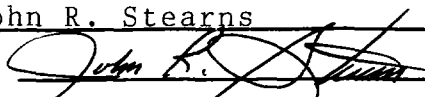


OIL CONSERVATION DIVISION  
RECEIVED

'91 APR 24 PM 9 57

APPLICATION  
FOR SALT WATER DISPOSAL  
BETENBOUGH "B" #3

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: John R. Stearns, dba. STEARNS  
Address: P.O. Box 988 Crossroads, NM 88114  
Contact party: John R. Stearns Phone: 505-675-2356
- 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: John R. Stearns Title Owner  
Signature:  Date: 20th April 1991
- \* 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.

## III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

## XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

## INJECTION WELL DATA SHEET

John R. Stearns dba STEARNS BETENBOUGH "B"  
 OPERATOR LEASE  
#3 660' FNL 1980 FEL S-14 T 9 S R 35 E  
 WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

## Schematic

## Tabular Data

## Surface Casing

Size 13 3/8 " Cemented with 400 sx.  
 TOC Surface feet determined by Circulation  
 Hole size 17 1/2 "

## Intermediate Casing

Size 9 5/8 " Cemented with 2550 sx.  
 TOC Surface feet determined by Circulation  
 Hole size 11 "

## Long string

Size 7 " Cemented with 2470 sx.  
 TOC 5290 feet determined by Circulation  
 Hole size 8 5/8 "

Total depth PBTD @ 9792 7" @ 9805 TD @ 12574

## Injection interval

9711 feet to 9731 feet  
 (perforated or open-hole, indicate which)

Tubing-Casing Annulus  
 Loaded with  
 Inhibited Packer  
 Fluid

PACKER @ 9675'

PERFORATIONS 9711'-9731'

7" @ 9805'

50SX Plug

TD @ 12574'

Tubing size 2 7/8 " lined with \_\_\_\_\_ set in a \_\_\_\_\_ (material)

BURKE Model A-3 packer at 9675 feet  
(brand and model)

(or describe any other casing-tubing seal).

## Other Data

- Name of the injection formation Bought "A" (Perm)
- Name of Field or Pool (if applicable) Bought
- Is this a new well drilled for injection? ☐ Yes ☒ No  
If no, for what purpose was the well originally drilled? Oil Production

- 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) \_\_\_\_\_

- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. \_\_\_\_\_

7980' ABD  
4700 San Andres

[illegible]

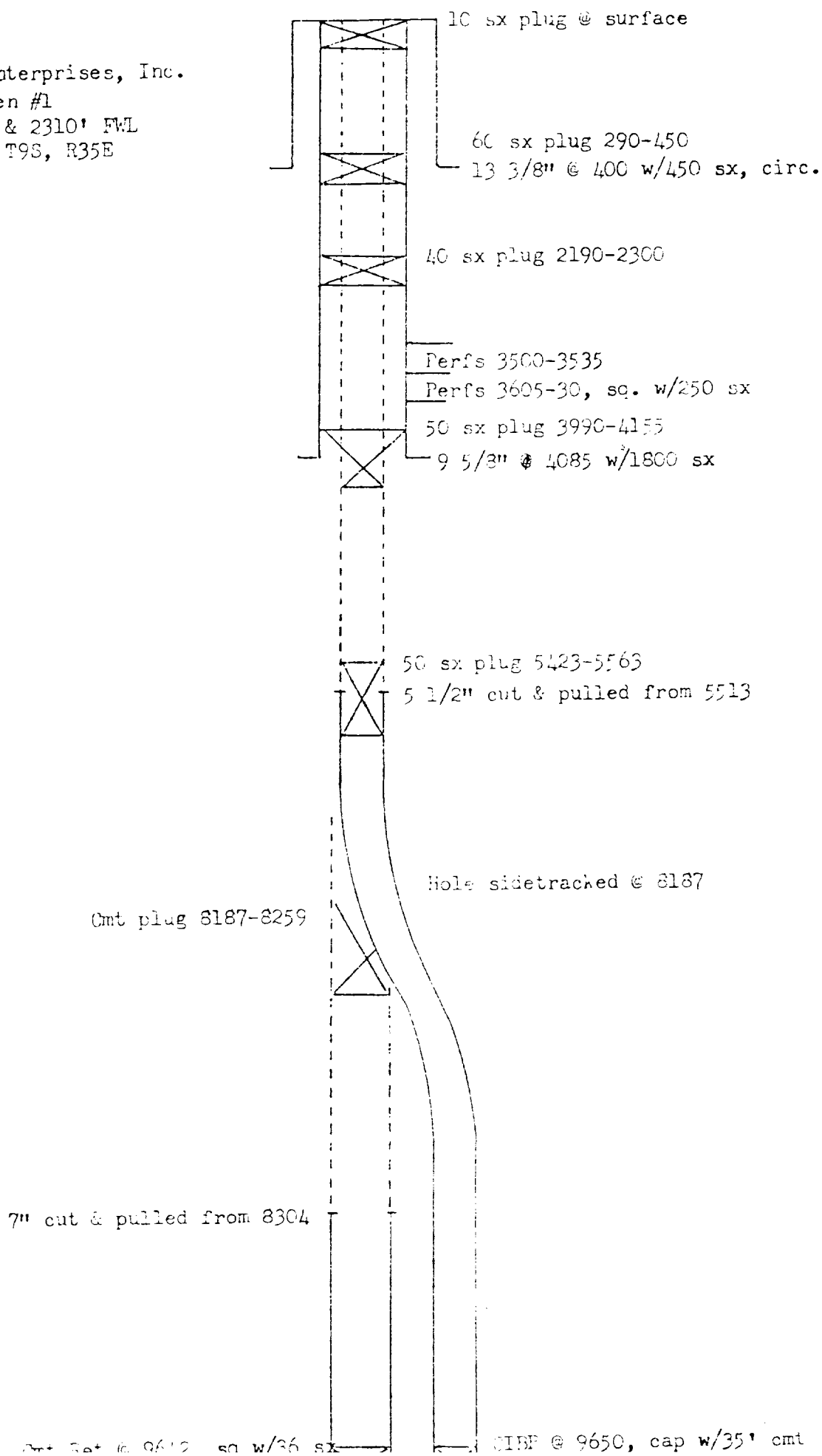
Tabulation of Data on All Wells  
of Public Record in the Area of Review.

/	Layton Enterprises, Inc. Betenbough B #2	330' FSL & 2310' FWL, Sec. 11, T9S, R35E Total Depth 9758, Perfs @ 9749-9754 P&A 9/11/80 Csg: 10 3/4 @ 478' w/450 sx TOC Surface 7 5/8 @ 4240 w/1059 sx TOC 480 TS 5 1/2 liner 4105-9747 w/1192 sx TOC 4105 cir. 4" liner 9686-9754 w/ sx NA
/	Layton Enterprises, Inc. John Allen #1	660' FNL & 2310 FWL, Sec. 14, T9S R35E Total Depth 9860, Perfs @ 9750-9754 P&A 10/80 Csg: 13 3/8 @ 400 w/450 sx TOC Surface 9 5/8 @ 4085 w/ 1800 sx TOC 750 TS 7" 8304-9733 w/ 200 sx TOC 8745 TS Cut and pulled from 8304 5 1/2" liner 9688-9748w/80 sx (Original TD 9757 & P&A) Hole Sidetracked @ 8187 TOC 8735 est. Cut and Pulled from 5513
/	Layton Enterprises, Inc. Betenbough B #1	660' FNL & 660' FEL, Sec. 14, T9S, R35E Total Depth 9859, Perfs @ 9757-9769 Csg: 13 3/8 @ 372 w/350 sx TOC Surface 9 5/8 @ 4429 w/1500 sx TOC 2300 TS 7" @ 9638 w/1987 sx TOC 300 TS Wwll TA
/	Layton Enterprises, Inc. Betenbough B #4	1874' FNL & 554' FEL, Sec. 14, T9S, R35E Total Depth 12,088, Perfs 9601-9623 P&A 9/80 Csg: 12 3/4 @ 380 w/375 sx TOC Surface 8 5/8 @ 4055 w/300 sx TOC 2875 est. Cut and Pulled from 4211 5 1/2" @ 9752 w/250 sx TOC 8310 est. Cut and Pulled from 1128
/	M & G Oil, Inc. Markham #2 SWD	660' FSL & 660' FEL, Sec. 11, T9S, R35E Total Depth 9668 Perfs @ 9645-9654 Csg: 13 3/8 @ 350 w/350 sx TOC Surface 9 5/8 @ 4700 w/1900 sx TOC Surface 7" @ 9700 w/ 1050 sx TOC NA Well in Operation
/	Coquina Oil Corp. Fed. 13 #1	660' FNL & 660' FWL, Sec. 13, T9S, R35E Total Depth 9615, Perfs @ 9585-9605 P&A 7/77 Csg: 13 3/8 @ 380 w/375 sx TOC Surface 9 5/8 @ 4433 w/1900 sx TOC Surface 7" @ 9615 w/1790 sx TOC Surface

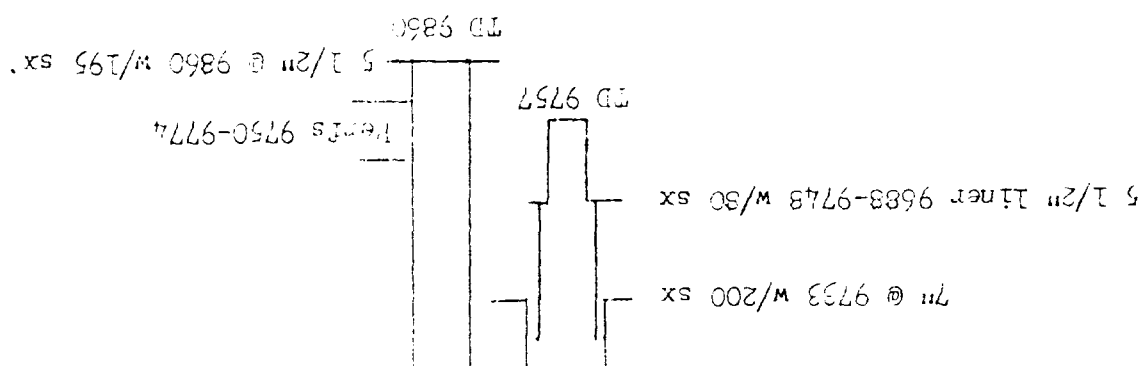
/ Penroc Oil Corp.  
Jack Markham #1

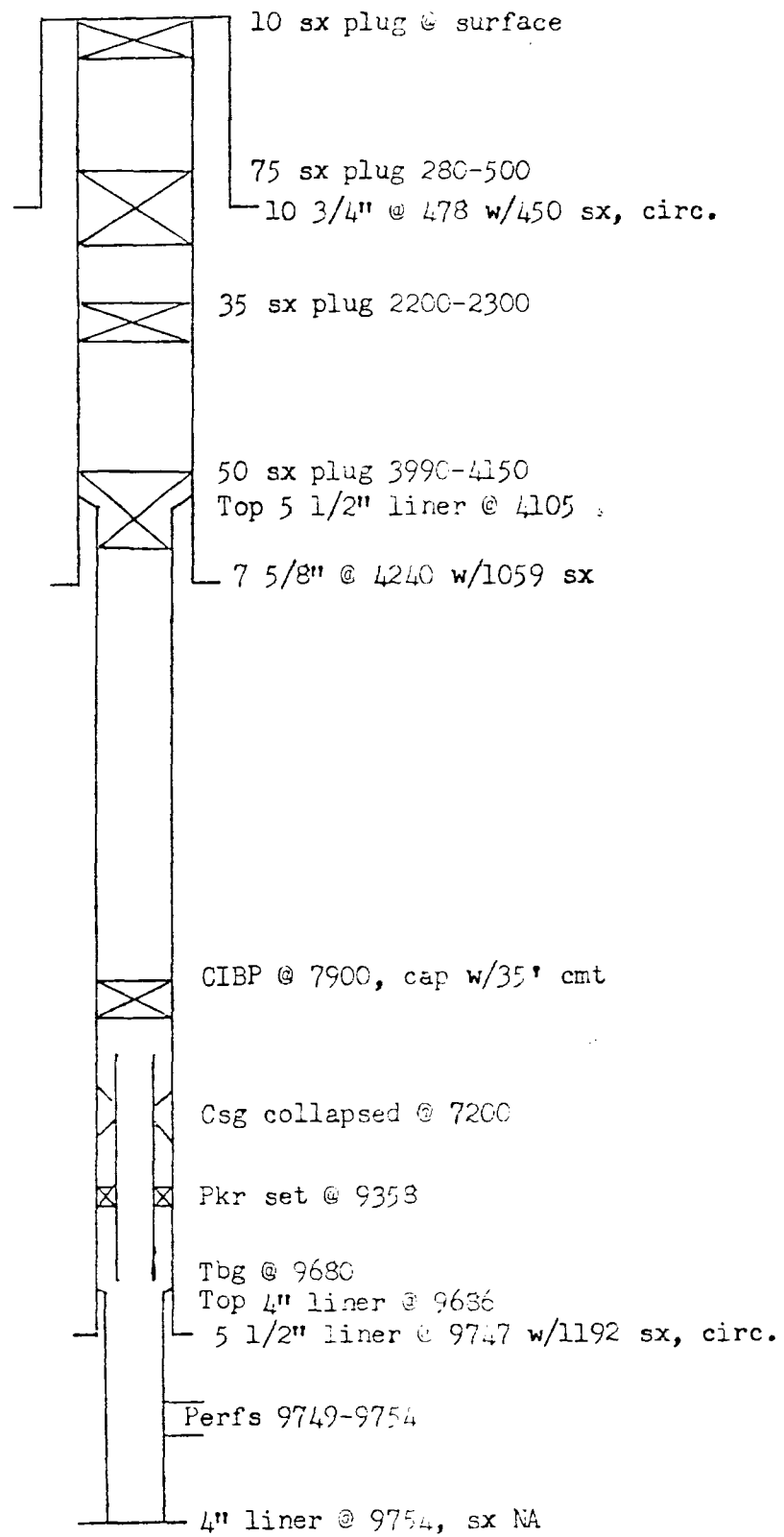
660' FSL & 1980 FEL, Sec. 11, T9S, R35E  
Total Depth 9726, Open Hole 9705-9726  
Csg: 10 3/4 @ 467 w/450 sx TOC Surface  
7 5/8 @ 4258 w/ 2175 sx TOC Surface  
5 1/2" liner @ 4124-9705 w/1850 sx  
TOC 4124 est.

Layton Enterprises, Inc.  
 John Allen #1  
 660' FNL & 2310' FWL  
 Sec. 14, T9S, R35E



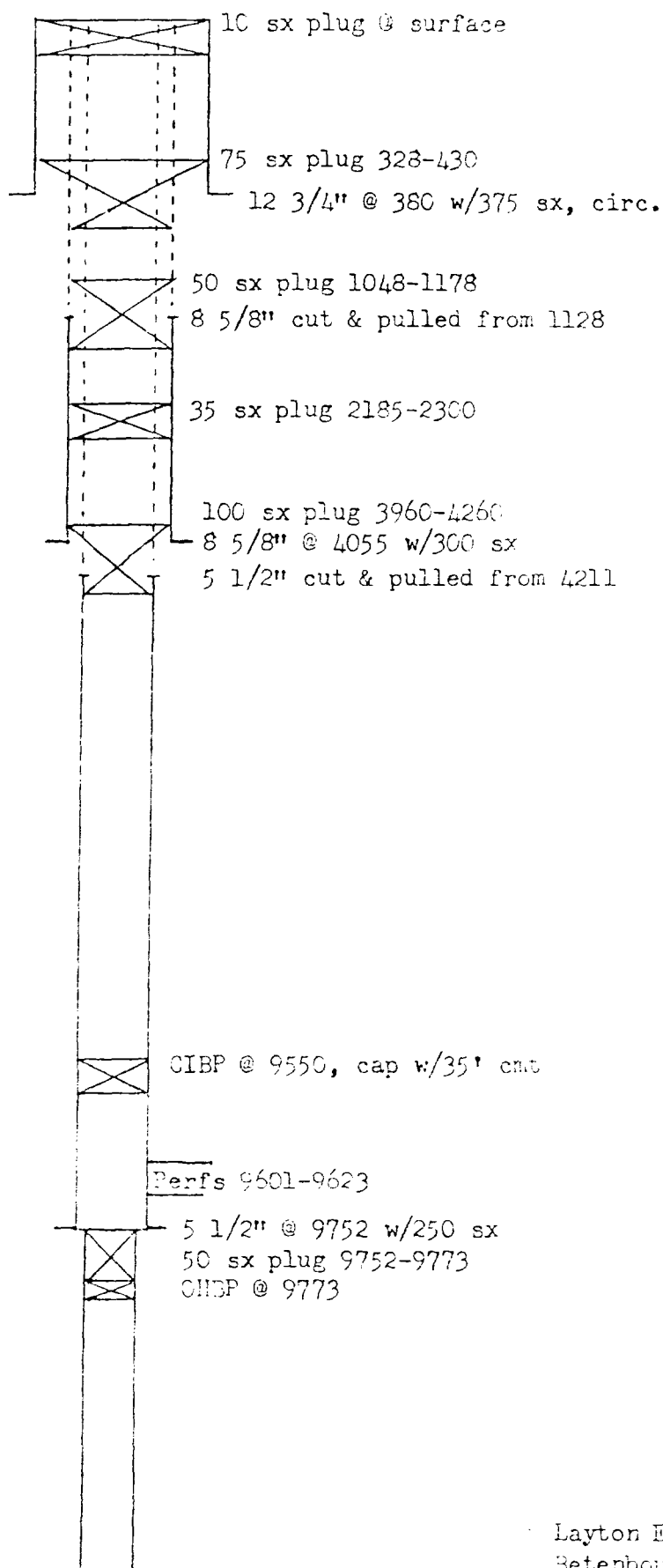






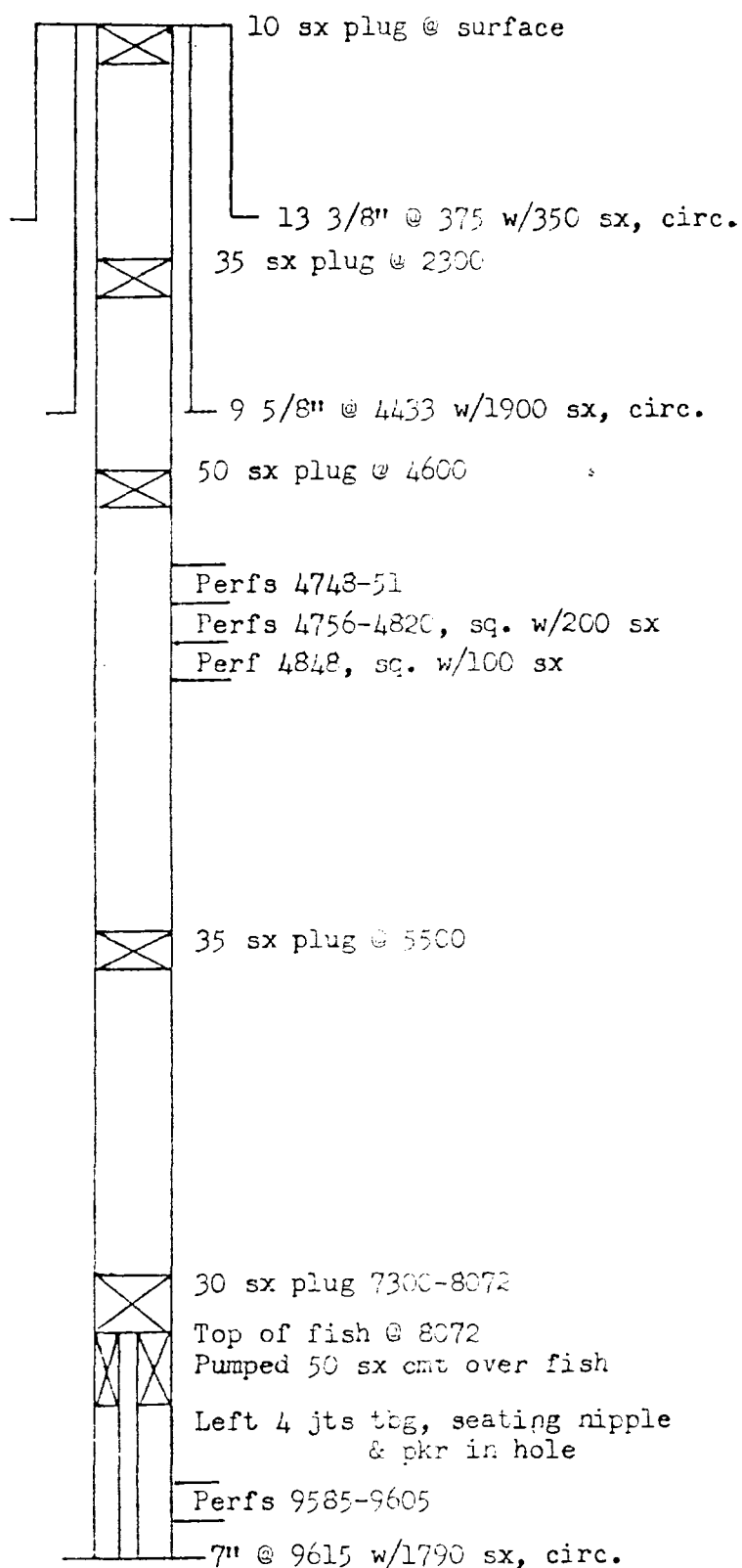
TD 9758

Layton Enterprises, Inc.  
 Betenbough B No. 2  
 330' FSL & 2310' FWL  
 Sec. 11, T9S, R35E



TD 12,088

Layton Enterprises, Inc.  
Betenbough B No. 4  
1874' FHL & 554' FEL  
Sec. 14, T9S, R35E



TD 9615

Coquina Oil Corporation  
 Federal 13 No. 1  
 660' FNL & 660' FWL  
 Sec. 13, T9S, R35E

## SUPPLEMENTAL DATA

### Form C-108

- VII.    1. Proposed average daily injection rate is 1000 B/D with an anticipated rate of 2000 B/D.
2. The injection system will be open.
3. The injection pressure at the wellhead is anticipated to be zero.
4. Source of the injection fluid will be from the Bough "C", San Andreas, Devonian, and Wolfcamp.
5. There are no active Penn wells within the prescribed area for the proposed injection well.
- VIII.    The Bough "C" Zone is a fine crystalline vuggy limestone of the Pennsylvanian age identified by late Crinoid Fossils. The gross zone is normally 28-30 feet thick and in the proposed injection well is found at a depth of 9711 to 9731 feet.
- Fresh water zones are almost non-existent in this area. A few wells of low capacity have been found at a depth of 90 - 250 feet.
- IX.       No stimulation of the well is planned.
- X.       Well logs are on file with OCD. Last production test was in July, 1980. Due to low production, the well is non-economic to produce.



A Baker Hughes company

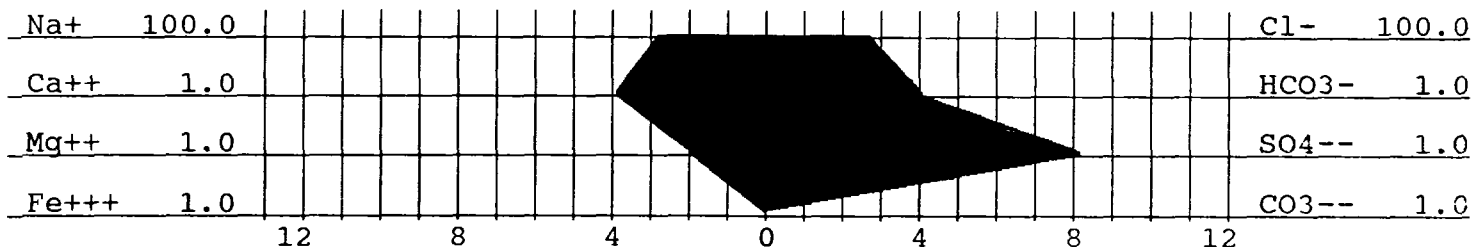
# WATER ANALYSIS for STEARNS

XI

Date of Analysis: MARCH 15, 1990  
Company: STEARNS  
State: NEW MEXICO  
Lease: LOVEJOY #1 F/W WELL  
Oil (bbl/day): N/D  
Type of Water: FRESH  
Sample Source: WELLHEAD  
Representative: W.H. FORT JR.

Analysis #: 5182  
Company Address: CROSSROADS  
Field: N/D  
Well #: #1  
Water (bbl/day): N/D  
Temp., C: 20  
Date of Sampling: MARCH 15, 1990  
Analysis By: CLYDE WILHOIT

## WATER ANALYSIS PATTERN (number beside ion symbol indicates me/l scale unit)



### DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness :	6.00	
Calcium, (Ca++) :	4.00	80.19
Magnesium, (Mg++) :	2.00	24.30
Iron, (Fe+++):	0.05	1.00
Barium, (Ba++) :	N/D	N/D
Sodium, Na+(calc):	288.26	6630.08
Manganese, (Mn++):	0.00	0.00

ANIONS	me/l	mg/l
Chloride, Cl- :	281.69	9999.64
Sulfate, SO4-- :	8.43	405.00
Carbonate, CO3-- :	0.00	0.00
Bicarbonate, HCO3--:	4.20	256.25
Hydroxyl, OH- :	0.00	0.00
Sulfide, S-- :	0.00	0.00
TOTAL SOLIDS (quant. ):		17696.46

### DISSOLVED GASES

Hydrogen sulfide:	0.00	mg/l
Carbon dioxide :	7.92	mg/l
Oxygen :	N/D	mg/l

### PHYSICAL PROPERTIES

pH	:	7.30
Spec Grav.	:	1.000
TDS (calc.)	:	17400.67

### SCALE STABILITIES

Temp., C	CaCO3	CaSO4	BaSO4
20.0	-0.87	3502	0
30.0	-0.68	3597	0
40.0	-0.47	3645	0
Max entity, (calc.)	274		0

RESIDUAL HYDROCARBONS: N/D

N/D = not determined

XII

AFFIRMATIVE STATEMENT

As required by Item XII of form C-108, John R. Stearns dba. STEARNS, has examined available geologic and engineering data and found no evidence of open faults or other hydrologic connection between the disposal zone and any underground source of drinking water.

# Affidavit of Publication

XIII

STATE OF NEW MEXICO           )  
  ) ss.  
COUNTY OF LEA                )

Joyce Clemens       being first duly sworn on oath  
deposes and says that he is   Adv. Director   of  
THE LOVINGTON DAILY LEADER, a daily newspaper  
of general paid circulation published in the English  
language at Lovington, Lea County, New Mexico; that  
said newspaper has been so published in such county  
continuously and uninterruptedly for a period in excess  
of Twenty-six (26) consecutive weeks next prior to the  
first publication of the notice hereto attached as here-  
inafter shown; and that said newspaper is in all things  
duly qualified to publish legal notices within the mean-  
ing of Chapter 167 of the 1937 Session Laws of the  
State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

and numbered ..... in the

..... Court of Lea  
County, New Mexico, was published in a regular and  
entire issue of THE LOVINGTON DAILY LEADER and  
not in any supplement thereof, once each week on the  
same day of the week, for ..... one (1) .....

consecutive weeks, beginning with the issue of .....

March 12 ....., 19... 91

and ending with the issue of .....

March 12 ....., 19... 91

And that the cost of publishing said notice is the  
sum of \$..... 6.87 .....

which sum has been (Paid) (~~Assessed~~) as Court Costs

*Joyce Clemens*  
Subscribed and sworn to before me this 12th .....

day of March ....., 19... 91

*Mrs. Jean Serin*  
Notary Public, Lea County, New Mexico

My Commission Expires Sept. 28, 19... 94

## LEGAL NOTICE

John R. Stearns, dba,  
Stearns, P.O. Box 988  
Crossroads, N.M. 88114, 505-  
675-2356, is making an  
application to the State of New  
Mexico, Oil Conservation  
Division for permit to dispose  
of produced into the Betanbough  
B #3. Well is located 660' FNL  
and 1980 FEL, Sec. 14, T9S,  
R35E, Lea County, New Mexico.  
Injection will be into the Bough  
"C" (Penn) Formation at a depth  
of 9711' to 9731', anticipated  
rates of 2000 B/D at O Pressure.  
Interested parties may file  
objection or request for hearing  
within 15 days to the Oil  
Conservation Division, P.O. Box  
2088, Santa Fe, New Mexico,  
88501.  
Published in the Lovington Daily  
Leader March 12, 1991.



C. GENE SAMBERSON  
MICHAEL T. NEWELL

LAW OFFICES  
**HEIDEL, SAMBERSON & NEWELL**

311 NORTH FIRST STREET  
POST OFFICE DRAWER 1599  
LOVINGTON, NEW MEXICO 88260  
TELEPHONE (505) 396-5303  
FAX (505) 396-5305

F. L. HEIDEL  
(1913-1985)

**April 18, 1991**

**TO WHOM IT MAY CONCERN:**

**JOHN R. STEARNS, d/b/a STEARNS**, has made application with the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico for the purpose of operating a disposal well located as follows, to-wit:

660 feet from the North line, 1980 feet from the East line of Section 14, township 9 South, Range 35 East, N.M.P.M., Lea County, New Mexico. Said well more commonly known as the Betenbough B#3.

The proposed well will dispose liquids into the Penn Zone pursuant to the application enclosed herewith.

N O T I C E

Prusuant to Section XIV of Form C-108, copies of the application have been mailed tothe following:

Surface Owner:  Kylene Bresenham  
                  4000 W. Minister  
                  Midland, TX  79707

Offset Operators within one-half mile:  
                  M & G Oil Inc.  
                  P.O. Box 957  
                  Crossroads, NM  88114

                  Penroc Oil, Inc.  
                  P.O. Box 5970  
                  Hobbs, NM  88240





STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

RECEIVED

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

'91 APR 29 AM 10 24

4-24-91

BRUCE KING  
GOVERNOR

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

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

RE: Proposed:

MC \_\_\_\_\_  
DHC \_\_\_\_\_  
NSL \_\_\_\_\_  
NSP \_\_\_\_\_  
SWD ☒ \_\_\_\_\_  
WFX \_\_\_\_\_  
PMX \_\_\_\_\_

Gentlemen:

I have examined the application for the:

John R Stearns dba Stearns Setenbough P # 3-6 14-9-35  
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours very truly,

Jerry Sexton  
Jerry Sexton  
Supervisor, District 1

/ed