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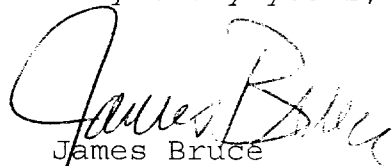
Michael E. Stogner
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Case No. _____; Application of Cross Timbers Oil Company
for an infill well in the SE¼ S2-31N-14W, San Juan
County, New Mexico (heard on January 25, 2001)

Dear Mr. Stogner:

Enclosed regarding the above case are (a) a proposed order, on hard
copy and disk, and (b) a land plat showing the location and numbers
of the Ute Indian leases in the immediate area of the subject well.

Very truly yours,


James Bruce

Attorney for Cross Timbers Oil Company

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 TO AMEND DIVISION ORDER NO.
R-11132 TO PERMIT AN ALTERNATIVE
UNORTHODOX GAS WELL LOCATION, SAN
JUAN COUNTY, NEW MEXICO.

Case No. _____
Order No. R-_____

ORDER OF THE DIVISION

BY THE DIVISION:

This cause 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 _____ day of January, 2001, 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) Applicant Cross Timbers Oil Company seeks authority to drill its Ute Indians "A" Well No. 32 at an unorthodox surface location 570 feet from the South line and 1120 feet from the East line of the section, and directionally drill the well to an unorthodox bottomhole location approximately 1031 feet from the South line and 1656 feet from the East line (Unit O) 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 Ute Dome-Morrison Gas Pool. The SE $\frac{1}{4}$ of Section 2 will be dedicated to the well in the Dakota and Morrison formations, forming a standard 160-acre gas spacing and proration unit. Applicant also seeks an exception to Division General Rule 104.D.(3) to continuously and concurrently produce:

- (a) Ute Dome-Dakota Gas Pool production from the Ute Indians "A" Well No. 32 and from 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
- (b) Ute Dome-Morrison Gas Pool production from the Ute Indians "A" Well No. 32 and from the 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.

Applicant also seeks approval to simultaneously dedicate all three wells to the SE¼ of Section 2.

(3) The proposed well is located in the Ute Dome-Dakota Gas Pool and Ute Dome-Morrison Gas Pool. The Dakota and Morrison 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 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. One well is allowed per quarter section.

(4) The Ute Mountain Ute Tribe, the royalty owner in the well unit and in all offsetting acreage, and the United States Bureau of Land Management were notified of the hearing in this matter. They did not object to applicant's request.

(5) The Ute Mountain Ute 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 applicant's request.

(6) The applicant presented the following evidence:

- (a) Division Order No. R-11132, as amended, approved the drilling of the Ute Indians "A" Well No. 26 at an unorthodox gas well location 570 feet from the South line and 1045 feet from the East line of Section 2, to test the Paradox formation. The well was also intended to test the Dakota formation. However, the Ute Indians "A" Well No. 26 has been completed as a producing well in the Paradox formation, and applicant does not seek to complete the well in the Dakota formation at this time.
- (b) Division Order No. R-11131 approved the drilling of the 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, to test the Morrison formation. The well was also intended to test the Dakota formation. However, the Ute Indians "A" Well No. 27 was completed as a producing well in the Morrison formation, and applicant does not seek to complete the well in the Dakota formation at this time.

- (c) The proposed Ute Indians "A" Well No. 32 will be directionally drilled from an unorthodox surface location 570 feet from the South line and 1120 feet from the East line of the section, 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 850 feet from the South line and 1450 feet from the East line of the section. Applicant intends to test and produce both zones.
- (d) 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.
- (e) 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.
- (f) 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.
- (g) Two faults bisect the SE¼ 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 Nos. 20 and 27 are located. Thus, the proposed well will not affect production from the existing wells.
- (h) 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.
- (i) Volumetric calculations on the primary sands in the Dakota formation in the SE¼ of Section 2 show the following:

Dakota <u>Sand</u>	OGIP (MMCF)	Remaining Gas In Place (MMCF)
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 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 reserves in the Dakota formation.

- (j) Volumetric calculations on the primary sand in the Morrison formation in the SE¼ of Section 2 show the following:

Morrison <u>Sand</u>	OGIP (MMCF)	Remaining Gas In Place (MMCF)
Third	1675	1472

The engineering data indicates that the existing Ute Indians "A" Well No. 27 will not recover all reserves in the SE¼ of Section 2, and that the proposed well will recover additional reserves in the Morrison formation.

- (k) 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.

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

(8) The evidence and testimony in this case indicates that unless another well is drilled in the SE¼ of Section 2, the Dakota and Morrison reserves in the SE¼ of Section 2 will not be recovered, and the interest owners therein will not have the opportunity to produce their fair share of reserves.

(9) Approval of the proposed unorthodox surface location, and approval of simultaneous dedication in the Ute Dome-Dakota Gas Pool and Ute Dome-Morrison Gas Pool, will afford applicant the opportunity to produce its just and equitable share of oil and gas from the subject pools, 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) Applicant Cross Timbers Oil Company is hereby authorized to drill its Ute Indians "A" Well No. 32 at an unorthodox surface location 570 feet from the South line and 1120 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 Ute Dome-Morrison Gas Pool. The bottomhole location in the Morrison formation shall be within a 100 foot radius of a location 1031 feet from the South line and 1656 feet from the East line of Section 2.

(2) Applicant is further authorized to simultaneously dedicate the SE $\frac{1}{4}$ of Section 2 to the wells described below, forming a standard 160-acre gas spacing and proration unit for the Ute Dome-Dakota Gas Pool and Ute Dome-Morrison Gas Pool. Applicant is further authorized to continuously and concurrently produce:

- (a) Ute Dome-Dakota Gas Pool production from the Ute Indians "A" Well No. 32 and from 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
- (b) Ute Dome-Morrison Gas Pool production from the Ute Indians "A" Well No. 32 and from the 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.

(3) That portion of Order No. R-11131 granting approval of simultaneous dedication of the Ute Indians "A" Well Nos. 20, 26, and 27 in the Ute Dome-Dakota Gas Pool and/or Ute Dome-Morrison Gas Pool is hereby suspended until further order of the Division.

(4) 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

