

**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. 14000  
ORDER NO. R-10527-A**

**APPLICATION OF HARVEY E. YATES COMPANY FOR EXPANSION OF A  
UNIT AREA, OTERO COUNTY, NEW MEXICO**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing on September 20, 2007 at Santa Fe, New Mexico, before Examiners William V. Jones and David K. Brooks.

NOW, on this 10<sup>th</sup> day of October, 2007, the Division Director, having considered the testimony, the record, and the recommendations of the Examiners,

**FINDS THAT:**

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

(2) The applicant, Harvey E. Yates Company ("HEYCO"), seeks approval of its proposal to expand the Bennett Ranch Exploratory Unit Area. The proposed expanded unit area includes the following-described 11,637.09 acres, more or less, of Federal and State lands situated in Otero County, New Mexico:

**TOWNSHIP 26 SOUTH, RANGE 12 EAST, NMPM**

Sections 1-3:	All
Sections 10-15:	All
Sections 22-27:	All
Irregular Section 35:	All
Irregular Section 36:	All

**TOWNSHIP 26 SOUTH, RANGE 13 EAST, NMPM**

Irregular Section 18:	All
Irregular Section 19:	All
Irregular Section 30:	All
Irregular Section 31:	All

(3) The Bennett Ranch Unit was first proposed by HEYCO in 1995 as an exploratory unit necessary in order to best prospect and develop oil from the Silurian Fusselman formation in 8,856.90 acres of State and Federal lands within Otero County, New Mexico. HEYCO used previous drilling records and three dimensional ("3-d") seismic to identify a structure possibly containing oil in the Fusselman formation. It was under that concept that the governmental administrators for the mineral owners – Bureau of Land Management ("BLM") and the State Land Office ("SLO") - approved unitizing the HEYCO leases into an exploratory unit called the Bennett Ranch Unit in 1995.

(4) The Oil Conservation Division then reviewed the Unit for compliance with the Division's statutory directives on December 7, 1995. At that examiner hearing in Case No 11394, HEYCO witnesses testified that older Texaco wells to the south and east had encountered heavy oil in Silurian age rocks along with significant fresh water. In fact, the HEYCO geologist testified that the entire geologic "section has produced fresh water from existing wellbores." One Texaco well was tested in the Fusselman formation at 5900 feet, then turned over to the local rancher as it would flow fresh water to the surface. The HEYCO geologist testified that this extensive fresh water was probably related to the range faulting and the outcrops to the west. Pennsylvanian age natural gas was encountered in a well 40 miles to the north, but that gas was not HEYCO's objective for the formation of the Bennett Ranch Unit.

(5) With approval of the Bennett Ranch Unit in Order No R-10527 on December 12, 1995, the Division reserved jurisdiction to supervise and control operations of the Unit and of oil and gas produced from the Unit. In addition, the Division, in Ordering Paragraph No (4) of said order, provided that, along with any other proposed changes, all expansions of this Unit shall be submitted to the Director of the Division for approval.

(6) No other parties entered an appearance in this case or otherwise opposed this application. HEYCO placed in evidence a letter from the SLO which conditioned approval by the SLO for this Unit expansion upon approval by the Division. HEYCO's land witness testified that the BLM wanted an Oil Conservation Division review of this proposed expansion.

(7) The Applicant presented testimony at the hearing from a landman. At the Division's request, a geologist employed by HEYCO who was present at the hearing also testified. There was no engineering support presented for this application.

(8) The presented testimony and existing Division records show that:

(a) After this proposed expansion, the Bennett Ranch Unit would be composed of 1,080.7 acres of lands owned by the State of New Mexico and the remaining 10,556.39 acres administered by the BLM.

(b) The three wells drilled to date within this Unit have been unproductive of oil from Silurian or Devonian age rocks. However, that drilling along with 3-d seismic has identified some potential for natural gas from Mississippian aged rocks and a better potential for natural gas from sands of the Pennsylvanian Canyon formation. Since the primary target has changed from 40-acre spaced oil in the Fusselman to [possibly] 640-acre spaced natural gas from the shallower Canyon, the locations of prospective drilling, and the exploration prospect acreage, have changed. HEYCO did not show geologic evidence or facts confirming that the proposed Unit acreage would be compatible with this latest exploration concept. A review of Division records containing submitted Plans of Development indicates that the structure for the Canyon gas is primarily located in the southern portion of the existing Unit and extends to the Texas state line. Therefore, HEYCO has not shown the need to retain acreage along the northern or northwestern edge of the existing Unit, suggesting that the Unit should possibly be contracted in the northern and northwestern portion - instead of the proposed expansion.

(c) The drilling to date was done with compressed air to a depth at which it was no longer possible because of the occurrence of water. Wellbore stability problems were encountered above the Pennsylvanian, and large quantities of water were discovered adjacent to, above or below gas shows in a highly permeable Canyon interval. HEYCO did not show what changes, if any, have been made to its drilling well designs in order to isolate wellbore problems and to protect the large quantities of in-situ fresh waters from invasion of drilling fluids or contamination from fluids of deeper formations.

(d) The discovered Canyon interval containing gas and water was found to be highly permeable and likely needing a much larger well spacing - possibly 640 acres per unit - than the 160-acre gas spacing units for Otero County defined under Division Rule 104C(3). HEYCO did not present any evidence that would enable the Division to determine whether drilling in and near any edges of the proposed, expanded Unit would protect correlative rights.

(e) The switch from an oil target to a natural gas objective means that miles of pipelines must be constructed to get the gas out of this basin. HEYCO did not present any evidence to show that this was practically or economically feasible.

(9) The Division has the statutory duty to regulate oil and gas exploration and development within New Mexico such that waste is prevented, correlative rights are protected, and human health and the environment are not harmed. The facts available to the Division at this time do not enable the Division to determine whether approval of this

application will prevent waste, protect correlative rights, and protect human health and the environment.

(10) This proposed expansion of the Bennett Ranch Unit should not be approved and this application should be denied.

**IT IS THEREFORE ORDERED THAT:**

(1) The proposed expansion of the Bennett Ranch Unit is not approved, and the application as presented by Harvey E. Yates Company is denied.

(2) 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



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STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

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

MARK E. FESMIRE, P.E.  
Director