

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. 12099
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 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 projected Section 2, 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 SE¼ of Section 2 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 Indians "A" Well No. 27 and from (i) the existing Ute Indians "A" Well No. 20, 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, and (ii) the proposed Ute Indians "A" Well No. 26, to be located at an orthodox bottomhole gas well location 850 feet from the South line and 1450 feet from the East line (Unit O) of Section 2 (the subject of Case No. 12100), and for the simultaneous dedication of all three wells to the SE¼ of Section 2.

(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 Gas 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 750 feet closer to the outer boundary of the well unit 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, and 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 level 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 wet when encountered off of localized structures. Thus, a well needs to be structurally high, and the proposed location achieves this objective.

(d) Two faults bisect the SE $\frac{1}{4}$ of Section 2. The proposed location is within a fault block which is separate from the fault block in which the existing Ute Indians "A" Well No. 20 is located. Thus, the proposed well will have no effect on production from the existing well.

(e) The proposed well will be drilled to test the Morrison formation, which has produced in the Ute Mountain Tribal "J" Well No. 4 in the SE $\frac{1}{4}$ of Section 1, to the east, but which is

not producing from the existing Ute Indians "A" Well No. 20.

(f) The Ute Indians "A" Well No. 20 has produced only 133 MMCF of gas since 1981, and is currently producing at a rate of 8 MCF/day. Decline curve analysis shows that the well will ultimately recover only 141 MMCF.

(g) Volumetric calculations on the primary sands in the Dakota formation in the SE¼ of Section 2 show the following:

<u>Dakota Sand</u>	<u>OGIP (MMCF)</u>	<u>Recoverable Gas (85% Recovery Factor) (MMCF)</u>
First	405	345
Second	355	302
<u>Third</u>	<u>189</u>	<u>161</u>
Total:	949	808

(h) The engineering data cumulatively indicates that the existing Ute Indians "A" Well No. 20 will not recover all reserves in the SE¼ of Section 2, and that the proposed well will recover additional economic reserves.

(8) The evidence and testimony in this case indicates that unless a well is drilled at an unorthodox location in the SE¼ of Section 2, the reserves under the SE¼ will not be recovered, 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 Indians "A" Well No. 27 at an unorthodox gas well location 2600 feet from the South line and 1000 feet from the East line of Section 2, 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 SE¼ of Section 2 shall be simultaneously dedicated to the Ute Indians "A" Well No. 27, the existing Ute Indians "A" Well No. 20, and the proposed Ute Indians "A" Well No. 26 (if and when completed in the Dakota and/or Morrison formations), forming a standard 160-acre gas spacing and proration unit for the Ute Dome-Dakota Gas Pool and the Morrison formation.

(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
Directory