The Buckeye quadrangle is located directly south of the town of Buckeye, approximately 40 km west of Phoenix, Arizona. The area is in the heart of the Buckeye Hills, defined by steep hills surrounded by broad granite pediments and bajadas. The Gila River flows through the northern part of the quad. The area was mapped contemporaneously with the adjacent Avondale SW 7.5' quadrangle, between November 2001 and April 2002. Field work was performed two days a week, for a total of approximately 36 days of field work for both quads. A 1:24,000 scale map is the primary product of this study (Plate 1). Mapping was done under the joint State-Federal STATEMAP program, as specified in the National Geologic Mapping Act of 1992, and was jointly funded by the Arizona Geological Survey and the U.S. Geological Survey under STATEMAP Program Contract #01HQAG098. Interested readers should be aware that updates of the digital map coverage could be released in the future.

Purpose: This geologic mapping southeast of Tucson is part of continuing efforts by the AZGS to map the geology of the Phoenix - Tucson urban corridor. This map builds on and complements previous and concurrent geologic mapping efforts in the Tucson area and is intended to enhance our understanding of the geology of the area and to aid in assessing and understanding geologic hazards.

Currentness Reference: publication date

Status:
Progress: Complete
Maintenance and Update Frequency: Unknown

Bounding Coordinates:
West Bounding Coordinate: -112.625
East Bounding Coordinate: -112.50
North Bounding Coordinate: 33.375
South Bounding Coordinate: 33.25

Keywords:
Theme:
Theme Keyword Thesaurus: None
Theme Keyword: digital cartography
digital geologic map
surficial geology
bedrock geology

Place:
Place Keyword Thesaurus: None
Place_Keyword: Buckeye 7.5' quadrangle
Place_Keyword: Maricopa County
Place_Keyword: Arizona
Place_Keyword: U.S.A.
Place_Keyword: Buckeye Hills
Place_Keyword: Gila River
Access_Constraints: None
Use_Constraints: Not to be reproduced for commercial purposes
Point_of_Contact:
Contact_Information:
  Contact_Organization_Primary:
    Contact_Organization: Arizona Geological Survey
    Contact_Position: GIS Technician
    Contact_Address:
      Address_Type: mailing and physical address
      Address: 416 W. Congress St., # 100
      City: Tucson
      State_or_Province: Arizona
      Postal_Code: 85701
      Country: U.S.A.
    Contact_Voice_Telephone: 520-770-3500
    Contact_Facsimile_Telephone: 520-770-3505
    Hours_of_Service: 8:00 a.m to 5:00 p.m., M-F
Native_Data_Set_Environment: Adobe® PDF format files
Data_Quality_Information:
  Attribute_Accuracy:
    Attribute_Accuracy_Report: Although no formal tests were performed, the location and existence of objects, as well as object attribution, were tested for accuracy against the paper source maps from which the source dataset was digitized by direct visual comparison between the source maps and the digital dataset.
  Logical_Consistency_Report: Logically consistent
  Completeness_Report: Data completeness reflects the content of the source maps.
Lineage:
  Source_Information:
    Source_Citation:
      Citation_Information:
        Originator: Skotnicki, S.J.
        Title: Unpublished geologic field sheets from bedrock mapping in the Buckeye 7.5' quadrangle, Maricopa County, Arizona (published here)
        Publication_Date: unpublished material
        Geospatial_Data_Presentation_Form: map
    Source_Scale_Denominator: 24000
    Type_of_Source_Media: paper maps
    Source_Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 20020600
        Source_Currentness_Reference: ground condition
        Source_Citation_Abbreviation: bedrock mapping
    Source_Contribution: sources used to compile the new bedrock mapping for the Buckeye 7.5' quadrangle
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: BLM
Publication_Date: 1978
Title: BLM ariel photos, approximately 1:30,000 scale, color, dated 19780612
Geospatial_Data_Presentation_Form: aerial photograph
Other_Citation_Details: mylar sheets are same size as photos and are still attached to photos.
Source_Scale_Denominator: 24000
Type_of_Source_Media: photographic paper
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 19780612
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: photos
Source_Contribution: source used to compile surficial geologic mapping for the Buckeye 7.5' quadrangle
Process_Step:
  Process_Description:
    (1) Field sheets were scanned as tiff images, registered and rectified in ArcInfo, then digitized using ArcEdit
    (2) Mylar overlays were scanned as tiff images, registered and rectified in ArcInfo, then digitized using ArcEdit
    (3) ArcInfo coverages were edited and appended using ArcEdit
    (4) ArcInfo coverages were attributed using ArcView
Source_Used_Citation_Abbreviation: bedrock mapping
Source_Used_Citation_Abbreviation: photos
Process_Date: 20020600
Source_Produced_Citation_Abbreviation: bedrock coverage
Process_Contact:
  Contact_Information:
    Contact_Organization_Primary:
      Contact_Organization: Arizona Geological Survey
      Contact_Person: Skotnicki, S.J.
    Contact_Address:
      Address_Type: mailing and physical address
      Address: 416 W. Congress St., Suite 100
      City: Tucson
      State_or_Province: Arizona
      Postal_Code: 85701
      Country: U.S.A.
      Contact_Voice_Telephone: 520-770-3500
      Contact_Facsimile_Telephone: 520-770-3505
  Process_Description:
    (1) Surficial geology was mapped onto mylar overlain onto air photos using photogeologic interpretation
    (2) Mapping was spot checked in the field to test accuracy of map unit assignments
    (3) Mylar linework was scanned as tiff images and registered and rectified in ArcInfo.
Source_Used_Citation_Abbreviation: BLM air photos
Process_Date: 19780612
Source_Produced_Citation_Abbreviation: surficial mapping
Process_Contact:
  Contact_Information:
    Contact_Organization_Primary:
Contact Organization: Arizona Geological Survey
Contact Person: Skotnicki, S.J.

Contact Address:
Address Type: mailing and physical address
Address: 416 W. Congress St., Suite 100
City: Tucson
State or Province: Arizona
Postal Code: 85701
Country: U.S.A.
Contact Voice Telephone: 520-770-3500
Contact Facsimile Telephone: 520-770-3505

Spatial Data Organization Information:
Direct Spatial Reference Method: raster

Spatial Reference Information:
Horizontal Coordinate System Definition:
Planar:
Grid Coordinate System:
Grid Coordinate System Name: Universal Transverse Mercator
Universal Transverse Mercator:
UTM Zone Number: 12
Transverse Mercator:
Scale Factor at Central Meridian: 0.999600
Longitude of Central Meridian: -117.000000
Latitude of Projection Origin: 0.000000
False Easting: 500000.000000
False Northing: 0.000000

Planar Coordinate Information:
Planar Coordinate Encoding Method: Coordinate pair
Coordinate Representation:
Abscissa Resolution: 1
Ordinate Resolution: 1
Planar Distance Units: Meters

Geodetic Model:
Horizontal Datum Name: North American Datum of 1927
Ellipsoid Name: Clarke 1866
Semi-major Axis: 6378206.4000000
Denominator of Flattening Ratio: 294.98

Entity and Attribute Information:
Overview Description:
Entity and Attribute Overview: This dataset includes two Adobe® PDF files that represent the text and plate 1 of a detailed, 1:24,000 layout scale geologic map of the Mount Fagan 7.5' quadrangle.
Entity and Attribute Detail Citation: n/a

Distribution Information:
Distributor:
Contact Information:
Contact Organization Primary:
Contact Organization: Arizona Geological Survey
Contact Position: Publication Sales Department
Contact Address:
Address Type: mailing and physical address
Address: 416 W. Congress St., # 100
City: Tucson
State or Province: Arizona
Postal Code: 85701
Country: U.S.A.
Contact Voice Telephone: 520-770-3500
Contact_Facsimile_Telephone: 520-770-3505
Hours_of_Service: 8:00 a.m to 5:00 p.m., M-F
Resource_Description: AZGS DGM-15: Geologic map of the Buckeye 7.5' quadrangle, Maricopa County, Arizona

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Standard_Order_Process:
   Digital_Form:
      Digital_Transfer_Information:
         Format_Name: Adobe® PDF format
      Digital_Transfer_Option:
         Offline_Option:
            Offline Media: CD-ROM
            Recording Format: Joliet
            Compatibility_Information: Windows 95/98/NT4.0/2000
      Fees: $15.00
   Ordering_Instructions: Publications and maps may be purchased by mail or in person from the AZGS office in Tucson. Call for information or visit the AZGS website at www.azgs.state.az.us to view a list of publications and to print out an order form.

Metadata_Reference_Information:
   Metadata_Date: 20020827
   Metadata_Contact:
      Contact_Information:
         Contact_Organization_Primary:
            Contact_Organization: Arizona Geological Survey
            Contact_Position: GIS Technician
         Contact_Address:
            Address_Type: Mailing and physical address
            Address: 416 W. Congress St., # 100
            City: Tucson
            State_orProvince: Arizona
            Postal_Code: 85701
            Country: U.S.A.
            Contact_Voice_Telephone: 520-770-3500
            Contact_Facsimile_Telephone: 520-770-3505
            Hours_of_Service: 8:00 a.m to 5:00 p.m., M-F
   Metadata_Standard_Name: FGDC CSDGM