



# NABORS

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

## COMPENSATED DENSITY/NEUTRON LOG

|                              |               |                                                                         |  |
|------------------------------|---------------|-------------------------------------------------------------------------|--|
| Company                      |               | I.A. OPERATING, INC.                                                    |  |
| Well                         |               | PEAVEY D #6-1                                                           |  |
| Field                        |               | ANDERSON                                                                |  |
| County                       |               | ELLIS                                                                   |  |
| State                        |               | KANSAS                                                                  |  |
| Location:                    |               | API # : 15-051-26540-00-00<br>520' FNL & 1130' FWL<br>SE - NE - NW - NW |  |
| Permanent Datum              |               | GROUND LEVEL                                                            |  |
| Log Measured From            |               | KELLY BUSHING & A.G.L.                                                  |  |
| Drilling Measured From       |               | KELLY BUSHING                                                           |  |
| SEC 6                        |               | TWP 11S RGE 18W                                                         |  |
| Other Services               |               | DIL MEL/SON                                                             |  |
| Elevation                    |               | K.B. 1959<br>D.F. 1957<br>G.L. 1951                                     |  |
| Date                         | 6/10/13       |                                                                         |  |
| Run Number                   | ONE           |                                                                         |  |
| Depth Driller                | 3580          |                                                                         |  |
| Depth Logger                 | 3579          |                                                                         |  |
| Bottom Logged Interval       | 3555          |                                                                         |  |
| Top Log Interval             | 2800          |                                                                         |  |
| Casing Driller               | 8 5/8" @ 263  |                                                                         |  |
| Casing Logger                | 263           |                                                                         |  |
| Bit Size                     | 7 7/8         |                                                                         |  |
| Type Fluid in Hole           | CHEMICAL MUD  |                                                                         |  |
| Density / Viscosity          | 9.1/50        |                                                                         |  |
| pH / Fluid Loss              | 9.5/8.8       |                                                                         |  |
| Source of Sample             | FLOWLINE      |                                                                         |  |
| Rin @ Meas. Temp             | 0.45 @ 89F    |                                                                         |  |
| Rinf @ Meas. Temp            | 0.34 @ 89F    |                                                                         |  |
| Rinc @ Meas. Temp            | 0.54 @ 89F    |                                                                         |  |
| Source of Rinf / Rinc        | MEASURED      |                                                                         |  |
| Rin @ BHT                    | 0.36 @ 112F   |                                                                         |  |
| Time Circulation Stopped     | 2 HOURS       |                                                                         |  |
| Time Logger on Bottom        |               |                                                                         |  |
| Maximum Recorded Temperature | 112F          |                                                                         |  |
| Equipment Number             | 680           |                                                                         |  |
| Location                     | HAYS, KS.     |                                                                         |  |
| Recorded By                  | JEFF GRONEMEG |                                                                         |  |
| Witnessed By                 | MARC DOWNING  |                                                                         |  |

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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.

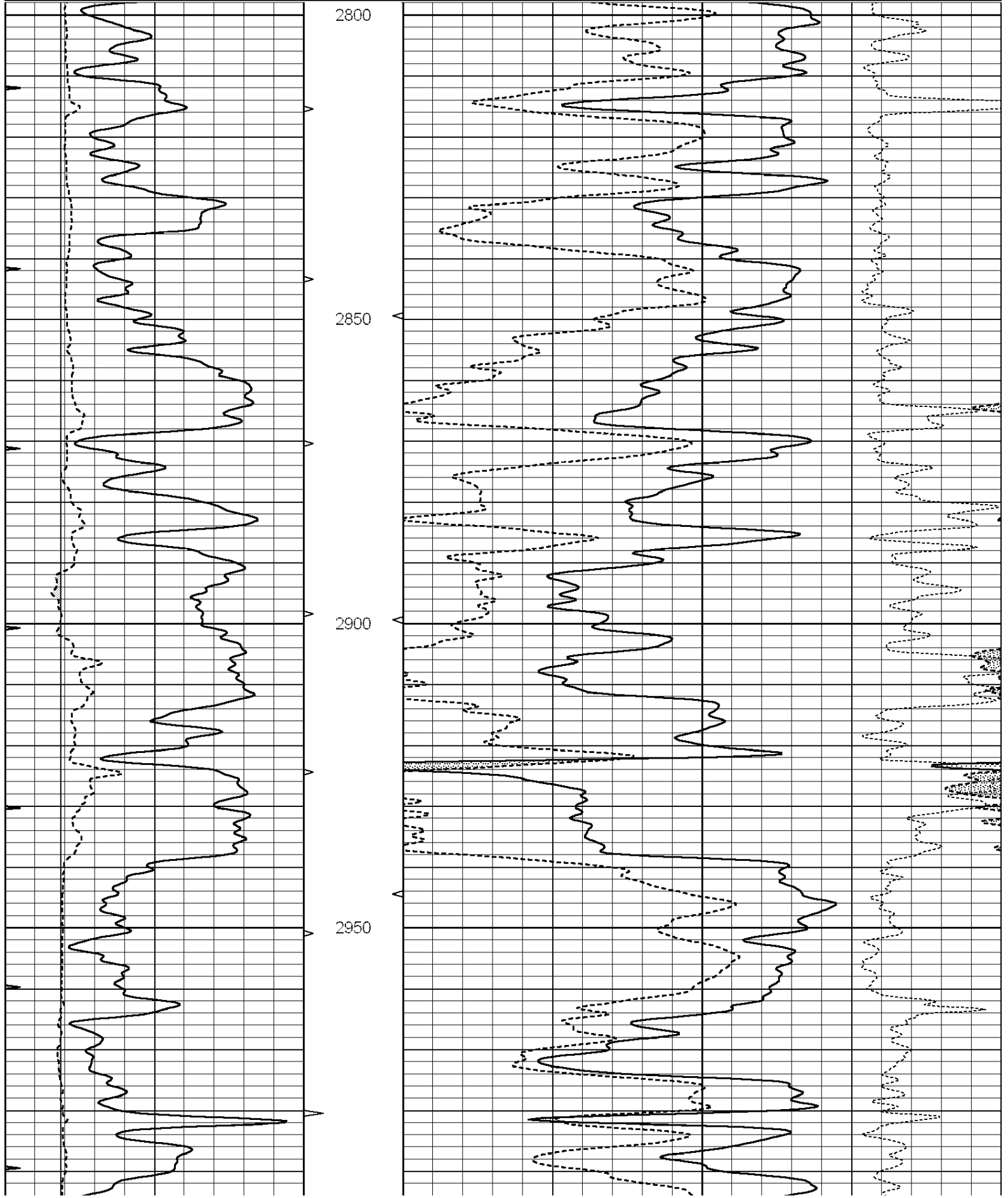
### Comments

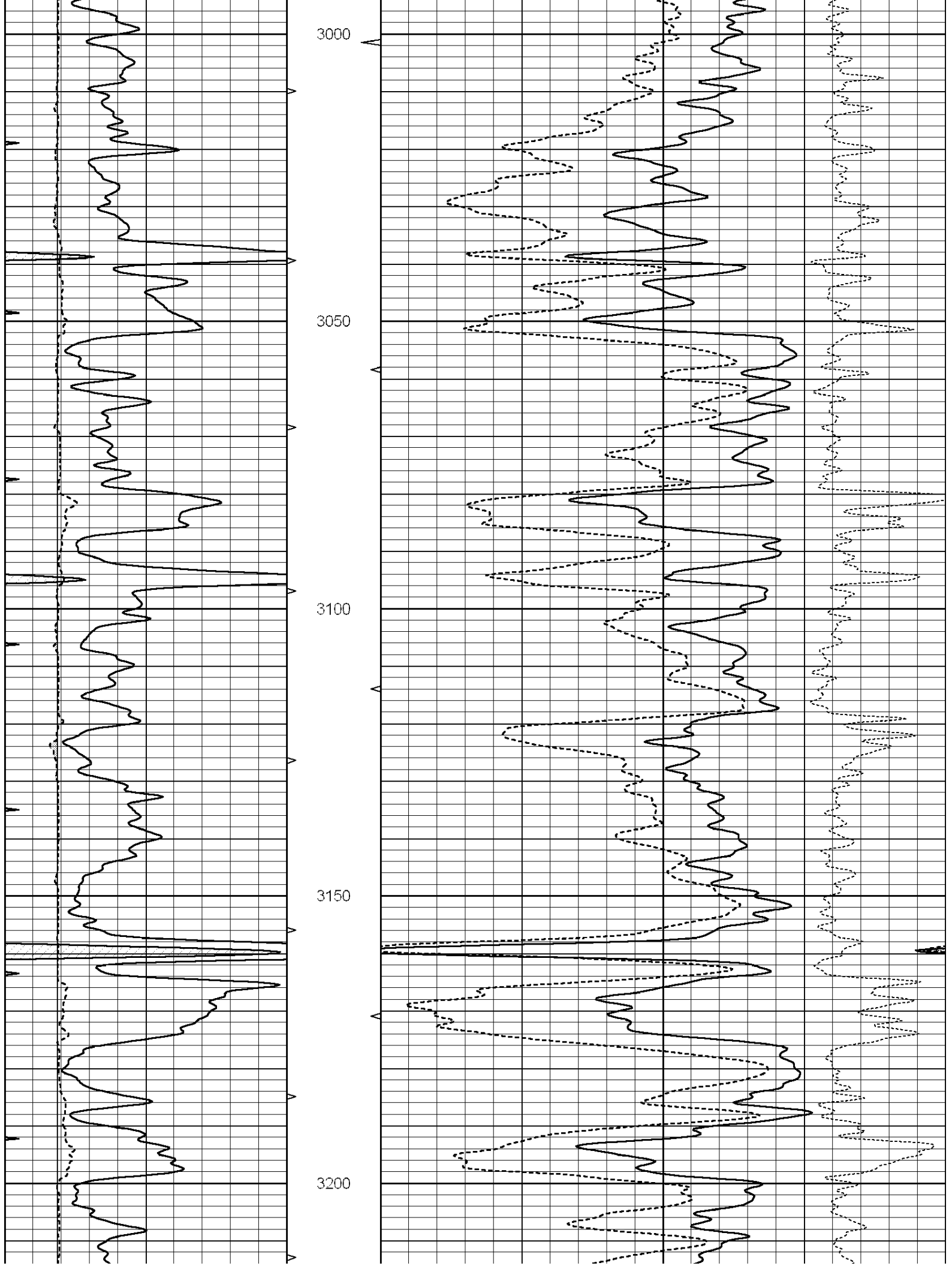
THANK YOU FOR USING NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

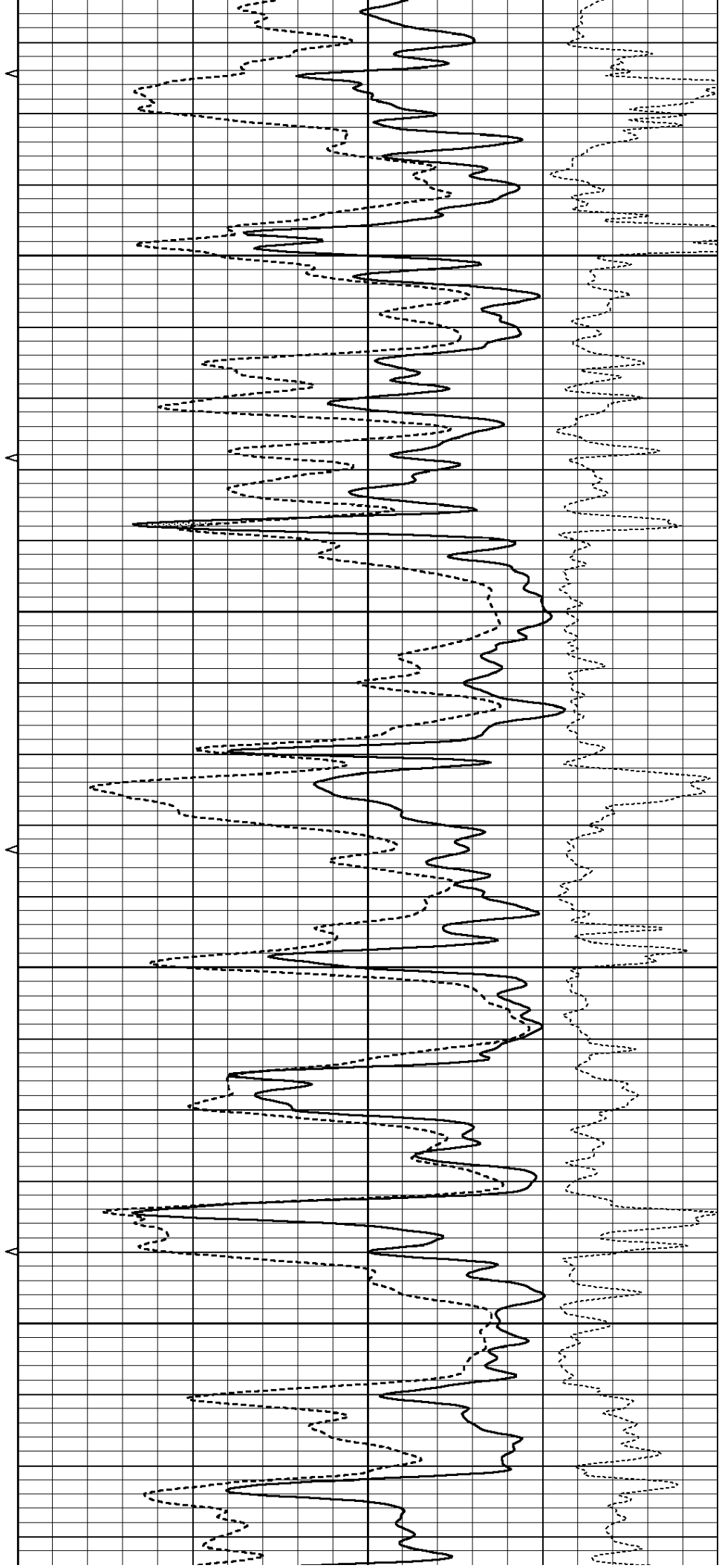
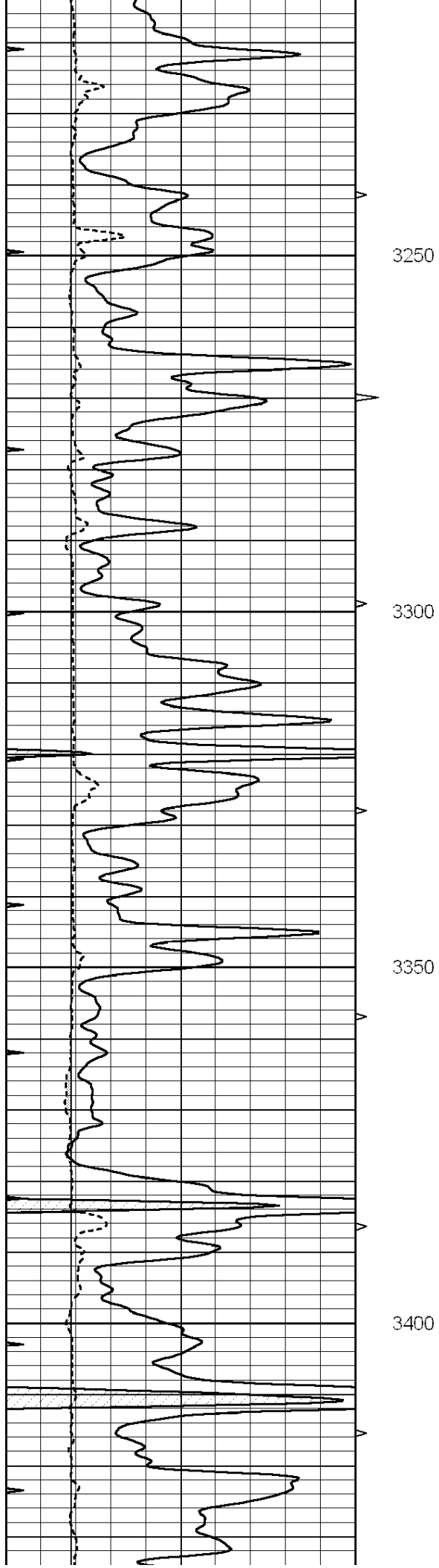
### DIRECTIONS:

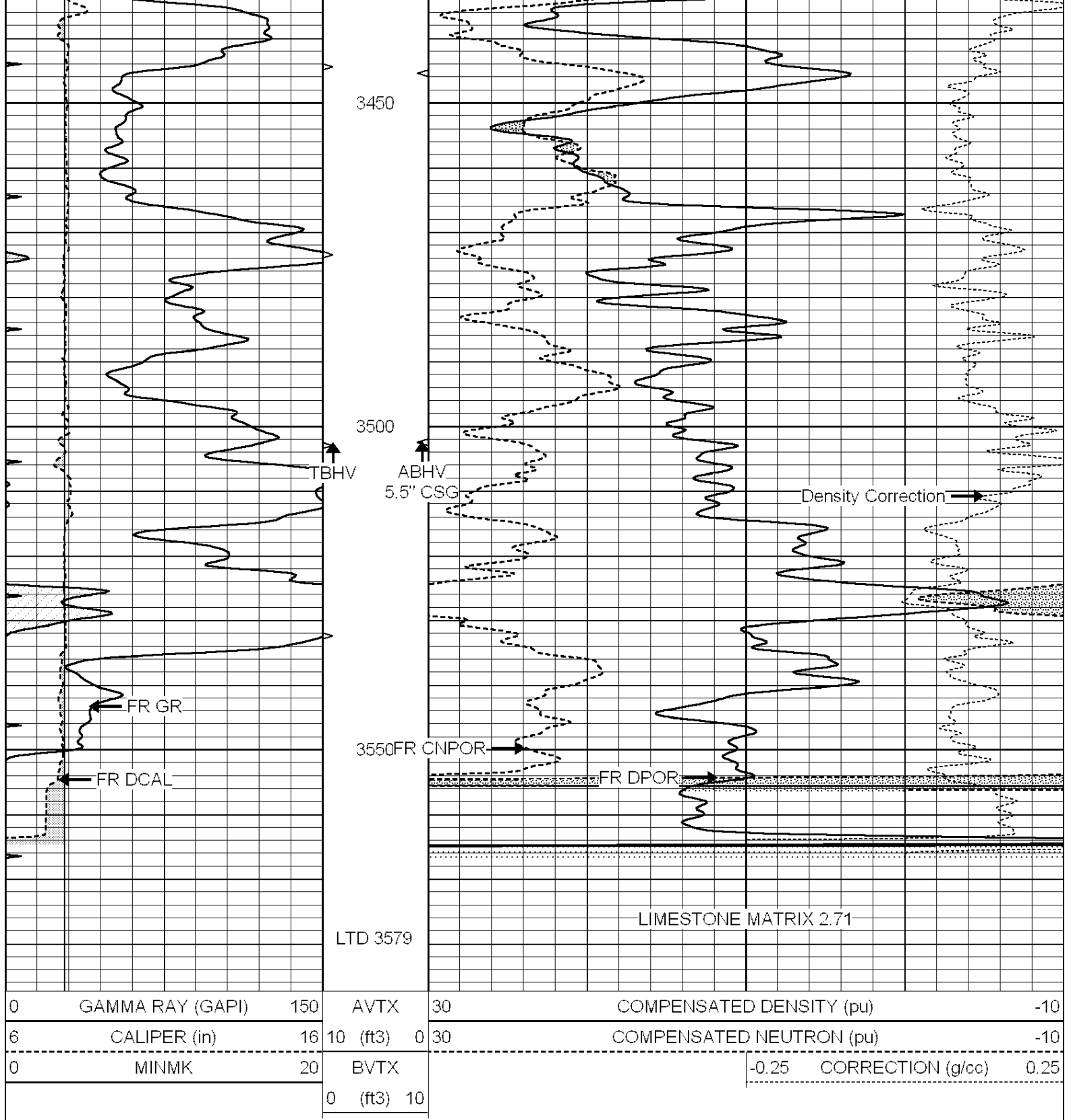
HAYS, KS - NORTH TO SALINE RIVER RD - 1 1/2 MILES WEST TO RD 240  
2.8 MILES NORTH AND WEST - WEST 3/4 MILE INTO AT PB RANCH SIGN

|             |                  |                             |            |                              |                          |     |
|-------------|------------------|-----------------------------|------------|------------------------------|--------------------------|-----|
| Charted by: |                  | Depth in Feet scaled 1:2.15 |            |                              |                          |     |
| 0           | GAMMA RAY (GAPI) | 150                         | AVTX       | 30                           | COMPENSATED DENSITY (pu) | -10 |
| 6           | CALIPER (in)     | 16                          | 10 (ft3) 0 | 30                           | COMPENSATED NEUTRON (pu) | -10 |
| 0           | MINMK            | 20                          | BVTX       | -0.25 CORRECTION (g/cc) 0.25 |                          |     |
|             |                  |                             | 0 (ft3) 10 |                              |                          |     |







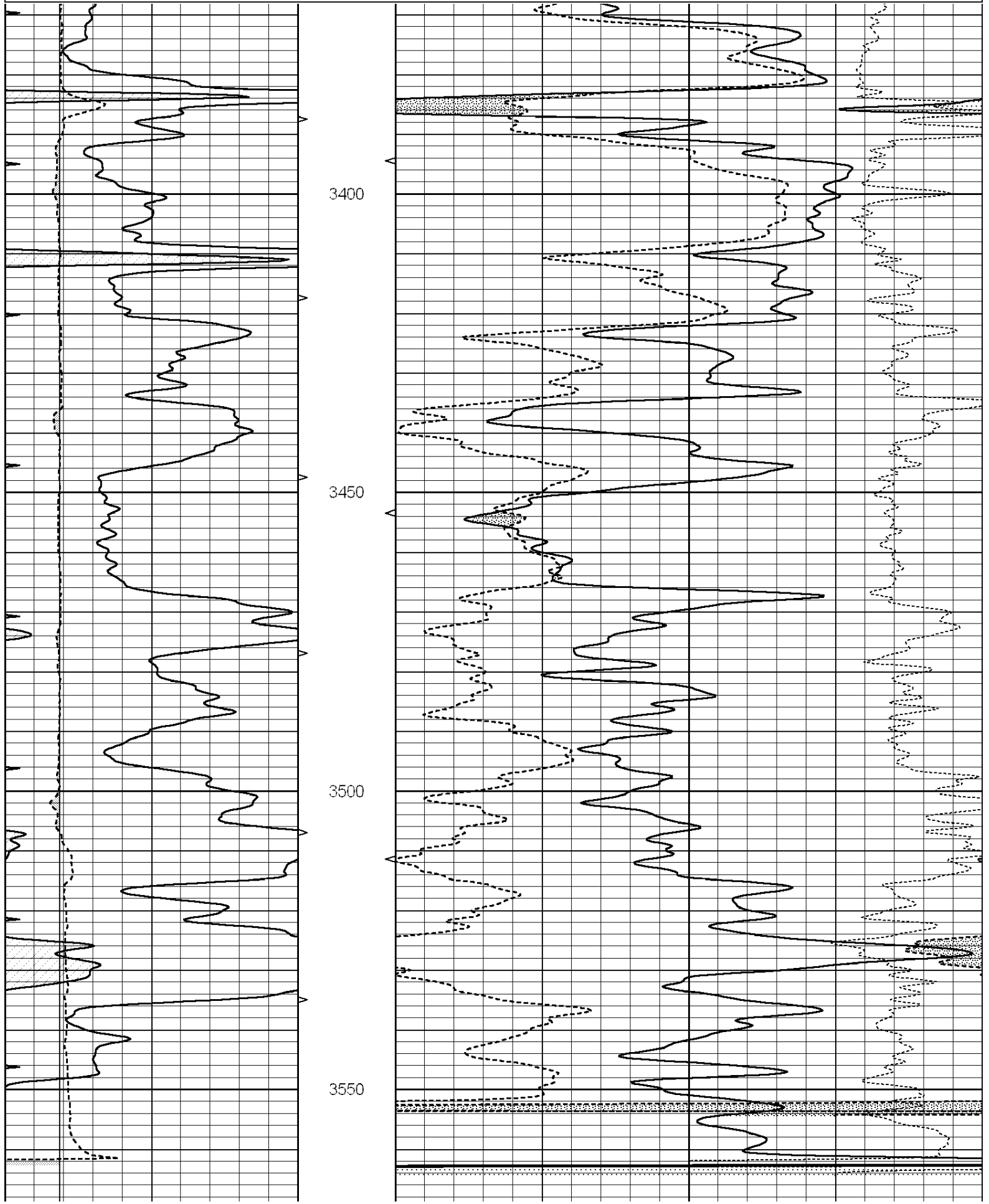


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# REPEAT SECTION

Database File: 061013ddn.db  
 Dataset Pathname: pass2.4  
 Presentation Format: \_den\_neu  
 Dataset Creation: Mon Jun 10 04:10:32 2013 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

|   |                  |     |          |       |                          |                          |      |     |
|---|------------------|-----|----------|-------|--------------------------|--------------------------|------|-----|
| 0 | GAMMA RAY (GAPI) | 150 | AVTX     | 30    | COMPENSATED DENSITY (pu) |                          | -10  |     |
| 6 | CALIPER (in)     | 16  | 10 (ft3) | 0     | 30                       | COMPENSATED NEUTRON (pu) |      | -10 |
|   |                  |     |          | ----- |                          |                          |      |     |
| 0 | MINMK            | 20  | BVTX     |       | -0.25                    | CORRECTION (g/cc)        | 0.25 |     |
|   |                  |     | 0 (ft3)  | 10    | -----                    |                          |      |     |
|   |                  |     |          |       |                          |                          |      |     |



|                    |         |              |               |
|--------------------|---------|--------------|---------------|
| Master Calibration |         |              |               |
|                    | Density | Far Detector | Near Detector |

|                     |                |      |                             |                     |                      |     |
|---------------------|----------------|------|-----------------------------|---------------------|----------------------|-----|
|                     | <u>Density</u> |      |                             | <u>Far Detector</u> | <u>Near Detector</u> |     |
| Magnesium           | 1.710          | g/cc |                             | 1015.91             | 497.51               | cps |
| Aluminum            | 2.600          | g/cc |                             | 227.67              | 350.20               | cps |
| Spine Angle = 76.79 |                |      | Density/Spine Ratio = 0.579 |                     |                      |     |
|                     | <u>Size</u>    |      |                             | <u>Reading</u>      |                      |     |
| Small Ring          | 8.00           | in   |                             | 3.21                | V                    |     |
| Large Ring          | 14.00          | in   |                             | 5.46                | V                    |     |

Compensated Neutron Calibration Report

|                |    |
|----------------|----|
| Serial Number: | 6I |
| Tool Model:    | G  |

|             |          |     |        |     |               |  |
|-------------|----------|-----|--------|-----|---------------|--|
| CALIBRATION |          |     |        |     |               |  |
| Detector    | Readings |     | Target |     | Normalization |  |
| Short Space | 1.00     | cps | 1.00   | cps | 1.0000        |  |
| Long Space  | 1.00     | cps | 1.00   | cps | 1.0000        |  |

Gamma Ray Calibration Report

|                     |                          |          |
|---------------------|--------------------------|----------|
| Serial Number:      | #8                       |          |
| Tool Model:         | OPEN                     |          |
| Performed:          | Mon Jun 13 16:56:43 2011 |          |
| Calibrator Value:   | 150.0                    | GAPI     |
| Background Reading: | 0.0                      | cps      |
| Calibrator Reading: | 175.0                    | cps      |
| Sensitivity:        | 0.8371                   | GAPI/cps |