



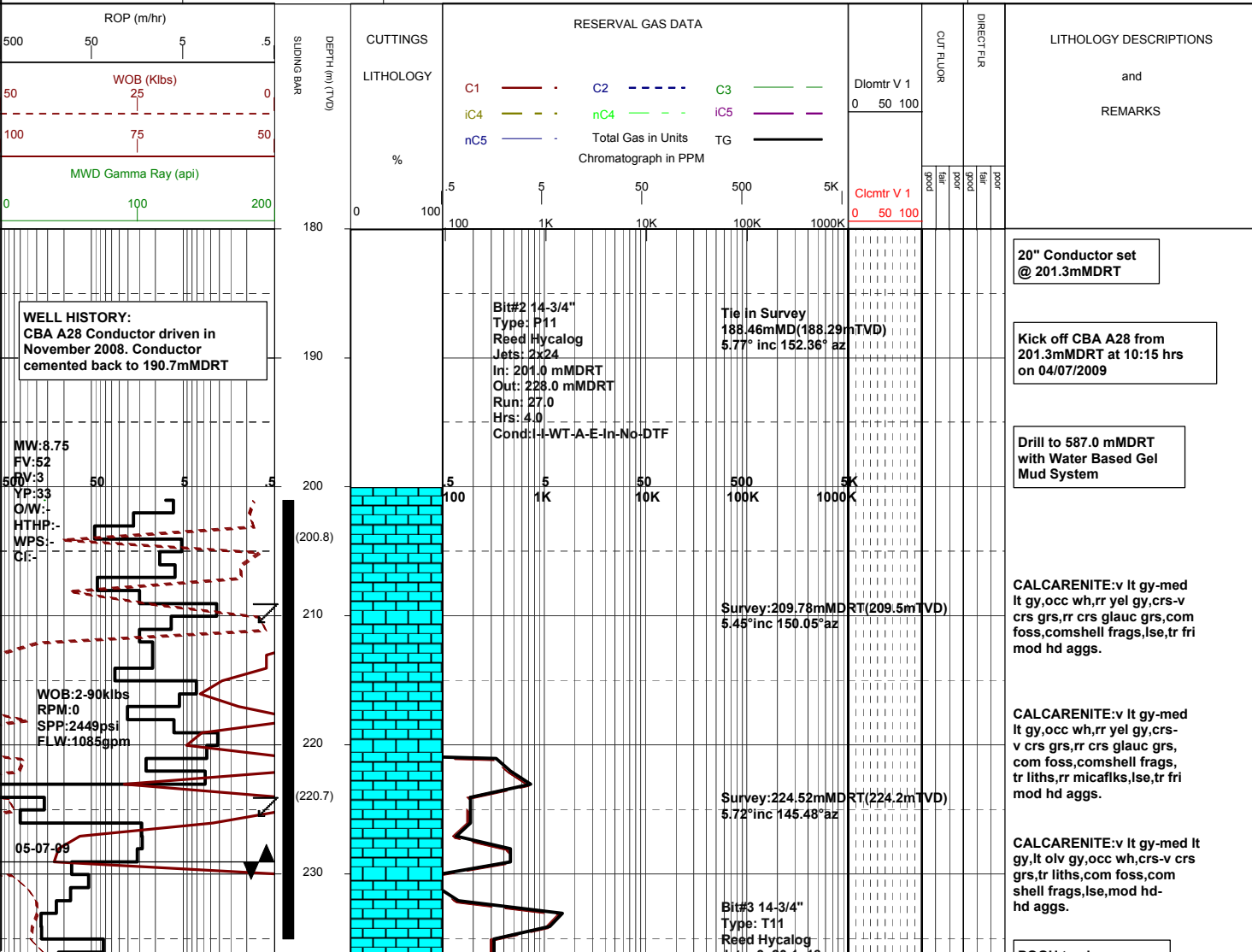
MASTERLOG

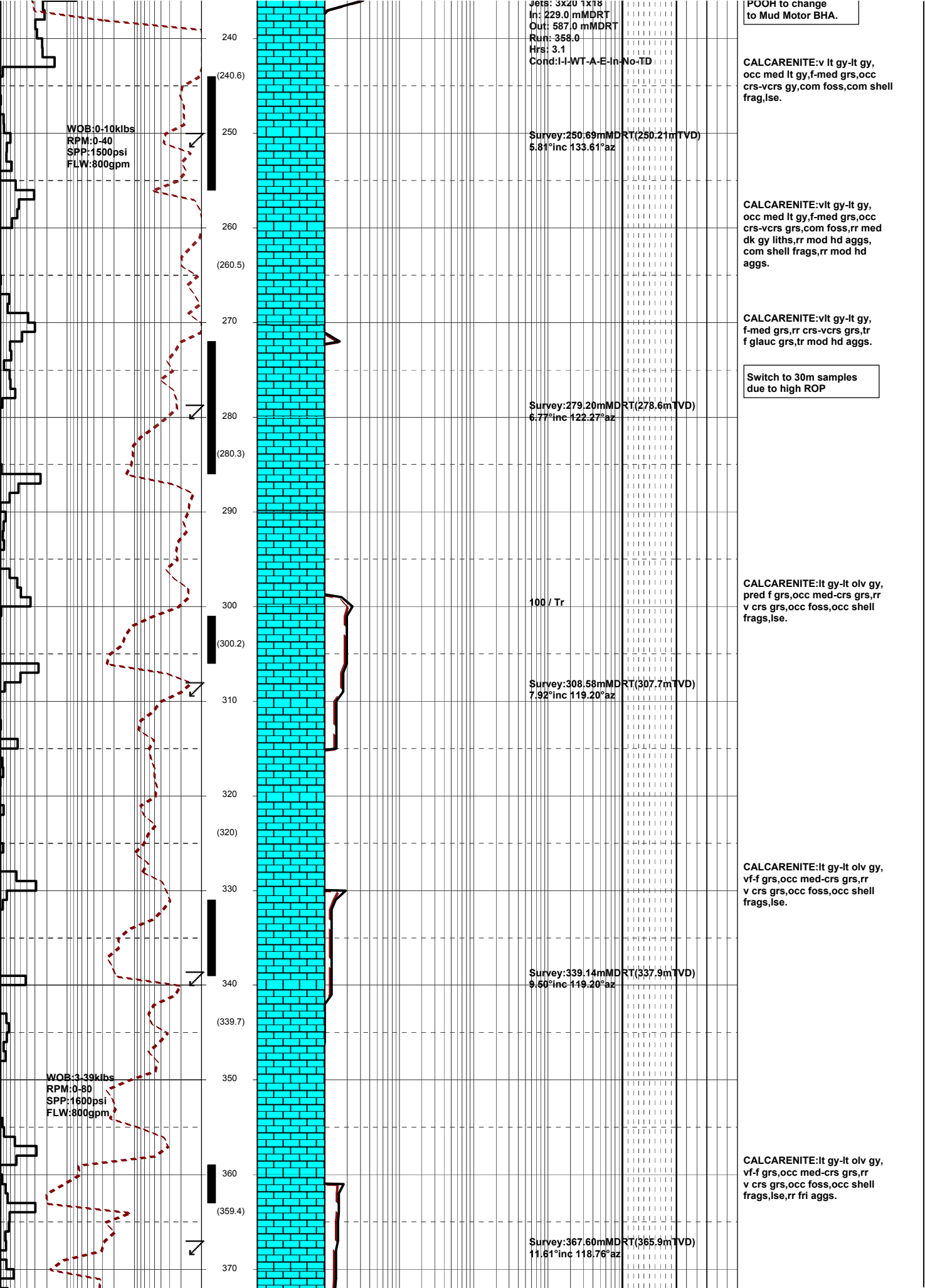
Cobia A28



GENERAL	SURFACE POSITION	HOLE / CASING INFO	DATE / DEPTH	ENGINEERS
Country : AUSTRALIA	Longitude : 148°18'32.995" E		Kick off Date: 04/07/2009	Gareth Munro
Permit : VIC / L5	Latitude : 38°26'57.456" S	9-7/8" Hole to 3995.0 mMDRT	Total Depth Date: 15/07/09	Phil Rady
Field : HALIBUT	MGA Co-ord X : 614238.70 mE	20" Conductor at 201.3 mMDRT	Total Depth: 3995.00 mMDRT	Colin Chadwick
Basin : GIPPSLAND	MGA Co-ord Y : 5743521.13 mN	10-3/4" Surface Csg at 584.96 mMDRT	Log Scale : 1/ 500	Kepa O'Reilly
Well Type : DEVELOPMENT	RT to MSL : 41.0 m			Adam Sullivan
Rig Name : Nabors 175	RT to Sea Bed : 120.0 m			

ABBREVIATIONS		LITHOLOGY LEGEND				ENGINEERING LEGEND									
MW	Mud Weight	WOB	Weight on Bit (Klbs)		Claystone		Marl		Bryozoa		Glauconite		Casing shoe		Sidewall core
FV	Funnel Viscosity	RPM	Rotations Per Min		Siltstone		Limestone		Radiolariae		Pyrite		Casing top		Core
PV	Plastic Viscosity	FLW	Flow Rate (gpm)		Sandstone		Dolomite		Echinoids		Foraminiferae		Survey		Mud gain
YP	Yield Point	SPP	Pump Pressure (psi)		Shale		Coal-lignite		Cement		MDT		Mud loss		
O/W	Oil/Water Ratio	RR	Re-Run Bit		Conglomerate		Volcanics								
WPS	Aq. Phase Salinity	TG	Trip Gas												
HPHT	Fluid Loss	CG	Connection Gas												
CI	Chlorides	BG	Background Gas												
Incl	Inclination	DGP	Drilled Gas Peak												
Az	Azimuth	MM	Mud Motor												





Jets: 3x20 1x18
 In: 229.0 mMDRT
 Out: 587.0 mMDRT
 Run: 358.0
 Hrs: 3.1
 Cond: I-I-WT-A-E-in-No-TD

POOH to change to Mud Motor BHA.

WOB: 0-10klbs
 RPM: 0-40
 SPP: 1500psi
 FLW: 800gpm

Survey: 250.69mMDRT (250.21mTVD)
 5.81°inc 133.61°az

CALCARENITE: vlt gy-lt gy, occ med lt gy, f-med grs, occ crs-vcrs grs, com foss, rr med dk gy liths, rr mod hd aggs, com shell frags, rr mod hd aggs.

CALCARENITE: vlt gy-lt gy, f-med grs, rr crs-vcrs grs, tr f glauc grs, tr mod hd aggs.

Switch to 30m samples due to high ROP

Survey: 279.20mMDRT (278.6mTVD)
 6.77°inc 122.27°az

CALCARENITE: lt gy-lt olv gy, pred f grs, occ med-crs grs, rr v crs grs, occ foss, occ shell frags, lse.

100 / Tr

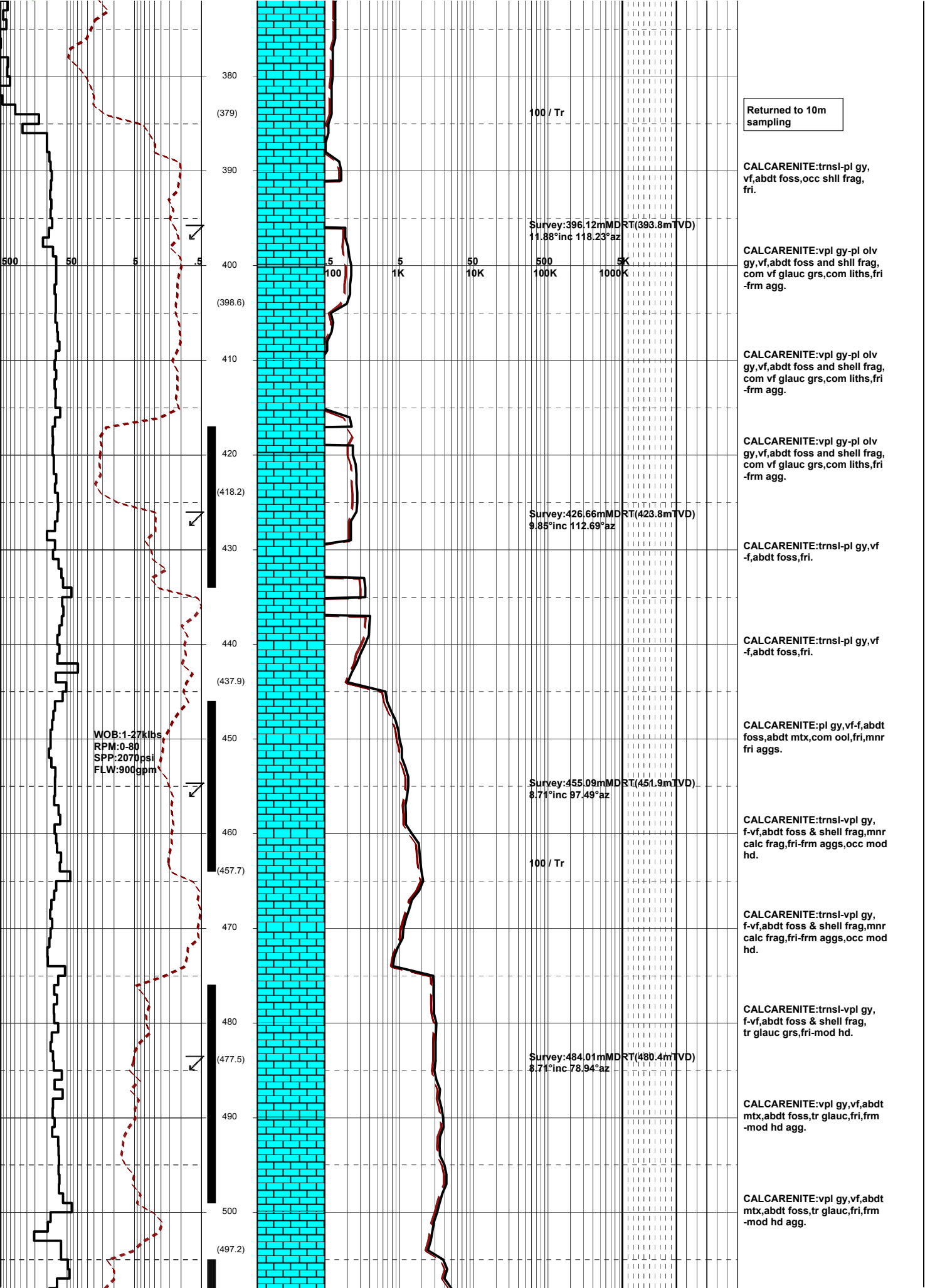
Survey: 308.58mMDRT (307.7mTVD)
 7.92°inc 119.20°az

CALCARENITE: lt gy-lt olv gy, vf-f grs, occ med-crs grs, rr v crs grs, occ foss, occ shell frags, lse.

Survey: 339.14mMDRT (337.9mTVD)
 9.60°inc 149.20°az

CALCARENITE: lt gy-lt olv gy, vf-f grs, occ med-crs grs, rr v crs grs, occ foss, occ shell frags, lse, rr fri aggs.

Survey: 367.60mMDRT (365.9mTVD)
 11.61°inc 118.76°az



Returned to 10m sampling

100 / Tr

CALCARENITE:trnsi-pl gy, vf, abdt foss, occ shll frag, fri.

Survey: 396.12mMDRT(393.8mTVD)
11.88°inc 118.23°az

CALCARENITE:vpl gy-pl olv gy, vf, abdt foss and shell frag, com vf glauc grs, com liths, fri -frm agg.

CALCARENITE:vpl gy-pl olv gy, vf, abdt foss and shell frag, com vf glauc grs, com liths, fri -frm agg.

CALCARENITE:vpl gy-pl olv gy, vf, abdt foss and shell frag, com vf glauc grs, com liths, fri -frm agg.

Survey: 426.66mMDRT(423.8mTVD)
9.85°inc 112.69°az

CALCARENITE:trnsi-pl gy, vf -f, abdt foss, fri.

CALCARENITE:trnsi-pl gy, vf -f, abdt foss, fri.

CALCARENITE:pl gy, vf-f, abdt foss, abdt mtx, com ool, fri, mnr fri aggs.

Survey: 455.09mMDRT(451.9mTVD)
8.71°inc 97.49°az

CALCARENITE:trnsi-vpl gy, f-vf, abdt foss & shell frag, mnr calc frag, fri-frm aggs, occ mod hd.

100 / Tr

CALCARENITE:trnsi-vpl gy, f-vf, abdt foss & shell frag, mnr calc frag, fri-frm aggs, occ mod hd.

CALCARENITE:trnsi-vpl gy, f-vf, abdt foss & shell frag, tr glauc grs, fri-mod hd.

Survey: 484.01mMDRT(480.4mTVD)
8.71°inc 78.94°az

CALCARENITE:vpl gy, vf, abdt mtx, abdt foss, tr glauc, fri, frm -mod hd agg.

CALCARENITE:vpl gy, vf, abdt mtx, abdt foss, tr glauc, fri, frm -mod hd agg.

WOB: 1.27klbs
RPM: 0-80
SPP: 2070psi
FLW: 900gpm

500

50

5

.5

.5

5

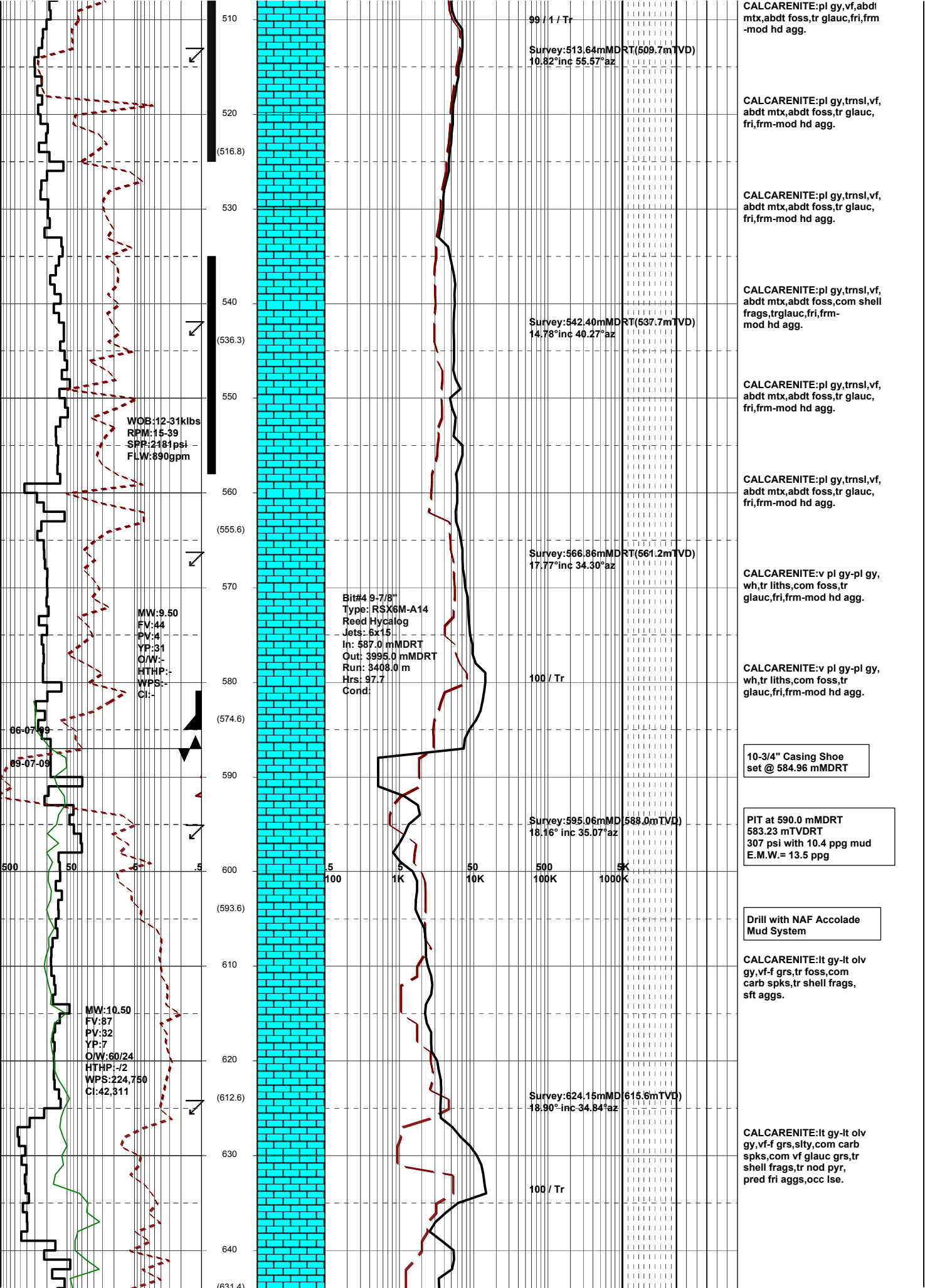
5

50

500

5K

380
(379)
390
400
(398.6)
410
420
(418.2)
430
440
(437.9)
450
460
(457.7)
470
480
(477.5)
490
500
(497.2)



99 / 1 / Tr
 Survey: 513.64mMDRT (509.7mTVD)
 10.82° inc 55.57° az

CALCARENITE: pl gy, vf, abdt
 mtx, abdt foss, tr glauc, fri, frm
 -mod hd agg.

CALCARENITE: pl gy, trns, vf,
 abdt mtx, abdt foss, tr glauc,
 fri, frm-mod hd agg.

CALCARENITE: pl gy, trns, vf,
 abdt mtx, abdt foss, tr glauc,
 fri, frm-mod hd agg.

Survey: 542.40mMDRT (537.7mTVD)
 14.78° inc 40.27° az

CALCARENITE: pl gy, trns, vf,
 abdt mtx, abdt foss, com shell
 frags, tr glauc, fri, frm-
 mod hd agg.

CALCARENITE: pl gy, trns, vf,
 abdt mtx, abdt foss, tr glauc,
 fri, frm-mod hd agg.

WOB: 12-31 klbs
 RPM: 15-39
 SPP: 2481 psi
 FLW: 890 gpm

CALCARENITE: pl gy, trns, vf,
 abdt mtx, abdt foss, tr glauc,
 fri, frm-mod hd agg.

Survey: 566.86mMDRT (561.2mTVD)
 17.77° inc 34.30° az

CALCARENITE: v pl gy-pl gy,
 wh, tr liths, com foss, tr
 glauc, fri, frm-mod hd agg.

MW: 9.50
 FV: 44
 PV: 4
 YP: 31
 O/W: -
 HTHP: -
 WPS: -
 CI: -

Bit# 9-7/8"
 Type: RSX6M-A14
 Reed Hycalog
 Jets: 6x15
 In: 587.0 mMDRT
 Out: 3995.0 mMDRT
 Run: 3408.0 m
 Hrs: 97.7
 Cond:

100 / Tr

CALCARENITE: v pl gy-pl gy,
 wh, tr liths, com foss, tr
 glauc, fri, frm-mod hd agg.

10-3/4" Casing Shoe
 set @ 584.96 mMDRT

Survey: 595.06mMDRT (588.0mTVD)
 18.16° inc 35.07° az

PIT at 590.0 mMDRT
 583.23 mTVDRT
 307 psi with 10.4 ppg mud
 E.M.W. = 13.5 ppg

Drill with NAF Accolade
 Mud System

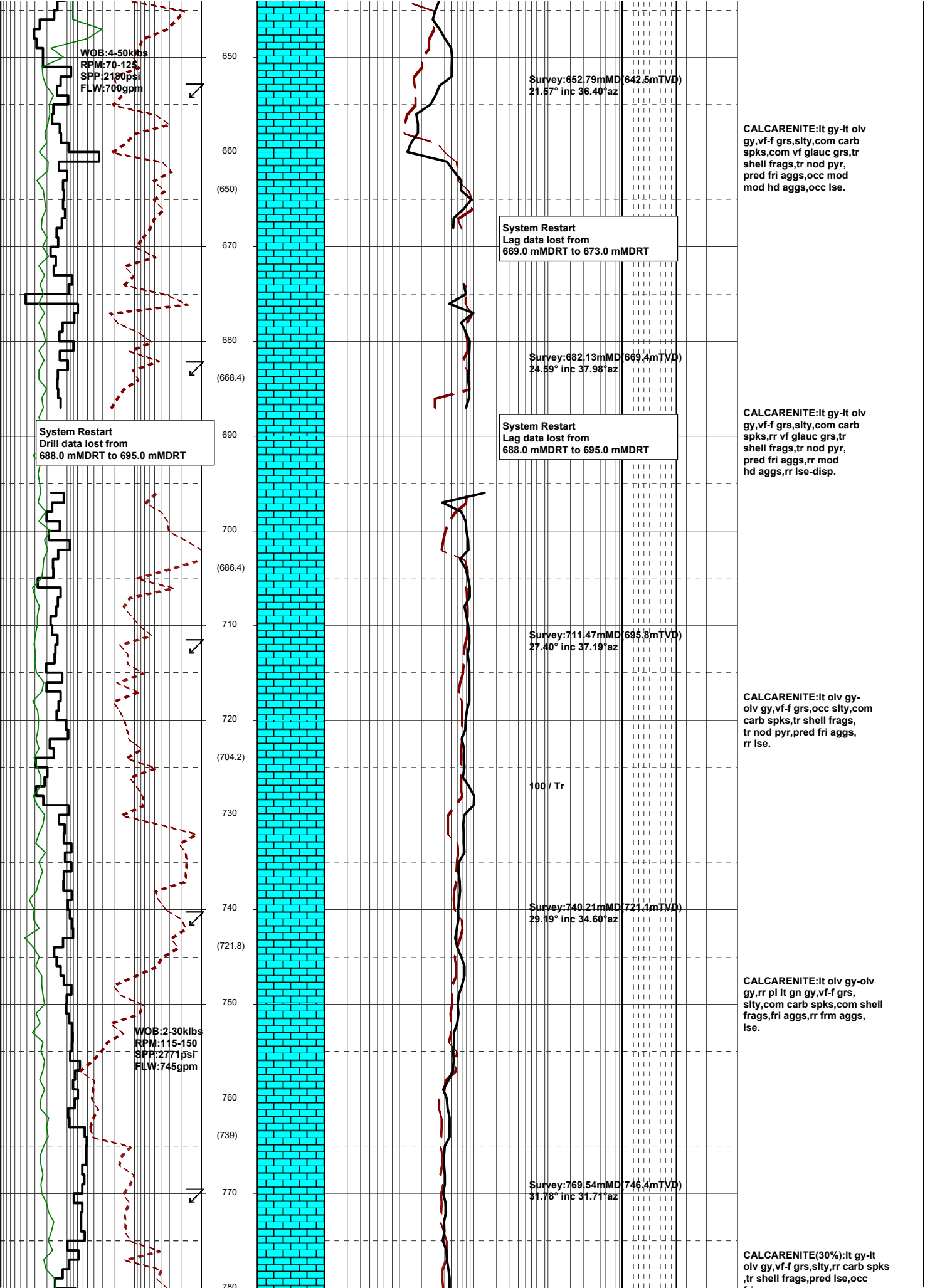
CALCARENITE: lt gy-lt olv
 gy, vf-f grs, tr foss, com
 carb spks, tr shell frags,
 sft aggs.

MW: 10.50
 FV: 87
 PV: 32
 YP: 7
 O/W: 60/24
 HTHP: -/2
 WPS: 224,750
 CI: 42,311

Survey: 624.15mMDRT (615.6mTVD)
 18.90° inc 34.84° az

CALCARENITE: lt gy-lt olv
 gy, vf-f grs, slty, com carb
 spks, com vf glauc grs, tr
 shell frags, tr nod pyr,
 pred fri aggs, occ lse.

100 / Tr



WOB:4-50klbs
RPM:70-125
SPP:2180psi
FLW:700gpm

Survey:652.79mMD (642.5mTVD)
21.57° inc 36.40°az

CALCARENITE:lt gy-lt olv gy,vf-f grs,silty,com carb spks,com vf glauc grs,tr shell frags,tr nod pyr, pred fri aggs,occ mod mod hd aggs,occ lse.

System Restart
Lag data lost from
669.0 mMDRT to 673.0 mMDRT

Survey:682.13mMD (669.4mTVD)
24.59° inc 37.98°az

CALCARENITE:lt gy-lt olv gy,vf-f grs,silty,com carb spks,rr vf glauc grs,tr shell frags,tr nod pyr, pred fri aggs,rr mod hd aggs,rr lse-disp.

System Restart
Drill data lost from
688.0 mMDRT to 695.0 mMDRT

System Restart
Lag data lost from
688.0 mMDRT to 695.0 mMDRT

Survey:711.47mMD (695.8mTVD)
27.40° inc 37.19°az

CALCARENITE:lt olv gy-olv gy,vf-f grs,occ silty,com carb spks,tr shell frags, tr nod pyr,pred fri aggs, rr lse.

100 / Tr

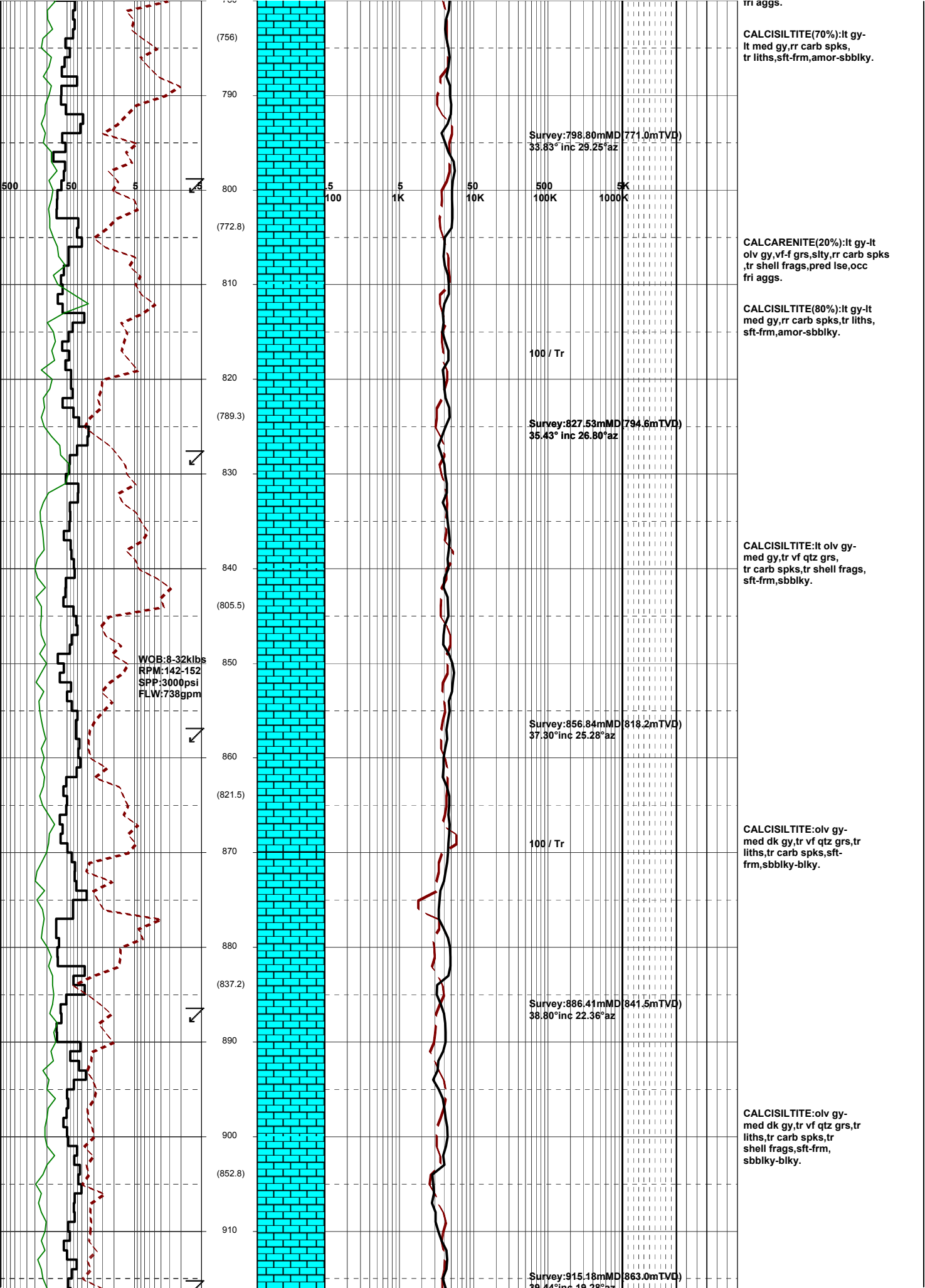
Survey:740.21mMD (721.1mTVD)
29.19° inc 34.60°az

CALCARENITE:lt olv gy-olv gy,rr pl lt gn gy,vf-f grs, silty,com carb spks,com shell frags,fri aggs,rr frm aggs, lse.

WOB:2-30klbs
RPM:115-150
SPP:2771psi
FLW:745gpm

Survey:769.54mMD (746.4mTVD)
31.78° inc 31.71°az

CALCARENITE(30%):lt gy-lt olv gy,vf-f grs,silty,rr carb spks, tr shell frags,pred lse,occ



tr aggs.
CALCISILTITE(70%):lt gy-
 lt med gy,rr carb spks,
 tr liths,sft frm,amor-sbbly.

CALCARENITE(20%):lt gy-
 lt olv gy,vf-grs,sly,rr carb spks
 ,tr shell frags,pred lse,occ
 fri aggs.

CALCISILTITE(80%):lt gy-
 lt med gy,rr carb spks,tr liths,
 sft frm,amor-sbbly.

CALCISILTITE:lt olv gy-
 med gy,tr vf qtz grs,
 tr carb spks,tr shell frags,
 sft frm,sbbly.

CALCISILTITE:olv gy-
 med dk gy,tr vf qtz grs,tr
 liths,tr carb spks,sft-
 frm,sbbly-blky.

CALCISILTITE:olv gy-
 med dk gy,tr vf qtz grs,tr
 liths,tr carb spks,tr
 shell frags,sft frm,
 sbbly-blky.

Survey: 798.80mMD (771.0mTVD)
 33.83° inc 29.25° az

Survey: 827.53mMD (794.6mTVD)
 35.43° inc 26.80° az

Survey: 856.84mMD (818.2mTVD)
 37.30° inc 25.28° az

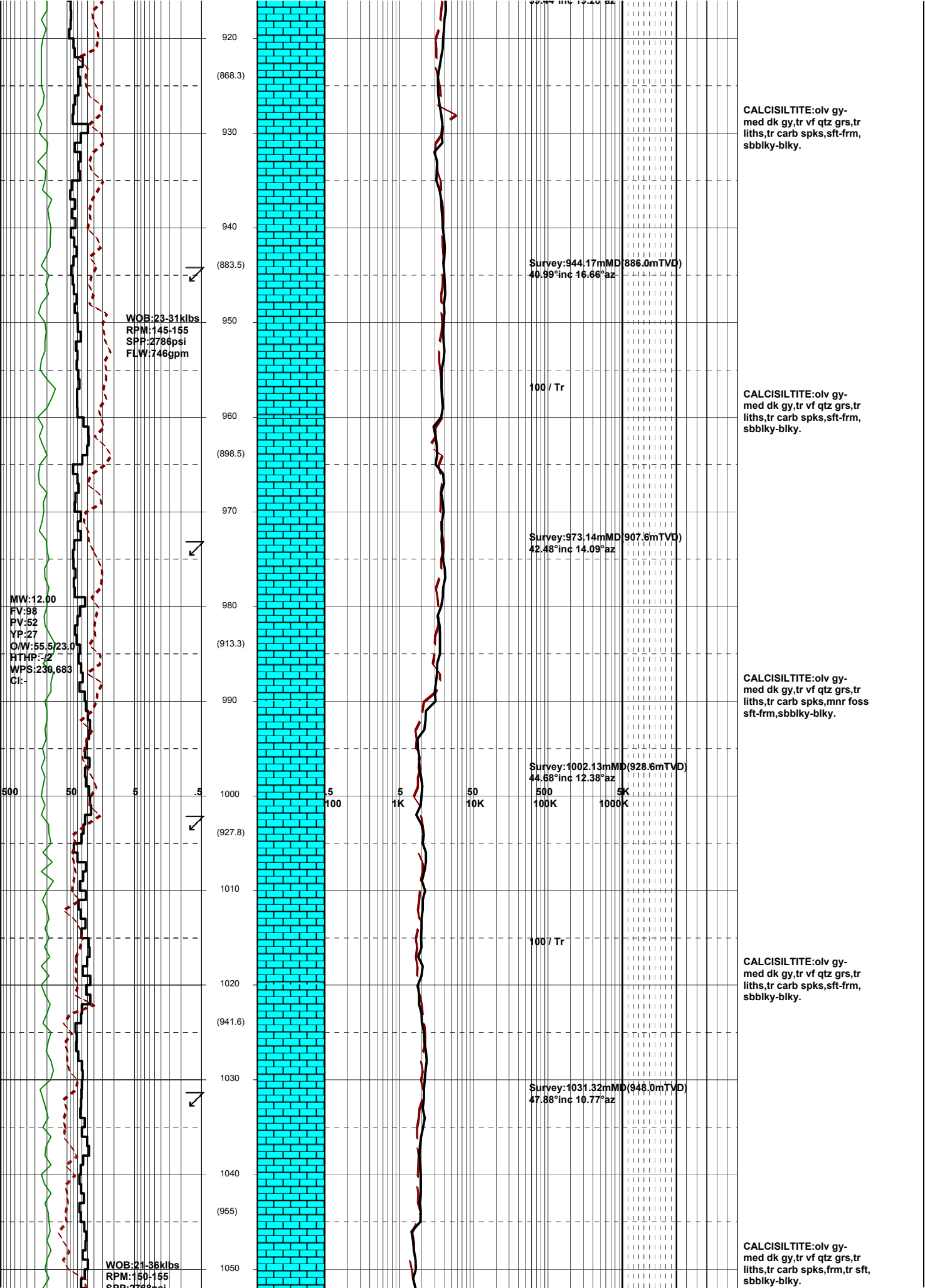
Survey: 886.41mMD (841.5mTVD)
 38.80° inc 22.36° az

Survey: 915.18mMD (863.0mTVD)
 39.44° inc 19.28° az

WOB: 8-32klbs
 RPM: 142-152
 SPP: 3000psi
 FLW: 738gpm

100 / Tr

100 / Tr



920
(868.3)
930
940
(883.5)
950
960
(898.5)
970
980
(913.3)
990
1000
(927.8)
1010
1020
(941.6)
1030
1040
(955)
1050

WOB:23-31klbs
RPM:145-155
SPP:2786psi
FLW:746gpm

MW:12.00
FV:98
PV:52
YP:27
O/W:55.5/23.0
HTHP:1.2
WPS:230,683
CI:-

WOB:21-36klbs
RPM:150-155
SPP:2786psi

Survey:944.17mMD(886.0mTVD)
40.99°inc 16.66°az

100 / Tr

Survey:973.14mMD(907.6mTVD)
42.48°inc 14.09°az

Survey:1002.13mMD(928.6mTVD)
44.68°inc 12.38°az

100 / Tr

Survey:1031.32mMD(948.0mTVD)
47.88°inc 10.77°az

CALCISILTITE:olv gy-med dk gy,tr vf qtz grs,tr liths,tr carb spks,sft frm,sbbkly-blky.

CALCISILTITE:olv gy-med dk gy,tr vf qtz grs,tr liths,tr carb spks,sft frm,sbbkly-blky.

CALCISILTITE:olv gy-med dk gy,tr vf qtz grs,tr liths,tr carb spks,mnr foss sft frm,sbbkly-blky.

CALCISILTITE:olv gy-med dk gy,tr vf qtz grs,tr liths,tr carb spks,sft frm,sbbkly-blky.

CALCISILTITE:olv gy-med dk gy,tr vf qtz grs,tr liths,tr carb spks,frm,fr sft,sbbkly-blky.

500 50 5 .5

5 100 5 1K 50 10K 500 100K 5K 1000K

SPP:2700psi
FLW:734gpm

10-07-09

MW:11.95
FV:88
PV:49
YP:28
OAW:71.5/28.5
HTHP:-/2
WPS:229,204
CI:39,782

WOB:25-37klbs
RPM:150-155
SPP:2856psi
FLW:743gpm

1060
(967.9)
1070
1080
(979.8)
1090
1100
(991.3)
1110
1120
(1002.4)
1130
1140
(1013.1)
1150
1160
(1023.5)
1170
1180
(1033.7)

Survey:1060.50mMD(967.6mTVD)
51.75°inc 10.77°az

100 / Tr

Survey:1089.43mMD(984.8mTVD)
55.01°inc 10.88°az

Survey:1118.25mMD(1001.0mTVD)
56.91°inc 12.44°az

100 / Tr

Survey:1147.62mMD(1016.7mTVD)
58.45°inc 15.37°az

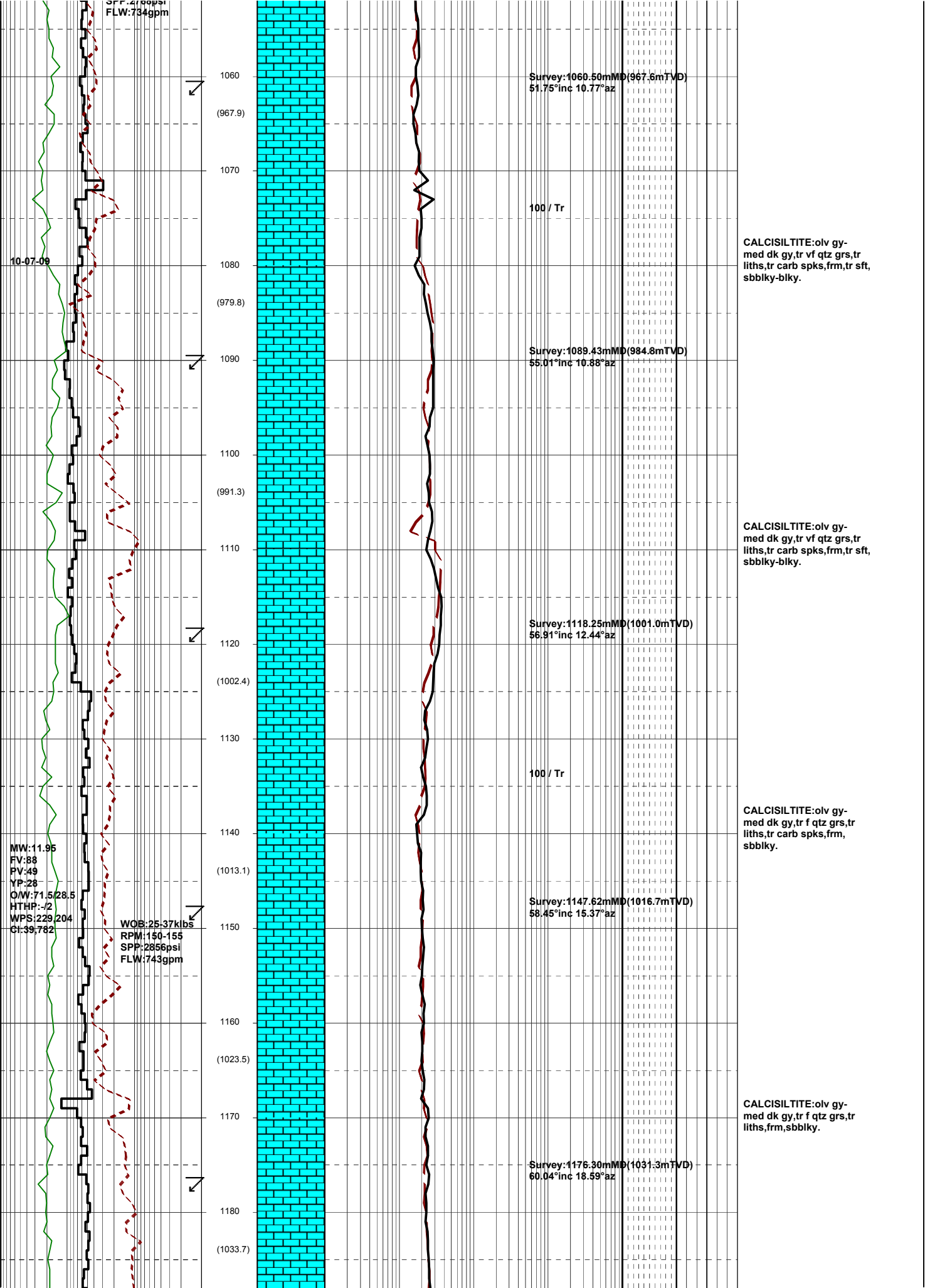
Survey:1176.30mMD(1031.3mTVD)
60.04°inc 18.59°az

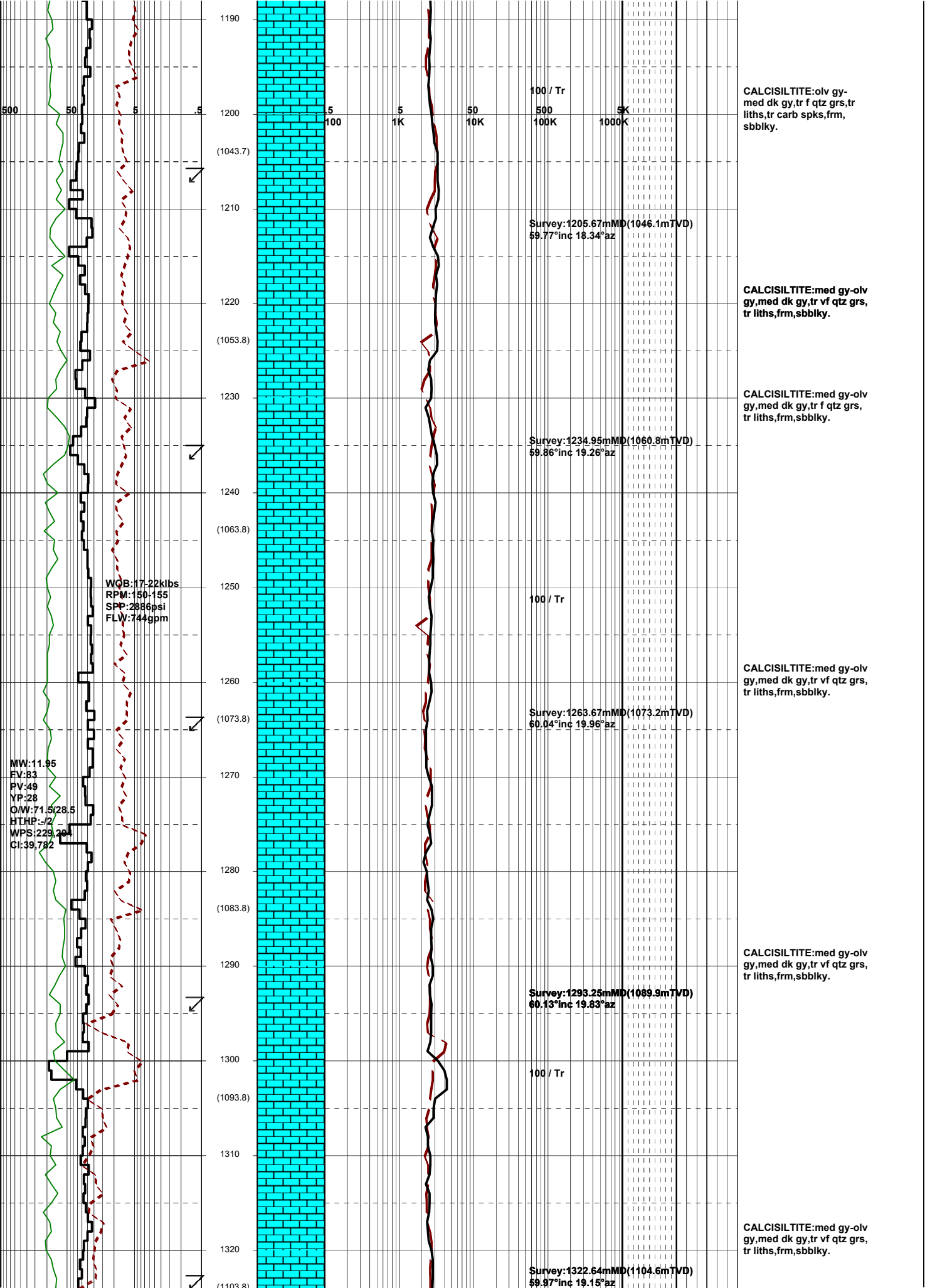
CALCISILTITE:olv gy-
med dk gy,tr vf qtz grs,tr
liths,tr carb spks,frm,tr sft,
sbbiky-blky.

CALCISILTITE:olv gy-
med dk gy,tr vf qtz grs,tr
liths,tr carb spks,frm,tr sft,
sbbiky-blky.

CALCISILTITE:olv gy-
med dk gy,tr f qtz grs,tr
liths,tr carb spks,frm,
sbbiky.

CALCISILTITE:olv gy-
med dk gy,tr f qtz grs,tr
liths,frm,sbbiky.





500 / Tr

50 / Tr

5 / Tr

.5 / Tr

5 / Tr

100 / Tr

5 / Tr

50 / Tr

100K / Tr

5K / Tr

1000K / Tr

100 / Tr

100 / Tr

100 / Tr

100 / Tr

100 / Tr

100 / Tr

100 / Tr

100 / Tr

WOB: 17-22klbs
 RPM: 150-155
 SPP: 2886psi
 FLW: 744gpm

MW: 11.95
 EV: 83
 PV: 49
 YP: 28
 O/W: 71.5/28.5
 HTHP: 1/2
 WPS: 229.20
 CI: 39.782

CALCISILTITE: olv gy-
 med dk gy, tr f qtz grs, tr
 liths, tr carb spks, frm,
 sbbkly.

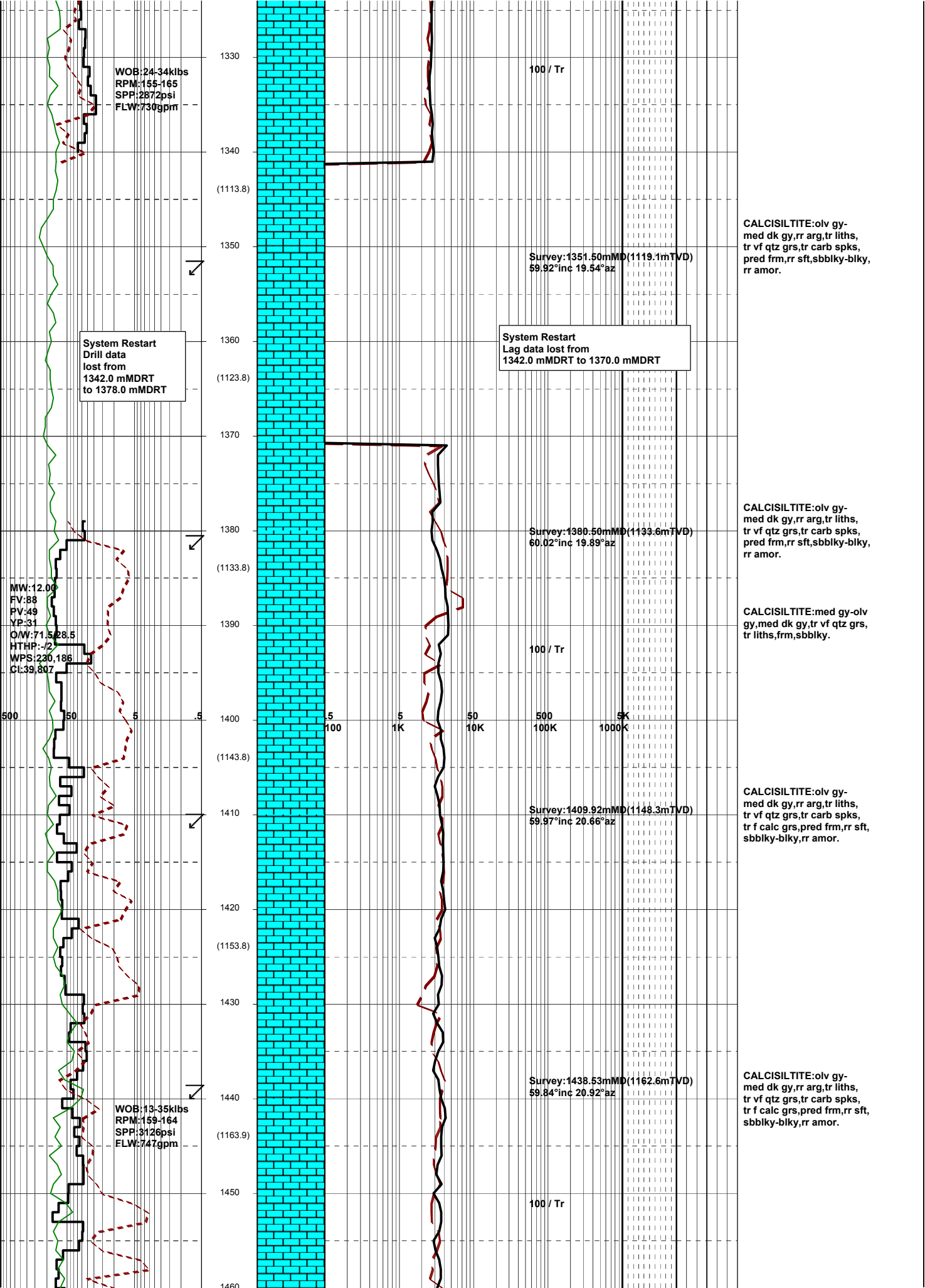
CALCISILTITE: med gy-olv
 gy, med dk gy, tr vf qtz grs,
 tr liths, frm, sbbkly.

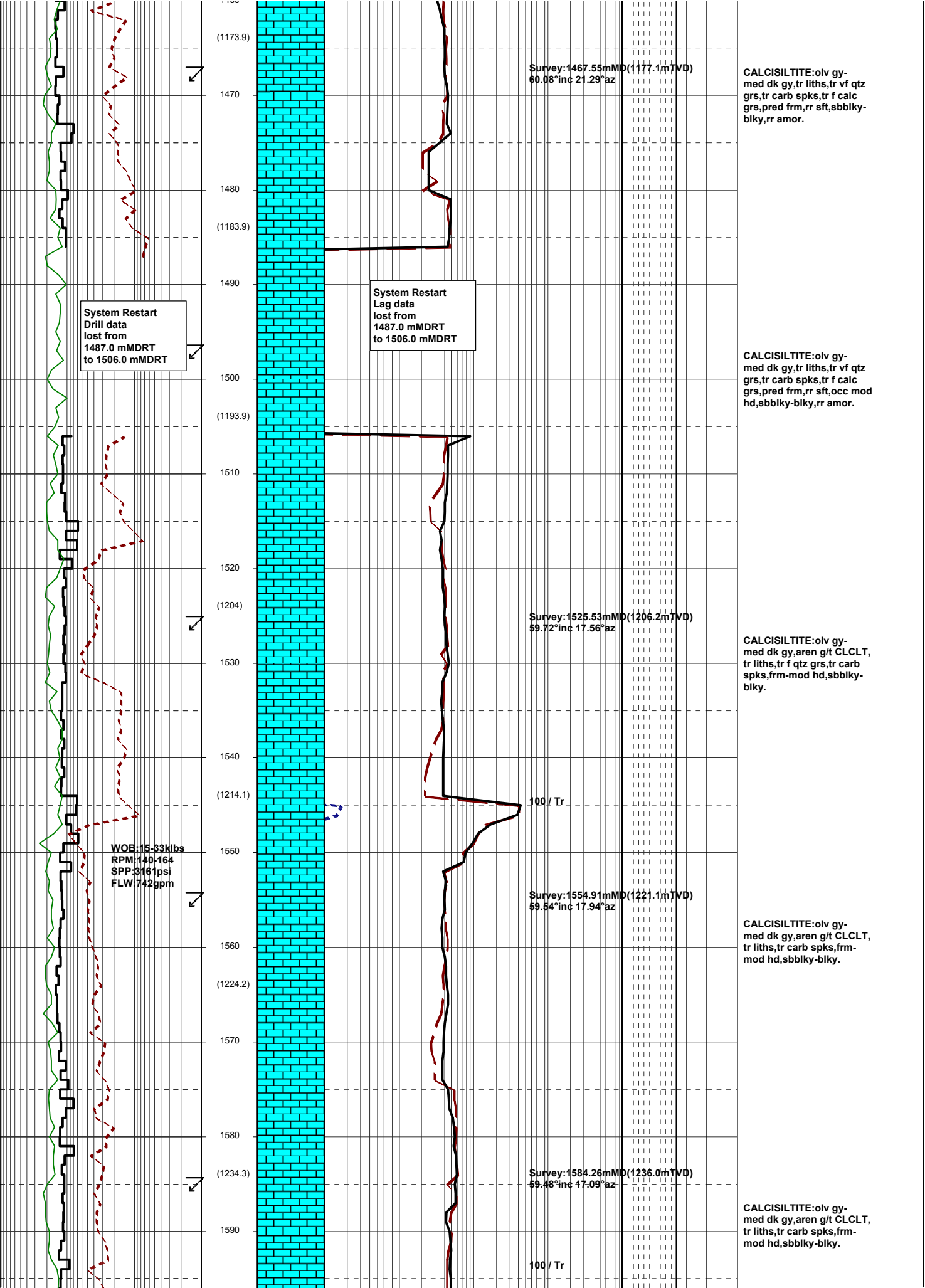
CALCISILTITE: med gy-olv
 gy, med dk gy, tr f qtz grs,
 tr liths, frm, sbbkly.

CALCISILTITE: med gy-olv
 gy, med dk gy, tr vf qtz grs,
 tr liths, frm, sbbkly.

CALCISILTITE: med gy-olv
 gy, med dk gy, tr vf qtz grs,
 tr liths, frm, sbbkly.

CALCISILTITE: med gy-olv
 gy, med dk gy, tr vf qtz grs,
 tr liths, frm, sbbkly.





1470
 (1173.9)
 1480
 (1183.9)
 1490
 1500
 (1193.9)
 1510
 1520
 (1204)
 1530
 1540
 (1214.1)
 1550
 1560
 (1224.2)
 1570
 1580
 (1234.3)
 1590

Survey: 1467.55mMDRT (1177.1mTVD)
 60.08°inc 21.29°az

CALCISILTITE: olv gy-med dk gy, tr liths, tr vf qtz grs, tr carb spks, tr f calc grs, pred frm, rr sft, sbblky-blky, rr amor.

CALCISILTITE: olv gy-med dk gy, tr liths, tr vf qtz grs, tr carb spks, tr f calc grs, pred frm, rr sft, occ mod hd, sbblky-blky, rr amor.

CALCISILTITE: olv gy-med dk gy, aren g/t CLCLT, tr liths, tr f qtz grs, tr carb spks, frm-mod hd, sbblky-blky.

CALCISILTITE: olv gy-med dk gy, aren g/t CLCLT, tr liths, tr carb spks, frm-mod hd, sbblky-blky.

CALCISILTITE: olv gy-med dk gy, aren g/t CLCLT, tr liths, tr carb spks, frm-mod hd, sbblky-blky.

System Restart
 Drill data
 lost from
 1487.0 mMDRT
 to 1506.0 mMDRT

System Restart
 Lag data
 lost from
 1487.0 mMDRT
 to 1506.0 mMDRT

WOB: 15-33klbs
 RPM: 140-164
 SPP: 3161psi
 FLW: 742gpm

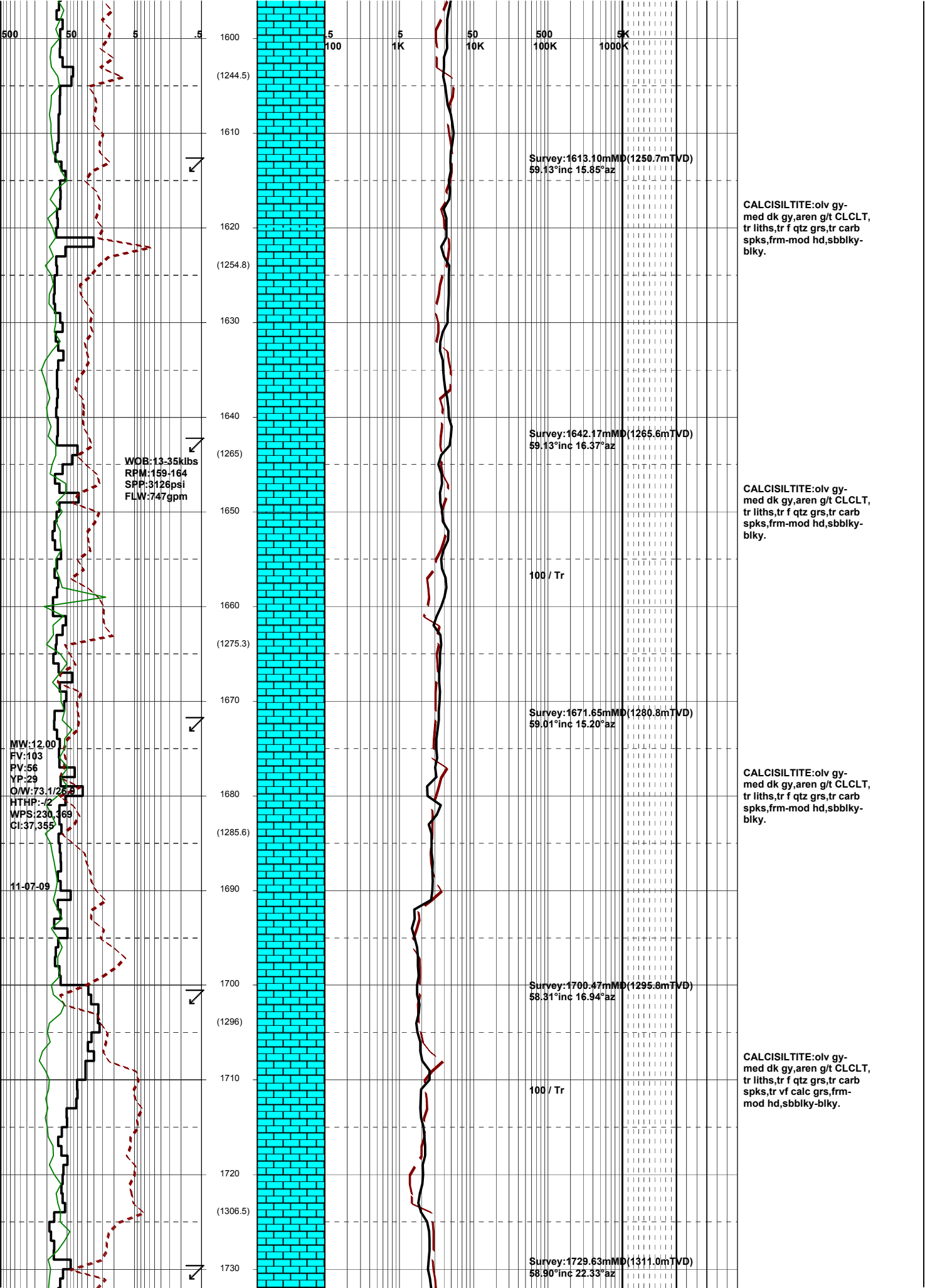
Survey: 1525.53mMDRT (1206.2mTVD)
 59.72°inc 17.56°az

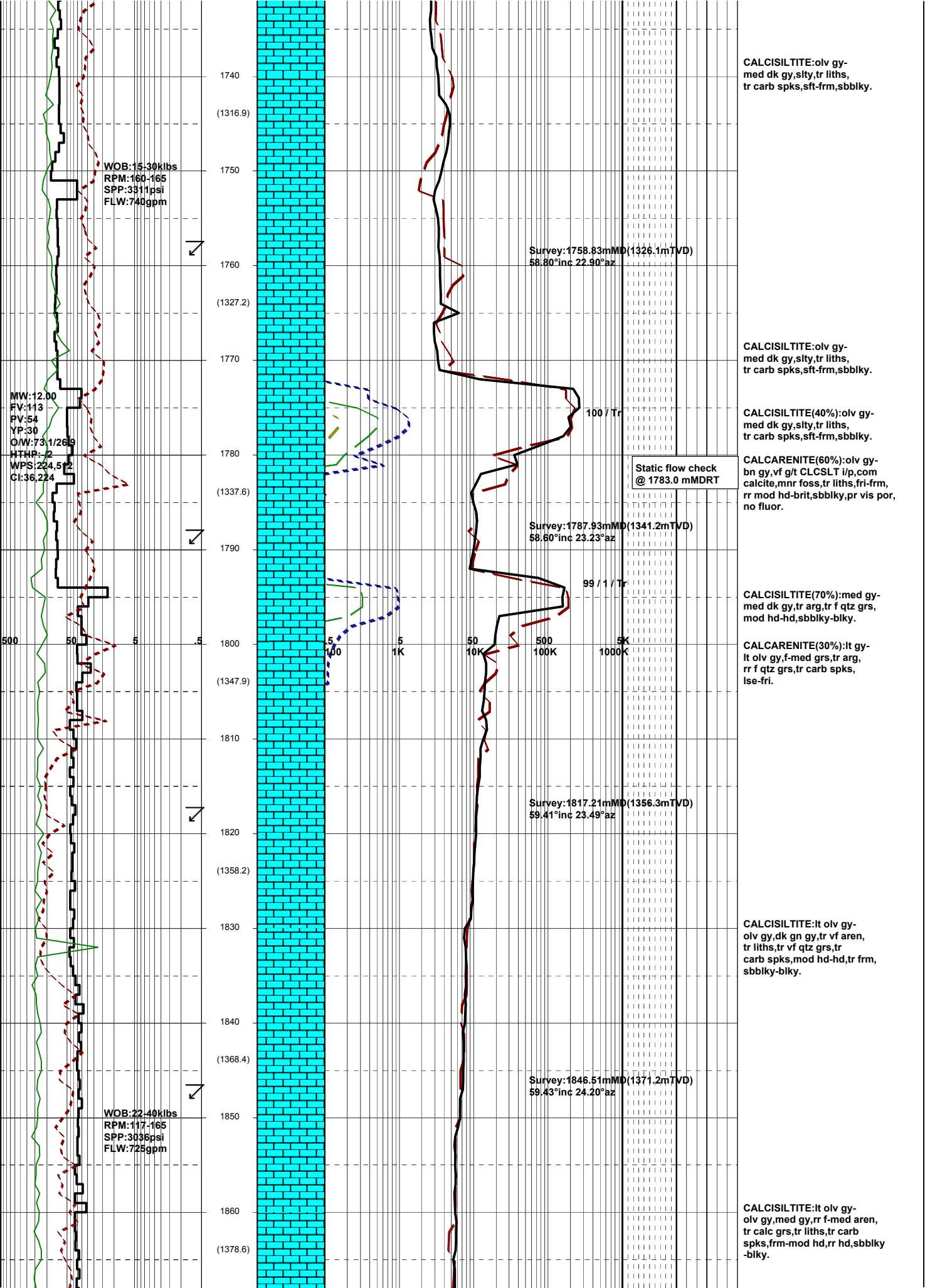
Survey: 1554.91mMDRT (1221.1mTVD)
 59.54°inc 17.94°az

Survey: 1584.26mMDRT (1236.0mTVD)
 59.48°inc 17.09°az

100 / Tr

100 / Tr





WOB:15-30kilbs
 RPM:160-165
 SPP:3311psi
 FLW:740gpm

MW:12.00
 FV:113
 PV:54
 YP:30
 O/W:73.1/269
 HTHP:2
 WPS:224.5
 CI:36.224

500 50 5 .5

5 5 50 500 5K
 100 1K 10K 100K 1000K

Static flow check
 @ 1783.0 mMDRT

CALCISILTITE:0lv gy-med dk gy, slty, tr liths, tr carb spks, sft-frm, sbbiky.

Survey:1758.83mMD(1326.1mTVD)
 58.60°inc 22.90°az

CALCISILTITE:0lv gy-med dk gy, slty, tr liths, tr carb spks, sft-frm, sbbiky.

CALCISILTITE(40%):0lv gy-med dk gy, slty, tr liths, tr carb spks, sft-frm, sbbiky.

CALCARENITE(60%):0lv gy-bn gy, vf g/t CLCSLT i/p, com calcite, mnr foss, tr liths, fri-frm, rr mod hd-brit, sbbiky, pr vis por, no fluor.

Survey:1787.93mMD(1341.2mTVD)
 58.60°inc 23.23°az

CALCISILTITE(70%):med dk gy, tr arg, tr f qtz grs, mod hd-hd, sbbiky-blky.

CALCARENITE(30%):lt olv gy, f-med grs, tr arg, rr f qtz grs, tr carb spks, lse-fri.

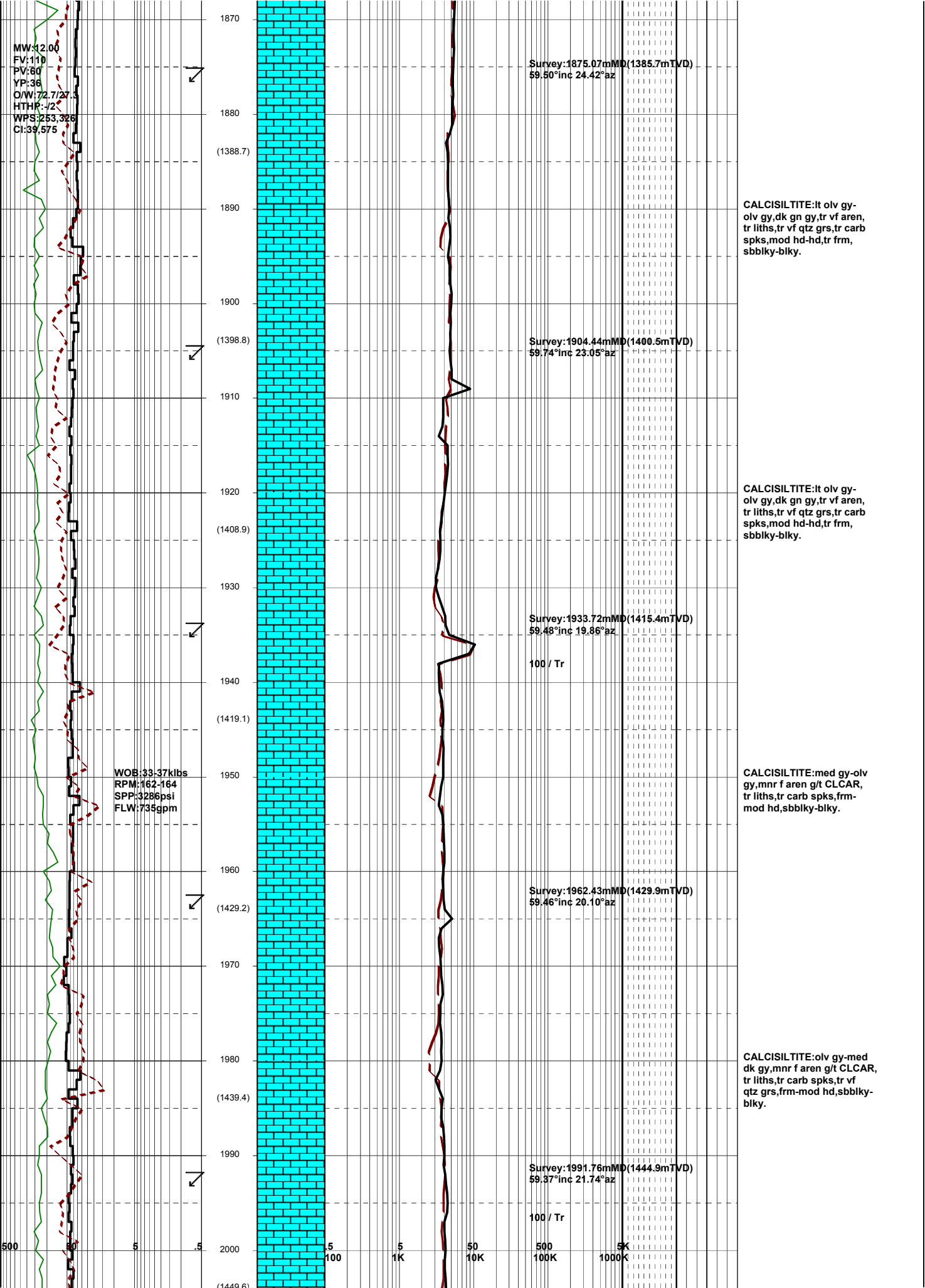
Survey:1817.21mMD(1356.3mTVD)
 59.41°inc 23.49°az

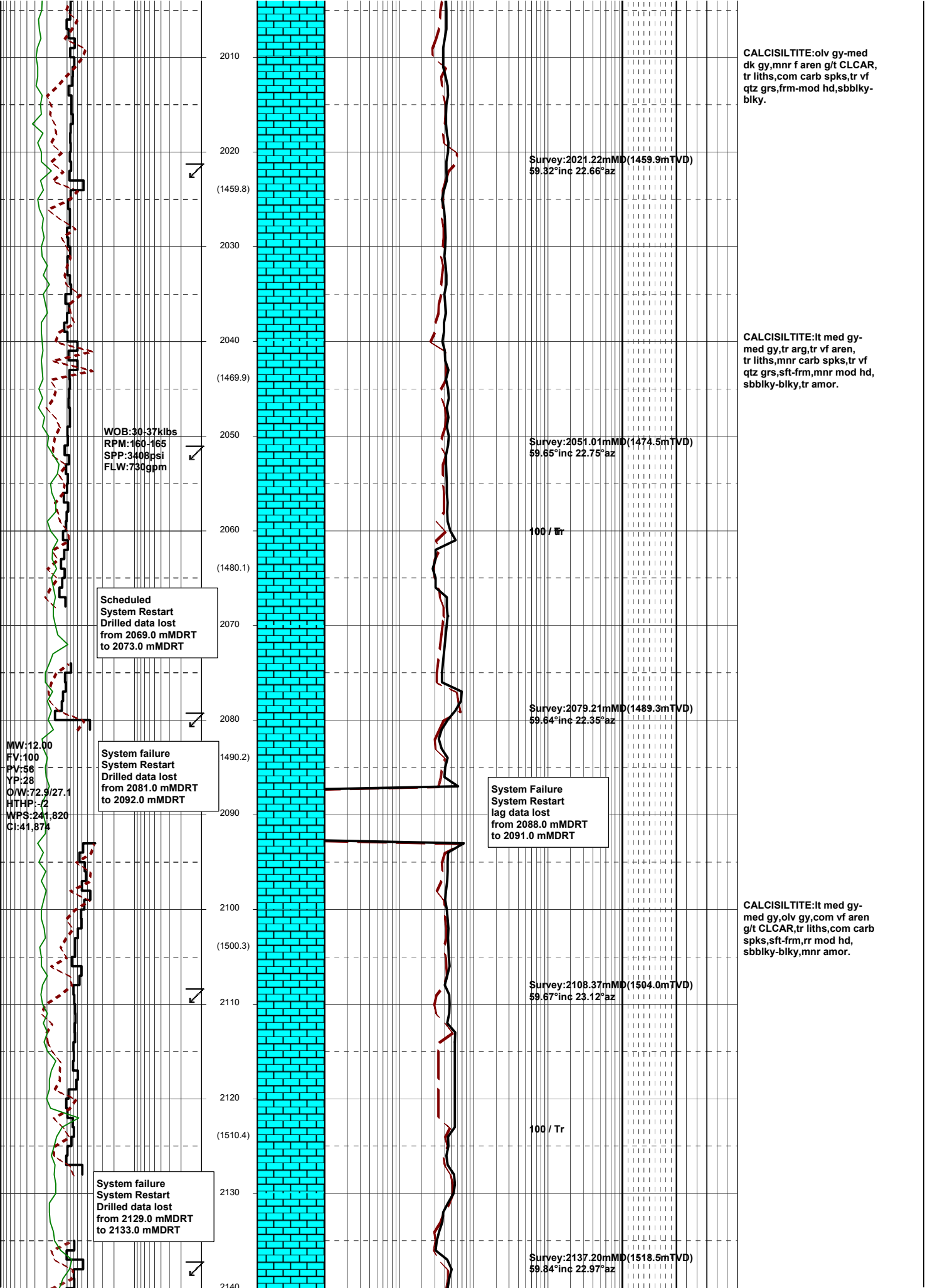
CALCISILTITE:lt olv gy-olv gy, dk gn gy, tr vf aren, tr liths, tr vf qtz grs, tr carb spks, mod hd-hd, tr frm, sbbiky-blky.

Survey:1846.51mMD(1371.2mTVD)
 59.43°inc 24.20°az

WOB:22-40kilbs
 RPM:117-165
 SPP:3036psi
 FLW:725gpm

CALCISILTITE:lt olv gy-olv gy, med gy, rr f-med aren, tr calc grs, tr liths, tr carb spks, frm-mod hd, rr hd, sbbiky-blky.





2010

2020

2030

2040

2050

2060

2070

2080

2090

2100

2110

2120

2130

2140

(1459.8)

(1469.9)

(1480.1)

1490.2

(1500.3)

(1510.4)

WOB: 30-37klbs
RPM: 160-165
SPP: 3408psi
FLW: 730gpm

Scheduled
System Restart
Drilled data lost
from 2069.0 mMDRT
to 2073.0 mMDRT

System failure
System Restart
Drilled data lost
from 2081.0 mMDRT
to 2092.0 mMDRT

System failure
System Restart
Drilled data lost
from 2129.0 mMDRT
to 2133.0 mMDRT

MW: 12.00
FV: 100
PV: 56
YP: 28
Q/W: 72.9/27.1
HTHP: -2
WPS: 241,820
C: 41,874

Survey: 2021.22mMD (1459.9mTVD)
59.32°inc 22.66°az

Survey: 2051.01mMD (1474.5mTVD)
59.65°inc 22.75°az

100 / Tr

Survey: 2079.21mMD (1489.3mTVD)
59.64°inc 22.35°az

System Failure
System Restart
lag data lost
from 2088.0 mMDRT
to 2091.0 mMDRT

Survey: 2108.37mMD (1504.0mTVD)
59.67°inc 23.12°az

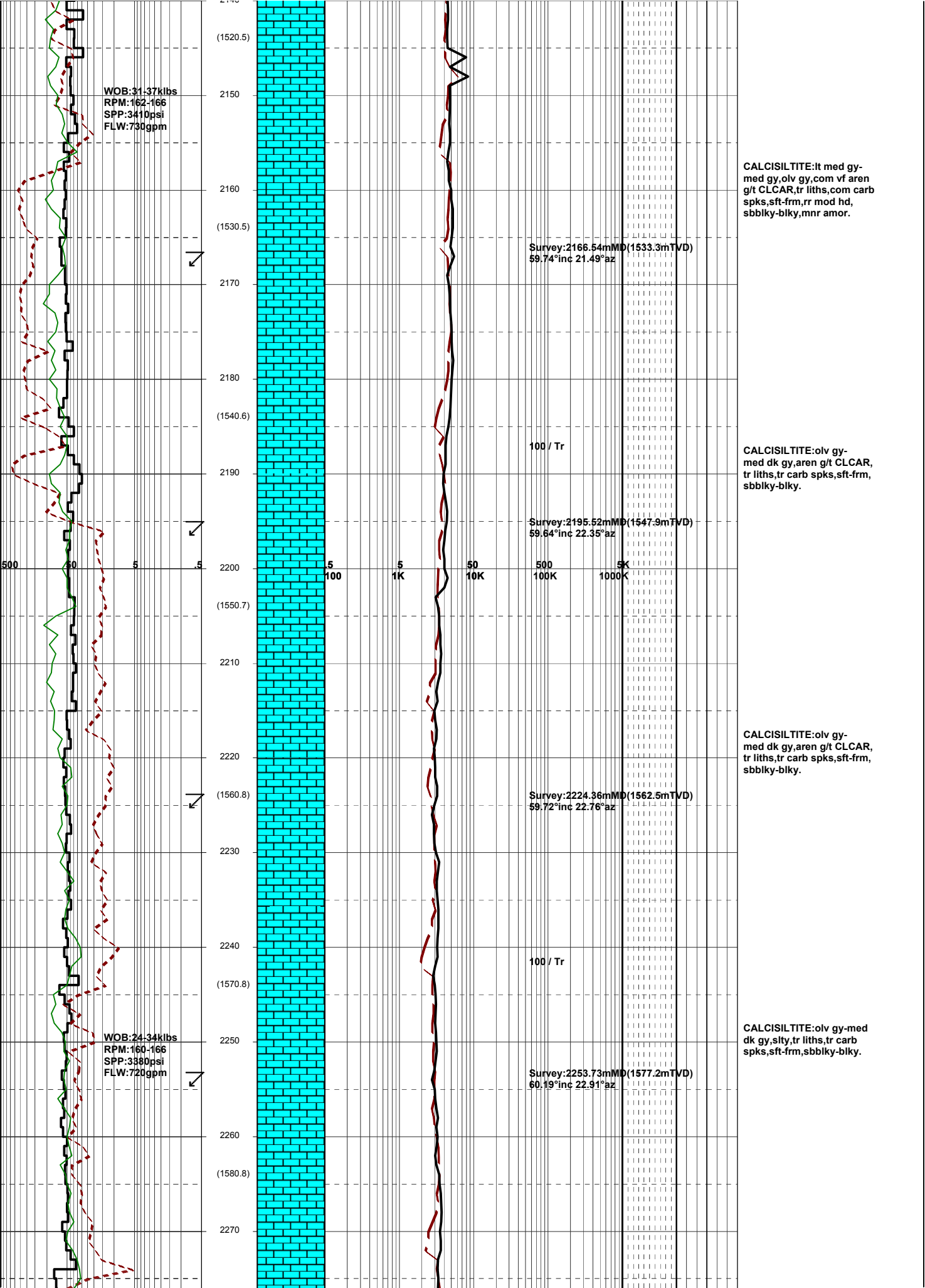
100 / Tr

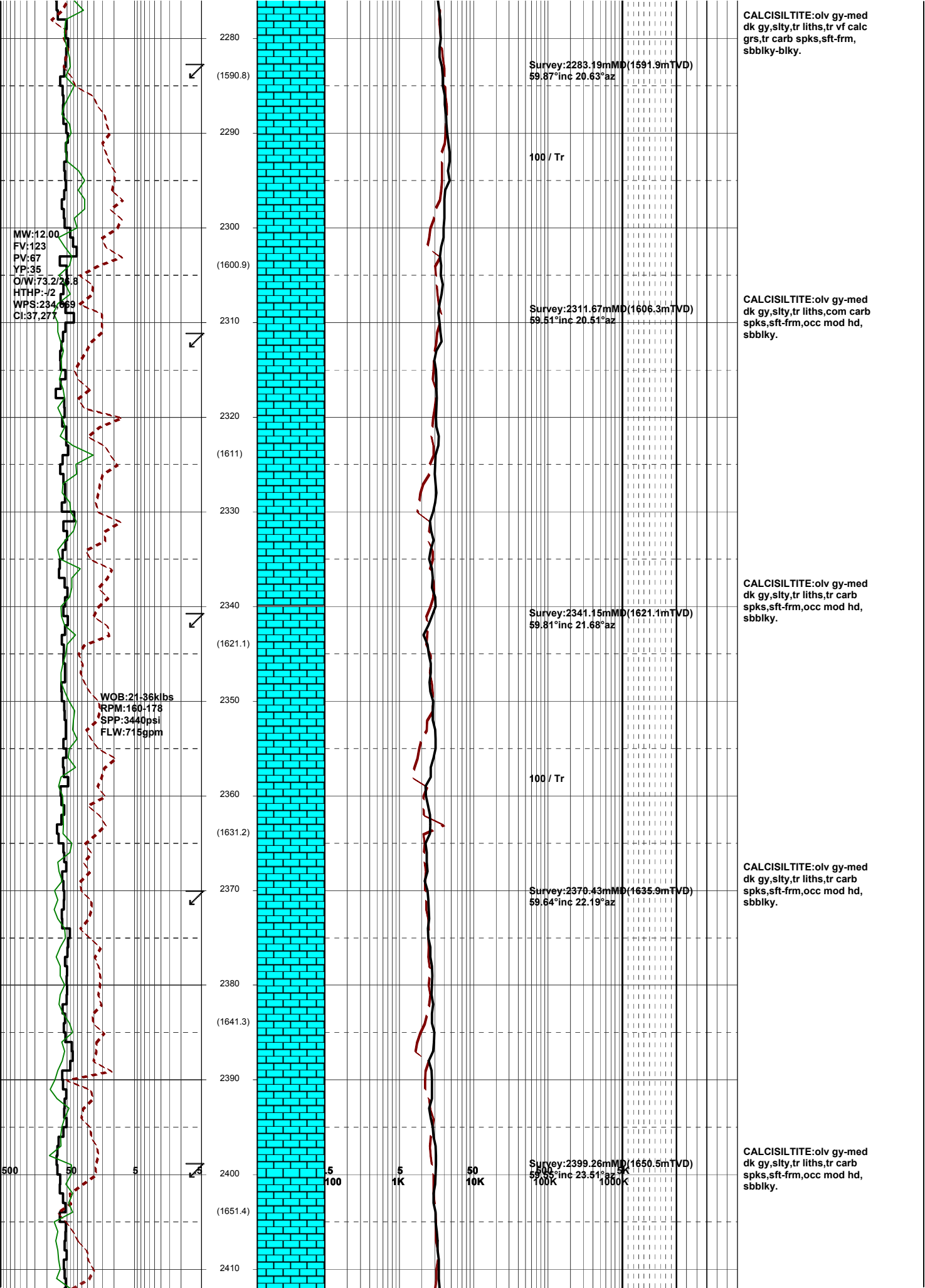
Survey: 2137.20mMD (1518.5mTVD)
59.64°inc 22.97°az

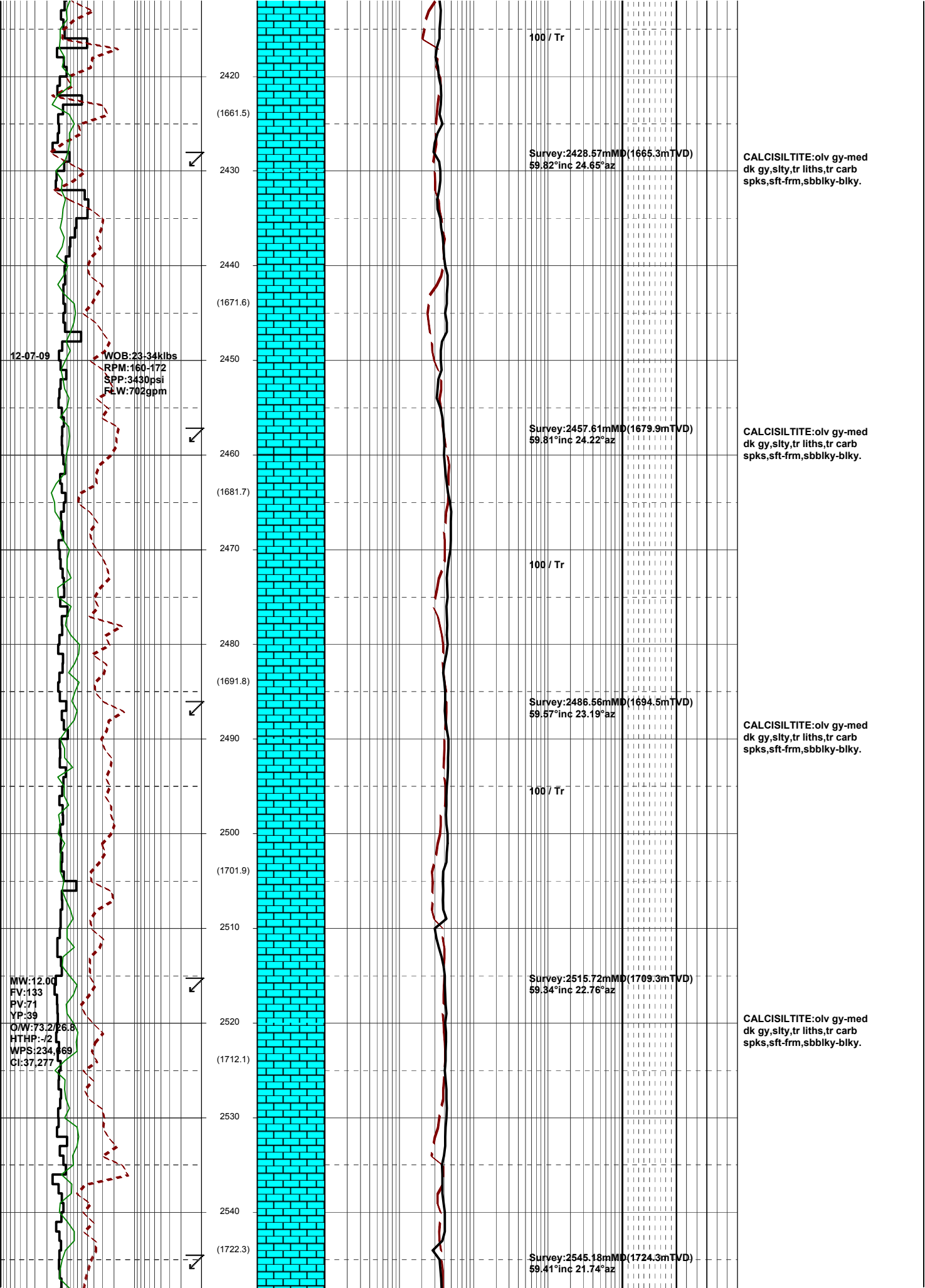
CALCISILTITE: olv gy-med dk gy, mnr f aren g/t CLCAR, tr liths, com carb spks, tr vf qtz grs, frm-mod hd, sbbiky-blky.

CALCISILTITE: It med gy-med gy, tr arg, tr vf aren, tr liths, mnr carb spks, tr vf qtz grs, sft-frm, mnr mod hd, sbbiky-blky, tr amor.

CALCISILTITE: It med gy-med gy, olv gy, com vf aren g/t CLCAR, tr liths, com carb spks, sft-frm, rr mod hd, sbbiky-blky, mnr amor.

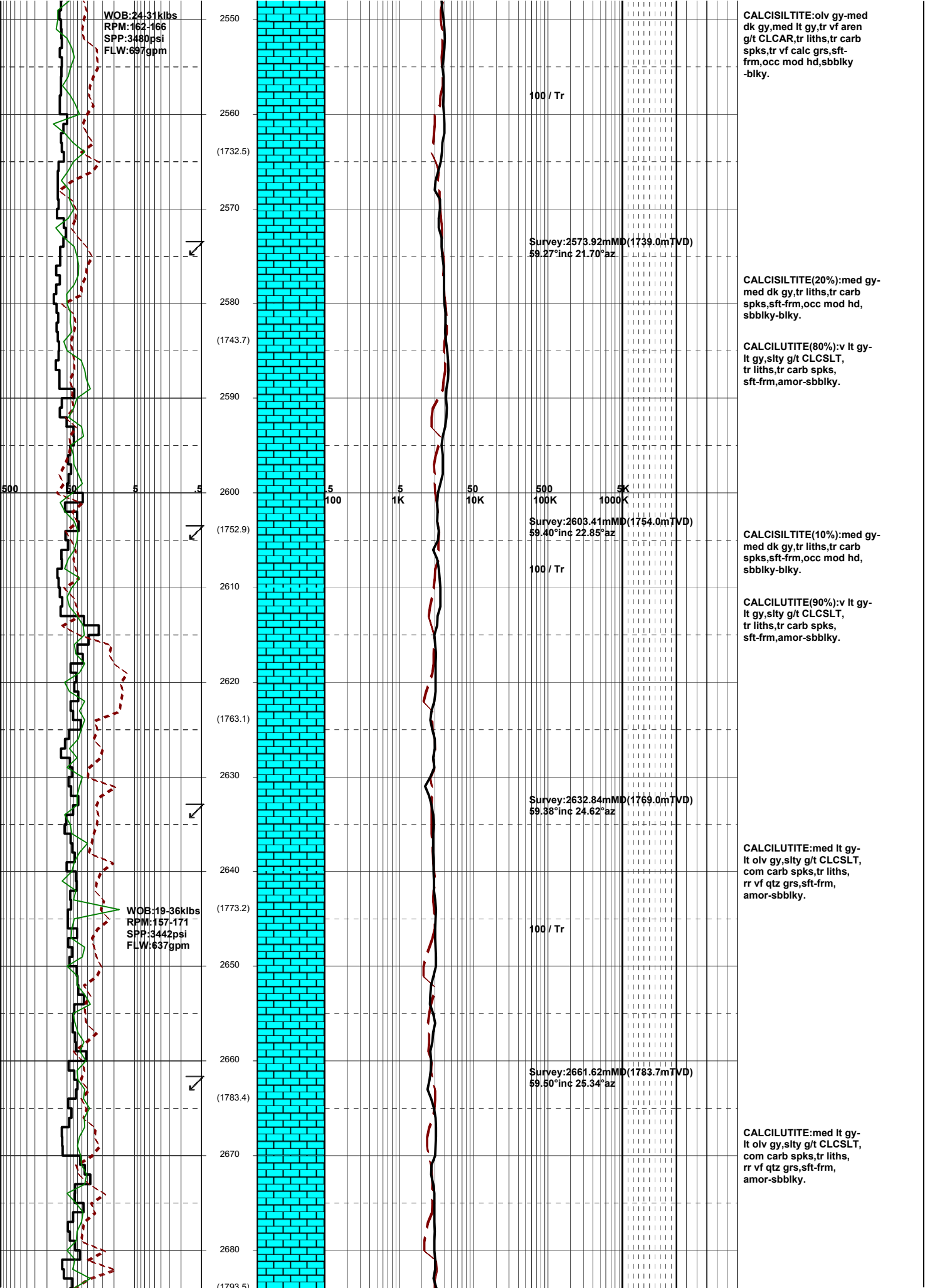






WOB:24-31klbs
RPM:162-166
SPP:3480psi
FLW:697gpm

WOB:19-36klbs
RPM:157-171
SPP:3442psi
FLW:637gpm



100 / Tr

Survey:2573.92mMD(1739.0mTVD)
59.27°inc 21.70°az

Survey:2603.41mMD(1754.0mTVD)
59.40°inc 22.85°az

Survey:2632.84mMD(1769.0mTVD)
59.38°inc 24.62°az

100 / Tr

Survey:2661.62mMD(1783.7mTVD)
59.50°inc 25.34°az

CALCISILTITE:olv gy-med dk gy,med lt gy,tr vf aren g/t CLCAR,tr liths,tr carb spks,tr vf calc grs,sft-frm,occ mod hd,sbbiky -biky.

CALCISILTITE(20%):med gy-med dk gy,tr liths,tr carb spks,sft-frm,occ mod hd, sbbiky-biky.

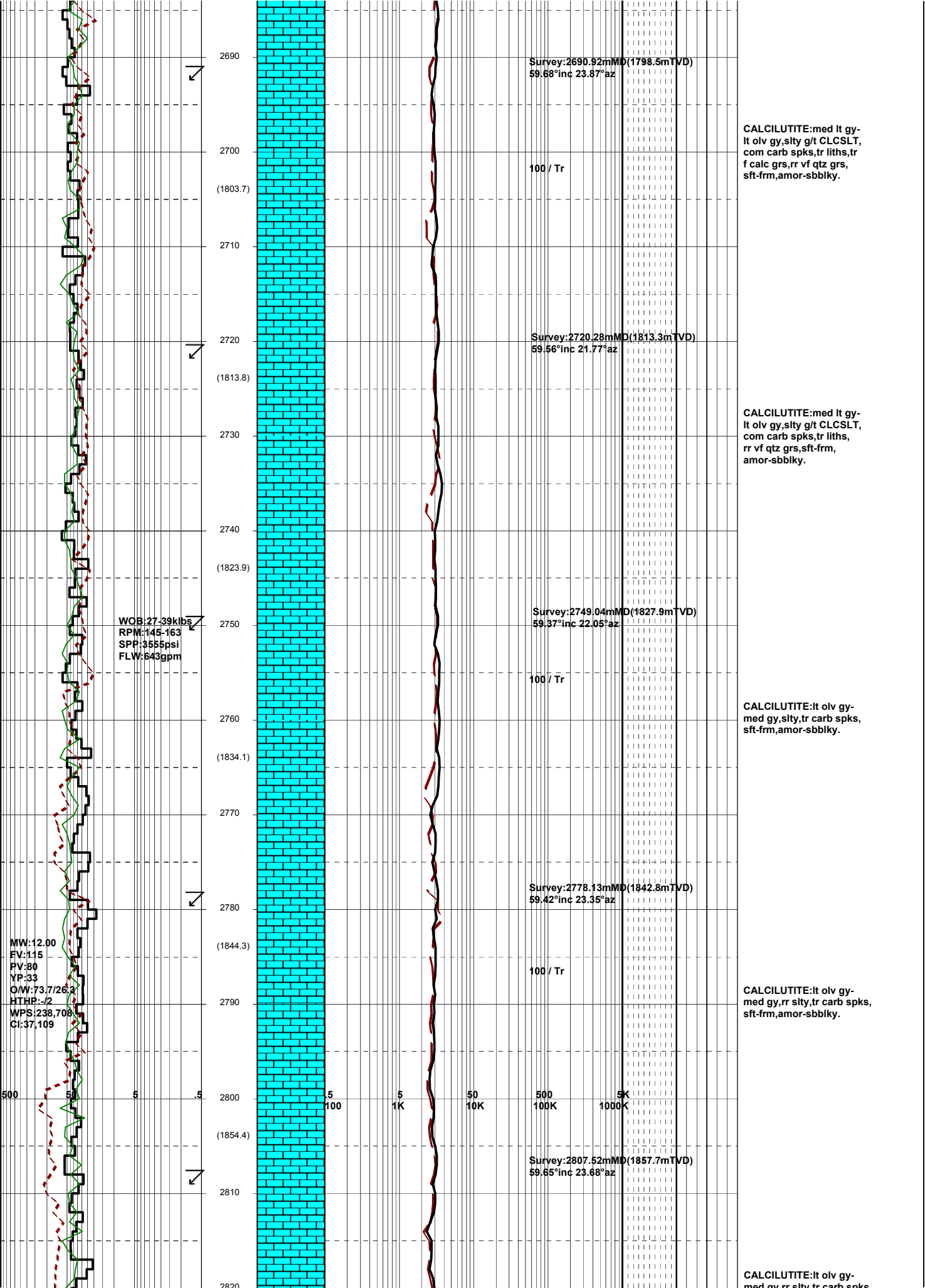
CALCILUTITE(80%):v lt gy-lt gy,sity g/t CLCSLT, tr liths,tr carb spks, sft-frm,amor-sbbiky.

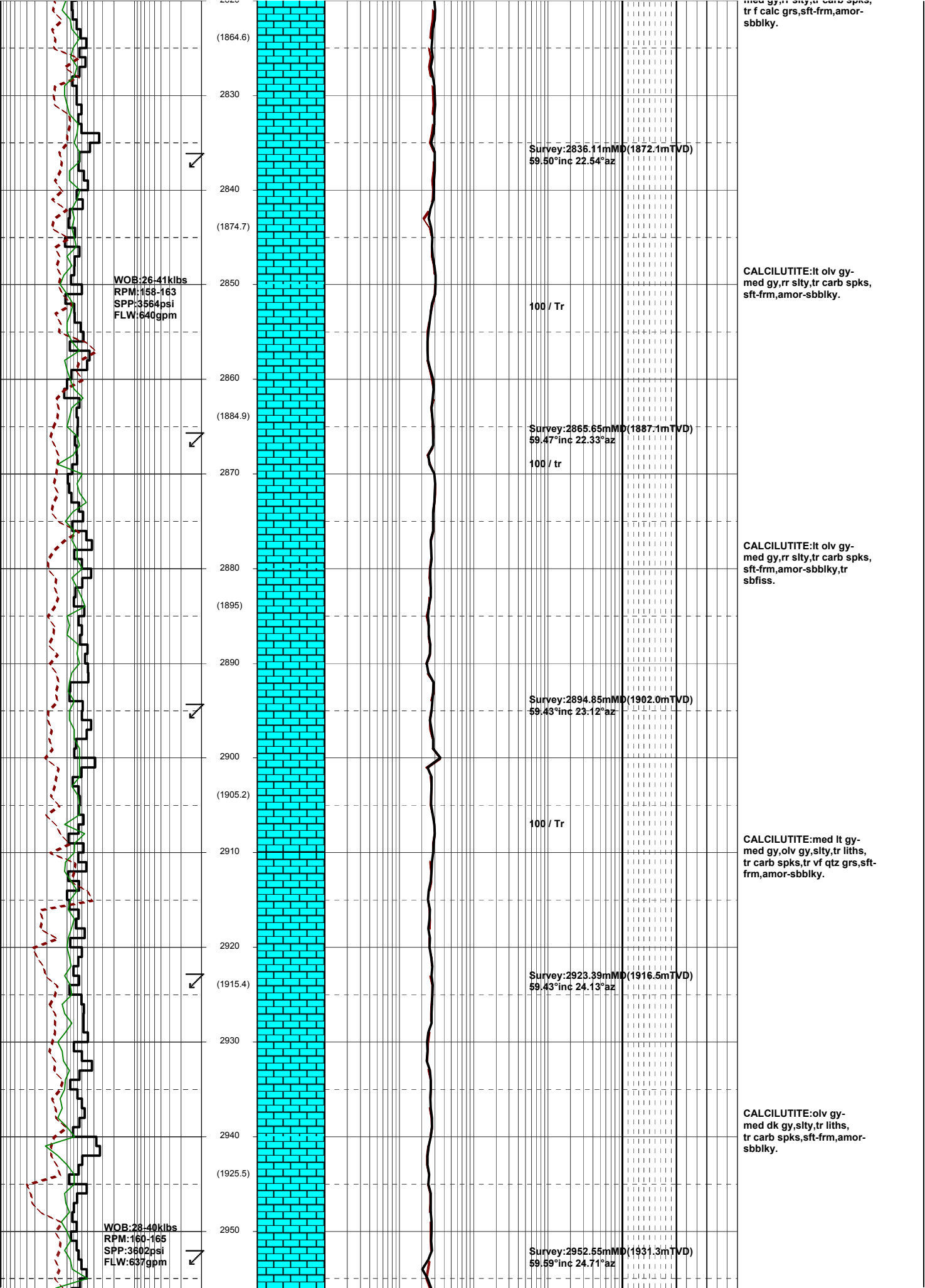
CALCISILTITE(10%):med gy-med dk gy,tr liths,tr carb spks,sft-frm,occ mod hd, sbbiky-biky.

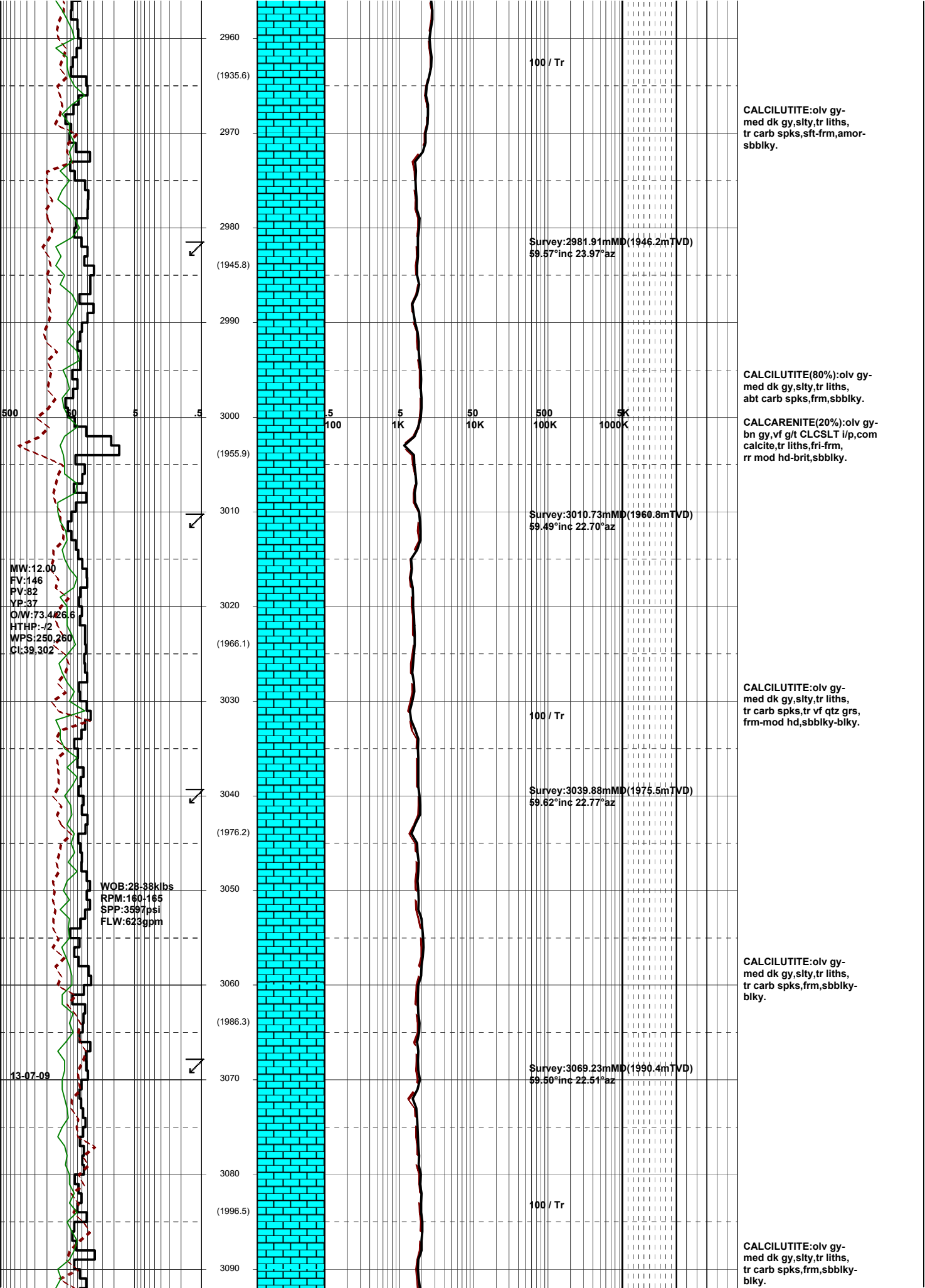
CALCILUTITE(90%):v lt gy-lt gy,sity g/t CLCSLT, tr liths,tr carb spks, sft-frm,amor-sbbiky.

CALCILUTITE:med lt gy-lt olv gy,sity g/t CLCSLT, com carb spks,tr liths, rr vf qtz grs,sft-frm, amor-sbbiky.

CALCILUTITE:med lt gy-lt olv gy,sity g/t CLCSLT, com carb spks,tr liths, rr vf qtz grs,sft-frm, amor-sbbiky.







CALCILUTITE: olv gy-med dk gy, slty, tr liths, tr carb spks, sft frm, amor-sbbkly.

CALCILUTITE(80%): olv gy-med dk gy, slty, tr liths, abt carb spks, frm, sbbkly.

CALCARENITE(20%): olv gy-bn gy, vf g/t CLCSLT i/p, com calcite, tr liths, fri-frm, rr mod hd-brit, sbbkly.

CALCILUTITE: olv gy-med dk gy, slty, tr liths, tr carb spks, tr vf qtz grs, frm-mod hd, sbbkly-blky.

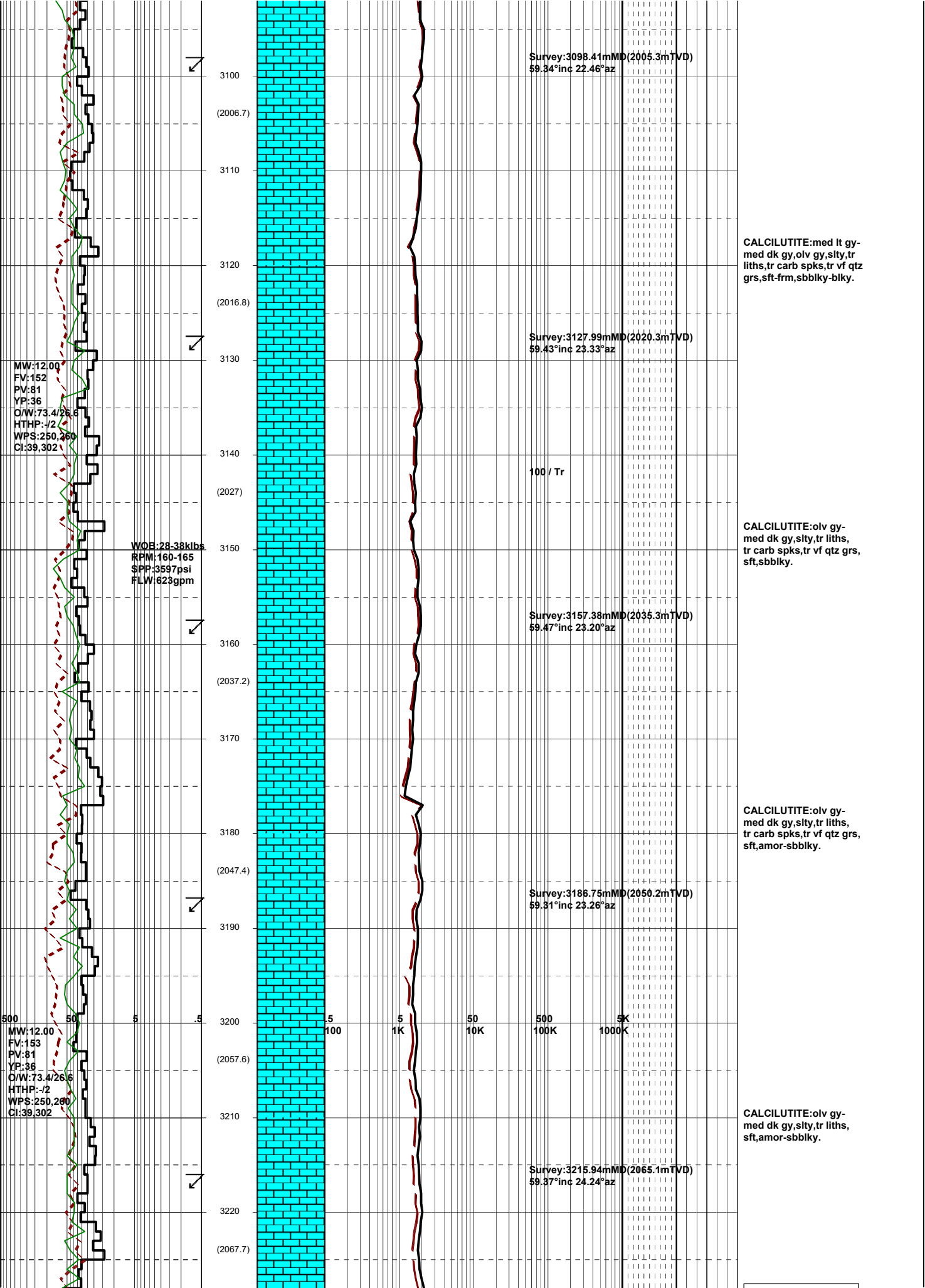
CALCILUTITE: olv gy-med dk gy, slty, tr liths, tr carb spks, frm, sbbkly-blky.

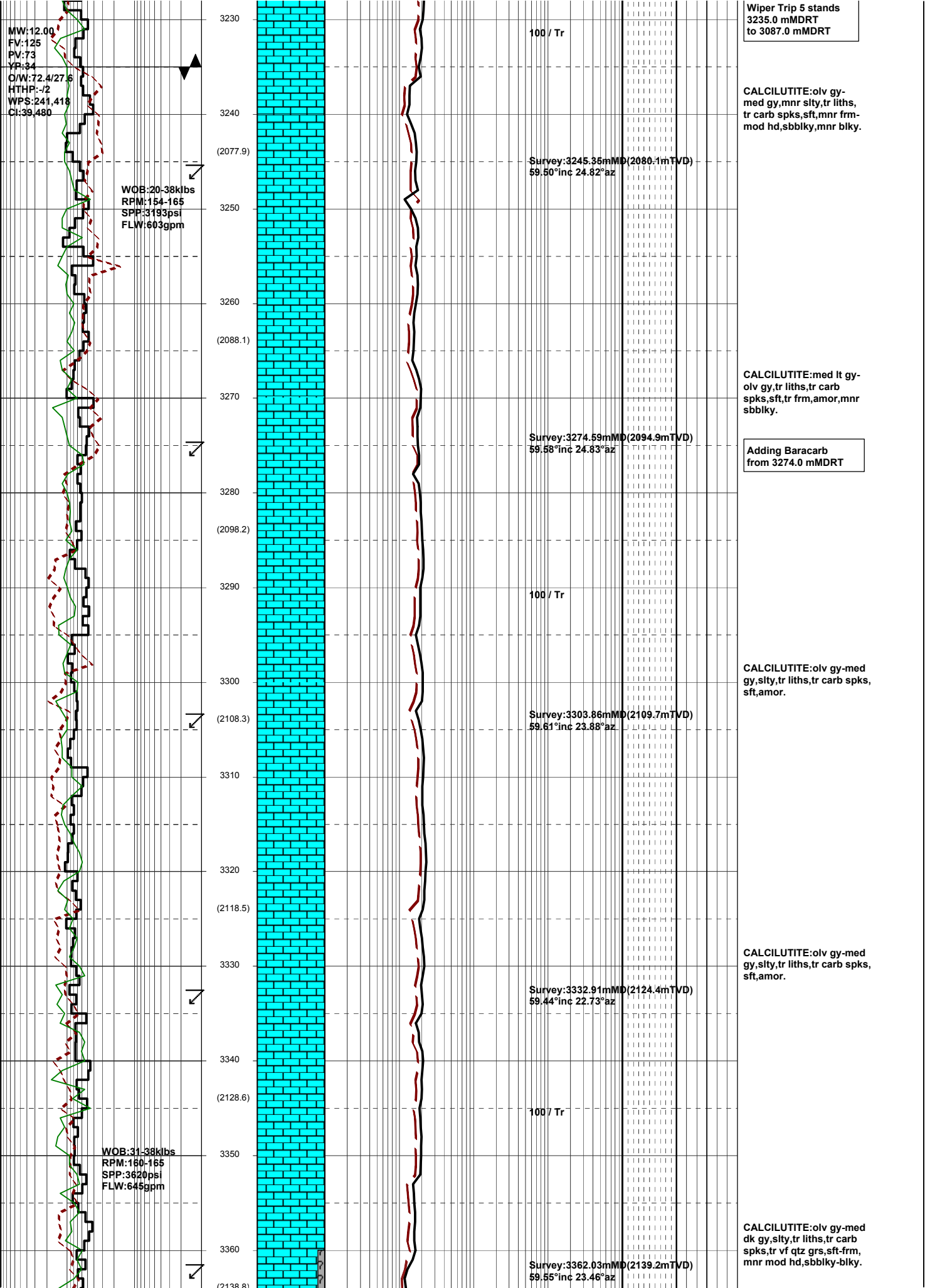
CALCILUTITE: olv gy-med dk gy, slty, tr liths, tr carb spks, frm, sbbkly-blky.

MW: 12.00
 FV: 146
 PV: 82
 YP: 37
 O/W: 73.4/26.6
 HTHP: -/2
 WPS: 250,260
 CL: 39,302

WOB: 28-38klbs
 RPM: 160-165
 SPP: 3597psi
 FLW: 623gpm

13-07-09





MW:12.00
 FV:125
 PV:73
 YP:34
 O/W:72.4/27.6
 HTHP:-2
 WPS:241,418
 CI:39,480

WOB:20-38klbs
 RFM:154-165
 SPP:3193psi
 FLW:603gpm

WOB:31-38klbs
 RPM:180-185
 SPP:3620psi
 FLW:645gpm

100 / Tr

Survey:3245.35mMD(2080.1mTVD)
 59.50°inc 24.82°az

Survey:3274.59mMD(2094.9mTVD)
 59.58°inc 24.83°az

100 / Tr

Survey:3303.86mMD(2109.7mTVD)
 59.61°inc 23.88°az

Survey:3332.91mMD(2124.4mTVD)
 59.44°inc 22.73°az

100 / Tr

Survey:3362.03mMD(2139.2mTVD)
 59.55°inc 23.46°az

Wiper Trip 5 stands
 3235.0 mMVRT
 to 3087.0 mMVRT

CALCILUTITE:olv gy-med gy,mnr slty,tr liths, tr carb spks,sft,mnr frm-mod hd,sbbkly,mnr blkly.

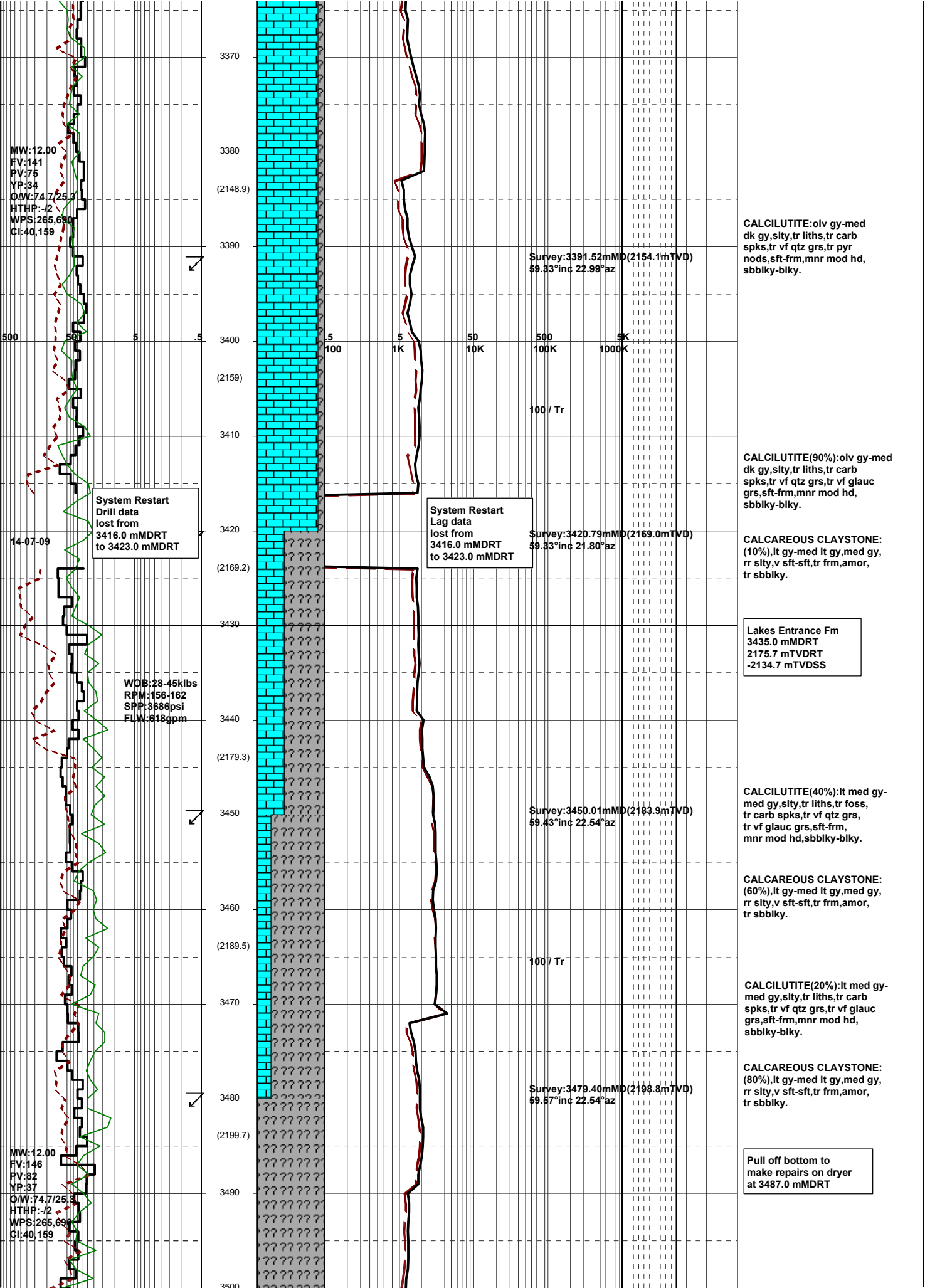
CALCILUTITE:med lt gy-olv gy,tr liths,tr carb spks,sft,tr frm,amor,mnr sbbkly.

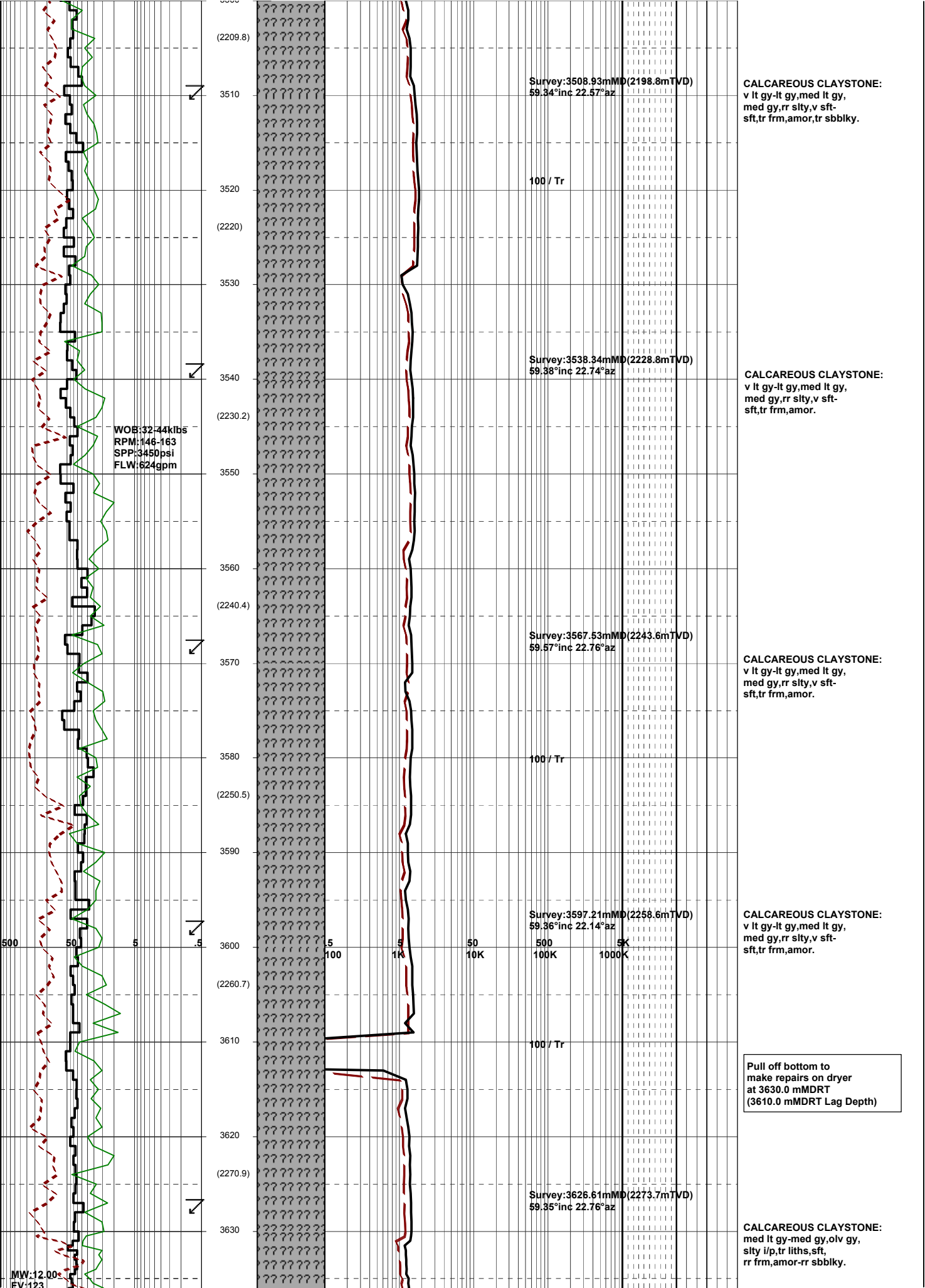
Adding Baracarb from 3274.0 mMVRT

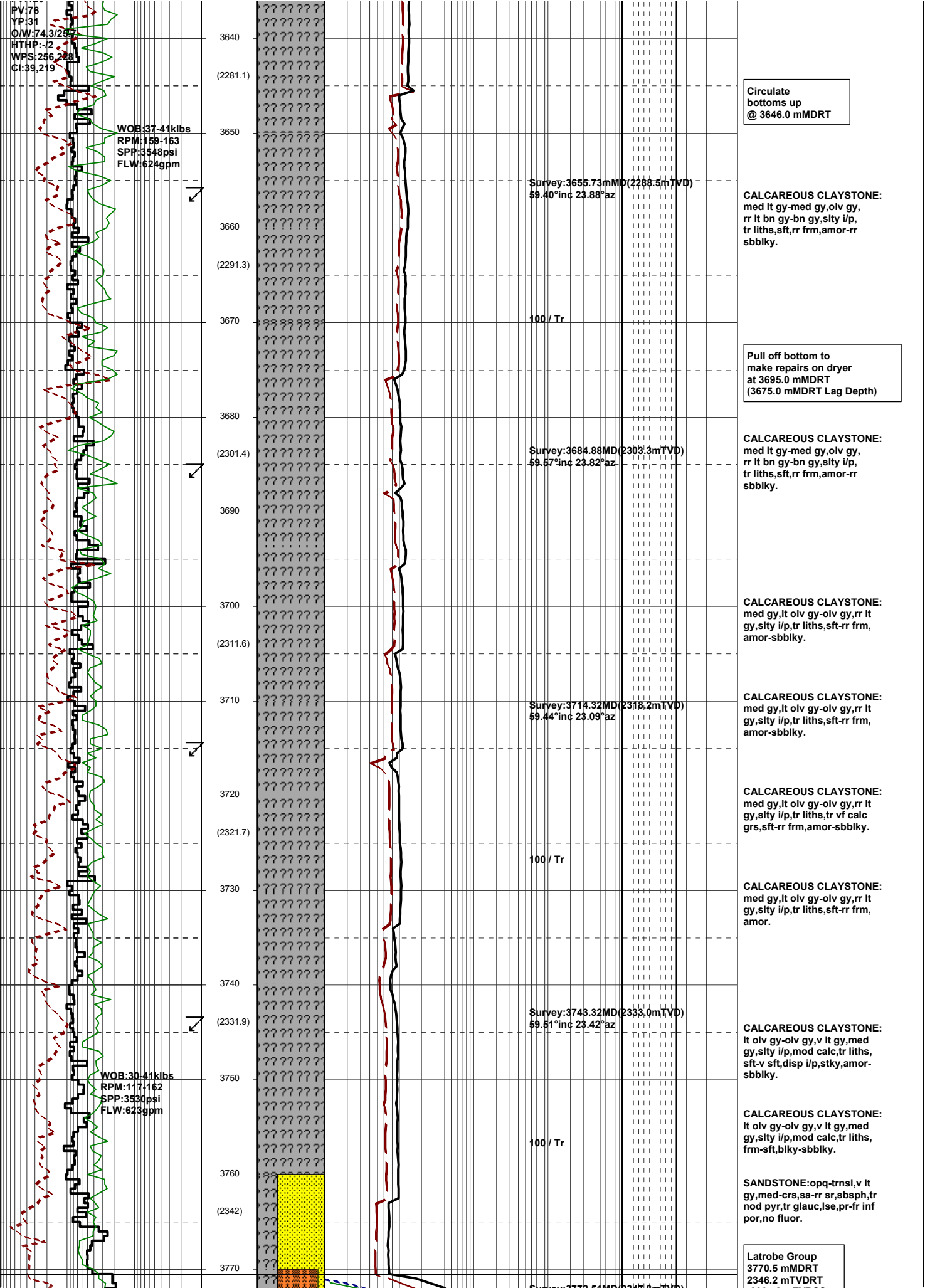
CALCILUTITE:olv gy-med gy,slty,tr liths,tr carb spks,sft,amor.

CALCILUTITE:olv gy-med gy,slty,tr liths,tr carb spks,sft,amor.

CALCILUTITE:olv gy-med dk gy,sity,tr liths,tr carb spks,tr vf qtz grs,sft-frm,mnr mod hd,sbbkly-blky.







PV:76
 YP:31
 O/W:74.3/25.7
 HTHP:-12
 WPS:256.228
 CI:39.219

WOB:37-41klbs
 RPM:159-163
 SPP:3548psi
 FLW:624gpm

WOB:30-41klbs
 RPM:117-162
 SPP:3530psi
 FLW:623gpm

Circulate
 bottoms up
 @ 3646.0 mMDRT

Survey:3655.73mMDRT(2288.5mTVD)
 59.40°inc 23.88°az

CALCAREOUS CLAYSTONE:
 med lt gy-med gy,olv gy,
 rr lt bn gy-bn gy,slty i/p,
 tr liths,sft,rr frm,amor-rr
 sbbkly.

100 / Tr

Pull off bottom to
 make repairs on dryer
 at 3695.0 mMDRT
 (3675.0 mMDRT Lag Depth)

Survey:3684.88mMDRT(2303.3mTVD)
 59.57°inc 23.82°az

CALCAREOUS CLAYSTONE:
 med lt gy-med gy,olv gy,
 rr lt bn gy-bn gy,slty i/p,
 tr liths,sft,rr frm,amor-rr
 sbbkly.

Survey:3714.32mMDRT(2318.2mTVD)
 59.44°inc 23.09°az

CALCAREOUS CLAYSTONE:
 med gy,lt olv gy-olv gy,rr lt
 gy,slty i/p,tr liths,sft-rr frm,
 amor-sbbkly.

100 / Tr

CALCAREOUS CLAYSTONE:
 med gy,lt olv gy-olv gy,rr lt
 gy,slty i/p,tr liths,tr vf calc
 grs,sft-rr frm,amor-sbbkly.

Survey:3743.32mMDRT(2333.0mTVD)
 59.51°inc 23.42°az

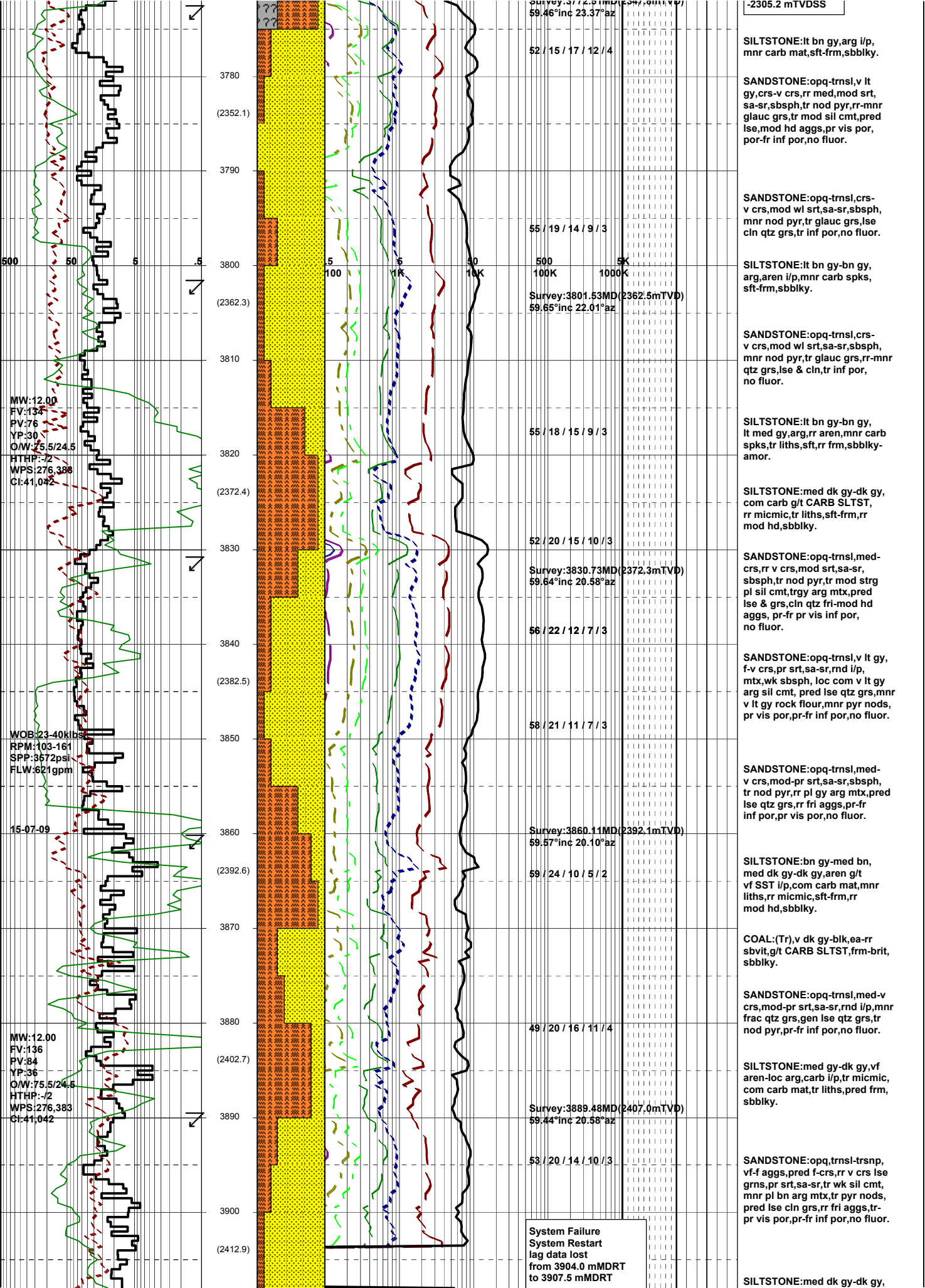
CALCAREOUS CLAYSTONE:
 lt olv gy-olv gy,v lt gy,med
 gy,slty i/p,mod calc,tr liths,
 sft-v sft,disp i/p,stky,amor-
 sbbkly.

100 / Tr

CALCAREOUS CLAYSTONE:
 lt olv gy-olv gy,v lt gy,med
 gy,slty i/p,mod calc,tr liths,
 frm-sft,bkly-sbbkly.

SANDSTONE:opq-trmsl,v lt
 gy,med-crs,sa-rr sr,sbsph,tr
 nod pyr,tr glauc,lse,pr-fr inf
 por,no fluor.

Latrobe Group
 3770.5 mMDRT
 2346.2 mTVDRT



-2305.2 mTVDSS

SILTSTONE:lt bn gy,arg i/p,
mnr carb mat,sft frm,sbbkly.

SANDSTONE:opq-trnsl,v lt
gy,crs-v crs,rr med,mod srt,
sa-sr,sbsph,tr nod pyr,rr-mnr
glauc grs,tr mod sil cmt,pred
lse,mod hd aggs,pr vis por,
por-fr inf por,no fluor.

SANDSTONE:opq-trnsl,crs-
v crs,mod wl srt,sa-sr,sbsph,
mnr nod pyr,tr glauc grs,lse
cln qtz grs,tr inf por,no fluor.

SILTSTONE:lt bn gy-bn gy,
arg,aren i/p,mnr carb spks,
sft frm,sbbkly.

SANDSTONE:opq-trnsl,crs-
v crs,mod wl srt,sa-sr,sbsph,
mnr nod pyr,tr glauc grs,rr-mnr
qtz grs,lse & cln,tr inf por,
no fluor.

SILTSTONE:lt bn gy-bn gy,
lt med gy,arg,rr aren,mnr carb
spks,rr liths,sft,rr frm,sbbkly-
amor.

SILTSTONE:med dk gy-dk gy,
com carb g/t CARB SLTST,
rr micmic,tr liths,sft-frm,rr
mod hd,sbbkly.

SANDSTONE:opq-trnsl,med-
crs,rr v crs,mod srt,sa-sr,
sbsph,tr nod pyr,tr mod strg
pl sil cmt,trgy arg mtx,pred
lse & grs,cln qtz fri-mod hd
aggs, pr-fr pr vis inf por,
no fluor.

SANDSTONE:opq-trnsl,v lt gy,
f-v crs,pr srt,sa-sr,rd i/p,
mtx,wk sbsph, loc com v lt gy
arg sil cmt, pred lse qtz grs,mnr
v lt gy rock flour,mnr pyr nods,
pr vis por,pr-fr inf por,no fluor.

SANDSTONE:opq-trnsl,med-
v crs,mod-pr srt,sa-sr,sbsph,
tr nod pyr,rr pl gy arg mtx,pred
lse qtz grs,rr fri aggs,pr-fr
inf por,pr vis por,no fluor.

SILTSTONE:bn gy-med bn,
med dk gy-dk gy,aren g/t
vf SST i/p,com carb mat,mnr
liths,rr micmic,sft-frm,rr
mod hd,sbbkly.

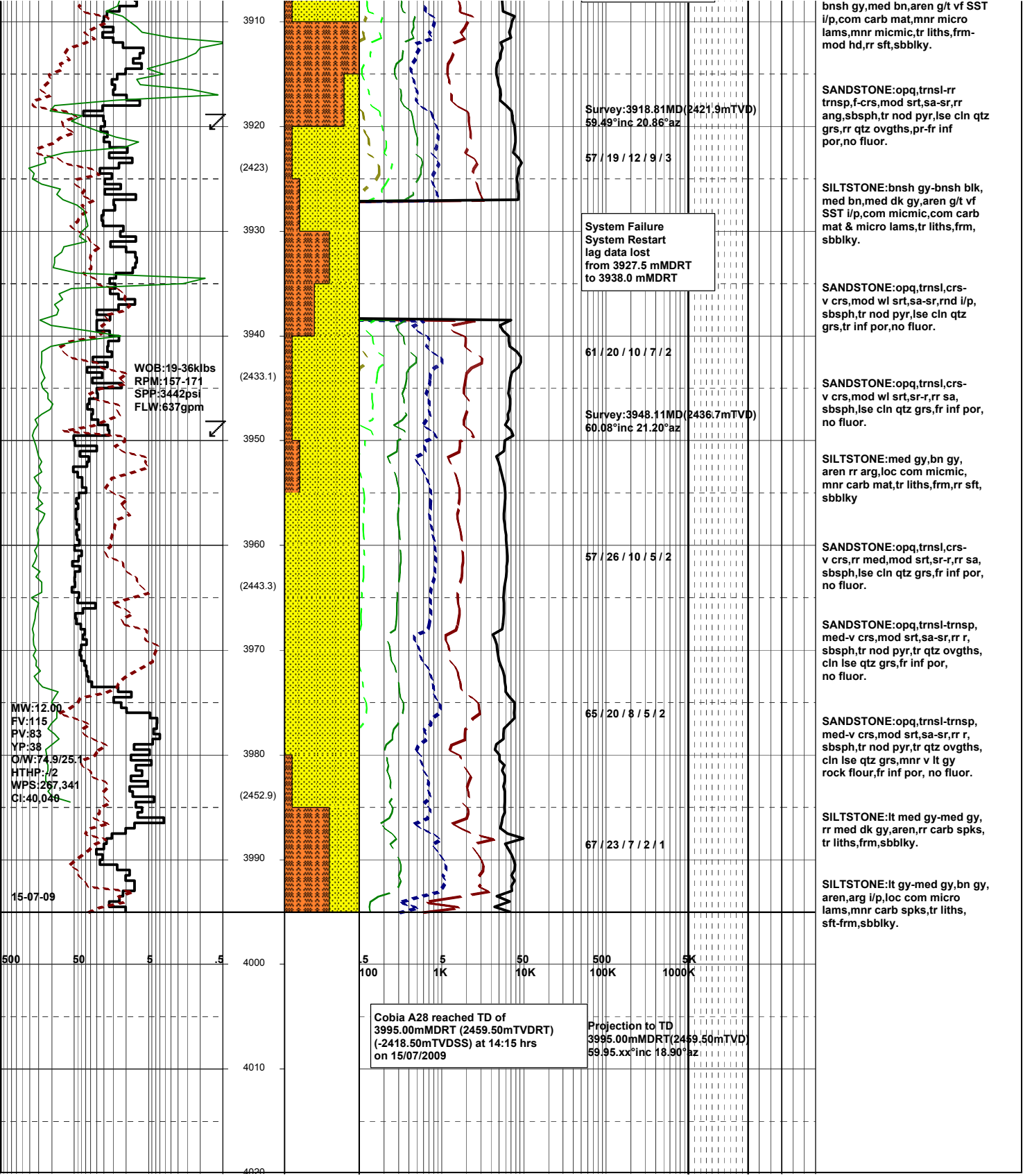
COAL:(Tr),v dk gy-blk,ea-rr
sbvit,g/t CARB SLTST,frm-brit,
sbbkly.

SANDSTONE:opq-trnsl,med-v
crs,mod-pr srt,sa-sr,rd i/p,mnr
frac qtz grs,gen lse qtz grs,
tr nod pyr,pr-fr inf por,no fluor.

SILTSTONE:med gy-dk gy,vf
aren-loc arg,carb i/p,tr micmic,
com carb mat,tr liths,pred frm,
sbbkly.

SANDSTONE:opq,tnsl-trsnp,
vf-f aggs,pred f-crs,rr v crs lse
grs,pr srt,sa-sr,tr wk sil cmt,
mnr pl bn arg mtx,tr pyr nods,
pred lse cln grs,rr fri aggs,pr-
fr vis por,pr-fr inf por,no fluor.

SILTSTONE:med dk gy-dk gy,



WOB:19-36klbs
 RPM:157-171
 SPP:3442psi
 FLW:637gpm

MW:12.00
 FV:115
 PV:83
 YP:38
 O/W:74.9/25.1
 HTHP:1/2
 WPS:267,341
 CI:40,049

15-07-09

Survey:3918.81MD(2421.9mTVD)

59.49°inc 20.86°az

57 / 19 / 12 / 9 / 3

System Failure
 System Restart
 lag data lost
 from 3927.5 mMDRT
 to 3938.0 mMDRT

61 / 20 / 10 / 7 / 2

Survey:3948.11MD(2436.7mTVD)

60.08°inc 21.20°az

57 / 26 / 10 / 5 / 2

65 / 20 / 8 / 5 / 2

67 / 23 / 7 / 2 / 1

Cobia A28 reached TD of
 3995.00mMDRT (2459.50mTVDRT)
 (-2418.50mTVDSS) at 14:15 hrs
 on 15/07/2009

Projection to TD

3995.00mMDRT(2459.50mTVD)

59.95°inc 18.90°az

bnsb gy,med bn,aren g/t vf SST
 i/p,com carb mat,mnr micro
 lams,mnr micmic,tr liths,frm-
 mod hd,rr sft,sbbkly.

SANDSTONE:opq,trnsi-rr
 trnsp,f-crs,mod srt,sa-sr,rr
 ang,sbsph,tr nod pyr,lse cln qtz
 grs,rr qtz ovghts,pr-fr inf
 por,no fluor.

SILTSTONE:bnsb gy-bnsb blk,
 med bn,med dk gy,aren g/t vf
 SST i/p,com micmic,com carb
 mat & micro lams,tr liths,frm,
 sbbkly.

SANDSTONE:opq,trnsi,crs-
 v crs,mod wl srt,sa-sr,rd i/p,
 sbsph,tr nod pyr,lse cln qtz
 grs,tr inf por,no fluor.

SANDSTONE:opq,trnsi,crs-
 v crs,mod wl srt,sr,rr sa,
 sbsph,lse cln qtz grs,fr inf por,
 no fluor.

SILTSTONE:med gy,bn gy,
 aren rr arg,loc com micmic,
 mnr carb mat,tr liths,frm,rr sft,
 sbbkly

SANDSTONE:opq,trnsi,crs-
 v crs,rr med,mod srt,sr,rr sa,
 sbsph,lse cln qtz grs,fr inf por,
 no fluor.

SANDSTONE:opq,trnsi-trnsp,
 med-v crs,mod srt,sa-sr,rr r,
 sbsph,tr nod pyr,tr qtz ovghts,
 cln lse qtz grs,fr inf por,
 no fluor.

SANDSTONE:opq,trnsi-trnsp,
 med-v crs,mod srt,sa-sr,rr r,
 sbsph,tr nod pyr,tr qtz ovghts,
 cln lse qtz grs,mnr v lt gy
 rock flour,fr inf por, no fluor.

SILTSTONE:lt med gy-med gy,
 rr med dk gy,aren,rr carb spks,
 tr liths,frm,sbbkly.

SILTSTONE:lt gy-med gy,bn gy,
 aren,arg i/p,loc com micro
 lams,mnr carb spks,tr liths,
 sft-frm,sbbkly.

