30	NW/4 and S/2
31	All
32	SE/4
33	SW/4
34 and 35	All
36	N/2

Township 6 South, Range 22 East, NMPM

Section

1-4	All
9-16	All
17	E/2
20-28	All
33-36	All

Township 6 South, Range 23 East, NMPM

Section

4	All
6	S/2
7-9	All
16-21	All
29-32	All

Township 7 South, Range 22 East, NMPM

Section

1-4	All
9-16	All

Township 7 South, Range 22 East, NMPM, ctd

Section

21-28	All
33-36	All

Township 7 South, Range 23 East, NMPM

Section

3	SW/4
4	S/2
5-10	All
11	W/2
15	W/2
16-21	All
28-32	All

Township 8 South, Range 22 East, NMPM

Section

1-4	All
9-16	All
17	SE/4
21-29	All
33-36	All

Township 8 South, Range 23 East, NMPM

Section

3-10	All
15	NW/4
16	E/2
17	W/2
18-19	All
20	W/2
29	W/2
30-32	All
33	SW/4

Township 9 South, Range 22 East, NMPM

Section

1	E/2
4	W/2
12	E/2
13	E/2
24	E/2

Township 9 South, Range 23 East, NMPM

Section

2-8	All
11	N/2
18	W/2
19	W/2

(4) Well spacing and density in the West Pecos Slope-Abo Gas Pool is governed by the Special Rules and Regulations for the West Pecos Slope-Abo Gas Pool adopted in Order No. R-9976-C, issued on March 19, 1996, as amended by Order No. R-9976-D, issued on February 4, 2004. These rules provide that a spacing unit in this pool shall consist of 160 acres, comprising a single governmental quarter section, that up to two wells may be drilled, completed in, and produced from this pool within any spacing unit, and that wells shall be located at least 660 feet from any unit outer boundary, and at least 10 feet from any quarter-quarter section line.

(5) Applicant appeared at the hearing through counsel and presented land, geologic and engineering testimony and exhibits demonstrating that:

(a) The West Pecos Slope Abo-Gas Pool has been substantially developed on its present drainage pattern of two wells per 160-acre unit.

(b) There are presently four operators in the pool, including Applicant. Two of the other three operators have signed consents (admitted as exhibits at the hearing) agreeing to Applicant's proposals, and the remaining operator indicated to Applicant that it will not oppose the application.

(c) There is a need to limit surface use in the area to accommodate surface owners, conform to surface topography and avoid interference with archeological sites. Because of these considerations, as well as reservoir characteristics, Applicant needs the flexibility to use horizontal wells, including multiple laterals from a single surface location, to fully develop this pool.

(d) The Abo sands that are productive of gas in the West Pecos Slope-Abo Gas Pool are tight compared to other Abo sands in the vicinity. Permeability ranges from 0.1 to 5.0 millidarcies, and averages around 2.3 millidarcies. Permeability of sands encountered in many of the wells is less than one millidarcy.

(e) Lateral continuity of the Abo sands in this area is very irregular, so that the sands penetrated in one well may be different from the sands penetrated in nearby wells.

(f) Applicant has estimated the drainage area of its wells by adding estimated gas remaining to cumulative production to estimate original gas in place, and then determining drainage area using data from the individual well logs, and a water saturation of 35%, which is typical of the Abo. These estimates indicate that many of the wells are draining substantially less than 80 acres.

(g) Applicant's estimates of drainage area were conservatively designed to overstate, rather than understate, actual drainage areas. Among other conservative methods employed in arriving at these estimates, Applicant estimated future production based on projecting current production for ten years,

rather than the actual decline curve that showed an average two percent per year production decline.

(h) Based on Applicant's estimates of drainage area, and the presence of discontinuous, productive sands, a well density greater than two wells per 160 acres, and a setback less than 660 feet from unit boundaries, are needed to efficiently produce the maximum amount of gas from this reservoir.

(6) No other party appeared at the hearing or otherwise opposed the granting of this application.

(7) The Division concludes that the proposed changes to the Special Pool Rules for the West Pecos Slope-Abo Gas Pool will probably make possible the recovery of additional gas from this pool that would otherwise not be produced, thus preventing waste, and will not impair correlative rights. Accordingly, these changes should be adopted.

**IT IS THEREFORE ORDERED THAT:**

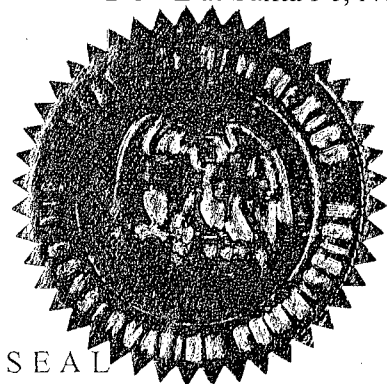
(1) The Special Rules and Regulations for the West Pecos Slope-Abo Gas Pool, as promulgated by Order No. R-9976-C and amended by Order No. R-9976-D are hereby repealed.

(2) The Special Rules for the West Pecos Slope-Abo Gas Pool, as set forth in Exhibit A to this Order, are hereby adopted.

(3) In all other respects, Order No. R-9976, as amended by Order Nos. R-9976-B, R-9976-C and R-9976-D, shall remain in full force and effect.

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

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



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.  
Director

Exhibit A to  
Order No. R-9976-E  
Case No. 13976

**SPECIAL RULES FOR THE  
WEST PECOS SLOPE-ABO GAS POOL**

**Rule 1.**      **Application of Rules.** Each well completed in the West Pecos Slope-Abo Gas Pool (this pool), or in the Abo formation within one mile thereof and not nearer to or within the limits of another designated Abo gas pool, shall be spaced, drilled, operated and produced as herein provided.

**Rule 2.**      **Unit Size.** A standard spacing unit in this pool shall consist of 160 acres, more or less, consisting of a governmental quarter section, unless otherwise authorized in accordance with Division rules. All non-standard units heretofore approved shall remain in effect.

**Rule 3.**      **(a) Well Density.** No more than four wells (to consist of vertical wells, directional wells drilled pursuant to Division Rule 111, or any combination thereof) shall be simultaneously produced from this pool within any spacing unit. Wells may be completed anywhere in the unit, subject to Rule 3(b) and to Division Rule 111.

**(b) Location.** No well in this pool shall be located closer than 330 feet to any unit outer boundary. Except for directional wells located as provided in Division Rule 111, no well in this pool shall be located closer than 10 feet to any governmental quarter-quarter section or subdivision line.

**(c) Units Adjacent To Other Abo Pools.** Notwithstanding the provisions of Rule 3(a) and 3(b), no more than two wells shall be simultaneous produced from this pool within any spacing unit any part of which is less than one-quarter mile from any other designated Abo gas pool, and a well in any such unit shall be located at least 660 feet from the outer boundary of such other Abo gas pool.

**Rule 4.**      **Exceptions.** The Division may grant exceptions to any provision of these rules in the manner and on the basis provided by statewide rules of the Division.