STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

BATAAN MEMORIAL BUILDING
STATE CAPITOL
SANTA FE, NEW MEXICO 87503

February 29, 1988

Kerr McGee Corporation
c/o R.J. Quance
Exploration and Production Division
P.O. Box 25861
Oklahoma City, OK 73125

Dear Mr. Quance:

Your February 3, 1988, letter requests assistance in attempting to locate a suitable fresh, brackish, or saltwater source capable of supplying from 2,000 to 4,000 BWPD. You indicate that your investigation relates to leases in Sections 1 and 2, Township 8 South, Range 33 East. This area is not located within a declared underground water basin in the State of New Mexico; therefore the drilling of wells and appropriation of water in this area would not require a permit from this office. The State Engineer would have no jurisdiction over ground water development other than to prevent waste. A map showing the declared underground water-basins in New Mexico is enclosed.

The USGS Button Mesa NE Quadrangle map indicates that there is at least one windmill in Section 2, T8S, R33E with additional windmills in adjacent sections. The major water bearing formation in this area is the Ogallala Formation. The western boundary of the Ogallala is located just a few miles west from your area of interest and dips to the east from New Mexico into Texas. The gradient of water movement in the Ogallala is generally from west to east with the saturated thickness increasing from west to east. In your area of interest, the saturated thickness of the Ogallala may be very small, which may be indicative of low producing wells. The State Engineer Office has checked its records and does not have any specific information on ground water quality or quantity for your area. There are, however, the following reports available for the surrounding areas that may be of interest to you.

McAda, Douglas, 1984, Projected Water Level Declines in the Ogallala Aquifer in Lea County, New Mexico, U. S. Geological Survey Water Resources Investigations Report 84-4062 84 p., This report was prepared to provide information to planners and water users in determining how much water was available for use and to estimate the present quantity of water in the Ogallala Aquifer in Lea County and is available through the Open File Service Section Branch of Distribution, US Geological Survey, MS 306, Box 25425, Denver Federal Center, Denver, Colorado 80225.

EXHIBIT 14

Kerr-McGee
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9682 + 9683

Cooper, J. B., 1960, Ground Water in the Causey-Lingo Area, Roosevelt County, New Mexico, New Mexico State Engineer Technical Report 14, 51 p., The Causey-Lingo area is located in south-central Roosevelt County. This report addresses water quantity, quality and water levels for the study area. Enclosed is a copy of this report.

Lansford, Robert R., 1974, Water Resources Evaluation of the Southern High Plains of New Mexico, New Mexico Water Resources Research Institute, WRRI Report No. 44 59 p., The Southern High Plains includes your area of interest. This report indicates that groundwater in the Southern High Plains is normally encountered at reasonably shallow depths with a saturated thickness generally less than 200 feet. This report is available through the NMWRRI, New Mexico State University, Box 3167, Las Cruces, New Mexico 88003.

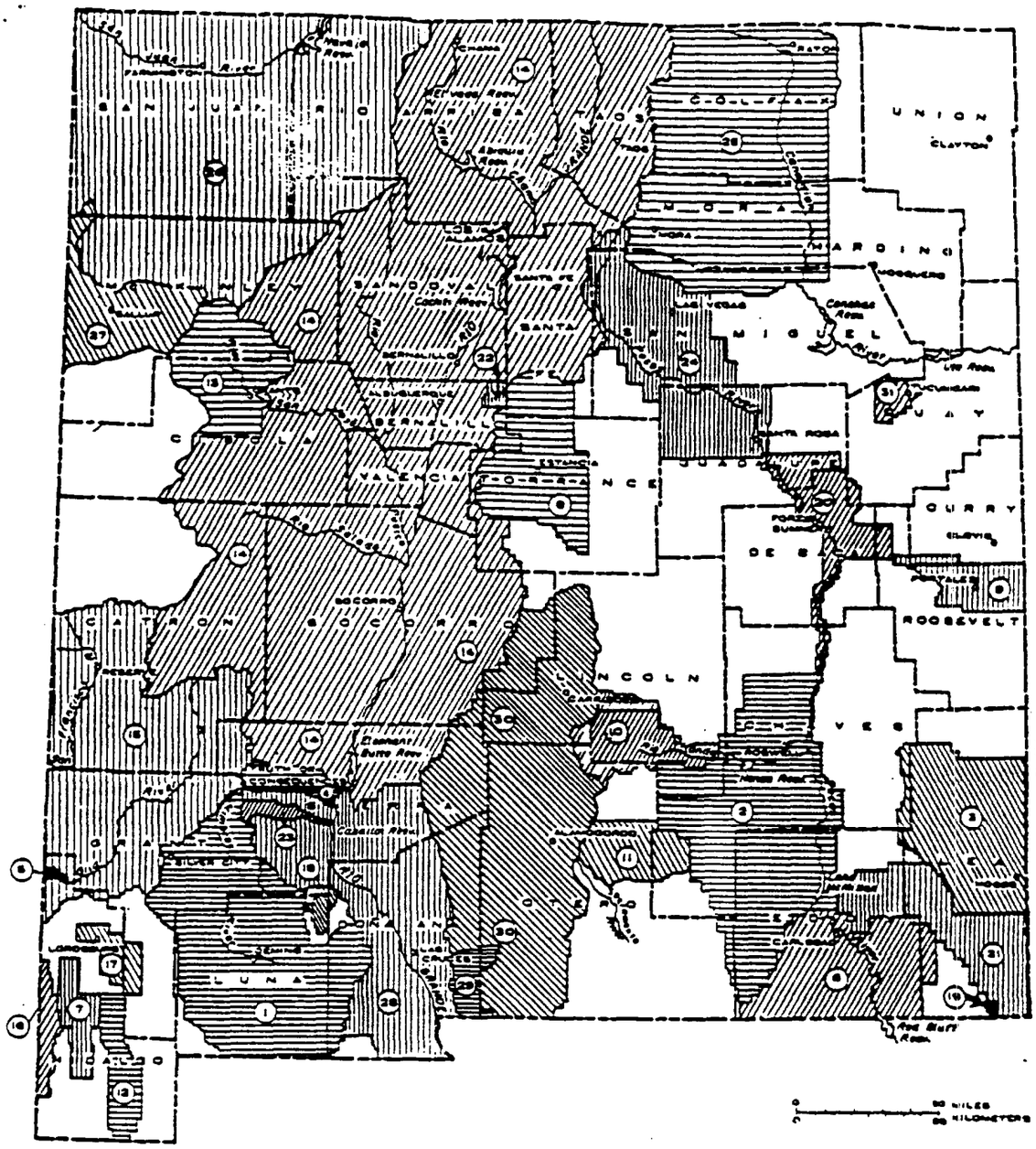
Please let me know if further discussion of this matter would be helpful.

Sincerely,

S.E. Reynolds
State Engineer

SER:egr

Enclosure



DECLARED UNDERGROUND WATER-BASINS IN NEW MEXICO

BASIN	AREA IN SQUARE MI.
1. MIMBRES VALLEY	4,279
2. ROSWELL	4,281
3. LEA COUNTY	2,180
4. HOT SPRINGS	284
5. VIRDEN VALLEY	19
6. CARLSBAD	1,968
7. ANIMAS	428
8. ESTANCIA	1,724
9. PORTALES	638
10. MONDO	901
11. PENASCO	723
12. PLAYAS VALLEY	516
13. BLUEWATER	1,310
14. RIO GRANDE	28,209
15. GILA-SAN FRANCISCO	5,689

BASIN	AREA IN SQUARE MI.
16. SAN SIMON	283
17. LORDSBURG VALLEY	329
18. NUTT-HOCKETT	133
19. JAL	18
20. FORT SUMNER	1,058
21. CAPITAN	1,660
22. SANDIA	73
23. LAS ANIMAS CREEK	131
24. UPPER PECOS	2,709
25. CANADIAN RIVER	5,825
26. SAN JUAN	9,757
27. GALLUP	1,439
28. LOWER RIO GRANDE	3668
29. HUECO	288
30. TULAROSA	6,879
31. TUCUMCARI	177
	84,723

ILLEGIBLE