

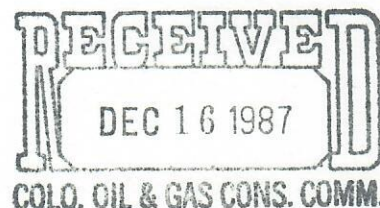
BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO



00250546

APPLICATION OF LOGAN COUNTY WATER DISPOSAL)
COMPANY AND LEWIS & CLARK EXPLORATION COMPANY)
PURSUANT TO RULE 326 OF THE COMMISSION)
TO COMMENCE OPERATIONS FOR THE DISPOSAL OF)
WATER INTO THE CRETACEOUS "J" AND "O" FORMATION)
IN THE DUBOIS #2 WELL, LOCATED SE NE NW OF)
SECTION 7, TOWNSHIP 9 NORTH, RANGE 52 WEST,)
LOGAN COUNTY, COLORADO)

Logan County Water Disposal Company, 1700 Broadway,
Suite 2308, Denver, Colorado 80290, a Colorado Corporation,
together with Lewis & Clark Exploration Company, 1625 Broadway,
Suite 2770, Denver, Colorado 80202, a Colorado Corporation, do
herewith make this application to the Oil and Gas Conservation
Commission of the State of Colorado under Rule 326 of the
Commission, to convert an oil and gas test well commonly
referred to as the DuBois #2 Well, located in the NE/4 NW/4 of
Section 7, Township 9 North, Range 52 West, Logan County,
Colorado, to water injection into the Cretaceous "J" and "O"
sand formations.



I

Lewis & Clark Exploration Company has acquired the Dubois #2 well and is planning to retest the well. If this test is unsuccessful, the Dubois #2 well will be conveyed to Logan County Water Disposal Company pursuant to a letter agreement dated December 1, 1987.

If the test is successful, the well will not be used for water disposal.

II

Pursuant to Rule No. 326 applicant submits that the proposed injection will not result in the presence in an underground source of drinking water of any physical, chemical, biologic or radiological substance or matter which may cause a violation of any primary drinking water regulation in effect as of December 10, 1987, and found at 40 C.F.R. Section 122.321, or may otherwise adversely affect the health of persons.

III

Pursuant to the informational requirements set forth in Rule 326 of the Commission, applicant herewith submits the following materials:

1. As required by subsection (1) of Rule 326, a plat, attached hereto as Exhibit "A", showing location of the DuBois #2 Well and the location of disposal wells, all oil and gas wells, including abandoned wells and dry hole of public record, and names of the owners of record including surface owners

within one-quarter mile of the DuBois #2 Well. The Exhibit "A" plat also shows the location and depths of all domestic and/or irrigation wells of public record within Sections 6, 7 and 8 of T9N-R52W. Including the general location limits of the 1967 Dickinson well in the SE SW Section 6, there are possibly two such wells within one-quarter mile of the DuBois #2 Well.

The plan and specification for the system are as follows:

Applicant will initially pipeline Cretaceous "J" sand formation production waters from the Lewis & Clark operated Arco-Sindt #6-15 well located in the SW/4 SE/4 Section 6 through buried 3 inch polyethylene lines, to a collection tank located near the DuBois #2 Well. Waters will be emptied from the tank into the DuBois #2 Well on vacuum, into tubing anchored on a packer set above the Cretaceous "O" sand perforations into which water will be injected. Provided sufficient injection capacity is indicated for the "O" sand, a second packer will be set above the J sand perforations thereby precluding disposal into the J sand at this time, but preserving additional reserve disposal capacity for the systems future needs. Later additional disposal of "O" sand produced water from Hondo Oil & Gas Company and/or KWB Operating Company operated wells elsewhere in Section 6 and 7 may be included in the system.

None of the wells within one-quarter mile of the #2 Dubois proposed disposal well indicates a lack of injection zone confinement requiring remedial action in either the "J" or "O" sand injection zones.

2. As required by subsection (2) of Rule 326, the name, description and depth of the formations into which water is to be injected are:

- A. Name: Cretaceous "J" (South Platte) formation
Description: Porous Sandstone
Depth: 4725-4820 ft.
- B. Name: Cretaceous "O" (Lytle) formation
Description: Porous Sandstone
Depth: 4994-5044 ft.

No underground sources of drinking water will be affected by the proposed operation.

3. As required by subsection (3) of Rule 326, a resistivity log of the disposal well from the bottom of the surface casing to total depth is attached hereto as Exhibit "B".

4. As required by subsection (4) of Rule 326, a description of the casing in the Dubois #2 Well, including a schematic drawing of the surface and subsurface construction details of the system is attached hereto as Exhibit "C".

Applicant's proposed methods of testing casing before use of well is as follows:

Five and one-half inch production casing will be tested at the surface to a pressure of not less than 300 psia

Applicant's full description of cement jobs already in place is as follows:

Surface casing cemented in place at 139' with 100 sacks.

Production casing cemented in place at 5092' with 125 sacks.

5. As required by subsection (5) of Rule 326, applicant intends to inject produced waters from the oil productive Cretaceous "J" of the Arco-Sindt #6-15 well (S/2 SW/4 SE/4 Sec 6) operated by Lewis & Clark and may later also dispose produced waters from the "O" sand formation of the Padroni West Field, operated by Hondo Oil & Gas Co. and/or KWB Operating Company in Sections 6 and 7, T9N-R52W, all in Logan County, Colorado. Applicant herewith submits as Exhibit "D" to this application photocopies of water analysis reports prepared by Halliburton Services from water samples obtained from Cretaceous "O" Sand formation at the adjacent DuBois #1 well into which injection is proposed, indicating that the total dissolved solids of sampled native waters is 5,979 milligrams per liter. Also submitted herewith as Exhibit "E" is a photocopy of a water analysis report prepared by Core Laboratories, Inc. of water samples obtained from the "J" Sand formation of the Arco-Sindt #6-15 well (SW SW Sec 6) proposed source of waters to be disposed. This Exhibit "E" report indicates that the total dissolved solids of these J sand waters is 6228 milligrams per liter, which in this and other characteristics are very similar to the "O" sand injection zone waters. Applicant plans no treatment of the injected water.

6. As required by subsection (6) of Rule 326, applicant herewith states that it has no proposed stimulation program for the DuBois #2 Well.

7. As required by subsection (7) of Rule 326, applicant herewith estimates the minimum and maximum amount of water to be injected with anticipated injection pressure and known or calculated fracturing pressure of the disposal formation as follows:

Anticipated volumes: 500 to 2000 BWPD

Anticipated pressure: 0 psia at surface

Known or Calculated Fracturing Pressure

of Cretaceous "O" sand formation: 1400 psia at surface

8. As required by subsection (8) of Rule 326, the names and addresses of those persons notified by the applicant of this application, in the form of registered or certified mail, including each surface owner within one-quarter mile of the DuBois #2 Well are as follows:

Violet DuBois
801 South 52nd Street, Apt. 1716 with oil/gas lease
Omaha, Nebraska 68106

W.E. and Elizabeth Dickinson
18029 County Road 48 with oil/gas lease
Sterling, Colorado 80751

Stanley W. and Carol L. Fluharty
18979 County Road 50 surface owner only
Sterling, Colorado 80751

James McNear and Estate of William McNear
18783 County Road 46 unleased minerals
Sterling, Colorado 80751

Other Mineral Owners:

Arthur Sindt
820 Hawthorne Court with oil/gas lease
Sterling, Colorado 80751

Oil & Gas Working Interest Owners:

Oklahoma Silurian Partners	87.50% WI
15 East Fifth Street, Suite 3300	DuBois lease
Tulsa, Oklahoma 74103	

Anderman Smith/Smith Operating Company	6.25% WI
1776 Lincoln Street, Suite 500	DuBois lease
Denver, Colorado 80203	

Edward M. Bolin	6.25% WI
P.O. Box 621	DuBois lease
Casper, Wyoming 82602	

Hondo Oil & Gas Company	100% WI
105 West Third Street, Suite 428	Sindt &
Roswell, New Mexico 88201	Dickinson lease

9. Applicant herewith submits a certificate of mailing a notice of this application, together with a copy of said notice, as Exhibit "F" hereto.

WHEREFORE, Applicant respectfully request that the Commission grant its application to amend injection zones of disposed water at the Dubois #2 Well.

Respectfully submitted,
LOGAN COUNTY WATER DISPOSAL COMPANY

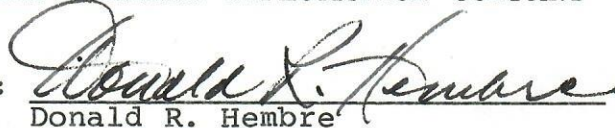
By:



William M. Griffith
President
1700 Broadway, Suite 2308
Denver, Colorado 80290
(303) 861-7055

LEWIS & CLARK EXPLORATION COMPANY

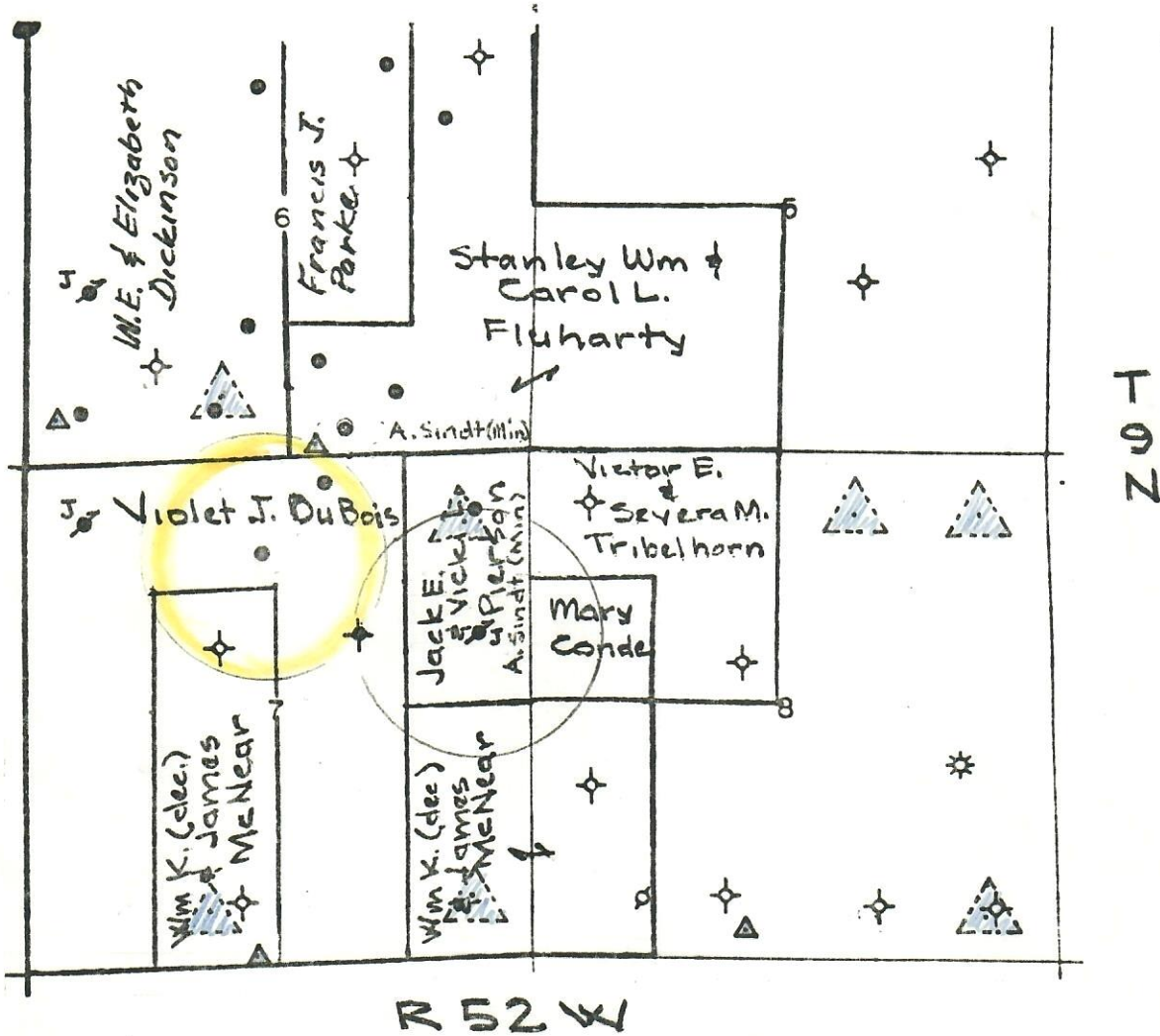
By:



Donald R. Hembre
President
1625 Broadway, Suite 2770
Denver, Colorado 80202
(303) 825-2444

EXHIBIT "A"

Plat Showing Disposal Wells, Oil & Gas Wells,
Water Wells and Ownership



Legend:

- Water Wells
 Specific location
 General location
- Oil & Gas Wells
 Oil abnd
 Gas
 Dry Hole
- Disposal Wells
 showing zone

WEST PADRONI FIELD AREA
LOGAN COUNTY, COLORADO

Map Scale 1:24,000

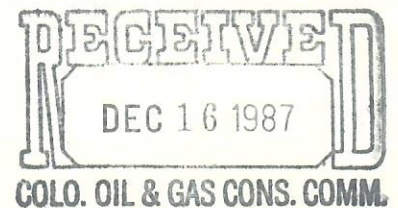
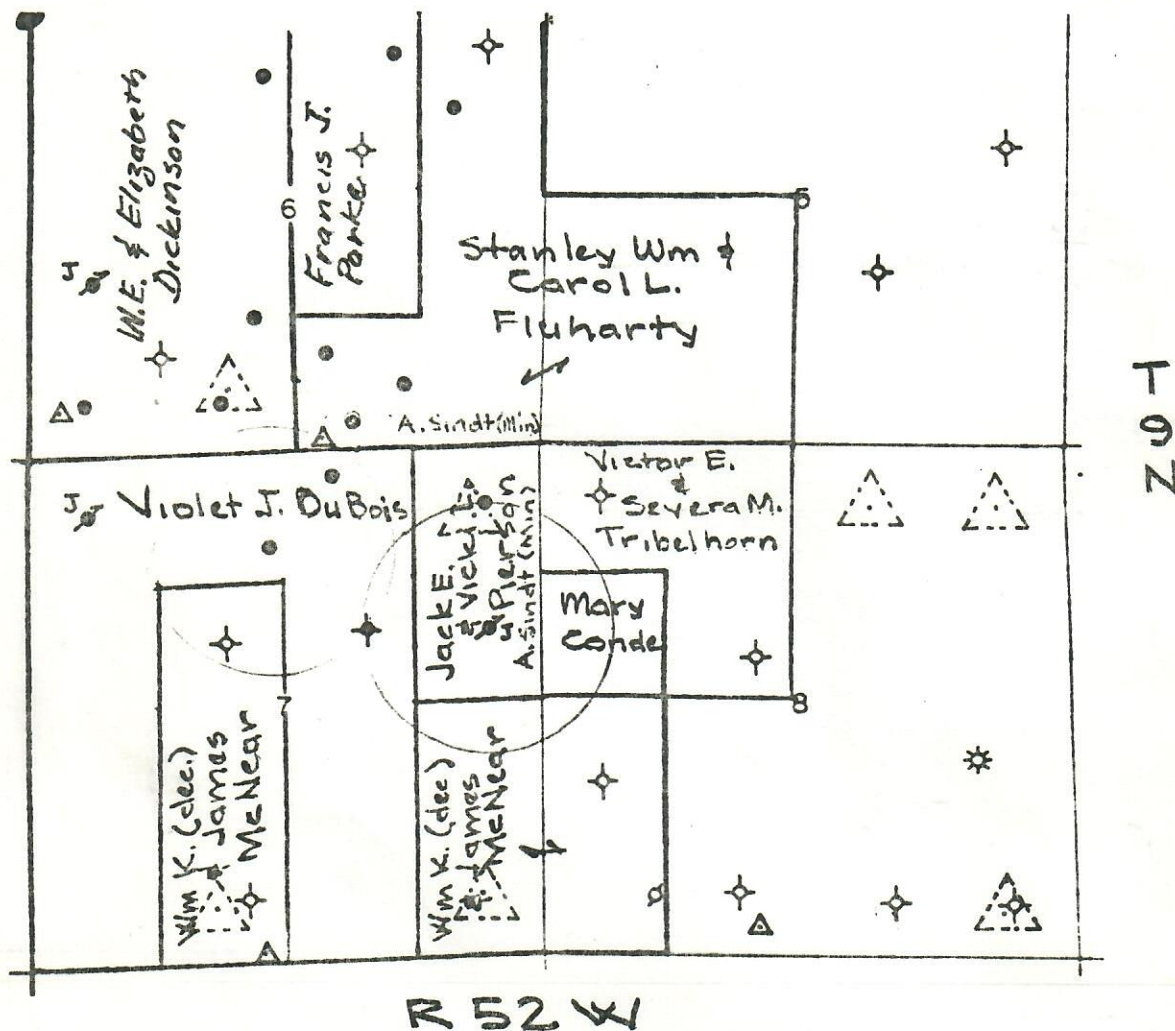




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Legend:

Water Wells

Specific location 
General location 

Oil & Gas Wells

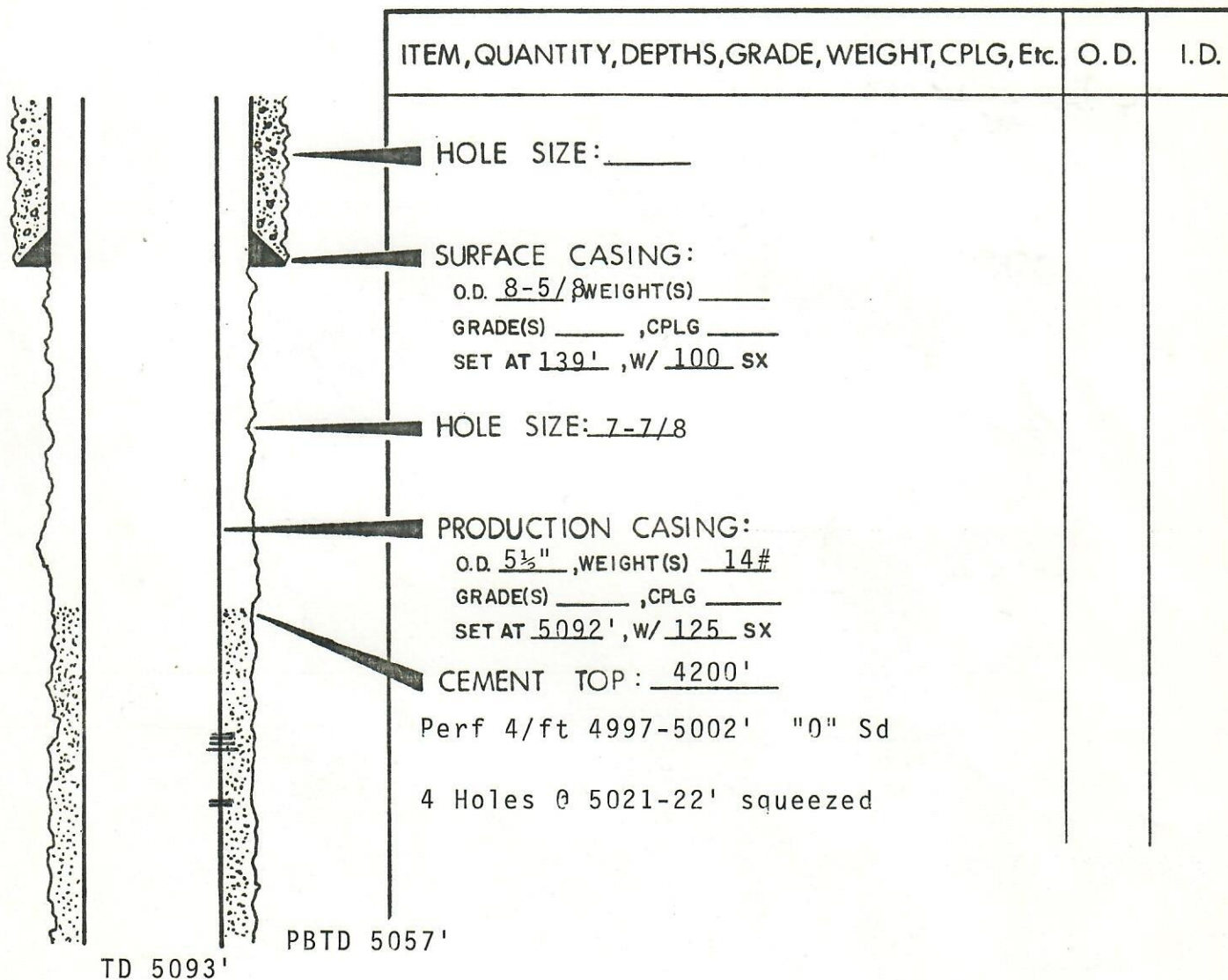
Oil  abnd 
Gas 
Dry Hole 

Disposal Wells
showing zone 

WEST PADRONI FIELD AREA
LOGAN COUNTY, COLORADO

Map Scale 1:24,000

EXHIBIT "C"
 SUBSURFACE CONSTRUCTION SCHEMATIC DIAGRAM
 DUBOIS #2 WELL
 SE NE NW SECTION 7, T9N-R52W
 LOGAN CO, COLORADO



RECEIVED
 DEC 16 1987
 COLO. OIL & GAS CONS. COMM.

EXHIBIT E

* DENVER DIVISION LAB *
* HALLIBURTON SERVICES *
* BOX 1510 *
* EVANSVILLE, WY 82636 *

DATE: MAY 7, 1986

TO: BOB FIELDING
- HALLIBURTON SERVICES
- DENVER, CO

REPORT NO: W86-0254

COMPANY: ANDERMAN-SMITH OPERATING

DATE REC'D: MAY 6, 1986

WELL NO: ~~DUBOTS UNIT~~

FORMATION: ~~ADAMS SHALE~~

LOCATION: SEC7-9N-52W
LOGAN CO, CO

0 Sand

SPECIFIC GRAVITY -----	1.002
PH -----	7.8
IRON (FE) -----	5
POTASSIUM (K) -----	13
SODIUM (NA) -----	1935
CALCIUM (CA) -----	10
MAGNESIUM (MG) -----	7
CHLORIDES (CL) -----	1706
SULFATES (SO4) -----	<10
CARBONATES (CO3) -----	NIL
BICARBONATES (HCO3) -----	2303
TDS -----	5979
RESISTIVITY -----	1.8

REMARKS:

OIL GRAV: 15.8 API @ 60 F.

MPL

OHMS AT 66 DEGREES F

CC: FILE
RANDY YEAGER

RESPECTFULLY SUBMITTED,

BY: A.A. KERNS

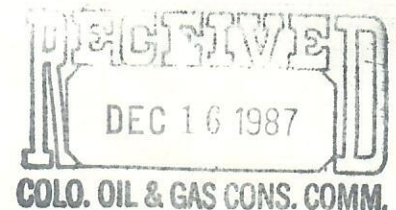


EXHIBIT F

December 17, 1987

NOTICE OF WATER DISPOSAL OPERATION

As required by Rule 326 (e) of the Colorado Oil and Gas Conservation Commission, you are herewith notified that Lewis & Clark Exploration Company and Logan County Water Disposal Company have jointly requested authorization from the Colorado Oil and Gas Conservation Commission to dispose oil field production waters into the Lower Cretaceous "J" and "O" sand formations at subsurface depths below 4700 feet of the #2 DuBois well, located SE NE NW Section 7, T9N-R52W, Logan County, Colorado.

A public hearing on the authorization may be required before the Colorado Oil and Gas Conservation Commission. Any person adversely affected may request a public hearing on the proposed authorization within 15 days of this notice.

Additional information on the operation for which authorization has been applied may be obtained from the office of the Colorado Oil and Gas Conservation Commission.

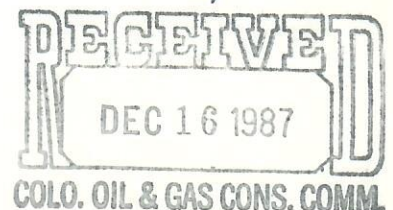
William M. Griffith
President
Logan County Water Disposal Company

CERTIFICATE OF MAILING

I hereby certify that I mailed a copy of the Notice of Water Disposal Operation to each owner of record, including service owner within one-quarter (1/4) mile of the proposed well by registered or certified mail on the 17th day of December, 1987.


William M. Griffith

MD-08 037A



December 17, 1987

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William M. Griffith
President
Logan County Water Disposal Company

CERTIFICATE OF MAILING

I hereby certify that I mailed a copy of the Notice of Water Disposal Operation to each owner of record, including service owner within one-quarter (1/4) mile of the proposed well by registered or certified mail on the 18th day of December, 1987.

MD-08 037A


William M. Griffith

