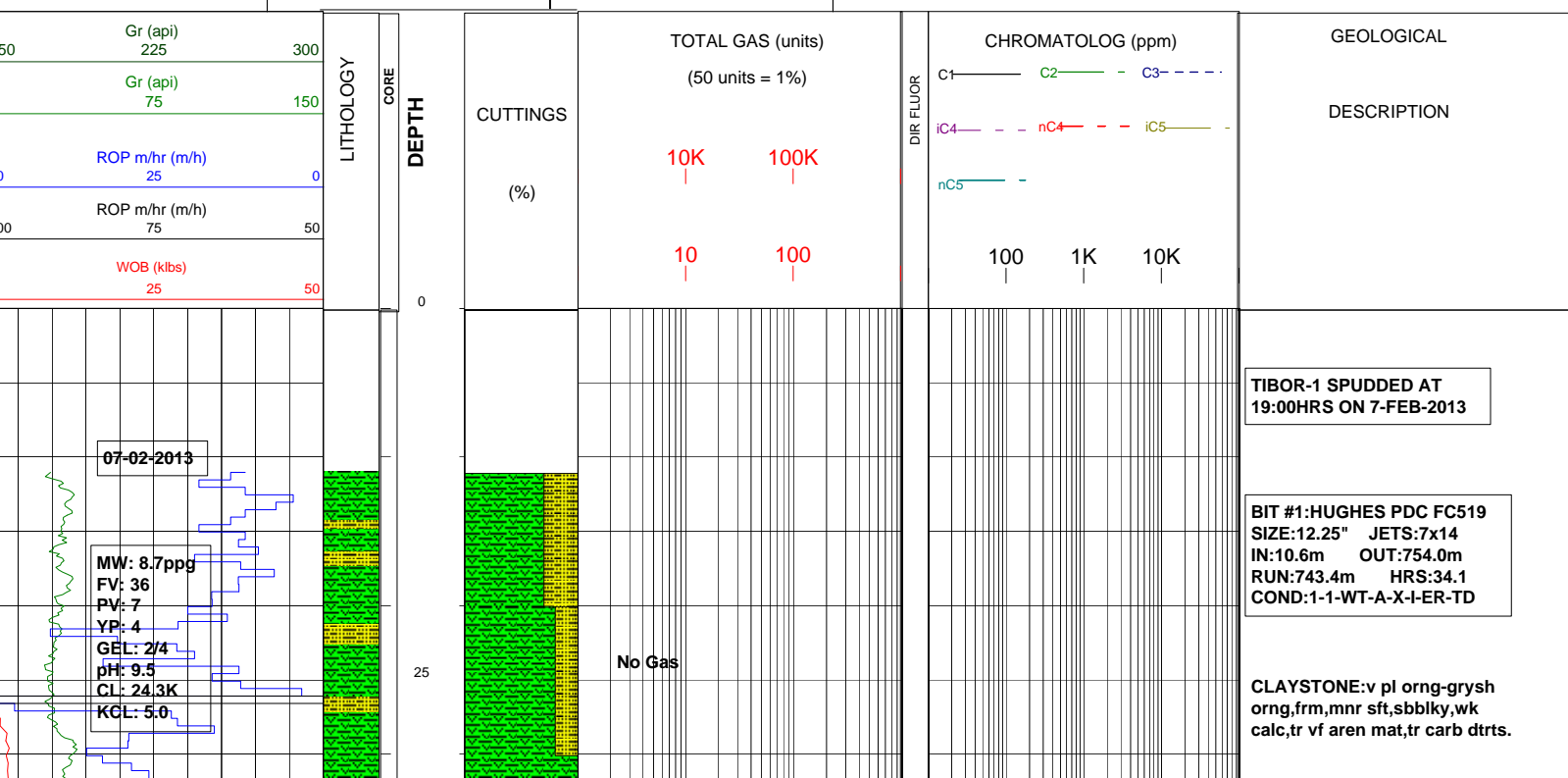
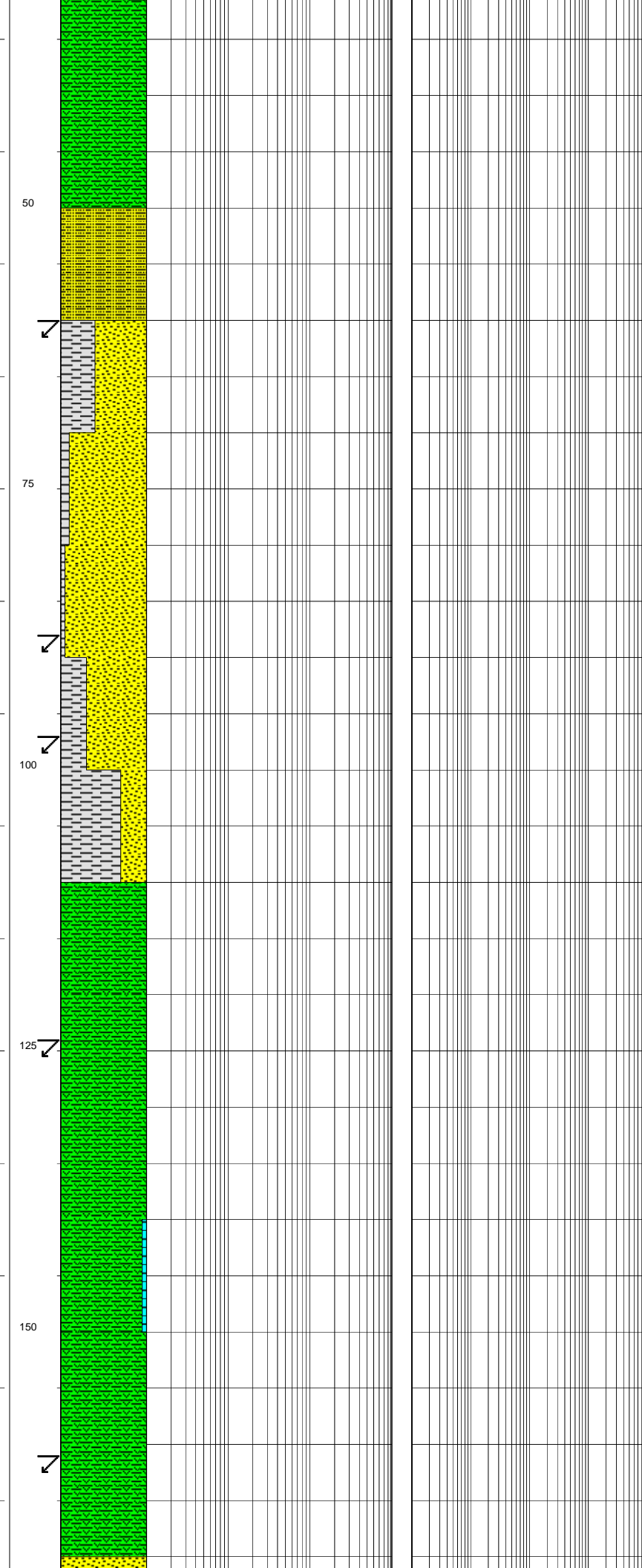
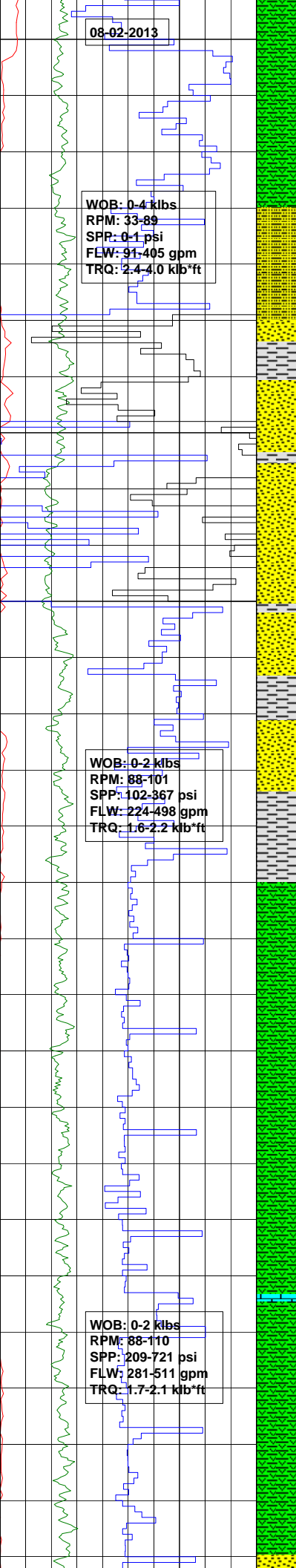


Field : EXPLORATION	Rotary Table : 140.0 m 9	Rig : ENSIGN 918	Open Hole:	Cased Hole:	Loggers : PRAMOD GADHE
Permit : ATP 539	Ground Level : 135.0 m	Spud Date : 07-02-2013	12.25" 754.0 mMDRT	9.625" 750.9 mMDRT	JOSHUA MARDEN
State : QLD	Datum: GDA 94	TD Date : 18-02-2013	8.5" 1723.0 mMDRT		SAM OTTOY
Country : AUSTRALIA	Lat. : 25°52' 17.796"S	Total Depth : 1723.0 mMDRT			DENIS MALIZANI
Scale: 1/ 500	Long. : 141° 16' 19.413"E	Final Status : PLUGGED & ABANDONED			

<b>LITHOLOGY</b> Sandstone Siltstone Claystone Shale Limestone Dolomite Coal Mudstone Evaporite Calcarenite Cement	<b>ACCESSORIES</b> Pyrite Glauconite Mica Chert Pyrite Fossils Iron Breccia Calcareous Carbonaceous Foraminifera	<b>DRILLING DATA</b> Casing shoe Deviation survey Dst Core Sidewall core  <b>MUD DATA</b> 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)	<b>ABBREVIATIONS</b> 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
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CLAYSTONE: med dk gry-com dk grnsh gry, mnr brnsh gry, sft-frm, sbblky, slty i/p, com aren, g/t Arg Sst i/p, tr carb dtrts.

SURVEY @ 60.0m MDRT INC: 0.0°

ARGILLACEOUS SANDSTONE: med dk gry-dk grnsh gry, fri-occ frm, vf-mnr f grns, sbang-rnd, mod wl srt, sbsph-sbelong, 50% arg mtx, occ wk sil cmt, tr lith frag, tr carb mat, nil vis por, no hc fluor.

SANDSTONE: lt gry-lt grnsh aggs, fri-mod hd, vf-f, pred med, sbang-ang, mnr sbrnd, mod wl srt, sbsph-sbelong, mnr arg mtx, com lse f-med grs qtz, wk calc i/p, tr mica flks & lith frags, v pr vis por, no hc fluor.

SURVEY @ 88.0m MDRT INC: 1.0°

ARENACEOUS SILTSTONE: lt gry-lt grnsh gry, frm, sbblky, tr calc, mnr cly mat, occ vf-mnr f sand.

SURVEY @ 97.0m MDRT INC: 0.5°

CLAYSTONE: lt gry-com lt grnsh gry, mnr lt brnsh gry, sft-rr frm, sbblky, slty i/p, tr lith spks, tr vf grs lse qtz, non-calc.

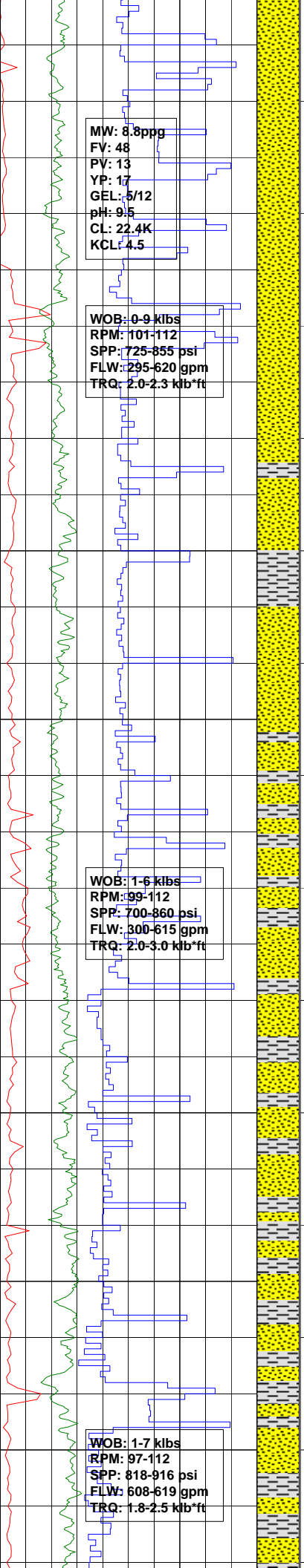
SURVEY @ 124.0m MDRT INC: 0.5°

CLAYSTONE: lt gry-com lt grnsh gry, tr lt brnsh gry, sft-rr frm, sbblky, slty i/p, tr lith spks, non-calc.

LIMESTONE: Mdst, brnsh gry-olv gry, frm-com mod hd, blk-sbblky, slty i/p, com arg, tr carb spks.

SURVEY @ 161.0m MDRT INC: 0.5°

CLAYSTONE: med gry, grnsh gry-pred dk grnsh gry, sft-mnr frm, sbblky, slty i/p, tr brnsh blk carb spks, wk calc i/p.



MW: 8.8ppg  
 FV: 48  
 PV: 13  
 YP: 17  
 GEL: 5/12  
 pH: 9.5  
 CL: 22.4K  
 KCL: 4.5

WOB: 0-9 klbs  
 RPM: 101-112  
 SPP: 725-855 psi  
 FLW: 295-620 gpm  
 TRQ: 2.0-2.3 kb\*ft

WOB: 1-6 klbs  
 RPM: 99-112  
 SPP: 700-860 psi  
 FLW: 300-615 gpm  
 TRQ: 2.0-3.0 kb\*ft

WOB: 1-7 klbs  
 RPM: 97-112  
 SPP: 818-916 psi  
 FLW: 608-619 gpm  
 TRQ: 1.8-2.5 kb\*ft

175  
 200  
 225  
 250  
 275  
 300

No Gas

SURVEY @ 188.0m MDRT INC: 0.5°

ARGILLACEOUS SANDSTONE:  
 lt gry-v lt grn gry,lt olv gry i/p,  
 fri,f-dom vf,sbang-ang,wl srt,  
 sbsph,abdt v lt gry arg mtx,mnr  
 wk calc,tr wk sil cmt,tr lith frags,  
 tr brnsh blk carb spks,v pr vis  
 por,no hc fluor.

SURVEY @ 217.0m MDRT INC: 0.5°

ARGILLACEOUS SILTSTONE:v lt  
 gry-lt grnsh gry,tr lt brnsh gry,  
 sft-occ frm,com arg mat,tr brnsh  
 blk carb spks.

SURVEY @ 246.0m MDRT INC: 0.5°

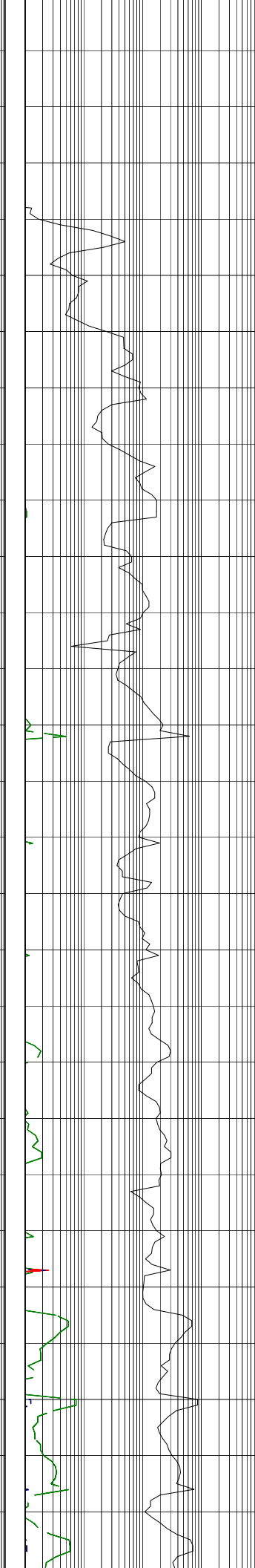
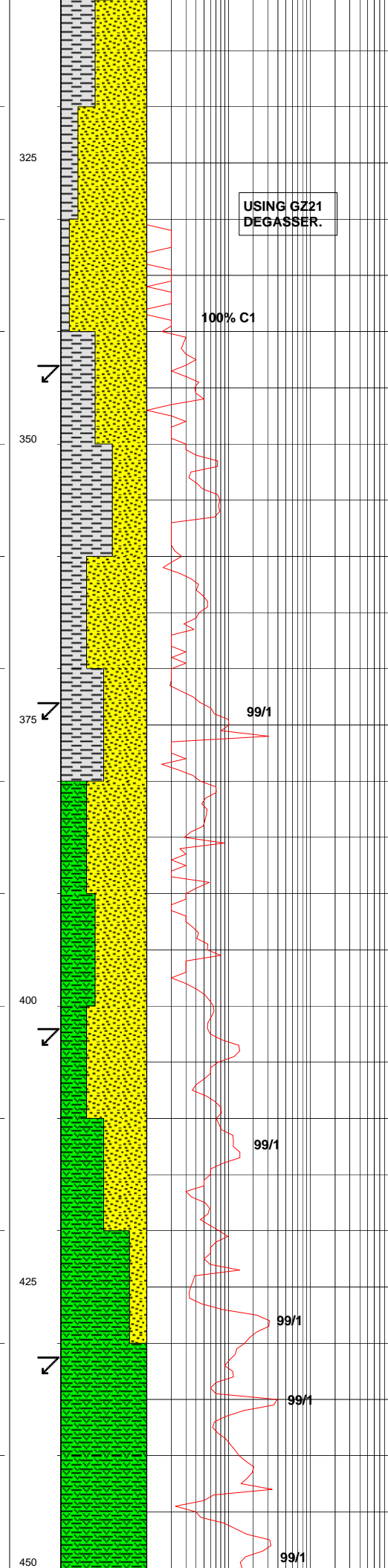
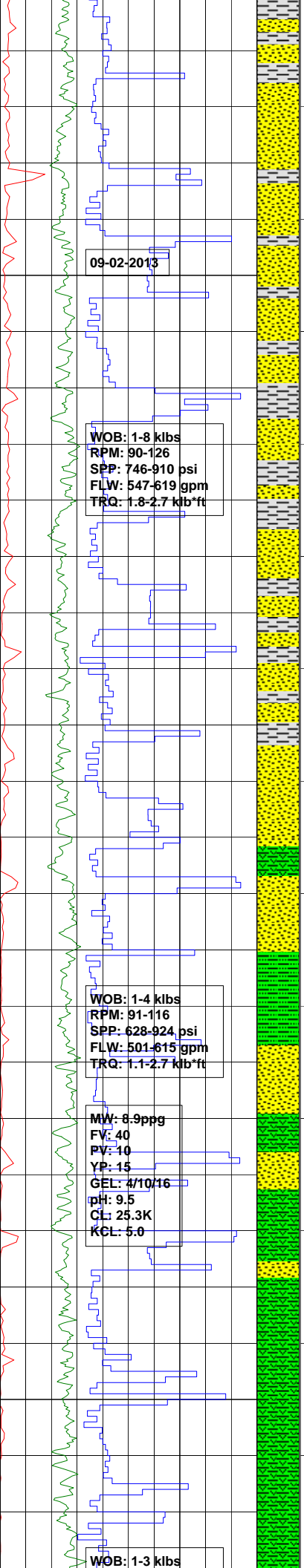
ARGILLACEOUS SANDSTONE:  
 lt gry-v lt grn gry,lt olv gry i/p,  
 fri,f-dom vf,sbang-ang,wl srt,  
 sbsph,abdt v lt gry arg mtx,mnr  
 wk calc,tr wk sil cmt,tr lith frags,  
 rr brnsh blk coal dtrts,v pr vis por,  
 no hc fluor.

SURVEY @ 275.0m MDRT INC: 0.5°

ARGILLACEOUS SILTSTONE:  
 v ltgry-lt grnsh gry,mnr lt brnsh  
 gry,sft-rr frm,abdt arg mat,tr brnsh  
 blk carb spks,g/t Sltty Clayst i/p.

SURVEY @ 305.0m MDRT INC: 0.5°

ARGILLACEOUS SANDSTONE:



lt gry-v lt grn gry, tr lt olv gry, slt sz-f grns, mnr med grs, sbang-ang, wl srt, sbsph, abdt v lt gry arg mtz, tr wk sil cmt, tr liths frags, tr brnsh blk carb spks & mic lam, rr micmic spks, nil-pr vis por, no hc fluor.

SANDSTONE: lse, v lt gry-lt grn gry, med gry, mnr trnsi, fri, vf-f, sbang-sbrnd, wl srt, sbsph, occ arg mtz, mnr wk calc-dom wk sil cmt, mnr grn gry liths, tr micmic, pr vis por, no hc fluor.

SURVEY @ 343.0m MDRT INC: 0.5°

ARGILLACEOUS SILTSTONE: v lt gry-lt grnsh gry, mnr lt brnsh gry, sft-rr frm, abdt arg mat, tr brnsh blk carb spks, g/t Slyt Clayst i/p.

SURVEY @ 373.0m MDRT INC: 0.5°

SILTY CLAYSTONE: brnsh gry-md gry, tr lt gry- brnsh gry sft-mnr frm, com stly i/p tr brnsh blk carb spks.

SANDSTONE: gen lse, v lt gry-md gry

SURVEY @ 402m MDRT INC: 1.0

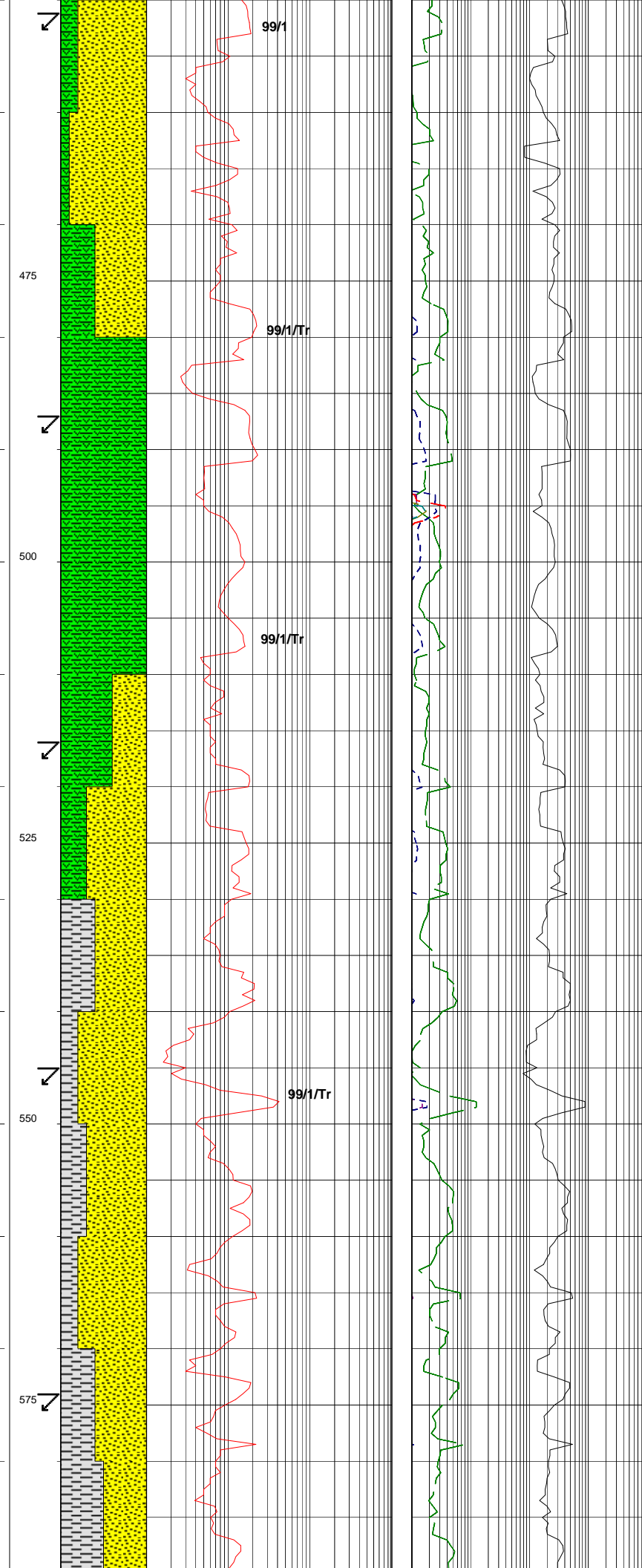
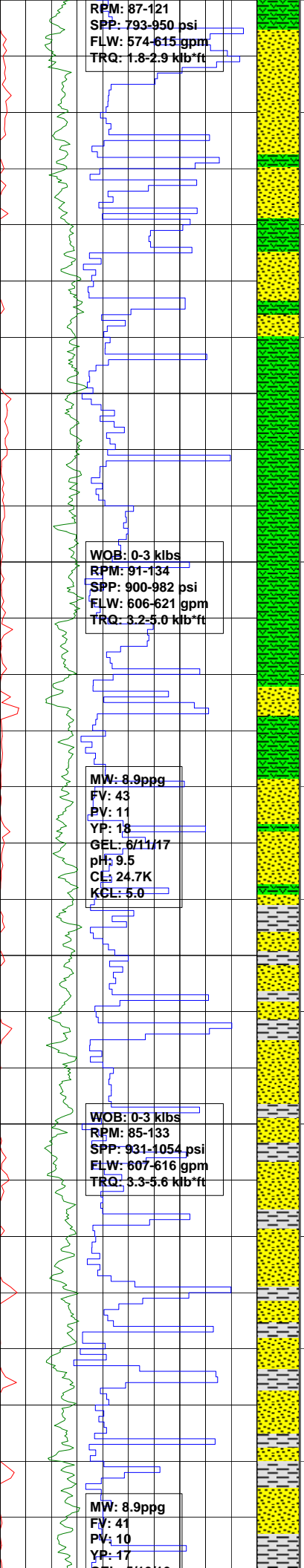
SILTY CLAYSTONE: brnsh gry-md gry, tr lt gry-brnsh gry, sft -mnr frm, com f silt-vf gr qtz g/t ARENACEOUS CLAYSTONE i/p, tr brnsh blk carb spks.

SANDSTONE: gen lse, v lt gry-med gry, com trnsi, vf-f, sbang-sbrnd, wl srt, subsphr, com fri, occ arg mtz, mnr mod calc cmt, occ wk sil cmt, mnr grn liths, tr brnsh blk carb mat, pr vis por, no hc flour

SURVEY @ 431m MDRT INC: 0.5

SILTY CLAYSTONE: brnsh gry-med gry, tr lt gry-lt brnsh gry, sft-mnr frm, dec stly i/p, tr brnsh blk carb spks.

SURVEY @ 451m MDRT INC: 0.5



**SANDSTONE:**fri-com mod hd,v lt gry-med gry,trnsl,lt grnsh gry,vf-f,sbang-sbrnd,wl srt,sbsph,tr arg mtx,com mod calc cmt,mnr wk sil cmt,mnr grn liths,mnr brnsh blk carb mat,tr lse med grs qtz,nil-v pr vis por,no hc fluor.

**SURVEY @ 487m MDRT INC: 0.5**

**CLAYSTONE:**brnsh gry-med dk gry,mnr med gry,sft-pred frm,tr slty i/p,mod calc i/p,tr brnsh blk carb spks,tr vf grs lse qtz.

**SURVEY @ 516m MDRT INC 0.5**

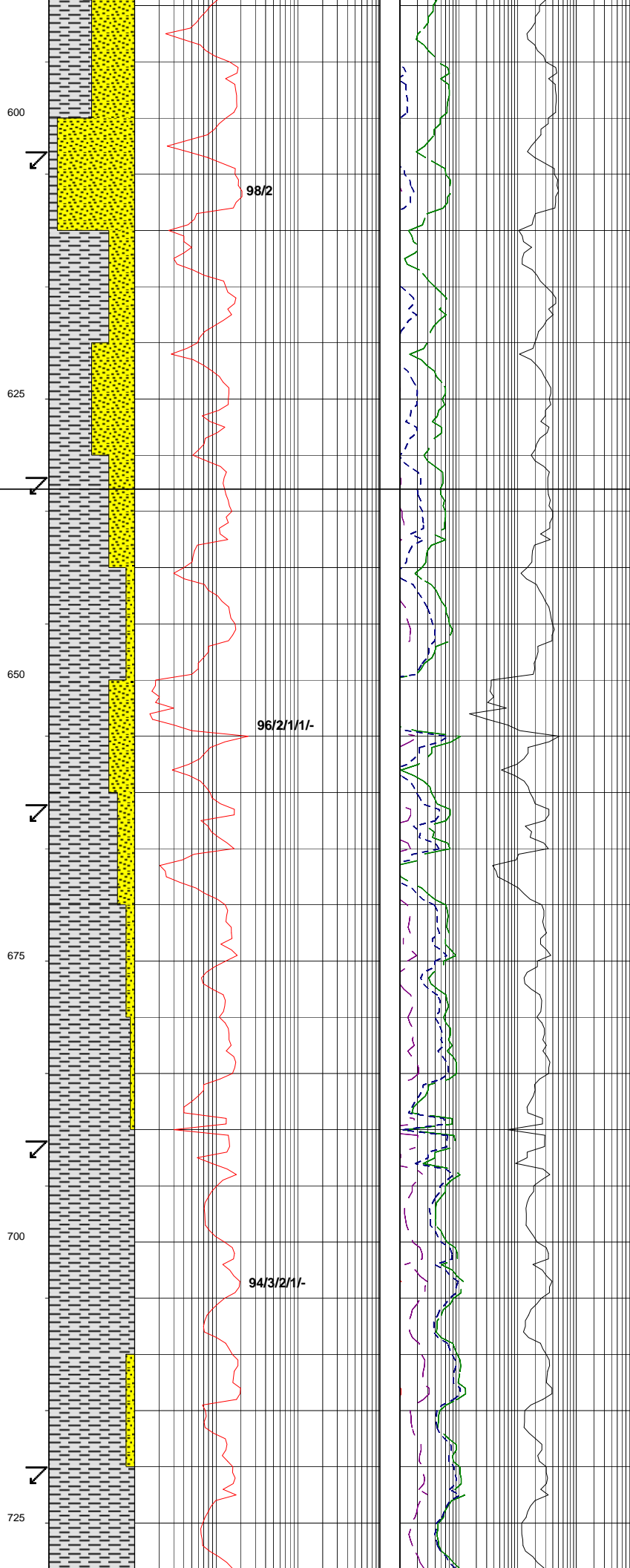
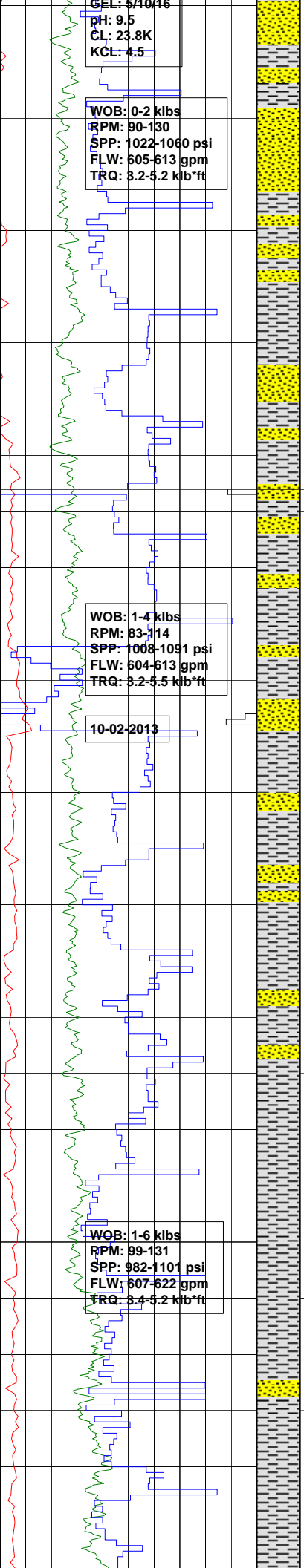
**SANDSTONE:**fri-com mod hd,v lt gry-med gry,trnsl,lt grnsh gry,vf-f,sbang-sbrnd,wl srt,sbsph,tr arg mtx,com mod calc cmt,mnr wk sil cmt,slty g/t Sity Clst,mnr grn liths,mnr brnsh blk carb mat,tr lse med grs qtz,nil-v pr vis por,no hc fluor.

**SURVEY @ 545m MDRT INC 0.5**

**SILTSTONE:**med lt gry-grysh brn,mnr v lt gry,sft-frm,tr mod hd,sbblky,mnr v f qtz grns,10% liths,micmic i/p,no calc,tr vf carb dtrts,rr f coaly lam.

**SURVEY @ 574m MDRT INC 0.5**

**SANDSTONE:**fri-com mod hd,v lt gry-med gry,trnsl,lt grnsh gry,vf-f,sbang-sbrnd,wl srt,sbsph,tr arg mtx,com mod calc cmt,mnr wk sil cmt,slty g/t Sity Clst,mnr grn liths,mnr brnsh blk carb mat,tr lse med grs qtz,nil-v pr vis por,no hc fluor.



**SURVEY @ 603m MDRT INC 0.5**

**SILTSTONE: med lt gry-grysh brn, mnr v lt gry, sft-frm, tr mod hd, occ blk, mnr v f qtz grns, 10% liths, micmic i/p, no calc, tr vf carb dtrts, rr f coaly lam.**

**SURVEY @ 635m MDRT INC 0.5**

**MACKUNDA FORMATION: 633.0m MDRT**

**SANDSTONE: fri-com mod hd, v lt gry-med gry, trns, lt grnsh gry, vf-f, sbang-sbrnd, wl srt, sbsph, tr arg mtx, com mod calc cmt, mnr wk sil cmt, slty g/t Sly Clst, mnr grn liths, mnr brnsh blk carb mat, tr lse med grs qtz, nil-v pr vis por, no hc fluor.**

**SURVEY @ 662m MDRT INC 0.5**

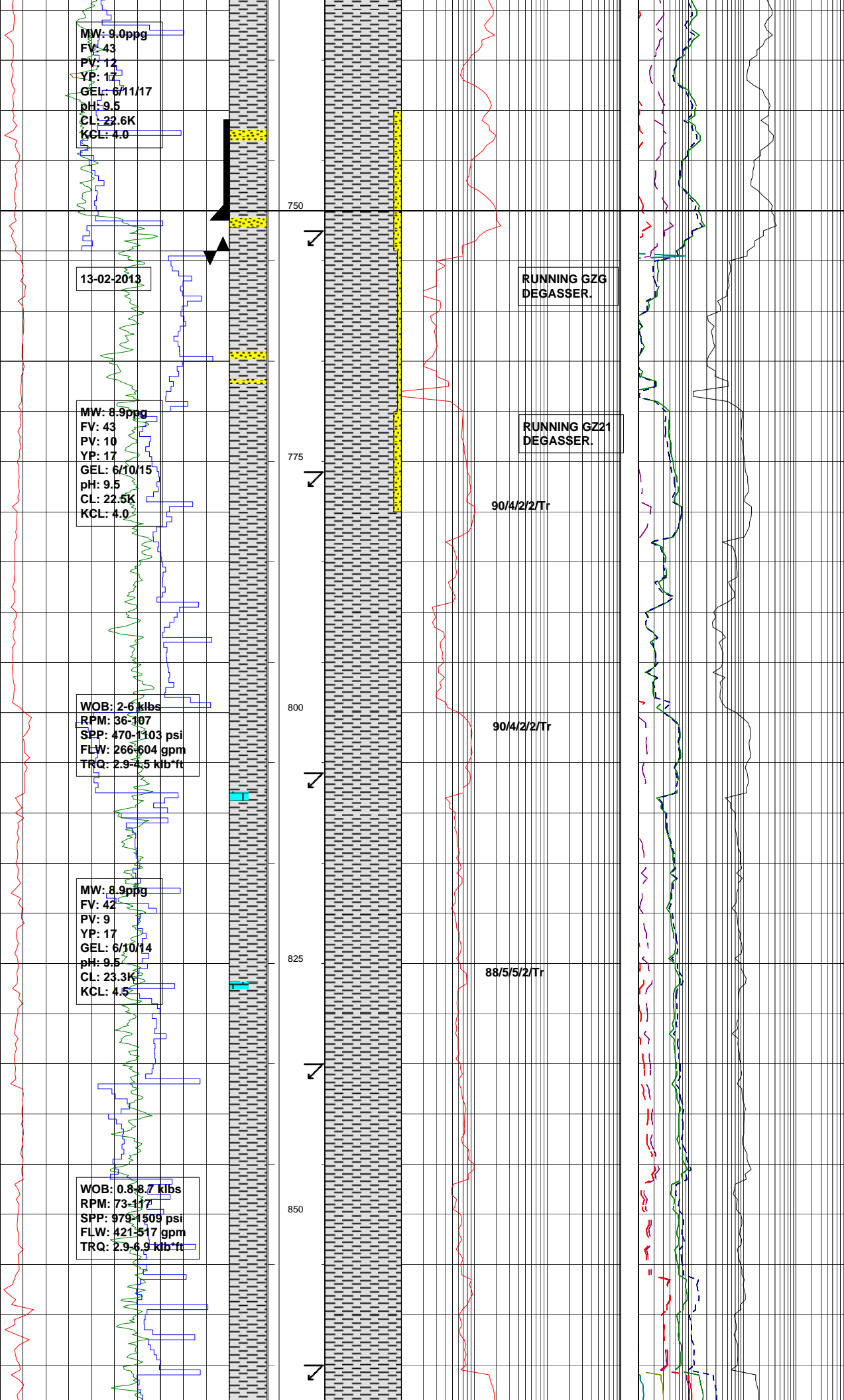
**SILTSTONE: med lt gry-grysh brn, mnr v lt gry, sft-frm, tr mod hd, occ blk, mnr v f qtz grns, 10% liths, micmic i/p, no calc, tr vf carb dtrts, rr f coaly lam.**

**SURVEY @ 691m MDRT INC 0.5**

**SILTSTONE: med lt gry-grysh brn, occ v lt gry, sft-frm, com mod hd, sbbkly-occ blk, mnr v f qtz grs, 10% liths, no calc, tr vf carb dtrts, rr f coaly lam.**

**SANDSTONE: mod hd, occ frm & fri v lt gry-md gry, trns, lt grnsh gry, vf-fn, tr med gr, sbang-sbrnd, mod wl srt, sbsph, tr arg mtx, com mod-strng calc cmt, mnr wk sil cmt tr brnsh blk carb mat, nil-v pr vis por, no hc fluor.**

**SURVEY @ 720m MDRT INC: 0.5**



MW: 9.0ppg  
 FV: 43  
 PV: 12  
 YP: 17  
 GEL: 6/11/17  
 pH: 9.5  
 CL: 22.6K  
 KCL: 4.0

13-02-2013

MW: 8.9ppg  
 FV: 43  
 PV: 10  
 YP: 17  
 GEL: 6/10/15  
 pH: 9.5  
 CL: 22.5K  
 KCL: 4.0

WOB: 2.6 klbs  
 RPM: 36-107  
 SPP: 470-1103 psi  
 FLW: 266-604 gpm  
 TRQ: 2.9-4.5 kb\*ft

MW: 8.9ppg  
 FV: 42  
 PV: 9  
 YP: 17  
 GEL: 6/10/14  
 pH: 9.5  
 CL: 23.3K  
 KCL: 4.5

WOB: 0.8-8.7 klbs  
 RPM: 73-117  
 SPP: 979-1509 psi  
 FLW: 421-517 gpm  
 TRQ: 2.9-6.9 kb\*ft

SILTSTONE: med lt gry-grysh  
 brn, occ v lt gry, sft frm, com mod  
 hd, sbblky-occ blk, mn v f qtz grns,  
 arg g/t Sity Clyst, 10% liths, no calc,  
 tr vf carb dtrts, rr f coaly lam.

ALLARU FORMATION:  
 750.0m MDRT

9 5/8" CASING SHOE  
 SET @ 750.93m

BIT #2: HUGHES PDC Q505F  
 SIZE: 8.5" JETS: 5x12  
 IN: 754m OUT: 1486m  
 RUN: 732m HRS: 58.8  
 COND: 3-4-BT-A-X-I-NR-HP

SANDSTONE: mod hd, occ frm & fri  
 v lt gry-md gry, trnsl, lt grnsh  
 gry, vf-fn, tr med gr, sbang-sbrnd,  
 mod wl srt, sbsph, tr arg mtz, com  
 mod-strng calc cmt, mnv wk sil cmt  
 tr brnsh blk carb mat, nil-v pr vis  
 pr, no hc flour.

SILTSTONE: olv gry-grysh brn,  
 mnv med-med lt gry, sft frm, mnv  
 mod hd, sbblky-occ blk, wk calc,  
 tr vf qtz grs, 10% liths, tr Dol,  
 micmic i/p.

SURVEY @ 806m MDRT INC: 1.5

LIMESTONE(Tr): mudstone, yelsh  
 gry, sft, sbblky, com arg.

SURVEY @ 835m MDRT INC: 1.0

SILTSTONE: med dk gry, tr brnsh  
 gry-olv gry, frm-mod hd, sbblky-  
 occ blk, wkly calc, occ arg i/p,  
 tr Lmst.

SURVEY @ 866m MDRT INC: 1.0

RUNNING GZG  
 DEGASSER.

RUNNING GZ21  
 DEGASSER.

90/4/2/2Tr

90/4/2/2Tr

88/5/5/2Tr

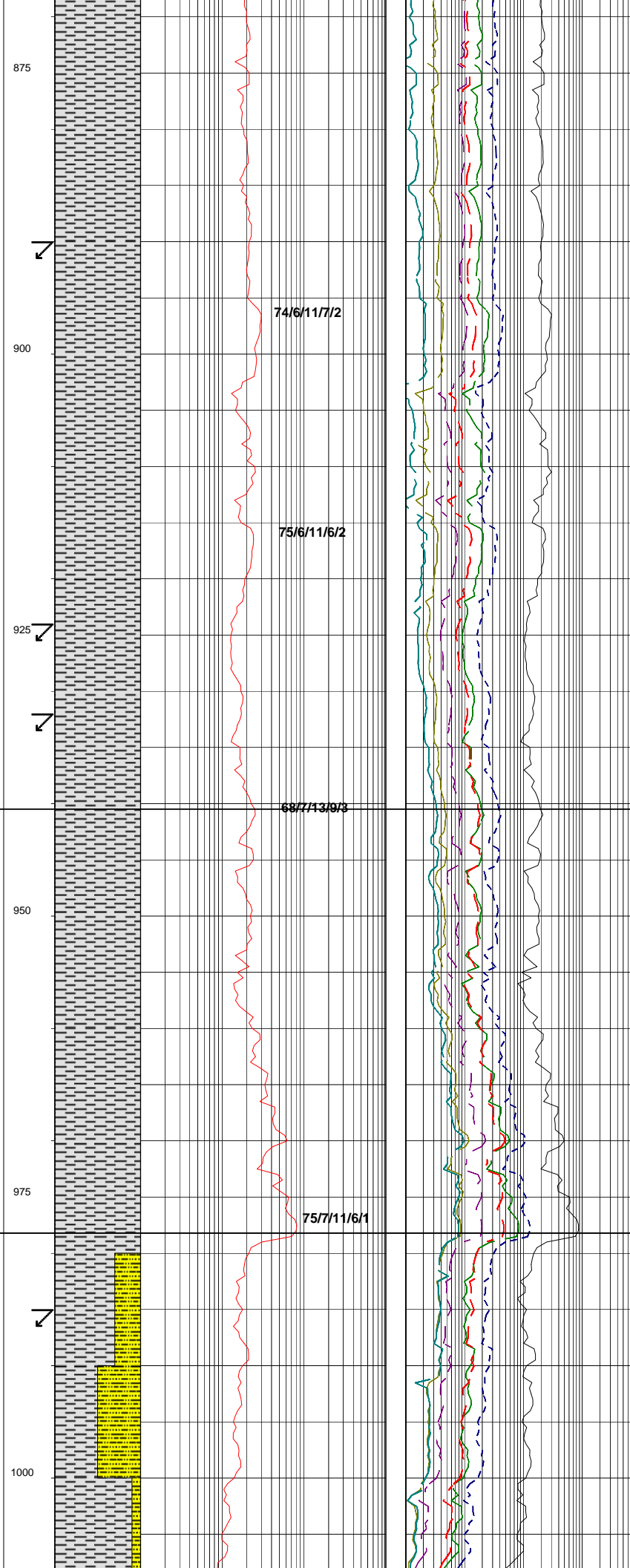
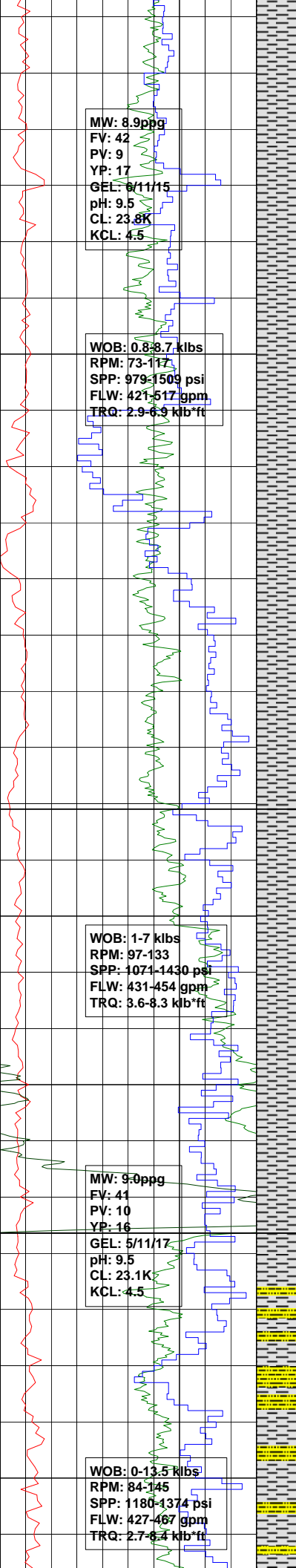
750

775

800

825

850



SILTSTONE: med dk gry, tr brnsh gry-olv gry, frm-mod hd, sbblky-occ blk, wkly calc, occ arg i/p, tr Lmst.

**SURVEY @ 890m MDRT INC: 0.5**

SILTSTONE: med dk gry, tr brnsh gry-olv gry, frm-mod hd, sbblky-occ blk, wkly calc, occ arg i/p, tr Lmst.

SILTSTONE: med dk gry, tr brnsh gry-olv gry, frm-mod hd, sbblky-occ blk, wkly calc, occ arg i/p, tr disseminated pyr, tr Lmst.

**SURVEY @ 932m MDRT INC: 2.0 AZ: 118**

**TOOLEBUC FORMATION: 940.47m MDRT**

SILTSTONE: med dk gry-dk gry, occ gry blk-olv blk, frm-mod hd i/p, sbblky-sbfiss, com arg, mod calc.

SILTSTONE: gry blk-olv blk, mnr med dk gry-dk gry, frm-mod hd i/p, sbblky-sbfiss, com arg, mod calc, tr sft wh calc mat.

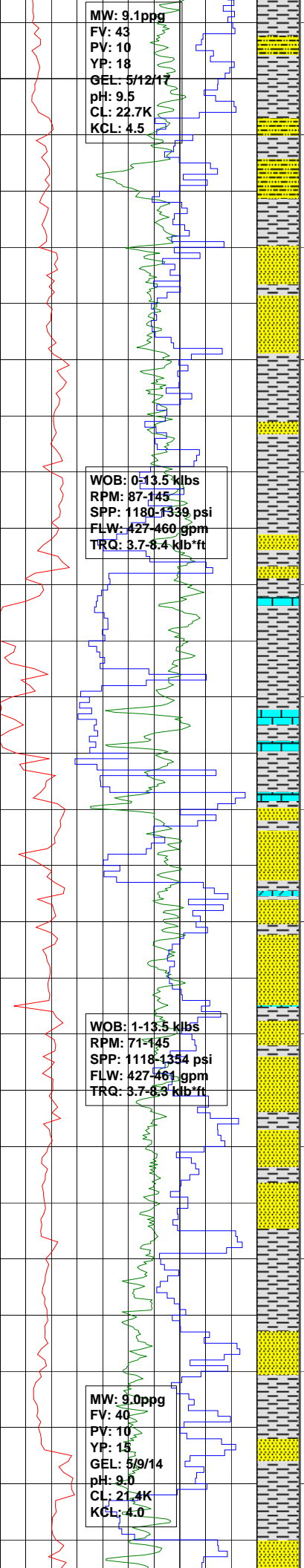
**WALLUMBILLA FORMATION: 978.19m MDRT**

**SURVEY @ 985m MDRT INC: 1.75 AZ: 118**

SILTY SANDSTONE: fri-dom hd, trnsi-v lt gry, vf-mnr f, com silt sz, mod wl srt, sbang-sbrnd, sbsph, tr qtz silt mtz, mnr arg mtz, wk calc cmt, rr-v mnr grn glauc, tr f grn blk liths, no vis por, no hc fluor.

SILTSTONE: gry blk-olv blk, mnr med dk gry-dk gry, frm-mod hd i/p, sbblky-sbfiss, com arg, mod calc, tr sft wh calc mat.





MW: 9.1ppg  
 FV: 43  
 PV: 10  
 YP: 18  
 GEL: 5/12/17  
 pH: 9.5  
 CL: 22.7K  
 KCL: 4.5

WOB: 0-13.5 klbs  
 RPM: 87-145  
 SPP: 1180-1339 psi  
 FLW: 427-460 gpm  
 TRQ: 3.7-6.4 kb\*ft

WOB: 1-13.5 klbs  
 RPM: 71-145  
 SPP: 1118-1354 psi  
 FLW: 427-461 gpm  
 TRQ: 3.7-6.3 kb\*ft

MW: 9.0ppg  
 FV: 40  
 PV: 10  
 YP: 15  
 GEL: 5/9/14  
 pH: 9.0  
 CL: 21.4K  
 KCL: 4.0

1025

1050

1075

1100

1125

77/7/9/6/1

82/6/7/4/1

SILTY SANDSTONE: pred lse, fri-dom hd, trnsi-v lt gry, vf-mnr f, com slit sz, mod wl srt, sbang-sbrnd, sbsph, tr qtz slit mtx, mnr arg mtx, wk cal cmt, rr-v mnr grn glauc, tr f grn blk liths, no vis por, no hc fluor.

SILTSTONE: med gry-olv gry, tr grysh blk-olv blk, frm-rr mod hd, sbbky-sbfiss, arg i/p, aren i/p, mod calc, tr lse vf grn qtz.

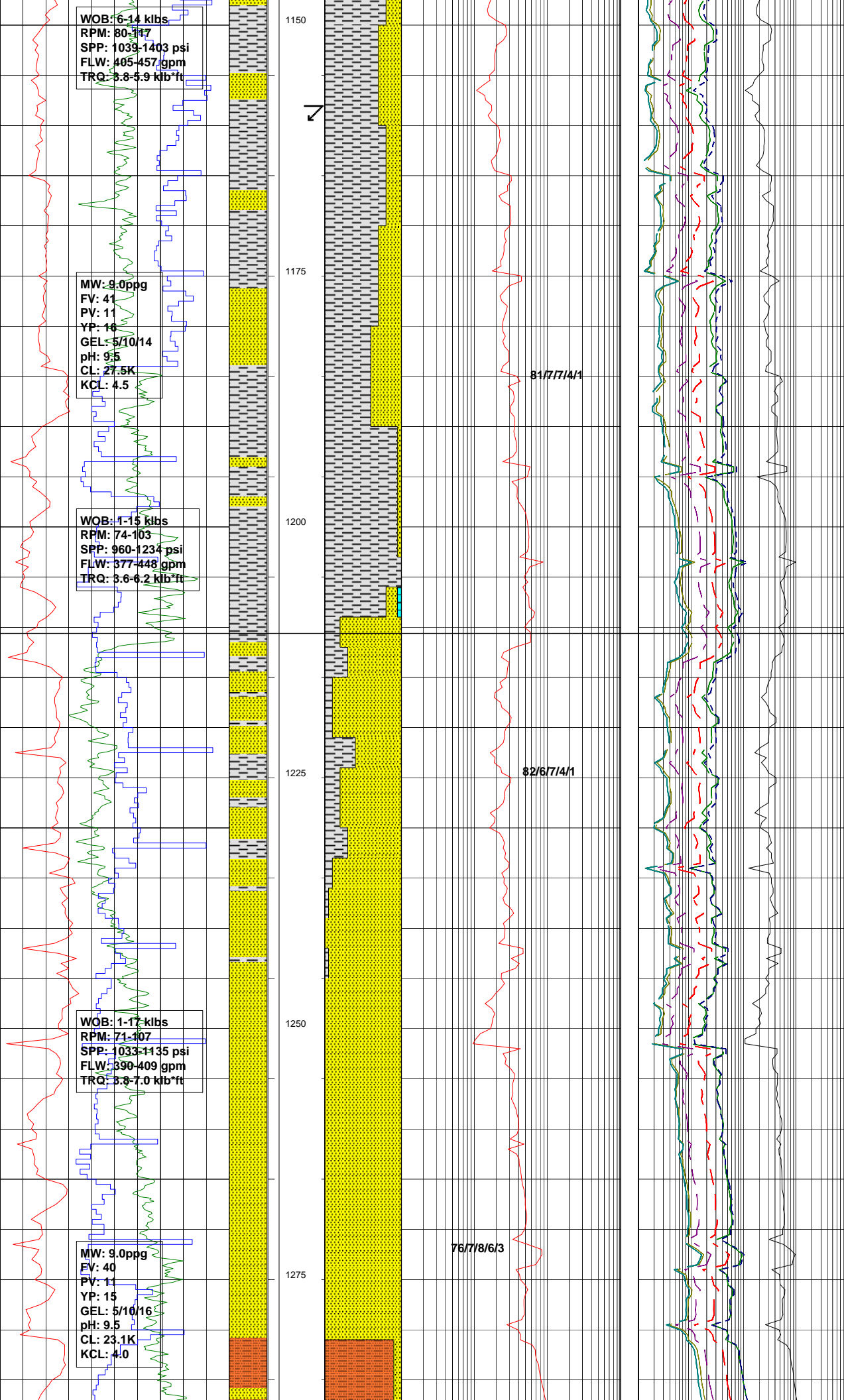
SURVEY @ 1062m MDRT  
 INC: 1.0 AZ: 100

LIMESTONE: Mdst, wh-v lt gry, hd blk, occ dk mic-lam.

SANDSTONE: pred lse, fri-dom hd, trnsi-v lt gry, vf-mnr f, com slit sz, mod wl srt, sbang-sbrnd, sbsph, tr qtz slit mtx, mnr arg mtx, wk calc cmt, rr-v mnr grn glauc, tr f grn blk liths, occ dk mic-lam, no vis por, no hc fluor.

SILTSTONE: med gry-olv gry, tr grysh blk-olv blk, frm-rr mod hd, sbbky-sbfiss, arg i/p, aren i/p, mod calc, tr lse vf grn qtz.

SANDSTONE: frm-mod hd aggs, occ fri, trnsi-v lt gry, vf-f, mod wl srt, sbang-sbrnd, sbsph, occ qtz slit mtx, mnr calc cmt, mnr vf grs glauc, tr



carb spks,rr lt brnsh gry Dol,nil-v pr por,no hc fluor.

SURVEY @ 1158m MDRT  
INC: 0.25 AZ: 98

SILTSTONE:gry blk-olv blk,mnr dk gry,mod hd-occ v hd,mnr frm, sbbkly-sbfiss,arg i/p,com aren i/p, wk calc i/p,tr lse vf grs qtz.

SILTSTONE:grysh blk-olv blk, mnr dk gry,mnr med gry,mod hd-pred v hd,com brit,rr frm,sbbkly-occ sbfiss,arg i/p,com aren i/p, wk calc i/p,tr lse med grs wh calcite,tr disse pyr.

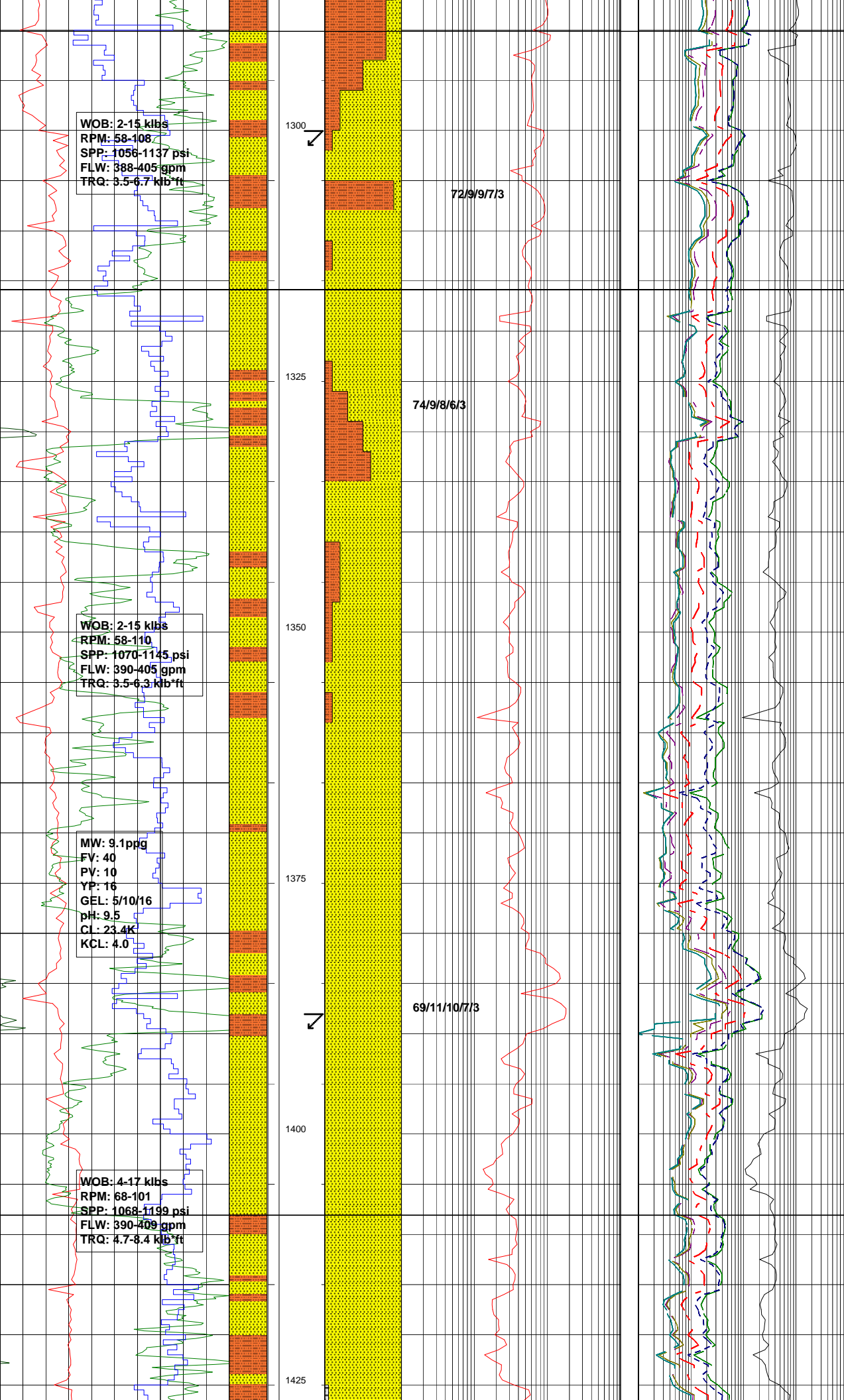
CADNA-OWIE FORMATION:  
1210.6m MDRT

SANDSTONE:hd-v hd,com lse, trnsi-v lt gry,vf-lower f grs,mod wl srt,sbang-sbrnd,sbsph,tr slty i/p, strng calc-dol cmt,rr wh liths & feld frags,tr glauc,nil-v pr vis por, no hc fluor.

ARENACEOUS SILTSTONE:dk gry-med gry,com grysh blk-olv blk,mod hd-pred v hd,com brit, sbbkly-mnr sbfiss,com aren,non-wk calc i/p,tr lse med grs calcite.

SANDSTONE:fri,mnr hd v wl cmt aggs,trnsi-v lt gry,mnr dk yeish brn,vf-lower f grs,mod wl srt, sbang-sbrnd,sbsph,rr slty i/p, occ lt gry arg mtx,strng calc-dol cmt,rr f grs wh liths & feld frags, tr glauc,nil-v pr vis por,no hc fluor.

ARENACEOUS SILTSTONE: grysh blk,slt hd,britt,blkly i/p, sbfiss i/p,arg mtx,aren,wk dol cmt,rr k-felds,rr coal grns.



**MURTA FORMATION:**  
1290.12m MDRT

**SURVEY @ 1300m MDRT**  
INC: 0.5 AZ: 25

**SANDSTONE:**med lt gry,sli hd, sbbkly,f-low vf,mod srt,ang, sbelong,mod sil cmt,com sil, com k-felds,com kao infill,no-pr vis por,no hc fluor.

**NAMUR FORMATION:**  
1315.86m MDRT

**ARENACEOUS SILTSTONE:** grysh blk,sli hd,britt,blky i/p, sbfiss i/p,arg mtx,aren,wk dol cmt,rr k-felds,rr coal grns.

**SANDSTONE:**trns1 lse grns, rr med-low vf,v pr srt,ang, sbsph-sbelong,wk sil cmt,rr liths frags,rr k-felds grns,pr inf por,rr f Sst cuttings showing pl grn/yel mineral fluor,no vis ct fluor.

**SANDSTONE:**lse,trns1-v lt gry,vf-med grs,sbrnd-rr sbang,v wl srt, mod sph,tr wk sil cmt,tr f grs calcite,fr-gd inf por,no hc fluor.

**SANDSTONE:**lse-com fri aggs, trns1-v lt gry,brnsh blk-grysh blk, vf-lower med grs,sbrnd-rr sbang, v wl srt,mod sph,tr frac grs,occ wk sil cmt,tr v lt gry arg mtx,v slty where brnsh blk-grysh blk grd to Aren Sltst,tr f grs,calc,tr vf grs blk liths/carb spks,tr pyr cmt, pr vis por,no fluor.

**SURVEY: 1388mMDRT**  
INC: 0.7 AZ: 17

**SANDSTONE:**lse-com fri aggs, trns1-v lt gry,brnsh blk-grysh blk, vf-lower med grs,sbrnd-rr sbang, v wl srt,mod sph,tr frac grs,occ wk sil cmt,tr v lt gry arg mtx,v slty where brnsh blk-grysh blk grd to Aren Sltst,tr f grs,calc,tr vf grs blk liths/carb spks,tr pyr cmt, pr vis por.

**WESTBOURNE FORMATION:**  
1408.08m MDRT

**FLUORESCENCE:**(1380-1383m)Tr tr dl yel ppnt fluor,blsh wh c/c,thk yelshy wh r/r.

**SILTSTONE:**grysh blk-brnsh blk,mnr dk yelsh brn, frm-occ mod hd,sbbkly-rr sbfiss,

WOB: 2-15 klbs  
RPM: 58-108  
SPP: 1056-1137 psi  
FLW: 388-405 gpm  
TRQ: 3.5-6.7 kb\*ft

1300

72/9/9/7/3

WOB: 2-15 klbs  
RPM: 58-110  
SPP: 1070-1145 psi  
FLW: 390-405 gpm  
TRQ: 3.5-6.3 kb\*ft

1350

74/9/8/6/3

MW: 9.1ppg  
FV: 40  
PV: 10  
YP: 16  
GEL: 5/10/16  
pH: 9.5  
CL: 23.4K  
KCL: 4.0

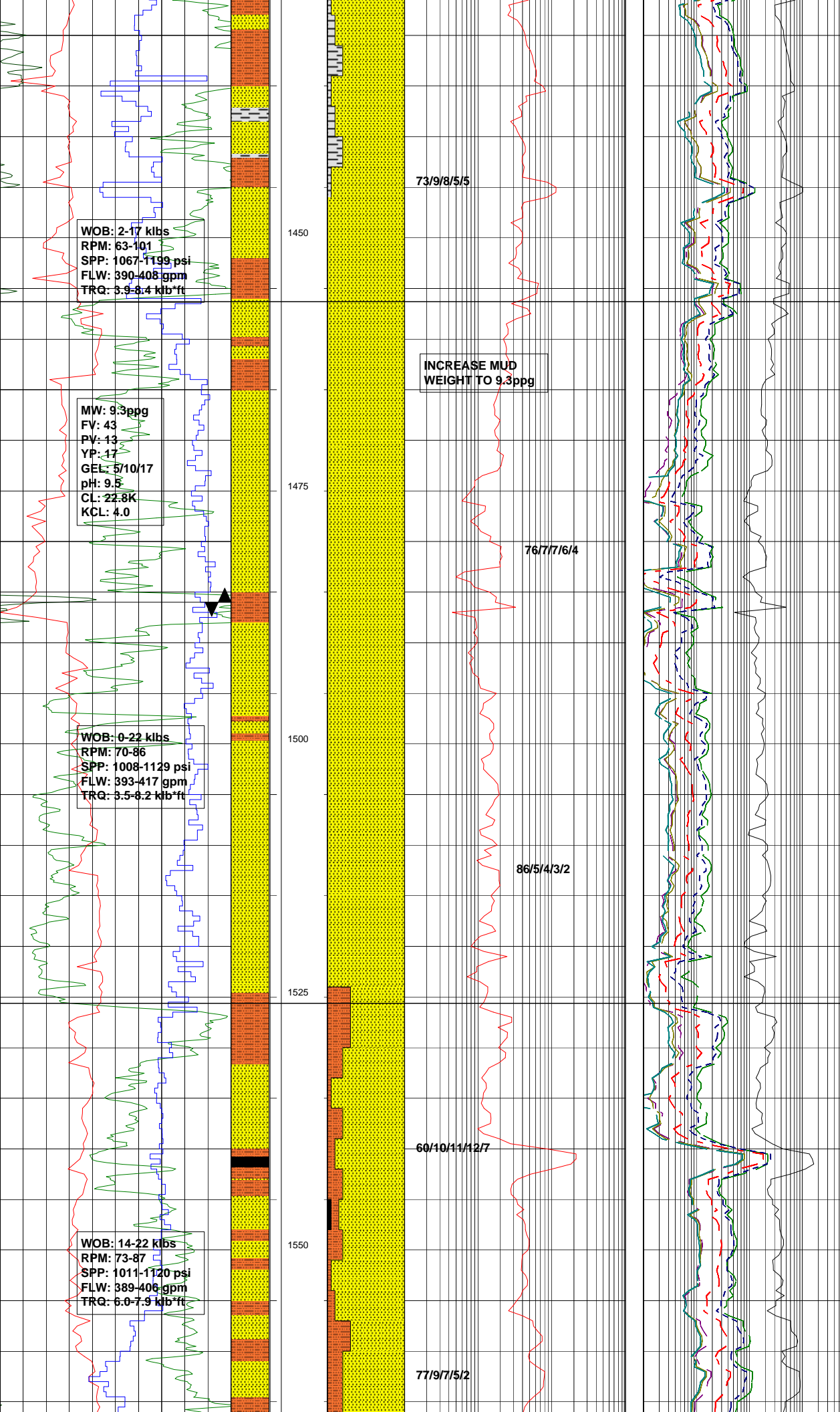
1375

69/11/10/7/3

WOB: 4-17 klbs  
RPM: 68-101  
SPP: 1068-1199 psi  
FLW: 390-409 gpm  
TRQ: 4.7-8.4 kb\*ft

1400

1425



com aren grd to Aren Stlst i/p,  
micmic i/p,no calc.

**SILTSTONE:** grysh blk-  
brnsh blk,mnr dk yeish brn,  
frm-occ mod hd,sbbly-rr sbfiss,  
com aren grd to Aren Stlst i/p,  
micmic i/p,no calc.

**ADORI FORMATION:**  
1456.3m MDRT

1463mMDRT-Tight Spot

**SANDSTONE:**trnsi-lse,f sd  
cuttings sli frm,britt,ply,vf  
-med,rr low crs grns,sbrnd-rr  
sbang,sbelong,f sbsph,mod srt,  
wk sil cmt,com k-felds grns,pr-  
fr inf por,v rr mineral fluor.

**FLUORESCENCE:**(1470-1473m)  
Tr dl yel grn ptchy fluor,v pl bish  
wh ct,thn pl blu/wh res rng.

1482mMDRT-Tight Spot

1473mMDRT-Tight Spot

**BIT #3:**HUGHES PDC DP505X  
SIZE:8.5" JETS:7x11  
IN:1486m OUT:1723m  
RUN:237m HRS:15.5  
COND:1-1-CT-A-X-I-RR-TD

**SANDSTONE:**trnsi,sli hd-hd,  
crumbly-brit,com lse sand,sbbly,  
occ med-f,mod-wl srt,ang,sbelong,  
wh kaol infill i/p,wk-strng sil cmt,  
rr K-feld,pr-fr por,rr min fluor.

**BIRKHEAD FORMATION:**  
1525.61m MDRT

**ARENACEOUS SILTSTONE:**olv-  
brnsh blk,hd,brit,sbbly-sbfiss,  
abdt aren,com f blk carb grs &  
flks,mod calc w/ occ wh calcite  
lams/veins,micmic i/p,no fluor.

**COAL:**brnsh blk,hd,blky,  
britt,sbvitr.

**SANDSTONE:**pred lse,mnr fri  
pred hd agg,trnsi-v lt gry,upper  
med-low f,tr v f,mod wl srt,sbrnd-  
com ang,sbelong,tr wh ka fill i/p,  
varia wk-strg sil cmt,tr qtz ovghts,  
occ washing out during prep,pr-  
fr inf por,no fluor.

WOB: 2-17 klbs  
RPM: 63-101  
SPP: 1067-1199 psi  
FLW: 390-408 gpm  
TRQ: 3.9-6.4 kb\*ft

MW: 9.3ppg  
FV: 43  
PV: 13  
YP: 17  
GEL: 5/10/17  
pH: 9.5  
CL: 22.8K  
KCL: 4.0

WOB: 0-22 klbs  
RPM: 70-86  
SPP: 1008-1129 psi  
FLW: 393-417 gpm  
TRQ: 3.5-6.2 kb\*ft

WOB: 14-22 klbs  
RPM: 73-87  
SPP: 1011-1120 psi  
FLW: 389-406 gpm  
TRQ: 6.0-7.9 kb\*ft

73/9/8/5/5

INCREASE MUD  
WEIGHT TO 9.3ppg

76/7/7/6/4

86/5/4/3/2

60/10/11/12/7

77/9/7/5/2

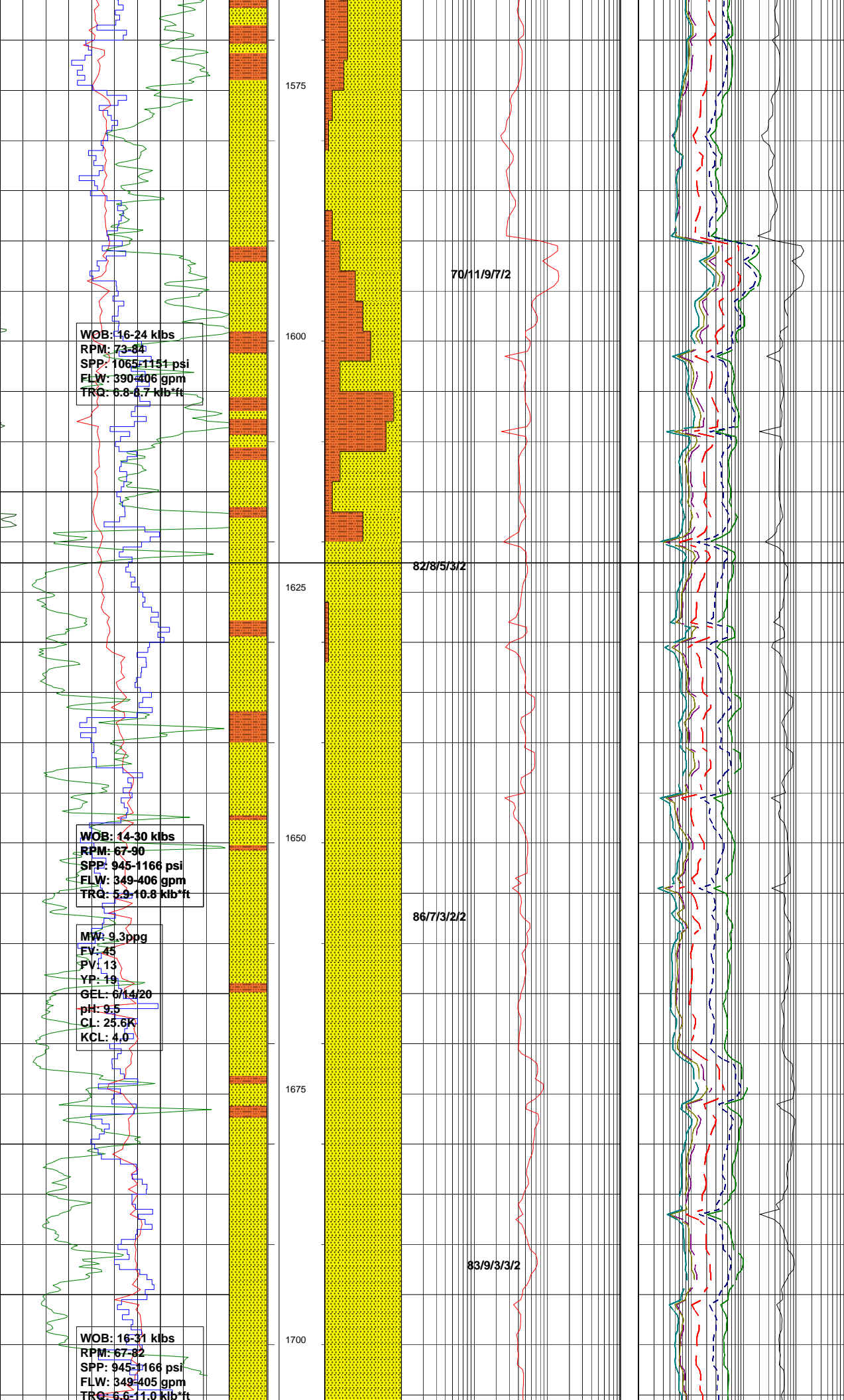
1450

1475

1500

1525

1550



WOB: 16-24 klbs  
 RPM: 73-84  
 SPP: 1065-1151 psi  
 FLW: 390-406 gpm  
 TRQ: 6.8-6.7 klb\*ft

WOB: 14-30 klbs  
 RPM: 67-90  
 SPP: 945-1166 psi  
 FLW: 349-406 gpm  
 TRQ: 5.9-10.8 klb\*ft

MW: 9.3ppg  
 EV: 45  
 PV: 13  
 YP: 19  
 GEL: 6/14/20  
 pH: 9.5  
 CL: 25.6K  
 KCL: 4.0

WOB: 16-31 klbs  
 RPM: 67-82  
 SPP: 945-1166 psi  
 FLW: 349-405 gpm  
 TRQ: 5.6-11.0 klb\*ft

70/11/9/7/2

82/8/5/3/2

86/7/3/2/2

83/9/3/3/2

**ARENACEOUS SILTSTONE:** oiv-brnsh blk,hd,brit,sbbkly-sbfiss, abdt aren,com f blk carb grs & flks,mod calc w/ occ wh calcite lams/veins,micmic i/p,no fluor.

**SANDSTONE:** fri-com frm agg, trnsi-v lt gry,upper med-low f,tr v f,mod wl srt,sbrnd-com ang,sbelong,tr wh ka fill i/p,varia wk-strng sil cmt,tr qtz ovghts,occ washing out during prep,pr-fr inf por,no fluor.

**FLUORESCENCE:** (1599-1602m)  
 Tr spty dl yelsh wh fluor,v dl yelsh wh ct,pl yelsh wh thn res rng.

**HUTTON SANDSTONE:**  
 1622.09m MDRT

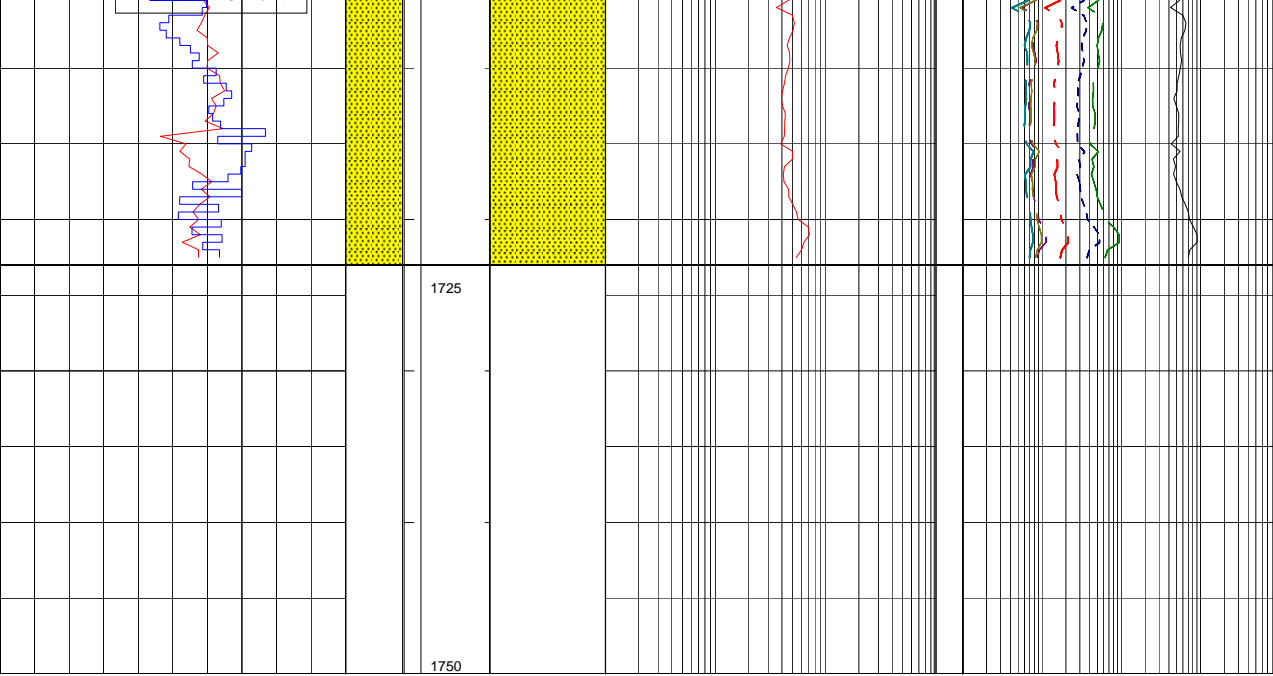
**SANDSTONE:** lse,trnsi-v lt gry,upper v crs-low v f,com crs reworked shatt qtz,occ sbrnd-ang,sbsph-elong,pr srt, tr qtz ovghts,grs supported,tr lt brnsh gry cly washing out during sample prep,no fluor.

**SANDSTONE:** lse,trnsi-v lt gry,med-low vf,com crs occ sbrnd-ang,sbsph-sbelong,mod srt,tr qtz ovghts,grns supported, tr lt brnsh gry cly washing out during sample prep,no fluor.

**FLUORESCENCE:** (1677-1680m)  
 Tr dl yel/grn ptchy fluor,v pl blsh/wh res rng.

**SANDSTONE:** lse,rnsi-v lt gry, upper v crs-low vf,com reworked shatt qtz,occ sbrnd-ang, sbsph-elong,pr srt,tr qtz ovghts, rens supported,tr lt brnsh gry cly washing out during sample prep.

**FLUORESCENCE:** (1686-1689m)  
 Tr dl yel/grn ptchy fluor,v pl blsh/wh res rng.



SANDSTONE:lse,rnsi-v lt gry,  
 occ crs-low vf,com reworked shatt  
 qtz,occ sbrnd-ang,sbspn-elong,  
 pr srt,tr qtz ovghts,rens supported,  
 tr lt brnsh gry cly washing out  
 during sample prep.

TIBOR-1 REACHED TD @ 11:30  
 HRS ON 18-02-2013

DRILLER'S DEPTH:1723.0 mMDRT  
 LOGGER'S DEPTH:1723.5 mMDRT

LOGGING RUNS:  
 1:EDTC-SP-PPC-HNGS-  
 HGNS-PEX-HRLA-ADT  
 2:PPC-MAST-GPIT-FMI-GR  
 3:CHECKSHOT-GR

ABANDONMENT PLUGS:  
 1:1637m-1480m  
 2:1331m-1164m  
 3:781m-690.5m