
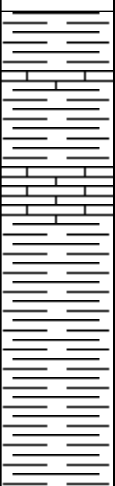
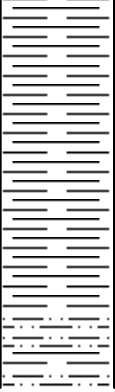
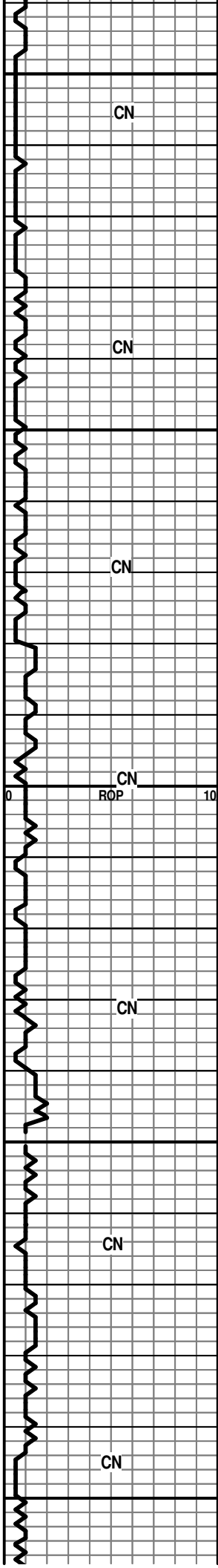
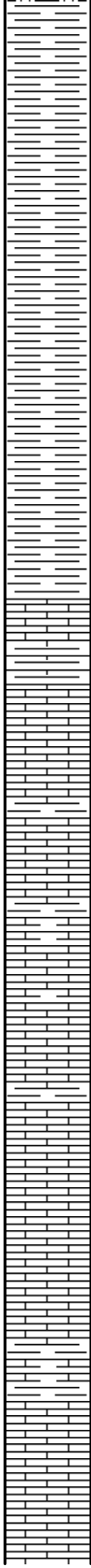
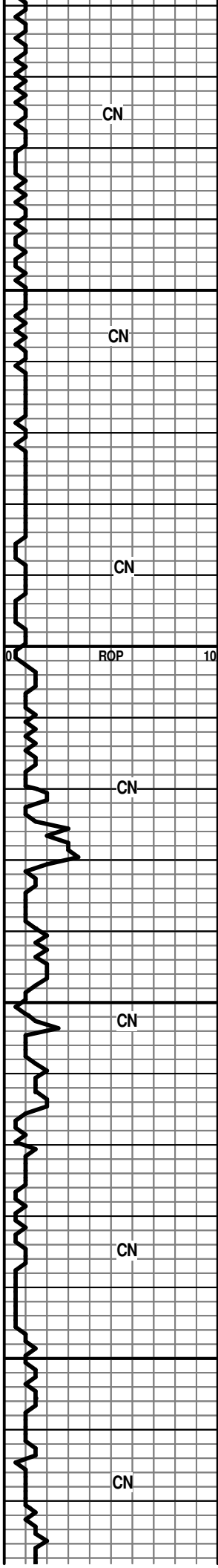


ROP (min/ft) 	DST	Lithology	Porosity and Show Depth	Geological Descriptions	TG, C1-C4 / REMARKS
0 ROP 10 DUKE RIG #7 GALEN ROACH			39	LOG TOPS HEEBNER 4202' (-2461') LANSING/KC 4398' (-2657') STARK SH 4810' (-3069') B/KC 4890' (-3149')	
DRILLING WITH PDC BIT			3950	MARMATON 4970' (-3229') MISS 5222' (-3481') VIOLA 6202' (4461') SIMPSON 6513' (-4772') ARBUCKLE 6585' (-4844')	KB=1741'
0 ROP 10 CN			4000	LS-GRY-V-SHLY-SAMPLES SH-LT GRY-SPLNTY SAMPLES MOSTLY SHALE-LT GRY-BLKY-LMY SHALES A.A.	
CN			4050	SH-LT GRY-TR SLT SLTSS-FRSTY GRY-F-GRN-V-SHLY-MICA-NO VIS POR-NO VIS FLOR-NO VIS SHOW	WT. 84 VIS 50



4100
SLTSS A.A.
SS-FRSTY WHT-F-GRN-TT-RND-WELL SRTED-CALC
CMT-HEM-MICA-NO VIS POR-NO VIS FLOR
POOR SAMPLE
4150
POOR SAMPLE
POOR SAMPLE
SH-BLK-CARB
LS-GRY-F-XLN-SNDY TEX-TR SH LT GRY IMBD
THRU-NO VIS POR-NO VIS FLOR-NO SHOW
4200
HEEBNER 4202' (-2461')
SH-BLK-CARB
SH-BLK-CARB
LS-DK GRY-V-SHLY
4250
POOR SAMPLE
4300
DOUGLAS SH 4294' (-2553')
LOG 4287' (-2546')
SH-GRY-SLTY

Depth (ft)	Notes
4105	ST HOLE @ 4105' 3/4 DEG
4100 - 4150	POOR SAMPLE
4150 - 4200	POOR SAMPLE
4200 - 4250	HEEBNER 4202' (-2461')
4250 - 4300	DOUGLAS SH 4294' (-2553') LOG 4287' (-2546')



SH-GRY-SPLNTY

SAMPLES-SHALE-GRY-SPLNTY

4350

SHALES A.A.

LANSING/KC 4394' (-2653')
LOG 4398' (-2657')

4400

POOR SAMPLE-V-SHLY

LS-OFF WHT-F-XLN-HD-DNS W/ SH GRY SPLNTY

LS/SH A.A.

4450

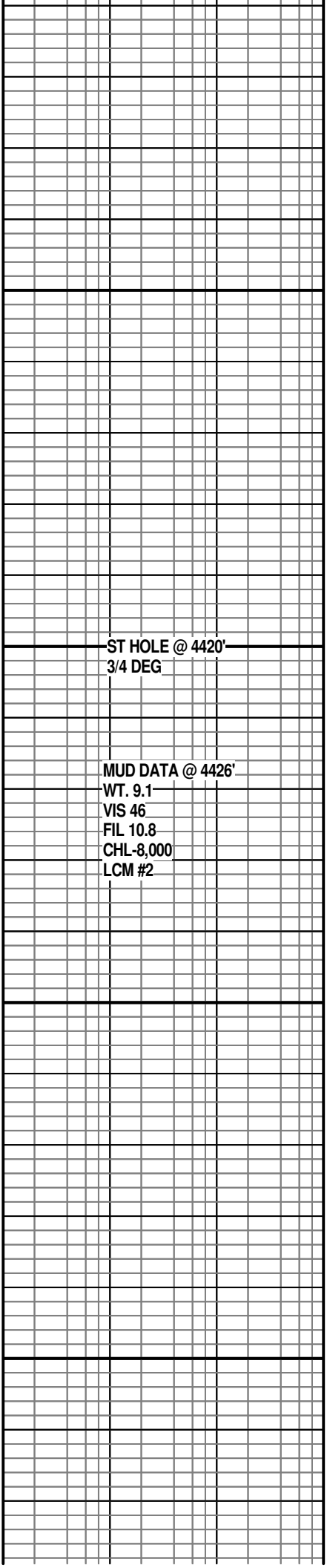
LS-OFF WHT-F-XLN-TR FOSS-HD-DNS

LS-OFF WHT-F-XLN-SCATT VUG POR-DULL WHT MIN
FLOR-NO VIS SHOW

4500

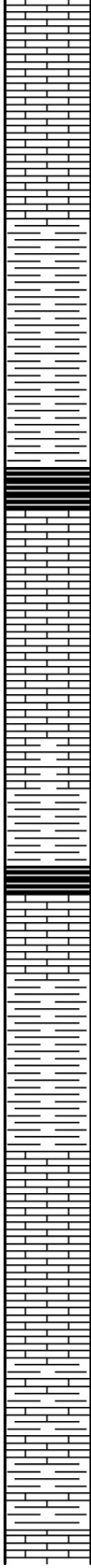
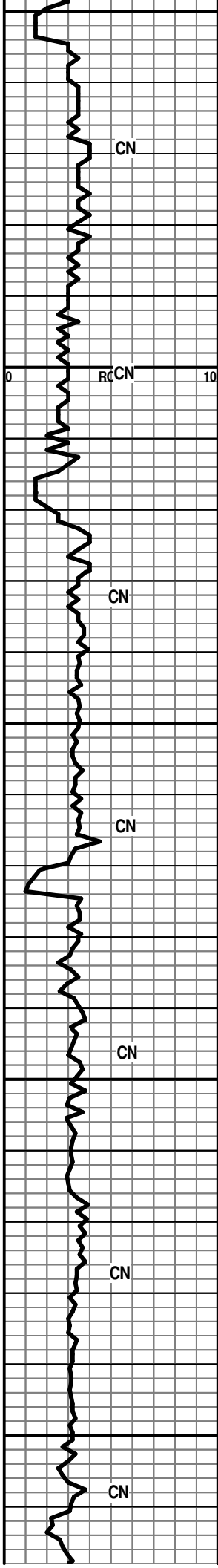
LS-GRY-F-XLN-BRIT-FOSS-SHLY-DULL WHT FLOR-NO
VIS SHOW

POOR SAMPLE



ST HOLE @ 4420'
3/4 DEG

MUD DATA @ 4426'
WT. 9.1
VIS 46
FIL 10.8
CHL-8,000
LCM #2



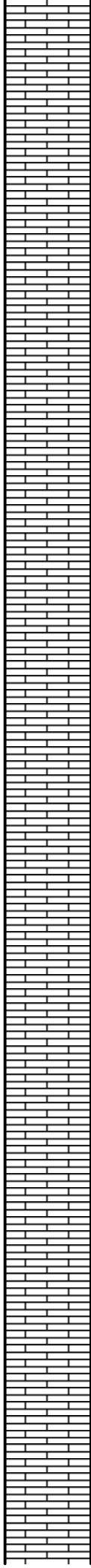
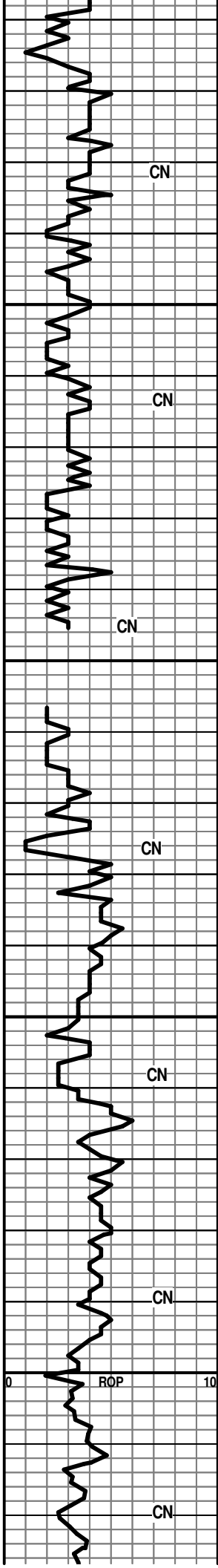
4750
4800
4850
4900
4950

LS A.A.
LS-TN-F-XLN-TR FOSS-SH LT GRY IMBD -TR DULL YEL FLOR-NO VIS CUT
LS-GRY-TN-F-XLN-HD-DNS TR CHLK IN TRAY
SH-DK RY-FRM-BLKY-LMY
SH A.A.
STARK SH 4808' (-3067')
LOG 4810' (-3069')
SH-BLK-CARB
LS-GRY-F-XLN-HD-DNS-SHLY W/ CHRT-LT BRN-OPQ-FRSH
LS-TN-F-XLN-SEMI CHLKY IP-HD-DNS
LS-OFF WHT-F-XLN-FOSS FRAGS-HD-DNS
LS-GRY-F-XLN-HD-DNS SHLY
SH-LT GRY-SPLNTY-WAXY
SH-BLK-CARB
LS-TN/GRY-F-XLN-HD-DNS
LS-OFF WHT-F-XLN-FOSS-OOL-BRIT-NO VIS POR-NO VIS SHOW
BASE OF K/C 4885' (-3144')
LOG 4890' (-3149')
SH-DK GRY-FRM-BLKY-SLTY
LS-TN-V-F-XLN-CHRTY-HD-DNS W/ SM PYR XLS IMBD
LS-TN-F-XLN-HD-DNS TR CHLK
LS A.A.
LS-GRY-F-XLN-HD-DNS SHLY
SH-DK GRY-BLKY-LMY
LS-OFF WHT-F-XLN-SM OOL-W/ SM OOL-MOLDIC POR-BRITE WHT FLOR-NO VIS CUT
SH-DK GRY-BLKY-ARGIL-W/ PYR XLS IN TRAY
MARMATON 4963' (-3222')

HW 100 PLUS
CHROMO 35

MUD DATA @ 4825'
WT. 9.3
VIS 47
FIL 10.8
LCM #4

HW 100 PLUS
CHROMO 25



LS-OFF WHT-F-XLN-SNDY TEX-FOSS FRAGS-FR
 INTER-GRN/INTER-PRT POR-PR TO FR
 INTER-GRN/FAC POR-NO VIS FLOR

LS-DK BRN-BLOCKY-HD-DNS

LS-OFF-WHT-F-XLN-OOL-HD-DNS W/
 CHRT-TRANS-FOSS-FRSH-NO VIS FLOR

LS-TN-M-XLN-FOSS FRAGS-HD-DNS

5450
 LS-OFF WHT-F-XLN-FOSS FRAGS-OOL-CHLKY-TR
 INTER-GRN POR-NO VIS FLOR

LS-OFF WHT/GRY-F-XLN-HD-DNS W/
 CHRT-GRY-TRANS-FRSH

LS-OFF WHT-F-XLN-TR FOSS FRAGS-HD-DNS W/ PYR
 XLS IN TRAY

LS A.A. W/ CHRT-OFF WHT/BLK SPECS-OPQ-FRSH

5500
 LS-OFF WHT-F-XLN-BRIT-FOSS-FRAGS-TR FRAC W/
 DK BLK STN-TR LT BLU FLOR-NO VIS CUT

LS-OFF WHT-F-XLN-SNDY TEX-BLOCKY-HD-DNS

LS-OFF WHT/GRY-F-GRN-FOSS-CHLKY-TR INTER-GRN
 POR--TR SCATT YEL FLOR-NO VIS CUT

LS-OFF WHT-F-XLN-FOSS FRAGS-OOL-HD-DNS W/
 CHRT

5550
 LS-OFF WHT-F-XLN/GRN-CHLKY-FOSS
 FRAGS-OOL-TR GLAU-TR FRAC POR-SCAT YEL
 FLOR-NO VIS CUT

LS-OFF WHT-F-XLN-TR GLAU-HD-DNS W/ CHRT AND
 CHLK IN TRAY

LS-GRY-F-XLN-BLOCKY-HD-DNS W/ CHRT

5600
 LS-OFF WHT-F-XLN-FOSS-TR GLAU-HD -DNS--SCATT
 CHLK IN TRAY

LS-OFF WHT/GRY-F-XLN-FOSS FRAGS-SH LT GRY
 IMBD-HD-DNS-TR CHLK IN TRAY-LG PYR XLS

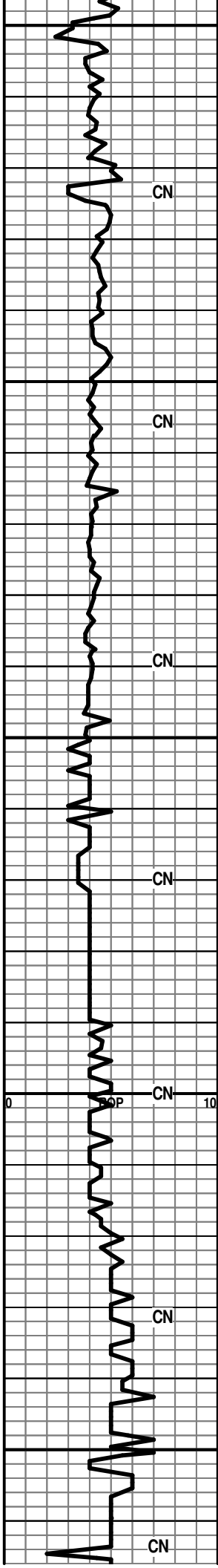
WT. 9.2
 VIS 58
 LCM 5

5428' HW 21 UNIT GAS
 INCRS

WT. 9.2
 VIS 47
 LCM #6

HW 23 UNIT GAS INCRS

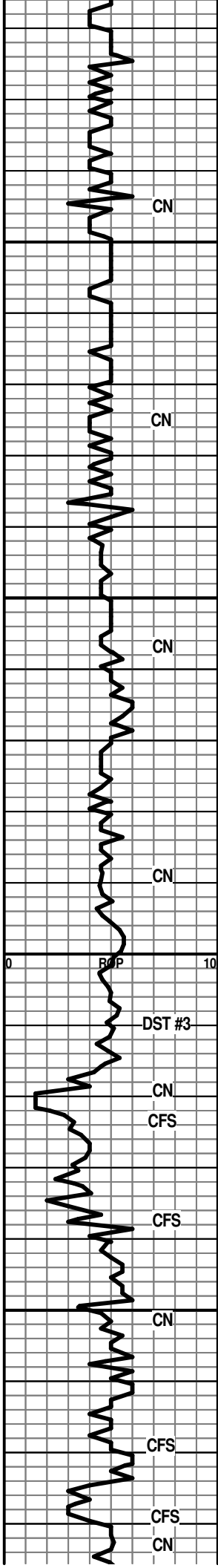
ST HOLE @ 5589'
 1 3/4 DEG



5850
5900
5950
6000
6050

DOLO A.A. TR SM GLAU XLS
 DOLO-GRY-F-XLN-BLOCKY-HD-GLAU IMBD-PYR XLS IN TRAY
 DOLO-GRRY-F-XLN-ARGIL-FOSS-SHELL-V-SM PYR XLS-NO VIS FLOR
 DOLO A.A. W/ CHRT-GRY-OPQ-FRSH
 DOLO-GRY-F-XLN-ARGIL-SM GLAU XLS-HD-DNS W/ CHRT
 DOLO A.A. W/ CHRT-OFF WHT/GRY-OPQ-FRSH
 DOLO-A.A.-W/ CHRT-OFF WHT-TRANS TO OPQ-FRSH
 DOLO A.A.
 DOLO A.A.
 DOLO-GRY-F-XLN-V-ARGIL-HD-DNS W/ CALCITE XLS IN TRAY
 DOLO-GRY-F-XLN-SHLY-HD-DNS -TR CHRT-NO VIS FLOR-NO VIS SHOW
 DOLO A.A. W/ (3)PCS LS-LT BRN-F-XLN-HD-DNS
 DOLO-GRY-F-XLN-SHLY-HD-DSN W/ CHRT-GRY/OFF WHT-FOSS FRAGS-OPQ-FRSH
 DOLO A.A.
 DOLO-GRY-F-XLN-SHLY-W/ CHRT-NO VIS FLOR

HW 10 UNIT @ 5877'
 HW 20 UNIT GAS INCRS @ 5890'
 WT. 9.3
 VIS 70
 LCM #5



DOLO A.A.- 1 PC LS-OFF WHT-F-XLN-FOSS FRAGS
 CHLKY -BRIT-NO VIS POR-NO VIS FLOR

WT. 9.3
 VIS 66
 LCM #6

DOLO A.A.

6100

DOLO-GRY-F-XLN-AGRIL-NO VIS POR- 1PC
 LS-TN-F-XLN-SM GLAU XLS IMD-NO VIS POR-NO VIS
 SHOW

DOLO A.A.

6150

DOLO A.A.

DOLO-GRY-F-XLN-SHLY-HD-DNS-W/ CHRT

DOLO-GRY-F-M-GRN-SH LT GRY DISS THRU-HD-DNS
 W/ CHRT-GRY-OPQ-FRSH

SH-LT GRN-FRM-LMY

6200

VIOLA 6198' (-4457')
LOG 6202' (-4461')

DOLO-TN-F-GRN-SUCRO-FOSS FRAGS-PR TO FR
 INTER-GRN/SM VUG POR-BRITE YEL/GLD FLOR-FLSH
 CUT WHEN CRUSHED-FNT ODOR W/
 CHRT-GRY-FOSS-OPQ-FRSH IN TRAY

HW 80 UNIT GAS
 INCRS

DST #3
 6215-6234
 REC-180 FT GIP + 120FT
 MUD
 IBLW-WK BLW BLT 2.5
 IN INTO BUCKET IN 15
 MIN
 FBLW-FAIR BLW BLT
 BOB IN 30 MIN
 SIP-284-498
 IFP-44-79
 FFP-49-76
 HP-3131-2822

DOLO-TN-F-GRN-SUCRO-TR FRAC POR-LT BRN STN
 -BRITE YEL FLOR-FLSH CUT WHEN CRUSHED-FNT
 ODOR

HW 100 PLUS OFF
 CHART

ST HOLE @ 6234'
 1 1/2 DEG

DOLO-TN-F-GRN-SUCRO-FOSS FRAGS-TR FRAC
 POR-TR BRITE GLD FLOR-NO VIS CUT W/
 CHRT-GRY-TRANS-FOSS-FRSH

6250

DOLO-TN-F-GRN-SUCRO-TR FRAC/VUG AND
 INTER-GRN POR-LT BRN STN (VISIBLE WHEN
 DRIED)-SCATT BRITE GLD FLOR-FLSH CUT WHEN
 CRUSHED-NO ODOR

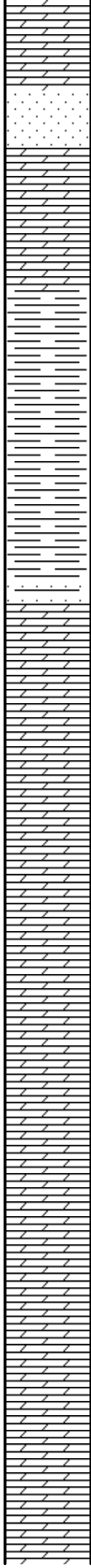
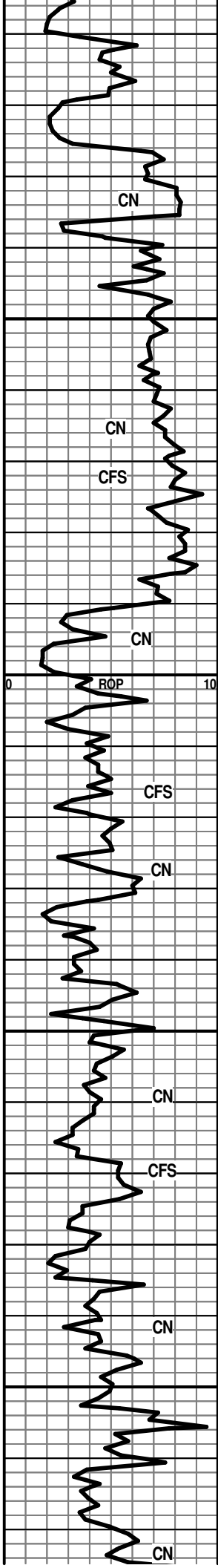
HW 120 UNIT GAS
 INCRS

DST #4
 REC-50 FEET MUD
 6234-6281
 IBLW-WL BLW 2
 INCHES INTO BUCKET
 IN 15 MIN

DOLO-TN-F-GRN-FOSS-PR TO FR INTER-GRN
 POR-SCATT GLD FLOR-TR FLSH CUT WHEN
 CRSHED-NO ODOR

HW 45 UNIT GAS INCRS-IES IN 45 MIN

FBLW-WK BLW BLT 5
 SIP-358-579
 IFP-53-65
 FFP-57-64



DOLO-OFF WHT-F-M-GRN-LG SND GRNS IMBD-NO VIS POR-DULL
WHT MIN FLOR-NO VIS CUT

SIMPSON 6518' (-4777')
LOG 6513 (-4772')

SS-FRSTY BRN-F-M GRN-FRI-RND TO SUB-RND-WELL SRTE-DOLO
CMT-TR SH IMBD-NO VIS FLOR-NO VIS CUT

DOLO-OFF WHT-F-XLN-LG SND GRNS IMBD-PYR
XLS-FR VUG/FAC POR IP TO NO VIS POR-NO VIS
FLOR-NO VIS CUT W/ SS-TRANS-LT BRN-M-GRN-RND
TO SUB RND-FR SRTE-DOLO CMT-NO VIS FLOR

6550 SH-GRY-BLU-SPLNTY

SH A.A.

POOR SAMPLES

ARBUCKLE 6590' (-4849')
LOG 6585' (-4844')

SS-FRSTY WHT/LT BRN-M-CRS GRN-RND TO SUB-RND-PR
SRTE-DOLO CMT-DULL YEL FLOR-NO VIS CUT

DOLO-LT BRN-F-XLN-SNDY-SEMI-CHLKY IP-(1PC) BRITE YEL
FLOR-FLSH CUT WHEN CRSHD-TR GAS BUB

6600 DOLO-GRY-F-GRN-V-F SND GRN-BRIT-DULL YEL
FLOR-NO VIS CUT--PYR XLS IN TRAY

DOLO-TN/GRY-F-XLN-TR SHLY-HD-(1PC)SCATT BRITE
YEL FLOR-NO VIS CUT

POOR SAMPLE

DOLO-DK RED/BRN-F-GRN-SUCR-NO VIS POR TO
V-SM PP POR-ABUNDT SM GAS BUB

6650 DOLO-OFF WHT-V-F-GRN-F-SNDY TEX-ABUNDT DULL
YEL FLOR-NO VIS CUT

DOLO-GRY-F-XLN-SM PYR XLS IMBD-DULL YEL
FLOR-NO VIS CUT

DOLO-DK BRN-F-M-XLN-FNT YEL FLOR-NO VIS CUT

DOLO-LT BRN-M-GRN-SUCRO-BRIT-DULL YEL MIN
FLOR-NO VIS CUT

6700 DOLO-DK BRN-F-XLN-SUCRO-HD-DNS-DULL YEL
FLOR-NO VIS CUT-TR CHRT-GRY-OPQ-FRSH

DOLO-OFF WHT-F-GRN-SEMI-CHLKY-NO VIS
POR-DULL YEL FLOR-NO VIS CUT

DOLO-DK BRN-HD-DNS-NO VIS POR-DULL YEL

KB=1741'

HW 60 UNIT GAS INCRS

WT. 9.0
VIS 65
LCM #10

HW 46 UNIT GAS INCRS

WT. 9.0
VIS 58
LCM #10

HW 32 UNIT GAS INCRS

WT. 9.1
VIS 55
FIL 8.8
LCM #8

