ENERGY AND MINERALS DEPARTMENT

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: C & C Operating Corp.

Address: P. O. Box 6016 Hobbs, NM 88241

Contact party: Joe D. Ramey Phone: 392-6525

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

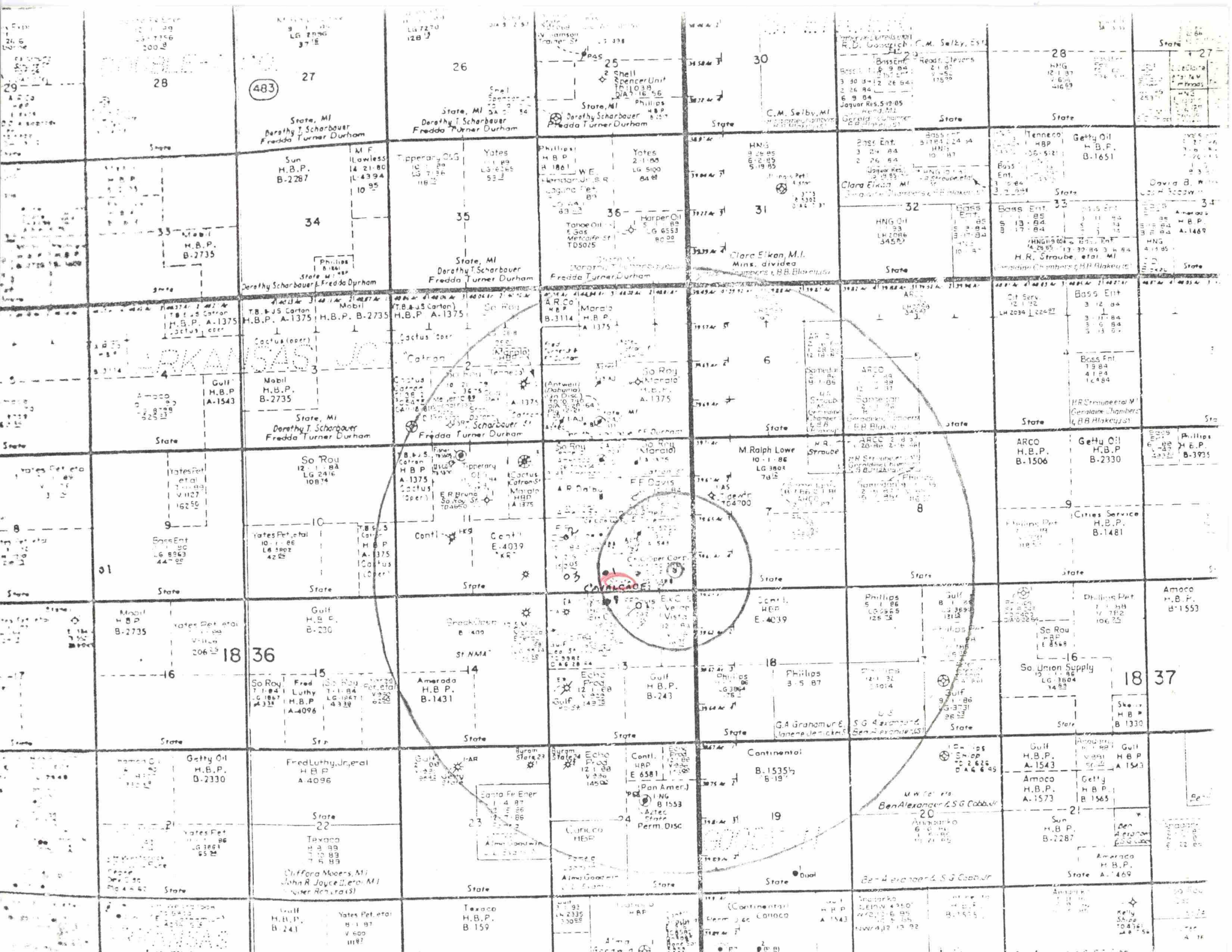
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Joe D. Ramey Title Consultant

Signature: _____ Date: _____

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office

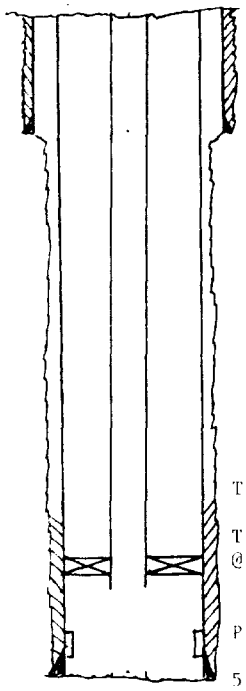

Cavalcade
18 36
18 37
483
State, MI
Dorothy T. Scharbauer
Fredda Turner Durham
Sun
H.B.P.
B-2287
Mobil
H.B.P.
B-2735
Gulf
H.B.P.
A-1543
So Roy
Marald
Conti
E-4039
EF Davis
M. Ralph Lowe
Clara Elkan, M.I.
C.M. Selby, MI
Getty Oil
H.B.P.
B-2330
ARCO
H.B.P.
B-1506
Cities Service
H.B.P.
B-1481
Phillips
So. Union Supply
Amerada
H.B.P.
B-1431
Fred Luthy, Jr., et al
H.B.P.
A-4096
Continental
B-1535½
Ben Alexander & S.G. Cabbur
Amoco
H.B.P.
B-1553
Texaco
H.B.P.
B 159
Yates Pet. et al
Boss Ent.
HNG
Tenneco
H.R. Straube, et al, MI
Pan Amer.
Echo Prod.
Santa Fe Ener.
Conoco
Perm. Disc.

INJECTION WELL DATA SHEET

OPERATOR	LEASE
C & C Operating Corp.	Lea OR State

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
3	660' S & E	12	18 South	36 East

Schematic



Tubular Data

Surface Casing

Size 8 5/8" Cemented with 250 sx.

TOC Surface feet determined by Circulated

Hole size 12 ¼"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5½ " Cemented with 295 sx.

TOC 3500' feet determined by Temp. Survey

Hole size 7 7/8"

Total depth 5202'

Injection interval

4942 feet to 4986 feet

(perforated or ~~open-hole~~, indicate which)

Tubing size 2 3/8" lined with Salta PVC (material) set in a

Guiberson Tension (brand and model) packer at 4900 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres

2. Name of Field or Pool (if applicable) Arkansas Junction San Andres

3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil Well

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Arkansas Junction Queen Gas Pool @ around 4350'

WELLS WITHIN AREA OF REVIEW

Cavalcade Oil Corp.
Silver State No. 1
330' N & 1980' W
Section 13, Township 18 South, Range 36 East
8 5/8" casing @ 1322' with 625 sxs. Circulated 135 sxs. 12¼" hole.
4½" casing @ TD 5175' with 700 sxs. Calculated top of cement 2175'.
7 7/8" hole.
Perforated in San Andres and completed as an oil well. 4912'-5066'
August production-303 bbls. oil, 462 bbls. water.

Cavalcade Oil Corp.
Golden State No. 1
660' S & 1980' W
Section 12, Township 18 South, Range 36 East
8 5/8" casing @ 1350' with 425 sxs. Circulated 136 sxs. 11" hole.
5½" casing @ Td 5227' with 675 sxs. Calculated top of cement 1900'.
7 7/8" hole.
Perforated in San Andres 4905'-5074' and completed as an oil well.
Temporary abandoned San Andres by setting bridge plug @ 4875'.
Perforated Queen 4382'-4394'. Tested 40 MCF/Day. Is now shut-in.

C & C Operating Corp.
Lea OR State No. 2
560' S & 1980' E
Section 12, Township 18 South, Range 36 East
8 5/8" casing @ 360' with 240 sxs. Cement circulated. 12¼" hole.
5½" casing @ TD 5210' with 295 sxs. Top cement 3700' by Temperature Survey. 7 7/8" hole.
Perforated in San Andres 4916'-5066' and completed as an oil well.
August production-130 bbls. oil, 380 bbls. water

PLUGGED AND ABANDONED
WITHIN AREA OF REVIEW

Axtec Oil & Gas Co.

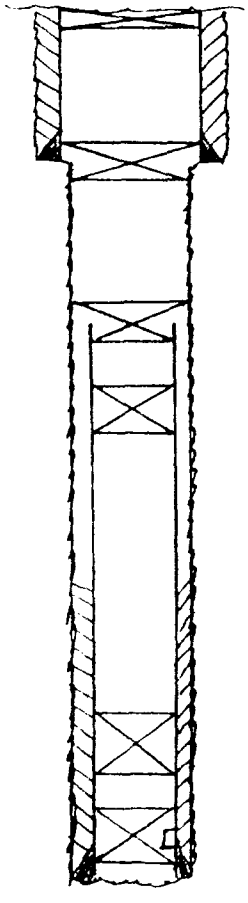
Gulf State No. 1
1980' S & E
Section 12, Township 18 South, Range 36 East

8 5/8" Casing set @ 357' with 240 sxs., circulated 40 sxs. 12¼" hole.

5½" casing set @ 5200'(Total depth) with 325 sxs. Top of cement @ 3200' by Temperature Survey. 7 7/8" hole

Perforated 4992'-5104' and originally completed as an oil well in the Arkansas Junction San Andres Pool.

Plugged & abandoned as illustrated below:



10 sx. plug at the surface

25 sxs. 307'-407'

5½" casing cut and pulled at 1262'
25 sxs. 1200'-1300'

25 sxs. 1852'-2067'

25 sxs. 3865'-4080'

25 sxs. 4940'-5155'

C & C Operating Corp. will operate the Lea OR State No. 3 disposal system as a closed system. Only produced water from the Arkansas Junction San Andres Pool will be injected into the well. The initial volume will be 20 bbls. per day with an anticipated maximum volume of 100 bbls. per day. The well will initially accept fluid on a vacuum and the maximum injection pressure should be 500 psi. However, a maximum pressure for the well of 988 psi is requested. Injection will be into the San Andres producing formation. The small volume injected will probably not affect the producing ability of surrounding producing wells and could give the operator an indication of the potential for future waterflood possibilities.

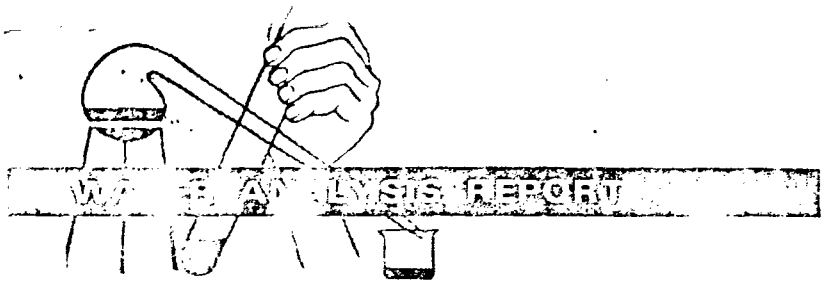
The San Andres in the area is predominately dolomite with some sand stringers. The formation reacts well to acid treatment and the perforations in the injection well have been treated with 100 gals. of acid. The top of the San Andres is around 4750 feet and has a total thickness of around 730 feet. Well logs have been previously submitted to the Division.

After examining the available engineering and geological data it is concluded that there is no evidence of open faulting or any other hydrologic connection between the disposal zone and the Ogallala fresh water source of drinking water in the area. The depth to the base of the Ogallala in the area is around 290 feet. Analysis from several fresh water wells in the area is attached to this application.

Treated oil has been pumped into the annular space above the packer and a pressure guage will be installed to monitor for tubing or packer leakage.

Copies of this application have been forwarded to the surface owner and lessee and to all leasehold operators within one-half mile of the injection well, list attached.

5603



WATER ANALYSIS REPORT

Champion Chemicals, Inc.
BOX 4513
ODESSA, TEXAS 79760

TECH SERVICE LABORATORY: Odessa, Texas Phone (915) 337-0055 & 563-0863
RESEARCH LABORATORY: Houston, Texas Phone (713) 431-2561
PLANT: Odessa, Texas Phone (915) 337-0055

REPORT FOR Patrick Gray
CC Skidmore
CC
CC
COMPANY General Petroleum
ADDRESS
SERVICE ENGINEER Cecil Brumley

DATE SAMPLED 12-26-85
DATE REPORTED 12-26-85
FIELD, LEASE, OR WELL Fresh water
COUNTY STATE
FORMATION
DEPTH
SUBMITTED BY

CHEMICAL ANALYSIS OF [illegible]

Chemical Component	Field, Lease, or Well: NE¼ NE¼ SE¼ ~~Sec 55~~ S27 T18R36 #1	NE¼ S3 T19 R36 #2	SE¼ S34 T18 R36 #3	#4
Chloride (Cl)	50	50	50	50
Iron (Fe)	0	0	0	0
Total Hardness ($CaCO_3$)	190	230	200	190
Calcium (Ca)	68	92	64	68
Magnesium (Mg)	4.9	9.7	9.7	4.9
Bicarbonate (HCO_3)	232	183	195	207
Carbonate (CO_3)	0	0	0	0
Sulfate (SO_4)	41.3	90	61.2	57.5
Hydrogen Sulfide (H_2S)	0	0	0	0
Specific Gravity	1.001	1.001	1.001	1.001
********** TDS	449.3	445.2	423.4	438
pH Beckman ( ) Strip ( )	7.4	7.5	7.5	7.8
Sodium	53.1	20.5	43.5	50.6
Scale Index				
$CaCO_3$ 85 F	0.23	0.35	0.23	0.58
$CaCO_3$ 160 F	0.96	1.08	0.96	1.31
$CaSO_4$	neg.	neg.	neg.	neg.

OTHER DESCRIPTION, REMARKS AND RECOMMENDATIONS

REPORTED BY Joe Edwards TITLE Tech Service

ADDRESS LIST

Conoco, Inc.
P. O. Box 460
Hobbs, NM 88240

Maralo, Inc.
P. O. Box 832
Midland, TX 79702

Elk Oil Company
P. O. Box 310
Roswell NM 88201

Cavalcade Oil Corp.
P. O. Box 16187
Lubbock, TX 79490

New Mexico State Land Office
P. O. Box 1148
Santa Fe, NM 87504-1148
Attention: Mr. Ray Graham

Snyder Ranches
P. O. Box 726
Lovington, NM 88260

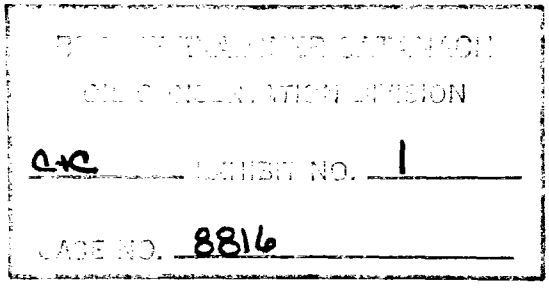


EXHIBIT NO. 1
CASE NO. 8816