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W. Thomas Kellahin  
Karen Aubrey

Jason Kellahin  
Of Counsel

April 4, 1988

RECEIVED

APR 5 1988

Mr. William J. LeMay  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 85701

OIL CONSERVATION DIVISION

"Hand Delivered"

Re: Anadarko Petroleum Corporation  
Increase Injection Pressure in  
Ballard GSA Unit Waterflood

Case 9364

Dear Mr. LeMay:

On behalf of Anadarko Petroleum Corporation, please set the enclosed application to increase the injection limitation pressure in the Foster San Andres Pool for the next available examiner's hearing now scheduled for April 27, 1988.

The following is suggested as a possible advertisement for this case:

773  
Application of Anadarko Production Company for Amendment to Division Order R-7000 to increase the injection pressure limitation for the Ballard GSA Waterflood Project, Eddy County, New Mexico. Applicant, in the above styled cause, seeks an order increasing the surface injection limitation pressure to 450 psi above the formation parting pressure as determined from step-rate tests for ten injection wells in the Grayburg formation of the Loco Hills Pool within the project area being a portion of Sections 4, 6, 7, 17, and all of Section 8 and 5 of T18S, R29E, Eddy County, New Mexico.

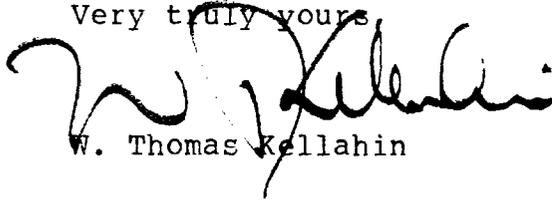
By copy of this letter, and enclosed application, we are notifying all interested parties that they have the right to appear at the hearing either in support of or

**KELLAHIN, KELLAHIN & AUBREY**

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opposition to the application. Should they desire further information they may contact the undersigned or Mr. John H. Beard, Anadarko Petroleum Company, (713) 875-0858.

Very truly yours,



W. Thomas Kellahin

WTK:ca  
Enc.

cc: Mr. John H. Beard  
Anadarko Production Company  
P. O. 1330  
Houston, Texas 77251

All interested parties in Exhibit C

STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY AND MINERALS  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION  
OF ANADARKO PETROLEUM CORPORATION  
FOR AMENDMENT OF ORDER R-7000 TO  
INCREASE THE INJECTION PRESSURE  
LIMITATION FOR THE BALLARD GSA  
WATERFLOOD PROJECT, EDDY COUNTY,  
NEW MEXICO.

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OIL CONSERVATION DIVISION

CASE: 9364

A P P L I C A T I O N

Comes now ANDARKO PETROLEUM CORPORATION, by and through its attorneys, Kellahin, Kellahin & Aubrey, and applies to the New Mexico Oil Conservation Division for an order amending Order R-<sup>7773</sup>~~7000~~ for the Ballard GSA Waterflood Project, Eddy County, New Mexico, to increase the injection limitation pressure to 450 psi above the formation parting pressure as determined from step-rate tests for injection wells set for on Exhibit A attached hereto, and in support thereof would show:

(1) Applicant is the operator of the Ballard GSA Waterflood, Eddy County, New Mexico as shown on Exhibit "B" attached hereto.

(2) The Applicant, Anadarko Production Company obtained authority by Division Order R-<sup>7773</sup>~~7000~~ (1985<sup>1984</sup> expansion) to expand its Ballard GSA Unit Waterflood

project by the completion for injection or conversion to water injection of ten wells located as shown on Exhibits A and B, all in Township 18 South, Range 29 East, Loco Hills Pool, Eddy County, New Mexico.

(3) Decline curve analysis indicates that 237 MBO may be recovered as a result of the injection wells added to the Ballard GB-SA Unit under Order R-7000 (1982 expansion).

(4) Temperature logs from injection wells operated under Order No. 4-4493A (1973 project, no surface injection pressure limit) and Order No. R-7000 (1982 expansion, 1550 psi maximum surface injection pressure,  $\pm$  .65 psi/ft) indicate that all injected water is being contained within the Grayburg formation.

(5) The 1985 expansion area has shown no response to injection under Order No. R-7773 (.2 psi/ft maximum surface injection pressure). The continuation of the pressure limitation imposed under this order will result in a loss of 250 MBO of secondary oil.

(6) Injection conducted at 450 psi above the parting pressure of the formation will create a fracture that will not propagate outside of the vertical limits of the Grayburg formation.

(7) The improved injectivity from increased pressure limitations will allow for the timely completion of waterflood operations in the Ballard GB-SA Unit and

result in an additional 250 MBO being recovered from the 1985 expansion area.

(8) That a new pressure limitation of 450 psi above the formation parting pressure as determined by step-rate tests is requested for the Ballard GS-SA Unit wells operated under Order R-7773 and as tabulated on Exhibit A attached hereto.

(9) That attached hereto as Exhibit "C" is a list of the names and addresses of all interested parties to whom applicant has sent notice of the hearing of this application in accordance with the requirements of Rule 1207(4).

(10) That approval of this application will prevent waste, protect correlative rights, and will not constitute a risk to fresh water sources.

WHEREFORE, applicant requests that this matter be set for hearing and that after notice and hearing the application be granted as requested.

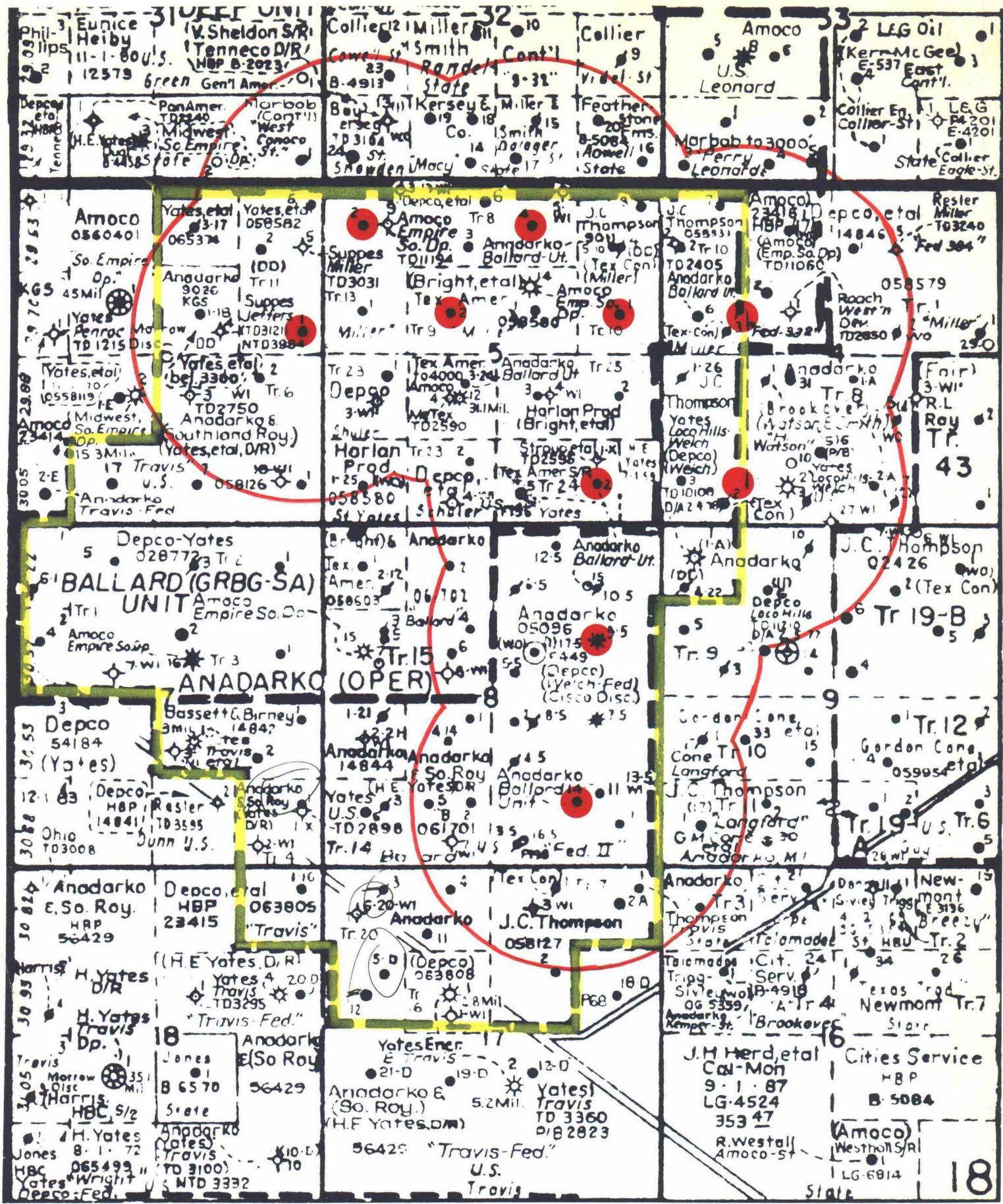
Respectfully submitted,



W. Thomas Kellahin, Esq.  
Kellahin, Kellahin & Aubrey  
P. O. Box 2265  
Santa Fe, New Mexico 87504

EXHIBIT "A"

<u>ELL</u>	<u>LOCATION</u>	<u>PRESSURE LIMIT (CURRENT) PSIG</u>	<u>PRESSURE LIMIT (REQUESTED) PSIG</u>
#10-9	1980' FNL & 1310' FWL, Sec 4	895	1345
#26-4	800' FSL & 1310' FWL, Sec 4	1290	1550
#5-9	Unit Letter H, Section 8	1032	1482
#5-14	Unit Letter P, Section 8	925	1375
#8-4	Unit Letter B, Section 5	737	1187
#9-2	Unit Letter F, Section 5	770	1220
#10-1	Unit Letter H, Section 5	520	970
#11-1	Unit Letter H, Section 6	475	925
#13-2	Unit Letter D, Section 5	750	1200
#24-2	Unit Letter P, Section 5	655	1105



● Proposed Injection Wells pressure increases

Exhibit B



**Anadarko**  
Production Company  
Midland Division

**BALLARD GB-SA UNIT**  
EDDY COUNTY, NEW MEXICO

**LAND PLAT**

Interpretation By: M.O. Bridges  
 Drafted By: \_\_\_\_\_ Scale: 1" = 2000'  
 Date: 10/84 Contour Interval: \_\_\_\_\_

BEFORE THE  
COURT OF COMMON PLEAS  
COLUMBIA COUNTY, OHIO  
Cecilia EX. LIT NO. 2  
CASE NO. 9381

EXHIBIT "C"

MAILING LIST

Smith & Watson  
Mrs. H. G. Watson  
920 South Roselawn Avenue  
Artesia, New Mexico 88210

Bogle Farms, Inc.  
P. O. Box 441  
Artesia, New Mexico 88210  
Attn: Mr. Millard Derrick

United States Bureau of Land Management  
P. O. Box 1397  
Roswell, New Mexico 88201

Gordon M. Cone  
P. O. Drawer 1509  
Lovington, New Mexico 88260

J. C. Thompson & J. C. Thompson, Jr.  
4500 Republic National Bank Tower  
Dallas, Texas 75201

Depco, Inc.  
110 16th Street  
Denver, Colorado 80202

Marbob Energy Corp.  
P. O. Box 304  
Artesia, New Mexico 88210

Kersey and Company  
808 W. Grand Avenue  
Artesia, New Mexico 88210

Cities Service Oil & Gas Company  
6 Desta Drive  
Suite 6002  
Midland, Texas 79702

Conoco Inc  
P. O. Box 460  
Hobbs, New Mexico 88240

Sell-Rasmussen Operating, Inc  
P. O. Box 5061  
Midland, Texas 79704