NM - 35

GENERAL CORRESPONDENCE

YEAR(S):

1997-98

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time 1345	Date 4/21/97
Originating Party		**Other Parties**
Ray Smith - OCD Artesia		Bill Olson - Environmental Bureau

Subject

GRB Properties (Old Barber Oil)

Discussion

Inspected site
Tank bottoms & caliche from federal well site used to fill low spot in road. Apparently BLM told them to do it, but not on federal land. Ray told them to take it back where it came from.
Contaminated berm material from spill was used to make 1-1½ berms around facility. Soil not remediated. Apparently Tim gave approval for this

Conclusions or Agreements

I will inspect next week & sample pond

Distribution

Signed Bill Olson

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time 1000	Date 4/21/97

Originating Party	Other Parties
Bill Olson - Environmental Bureau	Mrs. Richardson (505) 885-6175

Subject

GRB Properties (Old Barber O;l)

Discussion

Gave her Ray Smiths phone #

Told her Ray is on the way to inspect site and that she could meet him there when he arrives

Told her site to be cleaned up under the Artesia District unless referred to. Santa Fe

Conclusions or Agreements

She will keep in touch with me & Ray Smith

Distribution

Signed Bill Olson

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time approx 0930	Date 4/21/97

Originating Party	Other Parties
Bill Olson - Environmental Bureau	Ray Smith - OCD Artesia

Subject

GRB Properties (Old Barber Oil)

Discussion

Informed him of Mrs. Richardson's complaint

He's been having problem getting company to clean up.

Conclusions or Agreements

He is on way to inspect site. Will call me to brief me
Told him to refer to us if they don't cooperate

Distribution

Signed Bill Olson

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal | Time 0915 approx. | Date 4/21/97

Originating Party	Other Parties
Mrs. Jim Richardson - private landowner (505) 885-6175	Bill Olson - Environmental Bureau

Subject

Oil Spill Complaint - GRB Properties (Old Barber Oil)

Discussion

Live 15-18 east of Carlsbad, due south of Eddy Potash
Bought ranch couple years ago from Larry Squires
Properties (Old Barber well) has a D & C site on their land
Had a recent spill that has not been cleaned up
Found 2 dead ducks, prob due to HS Flvs, said killed by oil
Low area on road filled in with oil saturated soil & covered with caliche. Surface water pond approx. 100 yds from spill
Requesting help to clean up & protect surface pond
Ducks been migrating thru area & landing on pond

Conclusions or Agreements

Will call District Office to determine action

Distribution

Signed Bill Olson

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

RECEIVED

AUG 24 90

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

MEMORANDUM

TO: BILL LEMAY, Director
Oil Conservation Division

FROM: DAVID G. BOYER, Environmental Bureau Chief
Oil Conservation Division

SUBJECT: WATER ANALYSIS OF BARBER OIL, DISPOSAL WELL, C-20-20S-30E

DATE: AUGUST 22, 1990

On July 3, 1990, the Artesia District office obtained several water samples at and in the vicinity of the above well. The samples were taken to determine if water pooling near the well was more characteristic of the injection water or water from a nearby potash wastewater pond. These results were received back from the State laboratory today.

Based on a review of available information, potash wastewater is eliminated as the source of the surface pool. Analysis of the attached data, especially sodium/potassium ratios, shows that the water in the surface pool was more characteristic of the injection well rather than the potash pond. For example the weight ratio of sodium to potassium in the potash pond was 3.3. The ratio of sodium to potassium in the surface pool and injection well were 33.3 and 44.7, respectively. Since potash waste contains large amounts of potassium impurities whereas oilfield brine contains more sodium, the relative scarcity of potassium in the surface pool indicates its source was not the potash pond. Additionally, the total dissolved solids concentration of the pool was about two-thirds of the potash pond, but about four times that of the injection well. Sodium, potassium and chloride concentrations in the surface pool were also about three to four times the levels in the injection well, indicating the effect of evaporation on the pooled water.

Attachments

cc: *M. Williams, OCD Artesia Office*

BARBER OIL, INC.
111 West Mermod
Post Office Box 1658
CARLSBAD, NEW MEXICO 88220
(505) 887-2566

January 10, 1994

Mr. William J. LeMay, Director
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

Re: Barber Oil, Inc. Stovall-Wood #5
Salt Water Disposal Well
Unit C, Section 20, T20S, R30E
Eddy County, New Mexico

Dear Mr. LeMay:

Due to recent actions taken by the Oil Conservation Division concerning the above captioned well and after much consideration of alternative solutions to the disposal of produced water from the Barber field this company has decided to place this property and three others for sale. The financial burden placed upon this company by the decision to "shut-in" the Barber field has placed severe limits on what we can do to solve the problem of water disposal from this property. As a result, a sale of all properties operated by Barber in New Mexico is currently underway.

Mr. LeMay, would it be possible to obtain a letter from your office stating that you would be willing to work with the new operator to find a logical and reasonable solution to the disposal problem at Barber? You might even suggest some solutions in your letter that would be acceptable to the State of New Mexico. This letter might be of some help in disposing of the properties.

Also, would it be possible to obtain an extension of the time period for plugging the above captioned well. In the Order, we were given 60 days or about the 8th of February, 1994. Could we have an extension to June 8, 1994 in order to give the new operator time to take over operations prior to plugging the well?

Thank you for considering these requests.

Sincerely,

Michael D. Garringer
President

BARBER OIL, INC.
111 West Mermod
Post Office Box 1658
CARLSBAD, NEW MEXICO 88220
(505) 887-2566

April 16, 1992

COPY

Snyder Ranches
P. O. Box 2158
Hobbs, NM 88241

Attn: Larry C. Squires
President

Dear Mr. Squires:

We are in receipt of your letter dated April 10, 1992 in which you make a number of allegations, some of which are true, some are misleading and some are blatantly false. A number of the issues raised are not relevant to this company and we will not address those issues. We would care to take issue with the relevant allegations.

You have alledged that this company operated an injection well and disposed of large amounts of water "in a well with no casing at 20 feet below the surface." You further state "This was discovered because a lake was created in our corralls from the saturation of the shallow underground aquifer in the area. The OCD tested the water and found it not to be naturally occuring water and suggested it came from the disposal well or potash lake or more likely from both. This disposal well has been used for a number of years without the NMOCD knowledge or proper approval." (my emphasis)

First of all, we have never injected into a well with no casing. We have not injected water into the surface zone at twenty feet. We did not "create" the lake that now invades your corralls and almost completely surrounds one of our wells. We discovered about a year ago that the well casing had a hole in it at approximately 36 feet. The reason we discovered the hole is because the surface waters were invading our injection well and competing with our disposal water to enter a lower injection zone. This lower zone takes water on a vacuum and we use no pumps or other pressure to force the water into the zone. Because the surface waters were draining into our injection well, we began to experience difficulties in disposing of our produced water. As per instructions form the Oil Conservation Division and with their advice and consent we proceeded to completely rework the casing in the well. We have subsequently run two strings of casing, cemented to the surface in both cases. Inside this double string we ran tubing and filled the annulus with packer fluid. I should mention that we performed ten seperate cement jobs in order to seal off the upper surface water zone. The cost of completing this project exceeded $90,000.

BARBER OIL, INC.
111 West Mermod
Post Office Box 1658
CARLSBAD, NEW MEXICO 88220
(505) 887-2566

We also ran new flow lines, called Fas-Line, which is impervious to corrosion around the lake to prevent any potential leak into the lake. This project cost something over $6,500. In addition, we have had to build a raised road bed into our Stovall-Wood #3 well and completely rebuild the pad because of the rising lake level. This project cost approximately $7,000.

Mr. Squires, it is our studied opinion that two things have occured to raise the level of the lake. One, we have had one of the wettest years on record in terms of rainfall and this lake sets in a natural drainage area for the surrounding area. Over the past fifty years or so we have had our lease flooded on several occasions as a result of this drainage. It had nothing to do with the potash mine operations or the disposal of anyone's produced water. Secondly, when we cememted off the surface water zone we have most likely eliminated one of the methods for the lake to drain itself. The leaching of water in our disposal well along with the natural evaporation that occurs in this area would normally control the level of the lake. You now have only evaporation aiding you.

You should be aware of several other matters. This oil and gas lease is in an R-3221 area established on May 1, 1967 by the Oil Conservation Commission and later amended to exempt certain areas (including the areas where Barber now operates) from certain requirements concerning the disposal of produced water. We have for a number of years reported to both the OCD and the Bureau of Land Management, the existence of this well, the purpose of the well and the approximate amount of water being injected into the well. We have not operated this well without the approval, permission or knowledge of the proper authorities.

You should also be aware that we too have experienced some problems related to the mining oeprations in the area. We have an appreciation for the economic impact of the potash mines and we have learned to live with them. We have also enjoyed a good relationship with the ranchers in the area, that is, until you came along. We would care to have a productive and profitable relationship with your firm.

Mr. Squires, we would be pleased to meet with you on May 7th at the Federal Building here in Carlsbad if your intent is to reach a reasonable and economically feasible solution to your problems. If your intent is to "bash" the Potash Industry and the Oil and Gas Industry we will not attend.

Respectfully yours,

Michael D. Garringer
President

LARRY C. SQUIRES
President

SNYDER RANCHES
P. O. BOX 2158
HOBBS, NEW MEXICO 88241

Telephone
(505) 393-7544

APRIL 10, 1992

TO WHOM IT MAY CONCERN:

OUR RANCH LOCATED WITHIN NASH DRAW, 15 MILES EAST OF CARLSBAD, NM, HAS BEEN COMPLETLY DESTROYED BY THE PERSISTENT AND CONTINUOUS DISCHARGE OF BRINE WATER FORM THE POTASH INDUSTRY AND OIL & GAS INDUSTRY.

OUR WATER WELLS ARE POLLUTED AND DESTROYED (MOST RECENT ABANDON WELL - CHIMMEY WELL) LOCATED S6 T20 R30. NOXIOUS PLANTS HAVE INVADED ARE PASTURES WITH (SALT CEDER, GOLDEN ROD) DEVASTATINGLY RESULTS. GOLDEN ROD IS VERY POISONOUS, WE HAVE HAD 20 COWS DIE WITHIN THE LAST 6 MONTHS. THE DISCHARGE PONDS CREATES AN IDEAL ENVIRONMENT FOR ENVASION OF GOLDEN ROD IN THE WET LANDS CREATED BY THESE WATERS. THESE PLANTS THRIVE IN HIGHLY ALKALINE SALTY SOILS. GOOD GRASSES ARE DESTROYED BY THE HIGH CONCENTRATION OF SALT, MAKING ROOM FOR THE INVADING NOXIOUS PLANTS AND WEEDS.

IT WAS DISCOVERED RECENTLY THAT A DISPOSAL WELL OPERATED BY BARBER OIL CO WAS DISHARGING LARGE AMOUNTS OF PRODUCED OIL FIELD WATER IN A WELL WITH NO CASING AT 20 FEET BELOW THE SURFACE.

THIS WAS DISCOVERED BECAUSE A LAKE WAS CREATED IN OUR CORRALLS FROM THE SATURATION OF THE SHALLOW UNDERGROUND AQUIFER IN THE AREA. THE OCD TESTED THE WATER AND FOUND IT NOT TO BE NATURALLY OCCURING WATER AND SUGGESTED IT PROBABLY CAME FROM THE DISPOSAL WELL OR POTASH LAKE OR MORE LIKELY FROM BOTH. THIS DISPOSAL WELL HAS BEEN USED FOR A NUMBER OF YEARS WITHOUT THE NMOCD KNOWLEDGE OR PROPER APPROVAL.

THIS LAKE AND ASSOCIATED WET LANDS IS ON OUR FEE PROPERTIES AND HAS MADE OUR CORRALLS & PROPERTY COMPLETLY USELESS.

IT IS ALSO OUR UNDERSTANDING THAT EPA HAS DECLARED THIS AREA AS "WATERS OF U.S." AND THAT ANY DISCHARED INTO THESE WATERS IS PROHIBITIVE WITHOUT AN NPDES PERMIT.

OUR RANCH NEEDS TO BE SPRAYED AND THE WASTE AREAS FENCED OFF TO STOP ANY FURTHER DAMAGE. THE LAKES NEED TO BE DRAINED AND LAND RESTORED TO ITS ORIGINAL CONDITION.

IN THE PAST THE POTASH INDUSTRY HAS ALWAYS BEEN VERY COOPERATIVE TO FURNISH WATER TO US WHEN A WATER WELL WAS POLLUTED AND DESTROYED BY THE SURFACE IMPOUNDMENT OF BRINE WATER.

WE ARE VERY CONCERNED ABOUT THE LONGEVITY OF THIS ARRAINGEMENT AND WHAT HAPPENEDS TO OUR WATER SUPPLY WHEN IT IS NO LONGER COMMERCIALLY FEASABLE TO MINE POTASH IN THE CARLSBAD AREA. WE ARE AFRAID OUR RANCH WILL BE OF NO VALUE WHEN THIS OCCURS.

THE APPRAISED VALUE OF OUR PROPERTY (WHICH INCLUDES BLM GRAZING PERMIT, FEE PROPERTY - HOUSES, BARNS, CORRALS, FENSES, WATER WELLS & STATE GRASING LEASE) IS $1000.00 PER AU X 1100 AU OR $1,100,000.00.

LARRY C. SQUIRES
President

SNYDER RANCHES
P. O. BOX 2158
HOBBS, NEW MEXICO 88241

Telephone
(505) 393-7544

A RANCH WITHOUT WATER AND COVERED BY POISONOUS PLANTS AND THOUSANDS OF ACRES OF WASTE LAND CREATED BY SURFACE AND SUBSURFACE BRINE WATER IS VALUELESS. IT IS OUR OPINON THAT THIS INDUSTRIAL POLLUTION HAS SEVERLY AFFECTED US. WHAT CAN WE DO TO STOP THIS SITUATION? I WOULD LIKE TO MEET WITH ALL OF THE COMPANIES AND REGULATORY AGENCIES WITH THE RESPONSIBLILITY OF PROTECTING THE ENVIROMENT AND NEW MEXICO'S NATURAL RESOURCES. I AM PROPOSING A MEETING WITH ALL AFFECTED PARTIES ON 5-07-92 IN THE CARLSBAD FEDERAL BLDG. CONFERENCE ROOM AT 1:30 PM. PLEASE ADVISE ME IF YOU OR YOUR REPRESENTIVE CAN ATTEND SUCH A MEETING. YOU CAN REACH ME AT (505)-393-7544. THANK YOU.

SINCERELY YOURS,

LARRY SQUIRES
PRESIDENT

CC:
MARVIN WATTS, EDDY POTASH
RALPH CROSSER, HORIZON POTASH
DICK HEINEN, WESTERN AG - MINERAL CO
MIKE GARRINGER, BARBER OIL CO
BILL LEMAY, OCD - SANTA FE, NM
BARRY BIRCH, NM ENVIRONMENT DEPART
DIANNE RATKEY, WATER ENFORCEMENT EPA REGION VI DALLAS, TX
JIM BACA, NM STATE LAND COMMISSION
DICK MANUS, AREA MANAGER BLM, CARLSBAD, NM
DON ASHBY, RAMGE DEPT BLM, CARLSBAD, NM
KENNETH SMITH, AREA RANCHER
BUD EPPERS, AREA RANCHER
J.W NEAL, ATTORNEY, HOBBS NM
MIKE COMEAU, ATTORNEY, SANTA FE, NM
TIM KELLY, GEOHYDROLOGY ASSOCIATES, INC., ALB.,NM

Pg 2 Pg 1

4/7/92
9:30

comments from OCD
on -sq ste up
Calipers over 18"
we did not know about
well.

2-300 yds west of
Eddy Cty Potash Lake
hole 20-30' surface collapsed
3' down full of wtr
sw side of big lake - Rd to NW -

Larry Squires, Snyder Ranches

Called about Barber Disposal well. Said he has same concerns as before.
He would like a letter from OCD informing him as to what is being done, amount of water being disposed and water analysis report.

Larry Squires
P.O. Box 2158
Hobbs, NM 882[illegible]

393-7544

May 7 - 1:30 Federal Bldg Carlsbad

8-2-91
11:30

John,

Bill Short called from Dallas. Wants to meet with you Wednesday afternoon around 2:00
Will call probably Monday morning around 7-7:30

He is looking to buy Barbers Stoval Wood lease that this SWD is on. He has some questions about this well and general condition of lease, violations fines, etc?

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
APR 20 1992
O. C. D.
ARTESIA, OFFICE

Form C-103
Revised 10-1-78

COPY

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL ☐ GAS WELL ☐ OTHER- Disposal Well

7. Unit Agreement Name
Barber

Name of Operator
Barber Oil, Inc.

8. Farm or Lease Name
Stovall-Wood Fee

Address of Operator
P. O. Box 1658 Carlsbad, NM 88221-1658

9. Well No.
Barber Disposal

Location of Well
UNIT LETTER C, 880 FEET FROM THE North LINE AND 1580 FEET FROM THE West LINE, SECTION 20 TOWNSHIP 20S RANGE 30E NMPM.

10. Field and Pool, or Wildcat
Barber

15. Elevation (Show whether DF, RT, GR, etc.)

12. County
Eddy

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☒	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☒	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
OTHER ☐		OTHER ☐	

17. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

Began work on February 18, 1991. OCD requested removal of 6" PVC pipe. Removed pipe and well wall collapsed. Called Star Tool, T.R. Well Service, Bull Rogers, Halliburton and others. Rigged up drill collars and drilled to 244' with 7-5/8 bit and set cement plug. Next day tagged plug and pulled out. Pumped five cement plugs. Tagged cement at 57'. Set another plug and pulled out. Tagged cement at 40'. Pumped cement to surface. Rigged up Star Tool to drill plug. Reached 104'. Circulated hole. Tried to run 7" casing inside old 8-5/8 and cemented well bore. Casing stuck. Pulled out and circulated with 3" tubing and set another cement plug. Started drilling and lost circulation. Pumed 200 sax of class C cement, waited and drilled out. Lost circulation. Pumed another plug and waited. Started drilling and got circulation. Ran 7" casing inside old 8-5/8" and cemented well bore. 26# 7" set 114' and circulated cement to surface. Drilled to 255' and lost circulation, most likely now below old 8-5/8 and into the Rustler formation. Ran 114' of 5½" 17# N-80 LT&C casing and set on 5½" X 7" packer and filled annulus with packer fluid. Rigged up well head and injection lines. Put back on injection.

Work finished on about 3/7/91 at a cost of approximately $90,000.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE President DATE 3/31/91

APPROVED BY _____ TITLE _____ DATE _____

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

MEMORANDUM

TO: BILL LEMAY, Director
Oil Conservation Division

FROM: DAVID G. BOYER, Environmental Bureau Chief
Oil Conservation Division

SUBJECT: WATER ANALYSIS OF BARBER OIL, DISPOSAL WELL, C-20-20S-30E

DATE: AUGUST 22, 1990

On July 3, 1990, the Artesia District office obtained several water samples at and in the vicinity of the above well. The samples were taken to determine if water pooling near the well was more characteristic of the injection water or water from a nearby potash wastewater pond. These results were received back from the State laboratory today.

Based on a review of available information, potash wastewater is eliminated as the source of the surface pool. Analysis of the attached data, especially sodium/potassium ratios, shows that the water in the surface pool was more characteristic of the injection well rather than the potash pond. For example the weight ratio of sodium to potassium in the potash pond was 3.3. The ratio of sodium to potassium in the surface pool and injection well were 33.3 and 44.7, respectively. Since potash waste contains large amounts of potassium impurities whereas oilfield brine contains more sodium, the relative scarcity of potassium in the surface pool indicates its source was not the potash pond. Additionally, the total dissolved solids concentration of the pool was about two-thirds of the potash pond, but about four times that of the injection well. Sodium, potassium and chloride concentrations in the surface pool were also about three to four times the levels in the injection well, indicating the effect of evaporation on the pooled water.

Attachments

cc: M. Williams, OCD Artesia Office

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2555

SLD No. 1

Date Received:

Request ID No. 007162-B

2 User Code #: 70320

3 Request ID No.:

4 Priority Code #: 3 (If "1" or "2" call EID-SLD Coordinator)

5 Facility Name: Barber's Disposal Well

6 County: Eddy

7 City:

8 State: NM

9 Sample Location:

10 Collected By: Darrell Moore (First / Last) On: 90/07/03 (Date: YY/MM/DD) At: 1330 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter / WSS # / Organization

12 Latitude (DDMMSS) / Longitude (DDDMMSS) / 2 Digit ID (if needed)

13 Report To: David G. Boyer

14 Phone #: (505) 827-5812

Address: New Mexico Oil Conservation Division
P. O. Box 2088

City, State Zip: Santa Fe, New Mexico 87504-2088

15 Sample Purpose:
- [ ] Compliance
- [ ] Check
- [x] Monitoring
- [ ] Special

Sampling Information:
- [x] Grab
- [ ] Composite _____ (Composite Time Period)
- [ ] Flow Proportioned
- [ ] Equal Aliquot
- [ ] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: _____, Conductivity: _____ umhos @ _____ °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] -Stream
- [ ] -Lake
- [ ] -Drain
- [ ] -Pool
- [ ] -WWTP
- [x] -Well; Depth: _____
- [ ] -Spring
- [ ] -Distribution
- [ ] -Point-of-Entry
- [ ] -Other: _____

18 Field Notes/ Sample #: R30E R12E
Location Sec 20, T20S, R30E
UNIT C
* ½ Liter Sample/Cations most Important only

19 Sample Type: [x] -Water, [ ] -Soil, [ ] -Food, [ ] -Wastewater, [ ] -Other _____
This form accompanies a single sample consisting of:
_____ - 1 liter cubitainers (1 quart)
_____ - 4 liter cubitainers (1 gallon)
_____ - _____

20 Preservation:
- [ ] - WNF Water Not Preserved; Filtered
- [x] - WNN Water Not Preserved; Not Filtered
- [ ] - WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered
- [ ] - WPN Water Preserved with Sulfuric Acid; Not Filtered
- [ ] - WNL Water Not Preserved in Field; Please Add H2SO4 at Lab
- [ ] - ICE Water Iced
- [ ] - Other _____

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

Group Analyses:
- [ ] - (854) SDWA Group II (Nitrate as N)
- [ ] - (861) SDWA Group III (Fluoride)
- [ ] - (860) SDWA Complete Secondary
- [ ] - (859) SWQB SS Anion - Cation Group +
- [ ] - (868) SWQB NPS Anion, Cation, Physical + TSS
- [ ] - (869) SWQB Nutrient Analysis Group +
- [x] - (867) Major Anions & Cations

Cations: *
- [x] - Calcium (as Ca) _____
- [x] - Magnesium (as Mg) _____
- [x] - Potassium (as K) _____
- [x] - Sodium (as Na) _____
- [x] - Total Hardness (as CaCO3) _____

Anions:
- [x] - Alkalinity (as CaCO3) _____
- [x] - Bicarbonate (as HCO3) _____
- [x] - Carbonate (as CO3) _____
- [x] - Chloride (as Cl) _____
- [ ] - Fluoride (as F) _____
- [x] - Sulfate (as SO4) _____
- [x] - Ion Charge Balance _____

Physical Parameters:
- [ ] - Color _____
- [x] - Conductance (Micromhos @ 25 C) _____
- [ ] - Odor _____
- [x] - pH - Lab _____
- [ ] - Surfactants _____
- [x] - Total Dissolved Solids _____
- [ ] - Turbidity _____

Other:
- [ ] - _____ _____
- [ ] - _____ _____
- [ ] - _____ _____
- [ ] - _____ _____

Surface and Waste Water:
- [ ] - Biological Oxygen Demand _____
- [ ] - Total Suspended Solids _____
- [ ] - Chemical Oxygen Demand _____
- [ ] - Total Organic Carbon _____
- [ ] - Cyanide _____

Nutrients:
- [ ] - Nitrate + Nitrite (as N) _____
- [ ] - Ammonia (as N) _____
- [ ] - Total Kjeldahl (as N) _____
- [ ] - Nitrite (as N) _____
- [ ] - Orthophosphate (as P) _____
- [ ] - Total Phosphorus (as P) _____

Remarks:

SLD 8912-WC Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO HEALTH AND ENVIRONMENT DEPARTMENT

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500
WATER CHEMISTRY SECTION [505]-841-2555

August 16, 1990

Request ID No. 007162

ANALYTICAL REPORT
SLD Accession No. WC-90-2418

Distribution
(_) User 70320
(■) Submitter 260
(※) SLD Files

To: D. Boyer
NM Oil Consv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A water,Nonpres/No sample submitted to this laboratory on July 17, 1990**

DEMOGRAPHIC DATA

COLLECTION

On: 3-Jul-90 *By:* Moo . . .
At: 13:30 hrs. *In/Near:* Eddy County

LOCATION

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	1560.00		mG/L
magnesium	450.00		mG/L
potassium	300.00		mG/L
sodium	13425.00		mG/L
hardness	5750.00		mG/L
bicarbonate	485.00		mG/L
carbonate	0.00		mG/L
chloride	22300.00		mG/L
sulfate	4050.00		mG/L
conductance	47872.00		mG/L
pH	7.40		mG/L
total diss resid	41400.00		mG/L

Reviewed By: B. Dobie 8/16/90
Barbara Dobie 08/13/90
Analyst, Water Chemistry Section

ION BALANCE WORKSHEET

CATIONS	Meq	PPM	Det Limit	Analyte	ANIONS Meq	PPM	Det Limit
Ca	77.8443	1560	<5.0	HCO3	7.9482	485	<0.1
Mg	36.9610	450	<0.3	SO4	84.3750	4050	<5.0
Na	583.9495	13425	<5.0	Cl	629.0550	22300	<5.0
K	7.6726	300	<5.0				
Mn	0.0000	0		NO3	0.0000	0	
Fe	0.0000	0		CO3	0.0000	0	
				NH3	0.0000	0	
				PO4	0.0000	0	
+ SUMS	706.4275	15735		+ SUMS	721.3782	26835	

Total Dissolved Solids = 41400

Ion Balance = 97.92747

Sticker# 7162
WC# 2418
Date out by _____

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2555

1 SLD No.: ______

Date Received: ______

2 User Code #: 70326 / 8 9 2 3 5

3 Request ID No.: Request ID No. 007161-B

4 Priority Code #: 3 (If "1" or "2", call EID-SLD Coordinator)

5 Facility Name: Surface Pool at Barber's Well

6 County: Eddy County

7 City:

8 State: NM

9 Sample Location:

10 Collected By: Darrell (First) MOORE (Last) On: 90/07/03 Date: (YY/MM/DD) At: 1300 hrs. Time: 24 hr. clock 3:00 pm = 1500 hrs.

11 Codes: 70031 Submitter | WSS # | Organization

12 Latitude (DDMMSS) | Longitude (DDDMMSS) | 2 Digit ID (if needed)

13 Report To: Name David G. Boyer
Address New Mexico Oil Conservation Division
P. O. Box 2088
City, State Zip Santa Fe, New Mexico 87504-2088

14 Phone #: (505) 827-5812

15 Sample Purpose: ☐ Compliance ☐ Check ☐ Monitoring ☐ Special
Sampling Information: ☐ Grab ☐ Composite (Composite Time Period) ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody

16 Field Data: pH: ____, Conductivity: ____ umhos @ ____ °C, Temperature: ____ °C, Chlorine Residual: ____ mg/l, Flow: ____

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☒ Pool ☐ WWTP ☐ Well; Depth: ____ ☐ Spring ☐ Distribution ☐ Point-of-Entry ☐ Other: ____

18 Field Notes/ Sample #: R30E
Location Sec 20, T20S, R30E
UNIT C
*1/2 Liter-Sample/Cations Most Important

19 Sample Type: ☒ Water, ☐ Soil, ☐ Food, ☐ Wastewater, ☐ Other ____
This form accompanies a single sample consisting of:
____ - 1 liter cubitainers (1 quart)
____ - 4 liter cubitainers (1 gallon)
____ - ____

20 Preservation:
☐ WNF Water Not Preserved; Filtered
☒ WNN Water Not Preserved; Not Filtered
☐ WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered
☐ WPN Water Preserved with Sulfuric Acid; Not Filtered
☐ WNL Water Not Preserved in Field; Please Add H2SO4 at Lab
☐ ICE Water Iced
☐ Other ____

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

Group Analyses:
☐ (854) SDWA Group II (Nitrate as N)
☐ (861) SDWA Group III (Fluoride)
☐ (860) SDWA Complete Secondary
☐ (859) SWQB SS Anion - Cation Group +
☐ (868) SWQB NPS Anion, Cation, Physical + TSS
☐ (869) SWQB Nutrient Analysis Group +
☒ (867) Major Anions & Cations

Cations: *
☒ Calcium (as Ca)
☒ Magnesium (as Mg)
☒ Potassium (as K)
☒ Sodium (as Na)
☐ Total Hardness (as CaCO3)

Anions:
☐ Alkalinity (as CaCO3)
☒ Bicarbonate (as HCO3)
☒ Carbonate (as CO3)
☒ Chloride (as Cl)
☐ Fluoride (as F)
☒ Sulfate (as SO4)

☒ Ion Charge Balance

Physical Parameters:
☐ Color
☒ Conductance (Micromhos @ 25 C)
☐ Odor
☒ pH Lab
☐ Surfactants
☒ Total Dissolved Solids
☐ Turbidity

Other:
☐ ____
☐ ____
☐ ____
☐ ____

Surface and Waste Water:
☐ Biological Oxygen Demand
☐ Total Suspended Solids
☐ Chemical Oxygen Demand
☐ Total Organic Carbon
☐ Cyanide

Nutrients:
☐ Nitrate + Nitrite (as N)
☐ Ammonia (as N)
☐ Total Kjeldahl (as N)
☐ Nitrite (as N)
☐ Orthophosphate (as P)
☐ Total Phosphorus (as P)

Remarks:

SLD 8912-WC Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO HEALTH AND ENVIRONMENT DEPARTMENT
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500
WATER CHEMISTRY SECTION [505]-841-2555

August 16, 1990

Request ID No. 007161

ANALYTICAL REPORT
SLD Accession No. WC-90-2417

Distribution
(_) User 70320
(■) Submitter 260
(※) SLD Files

To: D. Boyer
NM Oil Consv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A water,Nonpres/No sample submitted to this laboratory on July 17, 1990**

DEMOGRAPHIC DATA

COLLECTION
On: 3-Jul-90 *By:* Moo . . .
At: 13:00 hrs. *In/Near:* Eddy County

LOCATION

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	19400.00		mG/L
magnesium	2740.00		mG/L
potassium	800.00		mG/L
sodium	26650.00		mG/L
hardness	60000.00		mG/L
bicarbonate	82.00		mG/L
carbonate	0.00		mG/L
chloride	89000.00		mG/L
sulfate	1542.00		mG/L
conductance	>100000.00		mG/L
pH	6.98		mG/L
total diss resid	179000.00		mG/L

Reviewed By: B. Dobie 8/16/90
Barbara Dobie 08/13/90
Analyst, Water Chemistry Section

ION BALANCE WORKSHEET

	CATIONS				ANIONS		
	Meq	PPM	Det Limit	Analyte	Meq	PPM	Det Limit
Ca	968.0639	19400	<5.0	HCO3	1.3438	82	<0.1
Mg	225.0513	2740	<0.3	SO4	32.1250	1542	<5.0
Na	1.1592E3	26650	<5.0	Cl	2.5106E3	89000	<5.0
K	20.4604	800	<5.0				
Mn	0.0000	0		NO3	0.0000	0	
Fe	0.0000	0		CO3	0.0000	0	
				NH3	0.0000	0	
				PO4	0.0000	0	
+ SUMS	2.3728E3	49590		+ SUMS	2.5440E3	90624	

Total Dissolved Solids = 179000

Ion Balance = 93.26774

Sticker# 7161
WC# 2417
Date out by _____

WATER CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION
700 CAMINO DE SALUD, ALBUQUERQUE, NM 87106
Water Chemistry Section - Telephone: (505) 841-2555

SLD No. 1 _____ Date Received: _____

2 User Code #: 20320 | 3 Request ID No.: | Request ID No. 007160-B | 4 Priority Code #: 3 (If "1" or "2" call EID-SLD Coordinator)

5 Facility Name: Eddy Potash Mine | 6 County: Eddy | 7 City: | 8 State: NM

9 Sample Location:

10 Collected By: Darrell Moore (First / Last) On: 9/10/03 (Date: YY/MM/DD) At: 1140 hrs. (Time: 24 hr. clock 3:00 pm = 1500 hrs.)

11 Codes: Submitter | WSS # | Organization

12 Latitude (DDMMSS) ° ' " | Longitude (DDDMMSS) ° ' " | 2 Digit ID (If needed)

13 Report To: David G. Boyer | 14 Phone #: (505) 827-5812

Address: New Mexico Oil Conservation Division
P. O. Box 2088

City, State Zip: Santa Fe, New Mexico 87504-2088

15 Sample Purpose:
- [ ] Compliance
- [ ] Check
- [x] Monitoring
- [ ] Special

Sampling Information:
- [x] Grab
- [ ] Composite _____ (Composite Time Period)
- [ ] Flow Proportioned
- [ ] Equal Aliquot
- [ ] Sample Split w/Permittee
- [ ] Chain of Custody

16 Field Data: pH: _____, Conductivity: _____ umhos @ _____ °C, Temperature: _____ °C, Chlorine Residual: _____ mg/l, Flow: _____

17 Sample Source:
- [ ] Stream
- [ ] Lake
- [ ] Drain
- [x] Pool
- [ ] WWTP
- [x] Well; Depth: _____
- [ ] Spring
- [ ] Distribution
- [ ] Point-of-Entry
- [ ] Other: _____

18 Field Notes/ Sample #:
From pond at South Side of Mine
* 1/2 Liter Sample / Cations MOST Important

19 Sample Type: [x] Water, [ ] Soil, [ ] Food, [ ] Wastewater, [ ] Other _____
This form accompanies a single sample consisting of:
_____ - 1 liter cubitainers (1 quart)
_____ - 4 liter cubitainers (1 gallon)
_____ - _____

20 Preservation:
- [ ] WNF Water Not Preserved; Filtered
- [x] WNN Water Not Preserved; Not Filtered
- [ ] WPF Water Preserved with Sulfuric Acid (H2SO4); Filtered
- [ ] WPN Water Preserved with Sulfuric Acid; Not Filtered
- [ ] WNL Water Not Preserved in Field; Please Add H2SO4 at Lab
- [ ] ICE Water Iced
- [ ] Other _____

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analyses required.

Group Analyses:
- [ ] (854) SDWA Group II (Nitrate as N)
- [ ] (861) SDWA Group III (Fluoride)
- [ ] (860) SDWA Complete Secondary
- [ ] (859) SWQB SS Anion - Cation Group +
- [ ] (868) SWQB NPS Anion, Cation, Physical + TSS
- [ ] (869) SWQB Nutrient Analysis Group +
- [x] (867) Major Anions & Cations

Cations: *
- [ ] Calcium (as Ca) _____
- [ ] Magnesium (as Mg) _____
- [ ] Potassium (as K) _____
- [ ] Sodium (as Na) _____
- [ ] Total Hardness (as CaCO3) _____

Anions:
- [ ] Alkalinity (as CaCO3) _____
- [ ] Bicarbonate (as HCO3) _____
- [ ] Carbonate (as CO3) _____
- [ ] Chloride (as Cl) _____
- [ ] Fluoride (as F) _____
- [ ] Sulfate (as SO4) _____
- [x] Ion Charge Balance _____

Physical Parameters:
- [ ] Color _____
- [x] Conductance (Micromhos @ 25 C) _____
- [ ] Odor _____
- [x] pH Lab _____
- [ ] Surfactants _____
- [ ] Total Dissolved Solids _____
- [ ] Turbidity _____

Other:
- [ ] _____ _____
- [ ] _____ _____
- [ ] _____ _____
- [ ] _____ _____

Surface and Waste Water:
- [ ] Biological Oxygen Demand _____
- [ ] Total Suspended Solids _____
- [ ] Chemical Oxygen Demand _____
- [ ] Total Organic Carbon _____
- [ ] Cyanide _____

Nutrients:
- [ ] Nitrate + Nitrite (as N) _____
- [ ] Ammonia (as N) _____
- [ ] Total Kjeldahl (as N) _____
- [ ] Nitrite (as N) _____
- [ ] Orthophosphate (as P) _____
- [ ] Total Phosphorus (as P) _____

Remarks:

SLD 8912-WC Form New 12/89 This Form Will NOT Be Returned With Your Results. Please RETAIN A COPY!

STATE OF NEW MEXICO HEALTH AND ENVIRONMENT DEPARTMENT

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500
WATER CHEMISTRY SECTION [505]-841-2555

August 16, 1990

Request ID No. 007160

ANALYTICAL REPORT
SLD Accession No. WC-90-2416

Distribution
(_) User 70320
(■) Submitter 260
(※) SLD Files

To: D. Boyer
NM Oil Consv. Div.
State Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504-2088

From: Water Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A water,Nonpres/No sample submitted to this laboratory on July 17, 1990**

DEMOGRAPHIC DATA

COLLECTION

On: 3-Jul-90 *By:* Moo . . .
At: 14:00 hrs. *In/Near:* Eddy County

LOCATION

ANALYTICAL RESULTS

Analysis	Value	D. Lmt.	Units
calcium	1800.00		mG/L
magnesium	3760.00		mG/L
potassium	23200.00		mG/L
sodium	76500.00		mG/L
hardness	19900.00		mG/L
bicarbonate	190.00		mG/L
carbonate	0.00		mG/L
chloride	134500.00		mG/L
sulfate	5450.00		mG/L
conductance	>100000.00		mG/L
pH	7.23		mG/L
total diss resid	266000.00		mG/L

Reviewed By: B. Dobie 8/16/90
Barbara Dobie 08/13/90
Analyst, Water Chemistry Section

ION BALANCE WORKSHEET

	CATIONS Meq	PPM	Det Limit	Analyte	ANIONS Meq	PPM	Det Limit
Ca	89.8204	1800	<5.0	HCO3	3.1137	190	<0.1
Mg	308.8296	3760	<0.3	SO4	113.5417	5450	<5.0
Na	3.3275E3	76500	<5.0	Cl	3.7941E3	134500	<5.0
K	593.3504	23200	<5.0				
Mn	0.0000	0		NO3	0.0000	0	
Fe	0.0000	0		CO3	0.0000	0	
				NH3	0.0000	0	
				PO4	0.0000	0	
+ SUMS	4.3195E3	105260		+ SUMS	3.9107E3	140140	

Total Dissolved Solids = 266000

Ion Balance = 110.4534

Sticker# 7160
WC# 2416
Date out by _____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED		
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FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [ ] Fee [X]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [ ] GAS WELL [ ] OTHER- Disposal Well

7. Unit Agreement Name: Barber

2. Name of Operator: Barber Oil, Inc.

8. Farm or Lease Name: Stovall-Wood Fee

3. Address of Operator: P. O. Box 1658 Carlsbad, NM 88221-1658

9. Well No.: Barber Disposal

4. Location of Well: UNIT LETTER C, 880 FEET FROM THE North LINE AND 1580 FEET FROM THE West LINE, SECTION 20 TOWNSHIP 20S RANGE 30E NMPM.

10. Field and Pool, or Wildcat: Barber

15. Elevation (Show whether DF, RT, GR, etc.)

12. County: Eddy

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[X]
TEMPORARILY ABANDON	[ ]			COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[ ]	CHANGE PLANS	[ ]	CASING TEST AND CEMENT JOB	[ ]		
OTHER	[ ]			OTHER	[ ]		

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

JUNE, 1990 - This disposal well drilled in approximately 1943 to a depth of 227' to a "cut out section" of the Upper Rustler formation. The bottom of the this formation is approximately 415'. Ran 195' of 8-5/8" casing and set with 25 sax cement. The injection interval was from 195' - 207' or 12' total open hole. Surface water is at approx. 50' and the top of the nearest oil or gas zone is 1420'. In June of 1990 we began experiencing trouble with the well back flowing ver y slight amounts of water (less than 10 bbls) and the wells rate of intake began to decline. We ran a special hand made tool down the well bore and casing and cleaned out what appeared to be a combination of asphaltines, iron sulfide and parafin. We then pumped in 1,000 gallons of acid and flushed with 250 bbls of fresh water. The well improved for a few days and then the problem reappeared. We then cleaned the well bore out to a depth of 115' and ran 128' of plastic schedule 80 6" pipe down the well until we were inside good casing. The last 13' of pipe had to be forced into the casing as the existing pipe was coated with "gunk". We then ran our tool back down the new casing and into the old casing and cleaned out the hole leaving a seal of gunk between the two pipes. The well has been working perfectly since this procedure. We believe the procedure accopmlished two things. First, we successfully shut off all surface water that was previously dumping into the rustler formation. Secondly, we replaced what was probably several joints of badley corroded pipe at the top of the well with new pipe that should last longer than steel pipe.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Michael K. Stovall TITLE President DATE 7/3/90

APPROVED BY _____ TITLE _____ DATE _____

7/2/90 9:10 Called Larry Squires about water in corrals - Larry said boggy around corrals + that Lake had been there about 3 years when they had their last big rain. He said that lake use to dry up after rains, but it does not do it anymore. He feels certain that the potash people + Barber Oil Co are causing the problem, by saturating the area with water - Larry said one of them was going to pump the water out. Larry has 160 acres of deeded land. Larry knows from a pumper that Barber they are putting water in the ground @ about 100'

7-2-90 Larry Squires Called in Complaint - Sent DM down 2:00

7-3-90 Sent DM + JR- to sample wtr + take pictures

7-5-90 JR visited w/ Barber Oil Co

7-6-90 MW - JR- Jerry Sexton inspected SWD. Ponds

8/90 Roger had samples

8/22/90 Dave Boyer said samples showed- ponds + SWD same wtr
Boyer said he told LeMay + he wants to think about what to do

3/23/90 Darrell Moore talked to State Engineers in Roswell Ken Fresca's
Ken said there use to be a domestic well @ one of the houses @ Barber lease but he did not know if it was still there or what type water they had

Ken also said that the Stock well (windmill) @ corrals was @ 90' in 1948 295 chlorides 3280 Conductivity, in May 1989 18980 Chlorides 47631 Conductivity + the fluid level was @ 23'

7/23/90 I visited [illegible] Grainger he said he knew they Needed to make some changes will PSA + redrill if OK I told him I would get back to him

JR- 7/5/90

Barber Oil Co

Flow Line going into lake has been disconnected
All water goes directly to disposal from water tanks.
Corrals are dry, water is appx. 75' from corral.
Talked to David Walker he has seen water in corral & there shop after a large rain. Pond has dryed up before but not in the last 10 years.

Reason for running six inch PVC. They were having trouble disposing of fluid due to ground water going into well. Landed six inch at 128 ft. & cleaned out well bore & well is taking appx. 5000 BBls per day gravity fed. (surface wtr 50' down - brackish)

No cattle have been there for 3 years
moving cattle in now — No tracks around pond
Cattle will not drink pond water - brackish

Potash Lake 2 miles North of well

Shaft 1/2 mile North of well

Odessa Nat'l Gas

Fed Dooley #1

24-20-29

Rustler	200
Tx	408
Bx	995
Yates	1105
Capitan Reef	1594
Delaware	3818

TELEPHONE MESSAGE

FOR 240

DATE: 6-29-90

TIME: 11:25

I think this is [illegible]

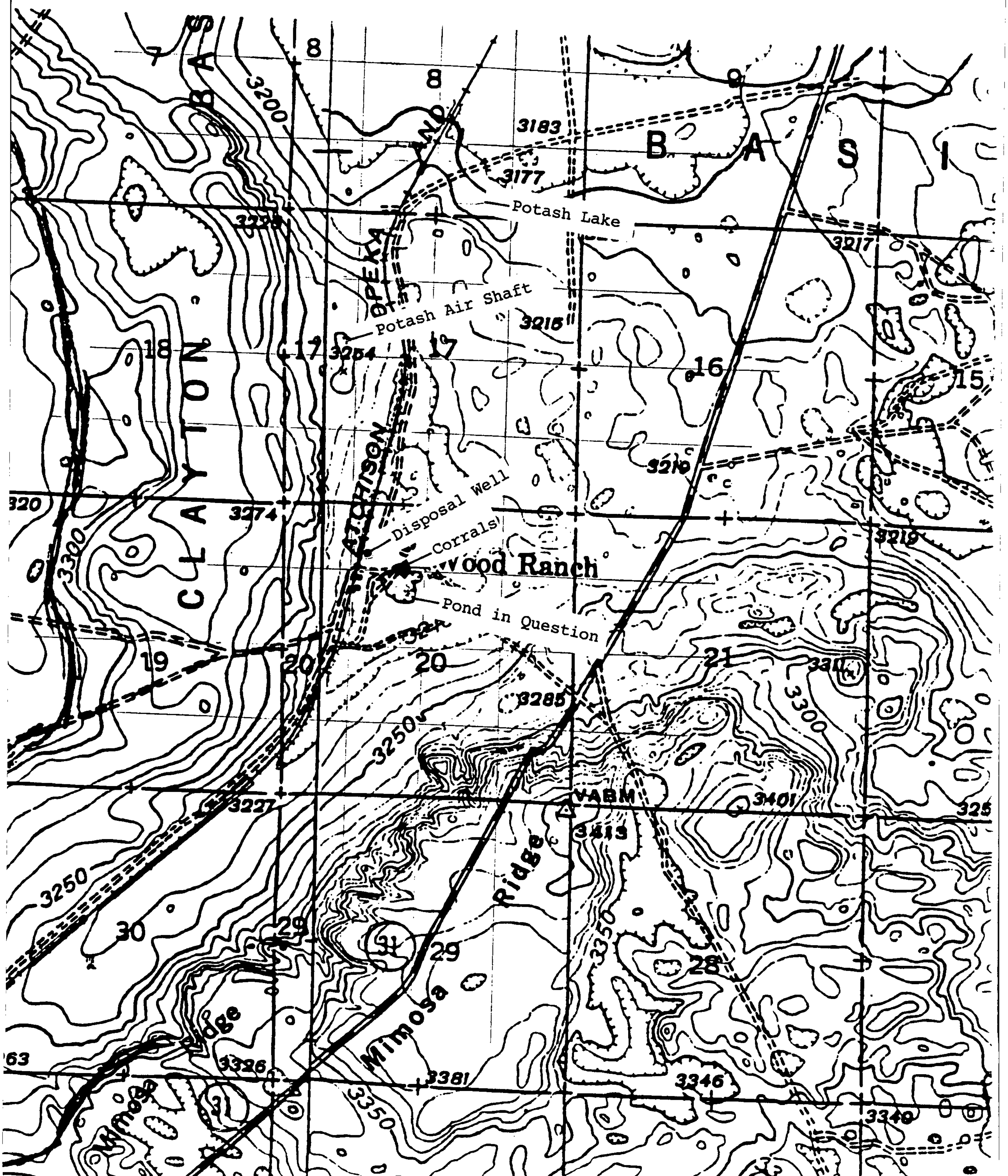
393-7544

CALLER: Larry Squires / Snyder Ranches

SUBJECT: Complained of water in corrals. He said it was coming from a Barber Oil Co (Bob Light) well C-20-20-30 either Stovall or Colglazier leases. Pumper told him they are disposing water into Russell farm at about 100ft. About 2 miles straight South of old PCA mine by Ranchhouse

BY: Betty Rollins

T-20S R-30E


Potash Lake
Potash Air Shaft
Disposal Well
Corrals
Wood Ranch
Pond in Question
B A S I
CLAYTON
ATCHISON
Mimosa Ridge
Mimosa Ridge
VABM
3413
3401
3183
3177
3217
3215
3219
3219
3274
3227
3285
3381
3346
3326
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STATE OF NEW MEXICO

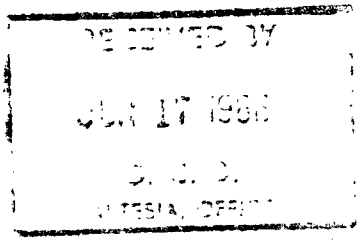
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501-2088
(505) 827-5800

June 10, 1986



Mr. John Novosad
Bureau of Land Management
P. O. Box 1778
Carlsbad, New Mexico 88220

Dear Mr. Novosad:

In response to your telephone request for information on the disposal well status at the Barber Oil Company-Calglazier Lease, Wells 1, 2, 3, Lease LC-029096-C, we provide the following information:

1. The Barber disposal well has been in use since 1943.

2. While we are assuming that the well was approved for disposal at that time, our records are incomplete in that they do not show approval or disapproval. We are continuing to research the matter.

3. The disposal well is located in the area covered by Oil Conservation Commission Order R-3221-B. This order allows for the surface disposal of fluids because either no ground water is present, or ground water has in excess of 10,000 mg/l total dissolved solids.

Based on information that no fresh water is located in the area, we believe that continued use of the disposal operation will not cause a hazard to fresh waters. We have requested that Barber submit the results of a survey designed to demonstrate where the water is going in the well. Any further action on this matter is pending the report of that survey.

Sincerely,

R. L. STAMETS
Director

RLS:DGB:dp

cc: Les Clements, Artesia District Office
Dave Boyer, Environmental Bureau, OCD

Bell PETROLEUM SURVEYS

H-993

RADIOACTIVE

TRACER SURVEY

COMPANY BARBER OIL COMPANY

WELL DISPOSAL WELL

FIELD

COUNTY EDDY STATE NEW MEXICO

LOCATION:

N/A

SEC. TWP.

OTHER SERVICES.

Permanent Datum GROUND LEVEL Elev. N/A

Log Measured From GROUND LEVEL Ft Above Perm Datum

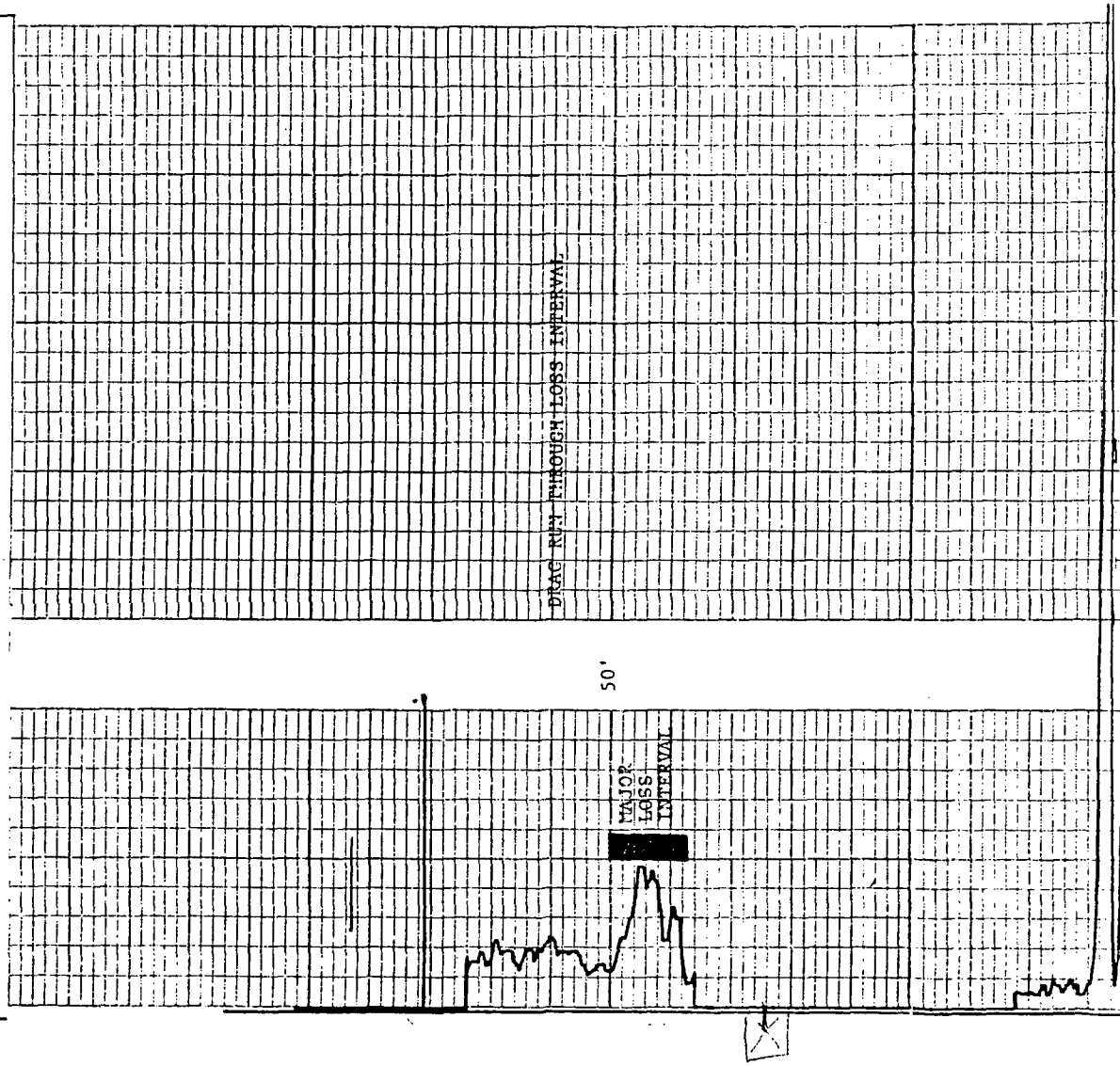
Drilling Measured From GROUND LEVEL

ELEVATIONS:
KB N/A
DF
GL

Date	6-06-86
Run No.	ONE
Type Log	TRACER SURVEY
Depth—Driller	200'
Depth—Logger	67'
Bottom logged interval	67'
Top logged interval	0'
Type fluid in hole	WATER
Salinity, PPM Cl.	
Density	
Level	
Max. rec. temp., Deg. F.	
Operating rig time	1 HOUR/PORTABLE MAST
Recorded by	J. BRYAN
Witnessed by	

RUN No	BORE-HOLE RECORD Bit	From	To	CASING RECORD Size	Wgt.	From	To
				8-5/8"		0	T.D.

COULD ONLY GET TO 67'. MAJOR FLUID LOSS BETWEEN 50' AND 63'.
HAD TIGHT SPOT AT 37'.
NO FLUID GOING BELOW LOGGER'S T.D.
SEE LOG FOR CONCLUSION.



ARTESIA OFFICE COPY

C-20-20-30

BARBER OIL, INC.

901 WEST PIERCE PHONE 887-2566

BOX 1658

CARLSBAD, NEW MEXICO

July 11, 1977

United States
Department of the Interior
Geological Survey
Drawer U
Artesia, NM 88210

Re: Application for approval of water disposal under NTL-2B, Barber Pool, Federal Oil and Gas Lease LC-029096-C

Attention: Joe Lara

Gentlemen:

Barber Oil, Inc. hereby requests approval for open unlined pits for disposal of produced water under production in the Barber Pool, Sections 17 & 20 of T20S, R30E, Eddy County, New Mexico. This pool does have a shallow water injection well located in Unit C of Section 20 which we have used for many years to dispose of produced water. We request approval to continue as we have in the past which has been approved by the Oil Conservation Commission. Exempt Area

As requested by your office in our recent telephone conversation I enclose a plat with the exact location of all wells on the above captioned property and the approximate location of the pits and tank battery on the property.

The average total water per day from all wells is 6051.66 barrels.

There are nine wells on the lease producing from the Yates lime or 7-Rivers at an average depth of 1,440 ft.

It is my understanding that the evaporation rate for Southeastern New Mexico is 72 inches per year. With essentially sand and gyp surface formation we achieve good to excellent perculation in the area.

I submit two copies of this application as requested. Should you need any further information, please so advise.

Very truly yours,

Robert S. Light
President
Barber Oil, Inc.

RSL:mig

RECEIVED
JUL 12 1977
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

APPROVED SEP 30 1977
DISTRICT ENGINEER

July 15, 1968

Estate of W. M. Snider,
Box 726,
Lovington, New Mexico

Gentlemen:

I enclose one executed copy of form C-108, Application to Dispose of Salt Water by Injection into a Porous Formation, as required by the Oil Conservation Commission. This application is to secure approval by the commission of our disposal well which we have used since 1943 on the Barber lease, Eddy County, New Mexico.

Very truly yours,

Barber Oil Inc.
Robert S. Light, President

RSL:pg
cc: Oil Conservation Commission

R.L STAMETS FIELD NOTE 4-25-68

Barber Disposal well 100 ft N. of Tanks
water from water lg. To cement Troughs
thru transite pipe (5½-6") to well
goes to well below surface. Well csg
corroded & open above ground.
Oil droplets in concrete Troughs.
Ray said thought csg circulated
Some water leaks, oily & unsanitary
behind Tanks

Copy to R.L. Stamets 4/

April 19, 1968

N. M. Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Re: Barber Pool Water Disposal

Dear Pete:

As per your request, I am herein outlining what I know or have been told about the subject matter.

On April 3rd of this year I stopped to see Bob Light in Carlsbad to check on his Russell Pool Flood. While there, he asked me if he would need to do anything to continue to dispose of his Barber Pool water as he has been doing. The Barber Pool was drilled years ago by Neil Wills and was operated by him until recently. The produced water has been dumped down a well into the Rustler Anhydrite for about the last 30 years. Bob said he thought the Barber water was of better quality than the water in the Rustler, but he did not at that time have proof. Further, he stated that the rancher had a stock water well which has been in constant use during this same 30 year period. The well is reportedly located next to one of Barber's Stovall Wood wells. The well is apparently 90 feet deep with one joint of casing in it.

Mr. Light said that if the described system were acceptable he would

April 19, 1968

Mr. A. L. Porter, Jr.
N. M. Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

request approval of a similar system in the PCA Pool. I advised him to contact you and to collect as much hard evidence as he could before he saw you.

I will go by this pool next week if possible and see what I can find out in the field. I will also try to prepare a cross section of the pool showing the oil zone, Rustler zone and the fresh water zone. This information will be forwarded when complete.

Very truly yours,

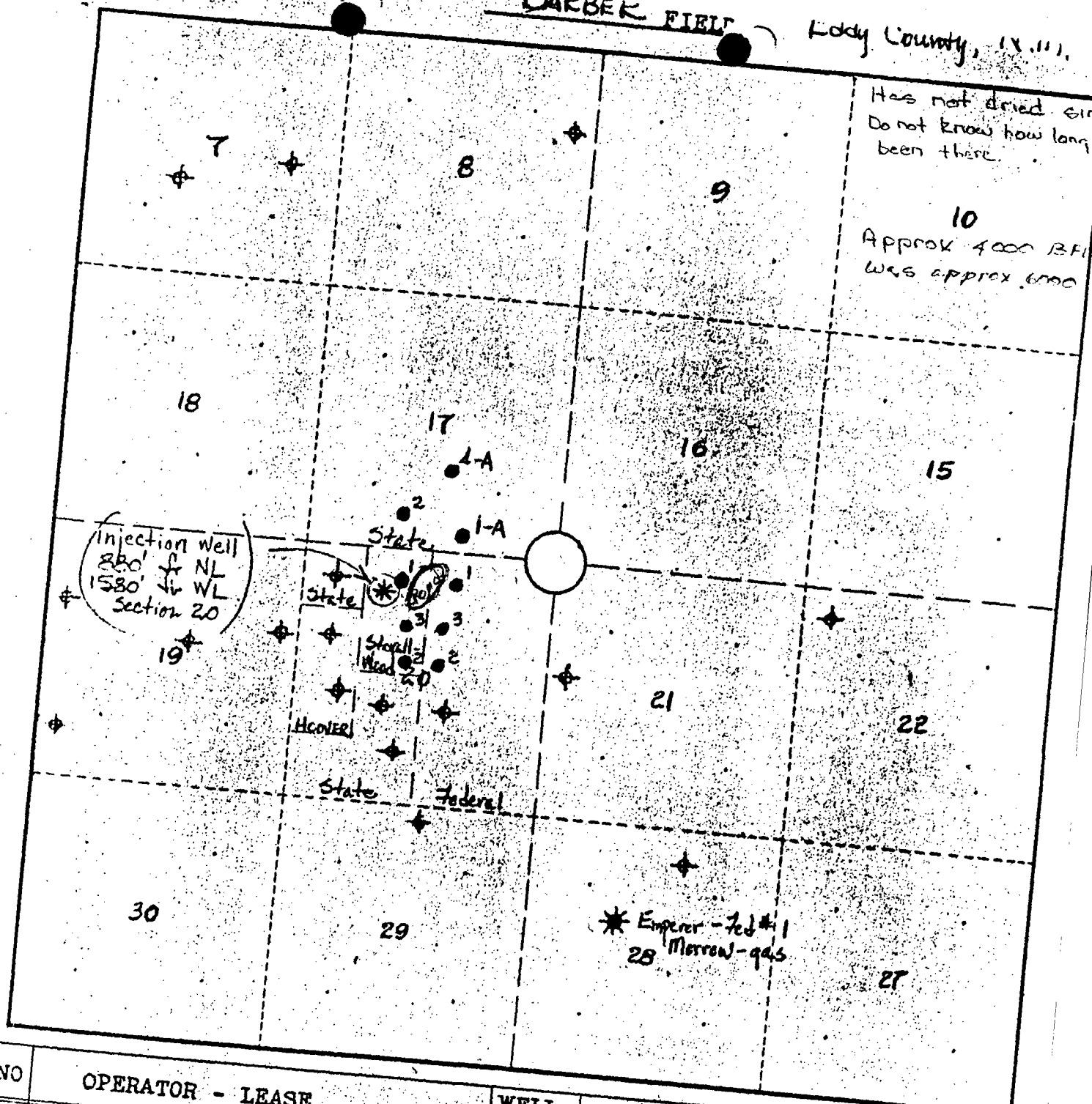
OIL CONSERVATION COMMISSION

R. L. STAMETS
Geologist

RLS/bh

T. 18 S., R. 30 E.

DARBER FIELD Eddy County, N.M.



NO	OPERATOR - LEASE	WELL NO.	SPUD	ELEV. NO.	ELEV.	TD
1.	DARBER Oil INC - State	3				
2.	✓ ✓ ✓ Federal	3				
3.	Fee	3				
4.		9 total Wells				
5.						
6.	NOTE: No offset operators					
7.	within ½ mile radius.					
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR: [illegible] Oil Inc. | ADDRESS: 901 West Kirce

LEASE NAME: Ansell-Ward | WELL NO.: disposal | FIELD: JARBER | COUNTY: Eddy

LOCATION

UNIT LETTER C ; WELL IS LOCATED 880 FEET FROM THE North LINE AND 1580 FEET FROM THE [illegible] LINE, SECTION 20 TOWNSHIP 20 South RANGE 30 East NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING set in 1943	5 5/8	195 ft.	25		
INTERMEDIATE					
LONG STRING					
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Rustler - Cut out section	Ground to 227 - cut out 227 - 415 Valence Rustler	415 ft

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	open hole	195-207' or 12' interval.

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	drilled for disposal use in 1943	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

None

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
40 ft ±	None	1420

ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
Gravity 4000	7000	open	gravity	Vacuum

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
yes			No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

J. H. M. Snyder Lovington, N.M. Box 726

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

None

ARE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	[redacted]
yes	yes	None	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	yes	None available	No

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

(Signature) President (Title) July 17, 1963 (Date)

NOTE: *Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests.* SEE RULE 701.

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR	ADDRESS
BARBER OIL, INC.	901 West Pierce Carlsbad, N. M. 88220

LEASE NAME	WELL NO.	FIELD	COUNTY
[illegible] Ward	disposal	Barber	Eddy

LOCATION

UNIT LETTER C ; WELL IS LOCATED [illegible] FEET FROM THE north LINE AND 1980 FEET FROM THE west LINE, SECTION [illegible] TOWNSHIP [illegible] South RANGE [illegible] East NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING set in 1943	[illegible]	[illegible] ft.	15		
INTERMEDIATE					
LONG STRING					
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
[illegible]	[illegible]	419 ft.

INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
casing	open hole	[illegible] - [illegible] 12 ft. interval

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
drilled in 1943	originally drilled for disposal use	no

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
none

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
approximately 40 ft.	none	1420 ft.

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
[illegible]	400	1000	open	gravity	vacuum

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
yes			no

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)
Estate of W. W. Snyder, Box [illegible], Lovington, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL
none

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	~~THE NEW MEXICO STATE ENGINEER~~
yes	yes	None	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	yes	none available	no

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

[signature]	President	July 17, 1968
(Signature)	(Title)	(Date)

NOTE: *Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests.* SEE RULE 701.

Form C-108
Revised 1-1-65

EXICO OIL CONSERVATION COMM

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OR	ADDRESS
[illegible] OIL, INC.	901 West Pierce Carlsbad, N. M. 88220

E NAME	WELL NO.	FIELD	COUNTY
Stovall-West	disposal	Barber	Eddy

OCATION
UNIT LETTER C ; WELL IS LOCATED [illegible] FEET FROM THE north LINE AND [illegible] FEET FROM THE west LINE, SECTION 20 TOWNSHIP [illegible] South RANGE [illegible] East NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
URFACE CASING set in 1943	8 5/8	195 ft.	15		REC
NTERMEDIATE					JUL 3 '90
ONG STRING					O. C. D.
UBING			NAME, MODEL AND DEPTH OF TUBING PACKER		ARTESIA, OFFICE

AME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
upper Rustler- cut out section	[illegible] with [illegible] [illegible] to 415' balance of	415 ft.

S INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
casing	open hole	195' - 207' 12 ft. interval

S THIS A NEW WELL DRILLED FOR ISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
drilled in 1943	originally drilled for disposal use	no

IST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
none

EPTH OF BOTTOM OF DEEPEST RESH WATER	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
approximately 40 ft.	none	1480 ft.

NTICIPATED DAILY NJECTION VOLUME BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
[illegible]	4000	7000	open	gravity	vacuum

NSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, TOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
yes			no

AME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)
Estate of W. M. Snyder, Box [illegible], Lovington, New Mexico

IST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL
none

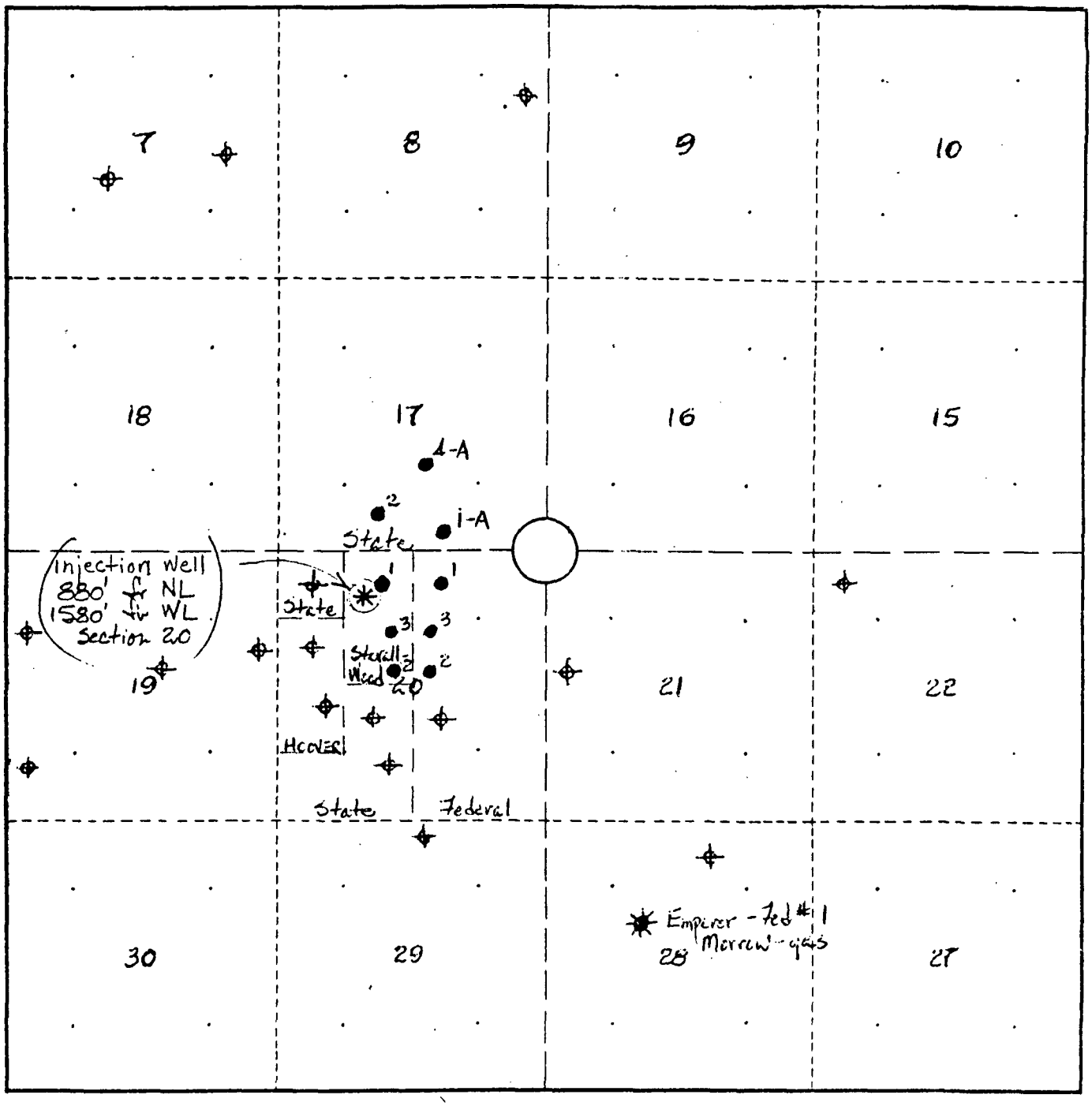
AVE COPIES OF THIS APPLICATION BEEN ENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	~~THE NEW MEXICO STATE ENGINEER~~
yes	yes	none	
RE THE FOLLOWING ITEMS ATTACHED TO HIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	yes	none available	no

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

(Signature)	President (Title)	July 17, 1968 (Date)

OTE: *Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well. not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests.* SEE RULE 701.

T. 20 S., R. 30 E. BARBER FIELD Eddy County, N.M.



NO	OPERATOR - LEASE	WELL NO.	SPUD	ELEV. NO.	ELEV.	TD
1.	BARBER Oil INC. - State	3				
2.	" " " Federal	3				
3.	" " " Fee	3				
4.		9 total Wells				
5.						
6.	NOTE: No offset operators					
7.	within ½ mile radius					
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR		ADDRESS	
BARBER OIL, INC.		901 West Pierce Carlsbad, N. M. 88220	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
Stovall-Wood	disposal	Barber	Eddy

LOCATION
UNIT LETTER G ; WELL IS LOCATED 860 FEET FROM THE north LINE AND 1980 FEET FROM THE west LINE, SECTION 20 TOWNSHIP 21 South RANGE 30 East NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING set in 1943	8 5/8	195 ft.	15		
INTERMEDIATE					[illegible] 3 '90
LONG STRING					O. C. D.
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		ARTESIA, OFFICE

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
upper Rustler- cut out section	[illegible] 415' [illegible]	415 ft.

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
casing	Open hole	195' - 207' 12 ft. interval

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
drilled in 1943	originally drilled for disposal use	no

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
none

DEPTH OF BOTTOM OF DEEPEST FRESH WATER	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
approximately 40 ft.	none	1420 ft.

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
[illegible]	4000	7000	open	gravity	vacuum

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
yes			no

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)
Estate of W. M. Snyder, Box 726, Lovington, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL
none

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	~~THE NEW MEXICO STATE ENGINEER~~
yes	yes	none	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	**PLAT OF AREA**	**ELECTRICAL LOG**	**DIAGRAMMATIC SKETCH OF WELL**
	yes	none available	no

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

[signature]	President	July 17, 1968
(Signature)	(Title)	(Date)

NOTE: *Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests.* SEE RULE 701.

in which water is injected into a producing horizon in sufficient quantities and under sufficient pressure to stimulate the production of oil from other wells in the area, and shall be limited to those areas in which the wells have reached an advanced state of depletion and are regarded as what is commonly referred to as "stripper" wells.

2. The project area of a water flood project shall comprise the proration units upon which injection wells are located plus all proration units which directly or diagonally offset the injection tracts and have producing wells completed on them in the same formation; provided however, that additional proration units not directly nor diagonally offsetting an injection tract may be included in the project area if, after notice and hearing, it has been established that such additional units have wells completed thereon which have experienced a substantial response to water injection.

3. The maximum allowable assigned to any water flood project area shall be determined by multiplying the number of proration units in the project area times the basic Area Allowable Factor (as determined in subparagraph 4 below) times the appropriate proportional (depth) factor for the pool as set forth in Rule 505 (b). The allowable assigned to any water flood project area in which there are proration units containing more than one well shall be increased by an amount of oil equal to 0.333 times the basic Area Allowable Factor times the proportional (depth) factor for the pool for each such additional well on the proration unit; provided however, that the <u>additional</u> allowable for any such proration unit shall not exceed the basic Area Allowable Factor times the proportional (depth) factor for the pool.

   The project area allowable may be produced from any well or wells in the project area in any proportion.

   The production from a water flood project area shall be identified as such on the monthly Commission Form C-115.

   Each and every well outside a prorated waterflood project area which is producing into common facilities with wells inside a prorated water flood project area shall be tested once each month and the

C. Salt Water Disposal Wells

The Secretary-Director of the Oil Conservation Commission shall have authority to grant an exception to the requirements of Rule 701-A for water disposal wells only, without notice and hearing, when the waters to be disposed of are mineralized to such a degree as to be unfit for domestic, stock, irrigation, or other general use, and when said waters are to be disposed of into a formation older than Triassic (Lea County only) which is non-productive of oil or gas within a radius of two miles from the proposed injection well, providing that any water occurring naturally within said disposal formation is mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use.

To obtain such administrative approval, operator shall submit in TRIPLICATE Commission Form C-108, Application to Dispose of Salt Water by Injection Into a Porous Formation, said application to be filed in accordance with Rule 701-B above. Copies of the application shall also be sent to all offset operators and to the surface owner of the land upon which the well is located.

If no objection is received within 15 days from the date of receipt of the application, and the Secretary-Director is satisfied that all of the above requirements have been complied with, and that the well is to be cased and cemented in such a manner that there will be no danger to oil, gas, or fresh water reservoirs, an administrative order approving the disposal may be issued. In the event that the application is not granted administratively, it shall be set for public hearing, if the operator so requests.

The Commission may dispense with the 15-day waiting period if waivers of objection are received from all offset operators, the surface owner, ~~and the State Engineer.~~

D. Pressure Maintenance Projects

1. Pressure maintenance projects are defined as those projects in which fluids are injected into the producing horizon in an effort to build up and/or maintain the reservoir pressure in an area which has not reached the advanced or "stripper" state of depletion.

2. The project area and the allowable formula for any pressure maintenance project shall be fixed by the Commission on an individual basis after notice and hearing.

E. Water Flood Projects

1. Water flood projects are defined as those projects

H - GAS PRORATION AND ALLOCATION

RULE 601. ALLOCATION OF GAS PRODUCTION

When the Commission determines that allocation of gas production in a designated gas pool is necessary to prevent waste, the Commission, after notice and hearing, shall consider the nominations of purchasers from that gas pool and other relevant data, and shall fix the allowable production of that pool, and shall allocate production among the gas wells in the pool delivering to a gas transportation facility upon a reasonable basis and recognizing correlative rights. The Commission shall include in the proration schedule of such pool any gas well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well.

RULE 602. PRORATION PERIOD

The proration period shall be at least six months and the pool allowable and allocations thereof shall be made at least 30 days prior to each proration period.

RULE 603. ADJUSTMENT OF ALLOWABLES

When the actual market demand from any allocated gas pool during a proration period is more than or less than the allowable set by the Commission for the pool for the period, the Commission shall adjust the gas proration unit allowables for the pool for the next proration period so that each gas proration unit shall have a reasonable opportunity to produce its fair share of the gas production from the pool and so that correlative rights shall be protected.

RULE 604. GAS PRORATION UNITS

Before issuing a proration schedule for an allocated gas pool, the Commission, after notice and hearing, shall fix the gas proration unit for that pool.

I - SECONDARY RECOVERY, PRESSURE MAINTENANCE, AND SALT WATER DISPOSAL

RULE 701. INJECTION OF FLUIDS INTO RESERVOIRS

A. Permit for Injection Required

The injection of gas, liquefied petroleum gas, air, water, or any other medium into any reservoir for the purpose of maintaining reservoir pressure or for the purpose of secondary recovery or the injection of water into any formation for the purpose of water disposal shall be permitted only by order of the Commission after notice and hearing, unless otherwise provided herein.

B. Method of Making Application

Application for original authority for the injection of gas, liquefied petroleum gas, air, water, or any other medium into any formation for any reason, including salt water disposal, or for the expansion of any such injection project by the completion or conversion of additional well (s) shall include the following:

1. A plat showing the location of the proposed injection well (s) and the location of all other wells within a radius of two miles from said proposed injection well (s) and the formation from which said wells are producing or have produced. The plat shall also indicate the lessees, if any there be, within said two-mile radius.

2. The log of the proposed injection well (s) if same is available.

3. A diagrammatic sketch of the proposed injection well (s) showing all casing strings, including diameters and setting depths, quantities used and tops of cement, perforated or open hole intervals, tubing strings, including diameters and setting depths, and the type and location of packers, if any.

4. Other pertinent information including the name and depth of the zone or formation into which injection will be made, the kind of fluid to be injected, the anticipated volumes to be injected, and the source of said injection fluid.

~~5. Evidence that a copy of the application, complete with all attachments, has been sent to the State Engineer Office, Capitol Building, Denver~~.

DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 2088
SANTA FE

May 21, 1968

Mr. Robert S. Light, President
Barber Oil Incorporated
901 West Pierce
Carlsbad, New Mexico 88220

Dear Mr. Light:

We are enclosing a copy of Rule 701 which you will follow to file an application for the disposal of salt water in the Basal Rustler formation, with our Santa Fe office. The application is to be filed on Form C-108 which is also enclosed.

Please follow the instructions very carefully so that there will not be any undue delay in processing your application.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir
Enclosures
cc: Mr. Bill Gressett
Oil Conservation Commission
Drawer DD
Artesia, New Mexico

DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 2088
SANTA FE

April 18, 1968

Mr. Robert S. Light, President
Barber Oil, Inc.
901 West Pierce
Carlsbad, New Mexico

Dear Mr. Light:

I discussed the problem to which you refer in your letter with Mr. Gressett and Mr. Stamets of the Artesia office yesterday. They will give me a report on what you have at present and what you propose to do in regard to the matter of water disposal, and I will be most happy to notify you in advance of my visit to the Artesia office so that we may discuss the matter.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

cc: Mr. Bill Gressett

DYNOCHEM

"Chemicals & Service for the Petroleum Industry"

BOX 2580 MIDLAND, TEXAS 79702 (915) 683-7132

API WATER ANALYSIS REPORT FORM

Company		Sample No.	Date Sampled
Barber Oil		H-4	3-13-86
Field	**Legal Description**	**County or Parish**	**State**
Barber		Eddy	NM
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
Lake				
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**
Fresh Surface Water	Lake	T. Newell

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	3956	172
Calcium, Ca	3880	194
Magnesium, Mg	293	24
Barium, Ba	-0-	-0-

ANIONS		
Chloride, Cl	13,000	366
Sulfate, SO_4	1,100	23
Carbonate, CO_3	-0-	-0-
Bicarbonate, HCO_3	55	0.9

Total Dissolved Solids (calc.) 22,284

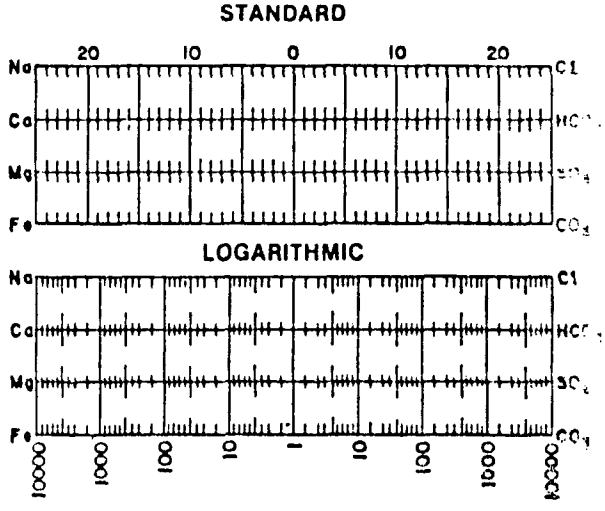
Iron, Fe (soluble) 0ppm

Sulfide as H_2S None Detected

OTHER PROPERTIES

pH	6.5
Specific Gravity, 60/60 F.	
Resistivity (ohm-meters)_____F.	

WATER PATTERNS — *me/l*



REMARKS — RECOMMENDATIONS:

DYNOCHEM

"Chemicals & Service for the Petroleum Industry"

BOX 2580 MIDLAND, TEXAS 79702 (915) 683-7132

API WATER ANALYSIS REPORT FORM

Company		Sample No.	Date Sampled
Barber Oil		H-1	3-13-86
Field	Legal Description	County or Parish	State
Barber		Eddy	NM
Lease or Unit	Well	Depth	Formation	Water, B/D
Barber	Lease			
Type of Water (Produced, Supply, etc.)	Sampling Point		Sampled By
Produced	Water Tank		T. Newell

DISSOLVED SOLIDS

CATIONS	*me/l*	*me/l*
Sodium, Na (calc.)	20,033	871
Calcium, Ca	1,240	62
Magnesium, Mg	512	42
Barium, Ba	-0-	-0-

ANIONS		
Chloride, Cl	31,000	873
Sulfate, SO_4	4,500	94
Carbonate, CO_3	-0-	-0-
Bicarbonate, HCO_3	488	8

Total Dissolved Solids (calc.) 57,773

Iron, Fe (total) 1ppm

Sulfide, as H_2S None Detected

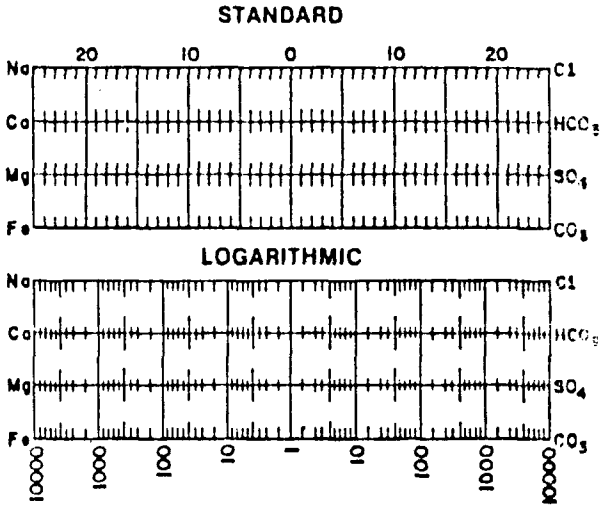
OTHER PROPERTIES

pH 9.0

Specific Gravity, 60/60 F.

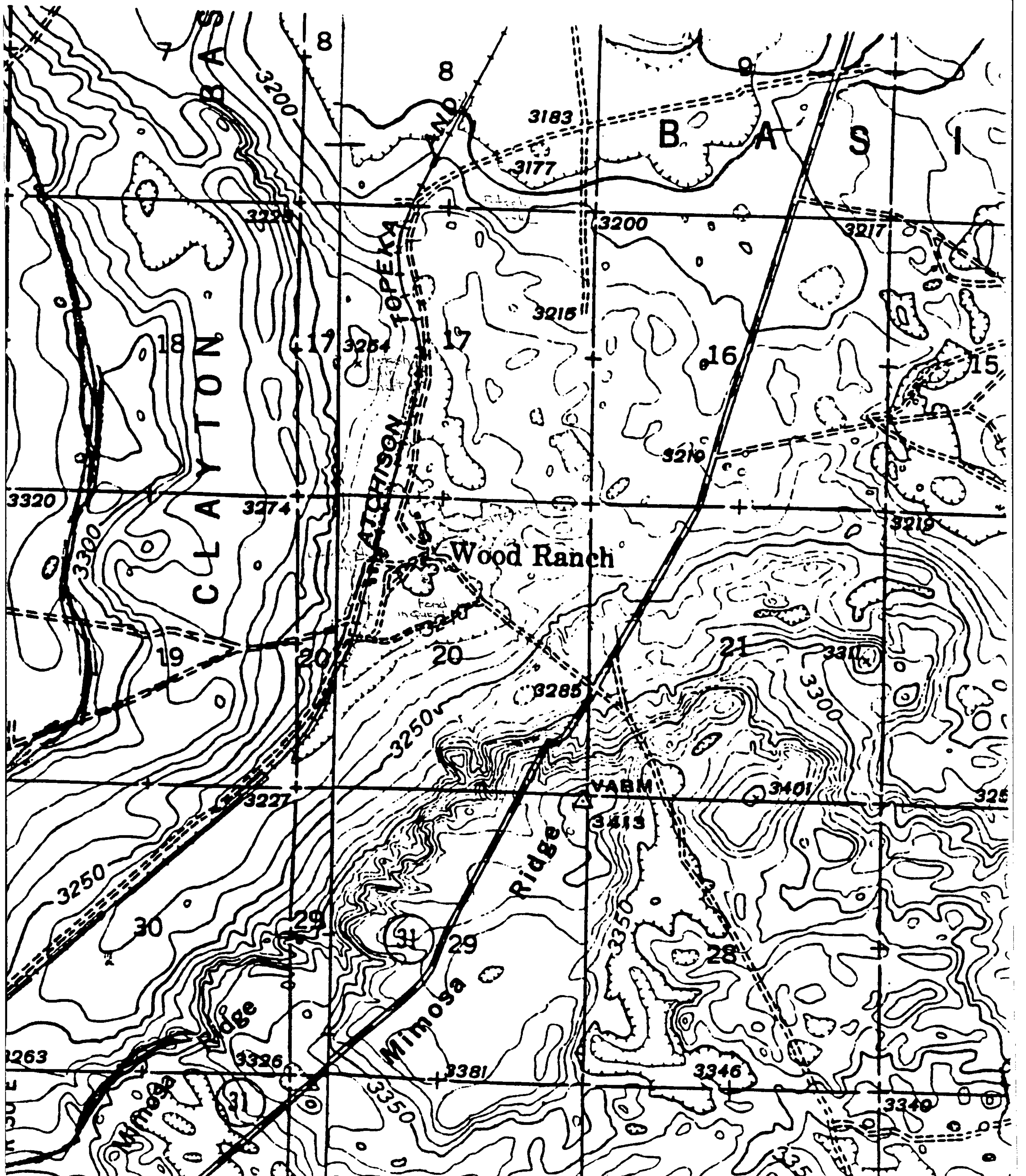
Resistivity (ohm-meters)_____F.

WATER PATTERNS — *me/l*



REMARKS & RECOMMENDATIONS:

T-20S , R-30-E


BASIN
CLAYTON
ATCHISON TOPEKA AND
Wood Ranch
Mimosa Ridge
Ridge
VABM
3413
3401
3200
3183
3177
3217
3215
3210
3219
3254
3274
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3300
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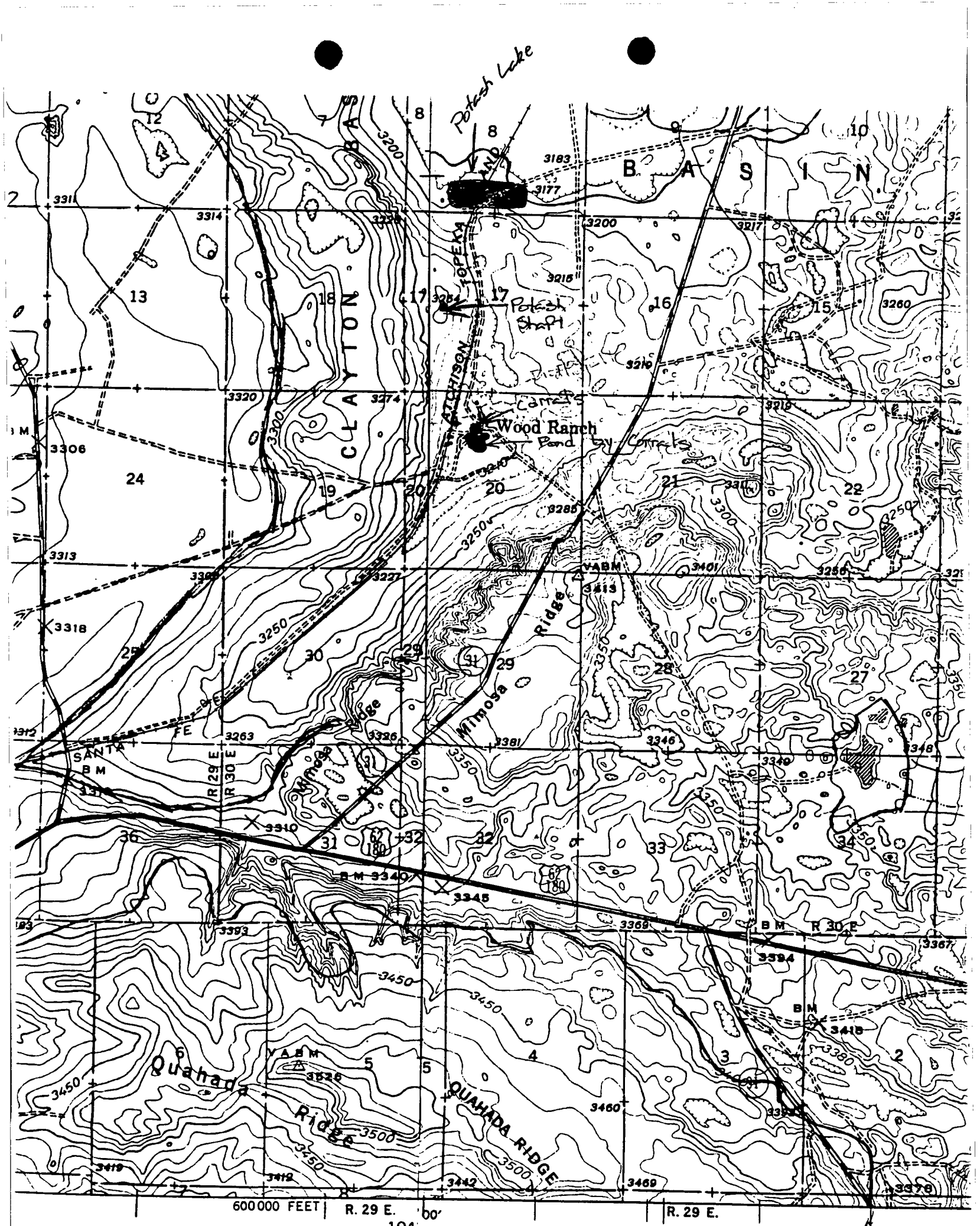


Topography by Max J. Gleissner, S. T. Penick, M. C. McClellan,

Polyconic projection. 1927 North American datum

THE REPRODUCTION OF

THE

FOLLOWING

DOCUMENT (S)

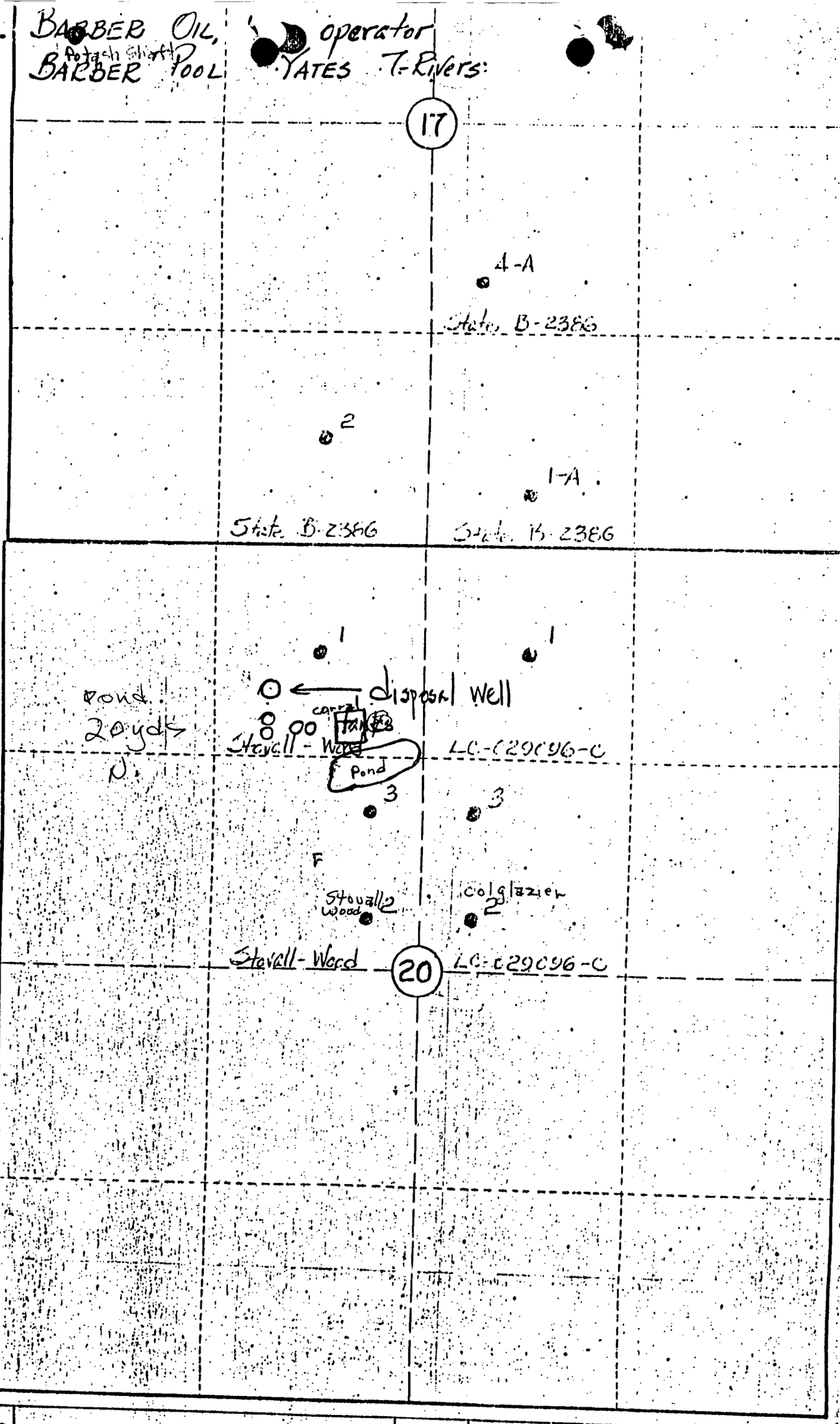
CANNOT BE IMPROVED

DUE TO

THE CONDITION OF

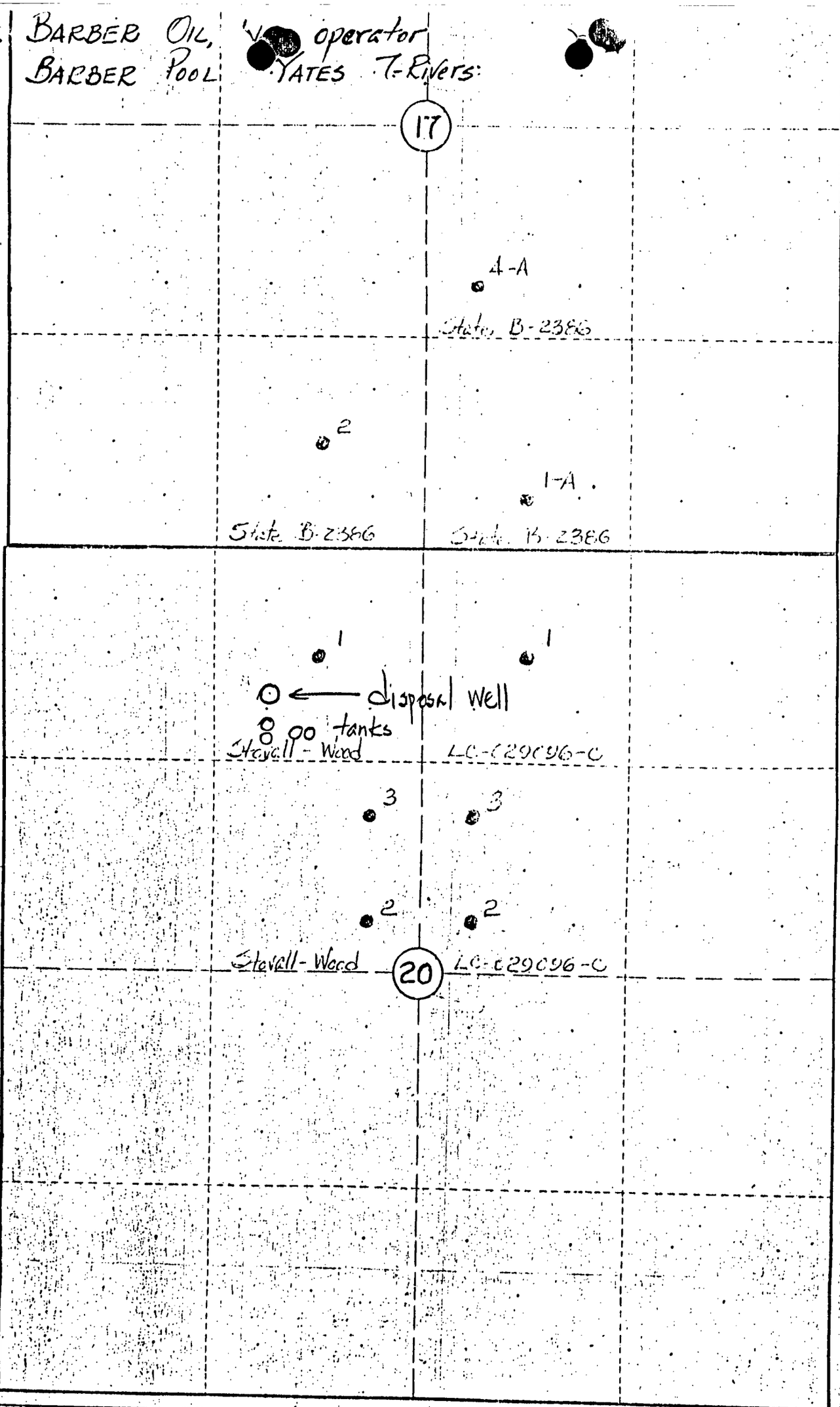
THE ORIGINAL

BARBER OIL, operator
(Attach Chart)
BARBER Pool YATES T-Rivers:



NO	OPERATOR - LEASE	WELL NO.	SPUD	ELEV. NO.	ELEV.	TD
	BARBER OIL, INC.					
1.	Colglazier LC-029096-C	1	1-18-37			1443
2.	" LC-029096-C	2	8-19-38			1436
3.	" LC-029096-C	3	1-28-53			1553
4.	State B-2366	2	7-22-42			1520
5.	State "A" B-2366	1-A	1-21-36			1476
6.	State "A" B-2366	4-A	6-14-42			1539
7.	Stovall-Wood Inc.	1				

BARBER OIL, operator
BARBER POOL YATES T-Rivers



NO	OPERATOR - LEASE	WELL NO.	SPUD	ELEV. NO.	ELEV.	TD
	BARBER OIL, INC.					
1.	Calglazier LC-029096-C	1	1-18-37			1443
2.	" LC-029096-C	2	8-19-38			1436
3.	" LC-029096-C	3	10-28-53			1553
4.	State B-2386	2	7-22-42			1520
5.	State "A" B-2386	1-A	1-21-36			1476
6.	State "A" B-2386	4-A	6-14-42			1539
7.	Stovall-Wood fee	1	4-10-37			1435
8.	Stovall-Wood fee	2				