

Final Technical Report

Prepared for the U.S. Geological Survey
National Geological and Geophysical Data Preservation Program
Award No. G09AP00100

07/01/2009 – 09/30/2010

INVENTORY OF CALIFORNIA GEOLOGIC MAP DATA

Submitted December 28, 2010

By

George J. Saucedo
California Geological Survey
345 Middlefield Road, MS-520
Menlo Park, CA 94025
Phone: (650) 688-6368
FAX: (650) 688-6329
E-mail: George.Saucedo@conservation.ca.gov

Department of Conservation
California Geological Survey



ABSTRACT

This project, funded in part through the U.S. Geological Survey – National Geological and Geophysical Data Preservation Program (NGGDPP) Award No. G09AP00100, enabled the California Geological Survey (CGS) to conduct a detailed inventory and create metadata for a collection of paper geologic maps contained in the files of its Regional Geologic Mapping Project (RGMP). These files contain the larger-scale source data materials used in the preparation of 1:250,000-scale Geologic Atlas and Regional Geologic Map series compilations. Both published and unpublished geologic mapping, conducted by CGS staff and other geologists, are contained within these files and were used in these regional compilations. Many are one-of-a-kind geologic maps, some are deteriorating, and a few have been lost over time. This collection is used frequently by CGS staff geologists, state, and federal agencies (including U.S. Geological Survey), consulting firms, and the general public.

A detailed, systematic inventory was conducted by going through each file contained in the collection and recording pertinent information into the CSV flat-file template obtained from the NGGDPP website (<http://datapreservation.usgs.gov/catalog.shtml#templates>). These data were then uploaded to the National Digital Catalog. This inventory and metadata creation represents the first step in identifying significant materials and establishing priorities for future preservation and archiving activities. It will also serve as an expedient way to locate pertinent geologic mapping for CGS staff and our stakeholders.

This project represented the first effort by CGS toward identifying those materials that need to be archived and preserved. Programs within the CGS are working together to identify their respective and relevant collections in an effort to develop a coordinated plan for future archiving and data preservation.

TABLE OF CONTENTS

ABSTRACT	1
TABLE OF CONTENTS	2
LIST OF FIGURES.....	3
Inventory of California Geologic Map Data.....	4
Introduction.....	4
Project Description	5
Outcome	7

LIST OF FIGURES

- Figure 1. Image of the Geologic Map of the San Jose Sheet - an example of one of the twenty-seven sheets that comprise the 1:250,000-scale Geologic Atlas Series..... 4**
- Figure 2. Image of a portion of the Index to Geologic Mapping used in the compilation of the San Jose Sheet - an example of the detailed geologic maps used for one map sheet 5**
- Figure 3. Examples of parts of unpublished geologic mapping contained in the Regional Geologic Mapping Program files..... 6**

INVENTORY OF CALIFORNIA GEOLOGIC MAP DATA

Introduction:

This project was funded in part through the U.S. Geological Survey – National Geological and Geophysical Data Preservation Program (NGGDPP) Award No. G09AP00100 and represents the first year of participation, by the California Geological Survey (CGS), in this program. The purpose of this project was to conduct a detailed inventory and create metadata for the geologic maps contained in the files of our Regional Geologic Mapping Project (RGMP). These files contain the larger-scale source data materials that were used in the preparation of our 1:250,000-scale Geologic Atlas and Regional Geologic Map series compilations (Figure 1) as well as other geologic data collected over decades.

These series of maps provide a bibliographic resource for users looking for more detailed geologic mapping (Figure 2). The above-mentioned files contain both published and unpublished geologic mapping conducted by CGS geologists or submitted by other geologists for use in these compilations (Figure 3). It was determined that a systematic inventory and the creation of pertinent metadata would be the first step in identifying significant materials and establishing priorities for future preservation and archiving activities. The results of this project would also serve as an expedient way to locate pertinent geologic mapping for our stakeholders.

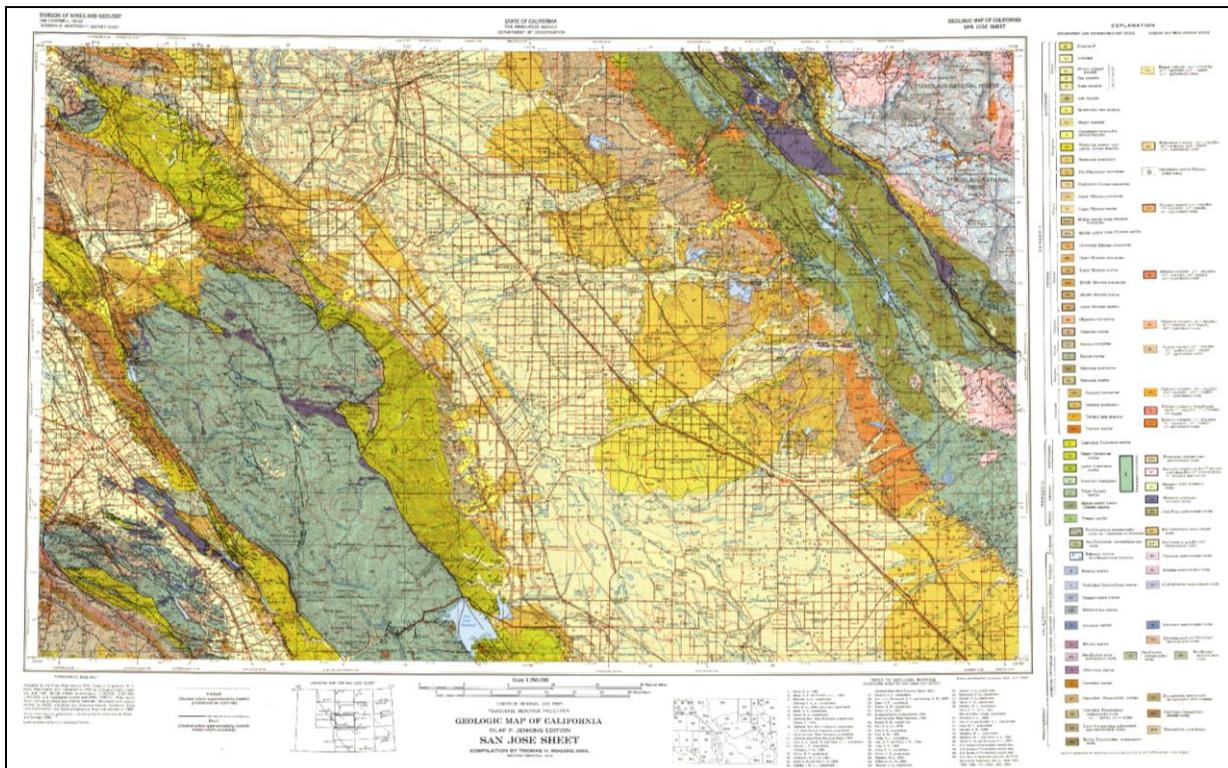


Figure 1. Image of the Geologic Map of the San Jose Sheet - an example of one of the twenty-seven sheets that comprise the 1:250,000-scale Geologic Atlas Series.

Project Description:

The project began July 1st 2009 and was to be completed on June 30th 2010. However, due to budgetary restrictions imposed on state agencies to deal with California's financial crisis, CGS was unable to hire student help and existing project staff members were faced with taking three furlough days per month. For these reasons, a three month, no-cost extension was requested and granted.

The primary goal of this project was to create metadata for the RGMP geologic map collection that would then be used in establishing priorities for future preservation and archiving activities and also serve as a tool to expediently locate relevant geologic mapping for our stakeholders. This goal was to be accomplished by a careful inventory of the unpublished geologic maps in the RGMP files and recording pertinent and required information into a CSV flat-file template obtained through the NGDPP website (<http://datapreservation.usgs.gov/catalog.shtml#templates>).

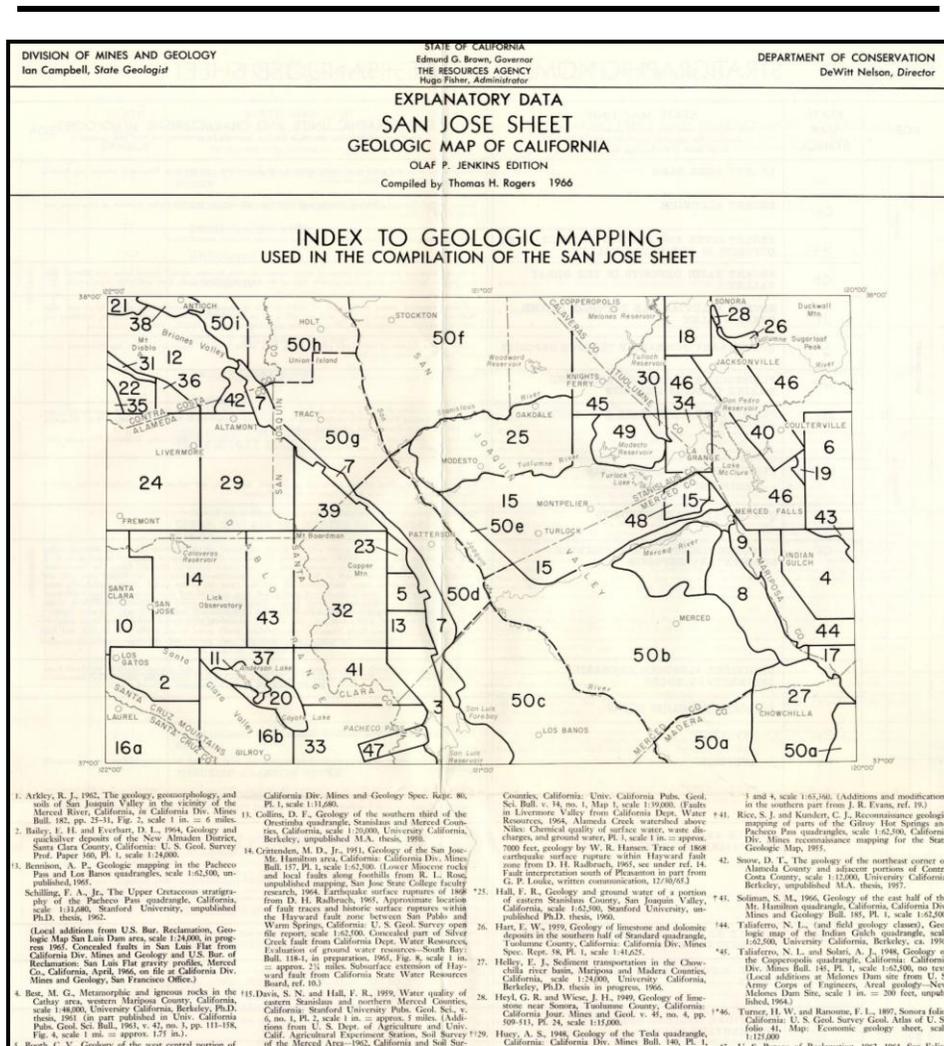


Figure 2. Image of a portion of the Index to Geologic Mapping used in the compilation of the San Jose Sheet - an example of the detailed geologic maps used for one map sheet.

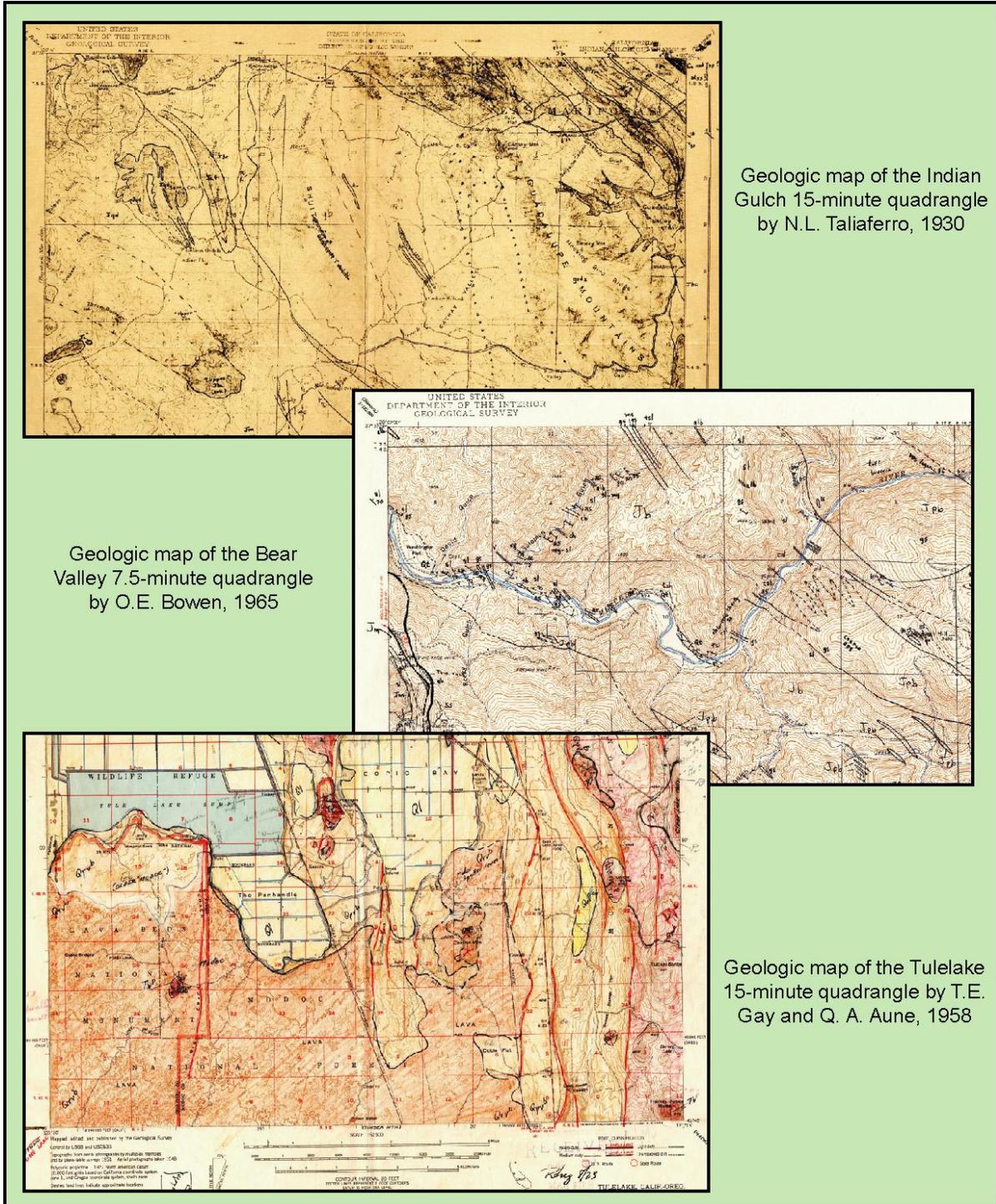


Figure 3. Examples of parts of unpublished geologic mapping contained in the Regional Geologic Mapping Program files.

The RGMP geologic map files are arranged alphabetically by the names of the twenty-seven 1:250,000-scale (1°x 2°) topographic quadrangle sheets covering California. The files consist of thirty-six drawers contained in eight, five-drawer file cabinets with each file drawer averaging approximately one hundred folders. During the initial stage of this project the collection was found to contain mapping and other geologic information not within the original scope of this project, that is, to inventory unpublished geologic mapping. Contained within the files are copies of published geologic mapping, published journal articles, private consulting reports, formal reports prepared by other governmental agencies (i.e. California Department of Water Resources, U.S. Bureau of Reclamation, Army Corps of Engineers, etc.), and graduate thesis mapping. In addition, the files contain an extensive collection of geologic mapping conducted by Southern Pacific Railroad (SPR) in the 1950's throughout California. It was decided that these files would not be included as part of this project. However, it was determined that the SPR mapping should be added to the NCGDPP catalog as a separate collection and inventoried, as such, at a later date.

The author reviewed each file folder in the collection to determine suitability for inclusion in the inventory. Some folders had hand-written data sheets attached which helped in gathering information to be entered into the flat-file. These data sheets typically contained the map author's name, title, year, and affiliation, however, locational coordinates were not included. For files without data sheets the items in the folder were reviewed to collect basic metadata information. Source data maps for the individual 1° x 2° geologic maps (Figure 2) were also consulted for reference information. Locational information had to be determined for each item entered in the flat-file, however, for a number of maps, coordinates could not be determined at the time of data entry due to missing or inadequate base material. The latitude and longitude of the map's center was used for the "coordinates" entry. For quadrangle-based map areas the center point of the quadrangle was used even if only a portion of the quadrangle was mapped.

When the inventory was completed, a total of 1,090 records had been created, of these, 132 were lacking locational coordinates leaving 958 records that were uploaded to NCGDPP website <http://my.usgs.gov/csc/nggdpp/upload> for inclusion into the National Digital Catalog. Once coordinates have been established for the remaining records the file will be updated.

Outcome:

Funding through the NCGDPP provided the opportunity to complete this inventory and create metadata for a collection of geologic maps contained in the files of the California Geological Survey's Regional Geologic Mapping Project. This inventory and the metadata created represent the first step in identifying significant materials and establishing priorities for future preservation and archiving activities. It will also serve as an expedient way to locate pertinent geologic mapping for CGS staff and our stakeholders. Programs within the CGS are working together to identify their respective and relevant collections in an effort to develop a coordinated plan for future archiving and data preservation.

The following is a summary of information acquired as a direct result of this project:

- 1,090 new records were created describing a previously undocumented collection of geologic maps.
- 958 of these records were added to the National Digital Catalog
- The remaining 132 records will be added to the National Catalog once coordinates have been determined
- CGS is now working on scanning this collection to obtain digital images for archiving
- Southern Pacific Railroad geologic mapping, contained in these files, should be considered as a separate collection and inventoried as such
- Some of the thesis mapping contained in the files may warrant archiving due to age and limited availability

The California Geological Survey looks forward to future cooperation and participation in this program.