

RADIAL CEMENT BOND LOG  
GAMMA RAY  
CCL

Company KERR MCGEE OIL AND GAS ONSHORE  
Well MILLER X31-5JI  
Field WATTENBERG  
County WELD  
State COLORADO

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Location: API # : 05-123-22276  
SEC 31 TWP 2N RGE 65W  
Permanent Datum G.L. Elevation 5010  
Log Measured From KB 10  
Drilling Measured From K.B  
Other Services  
K.B. 5020  
D.F. 5019  
G.L. 5010

Date 2-13-2014

Run Number ONE  
Depth Driller 8045  
Depth Logger 5200  
Bottom Logged Interval 5200  
Top Log Interval 500'  
Open Hole Size 8.875  
Type Fluid WATER  
Density / Viscosity 1.0  
Max. Recorded Temp.  
Estimated Cement Top  
Time Well Ready  
Time Logger on Bottom 4740  
Equipment Number  
Location GREELEY, CO  
Recorded By J.J.BULLARD  
Witnessed By J. CHANDLER

Borehole Record  
Run Number Bit From To Size Weight From To

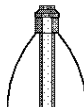
Casing Record  
Surface String 8.63 24 Wgt/Ft Top Bottom  
Prot. String 4.5 11.6 0 8045  
Production String  
Liner

<<< Fold Here >>>



All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

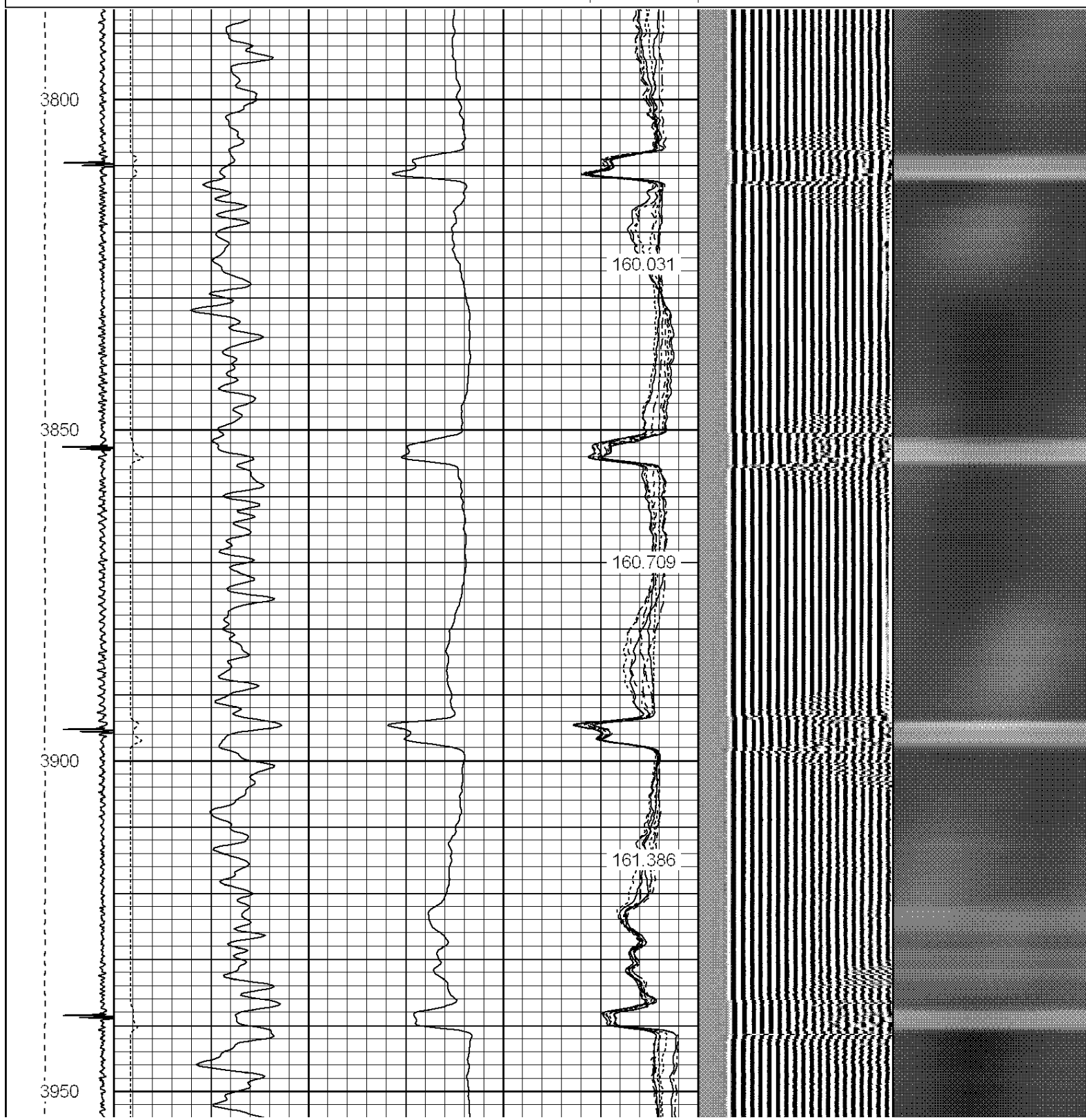
Comments

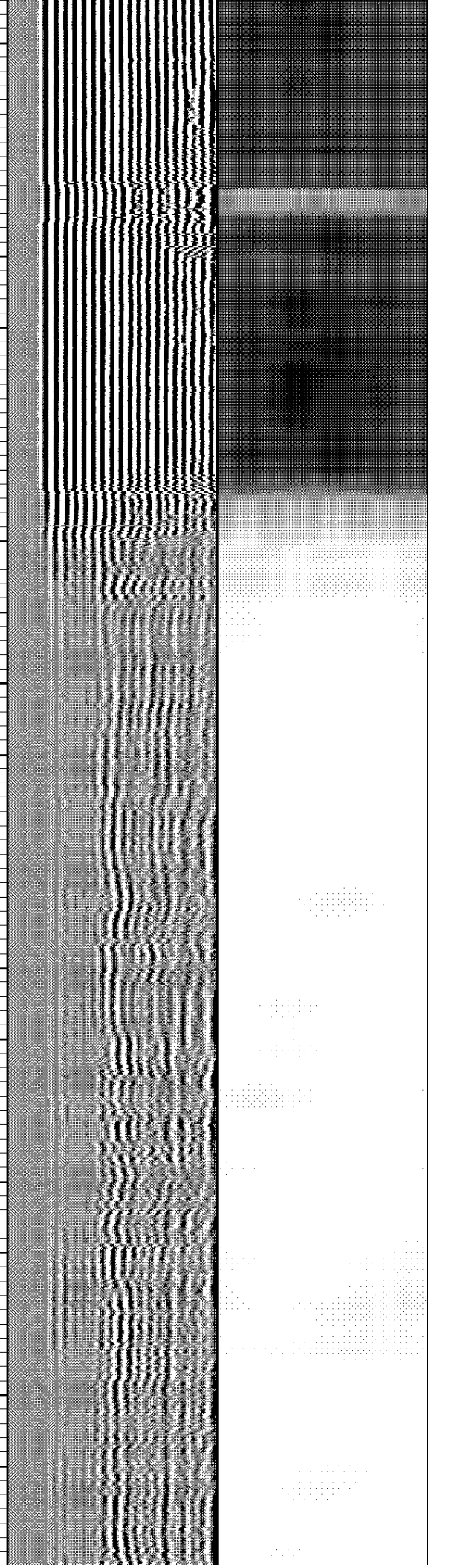
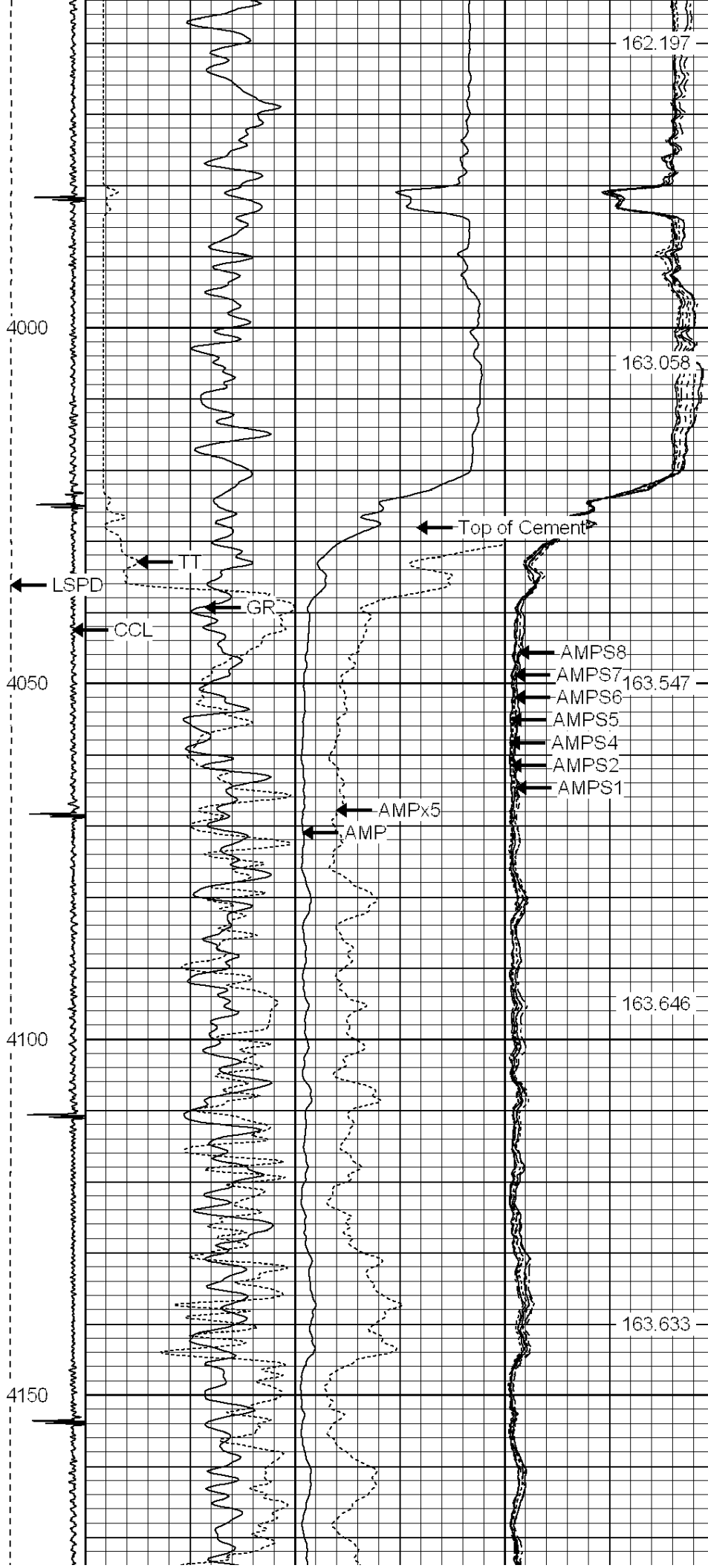
LOGGED TO VERIFY CEMENT BOND  
THANK YOU FOR USING WARRIOR ENERGY SERVICES!!!

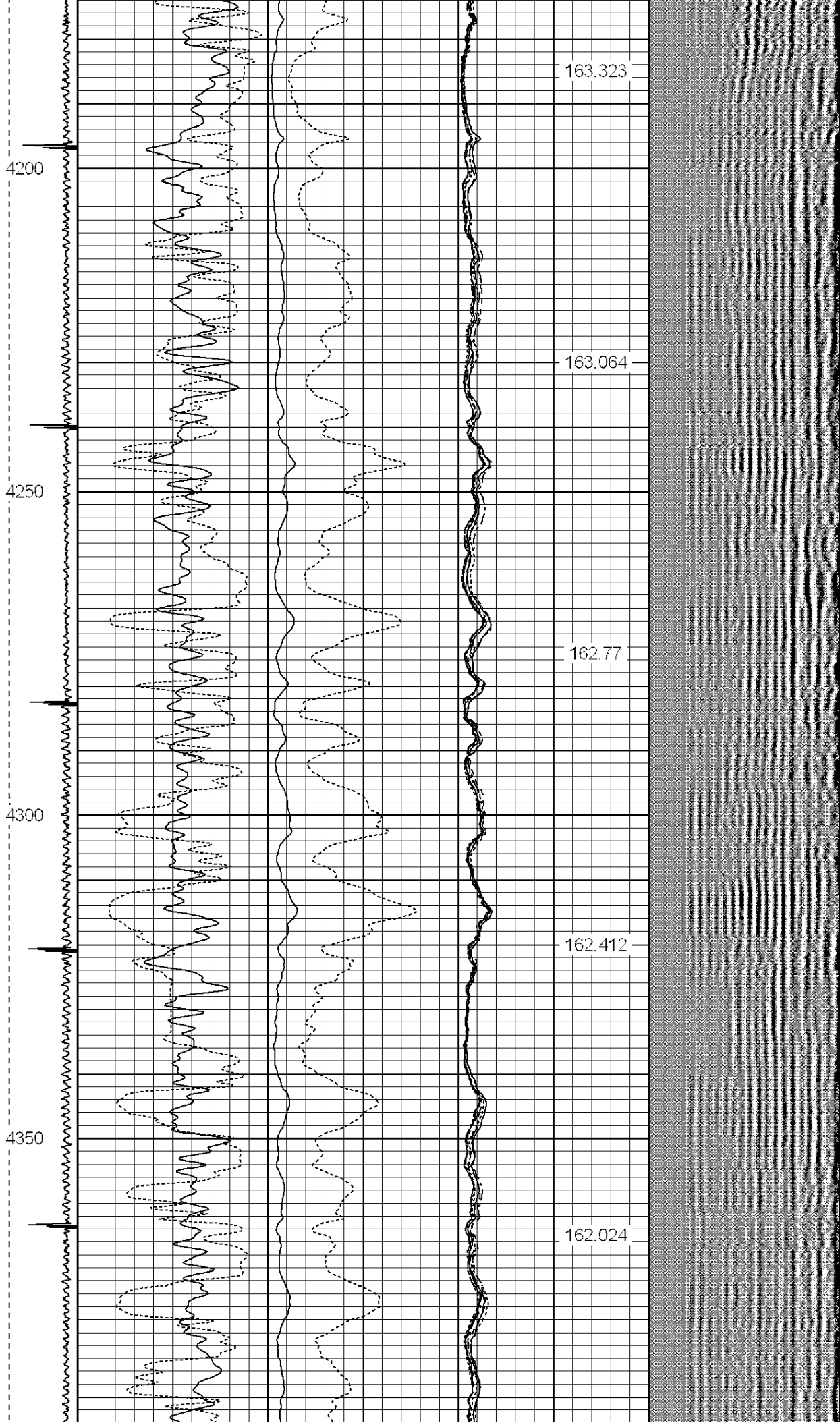
| Sensor | Offset (ft) | Schematic   | Description | Len (ft) | OD (in) | Wt (lb) |
|--------|-------------|---|-------------|----------|---------|---------|
|        |             |  |             |          |         |         |

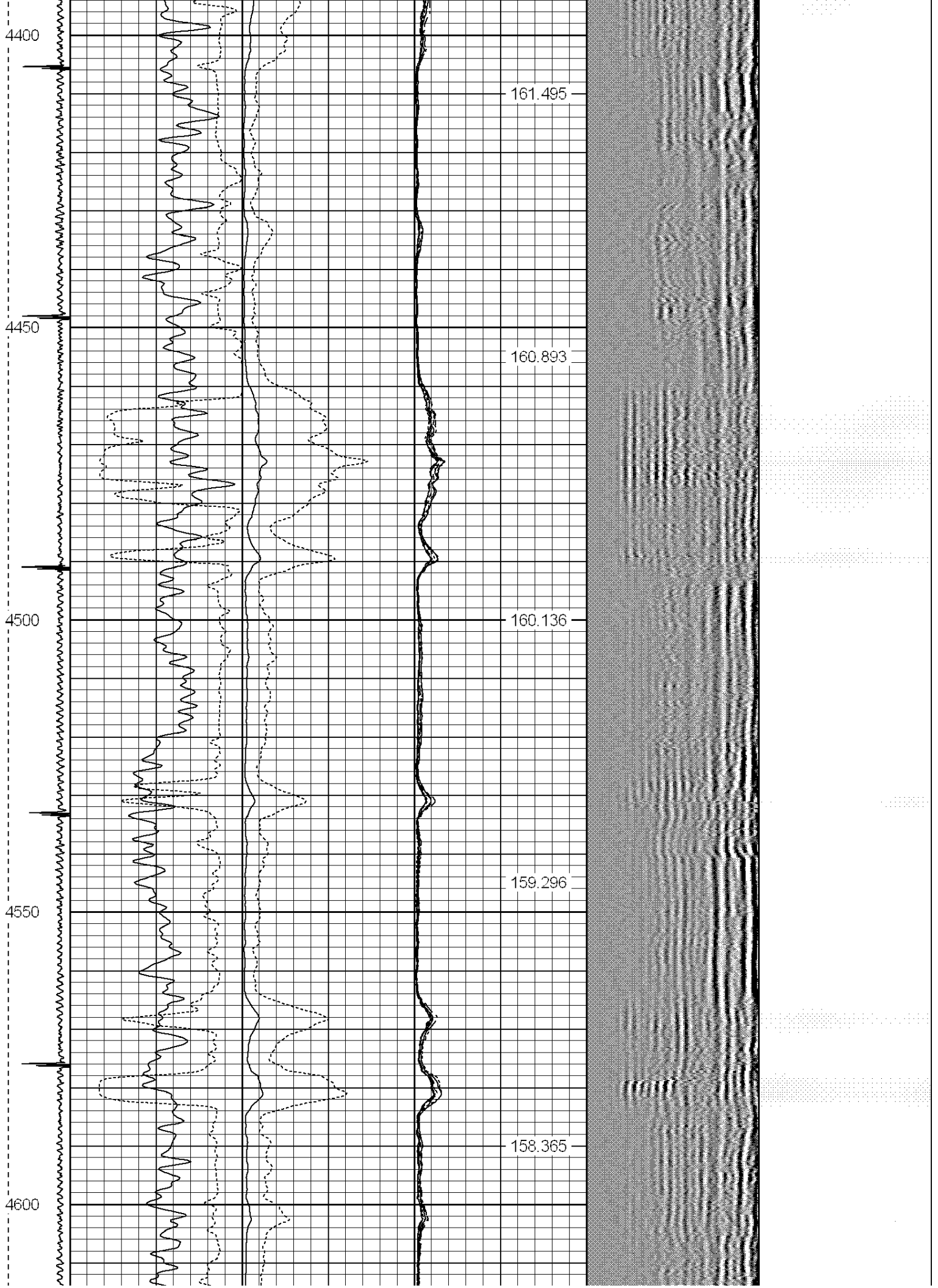
[illegible]

|                  |     |   |     |           |     |   |            |       |       |         |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|------------------|-----|---|-----|-----------|-----|---|------------|-------|-------|---------|-----|---|-----|---|---|------------|---|--|--|--|--|--|--|--|--|--|--|
| -9               | CCL | 1 | 200 | TT (usec) | 800 | 0 | AMP (mV)   | 100   | 0     | AMPS1   | 100 | 200   | VDL | 1200  | 1 | Cement Map | 8 |  |  |  |  |  |  |  |  |  |  |
| LSPD<br>(ft/min) | 0   |   | 0   | GR (GAPI) | 200 | 0 | AMPx5 (mV) | 20    | 0     | AMPS2   | 100 |  |     |  |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  | 200 |   | 200 | GR (GAPI) | 400 |   |            | 0     | AMPS4 | 100     |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  | 0   |   |     |           |     |   | 0          | AMPS5 | 100   |         |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  |     |   |     |           |     |   | 0          | AMPS6 | 100   |         |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  |     |   |     |           |     |   | 0          | AMPS7 | 100   |         |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  |     |   |     |           |     |   |            | 0     | AMPS8 | 100     |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  |     |   |     |           |     |   |            |       |       | IntTemp |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |
|                  |     |   |     |           |     |   |            |       |       | (degF)  |     |   |     |   |   |            |   |  |  |  |  |  |  |  |  |  |  |

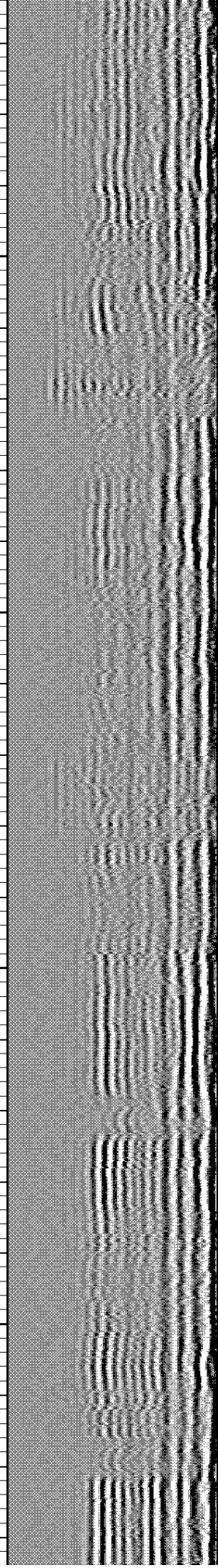
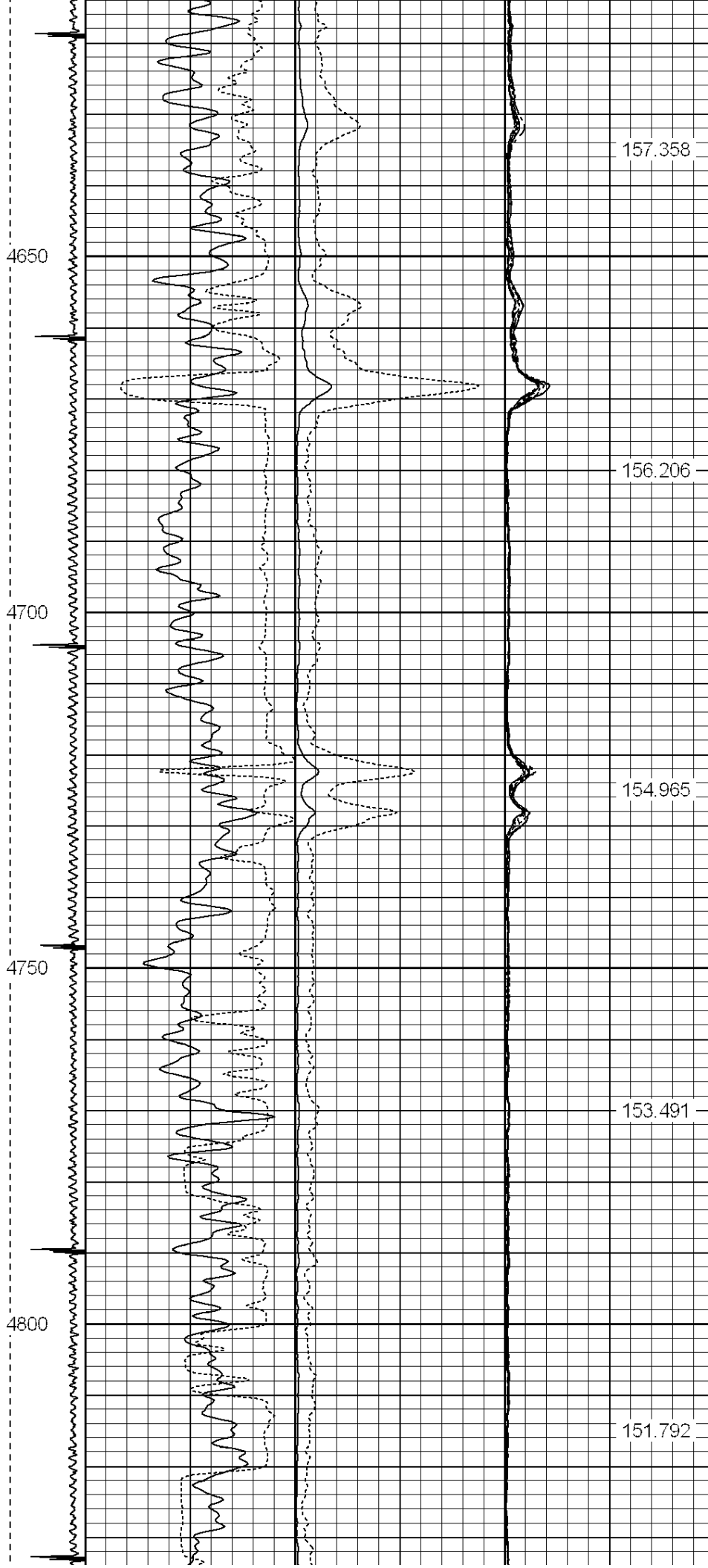


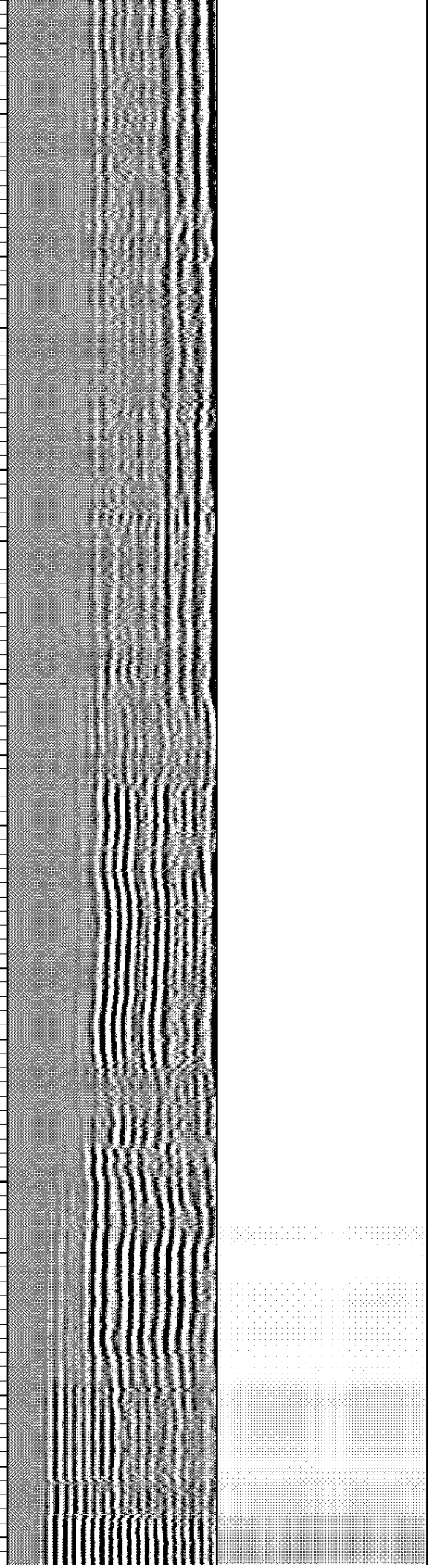
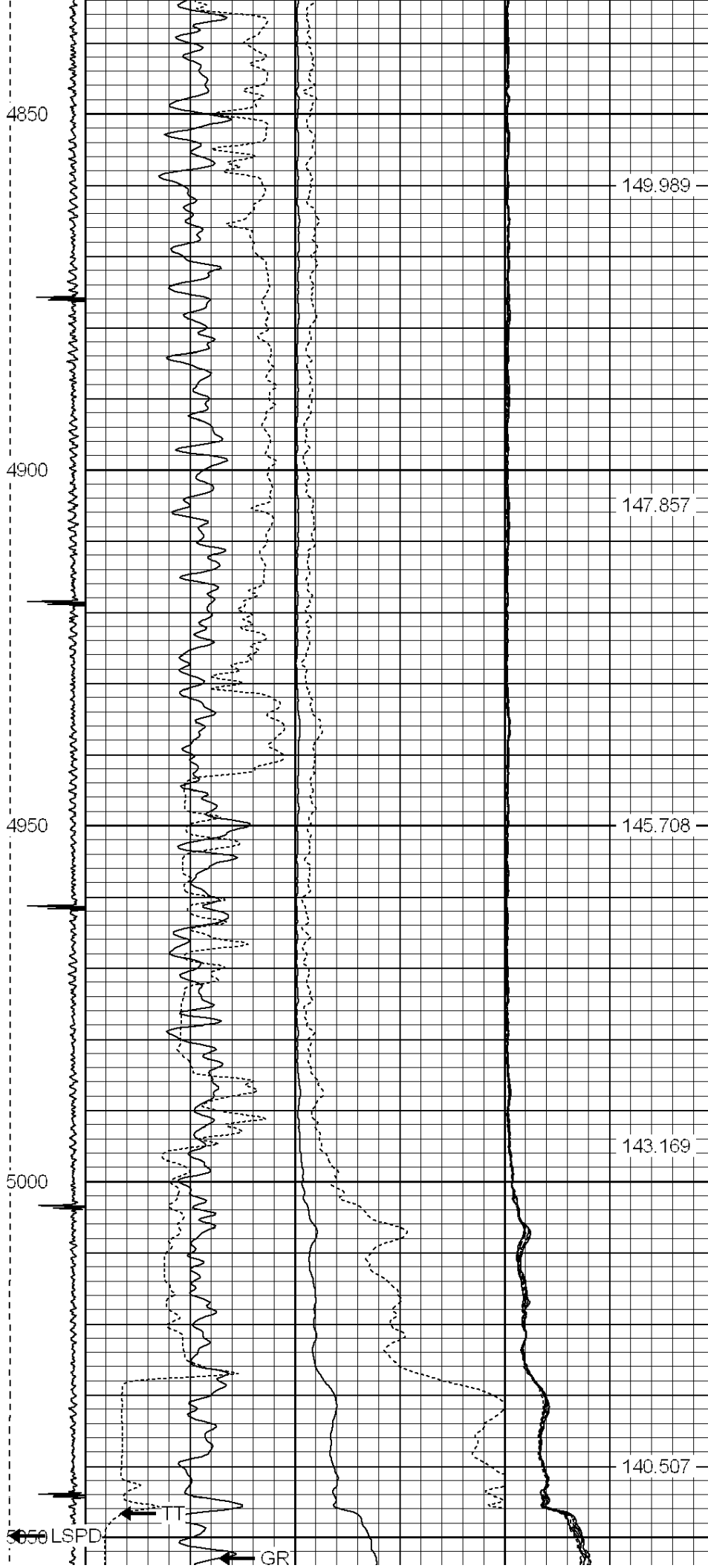




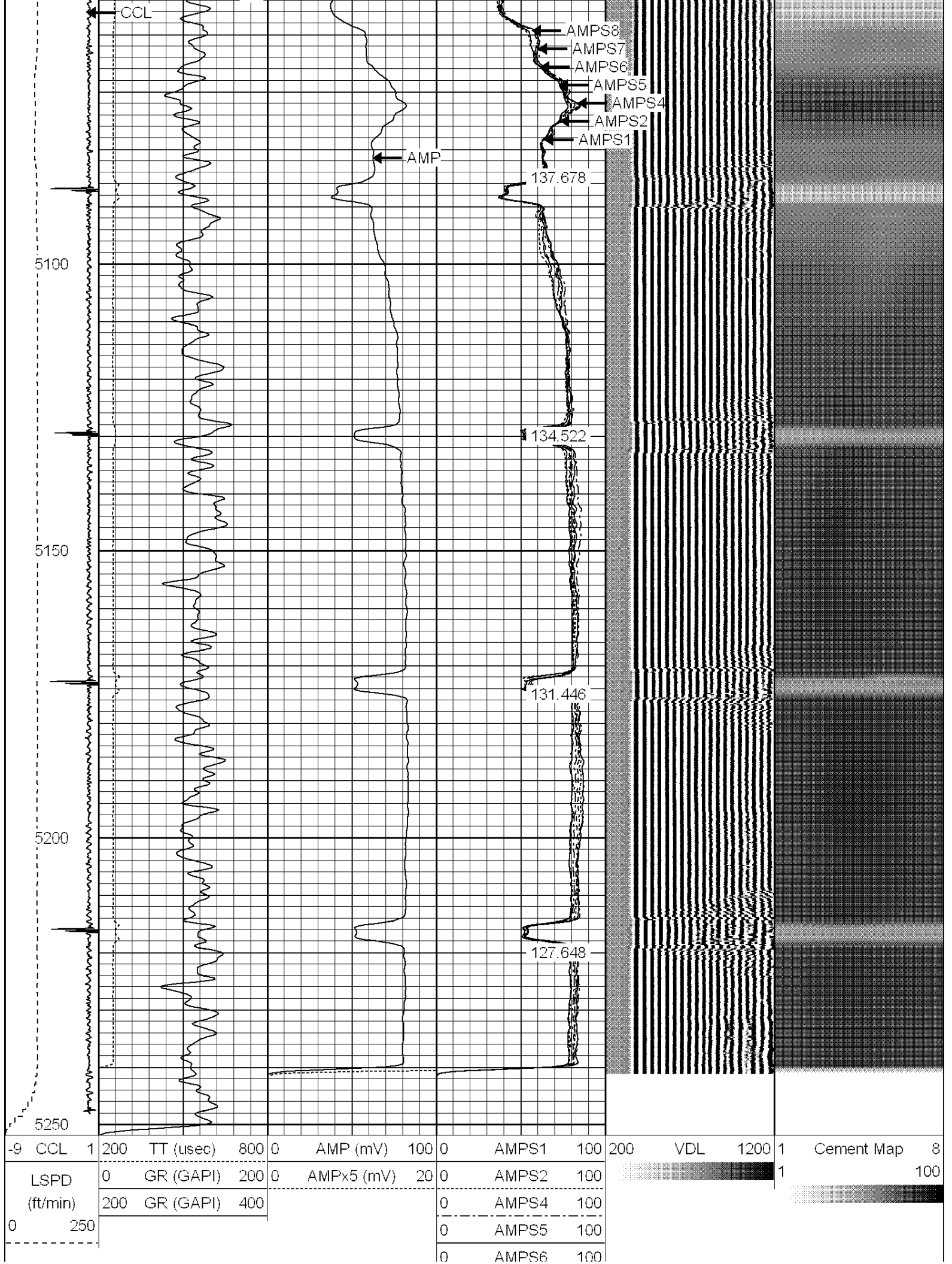




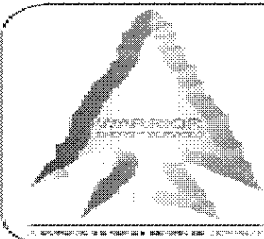








|                   |       |     |
|-------------------|-------|-----|
| 0                 | AMPS7 | 100 |
| 0                 | AMPS8 | 100 |
| IntTemp<br>(degF) |       |     |



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