

**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. 12873  
ORDER NO. R-2429-E**

**APPLICATION OF GRUY PETROLEUM MANAGEMENT COMPANY AND  
WADI PETROLEUM, INC. TO AMEND THE SPECIAL RULES AND  
REGULATIONS FOR THE WHITE CITY-PENNSYLVANIAN GAS POOL, OR,  
IN THE ALTERNATIVE, FOR APPROVAL OF FOUR UNORTHODOX INFILL  
GAS WELL LOCATIONS, TWO UNORTHODOX GAS WELL LOCATIONS, AND  
ONE INFILL GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on June 27 and August 1, 2002, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 8th day of October, 2002, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

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

(2) The applicants, Gruy Petroleum Management Company ("Gruy") and Wadi Petroleum, Inc. ("Wadi") seek an order amending the "*Special Rules and Regulations for the White City-Pennsylvanian Gas Pool*," to provide:

- (a) the option to drill one well on each quarter-section within a standard 640-acre gas spacing and proration unit; and
- (b) that wells may be drilled no closer than 660 feet to a quarter-section line nor closer than 10 feet to any quarter-quarter section line or subdivision inner boundary.

(3) In the alternative, the applicants seek approval of the following-described four unorthodox infill gas well locations:

- (a) the Wadi Pennzoil "9" Federal Com Well No. 4 to be drilled 1410 feet from the North line and 1320 feet from the East line (Unit G) of Section 9, Township 24 South, Range 26 East, NMPM;
- (b) the Wadi Pennzoil Federal Com Well No. 3 to be drilled 2000 feet from the South line and 660 feet from the East line (Unit I) of Section 15, Township 24 South, Range 26 East, NMPM;
- (c) the Gruy White Baby Com Well No. 3 to be drilled 1980 feet from the South line and 660 feet from the East line (Unit I) of Section 16, Township 24 South, Range 26 East, NMPM; and
- (d) the Gruy White Baby Com Well No. 4 to be drilled 990 feet from the North and West lines (Unit D) of Section 16, Township 24 South, Range 26 East, NMPM.

(4) In addition, the applicants seek approval of the following-described unorthodox gas well locations:

- (a) the Wadi Pennzoil Federal Com Well No. 2 to be drilled 760 feet from the North line and 660 feet from the East line (Unit A) of Section 15, Township 24 South, Range 26 East, NMPM; and
- (b) the Wadi Federal "22" Com Well No. 2 to be drilled 990 feet from the North line and 660 feet from the East line (Unit A) of Section 22, Township 24 South, Range 26 East, NMPM.

(5) In addition, the applicants seek authority to drill the Wadi Pennzoil "9" Federal Com Well No. 3 as an infill gas well at a standard location 1650 feet from the North and West lines (Unit F) of Section 9, Township 24 South, Range 26 East, NMPM.

(6) In accordance with the applicants' alternative proposal, four (4) standard 640-acre gas spacing and proration units in the White City-Pennsylvanian Gas Pool would be developed as follows:

- (a) Section 9, to be developed by Wadi, would be dedicated to the proposed Pennzoil "9" Federal Com Wells No. 3 and 4, and to the existing Pennzoil "9" Federal Com Well No. 1 (API No. 30-015-22038) located 1980 feet from the South and East lines (Unit J), and to the existing Pennzoil "9" Federal Com Well No. 2 (API No. 30-015-24202) located 1725 feet from the South line and 1650 feet from the West line (Unit K);
- (b) Section 15, to be developed by Wadi, would be dedicated to the proposed Pennzoil Federal Com Wells No. 2 and 3, and to the existing Pennzoil Federal Com Well No. 1 (API No. 30-015-21847) located 1980 feet from the South and West lines (Unit K);
- (c) Section 16, to be developed by Gruy, would be dedicated to the proposed White Baby Com Wells No. 3 and 4, and to the existing White Baby Com Well No. 1 (API No. 30-015-21419) located 1980 feet from the South and West lines (Unit K), and to the existing White Baby Com Well No. 2 (API No. 30-015-24972) located 1690 feet from the North line and 2130 feet from the East line (Unit G); and
- (d) Section 22, to be developed by Wadi, would be dedicated to the proposed Federal "22" Com Well No. 2, and to the existing Federal "22" Com Well No. 1 (API No. 30-015-21583) located 1400 feet from the North line and 1650 feet from the West line (Unit F).

(7) The unorthodox location for the proposed White Baby Com Well No. 3 has been approved by Division Order No. NSL-4729 dated May 14, 2002. Therefore, the request for approval of this unorthodox location may be dismissed from this application.

(8) The White City-Pennsylvanian Gas Pool currently comprises the following-described area in Eddy County, New Mexico:

Township 24 South, Range 26 East, NMPM

Sections 8 & 9: All  
Sections 15 through 17: All  
Sections 19 through 22: All  
Sections 26 through 35: All

Township 25 South, Range 26 East, NMPM

Sections 1 through 4: All  
Sections 10 through 14: All

Township 25 South, Range 27 East, NMPM

Section 7: All

(9) The White City-Pennsylvanian Gas Pool is currently governed by the “*Special Rules and Regulations for the White City-Pennsylvanian Gas Pool*,” as established by Division Order No. R-2429-A, as amended, dated March 27, 1963, which require:

- (a) standard 640-acre gas spacing and proration units with wells to be located no closer than 1650 feet to the outer boundary of the spacing unit nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary; and
- (b) no more than two wells capable of producing may be located on a standard proration unit.

(10) The evidence presented demonstrates that the northern boundary of the White City-Pennsylvanian Gas Pool is adjacent to the southern boundary of the South Carlsbad-Morrow Gas Pool. The South Carlsbad-Morrow Gas Pool is currently governed by Division Rule 104.C., which requires standard 320-acre gas spacing and proration units with the initial and infill well to be located no closer than 660 feet to the outer boundary of the quarter section on which the well is located, and no closer than 10 feet to any quarter-quarter section line or subdivision inner boundary. The rule further provides that the infill well may not be located in the same quarter section as the initial well.

- (11) The applicant presented geologic evidence that demonstrates that:
- (a) the Cisco/Canyon, Strawn, Atoka and Morrow formations are within the vertical limits of the White City-Pennsylvanian Gas Pool. The South Carlsbad-Morrow Gas Pool comprises only the Morrow formation;
  - (b) the predominant producing interval within the White City-Pennsylvanian and South Carlsbad-Morrow Gas Pools is the Morrow formation;
  - (c) the Morrow formation in this area is characterized by multiple producing channel sands that trend in a northeast to southwest direction, and appear to be generally present within both the White City-Pennsylvanian and South Carlsbad-Morrow Gas Pools;
  - (d) although these Morrow channel sands are generally continuous throughout the White City-Pennsylvanian and South Carlsbad-Morrow Gas Pools, the presence and extent of these individual sands varies considerably such that a well drilled in a particular section may encounter some, but not all of the channel sands; and
  - (e) Strawn production within the White City-Pennsylvanian Gas Pool is generally limited to those areas that contain sufficient porosity development, being Sections 16, 20, 21 and 29, Township 24 South, Range 26 East, NMPM.

(12) The applicants presented estimated ultimate gas recoveries for existing wells located within the White City-Pennsylvanian Gas Pool. This drainage data demonstrates that there are areas within the pool where the existing wells will not adequately drain their respective proration units.

(13) Murchison Oil and Gas, Inc., an operator within the White City-Pennsylvanian Gas Pool, appeared at the hearing and presented evidence to support the application.

(14) Murchison presented the results of an engineering study conducted within a nine-section area in the White City-Pennsylvanian Gas Pool. The results of this study demonstrate that:

- (a) within the study area, the original gas in place is estimated to be approximately 20.5 BCF per section;
- (b) the estimated recoverable gas within the study area, based upon a recovery factor of 75%, is approximately 135 BCF of gas; and
- (c) the cumulative gas recovery to date within the study area is approximately 34.5 BCF of gas.

(15) The evidence presented in this case by all parties demonstrates that:

- (a) the White City-Pennsylvanian and South Carlsbad-Morrow Gas Pools appear to represent a single common source of supply in the Morrow formation;
- (b) in order to protect correlative rights, the White City-Pennsylvanian and South Carlsbad-Morrow Gas Pools should be governed by similar rules, particularly with regards to well density and well location requirements;
- (c) two wells per 640 acres are insufficient to adequately recover the remaining gas reserves in the White City-Pennsylvanian Gas Pool; and
- (d) approval of the application will provide the operators in the pool the opportunity to recover additional gas reserves that may otherwise not be recovered by the existing wells, thereby preventing waste.

(16) The applicant's proposal to allow up to four wells per section is supported by their geologic and engineering evidence, and is consistent with current Division rules governing Morrow gas development in southeast New Mexico. However, certain provisions should be included in these proposed rule changes in order to ensure

consistency with the rules currently governing deep gas pools in southeast New Mexico on 320-acre spacing.

(17) The proposed well setback requirements will allow for greater flexibility in locating infill gas wells.

(18) The applicant notified all operators and interest owners within the area affected by this application. No operator or interest owner appeared at the hearing in opposition to the application.

(19) Approval of the application is in the best interest of conservation, prevention of waste and protection of correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Gruy Petroleum Management Company and Wadi Petroleum, Inc. for an order amending the "*Special Rules and Regulations for the White City-Pennsylvanian Gas Pool*," located in Sections 8, 9, 15 through 17, 19 through 22, and 26 through 35, Township 24 South, Range 26 East, Sections 1 through 4, and 10 through 14, Township 25 South, Range 26 East, and Section 7, Township 25 South, Range 27 East, NMPM, Eddy County, New Mexico, is hereby approved.

(2) Rules No. 2, 4, and 5 of the "*Special Rules and Regulations for the White City-Pennsylvanian Gas Pool*," are hereby amended to read in their entirety as follows:

RULE 2 (A): Each well completed or recompleted in the White City-Pennsylvanian Gas Pool shall be located on a standard unit containing 640 acres, more or less, consisting of a single governmental section.

RULE 2 (B): Nothing in this rule shall be construed as prohibiting the drilling of additional wells on a standard proration unit provided that there shall be no more than four (4) wells capable of producing from the White City-Pennsylvanian Gas Pool on any proration unit at one time.

RULE 4: The initial well within a gas spacing and proration unit shall be located no closer than 660 feet to the outer boundary of the quarter section on which the well is located and no closer than 10 feet to any quarter-quarter section line or subdivision inner boundary. Each infill well within an existing gas spacing and proration unit shall be

located in a quarter section that does not contain a producing Pennsylvanian gas well and shall be located with respect to the assigned unit boundaries as described above.

RULE 4 (A): No more than one Pennsylvanian gas well shall be located within a single governmental quarter section. Any deviation from this well density requirement shall be authorized only after hearing.

RULE 4(B): The land plat (NMOCD Form C-102) accompanying the "*Application for Permit to Drill*" (NMOCD Form C-101 or federal equivalent) for subsequent wells on an existing gas spacing and proration unit shall have outlined the boundary of the unit and shall show the location (well name, footage location, API number) of all existing Pennsylvanian gas wells on the unit plus the proposed new well.

RULE 5: The Division Director may grant an exception to the setback requirements for a Pennsylvanian gas well prescribed by Rule 4 above, without hearing, when an application has been duly filed under the provisions of Division Rule 104.F.

(3) Jurisdiction is hereby 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.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Lori Wrotenbery*  
LORI WROTENBERY  
Director