

**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. 12578  
ORDER NO. R-11132-B**

**APPLICATION OF CROSS TIMBERS OIL COMPANY FOR AN AMENDMENT  
TO DIVISION ORDERS NO. R-11132 AND R-11132-A, SIMULTANEOUS  
DEDICATION, AND AN UNORTHODOX SURFACE GAS WELL LOCATION, SAN  
JUAN COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on January 25, 2001, at Santa Fe, New Mexico before Examiner Michael E. Stogner.

NOW, on this 8<sup>th</sup> day of August, 2001, 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) The applicant, Cross Timbers Oil Company ("Cross Timbers") seeks authority to drill its Ute Indians "A" Well No. 32 (**API No. 30-045-30489**) at an unorthodox surface gas well location 560 feet from the South line and 1120 feet from the East line (Unit P) of Section 2, Township 31 North, Range 14 West, NMPM, San Juan County, New Mexico, and directionally drill the well to a standard bottomhole location approximately 1031 feet from the South line and 1656 feet from the East line (Unit O) of Section 2, in order to test the Ute Dome-Dakota Pool and the Undesignated Ute Dome-Morrison Pool. The SE/4 of Section 2 is to be dedicated to the well thereby forming a standard 160-acre gas spacing and proration unit for both intervals. Furthermore, the applicant seeks an exception to Division Rule 104.D (3) in order to simultaneously dedicate this 160-acre unit (SE/4 of Section 2) in:

(a) the Ute Dome-Dakota Pool to its proposed Ute Indians "A" Well No. 32 and its existing Ute Indians "A" Well No. 20 (**API No. 30-045-24605**), located at a standard gas well location 1580 feet from the South line and 1520

feet from the East line (Unit J) of Section 2; and

(b) the Undesignated Ute Dome-Morrison Pool to its proposed Ute Indians "A" Well No. 32 and its existing Ute Indians "A" Well No. 27 (**API No. 30-045-29863**), located at an unorthodox gas well location 2600 feet from the South line and 1000 feet from the East line (Unit I) of Section 2.

(3) The SE/4 of Section 2 is within the boundary of the Ute Dome-Dakota Pool and is within two-miles of the Ute Dome-Morrison Pool; therefore, both intervals are currently governed by Division Rule 104.C (3) (a) and 104.D (3), which require standard 160-acre gas spacing and proration units, with wells to be located no closer than 660 feet to the outer boundary of the unit nor closer than 10 feet to a quarter-quarter section line. Since both pools are unprorated, one well is allowed per quarter section under Division Rule 104.D (3).

(4) The Ute Mountain Ute Indian Tribe is the sole lessor and the applicant is the sole lessee of all of Sections 1, 2, 11, and 12, Township 31 North, Range 14 West, NMPM, San Juan County, New Mexico. The applicant notified the Ute Mountain Ute Indian Tribe and the United States Bureau of Land Management of the hearing in this matter.

(5) No party affected by this application appeared at the hearing or objected to this application.

(6) By Division Orders No. R-11131, R-11132, and R11132-A, Cross Timbers received authorization to:

(a) drill the aforementioned Ute Indians "A" Well No. 27 at an unorthodox gas well location 2600 feet from the South line and 1000 feet from the East line (Unit I) of Section 2 to test both the Ute Dome-Dakota Pool and Morrison formation;

(b) drill its Ute Indians "A" Well No. 26 (**API No. 30-045-29868**) at an unorthodox surface location 570 feet from the South line and 1045 feet from the East line (Unit P) of Section 2 and a subsurface gas well location/producing area within the Ute Dome-Dakota Pool and the Ute Dome-Paradox Pool that is no closer than: (i) 1650 feet to the North and West lines; (ii) 570 feet to the South line; and (iii) 1045 feet to the East line of Section 2;

(c) dedicate the SE/4 of Section 2, in order to form a standard 160-acre gas spacing and proration unit for gas production from the Morrison

formation, to the Indians "A" Well No. 27;

(d) dedicate all of Section 2, in order to form a standard 640-acre, more or less, gas spacing and proration unit within the Ute Dome-Paradox Gas Pool, to the Ute Indians "A" Well No. 26; and

(e) simultaneously dedicate the SE/4 of Section 2, being a standard 160-acre gas spacing and proration unit in the Ute Dome-Dakota Pool, to its Ute Indians "A" Wells No. 20, 26, and 27.

(7) The applicant testified that the: (i) Ute Indians "A" Well No. 26 was completed as a producing well in the Paradox formation, and is not intended to be completed in the Dakota formation; and (ii) Ute Indians "A" Well No. 27 was completed as a producing well in the Morrison formation, and is not intended to be completed in the Dakota formation.

(8) Review of the Division's records indicates that the actual bottomhole location of the Ute Indians "A" Well No. 26 at a depth of 8,558 feet (MD) is 802 feet from the South line and 1023 feet from the East line (Unit P) of Section 2. This bottomhole subsurface location extends outside of the assigned non-standard "producing area" set forth in Division Order No. R-11132-A by a distance of 22 feet. The preferred interval within this well (7,562 feet to 8,224 feet) is as much as 39 feet further east of this approved non-standard area. Since Cross Timbers and the Ute Mountain Indian Tribe are the only affected offsetting lessee and lessor, no correlative rights appear to be threatened. In the future, however, Cross Timbers, as a prudent operator, should be more cognizant of those requirements affecting its operations and abide by all stipulations placed on them by any Division order.

(9) The applicant presented the following evidence:

(a) The proposed Ute Indians "A" Well No. 32 is to be directionally drilled from an unorthodox surface location 560 feet from the South line and 1120 feet from the East line (Unit P) of Section 2, and will encounter the top of the Dakota formation at approximately 850 feet from the South line and 1450 feet from the East line of the section and the top of the Morrison formation at approximately 890 feet from the South line and 1496 feet from the East line of the section. It is the applicant's intent to test and produce both zones.

(b) Cross Timbers' Ute Dome field is located on a broad semi-circular structure on the edge of the Four Corners Platform. On the southeast side of the structure, the stratigraphic section dips steeply to the southeast, into the San Juan Basin.

(c) The southern portion of the structure is bisected in the Dakota level by several west-northwest/east-southeast trending faults. Vertical displacement along the faults can reach 250 feet, and the faults act as permeability barriers. The faults often form four-way structural closures, which trap hydrocarbons migrating upward from mature source rocks.

(d) Similar fault blocks in the area have proven productive from lower Dakota and Morrison sandstones, but they are wet when encountered off of localized structures. Thus, a well needs to be structurally high, and the proposed location achieves this objective in both the Dakota and Morrison formations.

(e) Two faults bisect the SE/4 of Section 2. The proposed location is within a fault block that is separate from the fault block in which the existing Ute Indians "A" Well Nos. 20 and 27 are located. Thus, the proposed well will not affect production from the existing wells.

(f) The primary zone of interest in the proposed well is the Dakota formation, which is producing in the Ute Indians "A" Well No. 20. That well has produced only 137 MMCF of gas since 1981, and is currently producing intermittently at a rate of 8 MCF/day.

(g) Volumetric calculations on the primary sands in the Dakota formation in the SE/4 of Section 2 show the following:

<u>Dakota Sand</u>	<u>OGIP (MMCF)</u>	<u>Remaining Gas In Place (MMCF)</u>
First	362	307
Second	251	213
Third	180	153
<u>Fifth/Sixth</u>	<u>890</u>	<u>756</u>
Total:	1683	1429

The engineering data indicate that the existing Ute Indians "A" Well No. 20 will not recover all reserves in the SE/4 of Section 2, and that the proposed well will recover additional reserves in the Dakota formation.

(h) Volumetric calculations on the primary sand in the Morrison formation in the SE/4 of Section 2 show the following:

Morrison <u>Sand</u> Third	OGIP (MMCF) 1675	Remaining Gas In Place (MMCF) 1472
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The engineering data indicate that the existing Ute Indians "A" Well No. 27 will not recover all reserves in the SE/4 of Section 2, and that the proposed well will recover additional reserves in the Morrison formation.

(i) The proposed well will have a total depth of approximately 3000 feet, and will cost approximately \$275,000.00. The additional cost to drill directionally is \$40,000.00.

(10) The unorthodox surface location is due to topographic problems, which prevent a well at the proposed bottomhole location. The U. S. Bureau of Land Management and the Ute Mountain Ute Tribe have approved the surface location for the proposed well.

(11) The evidence and testimony in this case indicate that unless another well is drilled in the SE/4 of Section 2, the Dakota and Morrison reserves in the SE/4 of Section 2 will not be recovered, and the interest owners therein will not have the opportunity to produce their fair share of reserves.

(12) Approval of the proposed unorthodox surface location, and approval of simultaneous dedication in the Ute Dome-Dakota Gas Pool and Undesignated Ute Dome-Morrison Gas Pool, will afford the applicant the opportunity to produce its just and equitable share of oil and gas from the subject pools, prevent economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and prevent waste and protect correlative rights.

(13) To avoid further confusion surrounding Division Orders No. R-11131, R-11132, and R-11132-A, a single order should be issued that reflects Cross Timbers' current operations of its Ute Indians Wells No. 20, 26, and 27 in the Dakota, Morrison, and Paradox intervals and its plans for the Ute Indians Well No. 32.

**IT IS THEREFORE ORDERED THAT:**

(1) This order shall supersede the Division Orders No. R-11131, issued in Case No. 12099 on February 5, 1999, R-11132, issued in Case No. 12100 on February 5, 1999, and R-11132-A, issued in Case No. 12210 on September 29, 1999.

(2) The applicant, Cross Timbers, is hereby authorized to drill its Ute Indians "A" Well No. 32 (**API No. 30-045-30489**) at an unorthodox surface gas well location 560 feet from the South line and 1120 feet from the East line (Unit P) of Section 2, Township 31 North, Range 14 West, NMPM, San Juan County, New Mexico, and directionally drill the well to a targeted bottomhole location within the Morrison formation approximately 1031 feet from the South line and 1656 feet from the East line (Unit O) of Section 2.

(3) The applicable drilling window or "producing area" within both the Dakota and Morrison intervals for this wellbore shall include that area within the subject 160-acre gas spacing and proration unit comprising the SE/4 of Section 2 that is no closer than the standard setback requirement of 660 feet to the outer boundary of this unit [see Division Rules 104.C (3) and 111.A (7)].

(4) Within the Ute Dome-Dakota Pool, the applicant is hereby authorized to simultaneously dedicate the SE/4 of Section 2, being a standard 160-acre gas spacing and proration unit, to the above-described Ute Indians "A" Well No. 32 and its existing Ute Indians "A" Well No. 20 (**API No. 30-045-24605**), located at an orthodox gas well location 1580 feet from the South line and 1520 feet from the East line (Unit J) of Section 2.

(5) Within the Undesignated Ute Dome-Morrison Pool, the applicant is hereby authorized to simultaneously dedicate the SE/4 of Section 2, being a standard 160-acre gas spacing and proration unit, to the above-described Ute Indians "A" Well No. 32 and its existing Ute Indians "A" Well No. 27, located at an unorthodox gas well location 2600 feet from the South line and 1000 feet from the East line (Unit I) of Section 2.

(6) Further, Cross Timbers shall comply with all provisions of Division Rule 111 applicable in this matter.

**IT IS FURTHER ORDERED THAT:**

(7) For gas production attributed to the deeper Paradox formation, all of Section 2, being a standard 640-acre, more or less, gas spacing and proration unit in the Ute Dome-Paradox Pool, shall be dedicated to Cross Timbers' Ute Indians "A" Well No. 26 (**API No. 30-045-29868**), located at an unorthodox surface location 570 feet from the South line and 1045 feet from the East line (Unit P) of Section 2 and a non-standard subsurface gas well location at a depth of 8,558 feet (MD) 802 feet from the South line and 1023 feet from the East line (Unit P) of Section 2.

(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.



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STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in cursive script that reads "Lori Wrotenbery".

LORI WROTENBERY  
Director