

Shallow water #4 Maune

February 8, 1983

K. C. Sawyer
134C NB

HUGOTON CORE DATA

Enclosed are the uninterpreted reflectance histograms from the first group of ten cores from the Kansas Geological Survey.

There was no recovery from:

Cities Service, 1 Kell B, 5-28S-34W
M. L. Brown, 9 A Maune, 31-21S-33W
Anadarko, 2 Davidson C, 9-33S-40W

Kerogen types from a visual examination can be found on page two.

Tom Hemler

TH/df



Superior Tucker 68-A4
4-29S-42W
Morton, Kansas

5246 M
5379 M
5385 M
5390 M
5397 M

S = Structured (woody)

M = Mixture of woody and amorphous material

ENCLOSURE 6

SHALLOW WATER REFINING CO., #4 MAUNE
31-21S-33E
Finney, Kansas

4629 - M
4634 - A
4639 - M
4646 - M
4657 - M
4730 - S
4736 - A
4773 - A

ANADARKO JONES B-1
9-33S-41W
Morton, Kansas

5039 - S
5046 - S
5061 - M
5067 - S
5070 - S

ANADARKO LOW G-1
6-33S-40W
Morton, Kansas

5370 - S
5374 - S
5382 - S
5407 - S
5410 - S

LOCALITY 5043

4 29S 42W MORTON CO., KANSAS

	<p>D-5043 5246.00 -5247.00 FT</p> <table border="1"> <thead> <tr> <th>AVG. %R0</th> <th>MEDIAN</th> <th>S.DEV.</th> <th>POINTS</th> </tr> </thead> <tbody> <tr> <td>1) * 1.67</td> <td>1.71</td> <td>0.241</td> <td>50</td> </tr> </tbody> </table>	AVG. %R0	MEDIAN	S.DEV.	POINTS	1) * 1.67	1.71	0.241	50
AVG. %R0	MEDIAN	S.DEV.	POINTS						
1) * 1.67	1.71	0.241	50						
	<p>D-5045 5379.00 -5380.00 FT</p> <table border="1"> <thead> <tr> <th>AVG. %R0</th> <th>MEDIAN</th> <th>S.DEV.</th> <th>POINTS</th> </tr> </thead> <tbody> <tr> <td>1) * 1.37</td> <td>1.36</td> <td>0.240</td> <td>50</td> </tr> </tbody> </table>	AVG. %R0	MEDIAN	S.DEV.	POINTS	1) * 1.37	1.36	0.240	50
AVG. %R0	MEDIAN	S.DEV.	POINTS						
1) * 1.37	1.36	0.240	50						
	<p>D-5046 5385.00 -5386.00 FT</p> <table border="1"> <thead> <tr> <th>AVG. %R0</th> <th>MEDIAN</th> <th>S.DEV.</th> <th>POINTS</th> </tr> </thead> <tbody> <tr> <td>1) * 1.46</td> <td>1.45</td> <td>0.235</td> <td>50</td> </tr> </tbody> </table>	AVG. %R0	MEDIAN	S.DEV.	POINTS	1) * 1.46	1.45	0.235	50
AVG. %R0	MEDIAN	S.DEV.	POINTS						
1) * 1.46	1.45	0.235	50						
	<p>D-5047 5390.00 -5391.00 FT</p> <table border="1"> <thead> <tr> <th>AVG. %R0</th> <th>MEDIAN</th> <th>S.DEV.</th> <th>POINTS</th> </tr> </thead> <tbody> <tr> <td>1) * 1.43</td> <td>1.46</td> <td>0.229</td> <td>50</td> </tr> </tbody> </table>	AVG. %R0	MEDIAN	S.DEV.	POINTS	1) * 1.43	1.46	0.229	50
AVG. %R0	MEDIAN	S.DEV.	POINTS						
1) * 1.43	1.46	0.229	50						
	<p>D-5048 5397.00 -5398.00 FT</p> <table border="1"> <thead> <tr> <th>AVG. %R0</th> <th>MEDIAN</th> <th>S.DEV.</th> <th>POINTS</th> </tr> </thead> <tbody> <tr> <td>1) * 1.50</td> <td>1.47</td> <td>0.308</td> <td>50</td> </tr> </tbody> </table>	AVG. %R0	MEDIAN	S.DEV.	POINTS	1) * 1.50	1.47	0.308	50
AVG. %R0	MEDIAN	S.DEV.	POINTS						
1) * 1.50	1.47	0.308	50						

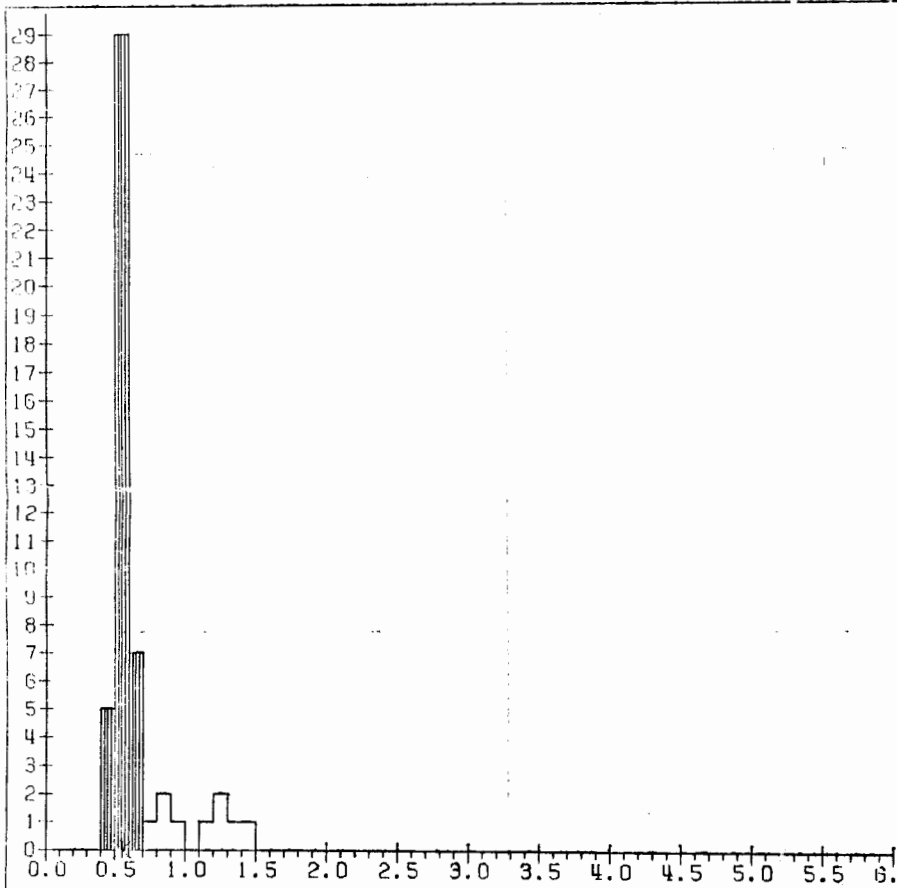
X-AXIS = PERCENT REFLECTANCE OF VITRINITE (%R0)

SHALLOW WATER REFINING CO. NO. 4 MAUNE

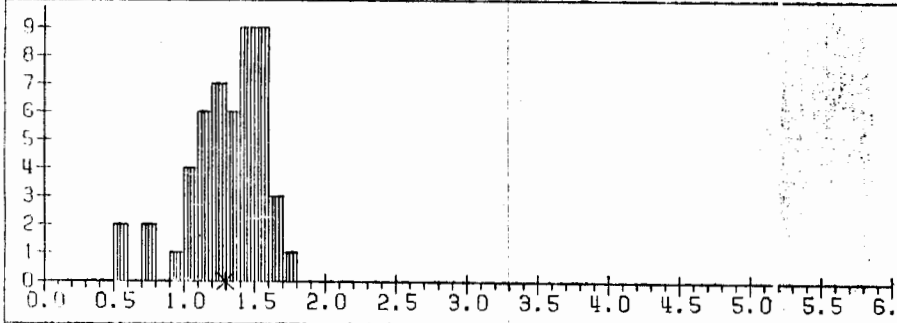
LOCALITY 4953

31 21S 33E FINNEY CO., KANSAS

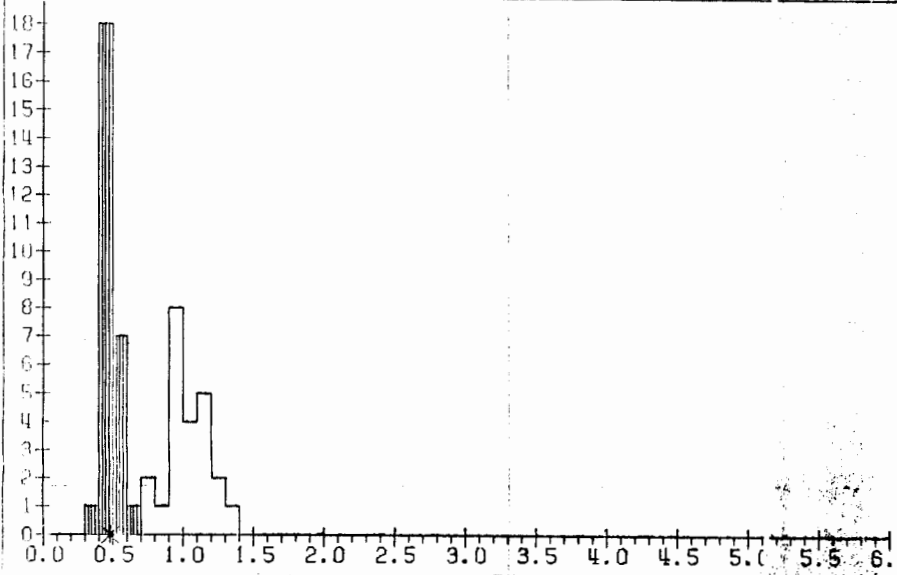
FEB 8 1983



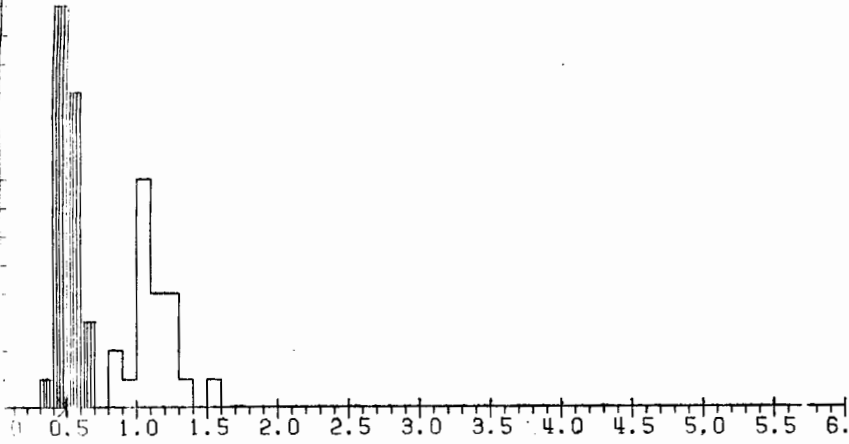
D-4953	4629.00	-4629.00	FT
<u>AVG. ZRO</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) * 0.56	0.55	0.047	41



D-4954	4634.00	-4634.00	FT
<u>AVG. ZRO</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) * 1.29	1.35	0.289	50

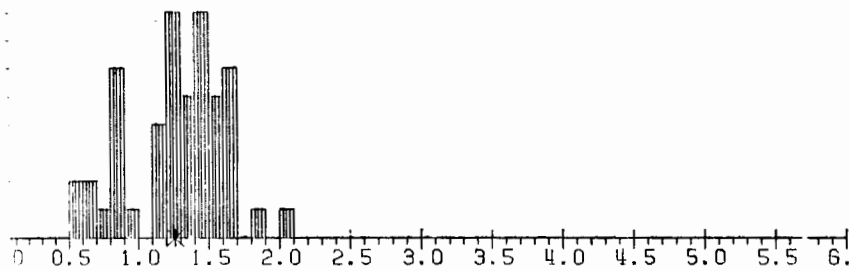


D-4955	4638.00	-4638.00	FT
<u>AVG. ZRO</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) * 0.48	0.47	0.060	27



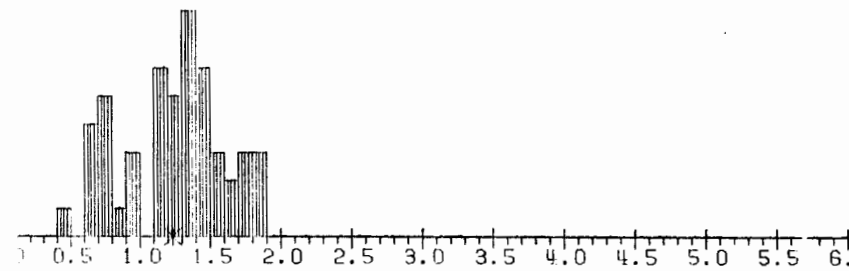
D-4956 4639.00 -4639.00 FT

	<u>AVG. %R0</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) *	0.49	0.49	0.063	29



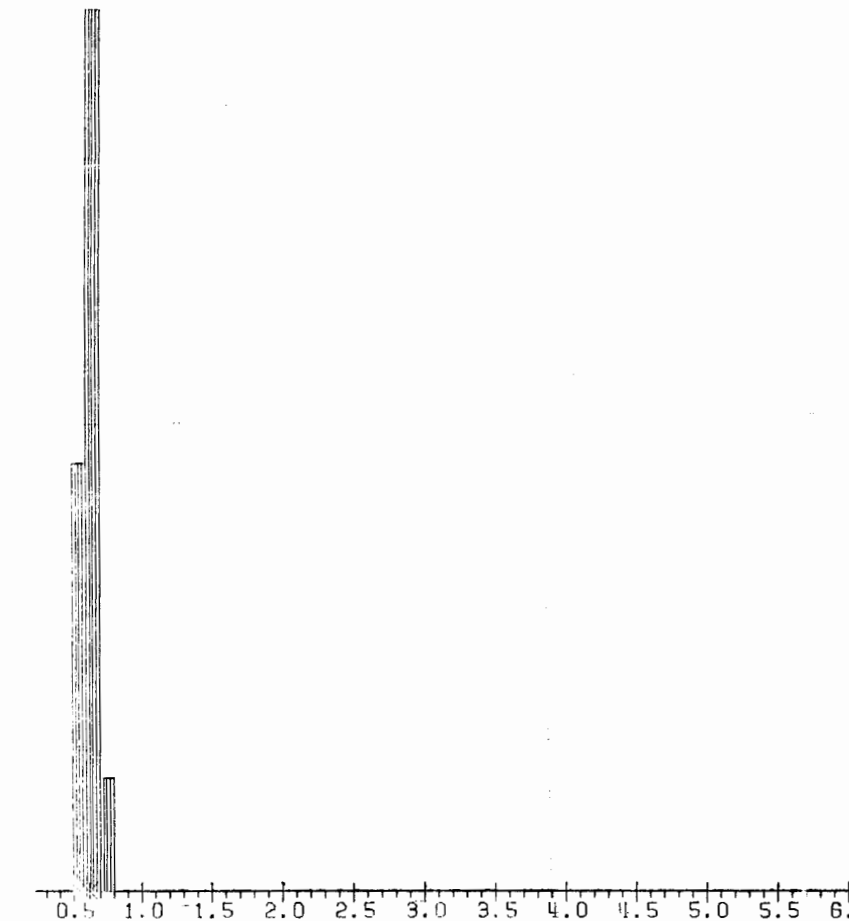
D-4957 4646.00 -4646.00 FT

	<u>AVG. %R0</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) *	1.26	1.32	0.336	50



D-4958 4647.00 -4647.00 FT

	<u>AVG. %R0</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) *	1.23	1.30	0.361	50



D-4959 4657.00 -4657.00 FT

	<u>AVG. %R0</u>	<u>MEDIAN</u>	<u>S. DEV.</u>	<u>POINTS</u>
1) *	0.62	0.63	0.055	50

S = PERCENT REFLECTANCE OF VITRINITE (%R0)

S = FREQUENCY

ANADARKO LOW 3-1

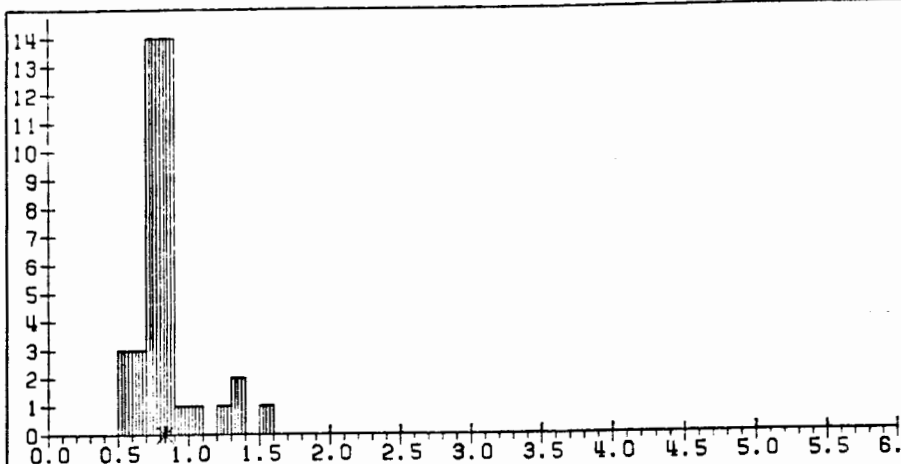
Undetected
Core
Data

June

LOCALITY 4974

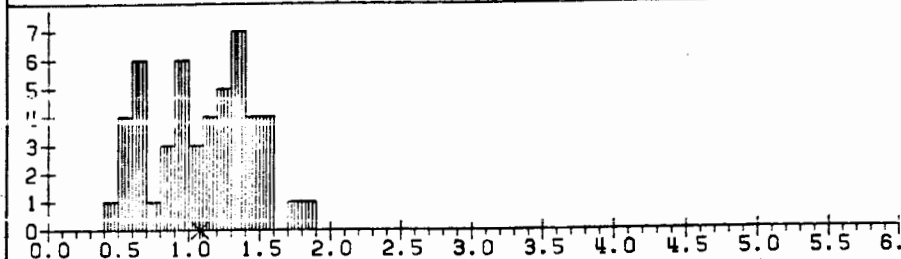
6 33S 41W MORTON CO., KANSAS

1982



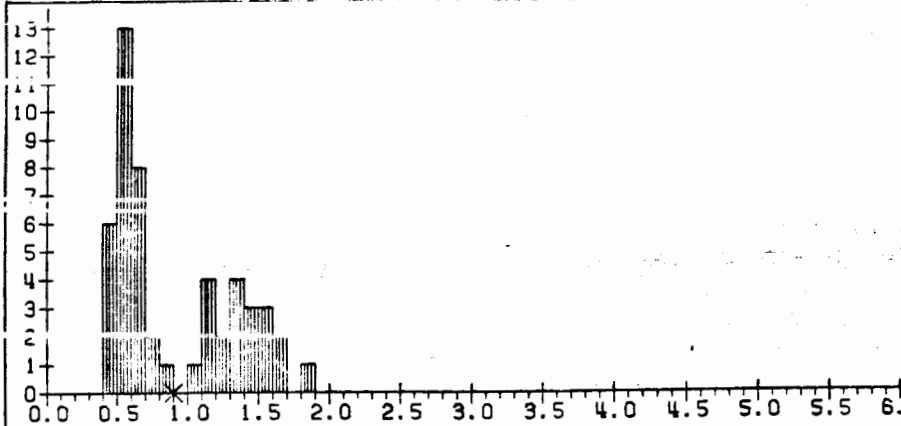
D-4974 5370.00 -5370.00 FT

AVG. %R0	MEDIAN	S.DEV.	POINTS
1) * 0.84	0.80	0.203	40



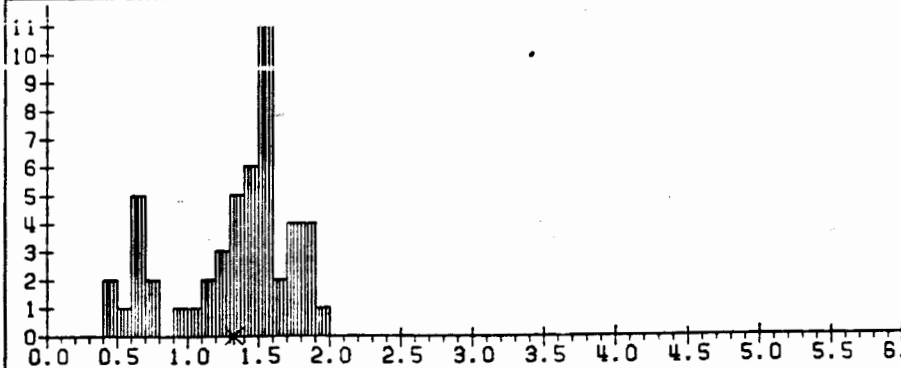
D-4975 5374.00 -5374.00 FT

AVG. %R0	MEDIAN	S.DEV.	POINTS
1) * 1.08	1.12	0.346	50



D-4976 5382.00 -5382.00 FT

AVG. %R0	MEDIAN	S.DEV.	POINTS
1) * 0.90	0.68	0.413	50



D-4977 5407.00 -5407.00 FT

AVG. %R0	MEDIAN	S.DEV.	POINTS
1) * 1.33	1.45	0.410	50

X-AXIS = PERCENT REFLECTANCE OF VITRINITE (%R0)

Y-AXIS = FREQUENCY

AVERAGE %R0 FOR POP.1 = 1.04

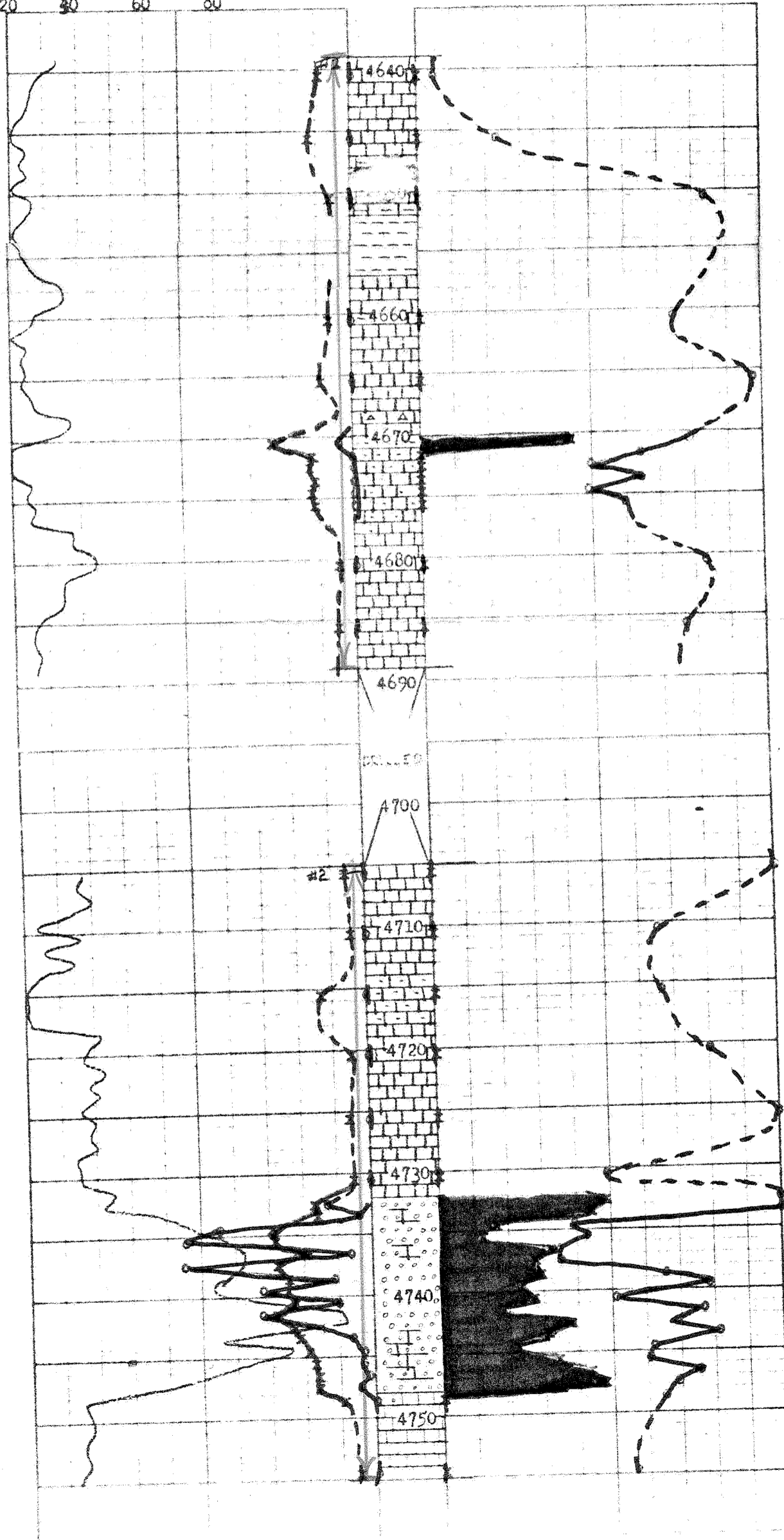
Kansas Cores

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS

COMPANY Maurice L. Brown DATE 1-26-75
 WELL Maune #A-9 CNWN# 31-21-33 W ANALYST IS
 FIELD Danme
 COUNTY Finney STATE Kansas Elevation: KB --99'

The analyses and interpretations are based on material brought to Kansas Cores by the client and such data and interpretations are accessible only to that company which the client represents. Kansas Cores makes no warranty and makes no guarantee for the interpretations and opinions of the logs. Our opinions of an analysis are placed at the discretion of the operator.

PERMEABILITY MILLIDARCY'S $\bigcirc \rightarrow \bigcirc$ CONNATE WATER % SATURATION
 800 400 200 0 0 70 60 50 40 $\bigcirc \rightarrow \bigcirc$
 POROSITY-% X \rightarrow X OIL % PORE SATURATION X \rightarrow X
 CORING TIME 20 10 0 10 20 30
 MIN/FT
 20 40 60 80



Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

Jan. 26, 1975

1125 NORTH LIGHTNER
WICHITA, KANSAS 67208

Re: CORE ANALYSIS REPORT
Maurice L. Brown
Mauna #A-9
Finney County, Kansas

Maurice L. Brown
Vickers-USA Bldg.
Wichita, Kansas

Gentlemen:

The cores from your well, Mauna #A-9, Finney County, Kansas have been analysed for permeability, porosity, and residual saturation of oil and water. The data will be found tabulated on the following pages and indicated on the coreograph. The data averages and recovery figures are not included in this report due to the non-productive nature of the zones cored.

The following is a short discussion of the section cored and analysed.

4670' to 4671' - Oil Productive

This isolated 1' of sand toward the top of the Mississippian section had good oil saturation and waters well in line for oil production. Also some permeability and fair porosity was measured. Although it is considered to be oil productive, the thinness of the zone would prohibit commercial production.

4732' to 4742' - Water Productive

This collitic zone in the Mississippian had good rather erratic permeabilities with fairly average porosities. Varied oil percentages and high waters were measured throughout. A water contact was not encountered, as the 2' of oil productive zone at the top is considered to be of a local nature only. It is expected that only water would be produced from this section.

Yours very truly,

KANSAS CORES

Ivan L. Stuber
Ivan L. Stuber

Attachments

see 2 copies to Maurice L. Brown, Wichita, Kas.

Re: CORE DESCRIPTION
Maurice L. Brown
Maune #A-9
Finney County, Ks.

<u>CORE #1</u>	<u>4639' to 4689'</u>	<u>Cut 50'</u>	<u>Rec. 50'</u>
4639--47	Hard dense to some very fine crystalline light grey-white limestone: No show		
4647--48	Light grey-green shaley limestone with 1" dark grey chert: No show		
4648--51 $\frac{1}{2}$	Light grey-tan very fine crystalline to dense limestone, slightly stylolitic in part: No show		
4651 $\frac{1}{2}$ --52	Grey-green shale with some limestone laminations & streaks: No show		
4652--57	Soft rotten badly washed grey-green shale		
4657--60	Hard dense to very fine crystalline medium tan limestone: No show Some grey shaley limestone, trace green shale partings		
4660--61	Same with few shale streaks		
4661--68	Dense tan limestone with traces green shale partings in part: No show		
4668--69	Hard dense dark tan limestone with 4" streak of dark maroon and some mottled light grey fresh chert: No show		
4669--70	Hard dense tan limestone: No show		
4670--71	Dark brown very fine grained clean sand, broken to fractured(may have been done while coring): Good stain and odor, bleeding some oil		
4671--73	light grey-green sandy limestone: No show		
4673--77	Slightly sandy light grey limestone, traces green glauconite: No show		
4677--89	Hard dense light grey-white limestone: No show		

CORE #2 4705' to 4755'

Cut 50'

Rec. 50'

- 4705--14 Hard dark grey-tan dense limestone: No show
- 4714--18 Soft greenish-grey slightly sandy limestone: No show
- 4718--24 Very hard dense very fine crystalline light tan limestone: No show
- 4724--31 Hard dark grey shaley limestone with some fossils scattered throughout:
No show
- 4731--32 Hard light grey-tan limestone : No show
- 4732--34 Hard very finely oolitic limestone, dark brown, with some light grey
dense to finely crystalline limestone streaks & inclusions: Good
stain and odor, some bleeding oil
- 4734--36 Fine to medium oolitic clean limestone, soft: Good stain and odor
- 4736--37 Finely oolitic limestone with some inclusions & streaks of light grey-
tan crystalline limestone: Good stain and odor, some bleeding oil
- 4737--43 Soft finely oolitic limestone, clean: Good stain and odor
- 4743--45 Finely oolitic limestone with few streaks & inclusions of dense grey
limestone: Good stain and odor
- 4745--48 Hard dark brown medium oolitic and much medium crystalline and fossili-
ferous limestone, vertically fractured bottom 2': Good stain and odor,
darker dead looking stain in fracture
- 4748--49 Hard light tan-brown fine to medium crystalline limestone: No show
- 4749--55 Hard medium grey shaley limestone, dense to very fine crystalline: No show

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS 67208

WELL	Maune #A-9	COUNTY	Finney	STATE	Kansas
OPER	Maurice L. Brown	DATE	1-26-75	FILE NO.	S-1238
DEPTH	Darrie	TYPE CORES	Diamond	ANALYST	IS

ANALYSIS DATA AND INTERPRETATIONS

DEPTH	CORRECTION	PERMEABILITY MILLIDARREYS		POROSITY %	SATURATION		PROBABLE PRODUCTION	REMARKS
		HORIZONTAL	VERTICAL		WATER IN PORE SPACE	WATER IN PORE SPACE		
1	4640 41	0.0	0.0	4.9	86.1	0.0	No Perm	
2	4645 46	0.0	0.0	6.1	69.0	0.0	No Perm	
3	4650 51	0.0	0.0	3.4	38.2	0.0	No Perm	
4	4660 61	0.0	0.0	3.9	43.8	0.0	No Perm	
5	4665 66	0.0	0.0	4.8	30.6	0.0	No Perm	
6	4670 71	7.4	7.2	11.8	40.8	21.9	Oil	
7	4671 72	0.0	0.0	5.9	48.3	0.0	No Perm	
8	4672 73	0.0	0.0	6.2	55.2	0.0	No Perm	
9	4673 74	0.0	0.0	5.5	48.2	0.0	No Perm	
10	4674 75	0.0	0.0	5.9	55.4	0.0	No Perm	
11	4675 76	0.0	0.0	5.3	50.0	0.0	No Perm	
12	4680 81	0.0	0.0	3.3	39.4	0.0	No Perm	
13	4685 86	0.0	0.0	3.7	41.9	0.0	No Perm	
14	4705 06	0.0	0.0	3.5	22.6	0.0	No Perm	
15	4710 11	0.0	0.0	2.8	47.5	0.0	No Perm	
16	4715 16	0.0	0.0	6.5	47.4	0.0	No Perm	
17	4720 21	0.0	0.0	3.3	40.0	0.0	No Perm	

Kansas Cores

DEPLETION RESERVOIR ENGINEERING
WICHITA, KANSAS 67208

COUNTY

STATE

DATE

FILE NO

TYPE CORES

ANALYST

ANALYSIS DATA AND INTERPRETATIONS

NO.	DEPTH	PERMEABILITY		CORE LOSS	SATURATION	SATURATION	PREFERABLE	REMARKS
		MD/DARCY	SPERM					
18	4725 26	0.0	0.0	3.4	27.6	0.0	No Perm	
19	4730 31	0.0	0.0	2.5	55.2	0.0	No Perm	
20	4732 33	180	14.7	8.9	25.6	24.4	Oil	
21	4733 34	32.3	54.8	8.5	24.1	21.4	Oil	
22	4734 35	580	600	14.9	60.3	8.6	Water	
23	4735 36	690	865	14.4	59.2	6.0	Water	
24	4736 37	85.1	79.6	9.9	73.1	15.6	Water	
25	4737 38	700	1050	14.1	63.4	14.3	Water	
26	4738 39	110	83.5	12.1	47.9	14.7	Water	
27	4739 40	320	430	12.8	40.4	11.8	Water	
28	4740 41	100	100	11.8	54.8	13.7	Water	
29	4741 42	330	340	14.8	41.7	9.3	Water	
30	4742 43	140	140	11.8	45.8	19.1	Water	
31	4743 44	67.9	44.0	10.7	39.4	15.3	Water	
32	4744 45	23.7	3.2	9.8	49.2	11.0	Water	
33	4745 46	26.1	3.8	9.0	49.9	17.4	Water	
34	4746 47	8.6	0.2	8.6	42.5	21.3	Water	
35	4747 48	27.1	17.5	8.9	45.5	24.0	Water	
36	4748 49	0.0	0.0	4.5	47.9	0.0	Water	
37	4754 55	0.0	0.0	2.5	52.0	0.0	No Perm	

CORE LABORATORIES, INC.



Petroleum Reservoir Engineering

COMPANY AMOCO PRODUCTION COMPANY

FILE NO. RP-2-6923

WELL MAUNE NO. 9

DATE 8-2-82

FIELD _____ FORMATION _____

ELEV. _____

COUNTY _____ STATE _____ DRLG. FLD. _____

CORES _____

LOCATION _____

CORRELATION COREGRAPH

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 or omissions excepted); but Core Laboratories, Inc., and its officers and employees, assume no responsibility and make no warranty or representations 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.

VERTICAL SCALE: 5" = 100'

Total Water _____

PERCENT PORE SPACE

100 80 60 40 20 0

Gamma Ray

RADIATION INCREASE →

Permeability _____

MILLIDARCIES

100 10 1.0 .1

Depth Feet 30

Porosity _____

PERCENT

20 10

Oil Saturation _____

PERCENT PORE SPACE

0 0 20 40 60 80 100

