A User-Friendly, Keyword-Searchable Database of Geoscientific References Through 2007 for Afghanistan

Data Series 323

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By Robert G. Eppinger, Julianna Sipeki, and M.L. Sco Scofield

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A User-Friendly, Keyword-Searchable Database of Geoscientific References Through 2007 for Afghanistan

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Abstract

This report includes a document and accompanying Microsoft Access 2003 database of geoscientific references for the country of Afghanistan. The reference compilation is part of a larger joint study of Afghanistan’s energy, mineral, and water resources, and geologic hazards currently underway by the U.S. Geological Survey, the British Geological Survey, and the Afghanistan Geological Survey. The database includes both published ($n = 2,489$) and unpublished ($n = 176$) references compiled through calendar year 2007. The references comprise two separate tables in the Access database. The reference database includes a user-friendly, keyword-searchable interface and only minimum knowledge of the use of Microsoft Access is required.

Introduction

This report describes an accompanying database of geoscientific references for the country of Afghanistan. The reference compilation is part of a larger joint study of Afghanistan’s energy, mineral, and water resources, and geologic hazards currently underway by the U.S. Geological Survey, the British Geological Survey, and the Afghanistan Geological Survey.

The compilation of geoscientific references was initially planned to contain only mineral-resource-related references. However, the effort soon grew to encompass references related to water resources, energy resources, geologic hazards, and other geoscientific disciplines. Version 1 of the reference database (Eppinger and Sipeki, 2006) contained 1,157 published and 168 unpublished references, and was available online only. Version 2 of the reference database (Eppinger and others, 2007) was compiled through September 2007, and the number of published references was more than doubled. This Data Series report contains references compiled through calendar year 2007 and contains 2,665 published and unpublished references. Unpublished references are generally internal governmental reports that were discovered during this compilation process.

The electronic database is in Microsoft Access 2003 format. An IBM PC-compatible computer is required as Microsoft Access is presently available only for PCs. The reference database includes a user-friendly, keyword-searchable interface, and only minimum knowledge of the use of Microsoft Access is required. The database was designed using a 1024 × 768 pixel display with the Microsoft Windows XP operating system. The database and document together are about 6 MB. The database on this CD-ROM, AfghRefDatabase_DS-323.mdb, is provided as a self-extracting WinZip.exe file, AfghRefDatabase_DS.exe. Double click on the .exe file and specify a location on the hard disk for unzipping the file. The default location for the unzipped file is C:\. To avoid error messages, the database file AfghRefDatabase_DS-323.mdb should be copied to and opened from the user’s hard disk rather than burned to a CD-ROM; attempting to run queries on Microsoft Access database files stored on a CD-ROM generates errors, as Access needs space to write temporary scratch files.

This database includes both published ($n = 2,489$) and unpublished ($n = 176$) references as two separate tables in the Access database. The published references table (tblPublishedReferences) includes a GeoRef accession number when available (American Geological Institute, 2006, accessed 8/28/2007), which can be used for linking the reference to the GeoRef database. Some 1,212 of the 2,489 published references have GeoRef accession numbers or record IDs from the GeoRef preview database (accessed 9/5/2007 at http://www.agiweb.org/georef/onlinedb/preview.html). The published references table also includes the U.S. Geological Survey library call number, if the library contains the holding. Rights to use the references in the GeoRef database were purchased from the American Geological Institute so they could be re-distributed here without copyright infringement. The unpublished references table (tblUnPublishedReferences) contains citations identified as unpublished, internal reports by various national geological survey organizations, or partial citations that were discovered during this compilation. Many of the older published and unpublished references identified here are likely housed in the archive collection of the Afghanistan Geological Survey, which has been inventoried and catalogued in a combined effort by the Afghanistan and British Geological Surveys. For information on this cataloging effort, see the website http://www.bgs.ac.uk/afghanminerals/reports.htm.

1 U.S. Geological Survey, PO Box 25046, MS 973, Denver, CO 80225.
2 Scofield Business Services, PO Box 101773, Denver, CO 80250-1773.
The published and unpublished reference tables have keyword fields that allow for searching capability within the reference database. Keywords are separated into two broad categories: scientific and geographic/cultural. The complete lists of keywords are listed alphabetically in the database in two separate keyword tables, tblKeywordsScientific and tblKeywordsGeographicCultural. The keywords lists are reproduced in this report as appendix 1 (scientific keywords) and appendix 2 (geographic/cultural keywords). The keywords used here follow the spelling and plurality conventions recommended in the GeoRef thesaurus (Goodman, 2000). Keywords were gathered from reference titles, the overall subject matter, and, for those references listed in GeoRef, from the GeoRef keyword fields.

Original references for this database were in numerous diverse file formats and style formats, and came from various sources as indicated in the following paragraph. The references were systematically organized, and the Microsoft Access database was populated accordingly. However, a small percentage of the references were not fully decipherable (for example, a list of numbers that did not allow for confident identification of volume, issue, and page number). For these references, the sequence of numbers was left as-is in the original form.

Sources of information for this reference compilation include libraries and colleagues of the U.S. Geological Survey (USGS), the British Geological Survey (BGS), the French Bureau de Recherches Géologiques et Minières (BRGM), the Czech Geological Survey (CGS), the German Federal Institute for Geosciences and Natural Resources (BGR), the Federal Agency on Mineral Resources of the Russian Federation (VSEGEI), and the Centre for Russian and Central Asian Mineral Studies (CERCAMS). The American Geological Institute’s GeoRef and GeoRef Preview databases, historical documents of the Afghanistan Department of Geological and Mineral Survey, and the Google search engine on the internet were also used. Acknowledgment is given to these various sources for the accumulated body of references within this database. Funding for the USGS was provided by USAID (United States Agency for International Development).

**Keyword-Searchable Database**

Upon opening the database file, AfghanRefDatabase_DS-323.mdb, the user first sees a splash screen that identifies project cooperators (Afghanistan Department of Geological Survey, USAID, and USGS) (see fig. 1). The splash screen displays momentarily and is followed by the main switchboard for the database (fig. 2). On the main switchboard, the user is presented with three options: “Search,” “Database Information,” and “Exit Application.” The “Database Information” option provides disclaimer information (under “About” and “Tech Support”), the option of viewing the database tables themselves (under “Show Database Window”), and the option of returning to the main switchboard (fig. 3). Clicking on “Show Database Window” displays a warning screen because with the database window displayed, the user has the ability to modify data tables. For seasoned Microsoft Access users, this might be the preferred way to search the data.
Clicking on the "Search" option on the main switchboard opens the search criteria dialog screen (fig. 4). The search criteria screen is divided into four parts: scientific keywords, geographic and cultural keywords, year of publication range, and user-entered freeform keywords. At the bottom of the screen is the ability to apply the chosen search criteria to the published references (default), to the unpublished references, or to both. To use the scientific and geographic/cultural dialogs, simply click on the letter of the alphabet and the keywords starting with that letter appear in a drop-down box. Clicking a keyword from the drop-down list and then clicking "Select" places the keyword into the keyword search field. Multiple keywords can be selected.

The "Year of Publication" on the search screen includes the option of "No Publication Year" to capture the few references where no publication year was listed (29 total). If no year range is selected, then all publication years are searched. The user-entered freeform keywords search all fields in the tables, including the author name fields. Thus, a search for a specific author in the database would be done by typing the author name in the freeform keyword box. Multiple freeform keywords should be separated with a semicolon (;), and a search for a question mark symbol should be done by enclosing the question mark in brackets ([?]). User-entered freeform keywords can also include the wildcard character "*." As an example, using the wildcard "paleo*" would produce all references having "paleo" in them (Paleozoic, paleontology, paleoseismicity, and so forth).

As an example, figure 4 shows a search screen with the following selections: scientific keyword = "carbonatites," geographic keyword = "Khanneshin," and no year range specified (so all years are selected). The search criteria include both the published and unpublished tables. With these selections chosen, clicking on the "Search" button results in nine references matching the above search criteria; eight of the references are published and one is not published (fig. 5). The search criteria keywords (in the example, carbonatites and Khanneshin) are listed at the top of the "Search Results" screen. On the "Search Results" screen, published references are shown first followed by unpublished references, both in alphabetical order by author. Clicking on the "New Search" button brings the user back to the search screen with the previous search criteria remaining. These criteria may be modified for a new search. A completely new search can be performed.

Figure 4. The search criteria dialog screen.
by clicking the <Clear All> button; the new search criteria can be entered at this point. Those familiar with Microsoft Access may use the sorting and filtering capabilities to further refine the results list.

The “Search Results” screen includes all fields in the tblPublishedReferences and tblUnpublishedReferences tables. Also appearing at the far left of the “Search Results” screen are two additional fields generated by the searching query, “Selected” and “Published.” The “Selected” field is used for selecting specific references for output (discussed below) and the “Published” field is a Yes/No field that specifies whether the record is published or unpublished.

### Database Output

Once the user is satisfied with the search results, desired references for output are chosen by using the “Selected” field on the “Search Results” screen (fig. 5). Clicking on the “Output to Word–USGS Format” button saves the selected results in a Microsoft Word document, following standard USGS style for listing references. The Microsoft Word document retains the search keywords at the top of the document and the words “Published” or “Unpublished” precedes each reference. Clicking on the “Output to Text” button saves the selected results as ASCII comma-tab delimited text file with a .TXT extension, with the words “Published” or “Unpublished” preceding each reference. Clicking on the “Output to Excel–All Fields” button saves all of the information related to the selected reference records in a Microsoft Excel format spreadsheet. The order of references for output to Word, text, or spreadsheet format is the same as that shown on the “Search Results” screen (published, then unpublished references—both arranged alphabetically by author).

### Database Structure

The published (tblPublishedReferences) and unpublished (tblUnpublishedReferences) reference tables have identical database structures. The database fields and their descriptions are listed in table 1. Microsoft Access table and query naming conventions follow those suggested by Reddick (1995, accessed 8/28/2007). The two keyword tables are simply listings of keywords used in the reference tables. They each have two fields: a text keyword field and a date field specifying when the keyword was entered in the database.
<table>
<thead>
<tr>
<th>Field name</th>
<th>Field type</th>
<th>Description of field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index</td>
<td>AutoNumber</td>
<td>Key field and database index</td>
</tr>
<tr>
<td>AuthorSenior</td>
<td>text</td>
<td>First author, in the format: Last name, first name (initials or spelled out)</td>
</tr>
<tr>
<td>AuthorSecondary</td>
<td>text</td>
<td>Additional authors, same format as above, listed sequentially as found in reference</td>
</tr>
<tr>
<td>AuthorAll</td>
<td>memo</td>
<td>Complete author listing for building citation</td>
</tr>
<tr>
<td>PublicationYear</td>
<td>text</td>
<td>Year of publication</td>
</tr>
<tr>
<td>GEORefAccessionID</td>
<td>text</td>
<td>ID that ties reference to the AGI GeoRef database; blank if no data</td>
</tr>
<tr>
<td>USGSLibraryID</td>
<td>text</td>
<td>ID that ties reference to the U.S. Geological Survey Library system catalogue number; blank if no data</td>
</tr>
<tr>
<td>OriginalTitle</td>
<td>memo</td>
<td>Full title of reference as originally found in it’s native language</td>
</tr>
<tr>
<td>TranslatedTitle</td>
<td>text</td>
<td>English title translation for the reference; irregularly populated field</td>
</tr>
<tr>
<td>Source</td>
<td>memo</td>
<td>Source of the reference; for example, journal title, volume, series, and page number</td>
</tr>
<tr>
<td>DocumentType</td>
<td>text</td>
<td>Type of document for the reference</td>
</tr>
<tr>
<td>SourceForDatabase</td>
<td>memo</td>
<td>Mechanism in which the reference was found for this database</td>
</tr>
<tr>
<td>Language</td>
<td>text</td>
<td>Language of original reference</td>
</tr>
<tr>
<td>EnglishSummary</td>
<td>text</td>
<td>For non-English references, note whether there is an English translation in the paper; irregularly populated</td>
</tr>
<tr>
<td>ScientificKeywords</td>
<td>memo</td>
<td>Scientific keywords; see tblKeywordsScientific for complete list of keyword possibilities</td>
</tr>
<tr>
<td>GeographicCulturalKeywords</td>
<td>memo</td>
<td>Geographic and cultural keywords; see tblKeywordsGeographicCultural for complete list of keyword possibilities</td>
</tr>
<tr>
<td>OtherID</td>
<td>text</td>
<td>Secondary ID for the reference, such as the reference code for a different library; irregularly populated field</td>
</tr>
<tr>
<td>AuthorSeniorAltSpelling</td>
<td>text</td>
<td>First author, spelling as found in original source, if different from Author_Senior</td>
</tr>
<tr>
<td>AuthorSecondaryAltSpelling</td>
<td>text</td>
<td>Additional authors, spelling as found in original source, if different from Author_Secondary</td>
</tr>
<tr>
<td>Comment</td>
<td>text</td>
<td>Comment related to reference; irregularly populated field</td>
</tr>
<tr>
<td>DateAddedToDatabase</td>
<td>Date/Time</td>
<td>Date in which reference was added to this Access database</td>
</tr>
</tbody>
</table>
References Cited


Appendix 1.—Alphabetical listing of 933 scientific keywords used in the reference database.

absolute age
accretion
acids
actinides
active faults
Adriatic plate
aeromagnetic surveys
Afghan block
Afghan plate
afghanicus
Afghan plate
Alpine plate
age
aggregate
agriculture
airborne methods
algae
alkali basalts
alkali feldspar
alkaline composition
alkaline earth metals
allochthons
alluvium
Alpine
Alpine orogeny
alteration
aluminoisilicates
aluminum
Ammonites
Ammonoidea
amphibole group
amphibolites
analcime
anatase
anatexis
anatomy
dandelites
Anthozoa
Anthropoda
anticlines
anticlinoria
antimony
apatite
aplite
aquamarine
aquifers
Ar/Ar
Arabian plate
aragonite
archaeology
Archean
areal geology
argillite
arid environments
arsenic
arsenides
artesian waters
arthropoda
articulata
Artiodactyla
asbestos
ASTER
atlas
barite
barium
basalts
basement
basins
batholiths
bauxite
Bazardarin Formation
Bennettitales
beryl
beryllium
bibliography
bicarbonate
biofacies
biogenetic structures
biogeography
bioherms
biometry
biostratigraphy
biotite
biozones
bismuth
Bivalvia
blueschist
body waves
borates
boreholes
boron
Bouguer anomalies
Bovidae
Brachiopoda
breccia
bromine
brookite
Bryophyta
Bryozoa
building stone
C-13/C-12
C-14
calc-alkaline
calcareous
calcite
calculator
Cambrian
carbon
carbonate platforms
carbonate rocks
carbonates
carbonitates
Carboniferous
cartography
Catenipora
caves
celestine
cement
Cenomanian
Cenozoic
Cephalopoda
ceramic materials
Cerebropollenites
cerium
cesium
chain silicates
Chaman fault
chemical composition
chemically precipitated rocks
chlorides
Chlorophyceae
Chlorophtya
Chordata
chromite
chromium
chrysotile
Cimmerian
Cimmerian orogeny
classification
clastic rocks
clastic sediments
clay
cleavelandite
climate
climate change
clinoamphibole
clinopyroxene
coal
cobalt
Coelenterata
color
columbite
complexes
composition
compression
conchaviscorites
conglomerate
Coniferales
Conodontas
contact metamorphism
continental crust
continental drift
continental margin
continental shelf
copper
correlation
corundum
Cretaceous
Crinoidea
Crinozoa
crust
Crustacea
crustal shortening
crystal chemistry
crystal growth
crystal structure
crystal zoning
crystalline rocks
crystallography
crystals
cultural
cycles
cyclicity
dacites
dams
Darwaza-Sarikol sequence
Dasycladaceae
dates
debris
décollement
deep-seated structures
deforestation
delicate environment
density
deposition
depositional environment
depressions
deuterium
lepidolite
limestone
lineaments
lithium
lithofacies
lithogeochemistry
lithosphere
lithostratigraphy
Lituolacea
loess
luminescence
Maestrichtian
mafic composition
magnas
magmatism
magnesite
magnesium
magnetic
magnetic anomalies
magnetic field
magnetic methods
magnetism
magnitude
major elements
Mammalia
Mandibulata
manganese
Mansehra granite
mantle
maps
marbles
marine environments
Masirah graben
mass movements
massifs
Mediterranean fold belt
melange
mercury
Mesozoic
metagabbro
metaigneous rocks
metal ores
metalimestone
metallogeny
metals
metamorphic rocks
metamorphism
metapelite
metasandstone
metasedimentary rocks
metasomatic rocks
metasomatism
metavolcanic rocks
mica group
microcontinents
microfossils
microplates
migmatites
military geology
mineral assemblages
mineral composition
mineral data
mineral deposits
mineral economics
mineral inclusions
mineral inventory
mineral localities
mineral resources
mineral waters
mineralogy
minerals
mining
minor elements
Mintek Formation
Miocene
miogeosynclines
miospores
mitigation
mixed-layer minerals
mobile belts
Moesian platform
Mohorovic discontinuity
molasse
Mollusca
molybdates
molybdenum
monazite
monitoring
monsoons
morganite
morphology
Moscovian
mountains
movement
Murgabian
muscovite
mylonites
nannofossils
nappes
native elements
natrolite
natural gas
natural resources
Nd-144/Nd-143
near-infrared spectra
Neocimmerian
Neocomian
Neogene
Neoproterozoic
neotectonics
nephrite
nesosilicates
nickel
Nilssoniales
niobates
niobium
niobotantalates
nitrogen
noble gases
Nogay suite
nomenclature
non-ferrous
nonmetals
Norian
normal faults
North Afghan platform
North American plate
nuclear explosions
Nummulites
O-18/O-16
obduction
oblique-slip faults
ocean circulation
oceanic crust
Oligocene
olistostromes
oncolites
ontogeny
onyx
opal
ophiolites
optical properties
Orbitolinidae
Ordovician
ore-forming fluids
organic compounds
organo-metallics
orogeny
orthoclase
orthogneiss
orthopyroxene
orthosilicates
Ostracoda
overprinting
overthrust faults
overturned folds
Ovummuridae
oxidation
oxides
oxygen
ozone
Pachycoma
paleobotany
Paleocene
paleoclimate
paleoecology
paleoenvironments
Paleogene
paleogeography
paleolatitude
paleomagnatism
paleomagnetism
paleontology
paleophylogeology
paleoplacers
Paleoproterozoic
paleoseismicity
paleosols
Paleozoic
Palissya
palyynomorphs
Pangaea
Panjshir synclinorium
paragenesis
parageness
passive margins
Pb/Pb
peat
pedogenesis
pegmatite
pentlandite
peraluminous
peridotites
Perissodactyla
permeability
Permian
petalite
Petaspermum
phacopida
Phanerozoic
phosphates
photogeology
phyllites
phylogeny
pinnules
PKP-waves
placers
planar bedding structures
Plantae
plasticity
plate boundaries
plate collisions
plate convergence
plate tectonics
plateaus
plates
platforms
Pleistocene
thorium  xenoliths
thrust faults  Zarak synclinorium
tin  zeolite group
titanium  zinc
tomography  zircon
tonalites  Zoantharia
topaz  Zoning
topography
tourmaline
Tournayella discoidea
trace elements
trachytes
transgression
transpression
traps
travertine
Triassic
Trilobita
Trilobitomorpha
troughs
tuff
tungstates
tungsten
Turan plate
Turanian platform
Turolian
Turonian
U/Pb
Ufimian
ultrabasite
ultramafics
unconformities
Ungulata
uplifts
Ural-Oman lineament
uraninite
uranium
ursilite
Valanginian
vanadium
vegetation
veins
Vendian
Vertebrata
Visean
volcanic rocks
volcanism
volcanoes
volcanology
water management
water resources
weather
weathering
weeksite
wehrlite
Wenlockian
Appendix 2.—Alphabetical listing of 632 geographic/cultural keywords used in the reference database.

Ab-E-Istada
Achin
Afghan Central Mountains
Afghanistan
Afghan-Tajik basin
Africa
Ahonkashan
Akhankashan
Alai Range
Alborz
Algeria
Ali Khel
Alishah
Almurad
Altai Mountains
Altimur Mountains
Amu Darya
Amu Darya basin
Amur
Anar
Anardara
Andarab
Andhui
Andkhoy
Angot
Anguri River
Arabian Peninsula
Arabian Sea
Aral
Aravalli Range
Arghandab
Arghandab River
Ashkhabad
Asia
Asmar-Kamdes
Aspan
Assam
Atlas Mountains
Attock-Cherat Range
Azwangani
Aynak
Azrao
Badakhshan
Badghis
Badragha
Baghlan
Bagram
Bagrami
Bakhud
Bala-Murghab
Balkh
Baluch Chain
Baluchistan
Banat
Band-e-Amir
Band-e-Amir Lake
Bandi
Band-i-Turkestan
Bangladesh
Baraki Barak
Barrandian
Bartang
Bas
Bashkirian
Bayan
Bayman
Bazar Valley
Bazardarin
Behsud
Besham
Beshud
Bhutan
Bibi Gauhar
Black Sea
Bolan Pass
Bouddhas
Boya
Bukhara
Bukhara-Khiva
Bulan
Bulola
Buni Zom
Butijak Beds
Buzmal
Campbellpore basin
Carpathians
Caspian basin
Caspian Sea
Caucasus
central Afghanistan
Chagai District
Chagharsaray
Chahar-Asyab
Chahriaq
Chak Wardak-Syahgerd
Chakhansur
Chalan-da-Lan Ridge
Chaman
Chaman-Argendeh
Chapa-Dara
Char Shango
Charbagh
Charburjak
Charikar
Chekhcha
Chesht-Sharif
Chigha Sarai
Chilkonshar
China
Chitral
Chumar
Chu-Sarysu
Commonwealth of Independent States
Dagestan Plain
Darai-i-Shor-i-Karamandi
Darai-Nur
Darai-Qunar
Darai-Sur
Darband
Darkot
Darrahe-Nur
Darrah-i-Alansang
Darra-i-Pech
Darre Pech
Darri-i-Suf
Darr-i-Suf
Dar-ul-Aman
Darvaz
Darvaz Range
Das Bar Valley
Dasht-e-Chahe-Mazar
Dasht-i-Nawar
Dawangh
Dawlat Khan
Deh Shir
Deh-Ghulaman
Dehrawat
Deli
Djebebl-us Saraj
Djebel-al-Seraj
Doab
Dobanday
Dubruja basin
Dokani
Dolpo
Donets basin
Donmez
Donqiao
Doodkash
Dorah Shah Dad
Dou Ab
Dunghan
Dusso
Dzhar-Kuduk
eastern Afghanistan
Egypt
Elburz
Ertfah
Eurasia
Europe
Faiizabad
Far East
Farah
Farah Rud
Farakhrud River
Farakhrudskiy
Farinjal
Farkhar River
Faryab
Faydabad
Fergana basin
Gaj
Galacheh
Gandaf
Gardez
Gaurdk
Gawdezeryh
Gaz-Khan
Gelmend
Gelmend River
Gerirud River
Gharam Chasma
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