

WALTERS DRILLING CO.

October 13, 1977

Re: Report - Dickman #4 SWI
Ness County, Kansas

TO WORKING INTEREST OWNERS

SUMMARY

The Dickman #4 has served as a satisfactory salt water injection well (SWI) for 14 years since its completion in 1963. It is still so functioning. This report provides the owners with an explanation for the September shut down of oil production necessitated by working on the SWI well. Considerable expenditures were involved in (a) cleaning the redwood tank, (b) testing the casing (no leaks), (c) removing and testing the fiber glass tubing, (d) cleaning out scale and iron sulfide with cable tools. The well will be re-equipped with plastic-lined steel tubing and a bottom hole packer to comply with present regulations.

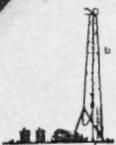
HISTORY

The Dickman #4 SWI has been successfully operated as a pressure maintenance project. Oilfield brine produced from the Mississippian formation is returned to the same formation below the oil-water contact. The Dickman #4 SWI was licensed as a salt water repressuring well by the State Corporation Commission, Docket #71-821C (C-10,347) on July 12, 1963. The Ness County tax assessor has continuously and capriciously refused to recognize this licensing, and allow us due tax credit. He claims that our well is only another SWD well. The best evidence to the contrary is our excellent recovery of oil in the Dickman Field due to pressure maintenance.

The Dickman SWI was drilled to 4530 feet total depth. The 5-1/2 inch casing was set and cemented at 4529 feet. Water is injected through perforations from 4497-4512 feet (subsea -2005 to -2020), or 38 feet below the top of the Mississippian drilled at 4459 (-1962).

BRINE INJECTION

Produced oilfield brine is injected into the Dickman #4 SWI at pressures varying from 0 to 200 psi. During the month of August 1977, total fluid injected was



Working Interest Owners - Dickman Lease

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42.5 gpm or 60.791 BWPH. This is also equivalent to 1459 BWPD derived from the following wells:

DICKMAN #4 SWI
WATER INJECTION - AUGUST 1977 (in bbls water per day)

Dickman #1	204	
Dickman #2	125	
Dickman #3	0	
Dickman #6	<u>154</u>	483
Tilley #1	332	
Tilley #2	<u>406</u>	738
Humphrey #1	68	
Elmore #1	<u>120</u>	<u>188</u>
DICKMAN FIELD TOTAL		1409 BWPD

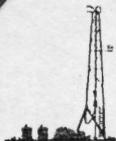
Temporary arrangements outside leases:

Schaben #1	42	
Schaben #2	--	
Phelps #1	<u>8</u>	50
		<u>1459 BWPD.</u>

SEPTEMBER 1977 - REWORK

It was necessary to shut down oil production from the lease named for several days during the month of September 1977 to permit work on the Dickman #4 SWI. Important steps in the workover are as follows:

- 9-16-77 Cleaned redwood settling tank.
- 9-19-77 Took fluid level tests during shut down.



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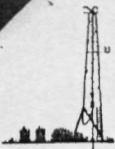
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- 9-20-77 Pulled fiber glass tubing.
- 9-23-77 Cleaned out scale and iron sulfide. Heavy solids could not be handled by swabbing with pulling unit. Moved in cable tools.
- 9-26-77 Worked on tight spot near 4467 feet. Set plug at 3500 feet and tested casing to 1,000 psi.
- 9-27-77 Worked with bit and bailer 4520-29 feet, below perforations. Had two tight spots. Set Baker packer at 4400 feet. Tested casing to 1,000 psi - all okay.
- 9-29-77 Reran 1041 feet of fiber glass tubing on a temporary basis. Acidized with 500 gallons HCl.

When the 2-inch fiber glass tubing was removed from the well, 219 joints were recovered. They were pressure tested with no leaks, but 113 couplings required replacing at a cost of \$33.20 each. This was considered noneconomical in view of the difficulty of running this old lightweight fiber glass tubing with a bottom hole packer now required by regulation. Accordingly, 2-inch used steel tubing was sent to Rice Engineering Company, Great Bend, Kansas, for plastic coating. It will be installed in the Dickman #4 SWI when ready later in October.

CONCLUSIONS

This letter is written for the information of the owners only, and requires no response.

WALTERS DRILLING CO.

Robert F. Walters, Managing Partner

RFW:rae

STATE OF KANSAS
KANSAS CORPORATION COMMISSION
CONSERVATION DIVISION
130 South Market - Room 2078
Wichita, Kansas 67202

DOCKET # C-16,817 96,935-C

NE/4 1/4, Sec. 18, Twp. 17S Rge. 24 E/W

4620 Feet from the South section line

660 Feet from the East section line

APPLICATION TO AMEND INJECTION ORDER

- Salt Water Disposal
- Repressuring
- Other Enhanced Recovery

Lease Sargent Well # 1

Ness County, Kansas

Originally granted to: Palomino Petroleum

(All information above this line taken from the original order.)

CURRENT OPERATOR: License # 5086 Contact Person:

Name: Pintail Petroleum, Ltd. Name: Flip Phillips

Address: 225 N. Market, #300, Wichita, KS 67202 Phone: 316/263-2243

It is requested that the (caption) (paragraph #) of the original order be amended as follows:

A. Change the authorized injection pressure to: psi minimum to psi maximum from the current allowable of psi to psi.

B. Change the authorized injection quantity to: 800 bbl/day to 1500 bbl/day maximum from the current allowable of 0 bbl/day to 200 bbl/day.

C. Add (X) or delete () the following leases for supplying salt water for injection:

<u>COMPANY</u>	<u>LEASE NAME</u>	<u>LEASE DESCRIPTION</u>
Pintail Petroleum, Ltd.	Dickman	E/2 NE Sec. 17-17S-24W

D. Change the order by: () add the following additional repressuring wells: ; () change the injection formation; or ()

TO:
STATE CORPORATION COMMISSION
CONSERVATION DIVISION - UIC SECTION
200 COLORADO DERBY BUILDING
WICHITA, KS 67202

71-821,C
DOCKET NO. C-103
C NW/4 NE/4 SEC 17, T17 S, R24 (X)W
()E

DICKMAN SWI
APPLICATION TO AMEND
INJECTION ORDER

4620 Feet from South section line

1980 Feet from East section line

() Salt Water Disposal

Lease DICKMAN Well # 4

(X) Repressuring

NESS County

() Other Enhanced Recovery

Originally granted to: Walters Drilling Co.

Current Operator: License # 5076
Name & Walters Drilling Co., Inc.
Address 100 S. Main, Suite 420
Wichita, Kansas 67202

Contact Person:
Name Robert F. Walters
Phone (316) 265-6683

It is requested that the caption order /paragraph # 7 /
of the original order be amended as follows:

A (X) Change authorized injection pressure to: 300 psi min. to 600 psi maximum
from current allowable of 100 psi to 300 psi maximum.

B (X) Change authorized injection quantity to: 600 bbl/d to 1500 bbl/d maximum
from current allowable of 200 bbl/d to 600 bbl/d maximum (or MCF/d)

C () Add or (X) delete the following leases for supplying salt water for
injection:

<u>Company</u>	<u>Lease Name</u>	<u>Lease Description</u>	<u>Well #</u>
<u>Walters Drilling Co.</u>	<u>Elmore</u>	<u>SW/4 Sec. 17</u> <u>T17S-R24W</u>	<u>#1</u>

D () Change the order by: () adding additional repressuring wells, () change
formation or NONE

(Enclose a sketch of the well construction if any change has been made or if an
U-1 application form has not been previously submitted). NONE

A copy of this application has been mailed or personally delivered to the landowner
and to all operators of leases within one-half mile radius of-
(X) this input well or () the boundaries of the lease to this well.

<u>Name</u>	<u>Mailing Address</u>
<u>R. W. Watchous</u>	<u>P. O. Box 18610 - Wichita, Kansas 67218</u>
<u>Vincent Oil Corporation</u>	<u>125 N. Market - Wichita, Kansas 67202</u>

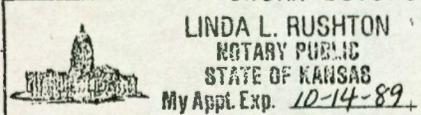
I hereby certify that the statements herein are true and correct to the best of my
knowledge and belief.

Robert F. Walters
Signature Robert F. Walters

Date October 14, 1985

Walters Drilling Co., Inc./Robert F. Walters, Pre
Applicant or Agent Name (type or print)

SUBSCRIBED AND SWORN before me this 14 day of October, 1985



Linda L. Rushton
NOTARY PUBLIC Linda L. Rushton

My commission expires 10-14-89

1. To: STATE CORPORATION COMMISSION
 CONSERVATION DIVISION - UIC SECTION
 2. 200 COLORADO DERBY BUILDING
 WICHITA, KANSAS 67202

Sec. 17, T17 S, R24 WE
 4620 feet from South section line
 1980 feet from East section line

4. APPLICATION FOR INJECTION WELL

5. DISPOSAL
 ENHANCED RECOVERY: REPRESSURE
 NOTE: This well has been in service many years, U-1 being filed with U-8. Amendment.
 WATERFLOOD
 TERTIARY

Lease description: North half Section 17-17S-24W

6. DATE 10-15-85
 7. Operator License # 5076

Lease Name Dickman Well # 4

8. Operator: Walters Drilling Co., Inc.
 Name & 100 S. Main - Suite 420
 9. Address Wichita, Kansas 67202

Field Name Dickman

County Ness

10. Contact Person Name Robert F. Walters
 Phone (316) 265-6683

Deepest usable water: Formation 455

Depth 780 feet to formation bottom

11. Old Well ~~Being Considered~~ Newly Drilled Well Well to be drilled
 See Note

12. Surface elev. _____ feet, Well Total Depth _____ feet, Plug back depth _____ feet
 13. Datum of top of injection formation _____ feet (reference mean sea level)

INJECTION FORMATION DESCRIPTION

14. name Mississippian top/bottom / perf/open hole at 4497 to 4512 feet
 15. _____ at _____ to _____ feet

LIST OF WELLS SUPPLYING SALT WATER (use extra sheet if needed)

	LEASE OPERATOR	LEASE NAME	LEASE DESCRIPTION	WELL ID# & Spot location
16.	1. Walters Drlg. Co.	DICKMAN	N/2 Sec. 17	#1 NE/4 NW/4
17.	2. " " "	"	"	#2 NW/4 NW/4
18.	3. " " "	"	"	#6 SW/4 NE/4
19.	4. Walters Drlg. Co.	TILLEY	S/2 Sec. 8	#1 SW/4 SE/4
20.	5. " " "	"	"	#2 SE/4 SW/4
21.	6.			
22.	7.			
23.	8.			

PRODUCING FORMATION STRATA DEPTH TOTAL DISSOLVED SOLIDS (if available)

	PRODUCING FORMATION	STRATA DEPTH	TOTAL DISSOLVED SOLIDS (if available)
24.	1. Miss. D-1	4427 to 4443 feet	30,954 mg/l
25.	2. Miss. D-2	4497 to 4502 feet	42,287 mg/l
26.	3. Miss. D-6	4450 to 4456 feet	40,552 mg/l
27.	4. Miss. T-1	4465 to 4473 feet	42,220 mg/l
28.	5. Miss T-2	4451 to 4461 feet	34,487 mg/l
29.	6.	_____ to _____ feet	_____ mg/l
30.	7.	_____ to _____ feet	_____ mg/l
31.	8.	_____ to _____ feet	_____ mg/l

32. Liquid Injection Rate: Min 300 bbl/day, Max 600* bbl/day
 33. or Gas Injection Rate: Min _____ scf/day, Max _____ scf/day, Type of gas _____
 34. Injection Pressure: Min 300 psig, Max 600* psig

Copy to Mr. Dickman

WELL COMPLETION

TYPE: Tubing & packer / /; Packerless (tubing) / /; Tubingless / /

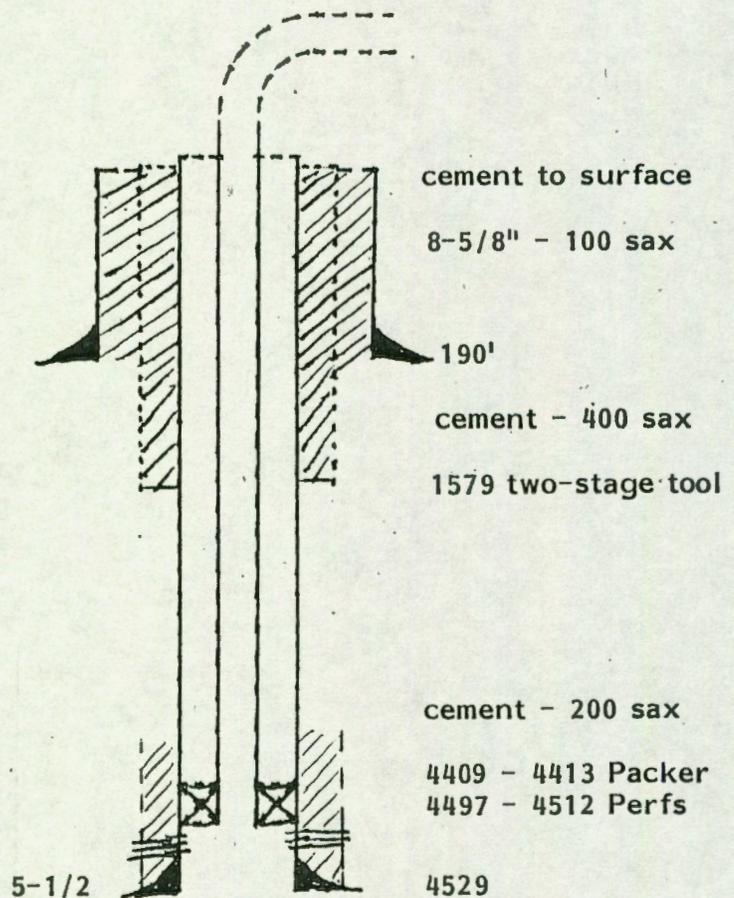
CASING OR TUBING	CONDUCTOR	SURFACE	INTERMEDIATE 2 Stage Tool	PRODUCTION	TUBING
SIZE	NONE	8-5/8		5-1/2	2-3/8
SETTING DEPTH		190	1579	4529	
CEMENT SACKS		100	400	200	
CEMENT: TOPS BOTTOMS		0 to 190	surface to 1579	? to 4529	

TUBING: TYPE 2-3/8 - 8rd thread duo-lined GRADE -

PACKER: TYPE Baker Lock set DEPTH 4409 - 4413

ANNULUS CORROSION INHIBITION FLUID: TYPE fresh water CONCENTRATION

LIST LOGS ENCLOSED:



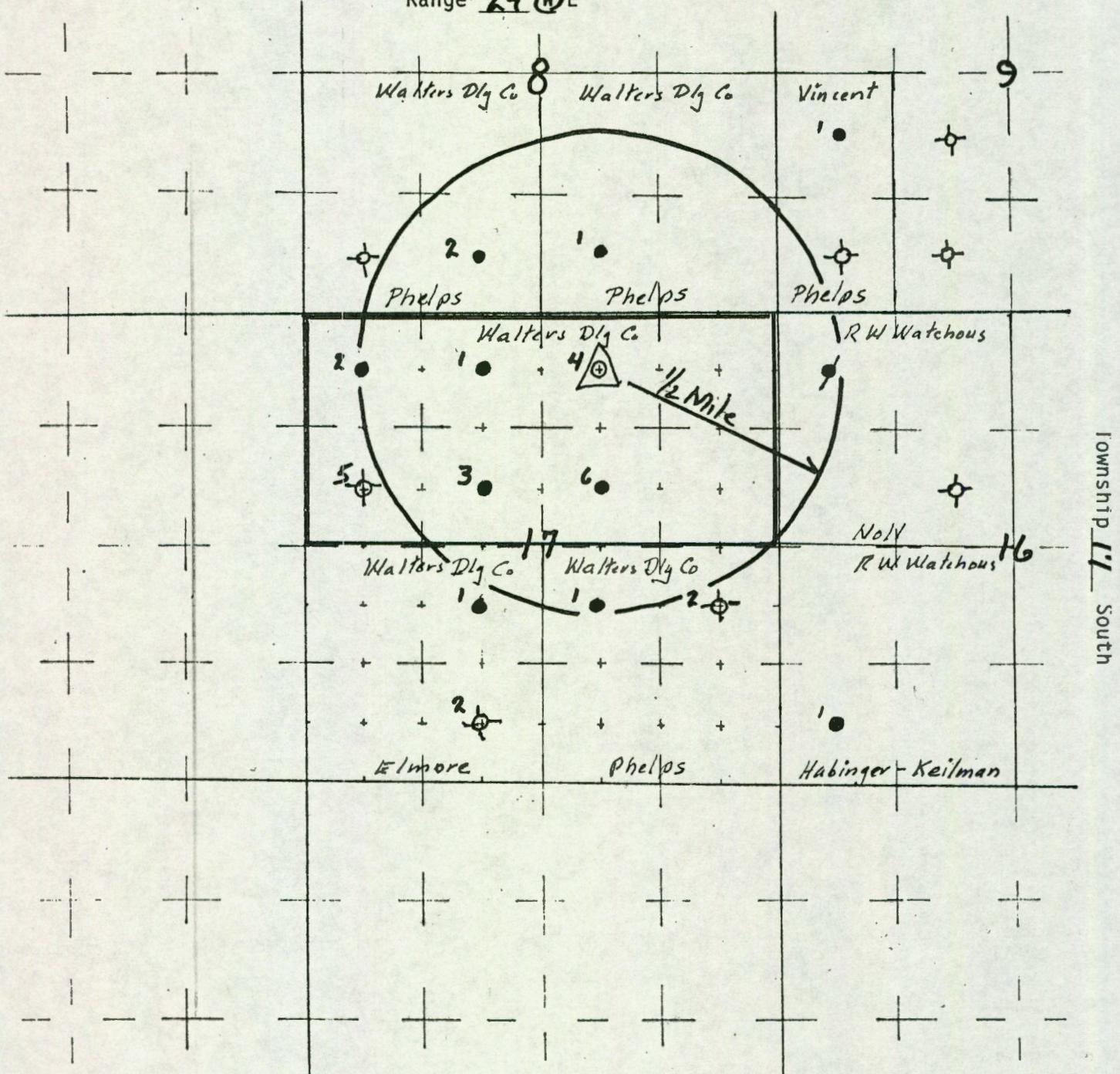
Static water level is 1200' feet below surface.

(To sketch installation, darken appropriate lines, indicate cement, and show depths.)

NOTE: Page 4 must be completed on all applications.

Use for UIC application plat map or attach a copy of an equivalent map. Indicate township, range, and appropriate section numbers. Then locate applicant injection well, plus all producing wells, abandoned wells, plugged holes, and other wells within a half mile radius. Also show lease boundaries, lease operators, well numbers, and producing wells producing formation tops.

Range 24 WE



- | | |
|--|--|
| applicant well | |
| other injection wells (including disposal) | |
| producing wells | |
| temporary abandoned well | |
| plugged producer | |
| D & A well | |
| plugged injection well | |
| water supply well | |

Operator Walters Drilling Co Inc Lease Dickman County Ness, Ks
N/2 Sec 17, T. 17 S., R. 24 W

Name and Addresses of those receiving copies of this application and attachments:

OFFSET OPERATOR'S AND LANDOWNER.
NAME

MAILING ADDRESS

RW Watchous

P.O. Box 18610 Wichita Ks 67218

Vincent Oil Corp

125 N. Market Suite 1110
Wichita Ks 67202

Mr. Fred Dickman

RR#1 Altamont Illinois 62411

A notice of this application was placed in the following general circulation newspaper of the area of the lease.

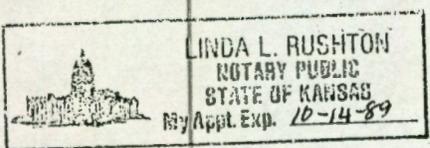
Paper Name _____ Date of Issue _____
Address _____ Page of Notice _____

I hereby certify that the statements herein are true and correct to the best of my knowledge and belief:

Robert J. Walters

Applicant or Duly Authorized Agent

Subscribed and sworn to before me this 15 day of October 1985.



Linda L. Rushton

Notary Public

Linda L. Rushton

October 14, 1989
My Commission Expires

INSTRUCTIONS

1. Use page 3 or attach a plat map showing subject well, and all known oil and gas wells, including wells abandoned, being drilled, or dry holes, within 1/2 mile. Show lease name and operator or unleased landowner. Show well numbers and elevations of producing formation tops.
2. Attach Drillers Log or Form ACO-1.
3. Fill in schematic drawing of subsurface facilities including: Size, setting depth, amount of cement used, measured or calculated tops of cement of surface, intermediate (if any) and production casing; size and setting depth of tubing; type and setting depth of packer; geological zone of injection showing top and bottom of injection interval.
4. The original and 2 copies of application and attachments shall be mailed to the State Corporation Commission.
5. Deliver or mail 1 copy of application to landowner on whose land injection well is located and to each operator of the producing leasehold or mineral rights owner within 1/2 mile of the well.
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6. Approval of this application, if granted, is valid only as long as there is no substantial change in the operation set forth in the application. A substantial operation change requires the approval of a new application.