



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

Well Name: Underhill 28N-17HZ
Location: Section 17, T1N, R67W, Weld County, CO.
License Number: API# 05-123-36917
Spud Date: 31 July 2013
Surface Coordinates: 849' FSL & 1520' FEL SW SE Sec 17 T1N R67W
Lat: 40° 02' 46.04" N; Long: -104° 54' 37.76" W
Region: Wattenberg
Drilling Completed: 08 August 2013
Bottom Hole Coordinates:
Ground Elevation (ft): 5112' K.B. Elevation (ft): 5128'
Logged Interval (ft): 7100' To: 12,120' Total Depth (ft): 12,120'
Formation: Lower Pierre Shale, Niobrara Chalks.
Type of Drilling Fluid: Water Base Mud

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

OPERATOR

Company: Anadarko/Kerr-McGee Oil & Gas Onshore LP
Address: Granite Tower - 1099 18th St, Ste 1800
Denver, CO 80202
CO Geologist, Tom Birmingham

GEOLOGIST

Name: Jack R. Rogers & Robert Nordeck
Company: Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)
Address: 575 Union Blvd.
Suite 208,
Lakewood CO. 80228

E-logs

MWD GR: 7111'-12,049'
MWD Resistivity: 8170'-12,056'





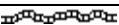



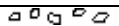





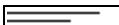

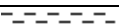



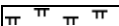

Casing

9 5/8" Surface Casing set @ 944'
7" Intermediate Casing set @ 8159'
4 1/2" Production Liner to be set to 1xxxx' TD

Comments

- 1) Drilling Contractor: Xtreme Drilling, Rig # 22
Rig Manager: Mike Headley / Tyler Humphrey
- 2) Company Man: Dave Cornett / Hal Curlett/
Scott Hancock / Luke Rains
- 3) Well Site Geologists: Goolsby Brothers & Assoc. :
Jack Rogers / Robert Nordeck
- 4) Mud Company : AES Drilling Fluids,
Mud Engineer: Sam Evans
- 5) Directional Drilling: Sperry / Halliburton
Drillers: Randy Bernatow,
MWD: Clay Wass / Caleb Jones
- 6) Gas Equipment: Mudlogging Systems Inc.
by Terra Services
Redbox # ML-198 w/ Ratcliff Agitator

ROCK TYPES

| | | | | | | | |
|---|-------|--|----------|---|-------|---|----------|
|  | Anhy |  | Oil sat. |  | Salt |  | Ss |
|  | Bent |  | Congl |  | Shale |  | Chalk |
|  | Brec |  | Dol |  | Shcol |  | Carb sh |
|  | Cht |  | Gyp |  | Shgy |  | Sltty sh |
|  | Clyst |  | Lmst |  | Ss | | |
|  | Coal |  | Mrlst |  | Sltst | | |

| MINERAL | | | ACCESSORIES | | | | | | |
|---------|----------|--------|-------------|--|----------|---------|----------|--|--|
| | Anhy | | Minxl | | Crin | | Dol | | |
| | Arggrn | | Nodule | | Echin | | Gyp | | |
| | Arg | | Phos | | Fish | | Ls | | |
| | Bent | | Pyr | | Foram | | Mrst | | |
| | Bit | | Salt | | Fossil | | Sltstrg | | |
| | Brecfrag | | Sandy | | Gastro | | Ssstrg | | |
| | Calc | | Silt | | Oolite | TEXTURE | | | |
| | Carb | | Sil | | Ostra | | | | |
| | Chtdk | | Sulphur | | Pelec | | | | |
| | Chtlt | | Tuff | | Pellet | | | | |
| | Dol | FOSSIL | | | Pisolite | | | | |
| | Feldspar | | | | Plant | | | | |
| | Ferrpel | | | | Strom | | | | |
| | Ferr | | | | STRINGER | | | | |
| | Glau | | | | | | | | |
| | Gyp | | | | | | | | |
| | Hvymin | | | | | | | | |
| | Kaol | | | | | | | | |
| | Marl | | | | | | | | |
| | | | | | | | Boundst | | |
| | | | | | | | Chalky | | |
| | | | | | | | Cryxln | | |
| | | | | | | | Earthy | | |
| | | | | | | | Finexln | | |
| | | | | | | | Grainst | | |
| | | | | | | | Lithogr | | |
| | | | | | | | Microxln | | |
| | | | | | | | Mudst | | |
| | | | | | | | Packst | | |
| | | | | | | | Wackest | | |

OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Vspotty
- near even

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic

OTHER SYMBOLS

Pinpoint
 Vuggy

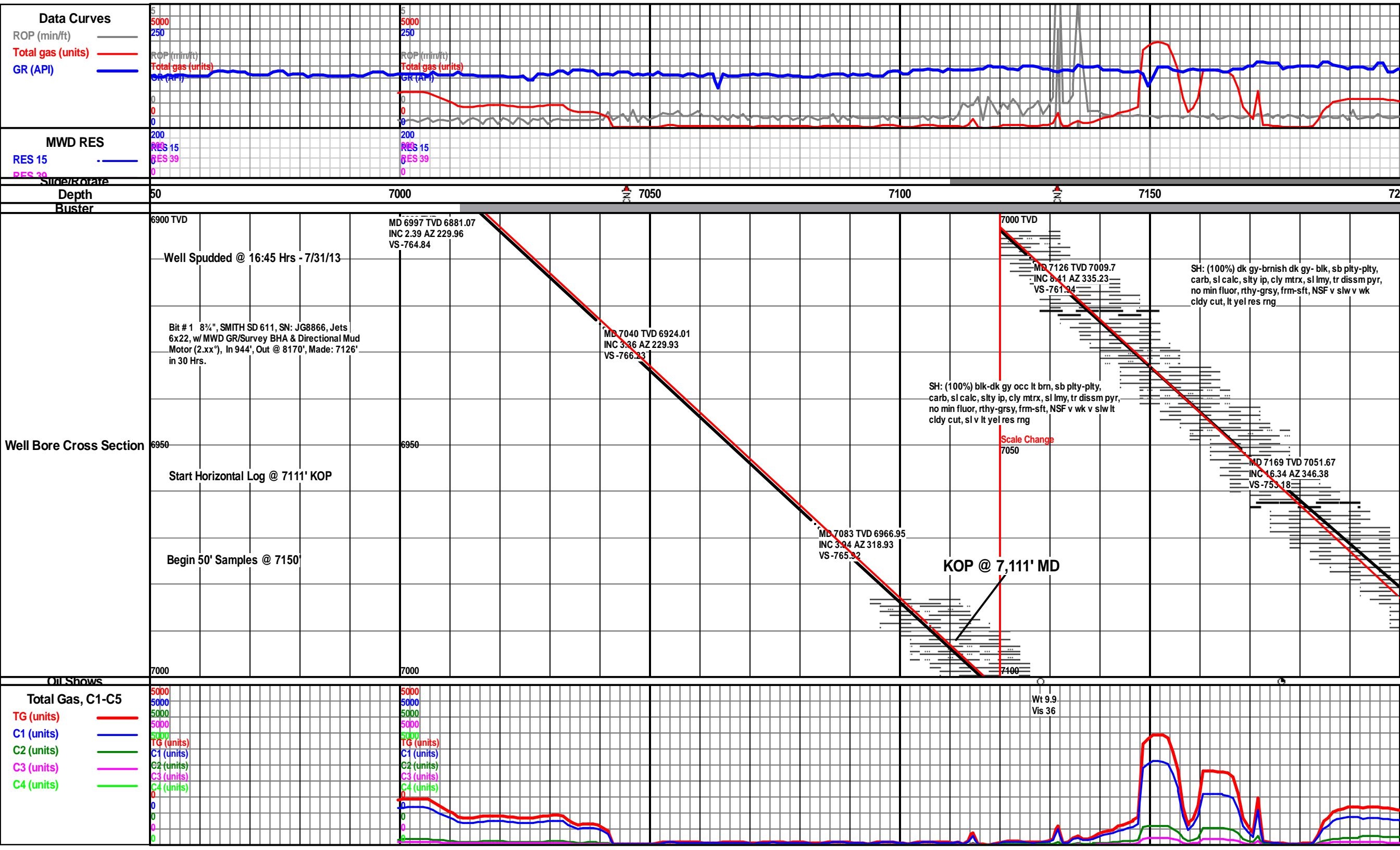
ROUNDING

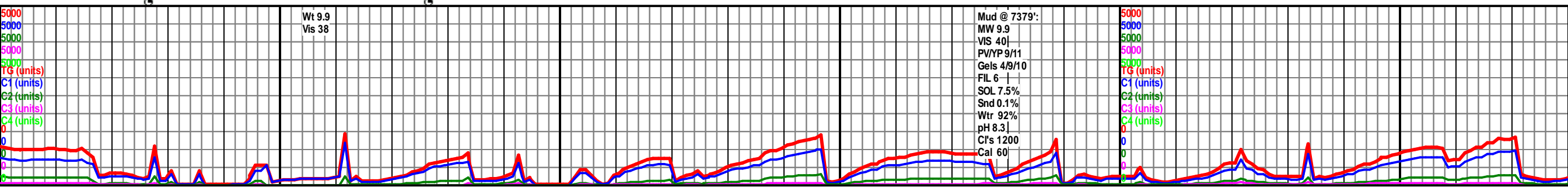
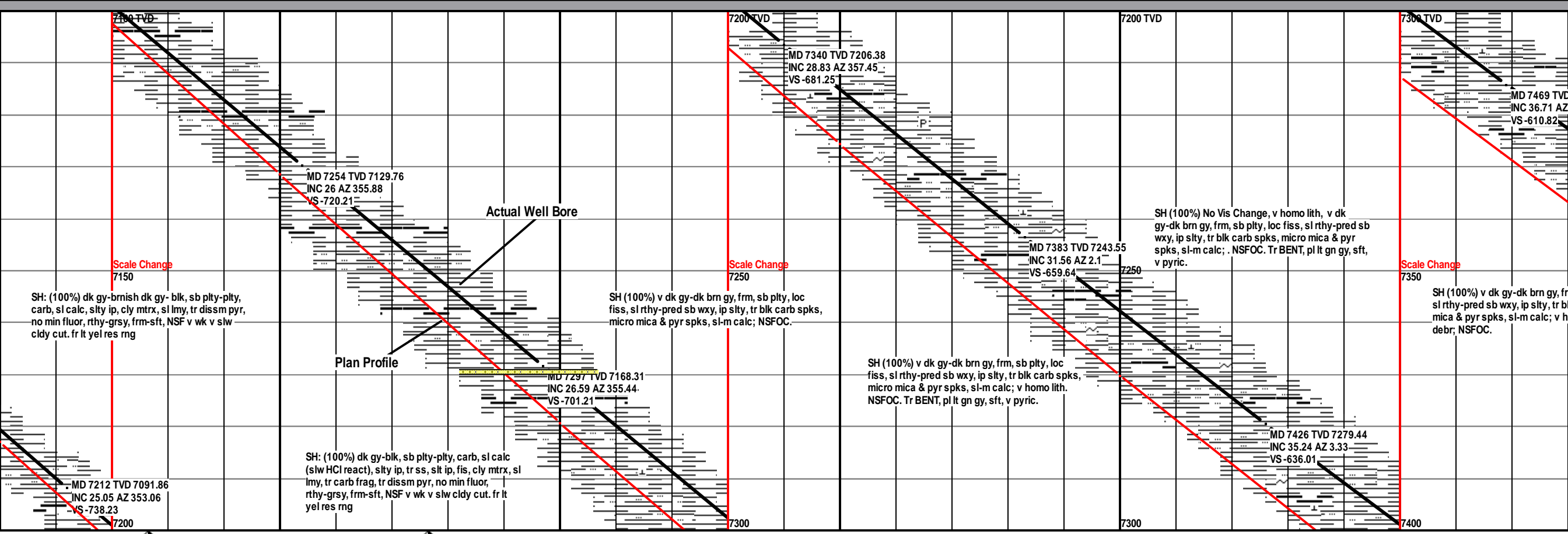
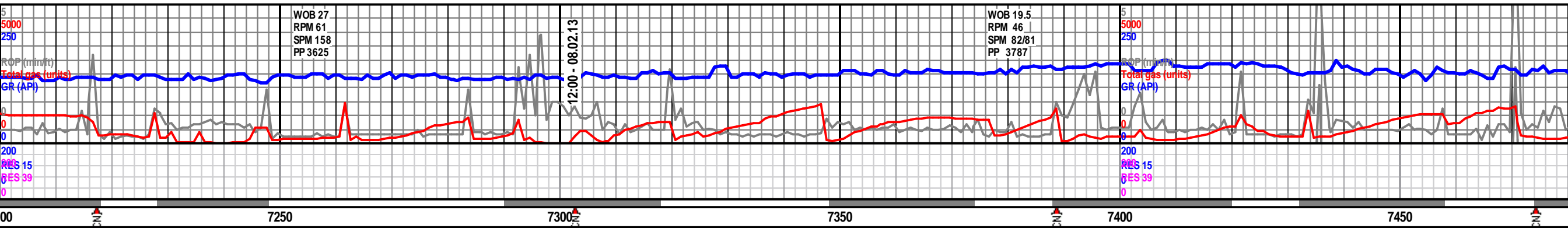
- Rounded
- Subrnd
- Subang

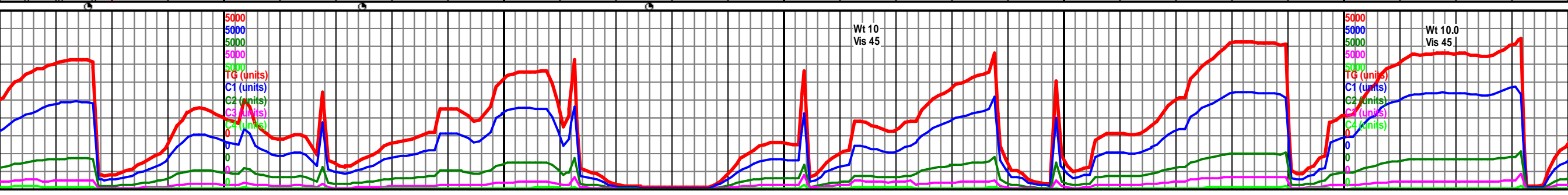
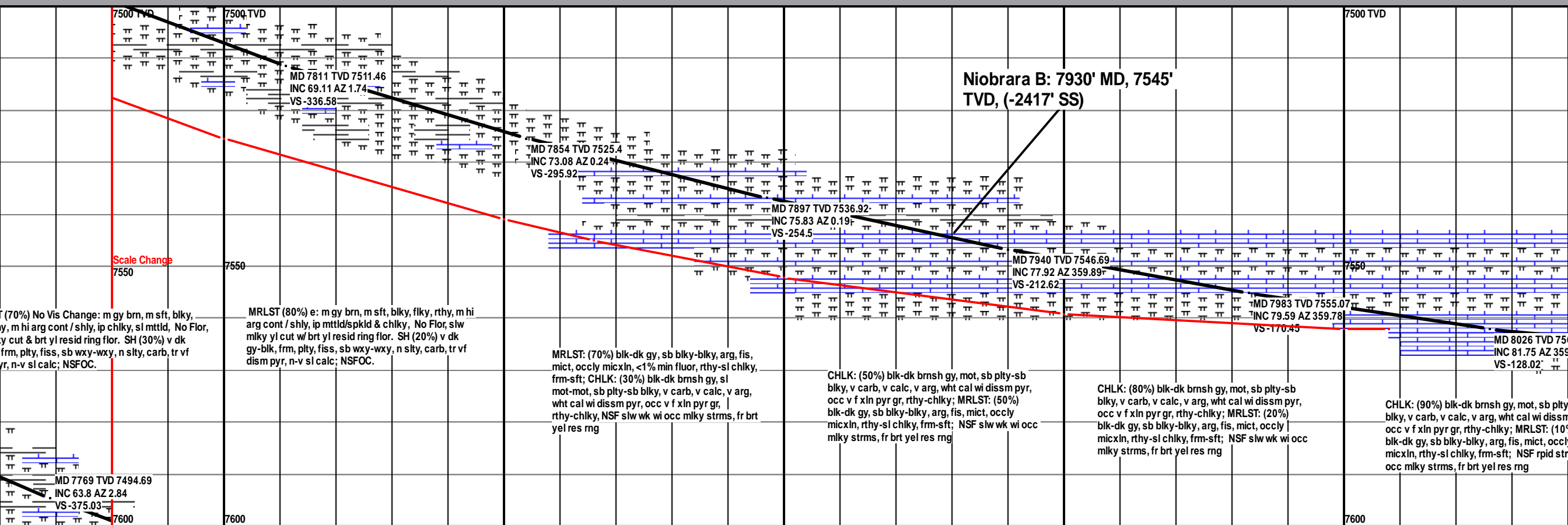
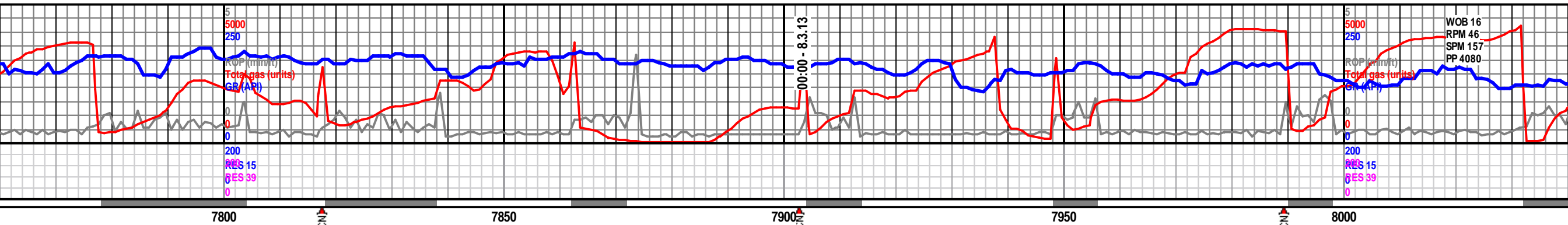
Angular

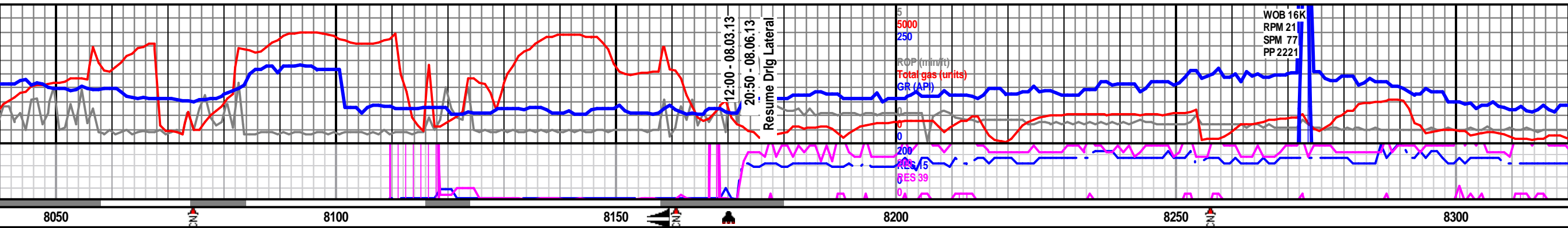
SORTING

- Well
- Moderate
- Poor

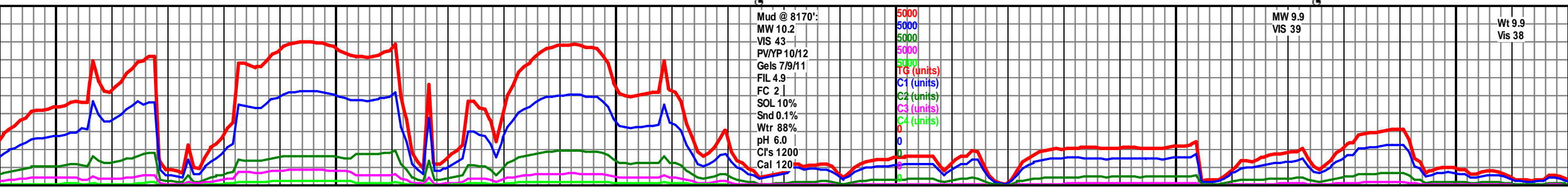


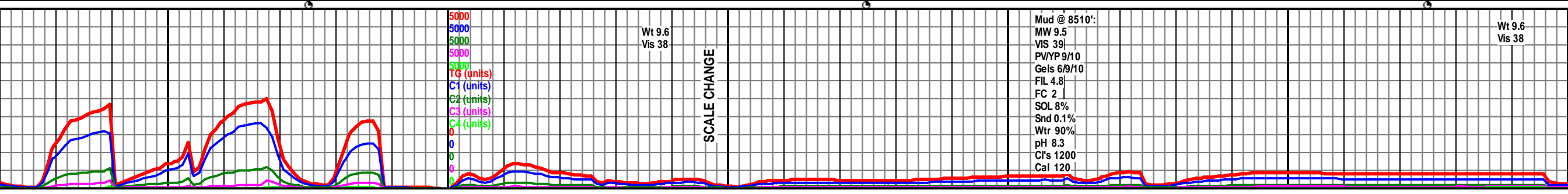
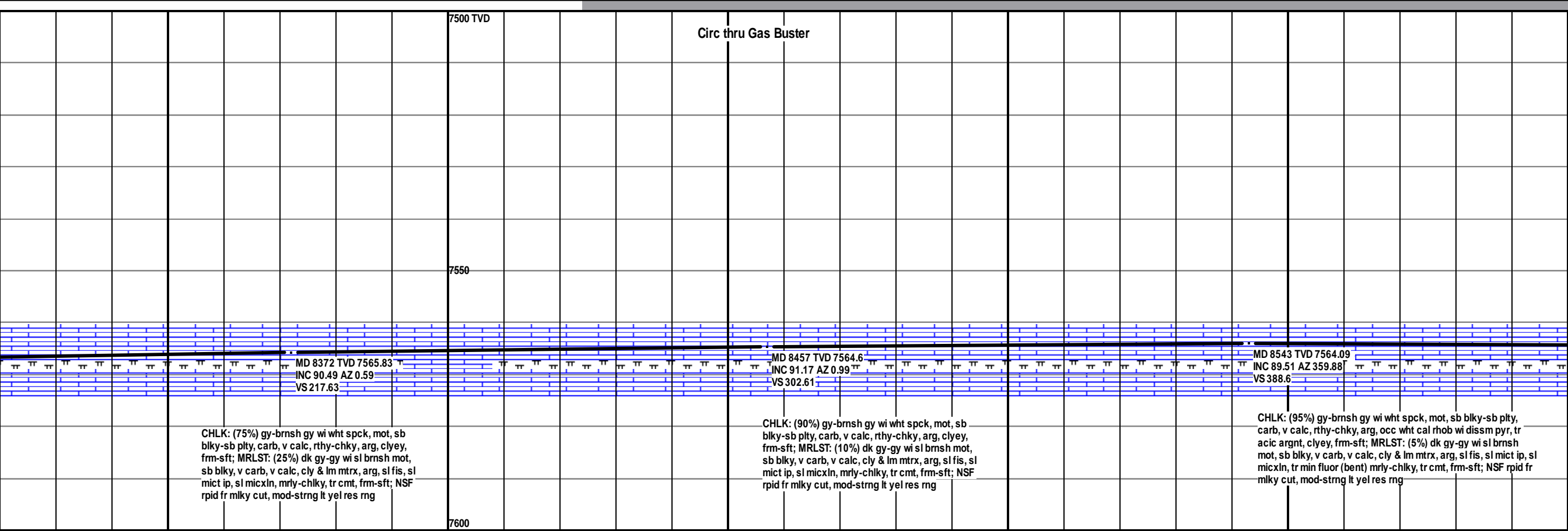
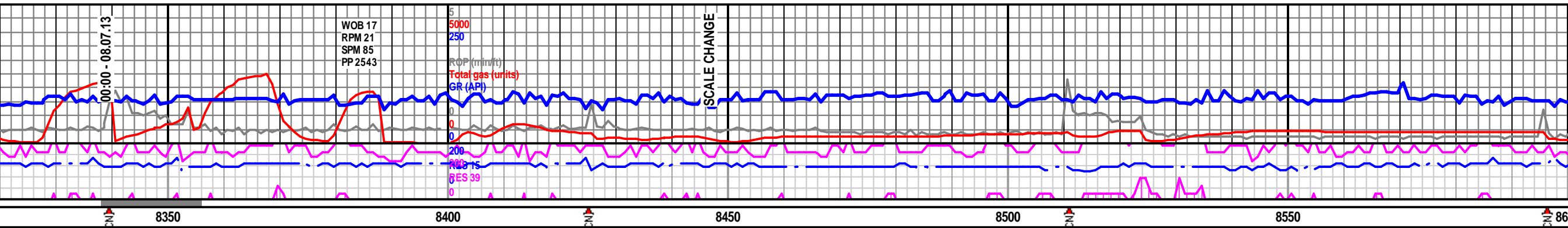


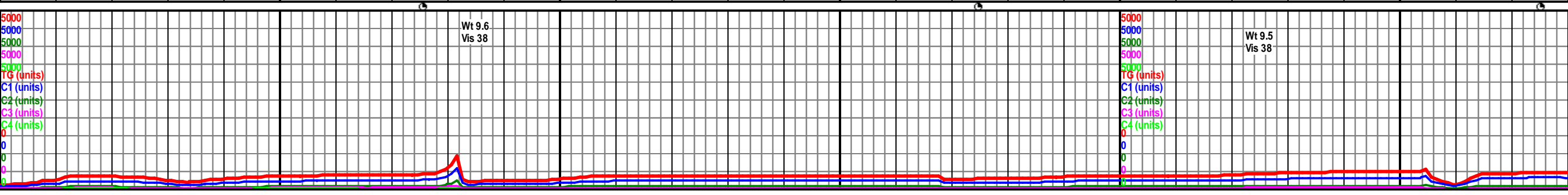
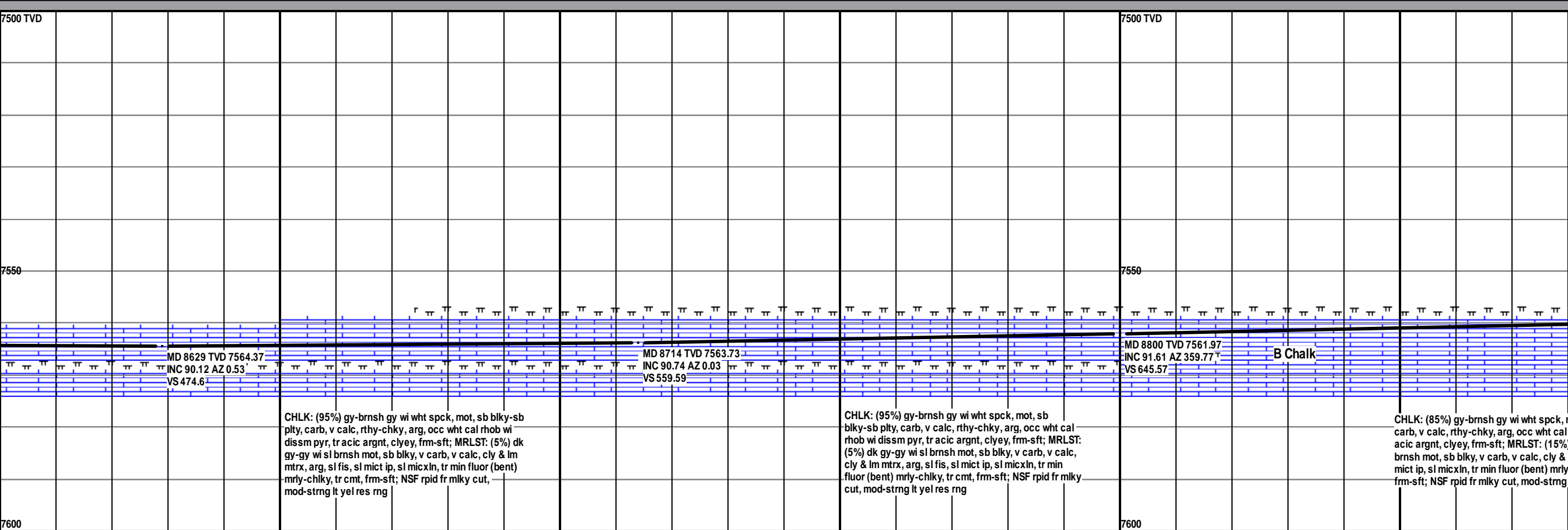
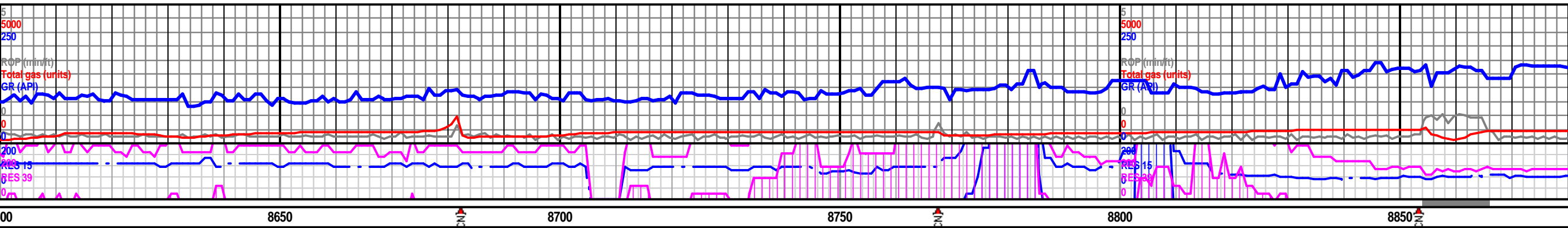


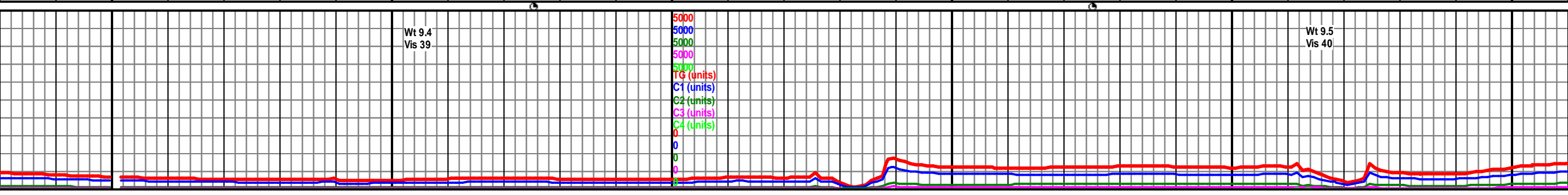
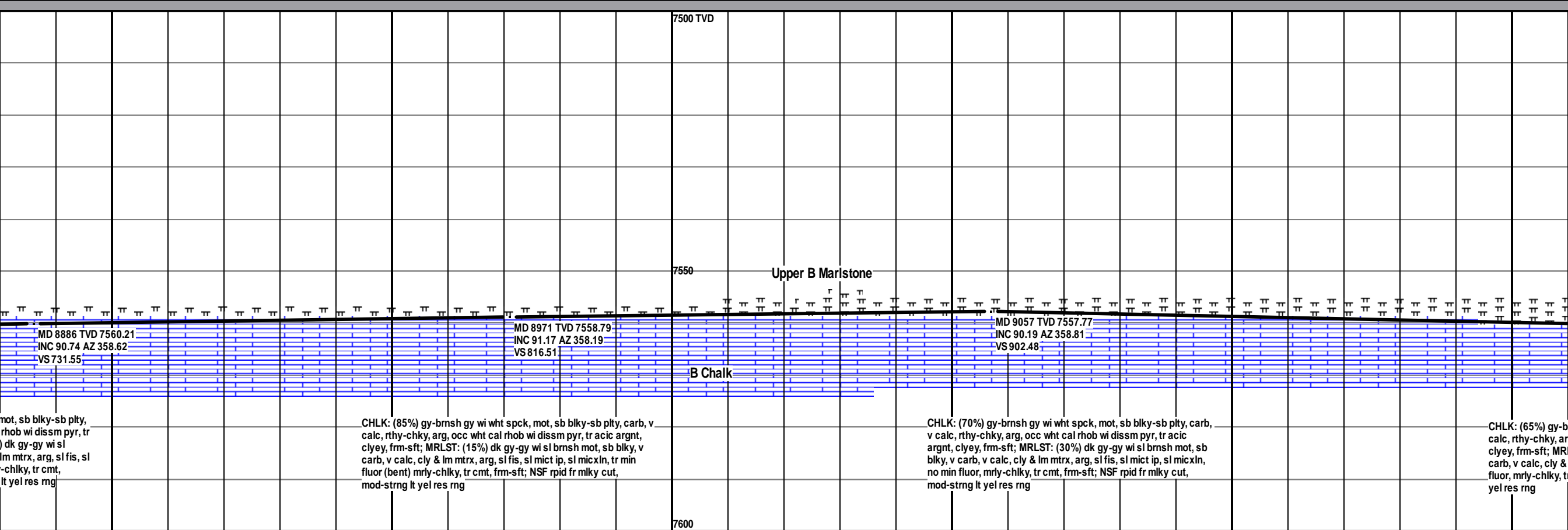
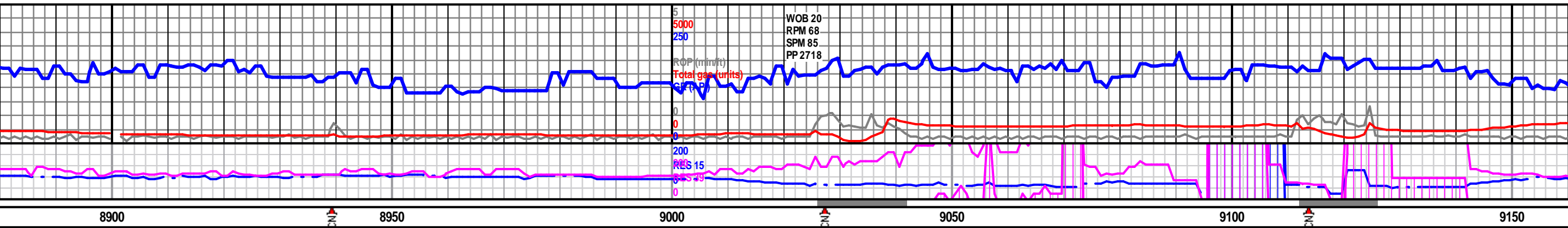


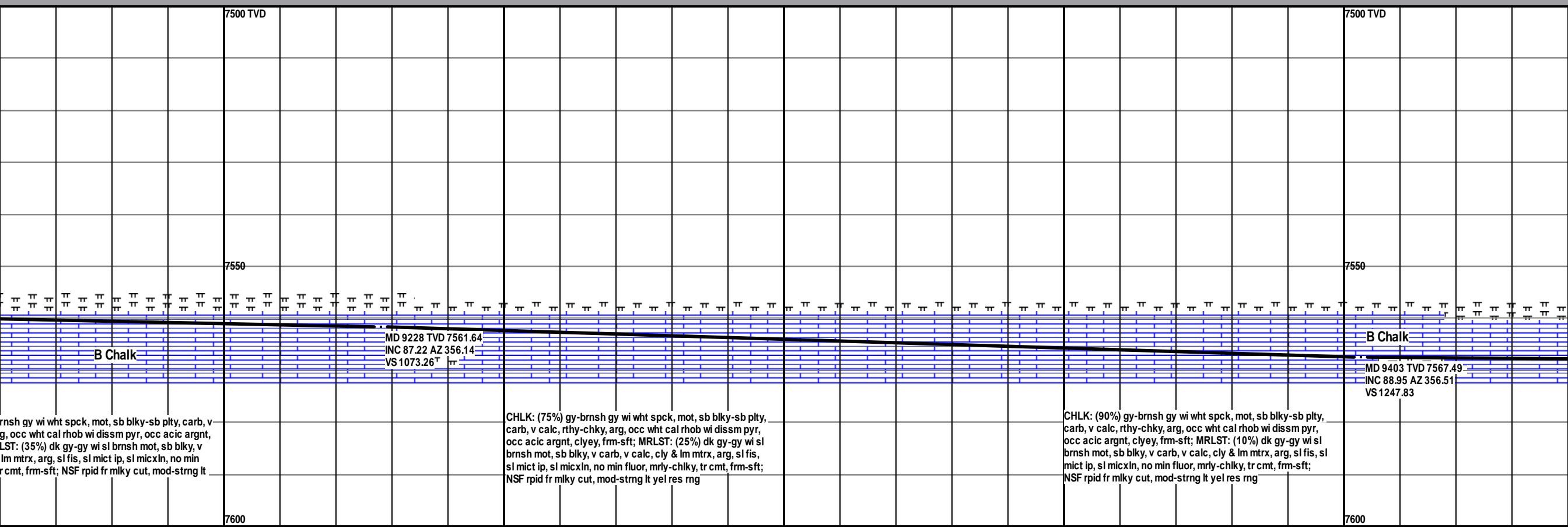
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| | | | | | | | | | | ICP 8170' reached @ 4:40 - 08.03.13 | | | | | | | | | | Bit # 2 6.125", SMITH SDI513S; SN: JG8222, Jets 5x16, w/ MWD GR/Res/Survey BHA & Directional Mud Motor (1.5°), In 8170', DO , Out @ 12,120'; Made 3950' in 26 Hrs. | | | | | | | | | | 7500 TVD | | | | | | | | | | Not going thru gas buster | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 7" Intermediate Casing set @ 8159' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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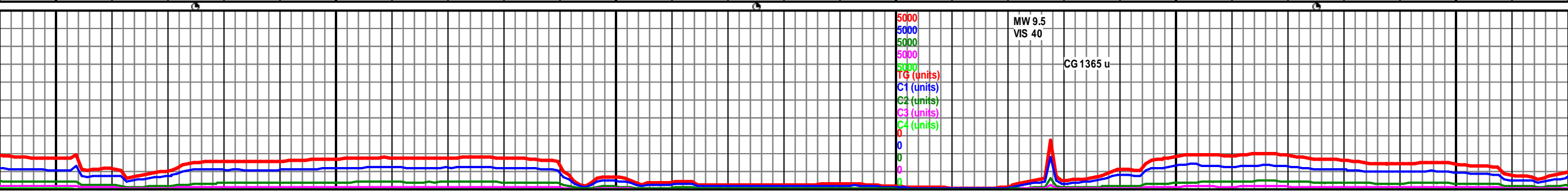
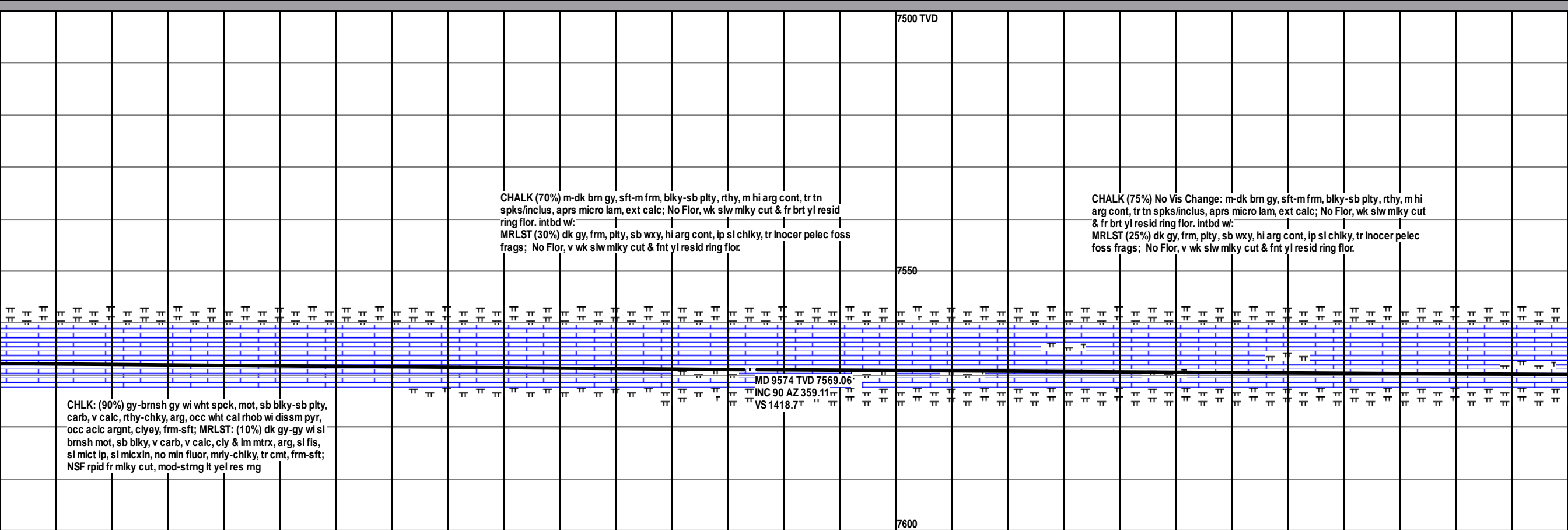


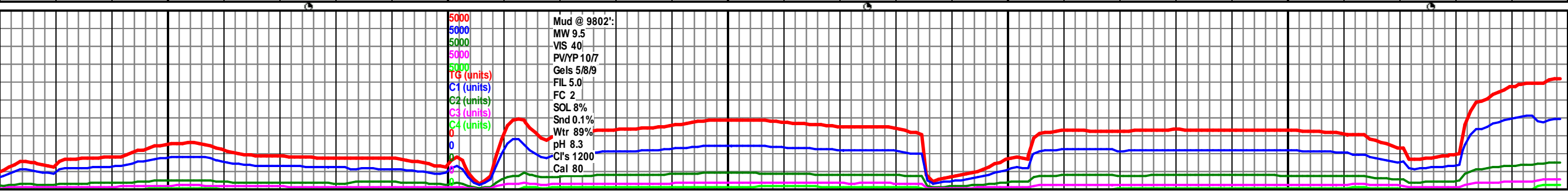
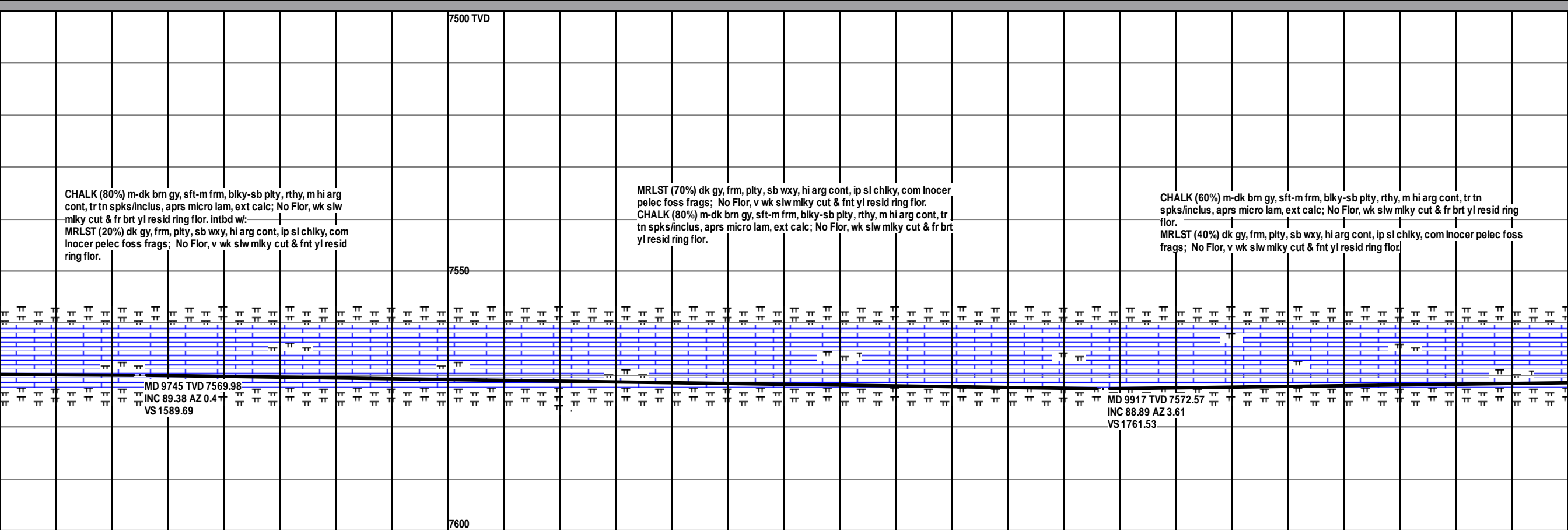
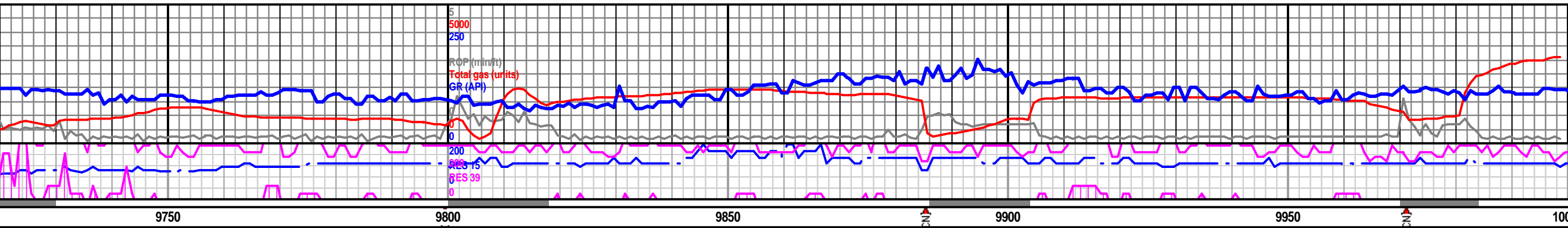


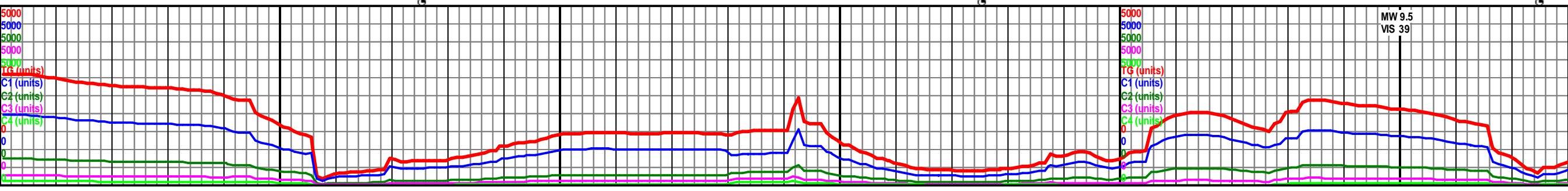
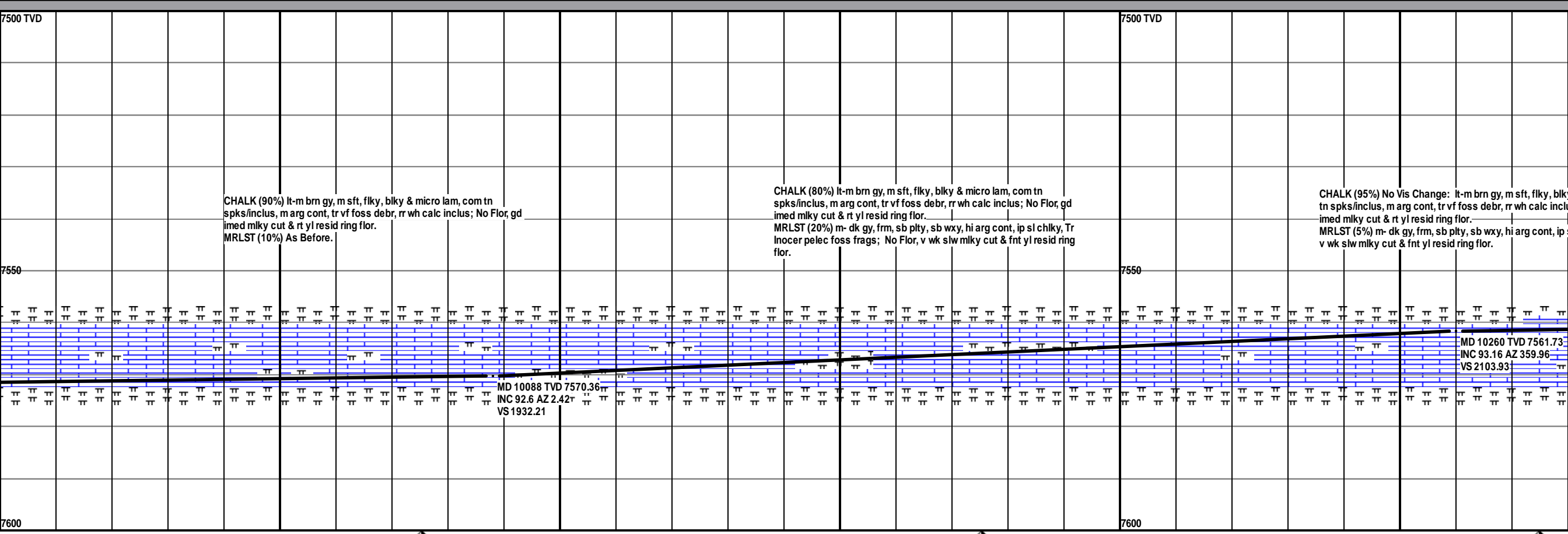
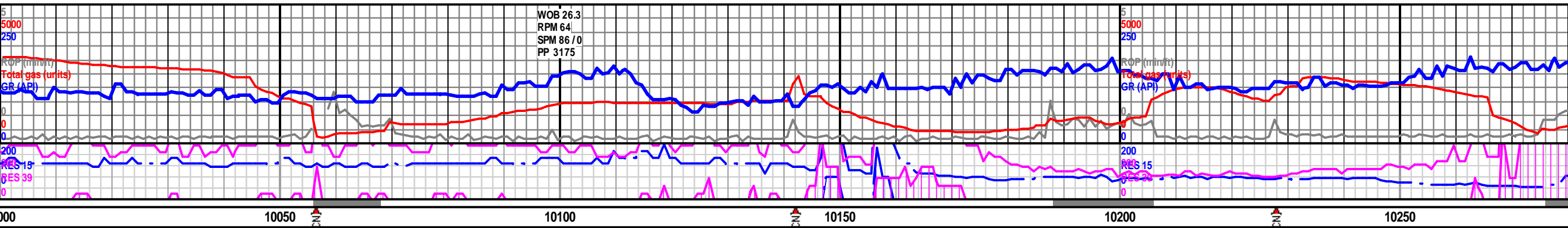


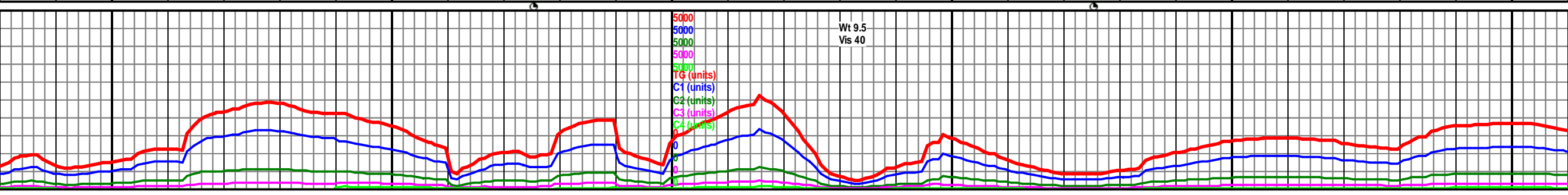
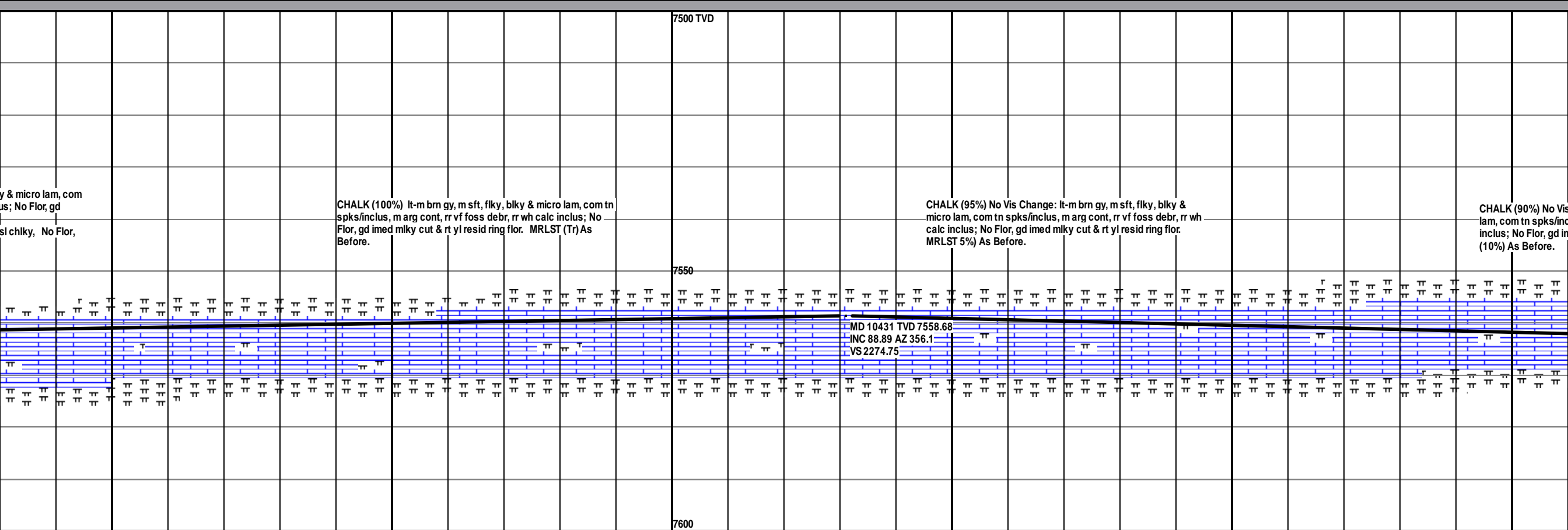
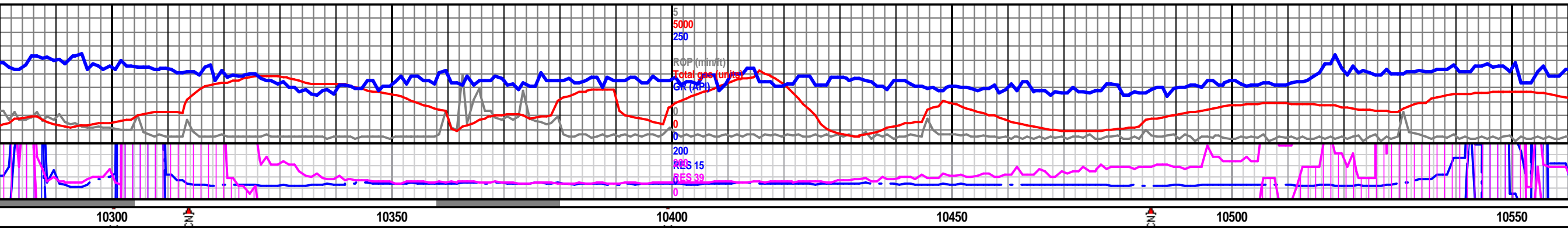


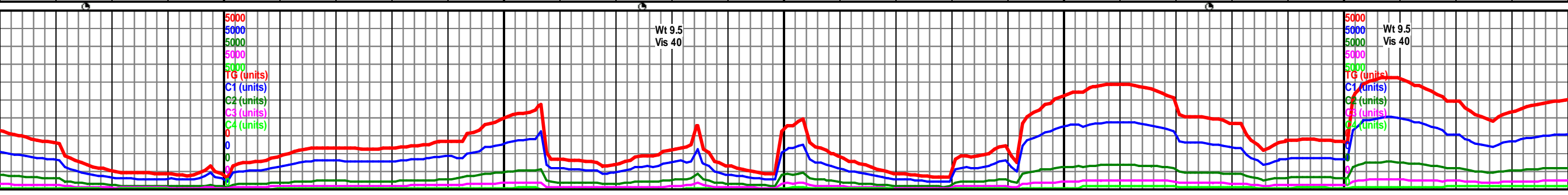
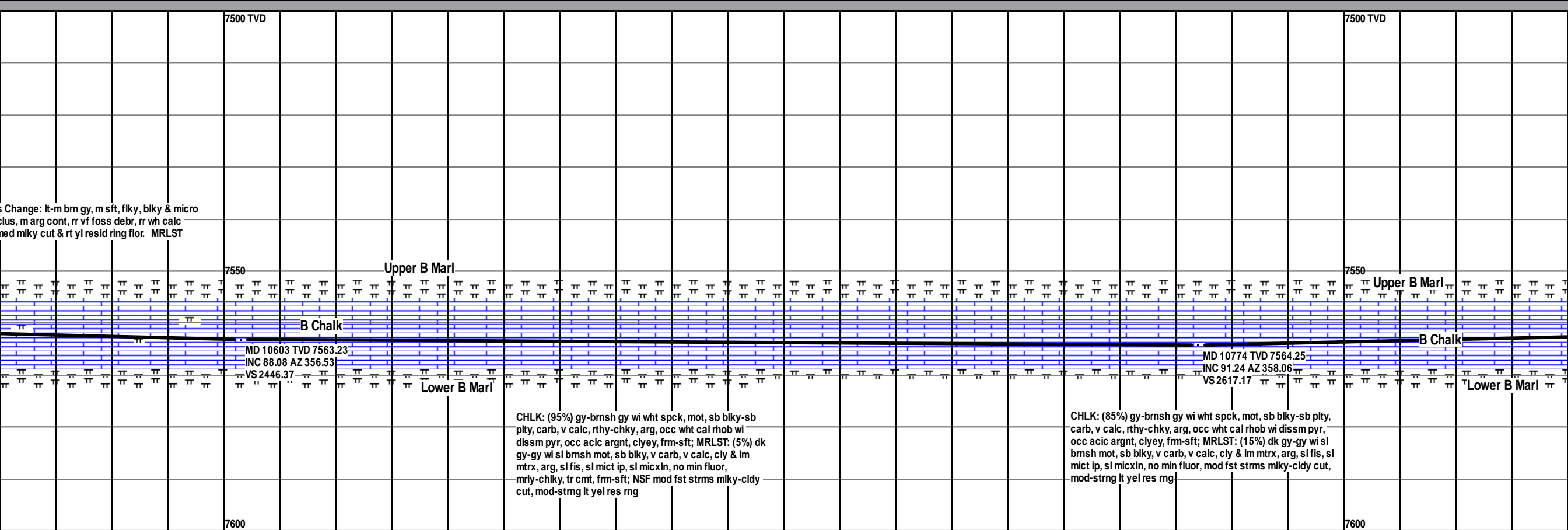
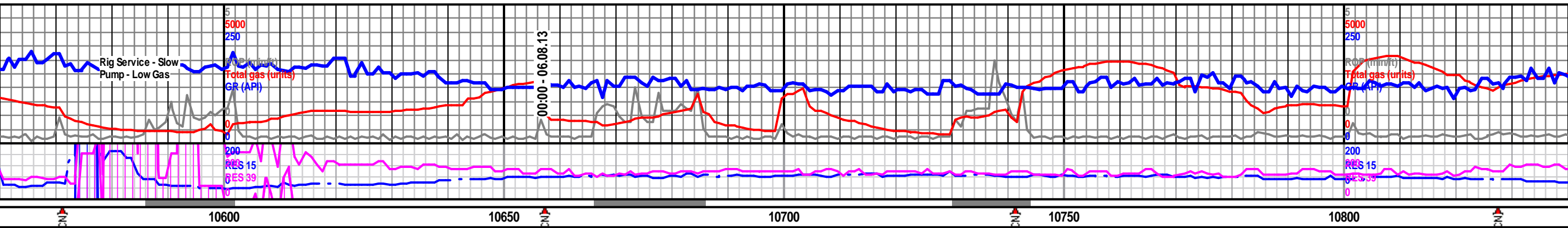


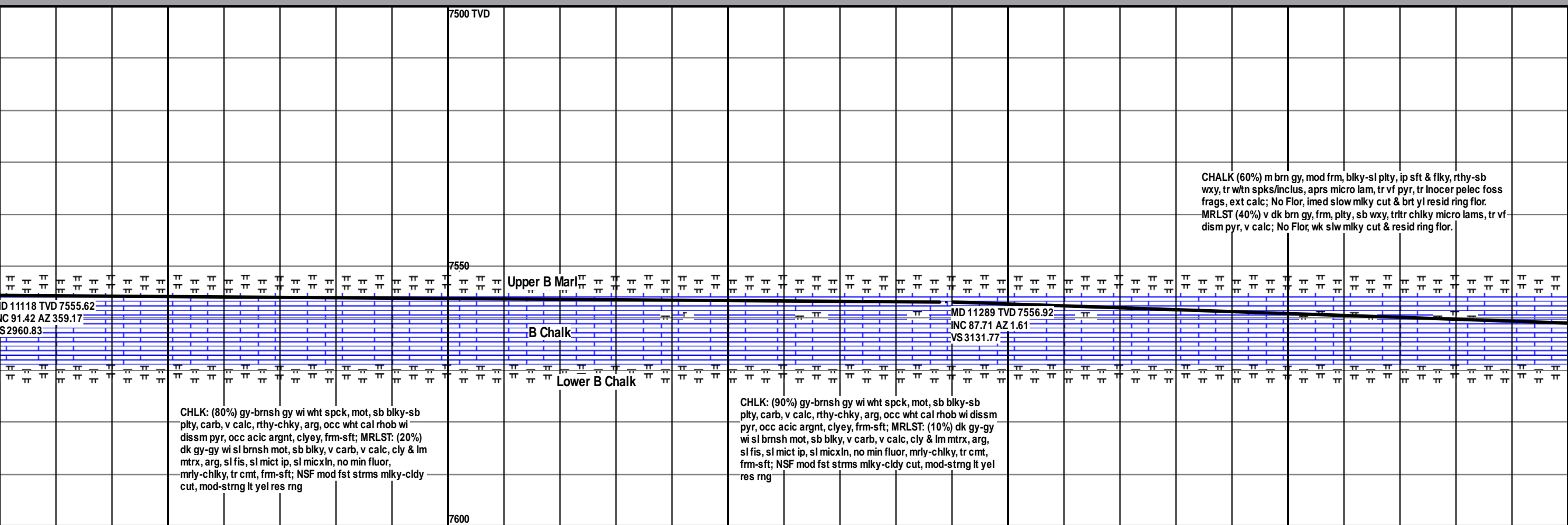


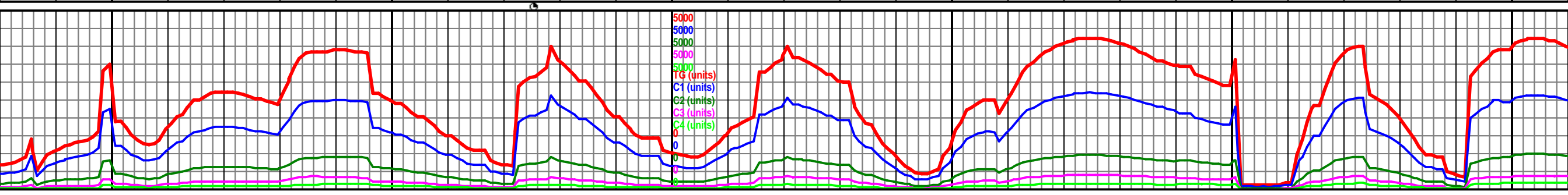
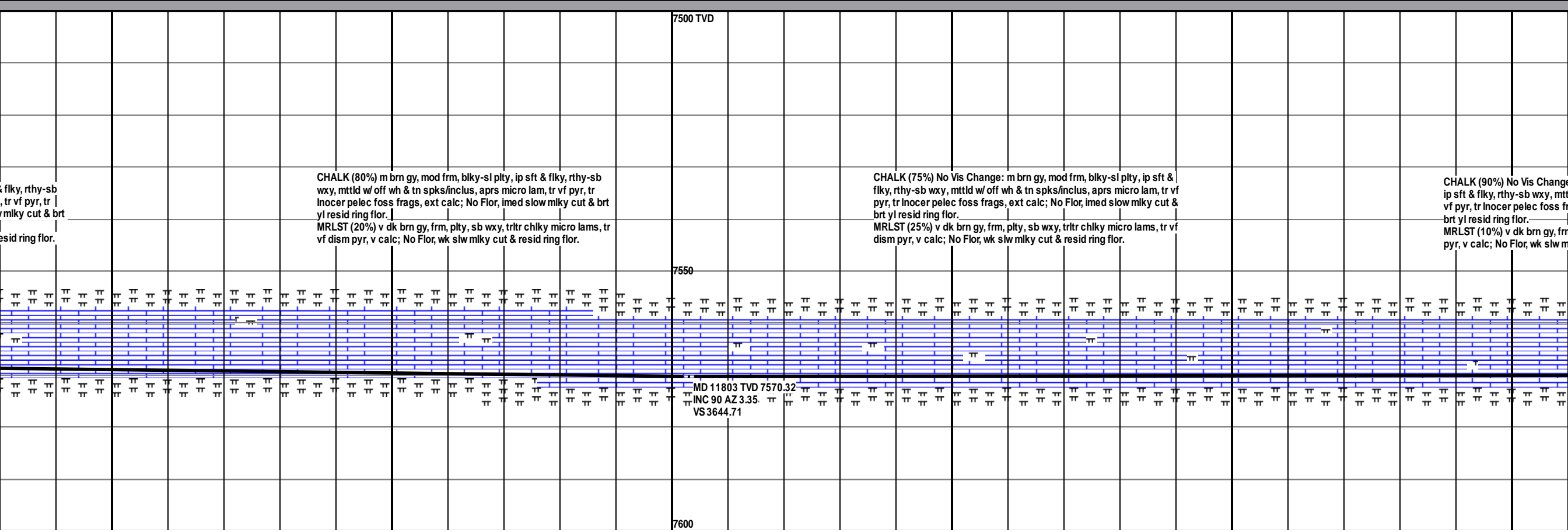
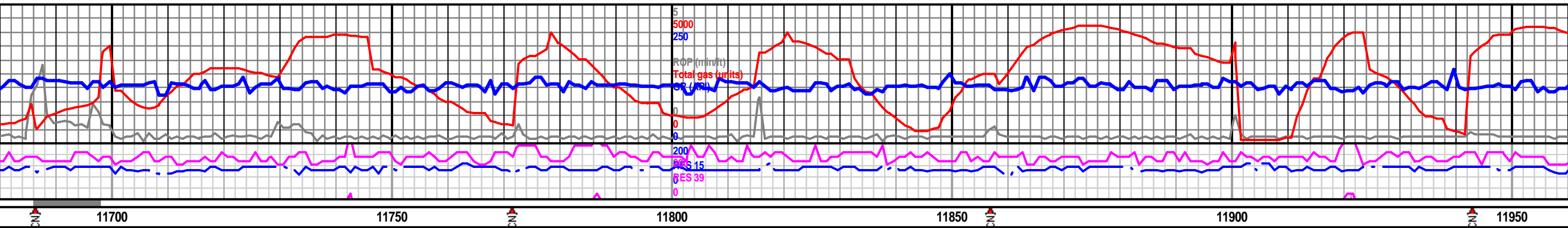


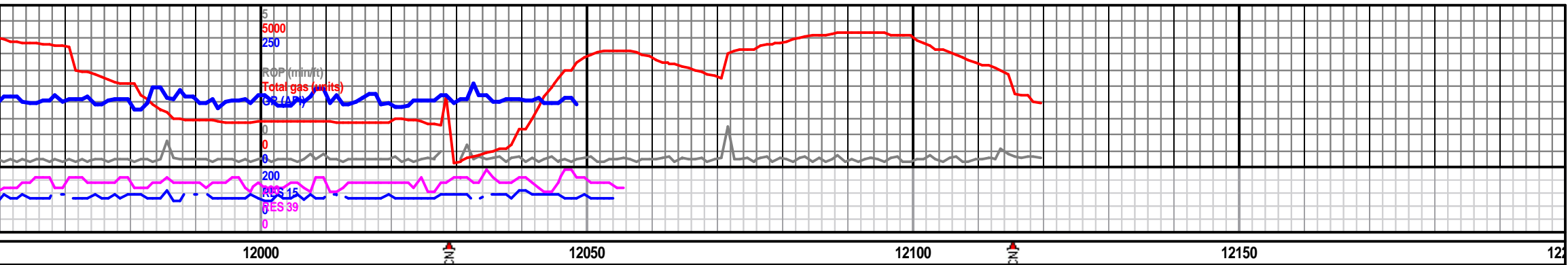












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| 7500 TVD | | | | | | | | | | | | Reach 12,120' MD TD @ 19:50 Hrs - 08.08.13; Circ BU; Circ & Cond; | | | | | | | | | | | |
| a: m brn gy mttld gy brn, mod frm, blk-y-sl plty, rld w/off wh & tn spks/inclus, aprs micro lam, tr rags, ext calc; No Flor, imed slow mlky cut & | | | | | | | | | | | | | | | | | | | | | | | |
| n, plty, sb wxy, trltr chlky micro lams, tr vf dism | | | | | | | | | | | | | | | | | | | | | | | |
| mlky cut & resid ring flor. | | | | | | | | | | | | | | | | | | | | | | | |
| 7550 | | | | | | | | | | | | | | | | | | | | | | | |
| CHALK (90%) m brn gy mttld gy brn, mod frm, blk-y-sl plty, ip sft & flky, rthy-sb wxy, mttld w/off wh & tn spks/inclus, aprs micro lam, tr vf pyr, tr Inocer pelec foss frags, ext calc; No Flor, imed slow mlky cut & brt yl resid ring flor. | | | | | | | | | | | | | | | | | | | | | | | |
| MRLST (10%) v dk brn gy, frm, plty, sb wxy, trltr chlky micro lams, tr vf dism pyr, v calc; No Flor, wk slw mlky cut & resid ring flor. | | | | | | | | | | | | | | | | | | | | | | | |
| Projection to TD: | | | | | | | | | | | | | | | | | | | | | | | |
| MD 11975 TVD 7570.14 INC 90.12 AZ 1.84 VS 3816.51 | | | | | | | | | | | | MD 12067 TVD 7570.04 INC 90 AZ 0.55 VS 3908.48 | | | | | | | | | | | |
| | | | | | | | | | | | | MD 12120 TVD 7570.04 INC 90 AZ 0.55 VS 3961.47 | | | | | | | | | | | |
| 7600 | | | | | | | | | | | | THANK YOU FOR CHOOSING GOOLSBY BROTHERS & ASSOCIATES | | | | | | | | | | | |
| | | | | | | | | | | | | Jack R. Rogers Robert E. Nordeck | | | | | | | | | | | |

