

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-884-9709 * WICHITA, KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY <u>L. D. DRILLING, INC.</u>	ELEVATIONS
LEASE <u># 1 MAGLEY TRUST UNIT</u>	KB <u>3380</u>
FIELD <u>WILDCAT</u>	DF _____
LOCATION <u>675' ENL & 2324' FEL</u>	CL <u>3375</u>
SEC <u>22</u> TWP <u>5s</u> RGE <u>37w</u>	Measurements Are All From <u>3380 KB</u>
COUNTY <u>CHEYENNE</u> STATE <u>KANSAS</u>	CASING SURFACE <u>8.58" @ 359'</u>
CONTRACTOR <u>L. D. DRILLING, INC.</u>	PRODUCTION _____
WELL NO. <u>5031</u> LTD <u>5034</u>	ELECTRICAL SURVEYS <u>DUAL IND, DENS-N, MICRO</u>
MUD UP <u>3597</u> TYPE MUD <u>CHEMICAL</u>	

SAMPLES SAVED FROM _____	<u>3800</u> TO <u>5031</u>
DRILLING TIME KEPT FROM _____	<u>3700</u> TO <u>5031</u>
SAMPLES EXAMINED FROM _____	<u>3800</u> TO <u>5031</u>
GEOLOGICAL SUPERVISION FROM _____	<u>3950</u> TO <u>5031</u>
GEOLOGIST ON WELL <u>KIM B. SHOEMAKER</u>	

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	3085+295	3088+292
B/ANH.	3122+258	3123+257
STATLER	3926-546	3918-538
HEEBNER	4200-820	4198-818
LANSING	4250-870	4248-868
B/KC	4510-1130	4505-1125
PAWNEE	4634-1254	4632-1252
FORT SCOT	4692-1312	4690-1310
CHEROKEE	4717-1337	4716-1336
MISSISSIPPI	4932-1552	4928-1548

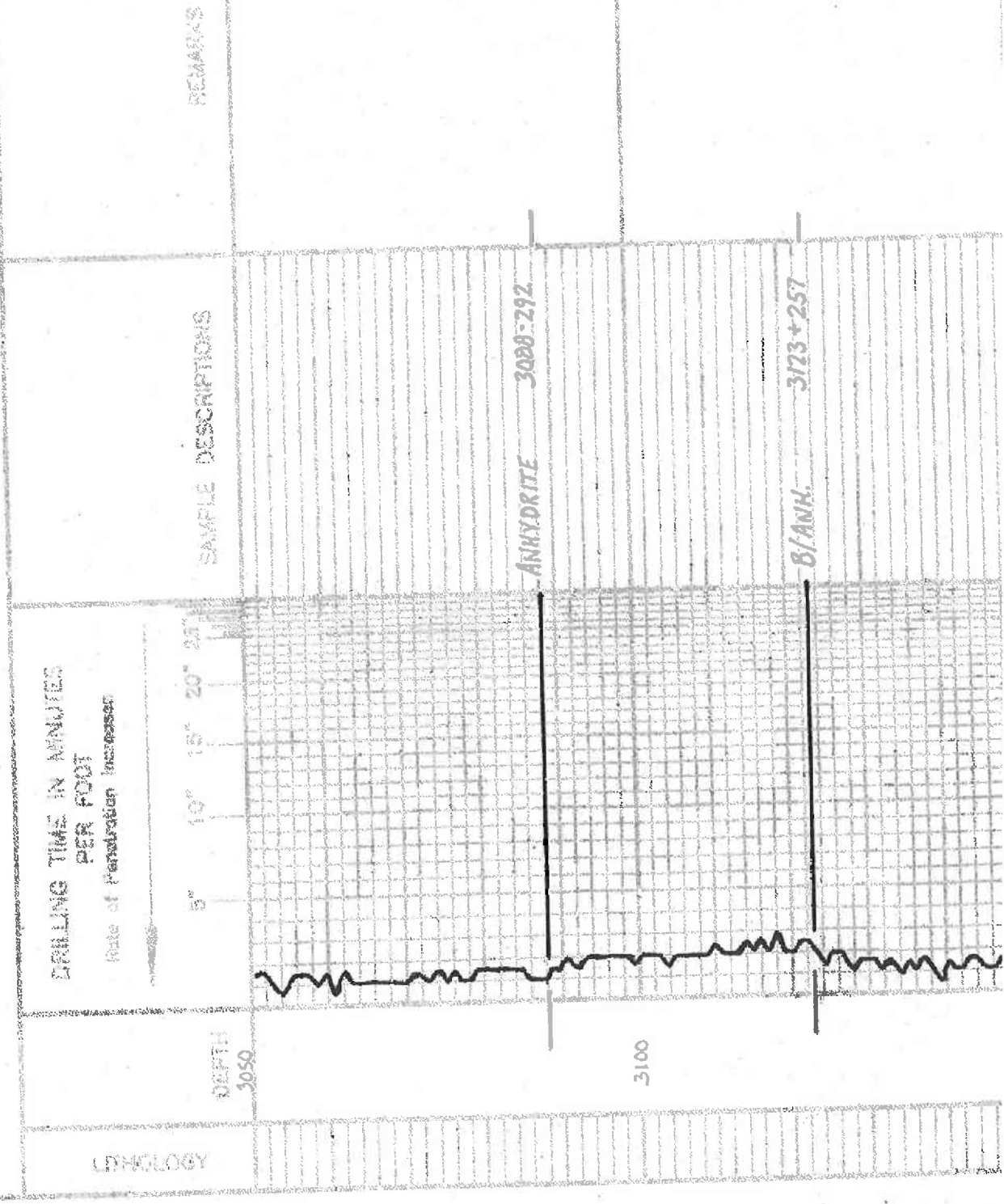


REMARKS: API: 15-023-21456

10-22-16 SRUD
 10-23 @ 362'
 10-24 @ 1900'
 10-25 @ 2810'
 10-26 @ 3395'
 10-27 @ 3774'
 10-28 @ 4130'
 10-29 @ 4450'
 10-30 @ 4570'
 10-31 @ 4695'
 11-1 @ 5031'

LEGEND

- Dolomite
- Gess
- Gellano
- Limestone
- Carb sh
- Sand
- Shale
- Sandstone
- Sand
- Anhydrite



3150

3700

3800

3900

V15150
WV189
S16-72
DNL 2400

V106

Samples are tagged

Sh. Gg. Silty Sdy

Ls. Fr. Gg. Sh. Foss.

Sh. Bl. Silty Sh. G.

Ls. Fr. Gg. Foss.
Ls. Fr. Gg. Sh. Foss.

Sh. Gg. - Bl. Silty

Ls. Fr. Foss.

Sh. Bl. Silty Gg.

Sh. Gg. Silty

STOTLER 3918-538

Ls. Fr. Gg. Sh. Foss.

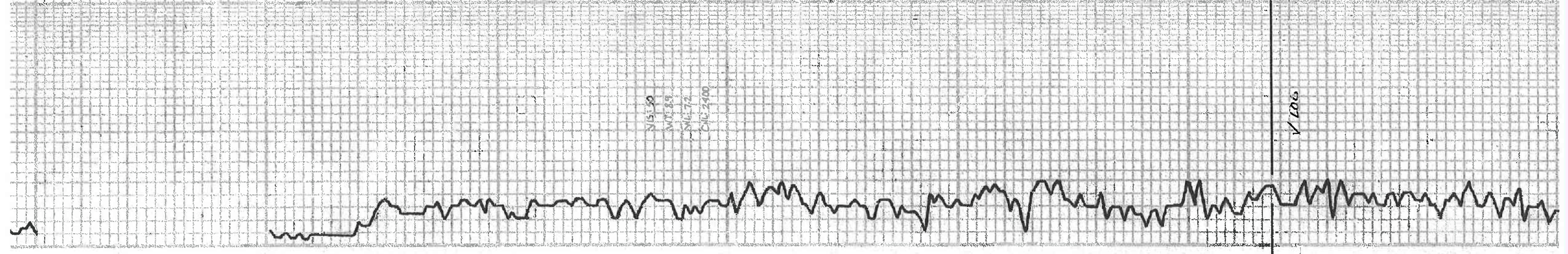
Sh. Gg.

Ls. Fr. Sh. Foss.

Ls. Fr. Gg. Sh. Foss. Fly of
Bl. Tan Spilt Str. No. 1000

Sh. Bl. Mucic.

Ls. Fr. Sh. Foss. Part of Bl. Tan Spilt Str
No. 1000



4000

4100

4200

4300

Sh. G.

LS. Ltg. V. sh. Foss.

Δ NR 444

LS. Foss. For. Capella.

Sh. G.

LS. Foss. Sil. Foss.

Sh. Foss. Bl.

LS. Foss. Sil. Foss. Sil. Foss. City of Ark. at Spid. Sil. Foss. No. 8000

Sh. Bl.

Sh. G.

LS. sh. For. Chilly.

LS. sh. V. sh. Foss. Sil. Chilly.

LS. sh. Sil. Foss. For. Sil. A.

Sh. Bl. G.

Sh. Bl. G.

Sh. Bl. G. V. sh. Foss. For. Bl.

Sh. Bl. G.

LS. sh. Foss. Celeste.

LS. sh. Foss. Sil. Foss. Sil. A.

Sh. Bl. G. Bl.

Sh. Bl.

LS. sh. Foss. Celeste. Foss. Bl. Foss. Sil. Foss. No. 8000. T. H. G. No. 8000.

HEEBNER 4198-810

Sh. Bl. G. Bl. Foss.

Sh. Bl. G.

Sh. Bl.

LS. sh. Foss. For. Foss. Bl. Foss. No. 8000. T. H. G. No. 8000.

Sh. Bl.

LANSING 4218-868

LS. Foss. Sil. Foss. Celeste.

Sh. Bl.

LS. sh. Foss. For. Foss. Bl. Foss. No. 8000. T. H. G. No. 8000.

Sh. Bl.

LS. sh. Foss. For. Foss. Bl. Foss. No. 8000. T. H. G. No. 8000.

Sh. Bl.

LS. sh. Foss. Chilly.

LS. sh. Foss. Celeste.

LS. S. DM
Sh. Rd.
LS. 20' - 40' - 60' - 80' - 100' - 120' - 140' - 160' - 180' - 200' - 220' - 240' - 260' - 280' - 300' - 320' - 340' - 360' - 380' - 400' - 420' - 440' - 460' - 480' - 500' - 520' - 540' - 560' - 580' - 600' - 620' - 640' - 660' - 680' - 700' - 720' - 740' - 760' - 780' - 800' - 820' - 840' - 860' - 880' - 900' - 920' - 940' - 960' - 980' - 1000'

MUNCIE CREEK 4366-986

Sh. Rd. 20' - 40' - 60' - 80' - 100' - 120' - 140' - 160' - 180' - 200' - 220' - 240' - 260' - 280' - 300' - 320' - 340' - 360' - 380' - 400' - 420' - 440' - 460' - 480' - 500' - 520' - 540' - 560' - 580' - 600' - 620' - 640' - 660' - 680' - 700' - 720' - 740' - 760' - 780' - 800' - 820' - 840' - 860' - 880' - 900' - 920' - 940' - 960' - 980' - 1000'

DST (1) 4364-4450

1. Spent: Blow built to 3 1/2"
2. Spent: " " " 3"

30-45-45-60

Rec. 70' MW (67' MW, 33' M)

CHK. 18.000
PH: 7.0
RW: 3.0
@ 75°F

FP: 1923-34-92 M
SIP: 1340-1336 F

Tool Sample
70% W
30% M
w/ oil tops

Temp 140°F

STARK 4448-1068

Sh. Rd. 20' - 40' - 60' - 80' - 100' - 120' - 140' - 160' - 180' - 200' - 220' - 240' - 260' - 280' - 300' - 320' - 340' - 360' - 380' - 400' - 420' - 440' - 460' - 480' - 500' - 520' - 540' - 560' - 580' - 600' - 620' - 640' - 660' - 680' - 700' - 720' - 740' - 760' - 780' - 800' - 820' - 840' - 860' - 880' - 900' - 920' - 940' - 960' - 980' - 1000'

B/KC 4505-1125

Sh. Rd. 20' - 40' - 60' - 80' - 100' - 120' - 140' - 160' - 180' - 200' - 220' - 240' - 260' - 280' - 300' - 320' - 340' - 360' - 380' - 400' - 420' - 440' - 460' - 480' - 500' - 520' - 540' - 560' - 580' - 600' - 620' - 640' - 660' - 680' - 700' - 720' - 740' - 760' - 780' - 800' - 820' - 840' - 860' - 880' - 900' - 920' - 940' - 960' - 980' - 1000'

DST (2) 4500-4656

1. Spent: Blow built to 1 1/4"
2. Spent: Surface Blow drill

30 - 30 - 30 - 30

Rec. 10' Mud w/ few oil spots

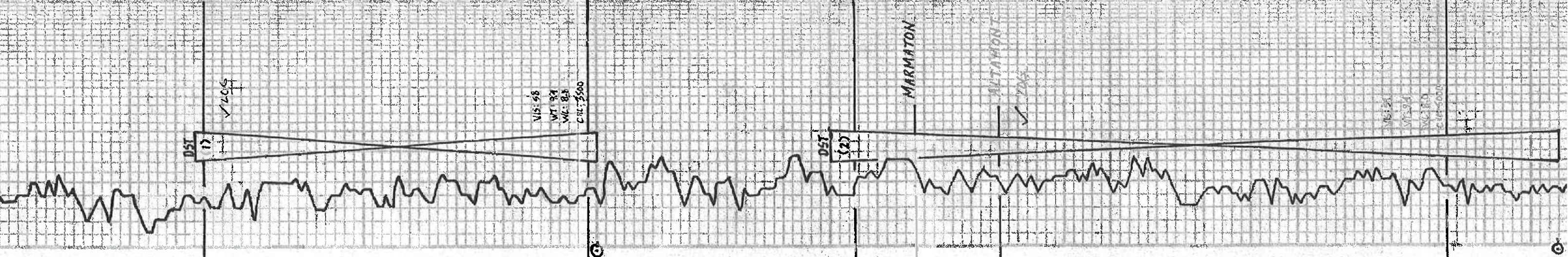
Tool Sample:
100% Mud
w/ oil

FP: 2719
18' 19"
SIP: 2722-131*

Temp 132°F

PANNEE 4632-1252

Sh. Rd. 20' - 40' - 60' - 80' - 100' - 120' - 140' - 160' - 180' - 200' - 220' - 240' - 260' - 280' - 300' - 320' - 340' - 360' - 380' - 400' - 420' - 440' - 460' - 480' - 500' - 520' - 540' - 560' - 580' - 600' - 620' - 640' - 660' - 680' - 700' - 720' - 740' - 760' - 780' - 800' - 820' - 840' - 860' - 880' - 900' - 920' - 940' - 960' - 980' - 1000'



4400

4500

4600

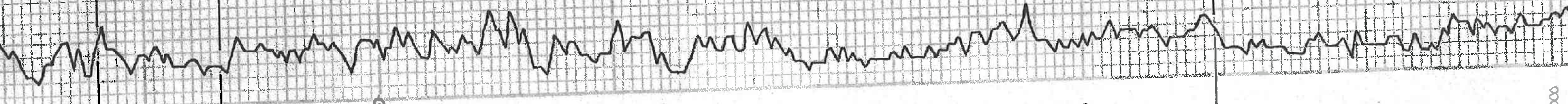
VIS: 58
WT: 94
WC: 82
CIL: 5500

VIS: 58
WT: 94
WC: 82
CIL: 5500

15. wk. 100 ft. - 80 y. Chilly
15. wt. chll
SHALLOO
FORT SLOT 4690-1310
16. wt. Sil. Ess. Sil. A 1/2

4700
4800
4900
5000

CHEROKEE 4716-1336
SH. BLK.
17. wt. Sil. Ess. Sil. 1/2
18. wt. Sil. Ess. Sil. 1/2
19. wt. Sil. Ess. Sil. 1/2
20. wt. Sil. Ess. Sil. 1/2
21. wt. Sil. Ess. Sil. 1/2
22. wt. Sil. Ess. Sil. 1/2
23. wt. Sil. Ess. Sil. 1/2
24. wt. Sil. Ess. Sil. 1/2
25. wt. Sil. Ess. Sil. 1/2
26. wt. Sil. Ess. Sil. 1/2
27. wt. Sil. Ess. Sil. 1/2
28. wt. Sil. Ess. Sil. 1/2
29. wt. Sil. Ess. Sil. 1/2
30. wt. Sil. Ess. Sil. 1/2
31. wt. Sil. Ess. Sil. 1/2
32. wt. Sil. Ess. Sil. 1/2
33. wt. Sil. Ess. Sil. 1/2
34. wt. Sil. Ess. Sil. 1/2
35. wt. Sil. Ess. Sil. 1/2
36. wt. Sil. Ess. Sil. 1/2
37. wt. Sil. Ess. Sil. 1/2
38. wt. Sil. Ess. Sil. 1/2
39. wt. Sil. Ess. Sil. 1/2
40. wt. Sil. Ess. Sil. 1/2
41. wt. Sil. Ess. Sil. 1/2
42. wt. Sil. Ess. Sil. 1/2
43. wt. Sil. Ess. Sil. 1/2
44. wt. Sil. Ess. Sil. 1/2
45. wt. Sil. Ess. Sil. 1/2
46. wt. Sil. Ess. Sil. 1/2
47. wt. Sil. Ess. Sil. 1/2
48. wt. Sil. Ess. Sil. 1/2
49. wt. Sil. Ess. Sil. 1/2
50. wt. Sil. Ess. Sil. 1/2
51. wt. Sil. Ess. Sil. 1/2
52. wt. Sil. Ess. Sil. 1/2
53. wt. Sil. Ess. Sil. 1/2
54. wt. Sil. Ess. Sil. 1/2
55. wt. Sil. Ess. Sil. 1/2
56. wt. Sil. Ess. Sil. 1/2
57. wt. Sil. Ess. Sil. 1/2
58. wt. Sil. Ess. Sil. 1/2
59. wt. Sil. Ess. Sil. 1/2
60. wt. Sil. Ess. Sil. 1/2
61. wt. Sil. Ess. Sil. 1/2
62. wt. Sil. Ess. Sil. 1/2
63. wt. Sil. Ess. Sil. 1/2
64. wt. Sil. Ess. Sil. 1/2
65. wt. Sil. Ess. Sil. 1/2
66. wt. Sil. Ess. Sil. 1/2
67. wt. Sil. Ess. Sil. 1/2
68. wt. Sil. Ess. Sil. 1/2
69. wt. Sil. Ess. Sil. 1/2
70. wt. Sil. Ess. Sil. 1/2
71. wt. Sil. Ess. Sil. 1/2
72. wt. Sil. Ess. Sil. 1/2
73. wt. Sil. Ess. Sil. 1/2
74. wt. Sil. Ess. Sil. 1/2
75. wt. Sil. Ess. Sil. 1/2
76. wt. Sil. Ess. Sil. 1/2
77. wt. Sil. Ess. Sil. 1/2
78. wt. Sil. Ess. Sil. 1/2
79. wt. Sil. Ess. Sil. 1/2
80. wt. Sil. Ess. Sil. 1/2
81. wt. Sil. Ess. Sil. 1/2
82. wt. Sil. Ess. Sil. 1/2
83. wt. Sil. Ess. Sil. 1/2
84. wt. Sil. Ess. Sil. 1/2
85. wt. Sil. Ess. Sil. 1/2
86. wt. Sil. Ess. Sil. 1/2
87. wt. Sil. Ess. Sil. 1/2
88. wt. Sil. Ess. Sil. 1/2
89. wt. Sil. Ess. Sil. 1/2
90. wt. Sil. Ess. Sil. 1/2
91. wt. Sil. Ess. Sil. 1/2
92. wt. Sil. Ess. Sil. 1/2
93. wt. Sil. Ess. Sil. 1/2
94. wt. Sil. Ess. Sil. 1/2
95. wt. Sil. Ess. Sil. 1/2
96. wt. Sil. Ess. Sil. 1/2
97. wt. Sil. Ess. Sil. 1/2
98. wt. Sil. Ess. Sil. 1/2
99. wt. Sil. Ess. Sil. 1/2
100. wt. Sil. Ess. Sil. 1/2



MISSISSIPPI 4928-1548
101. wt. Sil. Ess. Sil. 1/2
102. wt. Sil. Ess. Sil. 1/2
103. wt. Sil. Ess. Sil. 1/2
104. wt. Sil. Ess. Sil. 1/2
105. wt. Sil. Ess. Sil. 1/2
106. wt. Sil. Ess. Sil. 1/2
107. wt. Sil. Ess. Sil. 1/2
108. wt. Sil. Ess. Sil. 1/2
109. wt. Sil. Ess. Sil. 1/2
110. wt. Sil. Ess. Sil. 1/2
111. wt. Sil. Ess. Sil. 1/2
112. wt. Sil. Ess. Sil. 1/2
113. wt. Sil. Ess. Sil. 1/2
114. wt. Sil. Ess. Sil. 1/2
115. wt. Sil. Ess. Sil. 1/2
116. wt. Sil. Ess. Sil. 1/2
117. wt. Sil. Ess. Sil. 1/2
118. wt. Sil. Ess. Sil. 1/2
119. wt. Sil. Ess. Sil. 1/2
120. wt. Sil. Ess. Sil. 1/2
121. wt. Sil. Ess. Sil. 1/2
122. wt. Sil. Ess. Sil. 1/2
123. wt. Sil. Ess. Sil. 1/2
124. wt. Sil. Ess. Sil. 1/2
125. wt. Sil. Ess. Sil. 1/2
126. wt. Sil. Ess. Sil. 1/2
127. wt. Sil. Ess. Sil. 1/2
128. wt. Sil. Ess. Sil. 1/2
129. wt. Sil. Ess. Sil. 1/2
130. wt. Sil. Ess. Sil. 1/2
131. wt. Sil. Ess. Sil. 1/2
132. wt. Sil. Ess. Sil. 1/2
133. wt. Sil. Ess. Sil. 1/2
134. wt. Sil. Ess. Sil. 1/2
135. wt. Sil. Ess. Sil. 1/2
136. wt. Sil. Ess. Sil. 1/2
137. wt. Sil. Ess. Sil. 1/2
138. wt. Sil. Ess. Sil. 1/2
139. wt. Sil. Ess. Sil. 1/2
140. wt. Sil. Ess. Sil. 1/2
141. wt. Sil. Ess. Sil. 1/2
142. wt. Sil. Ess. Sil. 1/2
143. wt. Sil. Ess. Sil. 1/2
144. wt. Sil. Ess. Sil. 1/2
145. wt. Sil. Ess. Sil. 1/2
146. wt. Sil. Ess. Sil. 1/2
147. wt. Sil. Ess. Sil. 1/2
148. wt. Sil. Ess. Sil. 1/2
149. wt. Sil. Ess. Sil. 1/2
150. wt. Sil. Ess. Sil. 1/2

5000

4800

4900

5000

RTD 5031-1651

G

Sh. Red. Sdy.

Sdy. sh. Md. G. R. S. R. R.

Sh. Blue-grey. Purple. Sdy.

Sh. Yellow. Rd.

Rd. Clay. Md. G. S. R. R.

Sh. Red. Sdy.

Sh. Purple. Violet. Rd.

A. Yellow. Weathered.

Sh. Yellow. Rd.

Sd. Clay. Md. G. S. R. R.

Sd. Clay. Md. G. R. S. R. R.

Sh. Yellow. Rd.

Sd. Clay. Md. G. R. S. R. R.

Sh. Yellow. Rd.

Sh. Rd. Sdy. Rd.

Sh. Rd. Sdy. Rd. G. S. R. R.

A. Clay. Sh. Purple.

MISSISSIPPI 4928-1648

Dol. Tan. Foss. V. S. Foss. Svc.

Dol. G. Rd. Sdy. V. Foss. Svc.

Dol. G. Rd. Sdy. Foss. Svc.

Dol. G. Rd. Sdy. S. Foss. Svc.

Dol. G. Rd. Sdy. Foss. Svc.

Dol. G. Rd. Sdy. Svc.

Dol. G. Rd. Sdy. Foss. Svc.

Dol. G. Rd. Sdy. Foss.

Dol. W. Foss. Svc.

Dol. G. Rd. Sdy.

