

UGTA Photograph Database

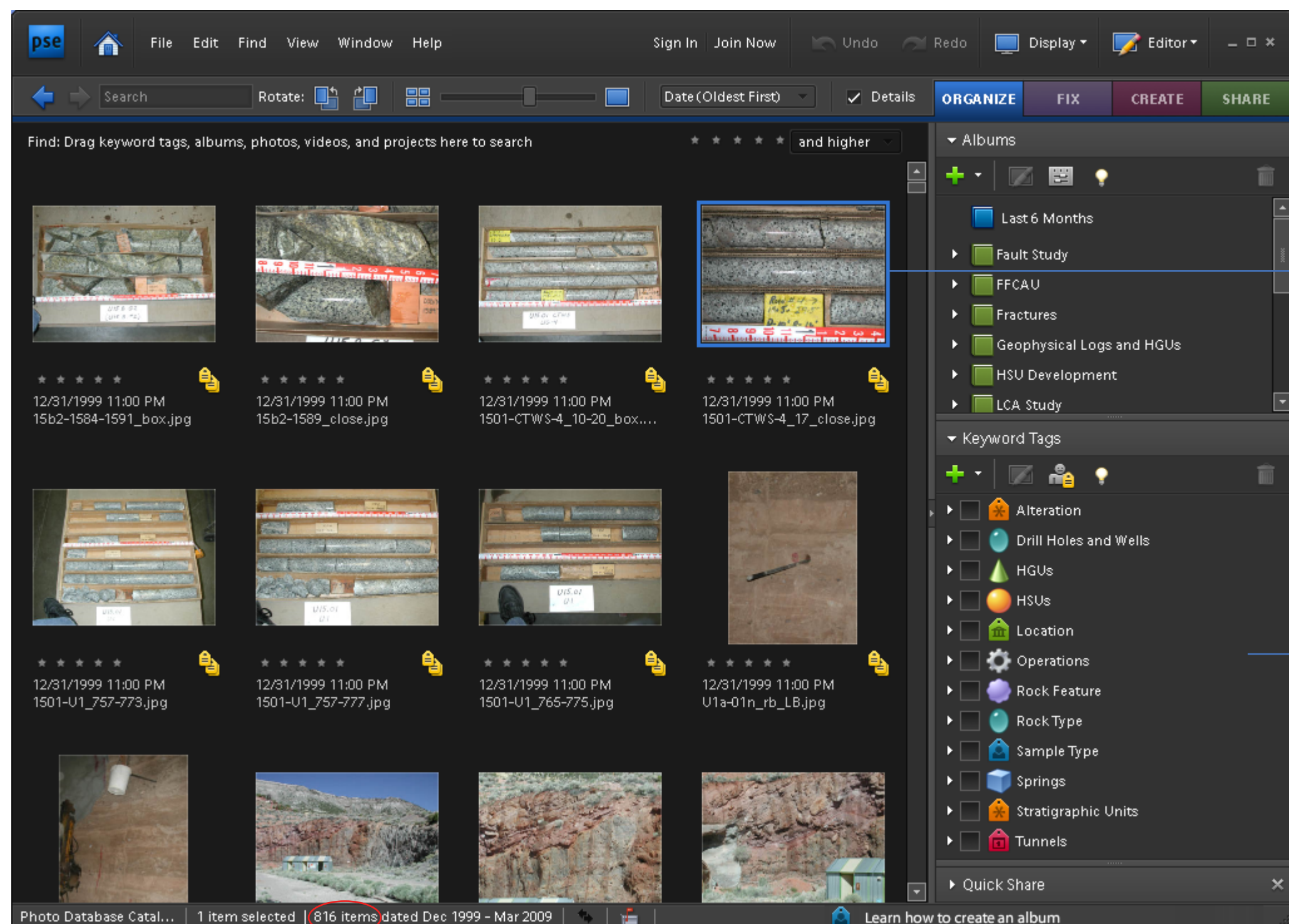
Underground Test Area and Borehole Program
Environmental Restoration
National Security Technologies, LLC (NSTec)

UGTA Technical Information Exchange Meeting
April 20, 2009

Abstract

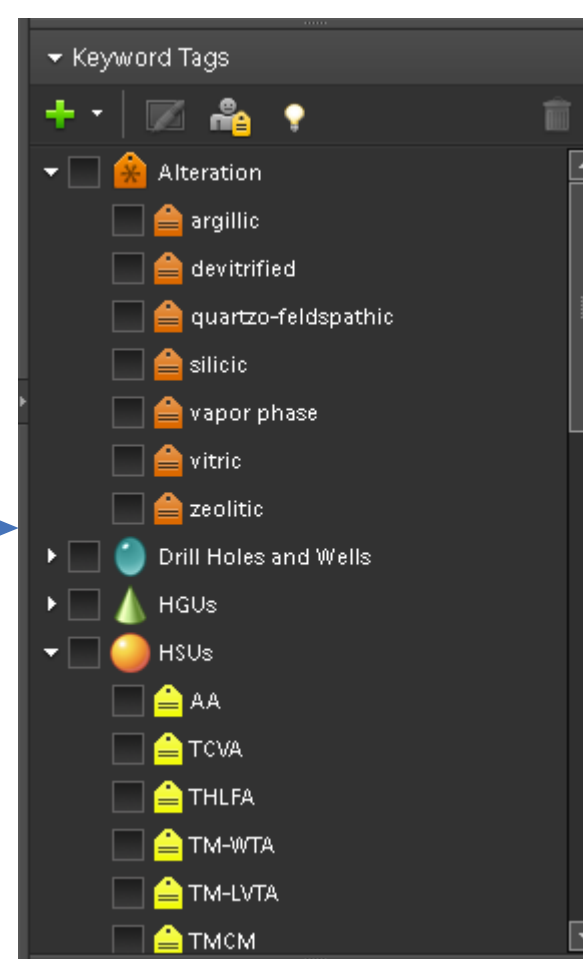
One of the advantages of the Nevada Test Site (NTS) is that most of the geologic and hydrologic features such as hydrogeologic units (HGUs), hydrostratigraphic units (HSUs), and faults, which are important aspects of flow and transport modeling, are exposed at the surface somewhere in the vicinity of the NTS and thus are available for direct observation. However, due to access restrictions and the remote locations of many of the features, most Underground Test Area (UGTA) participants cannot observe these features directly in the field. Fortunately, NSTec geologists and their predecessors have photographed many of these features through the years. During fiscal year 2009, work was done to develop an online photograph database for use by the UGTA community. Photographs were organized, compiled, and imported into Adobe® Photoshop® Elements 7. The photographs were then assigned keyword tags such as alteration type, HGU, HSU, location, rock feature, rock type, and stratigraphic unit. Some fully tagged photographs were then selected and uploaded to the UGTA website. This online photograph database provides easy access for all UGTA participants and can help “ground truth” their analytical and modeling tasks. It also provides new participants a resource to more quickly learn the geology and hydrogeology of the NTS.

NSTec's Adobe® Photoshop® Elements 7 Photograph Database

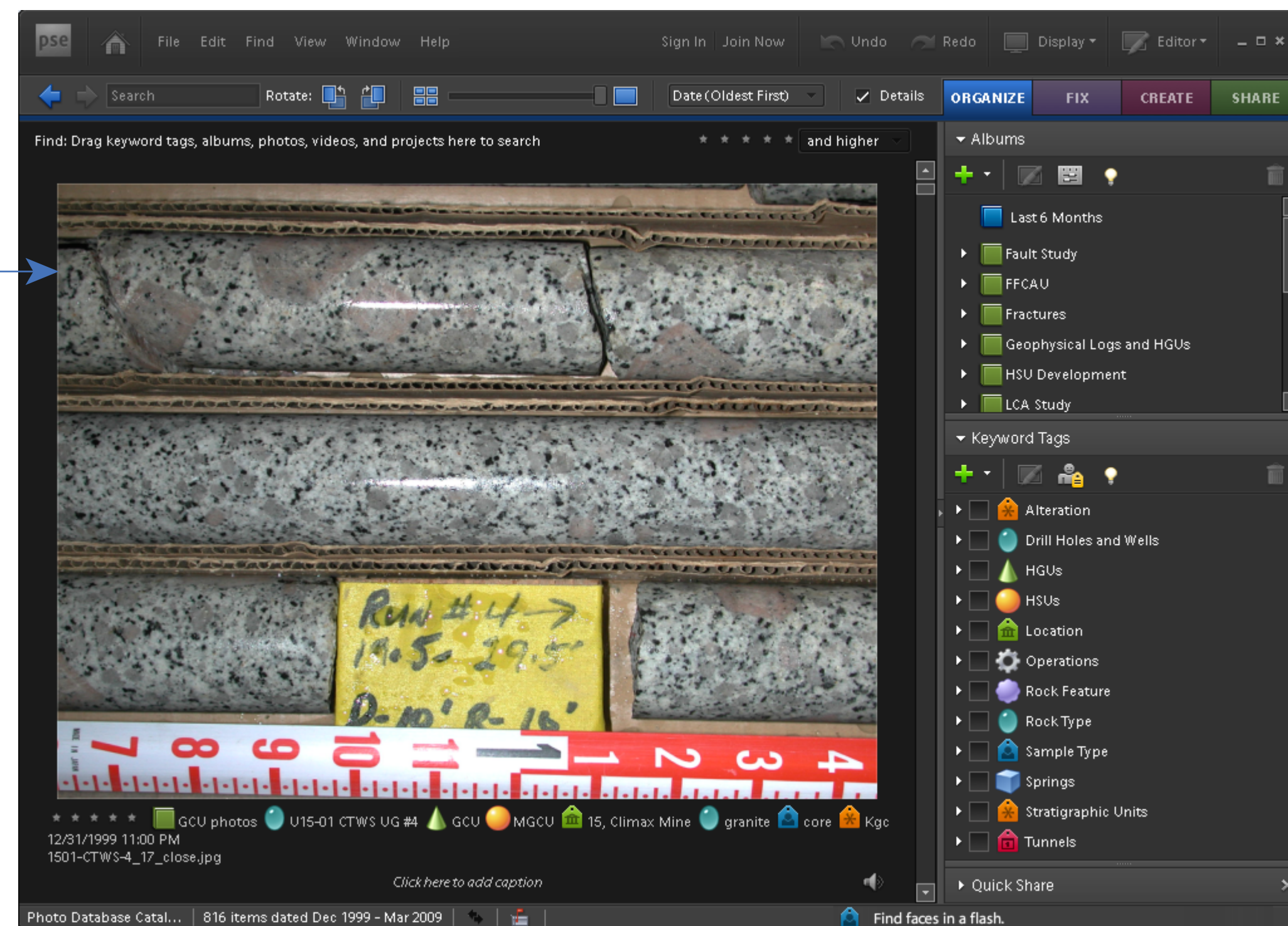


Number of photographs in NSTec's database

Snapshot of NSTec's Adobe® Photoshop® Elements 7 photograph database.

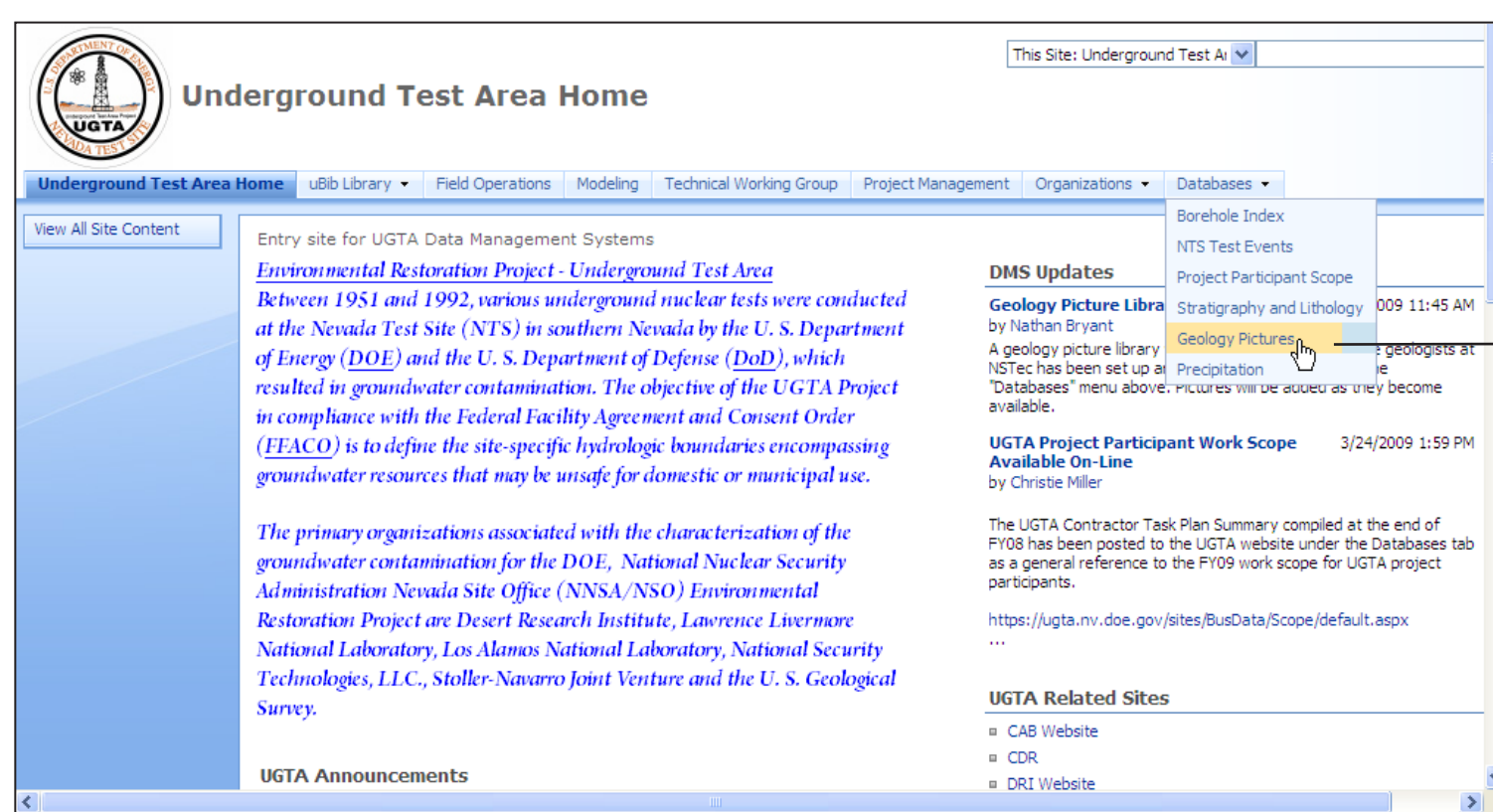


Snapshot of the expandable keyword tag list.

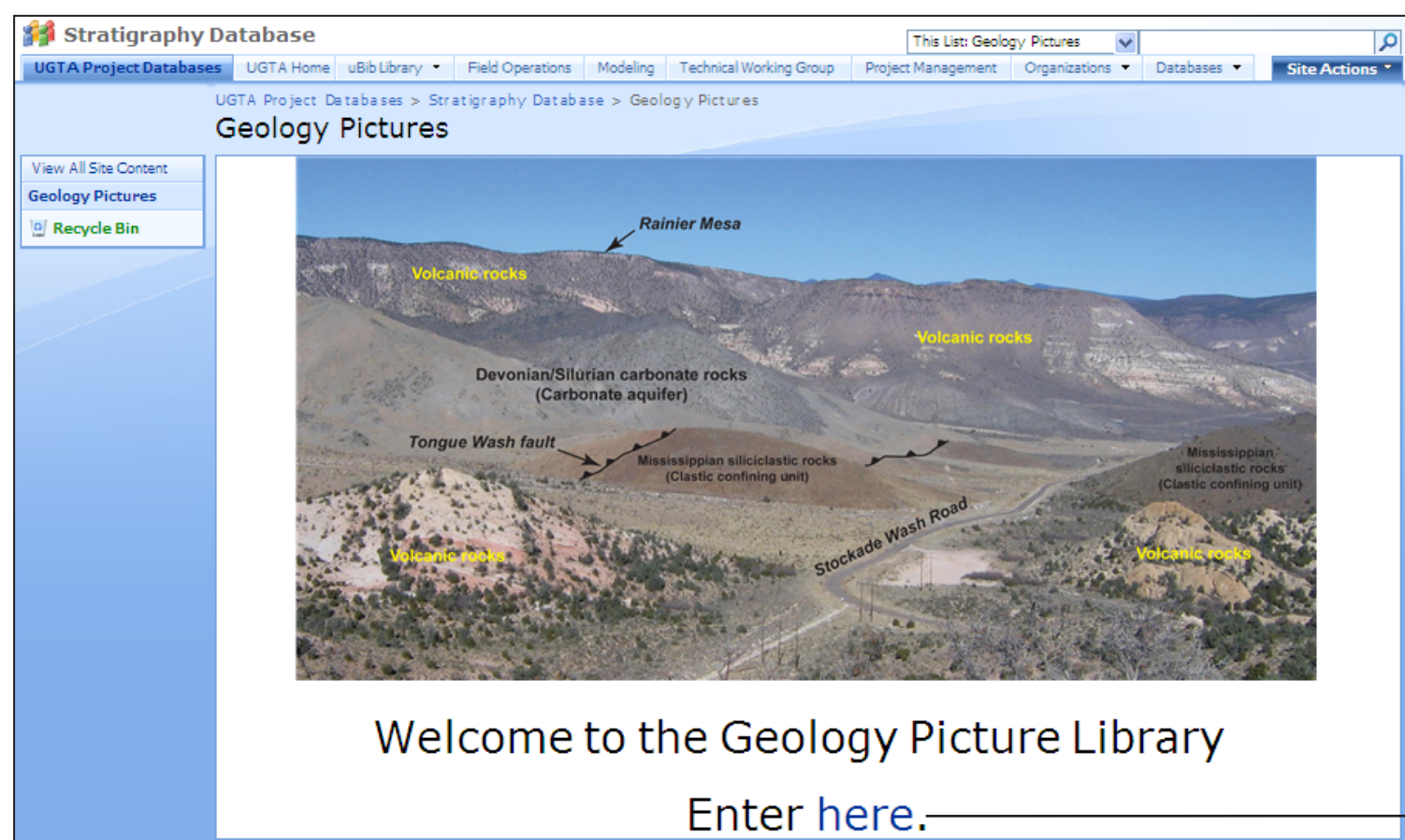


An example of a photograph from the database showing its assigned keyword tags (below the photograph).

Photograph Database on the UGTA Website (Collaborative Effort between NSTec and Stoller-Navarro Joint Venture)

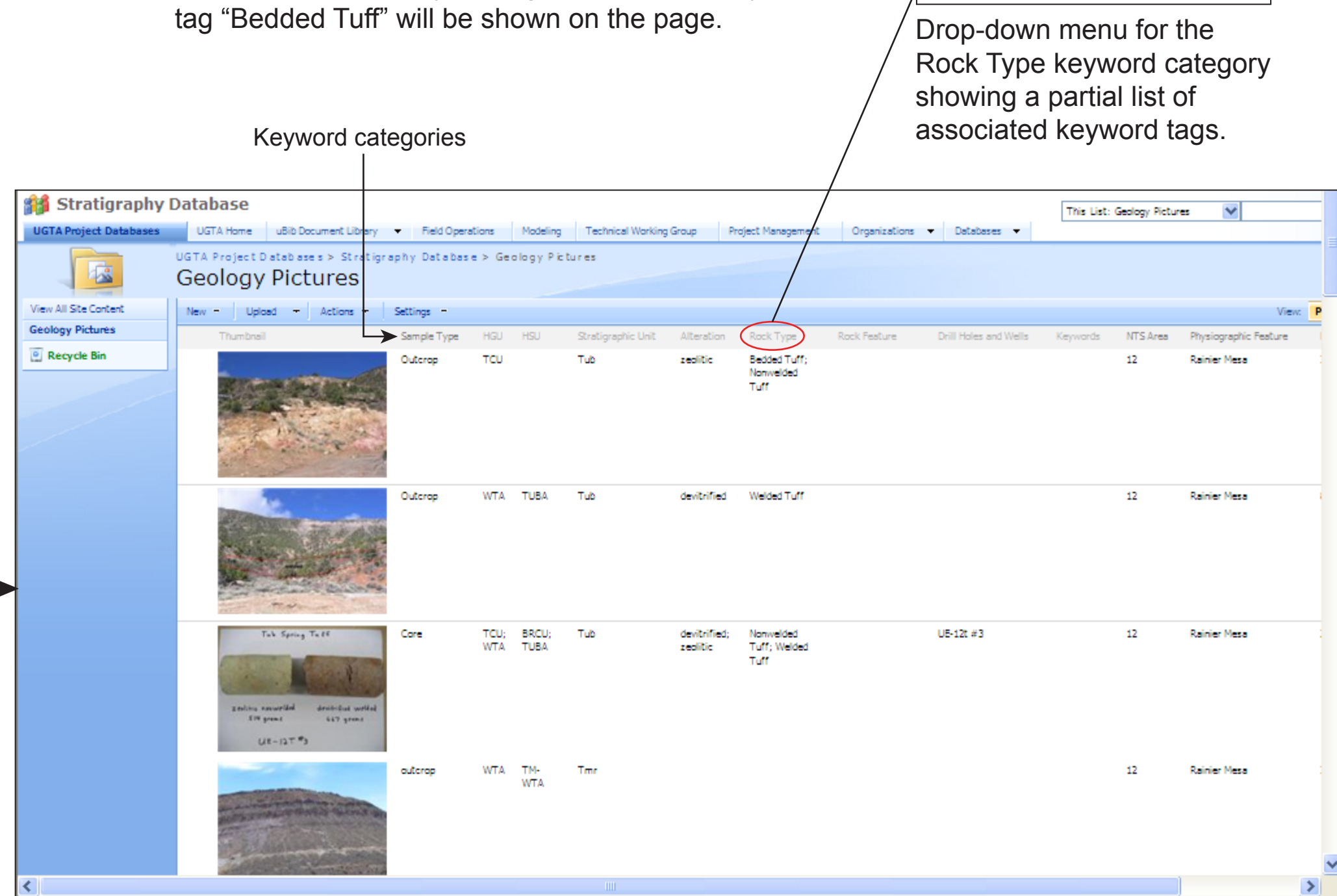


From the UGTA homepage (<https://ugta.nv.doe.gov/default.aspx>), the photograph database can be accessed by going to the “Databases” tab and selecting “Geology Pictures.”



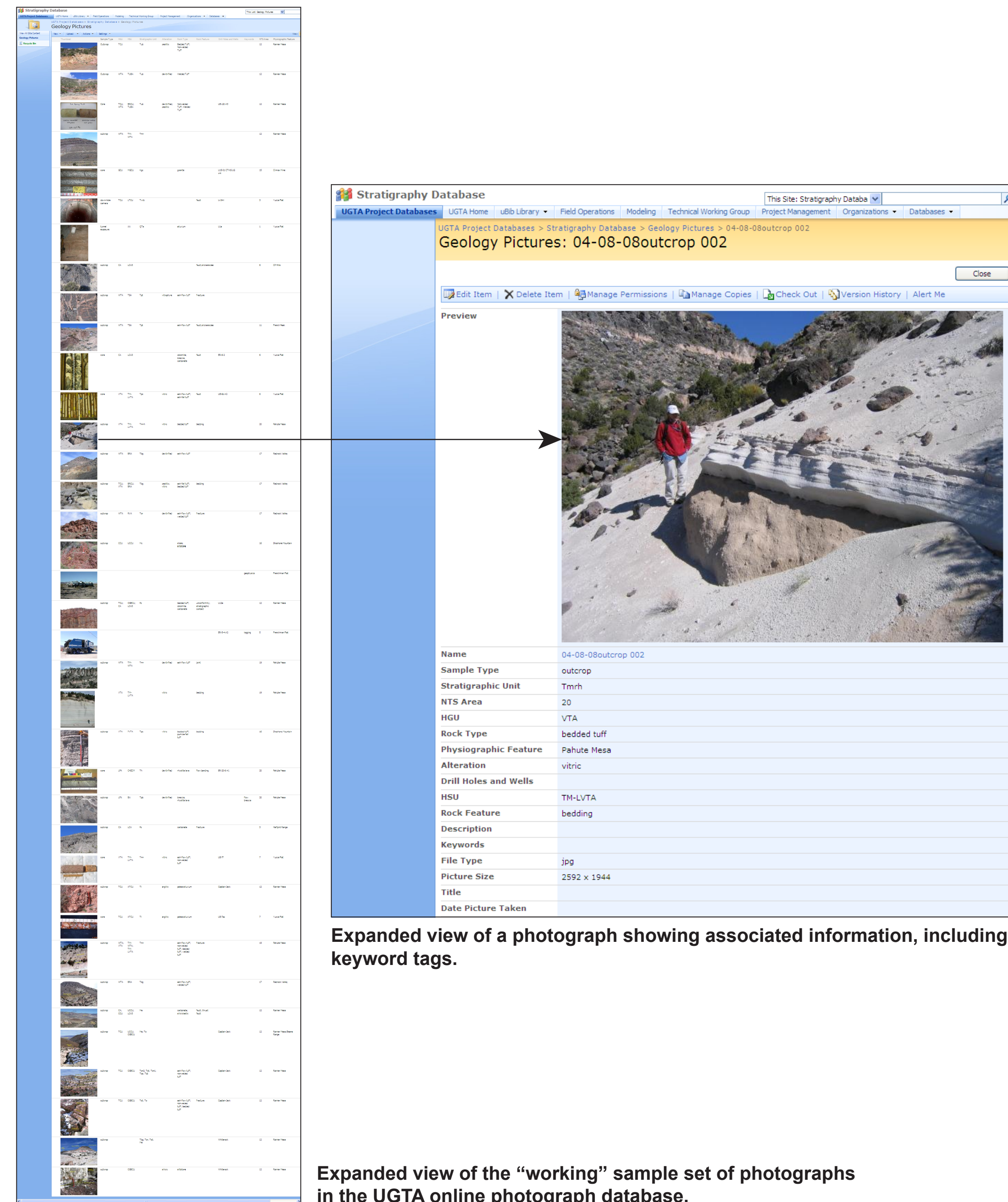
Snapshot of the entrance page to the UGTA online photograph database, which can also be accessed by going to this link:
<https://ugta.nv.doe.gov/sites/BusData/Stratigraphy/Geology%20Pictures/Forms/Welcome.aspx>.

Each keyword category (e.g., Rock Type) is a drop-down menu that lists the possible keyword tags. The drop-down menus can be used to filter which photographs are shown. For example, if “Bedded Tuff” is selected, only photographs with the keyword tag “Bedded Tuff” will be shown on the page.



Snapshot of the UGTA online photograph database showing photographs and their associated keyword tags.

To date, only a small “working” sample set of photographs has been uploaded to the UGTA website. Additional photographs will be uploaded to the website as more are compiled and tagged.



Expanded view of a photograph showing associated information, including keyword tags.

Expanded view of the “working” sample set of photographs in the UGTA online photograph database.