



**Weatherford**

**CEMENT BOND LOG**

COMPANY TAOS RESOURCES OPERATING COMPANY, LLC  
WELL BROTHERS DAIRY 1-36

FIELD BURDEN  
PROVINCE/COUNTY COWLEY

COUNTRY/STATE USA/KANSAS  
LOCATION 330' FSL & 330' FEL OF C SE SE SE

SEC TWP RGE Other Services

Latitude  
Longitude  
API Number 15-035-24542

Permanent Datum G. L., Elevation 1365 feet  
Log Measured From KB  
Drilling Measured From KELLY BUSHING

Elevations:  
KB 1374.00  
DF 1372.00  
GL 1365.00

Date 03-FEB-2014

**PERFORATION RECORD**

Run Number	TWO	Shot Density	Number of Shots	Depth From feet	Depth To feet
Service Order	78575990				
Type Log	CBL				
Depth Driller	3606.00				
Depth Logger	3552.00				
Top Log Interval	2020.00				
Bottom Log Interval	3552.00				
Hole Fluid Type	WBM				
Hole Fluid Level	0.00				
Restriction ID	4.960	inches			
Max Recorded Temp		Gun Type			
Well Head Pressure		Gun Size			
Well Head Equipment		CASING / TUBING RECORD			
Time Well Ready	1100	Size inches	Weight pounds/ft	Depth From feet	Depth To feet
Time Logger Bottom	1130	5.500	17.00	0.00	3600.00
SHORT JOINT	2917-2942				
Unit	14193				
Equipment Name	WSS-E				
Base	OKC				
Recorded By	L.KRAUTLARGER				
Witnessed By	MR. GARY HAEFELE				

**REMARKS**

CORRELATED TO WEATHERFORD COMPOSTIE DENSITY NEUTRON LOG DATED 24-NOV-2013  
DID NOT MAKE GAUGE RING RUN PRIOR TO LOGGING

**BOREHOLE RECORD**

Last Edited: 03-FEB-2014 12:09

Bit Size inches	Depth From feet	Depth To feet
7.875	262.00	3606.00

**CASING / TUBING RECORD**

Type	Grade	TypeJoint	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
CASING			5.500	0.00	3600.00	17.00

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.



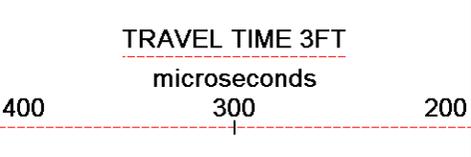
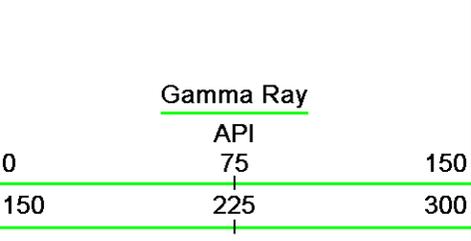
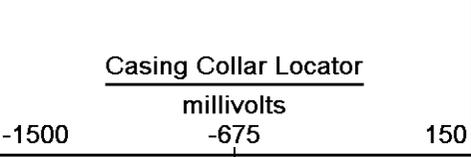
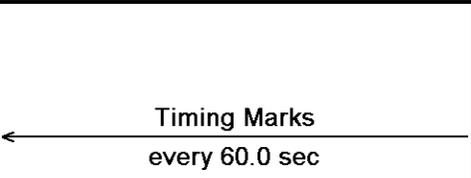
Depth Based Data - Maximum Sampling Increment 2.5cm

Plotted on 03-FEB-2014 12:15

Filename: C:\TAOSFEB14\MAINPASS.dta

Recorded on 03-FEB-2014 11:25

System Versions: Logged with 13.08.2005 Plotted with 13.08.2005



Depth  
in  
Feet

TENS

Replay  
Scale  
1:240

2000

2050

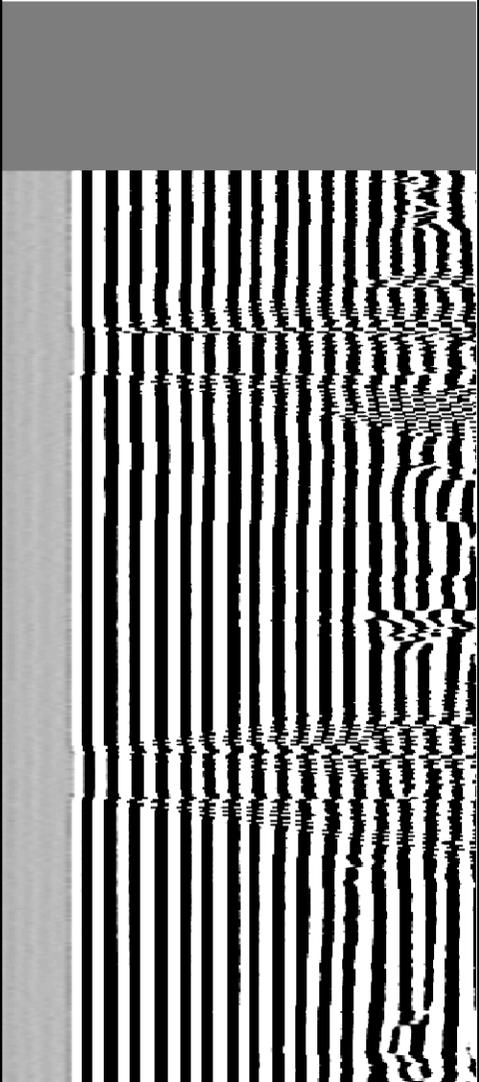
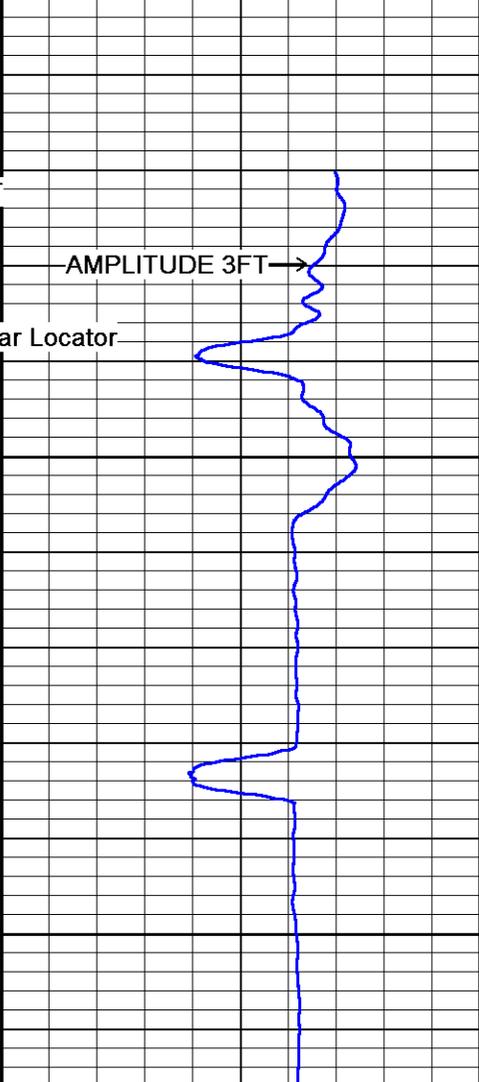
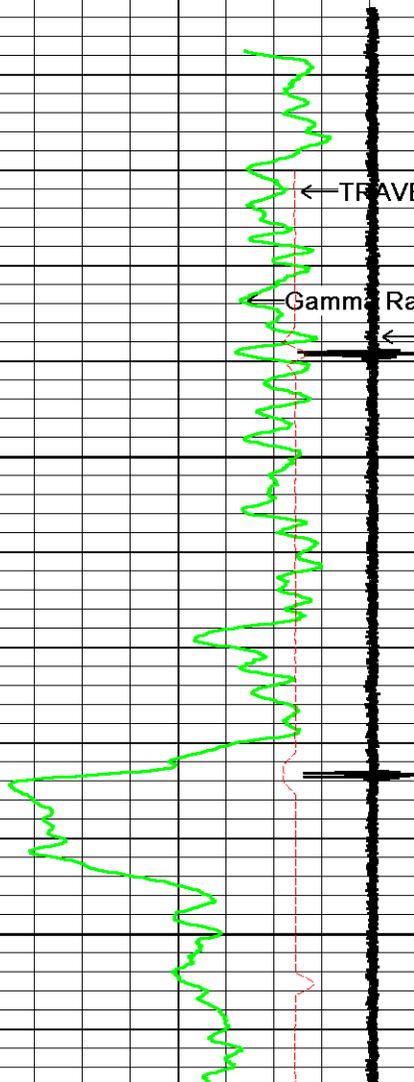
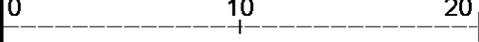
2100

AMPLITUDE 3FT  
millivolts

VARIABLE DENSITY 5FT  
microseconds

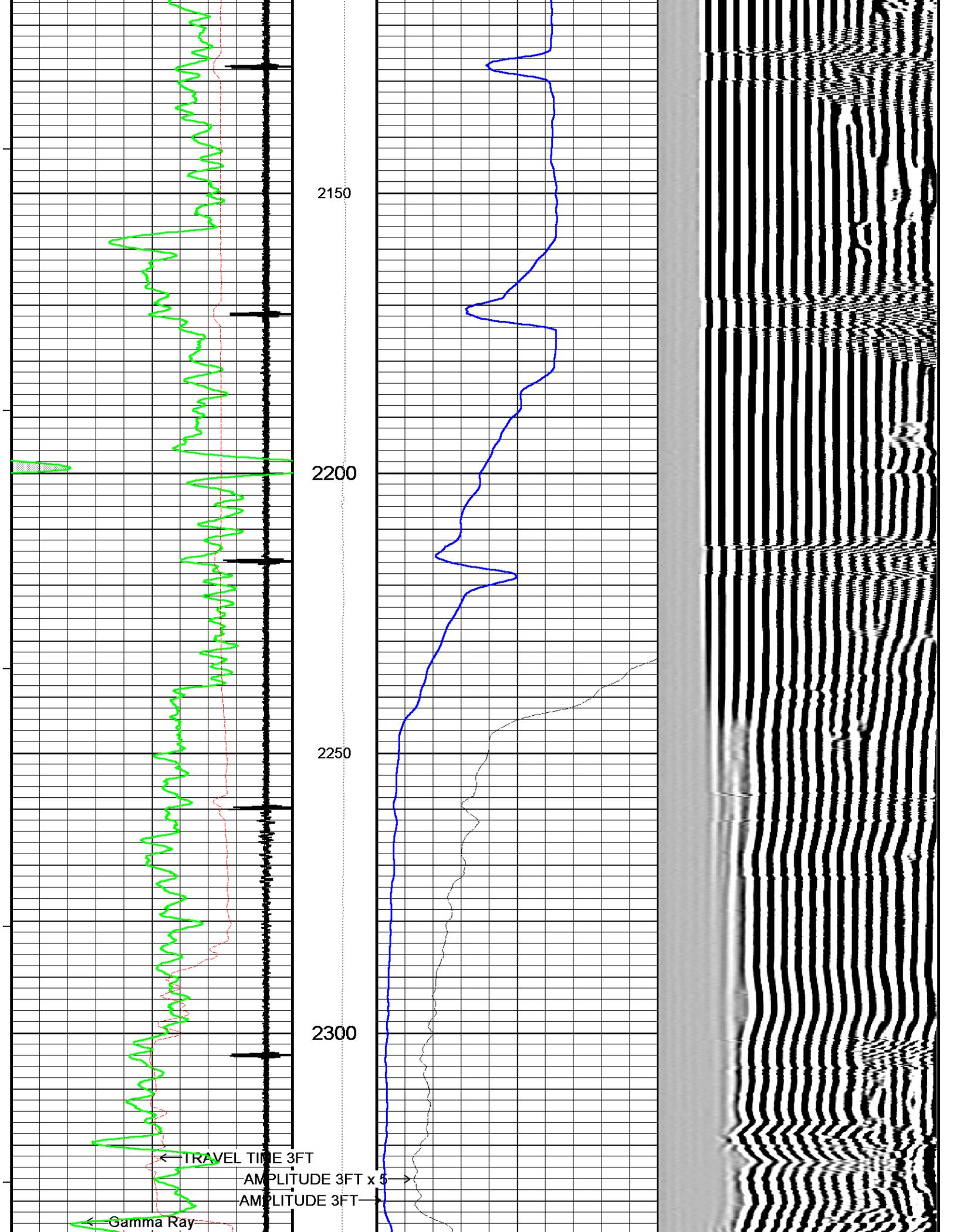


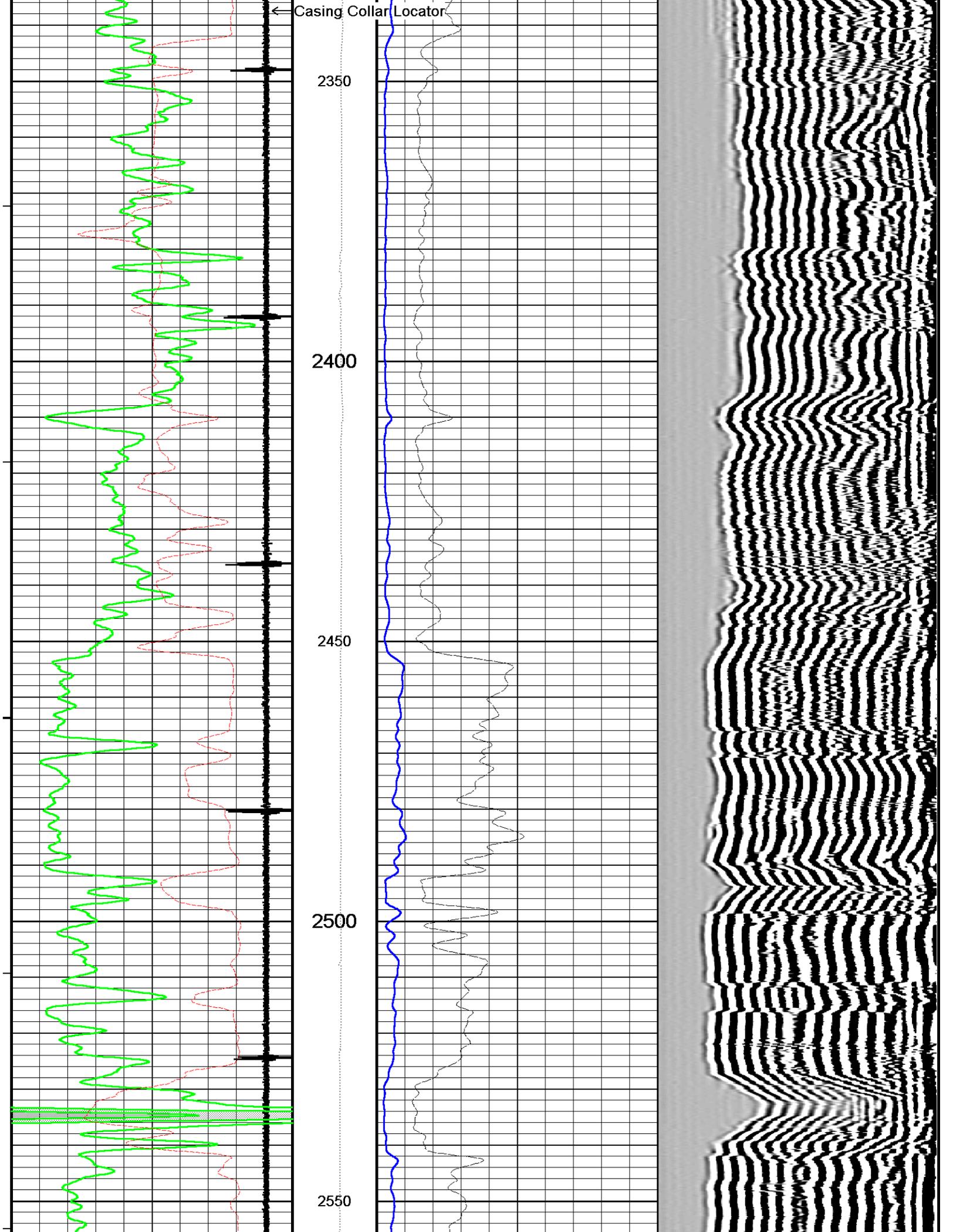
AMPLITUDE 3FT x 5  
millivolts

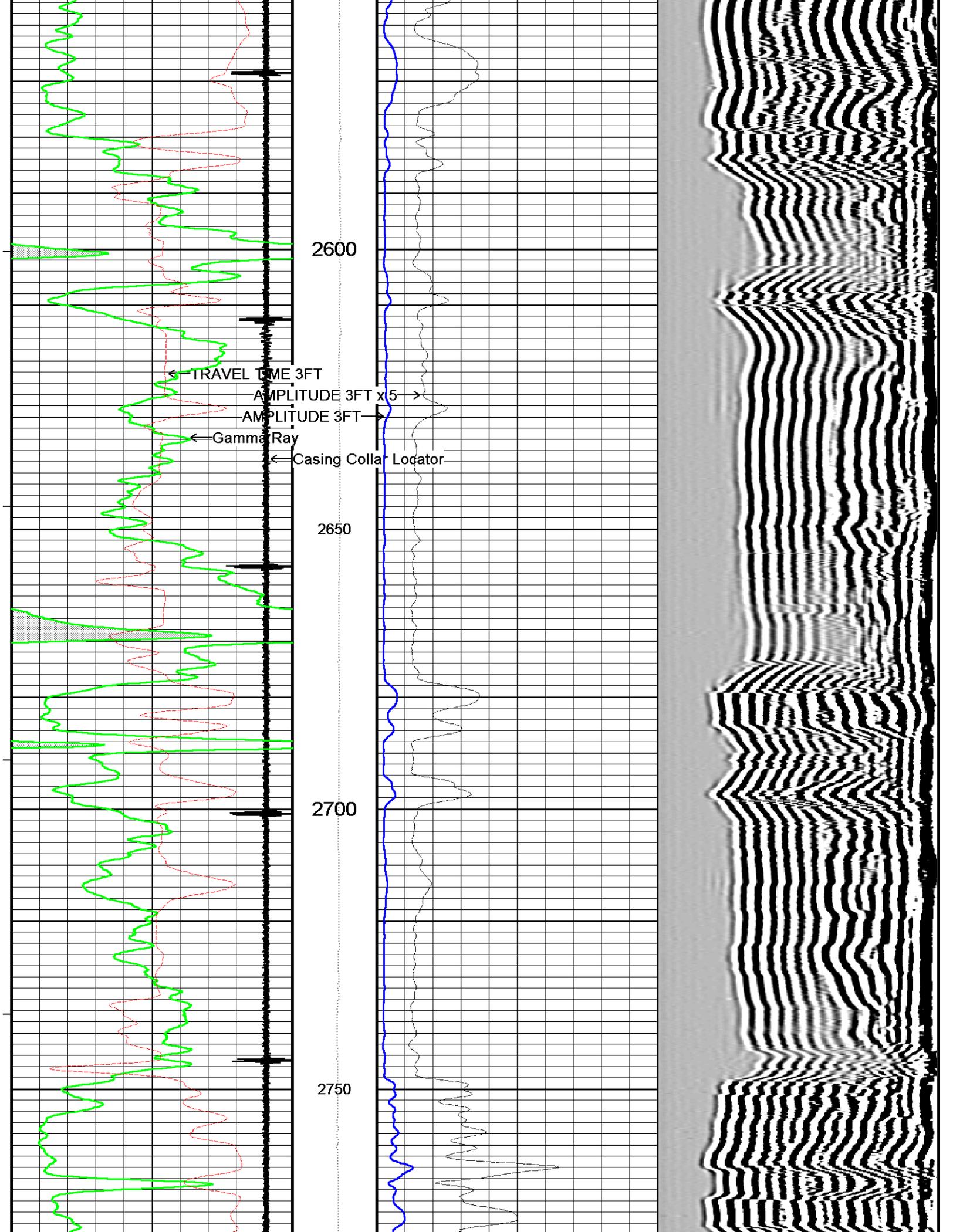


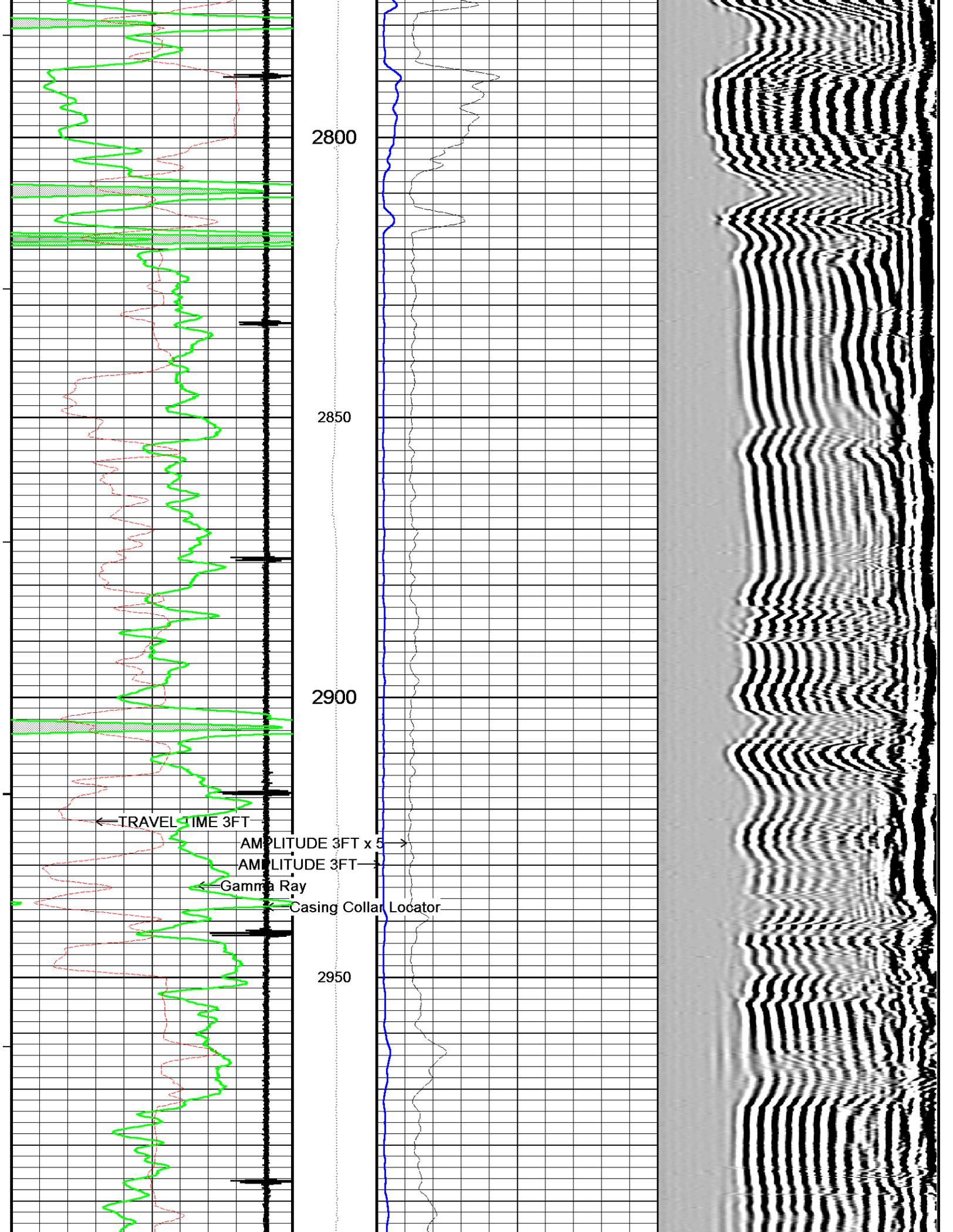
← TRAVEL TIME 3FT  
← Gamma Ray  
← Casing Collar Locator

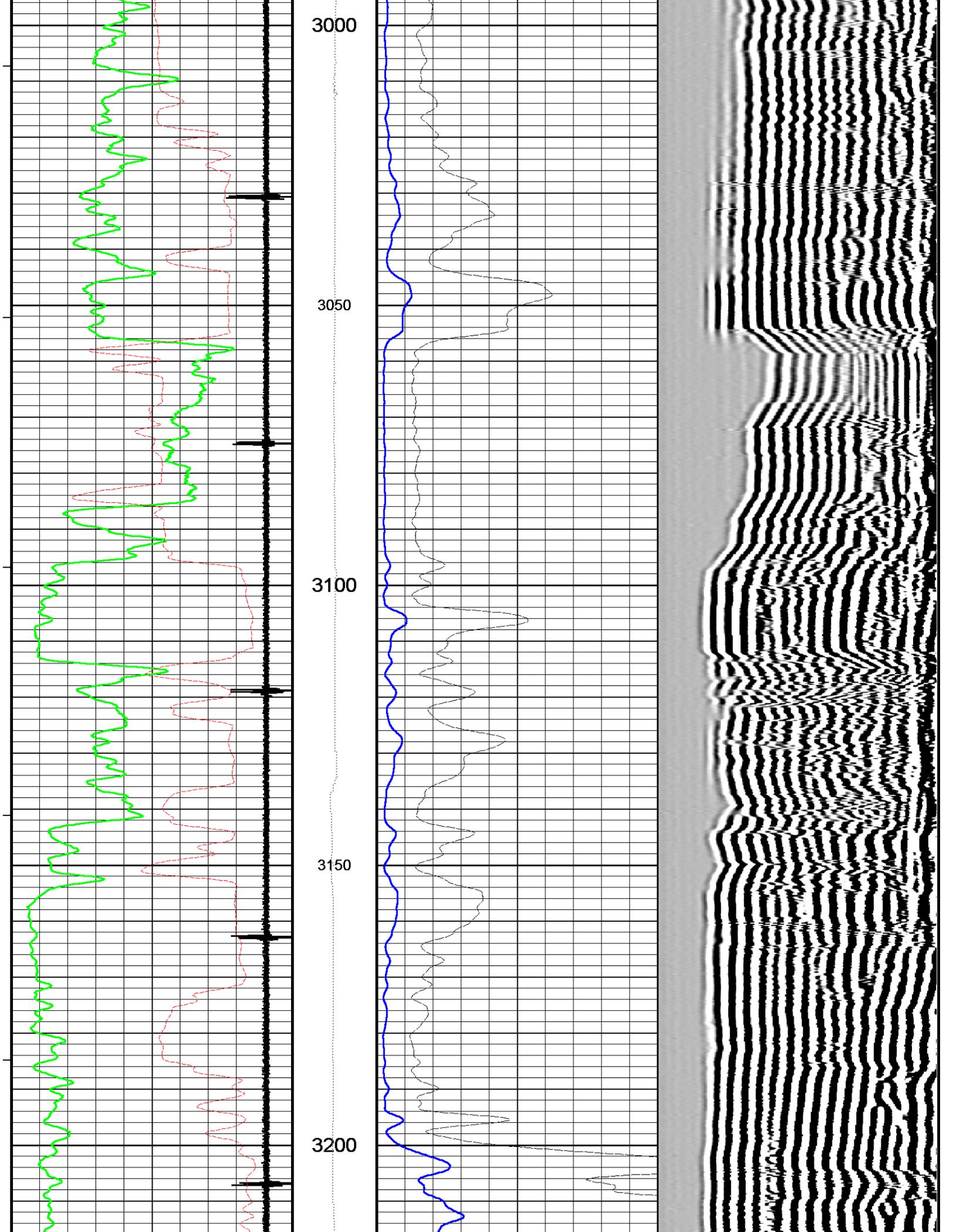
→ AMPLITUDE 3FT

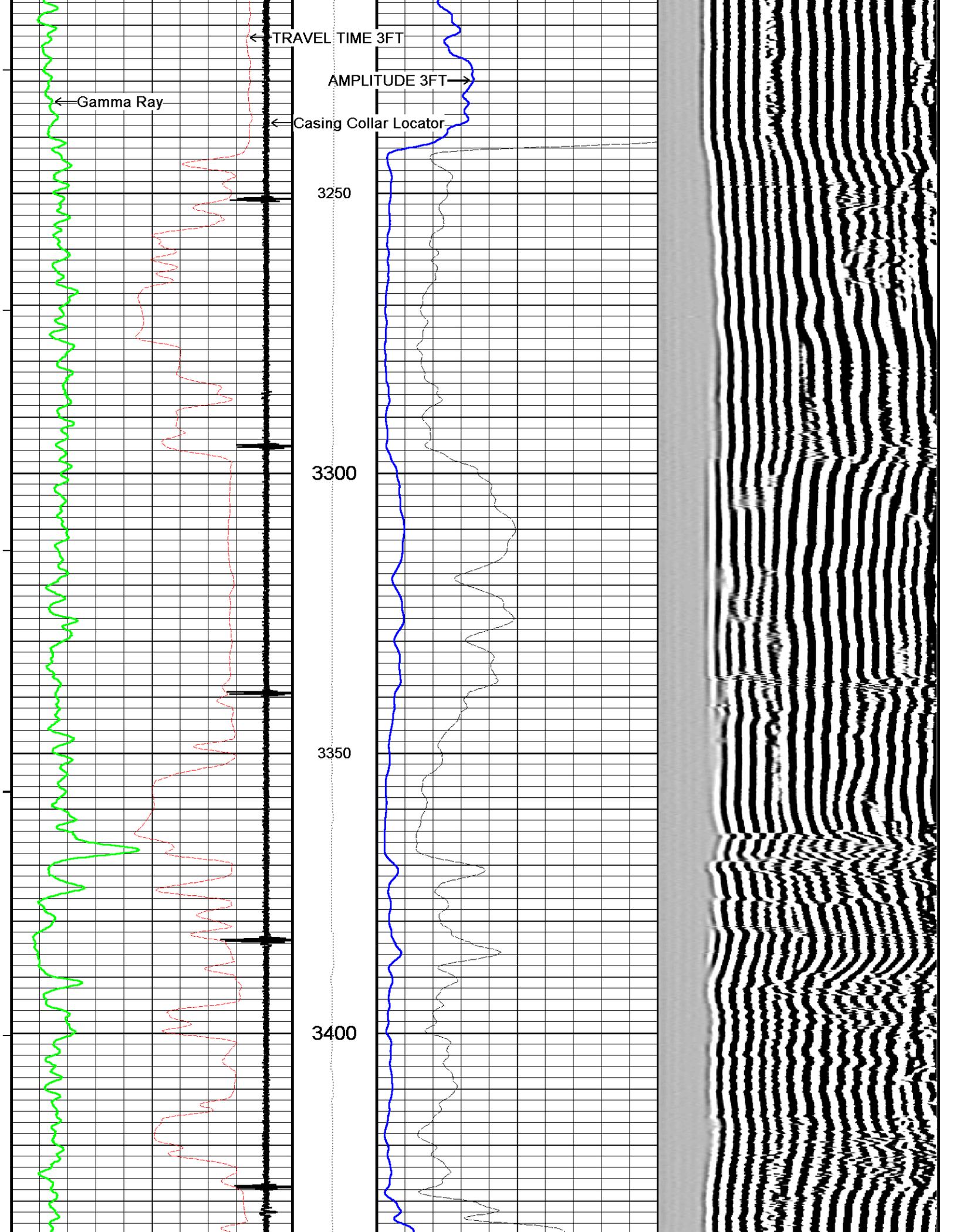


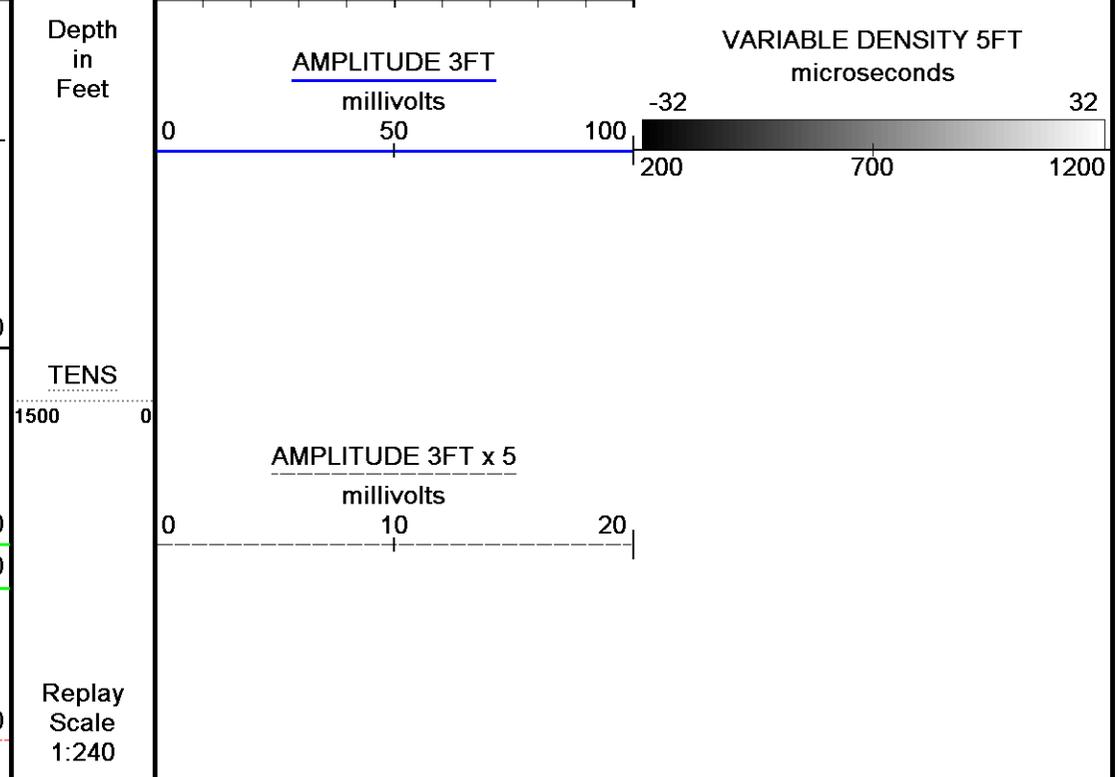
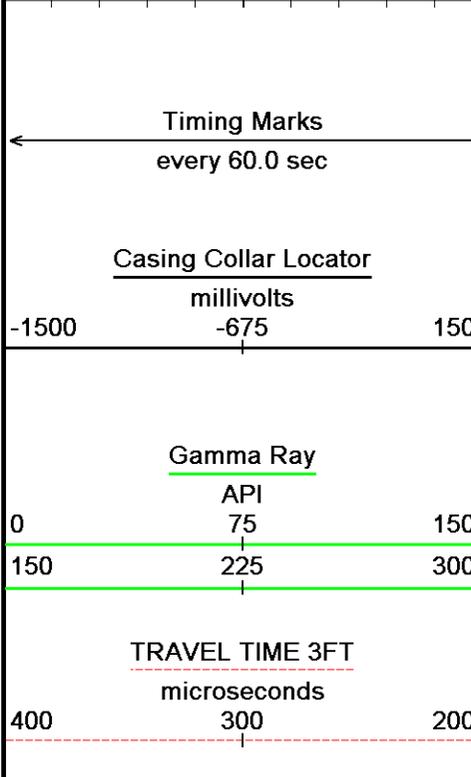
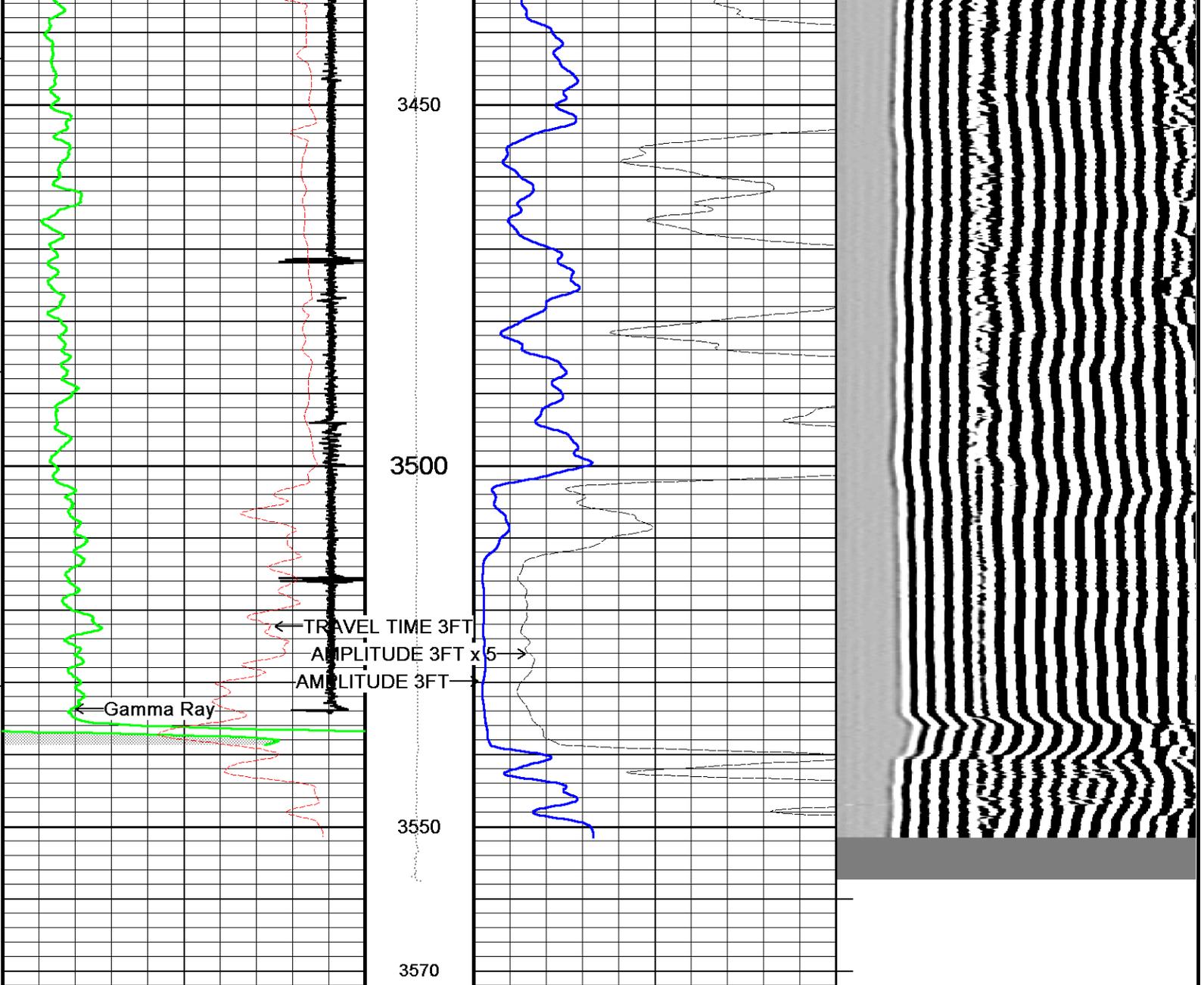


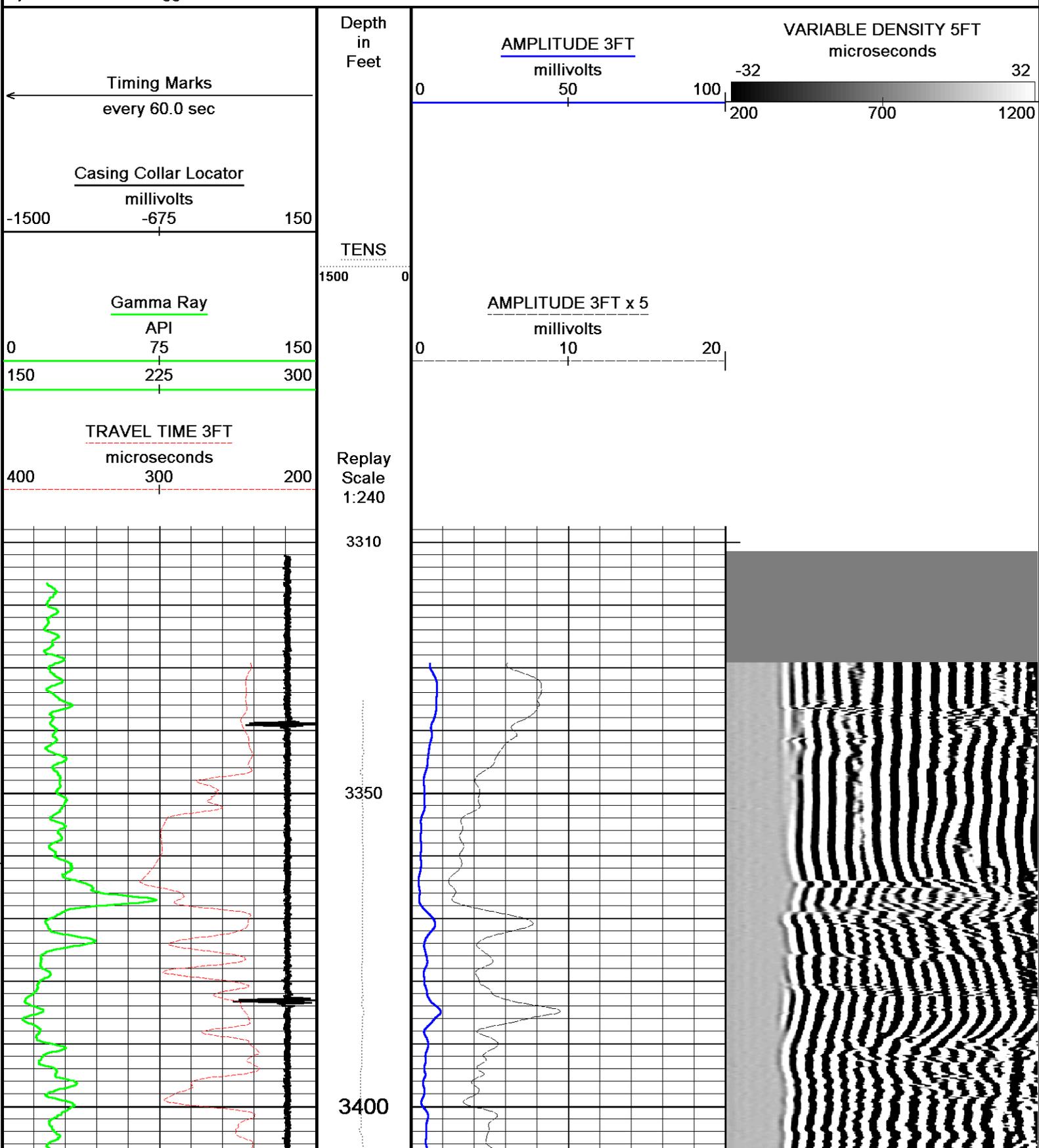


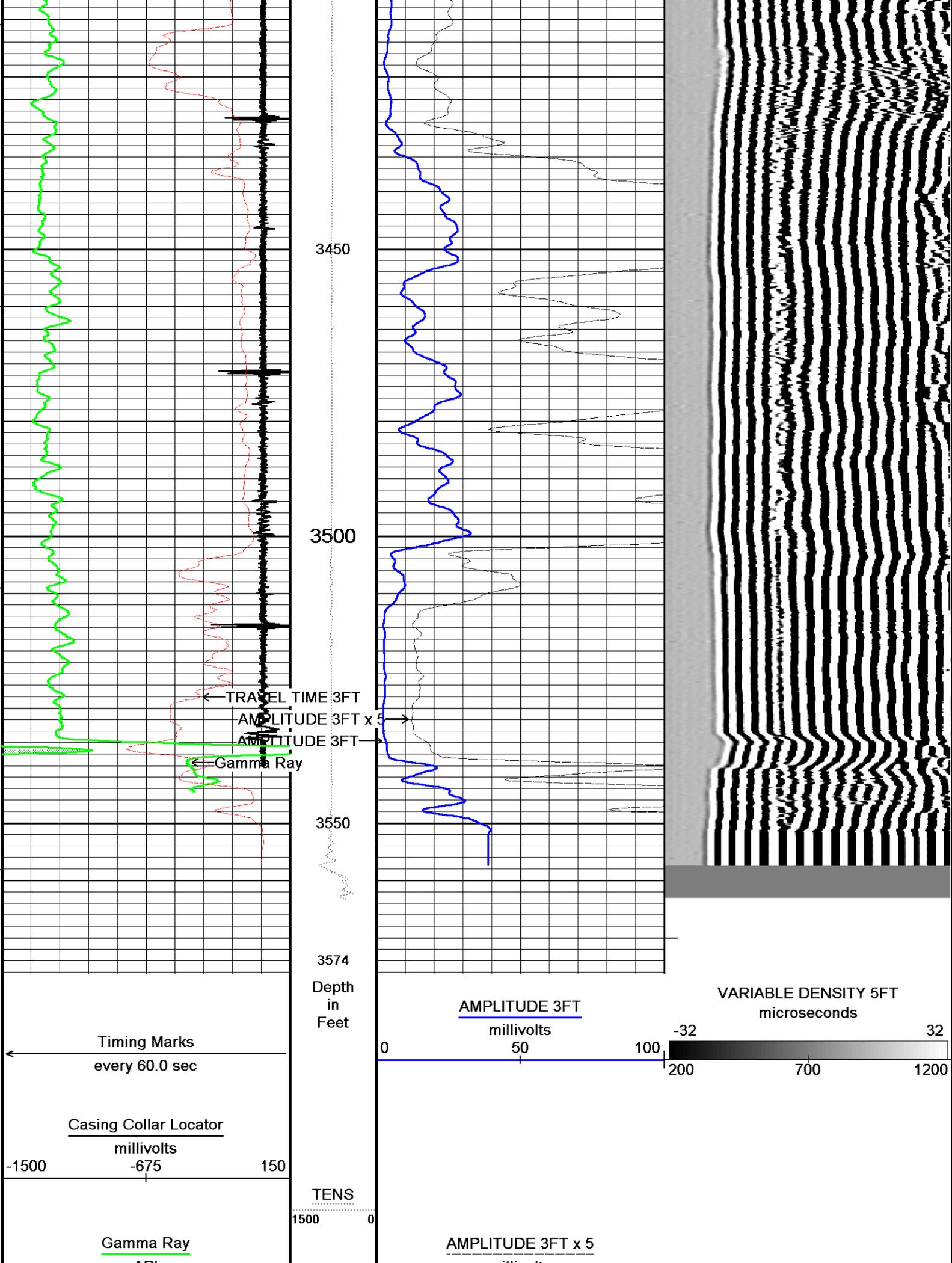












3450

3500

3550

3574

Depth  
in  
Feet

← TRAVEL TIME 3FT  
 AMPLITUDE 3FT x 5 →  
 AMPLITUDE 3FT →  
 ← Gamma Ray

AMPLITUDE 3FT  
 millivolts

VARIABLE DENSITY 5FT  
 microseconds

Timing Marks  
 every 60.0 sec

Casing Collar Locator  
 millivolts

-1500      -675      150

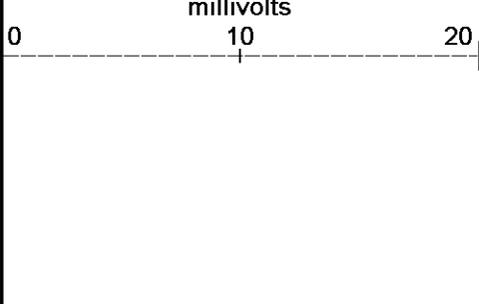
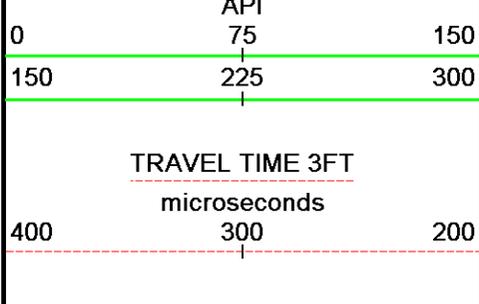
TENS

1500      0

Gamma Ray

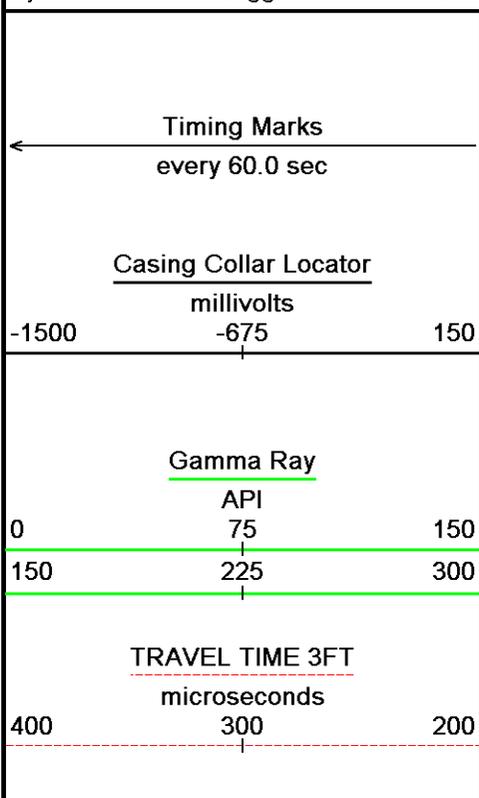
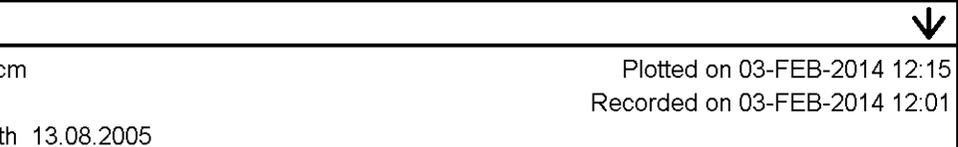
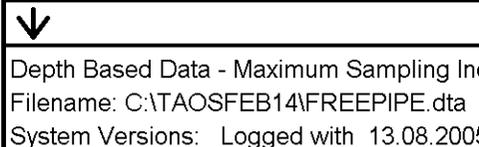
AMPLITUDE 3FT x 5

0      50      100      -32      32  
 200      700      1200



Replay  
Scale  
1:240

Depth Based Data - Maximum Sampling Increment 2.5cm  
 Filename: C:\TAOSFEB14\REPEATPASS.dta  
 System Versions: Logged with 13.08.2005 Plotted with 13.08.2005  
 Plotted on 03-FEB-2014 12:15  
 Recorded on 03-FEB-2014 11:17

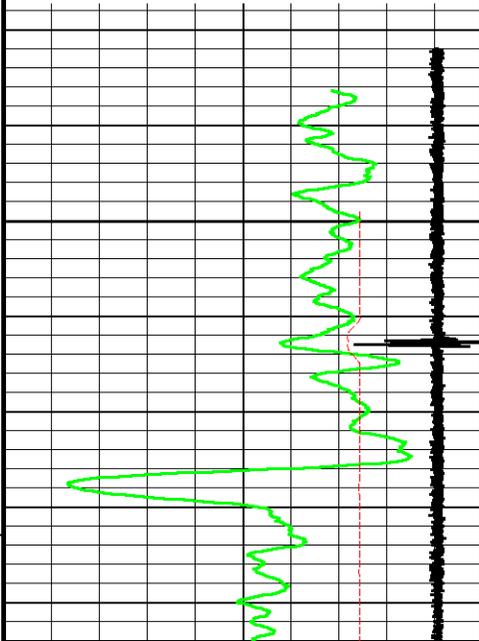
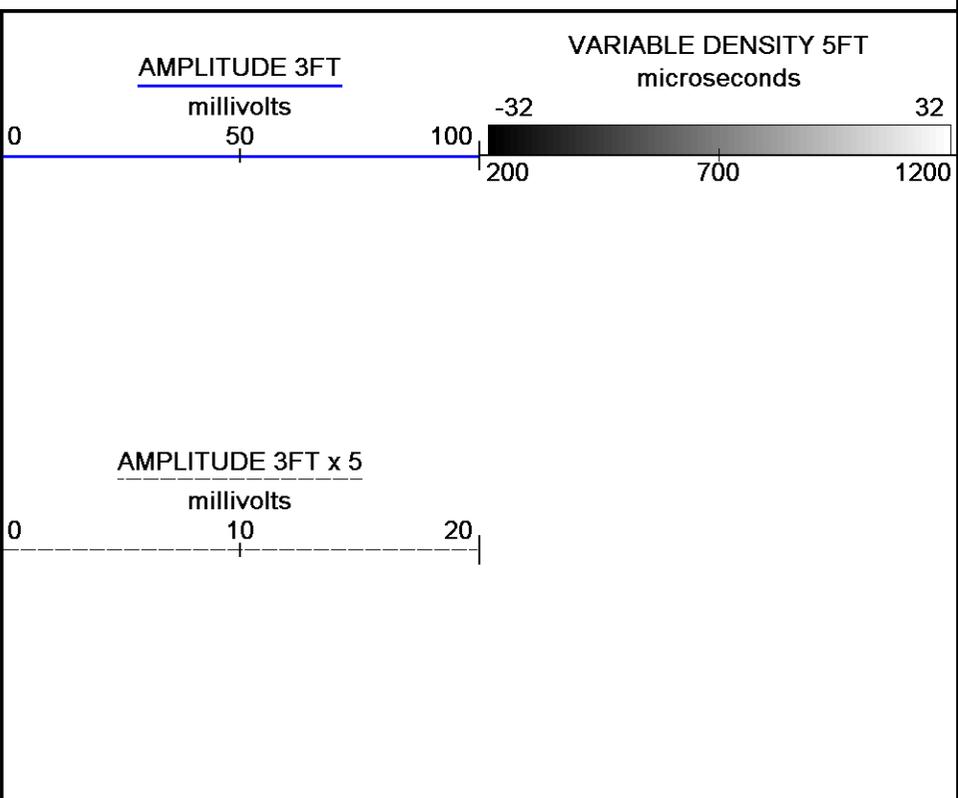


Depth  
in  
Feet

TENS

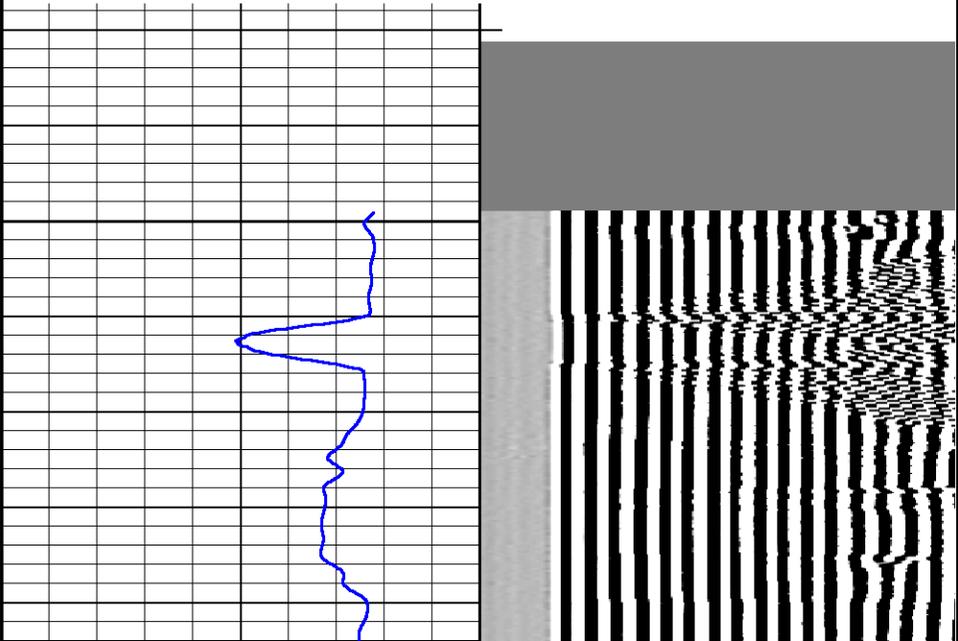
1500 0

Replay  
Scale  
1:240



1830

1850







### DOWNHOLE EQUIPMENT

C:\TAOSFEB14\MAINPASS.dta

Mono-Cablehead  
MCH-AA 0 LG: 1.02 ft WT: 2.2 lb OD: 1.417 in

2.75" CCL/Telemetry Sub  
CTB-AB 308 LG: 3.40 ft WT: 39.7 lb OD: 2.756 in

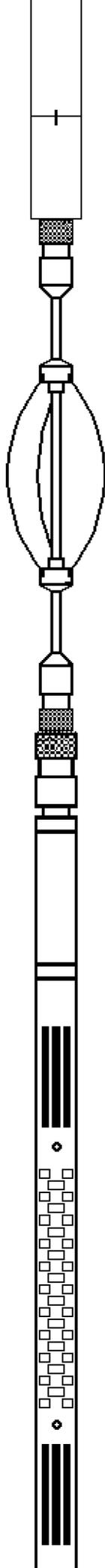
2.75" Gamma Ray Tool  
GRB-AB 181 LG: 4.71 ft WT: 59.5 lb OD: 2.756 in



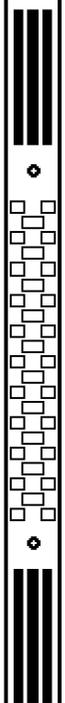
23.23 ft CCL - Collar Locator

19.64 ft GR - Gamma Ray

2.75in SBT Middle  
CEN-BA 141 LG: 3.08 ft WT: 22.0 lb OD: 2.717 in



Sector Bond Tool  
SBT-AA 328 LG: 10.32 ft WT: 90.4 lb OD: 2.717 in





UGR Field Survey Cal GRB-AB 181

Field Calibration on 00-JAN-1988 00:00

Gamma Ray Field Survey Calibration

Tool Type: GRB-AB Serial No: 181  
 Calibrator No:

Background	Calibrator	Standard	Units
0.0	400.0	200.0	CPS

Delta Counts Per Sec: 400.0 CPS/API = 2.000

SBT Field Calibration SBT-AA 328

Field Calibration on 03-FEB-2014 10:59

Sector Bond Field Calibration

Tool Type SBT-AA Serial No 328

Sensor	Description	Standard	Measured
AMP 3FT	100% Bond	2.40	1.10
	Free Pipe	72.00	367.20
AMP 5FT	100% Bond	1.60	0.60
	Free Pipe	48.00	914.30
1 SECTOR AMP	100% Bond	5.00	7.90
	Free Pipe	95.00	79.70
2 SECTOR AMP	100% Bond	5.00	6.80
	Free Pipe	95.00	81.70
3 SECTOR AMP	100% Bond	5.00	7.70
	Free Pipe	95.00	65.50
4 SECTOR AMP	100% Bond	5.00	7.80
	Free Pipe	95.00	74.60
5 SECTOR AMP	100% Bond	5.00	8.00
	Free Pipe	95.00	69.00
6 SECTOR AMP	100% Bond	5.00	8.00
	Free Pipe	95.00	85.00
7 SECTOR AMP	100% Bond	5.00	7.90
	Free Pipe	95.00	83.10
8 SECTOR AMP	100% Bond	5.00	6.80
	Free Pipe	95.00	97.80

SBT Constants SBT-AA 328

Last Edited on 00-JAN-1988 00:00

Min Ampl 100% Bond	1.00 mv
Max Ampl 0% Bond	72.00 mv
Casing Size	5.50 IN
Casing Weight	15.5 LB/F
3' IT Correction	-999.3 US

DT Fluid	200.0	US/F
Fast Formation TT	38.5	US/F
Cement Cmpr Strength	580	PSI
Casing Velocity	57.00	US/F
Maximum Attenuation	12.00	DB/F

SMS Constants SMS-A 0

Last Edited on 00-JAN-1988 00:00

Cement Weight 15.50 LB/G

COMPANY	TAOS RESOURCES OPERATING COMPANY, LLC
WELL	BROTHERS DAIRY 1-36
FIELD	BURDEN
PROVINCE/COUNTY	COWLEY
COUNTRY/STATE	USA/KANSAS

Elevation Kelly Bushing	1374.00	feet	Bottom Log Interval	3552.00	feet
Elevation Drill Floor	1372.00	feet	Depth Driller	3606.00	feet
Elevation Ground Level	1365.00	feet	Depth Logger	3552.00	feet



**Weatherford**<sup>®</sup>

CEMENT BOND LOG