

Amplified Geochemical Imaging, LLC has teamed with American Geological Services to market a passive soil vapor survey that will detect organic, inorganic and organometal(loid) vapors from buried ore deposits. The AGI Passive Sampler (AGI Module) allows for the direct detection of organic, organometal(loid) and inorganic compounds at the surface through hundreds of feet of post mineralization cover.

Until now, surface geochemistry for buried mineral deposits has utilized indirect methods of detection. The AGI Passive Sampler makes the difference by allowing direct detection. The patented sample collector keeps water out while allowing vapors to pass through. The module captures organic, inorganic, and sulfur gases from buried mineralized systems. We achieve a high level of sensitivity from this technology with the combination of some unique elements:

AGI's patented expanded polytetrafluoroethylene (ePTFE) tubing

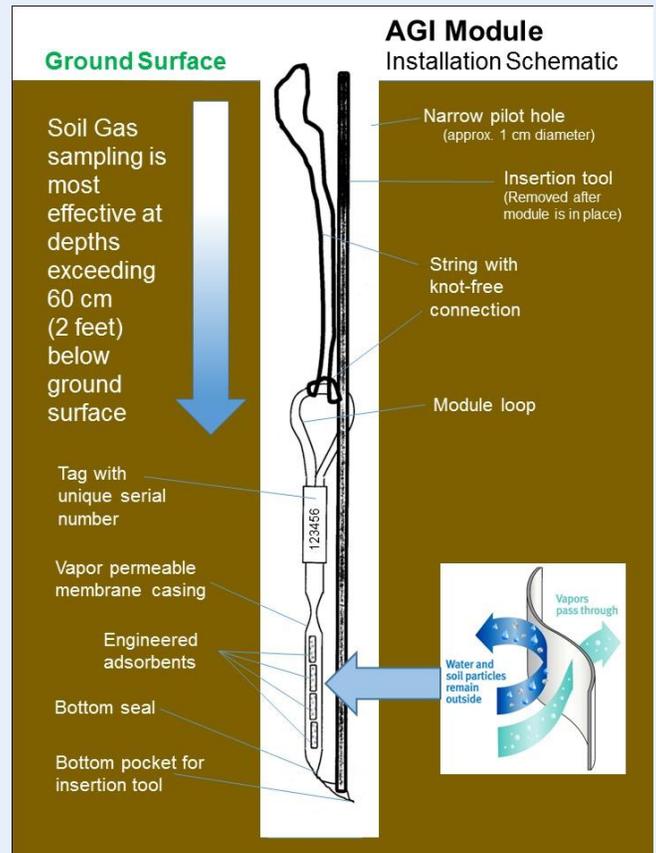
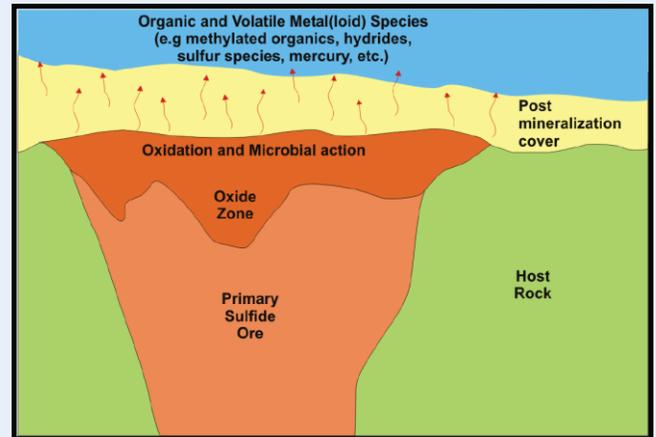
- protects sorbents from soil and liquid water, ensuring sample integrity while allowing for the detection of a broad range of gases
- waterproof and vapor permeable, allows for installation in low permeability and/or saturated settings

Highly durable collector design

- makes installation and retrieval simple, with no need to case the hole

Engineered sorbent system designed for subsurface detection of gases

- provides consistent sampling media and eliminates variability



Time-integrated sampling

- eliminates impacts caused by variations in soil permeability or moisture; maximizes sensitivity to a broad range (up to C₂₀) of hydrocarbons and sulfur compounds

Coding of each collector and container

- ensures high Quality Assurance/Quality Control program

Gas chromatography/mass spectroscopy (GC/MS) and gas chromatography/atomic emission detection (GC/AED) analysis yields sensitive, compound-specific results that are used in identifying sources of mineralization:

- About 90 compounds - through C₂₀
- Aliphatics
- Aromatics
- Oxygenated compounds
- Inorganic and sulfur compounds
- H₂S Hydrogen Sulfide
- S₈ Molecular Sulfur
- (CH₃)₂S Dimethylsulfide
- CS₂ Carbon disulfide
- COS Carbonal sulfide
- SO₂ Sulfur dioxide
- MercuryText



Geochemical modeling and interpretation differentiates vapor signatures from oxidizing mineralization from those associated with vegetation, host rock, or shallow pollution