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Integration of the Physical and Chemical Rock Properties, Structure, and Permeability of the San Andreas Fault, San Andreas Fault Observatory at Depth Borehole, California

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Data management Plan: Structure, Permeability Architecture, and Rock Properties of the San Andreas Fault at SAFOD – Insights from Microscopy, Geochemistry, and Physical Properties

Types of data

We will collect a range of rock analyses: whole rock geochemical analyses; stable isotope data; microstructural data; whole-rock geochemical data, sample locations,X-ray data from X-ray diffraction analyses and synchrotron analyses.

The bulk of the data will be laboratory based analytical data; we will also synthesize exisiting data sets help on servers related to the SAFOD project. These data will be collected on standard analytical equipment, most of which have their own back up data systems. We will also use existing SAFOD data sets that we have generated to date. Almost all of these data will be acquired and stored with internal laboratory controls on QA/QC.

Data and metadata standards

Most of the data sets we use or generate aer in the form of spreadsheets - Excel, Goolge Sheets, etc., and will be saved in the original formats (e. g., .xlsx, etc) AND as .csv and pdf formats. Metadata file consist of brief over view documents that explain in further detail the nature of the data files - what the data are, where the samples were collected - in the SAFOD case, by depth, and linked to the ICDP databases, and where the analyses were performed.

Policies for access and sharing

We make all of our data openly accessible on the Utah State University Digital Commons platform https://digitalcommons.usu.edu/. This system allows for public accessibility, web-based searchable files that are housed at 2-3 different cloud-based archiving systems. We will also record our samples via IEDA system, where needed, for field-based samples.

Policies and provisions for re-use, re-distribution

We prefer to have a 1 year right of access to our data. Usually we place our data in the Digital Commons site towards the end of the project - typically when students fnish their M. S. or Ph.D. programs, we upload the data.

Plans for archiving and preservation of access

Raw data files are stored in https://digitalcommons.usu.edu/, and we are told that this platform will be archived throughout the evolution of data farms, cloud storage, etc. Parsed raw data files, and the derived interpretations that appear in publications are housed in data repositories associated with the publications, and sample locality data are preserved in IEDA.