

# OILFIELD RESEARCH LABORATORIES

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

September 12, 1981

C. W. Alcorn, Jr.  
Box 2879  
Victoria, Texas 77902

Gentlemen:

Enclosed herewith are the results of the tests run on the rotary core taken from the Falkenstien Lease, Well No. 4, located in Labette County, Kansas.

The core was sampled and the samples sealed in plastic bags by a representative of the client and submitted to our laboratory on September 2, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

  
Sanford A. Michel

SAM/mkf

3 c to Victoria, Tx.  
1 c to Dallas, Tx.  
1 c to Nevada, Mo.

- REGISTERED ENGINEERS -

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

**Oilfield Research Laboratories**  
**GENERAL INFORMATION & SUMMARY**

Company C. W. Alcorn, Jr. Lease Falkenstien Well No. 4  
 Location 1658.93' E to E/L Sec. & 330.0' N to N/L Sec. L/L  
 Section 36 Twp. 34S Rge. 20E County Labette State Kansas

Elevation, Feet .....

Name of Sand..... **BARTLESVILLE**

Top of Core ..... 250.0

Bottom of Core ..... 290.0

Top of Sand ..... (Tested) 254.3

Bottom of Sand ..... (Tested) 282.0

Total Feet of Permeable Sand ..... 18.3

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
5 - 20	1.7	1.7
50 - 55	2.4	4.1
145 - 250	3.1	7.2
250 - 300	4.5	11.7
300 - 350	3.0	14.7
400 - 410	2.6	17.3
550 & Above	1.0	18.3

Average Permeability Millidarcys ..... 241.7

Average Percent Porosity ..... 22.8

Average Percent Oil Saturation ..... 50.7

Average Percent Water Saturation ..... 29.9

Average Oil Content, Bbls./A. Ft. .... 907.

Total Oil Content, Bbls./Acre ..... 17,497.

## OILFIELD RESEARCH LABORATORIES

LOGName C. W. Alcorn, Jr. Lease Falkenstien Well No. 4

<u>Depth Interval, Feet</u>	<u>Description</u>
250.0 - 254.3	Gray laminated shale and sandstone.
254.3 - 255.1	Brown sandstone.
255.1 - 255.5	Gray shale.
255.5 - 256.4	Brown slightly carbonaceous sandstone.
256.4 - 259.0	Brown sandstone with shale partings.
259.0 - 260.0	Gray shale.
260.0 - 261.6	Gray and brown laminated shale and sandstone.
261.6 - 264.6	Gray shale.
264.6 - 267.8	Brown sandstone with fine shale parting.
267.8 - 282.0	Brownish black slightly carbonaceous sandstone.
282.0 - 287.4	Light and dark brown slightly carbonaceous sandstone.
287.4 - 290.0	Gray shale.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company C. W. Alcorn, Jr.

Lease Falkenstien

Well No. 4

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.	Vert. Perm.
			Oil	Water	Total			Ft.	Cum. Ft.			
1	254.4	20.3	35	40	75	551	9.9	0.8	441	7.92	19.	
2	255.8	20.7	51	30	81	819	18.	0.9	737	16.20	18.	
3	257.7	21.0	56	29	85	912	52.	1.4	1277	72.80	2.9	
4	265.2	18.8	43	40	83	627	*	1.0	627	0.00	1.2	
5	267.6	18.8	41	39	80	598	52.	1.0	598	52.00	108.	
6	268.9	23.6	44	30	74	806	147.	1.6	1290	235.20	151.	
7	270.1	22.6	54	23	77	947	407.	1.6	1515	651.20	165.	
8	271.5	26.0	77	21	98	1553	259.	1.0	1553	259.00	259.	
9	272.5	24.0	48	28	76	894	335.	1.0	894	335.00	185.	
10	273.8	24.0	50	28	78	931	310.	1.0	931	310.00	49.	
11	274.7	23.8	57	27	84	1053	269.	1.0	1053	269.00	58.	
12	275.8	21.2	40	29	69	658	253.	1.5	987	379.50	95.	
13	277.4	23.5	48	30	78	875	200.	1.5	1313	300.00	26.	
14	278.5	22.8	54	33	87	955	415.	1.0	955	415.00	2.9	
15	279.8	26.2	68	23	91	1382	263.	1.0	1382	263.00	170.	
16	280.2	25.4	49	26	75	966	301.	1.0	966	301.00	112.	
17	281.2	25.2	50	39	89	978	556.	1.0	978	556.00	151.	

\* Permeability sample unobtainable.

NOTE:

# Oilfield Research Laboratories

## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Well No.			
C. W. Alcorn, Jr.	Falkenstien	4			
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
254.3 - 267.8	4.1	36.3	148.92		
267.8 - 282.0	14.2	301.0	4,273.90		
254.3 - 282.0	18.3	241.7	4,422.82		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
254.3 - 267.8	5.1	20.0	35.0	722	3,680
267.8 - 282.0	14.2	23.9	28.1	973	13,817
254.3 - 282.0	19.3	22.8	29.9	907	17,497

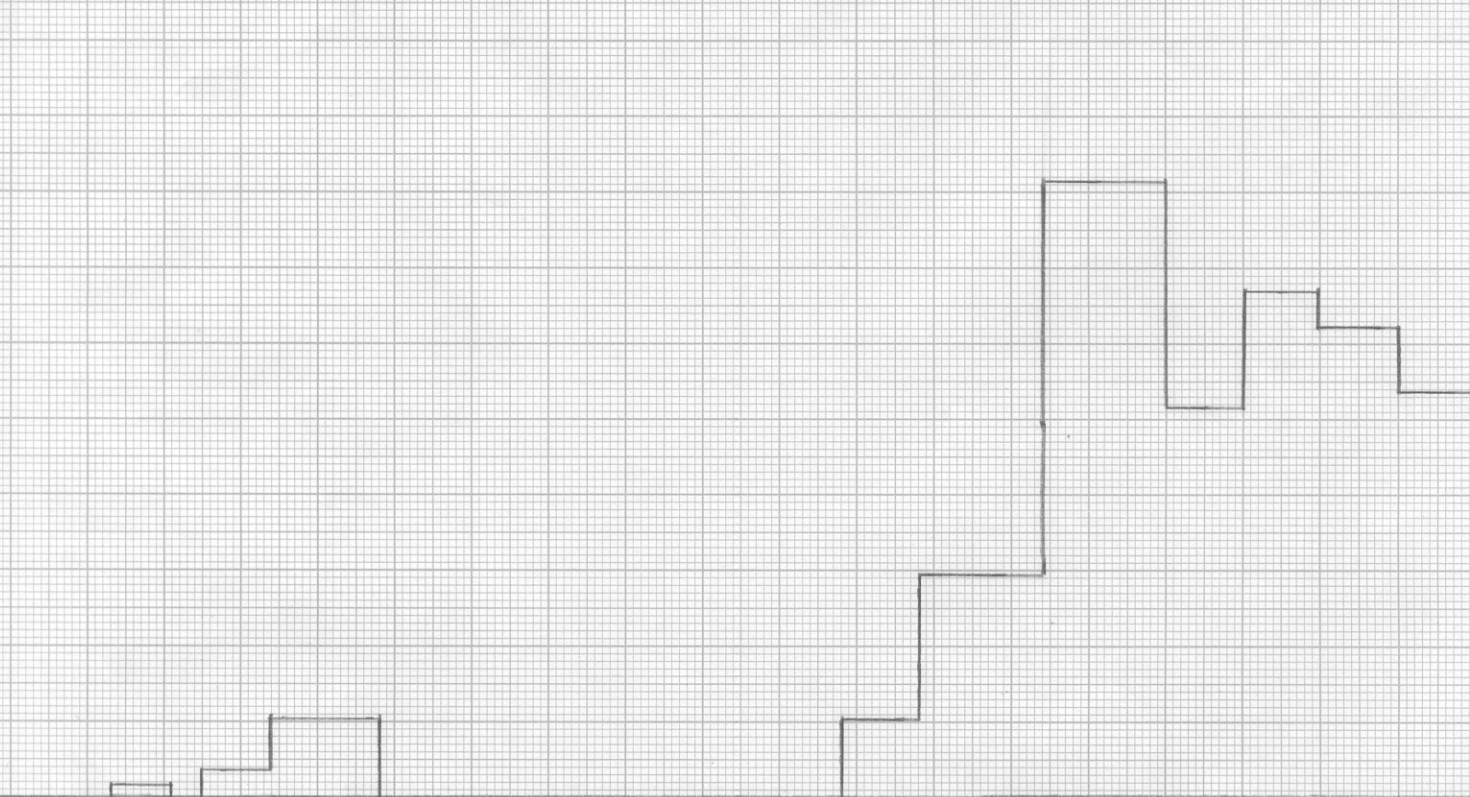
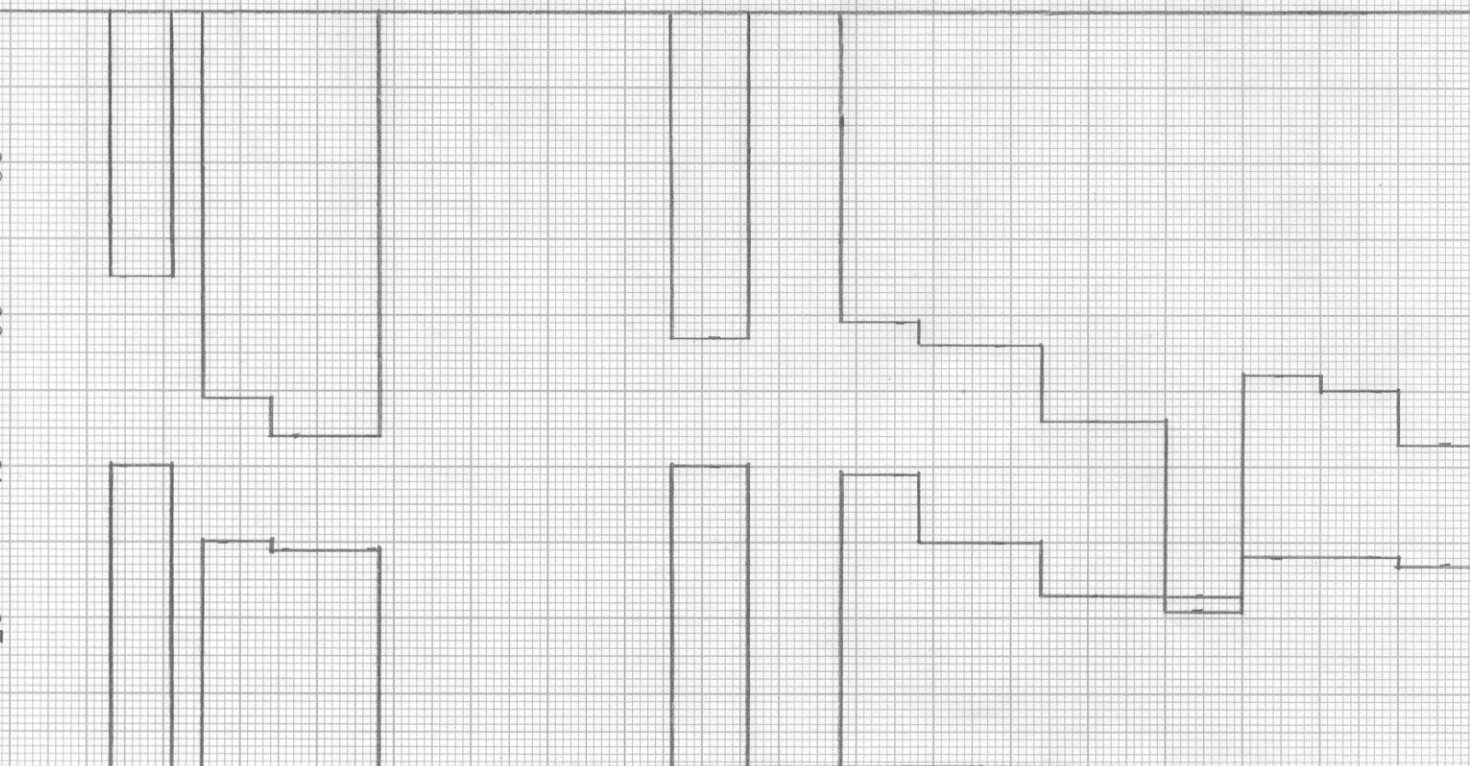
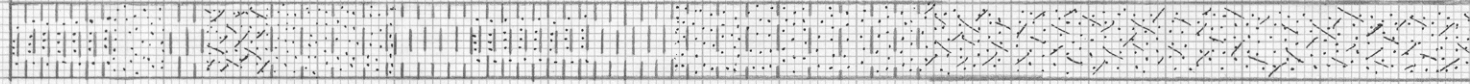
PERMEABILITY, IN MILLIDARCYS

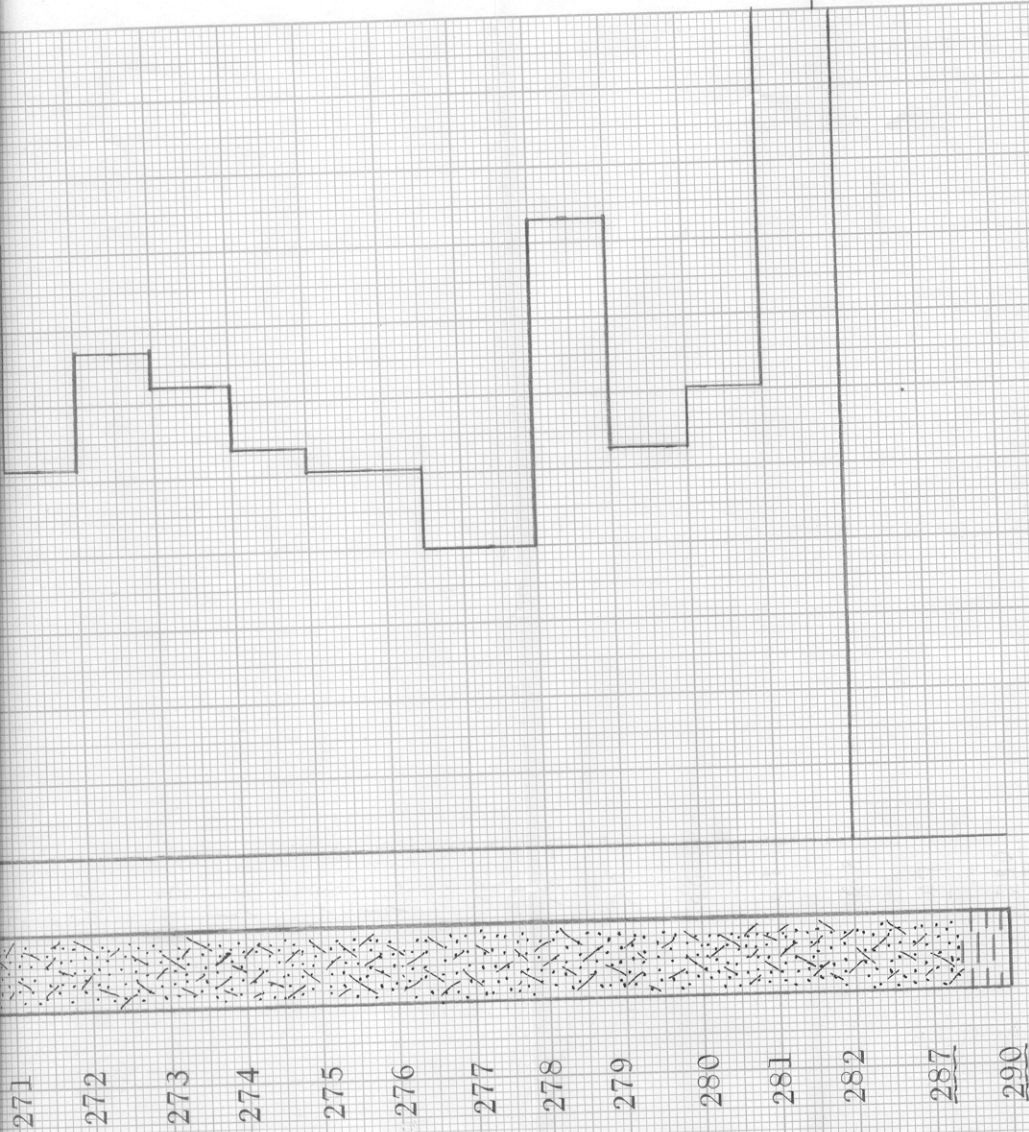
500  
400  
300  
200  
100

WATER SAT., PERCENT  
OIL SAT., PERCENT

90  
80  
70  
60  
50  
40  
30  
20  
10

250  
254  
255  
256  
257  
259  
260  
261  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274





CARBONACEOUS SANDSTONE  
 LAMINATED SANDSTONE AND SHALE  
 SANDSTONE WITH SHALE PARTINGS

KEY:  
 SANDSTONE  
 SHALE

**C. W. ALCORN, JR.**

WELL NO. 4

FALKENSTIEN LEASE

LABETTE COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT OIL SATURATION	AVERAGE PERCENT WATER SATURATION	AVERAGE PERMEABILITY, MILLIDARCS
271				
272				
273				
274				
275				
276				
277				
278				
279				
280				
281				
282				
287				
290				

282  
287  
290

CARBONACEOUS SANDSTONE  
LAMINATED SANDSTONE AND SHALE  
SANDSTONE WITH SHALE PARTINGS

KEY:  
SANDSTONE  
SHALE

# C. W. ALCORN, JR.

FALKENSTIEN LEASE  
LABETTE COUNTY, KANSAS  
WELL NO. 4

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS
254.3 - 267.8	5.1	20.0	46.3	35.0	36.3
267.8 - 282.0	14.2	23.9	52.2	28.1	301.0
254.3 - 282.0	19.3	22.8	50.7	29.9	241.7

OILFIELD RESEARCH LABORATORIES  
CHANUTE, KANSAS  
SEPTEMBER, 1981

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