

**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 TO CONSIDER:**

**CASE NO. 15874  
ORDER NO. R-14634**

**APPLICATION OF APACHE CORPORATION FOR APPROVAL OF THE  
THUNDERBIRD EXPLORATORY UNIT, EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came for hearing January 17, 2018 at Santa Fe, New Mexico, before Examiner Michael A. McMillan.

NOW, on this 6<sup>th</sup> day of April, 2018, 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) Apache Corporation ("Apache" or "Applicant", OGRID 873) seeks approval of its Thunderbird Exploratory Unit consisting of the following described 3198.44 acres (more or less) of Federal and State lands in Eddy County, New Mexico:

**Township 16 South, Range 30 East, NMPM**

Section 32:	E/2
Section 33:	All
Sections 34:	All
Section 35:	All
Section 36:	S/2

**Township 17 South, Range 30 East, NMPM**

Section 4:	All
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(3) The Unitized Interval is the stratigraphic equivalent of the top of the Yeso formation encountered at a measured depth of 4,233 feet down to the stratigraphic equivalent of the top of the Tubb formation at a measured depth of 5,554 feet as encountered in the Chi Operating Inc. Aspen Federal Com Well No. 1 (API 30-015-31656) located in the NE/4 SW/4, Section 31, Township 16 South, Range 31 East, NMPM, Eddy County, New Mexico.

(4) COG Operating presented a pre-hearing statement and made an appearance through counsel at the hearing in opposition to the inclusion of Section 36 in the Unit.

(5) COG subsequently withdrew their opposition to this case on March 27, 2018.

(6) The Applicant appeared at the hearing through legal counsel and presented testimony as follows.

(a) The proposed Thunderbird Unit ("Thunderbird Unit") comprises 17 separately owned tracts. Eleven of the tracts are administered by the Bureau of Land Management (BLM), and six of the tracts are administered by the Commissioner of Public Lands of the State of New Mexico ("NMSLO").

(b) The Thunderbird Unit is voluntary and each included tract requires 100 percent approval of the working interest owners. The boundaries of the Thunderbird Unit met this requirement.

(c) The Thunderbird Unit is considered by the BLM to be a "resource development unit" with a Unit agreement composed of the terms in a model exploratory unit and in a communitization agreement. The effect is to create within the Unit one large commonly owned tract. The operator can then have centralized facilities without commingling between separately owned tracts.

(d) Applicant is requesting the Division to declare a project area to cover the entire Unit to facilitate the horizontal well development in the Unit.

(e) The Thunderbird Unit is within the Lesser Prairie Chicken, Dune Sagebrush Lizard Protected Areas, and has topography concerns. As a result, Applicant has coordinated with the BLM for approval of surface locations. Applicant has a well pad for the Thunderbird "A" Well No. 5H (API 30-015-44436, "Thunderbird Well"), located 2315 from the North line and 1955 feet from the East line (Unit G), Section 33, Township 16 South, Range 30 East. Applicant has coordinated with the NMSLO to obtain two proposed well pads in the E/2 E/2 of Section 36, called the Whitetail Wells. Further, the Thunderbird Well is the obligation well, per Unit Agreement.

(f) The BLM and NMSLO have given preliminary approval and the Unit Agreement will be effective upon final approval of the Commissioner and BLM.

(g) Applicant initially began working on the Thunderbird Unit in 2015. Applicant met with representatives from the BLM in 2016, conducted a joint meeting with BLM and the Division in 2017, and then had another meeting with the NMSLO.

(h) The prospective portion of the Yeso formation is expected to be laterally continuous and present throughout the Unit.

(i) The Thunderbird Unit is being formed to allow efficient development of the Upper Yeso formation with horizontal wells. The Thunderbird Unit is offset to the southeast by the Cedar Lake Unit which was developed by horizontal wells in the Yeso formation. Applicant has drilled over 70 wells in the Cedar Lake Unit.

(j) The Unit agreement covers only the upper portion of the Yeso formation. The Tubb formation and the Drinkard formations are members of the Yeso formation but are excluded from the vertical boundaries of the Unit.

(k) Ownership vertically in the mineral interest estate is identical within the Thunderbird Unit. There are no vertically subdivided interests within the Unitized interval.

(l) Applicant has approximately 85% percent working interest in the Thunderbird Unit.

(m) Applicant has drilled, logged, and gathered core data on the pilot hole for the Thunderbird Well; however, the Thunderbird Well has not been completed.

(n) Applicant stated that based on data from the Thunderbird Well, target intervals exist within the Paddock and Blinbry formations. Further, the principal stress direction shows that either north to south or east to west horizontal wells could be drilled to develop reserves in the Yeso formation.

(o) Pursuant to the Unit agreement, the Thunderbird Unit shall become effective upon final approval by the BLM, Commissioner of Public Lands, and by the Division. Further, the Unit agreement will terminate after five years unless the BLM and Commissioner sign an extension or a valuable discovery has been made on Unitized land.

(p) Applicant's development plan will be within the required set-backs at the outer boundaries of the Thunderbird Unit.

(q) Pursuant to the Unit Agreement, if the Applicant fails to develop all the acreage within five years after approval, the Unit will contract to the developed spacing units. This language can be considered as a contraction clause.

(r) Notice by certified mail was provided to all uncommitted interest owners in the proposed Unit whose interests were evidenced by a conveyance instrument, either of record or known to Applicant when the Application was filed, and to heirs known to Applicant of deceased persons who appear as owners in such instruments, and whose whereabouts could be ascertained by exercise of reasonable diligence.

(s) Those potentially affected parties whose whereabouts could not be ascertained were noticed by publication as provided in Rule 19.15.4.12(B) NMAC.

(t) COG subsequently withdrew their protest of this well on March 27, 2018.

The Division concludes as follows:

(7) The Thunderbird Well has been placed in the Loco Hills; Glorieta-Yeso Pool (Pool Code 96718). Spacing in this pool is governed by Division Rule 19.15.15.9(A) NMAC, which provides for standard 40-acre units, each comprising a governmental quarter-quarter section, with 330-foot setbacks from the unit boundaries.

(8) The Yeso formation in the proposed Unit may now be economical for drilling and production using modern horizontal drilling and completion techniques. All the proposed unit acreage appears prospective for recovery of oil and gas from the target formation under the concept proposed by the Applicant.

(9) The Chi Operating Inc. Aspen Federal Com Well No. 1 (API No. 30-015-31656), the type log for the proposed Unit, based on Division records is located 660 feet from the North line and 1980 feet from the West line (Unit C), Section 31, Township 16 South, Range 30 East, NMPM, Eddy County, New Mexico.

(10) The Thunderbird Unit should be construed as one Project Area, as defined in Administrative Code 19.15.16.7(L) 2. This will enable Applicant to locate wells within the Unit for optimum development of oil and gas reserves. The Applicant would not be bound by set-backs within drilling units or well project areas within the interior of the Unit.

(11) Applicant's request **should be approved**. The development plan presented by the Applicant appears to be a prudent plan of development considering the numerous

surface restrictions for well pads resulting from topography and habitat restrictions. Further, the creation of a single Project Area will allow for less surface disturbance by lessening the number of required surface facilities. Lastly, if the Unit is approved as requested, Applicant will install smaller surface facilities and therefore reduce surface disturbances.

(12) Approval of the proposed Unit will prevent waste and will not impair correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The Thunderbird Unit Agreement executed by Apache Corporation is hereby approved for oil and gas in the Unitized Interval underlying the following described 3198.44 acres (more or less) of Federal and State lands located in Eddy County, New Mexico:

**Township 16 South, Range 30 East, NMPM**

Section 32:	E/2
Section 33:	All
Section 34:	All
Section 35:	All
Section 36	S/2

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(2) The Unitized Interval is the stratigraphic equivalent of the top of the Yeso formation encountered at a measured depth of 4,233 feet down to the stratigraphic equivalent of the top of the Tubb formation at a measured depth of 5,554 feet as encountered in the Chi Operating Inc. Federal Com Well No. 1 (API 30-015-31656) located 660 feet from the North line and 1980 feet from the West line (Unit C), Section 31, Township 16 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) The Unit Area, as it is finally approved by the BLM and the NMSLO, is hereby considered by the Division as one Project Area as defined in 19.15.16.7 L(2) NMAC. The Unit operator shall continue to form individual horizontal well project areas or spacing units, but without any limitations on the footage setbacks from those well unit boundaries. The setbacks from the outside boundary of the Unit Area shall be as required in the applicable pool. If the Unit Area contracts, the Project Area shall contract along with it.

(4) The plan contained in the Thunderbird Unit Agreement for the development and operation of the above-described unit area is hereby approved in principle; provided, however, notwithstanding any of the provisions contained in the unit agreement, this

approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation that is now, or may hereafter be, vested in the Division to supervise and control operations for the unit and production of oil and gas therefrom.

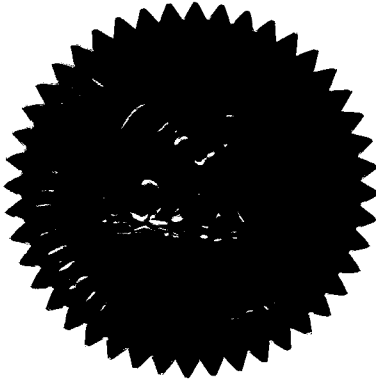
(5) The unit operator shall file with the Division an executed original or executed counterpart of the unit agreement within 30 days of the effective date thereof; in the event of subsequent joinder by any other party, or expansion or contraction of the unit area, the unit operator shall file with the Division, within 30 days thereafter, copies of the unit agreement reflecting the subscription of those interests having joined or ratified.

(6) Copies of all expansions or contractions of the unit area shall be filed with the Division.

(7) This order shall become effective upon the final approval of the unit agreement by the Bureau of Land Management and New Mexico State Land Office. This order shall terminate upon the termination of the unit agreement. The last unit operator shall notify the Division in writing of such termination.

(8) 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.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

HEATHER RILEY  
Director