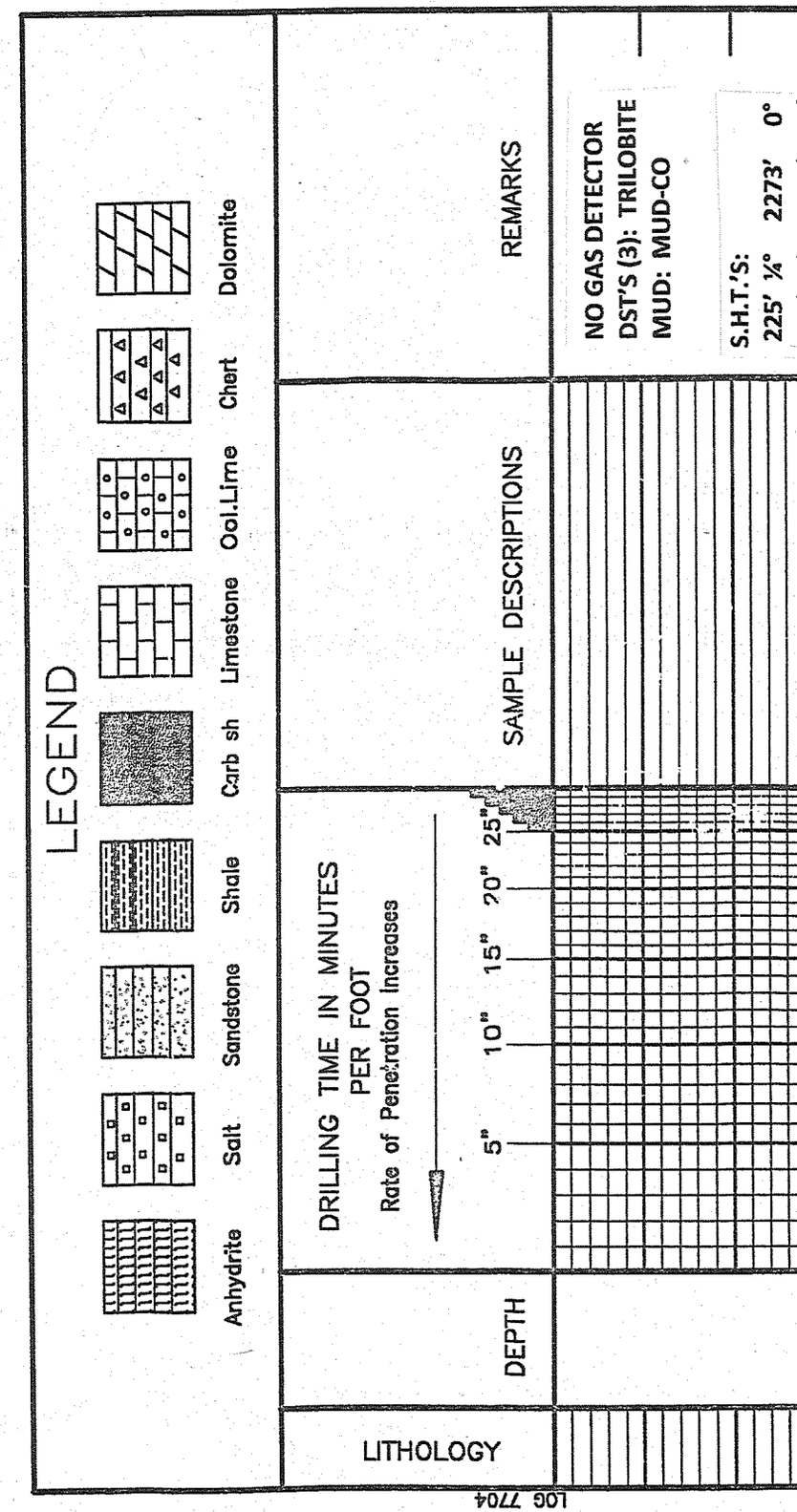
JERRY A. SMITH

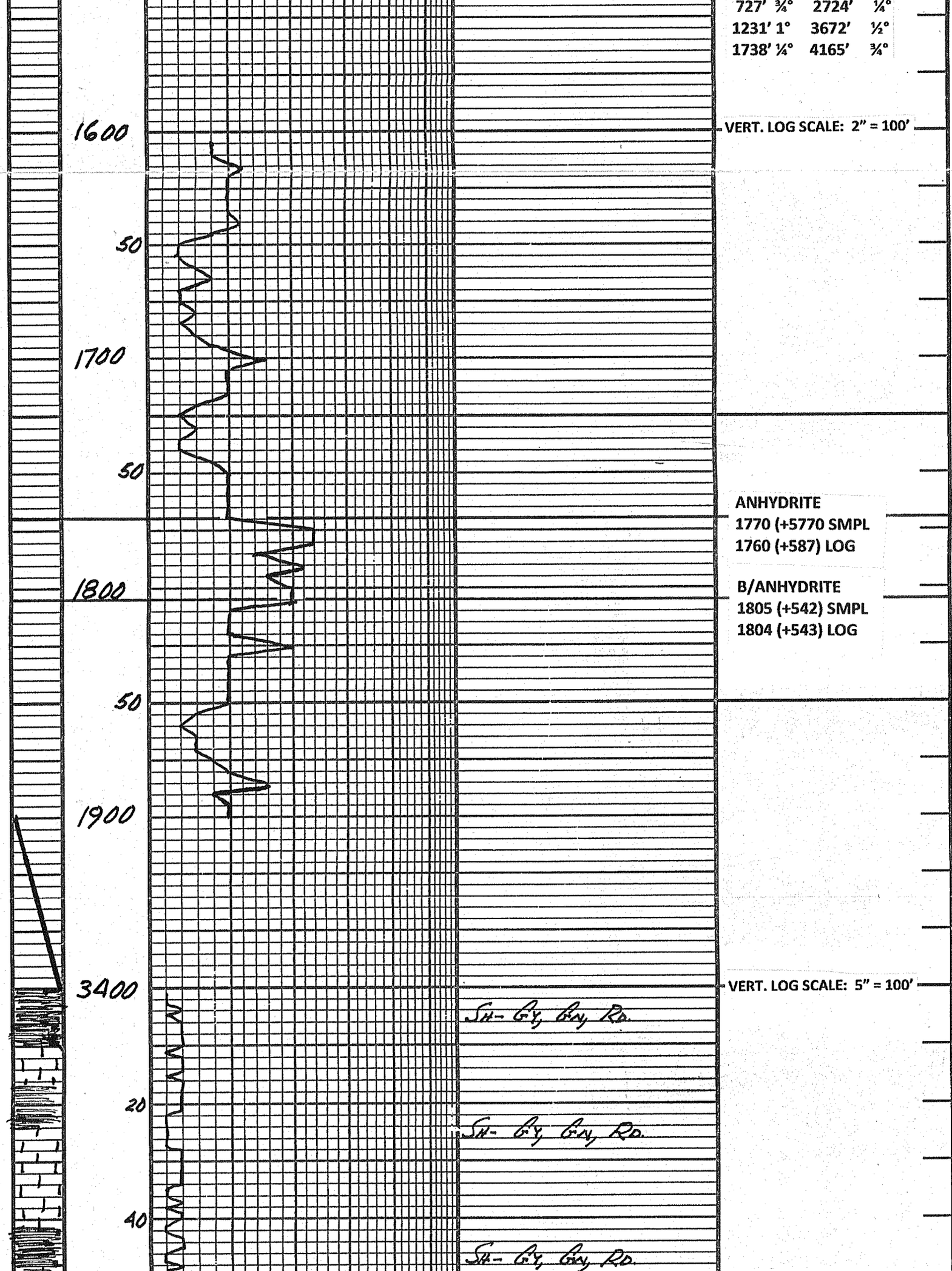
CERTIFIED PETROLEUM GEOLOGIST

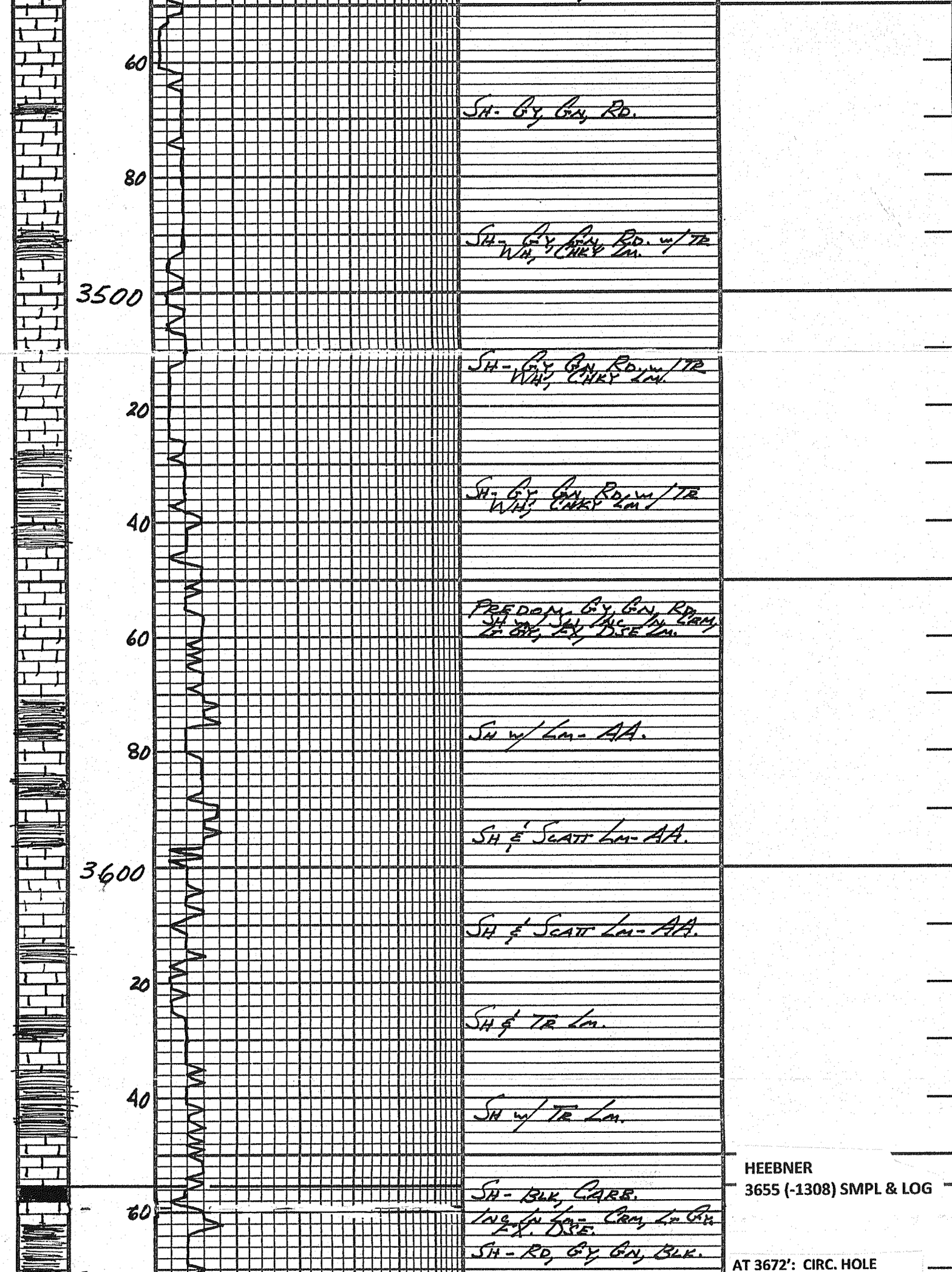
GEOLOGIST'S REPORT
DRILLING TIME and SAMPLE LOG

COMPANY: PICKRELL DRILLING COMPANY, INC			ELEVATIONS
LEASE: #3 PETTY "E"			K.B. 2347
FIELD: LOCKER NW			D.F.
LOCATION: 330' 'FNL & 1050' FWL			G.L. 2337
SEC. 30	TWSP. 13	RNG. 21 W	Measurements Are All From:
COUNTY: TREGO	STATE: KANSAS		KB
CONTRACTOR: COMPANY TOOLS, RIG #1			CASING
SPUD: 9/5/13	COMP. 9/14/13		SURFACE: 8 5/8 " @ 222'
RTD. 4165	LTD. 4165		PRODUCTION : 4 1/2" @ 3800'
MUD UP: 3441	TYPE MUD: CHEMICAL		ELECTRICAL SURVEYS
API No. 15-195-22854			NABORS: DIL, FDC-CNL, MICRO
SAMPLES SAVED FROM: 3400/3600			TO: 3600/RTD
DRILLING TIME KEPT FROM: 1600/3400			TO: 1900/RTD
SAMPLES EXAMINED FROM: 3400			TO: RTD
GEOLOGICAL SUPERVISON FROM: 3306			TO: RTD
GEOLOGIST ON WELL: JERRY A. SMITH			

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	1760 (+587)	1770 (+577)
HEEBNER	3655 (-1308)	3655 (-1308)
LANSING	3688 (-1341)	3690 (-1343)
STARK	3887 (-1540)	3894 (-1547)
PAWNEE	4032 (-1685)	4033 (-1686)
CONGLOMERATE SAND	4098 (-1751)	4100 (-1753)
ARBUCKLE	4143 (-1796)	4144 (-1797)

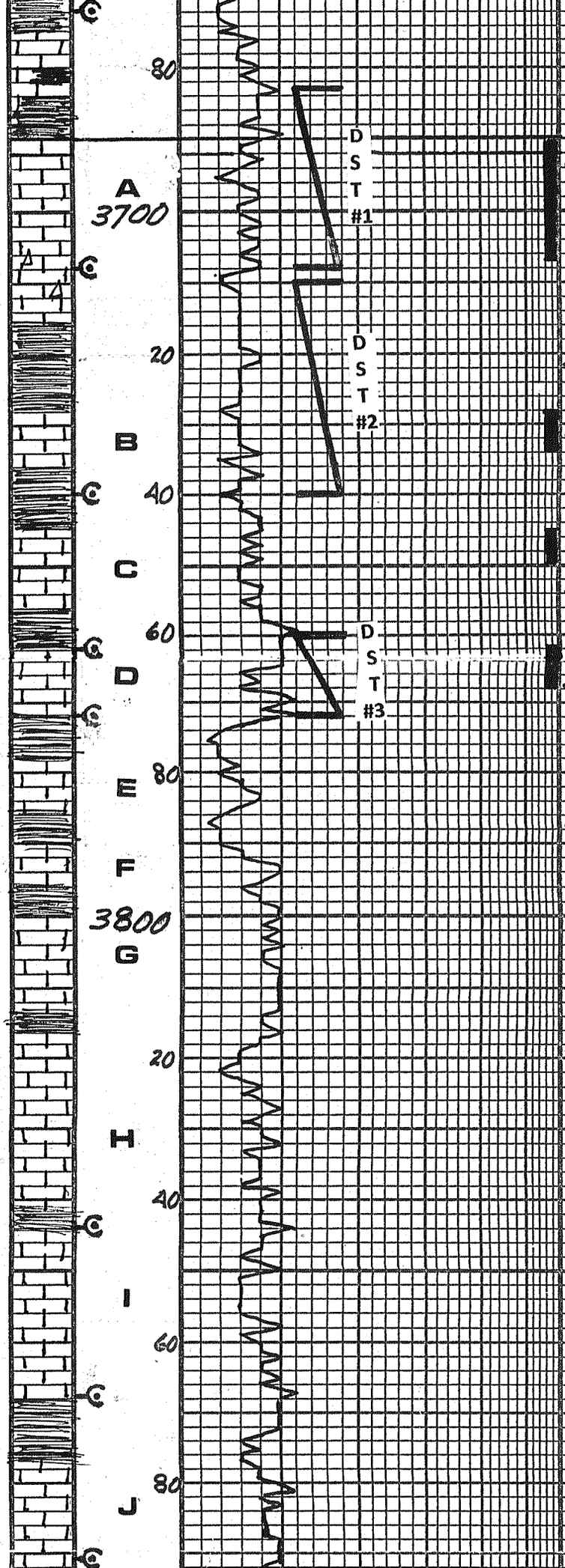



727' ¾° 2724' ¼°
1231' 1° 3672' ½°
1738' ¼° 4165' ¾°
VERT. LOG SCALE: 2" = 100'
1600
50
1700
50
ANHYDRITE
1770 (+5770 SMPL
1760 (+587) LOG
1800
B/ANHYDRITE
1805 (+542) SMPL
1804 (+543) LOG
50
1900
VERT. LOG SCALE: 5" = 100'
3400
SH- GY, GN, RD.
20
SH- GY, GN, RD.
40
SH- GY, GN, RD.



HEEBNER
3655 (-1308) SMPL & LOG

AT 3672': CIRC. HOLE



LM-CRM. FX. DSE → SUB-CHKY. NVP.

LM-CRM, LT GY. FX. DSE → V SPS VGY Ø. NS.

LM-CRM, LT GY. OOLIT IN PT w/ FR INT-OOL Ø. DK STN. GD SHO DK FGO. GD SHO GAS BUBB.

LM-AA.

LM-CRM, LT GY, LT TN. FX. DSE w/ SCATT CHT-M GY. OPQ → SEMIT RSL, SHP, DSE.

LM-AA w/ TR VGY Ø. BLK STN IN Ø. NO ODOR. NO FO.

LM-AA. SCATT VGY Ø. BLK STN NO ODOR. NO FO.

LM-AA. w/ ARD WH. SFT CHK. CPL PC'S w/ VGY Ø, SSFO & GAS BUBB.

SH-RD, GY, GN.

MOSTLY RD, GY, GN, SH. FEW PC'S LM-CRM, LT → M GY. FX. NO VIS Ø. BRK SHO FGO.

SH-DK GY.

LM-CRM, LT GY, GY-TN, F → MX. GD VGY Ø. FR ODOR. GD STN. FR → GD S FGO.

LM-CRM. FX. GD VGY Ø GD DK BRN STN. NO FO.

LM-CRM, LT GY. FX. DSE. w/ ARD WH, CHKY LM.

LM-CRM, WH. FX. SCATT VGY Ø. TR DEAD STN. NO FO.

LM-CRM, WH. FX. DSE → SUB-CHKY.

LM-AA.

LM-AA.

SH-BLK, CARB.

LM-M GY. FX. DSE.

LM-CRM, LT → M GY. FX. DSE → SUB-CHKY. NO VIS Ø. NO ODOR. NS.

LM-AA w/ TR SCATT VGY Ø & DK STN IN Ø. NO ODOR. NO FO.

SH-DK GY.

LM-CRM, LT GY. FX. DSE NO VIS Ø. NO ODOR. NS.

LM-CRM, LT GY, LT TN. FX. DSE. NO VIS Ø. NS.

SH-DK GY.

LM-LT → M GY. FX. DSE → SUB-CHKY.

LM-M GY. FX. DSE. NO VIS Ø. TR DK STN. NO ODOR. NO FO.

CLEAN; PULL PLUGGGED BIT

LANSING
3690 (-1343) SMPL
3688 (-1341) LOG

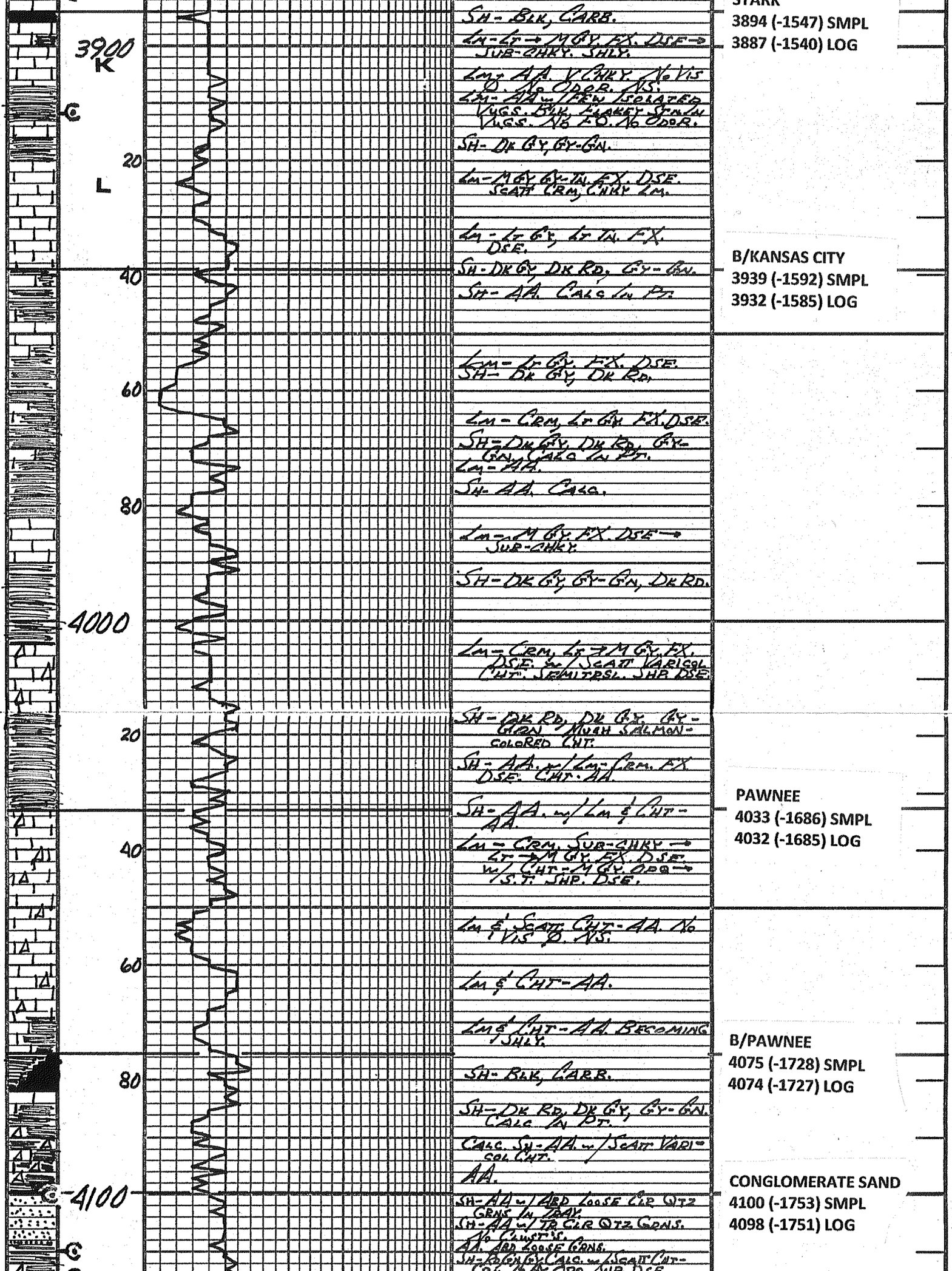
MUD @ 3708':
9.1 WT, 55 VIS, 6.8 FILT,
2800 CHLOR, 1# LCM

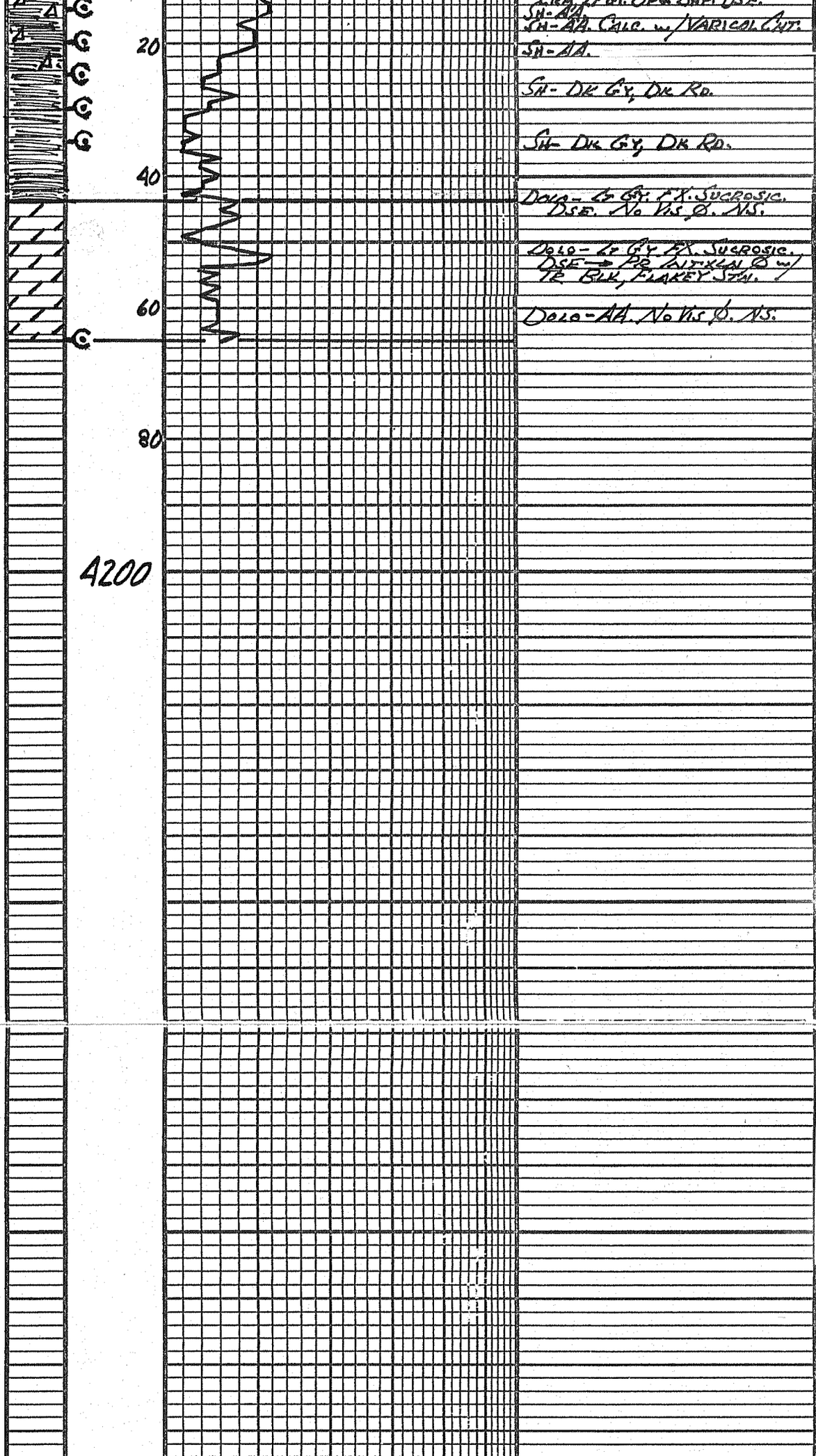
PIPE STRAP @ 3708':
3727.11 STRAP
3725.59 BOARD
1.52 LONG

MUD @ 3772':
9.1 WT, 50 VIS, 8.2 FILT,
3200 CHLOR, TR LCM

MUD @ 3891':
9.3 WT, 62 VIS, 7.8 FILT,
3300 CHLOR, 1# LCM

STARK


SH- BLK, CARB.
LM- LT → M GY, FX. DSE → SUB-CHKY. SHLY.
LM- AA. V. CHKY. NO VIS O. NO ODOR. NS.
LM- AA w/ FEW ISOLATED VUGS. BLK, LEAKY → SAME AS VUGS. NO F.S. NO ODOR.
SH- DK GY, GY-GN.
LM- M GY, GY-TN. FX. DSE. SCATT CRM, CHKY LM.
LM- LT GY, LT TN. FX. DSE.
SH- DK GY, DK RD, GY-GN.
SH- AA. CALC IN PT.
LM- LT GY. FX. DSE.
SH- DK GY, DK RD.
LM- CRM, LT GY FX. DSE.
SH- DK GY, DK RD, GY-GN, CALC IN PT.
LM- AA.
SH- AA. CALC.
LM- M GY. FX. DSE → SUB-CHKY.
SH- DK GY, GY-GN, DK RD.
LM- CRM, LT → M GY. FX. DSE. w/ SCATT VARICOL CHT. SEMITRSL. SHB DSE.
SH- DK RD, DK GY, GY-GRN. MUAH SALMON-COLORED CHT.
SH- AA. w/ LM- CRM. FX DSE. CHT. AA.
SH- AA. w/ LM & CHT- AA.
LM- CRM. SUB-CHKY → LT → M GY. FX. DSE. w/ CHT- M GY. ODO → S.T. SHB. DSE.
LM & SCATT CHT- AA. NO VIS O. NS.
LM & CHT- AA.
LM & CHT- AA. BECOMING SHLY.
SH- BLK, CARB.
SH- DK RD, DK GY, GY-GN. CALC IN PT.
CALC. SH- AA. w/ SCATT VARICOL CHT.
AA.
SH- AA w/ ABD LOOSE CLR QTZ GRNS IN SAMP.
SH- AA w/ TR CLR QTZ GRNS. NO CLUST'S.
AA. ABD LOOSE GRNS.
SH- RDSH GY. CALC. w/ SCATT CHT-
3900
K
L
C
20
40
60
80
4000
20
40
60
80
4100
C
STARK
3894 (-1547) SMPL
3887 (-1540) LOG
B/KANSAS CITY
3939 (-1592) SMPL
3932 (-1585) LOG
PAWNEE
4033 (-1686) SMPL
4032 (-1685) LOG
B/PAWNEE
4075 (-1728) SMPL
4074 (-1727) LOG
CONGLOMERATE SAND
4100 (-1753) SMPL
4098 (-1751) LOG



MUD @ 4135':
9.4 WT, 77 VIS,. 7.2 FILT,
2400 CHLOR, 2# LCM

ARBUCKLE
4144 (-1797) SMPL
4143 (-1796) LOG

TOTAL DEPTH
4165 (-1818) ROTARY & LOG

DST #1: 3683-3708
30-60-90-90

IF: BOB IN 28 MIN.
ISI: ¾" RETURN
FF: BOB IN 31 MIN.
FSI: 1" RETURN
DIED IN 60 MIN.

RECOVRY:
190' GIP
110' GO (20% G, 30% O)
60' GMCO (10% G,
50% O, 40% M)

SIP'S: 423-407#
FP'S: 23-35/41-75 #
HP'S: 1755-1750 #
BHT: 115° F

DST #2: 3710-40
30-30-30-30

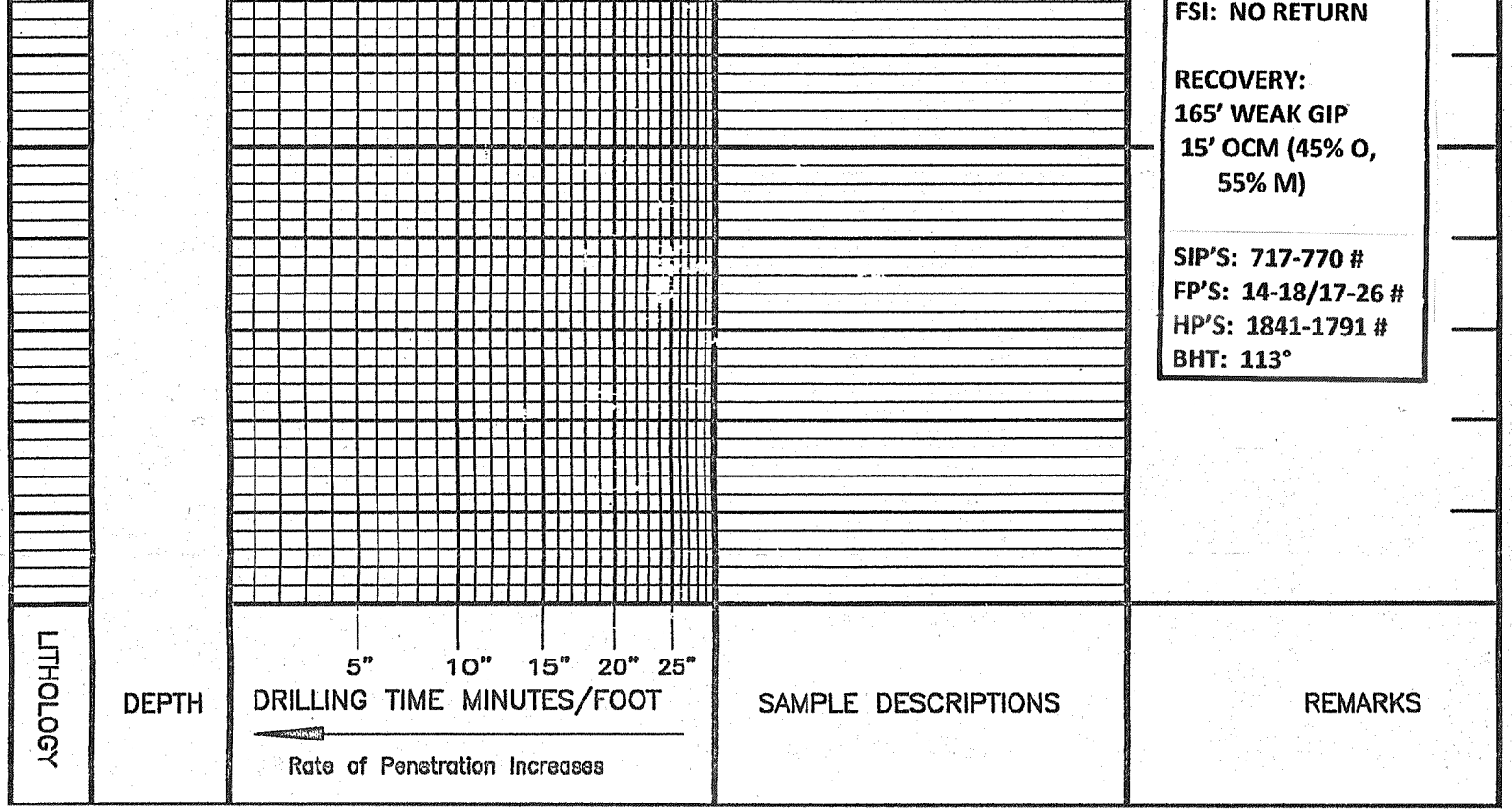
IF: SURF.BLO—DIED 25 MIN.
ISI: NO RETURN
FF: NO BLOW
FSI: NO RETURN

RECOVRY:
2' OCM (10% O, 90% M)

SIP'S: 17-23 #
FP'S: 14-15/15-15 #
HP'S: 1744-1766 #
BHT: 109° F

DST #3: 3760-72
30-60-60-90

IF: 2 ½" BLOW
ISI: NO RETURN
FF: 8 ½" BLOW



COMPANY: PICKRELL DRILLING COMPANY, INC.	ELEVATION: 2347 KB		
LEASE: #3 PETTY "E"			
LOCATION: 330' FNL & 1050' FWL	SEC 30	TWP 13	RGE 21W
COUNTY: TREGO	STATE: KANSAS		