



Apollo Lunar Roving Vehicle "Grover"

USGS ASTROGEOLOGY SCIENCE CENTER, FLAGSTAFF, AZ

The Apollo Lunar Roving Vehicle was designed for lunar exploration and gravity. Due to Earth's increased gravitational forces, the Lunar Roving Vehicle could not support the weight of a suited astronaut on Earth. As a result, U. S. Geological Survey's Astrogeology Branch built a near-copy for use on Earth: "Grover the Geologic Rover."

We were contracted to assess the condition of "Grover" as well as recommend a treatment plan. The assessment presented unique challenges due to the materials and fabrication techniques, which include: Steel (riveted and welded), metal alloys (extruded, milled, cast, and welded), lubrication fittings, wires and cables, rubber tires, gaskets and seals, fragile metallic and/or metallized plastic foil, and synthetic upholstery fabrics commonly used in 1960s-1970s.

The goals of the assessment were to better understand the materials of construction, present conditions, and the likely causes of observed deterioration. Research and documentation provided on the artifact was reviewed to understand the specifics of the artifact's manufacture and history.

The findings of the study were incorporated into an assessment report in written and photographic form. The report included recommendations for treatment of the observed conditions, including products and procedures to address the conditions, including methods, materials and equipment to be utilized, and estimated time for the treatment.

MORE INFORMATION:

<https://evergreene.com/projects/apollo-lunar-vehicle/>

SERVICES PERFORMED

Investigation, Testing & Analysis
Metal Conservation–Draft
Research & Documentation
Surveys & Condition Assessments

PROJECT DETAILS

Client / Owner
U.S. Geological Survey

