

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:

APPLICATION OF CROSS TIMBERS OIL
COMPANY FOR AN UNORTHODOX GAS WELL
LOCATION AND SIMULTANEOUS DEDICATION,
SAN JUAN COUNTY, NEW MEXICO.

Case No. 12098
Order No. R-_____

ORDER OF THE DIVISION
(Proposed by Cross Timbers Oil Company)

BY THE DIVISION:

This cause 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 _____ day of January, 1999, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter hereof.

(2) The applicant, Cross Timbers Oil Company, seeks authority to drill its Ute Mountain Tribal "J" Well No. 6 at an unorthodox gas well location 450 feet from the South line and 500 feet from the West line (Unit M) of projected Section 1, Township 31 North, Range 14 West, NMPM, San Juan County, New Mexico, to test the Ute Dome-Dakota Gas Pool and the Morrison formation. The SW¼ of Section 1 will be dedicated to the subject well, forming a standard 160-acre gas spacing and proration unit for both intervals. The applicant also seeks an exception to Division General Rule 104.D(3) to continuously and concurrently produce Ute Dome-Dakota Gas Pool production from the Ute Mountain Tribal "J" Well No. 6 and from the existing (i) Ute Mountain Tribal "J" Well No. 1, located at an unorthodox gas well location 2460 feet from the South line and 1830 feet from the West line (Unit K) of Section 1 (approved by Division Administrative Order NSL-575), and (ii) Ute Mountain Tribal "J" Well No. 4, located at an orthodox gas well location 1850 feet from the South line and 1110 feet from the West line (Unit L) of Section 1, and for the simultaneous dedication of all three wells to the SW¼ of Section 1.

(3) The Ute Mountain Ute Tribe (the "Tribe"), the royalty owner in the well unit and all offsetting acreage, appeared at the hearing.

(4) The proposed well is located in the Ute Dome-Dakota Pool. There is no designated Morrison pool in the area. Both intervals are governed by Rule 104.C(3)(a) of the Division's General Rules and Regulations, which requires standard 160-acre gas spacing and proration units, with wells no closer than 790 feet to the outer boundary of the unit, nor closer than 130 feet to a quarter-quarter section line.

(5) The proposed well is located 340 feet closer to the South line and 290 feet closer to the West line of the Section than allowed by Division rules.

(6) The 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. Thus, no interest owner is adversely affected by the unorthodox location or simultaneous dedication.

(7) The applicant presented the following geologic and engineering evidence:

(a) The 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.

(b) The southern portion of the structure is bisected in the Dakota formation by several WNW-ESE 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.

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

(d) A fault bisects the middle of the SW $\frac{1}{4}$ of Section 1. The proposed location is within a fault block which is separate from the fault block in which the existing wells in the SW $\frac{1}{4}$ of Section 1 are located, and which has not been tested by the existing wells.

(e) Because the proposed well is fault-separated from the existing wells in the SW $\frac{1}{4}$ of Section 1, it will have no effect

on production from those wells.

(f) Volumetric calculations on the primary sands in the Dakota formation in the SW¼ of Section 1 show as follows:

<u>Dakota Sand</u>	<u>OGIP (MMCF)</u>	<u>Recoverable Gas (85% Recovery Factor) (MMCF)</u>
First	338	287
Second	606	514
<u>Third</u>	<u>120</u>	<u>101</u>
Total:	1064	902

Production data on the existing wells in the SW¼ of Section 1 shows the following:

<u>Well</u>	<u>Cumulative Production (MMCF)</u>	<u>Decline Curve EUR (MMCF)</u>
"J" 1	460	460
"J" 4	309	506

There is little pressure data available in the Dakota formation in this area. However, the available data indicates that the Ute Mountain Tribal "J" Well Nos. 1 and 4 are not completely in pressure communication.

(g) The engineering data cumulatively indicates that reserves in the fault block to the north of the proposed Ute Tribal "J" Well No. 6 are economic, and that the proposed well should encounter economic reserves that are not being recovered by the existing wells.

(8) The evidence and testimony in this case indicates that unless a well is drilled at an unorthodox location in the SW¼ of Section 1, the reserves under the southern part of the SW¼ will not be produced, and the interest owners therein will not have the opportunity to produce their fair share of reserves in the reservoir.

(9) Approval of the proposed unorthodox location and simultaneous dedication will afford the applicant the opportunity to produce its just and equitable share of oil and gas from the subject pool, will 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 will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Cross Timbers Oil Company, is hereby authorized to drill its Ute Mountain Tribal "J" Well No. 6 at an unorthodox gas well location 450 feet from the South line and 500 feet from the West line of Section 1, Township 31 North, Range 14 West, NMPM, San Juan County, New Mexico, to test the Ute Dome-Dakota Gas Pool and the Morrison formation.

(2) The SW¼ of Section 1 shall be simultaneously dedicated to the Ute Mountain Tribal "J" Well No. 6, and the existing Ute Mountain Tribal "J" Well Nos. 1 and 4, forming a standard 160-acre gas spacing and proration unit for the Ute Dome-Dakota Pool.

(3) Jurisdiction is hereby 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