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Getty Oil Company | P.O. Box 3360, Casper, Wyoming 82602-3360

COLO. OIL &amp; GAS CONS. COMM.

Central Exploration and Production Division

December 30, 1983

Oil & Gas Conservation Commission  
1313 Sherman Street  
Room 721  
Denver, Colorado 80203

Attn: Mr. William R. Smith

Re: Application for Approval to Dispose  
of Produced Water into Getty's G.A.  
Henderson Well #6  
2355' FSL & 2645' FWL (NE/SW)  
Section 18-T9N-R53W  
Logan County, Colorado

Dear Mr. Smith:

Getty Oil Company, as owner and operator, hereby requests permission to dispose of produced water from Getty's C.F. Green #2 well into the 3rd Dakota "J" Sand formation of the G.A. Henderson Well #6 according to Rule #330 "Underground Disposal of Water".

1. Attached is Exhibit 1, a plat showing the location of disposal wells and the location of all oil and gas wells, including abandoned wells and dry holes, and names of owners of record including surface owners within a 1/4 mile radius of the proposed disposal well.
2. The formation into which water is to be injected is 3rd Dakota "J" Sand, at a depth of 5083'-5140'. Injection will be through casing perforations at the interval 5089'-5094'. The White River Formation at approximately 0' to 50' and a transition zone of the Pierre Shale from 50' to approximately 800' are considered to be potential fresh water sources by the State of Colorado Water Resources Department.
3. Attached is a log of the proposed disposal well.
4. The G.A. Henderson Well #6 has 8 5/8", 22.7#, SWSJ surface casing set at 132' cemented with 125 sacks of regular cement with 2% CaCl<sub>2</sub> circulated to surface. 5 1/2", 14#, J-55 production casing was set at 5140' and cemented with 200 sacks of 50-50 Pozmix cement with 2% gel (See Exhibit 2). A 15 minute tubing-casing annulus pressure test of 300 psi will be conducted. Anticipated injection pressure is expected to be a vacuum. The Director will be advised of the scheduled date on which the pressure test will be performed at least ten days prior to the test.
5. The water to be injected will be water currently being produced from Getty's C.F. Green lease located in the Walker Field approximately one and one-half

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miles to the east. Attached is an analysis of this 3rd Dakota "A" Sand water. Also attached is an analysis of the water into which we will be injecting. It was taken from Getty's G.A. Henderson Well #4, a 3rd Dakota "J" Sand producer.

6. The volumes of water to be injected will range between a minimum of 200 barrels per day to a maximum of 1500 barrels per day at an anticipated injection pressure of 0 psi at the wellhead. The known fracture pressure of the disposal formation is 4000 psi at the sand face.
7. The names and addresses of the owners of record including each surface owner within a 1/4 mile radius of the proposed disposal well are shown on the attached Exhibit 5. By copy of the attached letter these owners were notified of this request for permission to dispose of produced water (See Exhibit 6).

Sincerely,  
GETTY OIL COMPANY



For D. W. BOWERS  
Area Superintendent

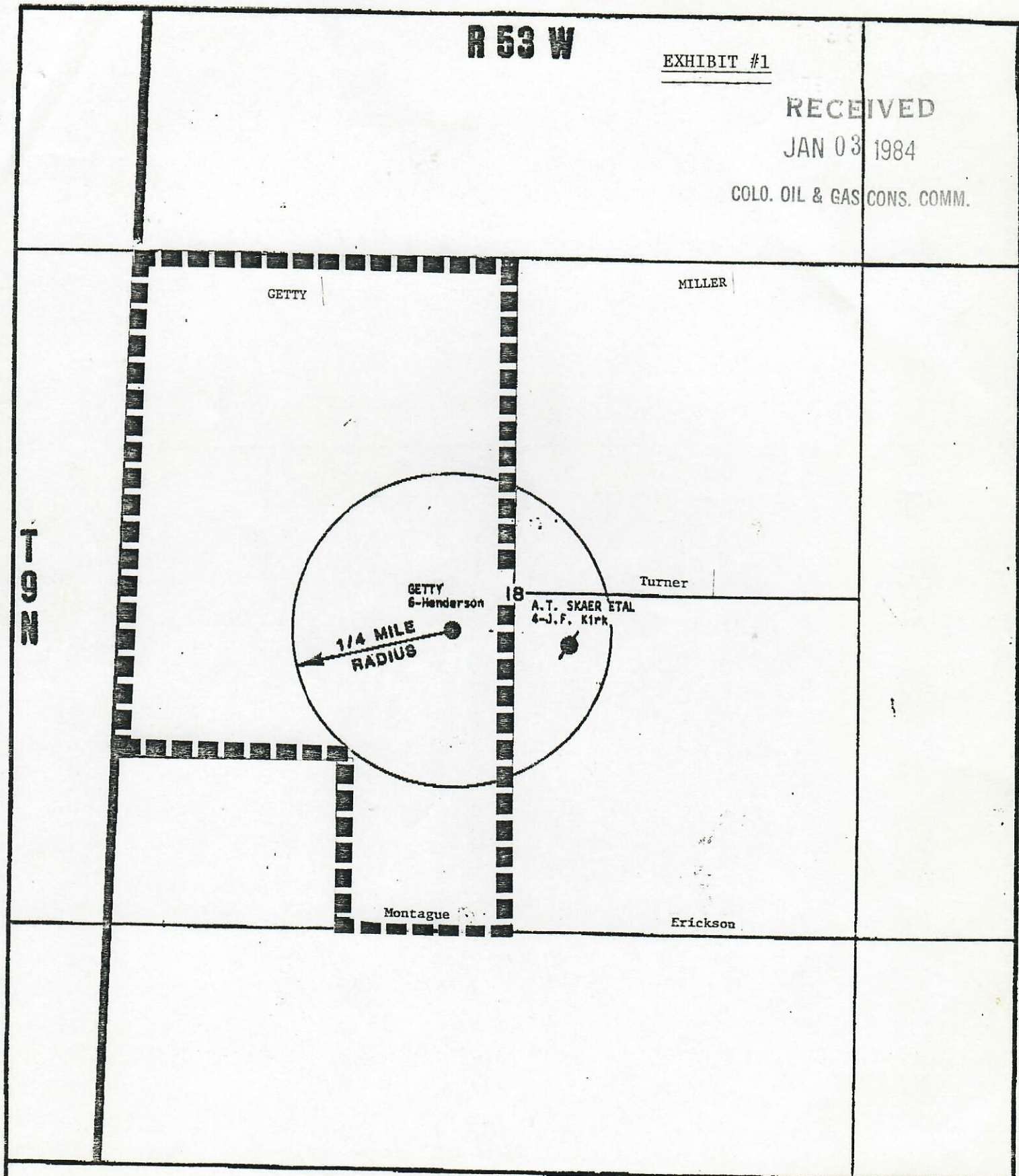
SP/cs  
Attachments



**R 53 W**EXHIBIT #1**RECEIVED**

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COLO. OIL &amp; GAS CONS. COMM.



Getty Lease



Abandoned Well

**Getty Oil Company**  
DENVER DISTRICT**G.A. HENDERSON LEASE**

(CEDAR CREEK FIELD)

LOGAN COUNTY, COLORADO

SCALE 1"/1000'

DATE NOV 1983

11/23/83

File

G.A. HENDERSON #6  
SECTION 18-9N-53W  
LOGAN COUNTY, COLORADO

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K.B. - 4276'  
G.L. - 4267'

## CASING -

8 5/8", 22.7#, Armco SWSJ  
Set @ 132'  
Cemented w/ 125 sx. of reg.  
Cmt w/2% CaCl<sub>2</sub>  
Cmt. Circulated to surface.

## TUBING -

160 jts of 2 3/8"  
Set @ 5050'

## CASING -

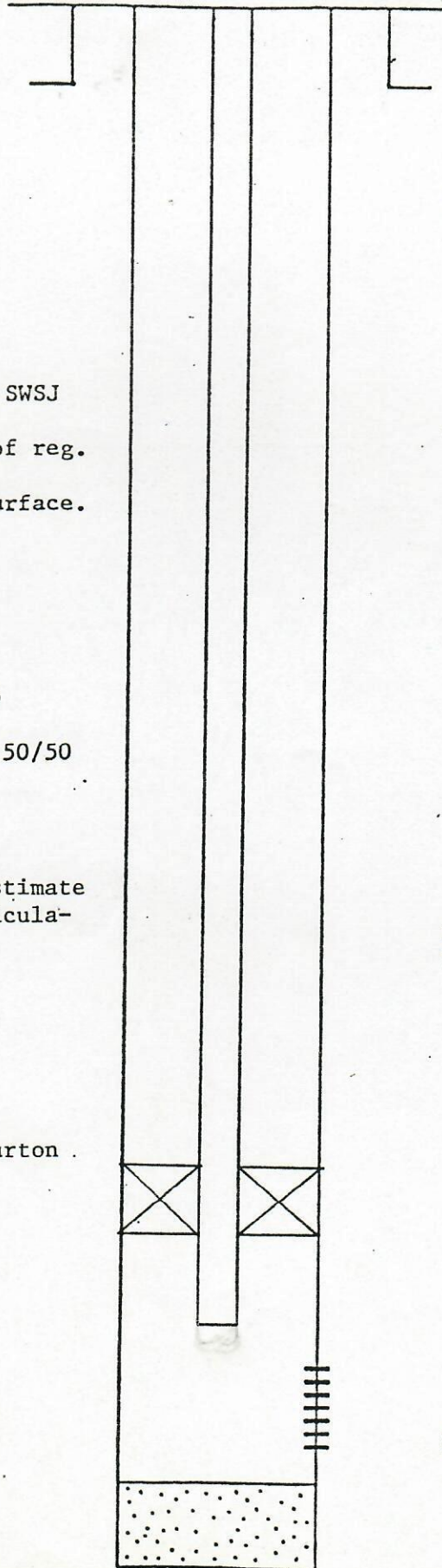
5 1/2", 14#, SS, J-55  
Set @ 5140'  
Cemented w/200 sx of 50/50  
Pozmix w/2% gel.

Cement top at 4275. Estimate  
based on volumetric calculations.

Perforated 3rd Dakota "J"  
Sand w/20 shots  
@ 5089' - 5094'

2 3/8" X 5 1/2" Halliburton  
24 Packer set at 4777.

PBTD - 5097'  
TD - 5140'





# HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

Box 1510  
Evansville, Wyoming 82636

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COLO. OIL & GAS CONS. COMM.

EXHIBIT #3

Date 12 Dec 83

To Mrs. A.A. Kerns

Report No. W83-0731

Halliburton Services - Sales

Casper, WY

Submitted By Getty Oil Co. Date Received 7 Dec 83

Well No. C.P. Green #2

Location Logan Co., CO Formation \_\_\_\_\_

Specific Gravity 1.004

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pH 7.8

Iron (Fe) less than 1

MILLIGRAMS PER LITER

Potassium (K) 12

Sodium (Na) 2097

Calcium (Ca) 7

Magnesium (Mg) 1

Chlorides (Cl) 1231

Sulfates (SO<sub>4</sub>) 440

Carbonates (CO<sub>3</sub>) nil

Bicarbonates (HCO<sub>3</sub>) 2913

Total Dissolved Solids 5224

Resistivity 1.60

Ohms/M<sup>2</sup>/M at 70 °F

Remarks:

cc: Mr. D.E. Bailey  
Mr. W.C. Maddox

Respectfully submitted,

HALLIBURTON SERVICES

By N. K. Reeves



# HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

Box 1510  
Evansville, Wyoming 82636

EXHIBIT #4

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JAN 03 1984

COLO. OIL & GAS CONS. COMM.

Date 12 Dec 83

To Mrs. A.A. Kerns

Report No. W83-0732

Halliburton Services - Sales

Casper, WY

Submitted By Getty Oil Co. Date Received 7 Dec 83

Well No. G.A. Renderson #4

Location Logan Co., CO Formation \_\_\_\_\_

Specific Gravity 1.006

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pH 7.3

Iron (Fe) less than 1

MILLIGRAMS PER LITER

Potassium (K) 19

Sodium (Na) 3072

Calcium (Ca) 12

Magnesium (Mg) 2

Chlorides (Cl) 3676

Sulfates (SO<sub>4</sub>) less than 10

Carbonates (CO<sub>3</sub>) nil

Bicarbonates (HCO<sub>3</sub>) 1876

Total Dissolved Solids 7706

Resistivity 0.98

Ohms/M<sup>2</sup>/M at 70 °F

Remarks:

xc: Mr. D.E. Bailey  
Mr. W.C. Maddox

Respectfully submitted,

HALLIBURTON SERVICES

By N. K. Reeves

Offset Owners

Getty Oil Company's  
G. A. Henderson Well #6  
NE/SW of Section 18-T9N-R53W  
Logan County, Colorado

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Exhibit 5

Art T. Skaer - Lessee, SE/4 Section 18  
1001 South Monaco Parkway - Suite 360  
Box 22418  
Denver, CO 80222

Charles W. Erickson - Landowner, SE/4 Section 18  
Route 2  
Sterling, CO 80751

Frank H. & Kenneth I. Turner - Landowners, NE/4 Section 18  
c/o Frank H. Turner  
226 North 9th Avenue  
Sterling, CO 80751

Ardis Miller - Mineral Owner, NE/4 Section 18  
518 Oak Street  
Sterling, CO 80751

Joe H. Montague - Landowner, W/2 Section 18  
Route 2  
Sterling, CO 80751