

DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

GEONAMES Data Base of Geologic Names
of the United States through 1988

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conformity with U.S. Geological Survey editorial standards.

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GEONAMES Data Base of Geologic Names of the United States Through 1988

The GEONAMES data base is an annotated index lexicon of formal geologic nomenclature of the United States, its territories and possessions. The data base was compiled by R. W. Swanson, M. L. Hubert, G. W. Luttrell, and V. M. Jussen and was published in 1981 as Geologic names of the United States through 1975: U.S. Geological Survey Bulletin 1535, 643 p. This version of GEONAMES has been updated based on information published through 1988, and it contains approximately 30,000 records relating to more than 18,000 names.

Data are entered in 10 fixed fields containing up to 123 characters of information for each record. The fields are: 1. location of unit; 2. geologic age; 3. name of unit; 4. USGS usage; 5. lithology; 6. geologic province; 7. thickness at type section; 8. location of type section; 9. lexicon reference; 10. unique identifier.

DEFINITION OF FIELDS. The formats and codes used in the fields are explained below. Fields 5, 6, 7, 8, and 9 are used only once for each unit as this information pertains to its type locality and original reference.

FIELD 1. LOCATION. The U.S. Postal Service 2-letter abbreviations are used to identify the State, territory, or possession in which the unit is located.

| | | | |
|----|----------------------|----|------------------|
| AL | Alabama | NH | New Hampshire |
| AK | Alaska | NJ | New Jersey |
| AZ | Arizona | NM | New Mexico |
| AR | Arkansas | NY | New York |
| CA | California | NC | North Carolina |
| CO | Colorado | ND | North Dakota |
| CT | Connecticut | OH | Ohio |
| DC | District of Columbia | OK | Oklahoma |
| DE | Delaware | OR | Oregon |
| FL | Florida | PA | Pennsylvania |
| GA | Georgia | RI | Rhode Island |
| HI | Hawaii | SC | South Carolina |
| ID | Idaho | SD | South Dakota |
| IL | Illinois | TN | Tennessee |
| IN | Indiana | TX | Texas |
| IA | Iowa | UT | Utah |
| KS | Kansas | VT | Vermont |
| KY | Kentucky | VA | Virginia |
| LA | Louisiana | WA | Washington |
| ME | Maine | WV | West Virginia |
| MD | Maryland | WI | Wisconsin |
| MA | Massachusetts | WY | Wyoming |
| MI | Michigan | CZ | Canal Zone |
| MN | Minnesota | CI | Caroline Islands |
| MS | Mississippi | GU | Guam |
| MO | Missouri | MR | Mariana Islands |
| MT | Montana | PR | Puerto Rico |
| NE | Nebraska | SA | Samoa |
| NV | Nevada | VI | Virgin Islands |

FIELD 2. GEOLOGIC AGE. The geologic age at the time of the last update is represented, with minor modifications, by the 3-digit code devised by the AAPG Committee on Standard Stratigraphic Coding.

| ERA | PERIOD | EPOCH OR PROVINCIAL SERIES | CODE |
|-----------|------------|-------------------------------|------|
| Cenozoic | | | 100 |
| late | | | 101 |
| middle | | | 104 |
| early | | | 107 |
| | Quaternary | | 110 |
| | | Holocene | 111 |
| | | Pleistocene | 112 |
| | Tertiary | | 120 |
| | | Pliocene | 121 |
| | | Miocene | 122 |
| | | Oligocene | 123 |
| | | Eocene | 124 |
| | | Paleocene | 125 |
| Mesozoic | | | 200 |
| late | | | 201 |
| middle | | | 204 |
| early | | | 207 |
| | Cretaceous | | 210 |
| | | Late | 211 |
| | | Gulfian | 212 |
| | | Comanchean | 213 |
| | | Early | 217 |
| | | Comanchean | 218 |
| | | Coahuilan | 219 |
| | Jurassic | | 220 |
| | | Late | 221 |
| | | Middle | 224 |
| | | Early | 227 |
| | Triassic | | 230 |
| | | Late | 231 |
| | | Middle | 234 |
| | | Early | 237 |
| Paleozoic | | | 300 |
| late | | | 301 |
| middle | | | 304 |
| early | | | 307 |
| | Permian | | 310 |
| | | Late | 311 |
| | | Ochoan | 312 |
| | | Guadalupian | 313 |
| | | Early | 317 |
| | | Leonardian | 318 |
| | | Wolfcampian | 319 |

| ERA | PERIOD | EPOCH OR PROVINCIAL SERIES | CODE |
|-------------|---------------|-------------------------------|------|
| | Pennsylvanian | | 320 |
| | | Late | 321 |
| | | Virgilian | 322 |
| | | Missourian | 323 |
| | | Middle | 324 |
| | | Des Moinesian | 325 |
| | | Atokan | 326 |
| | | Early | 327 |
| | | Morrowan | 328 |
| | Mississippian | | 330 |
| | | Late | 331 |
| | | Chesterian | 332 |
| | | Meramecian | 333 |
| | | Early | 337 |
| | | Osagean | 338 |
| | | Kinderhookian | 339 |
| | Devonian | | 340 |
| | | Late | 341 |
| | | Middle | 344 |
| | | Early | 347 |
| | Silurian | | 350 |
| | | Late | 351 |
| | | Middle | 354 |
| | | Early | 357 |
| | Ordovician | | 360 |
| | | Late | 361 |
| | | Middle | 364 |
| | | Early | 367 |
| | Cambrian | | 370 |
| | | Late | 371 |
| | | Middle | 374 |
| | | Early | 377 |
| TIME | EON | ERA | CODE |
| Precambrian | | | 400 |
| | Proterozoic | | 401 |
| | | Late | 410 |
| | | Middle | 420 |
| | | Early | 430 |
| | Archean | | 404 |
| | | Late | 440 |
| | | Middle | 450 |
| | | Early | 460 |
| | pre-Archean | | 407 |

FIELD 3. NAME. The geologic name consists of a geographic name combined with a rank or descriptive term. A comma separates the two parts of the name. If a unit is part of a higher ranking unit, the name of that unit follows in parentheses. A slash (/) preceding a name indicates a violation of the North American Stratigraphic Code (for instance, a name may have been used previously in the same area, or a rank term may have been used improperly or may have been omitted).

FIELD 4. USGS USAGE. A "U" is entered in this field if the line entry is based on usage in a USGS report.

FIELD 5. LITHOLOGY. The principal lithology of the unit at the type section is given. If lithology is indicated by the unit name, the lithology column may be blank.

| | | | | | |
|------|----------------|-------|-------------------|------|------------------|
| AGL | agglomerate | GNS | greenstone | NVC | novaculite |
| ALV | alluvium | GR | granite | OBS | obsidian |
| AMP | amphibolite | GRD | granodiorite | OOL | oolite |
| AND | andesite | GRNL | granulite | PCL | pyroclastics |
| ANH | anhydrite | GVL | gravel | PHL | phyllite |
| ANR | anorthosite | GYK | graywacke | PHS | phosphate |
| ARG | argillite | GYP | gypsum | PMC | pumice |
| ARK | arkose | HNF | hornfels | POR | porphyry |
| ASP | asphalt | IG | igneous rock | QZ | quartz |
| BAS | basalt | IGNM | ignimbrite | QZD | quartz diorite |
| BAUX | bauxite | INTR. | intrusive rock | QZM | quartz monzonite |
| BNT | Bentonite | LAT | latite | RDBD | redbed |
| BRC | breccia | LOS | loess | RHY | rhyolite |
| CH | chert | LV | lava | SCH | schist |
| CL | clay | MBL | marble | SD | sand |
| CLS | claystone | MBNT | metabentonite | SED | sedimentary rock |
| CST | clastic rock | MCK | muck | SL | slate |
| DAC | dacite | MD | mud | SRP | serpentinite |
| DBS | diabase | MET | metamorphic rock | ST | silt |
| DRT | diorite | MGM | migmatite | SYN | syenite |
| DRF | drift | MGYK | metagraywacke | TF | tuff |
| DTM | diatomite | MIG | metaigneous rock | TL | till |
| EVP | evaporite | MRL | marl | TRC | trachyte |
| FE | iron-formation | MS | mudstone | ULTM | ultramafic rock |
| GAB | gabbro | MSED | metasedim. rock | VOL | volcanic rock |
| GLC | glauconite | MSTS | metasiltstone | VSED | volcanic sed. |
| GN | gneiss | MVOL | metavolcanic rock | | |

FIELD 6. GEOLOGIC PROVINCE. The 3-digit geologic province code devised by the AAPG Committee on Statistics of Drilling is used.

| | |
|-----|---|
| 100 | New England province |
| 110 | Adirondack uplift |
| 120 | Atlantic Coast basin |
| 130 | South Georgia-North Florida sedimentary province |
| 140 | South Florida province |
| 150 | Piedmont-Blue Ridge province |
| 160 | Appalachian basin |
| 200 | Warrior basin |
| 210 | Mid-Gulf Coast basin |
| 220 | Gulf Coast basin |
| 230 | Arkla basin |

240 Desha basin
 250 Upper Mississippi embayment
 260 East Texas basin
 300 Cincinnati arch
 305 Michigan basin
 310 Wisconsin arch
 315 Illinois basin
 320 Sioux uplift
 325 Iowa shelf
 330 Lincoln anticline
 335 Forest City basin
 340 Ozark uplift
 345 Arkoma basin
 350 South Oklahoma folded belt province
 355 Chautauqua platform
 360 Anadarko basin
 365 Cherokee basin
 370 Nemaha anticline
 375 Sedgwick basin
 380 Salina basin
 385 Central Kansas uplift
 390 Chadron arch
 395 Williston basin
 400 Ouachita tectonic belt province
 405 Kerr basin
 410 Llano uplift
 415 Strawn basin
 420 Fort Worth syncline
 425 Bend arch
 430 Permian basin
 435 Palo Duro basin
 440 Amarillo arch
 445 Sierra Grande uplift
 450 Las Animas arch
 455 Las Vegas-Raton basin
 460 Estancia basin
 465 Orogrande basin
 470 Pedregosa basin
 475 Basin-and-Range province
 500 Sweetgrass arch
 505 Montana folded belt province
 510 Central Montana uplift
 515 Powder River basin
 520 Big Horn basin
 525 Yellowstone province
 530 Wind River basin
 535 Green River basin
 540 Denver basin
 545 North Park basin
 550 South Park basin
 555 Eagle basin
 560 San Luis basin
 565 San Juan Mountain province
 570 Uinta uplift
 575 Uinta basin
 580 San Juan basin
 585 Paradox basin
 590 Black Mesa basin

595 Piceance basin
600 Northern Cascade Range-Okanagan province
605 Eastern Columbia basin
610 Idaho Mountains province
615 Snake River basin
620 Southern Oregon basin
625 Great Basin province
630 Wasatch uplift
635 Plateau sedimentary province
640 Mojave basin
645 Salton basin
650 Sierra Nevada province
700 Bellingham basin
705 Puget Sound province
710 Western Columbia basin
715 Klamath Mountains province
720 Eel River basin
725 Northern Coast Range province
730 Sacramento basin
735 Santa Cruz basin
740 Coastal basins
745 San Joaquin basin
750 Santa Maria basin
755 Ventura basin
760 Los Angeles basin
765 Capistrano basin
800 Heceta Island area
805 Keku Islands area
810 Gulf of Alaska basin
815 Copper River basin
820 Cook Inlet basin
830 Kandik province
835 Kobuk province
840 Koyukuk province
845 Bristol Bay basin
846 Aleutians Islands
850 Bethel basin
855 Norton basin
860 Selawik basin
863 Yukon Flats basin
865 Lower Tanana basin
867 Middle Tanana basin
870 Upper Tanana basin
873 Galena basin
875 Innoko basin
877 Minchumina basin
880 Holitna basin
885 Arctic Foothills province
890 Arctic Slope basin

FIELD 7. THICKNESS. Thickness at the type section, in meters, rounded to the second significant figure is shown. Where this information is unavailable, the maximum thickness is given, if known.

FIELD 8. TYPE LOCALITY. One of nine parts of the State in which the type section, locality, or area of a unit is located. Each State is divided into nine parts, designated NW, NC, NE, WC, C, EC, SW, SC, SE, by dividing its maximum latitudinal and longitudinal dimensions by three. Canada and Mexico are designated by CAN AND MEX.

FIELD 9. REFERENCE. The letters A through H refer to the volume of the lexicon of Geologic Names in which a name was first described:

- A. Wilmarth, M. G., 1938, Lexicon of geologic names of the United States: U.S. Geol. Survey Bull. 896, 2 v.
- B. Wilson, Druid, and others, 1957, Geologic names of North America introduced in 1936-1955: U.S. Geol. Survey Bull. 1056-A, 405 p.
- C. Keroher, G. C., and others, 1966, Lexicon of geologic names of the United States for 1936-1960: U.S. Geol. Survey Bull. 1200, 3 v.
- D. Keroher, G. C., 1970, Lexicon of geologic names of the United States for 1961-1967: U.S. Geol. Survey Bull. 1350, 848 p.
- E. Luttrell, G. W., Hubert, M. L., Wright, W. B., Jussen, V. M., and Swanson, R. W., 1981, Lexicon of geologic names of the United States for 1968-1975: U.S. Geol. Survey Bull. 1520, 342 p.
- F. Luttrell, G. W., Hubert, M. L., and Jussen, V. M., 1986, Lexicon of new formal geologic names of the United States 1976-1980: U.S. Geol. Survey Bull. 1564, 191 p.
- G. Luttrell, G. W., Hubert, M. L., and Murdock, C. R., (in press), Lexicon of new formal geologic names of the United States 1981-1985: U.S. Geol. Survey Bull. 1565.
- H. Geologic names introduced after 1985. (No publication available.)

FIELD 10. UNIQUE IDENTIFIER. A unique identifier consisting of a four-letter mnemonic plus a two-digit number is assigned to each record. It is used for recalling records for updating and for sorting. The mnemonic is derived from the geographic part of the name using a method devised by the AAPG Committee on Standard Stratigraphic Coding. English articles and prepositions are deleted first; those in foreign languages are retained. The first letter of each remaining word is retained. Names beginning with Mc, O', De, or Van are treated as two words. Letters are then deleted, from right to left, in the following order until four remain: a, e, i, o, u, w, h, y, one of each double, t, n, s, r, l, d, c, m, f, g, p, k, b, v, x, j, q, z. All the records for each name have the same mnemonic but different numbers.

DATA RETRIEVAL

GEONAMES is now available on IBM-compatible 5 1/4-in diskettes from Open File Services. The files were first sorted by state and then downloaded onto 16 diskettes, each one generally containing data for two or more adjacent states. Users may purchase one or more diskettes, combine the states, or use them individually, depending upon their specific needs and computer equipment. These state files can be loaded into and manipulated with almost any database management software. (Records are loaded into dBase, for instance, using the command "append from [file name] sdf.") In setting up fields, use the following parameters.

| FIELD NAME | SIZE |
|------------|------|
| [State] | [4] |
| [Age] | [4] |
| [Slash] | [1] |
| [Name] | [62] |
| [Use] | [5] |
| [Lith] | [14] |
| [Prov] | [6] |
| [Thick] | [10] |
| [TypLoc] | [6] |
| [Ref] | [4] |
| [ID] | [7] |

The slash has been placed in a separate field in order to simplify sorting.

GEONAMES is also available on 8-track magnetic tape from NTIS. Units for the entire nation are listed alphabetically on the tape. This media may be more suitable for users interested in geologic names of the United States as a whole.

Following is a breakdown by diskette, showing the states, number of records, and the approximate size of the files. An asterisk indicates states included in more than one geographic grouping. Each diskette also contains the document, Geointro, a users guide to GEONAMES.

| CHAPTER | DISK # | STATE | RECORDS | KBYTES |
|---------|--------|-------|------------|-----------|
| A | 1 | ME | 436 | 55 |
| | | NH | 246 | 31 |
| | | VT | 592 | 74 |
| | | MA | 353 | 44 |
| | | CT | 316 | 40 |
| | | RI | 61 | 8 |
| | | | <hr/> 2004 | <hr/> 252 |
| B | 2 | NY | 1260 | 158 |
| | | PA | 1143 | 143 |
| | | | <hr/> 2403 | <hr/> 301 |
| C | 3 | NJ | 263 | 33 |
| | | MD | 484 | 61 |
| | | DE | 73 | 9 |
| | | DC | 34 | 4 |
| | | VA* | 881 | 110 |
| | | WV | 597 | 75 |
| | | | <hr/> 2332 | <hr/> 292 |
| D | 4 | KY | 575 | 72 |
| | | TN | 637 | 80 |
| | | MS | 218 | 27 |
| | | AL | 517 | 65 |
| | | | <hr/> 1947 | <hr/> 244 |
| E | 5 | VA* | 881 | 110 |
| | | NC | 348 | 44 |
| | | SC | 166 | 21 |
| | | GA | 591 | 74 |
| | | FL | 229 | 29 |
| | | | <hr/> 2215 | <hr/> 278 |
| F | 6 | OH | 547 | 69 |
| | | IN | 502 | 63 |
| | | IL | 743 | 93 |
| | | WI | 413 | 52 |
| | | MI | 408 | 51 |
| | | | <hr/> 2613 | <hr/> 328 |
| G | 7 | MN | 304 | 38 |
| | | ND | 326 | 41 |
| | | SD | 295 | 37 |
| | | NE | 476 | 60 |
| | | IA | 542 | 68 |
| | | | <hr/> 1943 | <hr/> 244 |

| CHAPTER | DISK # | STATE | RECORDS | KBYTES |
|---------|--------|-------|-------------|------------|
| H | 8 | OK | 1098 | 137 |
| | | KS | 658 | 82 |
| | | MO | 740 | 93 |
| | | | <u>2496</u> | <u>312</u> |
| I | 9 | TX | 1653 | 207 |
| | | LA | 270 | 34 |
| | | AR | 268 | 34 |
| | | | <u>2191</u> | <u>275</u> |
| J | 10 | MT | 809 | 101 |
| | | WY | 855 | 107 |
| | | ID* | 693 | 87 |
| | | | <u>2357</u> | <u>295</u> |
| K | 11 | CO | 881 | 110 |
| | | NM | 1151 | 144 |
| | | | <u>2032</u> | <u>254</u> |
| L | 12 | AZ | 892 | 112 |
| | | UT* | 1191 | 149 |
| | | | <u>2083</u> | <u>261</u> |
| M | 13 | WA | 694 | 87 |
| | | OR | 557 | 70 |
| | | ID* | 693 | 87 |
| | | | <u>1944</u> | <u>244</u> |
| N | 14 | NV | 1110 | 139 |
| | | UT* | 1191 | 149 |
| | | | <u>2301</u> | <u>288</u> |
| O | 15 | CA | 2050 | 234 |
| P | 16 | AK | 813 | 102 |
| | | HI | 90 | 12 |
| | | CI | 45 | 6 |
| | | MR | 43 | 6 |
| | | SA | 34 | 5 |
| | | GU | 33 | 4 |
| | | PR | 261 | 33 |
| | | VI | 31 | 4 |
| | | | <u>1350</u> | <u>172</u> |