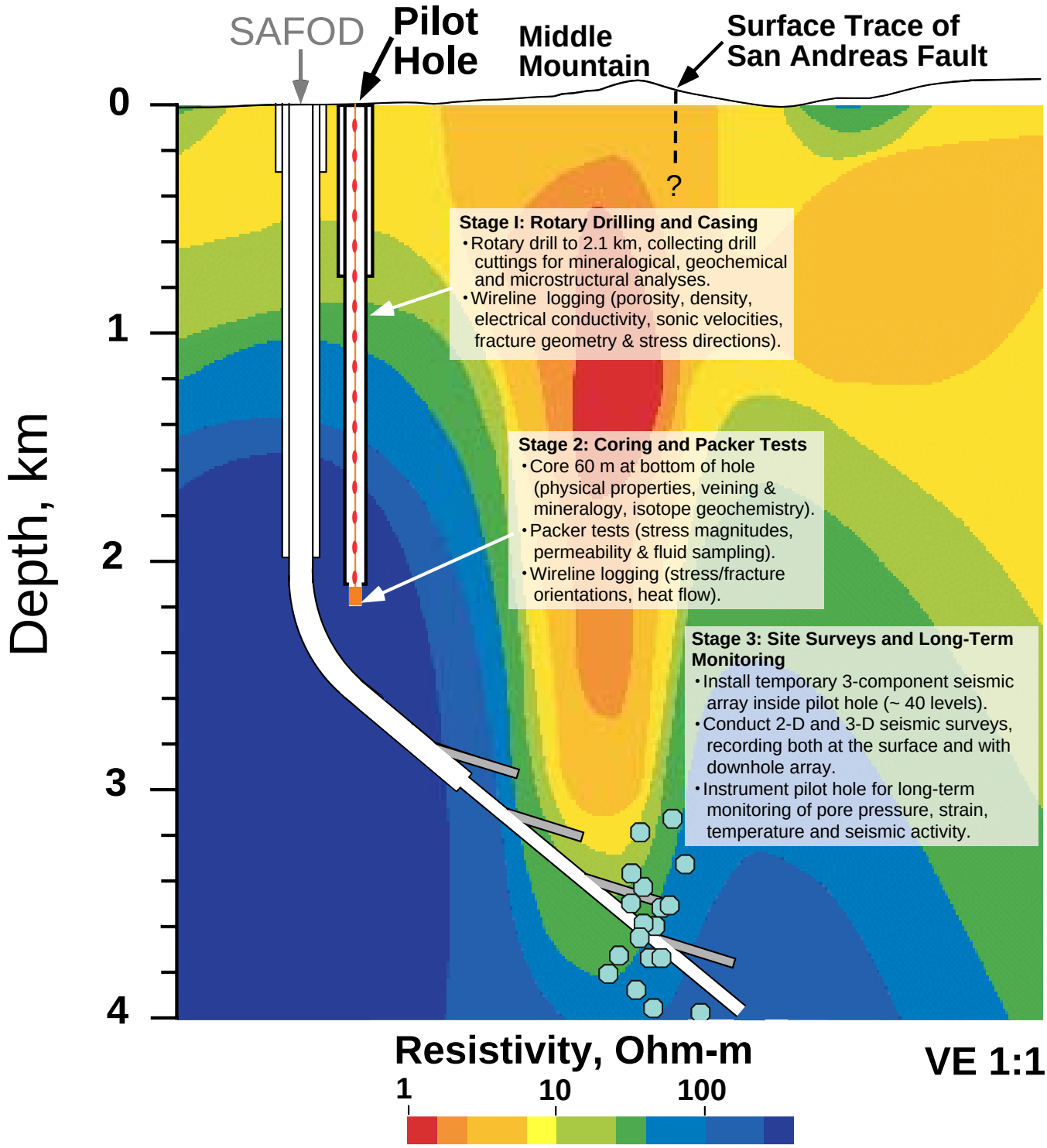
SAFOD
Pilot Hole
Middle Mountain
Surface Trace of San Andreas Fault
?
Depth, km
0
1
2
3
4
Stage I: Rotary Drilling and Casing
• Rotary drill to 2.1 km, collecting drill cuttings for mineralogical, geochemical and microstructural analyses.
• Wireline logging (porosity, density, electrical conductivity, sonic velocities, fracture geometry & stress directions).
Stage 2: Coring and Packer Tests
• Core 60 m at bottom of hole (physical properties, veining & mineralogy, isotope geochemistry).
• Packer tests (stress magnitudes, permeability & fluid sampling).
• Wireline logging (stress/fracture orientations, heat flow).
Stage 3: Site Surveys and Long-Term Monitoring
• Install temporary 3-component seismic array inside pilot hole (~ 40 levels).
• Conduct 2-D and 3-D seismic surveys, recording both at the surface and with downhole array.
• Instrument pilot hole for long-term monitoring of pore pressure, strain, temperature and seismic activity.
Resistivity, Ohm-m
1
10
100
VE 1:1