

**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. 13707  
ORDER NO. R-12570**

**APPLICATION OF YATES PETROLEUM CORPORATION TO RESCIND OR  
AMEND ADMINISTRATIVE ORDER SWD-1021, LEA COUNTY, NEW  
MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on May 11, 2006, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on *this* 21<sup>st</sup> day of June, 2006, 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) By Administrative Order No. SWD-1021 dated January 25, 2006, the Division authorized Manzano, LLC ("Manzano") to utilize its Peter Grande State Well No. 1 (API No. 30-025-36993) located 330 feet from the South line and 400 feet from the West line (Unit M) of Section 1, Township 10 South, Range 32 East, NMPM, Lea County, New Mexico, as a produced water disposal well, injection to occur into the San Andres formation through the perforated interval from 4,350 feet to 4,470 feet.

(3) The applicant, Yates Petroleum Corporation ("Yates" or "applicant"), seeks an order either rescinding or amending Order No. SWD-1021 so as to provide protection for its Mescalero "ARL" State Well No. 1 (API No. 30-025-33969) located 330 feet from the South and East lines (Unit P) of Section 2, Township 10 South, Range 32 East, NMPM, which is currently producing from the Pennsylvanian formation, North Mescalero-Upper Pennsylvanian Pool.

(4) The evidence presented demonstrates that the Mescalero "ARL" State Well No. 1 is cased, cemented and completed as follows:

11 ¾" surface casing is set at 405 feet, cemented with 300 sacks. Cement is circulated to surface;

8 5/8" intermediate casing is set at 2,995 feet, cemented with 1200 sacks. Cement is circulated to surface;

5 ½" production casing is set at 9,535 feet, cemented with 300 sacks. Cement top, as determined by cement bond log, is at 7,500 feet;

Well is perforated from 8,668 feet to 9,456 feet;

(5) The Mescalero "ARL" State Well No. 1 is located 730 feet from the Peter Grande State Well No. 1.

(6) Division records show that Manzano filed the administrative application to convert the Peter Grande State Well No. 1 to a disposal well on or about January 5, 2006.

(7) Yates testified that it received proper and timely notice of Manzano's administrative application dated December 28, 2005 to convert the Peter Grande State Well No. 1 to a disposal well. Yates further testified that by the time the application was forwarded to the proper company personnel for review, the 15-day waiting period in which the Division allows an objection to be filed had already expired.

(8) Yates subsequently contacted Manzano regarding the situation, but the two companies have been unable to resolve the issue.

(9) Yates contends that by virtue of its wellbore not being cemented across the San Andres injection interval, injection into the San Andres formation in the Peter Grande State Well No. 1 may cause damage to its Mescalero "ARL" State Well No. 1, thereby resulting in the possible loss of oil and gas reserves.

(10) In support of its position, Yates presented geologic and engineering evidence that demonstrates that:

- (a) the Mescalero "ARL" State Well No. 1 is currently producing from the Bough "B" and "C" (Cisco) intervals of the Pennsylvanian formation. The well, which was drilled in 1997, has cumulatively produced 79,000 barrels of oil and 0.27 BCF of gas from the North Mescalero-Upper Pennsylvanian Pool;

- (b) the Mescalero "ARL" State Well No. 1 is currently producing at a rate of approximately 15 barrels of oil per day and 160 MCF of gas per day. Remaining recoverable reserves within this well are estimated to be 39,000 barrels of oil and 0.33 BCF of gas;
- (c) the San Andres formation is laterally continuous and extends from the Peter Grande State Well No. 1 to the Mescalero "ARL" State Well No. 1;
- (d) due to the absence of cement, various formations are exposed within the production casing annulus of its Mescalero "ARL" State Well No. 1 from a depth of 7,500 feet to 2,995 feet (intermediate casing setting depth), including the San Andres formation; and
- (e) injection into the San Andres formation within the Peter Grande State Well No. 1 will significantly increase the possibility of casing failure within the Mescalero "ARL" State Well No. 1 due to corrosion.

(11) Manzano contends that since Yates failed to file a timely objection to its administrative application dated December 28, 2005, Order No. SWD-1021 should be considered final.

(12) Manzano further contends that the Mescalero "ARL" State Well No. 1, even in the absence of injection into the Peter Grande State Well No. 1, is at risk for casing failure due to i) exposure to native San Andres formation water; ii) exposure to several small salt sections below the San Andres formation; and iii) exposure to swelling shale intervals within the Abo formation. In support of its position, Manzano presented evidence that demonstrates that:

- (a) the native water within the San Andres formation contains 250,000 parts per million of total dissolved solids. The water that will be injected into the Peter Grande State Well No. 1 contains 135,000 parts per million of total dissolved solids;
- (b) well log data shows the presence of several salt sections of varying thickness below the San Andres formation within the Mescalero "ARL" State Well No. 1; and

- (c) casing collapse has occurred in wells in this area due to swelling shale sections in the Abo formation. The Abo formation is present in the Mescalero "ARL" State Well No. 1 at a depth of approximately 7,060 feet to 7,540 feet.

(13) Manzano also testified that there is limited San Andres production located approximately 1-1 ½ miles southwest of the Peter Grande State Well No. 1 within the SW/4 of Section 11, Township 10 South, Range 32 East, NMPM; however, the San Andres formation tested wet in the Peter Grande State Well No. 1.

(14) Manzano has spent approximately \$115,000 to prepare and equip the Peter Grande State Well No. 1 to receive produced water for disposal.

(15) Manzano further testified that there may be intervals within the Pennsylvanian formation within the Peter Grande State Well No. 1 that can be utilized for injection.

(16) The evidence presented by both parties in this case demonstrate that:

- (a) there is currently a risk of casing failure within the Mescalero "ARL" State Well No. 1 from factors such as the presence of corrosive formation water, salt sections and swelling shales; however, the risk of casing failure in this well is substantially increased if injection into the San Andres formation is allowed within the Peter Grande State Well No. 1;
- (b) a casing failure in the Mescalero "ARL" State Well No. 1 due to injection operations in the Peter Grande State Well No. 1 poses a great risk that oil and gas reserves will be lost, thereby resulting in waste and the violation of Yates' correlative rights;
- (c) Manzano may have alternative injection intervals in the Peter Grande State Well No. 1 that would not pose a threat to offset producing wells.

(17) In order to prevent waste and protect correlative rights, Division Order No. SWD-1021 should be rescinded.

(18) The Division may consider reinstating Order No. SWD-1021 in the event Manzano presents a plan acceptable to the Division that will reduce or eliminate the risk to the Mescalero "ARL" State Well No. 1.

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**ITJS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Yates Petroleum Corporation, Division Order No. SWD-1021 dated January 25, 2006, which order authorized Manzano, LLC to utilize its Peter Grande State Well No. 1 (API No. 30-025-36993) located 330 feet from the South line and 400 feet from the West line (Unit M) of Section 1, Township 10 South, Range 32 East, NMPM, Lea County, New Mexico, as a produced water disposal well, injection to occur into the San Andres formation through the perforated interval from 4,350 feet to 4,470 feet, is hereby **rescinded**.

(2) The Division may consider reinstating Order No. SWD-1021 in the event Manzano, LLC presents a plan acceptable to the Division that will reduce or eliminate the risk to the Mescalero "ARL" State Well No. 1.

(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.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in dark ink, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E.  
Director