

# MASW Analysis of St. Paul Falls Site (Lines 4 & 5)



## Sample Compact MASW Report

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### **Disclaimer**

*Park Seismic LLC does not guarantee this report to be free from errors or inaccuracies and disclaims any responsibility or liability for decisions made based on the information provided in this report.*

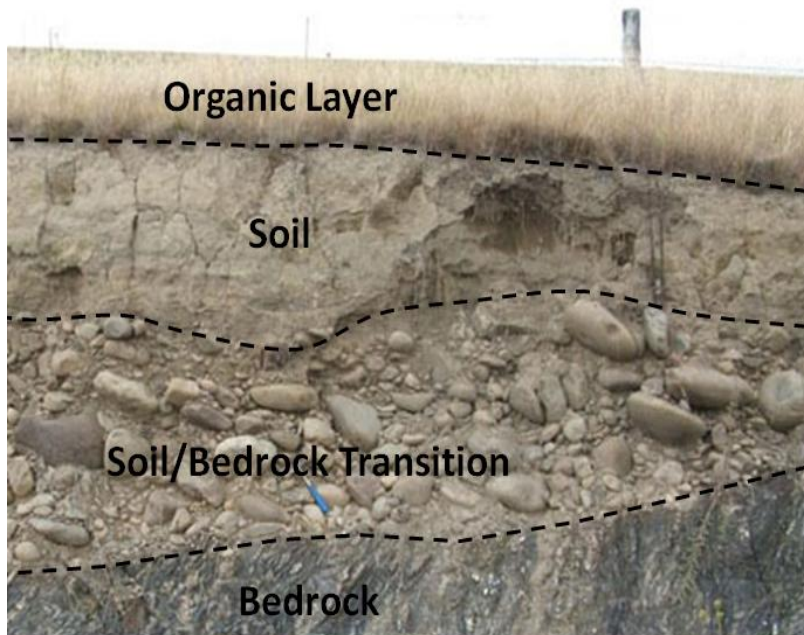
January 1, 2019

Report to

Anonymous Company

# Near-Surface Materials and “Approximate” Seismic Velocity ( $V_s$ ) (m/sec)

- $V_s \leq 100$  m/s – “extremely soft” soil
- $100$  m/s  $\leq V_s \leq 200$  m/s – “soft” soil
- $200$  m/s  $\leq V_s \leq 300$  m/s – “stiff” soil
- $300$  m/s  $\leq V_s \leq 500$  m/s – “weathered” zone
- $500$  m/s  $\leq V_s$  – “rock”
- $1000$  m/s  $\leq V_s$  – “competent” rock

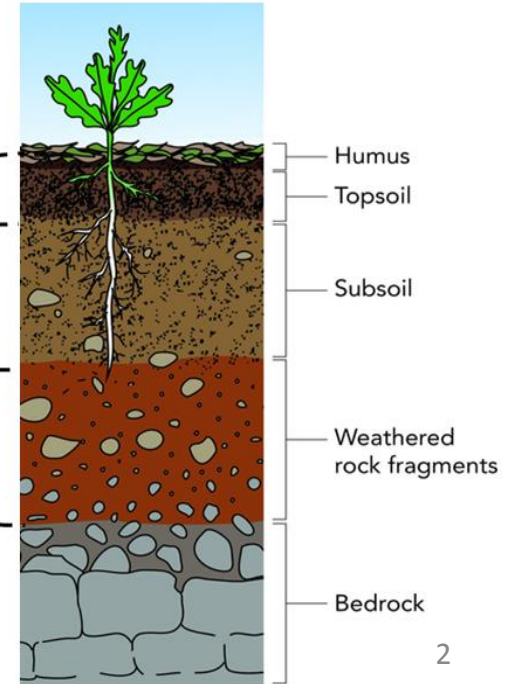


$50$  m/s  $\leq V_s \leq 100$  m/s

$100$  m/s  $\leq V_s \leq 300$  m/s

$300$  m/s  $\leq V_s \leq 500$  m/s

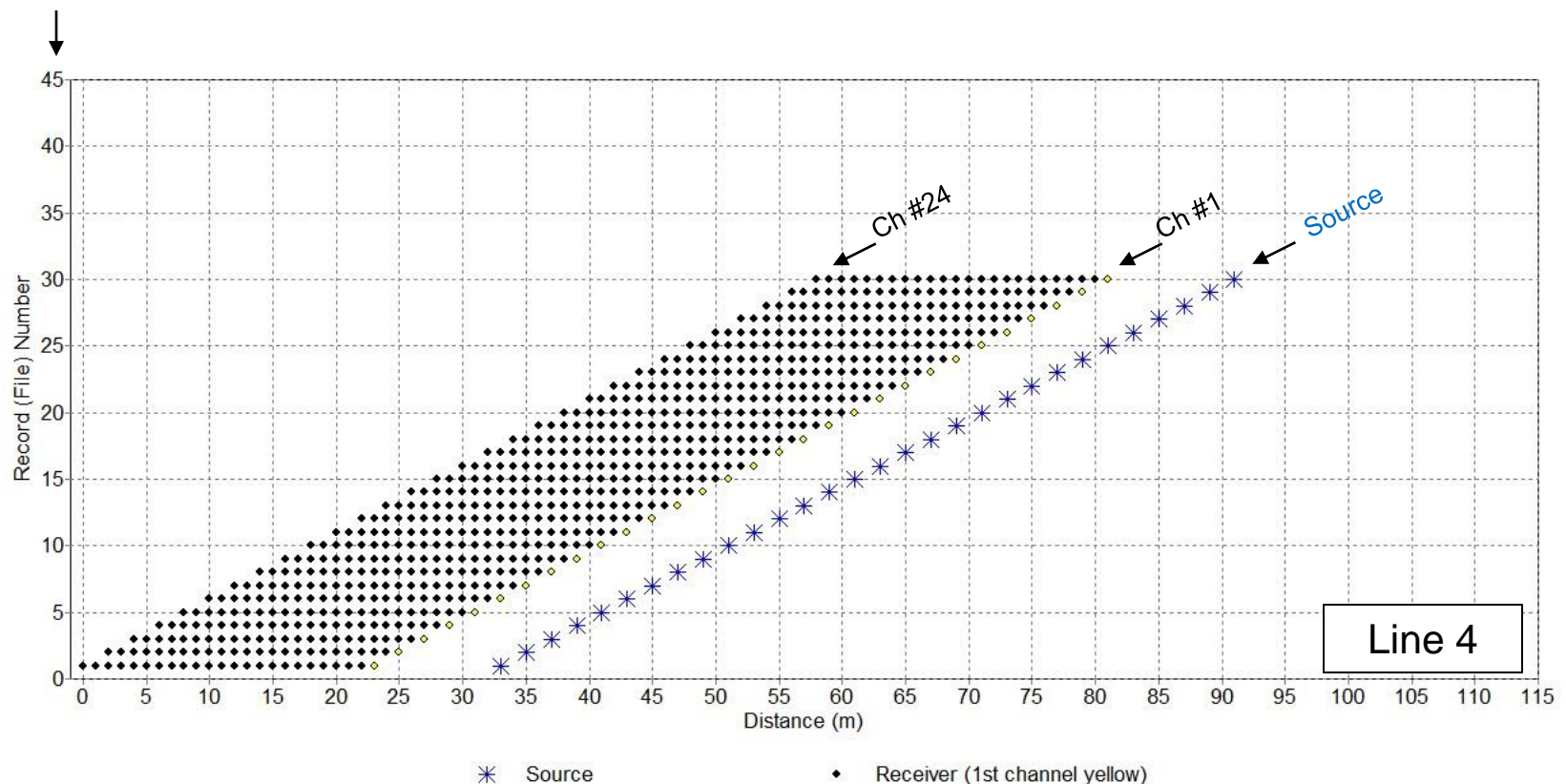
$500$  m/s  $\leq V_s \leq 2000$  m/s



# Source/Receiver (SR) Setup – Line 4

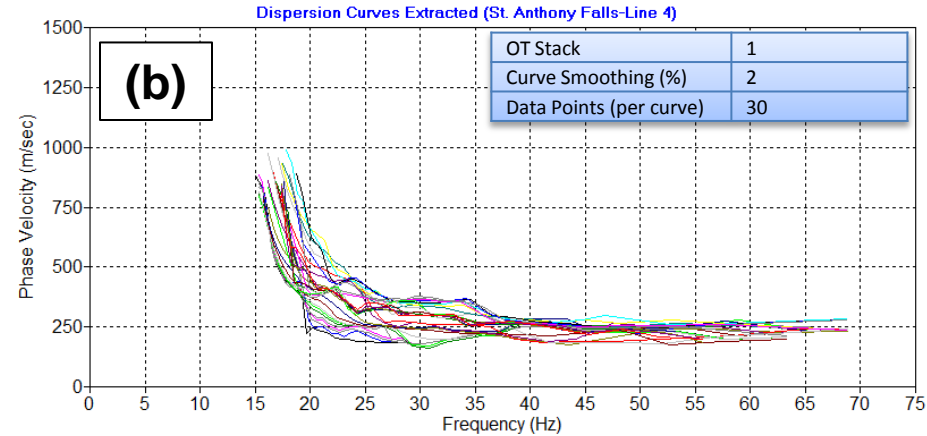
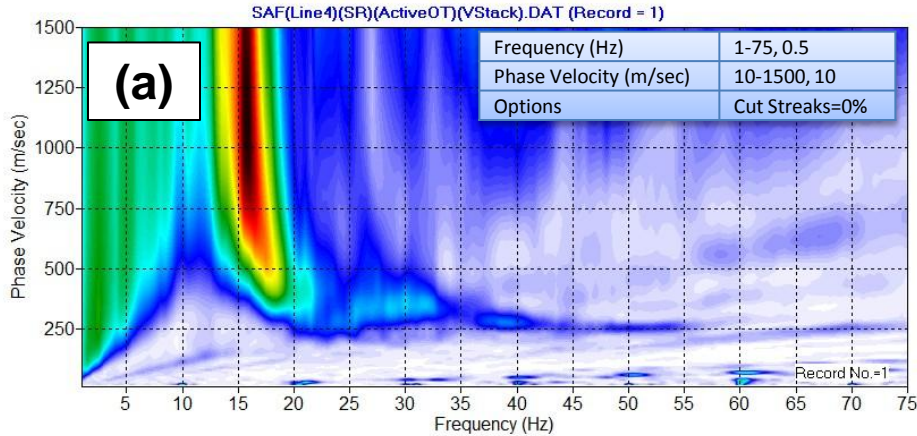
For the first file saved (i.e., “1.sg2”), the last channel (Ch #24) is located at  $X = 0.0$  m and the first channel (Ch #1) is located at  $X = 23.0$  m with source at  $X = 33.0$  m. Then, the entire source/receiver (SR) configuration moved by 2 meters each time toward source to record a total of 30 files (records).

File Number  
(\* .sg2)



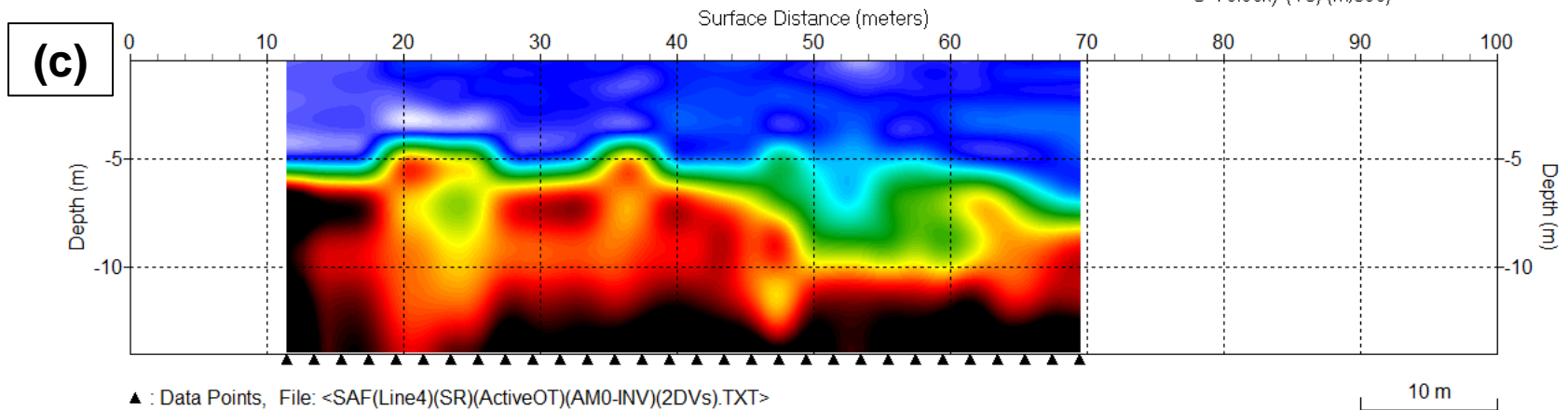
# Results - Line 4

(a) Average Dispersion Image, (b) Extracted Dispersion Curves, (c) Shear-Velocity ( $V_s$ ) Cross Section



Max Depth (m)	11.2
Lateral Continuity (%)	30
Velocity ( $V_s$ ) Scale (m/sec)	100-1000

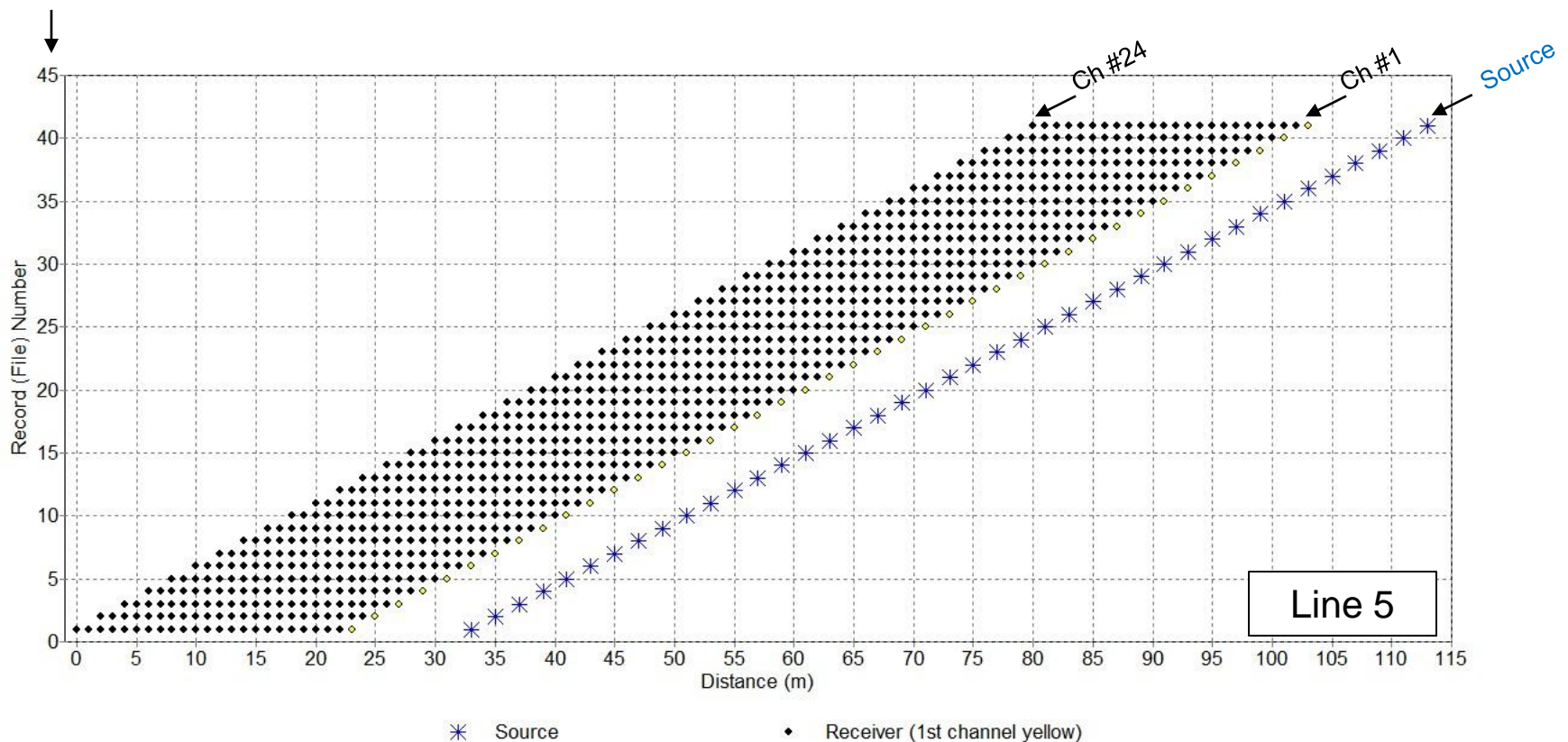
S-Velocity ( $V_s$ ) Map (St. Anthony Falls-Line 4)



# Source/Receiver (SR) Setup – Line 5

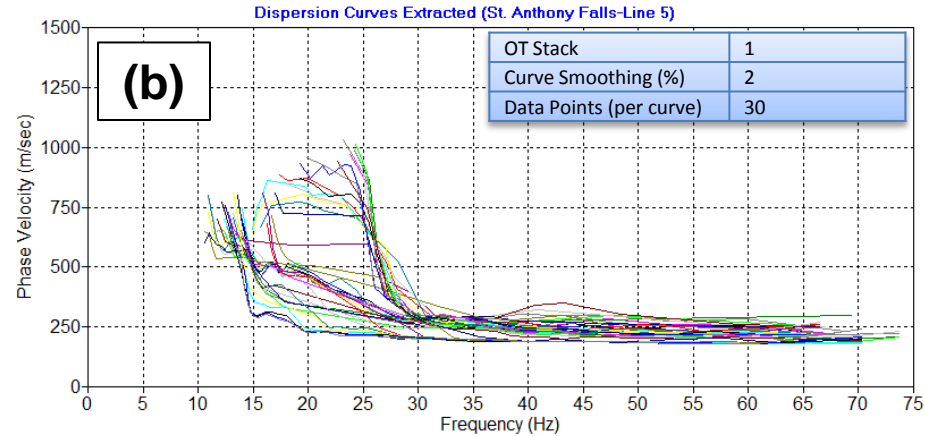
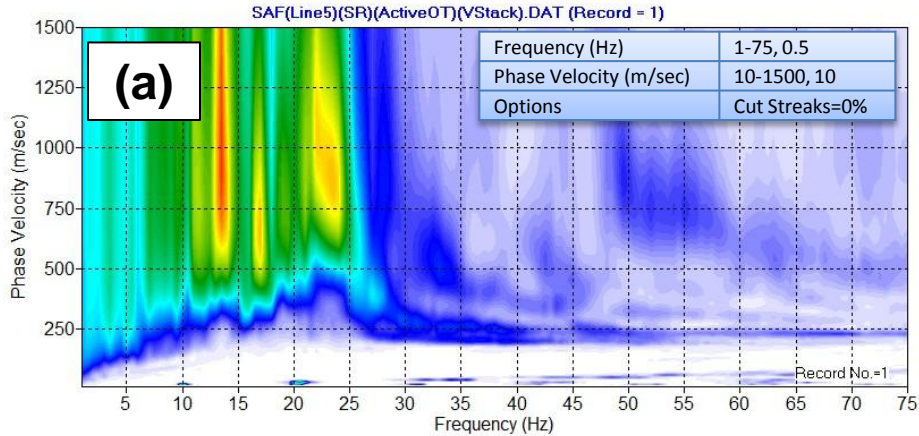
For the first file saved (i.e., “1.sg2”), the last channel (Ch #24) is located at  $X = 0.0$  m and the first channel (Ch #1) is located at  $X = 23.0$  m with source at  $X = 33.0$  m. Then, the entire source/receiver (SR) configuration moved by 2 meters each time toward source to record a total of 41 files (records).

File Number  
(\* .sg2)



# Results - Line 5

(a) Average Dispersion Image, (b) Extracted Dispersion Curves, (c) Shear-Velocity ( $V_s$ ) Cross Section



Max Depth (m)	11.2
Lateral Continuity (%)	30
Velocity ( $V_s$ ) Scale (m/sec)	100-1000

S-Velocity ( $V_s$ ) Map (St. Anthony Falls-Line 5)

