

APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

APPLICATION TO DRILL DEEPEN PLUG BACK

NAME OF COMPANY OR OPERATOR Town Oil Co. DATE 10-4-80
R. R. #4 Paola Kansas 66071
 Address City State

DESCRIPTION OF WELL AND LEASE			
Name of lease Walton	Well number 2-W	Elevation (ground)	
WELL LOCATION (give footage from section lines) <u>330</u> ft. from (N) XX sec. line <u>2635</u> ft. from (E) XX sec. line			
WELL LOCATION Section <u>4</u> Township <u>46</u> Range <u>33</u>		County Cass	
Nearest distance from proposed location to property or lease line: <u>330</u> feet		Distance from proposed location to nearest drilling, completed or applied - for well on the same lease: <u>165</u> feet	
Proposed depth: Approx. 600	Rotary or Cable tools Rotary	Approx. date work will start When approved	
Number of acres in lease: 85	Number of wells on lease, including this well, completed in or drilling to this reservoir: _____ Number of abandoned wells on lease: Unknown		
If lease, purchased with one or more wells drilled, from whom purchased: Name <u>Harry Knoche</u> Address <u>Belton, Missouri</u>		No. of Wells: producing _____ inactive _____ abandoned _____	
Status of Bond Single Well <input type="checkbox"/> Amt. _____ Blanket Bond <input checked="" type="checkbox"/> Amt. <u>\$20,000.00</u> <input checked="" type="checkbox"/> ON FILE <input type="checkbox"/> ATTACHED			
Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone) use back of form if needed.			
Proposed casing program:		Approved casing - To be filled in by State Geologist	
amt.	size	wt./ft.	cem.
<u>20'</u>	<u>6 1/4"</u>	<u>3.75</u>	<u>To surface</u>
<u>600'</u>	<u>2"</u>		
I, the undersigned, state that I am the <u>Partner</u> of the <u>Town Oil Co.</u> (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.			
Signature <u>Lester Town</u>			

Permit Number: 20096
 Approval Date: October 20, 1980
 Approved By: Wallace B. Durre
 IRS

SAMPLES REQUIRED
 SAMPLES NOT REQUIRED

Note: This Permit not transferable to any other person or to any other location. OCT 15 1980 WATER SAMPLES REQUIRED @:

Remit two copies to: Missouri Oil and Gas Council **MO. OIL & GAS COUNCIL**
 P.O. Box 250 Rolla, Mo. 65401

One will be returned. Approval of this permit by the Oil and Gas Council does not constitute endorsement of the geologic merits of the proposed well nor endorsement of the qualifications of the permittee.

MISSOURI OIL AND GAS COUNCIL

Form OGC-5

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

New Well Work-Over Deepen Plug Back Same Reservoir Different Reservoir Oil Gas Dry

Owner Town Oil Co.		Address Rt. 4 Paola, Kansas 66071			
Lease Name Walton		Well Number 2-W			
Location 330' from N. sec. line & 2635' from E sec. line				Sec. — TWP-Range or Block & Survey 4-46-33	
County Cass		Permit number (OGC3 number) 20096			
Date spudded 12-2-80	Date total depth reached 12-6-80	Date completed, ready to produce	Elevation (DF, RKB, RT or Gr.) feet	Elevation of casing hd. flange feet	
Total depth 620	P. B. T. D				
Producing interval (s) for this completion			Rotary tools used (interval) From 0 to 620	Cable tools used (interval) From to	
Drilling Fluid used water	Was this well directionally drilled? No	Was directional survey made?	Was copy of directional survey filed?	Date filed	
Type of electrical or other logs run (list logs filed with the State Geologist) Electric log run, copy attached				Date filed	

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)						
Purpose	Size hole drilled	Size casing set	Weight (lb. ft.)	Depth set	Sacks cement	Amt. pulled
Surface	8 5/8	6 1/2		22'	2	0
Producing	5 1/2	2"		520	87	0

TUBING RECORD

LINER RECORD

Size in.	Depth set ft.	Packer set at ft.	Size in.	Top ft.	Bottom ft.	Sacks cement	Screen (ft.)
PERFORATION RECORD				ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD			
Number per ft.	Size & type	Depth Interval		Am't. & kind of material used		Depth Interval	

INITIAL PRODUCTION

Date of first production None		Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump): Water injection				
Date of test	Hrs. tested	Choke size	Oil prod. during test bbls.	Gas prod. during test MCF	Water prod. during test bbls.	Oil gravity API (Corr.)
Tubing pressure	Casing pressure	Cal'ed rate of Production per 24 hrs.	Oil bbls.	Gas MCF	Water bbls.	Gas—oil ratio

Disposition of gas (state whether vented, used for fuel or sold):

Method of disposal of mud pit contents:
Covered with dirt

CERTIFICATE: I, the undersigned, state that I am the partner of the Town Oil Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

RECEIVED

MAR 19 1982

Signature Lester Town
Lester Town RECEIVED

MO. OIL & GAS COUNCIL

Remit two copies: one will be returned

MAR 19 1981

MO. OIL & GAS COUNCIL

TOWN OIL CO.

"Purchaser of Crude Oil"

RECEIVED

MAR 19 1982

MO. OIL & GAS COUNCIL

913-294-2854

913-294-4232

Route 4
Paola, Kansas 66071

Well No. 2W
Farm: Walton
Cass County, Missouri
Lease Owner: Town Oil Co.

Walton -- Well #2W

Thickness of Strata	Formation	Total Depth
10	Soil & clay	10
30	Broken Lime	40
27	Shale	67
10	Lime	77
14	Shale	91
2	Red bed	93
13	Shale	106
5	Lime	111
4	Shale	115
2	Slate	117
1	Lime	118
20	Shale	138
4	Lime	142
17	Shale	159
2	Lime	161
4	Shale	165
22	Lime	187
7	Shale & slate	194
20	Lime	214
4	Shale & slate	218
2	Lime	220
3	Shale & slate	223
7	Lime	230
40	Shale	270
4	Sand	274
54	Shale	328
8	Sand	336
56	Shale	392
5	Sand	397
14	Shale	411
4	Lime	415
2	Shale	417
4	Lime	421
8	Shale & slate	429
7	Lime	436
8	Shale	444
2	Sand	446
11	Shale	457

Hertha

Well No. 2W
Farm: Walton
Cass County, Missouri
Lease Owner: Town Oil Co.

Walton -- Well #2W

Thickness of Strata	Formation	Total Depth
4	Lime	461
5	Shale & slate	466
4	Shale	470
2	Lime	472
3	Sand	475
4	Sandy shale	479
1	Lime	480
5	Shale	485
1	Slate	486
12	Shale white	498
2	Lime shells	500
5	Shale	505
12	Sandy shale	517
3	Sandy shale	520
6	Sand	526
5	Sandy lime	531
5½	Sand	536½
3½	Lime	540
35	Sand	575
8	Shale	583
2	Lime	585
7	Sand	592
5	Shale	597
1	Slate	598
6	Lime shells	604
12	Shale	616
4	Lime	620

MECHANICAL INTEGRITY TEST REPORT

Test Date: 10 Aug 93

Operator: Town Oil Co.
Contact Person: Lester Town
Address: 16205 West 287th St. Paola, Kansas 66071
Phone: 913-294-2125

Lease WALTON Well # 2-W
County CASS Permit # 20096

TEST INFORMATION:

Type MIT: Pressure Radioactive Tracer Survey Temperature Survey

	Run #1	Run #2	Run #3
Start Time:	<u>11:10</u>	<u>12:00</u>	
End Time:	<u>11:40</u>	<u>1:25</u>	
Length of Test: (Start Time minus End Time)	<u>30</u>	<u>1:25</u>	

Initial Pressure (PSI):	<u>195</u>	<u>212</u>	
Ending Pressure (PSI):	<u>195</u>	<u>200</u>	
Pressure Change: (Initial Pressure minus Ending Pressure)		<u>12</u> <u>ck</u>	

Fluid used for test (water, nitrogen, CO2, ect.): Nitrogen

Comments about test: Perf at 544-553 Fluid Depression Test
453' of fluid above Perf X. 43 = 195#

The bottom of the tested zone is shut in with Float Shoe & cement at a depth of 544 ft. In signing the form below, it is certified that the above indicated well was tested for mechanical integrity on the date shown at the top of this page.

Signed: Sterling P. Hembumble EOR
Operator Contact Person or Approved Agent Title

DO NOT WRITE BELOW THIS LINE

Results were: Satisfactory Not Satisfactory

State Agent: E. R. R. Witnessed: Yes No

REMARKS: Well pressured back up prior to run #2

Computer Update 9/7/93 ck FILE WITH PERMIT!

MECHANICAL INTEGRITY TEST REPORT

Test Date: 8-29-03

Operator: TOWN OIL COMPANY
Contact Person: Lester Town
Address: 16205 West 287th St. Paola, Ks. 66071
Phone: 913-294-2125

Lease WALTON Well # 2-W
County CASS Permit # 20096

TEST INFORMATION:

Type MIT: Pressure Radioactive Tracer Survey Temperature Survey

	Run #1	Run #2	Run #3
Start Time:	<u>11:00 am</u>	_____	_____
End Time:	<u>3:00 pm</u>	_____	_____
Length of Test: (Start Time minus End Time)	<u>4 hr</u>	_____	_____

Initial Pressure (PSI): 100

Ending Pressure (PSI): 100

Pressure Change:
(Initial Pressure minus Ending Pressure) 0 #

Fluid used for test (water, nitrogen, CO2, ect.): Air

Comments about test: 232' of fluid
544'-553' Perfs, (232')(.433)

Fluid Depression test

The bottom of the tested zone is shut in with float shoe and Borev at a depth of 544' ft. In signing the form below, it is certified that the above indicated well was tested for mechanical integrity on the date shown at the top of this page.

Signed: Stacy P. Hamble EOR
Operator Contact Person or Approved Agent Title

DO NOT WRITE BELOW THIS LINE

Results were: Satisfactory Not Satisfactory
State Agent: _____ Witnessed: Yes No
REMARKS: Witnessed by Ted Fritz EPA 8-29-03
Computer Update _____ FILE WITH PERMIT!

MECHANICAL INTEGRITY TEST REPORT

Test Date: 2/19/98
Operator: TOWN OIL COMPANY
Contact Person: Lester Town
Address: 16205 West 287th St. Paola, Ks. 66071
Phone: 913-294-2125
Lease WALTON Well # 2-W
County CASS Permit # 20096

TEST INFORMATION:

Type MIT: Pressure Radioactive Tracer Survey Temperature Survey

	Run #1	Run #2	Run #3
Start Time:	<u>7:45</u>		
End Time:	<u>9:00</u>		
Length of Test: (Start Time minus End Time)	<u>1:15</u>		
Initial Pressure (PSI):	<u>1154</u>		
Ending Pressure (PSI):	<u>1154</u>		
Pressure Change: (Initial Pressure minus Ending Pressure)	<u>00</u>		

Fluid used for test (water, nitrogen, CO2, ect.): Air

Comments about test: perf - 544-553'
267' x 1433" 1154
fluid

The bottom of the tested zone is shut in with float shoe & Cement at a depth of 544 ft. In signing the form below, it is certified that the above indicated well was tested for mechanical integrity on the date shown at the top of this page.

Signed: Lester Town Operator Contact Person or Approved Agent
agent Title

DO NOT WRITE BELOW THIS LINE

Results were: Satisfactory Not Satisfactory
State Agent: SAS Witnessed: Yes No
REMARKS: Witnessed & Tied Entry / EPA
Computer Update FILE WITH PERMIT!

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FORM OGC-7

MAR 25 2013

Mo Oil & Gas Council



**STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM
PLUGGING RECORD**

OWNER'S NAME Kansas Resource Exploration & Development, LLC				ADDRESS 9393 W 110th Street, Ste. 500			
NAME OF LEASE Walton				WELL NUMBER 2W		PERMIT NUMBER (OGC-3 OR OGC-31 NUMBER) 037-20096	
LOCATION OF WELL SEC TWN RNG OR BLOCK AND SURVEY Sec. 4 Township 46 North Range 33 <input type="checkbox"/> East <input checked="" type="checkbox"/> West				LATITUDE N38 50' 40.93"		LONGITUDE W94 34' 26.84"	
APPLICATION TO DRILL THIS WELL WAS FILED IN NAME OF: Town Oil Company				HAS THIS WELL EVER PRODUCED OIL OR GAS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		CHARACTER OF WELL AT COMPLETION (INITIAL PRODUCTION) OIL (BBLs/DAY) 2 GAS (MCF/DAY) 0	
DATE OF ABANDONMENT 03/01/2013		TOTAL DEPTH 620'		AMOUNT WELL PRODUCING PRIOR TO ABANDONMENT OIL (BBLs/DAY) Injection GAS (MCF/DAY) Injection		WATER (BBLs/DAY) Injection	
Name of each formation containing oil or gas. Indicate which formation open to well bore at time of abandonment		Fluid content of each formation		Depth interval of each formation		Size, kind, and depth of plugs used, giving amount of cement.	
Squirrel Sandstone		Oil and Water		540-575		Squeezed 25 sks of Portland from surface to 603', topped off the well with 5 additional sks of Portland, shut in with 2" valve	
SIZE PIPE	PUT IN WELL (FT)	PULLED OUT (FT)	LEFT IN WELL (FT)	GIVE DEPTH AND METHOD OF PARTING CASING (SHOT, RIPPED, ETC.)		PACKERS AND SHOES	
2"	603'	0	603'	N/A		None	
WAS WELL FILLED WITH MUD-LADEN FLUID? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				INDICATE DEEPEST FORMATION CONTAINING FRESH WATER None			
NAME AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE							
NAME			ADDRESS			DIRECTION FROM THIS WELL	
Maclaughlin, J.R. and A			1103 W47th, Apt B Kansas City, MO 64112			West	
Beary, Helen			28 Briar Oaks Ln Reeds Springs, Mo 65737			East	
Michael Effertz Farms LLC			16401 HOLMES RD, BELTON, MO 64012			South	
Colt Energy, Rhoden Lease			4330 Shawnee Mssn Pky Fairway ks 66205			North	
METHOD OF DISPOSAL OF MUD PIT CONTENTS		There was no pit used in this process, cement was squeezed directly down the well					
NOTE: FILE THIS FORM IN DUPLICATE WITH: (USE REVERSE SIDE FOR ADDITIONAL DETAIL)							
<p style="text-align: center;"><small>Chief Operating Officer Kansas Resource Exploration and Development, LLC</small></p> CERTIFICATE I, the undersigned, state that I am the _____ of the _____ (Company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.							
SIGNATURE 						DATE 03/03/2013	



OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS 66720 - PHONE (316) 431-2650

January 30, 1981

Town Oil Company
R R # 4
Paola, Kansas 66071

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Walton Lease, Well No. 2-W, located in Cass County, Missouri and submitted to our laboratory on December 12, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Paola, Kansas

RECEIVED

APR 09 1984

AMERICAN OIL & GAS COUNCIL

- REGISTERED ENGINEERS -

CORE ANALYSIS - WATER ANALYSIS - REPRESSURING ENGINEERING - SURVEYING & MAPPING - PROPERTY EVALUATION & OPERATION

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Town Oil Company Lease Walton Well No. 2-W

Location _____

Section _____ Twp _____ Rge _____ County Cass State Missouri

Elevation, Feet _____

Name of Sand _____ Upper Squirrel

Top of Core _____ 521.0

Bottom of Core _____ 556.5

Top of Sand _____ 521.0

Bottom of Sand _____ 556.5

Total Feet of Permeable Sand _____ 25.3

Total Feet of Floodable Sand _____ 12.1

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 10

6.7

6.7

10 - 30

6.5

13.2

30 - 50

8.7

21.9

50 - 70

3.4

25.3

Average Permeability Millidarcys _____ 28.8

Average Percent Porosity _____ 19.8

Average Percent Oil Saturation _____ 41.3

Average Percent Water Saturation _____ 38.0

Average Oil Content, Bbls./A. Ft. _____ 642.

Total Oil Content, Bbls./Acre _____ 16,244.

Average Percent Oil Recovery by Laboratory Flooding Tests _____ 7.1

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. _____ 116.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre _____ 1,403.

Total Calculated Oil Recovery, Bbls./Acre _____ See "Calculated Recovery" Section

The core was sampled and the samples sealed in plastic bags by a representative of the client.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
521.0 - 521.9	Gray calcareous sandstone.
521.9 - 523.5	Brown slightly calcareous sandstone.
523.5 - 525.2	Brown and gray laminated slightly calcareous sandstone and shale.
525.2 - 526.3	Brown calcareous sandstone.
526.3 - 531.0	Hard gray limestone.
531.0 - 531.9	Brown slightly calcareous sandstone.
531.9 - 533.4	Light brown shaly sandstone.
533.4 - 536.0	Hard gray limestone.
536.0 - 539.0	Brown and gray laminated slightly calcareous sandstone and shale.
539.0 - 539.9	Hard gray limestone.
539.9 - 542.9	Brown slightly calcareous sandstone.
542.9 - 544.4	Brown and gray laminated slightly calcareous sandstone and shale.
544.4 - 556.5	Brown slightly calcareous sandstone.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 1,403 barrels of oil per acre was obtained from 12.1 feet of sand. The weighted average percent oil saturation was reduced from 43.9 to 36.8, or represents an average recovery of 7.1 percent. The weighted average effective permeability of the samples is 1.16 millidarcys, while the average initial fluid production

pressure is 27.9 pounds per square inch (See Table V).

By observing the data given in Table IV, you will note that of the 22 samples tested, 12 produced water and oil, and 2 samples produced water only. This indicates that approximately 55 percent of the sand represented by these samples is floodable pay sand.

CALCULATED RECOVERY

It would appear from a study of the core data, that efficient primary and waterflood operations in the vicinity of this well should recover approximately 3,460 barrels of oil per acre. This is an average recovery of 286 barrels per acre foot from 12.1 feet of floodable sand analyzed in this core.

Original formation volume factor, estimated	1.04
Reservoir water saturation, percent, estimated	25.0
Average porosity, percent	20.9
Oil saturation after flooding, percent	36.8
Performance factor, percent, estimated	50.0
Net floodable sand, feet	12.1

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Town Oil Company Lease Walton Well No. 2-W

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbbs. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	521.4	21.0	36	37	73	587	28.	0.9	0.9	528	25.20
2	522.7	19.5	44	33	77	666	28.	1.6	2.5	1066	44.80
3	524.5	18.0	35	48	83	489	4.8	1.7	4.2	831	8.16
4	525.5	19.3	44	39	83	659	13.	0.6	4.8	395	7.80
5	526.2	16.2	39	57	96	452	23.	0.5	5.3	226	11.50
6	531.5	18.1	43	34	77	604	11.	0.9	6.2	544	9.90
7	533.2	16.3	20	63	83	253	5.2	1.5	7.7	380	7.80
8	537.7	15.3	33	51	84	392	3.1	1.0	8.7	392	3.10
9	538.8	15.7	43	45	88	524	3.1	1.0	9.7	524	3.10
10	540.5	19.4	38	41	79	572	43.	1.0	10.7	572	43.00
11	541.5	20.8	41	36	77	662	24.	1.0	11.7	662	24.00
12	543.5	18.8	41	45	86	598	6.8	1.5	13.2	897	10.20
13	544.5	20.5	45	34	79	716	32.	1.5	14.7	1074	48.00
14	546.9	20.4	48	27	75	760	41.	1.6	16.3	1216	65.60
15	547.8	20.1	49	27	76	764	35.	1.0	17.3	764	35.00
16	548.7	21.5	42	33	75	701	41.	1.0	18.3	701	41.00
17	549.8	21.9	41	31	72	697	55.	1.5	19.8	1046	82.50
18	551.4	21.4	43	33	76	714	41.	1.0	20.8	714	41.00
19	552.4	21.7	47	37	84	791	28.	1.0	21.8	791	28.00
20	554.2	22.8	48	28	76	849	50.	1.6	23.4	1358	80.00
21	555.5	22.6	51	31	82	894	58.	1.0	24.4	894	58.00
22	556.3	22.8	42	33	75	743	58.	0.9	25.3	669	52.20

Oilfield Research Laboratories
SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company		Town Oil Company		Lease		Walton		Well No. 2-W	
Depth Interval, Feet	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Average Percent Oil Saturation	Average Percent Water Saturation	Permeability Capacity Ft. x Md.	Average Oil Content Bbl./A. Ft.	Average Percent Porosity	Total Oil Content Bbls./Acre
521.0 - 544.4	521.0 - 544.4	14.7	16.8	38.2	43.3	246.56	550	18.5	8,091
544.4 - 556.5	544.4 - 556.5	10.6	45.6	45.7	30.7	483.30	769	21.7	8,153
521.0 - 556.5	521.0 - 556.5	25.3	28.8	41.3	38.0	729.76	642	19.8	16,244

Oilfield Research Laboratories
RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation		Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure Lbs./Sq./In.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water			
1	521.4	21.5	35	584	0	0	35	59	31	0.60	40
2	522.7	19.5	44	666	0	0	44	52	23	0.75	40
3	524.5	17.6	36	492	0	0	36	50	0	Imp.	-
4	525.5	19.3	44	659	5	75	39	57	14	0.50	45
5	526.2	16.3	36	455	3	38	33	63	16	0.37	40
6	531.5	17.6	44	601	0	0	44	35	0	Imp.	-
7	533.2	16.4	20	254	0	0	20	64	0	Imp.	-
8	537.7	15.7	32	390	0	0	32	52	0	Imp.	-
9	538.8	15.6	43	520	0	0	43	47	0	Imp.	-
10	540.5	19.5	38	575	3	45	35	57	37	0.75	35
11	541.5	21.0	41	668	4	65	37	56	72	1.50	20
12	543.5	18.7	41	595	0	0	41	48	0	Imp.	-
13	544.5	20.0	46	714	0	0	46	36	0	Imp.	-
14	546.9	20.4	48	760	11	174	37	60	46	1.05	20
15	547.8	20.1	49	764	9	140	40	55	36	0.75	20
16	548.7	21.4	42	697	4	66	38	52	63	1.50	25
17	549.8	21.7	41	690	8	135	33	55	59	1.05	10
18	551.4	21.4	43	714	5	83	38	55	87	1.50	25
19	552.4	21.6	47	788	10	168	37	56	27	0.60	35
20	554.2	22.8	48	849	0	0	48	50	0	Imp.	-
21	555.5	22.5	51	890	13	227	38	56	34	0.60	35
22	556.3	23.0	42	749	4	71	38	59	151	3.45	25

Company: Town Oil Company Lease: Walton Well No. 2-W

Notes: cc—cubic centimeter.

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.

Oilfield Research Laboratories
SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company	Lease	Well No.
Town Oil Company	Walton	2-W
Depth Interval, Feet	521.0 - 544.4	544.4 - 556.5
	521.0 - 544.4	521.0 - 556.5
Feet of Core Analyzed	3.1	9.0
Average Percent Porosity	19.5	21.4
Average Percent Original Oil Saturation	39.8	45.3
Average Percent Oil Recovery	3.7	8.2
Average Percent Residual Oil Saturation	36.1	37.1
Average Percent Residual Water Saturation	57.7	56.2
Average Percent Total Residual Fluid Saturation	93.8	93.3
Average Original Oil Content, Bbls./A. Ft.	602.	754.
Average Oil Recovery, Bbls./A. Ft.	56.	137.
Average Residual Oil Content, Bbls./A. Ft.	546.	617.
Total Original Oil Content, Bbls./Acre	1,866.	6,782.
Total Oil Recovery, Bbls./Acre	174.	1,229.
Total Residual Oil Content, Bbls./Acre	1,692.	5,553.
Average Effective Permeability, Millidarcys	0.88	1.26
Average Initial Fluid Production Pressure, p.s.i.	35.0	24.4
		27.9

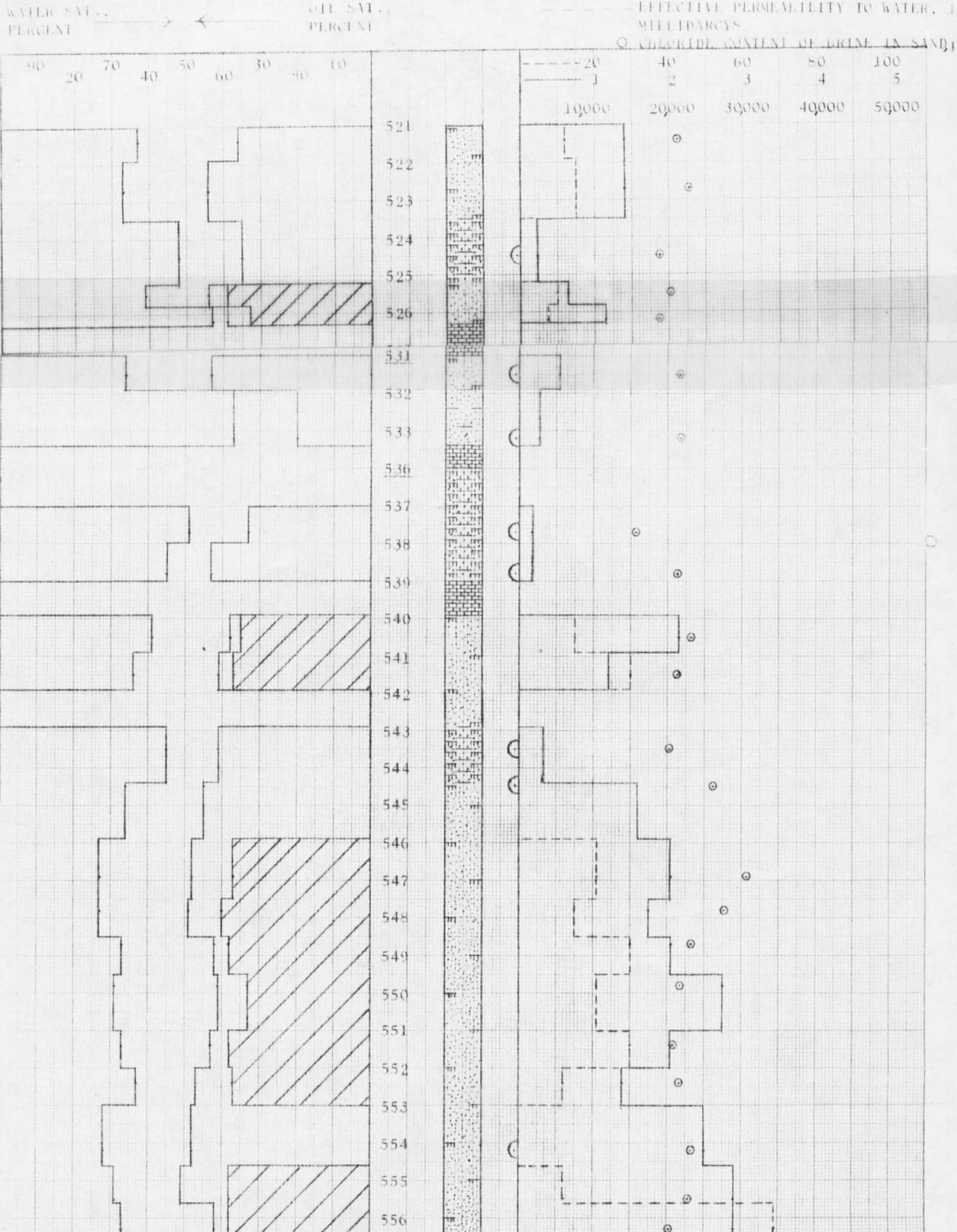
NOTE: Only those samples which recovered oil were used in calculating the above averages.

Oilfield Research Laboratories
RESULTS OF WATER DIFFERENTIATION TESTS
TABLE VI

Company Town Oil Company Lease Walton Well No. 2-W

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation		
			Connate	Drilling & Foreign	Total
1	521.4	21,190			
2	522.7	22,998			
3	524.5	18,824			
4	525.5	20,206			
5	526.2	18,730			
6	531.5	21,581			
7	533.2	21,954			
8	537.7	15,753			
9	538.8	21,410			
10	540.5	23,215			
11	541.5	21,468			
12	543.5	20,168			
13	544.5	26,141			
14	546.9	30,607			
15	547.8	27,676			
16	548.7	23,352			
17	549.8	21,706			
18	551.4	20,960			
19	552.4	21,513			
20	554.2	23,305			
21	555.5	22,926			
22	556.3	20,203			

Note: ppm — parts per million



- KEY:
- SHALY SANDSTONE
 - CALCAREOUS SANDSTONE
 - LIMESTONE
 - LAMINATED CALCAREOUS SANDSTONE AND SHALE
 - FLOODPOT RESIDUAL OIL SATURATION
 - IMPERMEABLE TO WATER

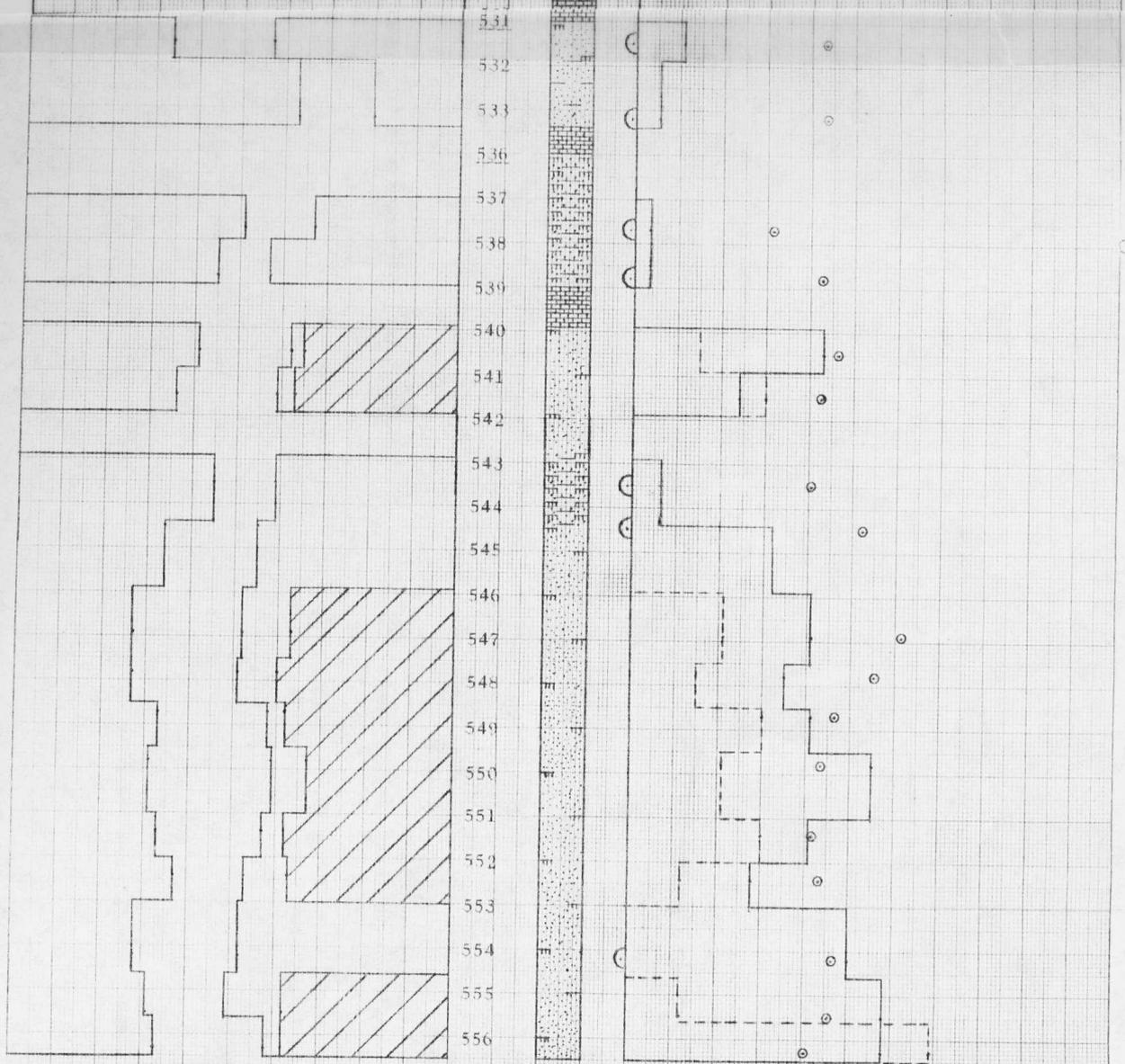
TOWN OIL COMPANY

WALTON LEASE

WELL NO. 2 - W

CASS COUNTY, MISSOURI

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS	CALCULATED OIL RECOVERY BBLs. / ACRE
521.0 - 544.4	14.7	18.5	38.2	43.3	16.8	



- KEY:
- SHALY SANDSTONE
 - CALCAREOUS SANDSTONE
 - LIMESTONE
 - LAMINATED CALCAREOUS SANDSTONE AND SHALE
 - FLOODPOT RESIDUAL OIL SATURATION
 - IMPERMEABLE TO WATER

TOWN OIL COMPANY

WALTON LEASE

WELL NO. 2 - W

CASS COUNTY, MISSOURI

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS	CALCULATED OIL RECOVERY BBLs. / ACRE
521.0 - 544.4	14.7	18.5	38.2	43.3	16.8	
544.4 - 556.5	10.6	21.7	45.7	30.7	45.6	
521.0 - 556.5	25.3	19.8	41.3	38.0	28.8	3460

(PRIMARY AND WATERFLOODING)

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
FEBRUARY, 1981

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