

**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. 14803  
ORDER NO. R-13176-A**

**APPLICATION OF APACHE CORPORATION  
TO AMEND ORDER NO. R-13176 FOR  
SECONDARY RECOVERY PROJECT, LEA  
COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on March 15, 2012, at Santa Fe, New Mexico, before Examiner David K. Brooks.

NOW, on this 23<sup>rd</sup> day of April, 2012, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

**FINDS THAT:**

- (1) Due notice has been given, and the Division has jurisdiction of the subject matter of this case.
- (2) In Order No. R-13176, issued in Case No. 14360 on September 30, 2009, the Division approved a secondary recovery project ("the Project") for a 40-acre spacing unit in the Blinebry, Tubb and Drinkard formations of the South House-Blinebry Pool. The project area was defined as Unit L of Section 12, Township 20 South, Range 38 East, NMPM, in Lea County, New Mexico, and was named the Blankenship Lease Waterflood Project.
- (3) Order No. R-13176 further authorized injection into the Blankenship Well No. 2 (API No. 30-025-07767) ("the Injection Well"), located 2075 feet from the South line and 555 feet from the West line of said Section 12, with an authorized injection interval in the Blinebry, Tubb and Drinkard from 6,046 to 7,028 feet beneath the surface.

(4) Apache Corporation ("Applicant") now seeks authorization to inject also into the Paddock formation, which lies immediately above the Blinebry, and re-definition of the injection interval to add the Paddock interval from 5,946 to 6,046 feet beneath the surface.

(5) Applicant appeared at the hearing through counsel and presented evidence that:

(a) The Injection Well was previously completed as a producing well in the Paddock formation. However, Order No. R-13176 required that the Paddock perforations be squeezed off as a prerequisite to commencement of injection into the lower formations, and this was done.

(b) Subsequently, Applicant discovered that communication was occurring between the Paddock and the Blinebry, either behind the pipe or in the reservoir, most likely due to the Paddock having been fracked in connection with the earlier completion in that zone.

(c) In December, 2011, Applicant re-squeezed the Paddock perforations. The cement went into the Blinebry so that it was necessary to re-perforate the Blinebry in order to re-establish injection. However, the Paddock squeeze did not hold, and Applicant doubts that the Paddock can be successfully isolated from the Blinebry.

(d) The Paddock is not productive in this area, and is not a zone of interest for this secondary recovery project. Applicant seeks authorization to inject into the Paddock, and to set the packer in the Injection Well above the Paddock, only because that zone cannot be effectively isolated.

(e) Because of the thickness of the Paddock and presence of silt and clay layers within that zone, Applicant does not believe that injected fluid will move up through the Paddock and invade the overlying San Andres formation.

(f) The only fresh groundwater in this vicinity is at very shallow depths, less than 90 feet beneath the surface.

(6) In addition, Applicant filed a new Form C-108, Application for Authorization to Inject, dated February 9, 2012. This form shows that the wells within the Area of Review are the same 21 wells that the Division found, in Order No. R-13176, were properly constructed to prevent migration of injected fluids out of the injection zone.

(7) According to OCD records, one of the Area of Review wells, the Howse C Well No. 1 (API No. 30-025-22165), has since been plugged and abandoned. Applicant has supplemented the record with a wellbore diagram demonstrating that that well has been properly plugged to prevent migration of injected fluids out of the injection zone.

(8) No other party appeared at the hearing or otherwise indicated to the Division any opposition to the granting of this Application.

(9) The Division concludes that the proposed expansion of the injection interval will prevent waste, and will not impair correlative rights, endanger any underground source of fresh water, or otherwise jeopardize human health or the environment. Accordingly, this Application should be approved.

**IT IS THEREFORE ORDERED THAT:**

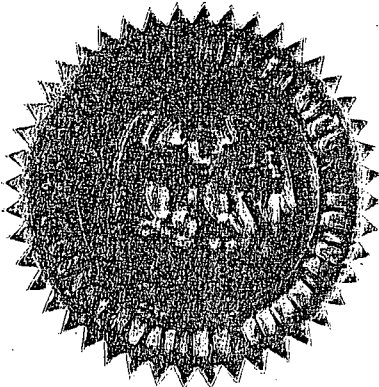
(1) Pursuant to the application of Apache Corporation, Order No. R-13176 is hereby modified to authorize injection into the Blankenship Well No. 2 (API No. 30-025-07767) ("the Injection Well"), located 2075 feet from the South line and 555 feet from the West line of Section 12, Township 20 South, Range 38 East, NMPM, in Lea County, New Mexico, with an authorized injection interval from 5,946 feet beneath the surface (top of the Paddock) to 7,028 feet beneath the surface (base of the Drinkard).

(2) Because this Order authorizes injection at shallower depths than authorized in the previous order and into a formation that was not contemplated by prior pressure increase authorizations, the maximum injection pressure shall be 0.2 psi per foot to the top of the injection interval as herein defined, or 1198 psi surface injection pressure, provided that the Director may authorize a pressure increase administratively if the operator satisfactorily demonstrates that a higher pressure will not cause fracturing.

(3) In all other respects, except as modified hereby, Order No. R-13176 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.



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STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Jami Bailey".

JAMI BAILEY  
Director