

MASTERLOG

geological evaluation

Company: PETROFINA EXPLORATION
 Location: BASS STRAIT
 Well: ANGLER # 1
 Rig: ZAPATA ARCTIC
 Country: AUSTRALIA

Latitude: 38' 39' 35.3" S
 Longitude: 148 26' 29.4" E
 Elevation RT/MSL: 27
 Spudded: 24/03/1989
 Completed: 13/05/1989

Scale 1:500

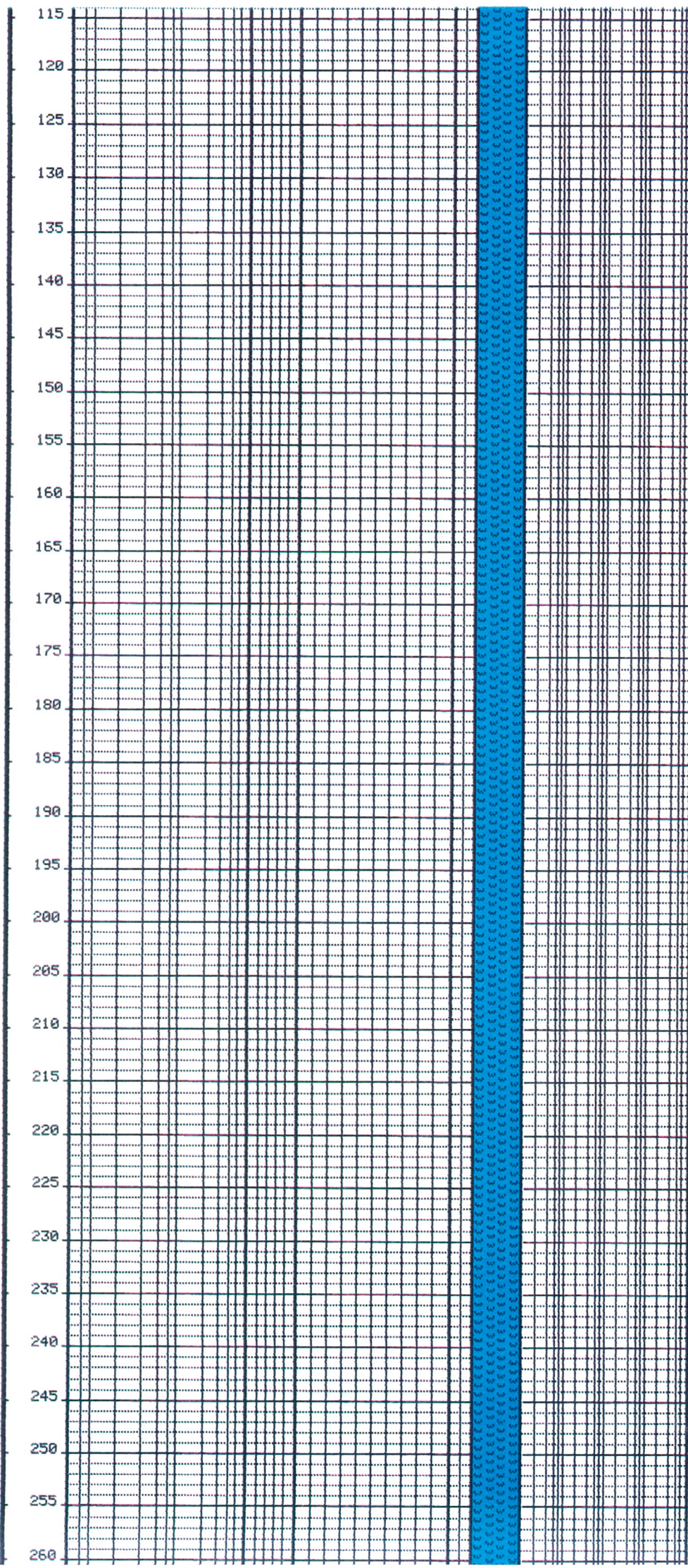
	Claystone		SILTSTONE		Clay(sandy)		Shale
	Shale(silty)		Shale(sandy)		Siltstone		Silt/Sand
	Sandstone		Conglomerat		Calcarenite		Calcisiltit
	Calcilutite		Marl(calc)		Marl (dol)		Dolomite
	Calc Clyst		Dol Clyst		Limestone		Chert
	Anhydrite		Gypsum		Coal/Lignit		Tuff
	Extrusive		Intrusive		Metamorphic		Quartzite
	Other		Other		Other		Other
	Other		Other		Other		Other
	Other		Other		Water		Cement

Depth mtr	R.O.P. (min/mtr)				CaCo3 0 100	Cuttings %	F	Lit	Chromatolog				Description
	.6	2	10	60					.01	.1	1	10	
5													
10													
15													
20													
25													RKB: 27m
30													
35													
40													
45													
50													
55													
60													
65													
70													
75													
80													
85													
90													
95													
100													
105													

DEPT. NAT. RES. & ENV.



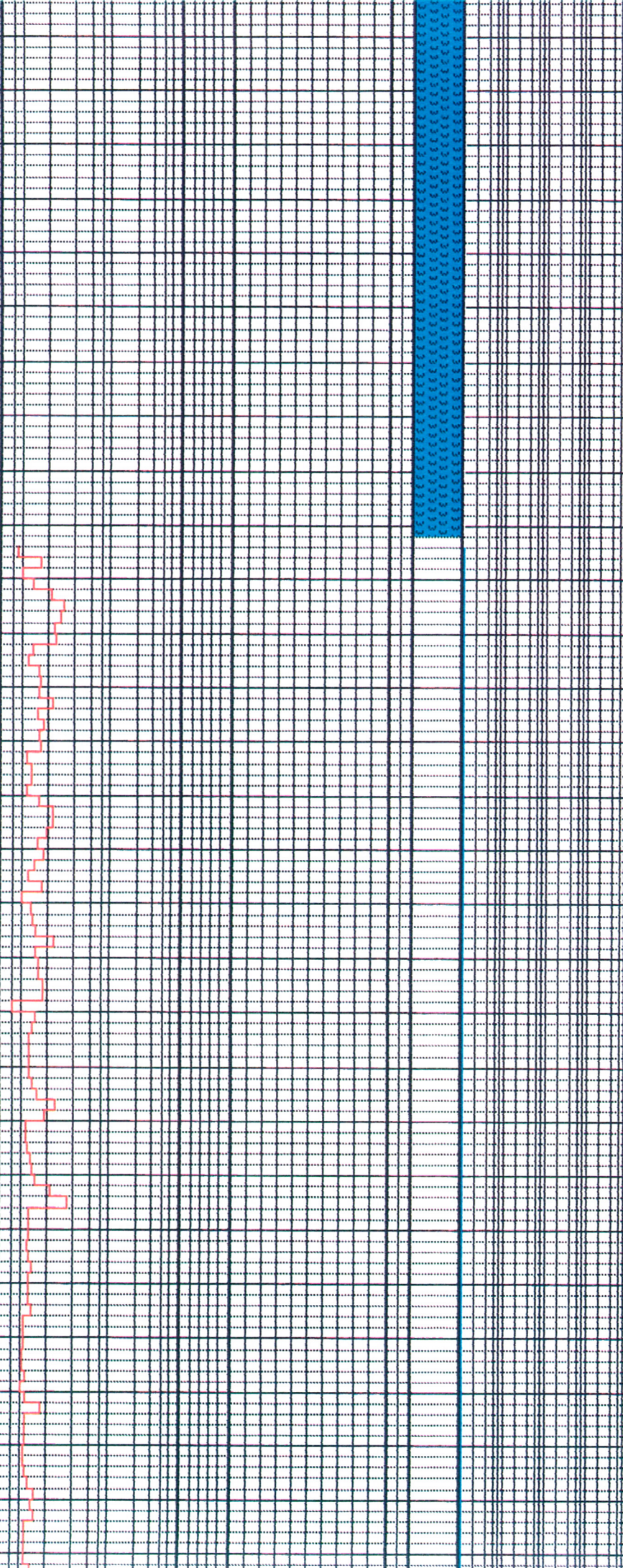
PE606684



WATER DEPTH
277.7m

PE60684-01

270
275
280
285
290
295
300
305
310
315
320
325
330
335
340
345
350
355
360
365
370
375
380
385
390
395
400
405
410



BIT 1 REED Y11 26" W/ HO
4 X 11 IN 303m OUT 363m
RUN 60m 5.5 hrs 1/1/I

DRILLING WITHOUT RISER
NO RETURNS

DRILLING WITH SEAWATER AND
HI-VIS SWEEPS

30" CASING SHOE @ 358m

BIT 1RR 363-365m RUN 2m .5 hr

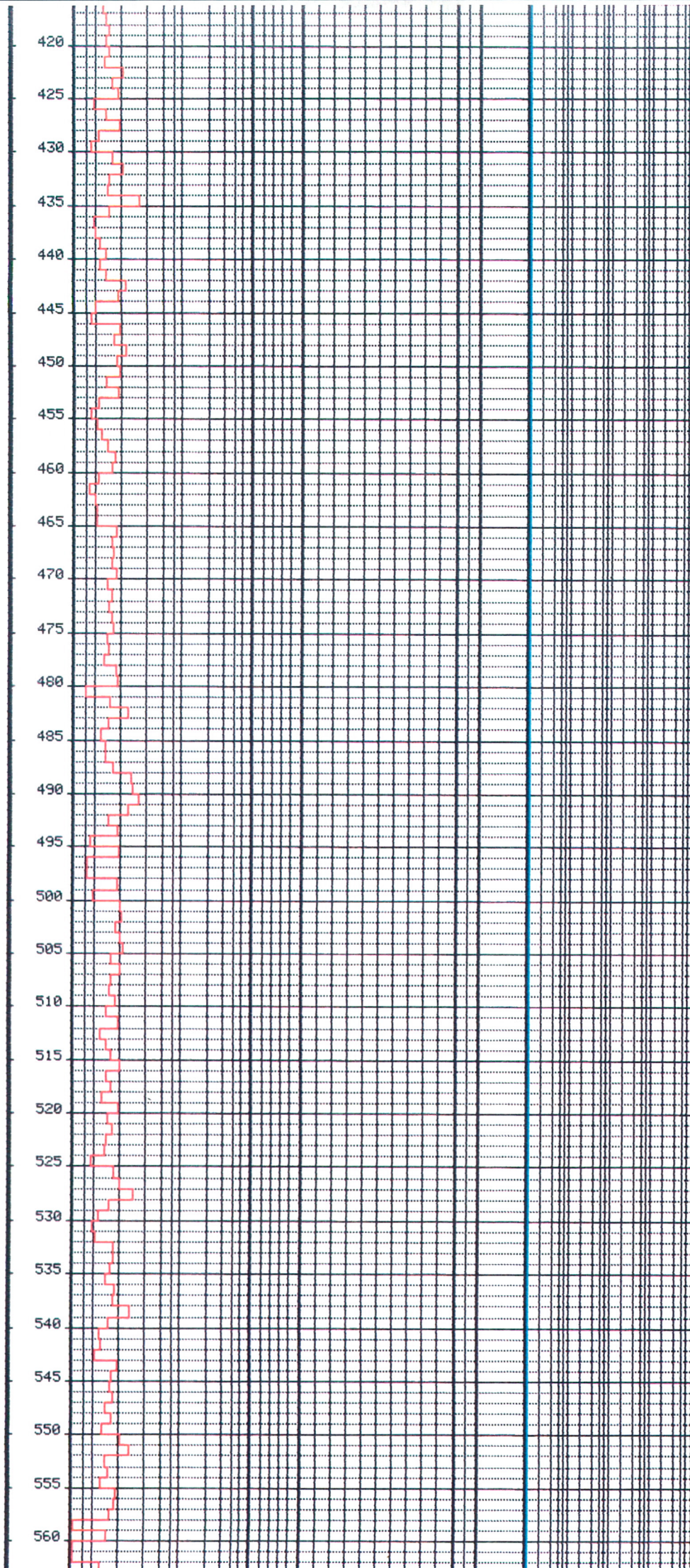
BIT 2 REED HP11J 8.5" OPEN
IN 365m OUT 585m RUN 9.75 hrs
220m 2/1/I

BIT 3 REED HP11J 12.5" W/ HO
3 X 12 IN 365m OUT 613m
RUN 1.25 hrs 248m 2/2/I

DRILLING WITH SEAWATER AND
HI-VIS SWEEEPS

DRILLING WITHOUT RISER
NO RETURNS

PE606684-02



420
425
430
435
440
445
450
455
460
465
470
475
480
485
490
495
500
505
510
515
520
525
530
535
540
545
550
555
560

DEV .75 deg

DRILLING WITHOUT RISER
NO RETURNS

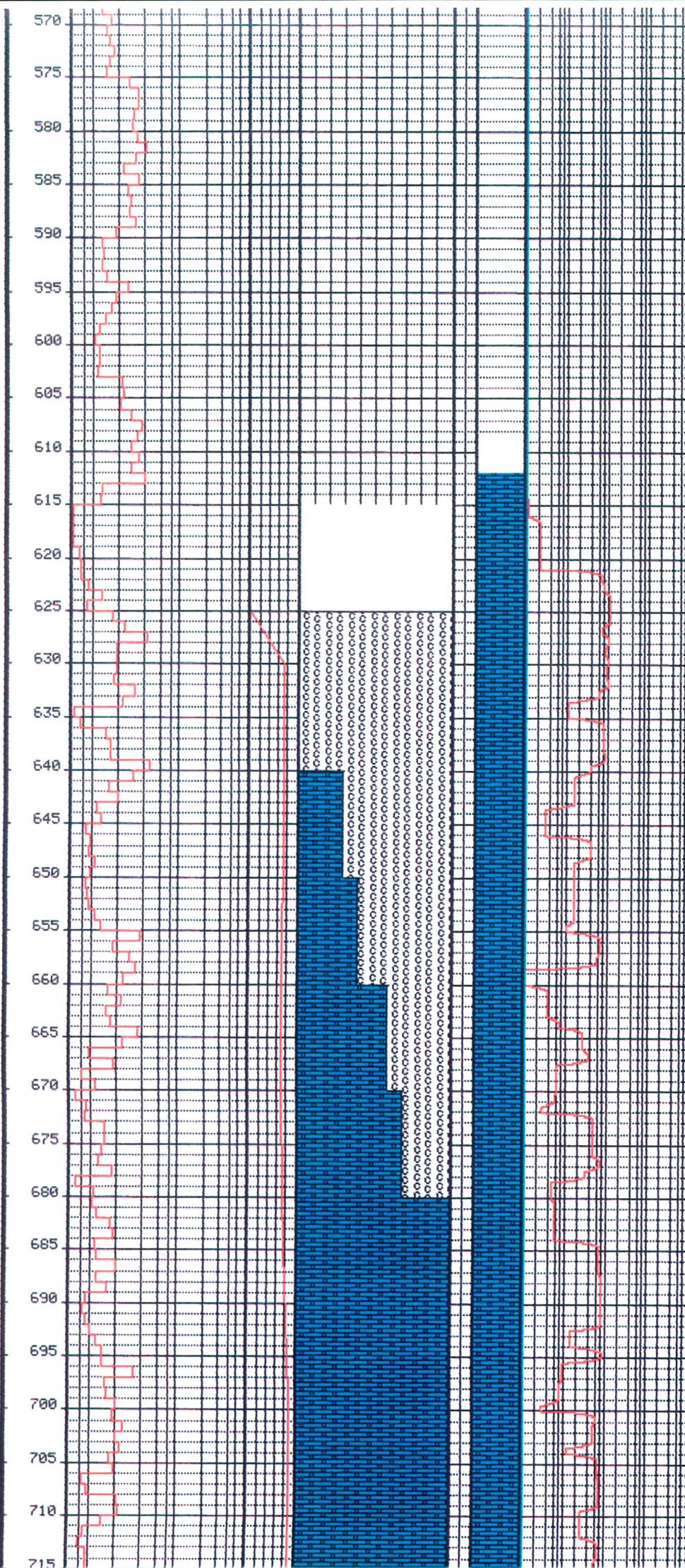
DRILLING WITH SEAWATER
AND HI-VIS SWEEPS

DRILLING WITHOUT RISER
NO RETURNS

DEV .25 deg

DRILLING WITH SEAWATER
AND HI-VIS SWEEPS

PE606684-03



DRILLED 8.5" PILOT HOLE TO
585m

20" CASING SHOE @ 603.9m

BIT 4 HTC CX34 17.5" 4 X 14
IN 613m OUT 1164m
RUN 29.5 hrs 552m

DRILLING WITH SEAWATER AND
HI-VIS SWEEPS

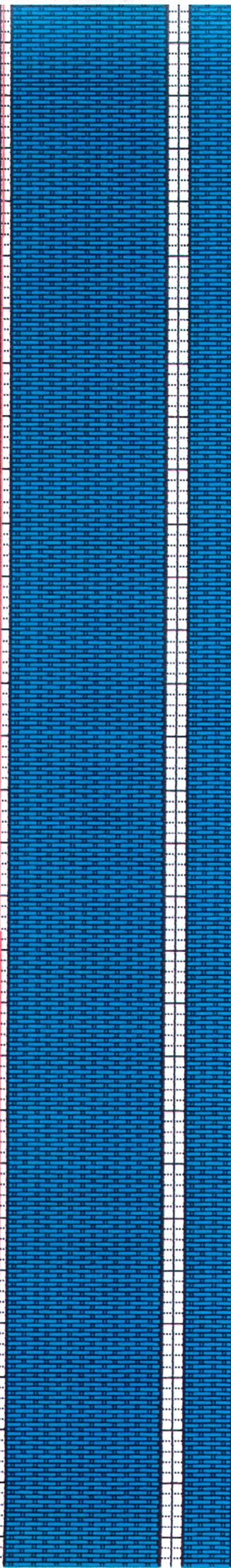
CALCARENITE: off wh, frm, foss
tr forams, car i/p, tr qtz gr
i/p

CALCARENITE: wh-off wh, frm-
i/p, com sucrtxt, f grn, mod
cmt, tr pyr nods, tr-rr mica,
lse qtz grns, com blk-brn lith
grns, com foss, pr vis por

DRILLING WITH SEAWATER AND
HI-VIS SWEEPS

PE 606684-04

725
730
735
740
745
750
755
760
765
770
775
780
785
790
795
800
805
810
815
820
825
830
835
840
845
850
855
860
865



CALCARENITE: wh off wh/lt gy,
incl forams, ech spines, tr
pyr, tr qtz, tr mica, cmn blk
grns, sucr txt, tr vis por

DRILLING WITH SEAWATER AND
HI-VIS SWEEPS

DEV .3 deg

CALCILUTITIC CALCARENITE: lt
gy-off sh, pred med-fn grn
sucr txt, mod wl cmt, pred
calc cmt, mod hd, foss, pred
forams, tr glauc, tr mica

WOB 10-25k
RPM 110-120
FR 900 GPM
PP 3400

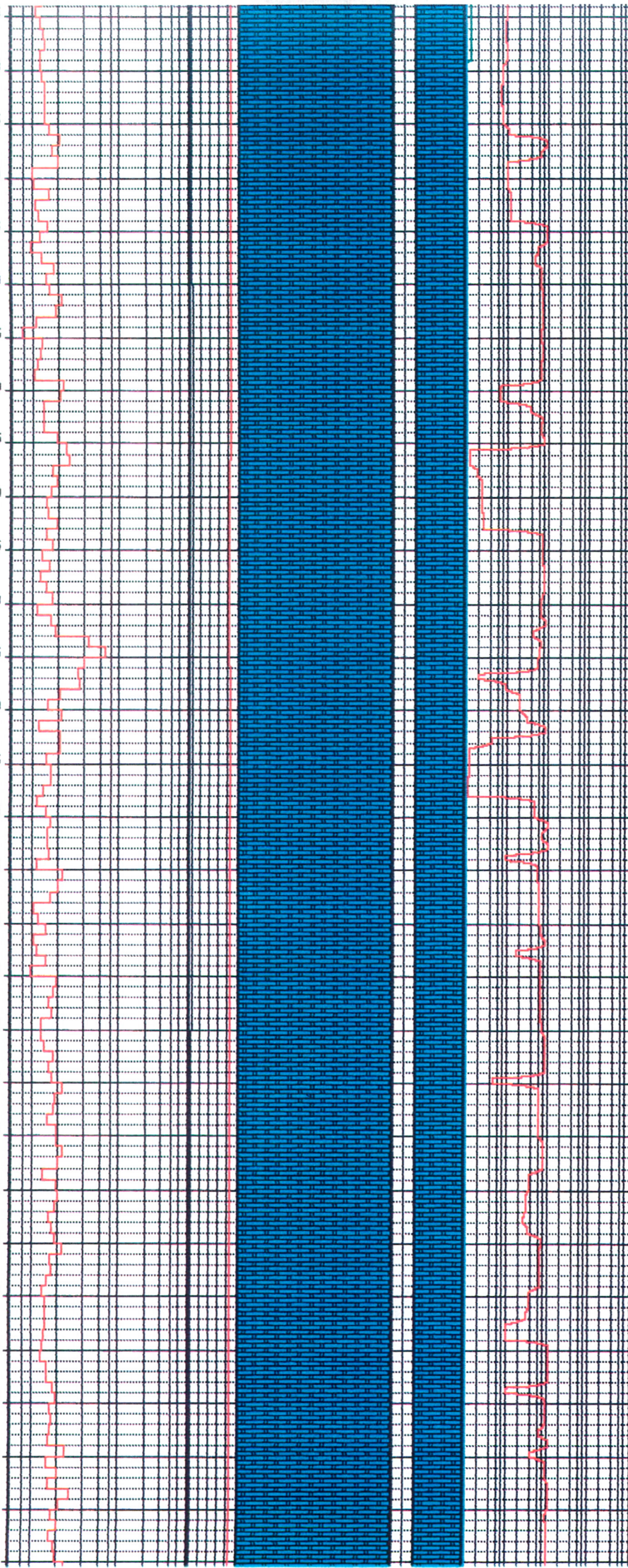
DEV .3 deg

CALCILUTITIC CALCARENITE: lt-
med gy, pred f-vfn gr, chky
mod w cmt, calc mtx, sft-fm,
pred forams, glauc, rr tr mica
vis por

DRILL WITH SEAWATER AND
HI-VIS SWEEPS

PE606684-05

875
880
885
890
895
900
905
910
915
920
925
930
935
940
945
950
955
960
965
970
975
980
985
990
995
1000
1005
1010
1015
1020



CALCARENITIC CALCILUTITE: lt-
med gy, chky txt, mod-w cmt,
mtx, less pred forams, tr
glauc, v pr vis por

WOB 10-25K
RPM 110-120
FR 900 GPM
PP 3400 PSI

DEV 0.1 deg

CALCARENITIC CALCILUTITE: lt
med gy, chky, txt, mod w cmt,
calc cmt i/p, tr arg mtx, sft,
foss, pred forams, tr glauc

LOW ROP DUE TO REDUCED WOB
932-938m

CALCARENITIC CALCILUTITE: lt-
med gy, chky txt, mod w cmt,
calc cmt i/p, tr arg mtx, sft,
foss-pred forams, tr glauc, v
pr vis por

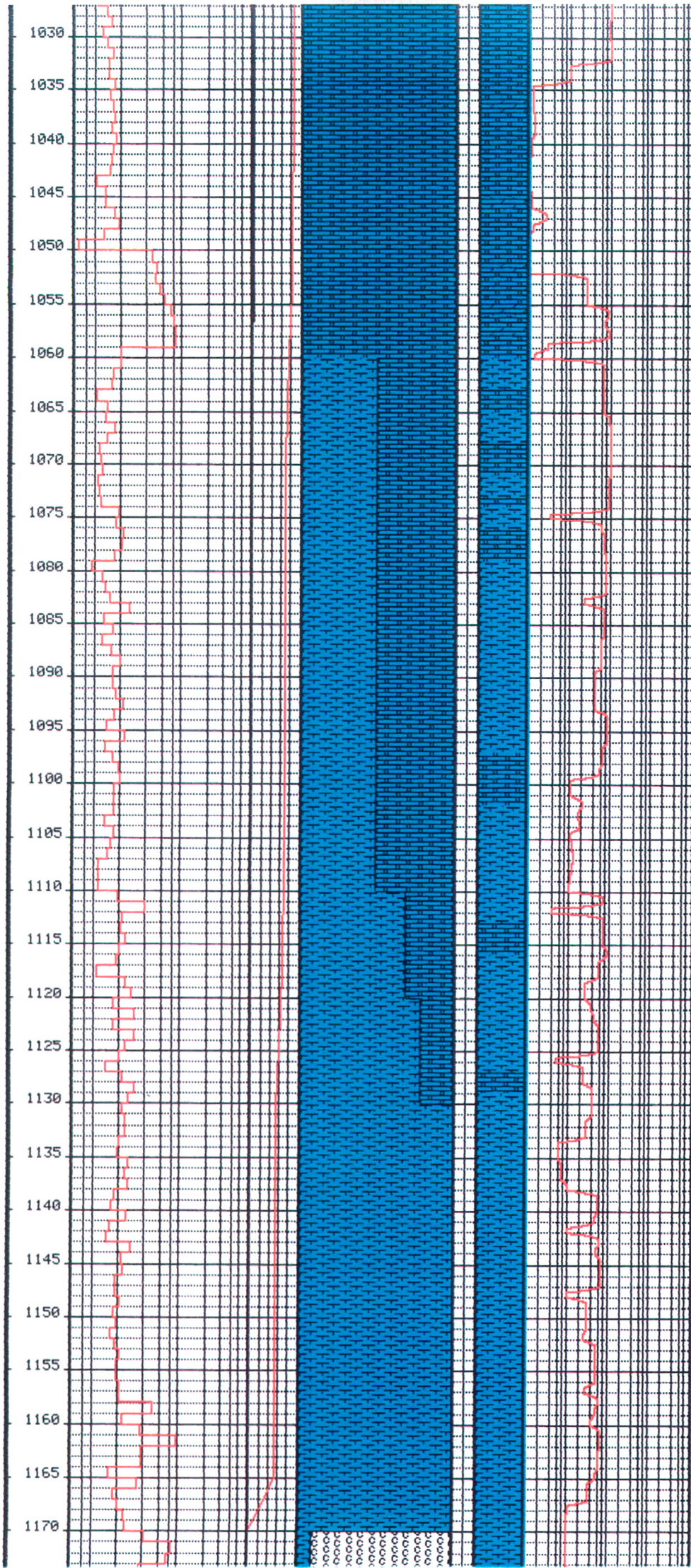
DEV 0.3 deg

DRILLING WITH SEAWATER AND
HI-VIS SWEEPS

CALCILUTITE: lt-med gy, chky,
mod w cmt, pred calc cmt, sft,
v foss-abnt forams, tr glauc
tr mica, rr dol, no vis por

DEV 0.1 deg

PE606684-06

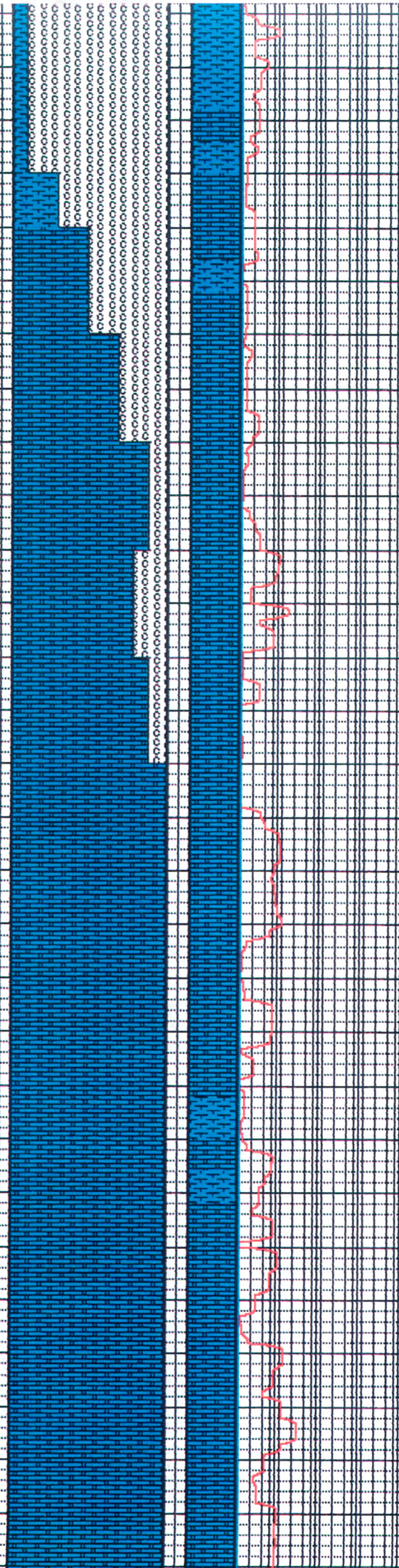


CALCILUTITE: lt-med gy, chky
 txt, mod w cmt, pred calc cmt,
 v foss-abnt forams, tr glauc
 tr mica, rr dol, no vis por

 1030
 1035
 1040
 1045
 1050 DRILLING WITH SEAWATER AND
 HI-VIS SWEEPS
 1055
 1060
 1065 DEV .2 deg
 1070
 1075 MARL: lt-med gy, sft, sticky,
 plas, occ slty
 1080
 1085
 1090
 1095 DEV .2 deg
 1100 CALCILUTITE: lt-med gy, sft,
 chky txt, mod w cmt, calc cmt,
 foss-abnt forams, tr glauc
 1105
 1110
 1115
 1120 WOB 10-25K
 RPM 110-120
 FR 900 GPM
 PP 3400 PSI
 1125
 1130
 1135 DEV .1 deg
 1140
 1145 MARL: lt-med gy, sft, sticky,
 plas, occ slty
 1150
 1155 13 3/8" Casing Shoe at 1151m
 1160
 1165 MW 1.17, PU 6 YP 7
 Gel 6/7, pH 9.0, C1 18.5 K
 Ca 1080, Sol 9%, H2O 91%
 1170
 BIT # 5, HTC B9M+, 12.25",

PE606684-07

1180
1185
1190
1195
1200
1205
1210
1215
1220
1225
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1290
1295
1300
1305
1310
1315
1320
1325



No calcimetry due to cement contamination

DEV .3 deg

CALCARENITE:lt gy-off wh,frm,
occ mod hd,med xln,com cmt,occ
v lt brn mtx,tr glauc,com
forams.

DEV .3 deg

CALCARENITE:lt gy-off wh,frm,
occ mod hd,med xln,gd cmt,occ
wh arg/calc mtx,tr glauc,com
forams.

DEV .4 deg

MARL:lt-med gy,sft,stky,
plastic,occ slty.

DEV .5 deg

CALCARENITE:off wh-lt gy,frm,
rr mod hd,med xln,well cmt i/p
occ wh arg/calc mtx,com rnd
forams,tr glauc,tight.

Drilling with sea-water
and Hi-vis pills.

PE60668A-08

WH calc/arg mtx, occ forams, tr
glauc, tight.

DRILL STRING TWIST OFF @1352m

BIT 6, REED HP 43A, 12.25inch,
NOZZLES: 13/13/14, IN: 1152m,
OUT 1740, RUN 388, DRL HRS 27,
WEAR 1/1/IN

TRIP GAS @ 1352m, TG: 1.1%

WOB: 30-35Klbs
RPM: 70
FR: 640gpm
SPP: 2800psi

CALCARENITE: dom off-wh, hd, med
xln, wl cmtd, mnr glauc, mica,
pr vis por, ptly lt-gy, frm, fn
xln, com arg/calc mtx i/p, pr
por.

Drilling with sea-water and
hi-vis pills in a closed
mud system.

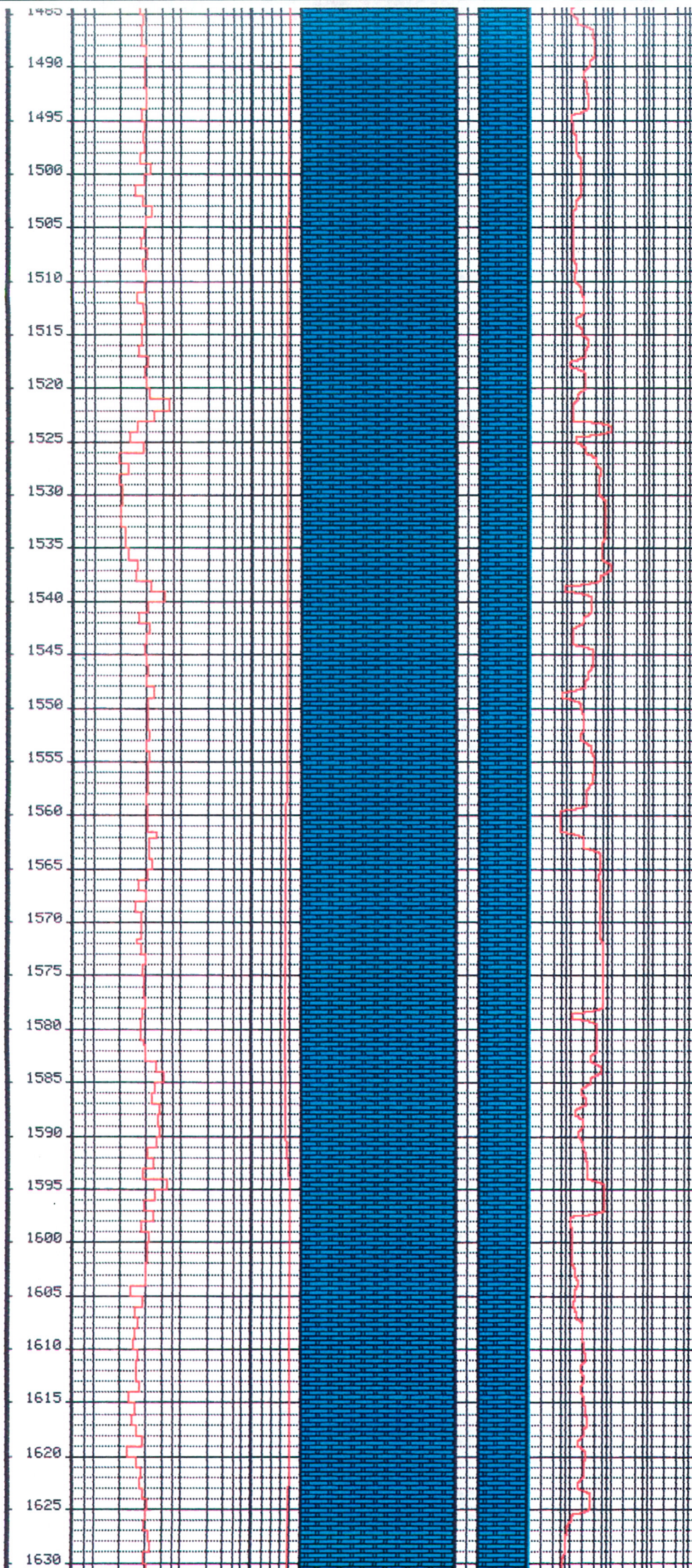
CALCARENITE: off wh-gy, frm-hd,
med-fn xln, wl cmtd, arg/calc
mtx i/p, pr vis por, com mica,
glauc, forams.

Single Shot survey @ 1435m
Deviation: 0.5deg.

WOB: 30-35Klbs
RPM: 65
FR: 625gpm
SPP: 2600-2800psi

CALCARENITE: off wh, frm-mod hd,
xln, calc cmt, arg/calc mtx, com
rnd forams, occ calcite w/-r
xln vug fillings.

PE60689-09



CALCILUTITE: lt gy, sft, plas,
calc cmt.

Drilling with sea-water
and Hi-vis pills in
a closed mud system.

DEV 0.6 deg.

CALCARENITE: off wh, frm-md hd,
f-vf xln, com f grn, mod wl cmtd
com wh calc mtx, com Forams, occ
-tr glauc, grds to Calcilutite
i/p.

MN: 1.06Sg, FU: 28, PU: 2, YP: 2,
Gel: 0/1, pH: 9.1, CL: 21K, Ca: 1680
Sol: 2, H2O: 98, Snd: Tr.

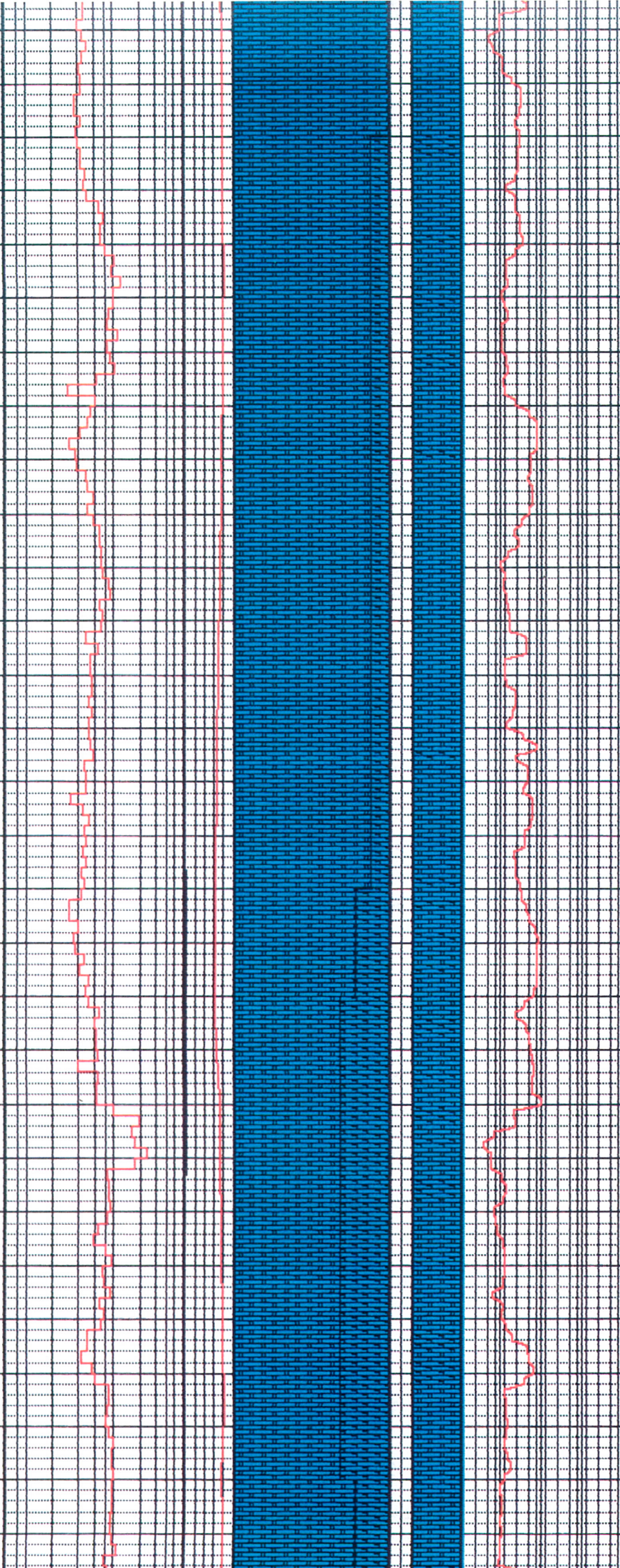
CALCARENITE: off wh to v. lt brn
frm-mod hd, occ hd, f-vf xln,
rr crs xln, com vf-f grn, mod
wl cmtd, com wh calc mtx, com
FORAMS, occ calc spicules, tr
glauc, tr gy liths, no vis por.

DRILLING WITH SEA WATER
AND HI-VIS PILLS

CALCARENITE: gen a/a, off wh,
-lt brn gy, mnr qtz silt i/p,
mnr glauc, com forams

PE606684-10

1640
1645
1650
1655
1660
1665
1670
1675
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1695
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1705
1710
1715
1720
1725
1730
1735
1740
1745
1750
1755
1760
1765
1770
1775
1780



CALCILUTITE: lt gy, sft-disp,
blky, silty i/p, n/s.

Drilling with sea-water and
Hi-vis pills in a closed mud
system.

MW: 1.08, FU: 30, PU: 1, YP: 4, Gel:
1/2, pH: 9.6, Sol: 3, CL: 20K,
Ca: 1520.

WOB: 30-40Klbs
RPM: 68
FR: 640
SPP: 3180

Survey Depth 1712.5m
Drift 0.5 deg, Az 45.9 deg

BIT #5RR HTC B9M+ 12.25"
6 X 16, 1 X 12, IN 1740m
OUT 1742.2m RUN 2.2m .6 hrs

BIT #7 HP43A 12.25"
2 X 14, 1 X 13, IN 1742m
OUT 1993m, DRL HRS 43.9

Survey Depth: 1743m.
Drift: 0.5 deg, Az 43.1 deg

CALCARENITE: cl-off wh, fm-
mod hd, suc i/p, vfn-fn xln,
srt, calc cmt, wl cmtd, arg
mtx i/p, com forams, mnr calc
spicules, com glauc, com dk
min, vf-f gn, hd, ang-sbang,
non-calc, nil, pr vis por

PE60684-11

blky i/p, n/s

WOB: 40-46Klbs
RPM: 70
FR: 500-600gpm
SPP: 3400psi

CALCARENITE: off wh -lt gy, brn,
frm-mod hd, suc i/p, vf-f xln,
occ med xln, wl srtd, calc cmt,
wl cmt, mnr-com glauc i/p, com
min, a/a, vf-f grn, nil-pr vis
por, n/s.

Survey Depth 1825m
Drift 0.5 deg, Az 35 deg

CALCILUTITE: off wh/gy (banded),
sft-plas i/p, sbfiss, n/s.

MM: 1.11Sg, FU: 29, PU: 2, YP: 3,
Gel: 0/1, pH: 9.7, CL: 20K, Ca: 1160,
Sol: 4, H2O: 96, Snd: Tr.

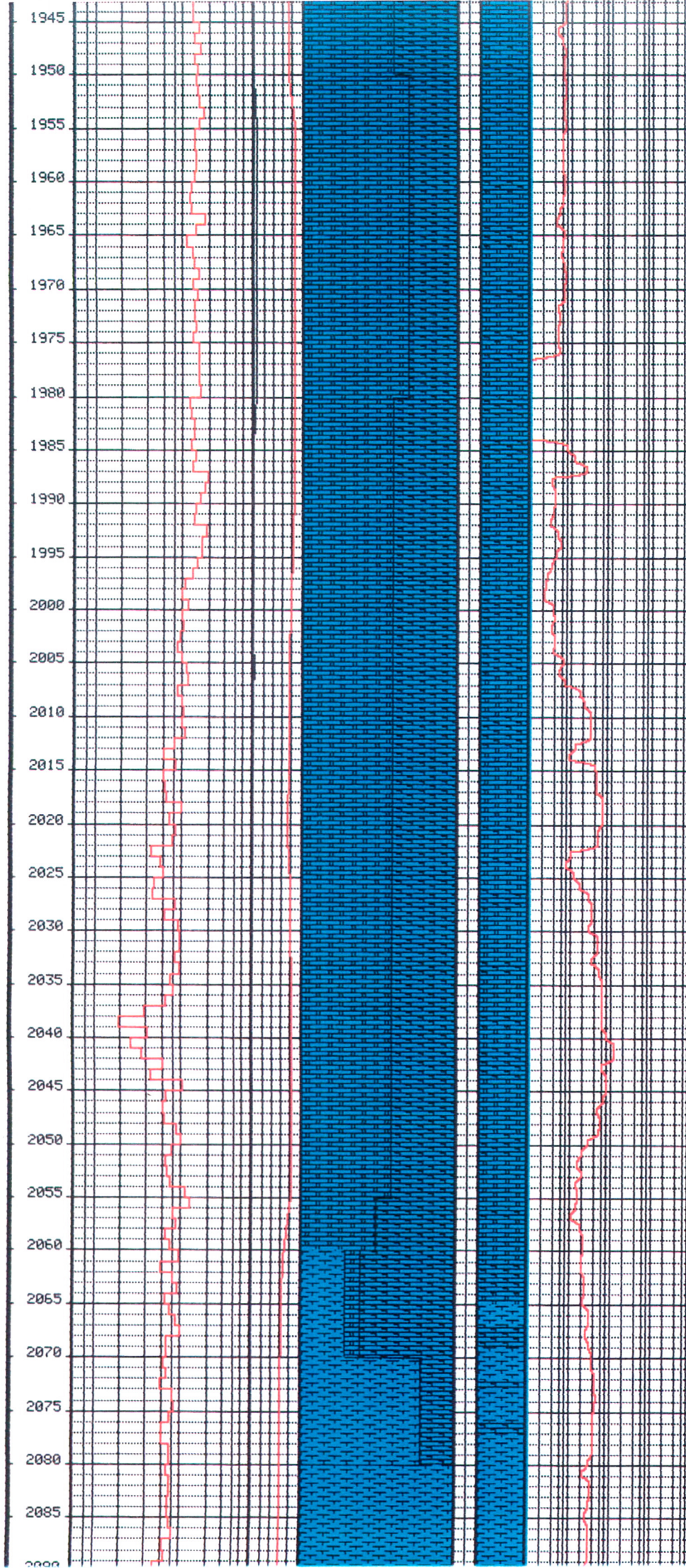
CALCARENITE: crm-lt gy/brn, frm-
mod hd, occ hd, vf-fn xln, grdg
to crse micxln i/p, wl cmt,
calc cmt, com wh/lt gy arg/calc
mtx, occ patch pure calc cmt,
calc spicules, occ forams, tr
glauc, com dk min, nil vis por,
n/s.

WOB: 40-50Klbs
RPM: 63
SPP: 3300-3450psi
FR: 550gpm.

CALCILUTITE: lt gy-off wh, bnd,
sft-plas, occ frm i/p, arg mtx
i/p, calc cmt grds to crse
micxln Calcarenite i/p, sbfiss-
blky, n/s.

Survey Depth: 1826.0m
Drift: 0.5deg, Az: 35.0deg.

PE606684-12



CALCARENITE:lt-brn-lt gy,occ
off wh,mod hd-hd,vf-f grn,suc
micxln,mod wl cmtd,pred calc
tr glauc,tr dol,nil vis por.

WOB:40-50Klbs
RPM:62
SPP:3300psi
FR:510gpm

CALCILUTITE:lt gy-off wh,sft,
occ slty,chlky,tr arg mtx,nil
vis por.

CHANGE FROM SEA WATER TO
GEL/POLYMER MUD SYSTEM

BIT # 8, HP13GJ, 12.25",
14/14/13,IN:1992M,OUT:2097m.

MW 1.09, FU 40, PU 11, YP 9,
Gel 2/2, pH 10.0, Cl 16K,
Ca 520, Sol 2, H2O 98, Snd Tr.

CALCARENITE:lt gy-lt brn,mod
hd,vf-f grn,occ micxln,mod wl
cmtd,calc cmt,com arg mtx,tr
glauc,nil vis por.

WOB:50Klbs
RPM:120
SPP:3200PSI
FR:700gpm.

CALCILUTITE:off wh-lt gy,sft-
mod frm,chlky,disp,nil vis por

WOB: 45-48 Klbs
RPM: 115-120
SPP: 3400 psi
FR : 695 gpm

MARL:lt brn-gy,sft-plas,occ
dk lithics,blky,suc txt.

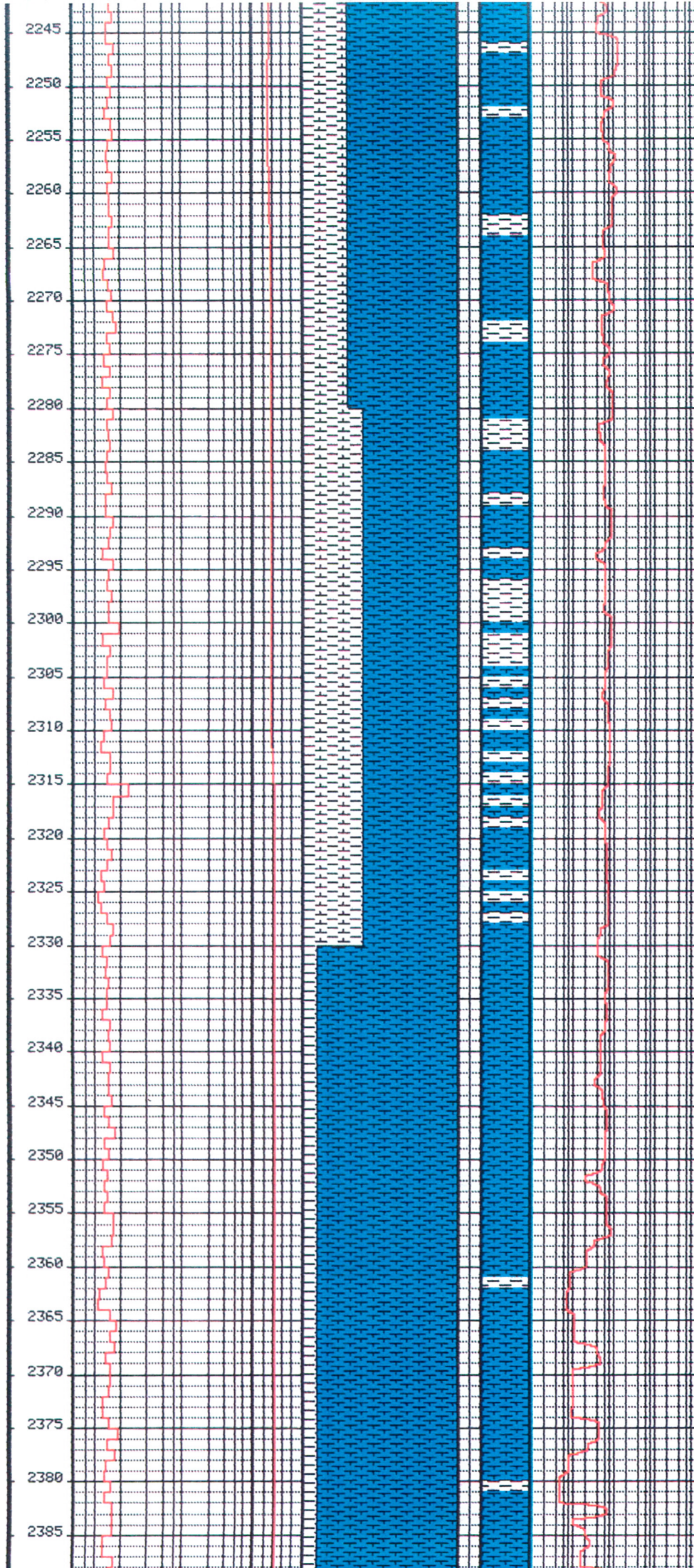
MW 1.09, FU 40, PU 10, YP 8,
Gel 1/2, pH 9.6, WL 5.6,
Cl 16.5K, Ca 600, Sol 3,

PE606684-13

BIT # 5RR HTC B9M+, 12.25",

Depth mtr	R.O.P. (min/mtr)				CaCo3 0 100	Cuttings %	F	Lit	Chromatolog				Description
	.5	2	10	60					.01	.1	1	10	
2100													
2105													5x16 1x12, In 2097, Out 2918, Run 821m, Dr1 Hrs 17.8, 50% W
2110													MARL: lt brn-lt gy, sft-fm, pred
2115													sft, hd i/p, stky, calc/arg mtx, calc mtx, disp, sl slty, grdng to Calcilutite.
2120													
2125													
2130													WOB: 28Klbs
2135													RPM: 141
2140													FR: 754gpm
2145													SPP: 2950psi
2150													
2155													
2160													
2165													WOB: 28Klbs
2170													RPM: 140
2175													FR: 760gpm
2180													SPP: 3250psi
2185													
2190													MARL: lt brn-lt gy, sft-fm, pred hd i/p, stky, calc/arg mtx, pred calc mtx, disp, sl slty, grds to arg CALCILUTITE.
2195													Survey Depth: 2193.5m Drift: 0.5deg, Az: 227.3deg.
2200													
2205													CALCAREOUS CLAYSTONE: v lt gy, sft-disp, occ lithics, occ blk.
2210													
2215													
2220													
2225													
2230													
2235													MW: 1.115g, FU: 46, PV: 15, Gel: 2/10

PE606684-14



MARL: 1t gy-gy brn, sft-frm, calc
 mtx, stky, occ arg mtx, disp, slty
 i/p.

Survey Depth: 2268.4m.
 Drift: 0.7deg, Az: 226.2deg.

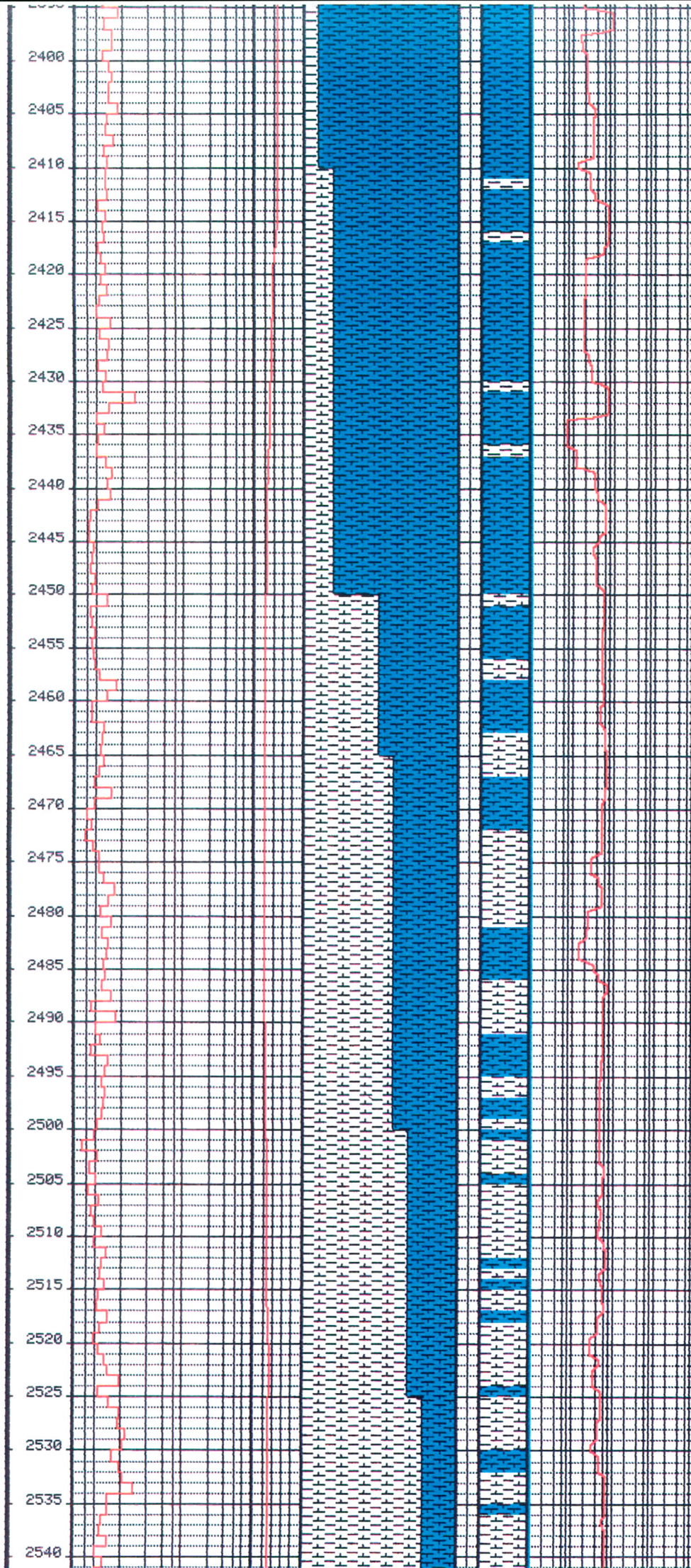
WOB: 25-30Klbs
 RPM: 135
 FR: 780gpm
 SPP: 3100psi

Survey Depth: 2325.2m
 Drift: 0.8deg, Az: 243.5deg.

MARL: 1t gy-gy brn, sft-frm, calc
 mtx, stky, occ arg mtx, disp, occ
 slty.

Survey Depth: 2371.6m
 Drift: 0.9deg, Az: 257.2deg.

PE606684-15



MARL:lt gy-gy,occ brn,sft-frm,
calc mtx,occ arg mtx,disp i/p,
silty i/p.

Survey Depth:2427.4m.
Drift:1.0deg,Az:236.4deg.

WOB:20-25Klbs
RPM:145
FR:760gpm
SPP:3100psi

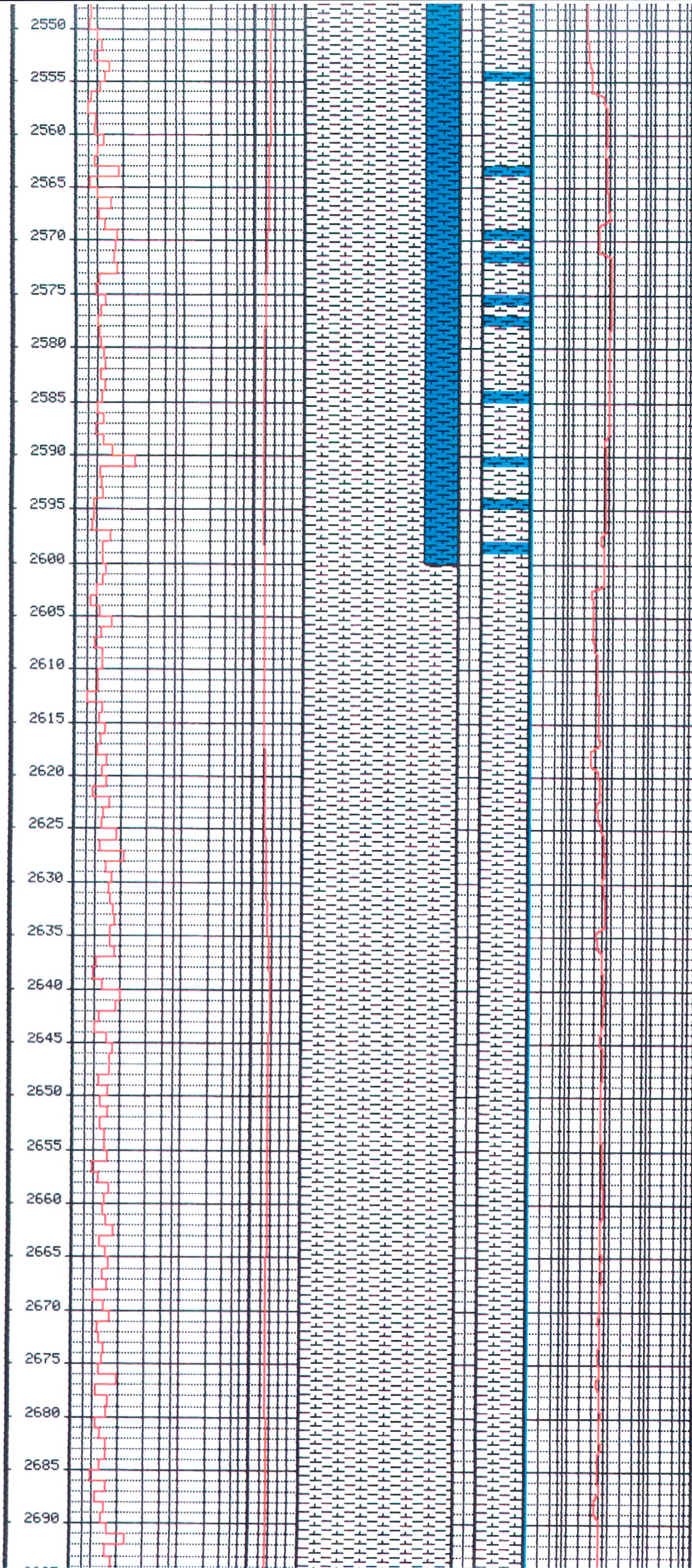
CALCAREOUS CLAYSTONE:lt gy-gy,
sft-frm,occ disp,stky,sbfiss,
silty/lithics,grading to
Claystone i/p.

Survey Depth:2484.8m
Drift:1.0deg,Az:244.5deg.

MM:1.15Sg,FU:46,PU:15,YP:15,
Gel:2/10,pH:9.5,WL:6.0,CL:16K
Ca:580,Sol:7,H2O:93,Oil:0,
Snd:Tr.

CALCAREOUS CLAYSTONE:lt gy-gy,
occ lt grn,sft-frm,stky,sbfiss

PE606684 - 16



Survey Depth: 2543.7m
 Drift: 1.0deg, Az: 267.7deg.

WOB: 18-25Klbs
 RPM: 142
 FR: 760gpm
 SPP: 3250psi

Survey Depth: 2605.7m
 Drift: 1.7deg, Az: 265.5deg.

Survey Depth: 2641.0m
 Drift: 1.7deg, Az: 269.1deg.

CALCAREOUS CLAYSTONE: lt gy-gy,
 occ lt grn, sft-hd, stky, blk, y,
 com calc mtx, grading to
 Claystone i/p, slty, tr mic, tr
 glauc, tr pyr.

Survey Depth: 2680.0m
 Drift: 1.8deg, Az: 274.0deg.

PE606684-17

2705
2710
2715
2720
2725
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2780
2785
2790
2795
2800
2805
2810
2815
2820
2825
2830
2835
2840
2845

MI: 1.15Sg, FU: 47, PU: 15, YP: 15,
Gel: 2/10, pH: 9.5, WL: 6.0, CL: 16K
Ca: 580, Sol: 7, H2O: 93, Snd: Tr.

SANDSTONE: brn, dk grn, f-crs,
felds, sbang-sbrndd, pr srted,
abdnt crs glauc, arg mtx, pr vis
por, n/s.

Survey Depth: 2776.1m.
Drift: 2.5deg, Az: 268.4deg.

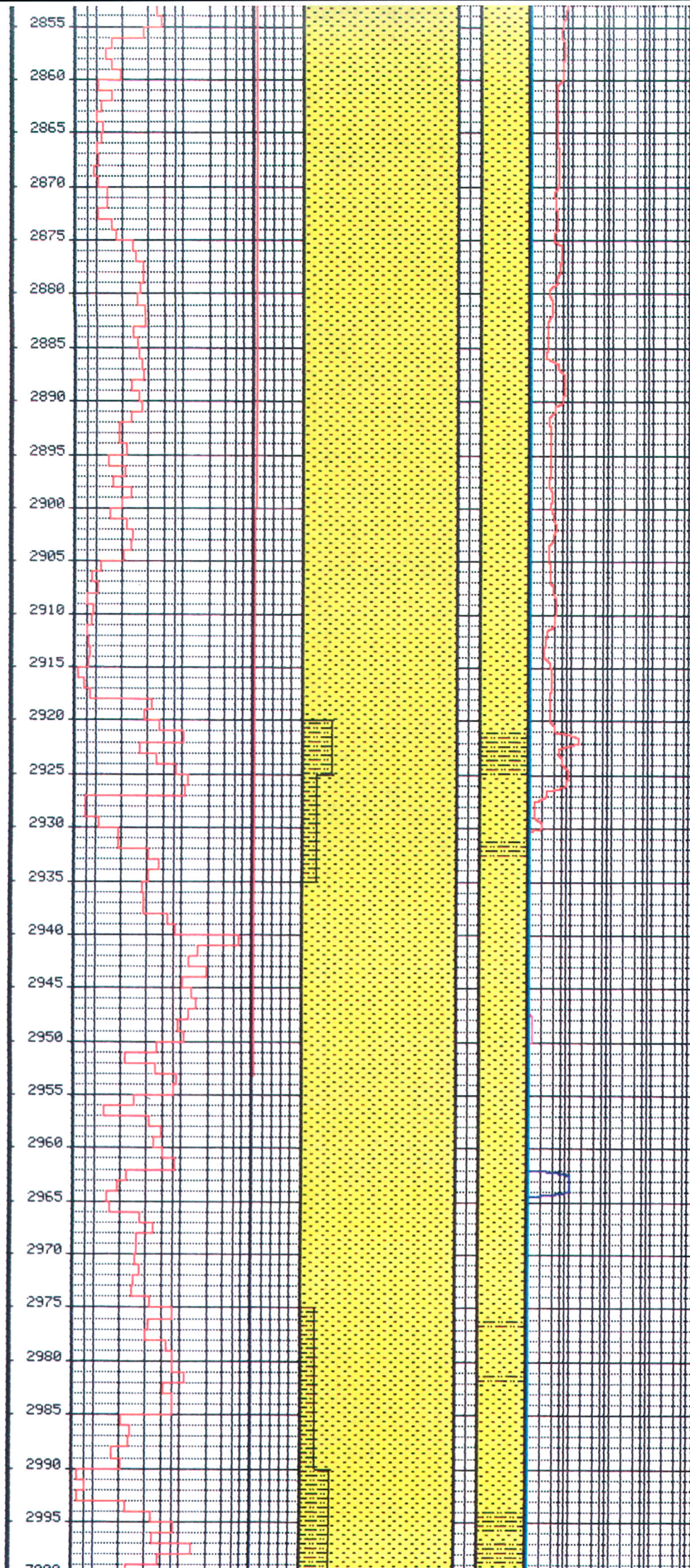
WOB: 20-30Klbs
RPM: 145
FR: 750gpm
SPP: 3300psi.

Survey Depth: 2801.8m
Drift: 2.5deg, Az: 278.3deg.

Survey Depth: 2830.9m
Drift: 3.0deg, Az: 290.9deg.

WOB: 30Klbs
RPM: 140
FR: 750gpm

PE606664 - 18



Survey Depth: 2857.6m
 Drift: 3.3deg, Az: 294.1deg.

SANDSTONE: clr-brn, grn, dom
 uncons, vf-crs, sbang-sbrnd,
 floating qtz grns, pt brn,
 uncons f grn arg mtx, com
 glauc, dk gen-blk, rnd-sbrnd,
 vis por, n/s.

9 5/8" Casing Shoe at 2888.14

Survey Depth: 2896.0m
 Drift: 3.6deg, Az: 284.0deg.

SANDSTONE: dom(80%), lse, crs qtz
 rndd, pr srted, ex infer por, n/s,
 pt (20%), brn, f-grn, uncon, arg
 mtx, abnt glauc, ex vis por,
 n/s.

BIT #9 REED HP11G 8.25"
 3x13, In 2918, Out 2984,
 Run 66, Dri Hrs 7.5,

SILTSTONE: med-dk gry, frm, carb
 glauc /p, tr pyr.

WOB: 30-45 Klbs
 RPM: 80
 FR: 450 gpm
 SPP: 2500 psi

SANDSTONE: trns1-trans, occ
 brnish gry, hd, crs-med gr, tr
 f gr, pred ang-sbang, mod srted,
 com glauc, tr pyr nods, carb i/p
 tr cons vf-f gry/brn SST, pred
 sil cmt, tr arg mtrx. pr inf
 por, no show.

SILTSTONE: lt gry-lt brn,
 sbang-sbbiky, carb lam i/p,
 com glauc, no show.

PC06689-19

Show.

Survey Depth: 3009.0m

Drift: 4.3deg, Az: 274.4deg.

COAL: blk, vitr, hd-mod hd.

SANDSTONE: trnsp-trnsl, crs-f, pred med, mod-wl strd, pr-tr glauc, tr pyr, pr inf vis por, no show.

WOB: 18-25Klbs

RPM: 90-100

FR: 480gpm

SPP: 2820psi

Survey Depth: 3067.11m

Drift: 3.5 deg, Az: 270.9 deg.

SILTSTONE: lt gry-brnsh gry, sft frm, arg mtrx, tr glauc, tr pyr, interlam w/ coal.

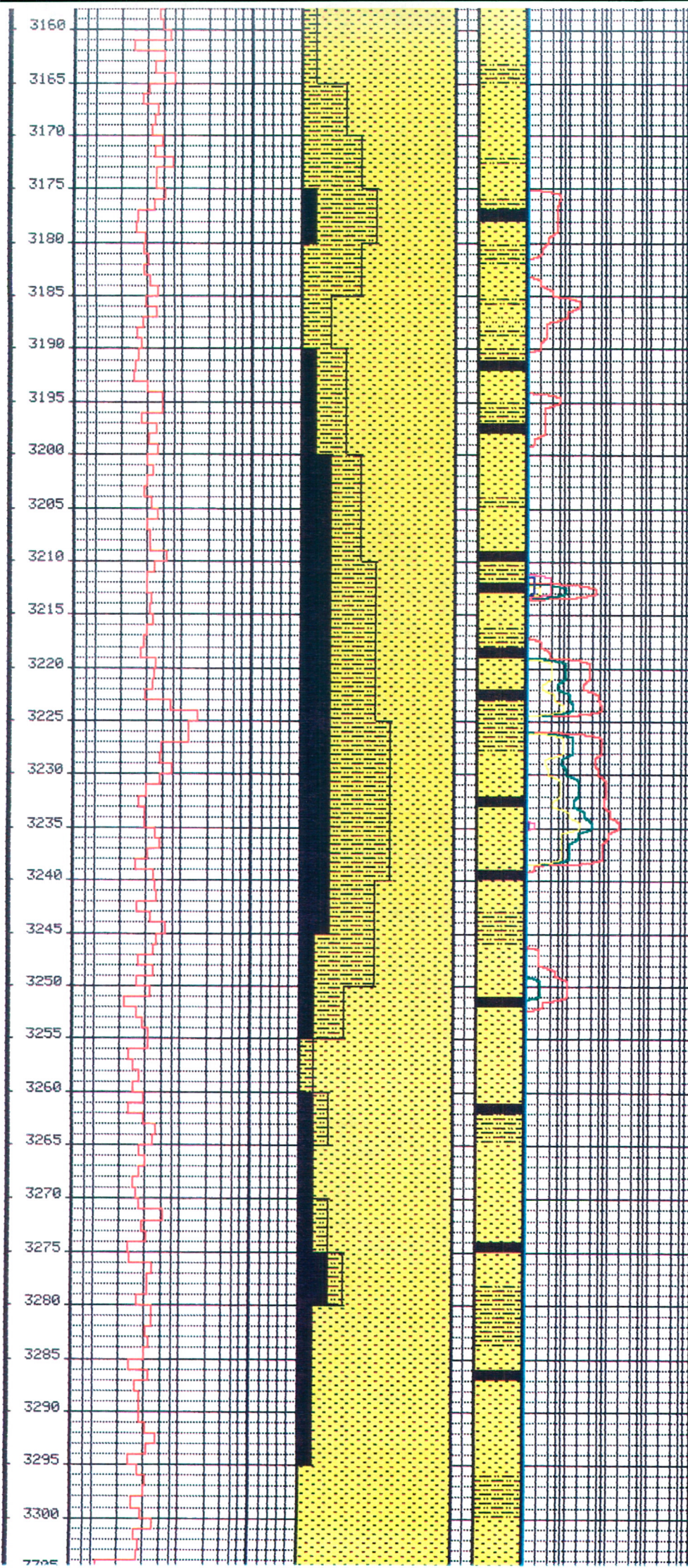
COAL: blk, vit-sbvit, hd-mod hd, sbconch-conch frac i/p.

SANDSTONE: trnsp-trnsl, lse, occ crs, mod-prly srted, sbang-sbrnd, no cmt, tr calc mtrx, tr dissem pyr, pr por, no show.

COAL: dk gry/blk, vit, conch frac.

SILTSTONE: lt brn, frm, arg mtrx, i/p, cmn carb lam, grads to coal i/p.

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gr, occ crs, prly srted, sbang-
sbrnd, no cmt, tr glauc, tr pyr
pr por, no show.

SILTSTONE: lt gy-lt brn gy, frm
com carb, intrlam coal, p-nil
inf por.

SILTSTONE: med gry-brn gry,
dft-frm, bicky, carb, mod yl
cut flour. (no vis str or
flour)

SANDSTONE: trnsl-trnsp, hd, crs-f
gr, pred med-crs gr, pr-mod
glauc, tr pyr, fr inf por, no
show.

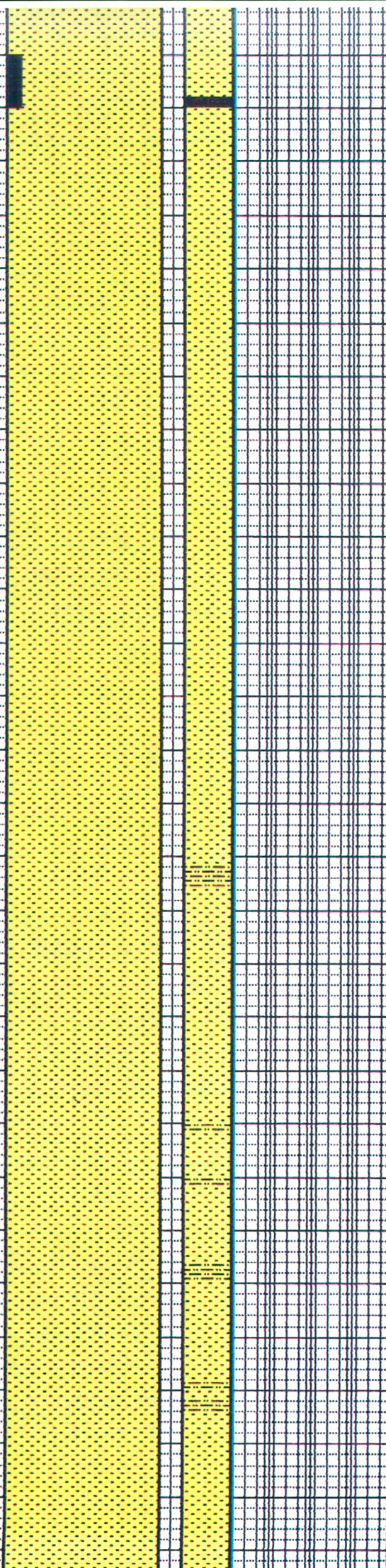
WOB: 20-32 Klbs
RPM: 80-110
SPP: 3300 psi
FR: 500 gpm

SANDSTONE: trnsp-trnsl, hd, crs
-f gr, pred crs-med, pr-mod
srted, tr-com pyr, fr inf por
no show.

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C1:18.5K, Ca:60, SOL:5.3,
H2O:94, SND:0.25.

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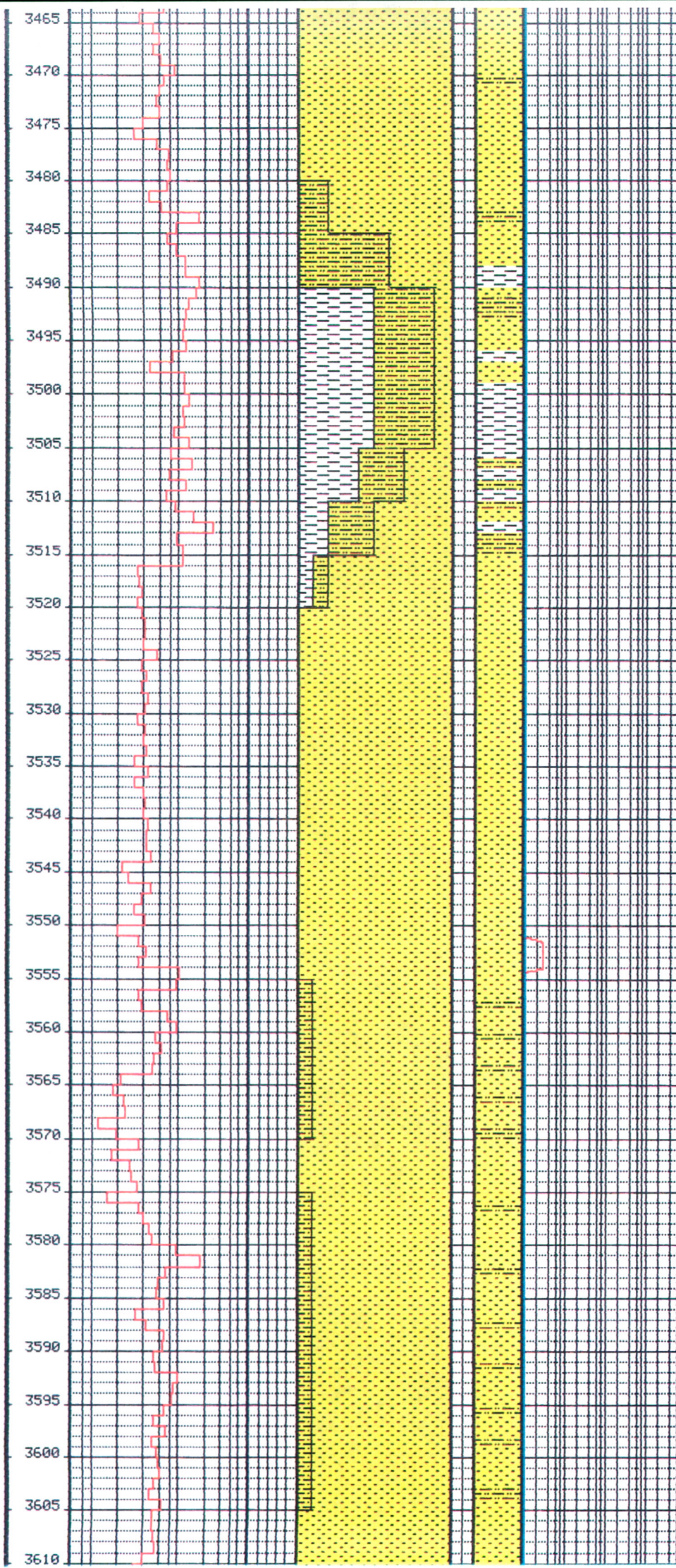


SANDSTONE:trnsp-trnsl,hd,f-
crs gr,pred med-f gr,mod wl
srted,ang-sbang,wl srted,gd
inf por,no show.

SANDSTONE:trnsp-trnsl,lse,
gr,pr-mod strd,sbang-sbrnd,no
vis cmt or mtrx,tr disse
pyr,fr inf por,no show.

SANDSTONE:trans/trnsl,lse,
med-crs gr,sbang-sbrnd,pr-
mod srted,no vis cmt or mtrx,
tr disse pyr,fr inf por,no
show.

SANDSTONE:trnsp-trnsl,lse,
med-crs gr,sbang-sbrnd,pr-
mod srted,no vis cmt or mtrx,
tr disse pyr,fr-gd inf por,
no show.



SANDSTONE: (1) gen a/a: (2) 10%
cons grns, off wh. f gr, sbang-
sbrnd, wl srt, tr calc mtrx,
tr com arg mtrx, pr inf por,
no show.

SILTSTONE: lt gy-dk gy, occ
brn gy, sft-fm, sbblky, carb,
abnd arg mtr, gdn to slty
clyst, show. Fluor: no dir
cut flu, pr-fr yw cut flu,
med yw res ring.

CLAYSTONE: med gy-dk gy, sft-
fm, v slty i/p, sbblky-sbfiss,
show, FLUOR: a/a.

SANDSTONE: trnspr-trnsl, crs-
f gr, sbang-sbrnd, md-w srt
no vis cmt, tr dissep pyr,
f-gd por, n/s, gdn to clystn,
sltst i/p.

SANDSTONE: trnspr-trnsl, crs-
f gr, pred crs-med, sbang-
sbrd, mod srt, no vis cmt, tr
dissep pyr, fr-pr por, tr dir
flu, cut flu, gdn to sltst
i/p

SANDSTONE: trnspr-trnsl, crs-fn
pred crs-med, mod srt, no vis
cmt, tr dissep pyr, f-gd por,
tr arg mtr, tr pyr, gdn to
sltst

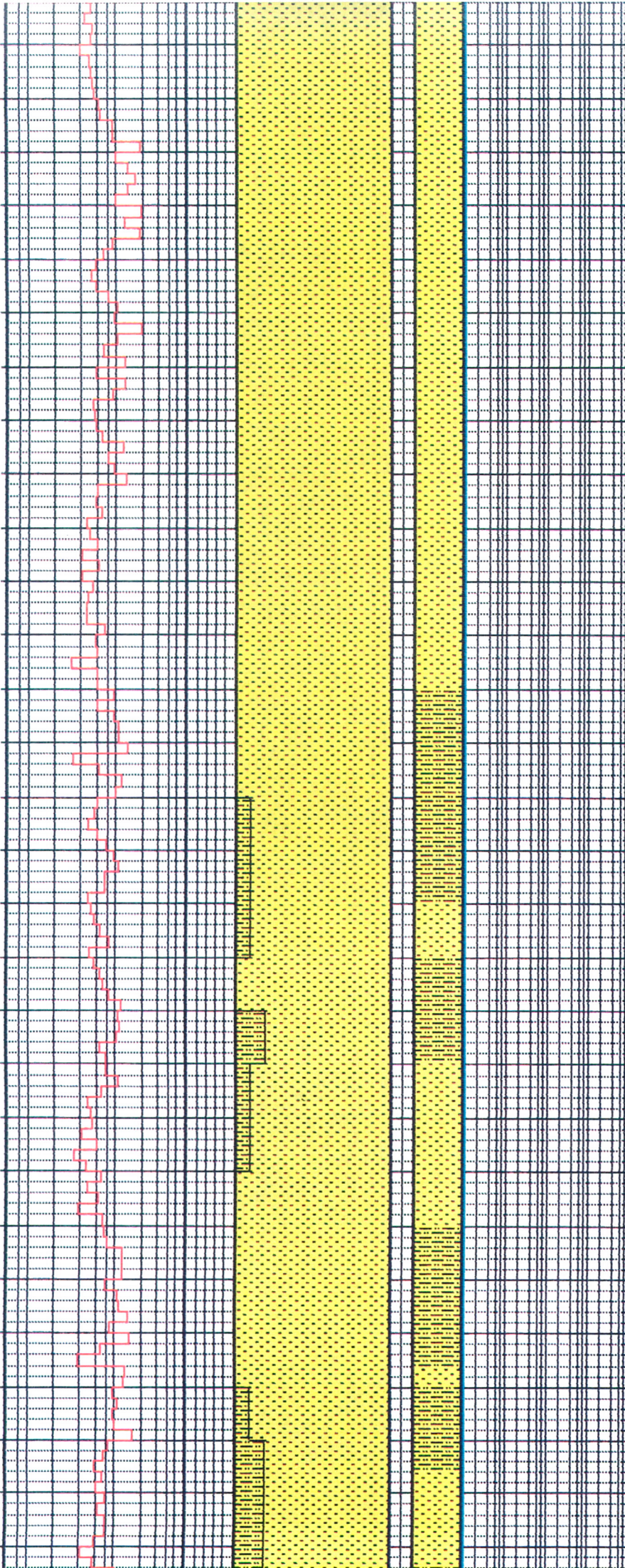
SILTSTONE: lt-dk gy, occ brnsh
gr, sft-fm, sbblky-sbfis,
carb, com arg mtr, gdn to
calc clyst, pr por

SANDSTONE: trnspr-trnsl, crs-

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por

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3760



SANDSTONE: clr-trnsp, lse, med
-crs, sbang-sbrnd, no vis cmt
or mtx, tr pyr, gd inf por, no
flu, tr clyst-md-dk gy, sft-fm
amorph, occ sbblky-sbfiss,
i/p

SANDSTONE: clr-trnsp-trnsl, ls
med crs, occ f, mod pr srt,
sbang-sbrnd, occ arg, occ wk s
cmt, no mtx, tr dissep pyr, gd
inf por, n/s, tr sltst, tr
clyst

SANDSTONE: trnsp,-trnsl-rr wht
lse, dom crs-occ f, mod srt,
sbrnd-sbang, wk sil cmt, no
occ pyr, gd inf por, n/s

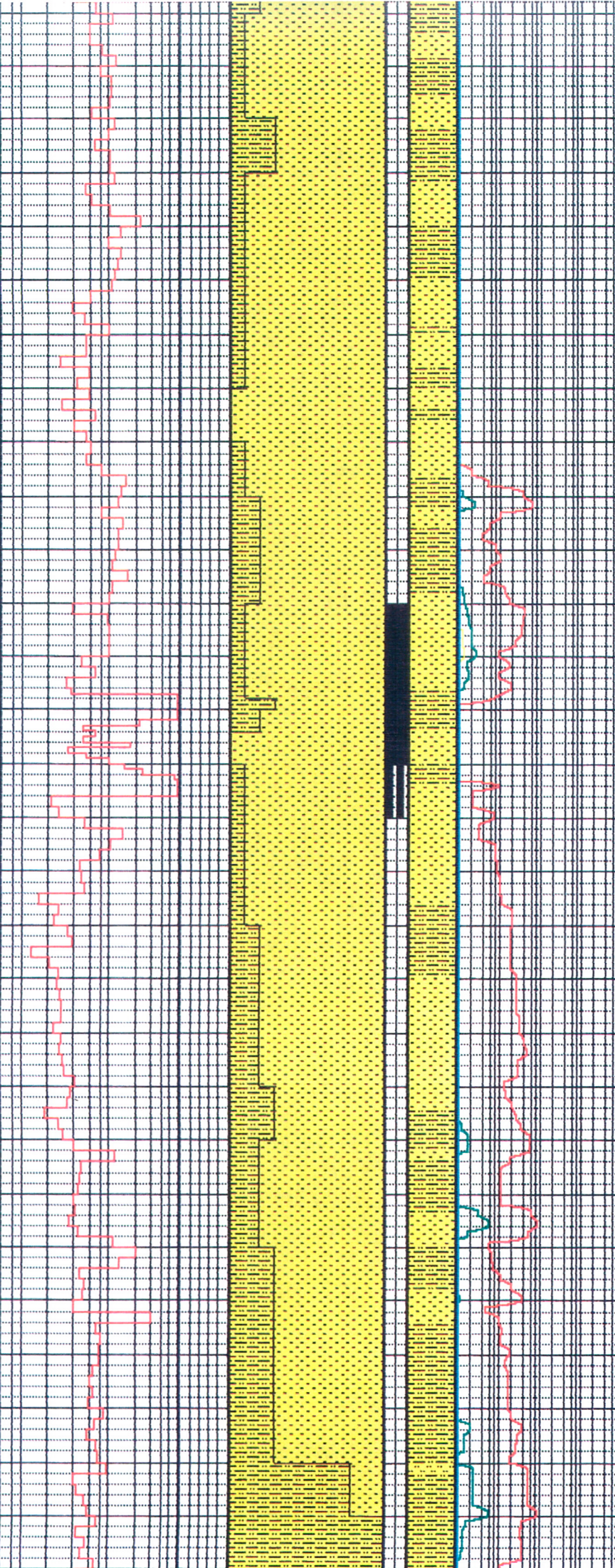
SILTSTONE: med-dk brn, occ lt
gry, occ blk, frm-mod hd, sb
biky-sbfiss, grads to shale i/p
occ v carb.

SANDSTONE: trnsp/trnsl, r wh,
lse, med occ f, mod srt, sb
ang-sbrnd, ra wl sil cmt, no
mtx, tr pyr, gd inf por, no show.

SANDSTONE: lt gy, trnsl, lse,
med-crs gr, prly srt, sbang-
sbrnd, com pr, gd inf por, no

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3915



SILTSTONE: dk gy-dk brn, frm-
mod hd, grads to clyst i/p,
carb, sbblky-sbfiss.

SANDSTONE: clr/trnsl occ wh,
lse, r frm, dom med-crs ra f
grns in aggs, sbang, tr sil
cmt, r wh arg mtr, tr mica, com
pyr, fr-gd inf por, no show.

SANDSTONE: lt gry, clr trnsl,
f-v crs, lse, sbang-sbrnd, cln,
v-gd por, show.

FLUOR: 3825- :50-60%, brt
yw ,Cut: fast smg brt yw, abd
lt brn oil str.

CORE BIT #1-DB CT3038 10m BBL
IN 3833m OUT 3842m 99% RECOV.

BIT #14 HUGHES B35M 8.5"
3 X 12, IN 3842m OUT

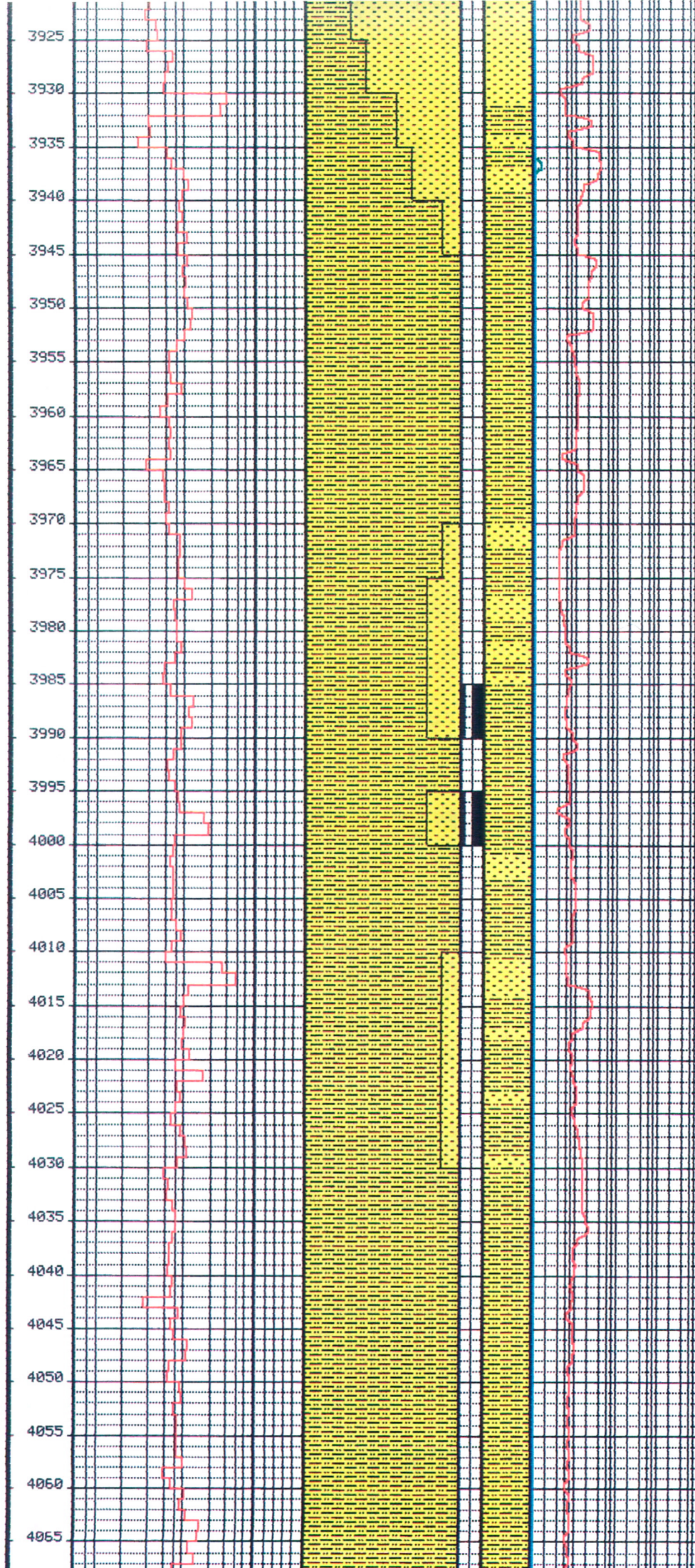
SILTSTONE: med gy-dk gy-brn,
mod hd-occ v hd, subfis, com
micmic, occ carb lams, sbblky,
com pyr

SANDSTONE: clr-mlky wht, dom
f-med, occ v crs, frac grns,
sbang, pr srted, mod hd, occ
calc, dol cmt, tr wht mtx, com
pyr/occ as mtx, no vis por, tr
min fluor

Survey Depth: 3897.5m.
Drift: 1.7deg, Az: 339.1deg.

SILTSTONE: med gy, brn, frm, occ
mod hd, gen sbfiss-sbblky, aren
i/p, com carb spks, micmic, tr

PE606684-25



WOB: 21K1bs
 RPM: 95
 SPP: 2150psi
 FR: 400gpm

Survey Depth: 3975m
 Drift: 1.9deg, Az: 358.8deg.

FLUOR: tr-10%, mod brt grn/yel
 w/-slw strmg cut, v. thin res'
 ring.

SILTSTONE: spkld brn-rd, gy-
 blk, fm-hd, vf, mod-pr srted,
 com fltg qtz grns, arg mtx,
 sndy i/p, coal lam i/p, tr
 glauc i/p, pyr i/p, tr coal

SANDSTONE: transl-wh, vf, arg mtx
 mod wl srted, com pyr.

Survey Depth: 4024.9m
 Drift: 2.1deg, Az: 2.3deg

WOB: 25K1bs
 RPM: 85
 FR: 460gpm
 SPP: 2400psi

SILTSTONE: wh\brn, occ lt brn,
 frm, cmb-ethy, com carb spks
 grdg to coal lam i/p, com-abnt
 feld, aren i/p, glauc i/p, mnr
 chlorite, com crs floating qtz
 grns, ang-sbang, w/-vuf dissem
 micpyr.

PE606684 - 26

BLOCKAGE IN GAS EQUIPMENT.
NO GAS RECORDED FROM 4075m TO
4085m.

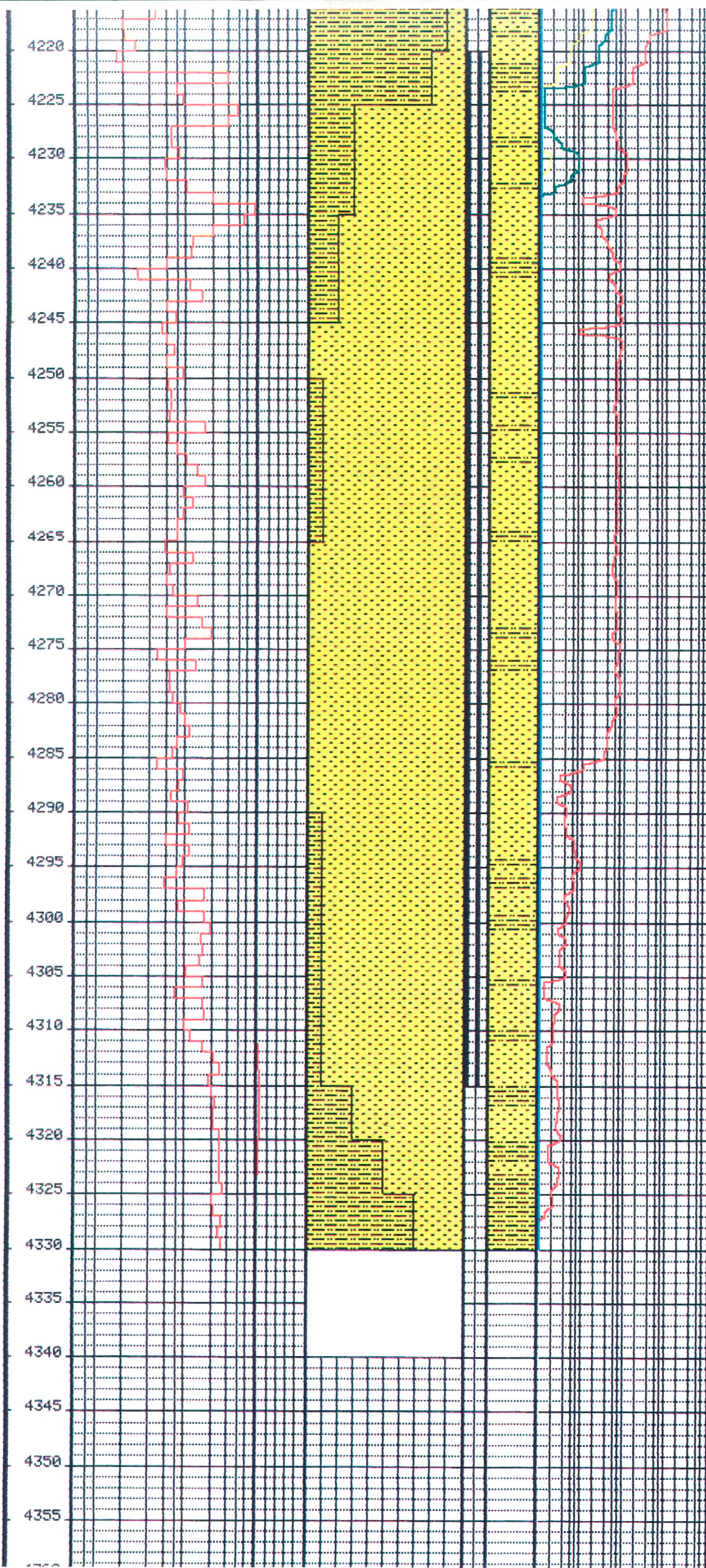
BIT #15, 8.5 inches, R435S,
Nozzles: 4 x 12, IN: 4079m, OUT:
4234m, RUN: 155m, 14.6hrs.

SANDSTONE: clr, uncons, ang-sbang
frac, frosted i/p, tr calc cmt,
srt, mnr pyr aggs, por infer
por, N/S.

WOB: 20-25Klbs
RPM: 90
FR: 375
SPP: 1900psi

Depth mtr	R.O.P. (min/mtr)				CaCo3		Cuttings %	F	Lit	Chromatolog					Description
	.5	2	10	60	0	100				.01	.1	1	10	100	
4125															
4130															
4135															Survey Depth: 4135m Drift: 2.8deg, Az: 17.8deg.
4140															
4145															SILTSTONE: wh/brn, lt brn, frm, cmb-ethy, com carb spks grdg to coal lam i/p, com-abdnt feld, bcmg aren w/-depth, decr glauc w/-depth, occ pyr.
4150															
4155															
4160															SANDSTONE: off wh-lt brn, vf, wl srt, sbang-sbrndd, calc cmt, arg, blky, hd, nil por, N/S.
4165															
4170															Survey Depth: 4173.9 Drift: 3.3deg, Az: 23.7deg.
4175															
4180															SILTSTONE: brn-blk, mod hd-hd, blky, carb, aren i/p.
4185															
4190															MW: 1.14Sg, FU: 56, PU: 19, YP: 21, Gel: 7/21, pH: 10.1, WL: 6.5, CL: 19K Ca: 440, Sol: 6, H2O: 94, Snd: Tr.
4195															
4200															SANDSTONE: wh-trnsl, uncons, med- crs, pred med grn, sbang-sbrndd, wl srt, tr glauc, tr pyr, tr calc cmt, gd por, N/S.
4205															
4210															

PEG06684-27



srt, tr pyr, tr calc cmt, gd por

FLUOR: 20% mod pl yel fluor, wk gn-yel cut, no str or res' rng.

BIT #16 REED HP53 AJK 8.5" Nozzles: B/14/11, IN: 4234m, OUT: 4330m, Run: 96m, 23.7hrs.

SANDSTONE: wh-transl-occ v lt gy, lse-mod hd, f-crs-dom med crs, sbrnd-sbang, pr srted, tr calc cmt, occ pyr, tr biot, p-inf por, wk yel-gold-occ orng dir flu

SANDSTONE: trns1- v. lt gy, wh, dom lse, frm-mod hd in aggr, vf-crs, dom f-med, sbrnd-sbang pr srted, occ calc cmt, wh mtx, com pyr, tr biot, v pr por-tite, wk flu

SILTSTONE: lt gy-med brn, mod hd-hd, blk-y-sbfis, v aren i/p, grds to vf gr sst, com mic and liths

SANDSTONE: off wh/lt gy, clr, f-crs, hd, pr srted, sbang-sbrndd, calc cmt, arg i/p, pr vis por,

FLUOR: tr-10% v. dull yel fluor w/-wk cut, no res' rng.

SILTSTONE: dom lt brn, fm-med, blk-y, com carb spks, calc cmt, pr cmted, grng to vvf SST, pt wh-lt brn, hd vhd, blk-y, strng cmted, calc cmt, pyr cmt i/p, com carb spks, nil por, n/s

ANGLER #1 TD 4330m

DATE: 13th MAY 1989
TIME: 10:20 a.m.

PE 606684-28.