

GAGE

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Geodetic Facility for the
Advancement of Geoscience

Creating the Digital Collection of William E. Davies at the USGS Library

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Introduction

During the middle of the 20th Century, the United States undertook numerous Antarctic expeditions that provided critical advancements in geology and geoscience. The scientists and explorers on these expeditions returned with troves of data and pictures that may yield further discoveries; however, many of these archived collections are currently available in print form only, limiting access and decreasing the overall utility of these collections. We therefore focused our work on digitizing the collection of William E. Davies, a USGS geologist present on the USS Atka's Antarctic expedition of 1954-55.

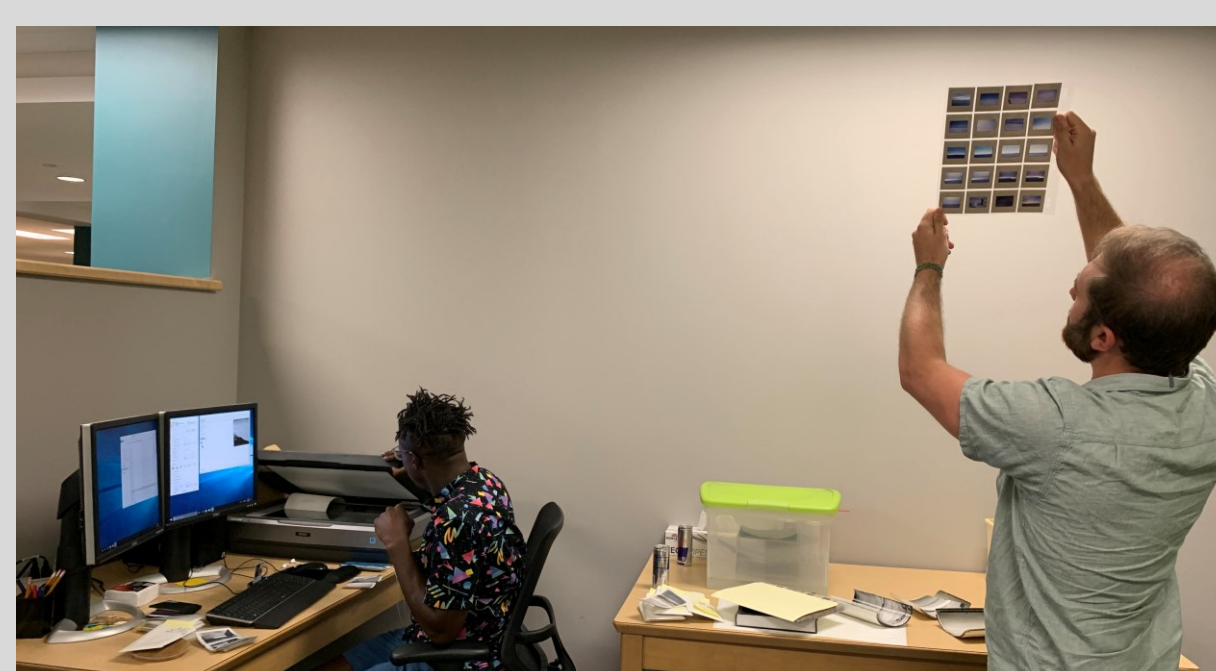
Methods

Step 1:

We physically sorted and analyzed the materials.

Step 2:

We digitized transparencies, photographs, maps, and field records with an Epson Expression 10000 XL scanner, along with a quality control check.



Step 3:

For parts of the collection, we created .zip files and PDFs to increase accessibility of the collection resources. All of the files were captured as high-resolution, preservation-quality .tif.

Step 4:

We uploaded the scanned materials to ScienceBase, the trusted data repository for the USGS, and created descriptive metadata for each record.

Step 5:

By creating descriptive metadata and a finding aid for the field records collection, we facilitated user navigation and retrieval of the digital and physical materials.

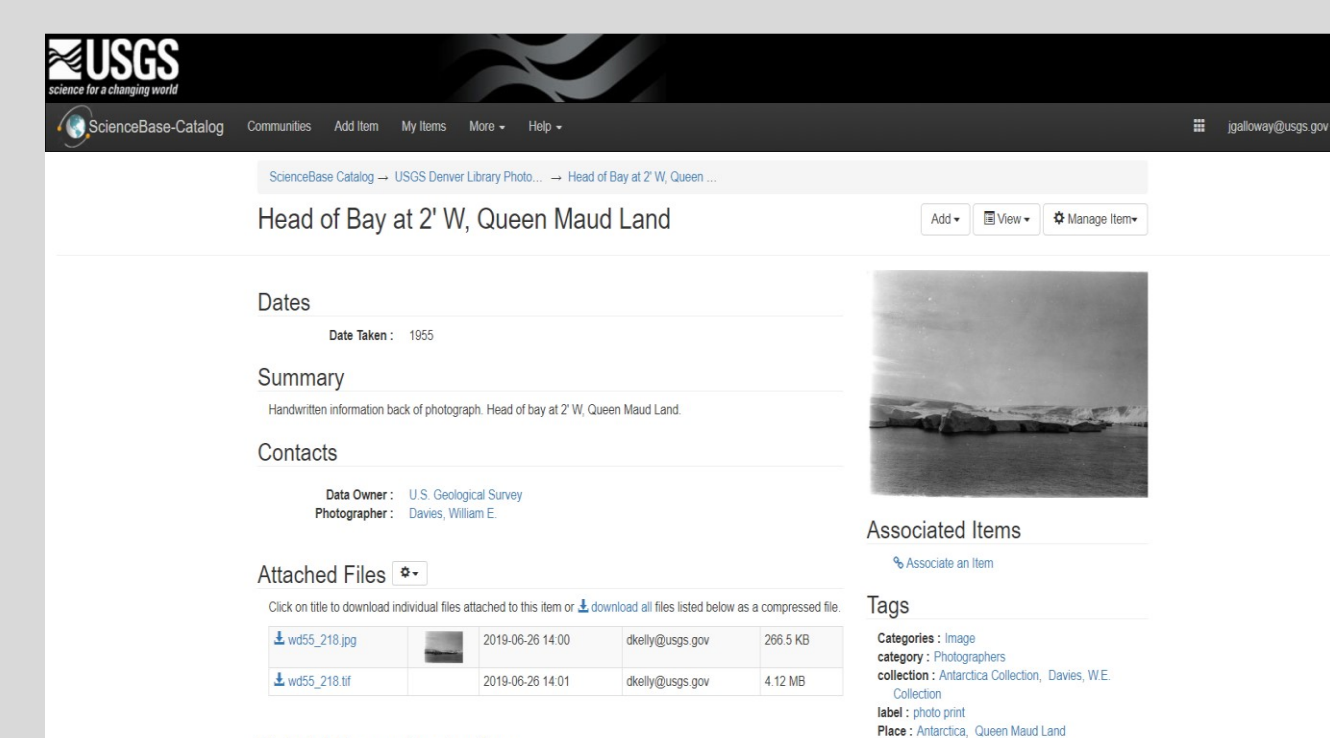


Figure 1: Screenshot of an uploaded photograph on ScienceBase.



Figure 2: Color transparencies from Davies' personal camera.

Results and Significance

Over the course of our project, we digitized the William E. Davies collection of his 1954-55 Antarctic expedition. These digitized materials formed the basis of our contribution to ScienceBase, and substantially increased the number of available Antarctic resources. This information is now a part of a database with open access to scientists, researchers, and the general public, increasing the utility of these materials.

Items digitized:

- ❖ 548 color transparencies slides
- ❖ 198 black & white photo prints
- ❖ 94 aerial reconnaissance photographs
- ❖ 11 maps
- ❖ Davies' diary

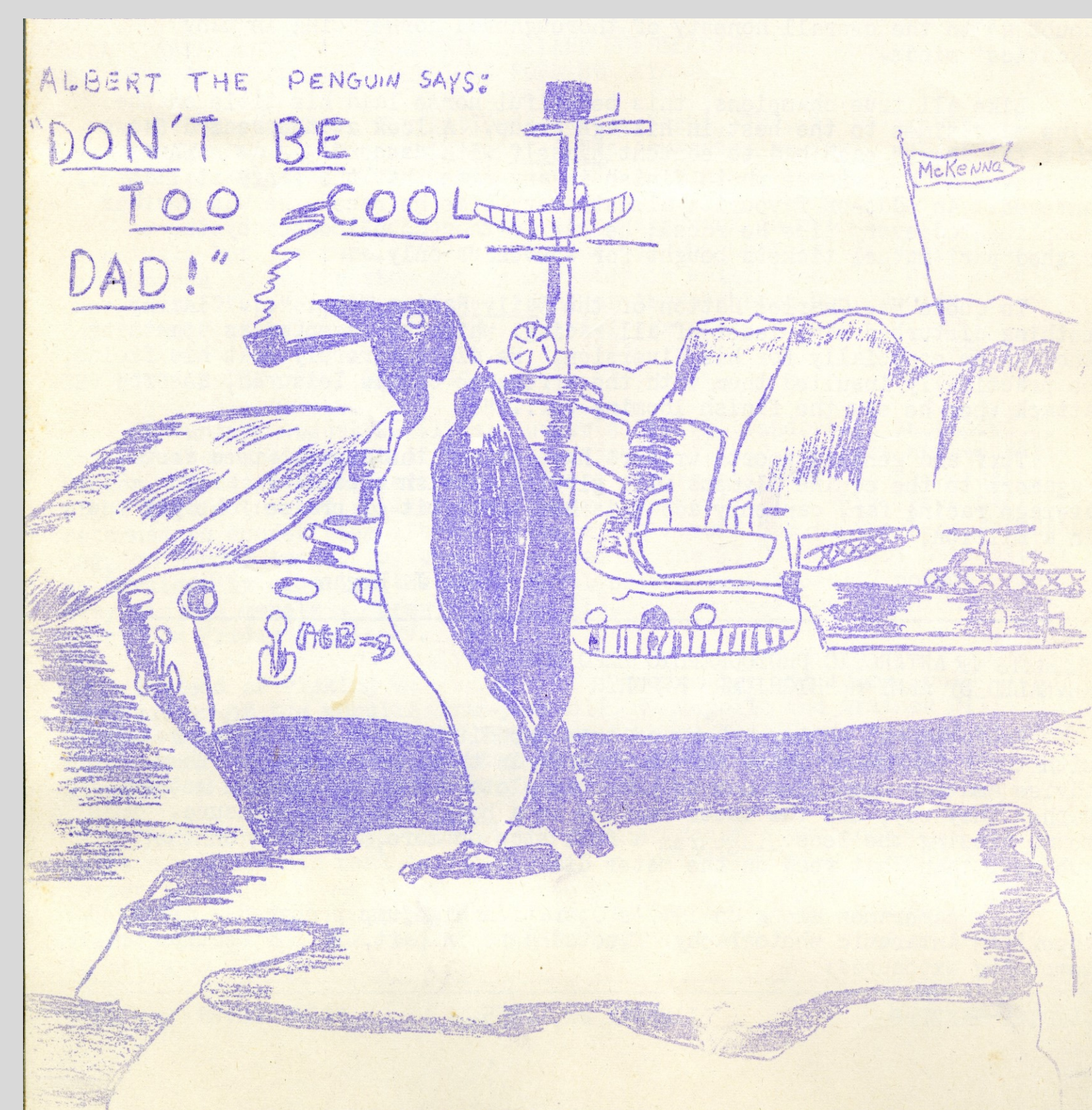


Figure 3: Sketch taken from USS Atka's ship newspaper, Jan. 1955.

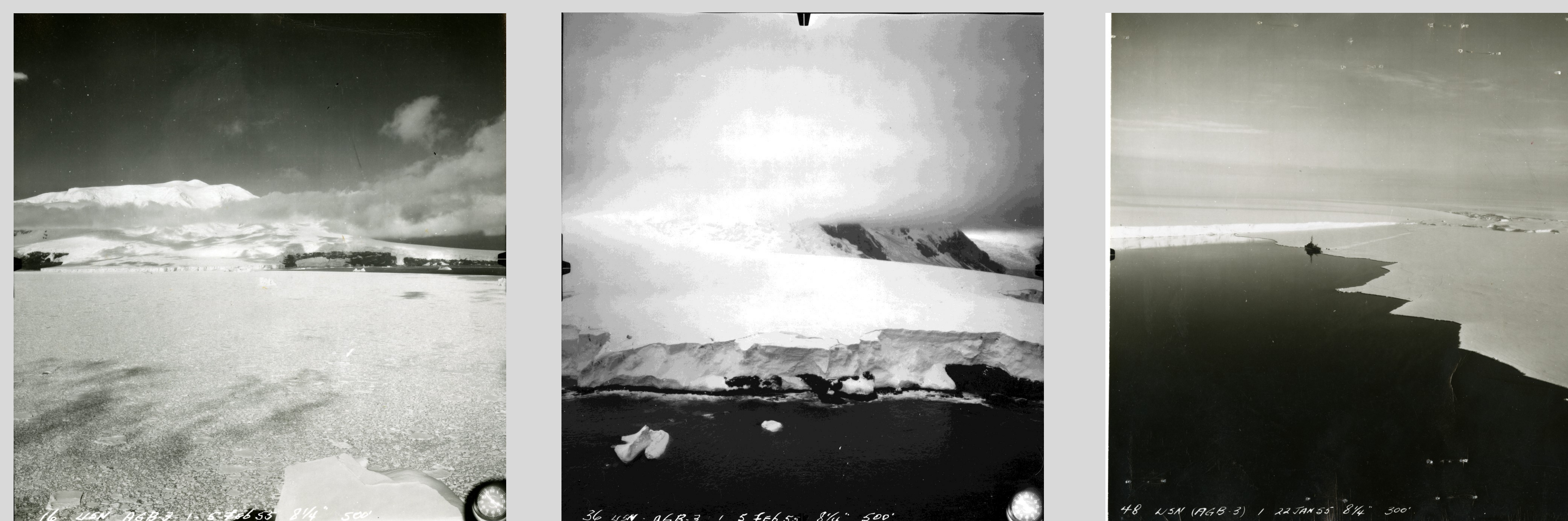


Figure 4: Photographs taken by Davies from a helicopter, on behalf of the US Navy.

Practical Applications

- Glaciologists, climatologists, and other scientists can use these historical photos for research, repeat photography, and other study analysis.
- Science educators can utilize these photos to enhance classroom learning experiences by provide primary sources.
- Maps and charts could be utilized to study changes in the Antarctic coastline, particularly recession of ice sheets.
- These materials provide historical documentation of an early expedition of the continent, which was foundational for current efforts.

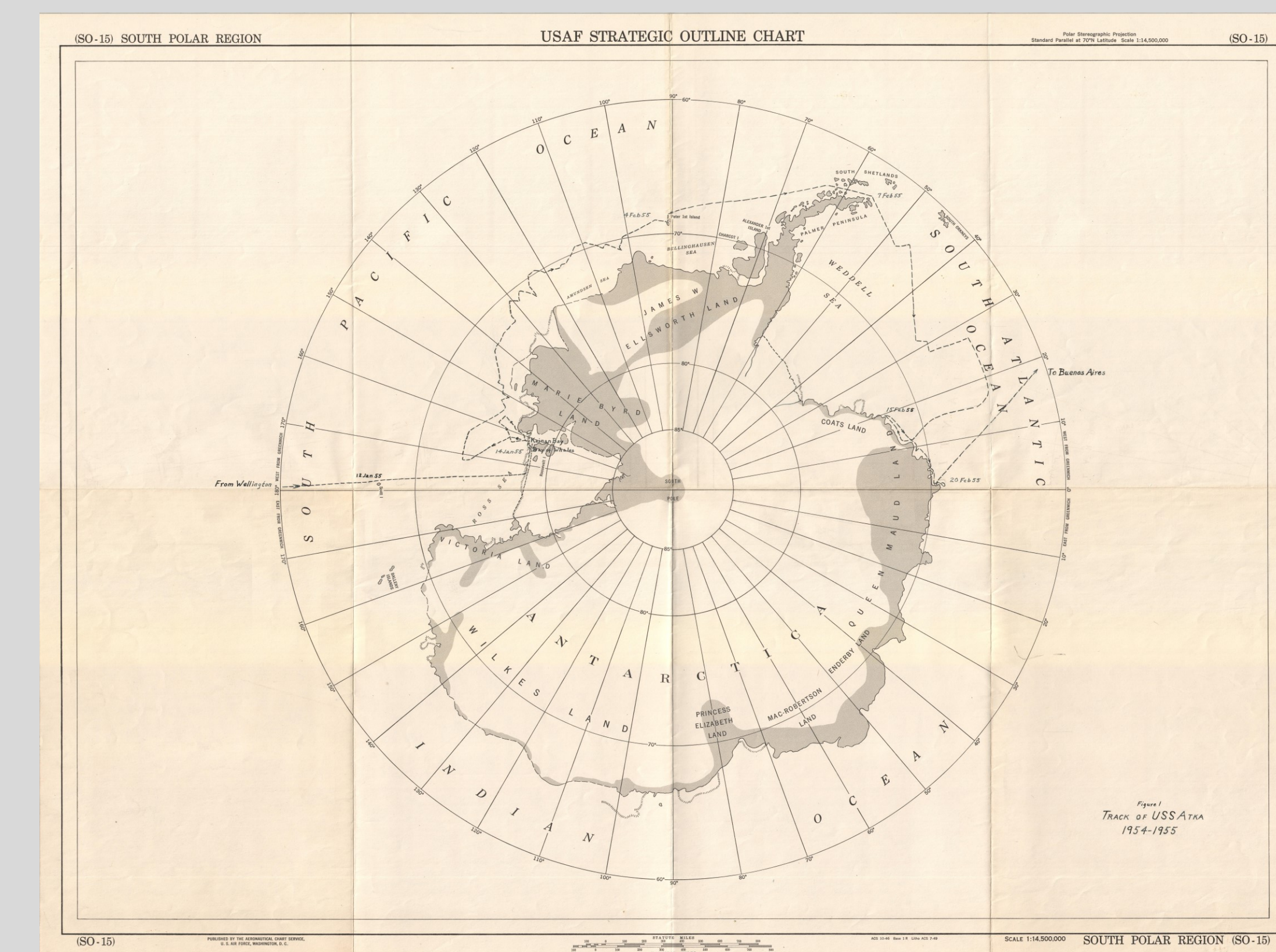


Figure 5: Davies' plotted map of the USS Atka's course.

Acknowledgements

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William E. Davies Field
Notebook Collection



William E. Davies
Photographic Collection



ScienceBase
Antarctica Collection

