



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

October 13, 2014



Village of Manteno
Attn: Ms. Janice Schulteis
98 East Third Street
Manteno, Illinois 60950

Dear Ms. Schulteis:

The Illinois Department of Natural Resources installed a blasting seismograph on property located at 1203 Whitetail Drive, Manteno, Illinois 60950. Enclosed, please find a copy of the seismographic data obtained at this location. This data includes blasting events occurring at the VCNA Prairie, Inc. – North Central Materials quarry from 07/09/14 through 10/10/14.

The first page(s) of digital information is a summary of all events recorded by the seismograph, including both blasting and non-blasting events. All subsequent pages are copies of the waveform analysis of the recorded events determined to be blast induced vibrations. Analysis of the waveforms indicate **compliance** with the regulatory limits established to prevent damage to protected structures.

Looking at the waveform analysis, four (4) channels of information are displayed. The first channel is the acoustic or airblast waveform. The regulatory airblast limit is 133 decibels (dB). The next three channels are the ground vibrations waveforms, measured in three (3) mutually perpendicular directions (Radial, Vertical and Transverse). The regulatory ground vibration limit is 1.0 inch per second (ips) for all three (3) directions of motion.

If you have any questions concerning this seismograph information, please contact myself at (815) 216-2361 (cell).

Sincerely,

Myron L. McCaskey – Blasting Specialist
Mine Safety and Training Division
Office of Mines and Minerals

Enclosure

cc: M.McCaskey
J.Steiner

Illinois Department of Natural Resources
Office of Mines and Minerals
Mine Safety and Training Division
VCNA Prairie Inc. - North Central Quarry
John Bobera Property *63 Main*

Record Name	Date	Peak (ips)	Acoustic (dB/Mb)	Vertical (ips)	Transverse (ips)	Vector Sum (ips)	Seismic Trigger (ips)	Battery
Number	Time	Hz	Hz	Hz	Hz	Serial Number	Acoustic Trigger dB	Gain
*c:\myron\downloads\m...\82620140709001.dtb 001	7/9/2014 15:58	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5000 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140709002.dtb 002	7/9/2014 15:58	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.5050 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140713003.dtb 003	7/13/2014 03:59	0.4950 0.0	134/1.00 0.0	0.4950 0.0	0.4950 0.0	0.0000 826	0.0800 132	6.9 x2
c:\myron\downloads\m...\82620140715004.dtb 004	7/15/2014 13:02	0.1650 11.0	116/0.12 12.1	0.0700 33.0	0.1050 12.9	0.1750 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140719005.dtb 005	7/19/2014 01:04	0.5000 0.0	134/1.00 0.0	0.4950 0.0	0.4950 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140722006.dtb 006	7/22/2014 13:05	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.4950 0.0	0.0000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620140724007.dtb 007	7/24/2014 11:00	0.1750 9.8	112/0.08 7.2	0.1350 28.4	0.1750 9.8	0.2050 826	0.0800 132	6.9 x2
c:\myron\downloads\m...\82620140727008.dtb 008	7/27/2014 15:49	0.0050 0.0	135/1.10 16.0	0.0050 0.0	0.0050 0.0	0.0050 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140731009.dtb 009	7/31/2014 03:51	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.4950 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140803010.dtb 010	8/3/2014 15:52	0.5050 0.0	134/0.98 0.0	0.4950 0.0	0.4950 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140807011.dtb 011	8/7/2014 03:53	0.5000 0.0	134/1.00 0.0	0.4900 0.0	0.4900 0.0	0.0000 826	0.0800 132	6.9 x2
c:\myron\downloads\m...\82620140808012.dtb 012	8/8/2014 12:02	0.1000 9.3	110/0.06 8.0	0.0400 23.2	0.0800 13.6	0.1000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620140809013.dtb 013	8/9/2014 12:47	0.1050 73.1	114/0.10 204.8	0.0300 68.2	0.1050 73.1	0.1100 826	0.0800 132	6.9 x2
c:\myron\downloads\m...\82620140811014.dtb 014	8/11/2014 11:15	0.1450 14.4	112/0.08 6.0	0.1050 29.2	0.0950 10.5	0.1950 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140814015.dtb 015	8/14/2014 23:16	0.5000 0.0	134/1.00 0.0	0.4950 0.0	0.4900 0.0	0.0000 826	0.0800 132	7.0 x2

* Denotes a calibration event.

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VCNA Prairie Inc. - North Central Quarry
John Bobera Property

Record Name	Date	Peak (ips)	Acoustic (dB/Mb)	Vertical (ips)	Transverse (ips)	Vector Sum (ips)	Seismic Trigger (ips)	Battery
Number	Time	Hz	Hz	Hz	Hz	Serial Number	Acoustic Trigger dB	Gain
*c:\myron\downloads\m...\82620140818016.dtb 016	8/18/2014 11:17	0.5000 0.0	134/0.98 0.0	0.4950 0.0	0.4900 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140821017.dtb 017	8/21/2014 23:18	0.5000 0.0	134/1.00 0.0	0.4950 0.0	0.4900 0.0	0.0000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620140822018.dtb 018	8/22/2014 10:29	0.1150 9.7	116/0.12 5.5	0.0500 33.0	0.1150 9.7	0.1150 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140825019.dtb 019	8/25/2014 22:30	0.5000 0.0	134/0.98 0.0	0.4950 0.0	0.4900 0.0	0.0000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620140827020.dtb 020	8/27/2014 13:55	0.1000 18.6	110/0.06 4.1	0.0950 32.0	0.0950 21.7	0.1250 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140831021.dtb 021	8/31/2014 01:57	0.5050 0.0	134/0.98 0.0	0.4950 0.0	0.4900 0.0	0.0000 826	0.0800 132	6.9 x2
c:\myron\downloads\m...\82620140831022.dtb 022	8/31/2014 14:18	0.0900 85.3	114/0.10 170.6	0.0450 68.2	0.0900 85.3	0.1000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620140831023.dtb 023	8/31/2014 14:20	0.0950 78.7	112/0.08 256.0	0.0950 78.7	0.0450 85.3	0.1050 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140904024.dtb 024	9/4/2014 02:21	0.5000 0.0	134/1.00 0.0	0.4950 0.0	0.4850 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140907025.dtb 025	9/7/2014 14:22	0.5050 0.0	134/0.98 0.0	0.4950 0.0	0.4850 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140911026.dtb 026	9/11/2014 02:23	0.5000 0.0	134/0.98 0.0	0.4900 0.0	0.4900 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140914027.dtb 027	9/14/2014 14:24	0.4950 0.0	134/0.98 0.0	0.4900 0.0	0.4850 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620140918028.dtb 028	9/18/2014 02:25	0.5000 0.0	134/0.98 0.0	0.4900 0.0	0.4900 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140921029.dtb 029	9/21/2014 14:26	0.5000 0.0	134/0.98 0.0	0.4950 0.0	0.4900 0.0	0.0000 826	0.0800 132	7.1 x2
c:\myron\downloads\m...\82620140922030.dtb 030	9/22/2014 14:44	0.1950 9.5	114/0.10 2.3	0.1050 32.0	0.1300 15.5	0.2000 826	0.0800 132	7.0 x2

* Denotes a calibration event.

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Record Name	Date	Peak (ips)	Acoustic (dB/Mb)	Vertical (ips)	Transverse (ips)	Vector Sum (ips)	Seismic Trigger (ips)	Battery
Number	Time	Hz	Hz	Hz	Hz	Serial Number	Acoustic Trigger dB	Gain
*c:\myron\downloads\m...\82620140926031.dtb 031	9/26/2014 02:46	0.4950 0.0	134/1.00 0.0	0.4850 0.0	0.4850 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620140929032.dtb 032	9/29/2014 14:47	0.4950 0.0	134/0.98 0.0	0.4900 0.0	0.4850 0.0	0.0000 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620141003033.dtb 033	10/3/2014 02:48	0.5000 0.0	134/1.00 0.0	0.4900 0.0	0.4900 0.0	0.0000 826	0.0800 132	6.9 x2
*c:\myron\downloads\m...\82620141006034.dtb 034	10/6/2014 14:49	0.5000 0.0	134/1.00 0.0	0.4900 0.0	0.4900 0.0	0.0000 826	0.0800 132	7.0 x2
c:\myron\downloads\m...\82620141007035.dtb 035	10/7/2014 14:08	0.0900 35.3	122/0.26 10.3	0.0900 35.3	0.0800 20.4	0.1050 826	0.0800 132	7.0 x2
*c:\myron\downloads\m...\82620141010036.dtb 036	10/10/2014 14:34	0.5050 0.0	134/1.00 0.0	0.4950 0.0	0.4950 0.0	0.0000 826	0.0800 132	7.0 x2

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File Name: c:\myron\downloads\unateno\man63\82620140715004.dib

Number: 004

Date: 7/15/2014

Time: 13:02

Serial Number: 826

Seismic Trigger: 0.0800 in/sec

Acoustic Trigger: 132 dB

Sample Rate: 2048

Duration: 6.0 Seconds

Pre-Trigger: 0.25 Seconds

Gain: 2x

Voltage: 7.0

M&M

Amplitudes and Frequencies

Acoustic: 116 dB, 0.12 Mb @ 12.1 Hz

Radial: 0.1650 in/sec @ 11.0Hz

Vertical: 0.0700 in/sec @ 33.0Hz

Transverse: 0.1050 in/sec @ 12.9Hz

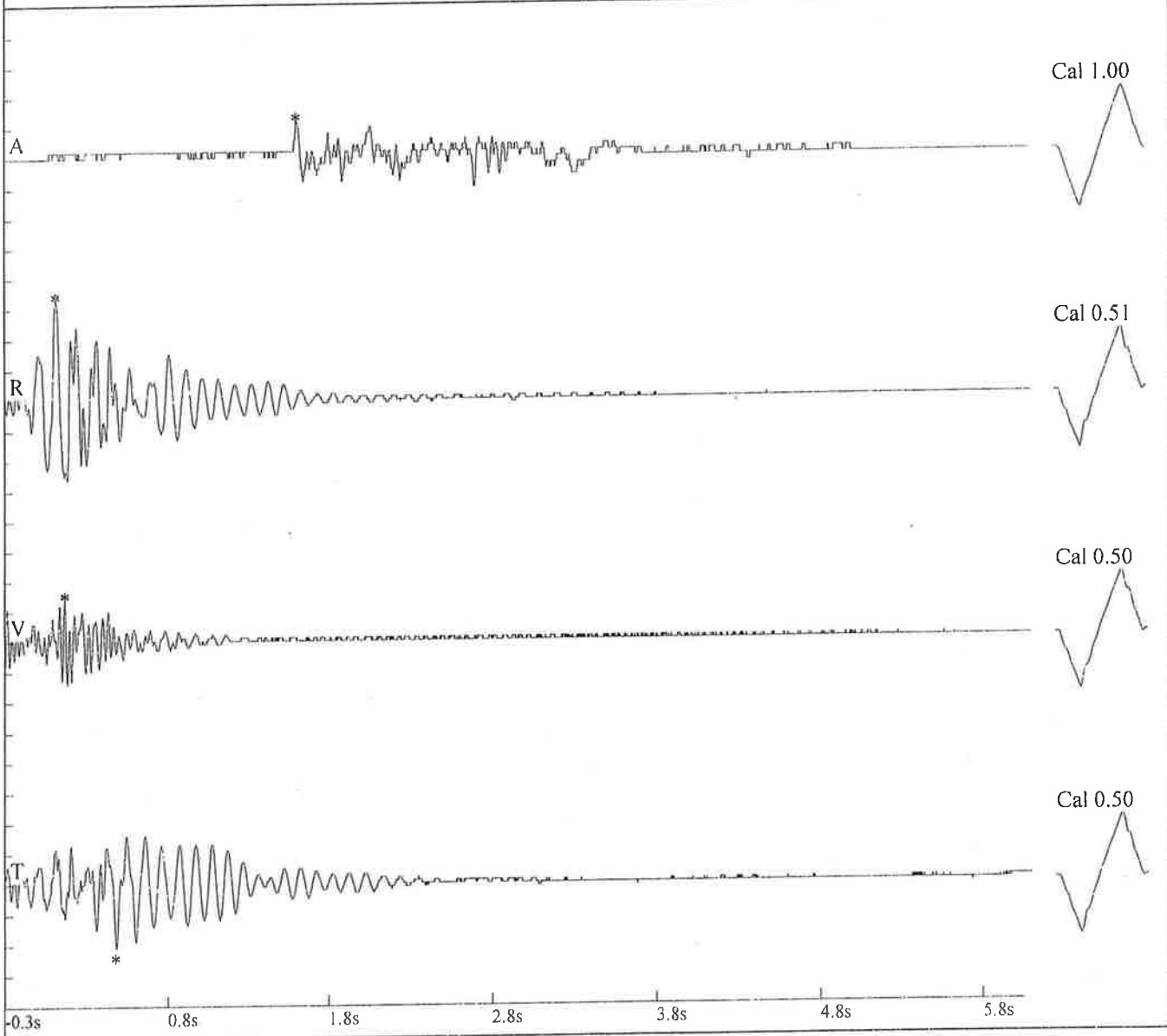
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno\mam63\82620140724007.dtb
 Number: 007
 Date: 7/24/2014
 Time: 11:00
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 6.9

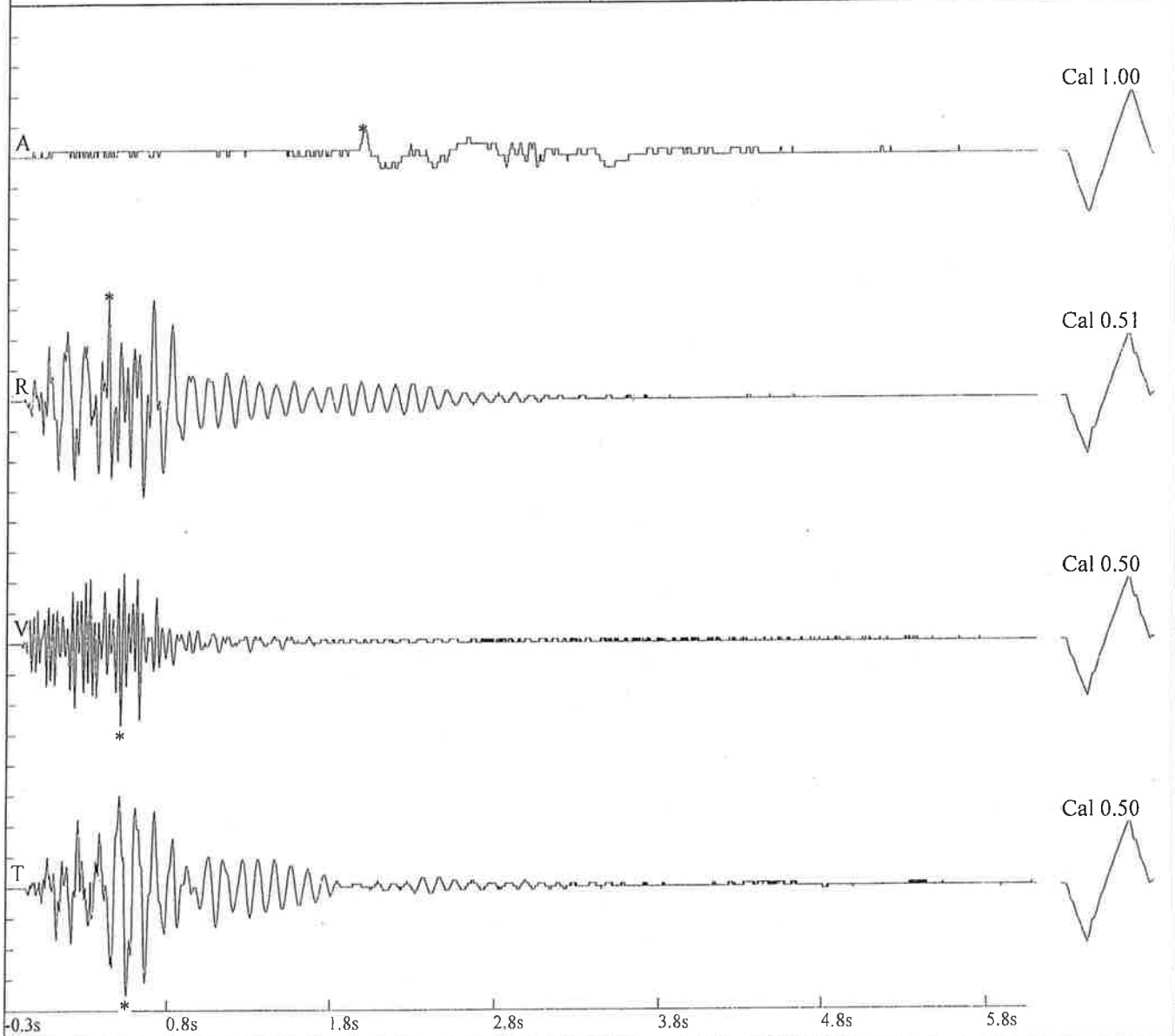
MSM

Amplitudes and Frequencies

Acoustic: 112 dB, 0.08 Mb @ 7.2 Hz
Radial: 0.1650 in/sec @ 21.3Hz
Vertical: 0.1350 in/sec @ 28.4Hz
Transverse: 0.1750 in/sec @ 9.8Hz

Graph Information

Duration: -0.250 s To: 6.000 s
Acoustic Scale: 126 dB
Seismic Scale: 0.20 in/sec (0.050 in/sec/div)
Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\mainteno\man63\82620140808012.dfb
 Number: 012
 Date: 8/8/2014
 Time: 12:02
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

MSM

Amplitudes and Frequencies

Acoustic: 110 dB, 0.06 Mb @ 8.0 Hz

Radial: 0.1000 in/sec @ 9.3Hz

Vertical: 0.0400 in/sec @ 23.2Hz

Transverse: 0.0800 in/sec @ 13.6Hz

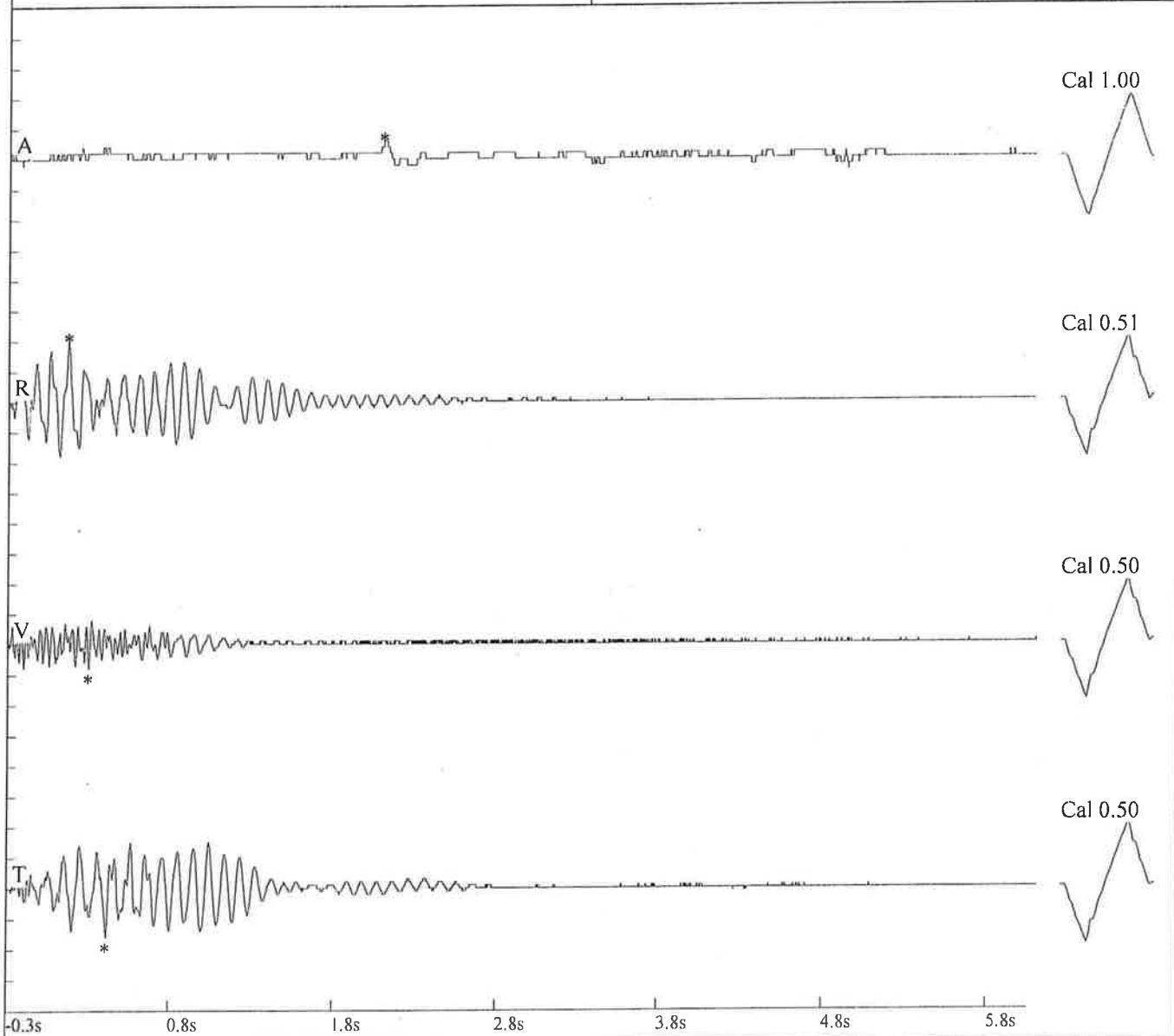
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno\man63\82620140811014.dtb
 Number: 014
 Date: 8/11/2014
 Time: 11:15
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 6.9

MLM

Amplitudes and Frequencies

Acoustic: 112 dB, 0.08 Mb @ 6.0 Hz

Radial: 0.1450 in/sec @ 14.4Hz

Vertical: 0.1050 in/sec @ 29.2Hz

Transverse: 0.0950 in/sec @ 10.5Hz

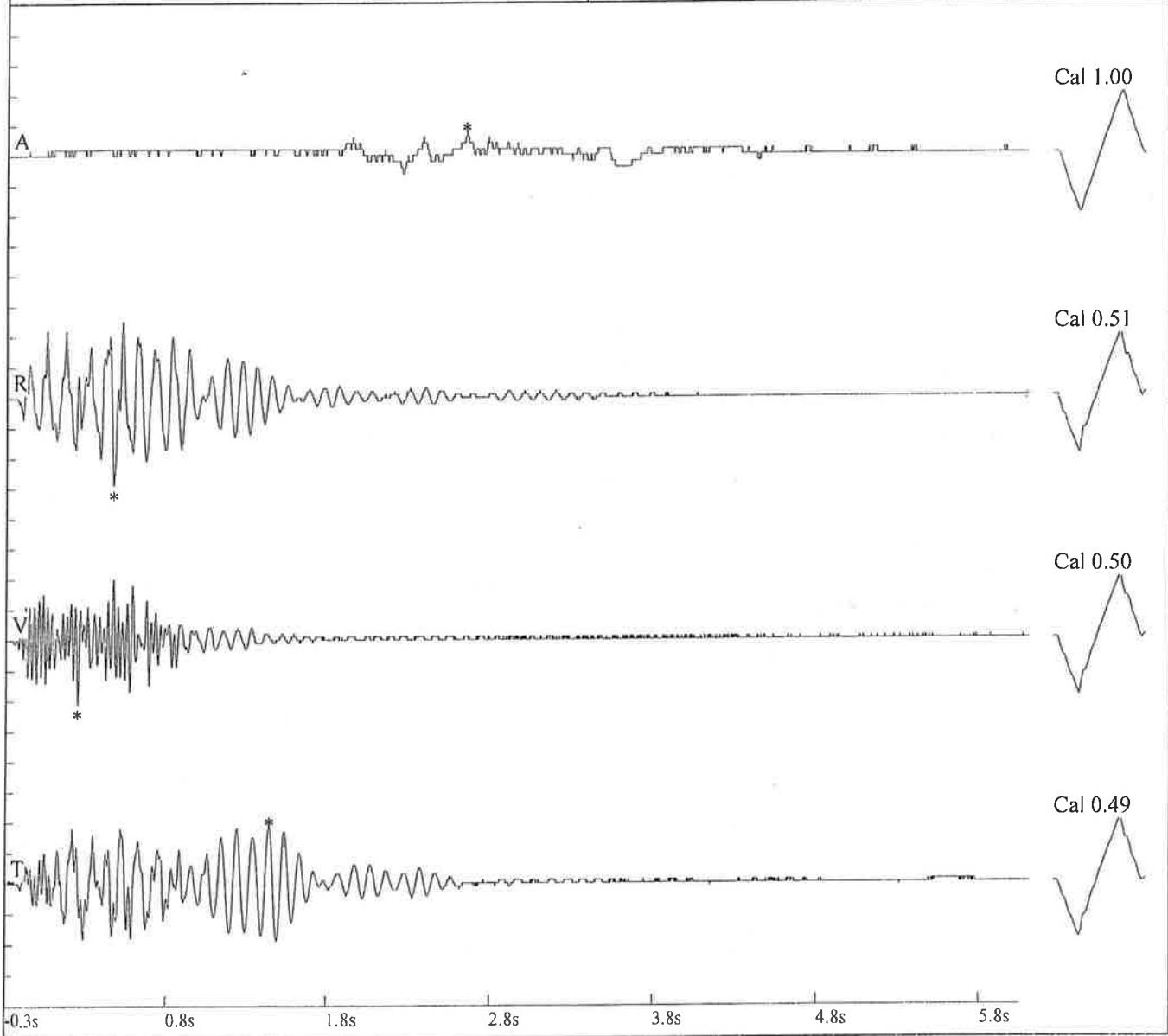
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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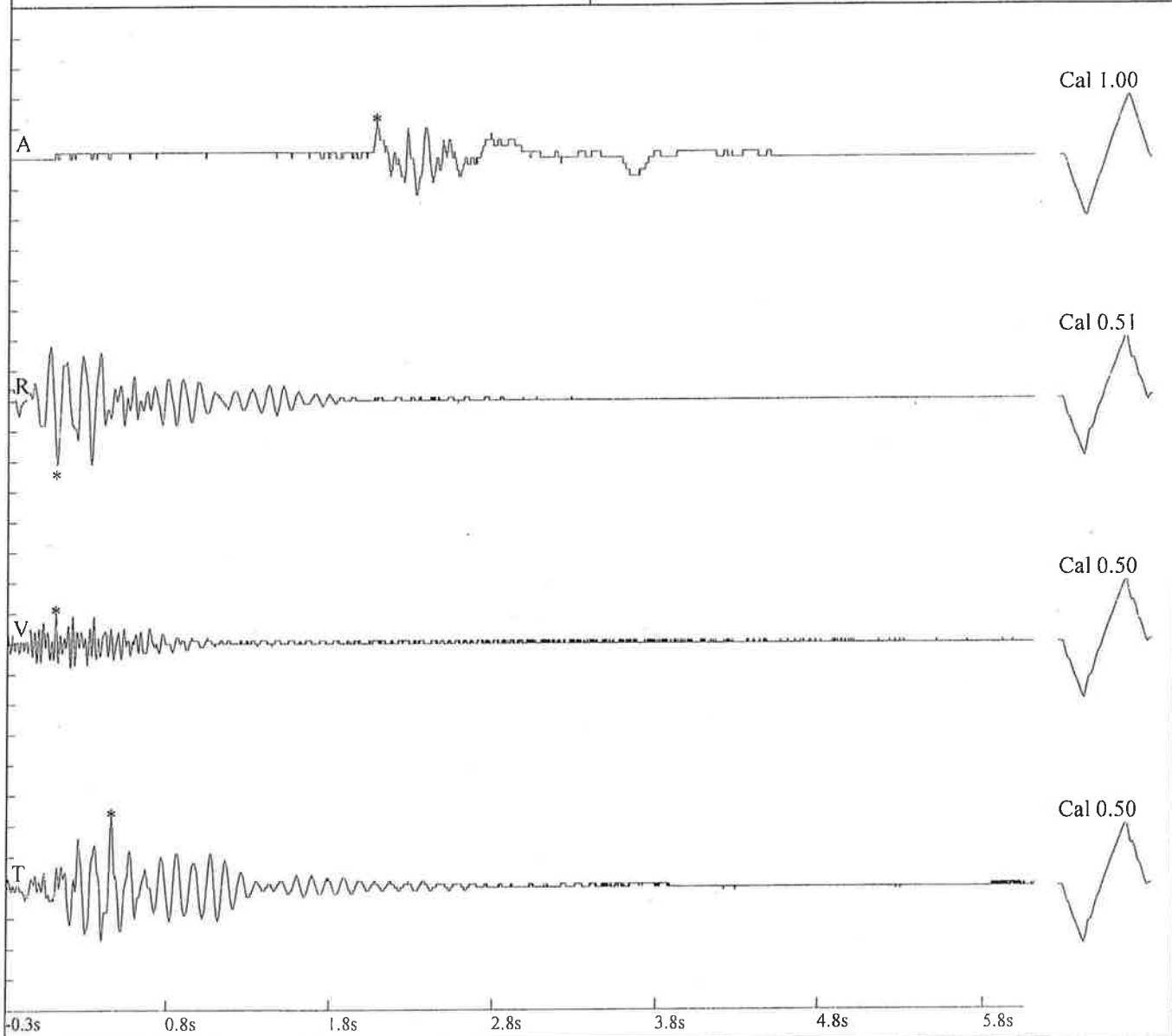
File Name: c:\myron\downloads\manteno\man63\82620140822018.d1b
 Number: 018
 Date: 8/22/2014
 Time: 10:29
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2X
 Voltage: 7.0

Amplitudes and Frequencies

Acoustic: 116 dB, 0.12 Mb @ 5.5 Hz
Radial: 0.1050 in/sec @ 11.2Hz
Vertical: 0.0500 in/sec @ 33.0Hz
Transverse: **0.1150 in/sec @ 9.7Hz**

Graph Information

Duration: -0.250 s To: 6.000 s
Acoustic Scale: 126 dB
Seismic Scale: 0.20 in/sec (0.050 in/sec/div)
Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno\man63\82620140827020.dtb
 Number: 020
 Date: 8/27/2014
 Time: 13:55
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

M&M

Amplitudes and Frequencies

Acoustic: 110 dB, 0.06 Mb @ 4.1 Hz

Radial: 0.1000 in/sec @ 18.6Hz

Vertical: 0.0950 in/sec @ 32.0Hz

Transverse: 0.0950 in/sec @ 21.7Hz

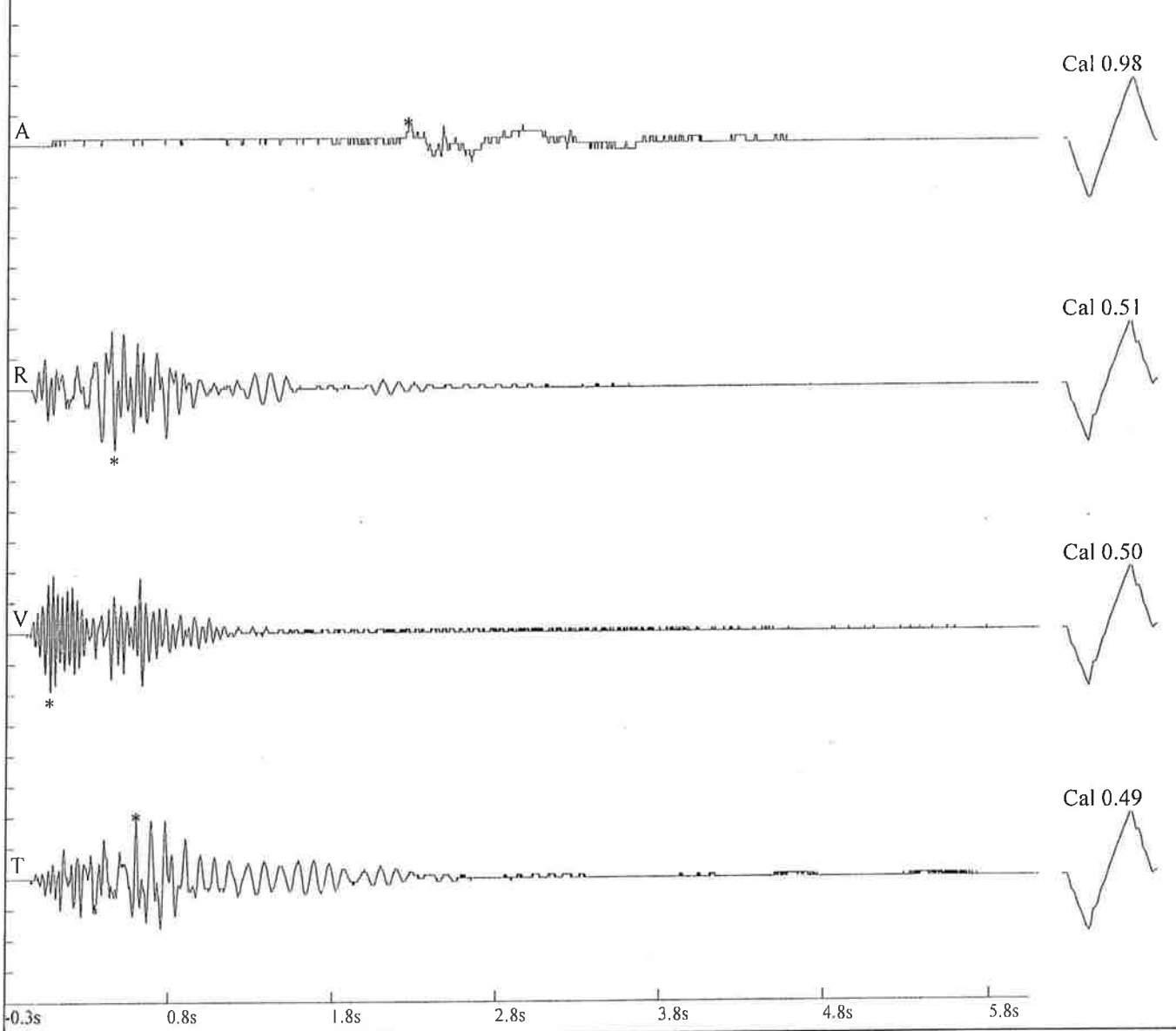
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\manteno\man63\82620140922030.dtb
 Number: 030
 Date: 9/22/2014
 Time: 14:44
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

MSM

Amplitudes and Frequencies

Acoustic: 114 dB, 0.10 Mb @ 2.3 Hz

Radial: **0.1950 in/sec @ 9.5Hz**

Vertical: 0.1050 in/sec @ 32.0Hz

Transverse: 0.1300 in/sec @ 15.5Hz

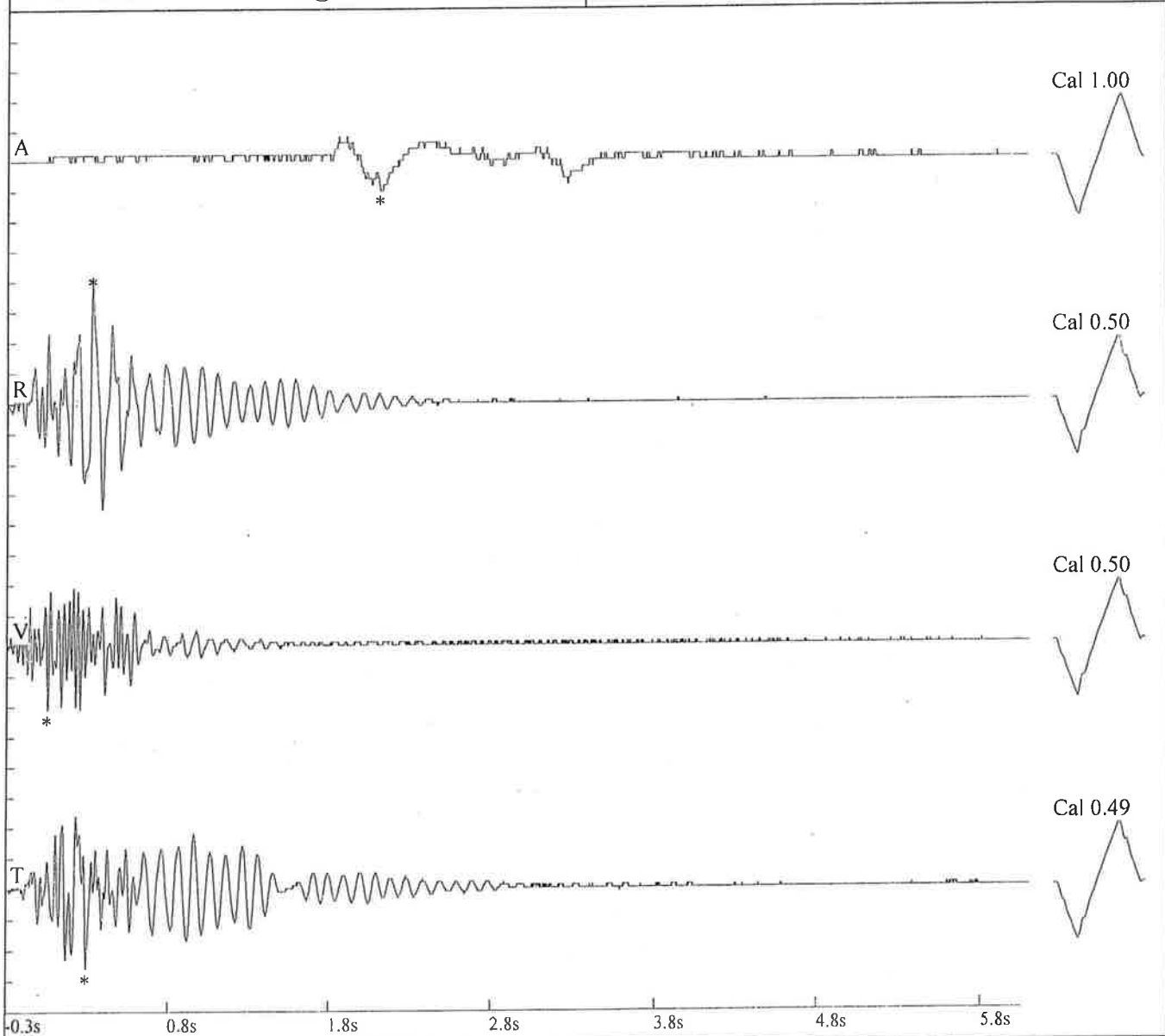
Graph Information

Duration: -0.250 s To: 6.000 s

Acoustic Scale: 126 dB

Seismic Scale: 0.20 in/sec (0.050 in/sec/div)

Time Intervals at: 1.00 s



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File Name: c:\myron\downloads\unanteno\man63\82620141007035.dtb
 Number: 035
 Date: 10/7/2014
 Time: 14:08
 Serial Number: 826
 Seismic Trigger: 0.0800 in/sec
 Acoustic Trigger: 132 dB
 Sample Rate: 2048
 Duration: 6.0 Seconds
 Pre-Trigger: 0.25 Seconds
 Gain: 2x
 Voltage: 7.0

MEM

Amplitudes and Frequencies

Acoustic: 122 dB, 0.26 Mb @ 10.3 Hz
 Radial: 0.0700 in/sec @ 15.0Hz
 Vertical: **0.0900 in/sec @ 35.3Hz**
 Transverse: 0.0800 in/sec @ 20.4Hz

Graph Information

Duration: -0.250 s To: 6.000 s
 Acoustic Scale: 126 dB
 Seismic Scale: 0.20 in/sec (0.050 in/sec/div)
 Time Intervals at: 1.00 s

