

L 5266

CORE LABORATORIES, INC.
Petroleum Engineering Service
SANTA FE BUILDING
DALLAS

August 28, 1940

Hunsaker # 3

Ryan Consolidated Oil Company
Dallas, Texas

Gentlemen:

Measurements for permeability, percent porosity, percent residual oil saturation and interpretation for each foot of core analyzed from your Hunsaker # 3, Couch Field, Cowley County, Kansas are given in the attached data.

The following summary and interpretative remarks are applicable to the zones analyzed in this well:

DEPTH OF ZONE	INTERPRETATION	REMARKS
2797-2805.5	-	Low permeability.
2812-2824	Oil	Low productive capacity. Summary figures, including average connate water saturation, for this zone are given on the summary page. This zone has too low productive capacity to be immediately producible. However, the calculated recoverable figure for natural production is 218 barrels per acre foot and that for water drive is 491 barrels per acre foot. These recovery figures may prove significant in secondary recovery operations.
2825-2835.5	Oil	Core summary and recovery figures for this zone are included on the final page of the report. The average porosity and recovery in barrels per acre foot for this zone is slightly higher than the corresponding zone in Hunsaker # 2, but the permeability and productive capacity are lower, indicating that the recoverable oil will be obtained over a longer period of time. The permeable feet of oil productive formation in Hunsaker # 3 is less than that found in Hunsaker # 2.
2835.5-2845	Transition to Water	No?

Very truly yours,

CORE LABORATORIES, INC.

Wm L. Horner (H)

William L. Horner
Secretary-Treasurer

WLH:cm
Enc.

Plug 9' well
back 2847-2838
7' - new
2768

shoot 2815-2835
1' above 4 1/2' shell
19' 60ft

CORE LABORATORIES, INC.

Petroleum Engineering Service

DALLAS

Page 1 of 3

Company RYAN CONSOLIDATED OIL COMPANY Date Report AUGUST 23, 1940 File FL 5-183
 Well HUNSAKER # 3 Location _____ Analysts WE:KN
 Field COUCH Formation BARTLESVILLE Reports to _____
 County COWLEY State KANSAS Elevation 1342.8' DF Coregraph YES
 Cores REED Remarks ON LOCATION

CORE ANALYSIS AND INTERPRETATION

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL OIL SATURATION % PORE SPACE	PROBABLE PRODUCTION	REMARKS
1	2797.7	0	15.8	2.5	None	Low Perm. Shaly
2	98.7	0.7	15.1	4.4		Low Perm. Shaly
3	99.5	0.8	15.6	4.2		Low Perm. Shaly
4	2800.2	0.5	16.4	2.4		Low Perm. Shaly
5	0.9	1.9	17.2	2.3		Low Perm. Shaly
6	02.1	0.6	16.3	6.6		Low Perm. Shaly
7	03.0	2.7	17.5	5.9		Low Perm. Shaly
8	03.7	0.3	14.6	4.6		Low Perm. Shaly
9	04.5	0.3	16.0	6.6		Low Perm. Shaly
10	05.3	0.4	18.4	0.0		Low Perm. Shaly
11	2812.8	4.4	19.0	8.5	Oil	Shaly
12	13.5	0			None	Low Perm. Shaly
13	14.2	13	19.1	12.1	Oil	Shaly
14	14.8	5.6	18.0	13.0	Oil	Shaly
15	15.3	0.6	13.5	0.0		Low Perm. Shaly
16	16.2	8.1	13.4	13.7	Oil	Shaly
17	16.8	3.6	15.7	9.8	Oil	Shaly
18	17.8	8.9	17.4	8.9	Oil	Shaly
19	18.7	9.9	17.0	13.0	Oil	Shaly
20	19.5	15	16.9	13.1	Oil	Shaly
21	20.4	7.7	17.3	14.1	Oil	Shaly
22	21.3	1.6	15.4	10.1		Low Perm. Shaly
23	22.0	4.2	15.4	11.9	Oil	Shaly
24	22.8	6.4	15.6	14.2	Oil	Shaly
25	23.3	2.3	15.3	7.7	Oil	Shaly
26	25.5	10	16.5	14.2	Oil	Shaly
27	26.5	7.8	16.1	11.3	Oil	Shaly
28	27.2	32	17.9	15.6	Oil	
29	27.8	12	17.1	12.9	Oil	
30	28.5	52	19.2	17.4	Oil	
31	29.3	55	17.6	13.1	Oil	
32	30.1	54	18.3	15.4	Oil	
33	31.5	53	17.9	12.1	Oil	
34	32.4	41	17.3	17.4	Oil	

NOTE:

(*) REFER TO ATTACHED LETTER.

(1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.

(2) OFF LOCATION ANALYSES—NO INTERPRETATION OF RESULTS.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE ANALYSIS AND INTERPRETATION

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL OIL SATURATION % PORE SPACE	PROBABLE PRODUCTION	REMARKS
35	2833.3	66	19.5	15.5	Oil	} Transition to water
36	34.2	47	18.4	16.3	Oil	
37	35.0	32	19.2	16.0	Oil	
38	35.9	22	17.0	15.3	Oil	
39	36.8	31	17.3	14.8	Oil	
40	37.5	28	17.6	14.8	Oil	
41	38.6	23	17.2	14.4	Oil	
42	39.6	32	18.2	14.1	Oil	
43	40.4	43	18.6	14.0	Oil	
44	41.3	59	20.2	15.0	Oil	
45	42.2	6.6	15.1	7.0	Oil	
46	43.1	12	16.8	12.3	Oil	
47	44.0	43	18.6	12.4	Oil	
48	44.8	34	17.5	13.2	Oil	
2845.5 - 2847.0		LOST CORE	31.8	17.8		

NOTE:
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 (1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.

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CORE SUMMARY AND CALCULATED RECOVERABLE OIL (2)

CORE SUMMARY

FORMATION	BARTLESVILLE	BARTLESVILLE			
DIVISION NO.	1	2			
DEPTH, FEET	2812.0-2824.0	2825.0-2835.5			
FEET CORED AND DRILLED	12.0	10.5			
FEET OF CORE RECOVERED	12.0	10.0			
% CORE RECOVERY	100	95			
FEET OF PERMEABLE, PRODUCTIVE FORMATION RECOVERED	10.0	10.0			
CUMULATIVE FEET OF PERMEABLE, PRODUCTIVE FORMATION	10.0	20.0			
AVERAGE PERMEABILITY	7.4	38			
CAPACITY	74	380			
CUMULATIVE CAPACITY	74	454			
% CAPACITY	16.3	83.7			
CUMULATIVE % CAPACITY	16.3	100.0			
AVERAGE POROSITY, PERCENT	16.7	17.9			
BBLs. PER ACRE FOOT	1296	1389			
AVERAGE CONNATE WATER SATURATION, % PORE SPACE	44	37			
GRAVITY OF OIL, °A. P. I.	41	42			
GAS/OIL RATIO, CU. FT./BBL.		230			
FORMATION VOLUME FACTOR		1.13			

CALCULATED RECOVERABLE OIL (6)

BY NATURAL OR GAS EXPANSION, BBLs. PER ACRE FOOT (4)	(*)	250			
INCREASE DUE TO WATER DRIVE, BBLs. PER ACRE FOOT	(*)	319			
TOTAL AFTER WATER DRIVE, BBLs. PER ACRE FOOT (3)	(*)	569			

CORE LABORATORIES, INC.

William L. Horner
 William L. Horner

August 28, 1940

NOTE:

- (*) REFER TO ATTACHED LETTER.
- (1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.
- (2) PREDICTION BASED ON COMPLETE ISOLATION OF EACH DIVISION.
- (3) AFTER COMPLETE WATER DRIVE—ORIGINAL RESERVOIR PRESSURE MAINTAINED.
- (4) AFTER REDUCTION OF ORIGINAL RESERVOIR PRESSURE TO ZERO POUNDS PER SQUARE INCH.
- (5) NO ESTIMATE FOR GAS PHASE RESERVOIRS.
- (6) STRUCTURAL POSITION OF WELL SHOULD BE CONSIDERED.

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CORE LABORATORIES, INC.

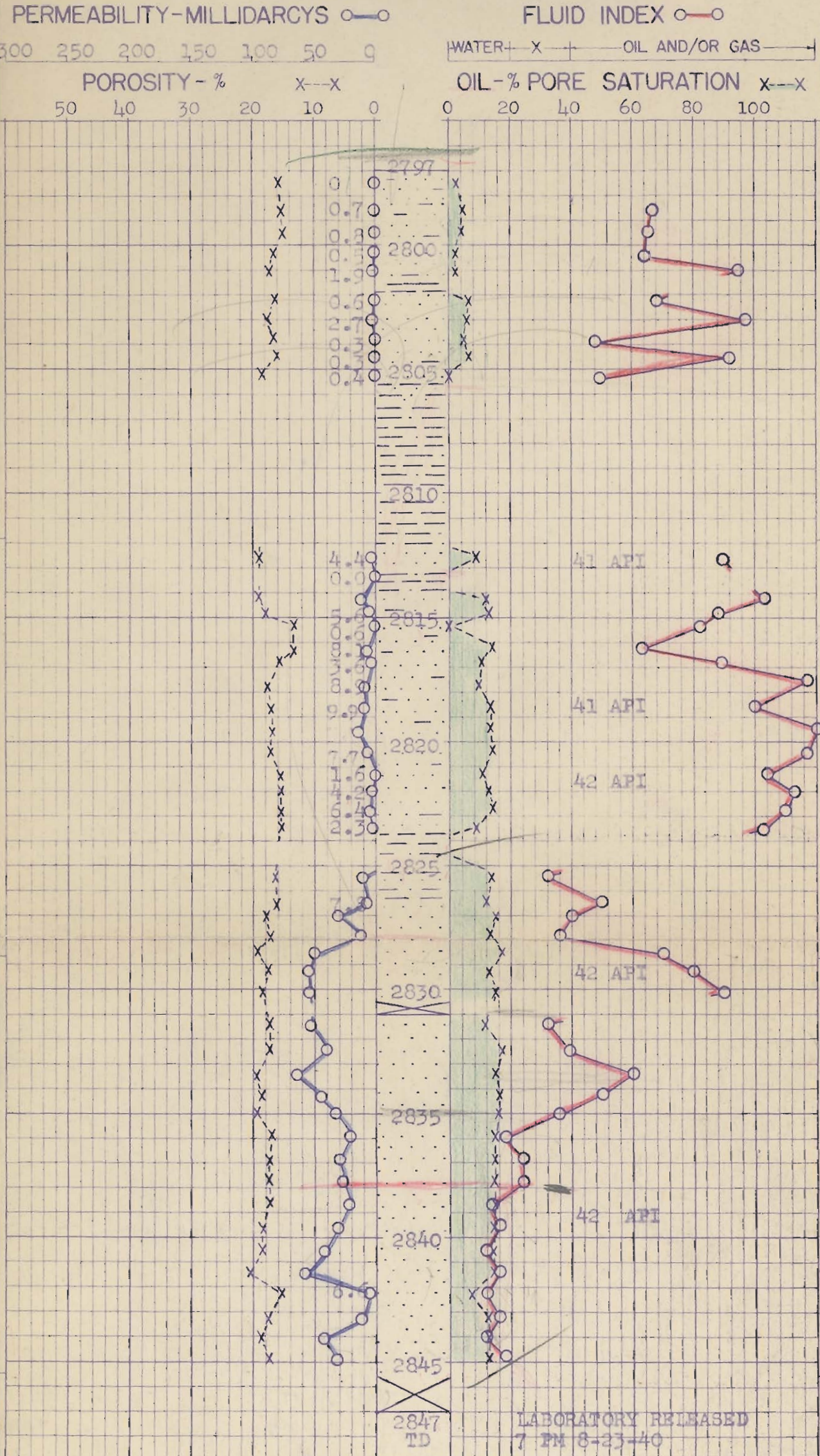
Petroleum Engineering Service

DALLAS

COMPANY RYAN CONSOLIDATED OIL CO DATE 8-23-40 FILE FL5-183
 WELL HUNSAKER #3 CORES REED ANALYSTS WE-KN
 FIELD COUCH REMARKS 1342.8 DF ELEV.
 COUNTY COWLEY STATE KANSAS

COMPLETION COREGRAPH

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LABORATORY RELEASED
7 PM 8-23-40

SMITHERMAN - COUCH 6/51

MONTH	WELLS	DAILY	CUMULATIVE
May 1954	1	3	5504
August 1954	1	3	5840
October 1954	1	2	6052
Dec 1954	1		6297
Jan 1955	1	3	6390

Dec 1955	1		6297
Dec 1954	1		4927

YEAR 1954 = $3\frac{3}{4}$ B/D 1370

@ \$200/661 net = \$2740/year

3 yr Payout = $\frac{3 \text{ yr}}{\$ 8,720}$

4 yr Payout = \$10,960

886 Bbls/8 mo = 111 B/mo