

Field : OTWAY BASIN
 Block : PEP 154
 State : VICTORIA
 Country : AUSTRALIA
 Scale : 1/ 500

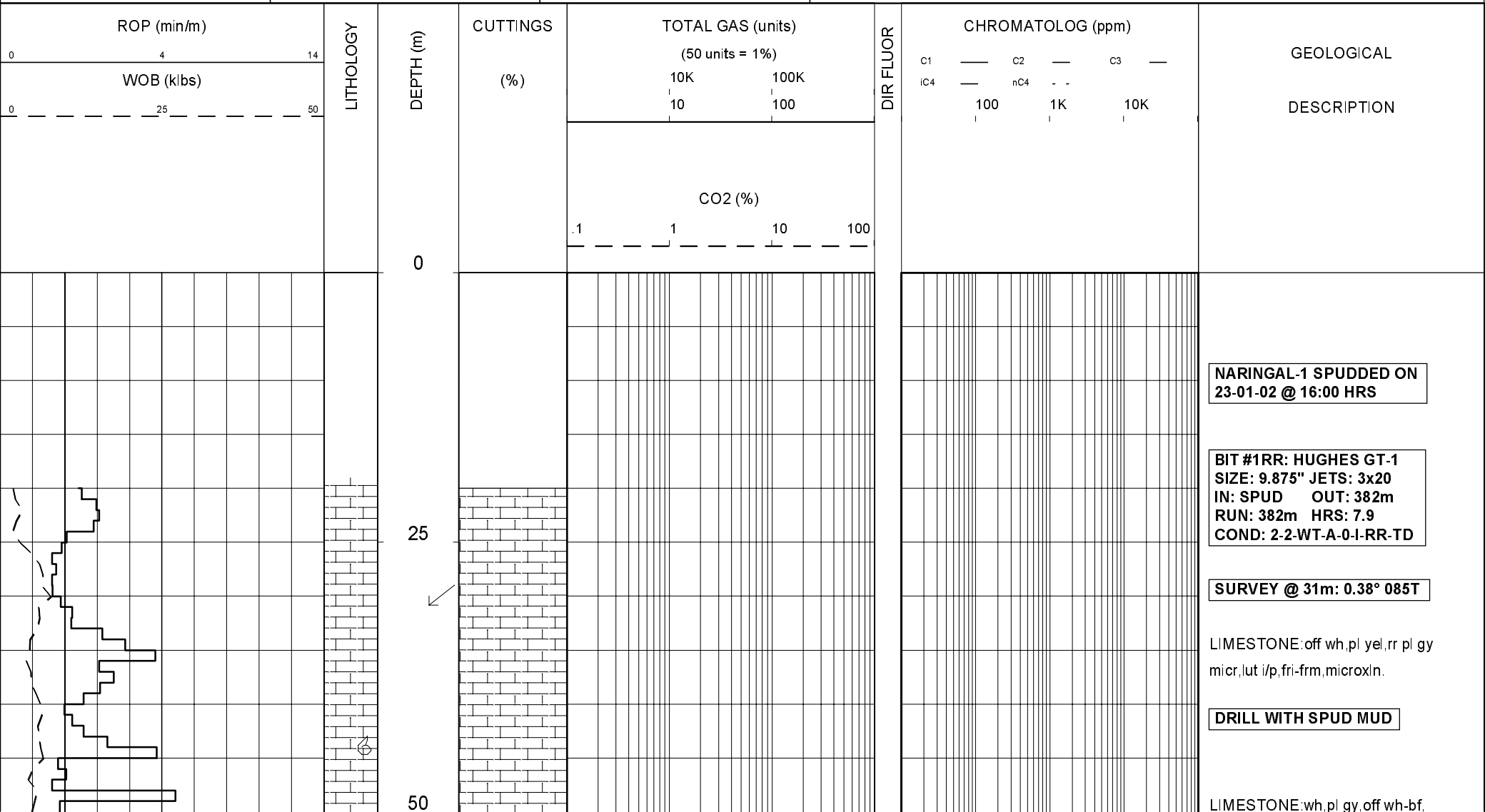
Rotary table : 53.7m
 Ground level : 49.0m
 GDA 94 Co-ordinates :
 Lat. : 38° 27' 18.32" S (PRELIM.)
 Long. : 142° 44' 22.33" E (PRELIM.)

Rig : OD&E 30
 Spud date : 23-01-2002
 TD date : 30-01-2002
 Total depth : 1710m
 Final status : PLUGGED & ABANDONED

Open Hole: 9.875" 382m
 6.75" 1710m
 Cased Hole: 7.625" 378m

Loggers : P. SKLADZIEN
 S. SENNIS
 A. WALSH

LITHOLOGY	ACCESSORIES	DRILLING DATA	ABBREVIATIONS
<ul style="list-style-type: none"> Conglomerate Coarse Sandstone Med Sandstone Fine Sandstone VF Sandstone Siltstone Carb. Siltstone Calc. Siltstone Clay Limestone Dolomite Coal Anhydrite Gypsum Igneous Volcanic Metamorphic Cement 	<ul style="list-style-type: none"> Pyrite Siderite Glauconite Feldspar Mica Ferrous Chert Calcareous Dolomitic Carbonaceous Lithoclast Breccia Foraminifera Corals Inoceramus Bryozoa Plant remains Fossils 	<ul style="list-style-type: none"> Casing Shoe Bit trip Wiper Trip Core DST Deviation survey 	<p>ABBREVIATIONS</p> <ul style="list-style-type: none"> BOPD - Barrels of Oil Per Day BWPD - Barrels of Water Per Day CG - Connection Gas CO - Circulate Out COND - Condensate c/c - 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 r/r - 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
		<p>MUD DATA</p> <ul style="list-style-type: none"> 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) 	



micr, fri-frm, microxln, shell frags.

LIMESTONE: off wh-bf, mnr lt gy, f-
m clear i/p, mnr lut, tr foss,
microxln, tr shell frags, rr lith
spks, fri-frm, com lse.

SURVEY @ 95m: 0.25° 018T

LIMESTONE: off wh, pl yel, occ pl
gy, micr, occ lut, pred lse, com fri
-frm aggs, microxln, tr shell
frags, tr lith spks.

LIMESTONE: wh, off wh, pl gy, micr,
frm, occ mod hd, com lse, microxln,
tr liths, tr glauc, tr shell frags

MARL: med-lt gy, rr dk gy, rr pl
brn/gy, calc, com foss, tr shell
frags, sft-frm, sbbiky..

LIMESTONE: off wh, pl gy, occ v pl
yel, micr, frm, occ mod hd, microxln
com liths, tr shell frags, tr
glauc.

SURVEY @ 181m: 0.25° 196T

WOB 2-8 klbs
RPM 85
SPP 90-100 psi
FLOW 300 gpm

NIL GAS

75

100

WOB 8-12 klbs
RPM 90
SPP 110 psi
FLOW 300 gpm

125

NIL GAS

150

WOB 10-15 klbs
RPM 118
SPP 910 psi
FLOW 580 gpm

175

200

MW: 8.7
FV: 42
PV: 8
YP: 19

Gel: 8/10
Sol: 2.7
WI: 21
pH: 9.5
CI: 900

WOB: 5-8 klbs
RPM: 118
SPP: 1100 psi
FLOW: 580 gpm

WOB: 5-8 klbs
RPM: 118
SPP: 1100 psi
FLOW: 570 gpm

225

250

275

300

325

350

10K

100K

10

100

100

1K

10K

NIL GAS

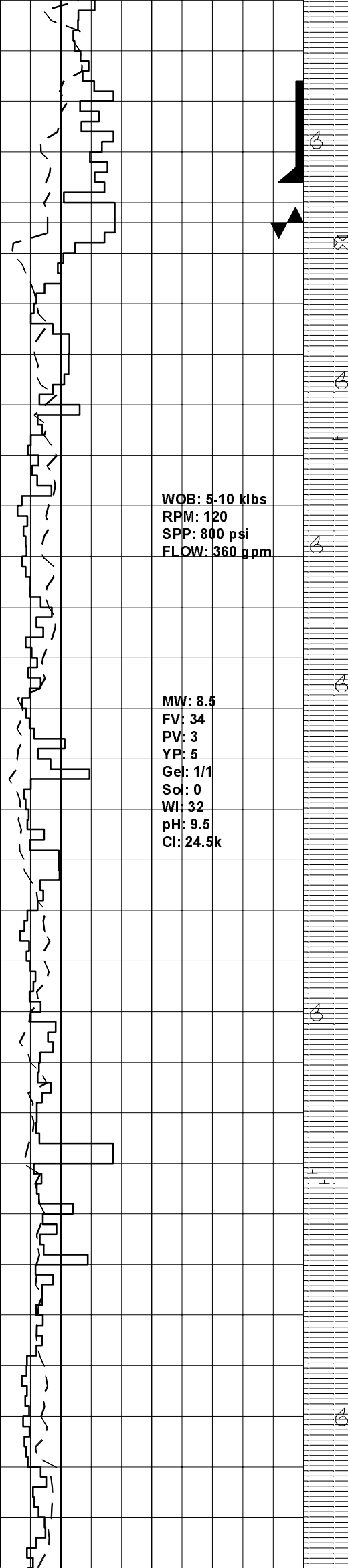
NIL GAS

MARL:lt-med gy,tr dk gy,v calc,
tr-occ foss frags,tr shell frags
frm-sft,sbbiky.

SURVEY @ 268m: 0.63° 212T

MARL:med gy,mod calc,com shell
frags,tr foss frags,sft,amorph,
stky i/p.

MARL:med gy,mod calc,abd foss
frags.com shell frags,sft,stky,
amorphs.



WOB: 5-10 klbs
RPM: 120
SPP: 800 psi
FLOW: 360 gpm

MW: 8.5
FV: 34
PV: 3
YP: 5
Gel: 1/1
Sol: 0
WI: 32
pH: 9.5
Cl: 24.5k

NIL GAS

SURVEY @ 374m: 0.00° 011T

7.625" CASING SHOE @ 378m

BIT #2: SEC FS2463
SIZE: 6.75" JETS: 4x12
IN: 382m OUT: 1710m
RUN: 1328m HRS: 51.7
COND: 8-3-RO-N-X-I-BT-TD

MARL: med-lt gy, mod calc, tr foss,
 tr shell frags, sft-disp i/p, occ
 frm, amorph, occ sbbiky.

MARL: med-occ lt gy, mod calc, com
 shell frags, tr foss frags, sft-
 disp i/p, tr frm, amorph-tr sbbiky

MARL: med-occ lt gy, com calc, com
 shell frags, occ foss frags, sft-

disp i/p, tr frm, amorph-sbblky.

SURVEY @ 520m: 0.38° 004T

MARL: med-lt gy, com calc, com
foss frags, occ shell frags, disp-
sft, tr frm, sbblky-amorph.

MARL: med gy, com calc, occ shell
frags, occ foss frags, sft-disp, tr
frm, sbblky-amorph.

**CLIFTON FORMATION:
658mRT (-604mSS)**

LIMESTONE: lt org-lt brn, org/rd
i/p, lut, aren i/p, sft-frm i/p, xln

WOB: 3.7 klbs
RPM: 110-120
SPP: 850 psi
FLOW: 360 gpm

WOB: 3.7 klbs
RPM: 120-130
SPP: 900 psi
FLOW: 360 gpm

525

550

575

600

625

650

NIL GAS

NIL GAS

10K

100K

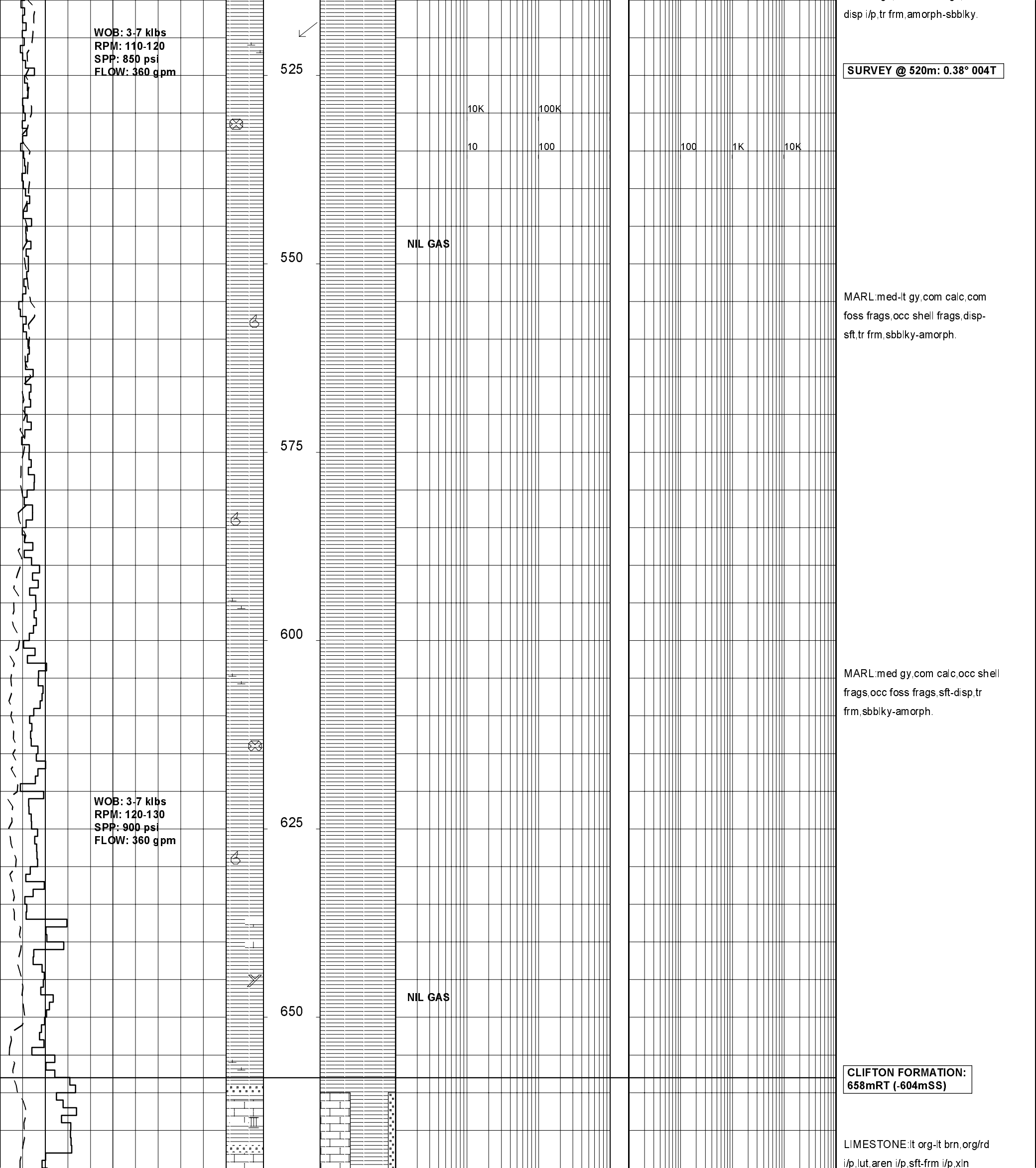
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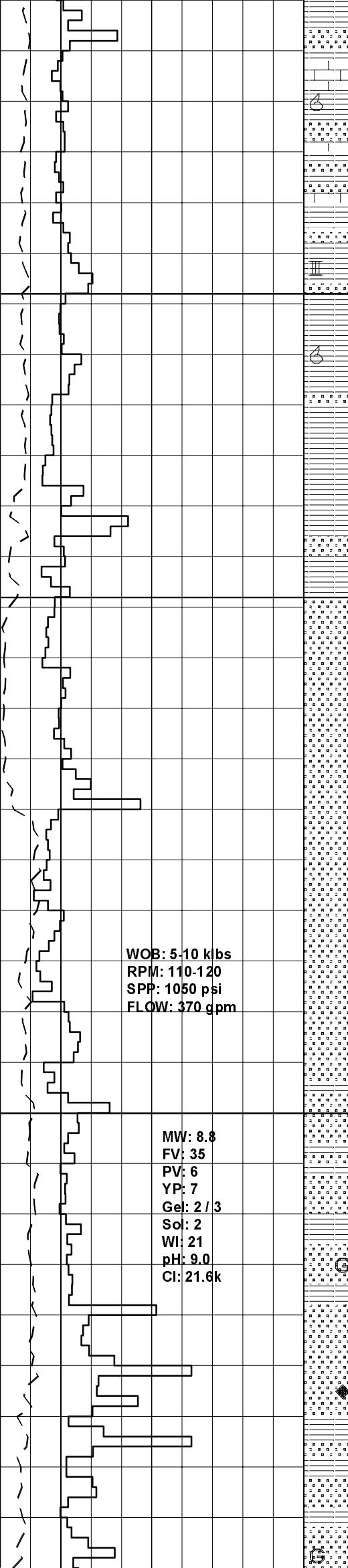
100

100

1K

10K





675

700

725

750

775

800

825

10K 100K
10 100

100 1K 10K

-micxn.

SURVEY @ 674m: 0.25° 020T

SANDSTONE:lt brn-brn/org, tr clr, pred f-med, tr gran, pr-mod srt sbrndd, wk calc cmt, com rd brn/ org arg mtrx, Fe oxide foss repl tr foss frag, dom fri-mod hd, tr lse, pr inf & vis por, no fluor.

**NARRAWATURK MARL
699mRT (-645mSS)**

MARL:gy-dk gy, com calc, arg, com micmic, tr glauc, tr foss frag, sft -disp, sbbky-amorph.

**MEPUNGA FORMATION
729mRT (-675mSS)**

NIL GAS

SANDSTONE:opq-trnsl, tr clr, med-f tr crs, mod srt, sbang-sbrndd, wk calc cmt, tr arg mtrx, tr glauc nod, pred lse, fri i/p, gd inf & vis por, no fluor.

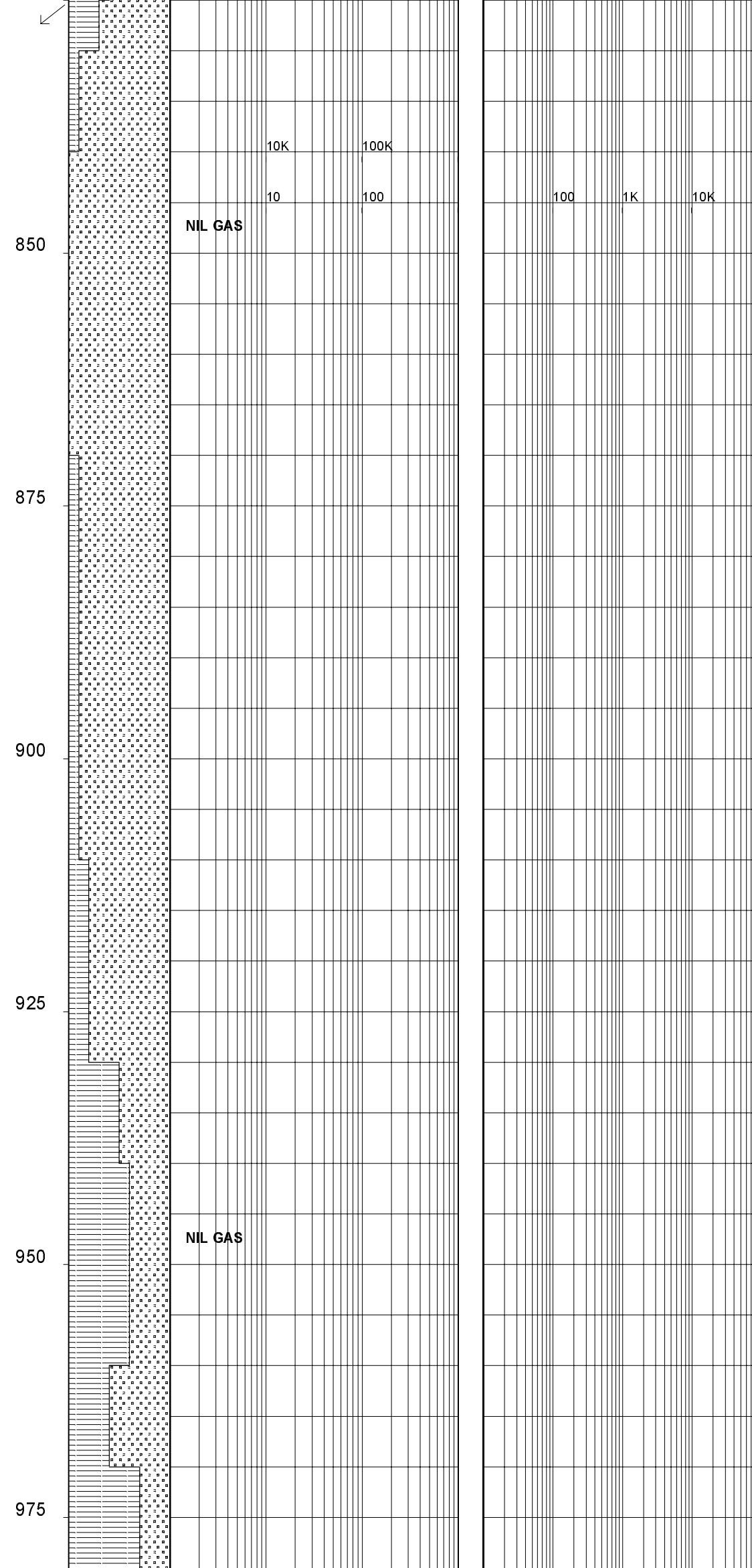
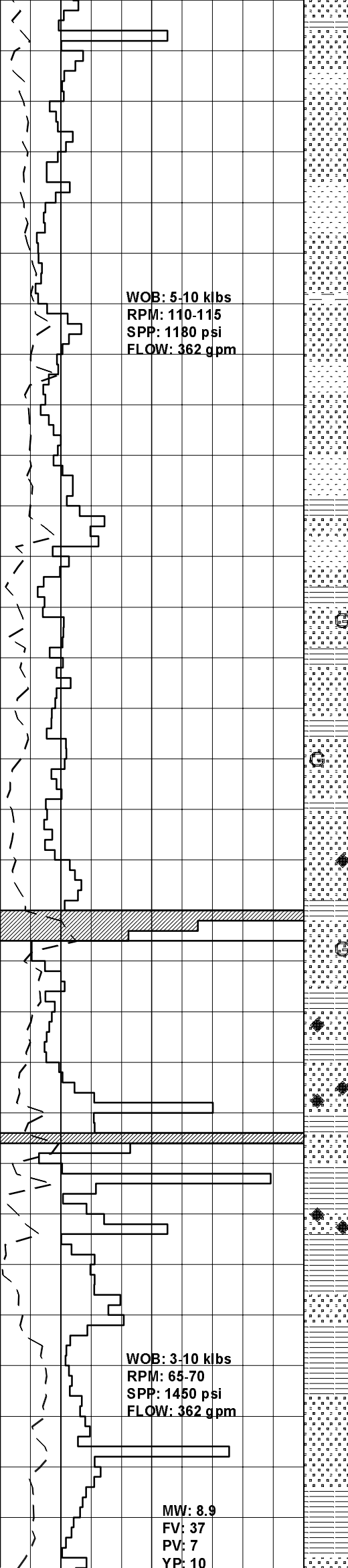
**DILWYN FORMATION
780mRT (-726mSS)**

CLAYSTONE:gy-dk gy, aren, v sft-sft, micrxn, sity, tr SST grns.

SANDSTONE:pl brn, org/brn, mnr clr -trnsl, med-crs, occ f, pr srt, sbrndd-rnd, occ wl rnd, wk calc cmt, tr arg mtrx, tr glauc, tr pyr, pred lse, tr fri-frn aggs, gd inf & vis por, no fluor.

WOB: 5-10 kibs
RPM: 110-120
SPP: 1050 psi
FLOW: 370 gpm

MW: 8.8
FV: 35
PV: 6
YP: 7
Gel: 2 / 3
Sol: 2
WI: 21
pH: 9.0
Cl: 21.6k



NIL GAS

NIL GAS

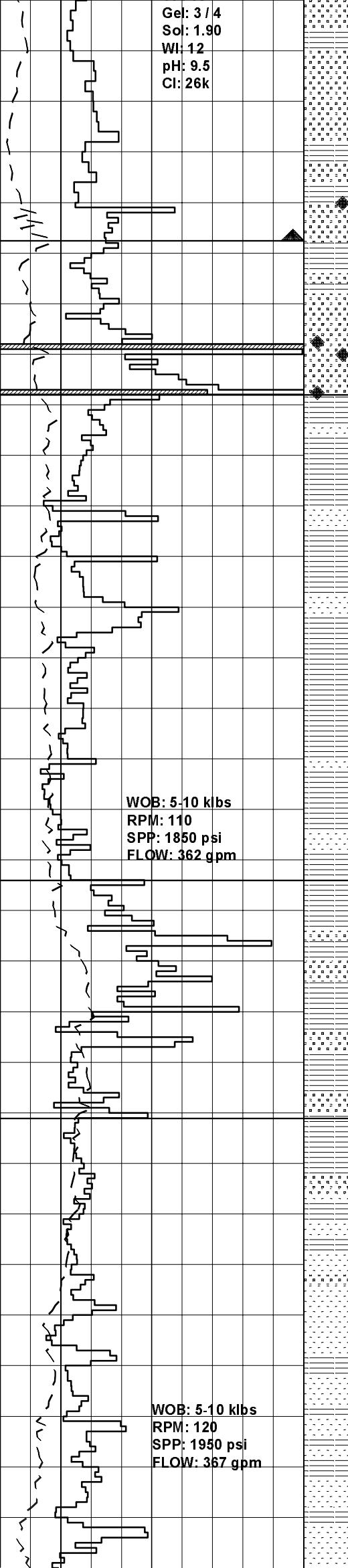
10K 100K
10 100
100 1K 10K

CLAYSTONE: med-lt brn, occ gy/brn,
rr brn, aren, v sft-sft, mnr frm,
sity, tr v f SST grns.

SANDSTONE: pl brn-org/brn, rr clr-
trnsl, med-crs, occ f, pr srt, sbrnd
-rnd, wk calc cmt, tr arg mtrx, tr
glauc, tr diss pyr, rr pyr nod,
pred lse, tr frm-fri aggs, gd inf
& vis por, no fluor.

CLAYSTONE: med brn, lt-med gy/brn,
lt brn, occ med-lt gy, aren, tr
micmic, tr pyr, sft-disp, tr frm,
amorph-sbbkly.

Gel: 3 / 4
Sol: 1.90
Wl: 12
pH: 9.5
Cl: 26k



SANDSTONE: clr-pl brn, trnsl, Fe
stnd, med-f, occ v f-crs, mod srt,
sbang-sbrnnd, tr ang, tr pyr nods,
lse, pr inf por, no fluor.

WIPER TRIP TO SHOE @ 1004m

Rmf: 0.19 @ 73°F

**PEMBER MUDSTONE
1019mRT (-965mSS)**

CLAYSTONE: med brn, tr v f micmic,
com carb spks, tr liths, v sft-
disp, amorph.

CLAYSTONE: lt-med brn, med gy, tr
micmic, tr carb spks, tr liths, sft
-disp, amorph, occ calc.

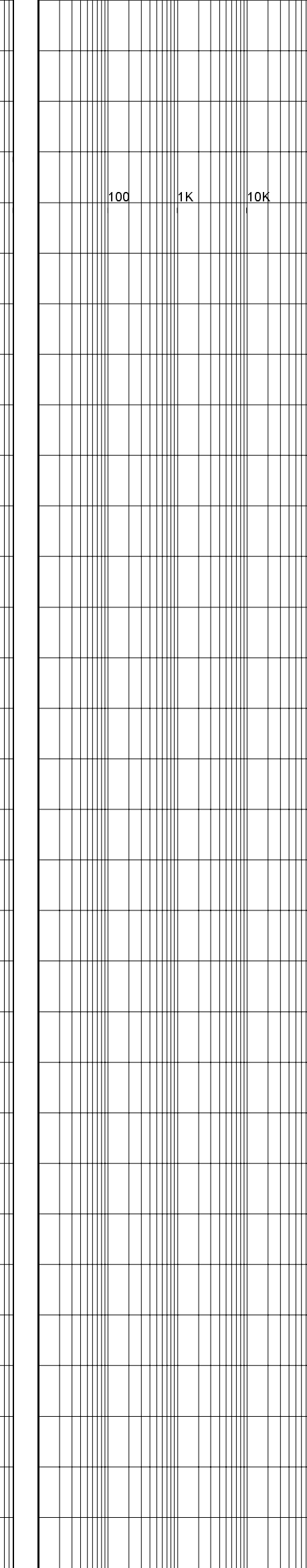
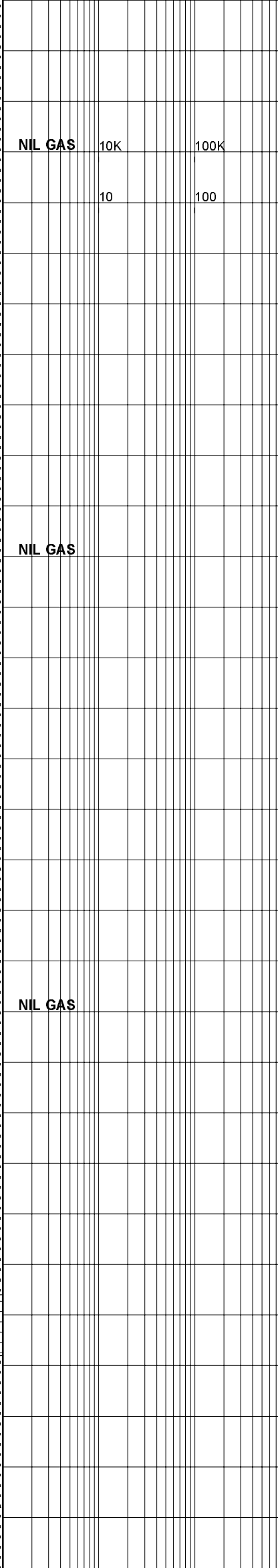
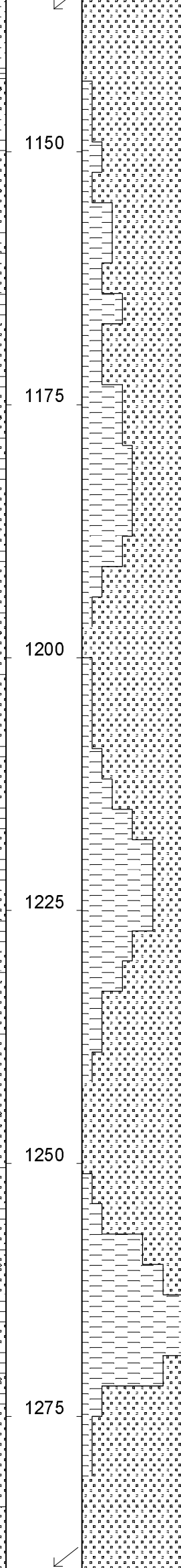
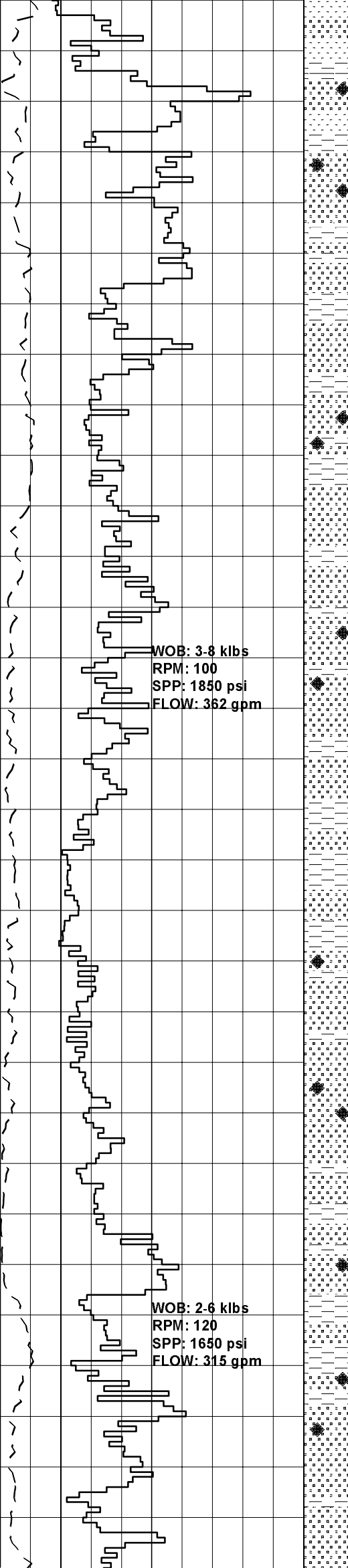
**PEBBLE POINT FORMATION
1067mRT (-1013mSS)**

SANDSTONE: clr-trnsl, pl brn/gy, f-
med, occ crs, pr srt, sbrnnd, occ
sbang, lse, pr inf por, no fluor.

**PAARATTE FORMATION
1090.5mRT (-1037mSS)**

SANDSTONE: clr-trnsl, occ pl gy/
brn, v f-f, occ med, rr crs, pr srt,
sbrnnd-rnd, mntr sbang, pred lse,
occ qtz ovghts, pr inf por, no
fluor.

CLAYSTONE: lt-med gy, pl brn/gy,
aren, i/p arg, tr micmic, tr liths,
v sft-sft, occ disp, amorph, occ
sbbly.



SANDSTONE: clr-trnsi, occ pl brn/gy, med-crs, pr srt, sbang-sbrndd, wk sil cmt, pred as qtz ovgrths, tr liths, lse, pr inf por, no fluor

SILTSTONE: pl gy, pl brn, med gy/brn, aren, arg i/p g/t CLYST, tr micmic, tr liths, sft, sbbiky.

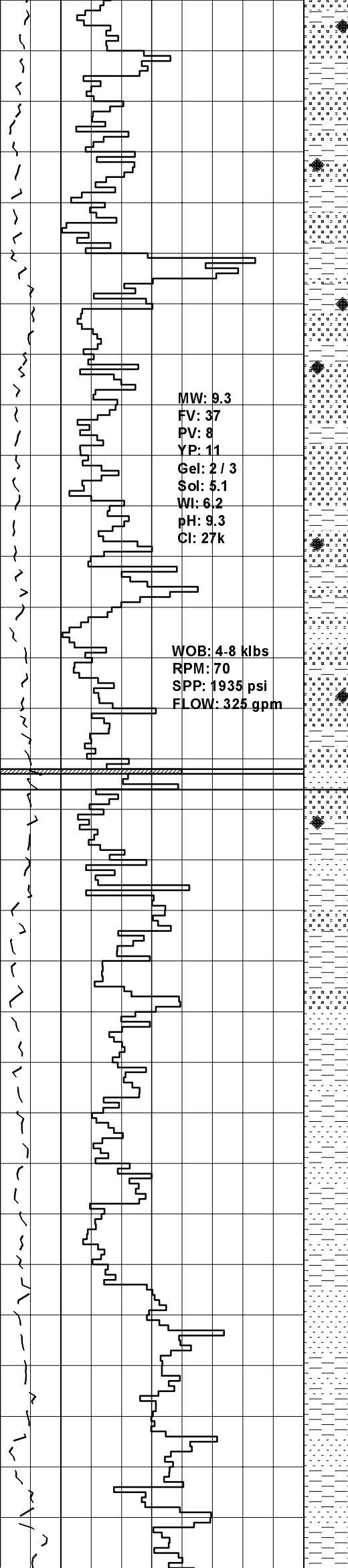
SANDSTONE: clr-trnsi, mnr opq-fros tr pl gy, v crs-crs, pr srt, sbrndd -sbang, wk calc cmt, com aren mtrx tr qtz ovgrths, com pyr nod, com dis pyr w/- tr foss replc, pr-fr inf & vis por, no fluor.

SILTSTONE: gy-lt gy, aren, tr diss pyr, rr pyr nod, tr glauc, tr foss, pred sft, disp i/p, sbbiky.

SANDSTONE: clr-trnsi, pl-opq i/p, med-crs, rr f, mod-pr srt, sbang, wk calc cmt i/p, rr wk sil cmt, arg mtrx i/p, tr pyr nod, tr foss, fri dom lse, gd-fr inf & vis por, no fluor.

SILTSTONE: med-dk gy, tr-rr carb fiks, tr diss pyr & pyr nod, tr foss, sft-v sft, sbbiky-amorph.

SANDSTONE: clr-trnsi, off wh-opq i/p, med-crs, rr v crs & rr f, pr-mod srt, sbang, wk sil cmt, tr aren



MW: 9.3
 FV: 37
 PV: 8
 YP: 11
 Gel: 2 / 3
 Sol: 5.1
 WI: 6.2
 pH: 9.3
 CI: 27k

WOB: 4-8 klbs
 RPM: 70
 SPP: 1935 psi
 FLOW: 325 gpm

1300
 1325
 1350
 1375
 1400
 1425

NIL GAS

10K 100K
 10 100

100 1K 10K

Tr C1

Tr C1

mtrx,rr pyr nod,pred lse,fri i/p
 fr inf & vis por,no fluor.

SURVEY @ 1290m: 0.25° 356T

SILTSTONE:dk gy,rr pl gy-pl brn
 aren,frm-sft,micmic,tr disp pyr,
 rr pyr nod,sbbiky-amorph i/p.

SANDSTONE:clr-trnsl,med-crs,v f
 & v crs i/p,pr srt,wl sil cmt,tr
 aren mtrx,rr pyr nod,tr qtz
 ovgrths,fr-gd inf & vis por,no
 fluor.

Rmf @ 1350m: 0.15 @ 69°F

**SKULL CREEK MUDSTONE
 1368mRT (-1314mSS)**

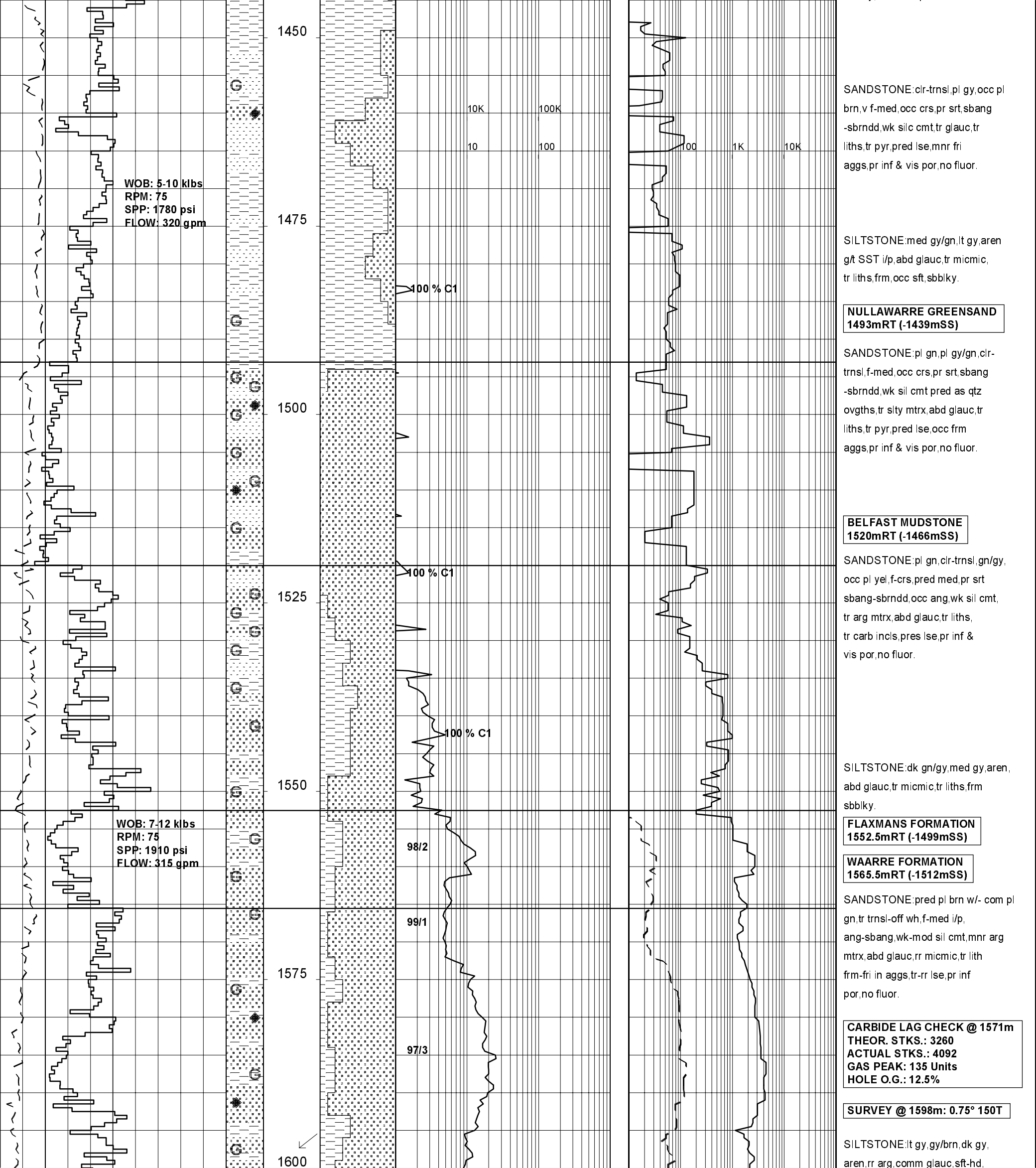
SILTSTONE:pl gy,lt brn/gy,arg,rr
 aren,tr micmic,tr diss pyr,sft-
 disp,amorph,occ sbbiky.

SILTSTONE:lt brn/gy,pl gy,occ
 off wh,arg,i/p aren g/t v f SST,
 tr micmic,tr glauc,sft-disp,occ
 frm,amorph-sbbiky.

SANDSTONE:clr-trnsl,occ pl gy,
 occ off wh,v f-f,wl srt,sbrnodd,
 mnr wk sil cmt,tr liths,tr carb
 spks,lse,occ fri-frm aggs,pr inf
 & vis por,no fluor.

SURVEY @ 1440m: 0.25° 036T

SILTSTONE:med gy,med gy/brn,arg,
 tr glauc,tr pyr,frm-sft,occ disp
 sbbiky,occ amorph.



SANDSTONE: cl-trnsl, pl gy, occ pl
brn, v f-med, occ crs, pr srt, sbang
-sbrndd, wk sil cmt, tr glauc, tr
liths, tr pyr, pred lse, mnr fri
aggs, pr inf & vis por, no fluor.

SILTSTONE: med gy/gn, lt gy, aren
gt SST i/p, abd glauc, tr micmic,
tr liths, frm, occ sft, sbbiky.

NULLAWARRE GREENSAND
1493mRT (-1439mSS)

SANDSTONE: pl gn, pl gy/gn, cl-trnsl,
f-med, occ crs, pr srt, sbang
-sbrndd, wk sil cmt pred as qtz
ovgths, tr slty mtr, abd glauc, tr
liths, tr pyr, pred lse, occ frm
aggs, pr inf & vis por, no fluor.

BELFAST MUDSTONE
1520mRT (-1466mSS)

SANDSTONE: pl gn, cl-trnsl, gn/gy,
occ pl, f-crs, pred med, pr srt
sbang-sbrndd, occ ang, wk sil cmt,
tr arg mtr, abd glauc, tr liths,
tr carb incl, pres lse, pr inf &
vis por, no fluor.

SILTSTONE: dk gn/gy, med gy, aren,
abd glauc, tr micmic, tr liths, frm
sbbiky.

FLAXMANS FORMATION
1552.5mRT (-1499mSS)

WAARRE FORMATION
1565.5mRT (-1512mSS)

SANDSTONE: pred pl brn w/- com pl
gn, tr trnsl-off wh, f-med i/p,
ang-sbang, wk-mod sil cmt, mnrg
mtr, abd glauc, rr micmic, tr lith
frm-fri in aggs, tr-rr lse, pr inf
por, no fluor.

CARBIDE LAG CHECK @ 1571m
THEOR. STKS.: 3260
ACTUAL STKS.: 4092
GAS PEAK: 135 Units
HOLE O.G.: 12.5%

SURVEY @ 1598m: 0.75° 150T

SILTSTONE: lt gy, gy/brn, dk gy,
aren, rr arg, comm glauc, sft-hd,

1450
1475
1500
1525
1550
1575
1600

10K 100K
10 100

100% C1

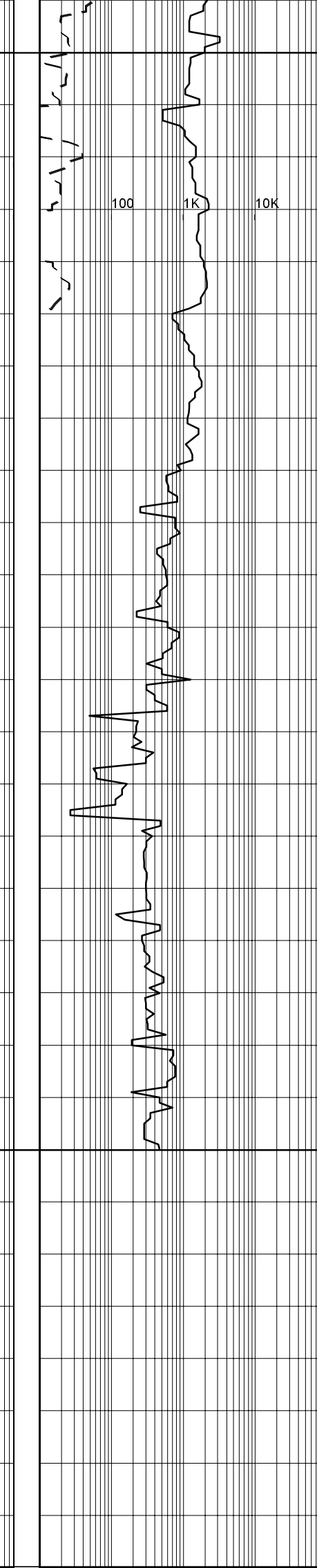
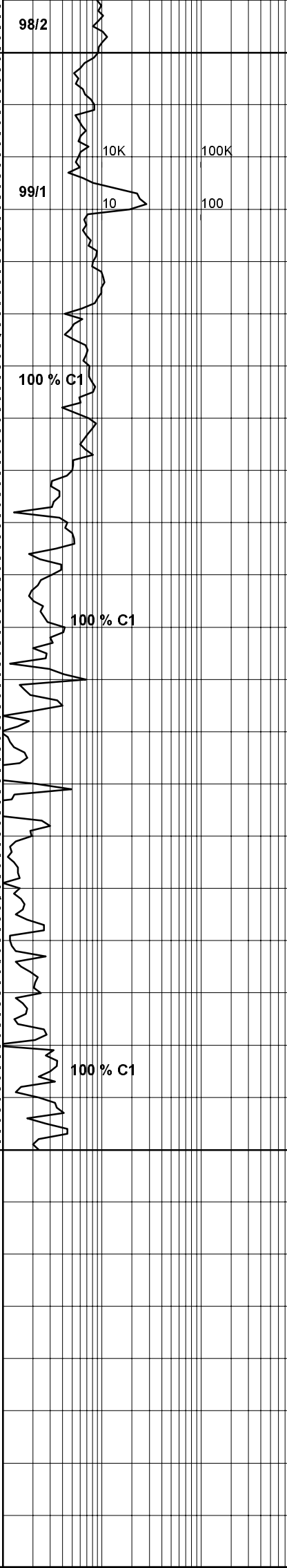
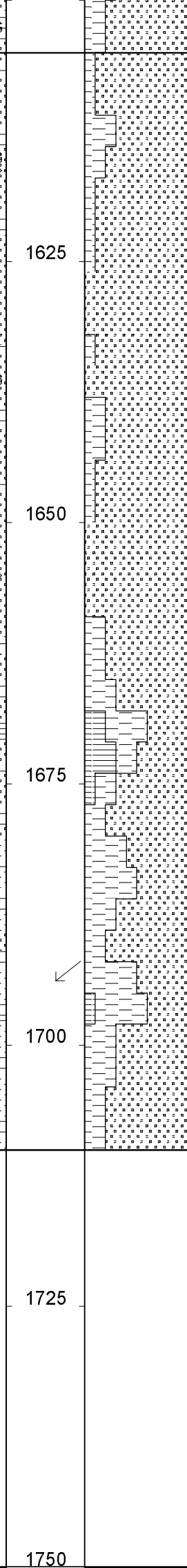
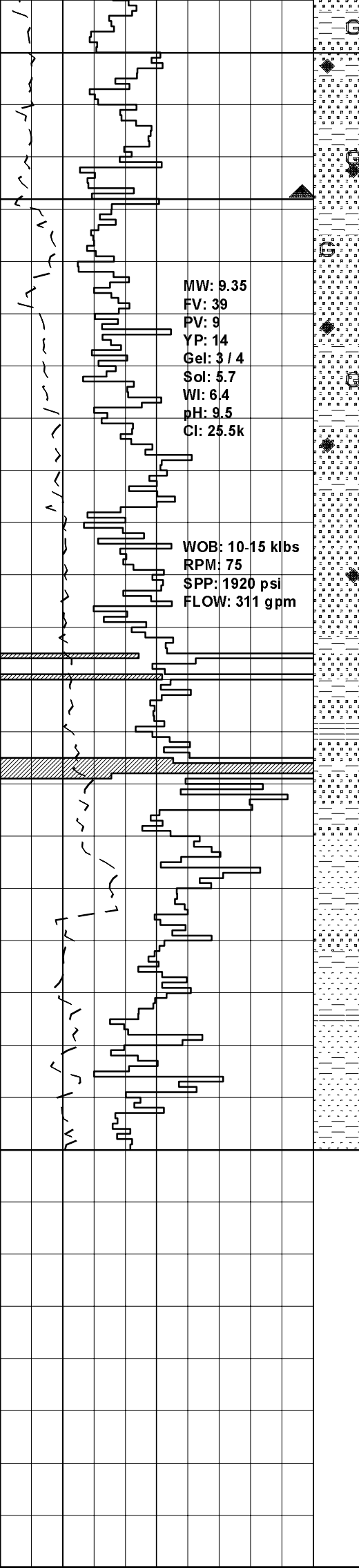
100% C1

100% C1

98/2

99/1

97/3



sbbkly-bkly, occ fiss.

**EUMERALLA FORMATION
1605mRT (-1551mSS)**
SANDSTONE: wh, clr, yel/brn i/p, f-med, occ crs-v crs, mod wl srt, sbrndd, abd arg mtrx, wl sil cmt, com glauc, rr pyr, tr foss frag, frm agg, pred lse, pr vis & inf por, no fluor.

WIPER TRIP @ 1619m

SILTSTONE: lt gy, off wh-pl brn, arg, sft, sbbkly.

Rmf @ 1660m: 0.18 @ 69°F

SANDSTONE: opq-off wh, trnsi-clr i/p, f-med, occ crs, mod pr srt, abd arg mtrx, com calc cmt, rr pyr nod, frm-fri in aggs, pr inf & vis por, no fluor.

CLAYSTONE: pl gy, pl brn/gy, occ off wh, tr carb spks, tr liths, sft -frm, mnr v sft, sbbkly.

SANDSTONE: clr-trnsi, pl gy, pl gy/gn, occ opq, f-med, wl srt, sbang-sbrndd, wk-mod sil cmt, tr wh arg mtrx, tr pyr, tr qtz ovgrths, pred lse, mnr fri-frm aggs, pr inf & vis por, no fluor.

SURVEY @ 1694m: 1.75° 059T

**NARINGAL-1 TD REACHED
ON 30-01-02 @ 04:30 Hrs**

**NARINGAL-1
PLUGGED & ABANDONED**

**DRILLER'S DEPTH: 1710m
LOGGER'S DEPTH: 1697m**

**ELECTRIC LOGS RUN:
RUN 1: GR-SDT-MSFL-DLL-CAL-LDL-CNL
RUN 2: GR-SWC
RUN 3: Velocity Shoot**