

TRUE OIL COMPANY

SPEAR DIAMOND RANCH NO. 32 - 9

B-1 INDUSTRIES, INC.

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY	TRUE OIL COMPANY	FILE NO.	7187
WELL	SPEAR DIAMOND RANCH # 32-9	FORMATION	COUNCIL GROVE
FIELD		DATE	7-26-87
COUNTY	SIOUX	CORE TYPE	DIA CONV
STATE	NEBRASKA	ELEVATION	4611' KB
		MUD TYPE	SALT SAT
		ANALYST	BP DH KB
		LOCATION	SEC 9 T25N R54W

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
---------	-------	----------------------------	-------	-------	---------	-----------	-------------

BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN  
PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS

	6667-73						ANHYDRITE NO ANALYSIS
1	6673-74	0.95	2.1	0.0	61.7	2.72	SS GRY FG
2	-75	0.01	1.9	0.0	52.5	2.77	SS GRY FG
3	-76	0.02	2.3	0.0	79.9	2.70	SS GRY FG
4	-77	0.27	3.0	0.0	47.0	2.64	SS GRY FG
5	-78	13	3.8	0.0	58.0	2.58	SS GRY FG
6	-79	37	4.1	0.0	87.7	2.53	SS PINK FG
7	-80	21	3.9	0.0	47.5	2.55	SS PINK FG
8	-81	12	3.5	2.3	44.5	2.58	SS GRY FG
9	-82	4.6	3.5	4.1	78.3	2.62	SS GRY FG
10	-83	0.12	2.2	0.0	89.0	2.71	SS GRY FG
11	-84	0.32	3.1	0.0	83.9	2.64	SS GRY FG
12	-85	0.14	2.6	0.0	83.4	2.68	SS GRY VFG
	6685-93						ANHYDRITE NO ANALYSIS
13	-94	4.0	2.4	0.0	45.3	2.75	DOL TAN FXLN SALT IN FRAC VF
14	-95	0.68	2.1	0.0	86.5	2.75	DOL TAN FXLN SALT IN FRAC VF
15	-96	15	3.2	0.0	58.1	2.62	DOL TAN VFXLN SLT IN FRAC VF
16	-97	2.1	2.5	0.0	90.2	2.69	DOL TAN FXLN SALT IN FRAC VF
	6697-6702						ANHY & SH NO ANALYSIS
17	6702-03	0.01	2.3	5.7	85.4	2.74	SS GRY FG
	6703-04						ANHYDRITE NO ANALYSIS
18	-05	0.01	1.4	4.5	67.6	2.76	SS GRY FG
19	-06	149	4.0	3.7	52.7	2.48	SS RED VFG
20	-07	4.0	2.8	0.0	55.4	2.69	SS RED VFG
	6707-20						ANHYDRITE NO ANALYSIS

PERMEABILITY MEASUREMENTS BELIEVED TO BE ERRONEOUS BECAUSE OF EROSION OF SURFACE OF SAMPLES DUE TO SALT CONTENT.

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY <u>TRUE OIL COMPANY</u>	FILE NO. <u>7187</u>
WELL <u>SPEAR DIAMOND RANCH # 32-9</u>	FORMATION <u>COUNCIL GROVE</u>
FIELD _____	DATE <u>7-27-87</u>
COUNTY <u>SIOUX</u>	CORE TYPE <u>DIA CONV</u>
STATE <u>NEBRASKA</u>	ELEVATION <u>4611' KB</u>
	MUD TYPE <u>SALT SAT</u>
	ANALYST <u>BP DH KB</u>
	LOCATION <u>SEC 9 T25N R54W</u>

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
---------	-------	----------------------------	-------	-------	---------	--------	-------------

SAMPLES WERE SOAKED 14 HOURS IN METHANOL THEN CENTRIFUGED WITH SEVERAL PORE VOLUMES OF METHANOL. PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN

1	6673-74	2.9	2.2			2.72	
2	-75	0.01	2.0			2.77	
3	-76	0.02	2.5			2.71	
4	-77	1.1	3.7			2.65	
5	-78	37	4.7			2.59	
6	-79	100	5.9			2.54	
7	-80	79	6.1			2.56	
8	-81	51	4.9			2.59	
9	-82	9.3	4.3			2.62	
10	-83	0.68	2.7			2.71	
11	-84	1.2	3.6			2.65	
12	6684-85	0.28	3.0			2.68	
13	6693-94	13	3.7			2.76	
14	-95	2.0	3.2			2.75	
15	-96	40	5.8			2.63	
16	6696-97	6.8	3.9			2.70	
17	6702-03	0.01	2.6			2.74	
18	6704-05	0.01	1.5			2.76	
19	-06	336	6.3			2.49	
20	6706-07	18	3.5			2.69	

PERMEABILITY MEASUREMENTS BELIEVED TO BE ERRONEOUS BECAUSE OF EROSION OF SURFACE OF SAMPLES DUE TO SALT CONTENT.

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY <u>TRUE OIL COMPANY</u>		FILE NO. <u>7187</u>
WELL <u>SPEAR DIAMOND RANCH # 32-9</u>	FORMATION <u>ADMIRE</u>	DATE <u>7-30-87</u>
FIELD _____	CORE TYPE <u>DIA CONV</u>	ELEVATION <u>4611' KB</u>
COUNTY <u>SIOUX</u>	MUD TYPE <u>SALT SAT</u>	ANALYST <u>BP AH KB</u>
STATE <u>NEBRASKA</u>	LOCATION <u>SEC 9 T25N R54W</u>	

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS							
	6793-98						ANHYDRITE NO ANALYSIS
21	6798-99	0.01	4.7	0.0	92.3	2.75	DOL LT DRK GRY FXLN BANDED
	6799-00						SHALE NO ANALYSIS
22	6800-01	0.01	10.9	0.0	48.6	2.84	DOL TAN FXLN
	6801-03						SHALE NO ANALYSIS
23	-04	0.06	3.5	0.0	33.3	2.74	SS GRY FG
24	-05	0.02	2.8	0.0	34.6	2.75	SS GRY FG
25	-06	0.02	2.7	0.0	19.8	2.76	SS GRY FG
26	-07	0.01	4.1	0.0	29.5	2.75	SS GRY FG
27	-08	0.01	3.6	0.0	29.6	2.77	SS GRY FG
	6808-18						SH & ANHY NO ANALYSIS
28	-19	0.01	8.9	0.0	69.6	2.83	DOL TAN FXLN
29	-20	0.01	6.4	0.0	70.1	2.87	DOL TAN FXLN
30	-21	0.01	1.1	0.0	53.6	2.82	DOL LT BRN VFXLN
	6821-23						ANHYDRITE NO ANALYSIS
31	-24	0.01	8.8	0.0	65.5	2.75	DOL GRY FXLN
32	-25	0.01	6.2	0.0	57.9	2.81	DOL GRY FXLN ANHY INC
	6825-26						SHALE NO ANALYSIS
33	-27	0.01	3.1	0.0	41.6	2.76	DOL GRY FXLN
	6827-29						ANHY & SH NO ANALYSIS
34	-30	0.01	3.4	0.0	64.1	2.80	DOL DRK GRY TAN XLN
35	-31	0.01	3.2	0.0	32.6	2.75	SS GRY FG DOL
	6831-33						SHALE NO ANALYSIS
36	-34	0.01	3.0	0.0	29.2	2.75	LS LT DRK GRY FXLN
	6834-45						SH & ANHY NO ANALYSIS
37	-46	0.35	15.1	1.7	40.0	2.80	DOL LT BRN VUGGY FXLN
38	-47	0.09	15.9	2.2	51.1	2.82	DOL LT BRN VUGGY FXLN
39	-48	0.02	10.8	0.0	77.6	2.81	DOL BRN VFXLN
40	-49	0.21	16.9	0.4	44.7	2.80	DOL GRN VFXLN ARG SH LAM
41	6849-50	0.01	2.2	0.0	33.4	2.80	DOL DRK GRY VXLN VF

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

**COMPANY** TRUE OIL COMPANY **FILE NO.** 7187  
**WELL** SPEAR DIAMOND RANCH # 32-9 **FORMATION** ADMIRE **DATE** 7-30-87  
**FIELD** \_\_\_\_\_ **CORE TYPE** DIA CONV **ELEVATION** 4611' KB  
**COUNTY** SIOUX **MUD TYPE** SALT SAT **ANALYST** BP AH KB  
**STATE** NEBRASKA **LOCATION** SEC 9 T25N R54W

SAMP NO	DEPTH	PERMEABILITY		POR %	OIL %	WATER %	GR DNS	DESCRIPTION
		HORIZ	VERT					
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS								
42	6850-51	0.01		2.3	3.9	23.3	2.68	DOL BRN FXLN VUG ARG SH LAM
	6851-52							LOST RECOVERY
	6852-68							SH & ANHY NO ANALYSIS
43	-69	0.01		5.9	3.6	43.8	2.85	DOL LT DRK BRN FXLN
44	-70	0.01		6.8	3.4	60.9	2.85	DOL LT DRK BRN FXLN ANHY INC
45	-71	0.01		4.3	6.0	36.1	2.88	DOL TAN FXLN SH INC
46	-72	0.01		7.1	3.8	34.3	2.78	DOL BRN FXLN CARB LAM VF
47	-73	0.01		5.0	1.3	56.6	2.79	DOL TAN FXLN
48	-74	0.17		10.5	6.0	66.4	2.84	DOL TAN FXLN CARB LAM
49	-75	0.01		7.0	0.0	73.1	2.82	DOL LT DRK GRY FXLN VF
50	-76	0.01		4.6	0.0	77.4	2.83	DOL TAN FXLN
51	-77	0.01		2.8	0.0	41.5	2.80	DOL BRN FXLN ABD ANHY
52	-78	0.01		5.4	1.7	50.5	2.84	DOL BRN VFXLN TR ANHY LAM
53	-79	0.54		10.3	0.9	64.3	2.82	DOL BRN FXLN TR ANHY INC
	6879-95							SH & ANHY NO ANALYSIS
54	-96	0.01		3.4	0.0	38.5	2.76	SS GRY FG
55	-97	0.01		3.9	0.0	35.9	2.75	SS GRY VFG
	6897-6904							SHALE NO ANALYSIS
MISSOURIAN FORMATION								
56	6904-05	0.01		2.4	0.0	48.8	2.76	SS GRY VFG DOL
57	-06	0.01		4.9	0.0	52.0	2.75	SS TAN VFG SLTY
58	-07	0.01		5.6	0.0	72.8	2.75	SS TAN VFG DOL
59	6907-08	0.01		9.0	0.0	75.3	2.73	SS TAN VFG SLTY LAM

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY	TRUE OIL COMPANY	FILE NO.	7187
WELL	SPEAR DIAMOND RANCH # 32-9	FORMATION	MISSOURIAN
FIELD		DATE	8-4-87
COUNTY	SIOUX	CORE TYPE	DIA CONV
STATE	NEBRASKA	ELEVATION	4611' KB
		MUD TYPE	SALT SAT
		ANALYST	BP AH DH KB
		LOCATION	SEC 9 T25N R54W

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN							
PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS							
60	6940-41	0.07	5.4	0.0	43.5	2.85	DOL TAN FXLN
61	-42	0.01	3.0	0.0	36.4	2.85	DOL TAN FXLN VF
62	-43	1.3	10.8	0.0	65.2	2.86	DOL TAN FXLN
63	-44	0.92	10.6	0.0	40.7	2.84	DOL GRY FXLN
64	-45	0.87	10.9	0.0	65.7	2.85	DOL GRY FXLN CARB INC
65	-46	0.01	6.7	0.0	41.2	2.86	DOL TAN FXLN
66	-47	0.07	7.2	0.0	56.2	2.85	DOL TAN FXLN CARB INC
67	-48	0.04	7.0	0.0	38.5	2.85	DOL TAN FXLN CARB INC
68	-49	4.6	15.8	0.0	60.6	2.84	DOL TAN FXLN CARB INC
69	-50	0.65	9.6	0.0	40.8	2.85	DOL TAN FXLN CARB INC
70	-51	0.79	10.1	0.0	51.3	2.87	DOL GRY FXLN ANHY INC
71	-52	0.41	11.1	0.0	57.2	2.84	DOL GRY FXLN
72	-53	1.1	13.4	0.0	57.6	2.84	DOL GRY FXLN TR ANHY LAM
73	-54	0.54	10.6	0.0	79.7	2.86	DOL TAN FXLN TR ANHY
74	-55	0.09	9.4	0.0	64.0	2.85	DOL TAN FXLN
75	-56	0.26	13.1	0.0	56.5	2.84	DOL GRY FXLN
76	-57	0.96	14.8	0.8	57.8	2.84	DOL GRY FXLN
77	-58	1.0	14.9	0.0	89.4	2.83	DOL TAN VFXLN
78	-59	4.6	19.3	0.0	69.3	2.84	DOL TAN VFXLN VF
79	-60	3.6	19.7	0.0	79.5	2.82	DOL TAN VFXLN VF
80	-61	0.53	16.7	0.0	59.6	2.82	DOL DRK GRY FXLN VF
81	-62	0.01	10.9	0.0	55.7	2.82	DOL DRK GRY FXLN
82	-63	0.01	11.0	3.0	60.5	2.83	DOL GRY FXLN TR VUG ARG
83	-64	0.01	4.7	3.6	35.7	2.85	DOL GRY FXLN ARG
84	-65	0.01	8.9	3.1	38.7	2.83	DOL TAN VFXLN ARG
85	-66	0.01	4.6	2.7	75.7	2.89	DOL LT DRK GRY FXLN ANHY IN
	6966-70						ANHYDRITE NO ANALYSIS
86	-71	0.01	6.8	0.0	54.0	2.76	SS GRY VF FG SL CALC
87	-72	0.01	5.4	0.0	53.7	2.75	SS GRY VFG CARB LAM
	6972-73						ANHYDRITE NO ANALYSIS

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

<b>COMPANY</b>	TRUE OIL COMPANY	<b>FILE NO.</b>	7187
<b>WELL</b>	SPEAR DIAMOND RANCH # 32-9	<b>FORMATION</b>	AS NOTED
<b>DATE</b>		<b>DATE</b>	8-4-87
<b>FIELD</b>		<b>CORE TYPE</b>	DIA CONV
<b>ELEVATION</b>		<b>ELEVATION</b>	4611' KB
<b>COUNTY</b>	SIOUX	<b>MUD TYPE</b>	SALT SAT
<b>ANALYST</b>		<b>ANALYST</b>	BP AH DH KB
<b>STATE</b>	NEBRASKA	<b>LOCATION</b>	SEC 9 T25N R54W

SAMP NO	DEPTH	PERMEABILITY		POR %	OIL %	WATER %	GR DNS	DESCRIPTION
		HORIZ	VERT					
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN								
PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS								
MISSOURIAN FORMATION								
88	6973-74	0.01		7.6	0.0	64.8	2.78	SS GRY VFG SH LAM
89	-75	0.01		4.3	0.0	56.3	2.75	SS GRY FG SLTY
90	-76	0.01		4.8	0.0	47.9	2.78	SS GRY VF FG
	6976-79							ANHYDRITE NO ANALYSIS
91	-80	0.01		10.2	19.5	36.5	2.80	DOL DRK BRN FXLN VUG ANHY FLC
92	-81	0.10		13.8	5.4	54.1	2.80	DOL BRN FXLN TR VUG
93	-82	0.01		7.5	68.2	21.9	2.73	DOL BRN FXLN
94	-83	0.01		1.3	2.9	63.5	2.92	DOL DRK GRY BRN FXLN ANHY
95	-84	0.01		5.3	26.4	23.1	2.85	DOL TAN FXLN CARB INC
96	-85	0.01		7.2	18.5	44.5	2.81	DOL BRN VFXLN
97	-86	0.01		7.7	1.4	48.2	2.86	DOL LT BRN VFXLN
	6986-90							ANHYDRITE NO ANALYSIS
98	-91	0.09		9.3	5.2	31.1	2.80	DOL BRN DNS
	6991-98							ANHYDRITE NO ANALYSIS
	6998-7050							DRILLED TO DES MOINES FORMATION
99	7050-51	0.98		6.6	10.3	41.3	2.74	SS GRY VF FG
100	-52	9.7		11.2	0.0	51.1	2.70	SS GRY VF FG
101	-53	10		11.1	0.0	52.4	2.70	SS GRY VF FG
102	-54	11		11.8	0.0	37.9	2.70	SS GRY VF FG
103	-55	12		12.3	0.0	59.0	2.69	SS GRY VF FG
	7055-56							LOST RECOVERY
104	-57	13		14.2	0.0	45.1	2.68	SS GRY VF FG
105	-58	17		14.5	0.0	80.9	2.68	SS GRY VF FG
106	-59	15		15.3	0.0	71.2	2.67	SS GRY VF FG
107	-60	0.22		4.9	0.0	68.0	2.73	SS GRY VF FG
108	-61	22		13.8	0.0	71.2	2.69	SS GRY VF FG
109	-62	31		13.3	0.3	60.4	2.70	SS GRY VF FG
110	-63	38		18.4	1.6	46.8	2.67	SS GRY VF FG
111	-64	39		17.6	0.0	61.5	2.68	SS GRY VF FG
112	7064-65	11		13.7	0.0	75.4	2.69	SS GRY VF FG

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY TRUE OIL COMPANY FILE NO. 7187  
 WELL SPEAR DIAMOND RANCH # 32-9 FORMATION DES MOINES DATE 8-4-87  
 FIELD \_\_\_\_\_ CORE TYPE DIA CONV ELEVATION 4611' KB  
 COUNTY SIOUX MUD TYPE SALT SAT ANALYST BP AH DH KB  
 STATE NEBRASKA LOCATION SEC 9 T25N R54W

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN							
PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS							
113	7065-66	33	17.2	0.3	49.8	2.68	SS GRY VFG
114	-67	23	11.2	1.9	75.8	2.72	SS GRY VFG
115	-68	0.01	6.8	0.0	53.8	2.80	DOL GRY DNS
116	-69	0.01	8.0	0.0	70.6	2.77	DOL GRY BRN FXLN
117	-70	0.01	3.4	0.0	48.5	2.82	DOL GRY BRN VFXLN ANHY LAM
	7070-72						ANHYDRITE NO ANALYSIS
118	-73	0.02	7.6	2.5	55.7	2.87	DOL TAN DNS
119	-74	0.81	14.6	16.6	41.4	2.85	DOL TAN VFXLN
120	-75	0.74	14.3	5.7	62.6	2.85	DOL TAN VFXLN
121	-76	1.0	17.4	0.4	69.7	2.84	DOL TAN VFXLN
122	-77	1.4	18.4	0.6	45.8	2.84	DOL TAN VFXLN
123	-78	2.6	23.4	16.0	19.2	2.84	DOL TAN VFXLN
124	-79	5.1	23.6	11.0	30.8	2.83	DOL TAN VFXLN
125	-80	0.33	23.2	5.6	58.2	2.85	DOL TAN VFXLN VF
126	-81	3.1	24.5	10.0	42.6	2.84	DOL TAN VFXLN VF
127	-82	2.0	23.2	1.5	47.7	2.85	DOL TAN VFXLN VF
128	-83	3.3	24.2	1.0	49.5	2.84	DOL TAN VFXLN VF
129	-84	2.6	19.3	0.4	72.4	2.86	DOL TAN VFXLN
130	-85	0.01	12.0	0.0	78.8	2.85	DOL TAN VFXLN
131	-86	1.9	20.8	0.0	53.2	2.85	DOL TAN VFXLN
132	-87	2.1	20.6	0.0	62.4	2.84	DOL TAN VFXLN
133	-88	5.1	22.5	0.0	58.2	2.83	DOL TAN VFXLN
134	-89	2.7	21.8	0.0	37.6	2.83	DOL TAN VFXLN
135	-90	0.64	18.7	0.0	52.2	2.83	DOL TAN VFXLN VF
136	-91	0.09	15.3	0.0	58.2	2.84	DOL TAN VFXLN VF
137	-92	0.89	20.2	0.0	71.4	2.82	DOL TAN VFXLN
138	-93	1.6	22.1	0.0	55.0	2.82	DOL BRN VFXLN
139	-94	0.33	20.5	0.0	38.0	2.81	DOL TAN VFXLN
140	-95	0.21	15.8	0.5	58.9	2.81	DOL TAN VFXLN
141	7095-96	0.01	12.1	0.5	61.5	2.80	DOL TAN VFXLN



# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY <u>TRUE OIL COMPANY</u>	FILE NO. <u>7187</u>
WELL <u>SPEAR DIAMOND RANCH # 32-9</u>	FORMATION <u>DES MOINES</u> DATE <u>8-4-87</u>
FIELD _____	CORE TYPE <u>DIA CONV</u> ELEVATION <u>4611' KB</u>
COUNTY <u>SIoux</u>	MUD TYPE <u>SALT SAT</u> ANALYST <u>BP AH DH KB</u>
STATE <u>NEBRASKA</u>	LOCATION <u>SEC 9 T25N R54W</u>

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS							
142	7096-97	0.01	9.3	1.0	88.6	2.80	DOL TAN VFXLN
143	-98	0.01	9.9	0.0	87.6	2.80	DOL BRN VFXLN
144	-99	0.01	11.2	1.6	87.9	2.76	DOL BRN VFXLN
145	7099-00	0.01	3.4	4.2	88.4	2.79	DOL BRN VFXLN
146	7100-01	0.01	2.1	0.0	95.9	2.73	LS DRK GRY DNS
147	-02	0.16	11.3	3.6	63.3	2.82	DOL TAN VFXLN
148	-03	0.65	15.3	0.3	60.4	2.83	DOL TAN VFXLN
149	-04	4.2	20.4	3.7	57.9	2.80	DOL TAN VFXLN
150	-05	4.9	21.7	30.4	34.8	2.80	DOL TAN VFXLN
151	-06	0.24	12.1	11.1	55.7	2.85	DOL TAN VFXLN
152	-07	0.32	14.9	0.3	68.8	2.85	DOL TAN VFXLN
153	-08	1.1	21.3	0.3	61.9	2.80	DOL TAN VFXLN
154	-09	0.01	12.2	16.6	49.8	2.80	DOL GRY VFXLN
155	-10	0.01	12.3	22.3	52.0	2.80	DOL GRY VFXLN
156	-11	0.09	11.3	38.1	35.1	2.79	DOL GRY VFXLN
157	-12	0.01	4.2	4.5	44.6	2.80	DOL GRY VFXLN
158	-13	0.01	3.3	28.4	56.8	2.78	LS GRY VFXLN
159	-14	0.01	1.0	39.1	58.6	2.70	LS DRK GRY VFXLN DOL
160	-15	0.01	1.0	30.7	61.3	2.70	LS GRY VFXLN
161	7115-16	0.01	3.1	12.7	40.7	2.74	LS TAN VFXLN DOL
162	7116-17	1.2	16.8	11.6	43.2	2.83	DOL GRY VFXLN SHLY
163	-18	0.18	18.3	1.0	74.1	2.82	DOL TAN VFXLN
	7118-19						SHALE NO ANALYSIS
164	-20	0.01	1.7	0.0	85.1	2.71	LS BRN VFXLN
165	-21	0.01	2.4	0.0	86.2	2.75	LS TAN VFXLN ANHY INC
166	-22	0.01	2.6	0.0	85.8	2.75	LS TAN VFXLN ANHY INC
167	-23	0.01	2.4	0.0	69.7	2.75	LS TAN VFXLN ANHY INC
168	-24	0.01	3.1	0.0	88.2	2.75	LS TAN VFXLN ANHY INC
169	-25	0.01	2.3	0.0	89.2	2.73	LS TAN VFXLN ANHY INC
170	-26	0.01	1.6	0.0	40.0	2.73	LS TAN VFXLN ANHY INC
171	7126-27	0.01	2.2	0.0	84.6	2.75	LS TAN VFXLN ANHY INC

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY <u>TRUE OIL COMPANY</u>		FILE NO. <u>7187</u>	
WELL <u>SPEAR DIAMOND RANCH # 32-9</u>	FORMATION <u>DES MOINES</u>	DATE <u>8-5-87</u>	
FIELD _____	CORE TYPE <u>DIA CONV</u>	ELEVATION <u>4611' KB</u>	
COUNTY <u>SIOUX</u>	MUD TYPE <u>SALT SAT</u>	ANALYST <u>BP AH DH KB</u>	
STATE <u>NEBRASKA</u>	LOCATION <u>SEC 9 T25N R54W</u>		

SAMP NO	DEPTH	PERMEABILITY HORIZ VERT	POR %	OIL %	WATER %	GR DNS	DESCRIPTION
---------	-------	----------------------------	-------	-------	---------	--------	-------------

BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN  
PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS

172	7127-28	0.01	3.2	0.0	86.8	2.75	LS TAN VFXLN ANHY INC
173	-29	0.01	1.8	0.0	86.1	2.72	LS TAN VFXLN ANHY INC
174	-30	0.01	1.6	0.0	86.9	2.72	LS TAN VFXLN ANHY INC
175	-31	0.01	1.3	0.0	80.4	2.71	LS TAN VFXLN ANHY INC
176	-32	0.01	1.6	0.0	87.3	2.76	LS TAN VFXLN
177	-33	6.0	25.4	0.6	84.4	2.82	DOL GRY VFXLN CALC
178	-34	4.9	24.4	0.2	79.1	2.82	DOL GRY VFXLN CALC
179	-35	0.03	9.8	0.3	85.8	2.80	LS GRY VFXLN DOL
180	-36	0.01	1.2	0.0	37.5	2.71	LS TAN FXLN
181	-37	0.01	1.4	0.0	88.0	2.71	LS GRY XLN
	7137-40						SHALE NO ANALYSIS
182	-41	0.01	2.4	0.0	47.9	2.67	SS GRY FG V CALC
183	-42	0.01	2.8	0.0	70.6	2.69	SS GRY FG V CALC
184	-43	0.01	2.9	0.0	39.6	2.67	SS GRY FG CALC
185	-44	0.01	3.2	0.0	47.4	2.71	LS TAN OOL SDY IN PT
186	-45	0.32	8.2	2.3	50.2	2.71	LS TAN OOL
187	-46	0.06	7.0	1.0	47.2	2.73	LS TAN OOL
188	-47	0.01	4.5	0.0	90.1	2.71	LS TAN XLN
189	-48	0.01	1.8	0.0	38.6	2.70	LS TAN XLN
190	-49	0.01	2.6	0.0	87.4	2.71	LS TAN FXLN
191	-50	0.01	2.4	0.0	77.6	2.71	LS TAN XLN
192	-51	0.05	8.3	1.3	68.8	2.85	DOL BRN FXLN ANHY INC
193	-52	0.23	11.6	0.4	59.7	2.84	DOL BRN VFXLN
194	-53	0.65	17.3	0.0	68.7	2.83	DOL BRN VFXLN VF
195	-54	0.47	18.5	0.0	76.8	2.84	DOL GRY VFXLN VF
196	-55	3.8	21.8	0.0	77.6	2.84	DOL GRY VFXLN CALC
197	-56	0.01	5.1	0.0	77.1	2.83	DOL GRY FXLN
198	-57	0.58	15.6	0.0	66.0	2.36	DOL TAN VFXLN ANHY INC
199	-58	7.6	11.8	0.0	81.1	2.85	DOL GRY XLN VUG ANHY INC VF
200	-59	0.01	3.3	0.0	32.3	2.72	SS GRY VF FG CALC VF
201	7159-60	0.01	4.2	0.0	43.2	2.72	SS GRU VF FG CALC VF

# B-1 INDUSTRIES, INC.

## CORE ANALYSIS REPORT

COMPANY	TRUE OIL COMPANY	FILE NO.	7187
WELL	SPEAR DIAMOND RANCH #32-9	FORMATION	DES MOINES
FIELD		DATE	8-5-87
COUNTY	SIOUX	CORE TYPE	DIA CONV
STATE	NEBRASKA	ELEVATION	4611' KB
		MUD TYPE	SALT SAT
		ANALYST	BP AH DH KB CG
		LOCATION	SEC 9 T25N R54W

SAMP NO	DEPTH	PERMEABILITY		POR %	OIL %	WATER %	GR DNS	DESCRIPTION
		HORIZ	VERT					
BOYLES LAW CORE ANALYSIS, PERMEABILITY TO AIR AT 1000psi NET OVERBURDEN PERMEABILITY & POROSITY WERE RUN ON SALT FREE PLUGS								
202	7160-61	0.01		1.6	0.0	93.1	2.81	DOL LT DRK BRN XLN ANHY INC
203	-62	0.09		2.8	0.0	34.9	2.85	DOL GRY FXLN ANHY INC
204	-63	0.29		5.8	0.0	91.3	2.83	DOL DRK GRY FXLN ANHY INC
	7163-68							ANHYDRITE NO ANALYSIS
205	-69	0.01		4.3	0.0	87.3	2.72	LS GRY FXLN ANHY INC
206	-70	0.01		6.0	0.0	48.6	2.74	LS GRY FXLN ANHY INC
207	-71	0.01		4.7	0.0	66.1	2.85	DOL GRY FXLN ABND ANHY
208	-72	0.01		3.5	0.0	44.8	2.85	DOL TAN XLN TR VUG VF
209	-73	0.01		2.1	0.0	45.4	2.73	SS GRY VF FG V CALC
	7173-76							SHALE NO ANALYSIS
210	-77	0.01		8.2	0.0	96.2	2.70	SS DRK GRY FG V SLTY
211	-78	0.01		6.2	0.0	79.3	2.80	DOL LT TAN FXLN
212	-79	0.01		2.2	0.0	85.4	2.67	SS GRY F CRS GR V CALC
213	-80	0.01		1.0	0.0	89.8	2.68	SS TAN FG V CALC
214	-81	0.01		1.5	0.0	87.5	2.72	LS TAN VFXLN
215	-82	0.01		1.3	0.0	88.2	2.71	LS TAN VFXLN
216	-83	0.01		1.0	0.0	89.2	2.71	LS TAN VFXLN
217	-84	0.11		13.8	0.0	53.9	2.83	DOL TAN VFXLN
218	-85	0.15		16.1	0.0	65.5	2.83	DOL TAN VFXLN VF
219	-86	0.01		14.9	0.0	58.1	2.83	DOL TAN VFXLN VF
	7186-87							SHALE NO ANALYSIS
220	-88	0.01		10.1	0.0	61.9	2.80	DOL TAN XLN ARG
221	-89	0.02		13.8	0.0	68.4	2.81	DOL TAN XLN
222	-90	0.01		4.0	1.9	94.5	2.74	SS DRK BRN VF FG SHLY
223	-91	0.02		15.2	0.0	71.1	2.81	DOL TAN VFXLN ARG
224	-92	0.05		14.2	0.0	55.8	2.81	DOL TAN VFXLN ARG
225	-93	0.12		10.4	0.0	75.7	2.74	DOL TAN VFXLN ARG
226	-94	0.05		6.8	0.0	54.7	2.73	SS GRY F CRS GR V CALC
227	-95	0.11		6.9	0.0	97.7	2.75	LS TAN XLN
228	-96	0.01		1.4	0.0	89.9	2.70	LS TAN XLN
229	-97	0.01		1.0	0.0	87.2	2.71	LS TAN XLN
230	-98	0.0		1.9	0.0	83.7	2.72	LS TAN XLN
231	7198-99	0.0		1.6	0.0	88.8	2.71	LS TAN XLN

# B-1 INDUSTRIES, INC.

# CORE ANALYSIS GRAPH

COMPANY TRUE OIL COMPANY

MUD TYPE SALT SATURATED

DATE 7-26-87

FILE 7187

WELL SPEAR DIAMOND RANCH NO. 32-9

LOCATION SEC 9 T25N R54W

FIELD \_\_\_\_\_

COUNTY, STATE SIOUX, NEBRASKA

GAMMA RAY



30

POROSITY, PERCENT

20

PERMEABILITY, MD., AIR

0

10

1.0

0.1

OIL SATURATION  
PERCENT PORE SPACE

0

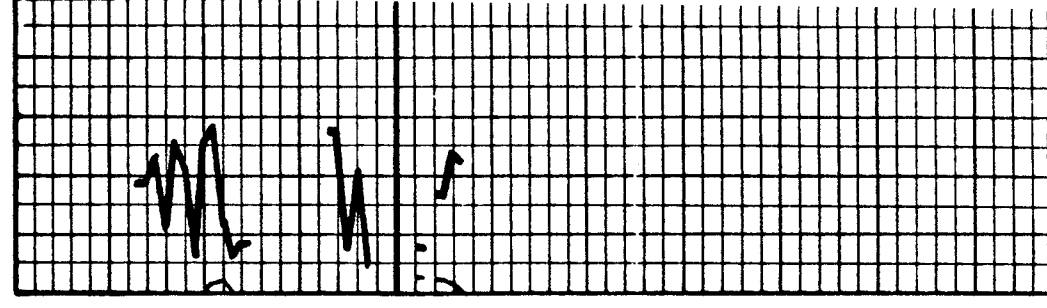
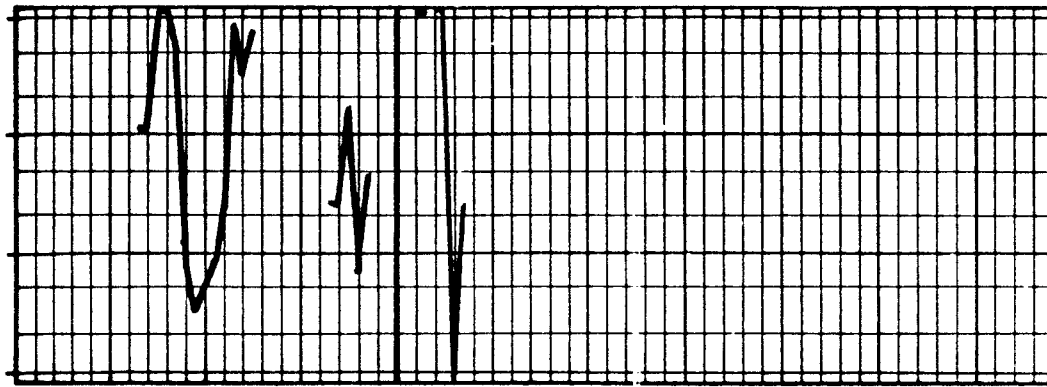
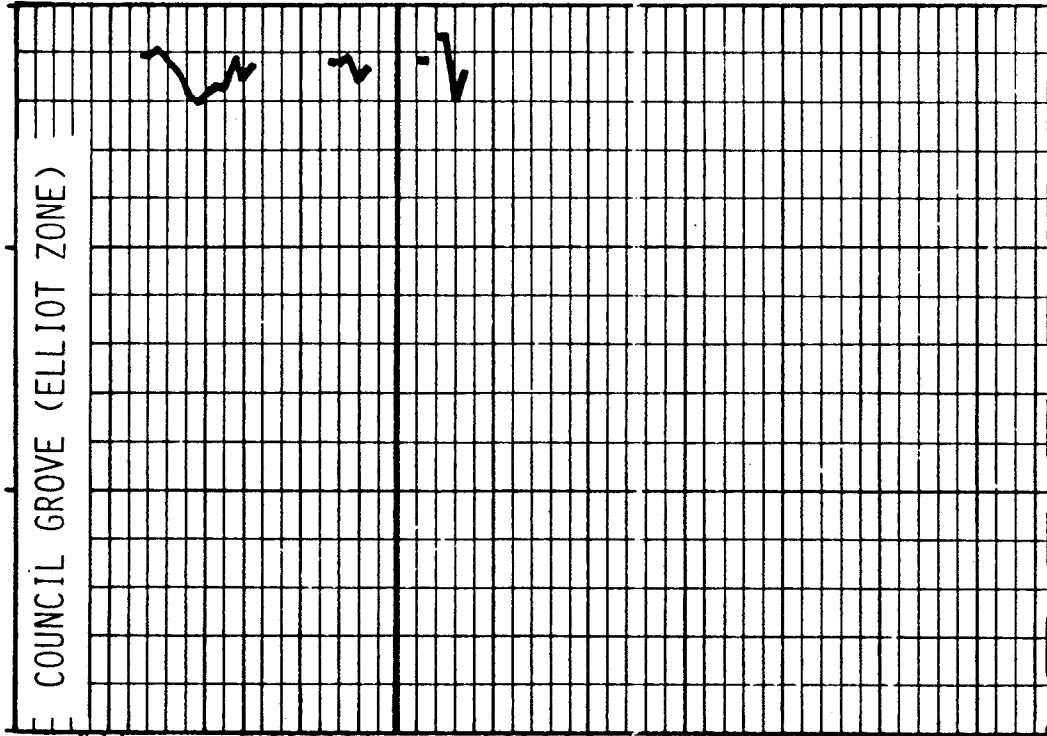
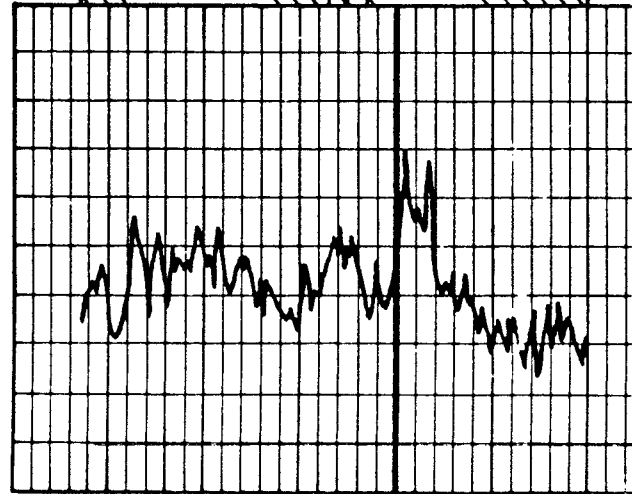
20

40

60

80

100



6667

6700

6720

# B-1 INDUSTRIES, INC.

# CORE ANALYSIS GRAPH

COMPANY TRUE OIL COMPANY MUD TYPE SALT SATURATED DATE 7-30-87 FILE 7187  
WELL SPEAR DIAMOND RANCH NO. 32-9 LOCATION SEC 9 T25N R54W  
FIELD \_\_\_\_\_ COUNTY, STATE SIOUX, NEBRASKA

WATER SATURATION  
PERCENT PORE SPACE

100 80 60 40 20

PERMEABILITY, MD., AIR

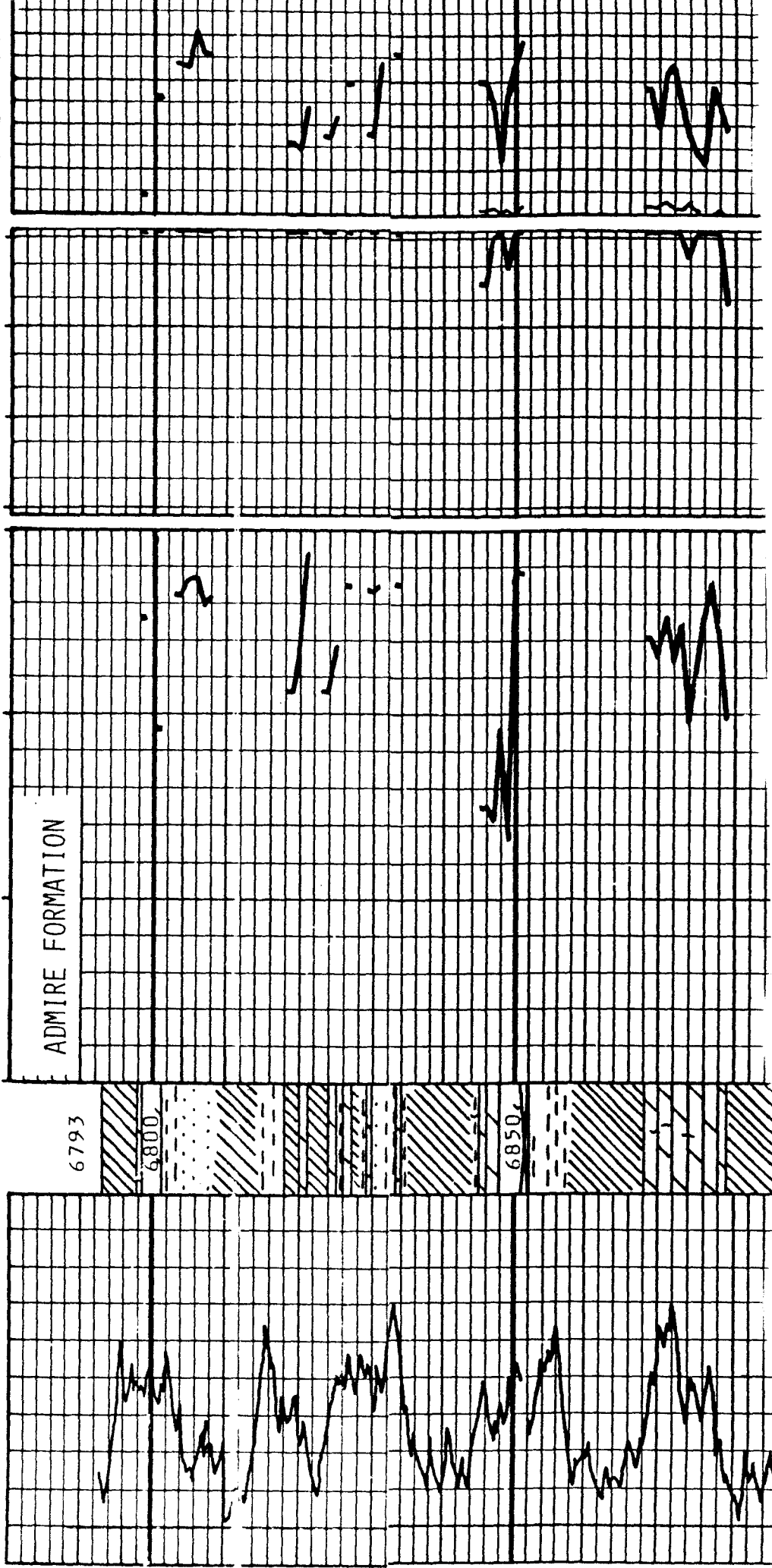
0 100 10 1.0 0.1

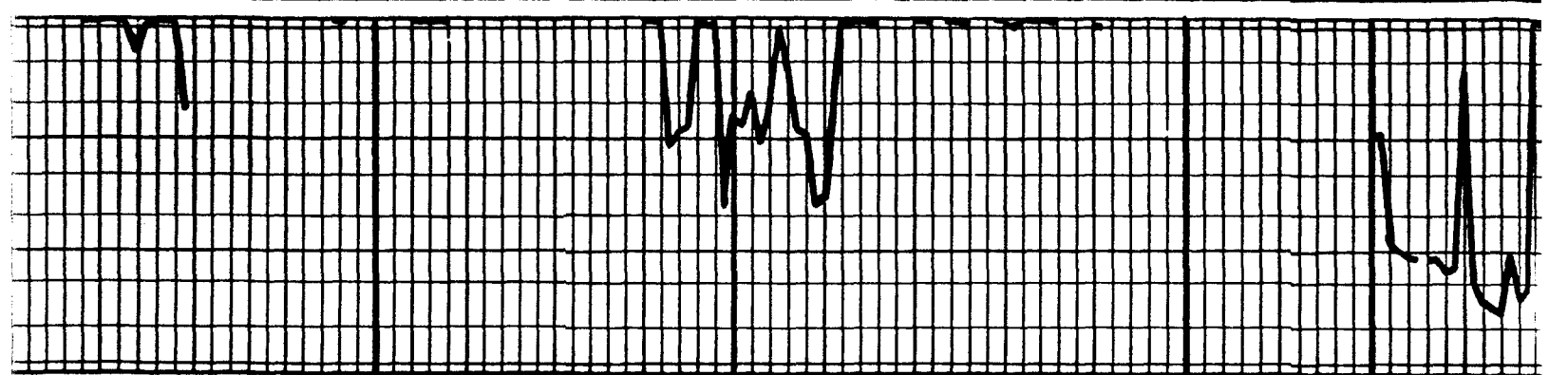
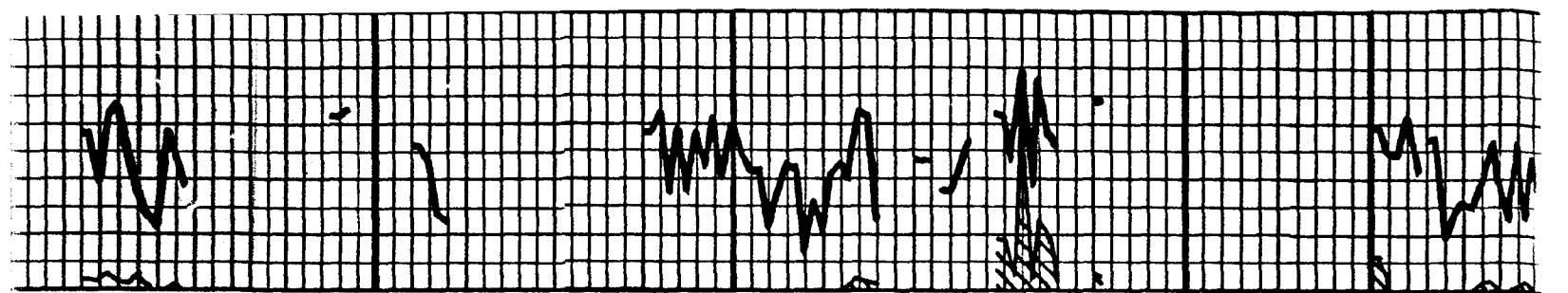
POROSITY, PERCENT

30 20 10 0

GAMMA RAY

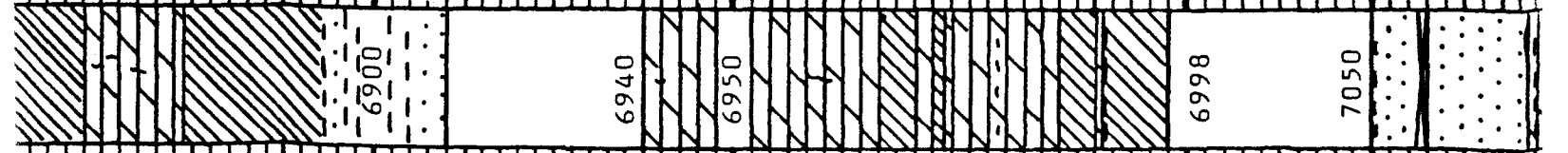
↑





MISSOURIAN FORMATION

DES MOINES FORMATION



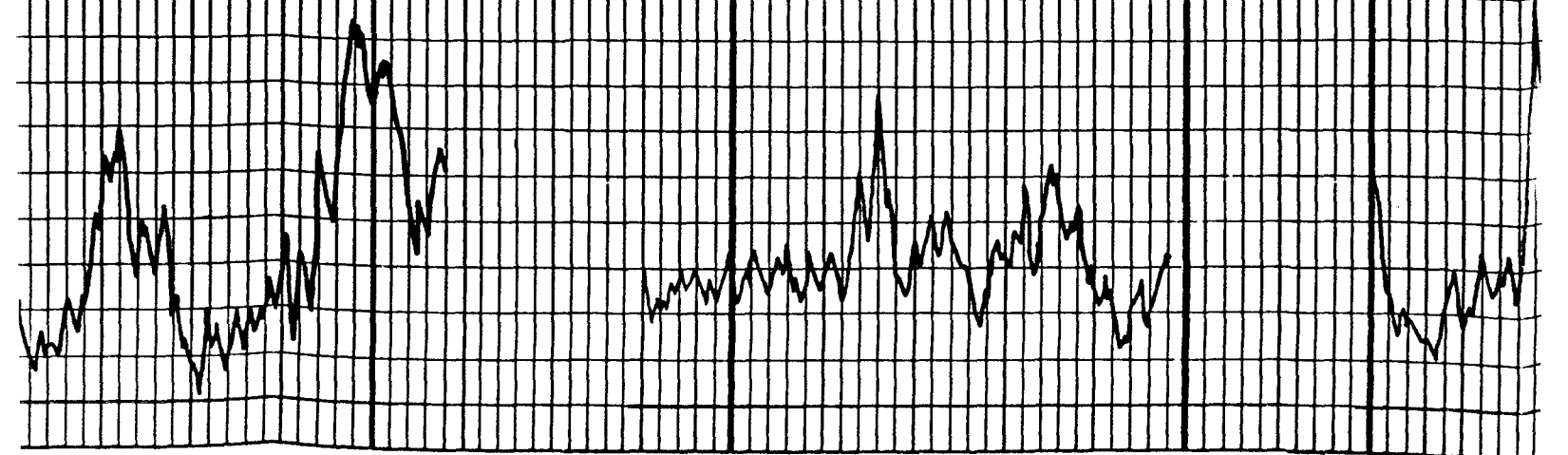
6900

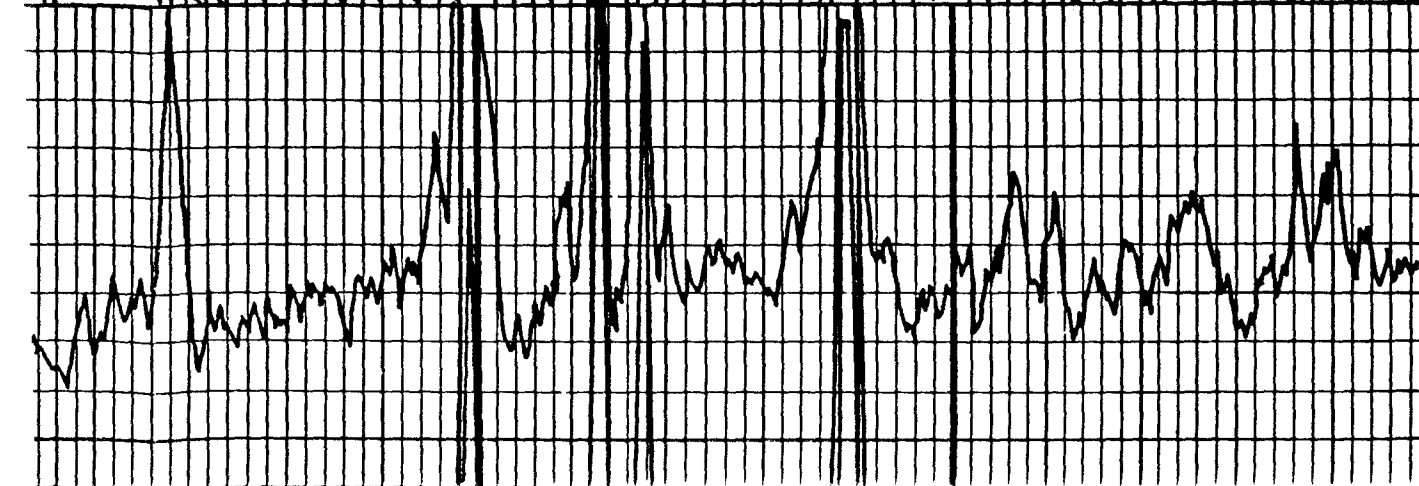
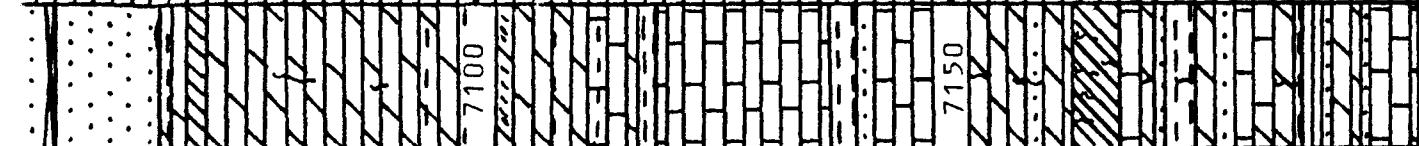
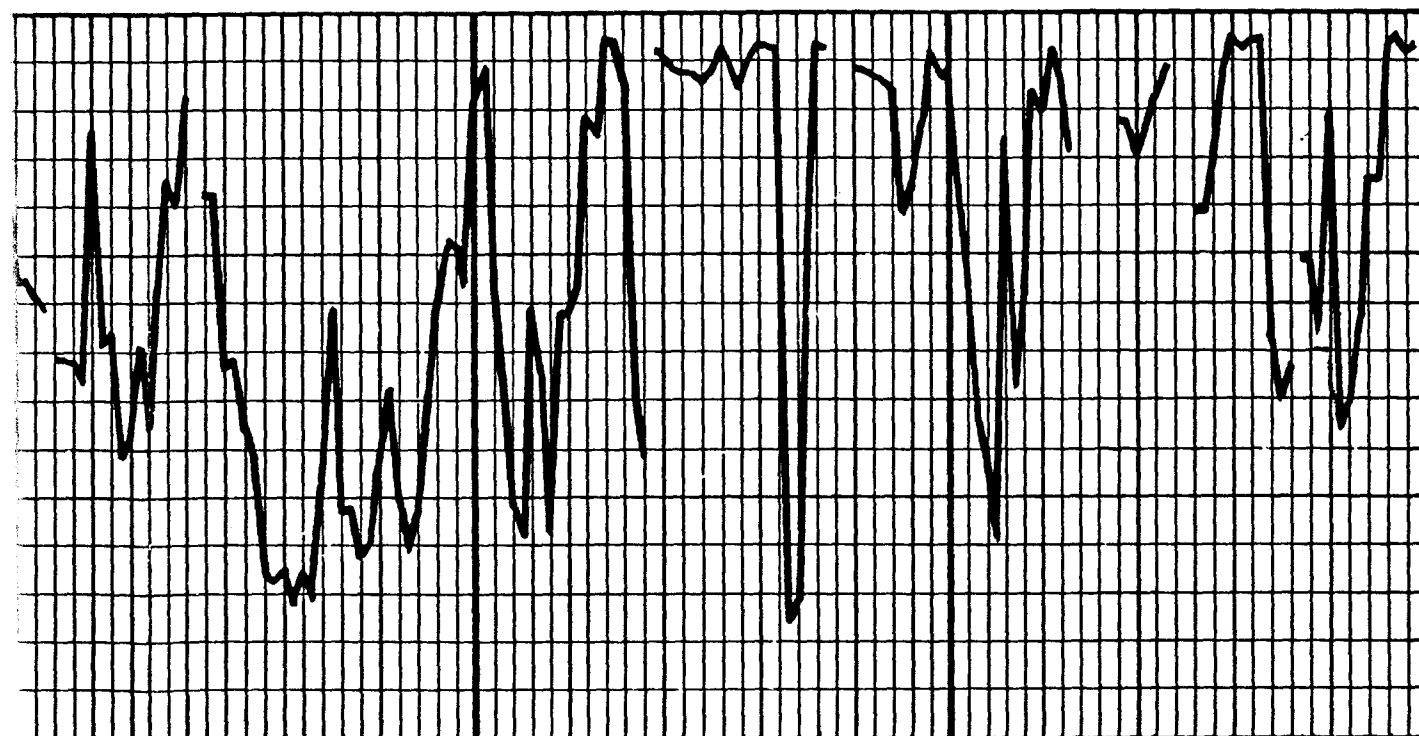
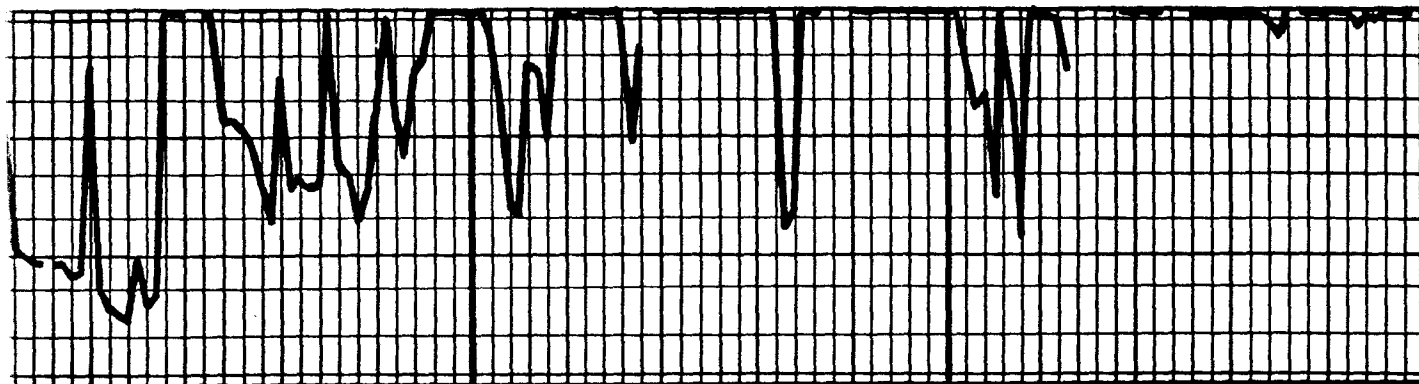
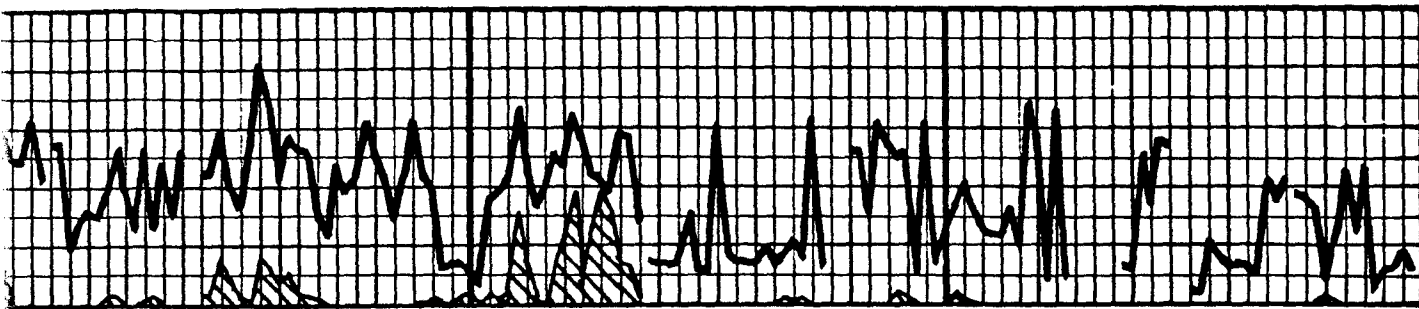
6940

6950

6998

7050





7100

7150

7199