

25-9-19E

Petroleum Reserve Engineering
DALLAS, TEXAS

Core Analysis Report

for

BAZELEY GEOLOGICAL SERVICES

SUSSELKA
~~SABELKA~~ NO. 1 WELL

JEFFERSON COUNTY, KANSAS

These analyses, opinions or interpretations are based on observations and materials 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



Bazeley Geological Services
1806 Brookfield
Midland, MI 48640

File No: 3602-1178
April 18, 1985

Att: Mr. Paul Bazeley

Re: Core Analysis Report
McLough Sand/Mississippian Formation
Sabelka No. 1 Well
Jefferson Co., Kansas

Gentlemen:

Diamond cores from this well between the depths of 1530-1595' and 1632-1652' have been received in our Michigan laboratory for conventional (plug-type) analysis of selected intervals. Upon receipt the cores were oriented, surface gamma-logged and a representative sample obtained from each foot of the selected intervals. A portion of each sample was crushed and its inplace fluids recovered by retorting. From the remaining portion of each sample 1" O. D. cylindrical plugs were obtained horizontal to bedding, using water as a coolant. The plugs were cleaned by refluxing toluene through them and dried in a vacuum oven at 140° C. Air permeabilities and Boyle's Law porosities were measured on the clean and dried samples. Results of these analyses are herein submitted in tabular and graphical form with a graph of the Surface-Gamma log.

1554.5' - 1590'

Analysis of this section indicates a porous and permeable sandstone formation interpreted to be productive of gas. The high oil saturation indicated below 1590' is associated with a black, heavy oil which is interpreted to be nonproductive by pressure depletion techniques.

Bazeley Geological Services

April 18, 1985

1635' - 1651'

Analysis of this section indicates a dolomite formation interpreted to be nonproductive of hydrocarbons due to low permeability and/or excessive water.

Histogram presentations of permeability/porosity data with their respective tabular data are included. These presentations are primarily designed to aid in selecting "net pay cutoff" values of permeability and/or porosity for the reservoir. An explanation of the histogram usage is included for your reference.

This core has been vertically sliced by diamond saw and the slabs separately packaged. One set of slabs has been delivered to you and the other is temporarily stored in our laboratory pending instructions for its disposition.

The trimmed end of each horizontal plug has been crushed to simulate drill cuttings. A portion of each sample was sealed in a vial with a hydrocarbon solvent and the fluorescence intensity of the sample's extract measured at the end of 1 hour and 20 hours extraction times to determine possible correlations between rock properties and hydrocarbon extraction rates. Copies of these experimental analyses are included for your information at no additional cost.

The opportunity to be of service on this well is appreciated and please call if you have any questions.

Very truly yours,

CORE LABORATORIES, INC.

*Mabre Maness*Mabre Maness
District Managerer
encl.

BAZELEY GEOLOGICAL SERVICES
SABELKA NO. 1 WELL
JEFFERSON COUNTY, KANSAS

Date: 4-10-85
Formation: MCLOUGH SAND/MISSISSIPPIAN
Drlds. Fluid: FRESH WATER
Location:

File No: 3602-1170
Engineer: MCCLURE
Elevation:

* Indicates Plug Perm S Indicates Preserved Sample + Assumes Fluid Den. = 1.2 g/cc

Smp. No.	Depth	Feet Anal	Perm to Air, md	Perm 90 deg Vert	Perm ft(90) Gex	Porosity %	Fluid Oil	Sats Water	Density +Bulk Grn Prod	Prob	Descript
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CONVENTIONAL (PLUG-TYPE) ANALYSIS

1530.0-1554.5 SHALE NO ANALYSIS
Middle Mc Louth ss.

1	1554.5-56.0	*	130.00	12.8	3.0	20.7	SS, M/GR, M
2	1556.0-58.0	*	345.00	15.9	2.3	25.5	SS, M/GR, M
3	1558.0-59.8	*	5714.00	17.4	6.3	25.2	SS, M/GR, M FRAC

1559.8-1563.0 LOST CORE

4	1563.0-65.0	*	941.00	21.2	1.7	39.2	SS, M/GR, M
5	1565.0-67.0	*	1279.00	22.8	TR	41.6	SS, M/GR, M
6	1567.0-69.0	*	1170.00	23.7	TR	30.9	SS, M/GR, M
7	1569.0-71.0	*	903.00	21.5	1.6	46.0	SS, M/GR, M
8	1571.0-73.0	*	657.00	21.9	TR	43.7	SS, M/GR, M
9	1573.0-75.0	*	614.00	22.2	TR	45.3	SS, M/GR, M
10	1575.0-77.0	*	597.00	21.9	TR	42.2	SS, M/GR, M

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HAZELEY GEOLOGICAL SERVICES
SHELKA NO. 1 WELL

Date: 4-10-85
Formation: MCLOUGH SAND/MISSISSIPPIAN

File No: 3602-1178
Engineer: MCCLURE

Smp. No.	Depth	Perm to Air, md	Perm Maximum	90 deg Vert	Perm ft(90)	Porosity %	Fluid Sats	Density	Prob
11	1000.0-79.0	*		670.00	20.3	TR	39.3	SS,M/GR	
12	1000.0-81.0	*		1362.00	21.9	TR	39.5	SS,M/GR	
13	1001.0-83.0	*		1128.00	22.3	1.6	40.1	SS,M/GR	
14	1003.0-85.0	*		1135.00	21.7	TR	41.6	SS,M/GR	
15	1005.0-87.0	*		937.00	21.9	1.6	46.0	SS,M/GR	
16	1007.0-89.0	*		1227.00	21.6	1.6	39.5	SS,M/GR	
17	1009.0-90.0	*		1082.00	21.4	1.6	42.8	SS,M/GR	
18	1010.0-91.0	*		1096.00	20.0	24.0	28.0	SS,M/GR	
19	1011.0-92.0	*		42.00	15.6	55.8	19.2	SS,M/GR	
20	1012.0-93.0	*		106.00	14.4	52.1	15.3	SS,M/GR	
21	1013.0-94.0	*		0.02	13.2	3.1	89.4	DOL,F/XL	
22	1014.0-94.5	*		<0.02	11.9	TR	91.6	DOL,F/XL	
DRILLED INTERVAL									
CORE NOT SUBMITTED FOR ANALYSIS									
23	1015.0-1632.0	*		<0.02	2.0	TR	83.9	LS,F/XL	
24	1016.0-36.0	*		0.79	25.7	0.0	70.1	DOL,F/XL	

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RAZELEY GEOLOGICAL SERVICES
SABELKA NO. 1 WELL

Date:

4-10-85

Formation:

MCLOUGH SAND/MISSISSIPPIAN

File No: 3602-1178
Engineer: MCCLURE

Smp. No.	Depth	Feet Anal	Perm Maximum	Perm to Air, md 90 deg Vert	Perm ft(90)	Porosity % Ge	Fluid Sats Oil Water	Density +Bulk Grn Prod	Prob Descrip
25	1637.0-38.0		*	0.27		20.9	0.0 70.3		LS,F/XL
26	1638.0-39.0		*	0.97		28.2	0.0 74.7		DOL,F/XL
27	1639.0-40.0		*	1.08		27.6	0.0 66.7		DOL,F/XL
28	1640.0-41.0		*	0.19		23.2	0.0 83.3		DOL,F/XL
CORE NOT SUBMITTED FOR ANALYSIS									
29	1646.0-47.0		*	<0.02		2.3	0.0 88.6		LS,F/XL
30	1647.0-48.0		*	1.44		26.1	0.0 58.9		DOL,F/XL
31	1648.0-49.0		*	0.44		21.7	TR 72.3		DOL,F/XL
32	1649.0-50.0		*	3.02		22.6	0.0 86.0		DOL,F/XL
33	1650.0-51.4		*	1.26		22.0	TR 57.0		DOL,F/XL

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PERMEABILITY: MILLIDARCIES

1000

100

10

1.0

MCLOUGH SAND

PERMEABILITY VS. POROSITY
BAZELEY GEOLOGICAL SERVICES
SABELKA NO. 1 WELL

JEFFERSON COUNTY, KANSAS

12.0

16.0

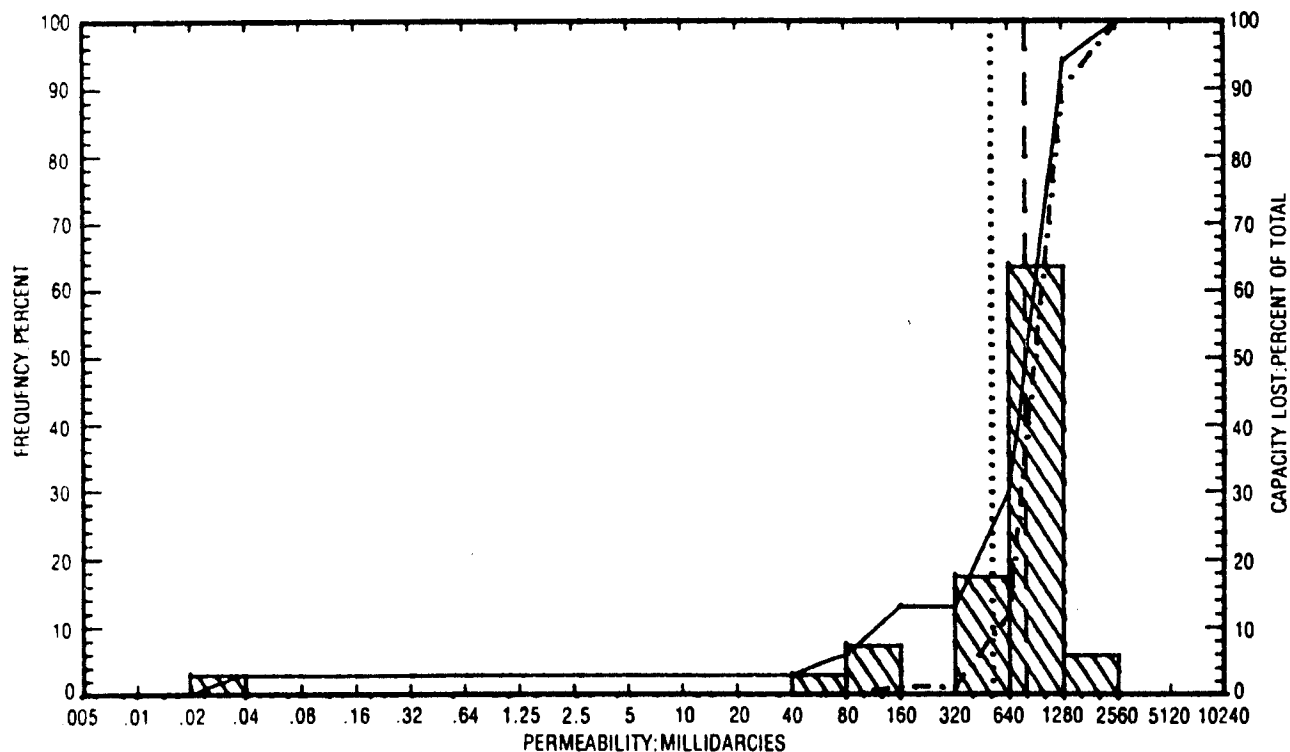
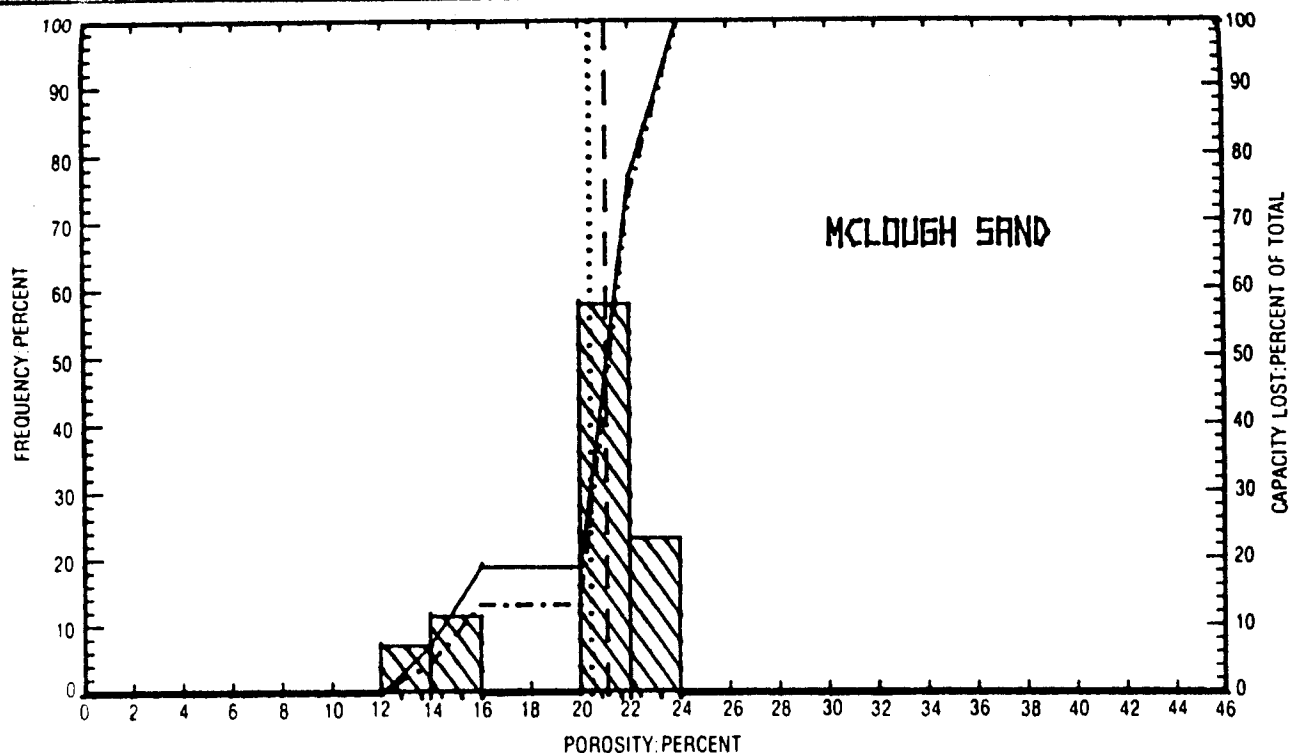
20.0

24.0

28.0

32.0

POROSITY: PERCENT



PERMEABILITY AND POROSITY HISTOGRAMS

BAZELEY GEOLOGICAL SERVICES
 SABELKA NO. 1 WELL
 V
 JEFFERSON COUNTY, KANSAS

LEGEND
 ARITHMETIC MEAN POROSITY
 GEOMETRIC MEAN PERMEABILITY
 MEDIAN VALUE
 CUMULATIVE FREQUENCY
 CUMULATIVE CAPACITY LOST-.-.-.-

25-9-19E

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES

FIELD :

WELL : ^UABELKA NO. 1 WELL
COUNTY, STATE: JEFFERSON COUNTY, KANSAS

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.010 TO 5000
POROSITY : PERCENT (GAS EXPANSION) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 1530.0 - 1594.5 INTERVAL LENGTH : 64.5
FEET ANALYZED IN ZONE : 36.8 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES
AVERAGE	ARITHMETIC HARMONIC GEOMETRIC
-----	-----
20.4	825 0.69 513

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES
FIELD :

WELL : SWEELKA NO. 1 WELL
COUNTY, STATE: JEFFERSON COUNTY, KANSAS

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	(ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
12.0 - 14.0	2.5	13.0	3.9	78	7.2	7.2
14.0 - 16.0	4.0	15.5	152	210	11.6	18.8
20.0 - 22.0	20.0	21.5	919	952	58.0	76.8
22.0 - 24.0	8.0	22.8	1009	1048	23.2	100.0

TOTAL NUMBER OF FEET = 34.5

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: HAZELEY GEOLOGICAL SERVICES WELL : ^USHREKKA NO. 1 WELL
FIELD : COUNTY, STATE: JEFFERSON COUNTY, KANSAS

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.020 - 0.039	1.0	0.020	0.020	13.2	2.9	2.9
40 - 80	1.0	42	42	15.6	2.9	5.8
80 - 160	2.5	120	120	13.4	7.2	13.0
320 - 640	6.0	502	519	20.0	17.4	30.4
640 - 1280	22.0	990	1012	21.8	63.8	94.2
1280 - 2560	2.0	1362	1362	21.9	5.8	100.0

TOTAL NUMBER OF FEET = 34.5

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES WELL : SABELKA NO. 1 WELL
FIELD : COUNTY, STATE: JEFFERSON COUNTY, KANSAS

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	34.5	100.0	20.4	21.1
2.0	0.0	0.0	34.5	100.0	20.4	21.1
4.0	0.0	0.0	34.5	100.0	20.4	21.1
6.0	0.0	0.0	34.5	100.0	20.4	21.1
8.0	0.0	0.0	34.5	100.0	20.4	21.1
10.0	0.0	0.0	34.5	100.0	20.4	21.1
12.0	0.0	0.0	34.5	100.0	20.4	21.1
14.0	2.5	4.6	32.0	95.4	21.0	21.2
16.0	6.5	13.4	28.0	86.6	21.8	21.4
18.0	6.5	13.4	28.0	86.6	21.8	
20.0	6.5	13.4	28.0	86.6	21.8	
22.0	26.5	74.2	8.0	25.8	22.8	
24.0	34.5	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 705.4

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES WELL : SABELKA NO. 1 WELL
FIELD : COUNTY, STATE: JEFFERSON COUNTY, KANSAS

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	34.5	100.0	512.98	791.67
0.010	0.0	0.0	34.5	100.0	512.96	791.67
0.020	0.0	0.0	34.5	100.0	512.96	791.67
0.039	1.0	0.0	33.5	100.0	694.54	804.24
0.078	1.0	0.0	33.5	100.0	694.54	804.24
0.156	1.0	0.0	33.5	100.0	694.54	804.24
0.313	1.0	0.0	33.5	100.0	694.54	804.24
0.625	1.0	0.0	33.5	100.0	694.54	804.24
1.250	1.0	0.0	33.5	100.0	694.54	804.24
2.500	1.0	0.0	33.5	100.0	694.54	804.24
5	1.0	0.0	33.5	100.0	694.54	804.24
10	1.0	0.0	33.5	100.0	694.54	804.24
20	1.0	0.0	33.5	100.0	694.54	804.24
40	1.0	0.0	33.5	100.0	694.54	804.24
80	2.0	0.1	32.5	99.9	757.16	817.00
160	4.5	1.2	30.0	98.8	882.90	849.82
320	4.5	1.2	30.0	98.8	882.90	849.82
640	10.5	12.1	24.0	87.9	1016.79	
1280	32.5	90.4	2.0	9.6	1361.99	
2560	34.5	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET (ARITHMETIC) = 28451.02

PERMEABILITY: MILLIDARCIES

10
1.0
0.10
0.01

MISSISSIPPIAN LIME

PERMEABILITY VS. POROSITY
BAZELEY GEOLOGICAL SERVICES
SABELKA NO. 1 WELL
JEFFERSON COUNTY, KANSAS

4.0

8.0

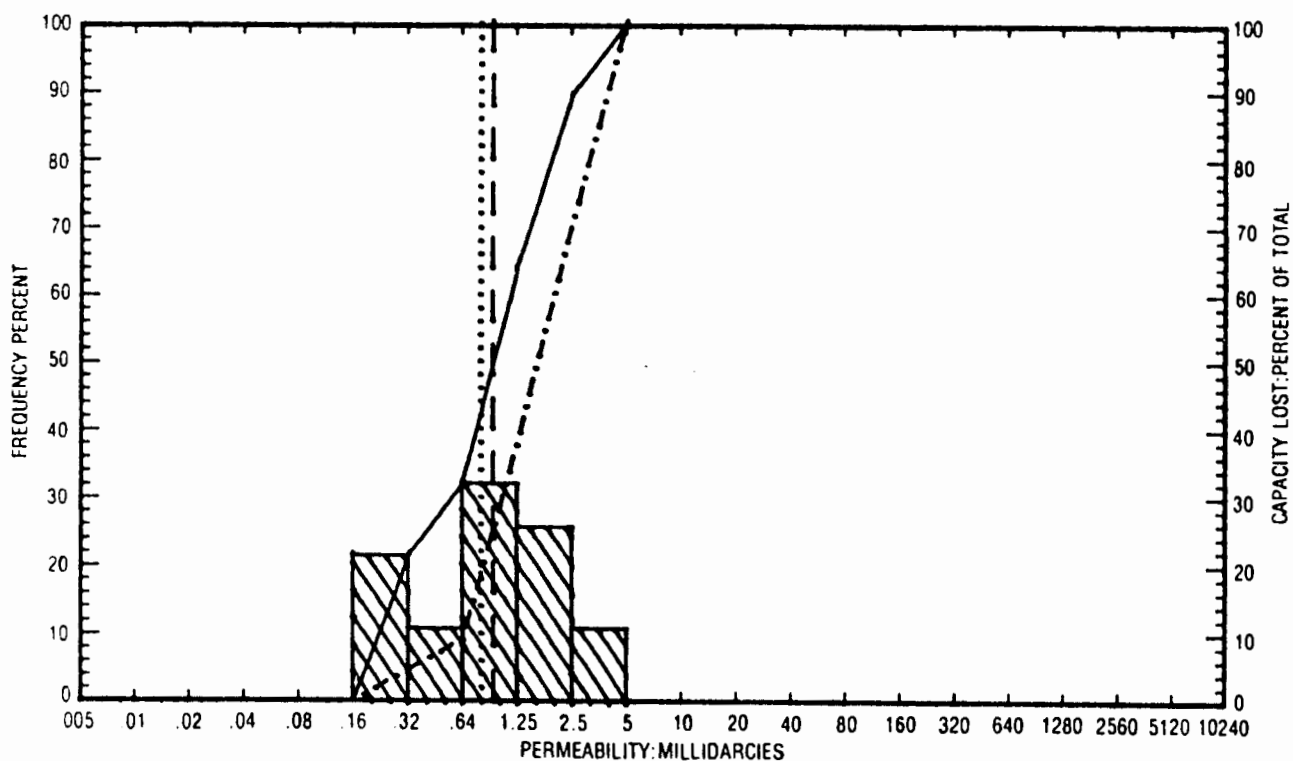
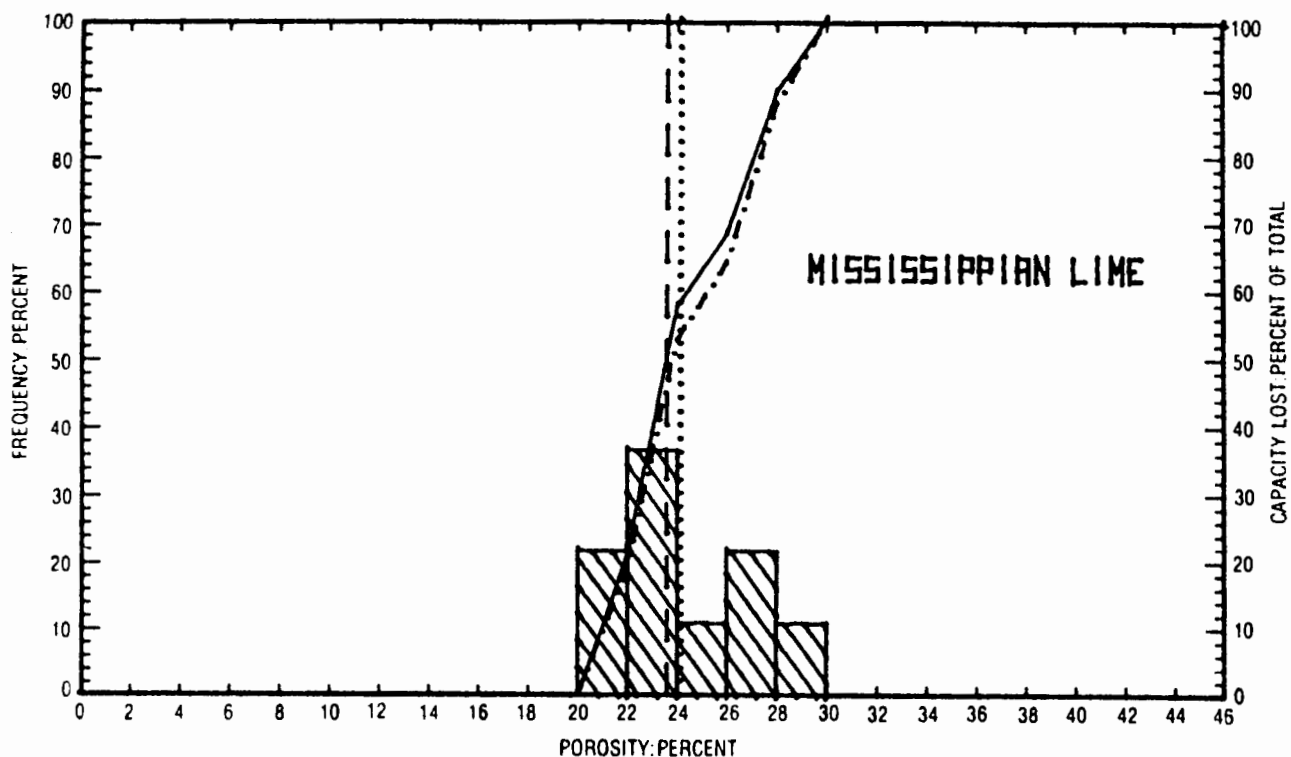
12.0

16.0

20.0

24.0

POROSITY: PERCENT



PERMEABILITY AND POROSITY HISTOGRAMS

BAZELEY GEOLOGICAL SERVICES
SABELKA NO. 1 WELL
 VA
JEFFERSON COUNTY, KANSAS

LEGEND

- ARITHMETIC MEAN POROSITY
- GEOMETRIC MEAN PERMEABILITY
- MEDIAN VALUE -----
- CUMULATIVE FREQUENCY —————
- CUMULATIVE CAPACITY LOST - . - . - .

25-9-19E

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: EAZELEY GEOLOGICAL SERVICES
FIELD :

WELL : ^uSABELKA NO. 1 WELL
COUNTY, STATE: JEFFERSON COUNTY, KANSAS

AIR PERMEABILITY : MD.
POROSITY : PERCENT (HORIZONTAL) RANGE USED 0.010 TO 5000
(GAS EXPANSION) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 1635.0 - 1651.4 INTERVAL LENGTH : 16.4
FEET ANALYZED IN ZONE : 11.4 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES
AVERAGE	ARITHMETIC HARMONIC GEOMETRIC
-----	-----
24.1	1.1 0.57 0.79

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES

WELL : ⁴ SABELKA NO. 1 WELL
COUNTY, STATE: JEFFERSON COUNTY, KANSAS

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
20.0 - 22.0	2.0	21.3	0.345	0.355	21.3	21.3
22.0 - 24.0	3.4	22.5	0.934	1.5	36.2	57.4
24.0 - 26.0	1.0	25.7	0.790	0.790	10.6	68.1
26.0 - 28.0	2.0	26.9	1.2	1.3	21.3	89.4
28.0 - 30.0	1.0	28.2	0.970	0.970	10.6	100.0

TOTAL NUMBER OF FEET = 9.4

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STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES WELL: ^USABELKA NO. 1 WELL
FIELD: COUNTY, STATE: JEFFERSON COUNTY, KANSAS

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	9.4	100.0	24.1	23.6
2.0	0.0	0.0	9.4	100.0	24.1	23.6
4.0	0.0	0.0	9.4	100.0	24.1	23.6
6.0	0.0	0.0	9.4	100.0	24.1	23.6
8.0	0.0	0.0	9.4	100.0	24.1	23.6
10.0	0.0	0.0	9.4	100.0	24.1	23.6
12.0	0.0	0.0	9.4	100.0	24.1	23.6
14.0	0.0	0.0	9.4	100.0	24.1	23.6
16.0	0.0	0.0	9.4	100.0	24.1	23.6
18.0	0.0	0.0	9.4	100.0	24.1	23.6
20.0	0.0	0.0	9.4	100.0	24.1	23.6
22.0	2.0	18.8	7.4	81.2	24.1	23.6
24.0	5.4	52.6	4.0	47.4	24.9	24.6
26.0	6.4	63.9	3.0	36.1	26.9	27.0
28.0	8.4	87.6	1.0	12.4	27.3	
30.0	9.4	100.0	0.0	0.0	28.2	

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 226.8

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: BAZELEY GEOLOGICAL SERVICES WELL : ^USMBELKA NO. 1 WELL
FIELD : COUNTY, STATE: JEFFERSON COUNTY, KANSAS

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	9.4	100.0	0.79	0.93
0.010	0.0	0.0	9.4	100.0	0.79	0.93
0.020	0.0	0.0	9.4	100.0	0.79	0.93
0.039	0.0	0.0	9.4	100.0	0.79	0.93
0.078	0.0	0.0	9.4	100.0	0.79	0.93
0.156	0.0	0.0	9.4	100.0	0.79	0.93
0.313	2.0	4.6	7.4	95.4	1.11	1.17
0.625	3.0	9.0	6.4	91.0	1.28	1.32
1.250	6.0	37.5	3.4	62.5	1.69	
2.500	8.4	69.7	1.0	30.3	3.02	
5	9.4	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET (ARITHMETIC) = 9.96

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

25-9-19E

DRILL CUTTINGS ANALYSIS

BAZELEY GEOLOGICAL SERVICES
SWBELKA NO. 1 WELL
JEFFERSON COUNTY, KANSAS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

HAZELEY GEOLOGICAL SERVICES
SABELKA NO. 1 WELL
U

File No: 3602 1178
Date: 4-15-85
CORE CHIPS Analysis

McLOUGH SAND/MISS. LIME

Smp No.	CORE Depth	Carbonate Analysis Percent by Volume			Smp Wt	Observed Count	Relative Hydrocarbon Richness by Thermal Extraction Chromatography		Relative Hydrocarbon Fluorescence		
		Other	Ls	Dol			Por %	Percent Total Hydrocarbon <C-8	Percent Total Hydrocarbon <C-13	Extraction Time 1 Hour	Extraction Time 20 Hour
	1530.0-54.5	SHALE- NO ANALYSIS									
1	1554.5-56.0				12.8				53	53	
2	1556.0-58.0				15.9				36	36	
3	1558.0-59.0				17.4				86	86	
	1559.0-63.0	LOST CORE									
4	1563.0-65.0				21.2				46	46	
5	1565.0-67.0				22.8				36	36	
6	1567.0-69.0				23.7				36	36	
7	1569.0-71.0				21.5				30	30	
8	1571.0-73.0				21.9				40	40	
9	1573.0-75.0				22.2				33	33	
10	1575.0-77.0				21.9				36	36	
11	1577.0-79.0				20.3				27	27	
12	1579.0-81.0				21.9				40	40	

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RAELEY GEOLOGICAL SERVICES
SHELKA NO. 1 WELL

File No: 3602 1170
Date: 4-15-89
CORE CHIPS ANALYSIS

McLOUGH SAND/MISS. LIME

Smp No.	CORE Depth	Carbonate Analysis Percent by Volume			Smp Wt	Relative Hydrocarbon Richness by Thermal Extraction Chromatography		Relative Hydrocarbon Fluorescence	
		Other	Ls	Dol		Observed Count	Percent Total Hydrocarbon <C-8 <C-13	Extraction Time 1 Hour 20 Hour	Pr Pr
13	1581.0-83.0					22.3		76	76
14	1583.0-85.0					21.7		46	46
15	1585.0-87.0					21.9		43	43
16	1587.0-89.0					21.6		54	54
17	1589.0-90.0					21.4		174	181
18	1590.0-91.0					20.0		2027	2060
19	1591.0-92.0					15.6		5099	5132
20	1592.0-93.0					14.4		5132	5166
21	1593.0-94.0					13.2		23	23
22	1594.0-94.5					11.9		10	10
	1594.5-1635.	DRILLED INTERVAL							
23	1625.0-36.0					2.0		3	7
24	1636.0-37.0					25.7		3	7
25	1637.0-38.0					20.9		3	3

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations and 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 representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or land in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

BAZELEY GEOLOGICAL SERVICES
 SHELKA NO. 1 WELL

File No: 2602 1178
 Date: 4-16-56
 CORE CHIPS ANALYSIS

McLOUGH SAND/MISS. LIME

Smp No.	CORE Depth	Carbonate Analysis Percent by Volume			Smp Wt	Relative Hydrocarbon Richness by Thermal Extraction Chromatography		Extraction Time	
		Other	LS	Dol		Observed Count	Percent Total Hydrocarbon <C-8	1 Hour	20 Hour
26	1638.0-39.0							3	3
27	1639.0-40.0							7	7
28	1640.0-41.0							7	7
CORE NOT SUBMITTED FOR ANALYSIS									
29	1646.0-47.0							7	7
30	1647.0-48.0							7	7
31	1648.0-49.0							3	3
32	1649.0-50.0							3	3
33	1650.0-51.4							7	7

Subelka 1 25-9-19E

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1806 Brookfield
Midland, MI 48640

Thermal Extraction
Chromatography

Hydrocarbon Count, MVS⁶ at 140 °C

5.0 10.0

Percent Hydr. Lighter than C-8

Lighter than C-14 ---

80 60 40 20

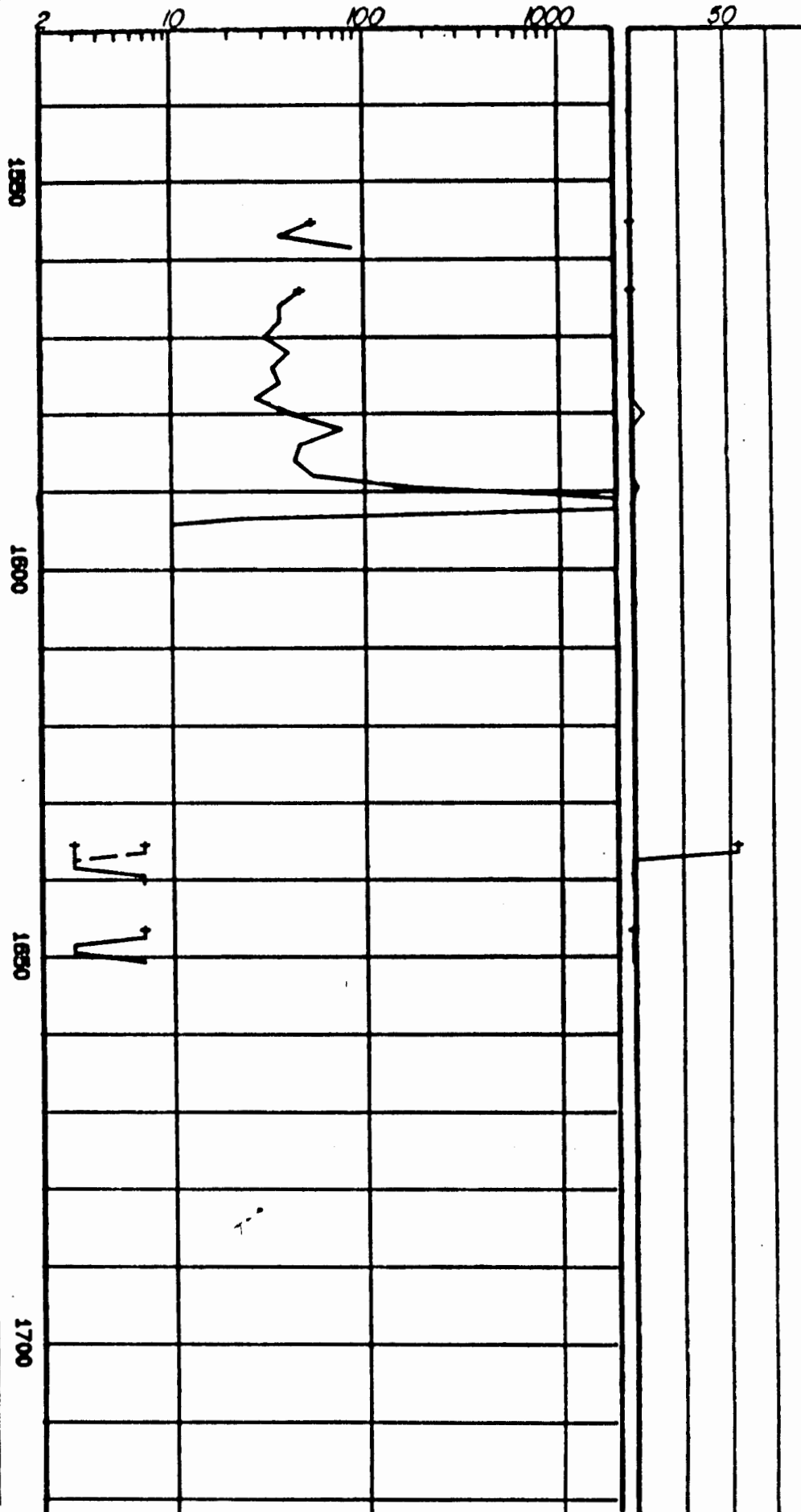
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Relative Hydrocarbon Fluorescence

E1: 1 Hr Extraction Time _____

E2: 20 Hr Extraction Time -----

Ratio
(E1/E2) x100



LAB

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Petroleum Reservoir Engineering

COMPANY **BAZELEY GEOLOGICAL SERVICES** FILE NO. **3602-117B**
 WELL **SABELKA NO. 1** DATE **4-10-85**
 FIELD **U** FORMATION **AS NOTED** ELEV. _____
 COUNTY **JEFFERSON** STATE **KANSAS** ORLG. FLD. **FRESH WATER** CORES **3.0" DIAMOND**
 LOCATION _____

CORRELATION COREGRAPH

NOTE: This correlation coregraph is prepared for use in correlating logs of cores from the same well. The logs should be placed in the spaces provided and the correlation lines drawn across the logs. The logs should be placed in the spaces provided and the correlation lines drawn across the logs. The logs should be placed in the spaces provided and the correlation lines drawn across the logs.

VERTICAL SCALE: 100'

Gamma Ray

RADIATION INCREASE

NOTE: NOT API UNITS

Permeability **KA-HORIZONTAL**

MILLIDARIES

Porosity **GEX**

PERCENT

Total Water

PERCENT PORE SPACE

Oil Saturation

PERCENT PORE SPACE

100 80 60 40 20 0

100 80 60 40 20 0

Depth

Feet

100

10

1

100

10

1

100

10

1

MCLOUGH SAND

MISSISSIPPIAN

DRILLED INTERVAL

1550

1551

1552



M N

