

CITY OF CARLSBAD  
PUBLIC WORKS OFFICE

## FACSIMILE TRANSMITTAL SHEET

TO: <u>William V. Jones</u>	FROM: <u>Dennis Langlitz</u>
COMPANY: <u>NMOC</u>	DATE: <u>7-11-08</u>
FAX NUMBER: <u>505-476-3462</u>	NO. OF PAGES INCLUDING COVER: <u>29</u>
PHONE NUMBER: <u>505-476-3448</u>	SENDER'S REFERENCE NUMBER:
RE:	YOUR REFERENCE NUMBER:

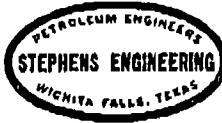
NOTES/COMMENTS:

WATER FLOODING

VALUATIONS

RESERVOIR STUDIES

TELEPHONE - 817-723-2166



POST OFFICE BOX - 2249

WICHITA FALLS, TEXAS  
76307

August 14, 1978

Barber Oil Company, Inc.  
P. O. Box 1658  
Carlsbad, New Mexico 88220

Attn: Mr. Robert S. Light

Re: Pressure Limitation  
Saladar Unit  
Eddy County, New Mexico

Dear Mr. Light:

Reference is made to Mr. George H. Hunker, Jr.'s letter of August 3, 1978 which contained additional information required in the New Mexico Oil Conservation Division Cases 6238 and 6226. Also contained with Mr. Hunker's letter was a memorandum from the Oil Conservation Commission dated August 24, 1977 and referred to as Memo No. 3-77.

As engineer on this project, I must object to the Oil Conservation Commission ruling in their memorandum which in effect places a pressure limitation on the injection program planned for use in the Saladar Unit. In the memorandum it is indicated that "no surface injection pressure greater than 0.2 psi per foot of depth to the top of the injection zone will be permitted unless there is strong evidence that the strata confining injection fluid has a fractured gradient which would support a higher pressure." In effect, this limitation places an approximate 130 psi surface pressure limitation on the Saladar Unit project since the top of the injection zone is at a depth of 660'. Information available in the area not only support the use of additional pressure, but also virtually guarantees that without additional pressure a successful flooding of the Saladar Unit cannot be accomplished.

For the past 25 years, Stephens Engineering has supplied Neil H. Wills and/or Barber Oil Company with consulting engineering

in one of the first water flood programs initiated in New Mexico. This program was initiated in 1953 in the Russell Pool located approximately two miles northeast of the Saladar Unit. Initially, pressures were held to a minimum of approximately 400 psi in this 800' depth project. Later, it became apparent that greater pressures and therefore greater injection rates could be sustained without creating channeling conditions, therefore the pressure was gradually raised to a 700 psi surface pressure reading. Even with this .875 psi per foot of depth gradient, the Barber Oil Company, Russell Pool project has dated approximately 25 years and has several additional years of commercial production still available. Based on this information, it is apparent that if the Oil Conservation Commission continues to restrict injection in the vicinity of the Saladar Unit to the 0.2 psi per foot of depth, it will require a tremendous number of years to completely water flood the zone planned for flooding, if a successful project could be sustained and held in a commercial range at all.

Based on the past performance of the Russell Pool, which is flooding a similar zone as is planned to be flooded in the Saladar Unit, it is strongly recommended that Barber Oil Company request an exemption to the 0.2 psi per foot of depth ruling and request that the Oil Conservation Commission allow use of a 0.875 psi per foot of depth restriction instead. Again, it must be emphasized that with a lower than planned pressure, not only will a large amount of time be necessary to successfully flood and obtain the oil available from the Saladar Unit, but a large question exists as to the commercial ability of installing the project until such a pressure limitation is removed.

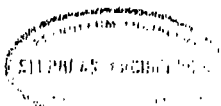
Should you desire any additional information concerning the necessity for a greater injection pressure, please do not hesitate to contact us.

Yours very truly,

STEPHENS ENGINEERING

  
Joe L. Johnson, Jr.

JLJjr/bw



FILED WITH SALADAR8

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 6226  
Order No. R-5939

APPLICATION OF BARBER OIL, INC.  
FOR A WATERFLOOD PROJECT, EDDY  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 2, 1978, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 28th day of February, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Barber Oil, Inc., seeks authority to institute a waterflood project on its Saladar Lease, Saladar-Yates Pool, by the injection of water into the Yates formation through five injection wells located in Units K, L, N and O of Section 33, Township 20 South, Range 25 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

-2-

Case No. 6226

Order No. R-5939

(6) That the Unit Operator should immediately notify the supervisor of the Artesia District Office of the Division of the failure of the tubing, casing, or packer of any well in the Unit Area or of the leakage of water from or around any well within one-half mile of the Saladar Unit Area, including wells which have been plugged and abandoned.

(7) That upon such failure of any well within one-half mile of an injection well in the Saladar Unit Area, the Division Director should be authorized to limit injection pressure in the Yates formation in such injection well to no more than hydrostatic pressure, and to maintain such pressure limitation until such time as workover operations (including re-plugging, if necessary) have been completed correcting such failure.

(8) That the injection wells or system should be equipped with a pressure control device or other acceptable substitute which will limit the surface injection pressure to no more than 557 psi. Provision should be made for the Division Director to administratively authorize a pressure limitation in excess of said 557 psi upon a showing by the Unit Operator that such higher pressure is necessary to effectively and efficiently waterflood the Saladar Unit Area and that such higher pressure limitation will not result in fracturing of the confining strata.

(9) That the subject application should be approved subject to the above conditions, and the project should be governed by the provisions of Rules 701, 702, and 703 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Barber Oil, Inc., is hereby authorized to institute a waterflood project on its Saladar Lease, Saladar-Yates Pool, by the injection of water into the Yates formation through the following-described wells in Section 33, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico:

<u>Original Well Name and No.</u>	<u>Unit Well No.</u>	<u>Unit Letter</u>
Riggs Hughes Fed No. 3	1-3	K
Riggs Hughes Fed No. 5	1-5	K
Riggs Hughes Fed No. 7	1-7	N
Conley Mayfield Fed No. 2	2-2	O
Riggs Malco-Keystone No. 1	3-1	L

-3-

Case No. 6226

Order No. R-5939

(2) That injection into each of said wells shall be through internally coated tubing, set in a packer which shall be located as near as practicable to the casing shoe; that the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(3) That the operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area or within one-half mile of the Saladar Unit Area.

(4) That upon such failure of any well within one-half mile of an injection well in the Saladar Unit Area, the Division Director is hereby authorized to limit injection pressure in the Yates formation in such injection well to no more than hydrostatic pressure, and to maintain such pressure limitation until such time as workover operations (including re-plugging, if necessary) have been completed, successfully correcting such failure.

(5) That the injection wells or system shall be equipped with a pressure control device or other acceptable substitute which will limit the surface injection pressure to no more than 557 psi. The Division Director may administratively authorize a pressure limitation in excess of said 557 psi upon a showing by the Unit Operator that such higher pressure is necessary to effectively and efficiently waterflood the Saladar Unit Area and that such higher pressure limitation will not result in fracturing of the confining strata.

(6) That the subject waterflood project is hereby designated the Saladar Unit Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Division Rules and Regulations.

(7) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Division in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(8) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

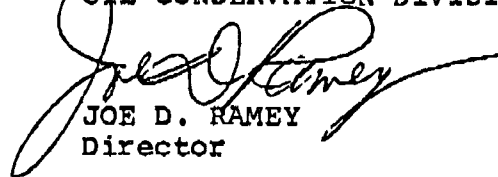
-4-

Case No. 6226

Order No. R-5-39

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



JOE D. RAMEY  
Director

S E A L

fd/

Side 1

# WELL DATA SHEET

OPERATOR: DENNIS LANGLEITZ

WELL NAME & NUMBER: SALADAR J OIL WELL SALADAR YATES COMPLETED 9/24/56 API 30 015 02451

WELL LOCATION: 2310 EST. 990 PM.  
FOOTAGE LOCATION

UNIT LETTER L

SECTION 33 TOWNSHIP 20S RANGE 28E

## WELLBORE SCHEMATIC

## WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 8 3/4 Casing Size: 7 1/2 17#  
Cemented with: 10 sx. SET @ 153 ft. ft<sup>3</sup>  
Top of Cement: SURFACE Method Determined: CALCULATION

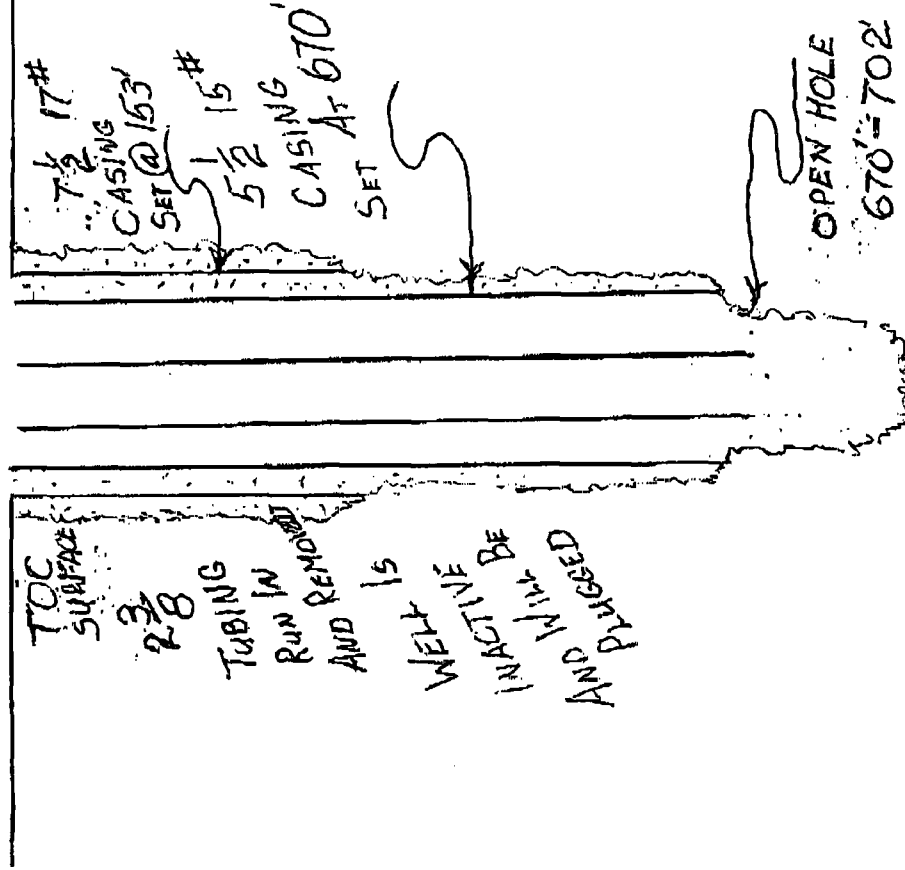
## Intermediate Casing

Hole Size: NONE Casing Size: \_\_\_\_\_  
Cemented with: \_\_\_\_\_ sx. or \_\_\_\_\_ ft<sup>3</sup>  
Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

## Production Casing

Hole Size: 6 1/2 Casing Size: 5 1/2 15#  
Cemented with: 45 sx. SET @ 670 ft. ft<sup>3</sup>  
Top of Cement: SURFACE Method Determined: CALCULATION  
Total Depth: 702 ft.

(Perforated or Open Hole; indicate which)





WELL DATA SHEET

Side 1

OPERATOR: DENNIS LANGLITZ

WELL NAME & NUMBER:

SALADAR 3 OIL WELL SALADAR YATES COMPLETED 11/25/56 API 30 015 02447

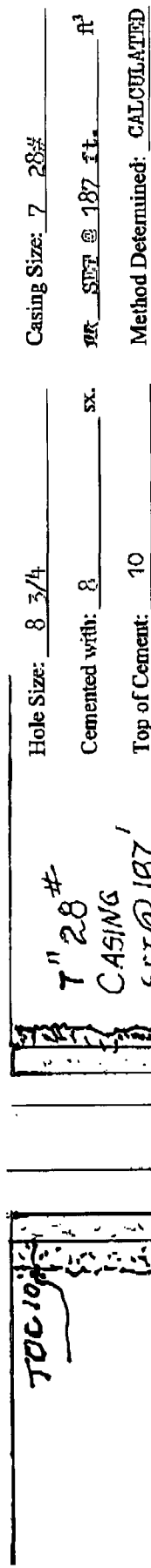
WELL LOCATION: 2310 FHL 1650 FEL  
FOOTAGE LOCATION

UNIT LETTER F SECTION 33 TOWNSHIP 20S RANGE 28E

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing



Hole Size: 8 3/4 Casing Size: 7 28#  
Cemented with: 8 sx. or SET @ 187 ft. ft<sup>3</sup>  
Top of Cement: 10 Method Determined: CALCULATED

Intermediate Casing

Hole Size: NONE Casing Size:  
Cemented with: sx. or ft<sup>3</sup>  
Top of Cement: Method Determined:

Production Casing

Hole Size: 6 1/4 Casing Size: 5 1/2 17#  
Cemented with: 45 sx. or SET @ 640 ft. ft<sup>3</sup>  
Top of Cement: surface Method Determined: CALCULATION

Total Depth: 706 ft.

(Perforated or Open Hole; indicate which)

## WELL DATA SHEET

Side 1

OPERATOR: DEWIS LAMBLITZ

WELL NAME &amp; NUMBER: SALADAR 5 OIL WELL, SALADAR YATES COMPLETED 6/30/56 API 30 015 02444

WELL LOCATION: 1650 FSL 1650 FWL

UNIT LETTER	SECTION	TOWNSHIP	RANGE
K	33	20S	28E

WELLBORE SCHEMATICWELL CONSTRUCTION DATA

Surface Casing

Hole Size: 8 1/4" Casing Size: 7"

Cemented with: HUDDLED IN sx. ~~OK~~ SET @ 264 ft. ft<sup>3</sup>

Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Intermediate Casing

Hole Size: NONE Casing Size: \_\_\_\_\_

Cemented with: \_\_\_\_\_ sx. or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

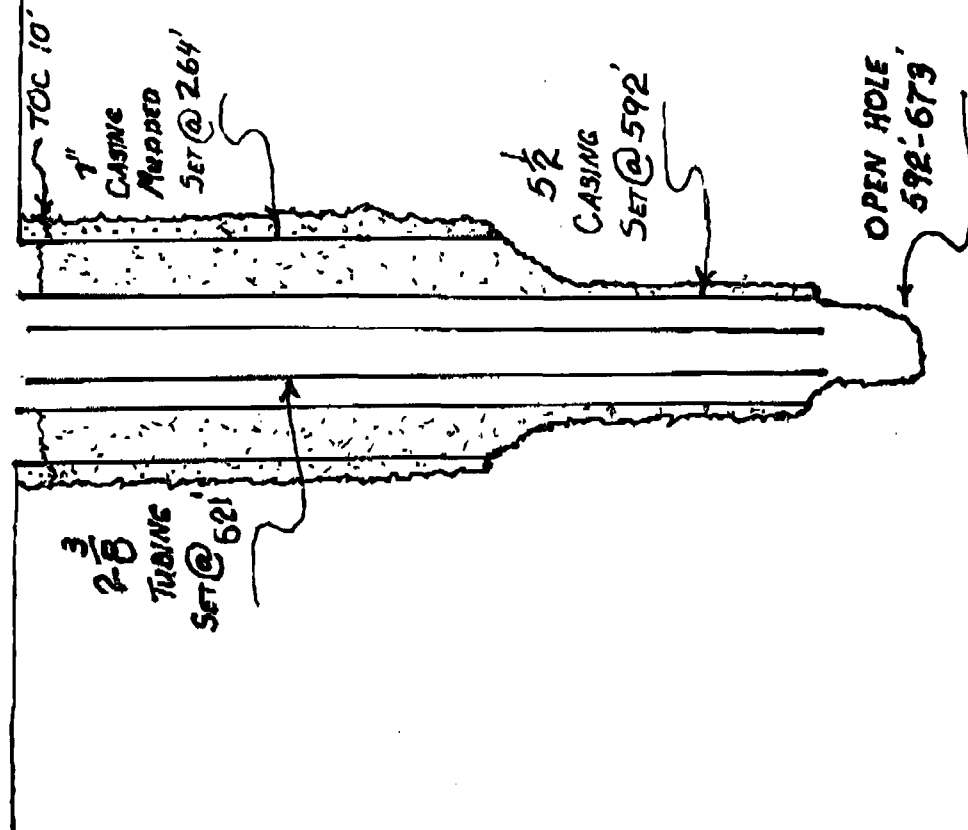
Production Casing

Hole Size: 6 1/4" Casing Size: 5 1/2"

Cemented with: 25 \_\_\_\_\_ sx. ~~OK~~ SET @ 592 ft. ft<sup>3</sup>

Top of Cement: 10 \_\_\_\_\_ Method Determined: CALCULATION

Total Depth: 673 ft.



(Perforated or Open Hole; indicate which)

WELL DATA SHEET

Side 1

OPERATOR: DENNIS LANGLEITZ

WELL NAME & NUMBER: SALADAR 11- OIL WELL SALADAR YATES COMPLETED 7/12/82 top pay 625 ft. API 30 015 24178

WELL LOCATION:

FOOTAGE LOCATION

UNIT LETTER

SECTION

TOWNSHIP

RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 6 3/4 Casing Size: 4 1/2 11.60#  
Cemented with: 250 sx. ~~at~~ SET @ 707 ft. ft.<sup>3</sup>  
Top of Cement: SURFACE, RAN IN DRILL TOOL HIT @ 40ft. FILLED FROM SURFACE  
Method Determined: \_\_\_\_\_

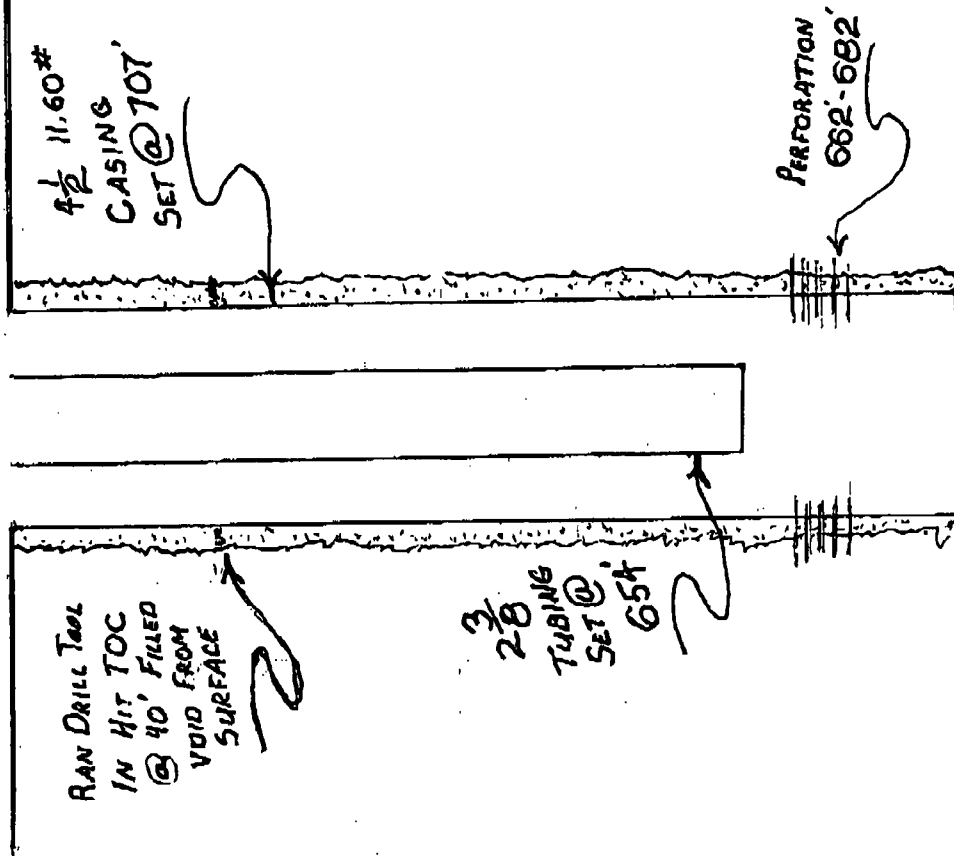
Intermediate Casing

Hole Size: NONE Casing Size: \_\_\_\_\_  
Cemented with: \_\_\_\_\_ sx. or ft.<sup>3</sup>  
Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Production Casing

Hole Size: SAME AS SURFACE CASING Casing Size: \_\_\_\_\_  
Cemented with: \_\_\_\_\_ sx. or ft.<sup>3</sup>  
Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_  
Total Depth: 707 ft.

(Perforated or Open Hole; indicate which)



## WELL DATA SHEET

OPERATOR: DENNIS LANGLITZ

WELL NAME &amp; NUMBER: SALADAR 13 OIL WELL

SALADAR YATES

COMPLETED 8/3/82

API 30 015 24-180

WELL LOCATION: 1315 FSL 1980 FWL

H

33

20S

28E

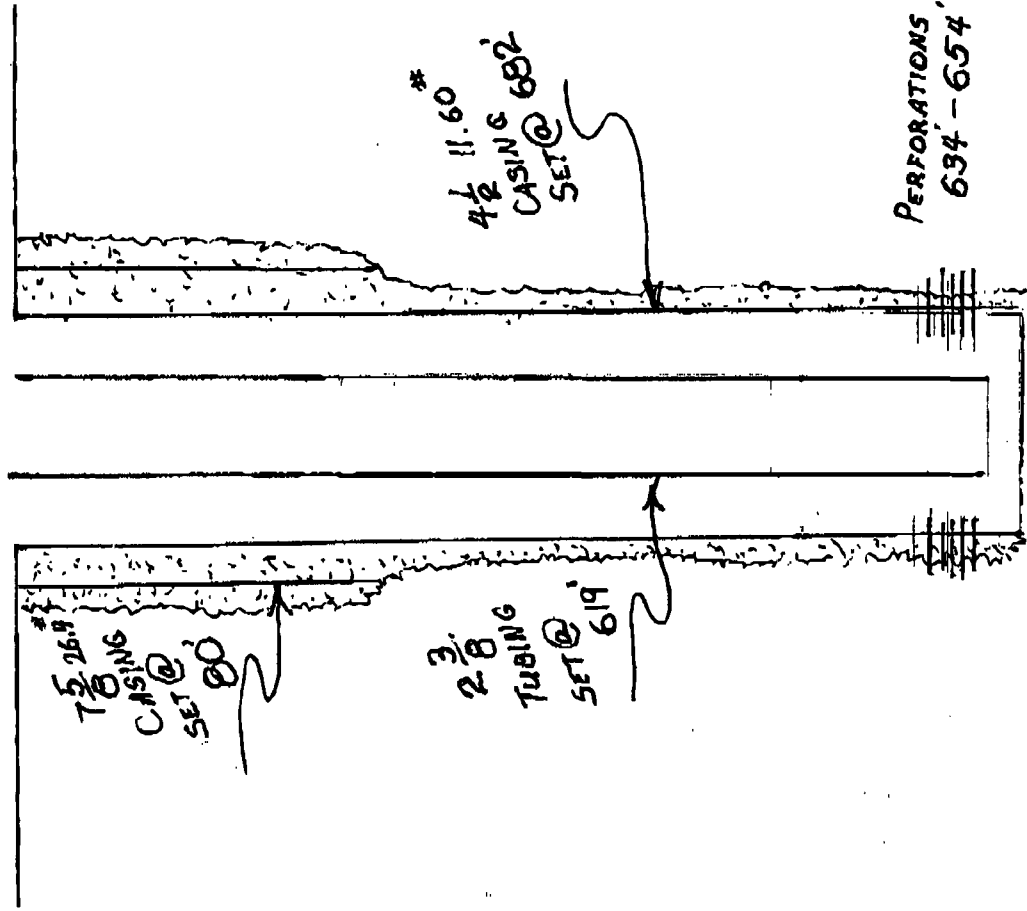
FOOTAGE LOCATION

UNIT LETTER

SECTION

TOWNSHIP

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 9 5/8 Casing Size: 7 5/8 26.40#  
 Cemented with: 15 sx. ~~7~~ SET @ 80 ft. ft.  
 Top of Cement: SURFACE Method Determined: CALCULATION

Intermediate Casing

Hole Size: NONE Casing Size: \_\_\_\_\_  
 Cemented with: \_\_\_\_\_ sx. or ft.  
 Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Production Casing

Hole Size: 6 3/4 Casing Size: 4 1/2 11.60#  
 Cemented with: 230 sx. ~~67~~ SET @ 682 ft. ft.  
 Top of Cement: SURFACE Method Determined: CALCULATED  
 Total Depth: 682 ft.

PERFORATIONS  
 634' - 654'

(Perforated or Open Hole; indicate which)

## WELL DATA SHEET

Side 1

OPERATOR: DENNIS LANGLITZ

WELL NAME &amp; NUMBER: SALADAR 14 OIL WELL SALADAR YATES COMPLETED 11/9/82 TD 660 ft. API 30 015 24181

WELL LOCATION: 1315 FSL 1325 F#L

FOOTAGE LOCATION

N

33

20S

28E

UNIT LETTER

TOWNSHIP

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 9 5/8 Casing Size: 7 5/8 26.40#

Cemented with: 15 sk. ~~87~~ SET @ 82 ft. ft<sup>3</sup>

Top of Cement: SURFACE Method Determined: CALCULATION

Intermediate Casing

Hole Size: Casing Size:

Cemented with: sk. or ft<sup>3</sup>

Top of Cement: Method Determined:

Production Casing

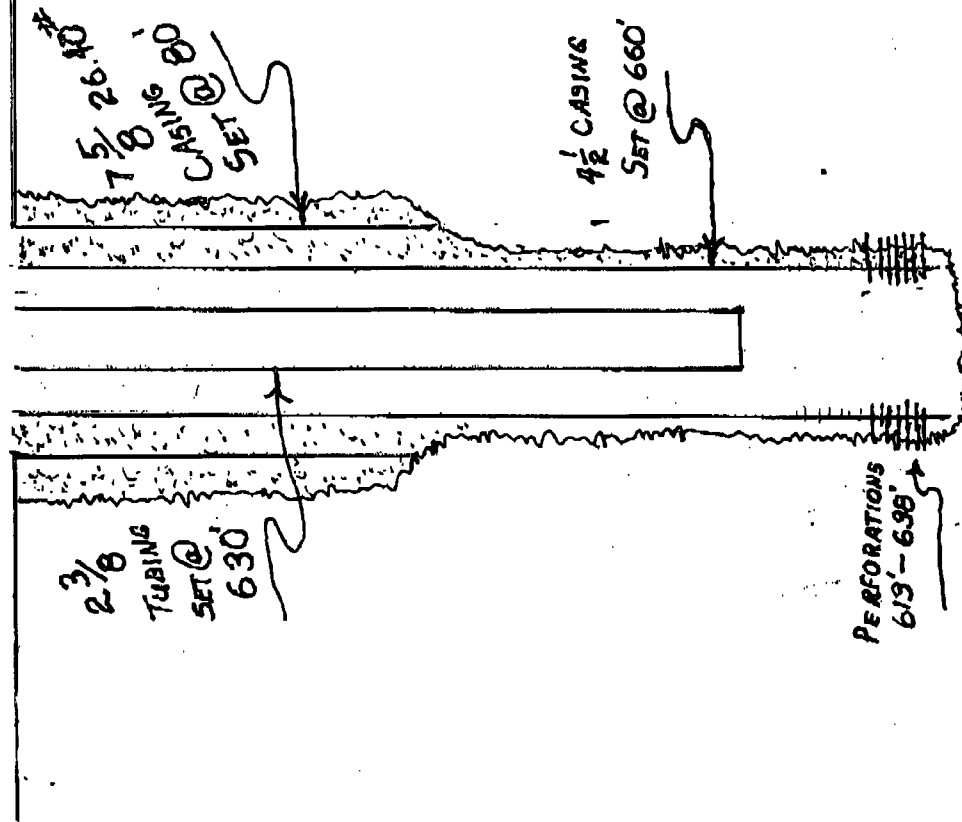
Hole Size: 6 3/4 Casing Size: 4 1/2 11.60#

Cemented with: 250 sk. ~~87~~ SET @ 660 ft. ft<sup>3</sup>

Top of Cement: S HFACE Method Determined: CALCULATION

Total Depth: 660 ft.

(Perforated or Open Hole; indicate which)



Side 1

# WELL DATA SHEET

OPERATOR: CHESAPEAKE OPERATING INC.

API 30 015 31579

WELL NAME & NUMBER:

FED. 4 WELL 4 OIL WELL AVALON BOHE SPRINGS EAST SPUDDED 2/18/01 COMPLETED 2/25/01

WELL LOCATION: 660 FEL 1298 FHL TD 6653 ft.

27E

FOOTAGE LOCATION

UNIT LETTER

SECTION

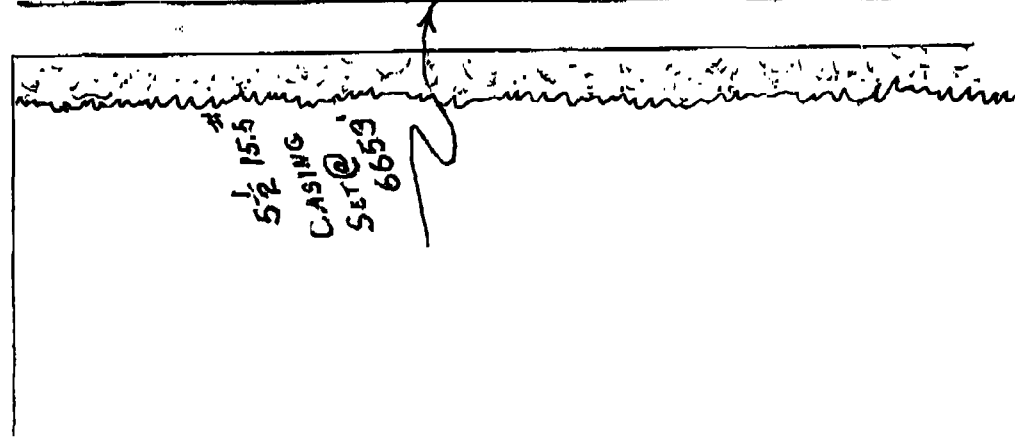
TOWNSHIP

RANGE

## WELLBORE SCHEMATIC

## WELL CONSTRUCTION DATA

Surface Casing



Hole Size: 11 Casing Size: 8 5/8 24" #  
Cemented with: 1200 sx. 0% SET @ 2700 ft. ft<sup>3</sup>  
Top of Cement: SURFACE Method Determined: CIRCULATED

### Intermediate Casing

Hole Size: NONE Casing Size: \_\_\_\_\_  
Cemented with: \_\_\_\_\_ sx. or \_\_\_\_\_ ft<sup>3</sup>  
Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

### Production Casing

Hole Size: 7 7/8 Casing Size: 5 1/2 15.5" #  
Cemented with: \_\_\_\_\_ sx. or \_\_\_\_\_ ft<sup>3</sup>  
Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_  
Total Depth: \_\_\_\_\_

(Perforated or Open Hole; indicate which)

Side 1

**WELL DATA SHEET**

OPERATOR: CHESAPEAKE OPERATING INC.

API 30 015 29422

WELL NAME &amp; NUMBER: FED. 4 WELL 2

OIL WELL

BURTON FLATS, BOONE SPRINGS

SPUDDED 4/16/97 COMPLETED 5/14/97

WELL LOCATION: 660 FUL 1980 FEL

6678 total depth G

4

21S

27E

FOOTAGE LOCATION

UNIT LETTER

SECTION

TOWNSHIP

RANGE

**WELLBORE SCHEMATIC****WELL CONSTRUCTION DATA**Surface Casing

Hole Size: 17 1/2 Casing Size: 13 5/8 54.5#

Cemented with: 570 sx. ~~60~~ SET @ 650ft. ft<sup>3</sup>

Top of Cement: SURFACE Method Determined: CIRCULATION

Intermediate Casing

Hole Size: 11 Casing Size: 8 5/8 24#

Cemented with: 1305 sx. ~~87~~ SET @ 2700 ft. ft<sup>3</sup>

Top of Cement: SURFACE Method Determined: CIRCULATION

Production Casing

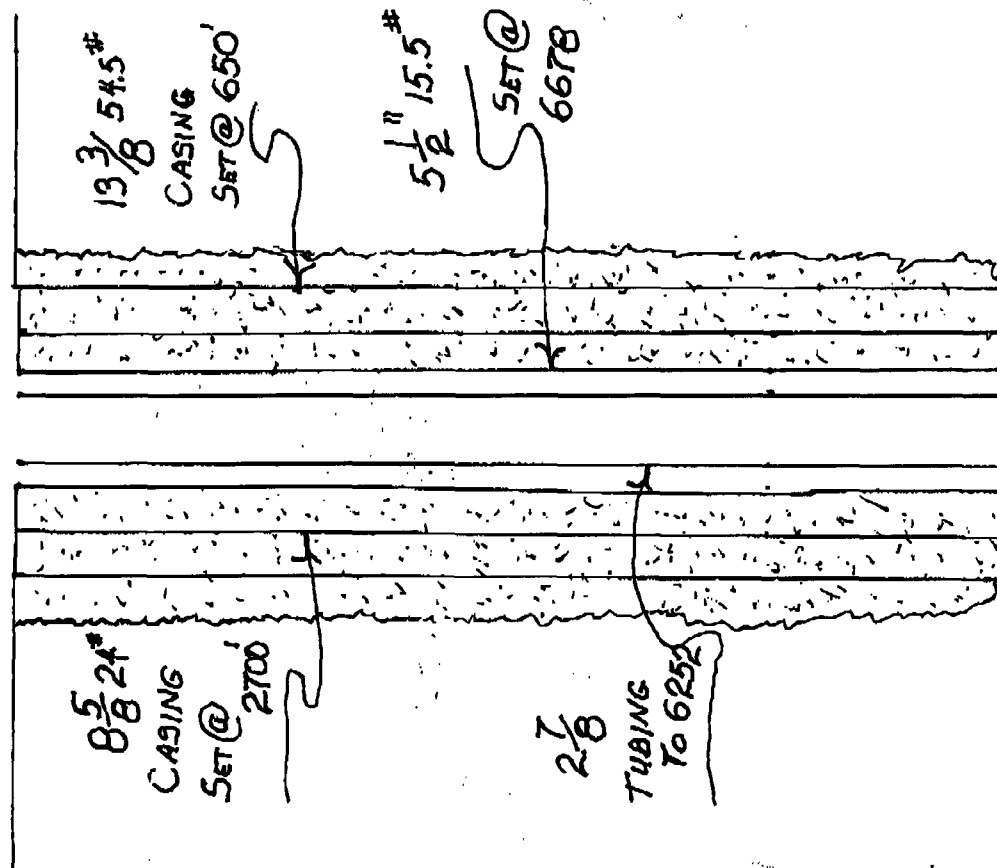
Hole Size: 7 7/8 Casing Size: 5 1/2 15.5#

Cemented with: 874 sx. ~~87~~ SET @ 6678 ft. ft<sup>3</sup>

Top of Cement: SURFACE Method Determined: CIRCULATION

Total Depth: 6678 ft.

(Perforated or Open Hole; indicate which)



Side 1

# WELL DATA SHEET

OPERATOR: OIL EXPLORATION

WELL NAME & NUMBER:

MILLER FED. 2 BURTON FLATS HORIZON GAS WELL SPUNDED 1/14/04

API 30 015 33060

WELL LOCATION: 840 FSL 1870 FUL

D

FOOTAGE LOCATION

UNIT LETTER

3

SECTION

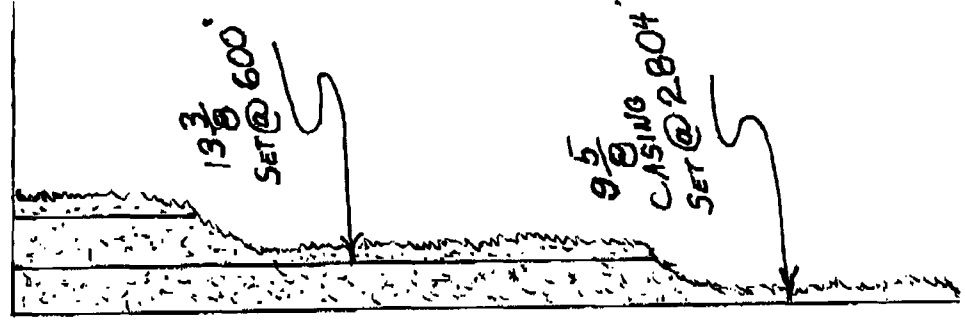
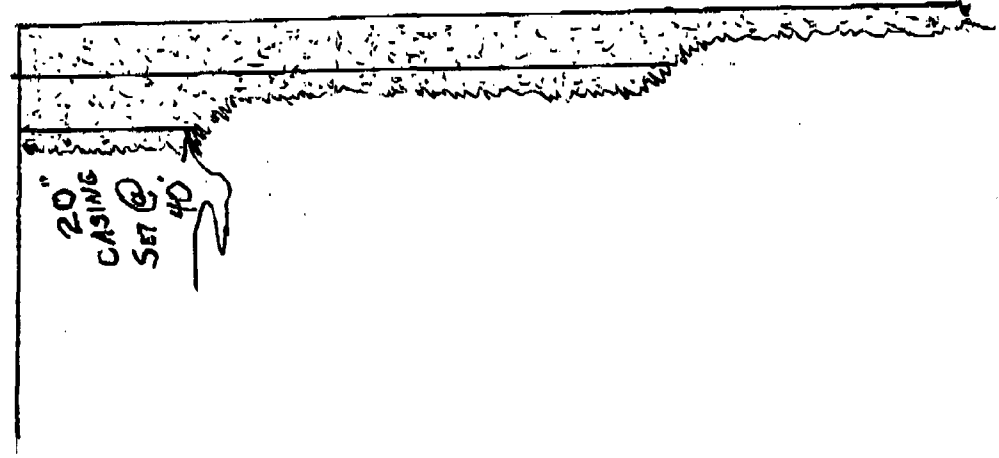
21S

TOWNSHIP

27E

RANGE

## WELLBORE SCHEMATIC



## WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 25 Casing Size: 20  
Cemented with: READY MIX sx. SET @ 40 ft. ft.  
Top of Cement: SURFACE Method Determined: VISUAL.

Intermediate Casing

Hole Size: 17 1/2 Casing Size: 13 3/8  
Cemented with: 500 sx. SET @ 600 ft. ft.  
Top of Cement: SURFACE Method Determined: CIRCULATION

Production Casing

Hole Size: Casing Size: 9 5/8  
Cemented with: 1200 sx. SET @ 2804 ft. ft.  
Top of Cement: SURFACE Method Determined: CIRCULATION  
Total Depth: 11570 ft.

(Perforated or Open Hole; indicate which)



## WELL DATA SHEET

Side 1

OPERATOR: MEMPHIS OIL CO.

WELL NAME &amp; NUMBER: SALADAR 33 FEE COIL 1 GAS WELL BURTON FLATS MORROW COMPLETED/9/22/04 API 30 015 33416

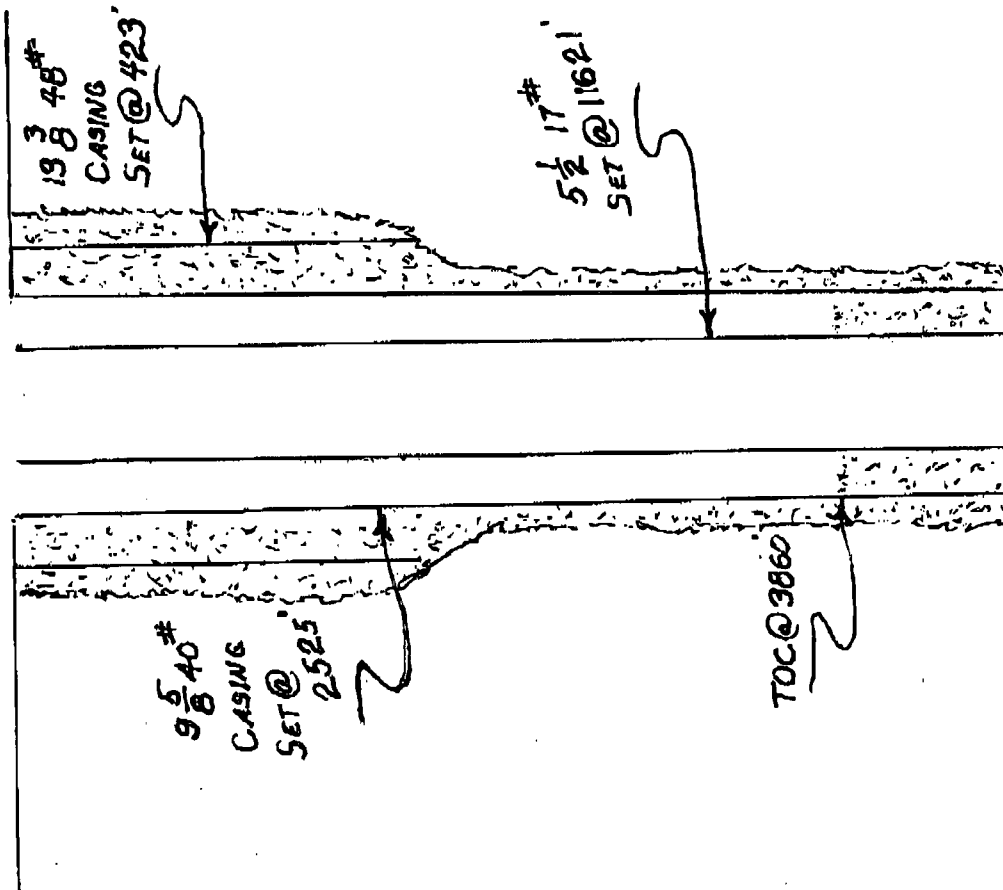
WELL LOCATION: 660 FEL 1650 FEL

UNIT LETTER	SECTION	TOWNSHIP	RANGE
M	33	20S	28E

## WELLBORE SCHEMATIC

## WELL CONSTRUCTION DATA

Surface Casing



Hole Size: 17 3/4 Casing Size: 13 3/8 48#

Cemented with: 400 sx. SET @ 423 ft. ft<sup>3</sup>

Top of Cement: surface Method Determined: circulated

## Intermediate Casing

Hole Size: 12 3/4 Casing Size: 9 5/8 40#

Cemented with: 1200 sx. SET @ 2525 ft. ft<sup>3</sup>

Top of Cement: SURFACE Method Determined: CIRCULATED

## Production Casing

Hole Size: 8 3/4 Casing Size: 5 1/2 17#

Cemented with: 1750 sx. SET @ 11621 ft. ft<sup>3</sup>

Top of Cement: 3860 Method Determined: DRILL BIT TAG

Total Depth: 11361 ft. PLUGGED BACK

(Perforated or Open Hole; indicate which)











## INJECTION WELL DATA SHEET

Side 1

OPERATOR: DENNIS LANGLITZ

WELL NAME &amp; NUMBER: SALADAR 7

SALADAR DEPT

API 30 015 10468

WELL LOCATION: 990 FSL 1808 FWL

H

33

20S

28E

FOOTAGE LOCATION

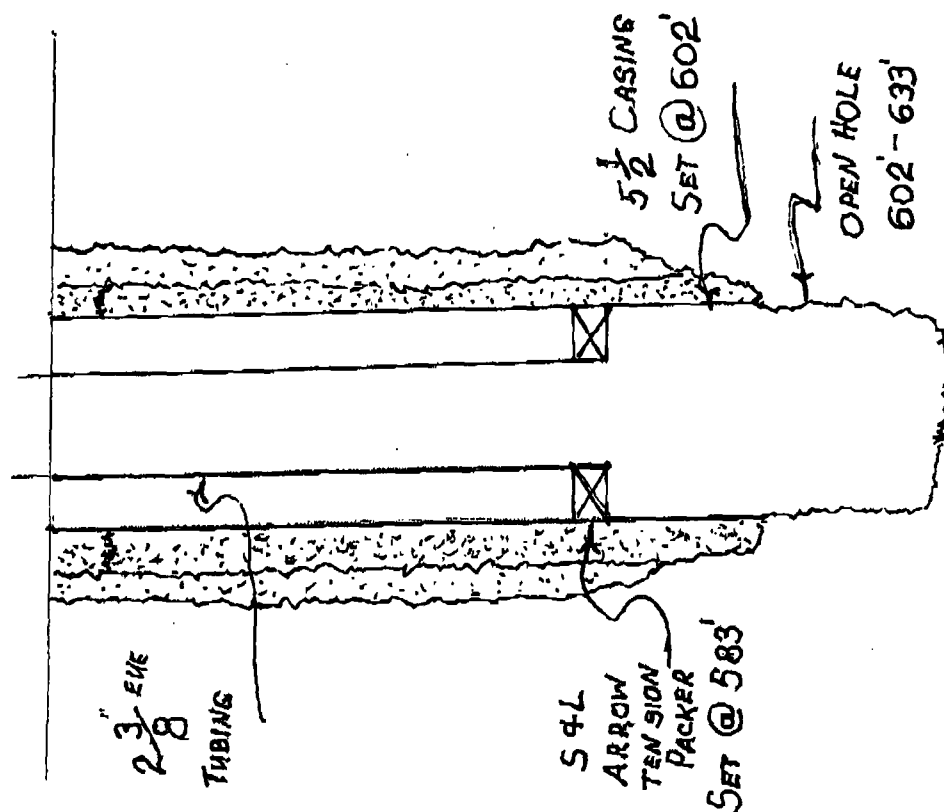
UNIT LETTER

SECTION

TOWNSHIP

RANGE

## WELLBORE SCHEMATIC



## WELL CONSTRUCTION DATA

Surface Casing

Hole Size:  $8 \frac{1}{4}$  Casing Size:  $7 \frac{1}{2}$

Cemented with: MUDDIED AND PULLED ~~MUDDIED~~ or  $\text{ft}^3$

Top of Cement: Method Determined:

## Intermediate Casing

Hole Size: NONE Casing Size:

Cemented with: sx. or  $\text{ft}^3$

Top of Cement: Method Determined:

## Production Casing

Hole Size:  $6 \frac{1}{4}$  Casing Size:  $5 \frac{1}{2}$

Cemented with: 100 sx. or  $\text{ft}^3$

Top of Cement: 10 Method Determined: CALCULATION

Total Depth: 602

## Injection Interval

602 feet to 633

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8 EUR Lining Material: PLASTIC COATEDType of Packer: 2X5 1/2 SEAL ARROW TENSIONPacker Setting Depth: 583 ft.

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes \_\_\_\_\_ X No

If no, for what purpose was the well originally drilled? OIL WELL2. Name of the Injection Formation: YATES SAND3. Name of Field or Pool (if applicable): SALADAR YATES4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NONE

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

QUEEN SAND: APPROXIMATELY 1800 ft.

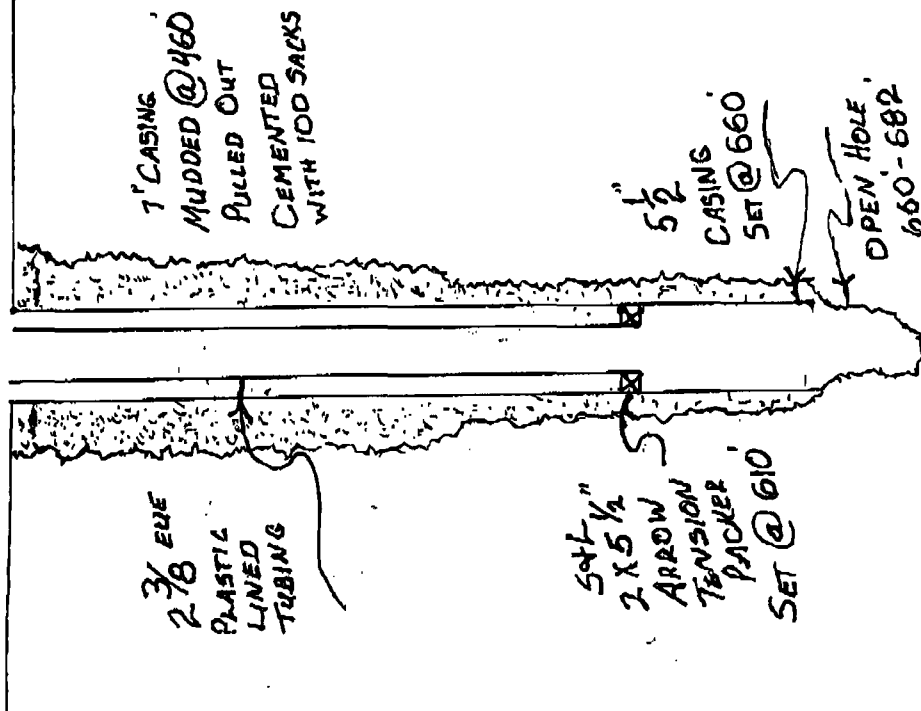


SIDE 1

## INJECTION WELL DATA SHEET

OPERATOR DEMIS LARSEN SALADAR FIELD LEASE  
 WELL NO. 1650 FSL 2185 FSL 33 205 283 RANGE  
 LOCATION UNIT SECTION TOWNSHIP  
 DATE API 30 015 02448

## Schematic



## Tabular Data

## Surface Casing

Size 7 " Cemented with MUDDER AT 460 SX. PULLED  
 TOC feet determined by

Hole size 8

Intermediate Casing NONE

Size " Cemented with SX.  
 TOC feet determined by

Hole size "

## Liner string

Size 5 1/2 " Cemented with 100 SX.  
 TOC SURFACE feet determined by CIRCULATION

Hole size 6 1/4

Total depth 660

Injection interval

660 feet to 682 feet  
 (perforated or open-hole, indicate which)

Side 2

INJECTION WELL DATA SHEETTubing Size: 2 3/8 EUE Lining Material: PLASTIC LINEDType of Packer: 2X5 1/2 S&L ARROW TENSIONPacker Setting Depth: 610 ft.

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data1. Is this a new well drilled for injection? \_\_\_\_\_ Yes y No \_\_\_\_\_If no, for what purpose was the well originally drilled? OIL WELL2. Name of the Injection Formation: YATES SAND3. Name of Field or Pool (if applicable): SALADAR YATES4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NONE

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: \_\_\_\_\_

QUEEN SAND: APPROXIMATELY 1800 ft.

# INJECTION WELL DATA SHEET

Side 1

OPERATOR: DENNIS LANGLITZ

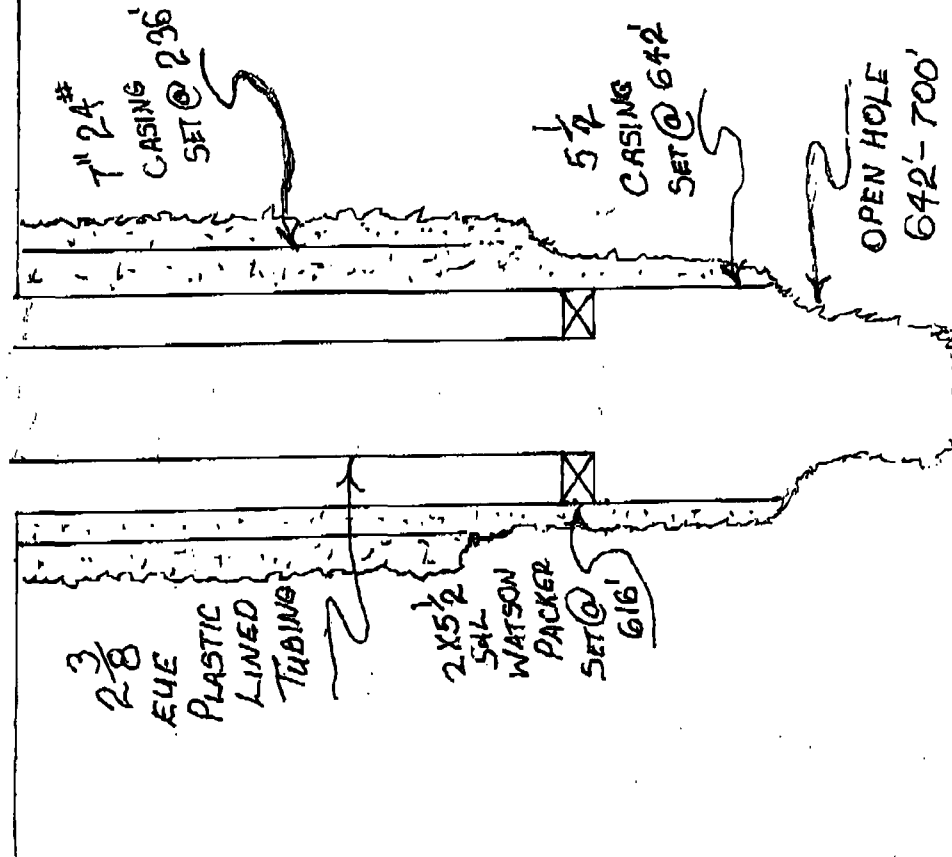
WELL NAME & NUMBER: SALADAR 4 APT 30 015 02446

WELL LOCATION: 2310 FSL 1650 FSL  
FOOTAGE LOCATION

UNIT LETTER: K

SECTION: 33 TOWNSHIP: 20S RANGE: 28E

## WELLBORE SCHEMATIC



Hole Size: 8 3/4" Casing Size: 7"

Cemented with: HEAVY MUD SK. Method Determined: ft<sup>3</sup>

Top of Cement: Method Determined: Intermediate Casing

Hole Size: NONE Casing Size: ft<sup>3</sup>

Cemented with: SK. Method Determined: Production Casing

Top of Cement: Method Determined: Casing Size: 5 1/2"

Hole Size: 6 1/2" Casing Size: 5 1/2"

Cemented with: 40 SK. or ft<sup>3</sup>

Top of Cement: SURFACE Method Determined: CALCULATION

Total Depth: 642

Injection Interval: 642 feet to 633

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8 EUE Lining Material: PLASTIC COATED  
 Type of Packer: 2X5 1/2 SEL WATSON TENSION  
 Packer Setting Depth: 616 ft.  
 Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes \_\_\_\_\_ X No  
 If no, for what purpose was the well originally drilled? oil well
2. Name of the Injection Formation: YATES SAND
3. Name of Field or Pool (if applicable): SALADAR YATES
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NONE
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:  
QUEEN SAND: APPROXIMATELY 1800 ft.

## INJECTION WELL DATA SHEET

Side 1

OPERATOR: DENNIS LANGLITZ

WELL NAME &amp; NUMBER: SALADAR 2

SALADAR UNIT

API 30 015 02450

WELL LOCATION: 1650 FSL 990 FWL

FOOTAGE LOCATION

L  
UNIT LETTER

33

SECTION

205

TOWNSHIP

28E

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 8 3/4" Casing Size: 8 5/8"  
 Cemented with: BUDDER IN 137 ft. CASING  
 Top of Cement: Method Determined:  $\text{ft}^3$

Intermediate Casing

Hole Size: NONE Casing Size:  $\text{ft}^3$   
 Cemented with: Method Determined:  $\text{ft}^3$

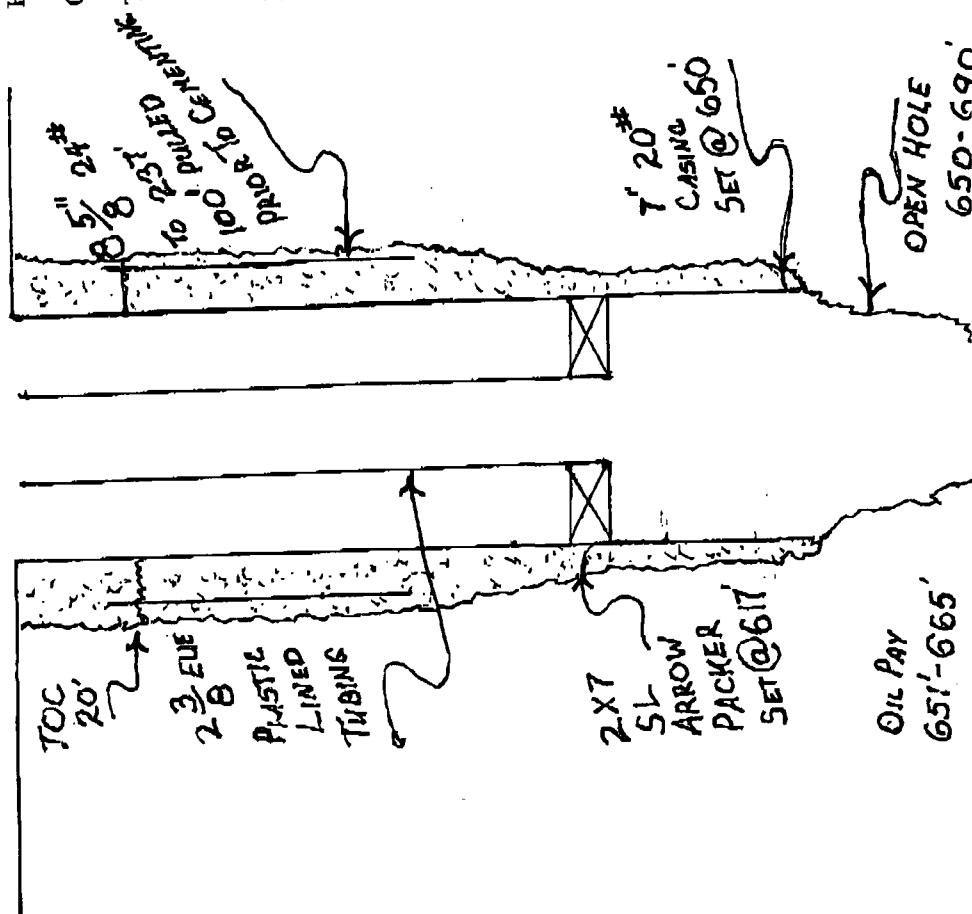
Production Casing

Hole Size: 8 Casing Size: 7  
 Cemented with: 20 sx. or  $\text{ft}^3$   
 Top of Cement: 20 ft. Method Determined: CALCULATION  
 Total Depth: 650 ft.

Injection Interval

650 feet to 690

(Perforated or Open Hole; indicate which)



Side 2

INJECTION WELL DATA SHEETTubing Size: 2 3/8 EHR Lining Material: PALSTIC LINEDType of Packer: 2X7 SEAL ARROW TENSIONPacker Setting Depth: 617 ft.

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data1. Is this a new well drilled for injection? \_\_\_\_\_ Yes X No \_\_\_\_\_If no, for what purpose was the well originally drilled? OIL WELL2. Name of the Injection Formation: YATES SAND3. Name of Field or Pool (if applicable): SALADAR YATES4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NONE

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: \_\_\_\_\_

QUEEN SAND: APPROXIMATELY 1800 ft.

# TRANSACTION REPORT

P. 01

JUL-11-2008 FRI 03:55 PM

FOR:

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JUL-11	03:45 PM	1 575 885 2773	10' 05"	30	RECEIVE	OK		

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