

Field : OTWAY BASIN
 Block: PEP-153
 State : VICTORIA
 Country : AUSTRALIA
 Scale : 1/ 200

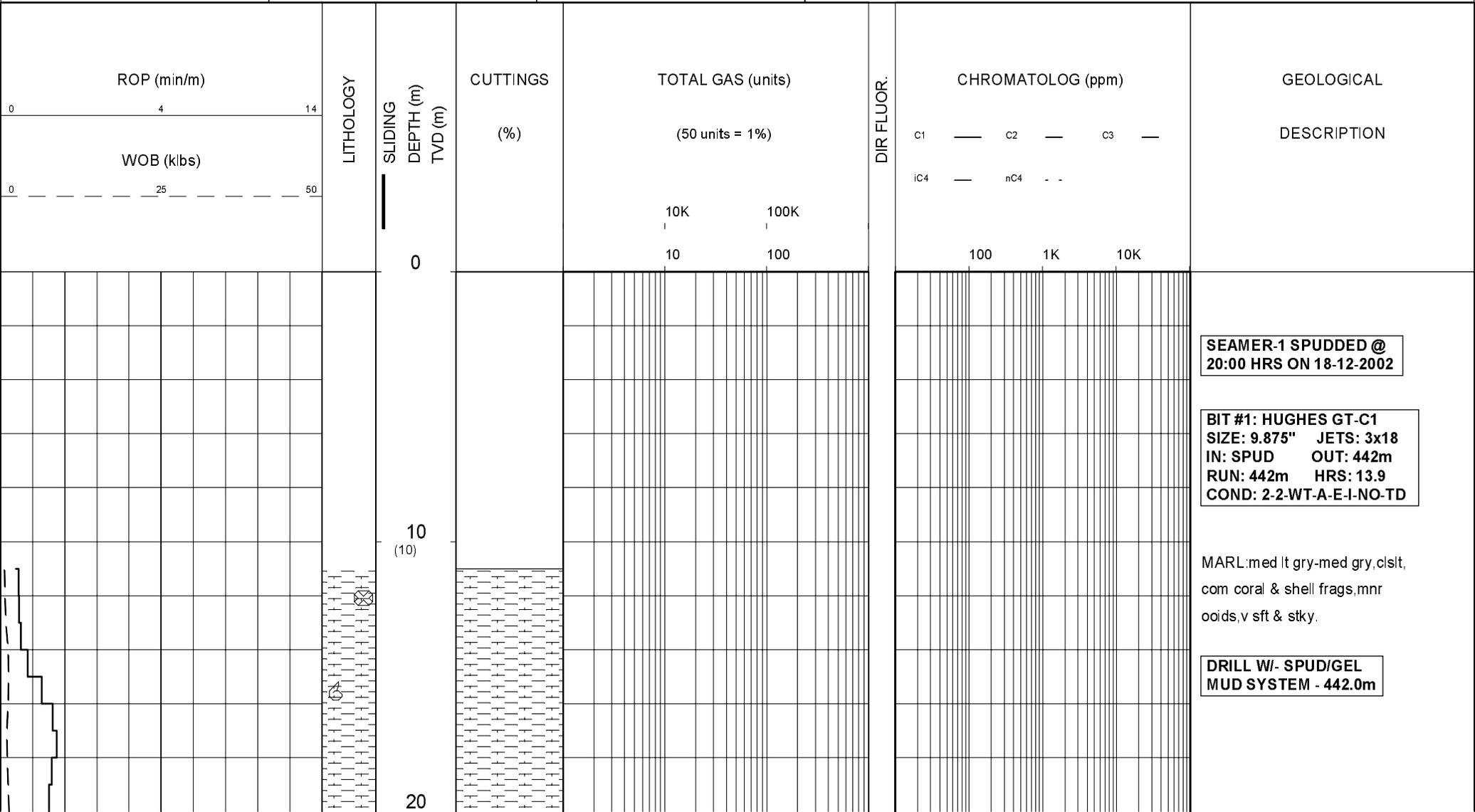
Rotary table : 63.7m
 Ground level : 58.5m
 GDA 94 Co-ordinates :
 Lat. : 38° 33' 24.28" E (PRELIM.)
 Long. : 143° 01' 15.70" S (PRELIM.)

Rig : CENTURY ENERGY-11
 Spud date : 18-12-2002
 TD date : 25-12-2002
 Total depth : 1360mMD(1325.05mTVD)
 Final status : C & S

Open Hole: 9.875" 442m
 6.75" 1360m
 Cased Hole: 7.625" 434m
 3.5" 1356.5m

Loggers : Leigh Foreman
 Ken Haak
 John Hobday

LITHOLOGY	ACCESSORIES	DRILLING DATA	ABBREVIATIONS
Conglomerate Coarse Sandstone Med Sandstone Fine Sandstone VF Sandstone Siltstone Carb. Siltstone Calc. Siltstone Clay Limestone Dolomite Coal Anhydrite Gypsum Igneous Volcanic Metamorphic Cement	Pyrite Siderite Glauconite Feldspar Mica Ferrous Chert Calcareous Dolomitic Carbonaceous Lithoclast Breccia Foraminifera Corals Inoceramus Bryozoa Plant remains Fossils	Casing Shoe Bit Trip Wiper Trip Core DST Deviation Survey MUD DATA MW - Mud Weight (lb/gal) FV - Funnel Viscosity (s/qt) PV - Plastic Viscosity (cps) YP - Yield Point (lb/100ftsq) Gel - Gel Strength (10sec) WL - Water Loss (cc/30min) pH - Acidity / Alkalinity Ck - Cake (32nd/inch) Sol - Solids (% vol) Cl - Chlorides (mg/l)	BOPD - Barrels of Oil Per Day BWPD - Barrels of Water Per Day CG - Connection Gas CO - Circulate Out COND - Condensate <i>c/c</i> - Crush Cut DST - Drill Stem Test FLOW - Flow Rate (gal/min) GCM - Gas Cut Mud GCW - Gas Cut Water GTS - Gas To Surface INJ - Injection of Mist (bbls/hr) LCM - Lost Circulation Material MMCFD - Million Cubic Feet / Day NGTS - No Gas To Surface NOTS - No Oil To Surface NR - No Returns OCM - Oil Cut Mud OG - Over Gauge OH - Open Hole OTS - Oil To Surface Q - Flow Rate REC - Recovery Rmf - Resistivity mud filtrate ROP - Rate Of Penetration RPM - Revolutions Per Minute RTSTM - Rate Too Small To Measure Rw - Resistivity water <i>r/r</i> - Ring Residue SCFM - Standard Cubic Ft/Min (air) SGCM - Slightly Gas Cut Mud SPM - Strokes Per Minute SPP - Stand Pipe Pressure SWC - Side-Wall Core TG - Trip Gas WOB - Weight On Bit



WOB 1.3 klbs
RPM 85
SPP 190 psi
FLOW 408 gpm

NO GAS

SURVEY @ 28m: 0.25° 087T

MARL: med lt gry-med gry, med lt gry brn, clst, com coral & shell frags, mnr ooids, mnr spar LMST frags, v sft & stky.

30
(30)

40
(40)

MARL: med lt gry-med lt brn gry, clst, com coral & shell frags, mnr ooids, v sft & stky.

WOB 5-10 klbs
RPM 120
SPP 350 psi
FLOW 361 gpm

NO GAS

MARL: med lt gry-med gry, occ gry brn, clst, com coral & shell frags, mnr ooids, v sft & stky.

50
(50)

60
(60)

SURVEY @ 56m: 0.25° 307T

MARL: med-lt gry, pred lt gry, tr gry brn, clst, abdt coral & shell frags, rr ooids, v sft & stky.

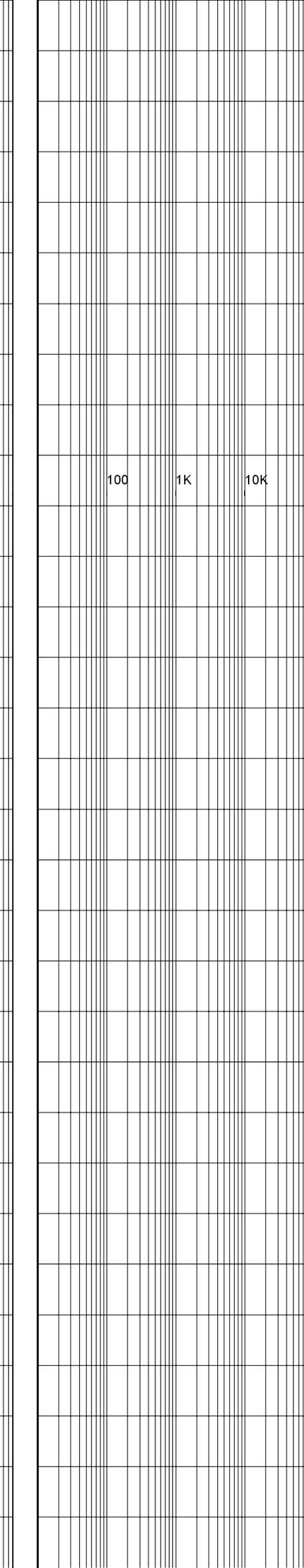
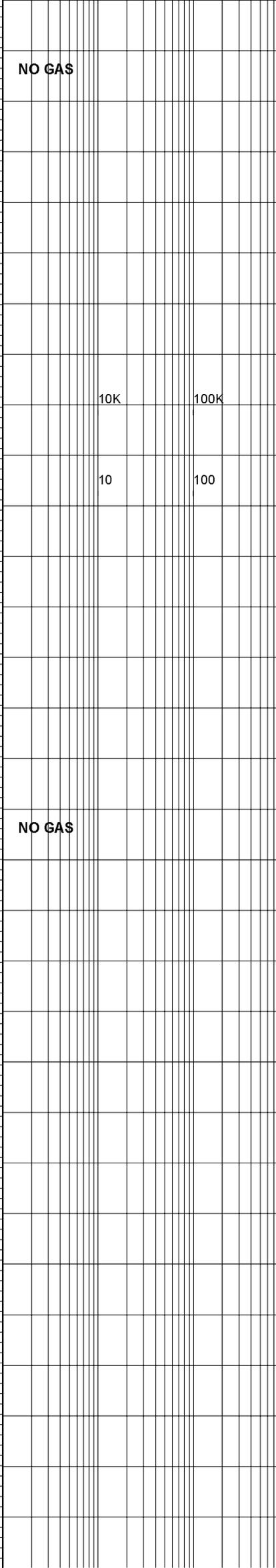
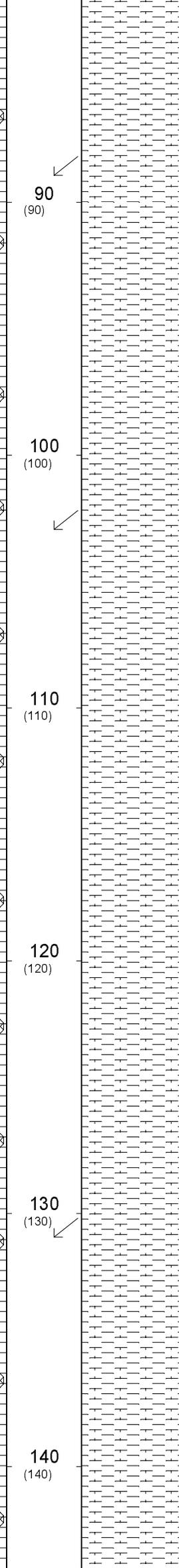
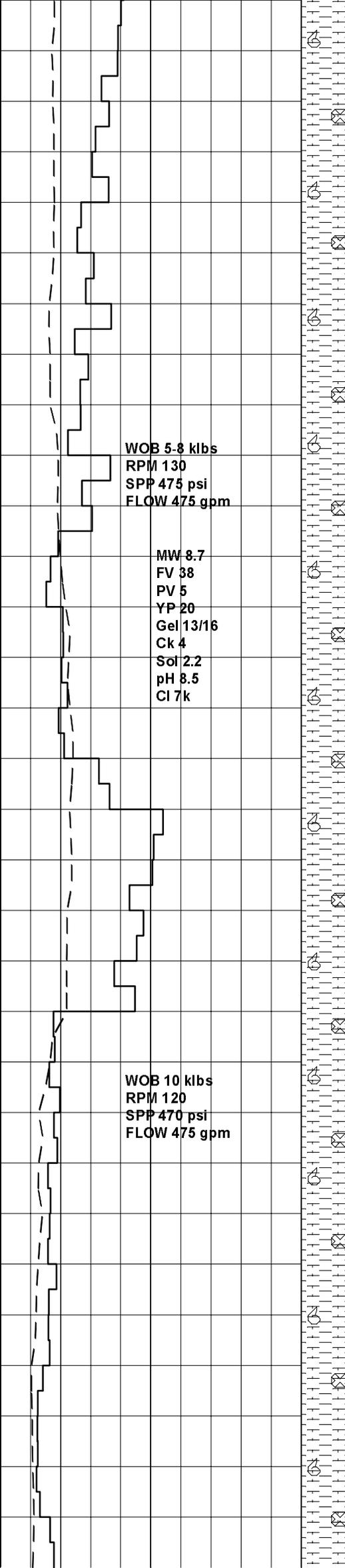
MW 8.6
FV 36
PV 4
YP 13
Gel 12/24
WL 28.0
Ck 3
Sol 1.9
pH 9.0
Cl 850

70
(70)

WOB 8-10 klbs
RPM 130
SPP 500 psi
FLOW 475 gpm

80
(80)

MARL: pred lt gry, occ g/t med gry abdt coral & shell frags, rr ooids, v sft & stky.



SURVEY @ 89m: MISRUN

MARL:lt-med gry,occ pl gry brn, abdt shell & coral frags,occ ooids,v sft & stky.

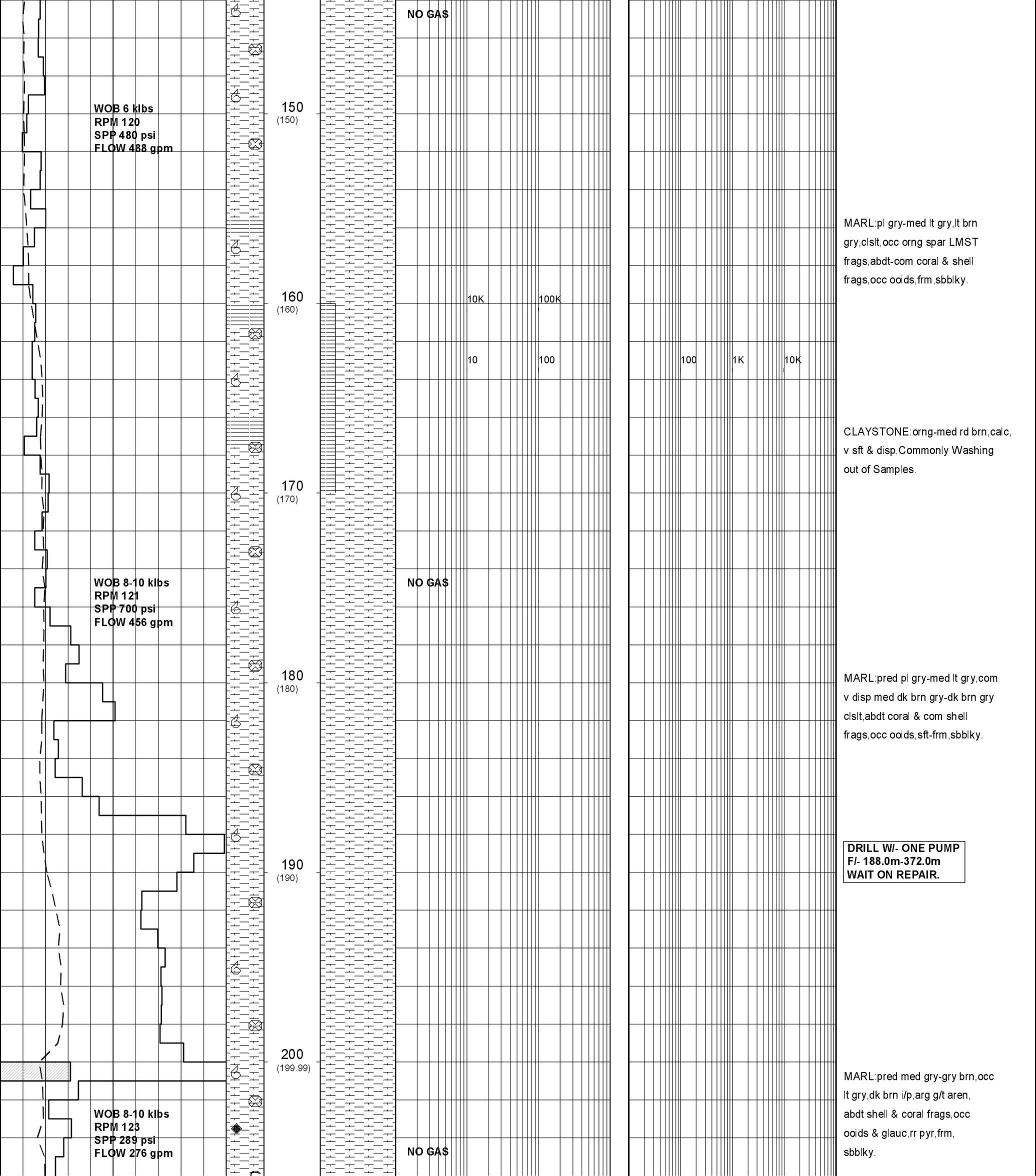
SURVEY @ 103m: 0.25° 097T

MARL:pl gry-med gry,med lt gry-med lt brn gry,clsit,abdt coral & shell frags,com ooids,v sft-sft & stky.

MARL:pl gry-med gry,med lt gry-lt brn gry,clsit,abdt coral & shell frags,com-occ ooids,sft-frn,sbblky.

SURVEY @ 131m: 0.50° 115T

MARL:pl gry-med gry,lt brn gry-med lt brn,clsit,abdt coral & shell frags,com-occ ooids,sft-pred frn,sbblky.



WOB 6 klbs
RPM 120
SPP 480 psi
FLOW 488 gpm

150
(150)

NO GAS

MARL:pl gry-med lt gry,lt brn gry,clst,occ orng spar LMST frags,abdt-com coral & shell frags,occ ooids,frm,sbbiky.

160
(160)

10K

100K

10

100

100

1K

10K

CLAYSTONE:orng-med rd brn,calc, v sft & disp.Commonly Washing out of Samples.

170
(170)

NO GAS

WOB 8-10 klbs
RPM 121
SPP 700 psi
FLOW 456 gpm

180
(180)

MARL:pred pl gry-med lt gry,com v disp med dk brn gry-dk brn gry clst,abdt coral & com shell frags,occ ooids,sft-frm,sbbiky.

190
(190)

DRILL WI- ONE PUMP
FI- 188.0m-372.0m
WAIT ON REPAIR.

200
(199.99)

WOB 8-10 klbs
RPM 123
SPP 289 psi
FLOW 276 gpm

NO GAS

MARL:pred med gry-gry brn,occ lt gry,dk brn i/p,arg g/t aren, abdt shell & coral frags,occ ooids & glauc,rr pyr,frm,sbbiky.

MW 8.7
FV 33
PV 4
YP 16
Gel 11/13
Sol 2.2
Ck 4
pH 8.5
Cl 8.5k

WOB 8-10 klbs
RPM 93
SPP 344 psi
FLOW 279 gpm

WOB 8-10 klbs
RPM 92
SPP 344 psi
FLOW 139 gpm

210
(209.99)

220
(219.99)

230
(229.99)

240
(239.99)

250
(249.99)

260
(259.99)

10K

100K

10

100

100

1K

10K

NO GAS

NO GAS

SANDSTONE: cir-trnsl, mlky, pl brn
i/p, pred vf-med i/p, occ crs grs,
mod srt, sbang-sbrnd, tr calc cmt,
lse, gd inf por, no fluor.

MARL: med brn gry, pl brn i/p, occ
dk gry, abdt foss, shell & coral
frags, occ ooids, clst, com pyr &
glauc, tr qtz grs, mnr dk brn-blk
liths, frm, sbbky.

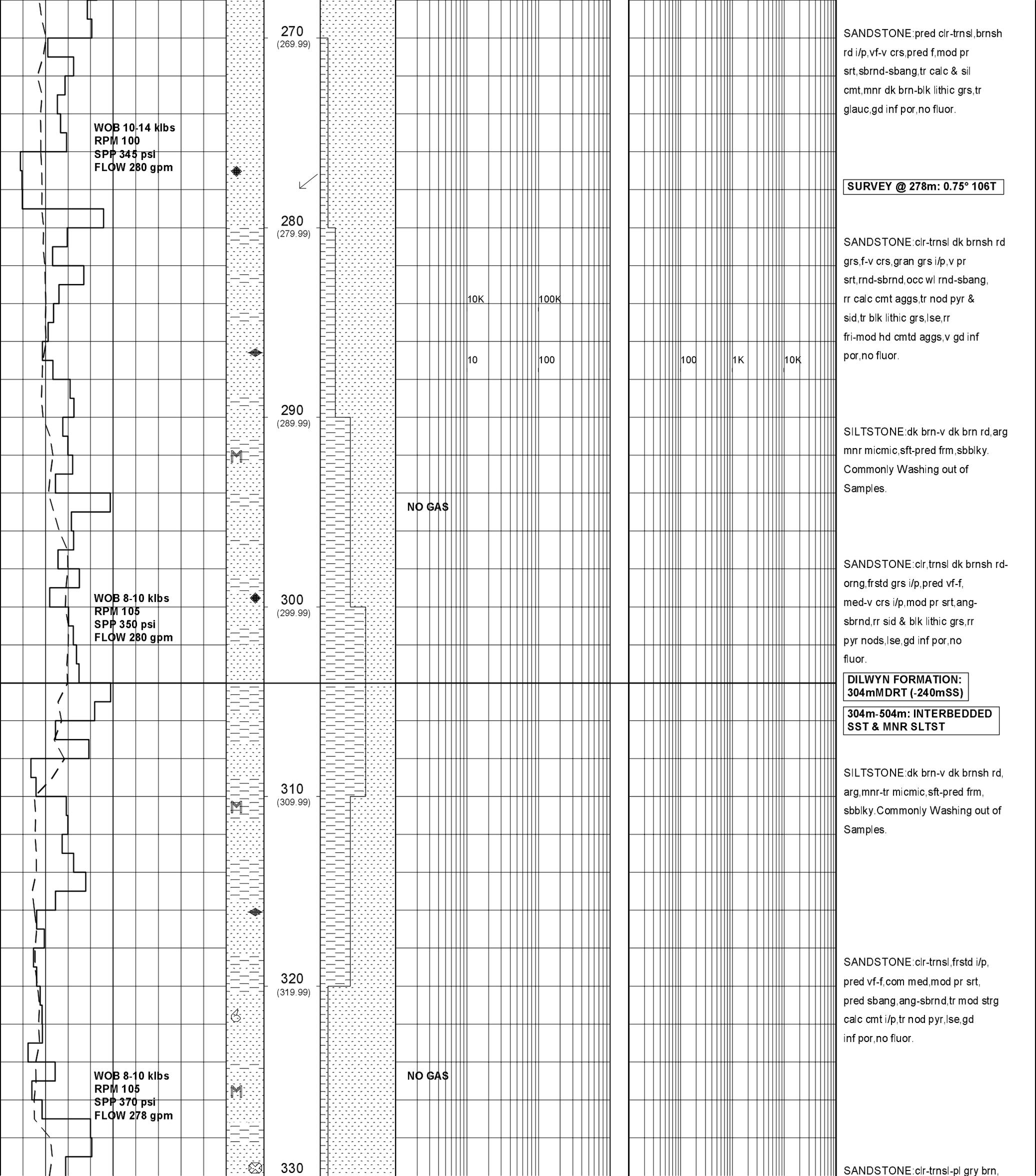
**MEPUNGA FORMATION:
233mMDRT (-169mSS)**

**233m-304m: INTERBEDDED
SST & MNR SLTST**

SANDSTONE: orng, orng-yel, cir-
trnsl, frstd, vf-med, pred f, mod
srt, sbang-sbrnd, mnr mod strg
calc cmt, tr wh sil cmt, abdt pyr
& glauc & sid, mnr dk brn blk
liths, lse, gd inf por, no fluor.

SURVEY @ 248m: 0.75° 129T

SANDSTONE: orng, orng yel, cir-
trnsl, occ frstd, mnr mod strg
calc cmt, rr wh sil mt, tr glauc
& sid, com dk grn-blk liths, tr
coral & shell frags, lse, gd inf
por, no fluor.



SANDSTONE: pred cir-trnsl, brnsh rd i/p, vf-v crs, pred f, mod pr srt, sbrnd-sbang, tr calc & sil cmt, mnr dk brn-blk lithic grs, tr glauc, gd inf por, no fluor.

SURVEY @ 278m: 0.75° 106T

SANDSTONE: cir-trnsl dk brnsh rd grs, f-v crs, gran grs i/p, v pr srt, rnd-sbrnd, occ wl rnd-sbang, rr calc cmt aggs, tr nod pyr & sid, tr blk lithic grs, lse, rr fri-mod hd cmtd aggs, v gd inf por, no fluor.

10K 100K
10 100 100 1K 10K

SILTSTONE: dk brn-v dk brn rd, arg mnr micmic, sft-pred frm, sbblky. Commonly Washing out of Samples.

NO GAS

SANDSTONE: cir, trnsl dk brnsh rd-ornng, frstd grs i/p, pred vf-f, med-v crs i/p, mod pr srt, ang-sbrnd, rr sid & blk lithic grs, rr pyr nods, lse, gd inf por, no fluor.

DILWYN FORMATION: 304mMDRT (-240mSS)

304m-504m: INTERBEDDED SST & MNR SLTST

SILTSTONE: dk brn-v dk brnsh rd, arg, mnr-tr micmic, sft-pred frm, sbblky. Commonly Washing out of Samples.

SANDSTONE: cir-trnsl, frstd i/p, pred vf-f, com med, mod pr srt, pred sbang, ang-sbrnd, tr mod strg calc cmt i/p, tr nod pyr, lse, gd inf por, no fluor.

NO GAS

SANDSTONE: cir-trnsl-pl gry brn,

WOB 10-14 klbs
RPM 100
SPP 345 psi
FLOW 280 gpm

WOB 8-10 klbs
RPM 105
SPP 350 psi
FLOW 280 gpm

WOB 8-10 klbs
RPM 105
SPP 370 psi
FLOW 278 gpm

270
(269.99)

280
(279.99)

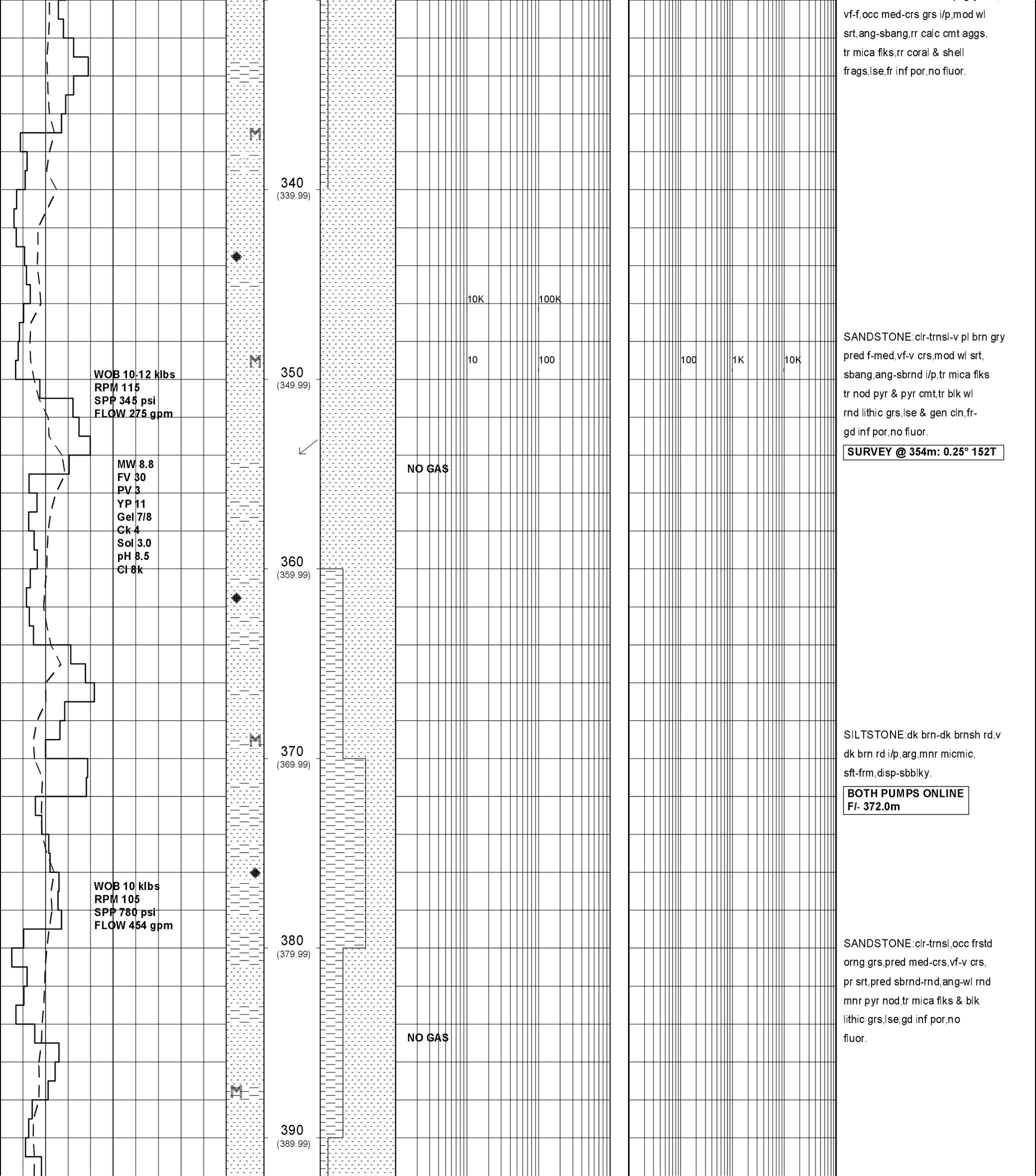
290
(289.99)

300
(299.99)

310
(309.99)

320
(319.99)

330



vf-f, occ med-crs grs i/p, mod wl
 srt, ang-sbang, rr calc cmt aggs,
 tr mica flks, rr coral & shell
 frags, lse, fr inf por, no fluor.

SANDSTONE: clr-trnsl-v pl brn gry
 pred f-med, vf-v crs, mod wl srt,
 sbang, ang-sbrnd i/p, tr mica flks
 tr nod pyr & pyr cmt, tr blk wl
 rnd lithic grs, lse & gen cln, fr-
 gd inf por, no fluor.

SURVEY @ 354m: 0.25° 152T

SILTSTONE: dk brn-dk brnsh rd, v
 dk brn rd i/p, arg, mnr micmic,
 sft frm, disp-sbbiky.

**BOTH PUMPS ONLINE
 F/- 372.0m**

SANDSTONE: clr-trnsl, occ frstd
 orng grs, pred med-crs, vf-v crs,
 pr srt, pred sbrnd-rnd, ang-wl rnd
 mnr pyr nod, tr mica flks & blk
 lithic grs, lse, gd inf por, no
 fluor.

**WOB 10-12 klbs
 RPM 115
 SPP 345 psi
 FLOW 275 gpm**

MW 8.8
 FV 30
 PV 3
 YP 11
 Gel 7/8
 Ck 4
 Sol 3.0
 pH 8.5
 Cl 8k

**WOB 10 klbs
 RPM 105
 SPP 780 psi
 FLOW 454 gpm**

340
 (339.99)

350
 (349.99)

360
 (359.99)

370
 (369.99)

380
 (379.99)

390
 (389.99)

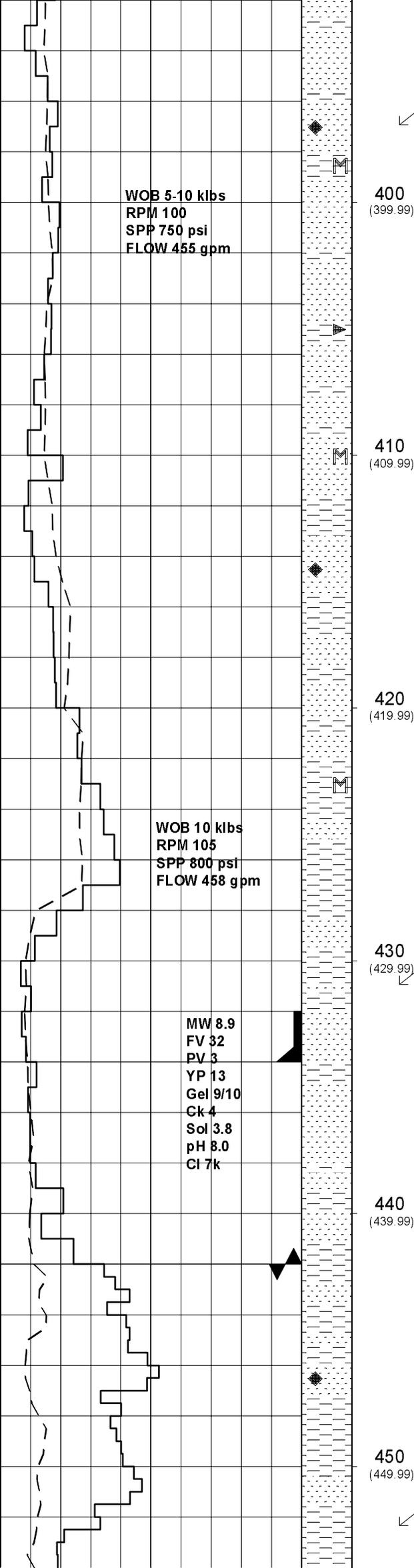
10K 100K

10 100

100 1K 10K

NO GAS

NO GAS



WOB 5-10 klbs
RPM 100
SPP 750 psi
FLOW 455 gpm

WOB 10 klbs
RPM 105
SPP 800 psi
FLOW 458 gpm

MW 8.9
FV 32
PV 3
YP 13
Gel 9/10
Ck 4
Sol 3.8
pH 8.0
Cl 7k

400
(399.99)

410
(409.99)

420
(419.99)

430
(429.99)

440
(439.99)

450
(449.99)

10K 100K

10 100

100 1K 10K

NO GAS

NO GAS

SURVEY @ 397m: 0.25° 107T

SANDSTONE: cl-trnsi pl brn, pred
f-med, vf-crs i/p, mod srt, pred
sbang, ang-sbrnd, tr mica flks, lse
& gen cln, gd inf por, no fluor.

SILTSTONE: dk brn gry-dk gry brn
i/p, dk brn blk, arg, mnr micmic &
carb mat, frm, sbbkly.

SANDSTONE: cl-trnsi pl brn, pred
f-med, vf-crs, mod srt, pred sbang,
com sbrnd, ang i/p, tr mica flks &
pyr nods, lse & gen cln, gd inf
por, no fluor.

SILTSTONE: dk brn-dk brnsh rd,
arg-occ aren i/p, mnr vf-f qtz
grs incls, frm, sbbkly. Commonly
Washing out of Samples

SURVEY @ 431m: 0.50° 167T

**7.625" CASING SHOE
SET @ 434.0m**

L.O.T. @ 437m: EMW = 10.0 ppg

**BIT #2: HUGHES STR-09D
SIZE: 6.75" JETS: 3x13
IN: 442m OUT: 1169m
RUN: 727m HRS: 26.4
COND: 8-4-BT-G-2-E-WT-HRS**

**DRILL W/- DOWN HOLE
MOTOR F/- 442.0m-1360.0m**

**DRILL W/- KCL/PHPA MUD
SYSTEM F/- 442.0m-900.0m**

SURVEY @ 452.4m: 0.20° 31.7T

SANDSTONE: cl-trnsi grs, pred med
occ f-crs i/p, mod wl srt, sbang,
occ ang-sbrnd i/p, rr pyr cmt &

nods,rr glauc,gen lse & cln,fr
inf por,no fluor.

SILTSTONE:med brn gry-occ med
gry brn,arg,tr dissem pyr & carb
mat,disp,amorph.

SANDSTONE:clr-trnsi grs,pred med
com crs-v crs,mod pr srt,pred
sbang-sbrnd,occ ang,rr sil cmt,
rr pyr nods & glauc,gen lse &
cln,fr-gd inf & fr vis por,no
fluor.

SURVEY @ 481.6m: 0.14° 39.8T
SILTSTONE:med brn gry-med gry
brn i/p,arg,tr dissem pyr & carb
mat,disp,amorph.

SANDSTONE:clr-trnsi-pl brn,pred
med-crs,f-v crs,pr srt,sbang-
sbrnd,rr sil cmt,tr pyr nods,gen
lse & cln,fr-gd vis & inf por,no
fluor.

**PEMBER MUDSTONE:
504mMDRT (-440mSS)**

**504m-574m: CLYST W/ MNR
INTERBEDDED SST & SLTST**

SURVEY @ 510.7m: 0.18° 271.5T
CLAYSTONE:med-dk brn,arg,tr carb
mat,sft,disp,amorph.

WOB 3-5 klbs
RPM 40
DH RPM 160
SPP 770 psi
FLOW 226 gpm

MW 8.65
FV 31
PV 3
FV 4
Gel 1/1
Ck 1
Sol 0.8
pH 8.5
CI 24,k

WOB 5-10 klbs
RPM 35
DH RPM 160
SPP 860 psi
FLOW 230 gpm

WOB 10 klbs
RPM 80
DH RPM 205
SPP 890 psi
FLOW 230 gpm

460
(459.99)

470
(469.99)

480
(479.99)

490
(489.99)

500
(499.99)

510
(509.99)

10K

100K

10

100

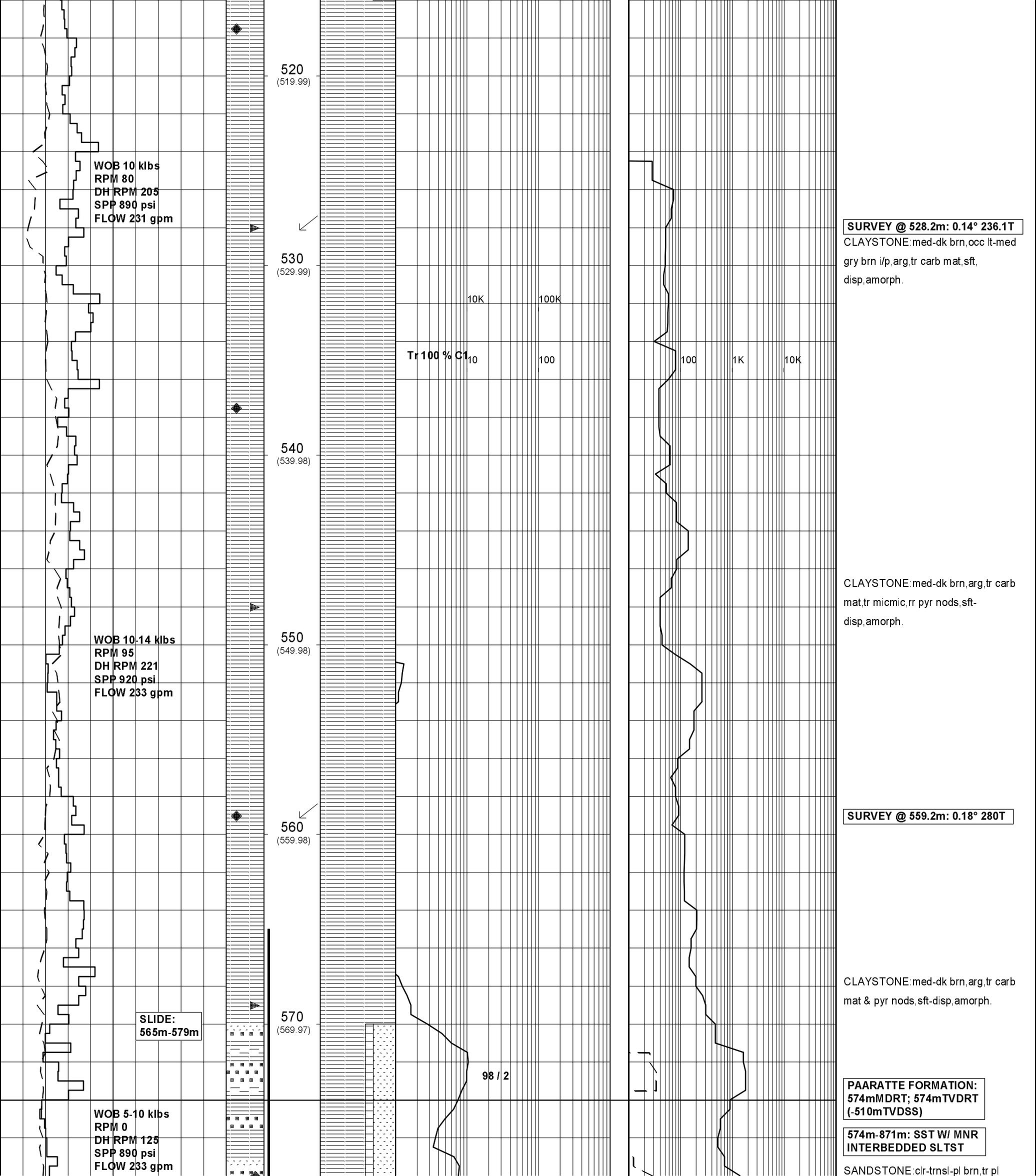
100

1K

10K

NO GAS

NO GAS



WOB 10 klbs
RPM 80
DH RPM 205
SPP 890 psi
FLOW 231 gpm

WOB 10-14 klbs
RPM 95
DH RPM 221
SPP 920 psi
FLOW 233 gpm

WOB 5-10 klbs
RPM 0
DH RPM 125
SPP 890 psi
FLOW 233 gpm

SLIDE:
565m-579m

520
(519.99)

530
(529.99)

540
(539.98)

550
(549.98)

560
(559.98)

570
(569.97)

10K 100K

Tr 100% C₁₀ 100 1K 10K

98 / 2

SURVEY @ 528.2m: 0.14° 236.1T

CLAYSTONE: med-dk brn, occ lt-med gry brn i/p, arg, tr carb mat, sft, disp, amorph.

CLAYSTONE: med-dk brn, arg, tr carb mat, tr micmic, rr pyr nods, sft-disp, amorph.

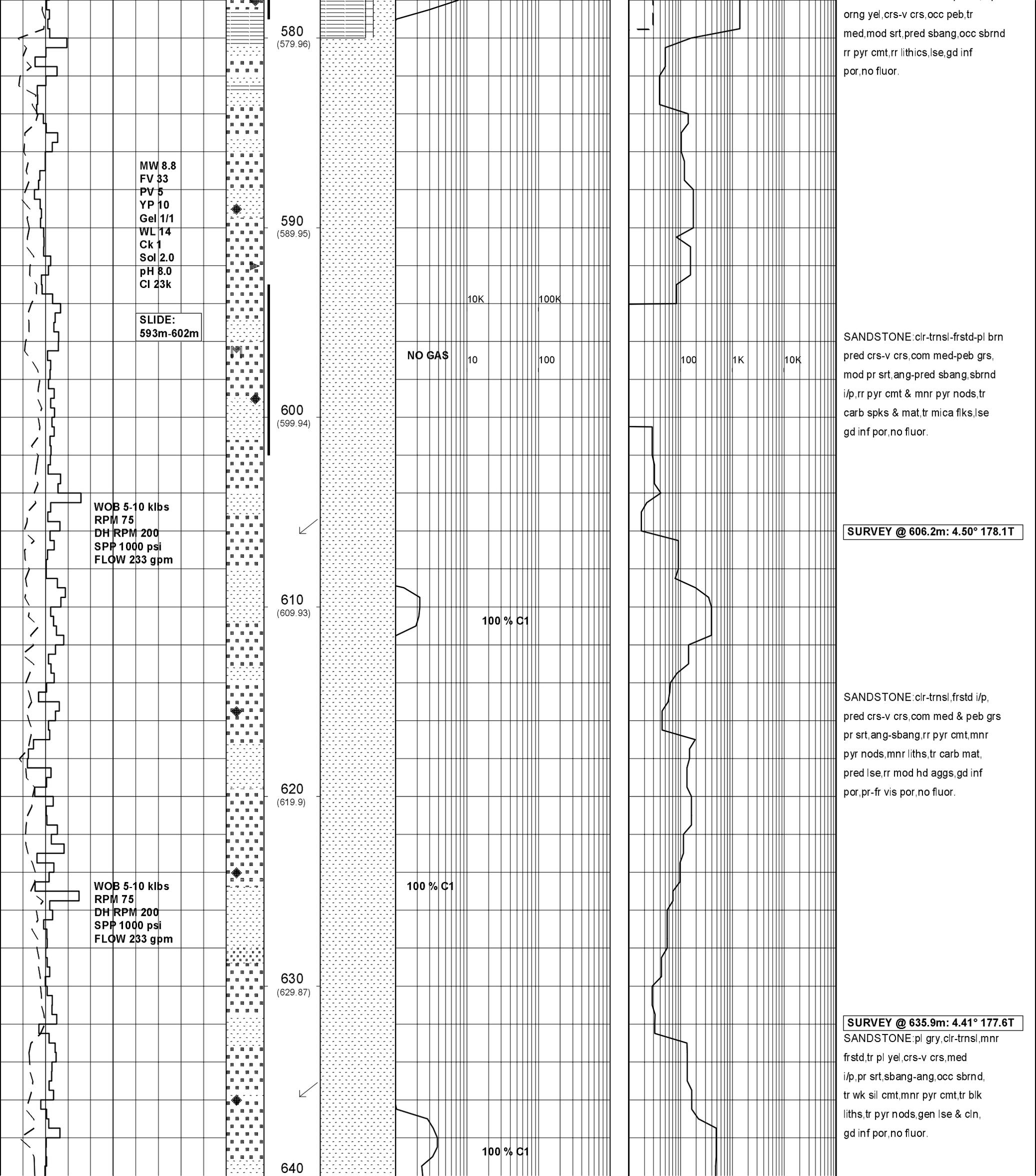
SURVEY @ 559.2m: 0.18° 280T

CLAYSTONE: med-dk brn, arg, tr carb mat & pyr nods, sft-disp, amorph.

**PAARATTE FORMATION:
574mMDRT; 574mTVDRT
(-510mTVDSS)**

**574m-871m: SST W/ MNR
INTERBEDDED SLTST**

SANDSTONE: clr-trnsl-pl brn, tr pl



MW 8.8
 FV 33
 PV 5
 YP 10
 Gel 1/1
 WL 14
 Ck 1
 Sol 2.0
 pH 8.0
 CI 23k

SLIDE:
 593m-602m

WOB 5-10 klbs
 RPM 75
 DH RPM 200
 SPP 1000 psi
 FLOW 233 gpm

WOB 5-10 klbs
 RPM 75
 DH RPM 200
 SPP 1000 psi
 FLOW 233 gpm

580
 (579.96)

590
 (589.95)

600
 (599.94)

610
 (609.93)

620
 (619.9)

630
 (629.87)

640

NO GAS

10K 100K

10 100

100 1K 10K

100 % C1

100 % C1

100 % C1

orng yel,crs-v crs,occ peb,tr
 med,mod srt,pred sbang,occ sbrnd
 rr pyr cmt,rr lithics,lse,gd inf
 por,no fluor.

SANDSTONE: clr-trnsi-frstd-pl brn
 pred crs-v crs,com med-peb grs,
 mod pr srt,ang-pred sbang,sbrnd
 i/p,rr pyr cmt & mnr pyr nods,tr
 carb spks & mat,tr mica flks,lse
 gd inf por,no fluor.

SURVEY @ 606.2m: 4.50° 178.1T

SANDSTONE: clr-trnsi,frstd i/p,
 pred crs-v crs,com med & peb grs
 pr srt,ang-sbang,rr pyr cmt,mnr
 pyr nods,mnr liths,tr carb mat,
 pred lse,rr mod hd aggs,gd inf
 por,pr-fr vis por,no fluor.

SURVEY @ 635.9m: 4.41° 177.6T

SANDSTONE: pl gry,clr-trnsi,mnr
 frstd,tr pl yel,crs-v crs,med
 i/p,pr srt,sbang-ang,occ sbrnd,
 tr wk sil cmt,mnr pyr cmt,tr blk
 liths,tr pyr nods,gen lse & cln,
 gd inf por,no fluor.

SLIDE:
644m-654m

WOB 5-10 klbs
RPM 0
DH RPM 125
SPP 1000 psi
FLOW 233 gpm

650
(649.79)

100 % C1

10K

100K

660
(659.75)

10

100

100

1K

10K

100 % C1

670
(669.69)

96 / 4

WOB 5-10 klbs
RPM 80
DH RPM 210
SPP 1000 psi
FLOW 240 gpm

680
(679.6)

SLIDE:
683m-693m

690
(689.52)

100 % C1

700
(699.41)

SANDSTONE:trnsI-clr,mnr frstd,tr
lt gry,crs-v crs,med i/p,pr srt,
sbang-sbrnd,occ ang bit frac grs
mnr pyr cmt i/p,mnr pyr nods,tr
liths,pred lse,mnr mod hd,gd inf
por,pr-fr vis por,no fluor.

SURVEY @ 665.2m: 6.06° 178T

SILTSTONE:med gry-med gry brn,dk
gry brn i/p,arg-v arg g/t CLYST,
tr carb spks,sft,disp i/p,
amorph-sbbiky.

SANDSTONE:trnsI-clr,mnr frstd,tr
lt gry,crs-v crs,sbang-sbrnd,tr
ang,tr wk sil cmt,tr-mnr pyr cmt
mnr-com pyr nods,pred lse & cin,
gd inf por,no fluor.

SURVEY @ 694.7m: 8.48° 183.9T

SILTSTONE:med-occ dk gry brn,med
gry,arg-v arg tr carb spks,sft,
disp i/p,amorph-sbbiky.

WOB 5-10 klbs
RPM 80
DH RPM 210
SPP 1000 psi
FLOW 240 gpm

SLIDE:
712m-722m

WOB 5-10 klbs
RPM 80
DH RPM 210
SPP 1000 psi
FLOW 240 gpm

SLIDE:
736m-750m

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1000 psi
FLOW 240 gpm

710
(709.26)

720
(719.12)

730
(728.9)

740
(738.65)

750
(748.39)

760
(758.04)

100 % C1

10K 100K

10 100

97 / 3

100 % C1

100 % C1

100 % C1

SANDSTONE: trnsl-clr, mnr frstd,
crs-v crs, mnr med, pr-mod srt,
sbrnd-sbang i/p, tr wk-mod sil
cmt, com pyr nods, pred lse, mnr
mod hd, gd inf por, fr vis por, no
fluor.

SILTSTONE: med-occ dk gry grn,
arg-v arg, tr carb spks, sft-disp
i/p, sbbky-amorph.

SURVEY @ 723.6m: 11.02° 187.8T

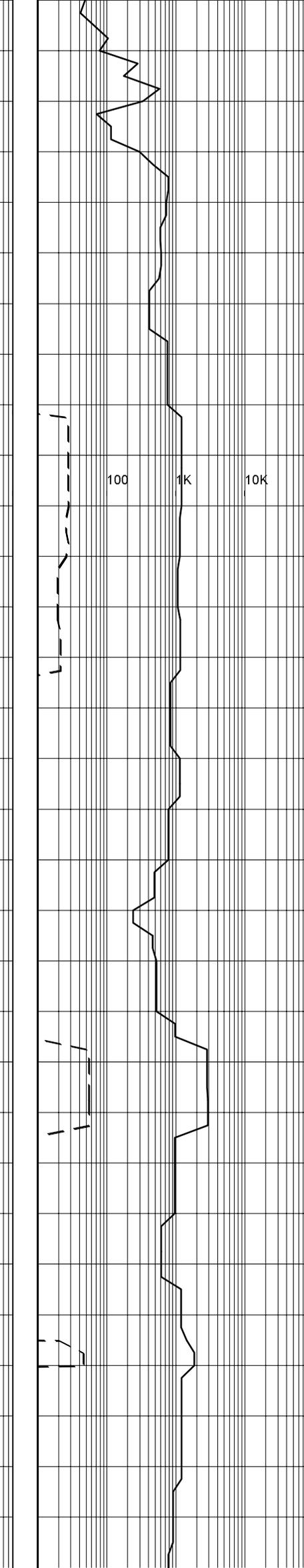
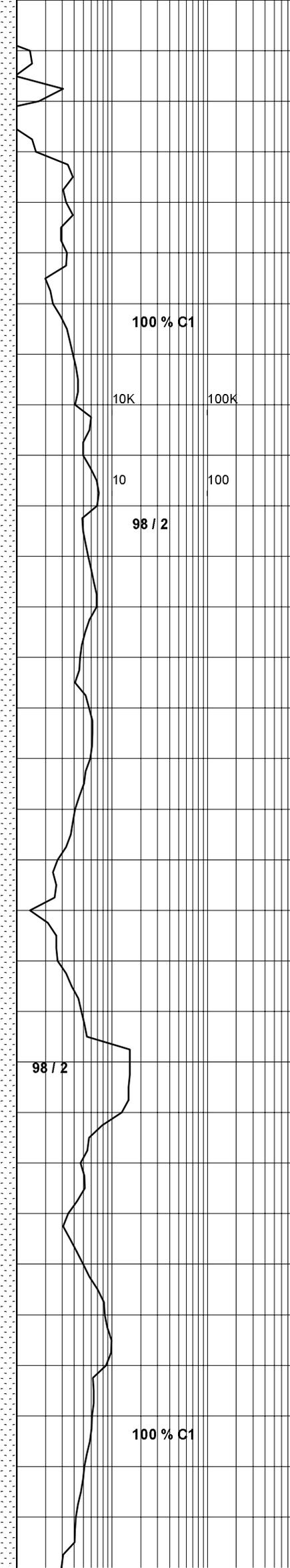
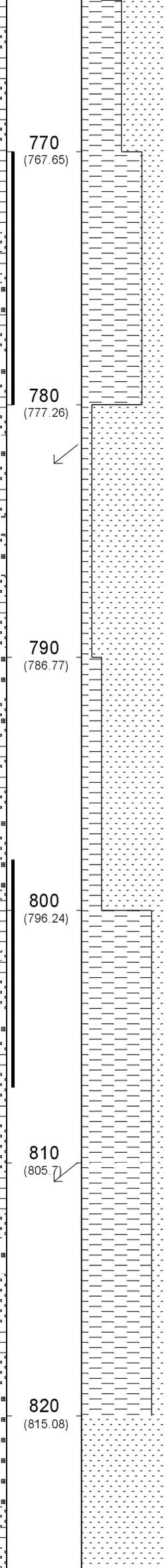
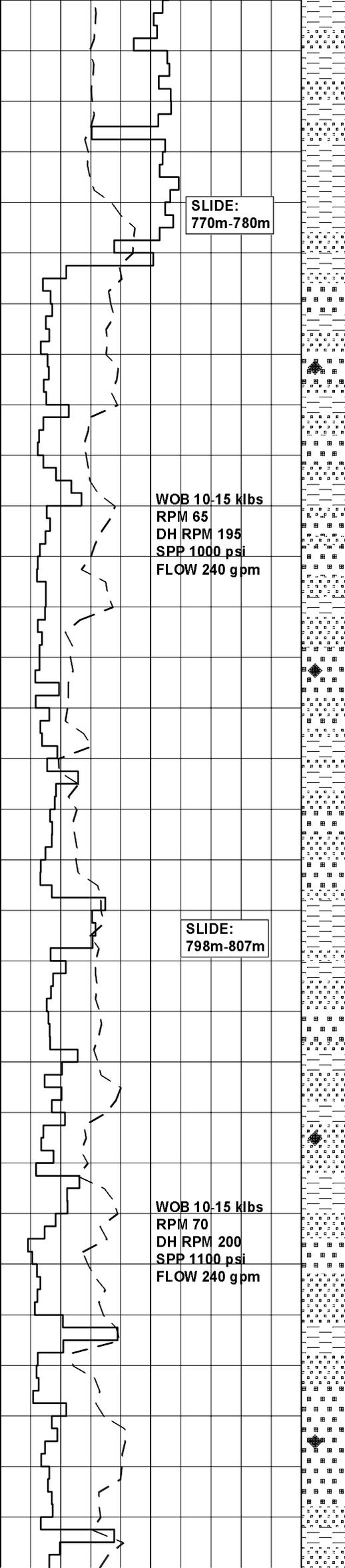
SANDSTONE: clr-trnsl, lt gry, mnr
wh, crs-v crs, mnr f-med & peb,
mod-pr srt, sbrnd-rnd i/p, tr-loc
com pyr cmt, lse, pred cln, gd inf
por, no fluor.

SILTSTONE: med-dk gry brn, mnr dk
brn, arg-v arg, tr carb spks, sft,
disp i/p, sbbky-amorph i/p.

SANDSTONE: clr-trnsl, opq, pl gry,
wh, med-v crs, pr srt, ang-sbrnd,
com ang sec sil frags, tr mod
strg sil cmt, rr wh arg mtx, gen
lse & cln, tr mod hd aggs, fr inf
por, no fluor.

SURVEY @ 753.0m: 14.82° 187.9T

SILTSTONE: med-dk brn, occ v dk



brn, carb i/p, arg, sft, disp, amorph-sbbiky i/p.

SURVEY @ 782.4m: 17.23° 187.4T

SANDSTONE: clr-trnsl, occ opq, pl gry, med-v crs, pr-mod srt, sbang-sbrnd, occ ang, tr mod strg sil cmt, gen lse, tr mod hd aggs, fr inf por, no fluor.

SILTSTONE: med-dk gry brn, med brn arg, tr carb, sft, disp, amorph-sbbiky i/p.

SANDSTONE: trnsl-clr, opq, med-v crs, pr srt, sbang-sbrnd, rr pyr nods, lse, fr inf por, no fluor.

SILTSTONE: med gry-med gry brn, arg, tr-mnr carb spks, sft-tr frm, disp i/p, amorph-sbbiky i/p.

SURVEY @ 810.8m: 20.27° 188.3T

SANDSTONE: (Tr) lt gry-lt gry brn vf-f, wl srt, sbang-sbrnd, wk sil cmt, tr-loc com wh arg mtx, fri-mod hd, v pr-pr vis por, no fluor

SANDSTONE: clr-trnsl, tr opq, med-v crs, pr srt, sbang-sbrnd, tr pyr nods, lse, fr inf por, no fluor.

SLIDE:
826m-836m

WOB 10-15 klbs
RPM 0
DH RPM 130
SPP 1100 psi
FLOW 240 gpm

830
(824.45)

100 % C1

SANDSTONE: cir-trnsl, tr opq, med-
v crs, tr-mnr f-vf grnd aggs, pr
srt, sbang-sbrnd, tr mod sil cmt &
pyr cmt i/p, tr pyr nods, pred lse
tr fri-mod hd, fr inf por, pr-v pr
vis por, no fluor.

SURVEY @ 840m: 20.70° 181T

840
(833.82)

10K

100K

SILTSTONE: med gry-med gry brn,
arg, tr carb liths, sft, disp i/p,
amorph-sbbiky i/p.

10

100

100

1K

10K

850
(843.18)

98 / 2

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1100 psi
FLOW 240 gpm

SANDSTONE: cir-trnsl, pred med, mnr
crs & v crs, mod-pr srt, sbrnd-
sbang, tr wk sil cmt, pred lse, fr
inf por, no fluor.

860
(852.54)

100 % C1

SANDSTONE: cir-trnsl, med-f, mnr
crs & v crs, mod srt, sbrnd-sbang,
tr wk sil cmt, lse, pr-fr inf &
vis por, no fluor.

870
(861.9)

SURVEY @ 869.1m: 20.56° 181.5T

WOB 10-20 klbs
RPM 90
DH RPM 218
SPP 1200 psi
FLOW 240 gpm

SKULLCREEK MUDSTONE:
871mMDRT; 863mTVDRT
(-799mTVDSS)

871m-996m: INTERBEDDED
SLTST & MNR SST

97 / 3

DROP CARBIDE @ 880.0m
ACTUAL STROKES: 2430
THEOR. STROKES: 2415
OPEN HOLE O.G.: IN GAUGE
TOTAL GAS RECORDED: 25 units

880
(871.27)

SILTSTONE: med gry brn-med brn
gry i/p, arg, rr micmic, sft-disp,
amorph.

MW 9.05
FV 40
PV 9
YP 19
Gel 4/7
WL 8.0

Ck 1.3
Sol 3.4
pH 8.0
Cl 31k

WOB 10-12 klbs
RPM 90
DH RPM 218
SPP 1240 psi
FLOW 240 gpm

WOB 9-12 klbs
RPM 81
DH RPM 177
SPP 937 psi
FLOW 191 gpm

890
(880.65)

900
(890.02)

910
(899.41)

920
(908.79)

930
(918.19)

940
(927.6)

950

98 / 2

100 % C1

10K 100K

10 100

100 % C1

Tr 100 % C1

100 % C1

SURVEY @ 898.8m: 20.19° 181.1T

SANDSTONE: cl-trnsi, pred f-med,
occ vf-crs, mod pr srt, sbang-
sbrnd, mnr mod strg sil cmt i/p,
tr arg mtx, tr pyr nods, gen lse,
fri aggs, pr vis & pr-fr inf por,
no fluor.

**DRILL WJ- KCI/POLYMER MUD
SYSTEM FJ- 900.0m-1360.0m**

SILTSTONE: med gry brn-med brn
gry i/p, arg, rr micmic & micro
carb mat, sft-disp, amorph.

SANDSTONE: cl-trnsi, pred med, vf-
v crs, pr srt, sbang-sbrnd, tr mod
strg sil cmt, tr wh arg mtx, tr
pyr nods, gen lse, fri aggs, pr-fr
inf & pr vis por, no fluor.

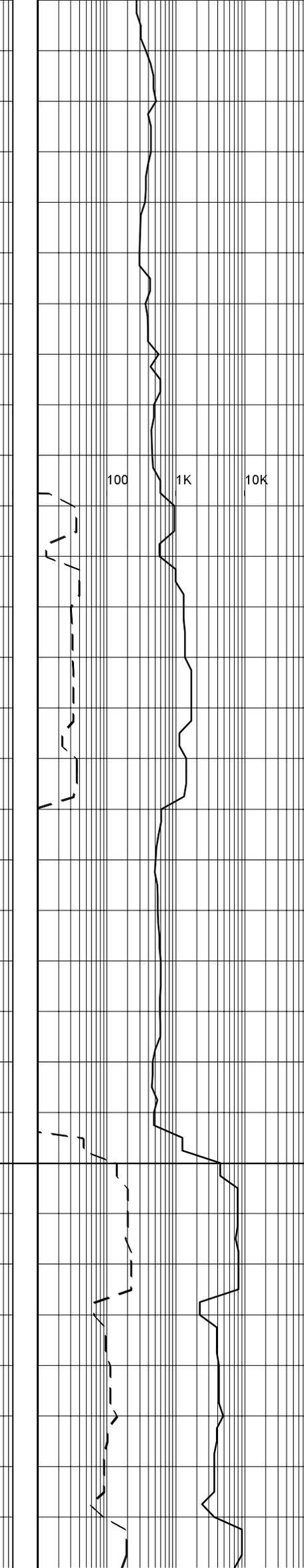
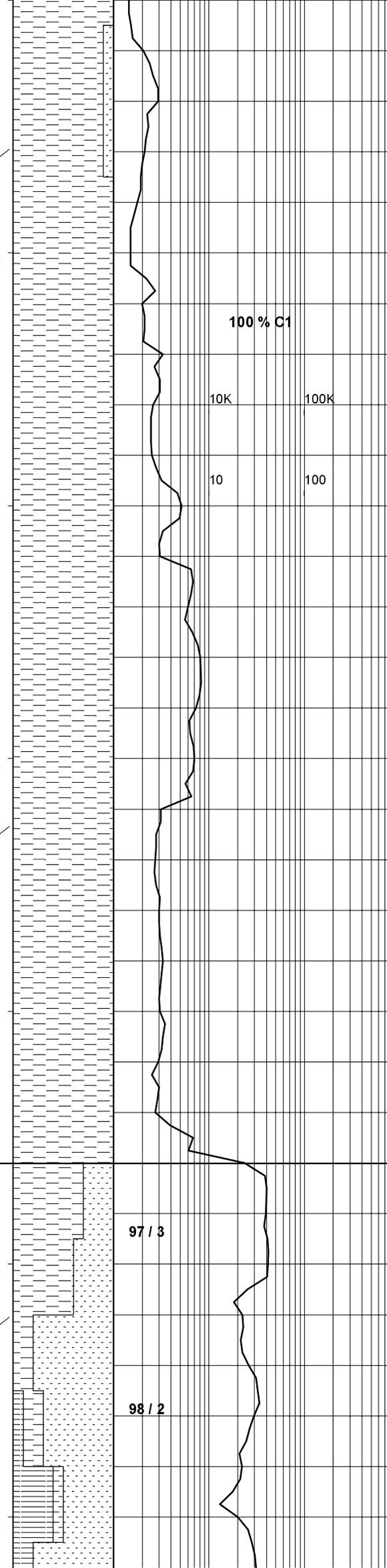
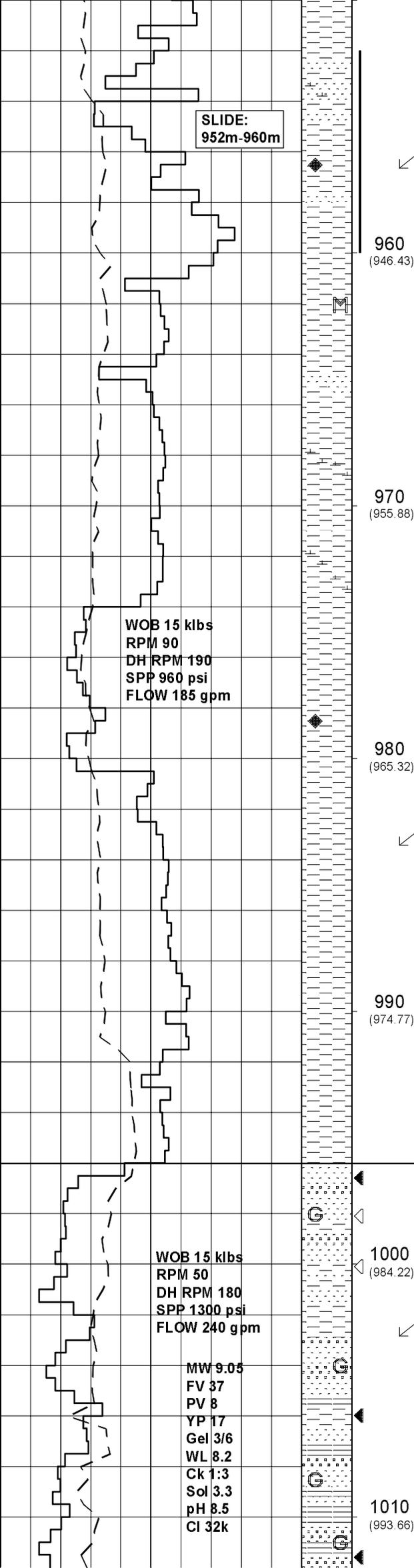
SILTSTONE: med lt-med gry brn, arg
tr vf aren g/t vf SST, rr micmic,
tr pyr nods, sft-disp, amorph.

SURVEY @ 927.8m: 20.17° 181.2T

SANDSTONE: cl-trnsi grs, pred crs
com med-v crs, tr vf-f mod strg
sil cmt aggs, tr wh-lt gry arg
mtx, mnr-tr pyr nods, gen lse, fri-
mod strg aggs, fr inf & pr vis
por, no fluor.

SILTSTONE: med gry-med gry brn
i/p, arg, tr pyr nods, rr micmic &
microcarb spks, sft-disp, amorph.

SILTSTONE: med gry brn-pl brn, arg
tr pyr nods i/p, rr micmic &
microcarb spks i/p, v sft-disp,
amorph.



SANDSTONE: v pl gry, vf-f, wl srt, sbang, com strg calc cmt, mnr wh-pl gry arg mtx, mod hd-hd, v pr vis por, no fluor.

SURVEY @ 956.7m: 19.30° 177.9T

SILTSTONE: med gry brn-pl brn gry arg, tr calc aren, tr pyr nods & frags, rr micmic & microcarb lams & spks, v sft-disp, amorph.

SILTSTONE: med gry brn-pl brn gry arg, tr calc aren, tr hd sil frags tr pyr nods & frags, rr micmic & microcarb spks & lams i/p, v sft-disp, amorph.

SILTSTONE: med gry brn-pl brn gry v arg g/t CLYST, tr calc aren, tr pyr nods & frags, rr micmic & microcarb spks i/p, v sft-disp, amorph.

SURVEY @ 983.5m: 19.14° 176.8T

SILTSTONE: med gry brn-pl gry brn arg g/t CLYST, tr hd sil frags, tr pyr nods & frags, rr micmic, v sft-disp, amorph.

NULLAWARRE GREENSAND: 996m MDRT; 980m TVDRT (-916m TVDSS)

996m-1084m: MASSIVE SST W/- MNR SLTST INTERBEDS

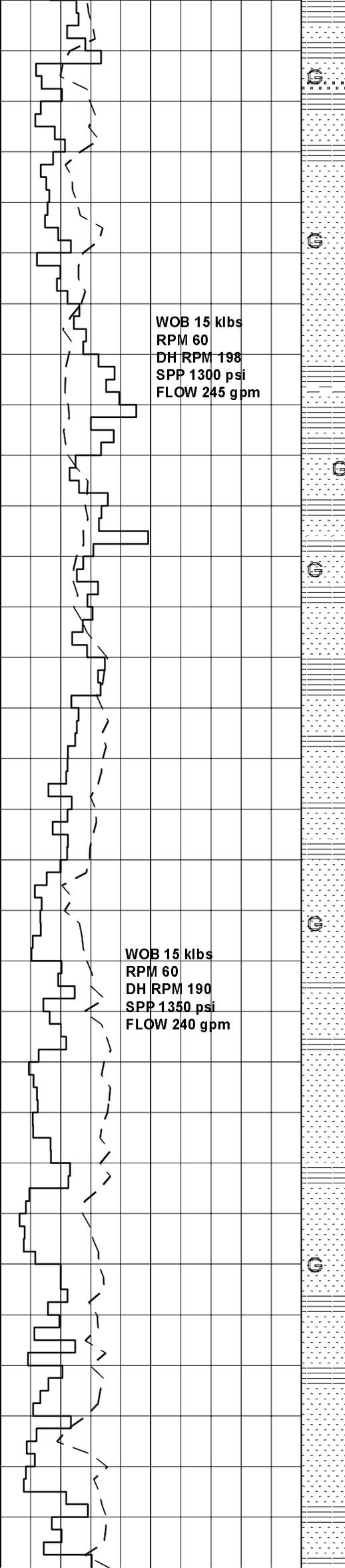
Rmf @ 1000m: 0.14 ohm @ 75° F

SANDSTONE: clr-trnsl, pl grn-grn, occ frstd pl yel grs, pred med, com crs, occ f-v crs, mod pr srt, sbang-sbrnd, com glauc, tr wk sil cmt, tr wh arg mtx, gen lse, fri, fr inf & vis por, no fluor.

CLAYSTONE: pl yel-dsky yel, com limonitic stng, v sft-disp, amorph

SURVEY @ 1002.9m: 19.00° 176.7T

SANDSTONE: trnsl-clr, pl yel, pl grn, f-dom med, crs i/p, mod wl srt sbrnd-rnd, tr wk sil cmt, loc com



WOB 15 klbs
RPM 60
DH RPM 198
SPP 1300 psi
FLOW 245 gpm

WOB 15 klbs
RPM 60
DH RPM 190
SPP 1350 psi
FLOW 240 gpm

1020
(1003.11)

1030
(1012.55)

1040
(1022)

1050
(1031.45)

1060
(1040.9)

1070
(1050.38)

99 / 1

98 / 2

98 / 2

98 / 2

98 / 2

98 / 2

10K 100K
10 100
100 1K 10K

pl grn-wh arg-glauc mtx,com grn
glauc grns,fr-lse,fr inf por,no
fluor.

CLAYSTONE:olv brn,yel brn,brn,
sft,disp,amorph.

SANDSTONE:trnsi-clr,mnr pl yel,
tr pl grn,f-med,tr crs,mod wl
srt,sbrnd-rnd,wk sil cmt i/p,loc
com pl grn-wh arg mtx,tr lt-med
yel arg mtx,tr glauc,fr inf por,
no fluor.

SURVEY @ 1033.6m: 19.44° 176.5T

CLAYSTONE:lt-med yel brn,tr f
qtz grs,sft-occ frm,disp,amorph-
sbbiky.

SANDSTONE:clr-trnsi,pl yel,med-
f,mnr crs & v crs,mod-wl srt,
sbang-sbrnd,tr wk-mod sil cmt,
rr liths,pred lse,mnr fri-mod hd
fr inf por,no fluor.

CLAYSTONE:lt yel brn,olv brn,lt
brn,sft,disp,amorph-occ sbbiky.

SURVEY @ 1062.7m: 18.67° 175.2T

SANDSTONE:pl brn,clr-trnsi,lt
yel,med-mnr crs,tr f,mod wl srt,
sbrnd-rnd,wk-occ mod strg sil
cmt,loc com wh-pl grn arg mtx,tr
glauc,tr liths,pred lse,mnr mod
hd,pr vis por,fr inf por,no
fluor.

CLAYSTONE:lt-med gry,lt gry brn,
tr carb spks,sft,disp,amorph.

WOB 15 klbs
RPM 60
DH RPM 190
SPP 1350 psi
FLOW 240 gpm

1080
(1059.87)

100 % C1

SANDSTONE: cl-trnsl, lt brn, lt
yel, pred med, mnr f & crs, mod wl
srt, sbang-occ rnd, tr wk-mod strg
sil cmt, loc com wh-pl grn arg
mtx, rr liths, pred lse, mnr fri-
mod hd, fr inf por, pr vis por, no
fluor.

BELFAST MUDSTONE:
1084mMDRT; 1064mTVDRT
(-1000mTVDSS)

1084m-1153m:
MASSIVE CLAYSTONE

SURVEY @ 1091.6m: 18.19° 175.2T

CLAYSTONE: lt-med gry, lt-med gry
brn, lt grn gry, tr carb spks, tr
vf glauc nods i/p, sft, disp,
amorph-sbbiky i/p.

1090
(1069.35)

10K 100K
10 100
100 1K 10K
100 % C1

WOB 15 klbs
RPM 70
DH RPM 200
SPP 1400 psi
FLOW 240 gpm

1100
(1078.85)

100 % C1

CLAYSTONE: med gry-med gry brn, lt
-med grn gry, tr-loc com vf glauc
nods, sft, disp, amorph-rr sbbiky.

SLIDE:
1112m-1117m

1110
(1088.35)

100 % C1

CLAYSTONE: lt-med brn gry, lt-med
brn, mnr med gry & med grn gry,
tr slty, loc com vf glauc nods,
rr pyr nods, sft, disp, amorph-mnr
sbbiky.

SURVEY @ 1120.5m: 18.32° 174.7T

CLAYSTONE: med brn gry, med brn,
mnr lt-med grn gry, loc com vf
glauc nods, rr pyr nods, sft, disp,
amorph-sbbiky.

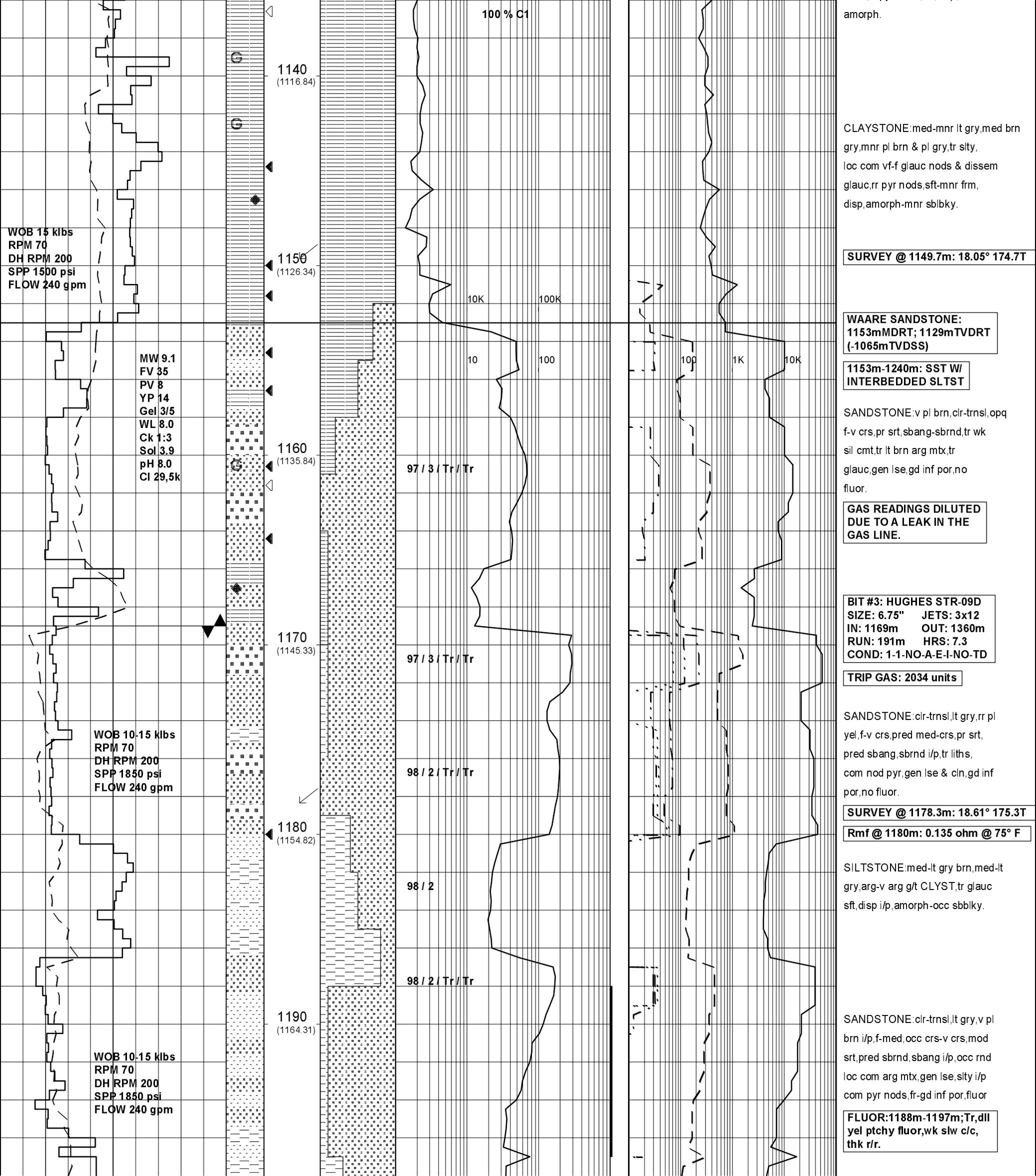
WOB 15 klbs
RPM 70
DH RPM 200
SPP 1450 psi
FLOW 240 gpm

1120
(1097.64)

DROP CARBIDE @ 1126.5m
ACTUAL STROKES: 3120
THEOR. STROKES: 3062
OPEN HOLE O.G.: 3.8 %
TOTAL GAS RECORDED: 15 units

1130
(1107.34)

CLAYSTONE: med brn gry, med brn,
mnr med gry, loc com vf glauc
nods, rr pyr nods, sft, disp,



100 % C1

amorph.

1140
(1116.84)

CLAYSTONE: med-mnr lt gry, med brn gry, mnr pl brn & pl gry, tr slty, loc com vf-f glauc nods & dissem glauc, rr pyr nods, sft-mnr frm, disp, amorph-mnr sblbky.

1150
(1126.34)

SURVEY @ 1149.7m: 18.05° 174.7T

WOB 15 klbs
RPM 70
DH RPM 200
SPP 1500 psi
FLOW 240 gpm

10K 100K

WAARE SANDSTONE:
1153mMDRT; 1129mTVDRT
(-1065mTVDSS)

MW 9.1
FV 35
PV 8
YP 14
Gel 3/5
WL 8.0
Ck 1:3
Sol 3.9
pH 8.0
CI 29,5k

10 100

1153m-1240m: SST W/
INTERBEDDED SLTST

1160
(1135.84)

SANDSTONE: v pl brn, clr-trnsl, opq f-v crs, pr srt, sbang-sbrnd, tr wk sil cmt, tr lt brn arg mtx, tr glauc, gen lse, gd inf por, no fluor.

97 / 3 / Tr / Tr

GAS READINGS DILUTED
DUE TO A LEAK IN THE
GAS LINE.

1170
(1145.33)

BIT #3: HUGHES STR-09D
SIZE: 6.75" JETS: 3x12
IN: 1169m OUT: 1360m
RUN: 191m HRS: 7.3
COND: 1-1-NO-A-E-I-NO-TD

97 / 3 / Tr / Tr

TRIP GAS: 2034 units

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

SANDSTONE: clr-trnsl, lt gry, rr pl yel, f-v crs, pred med-crs, pr srt, pred sbang, sbrnd i/p, tr liths, com nod pyr, gen lse & cln, gd inf por, no fluor.

98 / 2 / Tr / Tr

1180
(1154.82)

SURVEY @ 1178.3m: 18.61° 175.3T

Rmf @ 1180m: 0.135 ohm @ 75° F

98 / 2

SILTSTONE: med-lt gry brn, med-lt gry, arg-v arg g/t CLYST, tr glauc sft, disp i/p, amorph-occ sblbky.

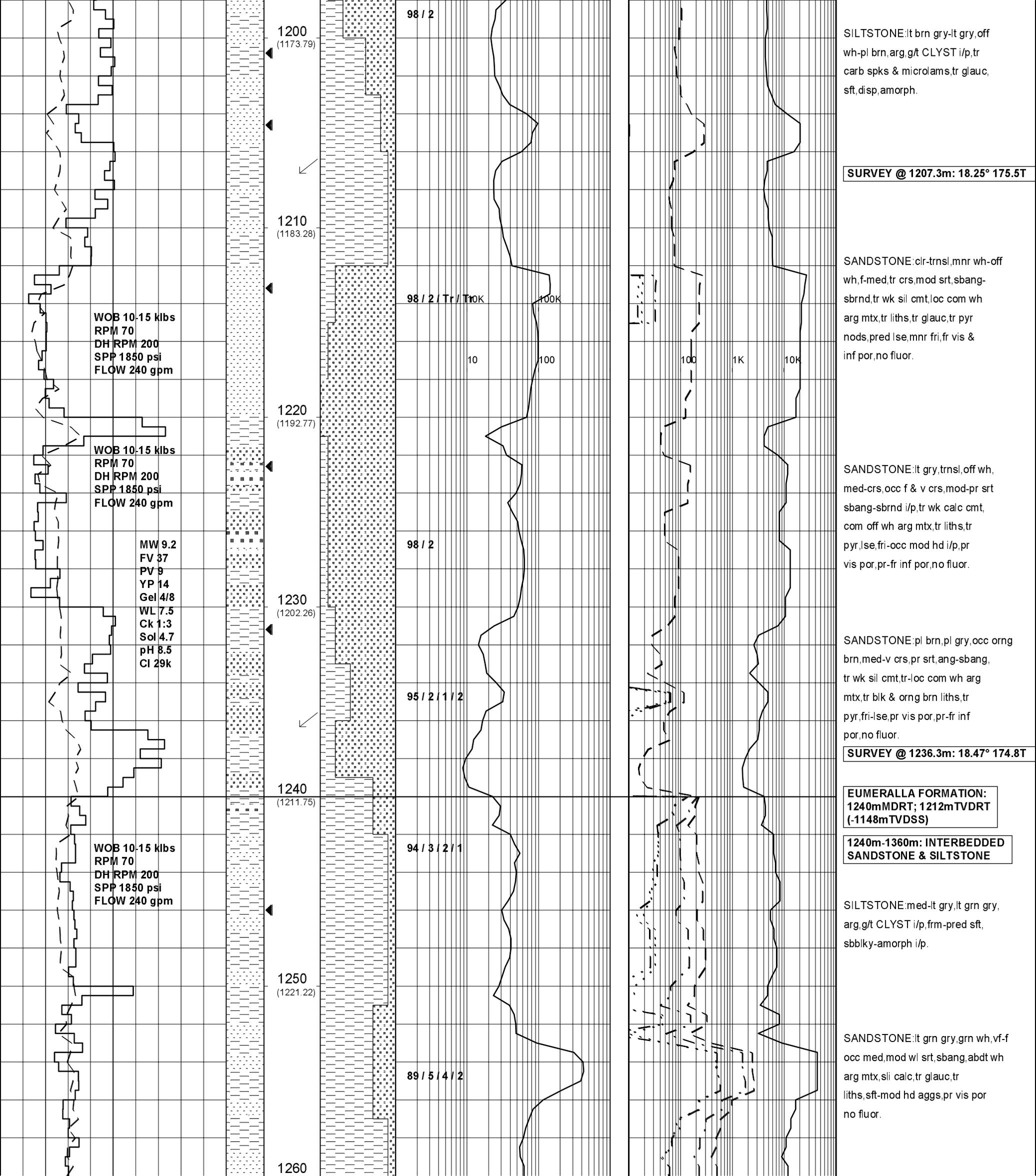
WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

98 / 2 / Tr / Tr

1190
(1164.31)

SANDSTONE: clr-trnsl, lt gry, v pl brn i/p, f-med, occ crs-v crs, mod srt, pred sbrnd, sbang i/p, occ rnd loc com arg mtx, gen lse, slty i/p com pyr nods, fr-gd inf por, fluor

FLUOR: 1188m-1197m; Tr, dll yel ptchy fluor, wk slw c/c, thk r/r.



1200
(1173.79)

1210
(1183.28)

1220
(1192.77)

1230
(1202.26)

1240
(1211.75)

1250
(1221.22)

1260

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

MW 9.2
FV 37
PV 9
YP 14
Gel 4/8
WL 7.5
Ck 1:3
Sol 4.7
pH 8.5
CI 29k

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

98 / 2

98 / 2 / Tr / T10K

98 / 2

95 / 2 / 1 / 2

94 / 3 / 2 / 1

89 / 5 / 4 / 2

10

100K

100

100

1K

10K

SURVEY @ 1207.3m: 18.25° 175.5T

SANDSTONE: cr-trnsl, mnr wh-off
wh, f-med, tr crs, mod srt, sbang-
sbrnd, tr wk sil cmt, loc com wh
arg mtx, tr liths, tr glauc, tr pyr
nods, pred lse, mnr fri, fr vis &
inf por, no fluor.

SANDSTONE: lt gry, trnsl, off wh,
med-crs, occ f & v crs, mod-pr srt
sbang-sbrnd i/p, tr wk calc cmt,
com off wh arg mtx, tr liths, tr
pyr, lse, fri-occ mod hd i/p, pr
vis por, pr-fr inf por, no fluor.

SANDSTONE: pl brn, pl gry, occ orng
brn, med-v crs, pr srt, ang-sbang,
tr wk sil cmt, tr-loc com wh arg
mtx, tr blk & orng brn liths, tr
pyr, fri-lse, pr vis por, pr-fr inf
por, no fluor.

SURVEY @ 1236.3m: 18.47° 174.8T

**EUMERALLA FORMATION:
1240mMDRT; 1212mTVDRT
(-1148mTVDSS)**

**1240m-1360m: INTERBEDDED
SANDSTONE & SILTSTONE**

SILTSTONE: med-lt gry, lt grn gry,
arg, g/t CLYST i/p, frm-pred sft,
sbbkly-amorph i/p.

SANDSTONE: lt grn gry, grn wh, vf-f
occ med, mod wl srt, sbang, abdt wh
arg mtx, sli calc, tr glauc, tr
liths, sft-mod hd aggs, pr vis por
no fluor.

SILTSTONE: med-lt gry, lt grn gry,
arg, g/t CLYST i/p, pred sft-mnr
frm, sbbiky-amorph i/p.

SURVEY @ 1265.3m: 18.99° 175.8T

SANDSTONE: off wh-grn wh, pl grn
gry, vf-f, wl srt, sbang-sbrnd, abdt
wh arg mtx, g/t aren SLTST i/p,
com liths, sft-frm, pr vis por, no
fluor.

SANDSTONE: grn gry, med gry, off wh
trnsi, med-crs, pred med, mod wl
srt, sbang, tr wk sil cmt, com
liths, tr glauc, fri-lse, fr-gd inf
por, no fluor.

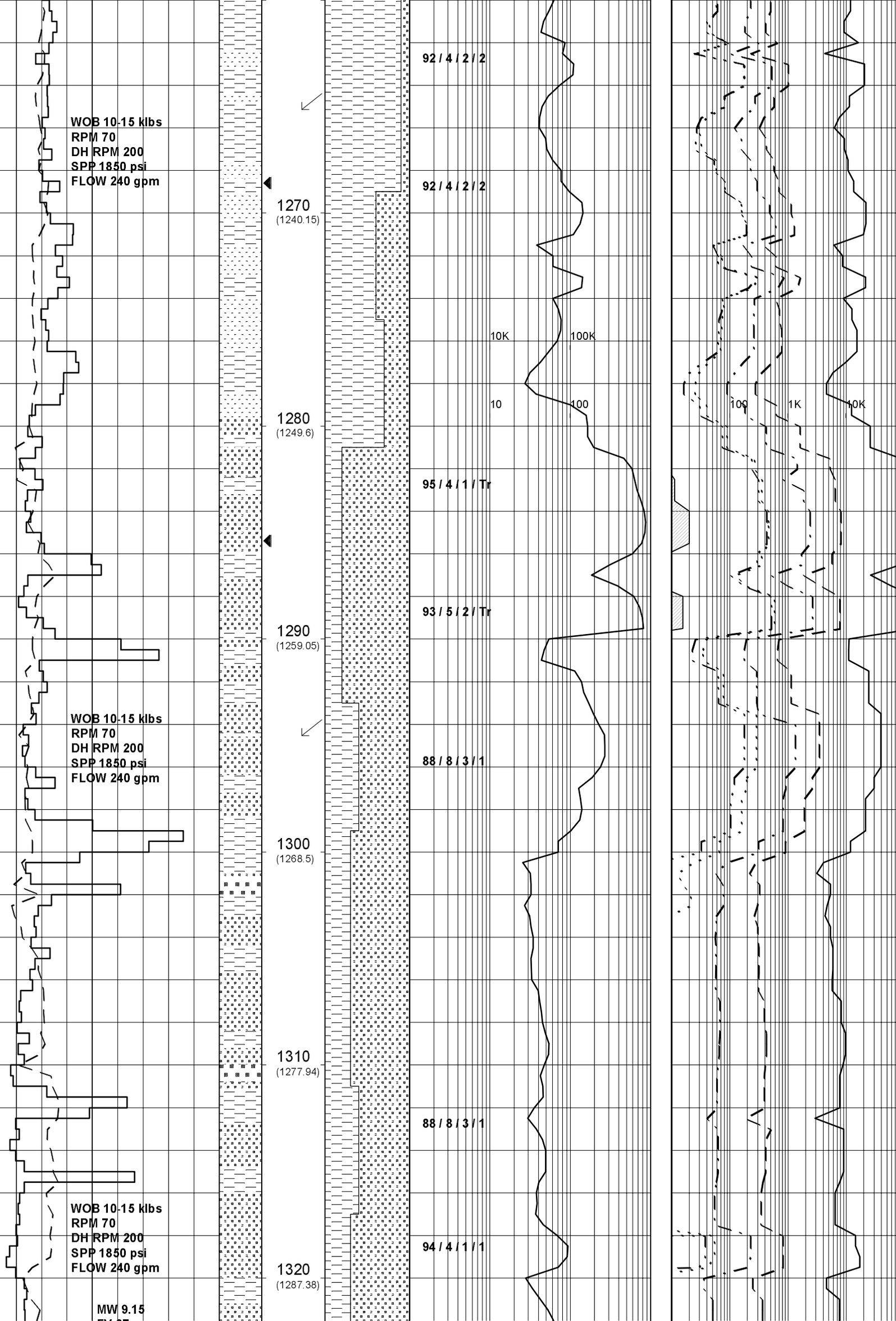
SURVEY @ 1294.6m: 19.08° 176.1T

SANDSTONE: grn gry, off wh-pl grn,
tr rd brn, mott i/p, med-crs, mod
wl srt, pred sbang, tr-loc com mod
strg sil cmt, tr-loc com lt gry
arg mtx, sli calc, com liths, mod
hd aggs, com lse, pr vis por, fr
inf por, no fluor.

SILTSTONE: lt gry, off wh, brn i/p,
arg, tr glauc, tr carb spks, sft-
frm, sbbiky.

SANDSTONE: lt-med gry, lt grn gry,
occ dk gry, trnsi, off wh, lt grn,
f-pred med, mnr crs, mod wl srt,
sbang-sbrnd, loc com lt gry arg
mtx, abdt liths, tr pyr nods, tr
glauc, pred lse, fr inf por, no
fluor.

SILTSTONE: med-mnr lt grn gry, lt
gry-brn gry, sil, mod hd-hd, occ
frm, sbbiky.



WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

WOB 10-15 klbs
RPM 70
DH RPM 200
SPP 1850 psi
FLOW 240 gpm

MW 9.15

92 / 4 / 2 / 2

92 / 4 / 2 / 2

95 / 4 / 1 / Tr

93 / 5 / 2 / Tr

88 / 8 / 3 / 1

88 / 8 / 3 / 1

94 / 4 / 1 / 1

1270
(1240.15)

1280
(1249.6)

1290
(1259.05)

1300
(1268.5)

1310
(1277.94)

1320
(1287.38)

10K

100K

10

100

100

1K

10K

FV 37
 PV 9
 YP 15
 Gel 4/7
 WL 7.0
 Ck 1:3
 Sol 4.1
 pH 8.5
 Cl 31.5k

SURVEY @ 1323.4m: 19.56° 175.6T

SANDSTONE: clr-trnsl,lt-med gry,
 off wh,pl grn,pred med,f & crs
 i/p,mod wl srt,sbang-sbrnd,tr wk
 sil cmt,abdt dk gry liths,tr
 glauc,lse,fr-gd inf por,no
 fluor.

SILTSTONE:lt-med grn gry,lt-med
 brn gry,pl grn,arg,g/t CLYST i/p
 tr liths,sft-mod hd,sbbkly.

SILTSTONE:lt-med grn gry,lt-med
 gry brn,mnr pl grn,arg,g/t
 CLYST i/p,tr liths,sft-mod hd,
 sbbkly.

SANDSTONE:clr-trnsl,lt-med gry
 grn,pl grn,pred med,mnr f & crs,
 mod wl srt,sbang-sbrnd,abdt dk
 grn liths,com glauc nods,lse,
 fr-gd inf por,no fluor.

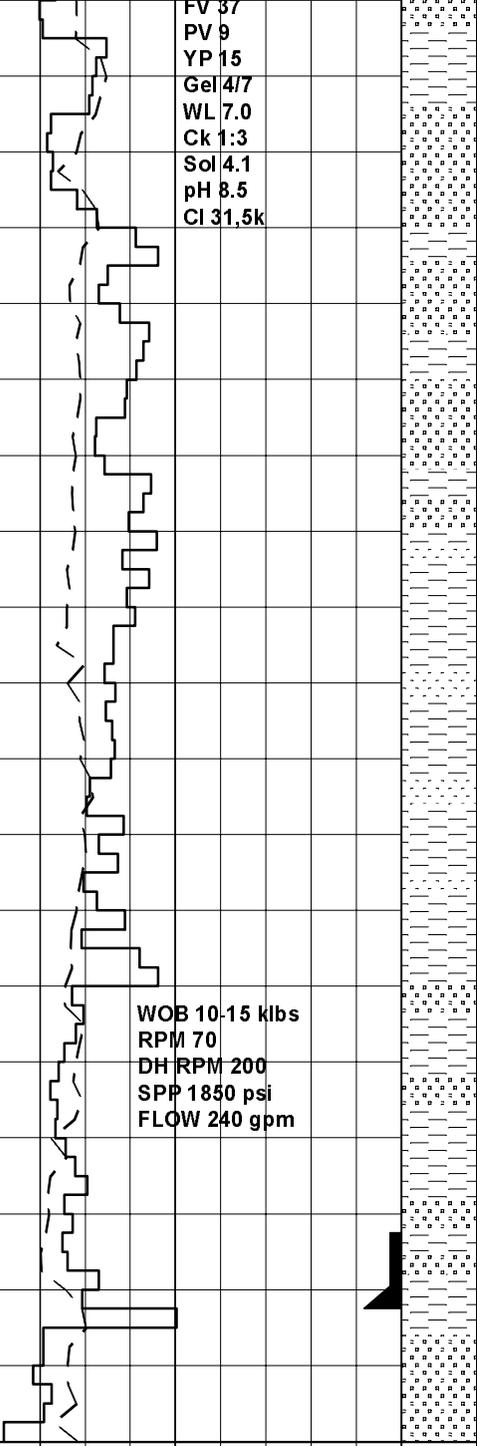
**3.5" CASING SHOE
 SET @ 1356.5m**

**SEAMER-1 REACHED TD
 @ 1360.0mMDRT (1325.05mTVDRT)
 @ 23:30 HRS ON 25-12-2002**

**ELECTRIC LOGGING RUNS:-
 RUN #1: DSL-DLL-MLL-ZDL
 -CN-SP-CAL-DAC-GR
 RUN #2: FMT-GR (2 Trips)
 RUN #3: SWC-GR (25 Shots)**

**SIDEWALL CORES:-
 1.1285.8m 2.1269.0m 3.1246.5m
 4.1231.5m 5.1223.0m 6.1213.5m
 7.1205.0m 8.1201.3m 9.1180.3m
 10.1164.8m 11.1162.0m 12.1161.0m
 13.1157.0m 14.1155.0m 15.1152.0m
 16.1150.3m 17.1145.3m 18.1137.0m
 19.1099.0m 20.1012.0m 21.1006.3m
 22.1000.5m 23.998.5m 24.997.0m
 25.930.5m**

**SHOTS RECOVERED: 20.
 SHOTS UNRECOVERED (5):-
 11,18,19,22,23.**



1330
 (1296.8)

1340
 (1306.22)

1350
 (1315.63)

1360
 (1325.05)

1370

1380

94 / 4 / 1 / 1

95 / 4 / 1

93 / 6 / 1

95 / 4 / 1 / Tr

WOB 10-15 klbs
 RPM 70
 DH RPM 200
 SPP 1850 psi
 FLOW 240 gpm