GEOLOGICAL REPORT AND SAMPLE LOG

COMPANY Barline Oil, LLC
LEASE Ratliff Tr. WELL NO 1-16
FIELD Wildcat
LOCATION S/2 SW SW
SEC. 16 TWP. 2S. RGE. 15 W.
COUNTY Smith STATE Kansas
CONTRACTOR WW Drlg RIG NO 12
COMMENCED DRILLING 7/16/12
COMPLETED DRILLING 7/25/12
RDT 3960 FEET LTD 3960 FEET
MUD UP AT 2400 FEET MUD TYPE Chemical
SAMPLES SAVED FROM 2500 FEET TO RTD 3960 FEET
DRILLING TIME KEPT FROM 2500 FEET TO " FEET
SAMPLES EXAMINED FROM 2500 FEET TO " FEET
GEOLOGICAL SUPERVISION FROM 2000 FEET TO " FEET
GEOLOGIST Bill Ree
DRILL STEM TESTING BY Trilobite Testing
GAS DETECTOR MBC- Hot Wire & Chromatograph

ELEVATIONS
KB 1981 FEET
DF FEET
GL 1973 FEET
MEASUREMENTS ARE ALL FROM KB

CASING
8 5/8 @ 211
w/150 sx
D & A

ELECTRICAL SURVEYS
CNL-CDL
DIL
MEL
Sonic

REMARKS The Topeka (Oread), Lansing "A", Lansing "B" zone had fair to good shows of oil in samples, as well as in the DST tool, but were found to be impermeable after drillst testing. This well would likely have been productive b for the lack of permeability.

It is most important now to reinterpret the 3-D seis in an effort to determine where permeability is most likely to occur on the prospect.

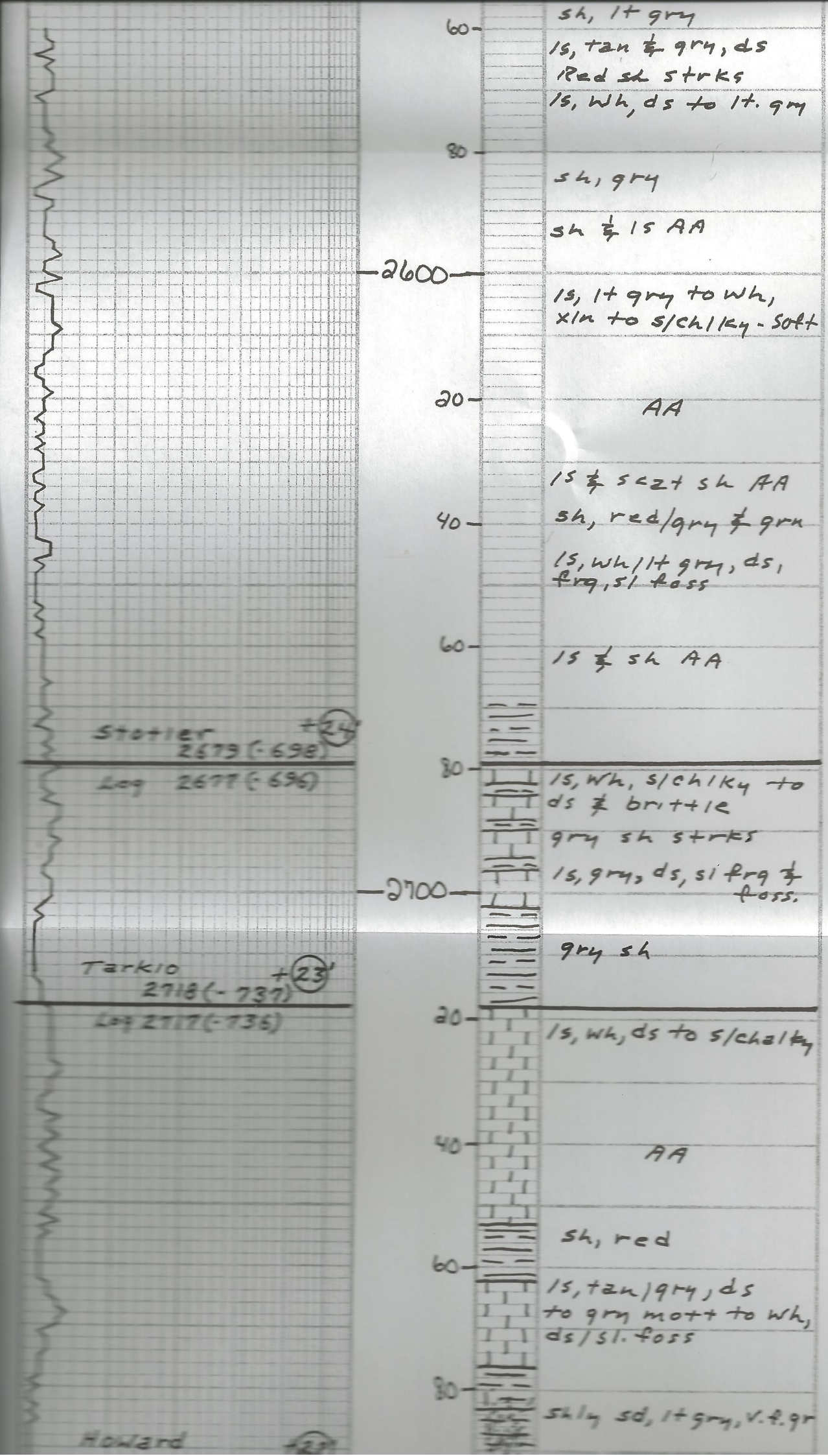
Bill Ree

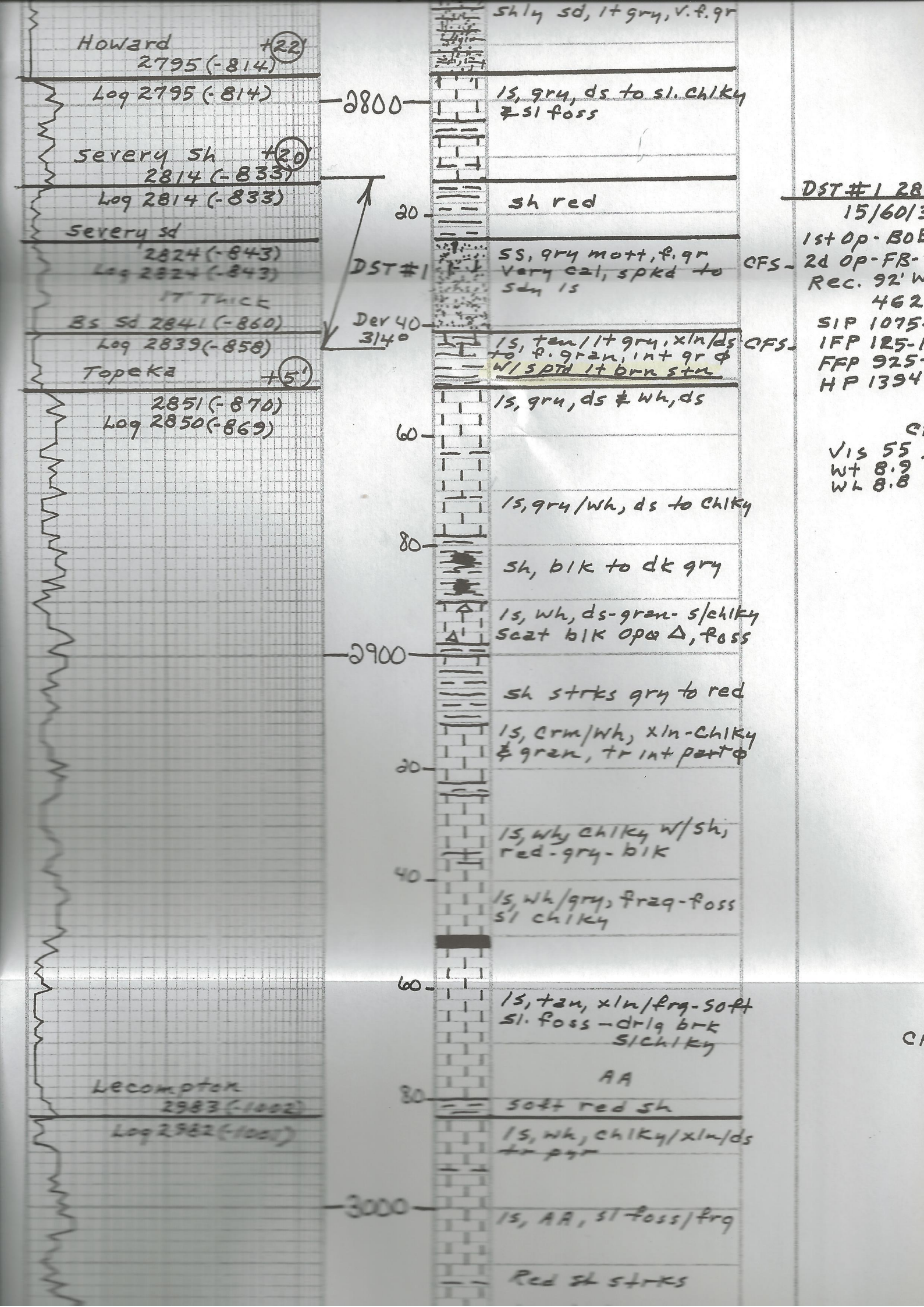
LEGEND

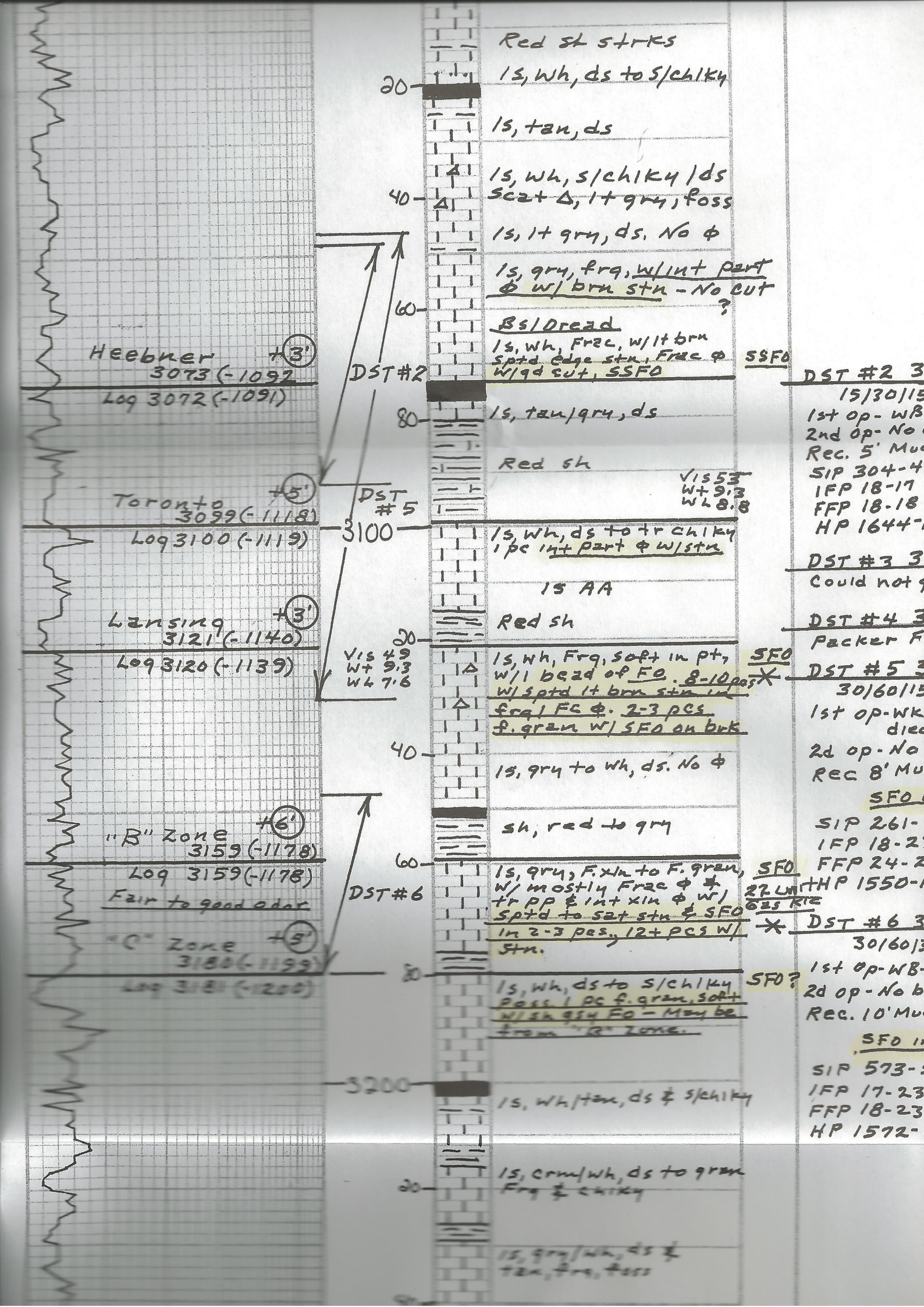
Anhydrite, Salt, Sandstone, Shale, Carb sh, Limestone, Ool.Lime, Chert, Dolomite

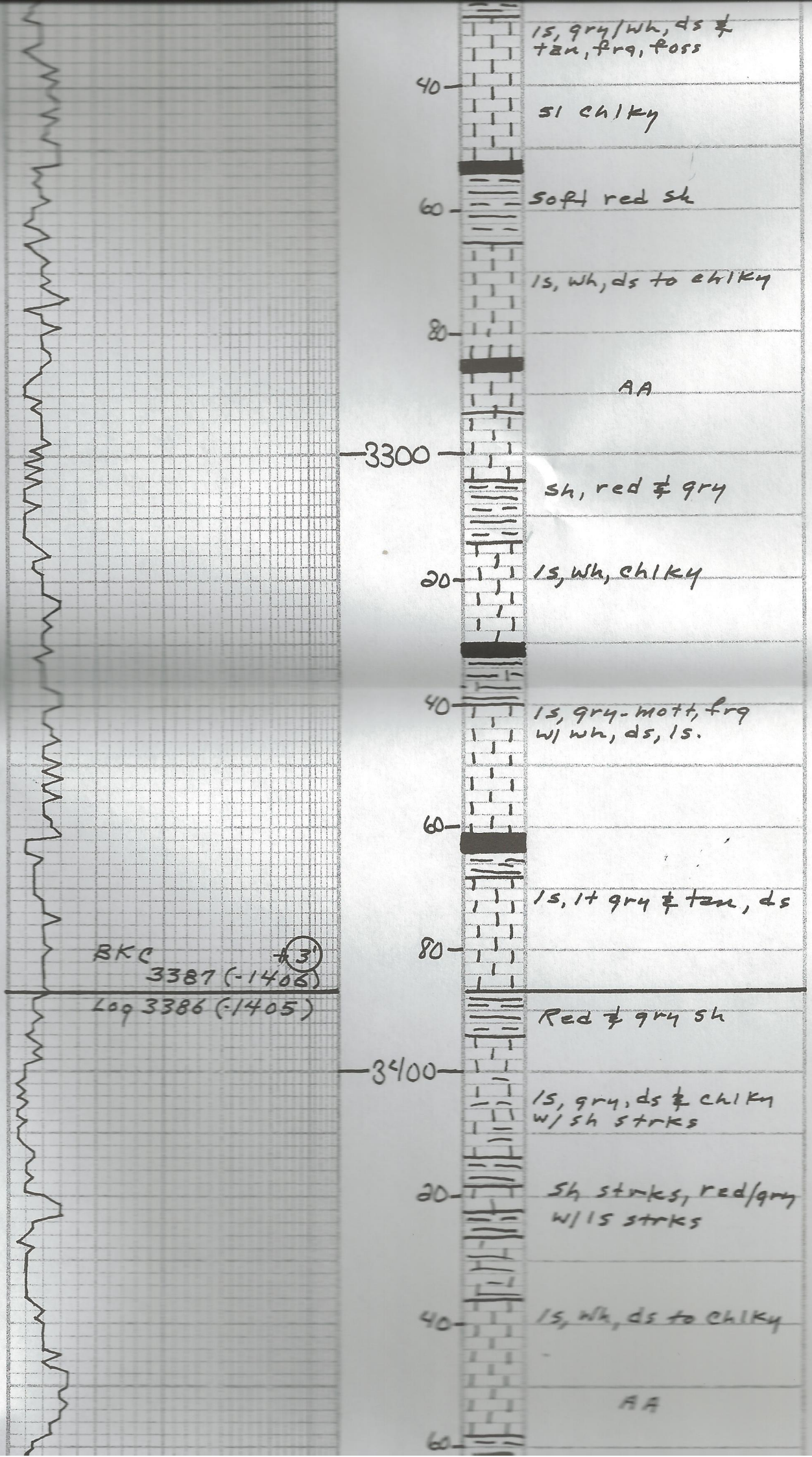
DRILLING TIME IN MINUTES PER FOOT (Rate of Penetration Decreases) 5" 10" 15" 20" 25"	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
	2550		ls, lt gry, f. xln/ds, sl foss		
			sh, lt gry		
	60		ls tan & gry, ds		

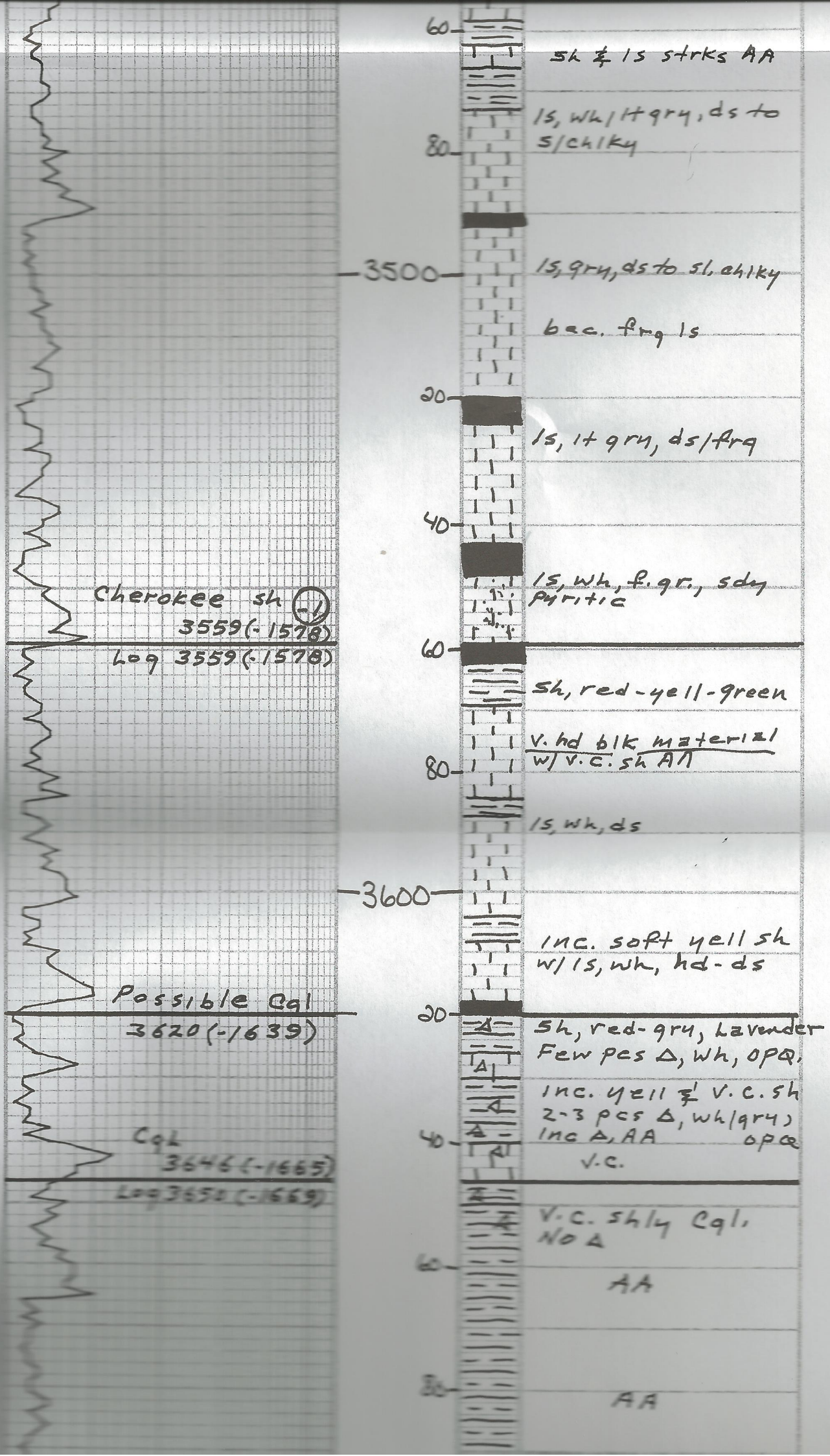
LOG 7710

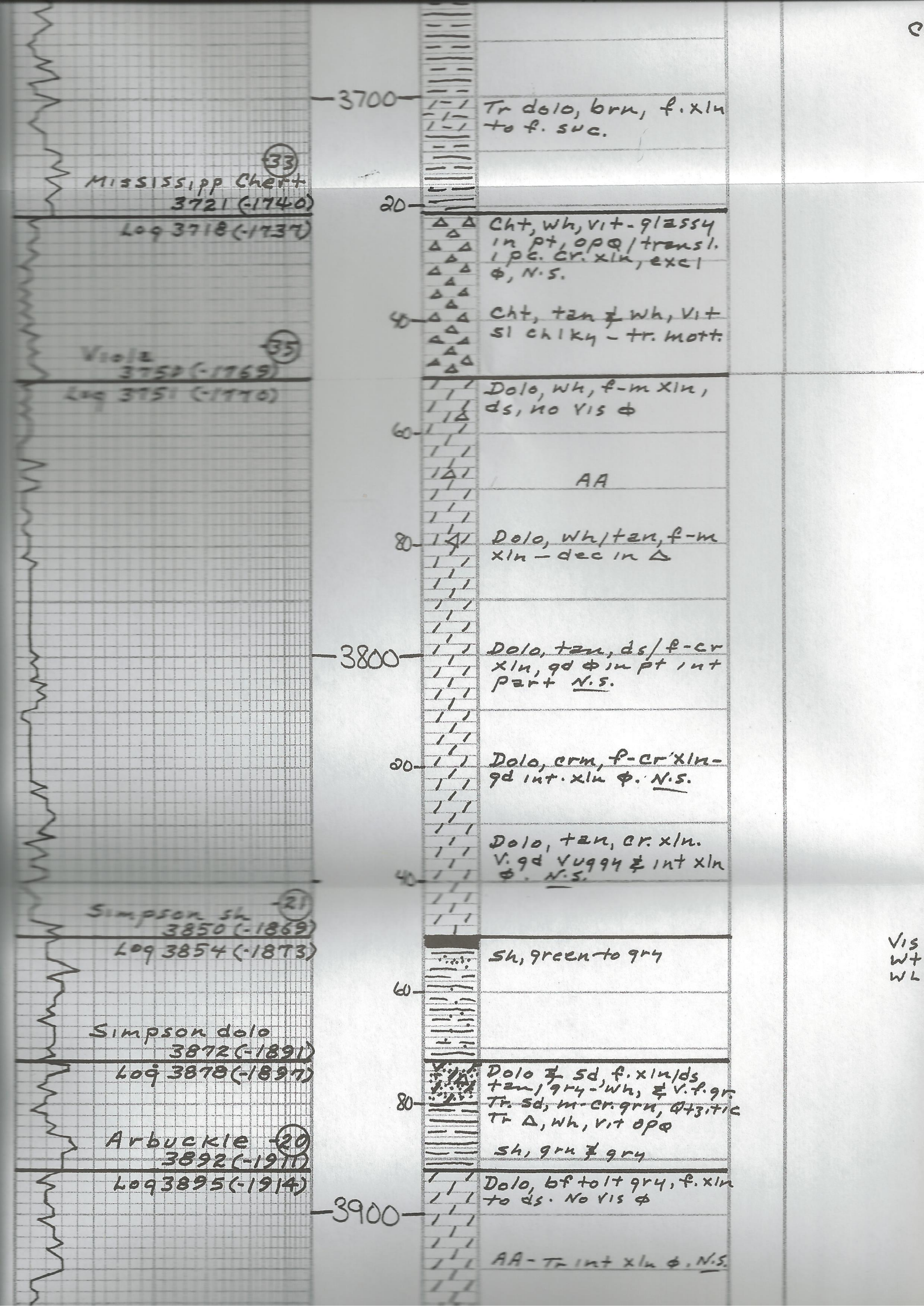

sh, lt gry
60
ls, tan & gry, ds
Red sh strks
ls, wh, ds to lt. gry
80
sh, gry
sh & ls AA
2600
ls, lt gry to wh, xln to s/chalky - soft
20
AA
ls & scat sh AA
40
sh, red/gry & grn
ls, wh/lt gry, ds, frq, sl foss
60
ls & sh AA
Stotler +24'
2579 (-698)
Log 2677 (-696)
80
ls, wh, s/chalky to ds & brittle
gry sh strks
ls, gry, ds, sl frq & foss.
2700
gry sh
Tarkio +23'
2718 (-737)
Log 2717 (-736)
20
ls, wh, ds to s/chalky
40
AA
sh, red
60
ls, tan/gry, ds to gry mott to wh, ds/sl. foss
80
shly sd, lt gry, v.f.gr
Howard +21'

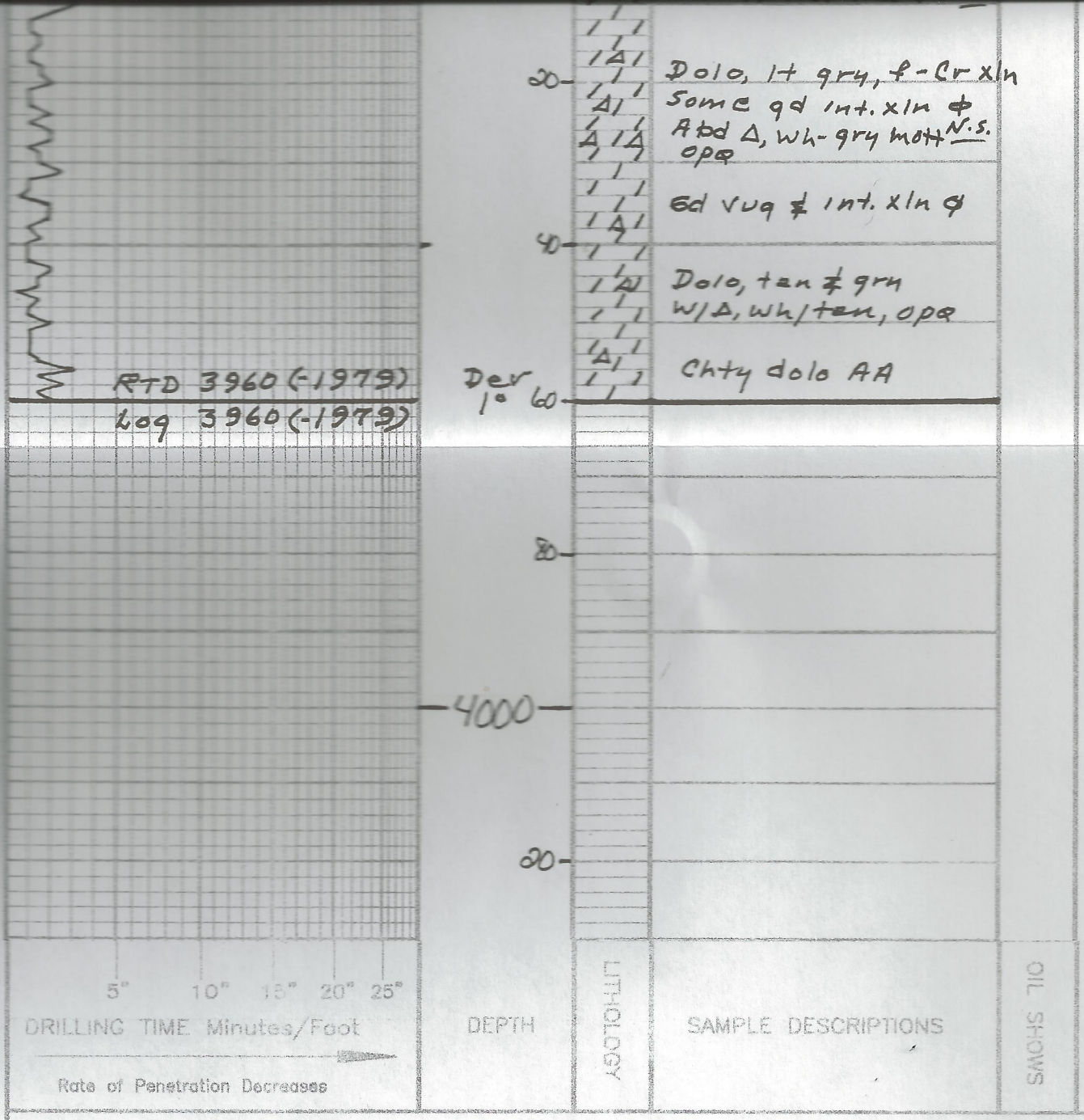

Howard +22'
2795 (-814)
Log 2795 (-814)
Severy Sh +20'
2814 (-833)
Log 2814 (-833)
Severy sd
2824 (-843)
Log 2824 (-843)
17' Thick
Bs Sd 2841 (-860)
Log 2839 (-858)
Topeka +5'
2851 (-870)
Log 2850 (-869)
Lecompton
2983 (-1002)
Log 2982 (-1001)
DST #1
Dev 40
314°
2800
2900
3000
20
40
60
80
sh/y sd, lt gry, v.f.gr
ls, gry, ds to sl. chlky
sl foss
sh red
ss, gry mott, f. gr
Very cal, spkd to
sdy ls
CFS
ls, tan/lt gry, xln/ds
to f. gran, int gr φ
w/ spty lt brn stn
CFS
ls, gry, ds ≠ wh, ds
ls, gry/wh, ds to chlky
sh, blk to dk gry
ls, wh, ds-gran- s/chlky
scat blk opq Δ, foss
sh strks gry to red
ls, crm/wh, xln-chlky
& gran, tr int part φ
ls, wh, chlky w/sh,
red-gry-blk
ls, wh/gry, frag-foss
sl chlky
ls, tan, xln/frg-soft
sl. foss-drlg brk
s/chlky
AA
soft red sh
ls, wh, chlky/xln/ds
tr ppr
ls, AA, sl foss/frg
Red sh strks
DST #1 28
15/60/3
1st Op - BOB
2d Op - FB-
Rec. 92' W
462
SIP 1075-
IFP 125-
FFP 925-
HP 1394
Vis 55
Wt 8.9
WL 8.8


Red sh strks
ls, wh, ds to s/chlky
20
ls, tan, ds
ls, wh, s/chlky / ds
scat Δ, lt grn, foss
40
ls, lt grn, ds. No Φ
ls, grn, frg, w/int part Φ w/ brn stn - No cut ?
60
Bs/Dread
ls, wh, Frac, w/lt brn spt'd edge stn, Frac Φ w/gd cut, SSFO
SSFO
Heebner +3'
3073 (-1092)
Log 3072 (-1091)
DST #2
80
ls, tan/grn, ds
Red sh
Vis 53
Wt 9.3
Wl 8.8
Toronto +5'
3099 (-1118)
Log 3100 (-1119)
DST #5
3100
ls, wh, ds to tr chlky
1 pc lt part Φ w/stn
ls AA
Red sh
Lansing +3'
3121' (-1140)
Log 3120 (-1139)
20
Vis 49
Wt 9.3
Wl 7.6
ls, wh, Frg, soft in pt, w/1 bead of FO. 8-10 pcs w/spt'd lt brn stn in frg/ FC Φ. 2-3 pcs f. grn w/ SFO on brk
SFO
"B" Zone +6'
3159 (-1178)
Log 3159 (-1178)
Fair to good odor
40
ls, grn to wh, ds. No Φ
sh, red to grn
"C" Zone +5'
3180 (-1199)
Log 3181 (-1200)
DST #6
60
ls, grn, F. xln to F. grn, w/ mostly Frac Φ & tr pp & int xln Φ w/ spt'd to sat stn & SFO in 2-3 pcs, 12+ pcs w/ stn.
SFO
22 units HP 625 RTE
80
ls, wh, ds to s/chlky Poss 1 pc f. grn, soft w/ sh gsy FO - May be from "B" Zone.
SFO?
3200
ls, wh/tan, ds & s/chlky
20
ls, crm/wh, ds to grn Frg & chlky
ls, grn/wh, ds & tan, frg, foss
DST #2 3
15/30/15
1st op- WB
2nd op- No
Rec. 5' Mu
SIP 304-4
IFP 18-17
FFP 18-18
HP 1644-
DST #3 3
Could not
DST #4 3
Packer F
DST #5 3
30/60/15
1st op-WK died
2d op-No
Rec 8' Mu
SFO
SIP 261-
IFP 18-2
FFP 24-2
HP 1550-
DST #6 3
30/60/3
1st op-WB-
2d op-No b
Rec. 10' Mu
SFO
SIP 573-
IFP 17-23
FFP 18-23
HP 1572-


ls, gry/wh, ds & tan, frq, foss
40
sl chlky
60
soft red sh
ls, wh, ds to chlky
80
AA
3300
sh, red & gry
20
ls, wh, chlky
40
ls, gry-mott, frq w/ wh, ds, ls.
60
ls, lt gry & tan, ds
80
BKC +3'
3387 (-1408)
Log 3386 (-1405)
Red & gry sh
3400
ls, gry, ds & chlky w/ sh strks
20
sh strks, red/gry w/ ls strks
40
ls, wh, ds to chlky
AA
60


60
sh & ls strks AA
ls, wh/lt gry, ds to s/chlky
80
3500
ls, gry, ds to sl. chlky
bac. frg ls
20
ls, lt gry, ds/frg
40
ls, wh, f. gr., sdy pyritic
Cherokee sh -1
3559 (-1578)
Log 3559 (-1578)
60
sh, red-yell-green
v. hd blk material w/ v.c. sh AA
80
ls, wh, ds
3600
inc. soft yell sh w/ ls, wh, hd-ds
Possible Cgl
3620 (-1639)
20
sh, red-gry, lavender
Few pcs Δ, wh, opq.
inc. yell & v.c. sh
2-3 pcs Δ, wh/gry)
inc Δ, AA opq
v.c.
Cgl
3646 (-1665)
Log 3650 (-1669)
40
v.c. shly Cgl, NO Δ
60
AA
80
AA


3700
Tr dolo, brn, f. xln to f. suc.
33
Mississippi Chert
3721 (-1740)
Log 3718 (-1737)
20
Cht, wh, vit-glassy in pt, opq/transl. 1 pc. cr. xln, excl ϕ, N.S.
40
Cht, tan ≠ wh, vit sl chlky - tr. mott.
35
Viola
3750 (-1769)
Log 3751 (-1770)
Dolo, wh, f-m xln, ds, no vis ϕ
60
AA
80
Dolo, wh/tan, f-m xln - dec in Δ
3800
Dolo, tan, ds/f-cr xln, gd ϕ in pt, int part N.S.
20
Dolo, crm, f-cr xln - gd int. xln ϕ. N.S.
Dolo, tan, cr. xln. V. gd vuggy ≠ int xln ϕ. N.S.
40
21
Simpson sh
3850 (-1869)
Log 3854 (-1873)
Sh, green-to gry
60
Simpson dolo
3872 (-1891)
Log 3878 (-1897)
Dolo ≠ sd, f. xln/ds tan/gry-wh, ≠ v.f.gr. Tr sd, m-cr. grn, ϕ+3, +c
80
Tr Δ, wh, vit opq
Sh, grn ≠ gry
20
Arbuckle
3892 (-1911)
Log 3895 (-1914)
Dolo, bf to lt gry, f. xln to ds. No vis ϕ
3900
AA - Tr int xln ϕ. N.S.



CONTRACTOR WW Drlg

LEASE Ratliff # 1-16 IP

ELEVATION 1981 KB RTD 3960

LOCATION S/2 SW SW

SEC 16 TWP 2 S. RNG 15 W

COUNTY Smith STATE Kansas