



MID CONTINENT WELL LOGGING SERVICE, INC.

CONTINUOUS WELL LOGGING / COMPLETE HYDROCARBON ANALYSIS

2222 WESTPARK DR. STE. A
NORMAN, OK 73069
OFFICE (405) 360-7333
OPERATIONS (405) 590-3655
SALES (405) 203-9989

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: KATHLEEN 2231 1-36
Location: Section 36, T22S, R31W of Finney Co., KS
License Number: 1505522280000
Spud Date: 07/29/2013
Surface Coordinates: SHL: 2,350' FNL & 1,100' FWL
Region: Finney County
Drilling Completed: 08/04/2013
Bottom Hole Report For: William Scott
Coordinates: Logger: Bill Larzelere & Johnathan Magee
Ground Elevation (ft): 2,880' K.B. Elevation (ft): 2,892'
Logged Interval (ft): 2,000' To: 5,223' Total Depth (ft): 5,223'
Formation: Spergen
Type of Drilling Fluid: WATER, GEL

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Sandridge Energy, INC.
Address: 123 Robert S. Kerr Avenue, Ste. 2430
Oklahoma City, Oklahoma 73102-6406

GEOLOGIST

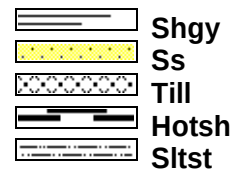
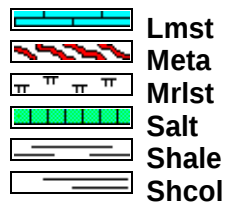
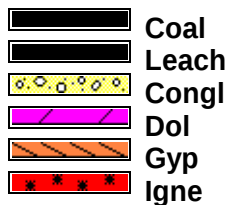
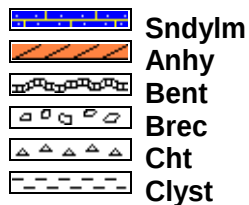
Name: William Scott
Company: Sandridge Energy, Inc
Address: 123 Robert S. Kerr Avenue, Ste. 2430
Oklahoma City, Oklahoma 73102-6406

Cores

DSTs

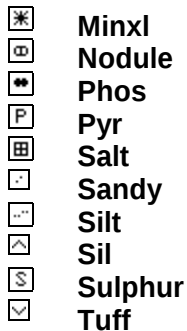
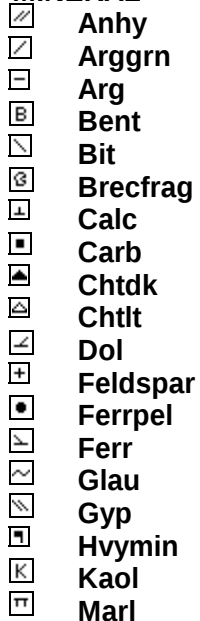
Comments

ROCK TYPES

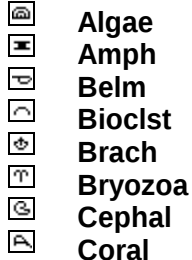


ACCESSORIES

MINERAL



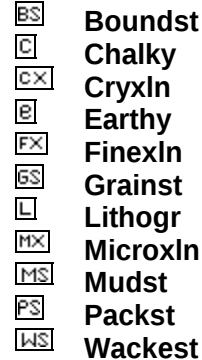
FOSSIL



STRINGER

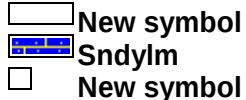
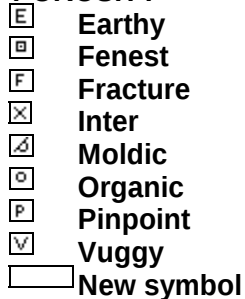


TEXTURE



OTHER SYMBOLS

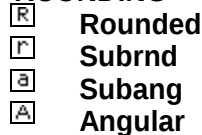
POROSITY



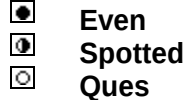
SORTING



ROUNDING



OIL SHOW



INTERVAL



EVENT

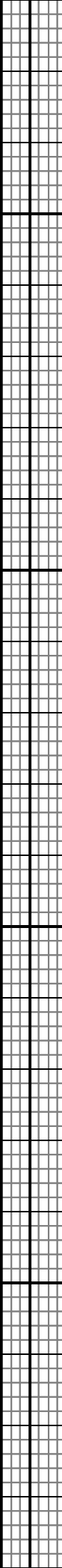
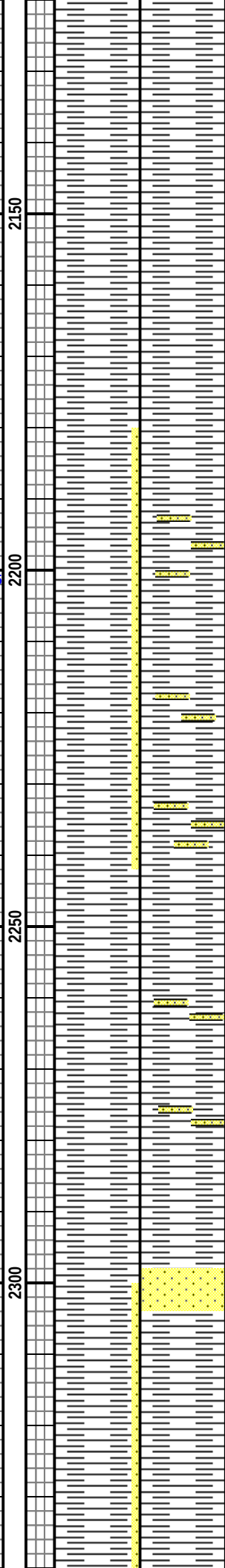
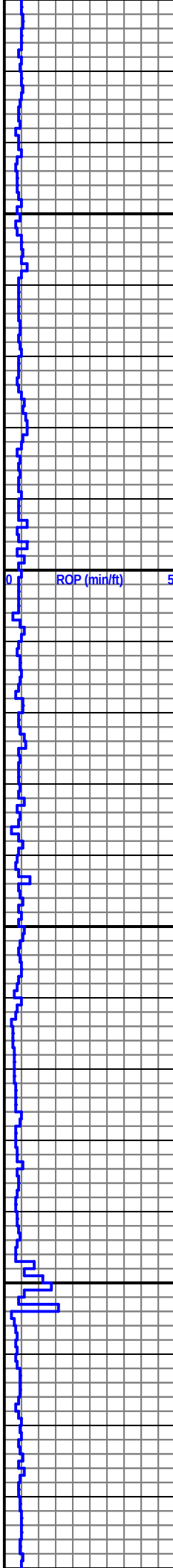


[illegible]

WT: 8.7
VIS: 27

WT: 8.9
VIS: 39

WOB: 10
RPM: 190
PP: 700
SPM: 140



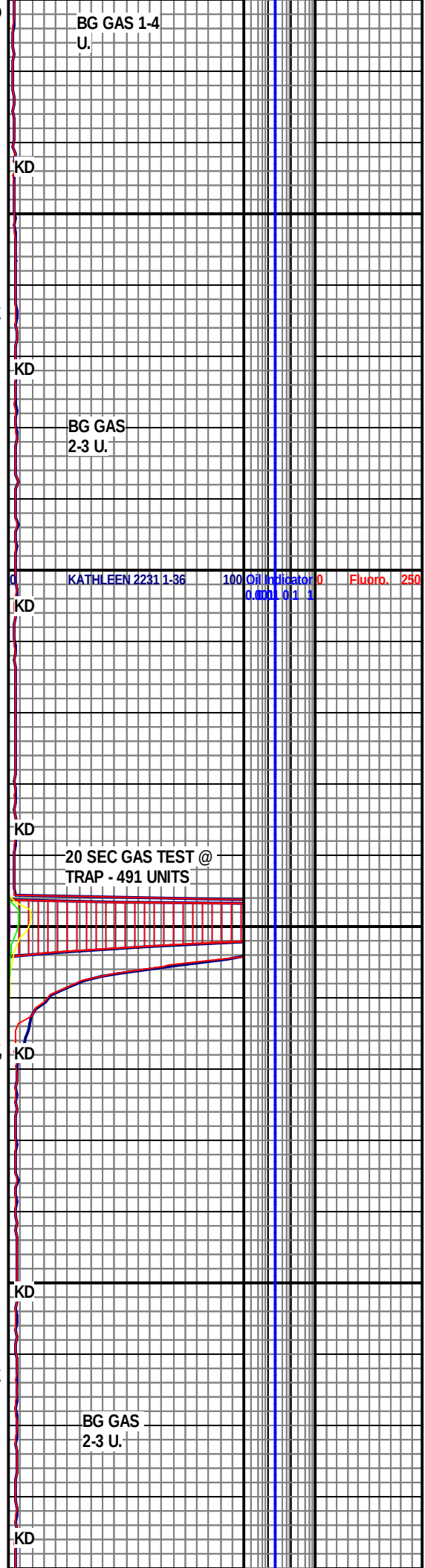
SFT, TR MOD FRM, TR SUBRND
TO RND OPQ QRTZ GRNS,
SCAT OFF WHT TO WHT LS
STRNGRS THRU OUT, TR LT
BRN TO BRN SS STRNGRS
THRU OUT

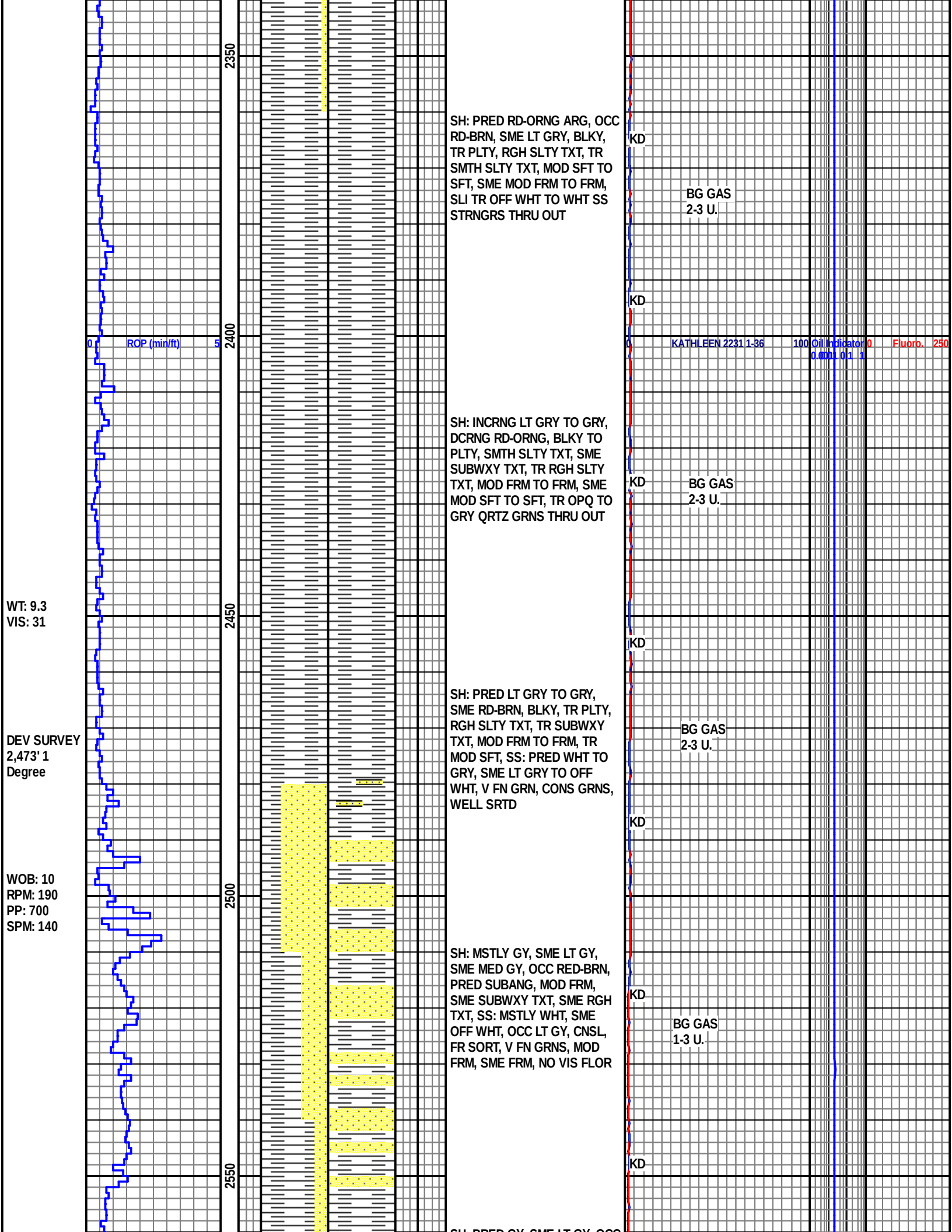
SH: PRED RD-ORNG ARG, SME
LT GRY, BLKY, RGH SLTY TXT,
MOD SFT TO SFT, SME MOD
FRM TO FRM, TR RND OPQ
QRTZ GRNS, TR LT BRN TO
BRN SS STRNGRS THRU OUT

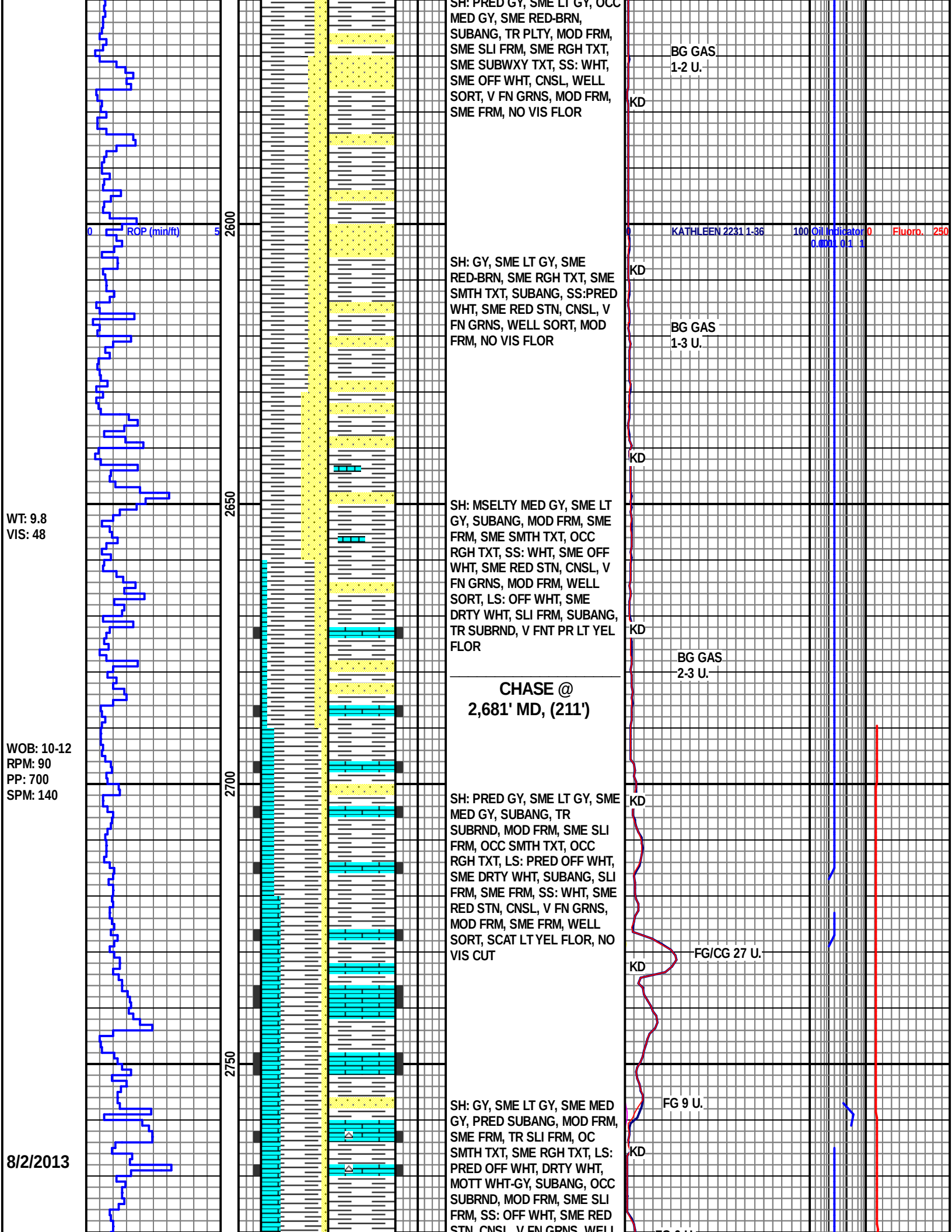
SH: PRED RD-ORNG ARG, TR
LT GRY, BLKY, RGH SLTY TXT,
MOD SFT TO SFT, TR MOD
FRM, SS: PRED LT TAN TO
TAN, CONS GRNS, V FN TO FN
GRN, FR-GD SRT

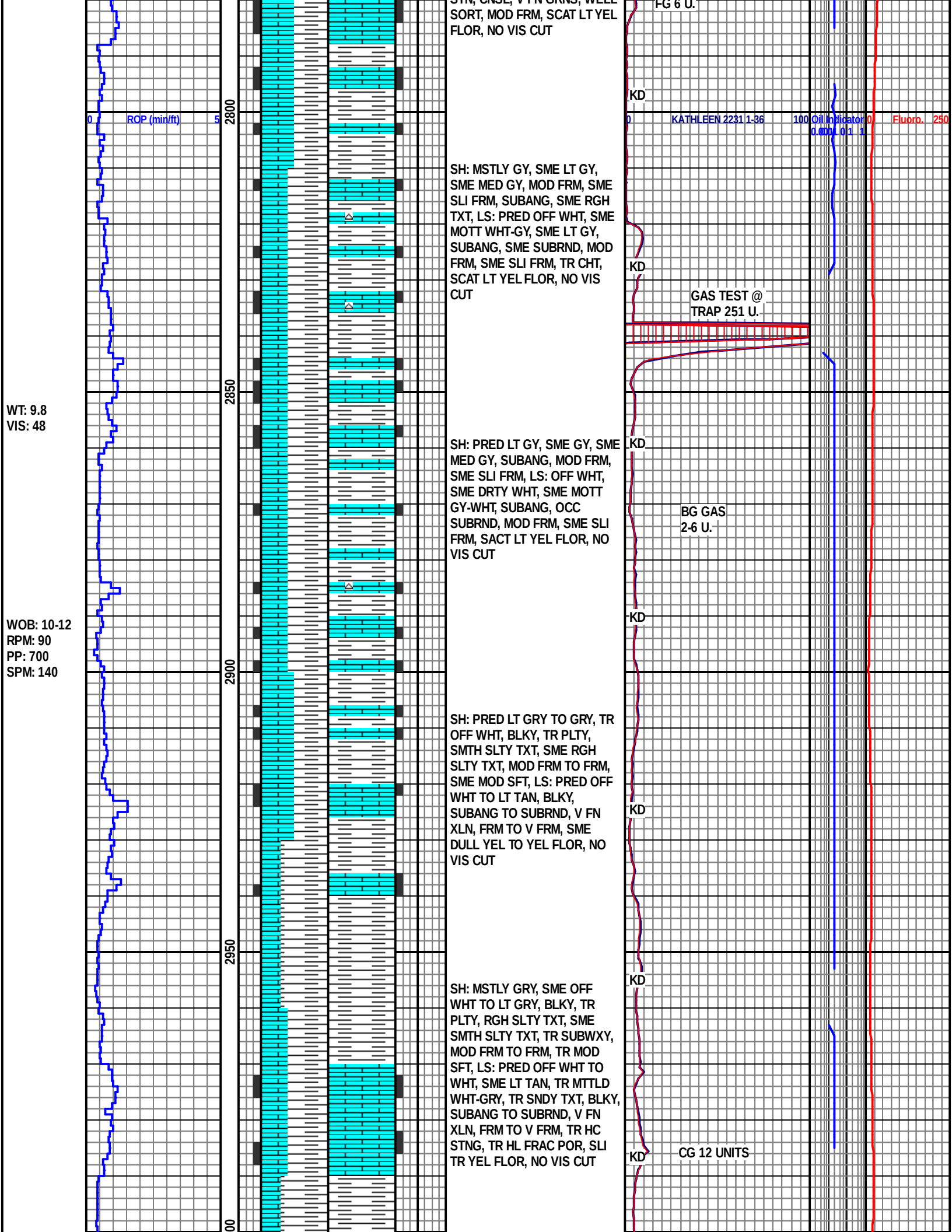
SH: MSTLY RD-ORNG ARG,
INCRNG LT GRY TO GRY,
BLKY, TR PLTY, RGH SLTY TXT,
TR SMTH SLTY TXT, MSTLY
SFT, TR MOD FRM TO FRM,
OFF WHT TO LT TAN SS
STRNGRS THRU OUT

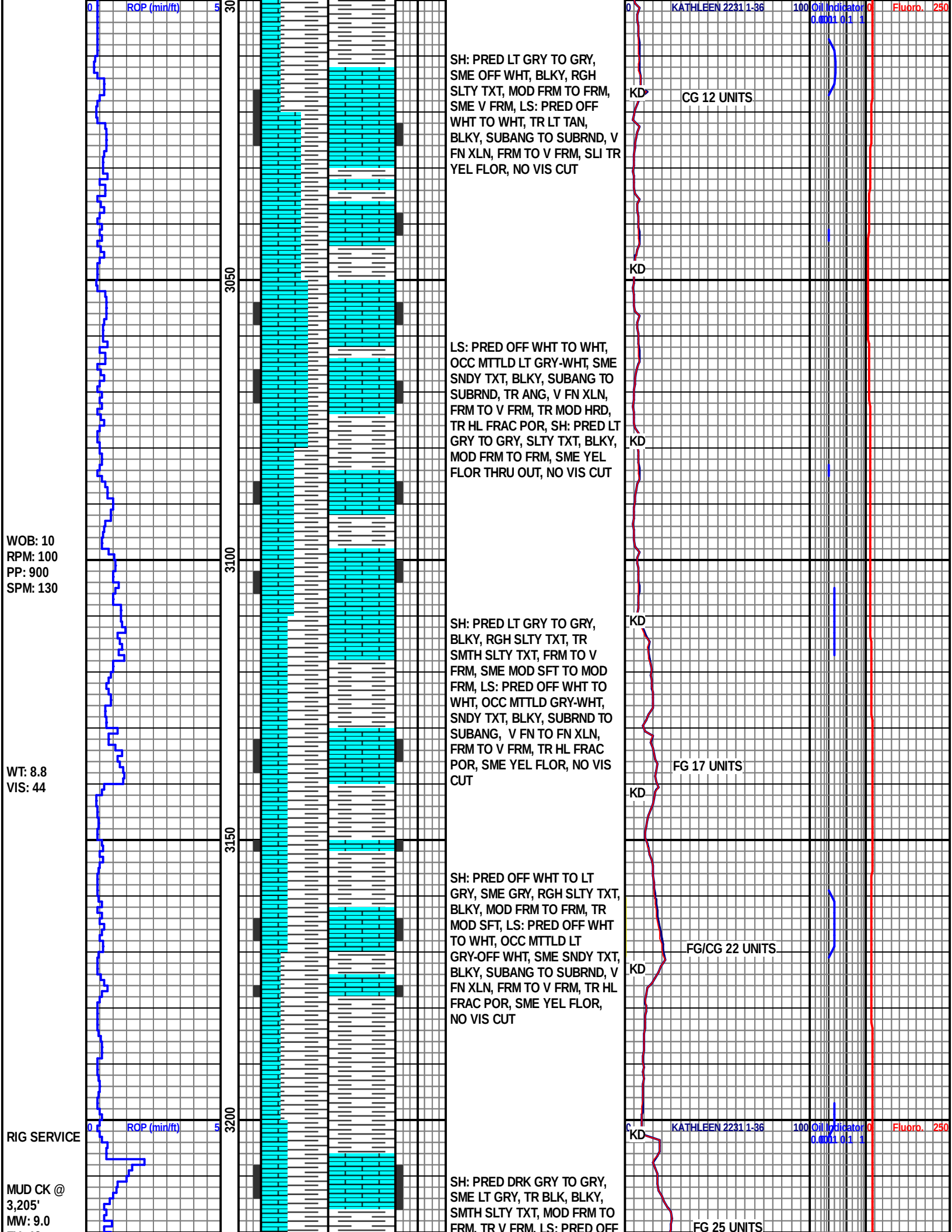
SH: PRED RD-ORNG ARG, SME
LT GRY TO GRY, BLKY, RGH
SLTY TXT, MOD SFT TO SFT,
SME MOD FRM, SS: PRED
RD-BRN, TR LT TAN TO TAN, V
FN GRN, CONS GRNS, FR-GD
SRT

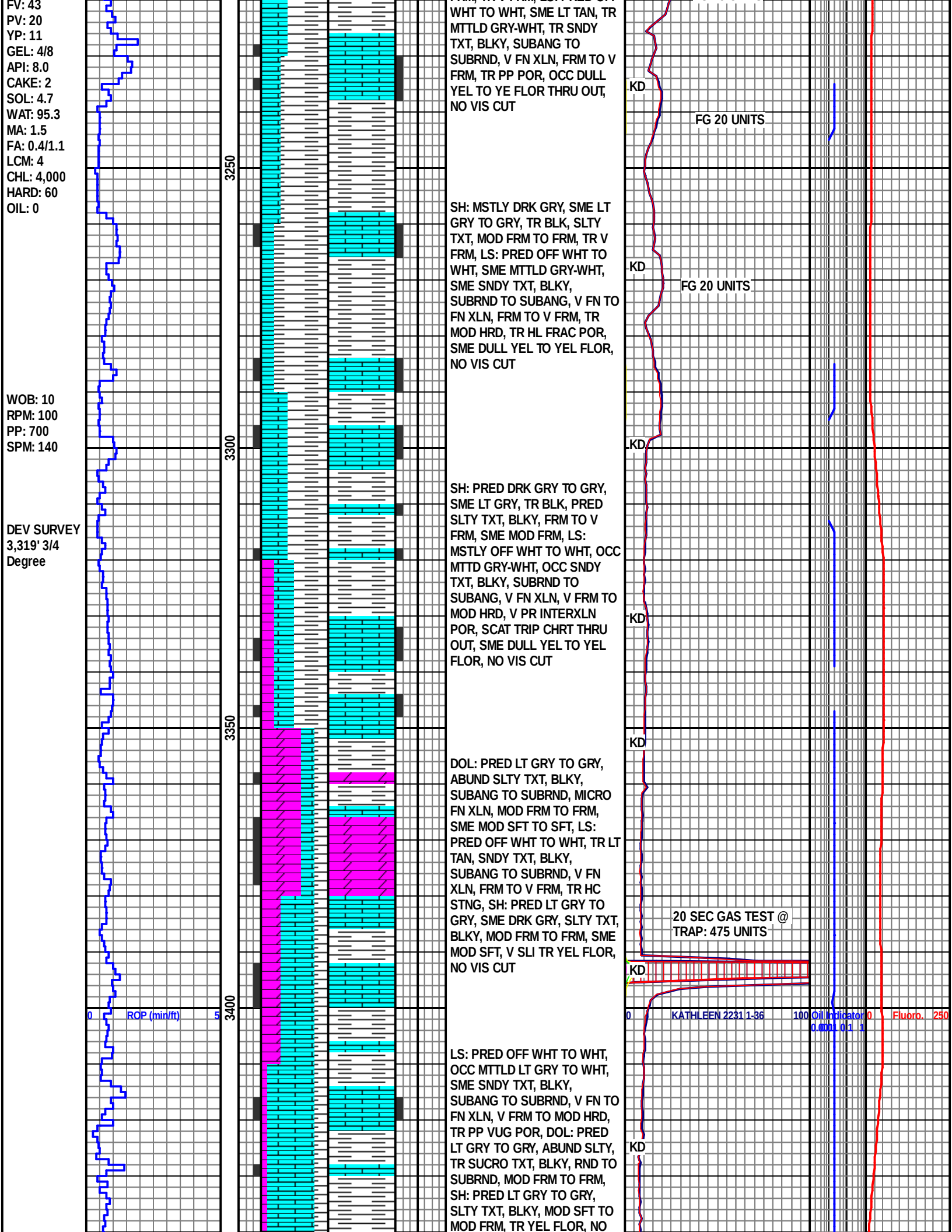




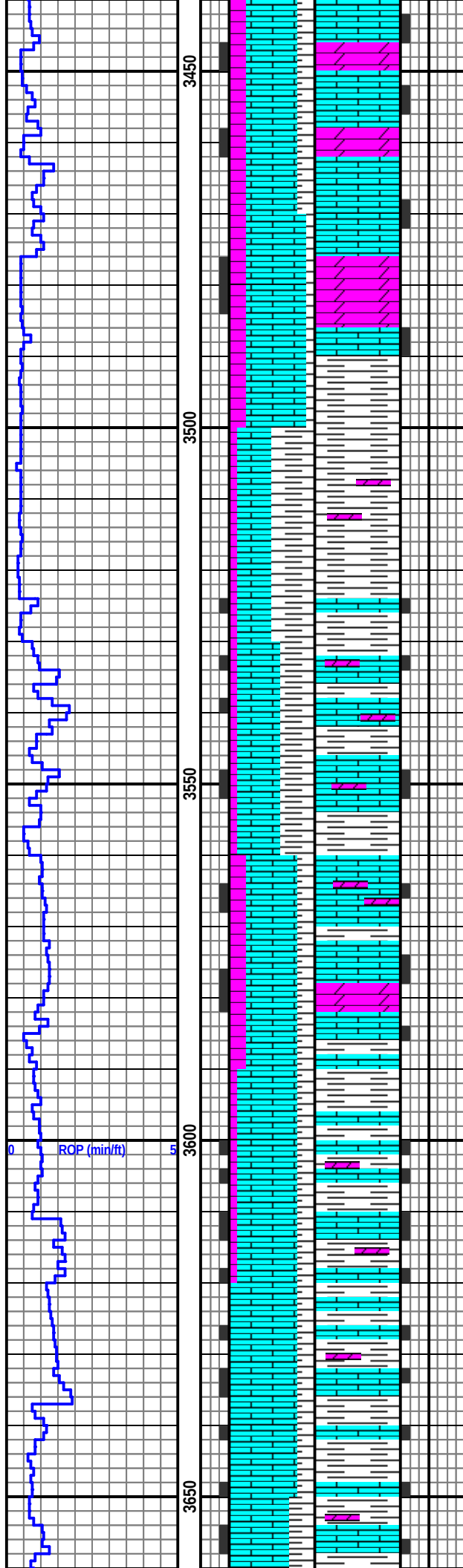








WOB: 10
RPM: 100
PP: 700
SPM: 140



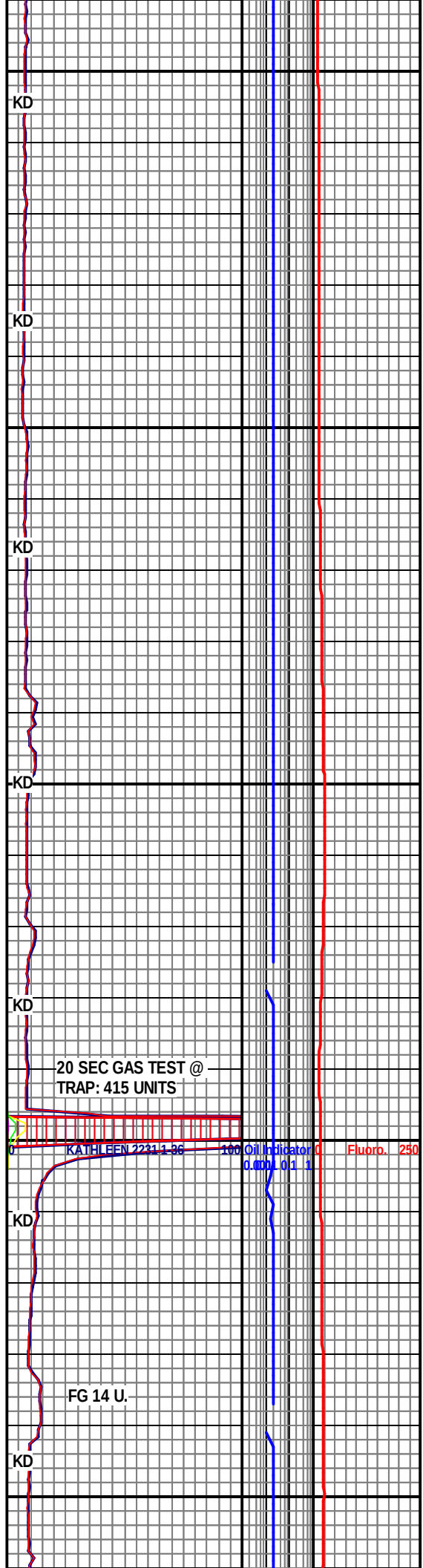
VIS CUT

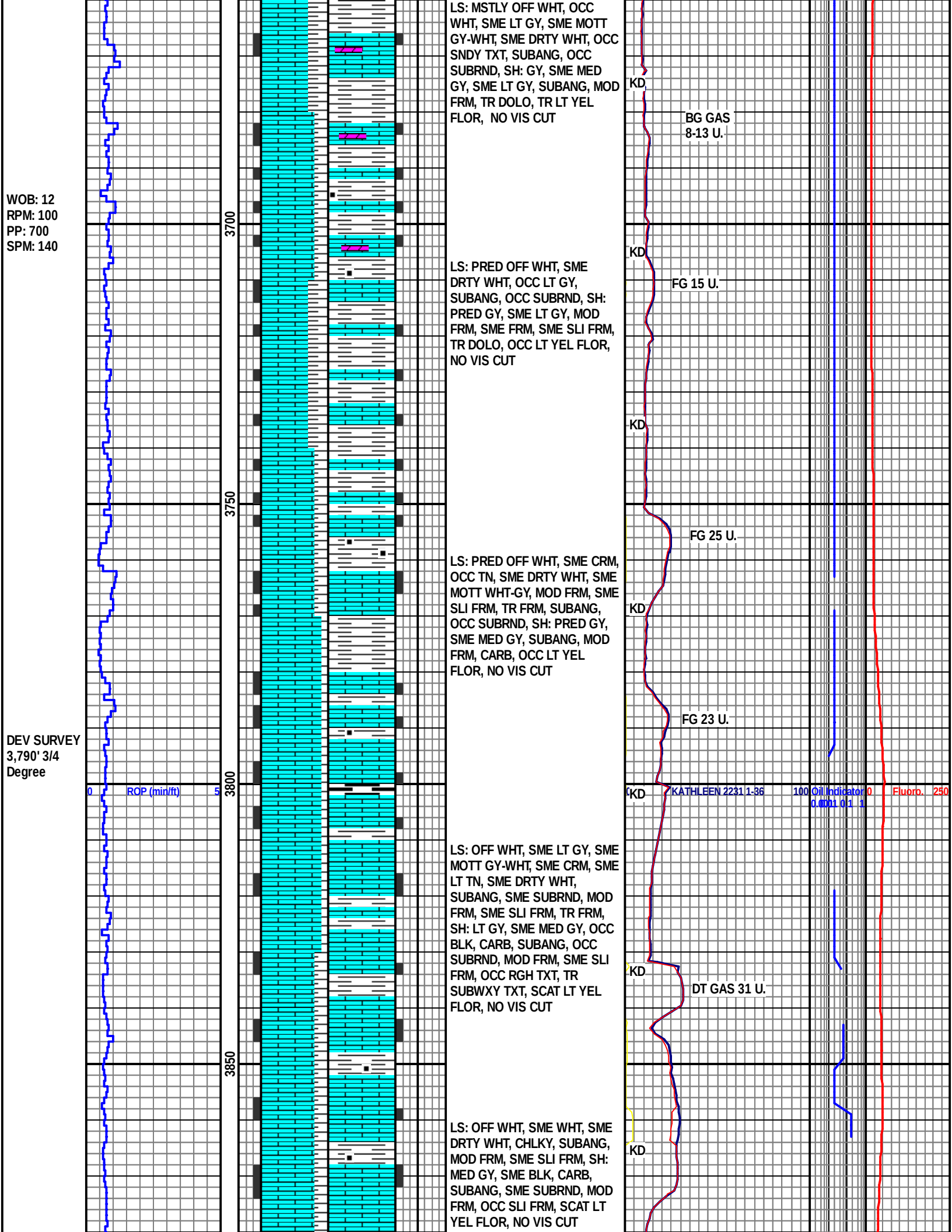
LS: MSTLY OFF WHT TO WHT,
OCC MTTLD GRY-WHT, SME
SNDY TXT, BLKY, SUBRND TO
SUBANG, V FN TO FN XLN, V
FRM TO MOD HRD, TR HRD, TR
PP VUG POR, DOL: PRED LT
GRY TO GRY, SLTY, SME
SUCRO TXT, BLKY, SUBANG
TO SUBRND, FRM TO V FRM,
SME MOD FRM, SH: PRED LT
GRY TO GRY, SLTY TXT, MOD
FRM TO FRM, SME MOD SFT,
TR YEL FLOR, NO VIS CUT

LS: PRED OFF WHT TO WHT,
SME LT GRY TO LT TAN, TR
MTTLD GRY, SME SNDY TXT,
BLKY, SUBANG TO SUBRND, V
FN XLN, MOD HRD TO HRD,
SME FRM TO V FRM, SH: PRED
LT GRY TO GRY, SMTH SLTY
TXT, BLKY, MOD FRM TO FRM,
SME MOD SFT, SME SUCRO
DOL STRNGRS THRU OUT, TR
YEL FLOR, NO VIS CUT

LS: PRED OFF WHT TO WHT,
SME LT GRY TO LT TAN, TR
MTTLD GRY, TR SNDY TXT,
BLKY, TR PLTY, SUBRND TO
SUBANG, V FN TO FN XLN,
FRM TO V FRM, SME MOD
HRD, DOL: PRED LT GRY TO
GRY, SME WHT, SUCRO TXT,
BLKY, SUBANG TO SUBRND,
MICRO FN XLN, FRM, SH:
PRED LT GRY TO GRY, SLTY
TXT, BLKY, MOD SFT TO MOD
FRM, TR YEL FLOR, NO VIS
CUT

LS: PRED OFF WHT, SME WHT,
SME LT GY, SME MOTT
GY-WHT, TR SNDY TXT,
SUBANG, SME SUB RND, TR
BLKY, SH: SME LT GY, SME
GY, OCC MED GY, MOD FRM,
SME SLI FRM, DOL: MSTLY LT
GY, SME DRK GY, MOD FRM,
SME V FRM, SUBRND, TR
SUBANG, TR LT YEL FLOR, NO
VIS CUT



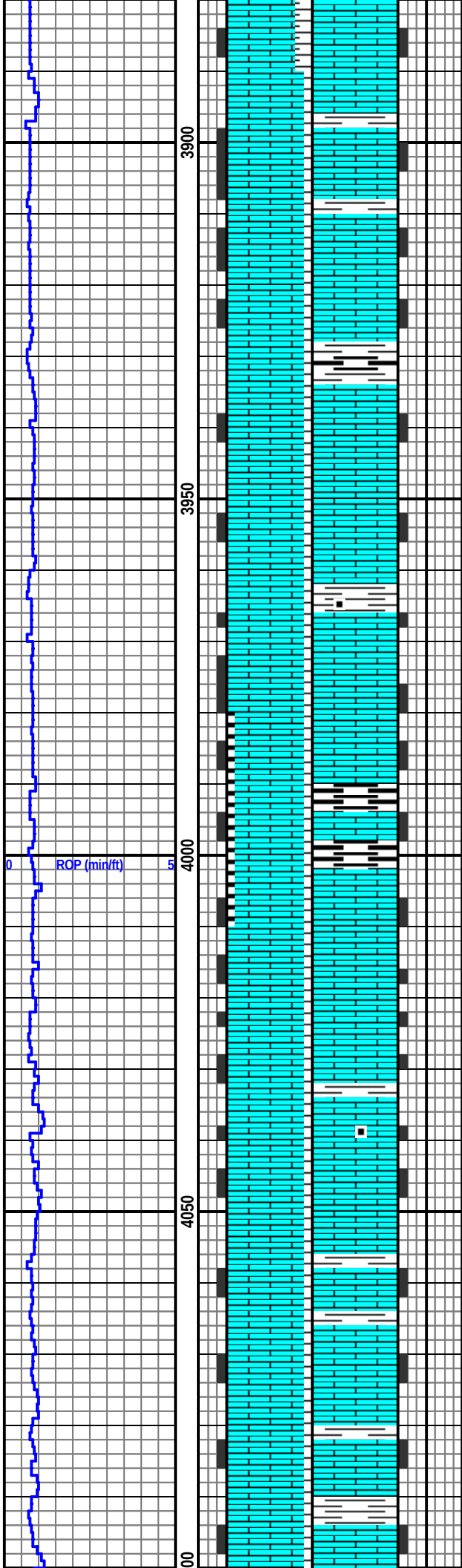


WOB: 12
RPM: 100
PP: 850
SPM: 140

8/3/2013

WT: 9.5
VIS: 65

WOB: 12
RPM: 100
PP: 850



LS:MSTLY OFF WHT, SME
WHT, SME LT TN, OCC CRM,
SME DRTY WHT, MOD FRM,
SME SLI FRM, TR FRM,
SUBANG, OCC SUBRND, SH:
PRED GY, SME DRK GY, BLK,
CARB, SUBANG, OCC
SUBRND, MOD FRM, SME SLI
FRM, SCAT LY YEL FLOR, NO
VIS CUT

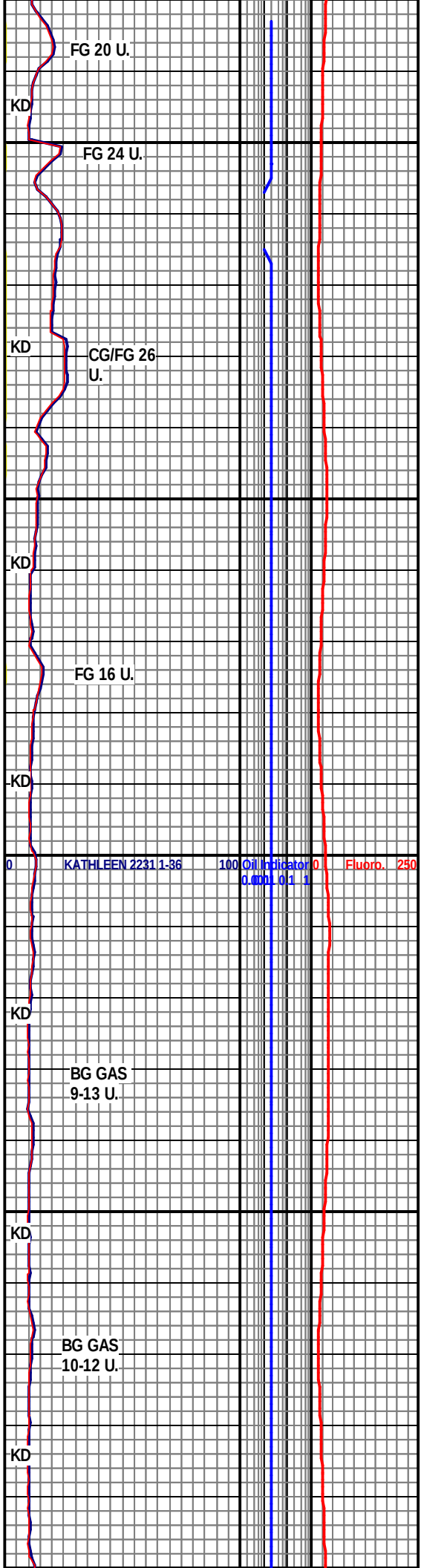
LS: PRED OFF WHT, SME WHT,
SME LT CRM, SME CRM, SME
LT GY, SME TN, SME DRTY
WHT, SUBANG, SME SUBRND,
MOD FRM, SME SLI FRM, SH:
PRED GY, SME BLK, CARB,
SUBANG, OCC SUBRND, MOD
FRM, SCAT LT YEL FLOR, NO
VIS CUT

**HEEBNER @
3,998' MD, (-1,106')**

LS: PRED OFF WHT, SME WHT,
SME LT GY, SME CRM, MOD
FRM, SME SLI FRM, PRED
SUBANG, OCC SUBRND, SH:
SME GY, SME BLK, CARB,
SUBANG, TR SUBRND, MOD
FRM, SME SLI FRM, SCAT LT
YEL FLOR, NO VIS CUT

**LANSING @
4,050' MD, (-1,158')**

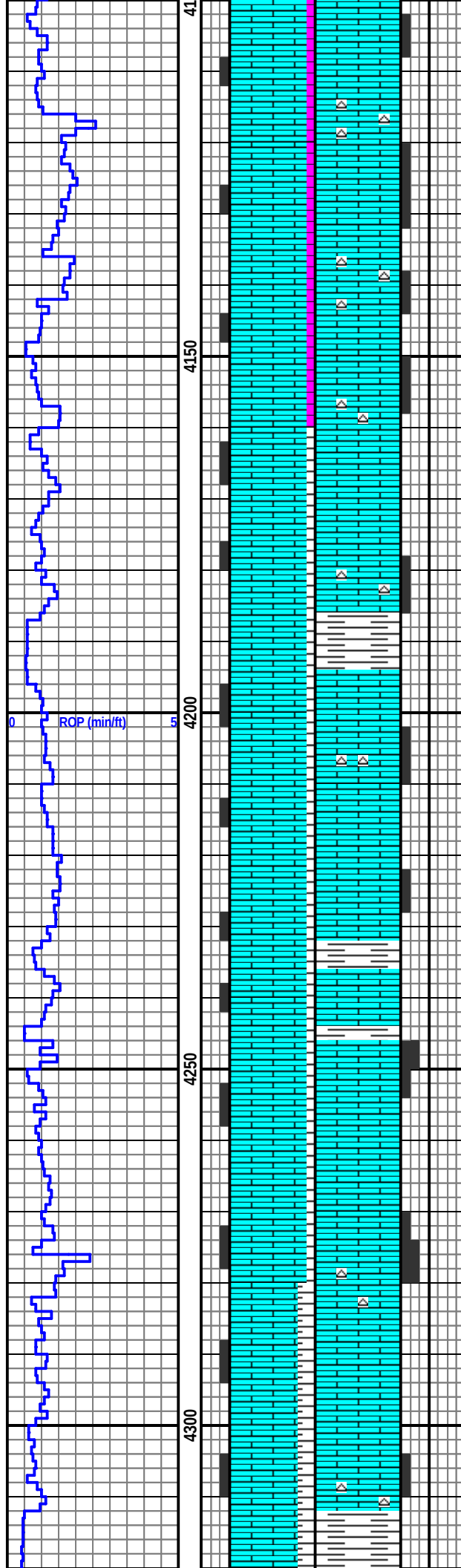
LS: MSTLY OFF WHT, SME
WHT, OCC LT GY, SME CRM,
SME MOTT GY-MOTT, SME
DRTY WHT, SUBANG, OCC
SUBRND, MOD FRM, SME SLI
FRM, SH: PRED GY, SME MED
GY, MOD FRM, SCAT LT YEL
FLOR, NO VIS CUT



SPM: 140

WT: 9.6
VIS: 47

WOB: 14
RPM: 90
PP: 750
SPM: 134



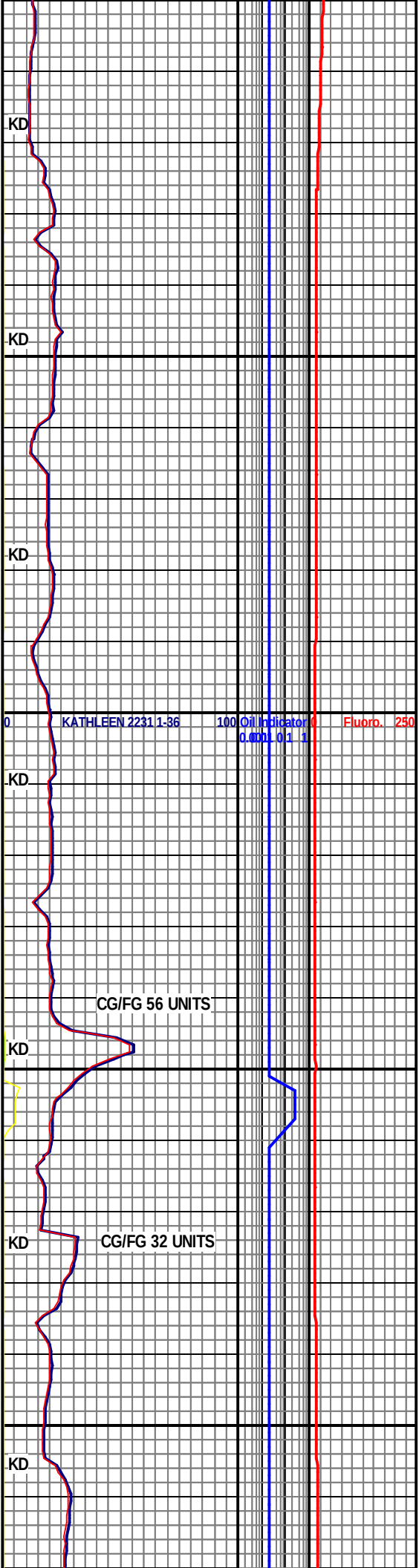
LS: PRED OFF WHT TO WHT,
SME LT GRY TO LT TAN, TR
SNDY TXT, BLKY, TR PLTY,
ANG TO SUBANG, SME
SUBRND, MICRO FN TO V FN
XLN, V FRM TO MOD HRD, PR
INTERXLN POR, TR TRIP CHRT
THRU OUT, OCC WHT TO DULL
YEL FLOR THRU OUT, NO VIS
CUT

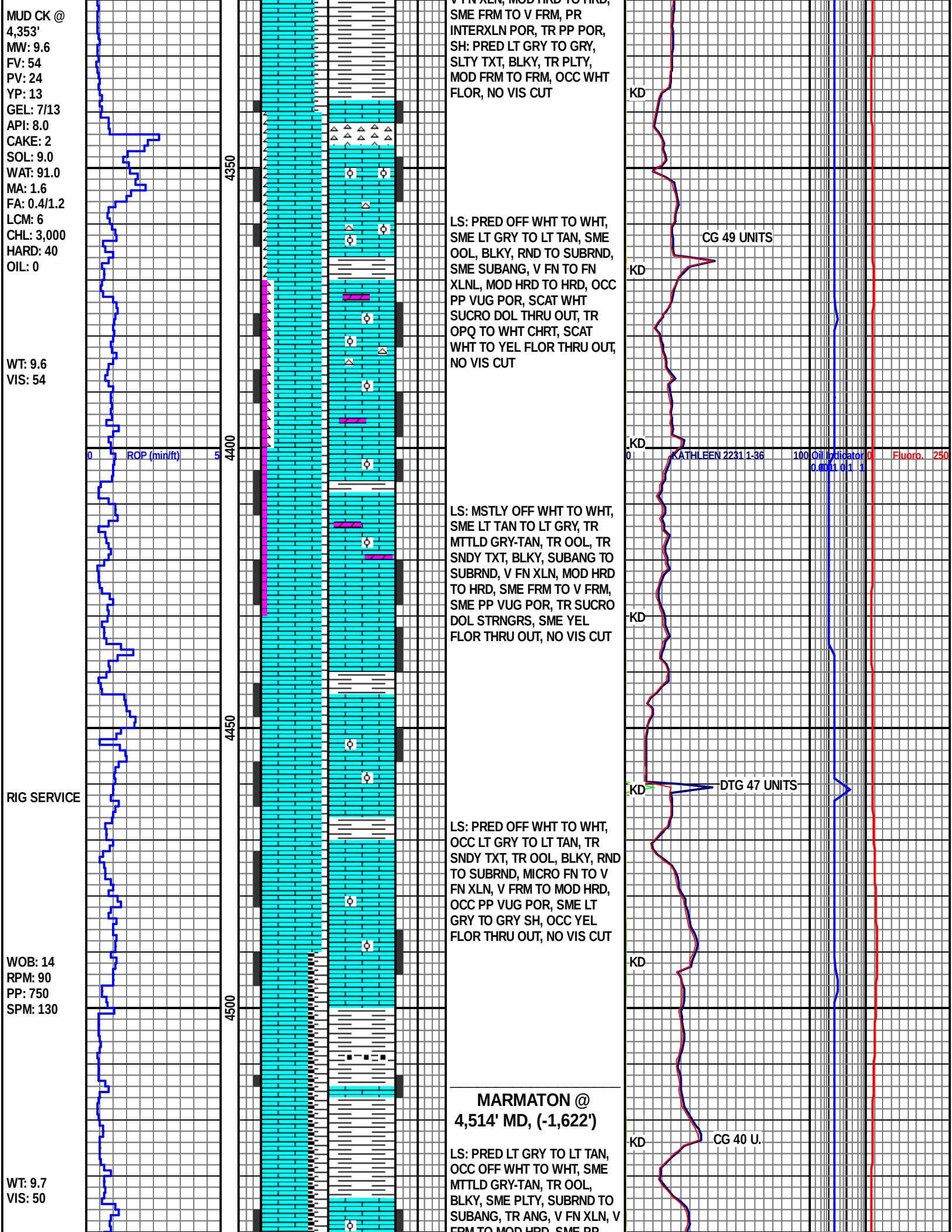
LS: PRED OFF WHT TO WHT,
SME LT GRY, TR SNDY TXT,
BLKY, SUBANG TO SUBRND,
MICRO FN TO V FN XLN, MOD
HRD TO HRD, SME FRM TO V
FRM, PR INTERXLN POR, SME
PP VUG POR, TR OPQ TO WHT
CHRT, OCC WHT TO YEL FLOR
THRU OUT, NO VIS CUT

LS: PRED OFF WHT TO WHT,
TR LT GRY, TR SNDY TXT,
PLTY TO BLKY, SUBRND TO
SUBANG, MICRO FN XLN, SME
V FN XLN, MOD HRD TO HRD,
SME V FRM, PR INTERXLN
POR, TR PP POR, TR OPQ TO
WHT CHRT, ABUND WHT FLOR
THRU OUT, NO VIS CUT

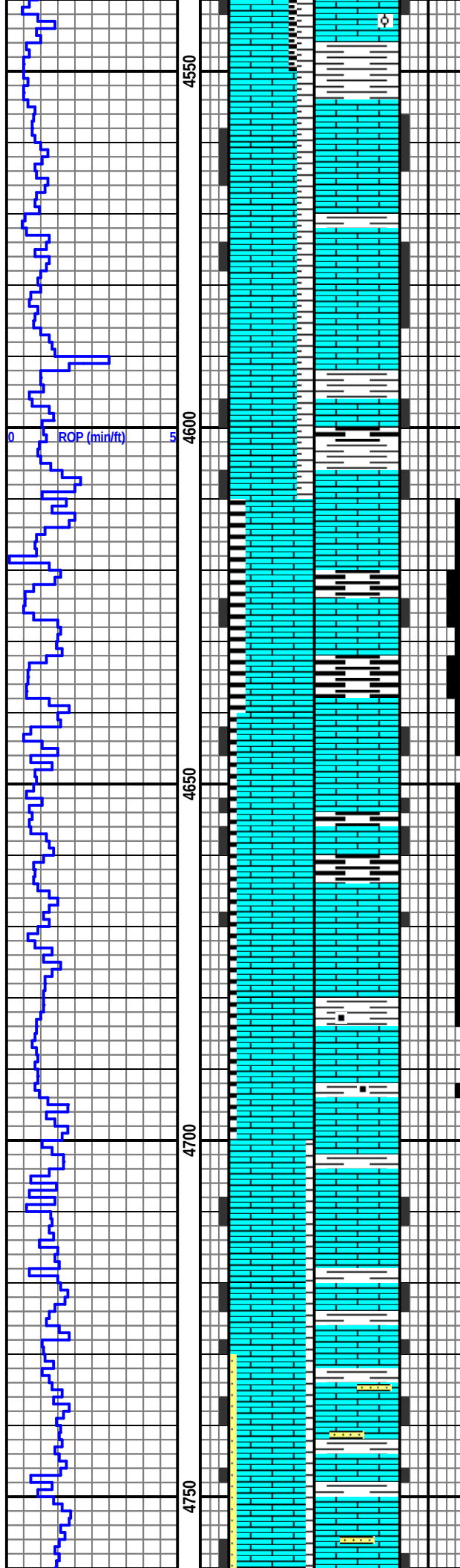
LS: MSTLY OFF WHT TO WHT,
OCC LT GRY TO LT TAN, TR
MTTLD, TR SNDY TXT, BLKY,
SUBRND TO SUBANG, TR ANG,
V FN XLN, V FRM TO MOD
HRD, TR FRM, PR INTERXLN
POR, SME PP VUG POR, OCC
WHT FLOR THRU OUT, NO VIS
CUT

LS: PRED OFF WHT TO WHT,
SME LT GRY TO LT TAN, TR
MTTLD, SME SNDY TXT, BLKY,
TR PLTY, SUBANG TO
SUBRND, MICRO FN XLN, SME
V FN XLN, MOD HRD TO HRD





WOB: 12
RPM: 100
PP: 850
SPM: 130



FRM TO MOD HRD, SME PP
VUG POR, SH: PRED LT GRY
TO GRY, SME BLK CARB,
BLKY, SMTH SLTY TXT, MOD
FRM TO FRM, OCC YEL FLOR
THRU OUT, NO VIS CUT

LS: PRED LT GRY TO LT TAN,
OCC OFF WHT TO WHT, TR
MTTLD, TR SNDY TXT, BLKY,
TR PLTY, SUBANG TO
SUBRND, V FN XLN, MOD HRD
TO HRD, SME FRM TO V FRM,
TR PP VUG POR, SH: PRED LT
GRY TO GRY, TR BLK CARB,
SLTY TXT, BLKY, MOD FRM TO
FRM, OCC YEL FLOR THRU
OUT, NO VIS CUT

**PAWNEE @
4,602' MD, (-1,710')**

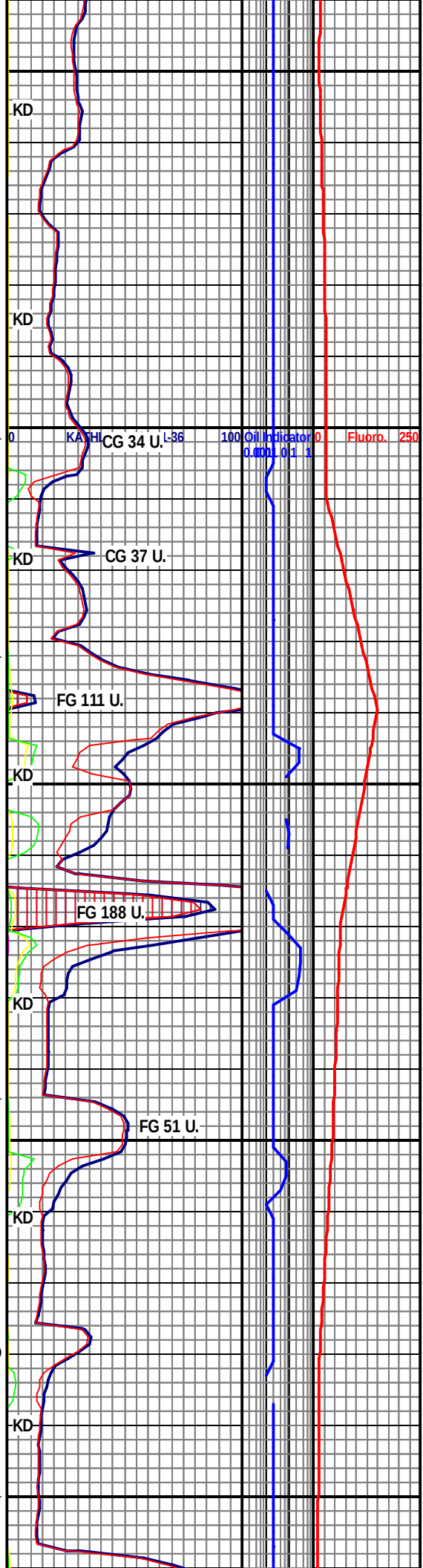
**CHEROKEE @
4,632' MD, (-1,740')**

LS: PRED OFF WHT, SME LT
GY, SME MOTT GY-WHT, MOD
FRM, SME SLI FRM, SUBANG,
SH: PRED BLK, OC GY, SME
MED GY, SUBANG, OCC
SUBRND, SLI FRM, SME MOD
FRM, SCAT LT YEL FLOR,
BLU-GRN CUT, LT GRN RES
RING

**ATOKA @
4,694' MD, (-1,802')**

LS: PRED OFF WHT, SME WHT,
SME LT GY, SME MOTT
GY-WHT, MOD FRM, SME SLI
FRM, PRED SUBANG, SH: GY,
SME MED GY, SME LT GY, MOD
FRM, SUBANG, TR SS, SCAT
LT YEL FLOR

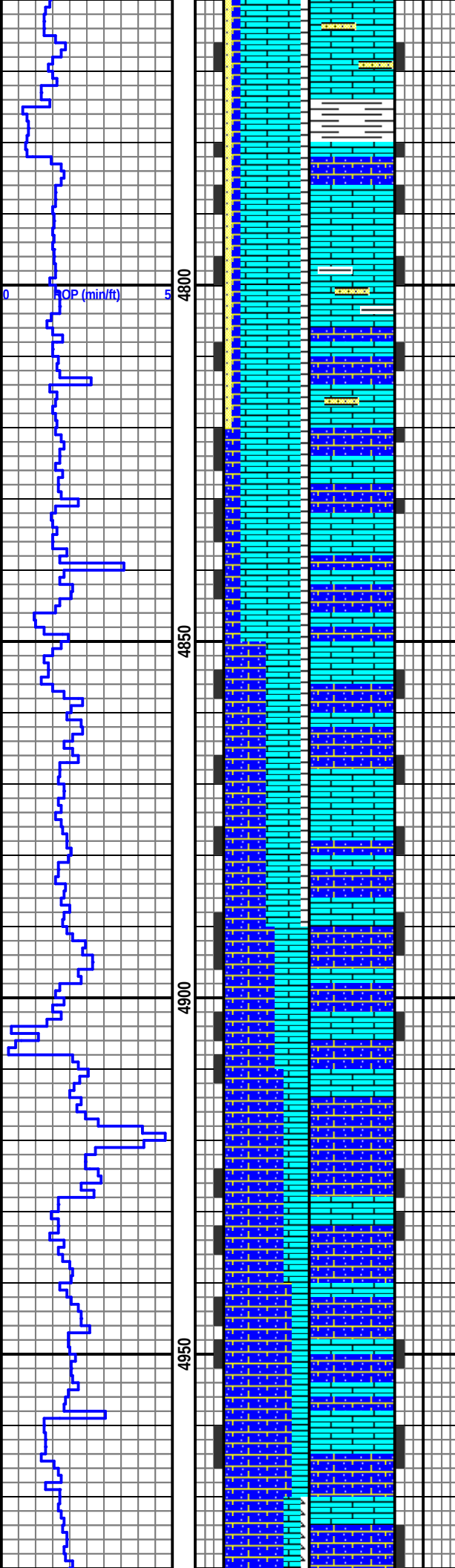
**MORROW @
4,750' MD, (-1,858')**



WT: 9.7
VIS: 50

8/4/2013

WOB: 12
RPM: 90
PP: 850
SPM: 140



**MISSISSIPPIAN @
4,782' MD, (-1,890')**

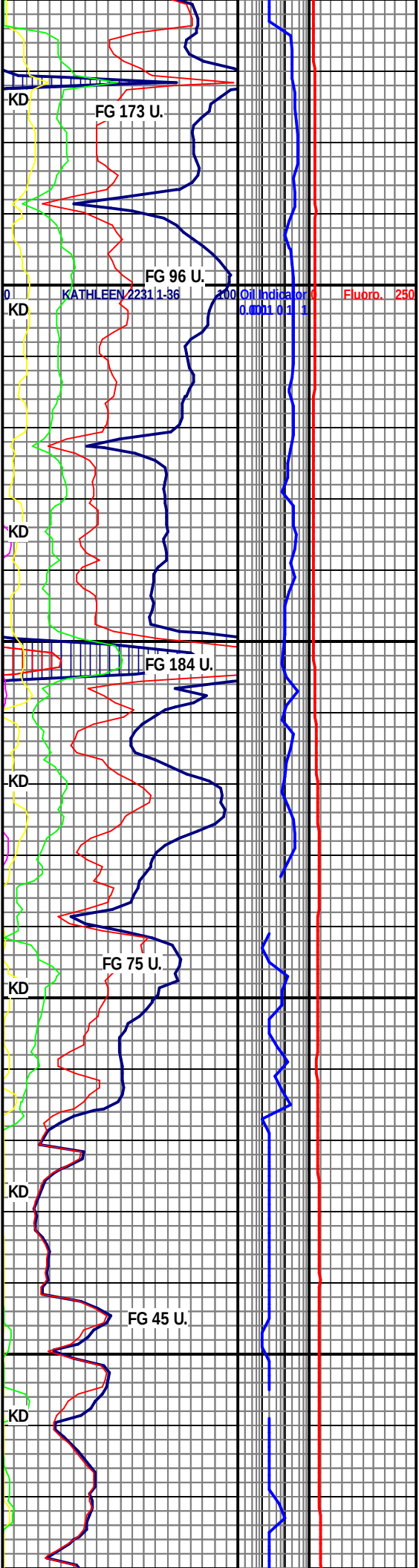
LS: PRED OFF WHT, SME WHT,
SME LT GY, SME DRTY WHT,
SME SNDY TXT, MOD FRM,
SME SLI FRM, SUBANG, OCC
SUBRND, SH: PRED LT GY,
SME MED GY, MOD FRM,
SUBANG, SCAT YEL FLOR

**ST. LOUIS @
4,849' MD, (-1,957')**

LS: PRED OFF WHT, SME LT
CRM, SME CRM, SME DRTY
WHT, SUBANG, OCC SUBRND,
MOD FRM, SME SLI FRM, SME
SNDY TXT, SH: GY, SME MED
GY, MOD FRM, SUBANG, SCAT
LT YEL FLOR, NO VIS CUT

LS: PRED OFF WHT, SME DRTY
WHT, OCC CRM, SME LT TN,
SME TN, MOD FRM, SME SLI
FRM, OCC FRM, SUBANG, SME
SUBRND, SCAT LT YEL FLOR,
NO VIS CUT

LS: PRED LT GRY TO OFF
WHT, OCC LT TAN TO CRM,
ABUND SNDY TXT, BLKY TO
PLTY, ANG TO SUBANG, TR
SUBRND, V FN XLN, MOD FRM
TO FRM, SME MOD HRD TO
HRD, TR PP POR, SCAT OPQ



**MISSISSIPPIAN @
4,782' MD, (-1,890')**

LS: PRED OFF WHT, SME WHT,
SME LT GY, SME DRTY WHT,
SME SNDY TXT, MOD FRM,
SME SLI FRM, SUBANG, OCC
SUBRND, SH: PRED LT GY,
SME MED GY, MOD FRM,
SUBANG, SCAT YEL FLOR

**ST. LOUIS @
4,849' MD, (-1,957')**

LS: PRED OFF WHT, SME LT
CRM, SME CRM, SME DRTY
WHT, SUBANG, OCC SUBRND,
MOD FRM, SME SLI FRM, SME
SNDY TXT, SH: GY, SME MED
GY, MOD FRM, SUBANG, SCAT
LT YEL FLOR, NO VIS CUT

LS: PRED OFF WHT, SME DRTY
WHT, OCC CRM, SME LT TN,
SME TN, MOD FRM, SME SLI
FRM, OCC FRM, SUBANG, SME
SUBRND, SCAT LT YEL FLOR,
NO VIS CUT

LS: PRED LT GRY TO OFF
WHT, OCC LT TAN TO CRM,
ABUND SNDY TXT, BLKY TO
PLTY, ANG TO SUBANG, TR
SUBRND, V FN XLN, MOD FRM
TO FRM, SME MOD HRD TO
HRD, TR PP POR, SCAT OPQ

