



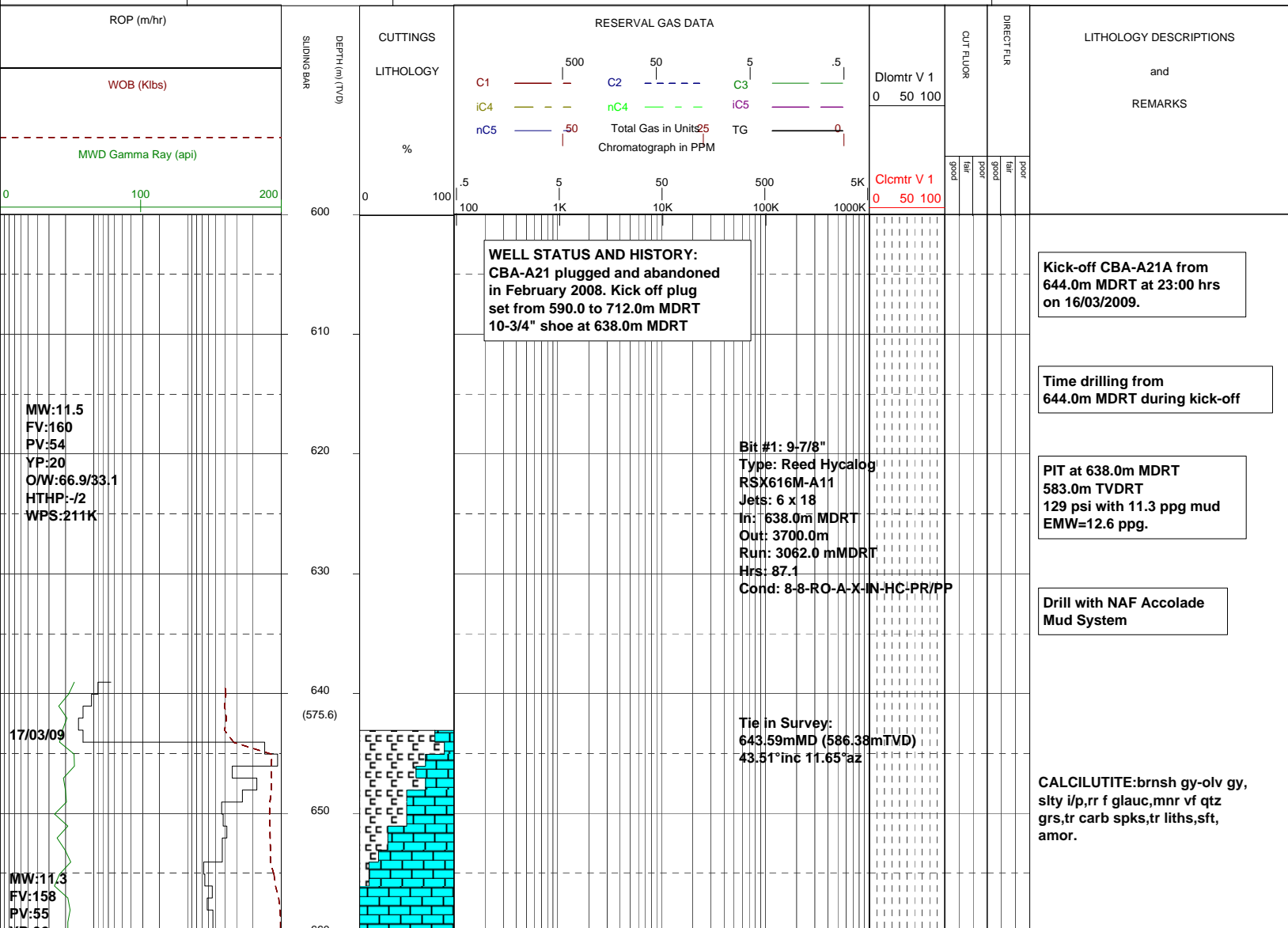
MASTERLOG

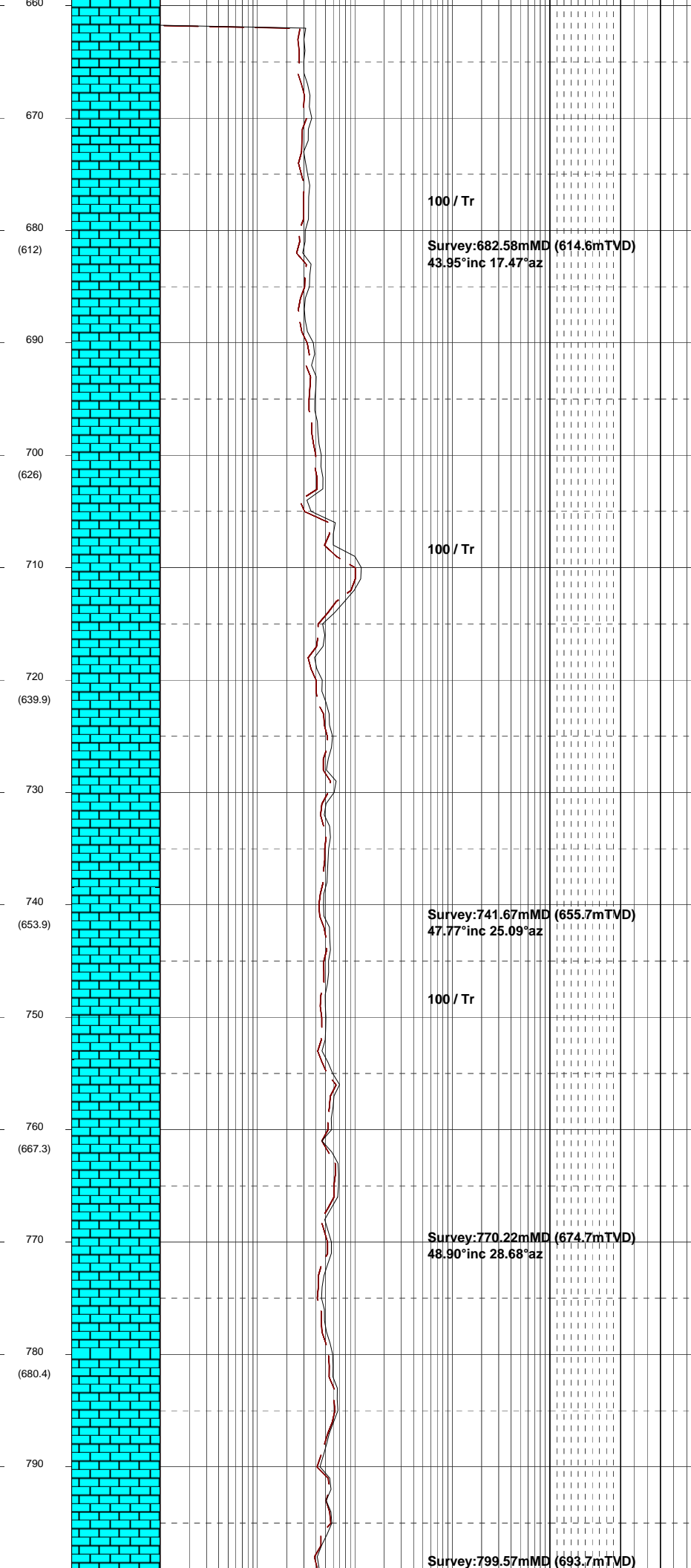
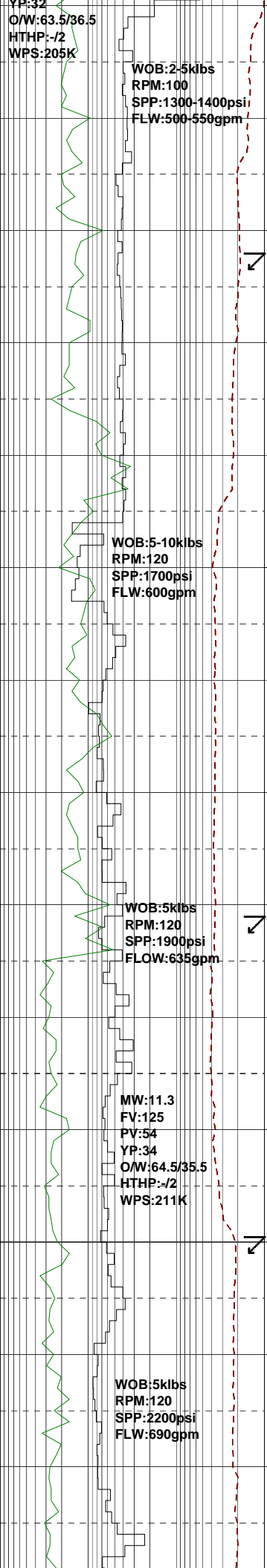
Cobia A21A



GENERAL	SURFACE POSITION	HOLE / CASING INFO	DATE / DEPTH	ENGINEERS
Country : AUSTRALIA	Longitude : 148°18'33.005" E	9-7/8" Hole to 3923.0 mMDRT	Kick off Date: 16/03/2009	Mark Smith
Permit : VIC / L5	Latitude : 38°26'57.568" S		Total Depth Date: 24th March 24/03/2009	Phil Rady
Field : COBIA	MGA Co-ord X : 614238.880 mE	10-3/4" Surface Csg at 638.0m MDRT	Total Depth: 3923.0 mMDRT	Colin Chadwick
Basin : GIPPSLAND	MGA Co-ord Y : 5743517.940 mN		True Vertical Depth:	Adam Sullivan
Well Type : DEVELOPMENT	RT to MSL : 41.0 m	7" Production Csg at	Log Scale : 1/ 500	Kepa O'Reilly
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	RFT MDT
FV Funnel Viscosity	RPM Rotations Per Min	Siltstone	Limestone	Radiolariae	Pyrite	Casing Top	Mud gain
PV Plastic Viscosity	FLW Flow Rate (gpm)	Fine sandstone	Dolomite	Echinoids		Survey	Mud loss
YP Yield Point	SPP Pump Pressure (psi)	Shale	Coal-lignite	Foraminiferae		Sidewall core	Core
O/W Oil/Water Ratio	RR Re-Run Bit	Conglomerate	Volcanic cinder, tuf	Cement			
WPS Aq. Phase Salinity	TG Trip Gas						
HPHT Fluid Loss	CG Connection Gas						
Cl Chlorides	BG Background Gas						
Incl Inclination	DGP Drilled Gas Peak						
Az Azimuth	MM Mud Motor						





CALCILUTITE:brnsh gy-olv gy,
silty i/p,rr f glauc,mnr vf qtz
grs,tr carb spks,tr liths,sft,
amor.

100 / Tr

Survey:682.58mMD (614.6mTVD)
43.95°inc 17.47°az

CALCARENITE:(40%)med gy,olv
gy,vf,wl srt,sa-sr,com pl gy
arg mtx,com f glauc grs,
mnr liths,fri,sbbly.

100 / Tr

CALCARENITE:(70%)med gy,olv
gy,rr brnsh gy,vf,wl srt,sa-sr,
com pl gy arg mtx,mnr f glauc
grs,mnr liths,fri,sbbly-rr amor.

CALCILUTITE:(30%)brnsh gy-
olv gy,silty,rr f glauc grs,
mnr vf qtz grs,sft,amor.

Survey:741.67mMD (655.7mTVD)
47.77°inc 25.09°az

CALCARENITE:(10%)med gy,olv
gy,rr brnsh gy,vf,wl srt,sa-sr,
mnr-com pyr nod,arg mtx,mnr f glauc
grs,mnr liths,fri,sbbly.

100 / Tr

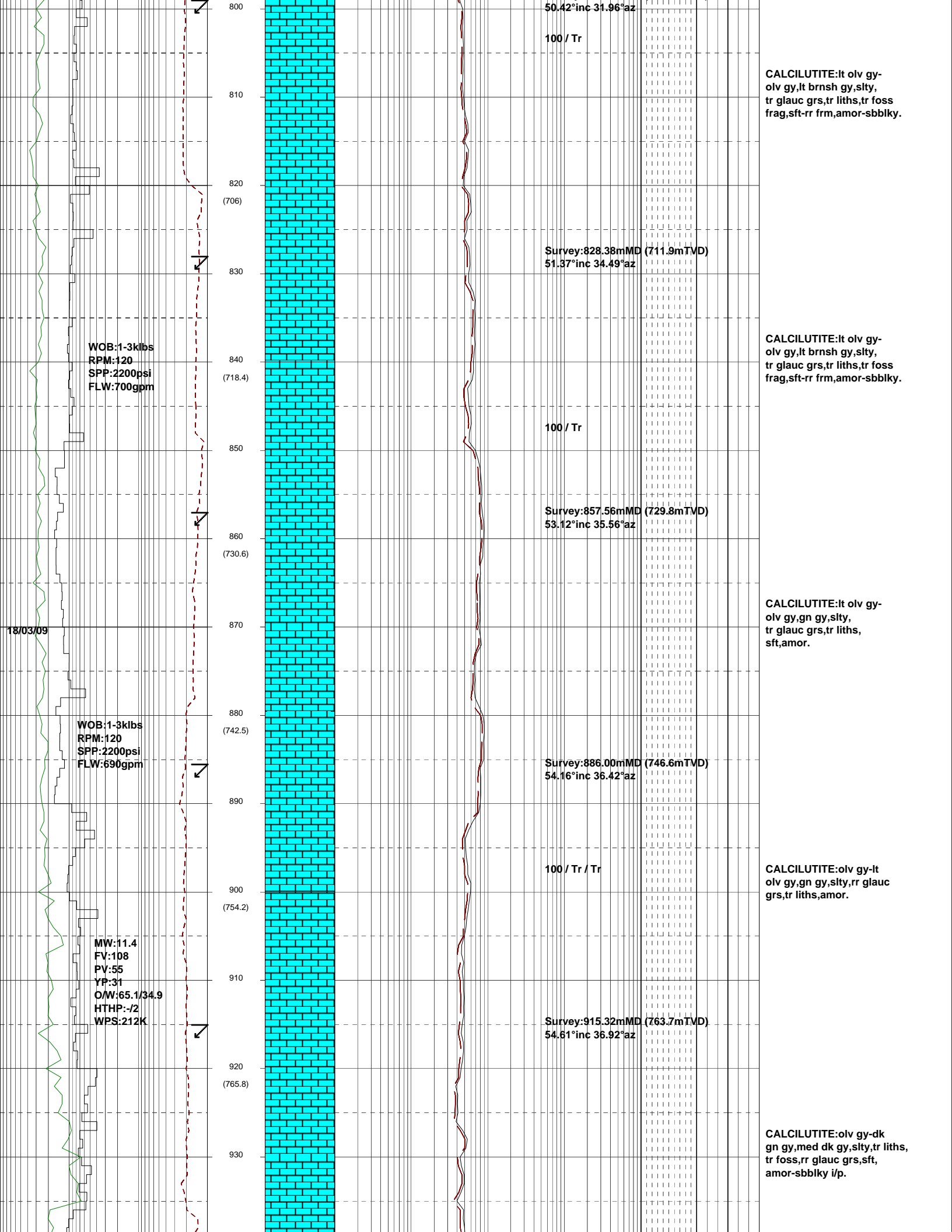
CALCILUTITE:(90%)lt olv gy-
lt bnsh gy,silty,rr-mnr glauc
grs,tr liths,mnr foss frag,
sft,amor.

Survey:770.22mMD (674.7mTVD)
48.90°inc 28.68°az

CALCARENITE:(30%)olv gy,
brnsh gy,med gy,vf,wl srt,
mnr-com pl arg mtx,tr glauc,
tr liths,fri-mod hd,sbbly.

CALCILUTITE:(70%)olv gy,
brnsh gy,silty,tr glauc grs,
tr liths,mnr foss frag,sft,
amor.

Survey:799.57mMD (693.7mTVD)



50.42°inc 31.96°az

100 / Tr

CALCILUTITE:lt olv gy-olv gy,lt brnsh gy,sity, tr glauc grs,tr liths,tr foss frag,sft-rr frm,amor-sbbiky.

810

(706)

Survey:828.38mMD (711.9mTVD)
51.37°inc 34.49°az

840

(718.4)

WOB:1-3klbs
RPM:120
SPP:2200psi
FLW:700gpm

CALCILUTITE:lt olv gy-olv gy,lt brnsh gy,sity, tr glauc grs,tr liths,tr foss frag,sft-rr frm,amor-sbbiky.

100 / Tr

850

Survey:857.56mMD (729.8mTVD)
53.12°inc 35.56°az

860

(730.6)

CALCILUTITE:lt olv gy-olv gy,gn gy,sity, tr glauc grs,tr liths, sft,amor.

18/03/09

870

880

(742.5)

WOB:1-3klbs
RPM:120
SPP:2200psi
FLW:690gpm

Survey:886.00mMD (746.6mTVD)
54.16°inc 36.42°az

890

100 / Tr / Tr

900

(754.2)

CALCILUTITE:olv gy-lt olv gy,gn gy,sity,rr glauc grs,tr liths,amor.

MW:11.4
FV:108
PV:55
YP:31
O/W:65.1/34.9
HTHP:-/2
WPS:212K

910

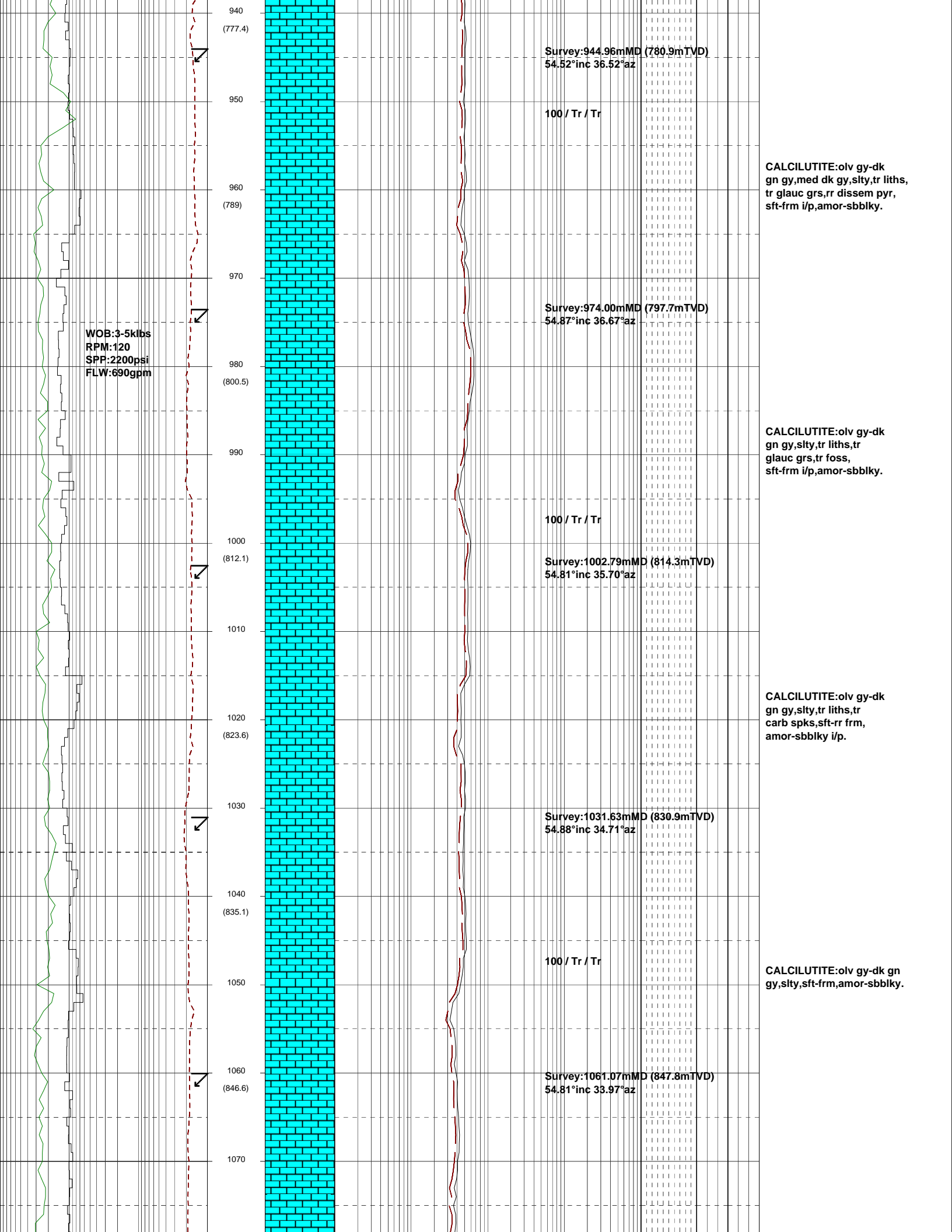
Survey:915.32mMD (763.7mTVD)
54.61°inc 36.92°az

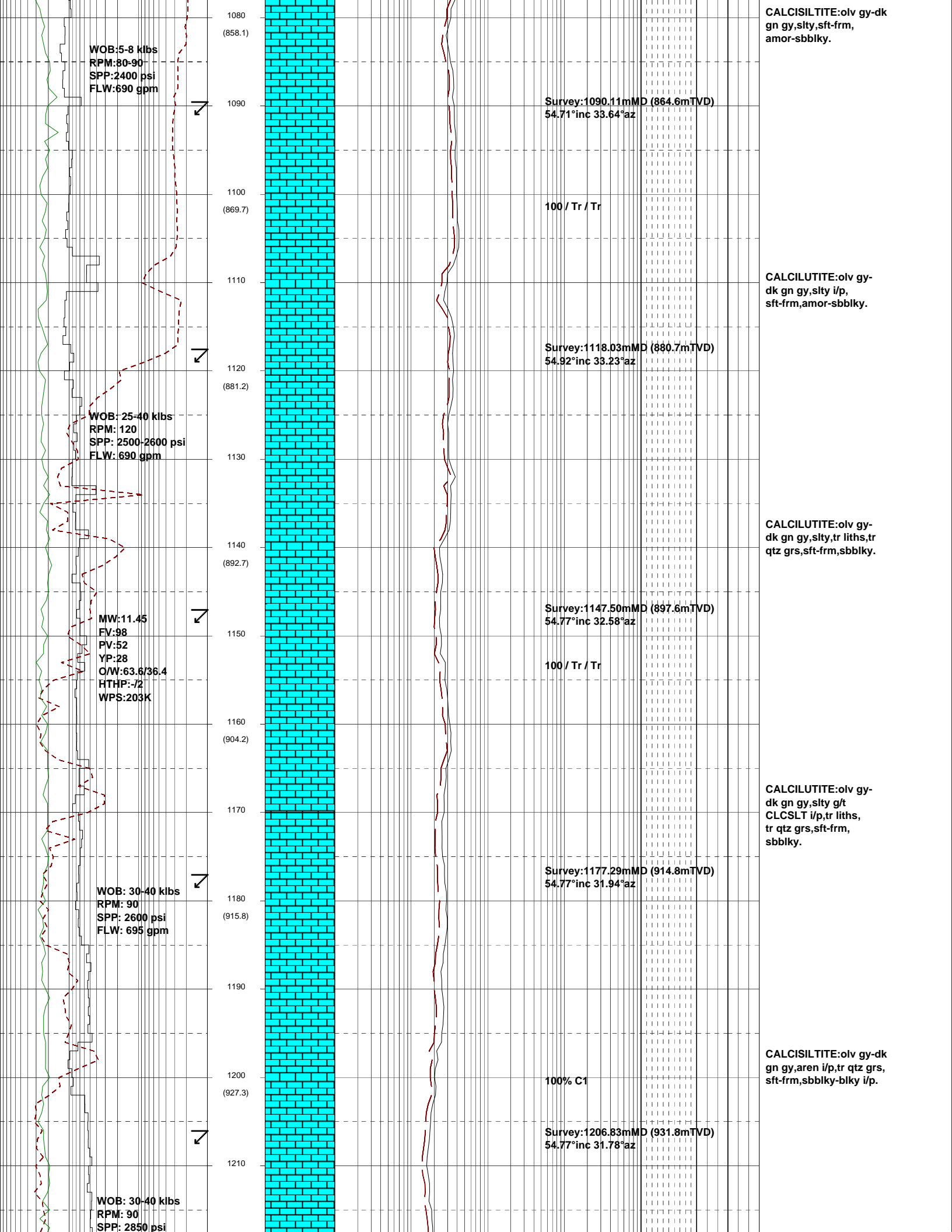
920

(765.8)

CALCILUTITE:olv gy-dk gn gy,med dk gy,sity,tr liths, tr foss,rr glauc grs,sft, amor-sbbiky i/p.

930





CALCISILTITE: olv gy-dk
gn gy, slty, sft-frm,
amor-sbblky.

WOB: 5-8 klbs
RPM: 80-90
SPP: 2400 psi
FLW: 690 gpm

(858.1)

Survey: 1090.11mMD (864.6mTVD)
54.71°inc 33.64°az



1090

100 / Tr / Tr

1100
(869.7)

1110

Survey: 1118.03mMD (880.7mTVD)
54.92°inc 33.23°az



1120
(881.2)

WOB: 25-40 klbs
RPM: 120
SPP: 2500-2600 psi
FLW: 690 gpm

1130

1140
(892.7)

Survey: 1147.50mMD (897.6mTVD)
54.77°inc 32.58°az



1150

100 / Tr / Tr

1160
(904.2)

MW: 11.45
FV: 98
PV: 52
YP: 28
O/W: 63.6/36.4
HTHP: -72
WPS: 203K

1170

Survey: 1177.29mMD (914.8mTVD)
54.77°inc 31.94°az



1180
(915.8)

WOB: 30-40 klbs
RPM: 90
SPP: 2600 psi
FLW: 695 gpm

1190

100% C1

1200
(927.3)

Survey: 1206.83mMD (931.8mTVD)
54.77°inc 31.78°az



1210

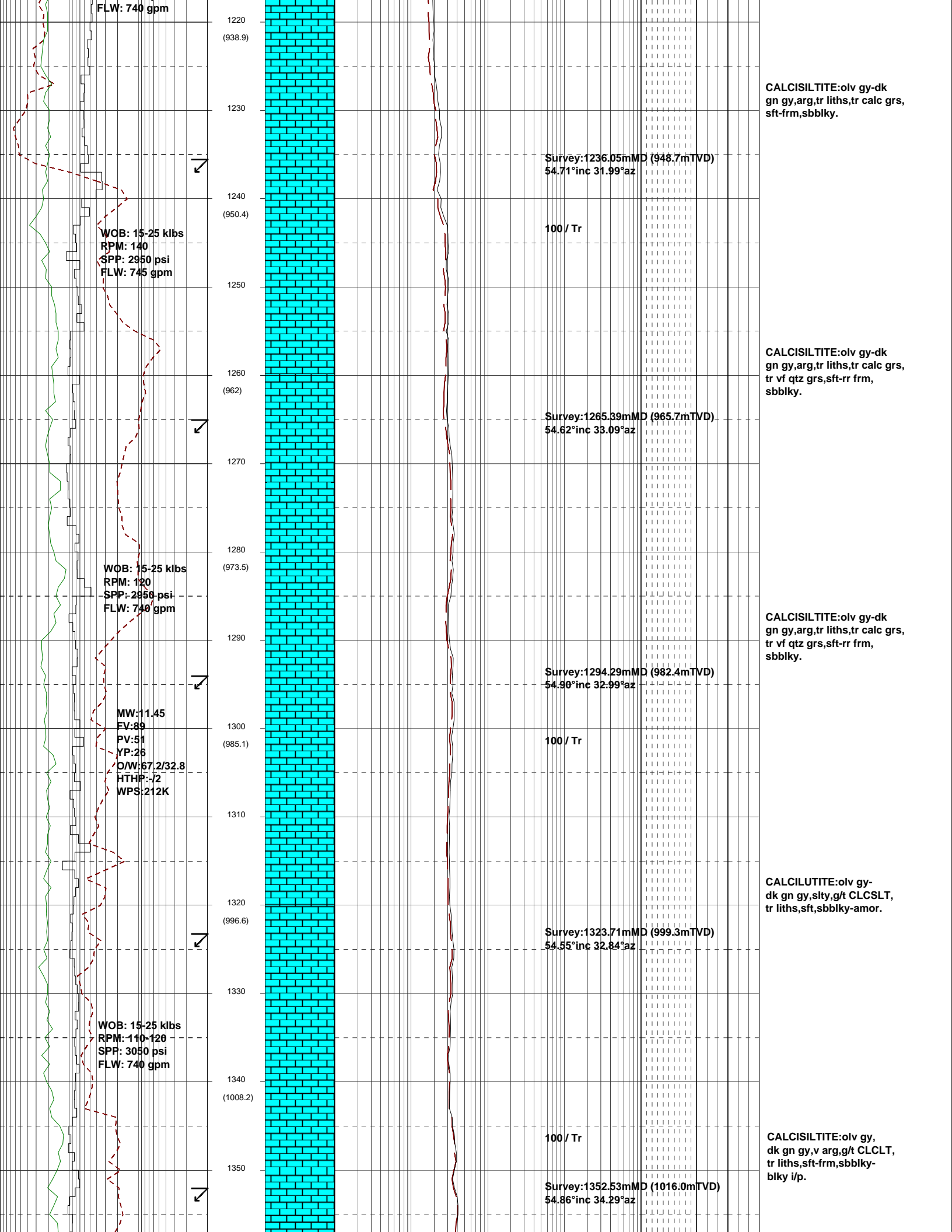
WOB: 30-40 klbs
RPM: 90
SPP: 2850 psi

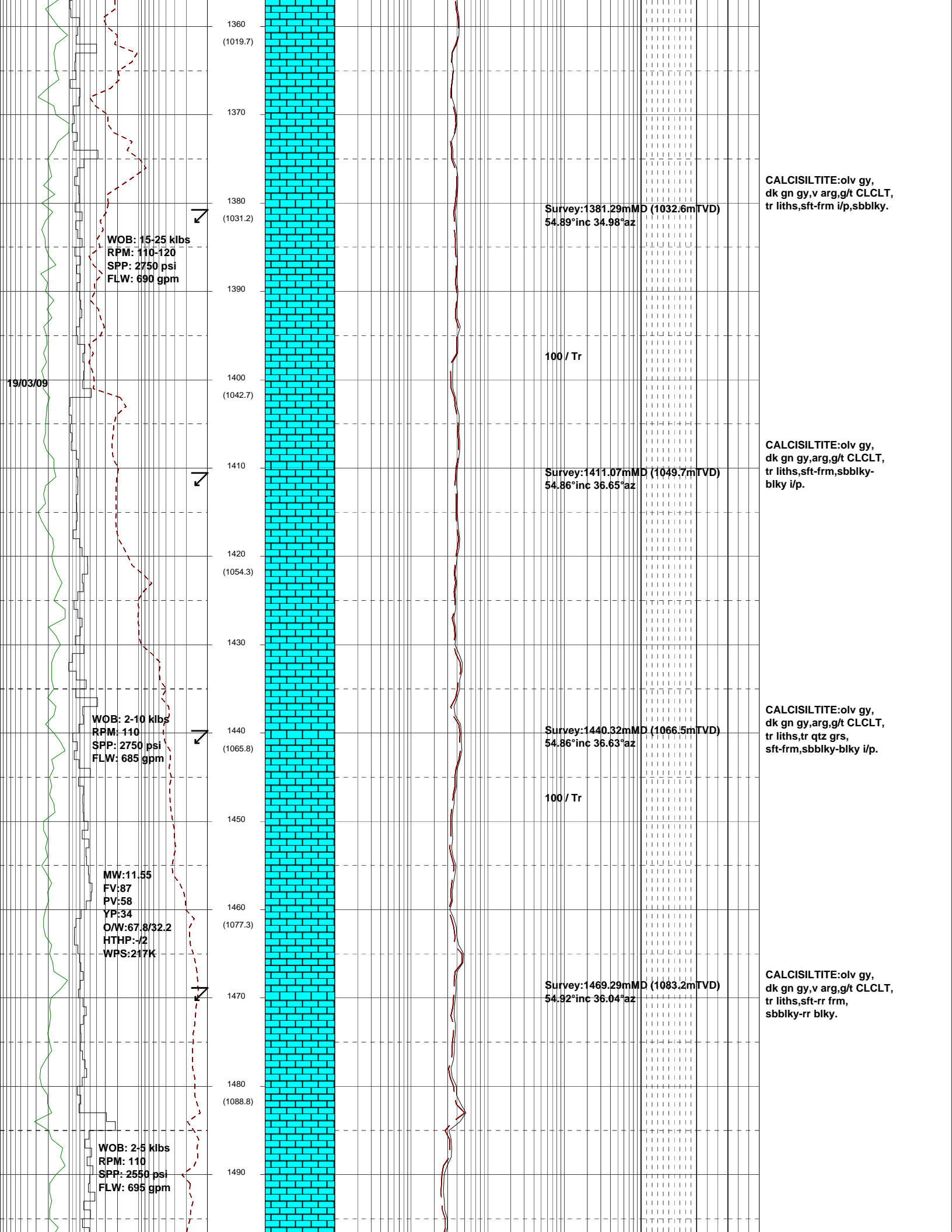
CALCILUTITE: olv gy-dk
gn gy, slty i/p,
sft-frm, amor-sbblky.

CALCILUTITE: olv gy-dk
gn gy, slty, tr liths, tr
qtz grs, sft-frm, sbblky.

CALCILUTITE: olv gy-dk
gn gy, slty g/t
CLCSLT i/p, tr liths,
tr qtz grs, sft-frm,
sbblky.

CALCISILTITE: olv gy-dk
gn gy, aren i/p, tr qtz grs,
sft-frm, sbblky-blky i/p.





19/03/09

WOB: 15-25 klbs
RPM: 110-120
SPP: 2750 psi
FLW: 690 gpm

WOB: 2-10 klbs
RPM: 110
SPP: 2750 psi
FLW: 685 gpm

MW: 11.55
FV: 87
PV: 58
YP: 34
O/W: 67.8/32.2
HTHP: -/2
WPS: 217K

WOB: 2-5 klbs
RPM: 110
SPP: 2550 psi
FLW: 695 gpm

Survey: 1381.29m MD (1032.6m TVD)
54.89° inc 34.98° az

100 / Tr

Survey: 1411.07m MD (1049.7m TVD)
54.86° inc 36.65° az

Survey: 1440.32m MD (1066.5m TVD)
54.86° inc 36.63° az

100 / Tr

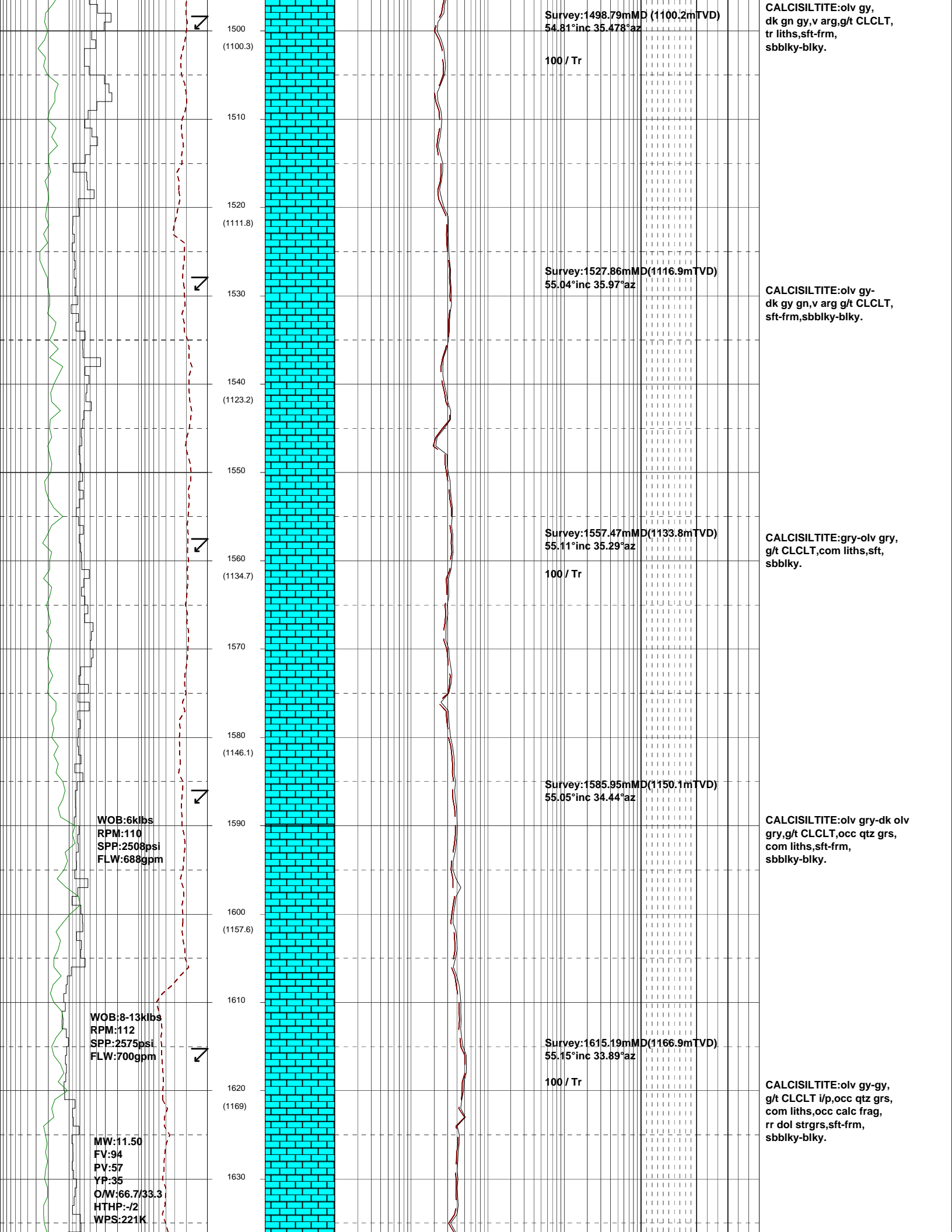
Survey: 1469.29m MD (1083.2m TVD)
54.92° inc 36.04° az

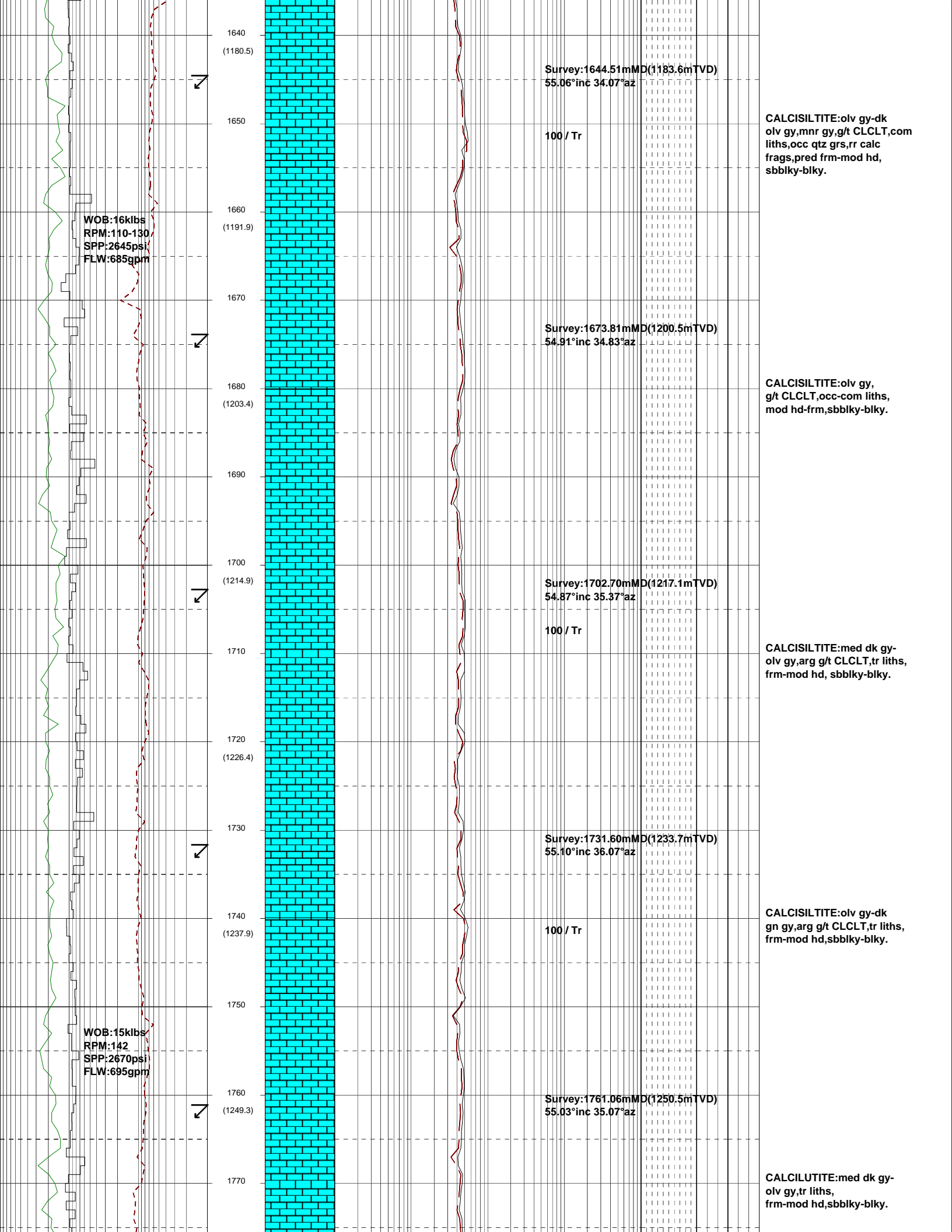
CALCISILTITE: olv gy, dk gn gy, v arg, g/t CLCLT, tr liths, sft-frm i/p, sbbkly.

CALCISILTITE: olv gy, dk gn gy, arg, g/t CLCLT, tr liths, sft-frm, sbbkly-blky i/p.

CALCISILTITE: olv gy, dk gn gy, arg, g/t CLCLT, tr liths, tr qtz grs, sft-frm, sbbkly-blky i/p.

CALCISILTITE: olv gy, dk gn gy, v arg, g/t CLCLT, tr liths, sft-rr frm, sbbkly-rr blkly.





1640 (1180.5)
1650
1660 (1191.9)
1670
1680 (1203.4)
1690
1700 (1214.9)
1710
1720 (1226.4)
1730
1740 (1237.9)
1750
1760 (1249.3)
1770

Survey:1644.51mMD(1183.6mTVD)
55.06°inc 34.07°az

100 / Tr

Survey:1673.81mMD(1200.5mTVD)
54.91°inc 34.83°az

Survey:1702.70mMD(1217.1mTVD)
54.87°inc 35.37°az

100 / Tr

Survey:1731.60mMD(1233.7mTVD)
55.10°inc 36.07°az

100 / Tr

Survey:1761.06mMD(1250.5mTVD)
55.03°inc 35.07°az

CALCISILTITE:olv gy-dk
olv gy,mnr gy,g/t CLCLT,com
liths,occ qtz grs,rr calc
frags,pred frm-mod hd,
sbbiky-blky.

CALCISILTITE:olv gy,
g/t CLCLT,occ-com liths,
mod hd-frm,sbbiky-blky.

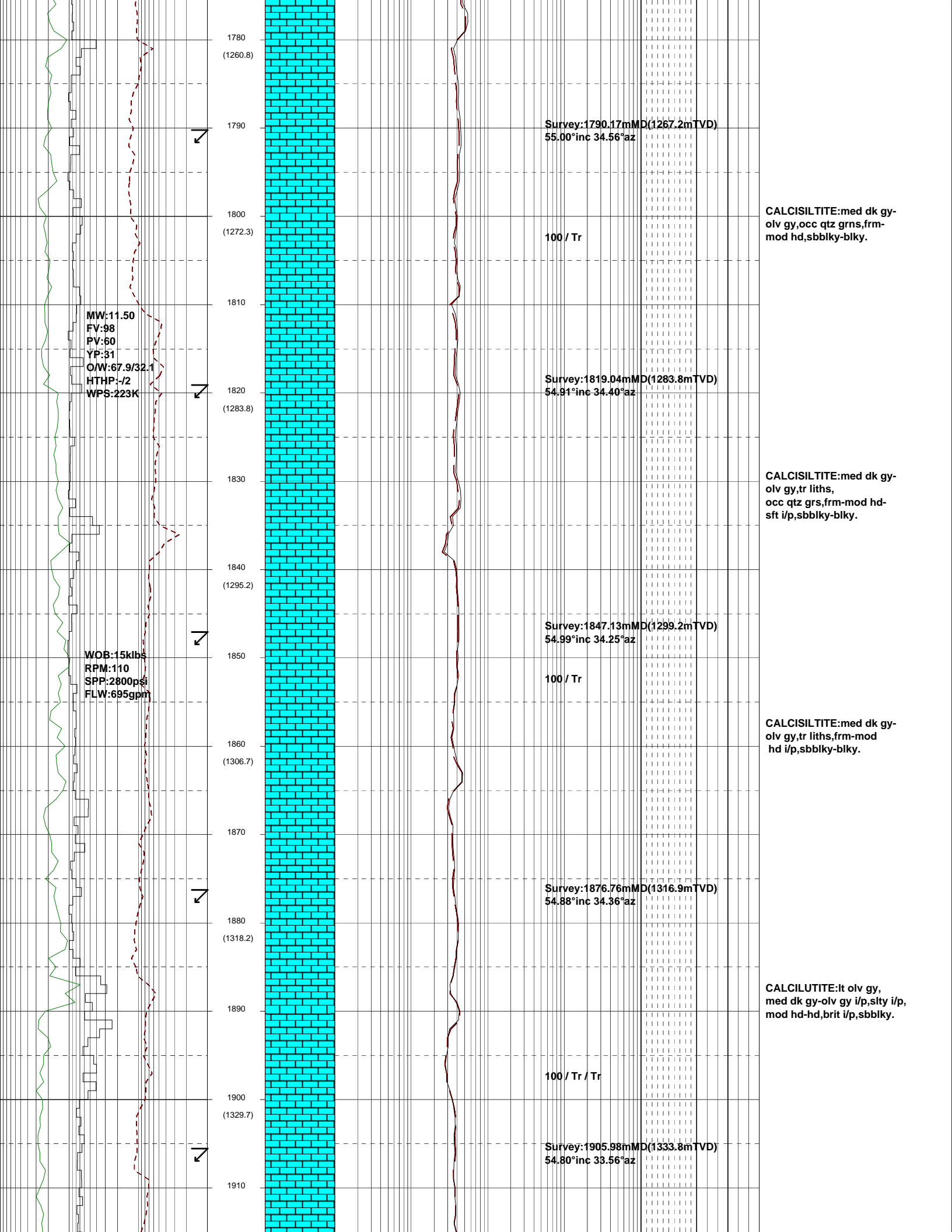
CALCISILTITE:med dk gy-
olv gy,arg g/t CLCLT,tr liths,
frm-mod hd, sbbiky-blky.

CALCISILTITE:olv gy-dk
gn gy,arg g/t CLCLT,tr liths,
frm-mod hd,sbbiky-blky.

CALCISILTITE:med dk gy-
olv gy,tr liths,
frm-mod hd,sbbiky-blky.

WOB:16klbs
RPM:110-130
SPP:2645psi
FLW:685gpm

WOB:15klbs
RPM:142
SPP:2670psi
FLW:695gpm



1780 (1260.8)
1790
1800 (1272.3)
1810
1820 (1283.8)
1830
1840 (1295.2)
1850
1860 (1306.7)
1870
1880 (1318.2)
1890
1900 (1329.7)
1910

Survey: 1790.17m MD (1267.2m TVD)
55.00° inc 34.56° az

100 / Tr

Survey: 1819.04m MD (1283.8m TVD)
54.91° inc 34.40° az

Survey: 1847.13m MD (1299.2m TVD)
54.99° inc 34.25° az

100 / Tr

Survey: 1876.76m MD (1316.9m TVD)
54.88° inc 34.36° az

100 / Tr / Tr

Survey: 1905.98m MD (1333.8m TVD)
54.80° inc 33.56° az

CALCISILTITE: med dk gy-olv gy, occ qtz grns, frm-mod hd, sbbiky-blky.

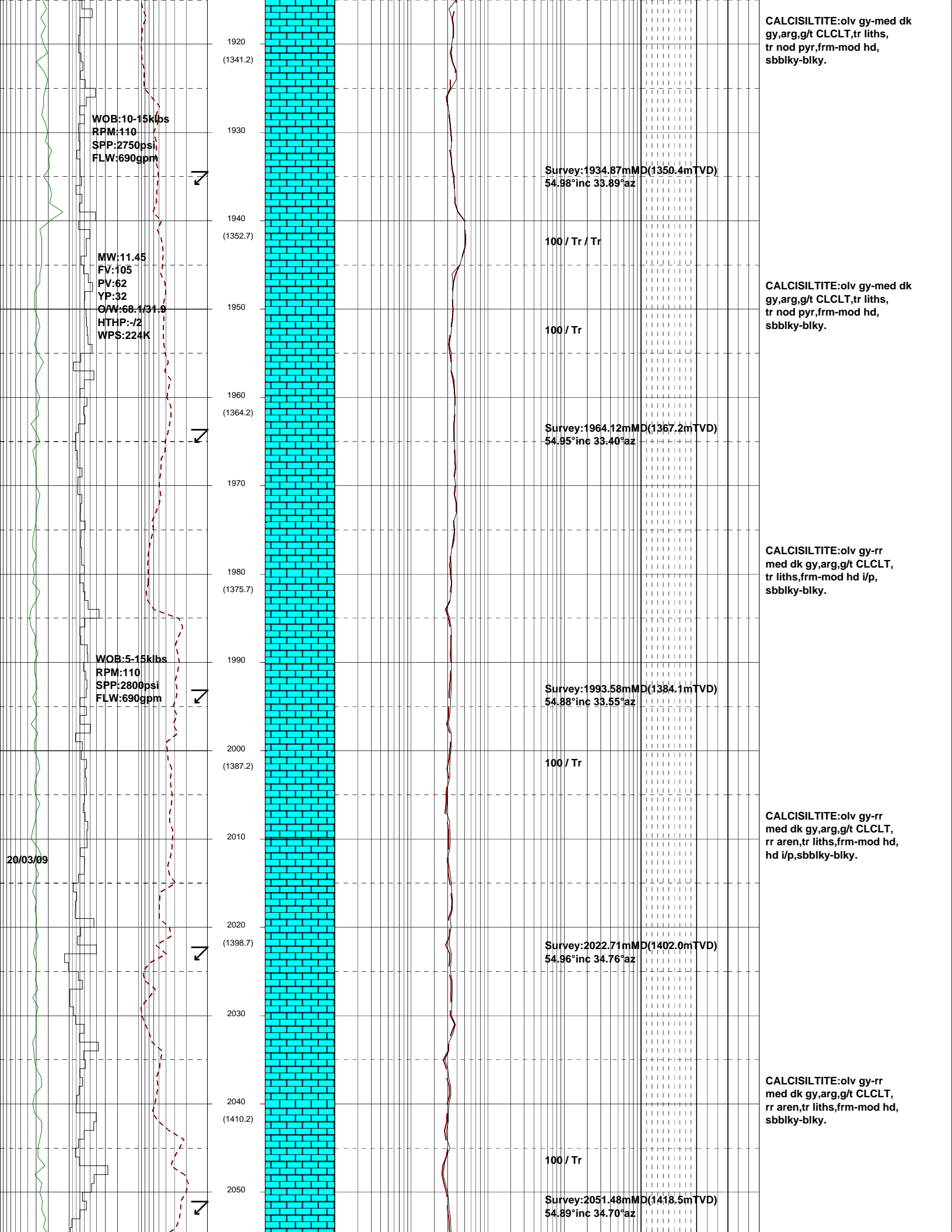
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CALCISILTITE: med dk gy-olv gy, tr liths, frm-mod hd i/p, sbbiky-blky.

CALCILUTITE: lt olv gy, med dk gy-olv gy i/p, stly i/p, mod hd-hd, brit i/p, sbbiky.

MW: 11.50
FV: 98
PV: 60
YP: 31
O/W: 67.9/32.1
HTHP: -/2
WPS: 223K

WOB: 15klbs
RPM: 110
SPP: 2800psi
FLW: 695gpm



WOB:10-15klbs
RPM:110
SPP:2750psi
FLW:690gpm

MW:11.45
FV:105
PV:62
YP:32
C/W:68.4/31.9
HTHP:-12
WPS:224K

WOB:5-15klbs
RPM:110
SPP:2800psi
FLW:690gpm

Survey:1934.87mMD(1350.4mTVD)
54.98°inc 33.89°az

100 / Tr / Tr

100 / Tr

Survey:1964.12mMD(1367.2mTVD)
54.95°inc 33.40°az

Survey:1993.58mMD(1384.1mTVD)
54.88°inc 33.55°az

100 / Tr

Survey:2022.71mMD(1402.0mTVD)
54.96°inc 34.76°az

100 / Tr

Survey:2051.48mMD(1418.5mTVD)
54.89°inc 34.70°az

CALCISILTITE:olv gy-med dk gy, arg, g/t CLCLT, tr liths, tr nod pyr, frm-mod hd, sbbiky-blky.

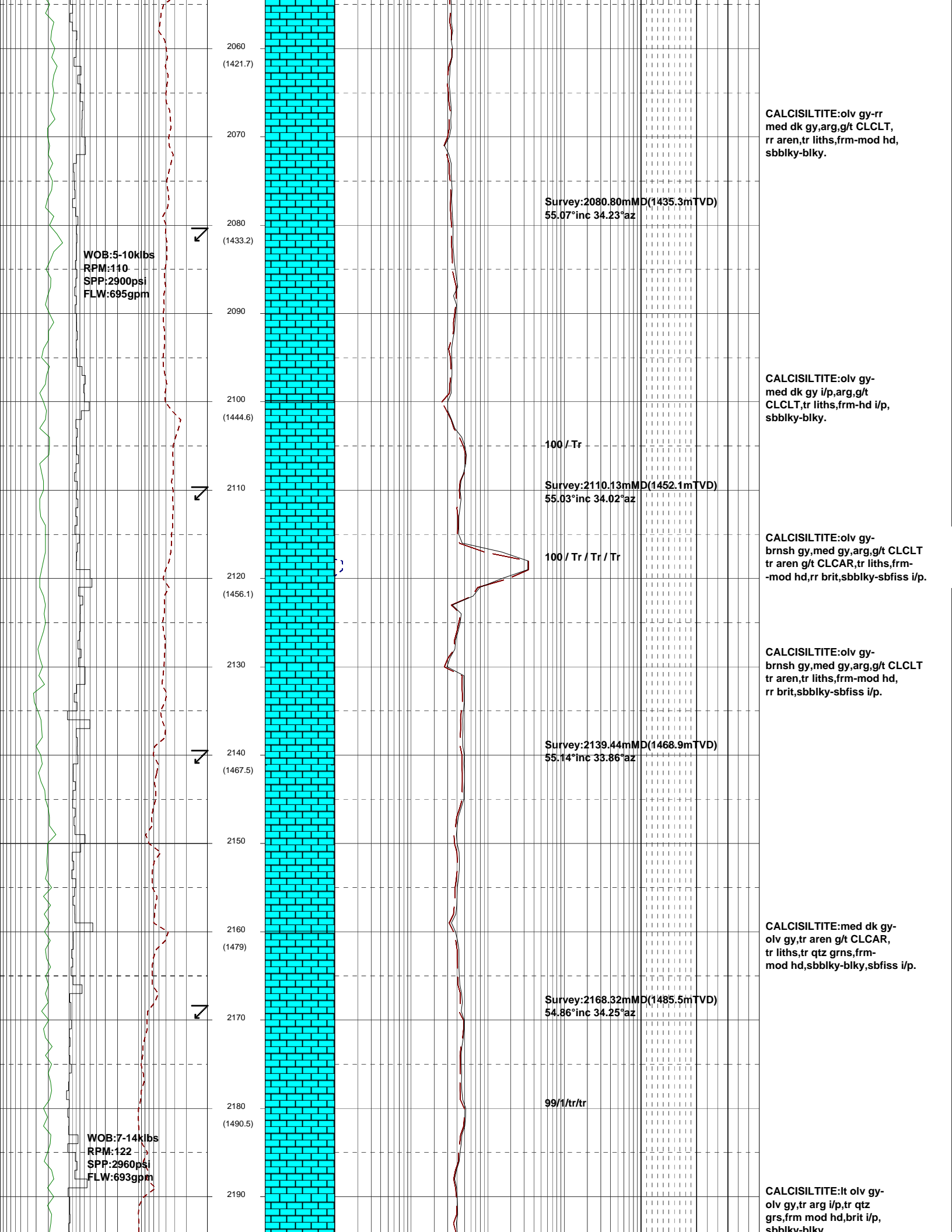
CALCISILTITE:olv gy-med dk gy, arg, g/t CLCLT, tr liths, tr nod pyr, frm-mod hd, sbbiky-blky.

CALCISILTITE:olv gy-rr med dk gy, arg, g/t CLCLT, tr liths, frm-mod hd i/p, sbbiky-blky.

CALCISILTITE:olv gy-rr med dk gy, arg, g/t CLCLT, rr aren, tr liths, frm-mod hd, hd i/p, sbbiky-blky.

CALCISILTITE:olv gy-rr med dk gy, arg, g/t CLCLT, rr aren, tr liths, frm-mod hd, sbbiky-blky.

20/03/09



2060
(1421.7)

2070

2080
(1433.2)

2090

2100
(1444.6)

2110

2120
(1456.1)

2130

2140
(1467.5)

2150

2160
(1479)

2170

2180
(1490.5)

2190

WOB: 5-10klbs
RPM: 110
SPP: 2900psi
FLW: 695gpm

WOB: 7-14klbs
RPM: 122
SPP: 2960psi
FLW: 693gpm

Survey: 2080.80mMD(1435.3mTVD)
55.07°inc 34.23°az

Survey: 2110.13mMD(1452.1mTVD)
55.03°inc 34.02°az

Survey: 2139.44mMD(1468.9mTVD)
55.14°inc 33.86°az

Survey: 2168.32mMD(1485.5mTVD)
54.86°inc 34.25°az

100 / Tr

100 / Tr / Tr / Tr

99/1/tr/tr

CALCISILTITE: olv gy-rr
med dk gy, arg, g/t CLCLT,
rr aren, tr liths, frm-mod hd,
sbbiky-blky.

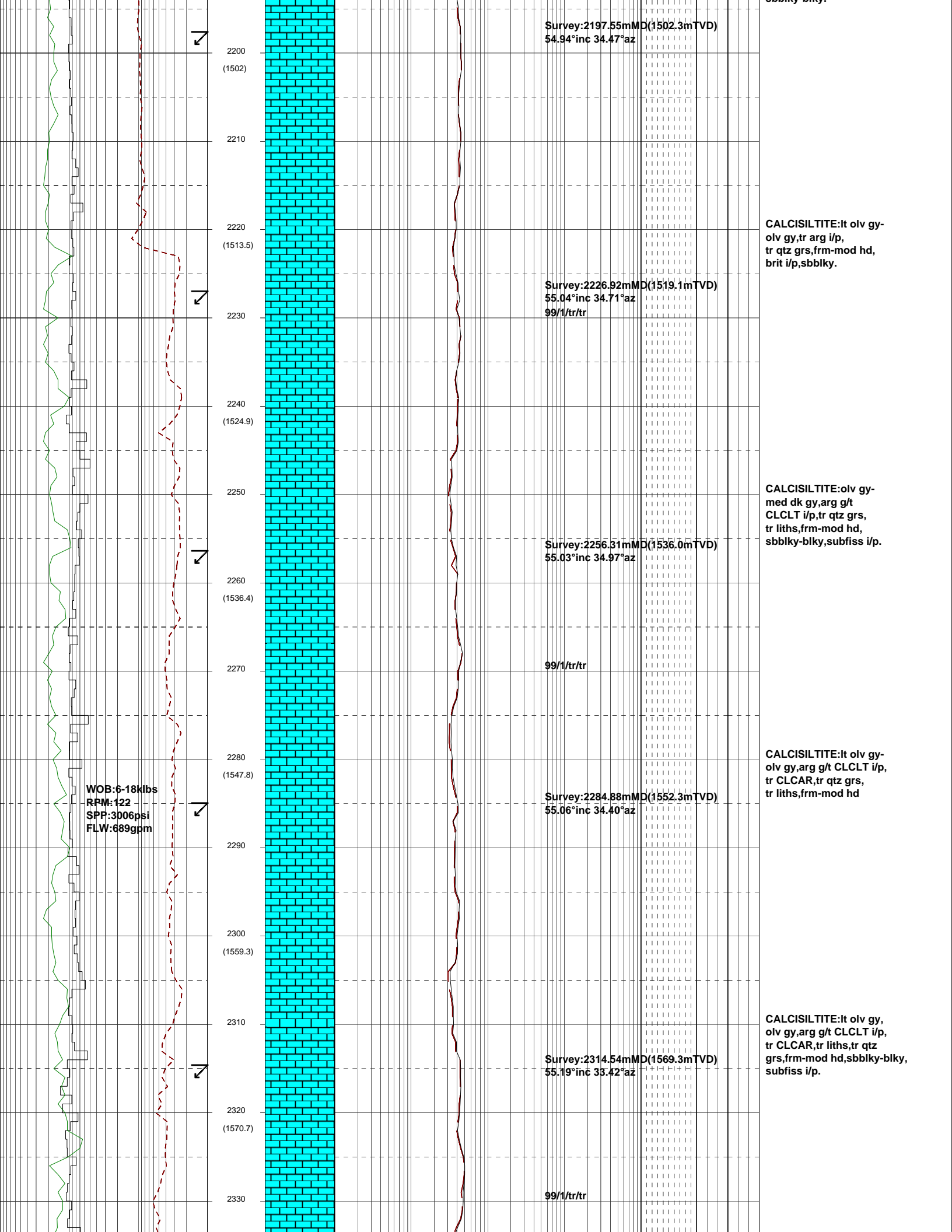
CALCISILTITE: olv gy-
med dk gy i/p, arg, g/t
CLCLT, tr liths, frm-hd i/p,
sbbiky-blky.

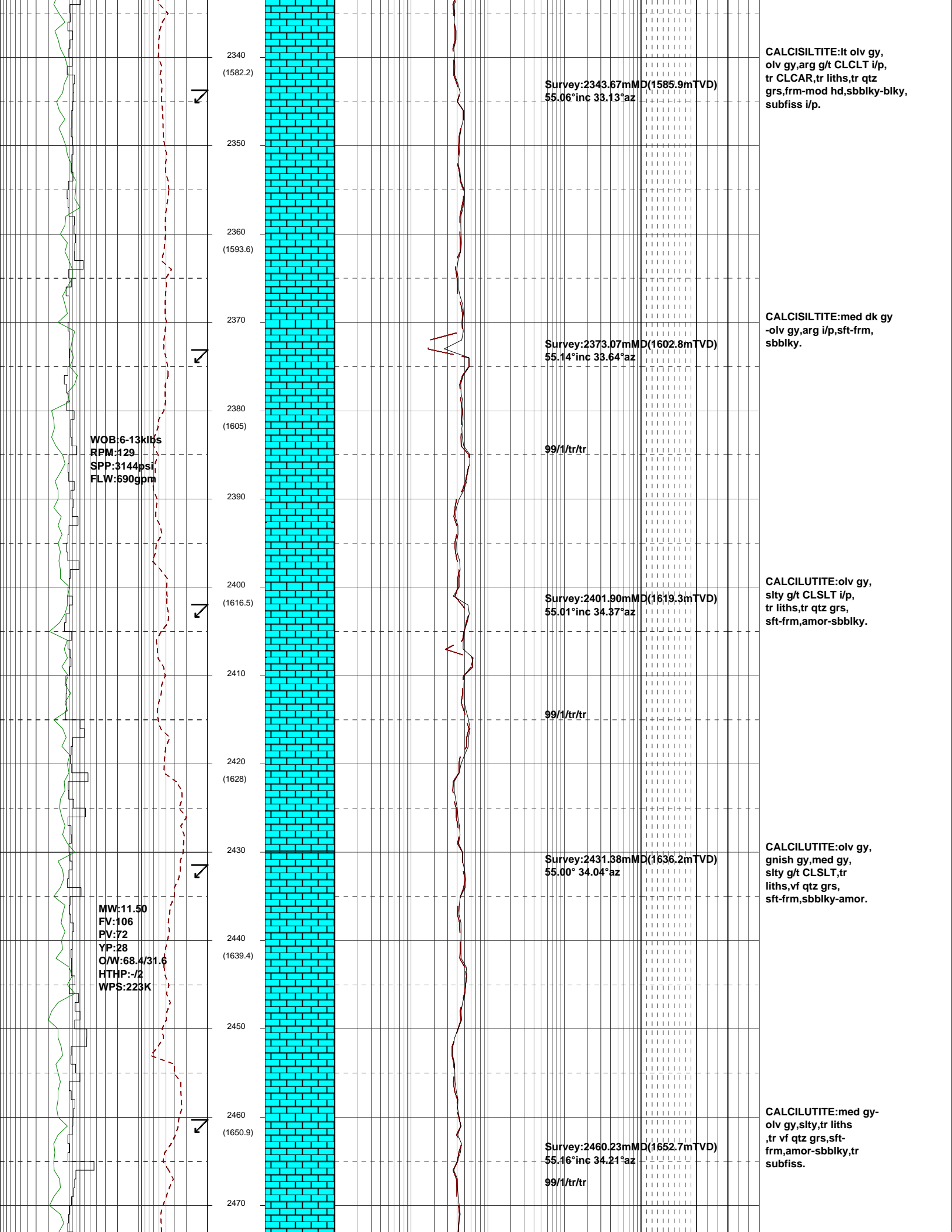
CALCISILTITE: olv gy-
brnsh gy, med gy, arg, g/t CLCLT
tr aren g/t CLCAR, tr liths, frm-
-mod hd, rr brit, sbbiky-sbfiss i/p.

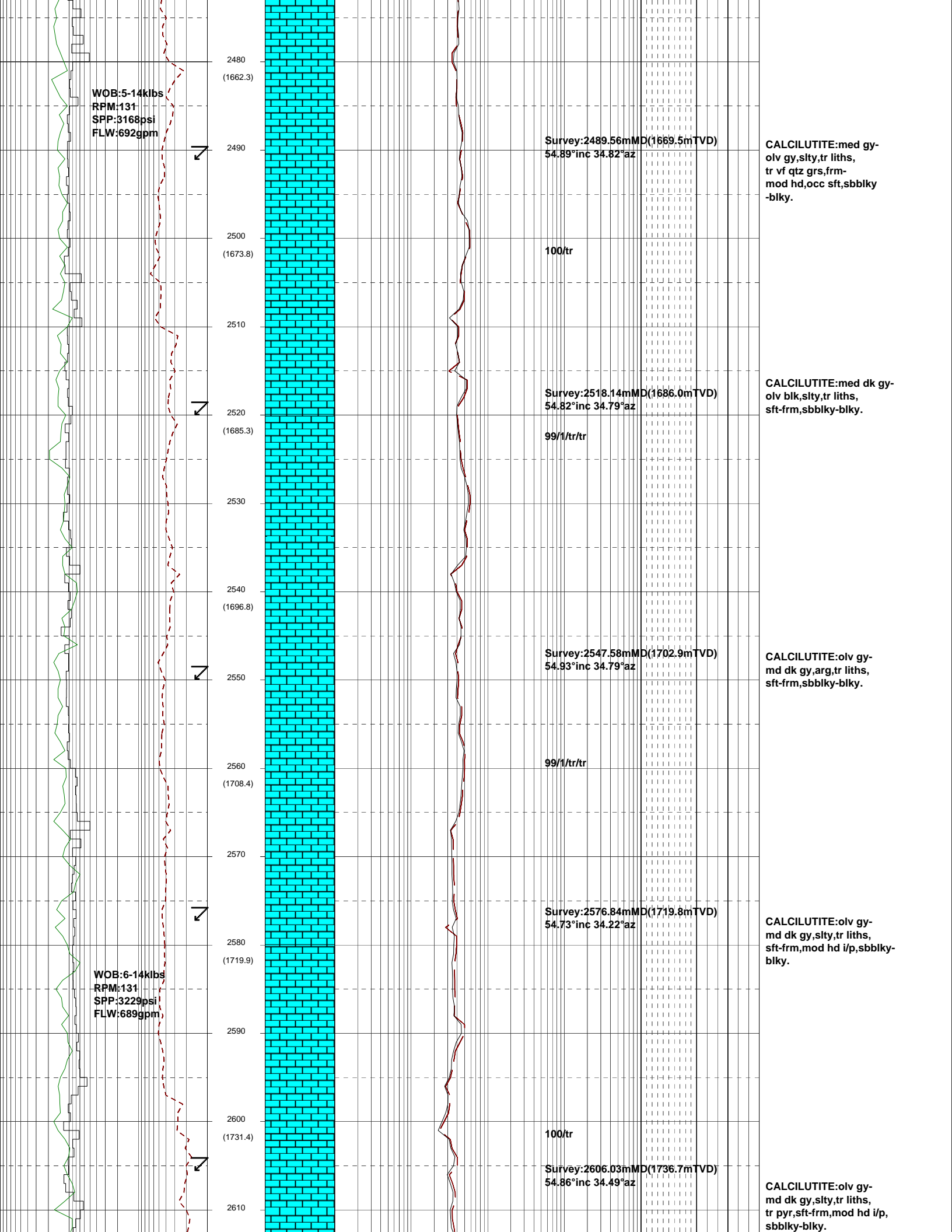
CALCISILTITE: olv gy-
brnsh gy, med gy, arg, g/t CLCLT
tr aren, tr liths, frm-mod hd,
rr brit, sbbiky-sbfiss i/p.

CALCISILTITE: med dk gy-
olv gy, tr aren g/t CLCAR,
tr liths, tr qtz grns, frm-
-mod hd, sbbiky-blky, sbfiss i/p.

CALCISILTITE: lt olv gy-
olv gy, tr arg i/p, tr qtz
grs, frm mod hd, brit i/p,
sbbiky-blky







WOB:5-14klbs
RPM:131
SPP:3168psi
FLW:692gpm

WOB:6-14klbs
RPM:131
SPP:3229psi
FLW:689gpm

2480 (1662.3)
2490
2500 (1673.8)
2510
2520 (1685.3)
2530
2540 (1696.8)
2550
2560 (1708.4)
2570
2580 (1719.9)
2590
2600 (1731.4)
2610

Survey:2489.56mMD(1669.5mTVD)
54.89°inc 34.82°az

100/tr

Survey:2518.14mMD(1686.0mTVD)
54.82°inc 34.79°az

99/1/tr/tr

Survey:2547.58mMD(1702.9mTVD)
54.93°inc 34.79°az

99/1/tr/tr

Survey:2576.84mMD(1719.8mTVD)
54.73°inc 34.22°az

100/tr

Survey:2606.03mMD(1736.7mTVD)
54.86°inc 34.49°az

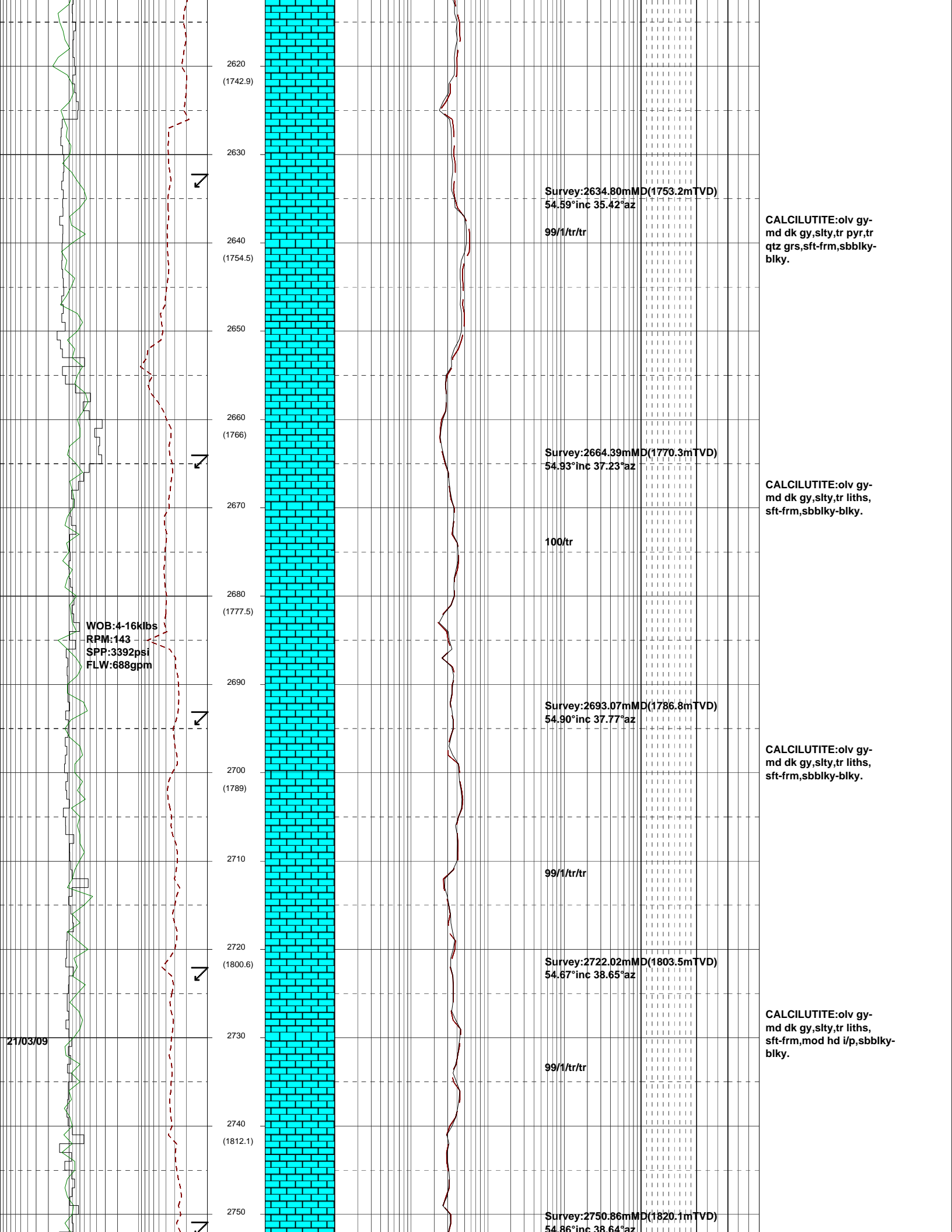
CALCILUTITE:med gy-
olv gy,silty,tr liths,
tr vf qtz grs,frm-
mod hd,occ sft,sbbiky
-blky.

CALCILUTITE:med dk gy-
olv blk,silty,tr liths,
sft-frm,sbbiky-blky.

CALCILUTITE:olv gy-
md dk gy,arg,tr liths,
sft-frm,sbbiky-blky.

CALCILUTITE:olv gy-
md dk gy,silty,tr liths,
sft-frm,mod hd i/p,sbbiky-
blky.

CALCILUTITE:olv gy-
md dk gy,silty,tr liths,
tr pyr,sft-frm,mod hd i/p,
sbbiky-blky.



2620 (1742.9)
2630
2640 (1754.5)
2650
2660 (1766)
2670
2680 (1777.5)
2690
2700 (1789)
2710
2720 (1800.6)
2730
2740 (1812.1)
2750

Survey: 2634.80m MD (1753.2m TVD)
54.59° inc 35.42° az

99/1/tr/tr

CALCILUTITE: olv gy-md dk gy, slty, tr pyr, tr qtz grs, sft frm, sbbiky-blky.

Survey: 2664.39m MD (1770.3m TVD)
54.93° inc 37.23° az

100/tr

CALCILUTITE: olv gy-md dk gy, slty, tr liths, sft frm, sbbiky-blky.

Survey: 2693.07m MD (1786.8m TVD)
54.90° inc 37.77° az

99/1/tr/tr

CALCILUTITE: olv gy-md dk gy, slty, tr liths, sft frm, sbbiky-blky.

Survey: 2722.02m MD (1803.5m TVD)
54.67° inc 38.65° az

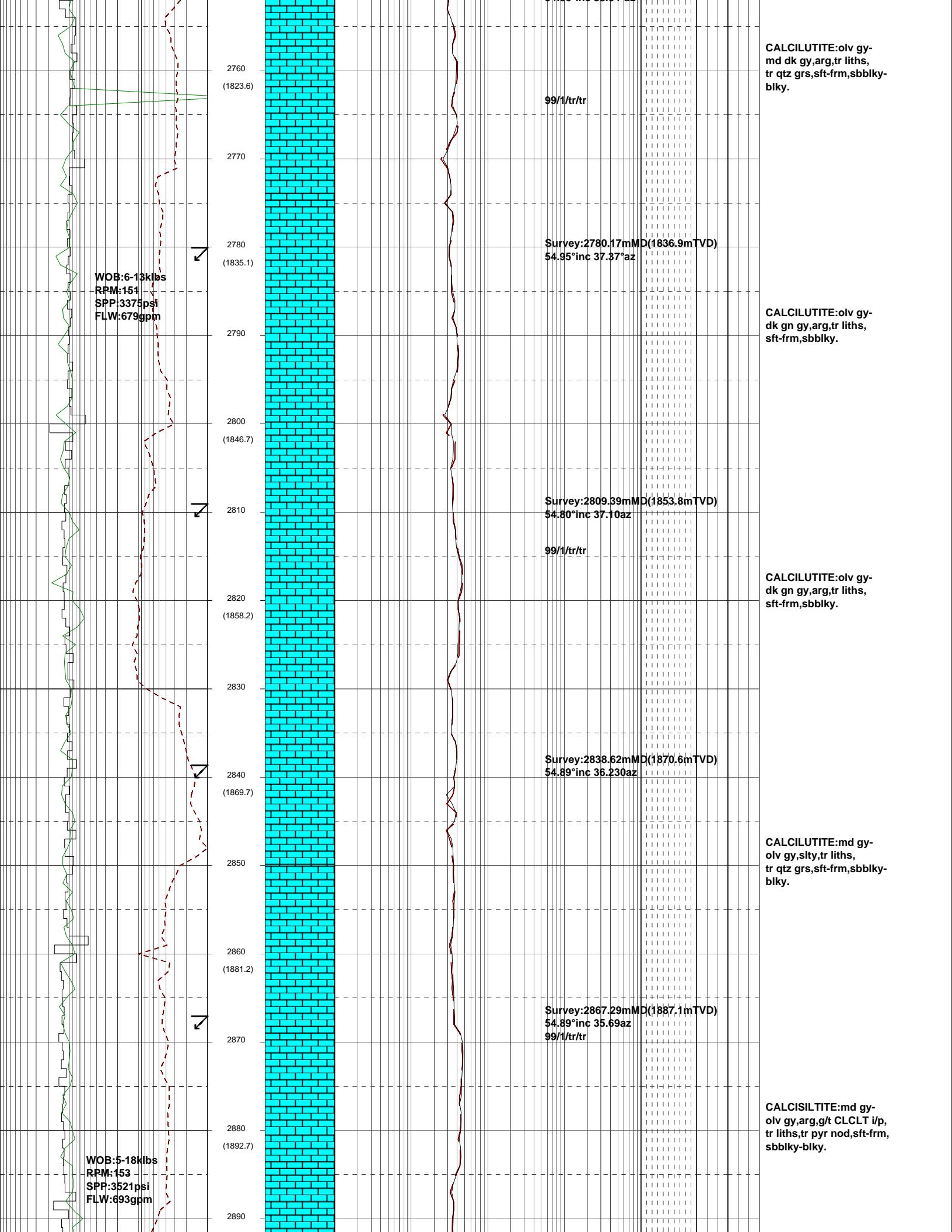
99/1/tr/tr

CALCILUTITE: olv gy-md dk gy, slty, tr liths, sft frm, mod hd i/p, sbbiky-blky.

Survey: 2750.86m MD (1820.1m TVD)
54.86° inc 38.64° az

WOB: 4-16klbs
RPM: 143
SPP: 3392psi
FLW: 688gpm

21/03/09



2760
(1823.6)
2770
2780
(1835.1)
2790
2800
(1846.7)
2810
2820
(1858.2)
2830
2840
(1869.7)
2850
2860
(1881.2)
2870
2880
(1892.7)
2890

WOB:6-13klbs
RPM:151
SPP:3375psi
FLW:679gpm

WOB:5-18klbs
RPM:153
SPP:3521psi
FLW:693gpm

99/1/tr/tr

Survey:2780.17mMD(1836.9mTVD)
54.95°inc 37.37°az

Survey:2809.39mMD(1853.8mTVD)
54.80°inc 37.10az

99/1/tr/tr

Survey:2838.62mMD(1870.6mTVD)
54.89°inc 36.230az

Survey:2867.29mMD(1887.1mTVD)
54.89°inc 35.69az
99/1/tr/tr

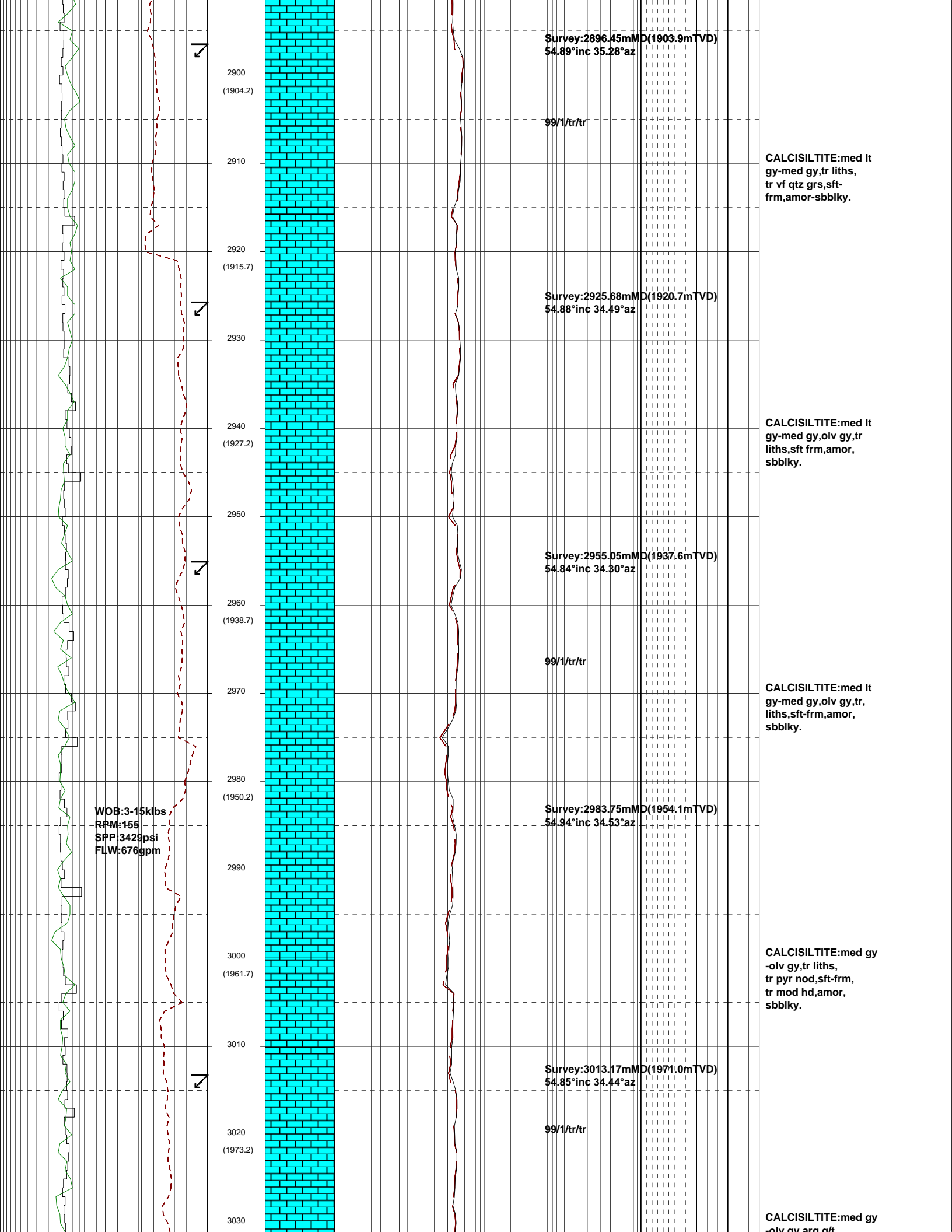
CALCILUTITE:olv gy-
md dk gy,arg,tr liths,
tr qtz grs,sft frm,sbblky-
blky.

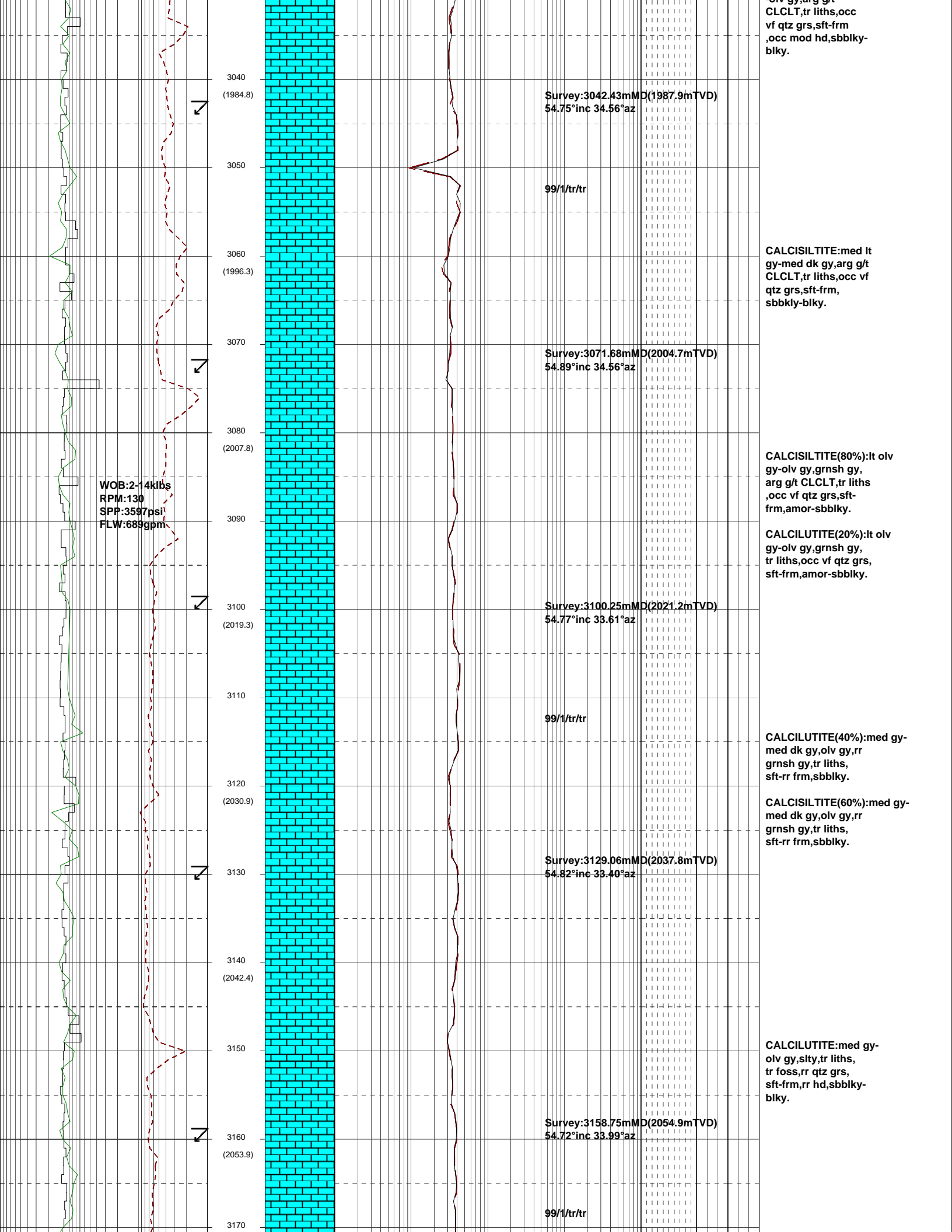
CALCILUTITE:olv gy-
dk gn gy,arg,tr liths,
sft frm,sbblky.

CALCILUTITE:olv gy-
dk gn gy,arg,tr liths,
sft frm,sbblky.

CALCILUTITE:md gy-
olv gy,silty,tr liths,
tr qtz grs,sft frm,sbblky-
blky.

CALCISILTITE:md gy-
olv gy,arg,g/t CLCLT i/p,
tr liths,tr pyr nod,sft frm,
sbblky-blky.





CALCILUTITE:med gy-olv gy,tr liths,sft-frm,sbbkly-blky.

CALCILUTITE(60%):med It gy-olv gy,slty,tr liths,tr vf qtz grs,sft-frm,sbbkly-blky.

CALCISILTITE(40%):med It gy-olv gy,slty,tr liths,tr vf qtz grs,sft-frm,sbbkly-blky.

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

CALCILUTITE:med gy-olv gy,slty,tr liths ,tr vf qtz grs,sft-frm,rr mod hd,amor-sbbkly,rr brit.

CALCILUTITE:olv gy-md dk gy,slty,tr liths, tr vf qtz grs,sft-frm, amor-sbbkly.

WOB:5-17kibs
RPM:131
SPP:3621psi
FLW:689gpm

WOB:5-18kibs
RPM:130
SPP:3677psi
FLW:689gpm

Survey:3188.08mMD(2071.8mTVD)
54.80°inc 33.46°az

Survey:3216.59mMD(2088.3mTVD)
54.75°inc 32.75°az

Survey:3246.05mMD(2105.1mTVD)
55.54°inc 32.75°az

Survey:3275.16mMD(2121.7mTVD)
55.16°inc 33.54°az

Survey:3304.40mMD(2138.4mTVD)
55.16°inc 33.54°az

99/1/tr/tr

99/1/tr/tr

99/1/tr/tr

99/1/tr/tr

3180
(2065.5)

3190

3200
(2077)

3210

3220
(2088.5)

3230

3240
(2100)

3250

3260
(2111.4)

3270

3280
(2122.7)

3290

3300
(2134.2)

3310



99/1/tr/tr

3320
(2145.5)

REDUCED FLOW WHILE
WORKING ON CENTRIFUGE

CALCILUTITE: dk gy-
olv gy, slty, tr liths,
tr vf qtz grs, sft-frm,
amor-sbblyk.

Survey: 3333.78mMD (2155.1mTVD)
55.47° inc 33.04° az

3330

3340
(2156.9)

97/1/1/1/tr

CALCILUTITE:
dk gy-olv gy, slty,
tr vf qtz grs, sft-
frm, amor-sbblyk.

Survey: 3363.00mMD (2171.7mTVD)
55.41° inc 26.91° az

3360
(2168.3)

WOB: 6-14klbs
RPM: 130
SPP: 364psi
FLW: 681gpm

3370

3380
(2179.6)

REDUCED FLOW WHILE
WORKING ON CENTRIFUGE

CALCAREOUS CLAYSTONE:
med gy-med dk gy, olv gy,
tr liths, sft, sbblyk,
rr amor.

Survey: 3392.41mMD (2188.4mTVD)
55.39° inc 22.35° az

3390

3400
(2191)

LAKES ENTRANCE Fm.
3390.0mMDRT, 2185.9mTVDRT,
-2144.9mTVDSS.

MW: 11.5
FV: 124
PV: 72
YP: 33
O/W: 54.5/23.5
HTHP: -/3
WPS: 236k

3410

3420
(2202.4)

Survey: 3421.69mMD (2205.0mTVD)
55.30° inc 20.48° az

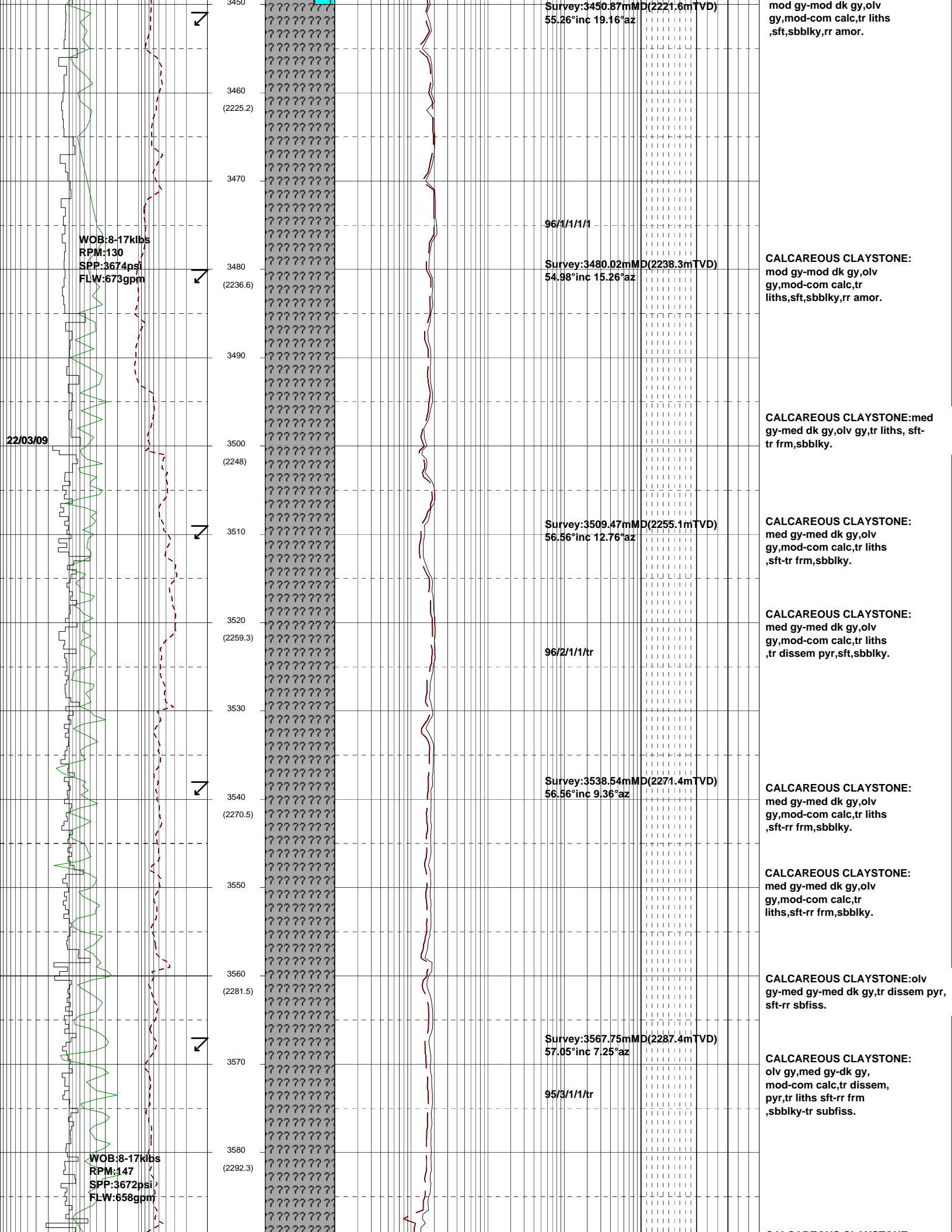
CALCAREOUS CLAYSTONE:
mod gy-mod dk gy, olv
gy, mod-com calc, tr liths
, sft, sbblyk, rr amor.

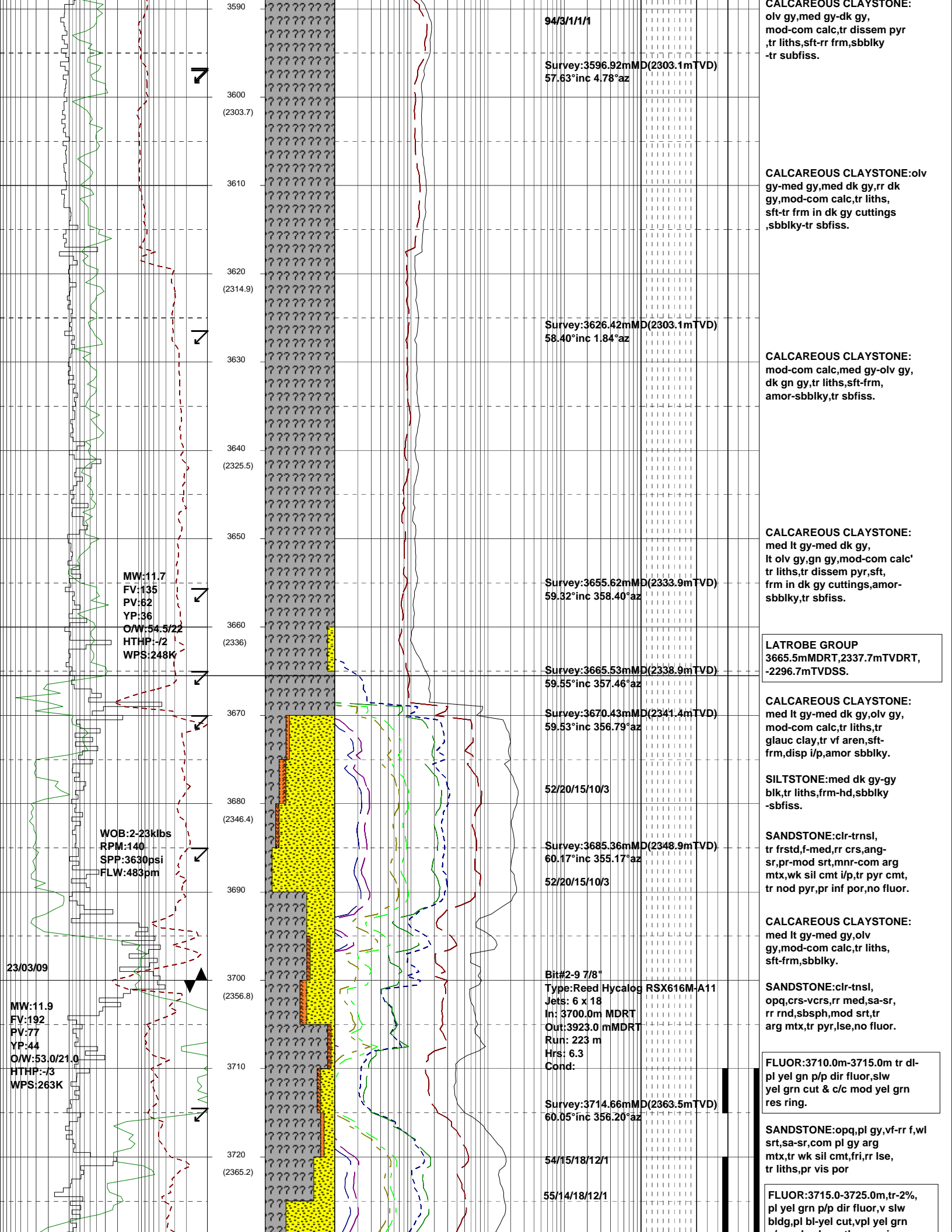
3430

3440
(2213.8)

97/1/1/1/tr

CALCAREOUS CLAYSTONE:





94/3/1/1/1

Survey:3596.92mMD(2303.1mTVD)
57.63°inc 4.78°az

CALCAREOUS CLAYSTONE:
olv gy,med gy-dk gy,
mod-com calc,tr disse pyr
,tr liths,sft-rr frm,sbblky
-tr sbfiss.

CALCAREOUS CLAYSTONE:olv
gy-med gy,med dk gy,rr dk
gy,mod-com calc,tr liths,
sft-tr frm in dk gy cuttings
,sbblky-tr sbfiss.

Survey:3626.42mMD(2303.1mTVD)
58.40°inc 1.84°az

CALCAREOUS CLAYSTONE:
mod-com calc,med gy-olv gy,
dk gn gy,tr liths,sft-frm,
amor-sbblky,tr sbfiss.

Survey:3655.62mMD(2333.9mTVD)
59.32°inc 358.40°az

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy,
lt olv gy,gn gy,mod-com calc'
tr liths,tr disse pyr,sft,
frm in dk gy cuttings,amor-
sbblky,tr sbfiss.

LATROBE GROUP
3665.5mMDRT,2337.7mTVDRT,
-2296.7mTVDSS.

Survey:3665.53mMD(2338.9mTVD)
59.55°inc 357.46°az

CALCAREOUS CLAYSTONE:
med lt gy-med dk gy,olv gy,
mod-com calc,tr liths,tr
glauc clay,tr vf aren,sft-
frm,disp i/p,amor sbblky.

SILTSTONE:med dk gy-gy
blk,tr liths,frm-hd,sbblky
-sbfiss.

Survey:3685.36mMD(2348.9mTVD)
60.17°inc 355.17°az

SANDSTONE:clr-trnsi,
tr frstd,f-med,rr crs,ang-
sr,pr-mod srt,mnr-com arg
mtx,wk sil cmt i/p,tr pyr cmt,
tr nod pyr,pr inf por,no fluor.

Bit#2-9 7/8"
Type:Reed Hycalog RSX616M-A11
Jets: 6 x 18
In: 3700.0m MDRT
Out:3923.0 mMDRT
Run: 223 m
Hrs: 6.3
Cond:

CALCAREOUS CLAYSTONE:
med lt gy-med gy,olv
gy,mod-com calc,tr liths,
sft-frm,sbblky.

SANDSTONE:clr-trnsi,
opq,crs-vcrs,rr med,sa-sr,
rr rnd,sbsph,mod srt,tr
arg mtx,tr pyr,lse,no fluor.

Survey:3714.66mMD(2363.5mTVD)
60.05°inc 358.20°az

FLUOR:3710.0m-3715.0m tr dl-
pl yel gn p/p dir fluor,slw
yel grn cut & c/c mod yel grn
res ring.

54/15/18/12/1

SANDSTONE:opq,pl gy,vf-rr f,wl
srt,sa-sr,com pl gy arg
mtx,tr wk sil cmt,fr,rr lse,
tr liths,pr vis por

55/14/18/12/1

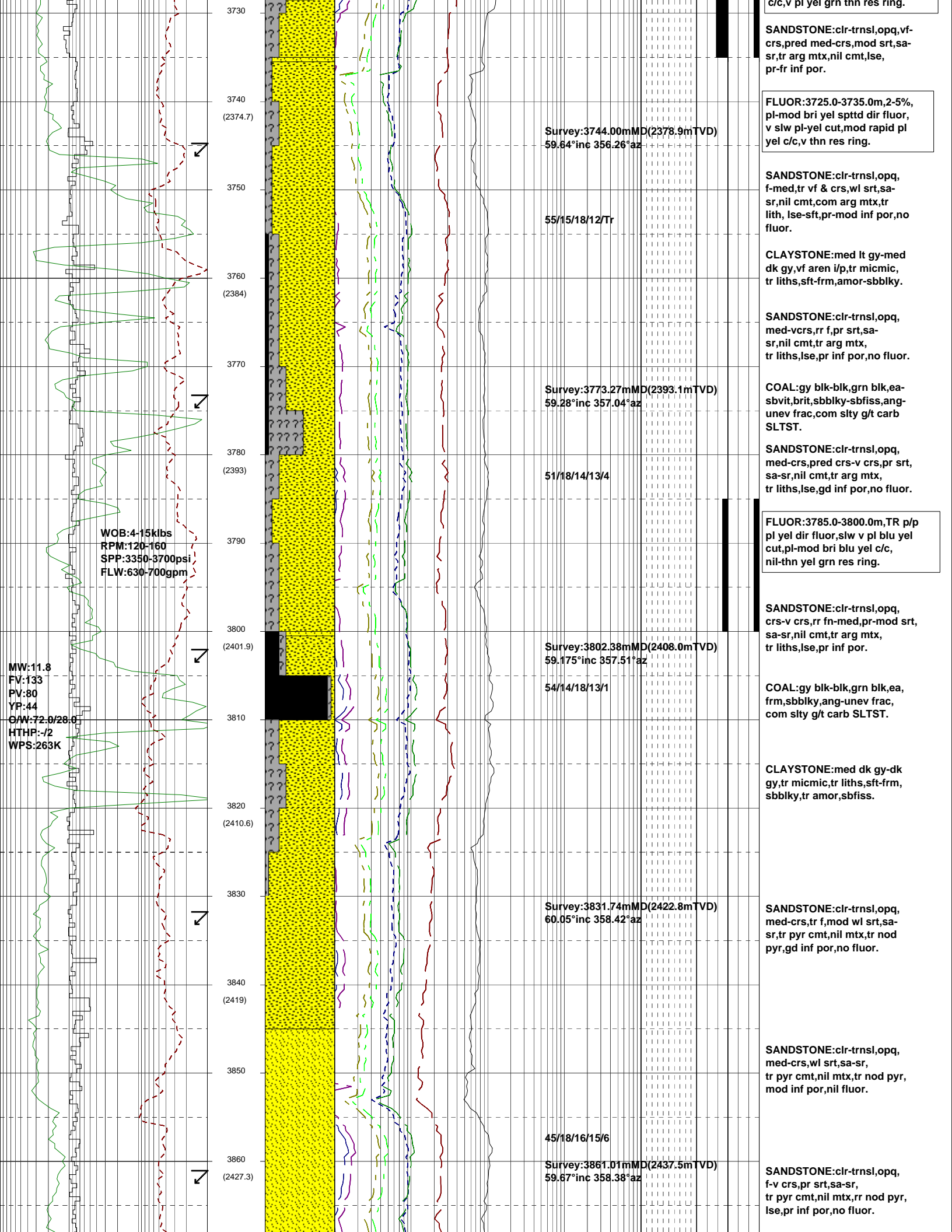
FLUOR:3715.0-3725.0m,tr-2%,
pl yel grn p/p dir fluor,v slw
bldg,pl bl-yel cut,vpl yel grn

MW:11.7
FV:135
PV:62
YP:36
O/W:54.5/22
HTHP:-J2
WPS:248K

WOB:2-23klbs
RPM:140
SPP:3630psi
FLW:483pm

23/03/09

MW:11.9
FV:192
PV:77
YP:44
O/W:53.0/21.0
HTHP:-J3
WPS:263K



c/c, v pl yel grn thn res ring.

SANDSTONE:clr-trnsl,opq,vf-crs,pred med-crs,mod srt,sa-sr,tr arg mtx,nil cmt,lse,pr-fr inf por.

FLUOR:3725.0-3735.0m,2-5%,pl-mod bri yel spthd dir fluor,v slw pl-yel cut,mod rapid pl yel c/c,v thn res ring.

SANDSTONE:clr-trnsl,opq,f-med,tr vf & crs,wl srt,sa-sr,nil cmt,com arg mtx,tr lith,lse-sft,pr-mod inf por,no fluor.

CLAYSTONE:med lt gy-med dk gy,vf aren i/p,tr micmic,tr liths,sft-frm,amor-sbbiky.

SANDSTONE:clr-trnsl,opq,med-vcrs,rr f,pr srt,sa-sr,nil cmt,tr arg mtx,tr liths,lse,pr inf por,no fluor.

COAL:gy blk-blk,grn blk,ea-sbvit,brit,sbbiky-sbfiss,ang-unev frac,com sity g/t carb SLTST.

SANDSTONE:clr-trnsl,opq,med-crs,pred crs-v crs,pr srt,sa-sr,nil cmt,tr arg mtx,tr liths,lse,gd inf por,no fluor.

FLUOR:3785.0-3800.0m,TR p/p pl yel dir fluor,slw v pl blu yel cut,pl-mod bri blu yel c/c,nil-thn yel grn res ring.

SANDSTONE:clr-trnsl,opq,crs-v crs,rr fn-med,pr-mod srt,sa-sr,nil cmt,tr arg mtx,tr liths,lse,pr inf por.

COAL:gy blk-blk,grn blk,ea,frm,sbbiky,ang-unev frac,com sity g/t carb SLTST.

CLAYSTONE:med dk gy-dk gy,tr micmic,tr liths,sft-frm,sbbiky,tr amor,sbfiss.

SANDSTONE:clr-trnsl,opq,med-crs,tr f,mod wl srt,sa-sr,tr pyr cmt,nil mtx,tr nod pyr,gd inf por,no fluor.

SANDSTONE:clr-trnsl,opq,med-crs,wl srt,sa-sr,tr pyr cmt,nil mtx,tr nod pyr,mod inf por,nil fluor.

SANDSTONE:clr-trnsl,opq,f-v crs,pr srt,sa-sr,tr pyr cmt,nil mtx,rr nod pyr,lse,pr inf por,no fluor.

WOB:4-15kibs
RPM:120-160
SPP:3350-3700psi
FLW:630-700gpm

MW:11.8
FV:133
PV:80
YP:44
QW:72.0/28.0
HTHP:-/2
WPS:263K

Survey:3744.00mMD(2378.9mTVD)
59.64°inc 356.26°az

55/15/18/12/Tr

Survey:3773.27mMD(2393.1mTVD)
59.28°inc 357.04°az

51/18/14/13/4

Survey:3802.38mMD(2408.0mTVD)
59.175°inc 357.51°az

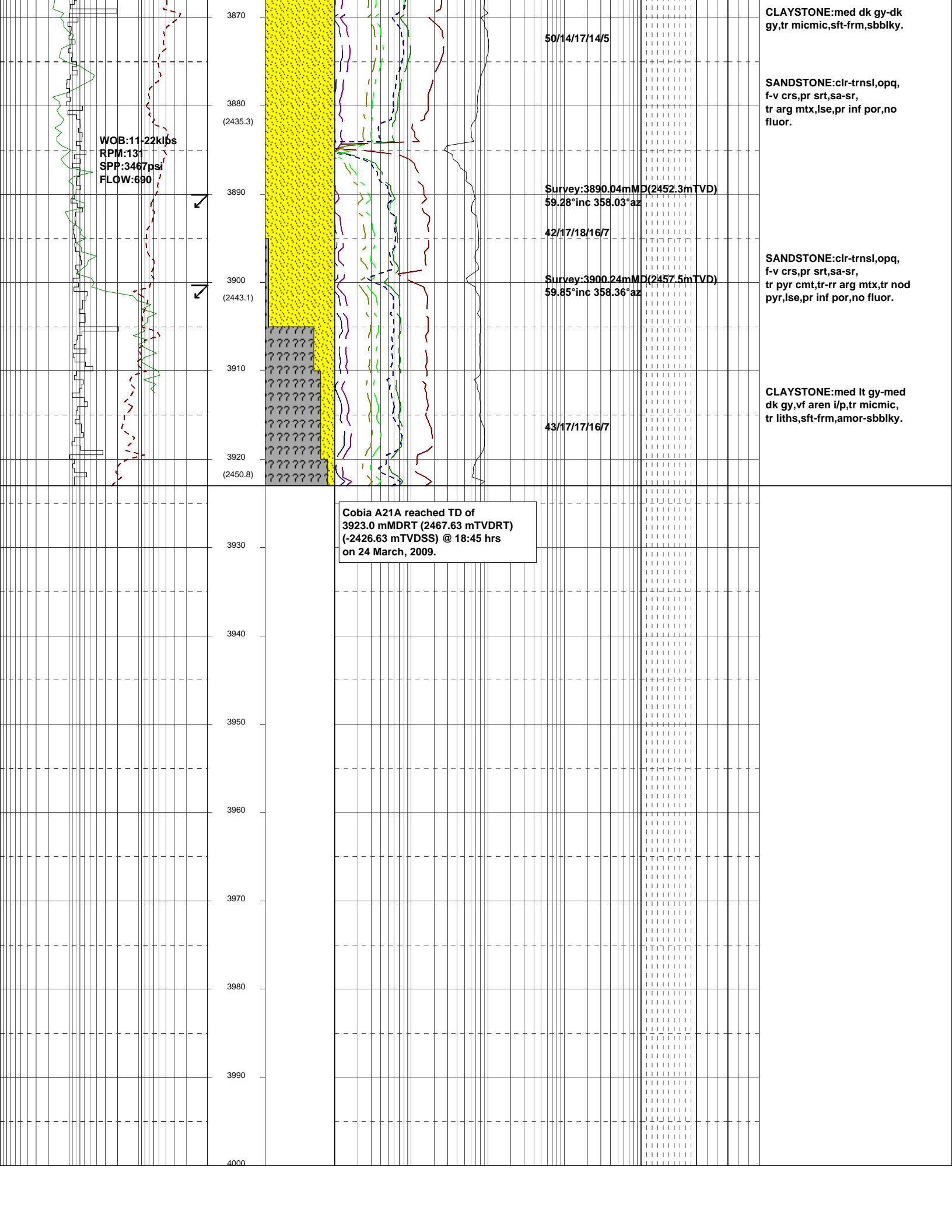
54/14/18/13/1

Survey:3831.74mMD(2422.8mTVD)
60.05°inc 358.42°az

45/18/16/15/6

Survey:3861.01mMD(2437.5mTVD)
59.67°inc 358.38°az

3730
3740 (2374.7)
3750
3760 (2384)
3770
3780 (2393)
3790
3800 (2401.9)
3810
3820 (2410.6)
3830
3840 (2419)
3850
3860 (2427.3)



WOB:11-22klps
 RPM:131
 SPP:3467psi
 FLOW:690

50/14/17/14/5

CLAYSTONE:med dk gy-dk
 gy,tr micmic,sft frm,sbblky.

(2435.3)

SANDSTONE:clr-trnsl,opq,
 f-v crs,pr srt,sa-sr,
 tr arg mtx,lse,pr inf por,no
 fluor.

Survey:3890.04mMD(2452.3mTVD)
 59.28°inc 358.03°az

42/17/18/16/7

3890

SANDSTONE:clr-trnsl,opq,
 f-v crs,pr srt,sa-sr,
 tr pyr cmt,tr-rr arg mtx,tr nod
 pyr,lse,pr inf por,no fluor.

Survey:3900.24mMD(2457.5mTVD)
 59.85°inc 358.36°az

(2443.1)

3910

CLAYSTONE:med lt gy-med
 dk gy,vf aren i/p,tr micmic,
 tr liths,sft frm,amor-sbblky.

43/17/17/16/7

3920

(2450.8)

Cobia A21A reached TD of
 3923.0 mMDRT (2467.63 mTVDRT)
 (-2426.63 mTVSS) @ 18:45 hrs
 on 24 March, 2009.

3930

3940

3950

3960

3970

3980

3990

4000