

VPEG eVib

Electromagnetic Seismic Vibrator



VPEG-8



VPEG-16

CAPABILITIES PRESENTATION



Next for R.T. Clark?



PEG-40

Propelled Energy Generator
40kg Impact Source



GPEG-500

Gravity Propelled Energy Generator
500kg Impact Source



Where is the
gap?

What is the
need?

The Missing Tool in Near-Surface Seismic

Frequency Positioning

Bridging the gap between GPR and conventional seismic sources



- GPR provides very high resolution but at a shallow depth
- Conventional seismic sources require heavy equipment
- Near-surface work often needs portable controlled energy

Development and Milestones

August 2024



August 2024

IMAGE Conference Discussion

Dec. 2024



Dec. 2024

Proof-of-Concept Build and Testing

Feb. 2025



Feb. 2025

Prototype Development

August 2025



August 2025

IMAGE Prototype Announcement

Sept-Oct. 2025



Sept-Nov. 2025

Extensive Field Testing

Nov 2025 to Present

Production Models and Finalization

May 2026



May 2026.... Full Sales Announcement

Field Testing

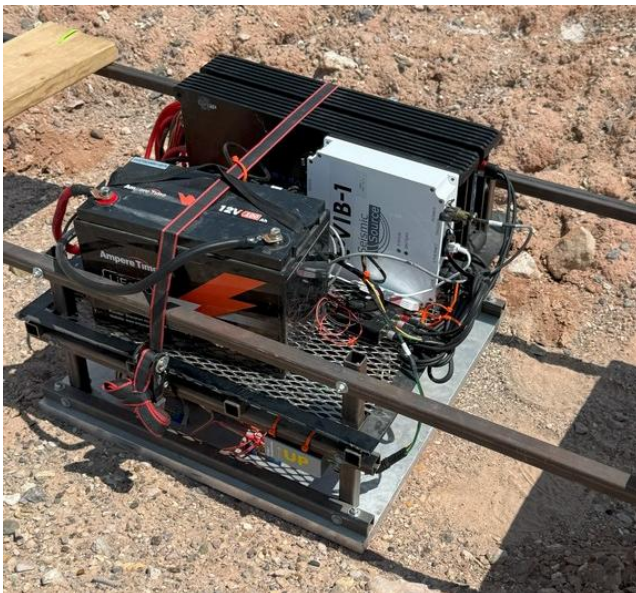


Sensors:
1976 nodes of
Dawson's new Geospace
Technologies Pioneers

Layout:
80 x 2,470ft,
8 Lines of 247 station,
10ft spacing

VP's:
~1,100 points
at 10ft intervals

Sweep:
24sec at 8-128hz,
3 stacks per VP



VPEG Platform Configurations

VPEG 8

Deployment:
Hand Carry / Hitch Lift

Weight:
~140 lb (64 kg)

Dimensions:
26 × 26 × 18 in

Recommended Battery:
12 V 100 Ah

Typical VP Production:
~300 VP per battery

* Based on 8-128Hz @ 24sec



VPEG 16

Deployment:
Mini Skid-steer Mount

Weight:
~350 lb (159 kg)

Dimensions:
36 × 36 × 15 in

Recommended Battery:
12 V 200 Ah

Typical VP Production:
~300 VP per battery

* Based on 8-128Hz @ 24sec

Key System Capabilities

Broadband Seismic Source:

Frequency sweep capability from **<8 Hz – 800 Hz**

Full-drive bandwidth **20 Hz – 800 Hz**

GPS Positioning:

20cm Accurate GPS Antenna

RTK Correction Subscription available through Seismic Source

Multiple Deployment Options:

Hand portable system options

Hitch-mounted Lift vehicle deployment

Mini Skid-steer mounted configuration

Permanent installation

Flexible Source Control:

The VPEG control system, developed with **Seismic Source**, supports:

Single or multi-sweep operation | Multi-unit synchronization

Wireless Wi-Fi or Ethernet control | 3-pin Seismograph Triggering

Manual push-button operation

Low mechanical noise

The electromagnetic actuation system generates extremely low mechanical noise compared to impact sources, improving correlation performance and signal fidelity.



Deployment Methods



Mini-Skid Steer
Mount

Mini Universal
Mount Type

Adaptors
available for
Bobcat MT, and
ASV systems

Can Convert to
Full Skid or
Tractor Mount



Deployment Methods



2-Man Portable Mount

Powered Hitch Lift

Base Plate Hole Pattern
can be used for many
different mounting
needs



Deployment Methods



2-Man Portable Mount

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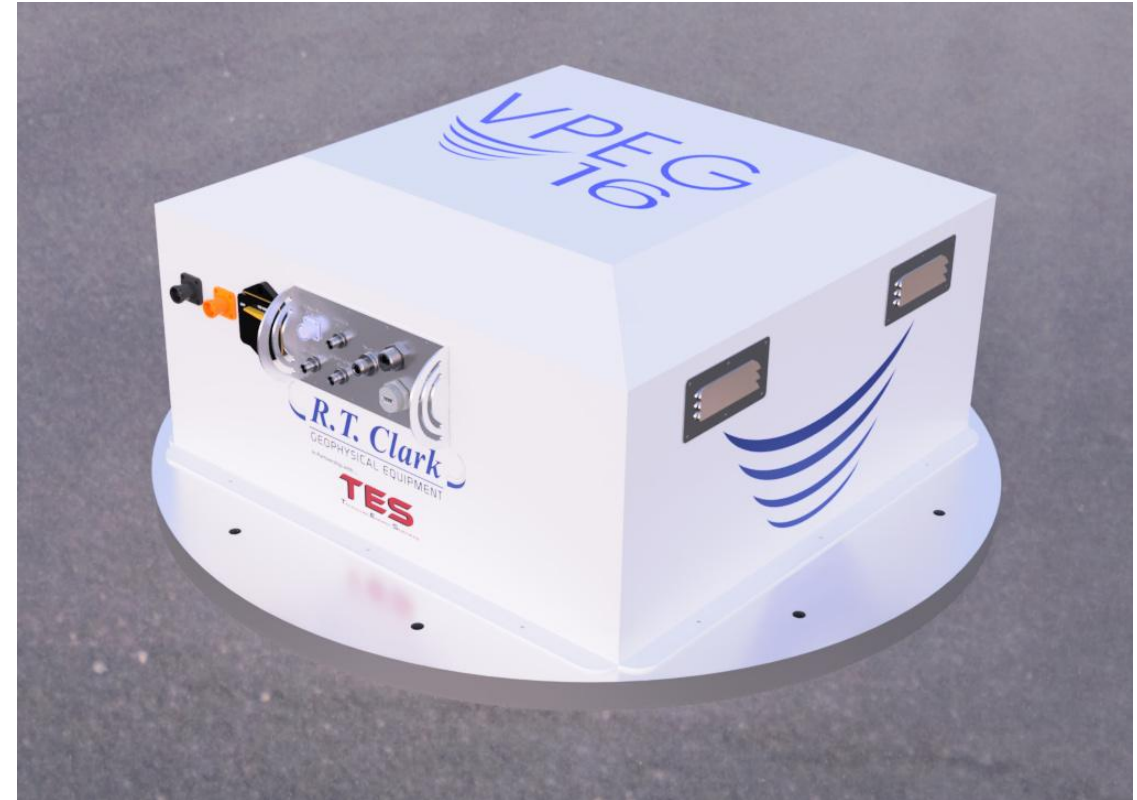


Applications and Current Status

Applications:

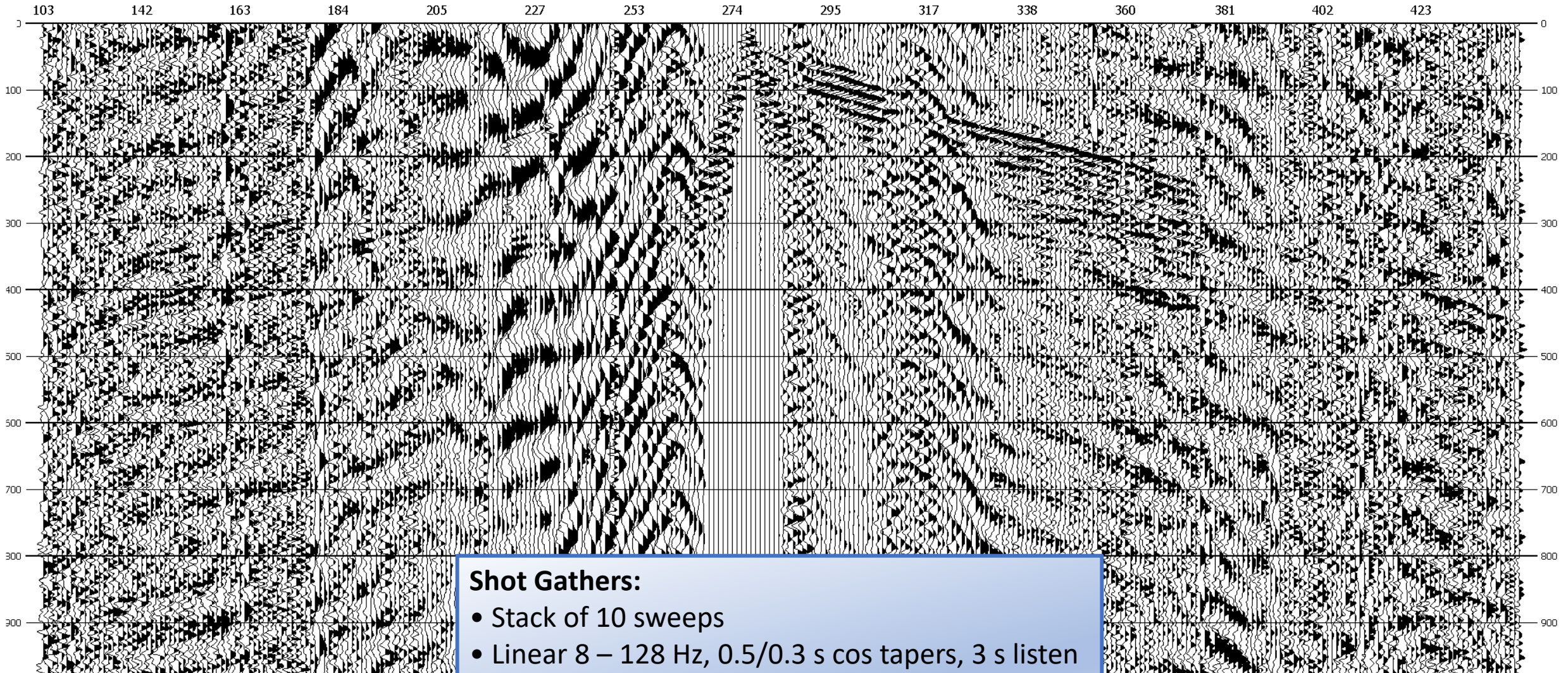
The VPEG system is designed for a range of geophysical and engineering investigations:

- Near-surface seismic imaging
- Environmental and engineering geophysics
- Mining exploration
- Hazard and infrastructure surveys
- Academic and Seismic Research

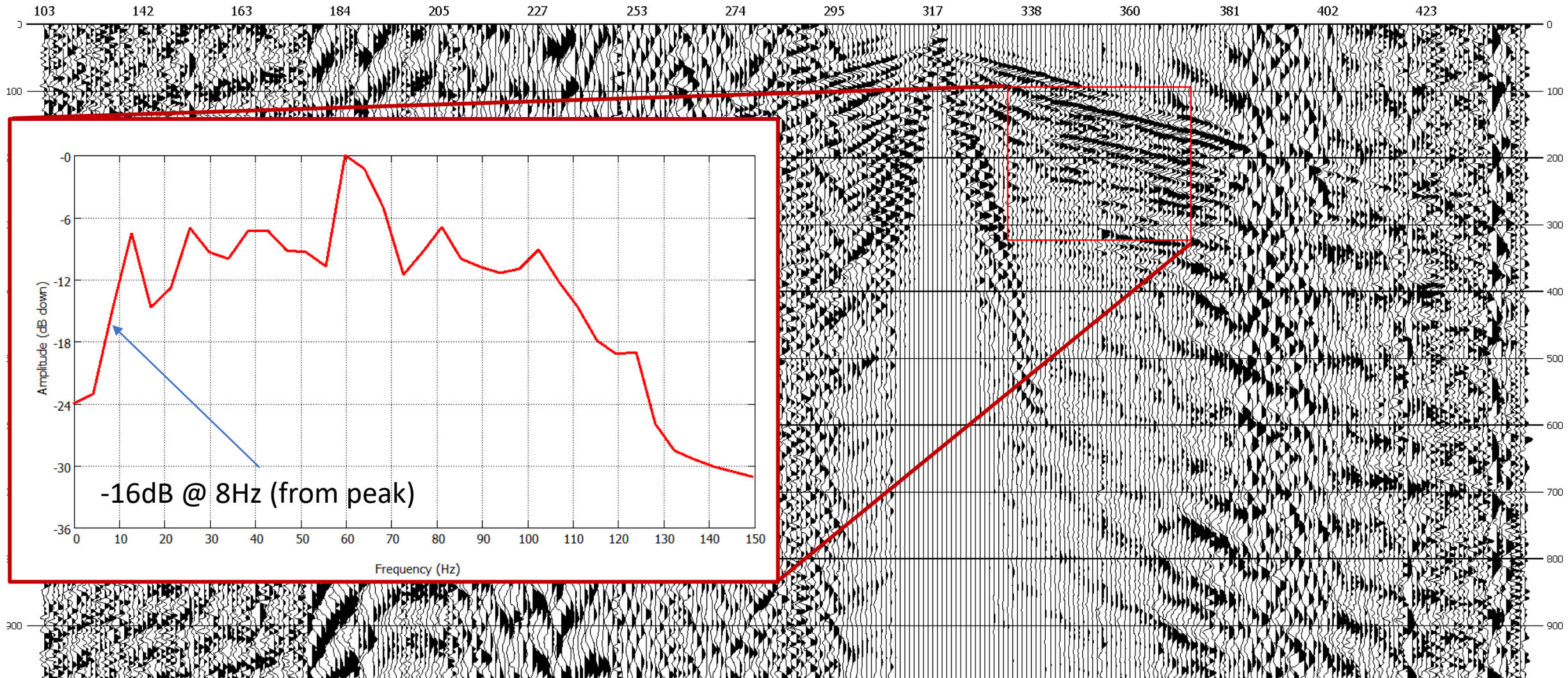


The system is currently in production fabrication
Full commercial launch coming May 2026

Raw Shot Gather, Stack of 10



Average Frequency Spectra



Data Examples

Migrations

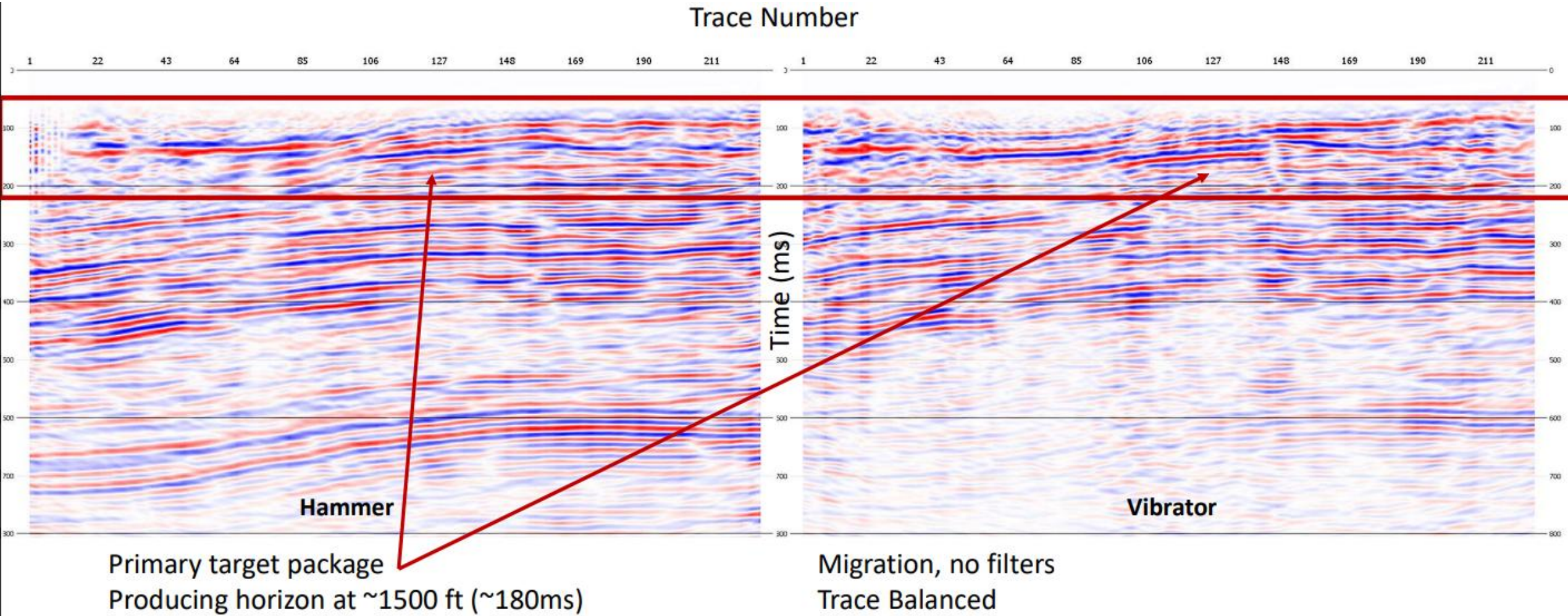
- Stack of 10 sweeps with vibrator, 5 hits with hammer
- Linear 8 – 128 Hz, 0.5/0.3 s cos tapers, 3 s listen
- 40 ft group spacing
 - vibrator data decimated to match legacy GPEG data group interval
- 80 ft shot spacing
- Both volumes processed using identical flow
- No filters or additional noise reduction in displays

Comparison of

- R.T. Clark GPEG-500 hammer source (500 kg weight drop)
- VPEG-16 vibrator source
- Identical 2D line/station locations

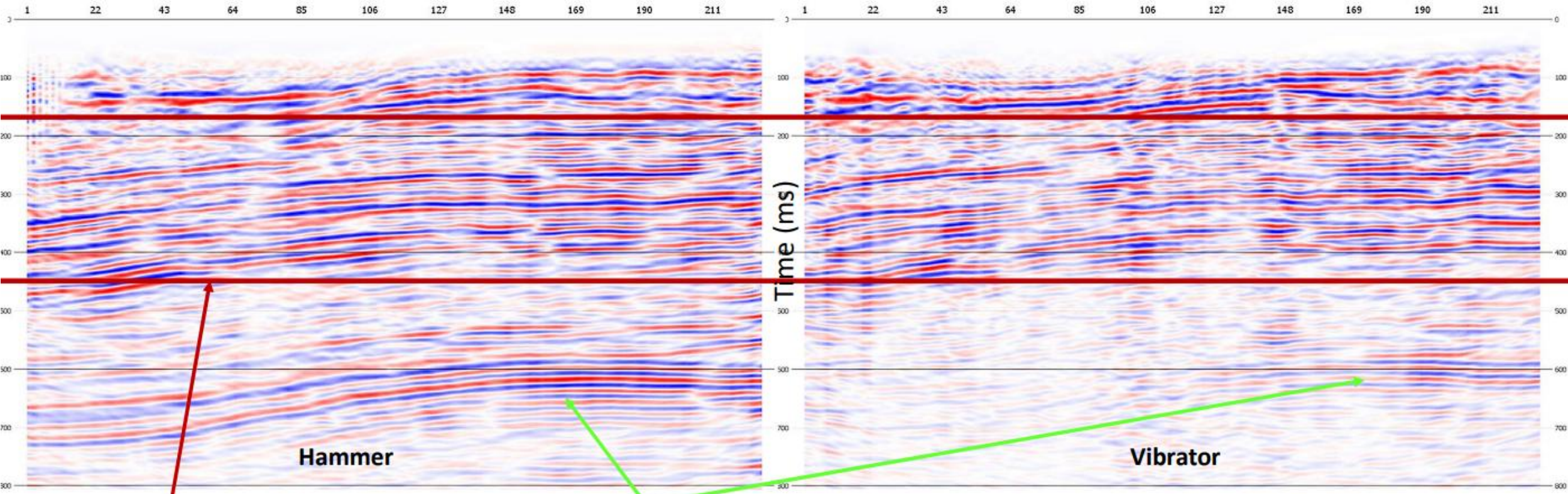


GPEG-500 & VPEG-16 Direct Comparison, Migration



GPEG-500 & VPEG-16 Direct Comparison, Migration

Trace Number

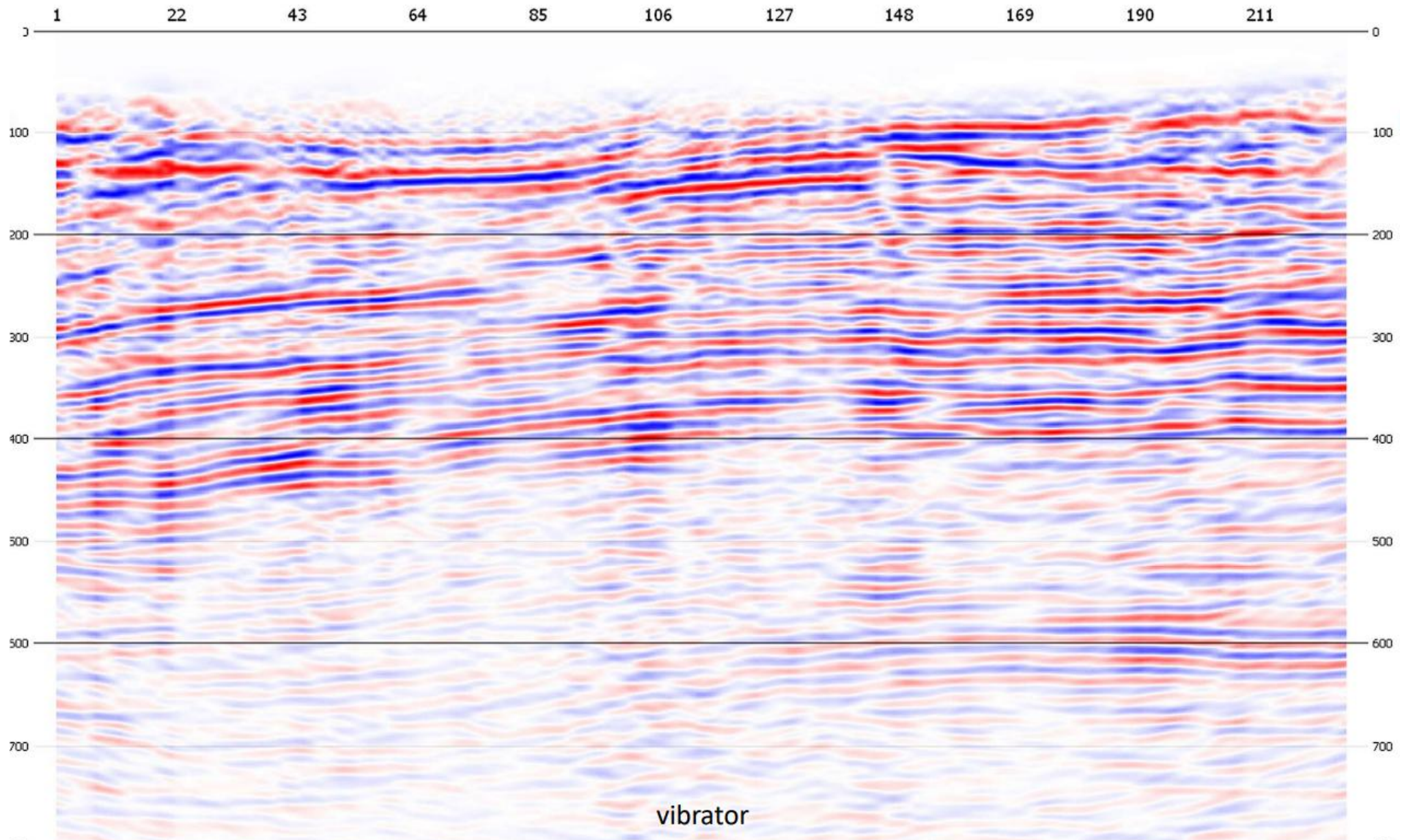


Secondary target package
1800 – 3000+ ft (200 – 400ms)

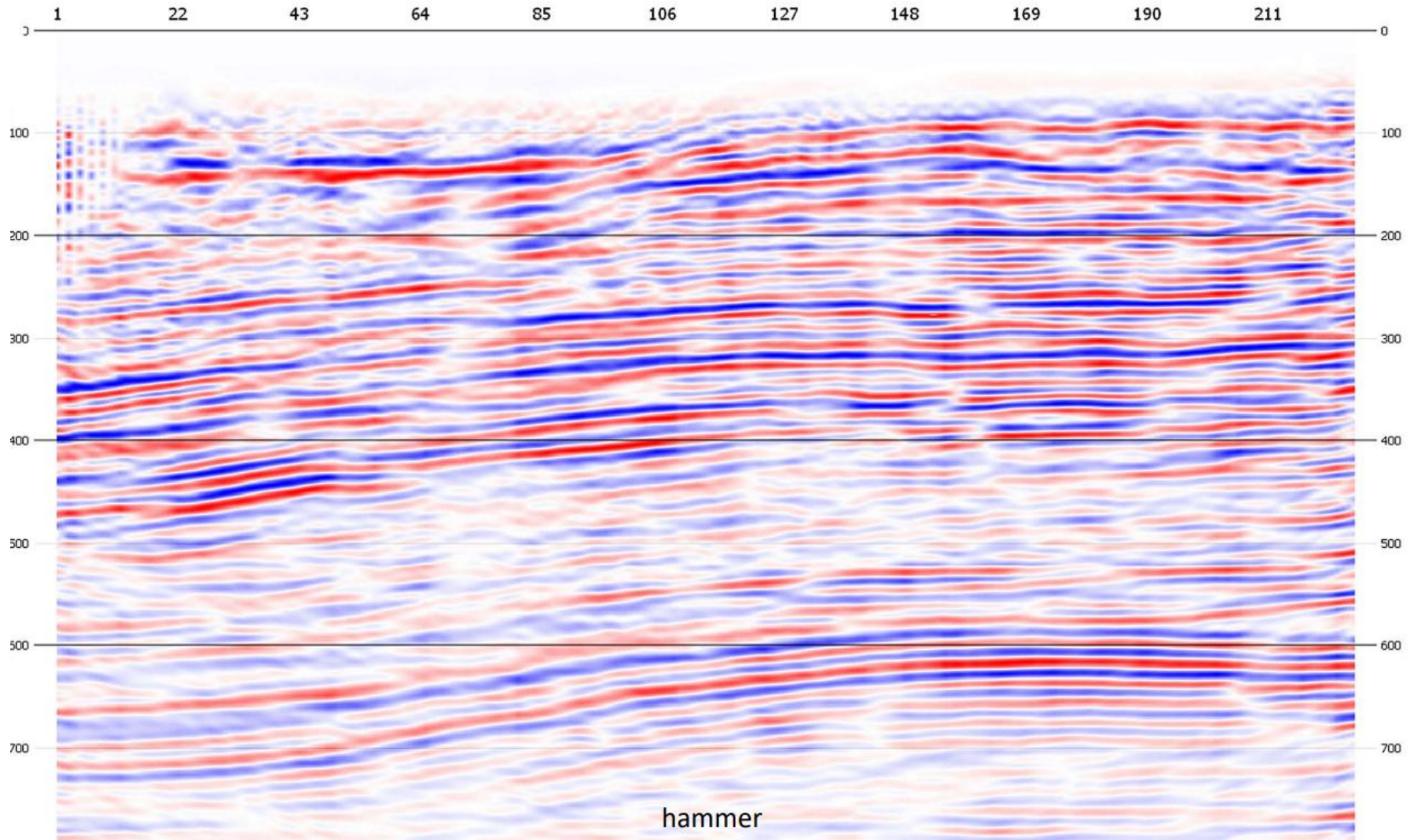
Basement @ 600ms (4000+ ft)

Migration, no filters
Trace Balanced

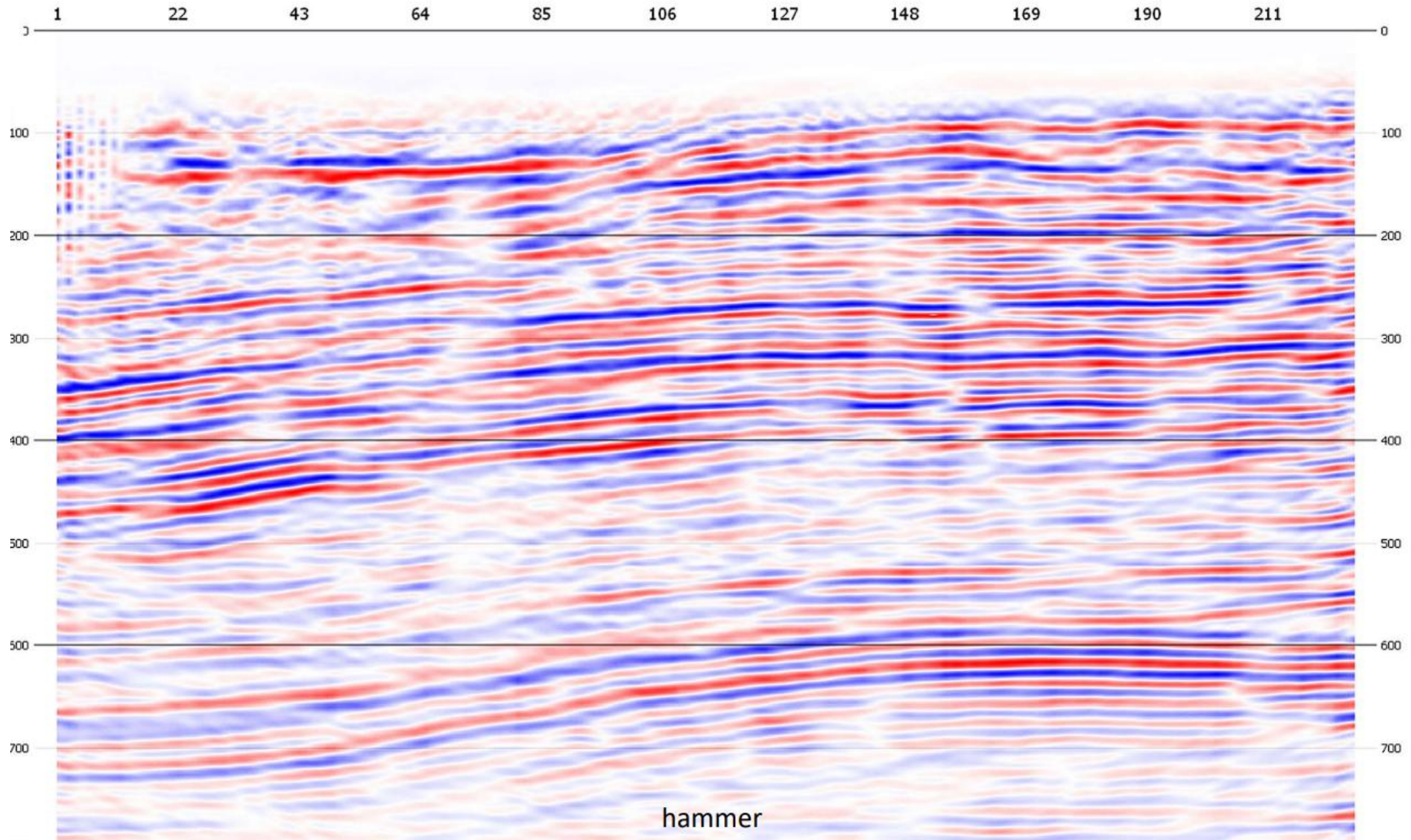
VPEG-16



GPEG-500



GPEG-500



T H A N K Y O U

**R.T. Clark**
GEOPHYSICAL EQUIPMENT

In Partnership with...

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TELEMARK ENERGY SERVICES



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Seismic
Source