

**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. 12100  
Order No. R-11132**

**APPLICATION OF CROSS TIMBERS OIL COMPANY FOR A NON-STANDARD  
SUBSURFACE GAS WELL LOCATION/ PRODUCING AREA AND  
SIMULTANEOUS DEDICATION, SAN JUAN COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on December 17, 1998, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 5<sup>th</sup> day of February, 1999, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised,

**FINDS THAT:**

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

(2) Cases No. 12098, 12099 and 12100 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Cross Timbers Oil Company (Cross Timbers), seeks authority to locate its proposed directionally drilled Ute Indians "A" Well No. 26 at an unorthodox subsurface gas well location/producing area in the Ute Dome-Paradox Gas Pool no closer than: (i) 1650 feet from the North and West lines; ii) 850 feet from the South line; or (iii) 1450 feet from the East line of Section 2, Township 31 North, Range 14 West, as projected into the unsurveyed Ute Mountain Indian Reservation, San Juan County, New Mexico. All of Section 2 is to be dedicated to the well forming a standard 640-acre gas spacing and proration unit for this pool.

(4) The Ute Indians "A" Well No. 26 is to be directionally drilled from a surface location 570 feet from the South line and 1045 feet from the East line (Unit P) of Section 2. The well will primarily test the Paradox formation, with secondary objectives including the Dakota and Morrison formations.

(5) Representatives of the Ute Mountain Ute Indian Tribe, the surface and royalty interest owner within Section 2, appeared at the hearing and cross examined Cross Timber's witnesses.

(6) Testimony by the applicant indicates that its Ute Indians "A" Well No. 7 (API No. 30-045-11049), located 1650 feet from the North line and 1600 feet from the West line (Unit F) of Section 2, is currently completed in the Ute Dome-Paradox Gas Pool and is currently dedicated to the 640-acre gas spacing and proration unit comprising Section 2.

(7) The applicant testified that in the event the Ute Indians "A" Well No. 26 is completed as a producing well in the Ute Dome-Paradox Gas Pool, it will shut-in or otherwise abandon this pool in the existing Ute Indians "A" Well No. 7.

(8) The applicant's request for simultaneous dedication of the Ute Indians "A" Well No. 26 in the Dakota and Morrison is addressed in companion Case No. 12099 and should therefore not be an issue in this case.

(9) The proposed well is located within the Ute Dome-Paradox Gas Pool which is currently governed by special rules set forth in Division Order No. R-46 dated December 29, 1950, which require standard 640-acre gas spacing and proration units with wells to be located no closer than 1650 feet from the outer boundary of the section nor closer than 330 feet from the center of the section.

(10) The applicant presented the following geologic and engineering evidence and testimony with regards to the proposed unorthodox bottomhole gas well location in the Paradox formation:

- a) the Ute Indians "A" Well No. 7 was drilled by Pan American Petroleum Corporation in 1955 and has cumulatively produced 9.8 BCF of gas from the Paradox formation. In 1983, the production from this well suddenly decreased from a rate of 600 MCFGD to 40 MCFGD. Several workovers failed to substantially increase the production rate and the well is currently producing at a rate of approximately 24 MCFGD;

- b) the Paradox formation is approximately 700 feet thick in this area and is composed mostly of Algal and fossiliferous carbonates deposited in shallow water. The Paradox formation is subdivided into five members, in ascending order, the Alkali Gulch, Barker Creek, Akah, Desert Creek and Ismay. All of these zones are productive in this area. Literature suggests that there is no vertical communication between the zones because each has a separate gas/water contact;
- c) the Ute Dome feature is a structural high formed at the crest of an asymmetrical, northeast plunging anticline. Steeper dips are found on the southern and eastern sides of the anticline, which forms the edge of the San Juan Basin;
- d) the proposed bottomhole location of the Ute Indians "A" Well No. 26 is on the flexure point between the relatively flat crest of the structure and the steeply dipping south flank. This flexure point should lie in the area of most intense fracturing, which is necessary for good productivity in the Paradox formation;
- e) the Ute Mountain Gas Com "M" Well No. 1, located to the south in Section 11, encountered 75 feet of thick porous carbonate buildup in the basal Ismay, which is not present in offsetting wells. This zone may extend, however, into the SE/4 of Section 2 and, as a result, the proposed well may test a zone not present in the existing Ute Indians "A" Well No. 7;
- f) the proposed unorthodox bottomhole location moves away from the area that was drained by the Ute Indians "A" Well No. 7; and
- g) there are approximately 1.4 BCF of gas reserves underlying Section 2 in the Paradox formation that will not be recovered by the existing Ute Indians "A" Well No. 7.

(11) The directional drilling of the Ute Indians "A" Well No. 26 is necessary due to topographic problems within Section 2.

(12) The geologic and engineering evidence presented in this case demonstrates that the drilling of the Ute Indians "A" Well No. 26 to the proposed unorthodox bottomhole location is necessary in order to effectively and efficiently recover the remaining gas reserves within Section 2, which will not otherwise be recovered by the existing Ute Indians "A" Well No. 7.

(13) The applicant currently operates all the affected offset acreage.

(14) Approval of the proposed unorthodox bottomhole gas well location will afford the applicant the opportunity to produce the remaining gas reserves underlying Section 2 which may otherwise not be recovered, and will otherwise prevent waste and protect correlative rights.

(15) The applicant should be required to obtain approval for directional drilling from the Division's Aztec District Office prior to initiating such operations.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Cross Timbers Oil Company, is hereby authorized to locate its Ute Indians "A" Well No. 26 at an unorthodox subsurface gas well location/producing area in the Ute Dome-Paradox Gas Pool no closer than: (i) 1650 feet from the North and West lines; (ii) 850 feet from the South line; or (iii) 1450 feet from the East line of Section 2, Township 31 North, Range 14 West, as projected into the unsurveyed Ute Mountain Indian Reservation, San Juan County, New Mexico.

(2) All of Section 2 shall be dedicated to the well forming a standard 640-acre gas spacing and proration unit for this pool.

(3) Prior to initiating directional drilling operations on the Ute Indians "A" Well No. 26, the applicant shall obtain the necessary permits from the Division's Aztec District Office.

(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.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
LORI WROTENBERY  
Director