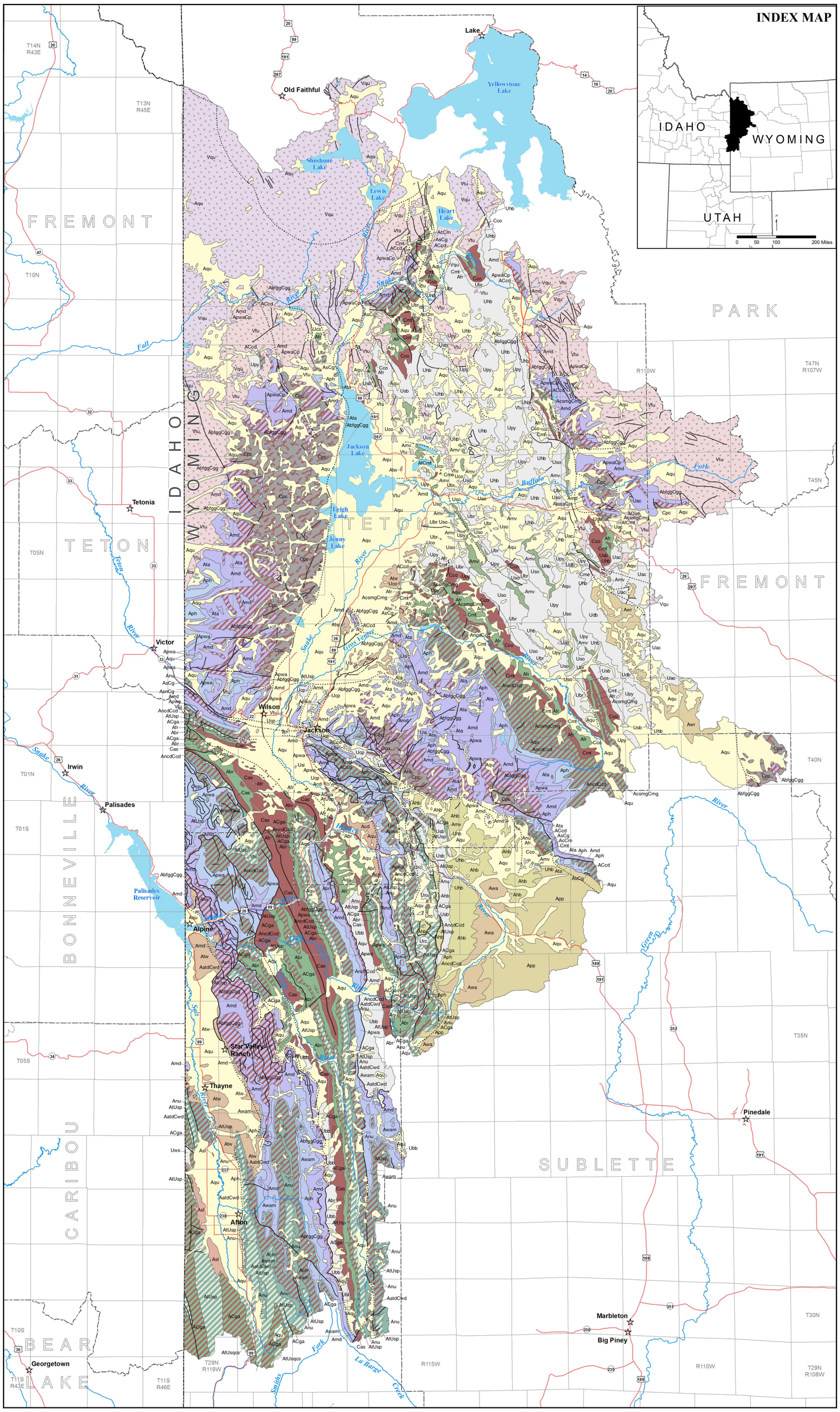

Hydrogeology - Snake/Salt River Basin Wyoming

compiled by
Tim Bartos and Jim Stafford

N MN

Magnetic Declination = 11° 41' 24" E
at center of map
(Feb 3, 2014)

0 5 10 15 20 25 30 Miles

Scale 1:400,000

Explanation

- U.S. highway
- State highway
- Faults
- City or town
- Township boundary
- County boundary
- State boundary
- Lake or reservoir
- River or creek

Hydrogeology

Hydrogeologic Units - Compiled from Plates 4, 5, and 6

CENOZOIC

Quaternary

- Aqu — Quaternary unconsolidated-deposit aquifer
- Vqu — Undefined Quaternary volcanic units

Quaternary and Tertiary

- Ucp — Undefined Pleistocene or Pliocene conglomerate

Tertiary

- Asl — Salt Lake aquifer
- Usi — Undefined Shooting Iron
- Acd — Camp Davis aquifer
- Atw — Teewinot aquifer
- Urc — Undefined red conglomerate
- Uco — Undefined Colter
- Uac — Undefined Aycross
- Ucs — Undefined conglomerate of the Sublette Range
- Awa — Wasatch aquifer
- Awr — Wind River aquifer
- App — Pass Peak aquifer
- Udb — Undefined Devils Basin
- Ahb — Hoback aquifer
- Vtu — Undefined Tertiary volcanic units

CENOZOIC AND MESOZOIC

Tertiary and Cretaceous

- Upy — Undefined Pinyon

MESOZOIC

Cretaceous

- Uhb — Undefined Harebell
- Cme — Meeteetse confining unit
- Amv — Mesaverde aquifer
- Uso — Undefined Sohare
- Usb — Undefined Sohare and Bacon Ridge
- Ubr — Undefined Bacon Ridge
- Cco — Cody confining unit
- Ubb — Undefined Blind Bull
- Afr — Frontier aquifer
- AfCmt — Frontier aquifer, and Mowry and Thermopolis confining units

MESOZOIC (cont.)

Cretaceous (cont.)

- Cmt — Mowry and Thermopolis confining units
- AtUsqcs — Thomas Fork aquifer, and undefined Sage Junction, Quealy, Cokeville, and Smiths
- Uws — Undefined Wayan and Smiths
- Cas — Aspen confining unit
- Abr — Bear River aquifer
- ACga — Gannett aquifer and confining unit

Cretaceous and Jurassic

- AcCm — Cloverly aquifer and Morrison confining unit
- AcsmgCmg — Cloverly and Sundance aquifers, and Morrison and Gypsum Springs confining units

Jurassic

- AtUsp — Twin Creek aquifer, and undefined Stump and Preuss
- AsCg — Sundance aquifer, and Gypsum Springs confining unit

Jurassic and Triassic

- AsnCg — Sundance and Nugget aquifers, and Gypsum Springs confining unit
- Anu — Nugget aquifer
- AncdCcd — Nugget aquifer, and Chugwater and Dinwoody aquifers and confining units

Triassic

- AatdCwd — Ankareh and Thayne aquifers, Woodside confining unit, and Dinwoody aquifer and confining unit
- ACcd — Chugwater and Dinwoody aquifers and confining units

PALEOZOIC

Permian

- Aph — Phosphoria aquifer

Permian, Pennsylvanian, and Mississippian

- Apwa — Phosphoria, Wells, and Amsden aquifers
- ApwaCp — Wells and Amsden aquifers, and Phosphoria aquifer and confining unit
- Awam — Wells and Amsden aquifers

Pennsylvanian and Mississippian

- Ata — Tensleep and Amsden aquifers

Mississippian and Devonian

- Amd — Madison and Darby aquifers

Ordovician and Cambrian

- AbfggCgg — Bighorn and Flathead aquifers, and Gallatin and Gros Ventre aquifer and confining units

PRECAMBRIAN

Archean

- Cpc — Precambrian basal confining unit

REFERENCES

Albee, H.F., 1973, Geologic map of the Observation Peak quadrangle, Teton and Lincoln Counties, Wyoming: U.S. Geological Survey, Geologic Quadrangle Map GQ-1081, scale 1:24,000.

Love, J.D., and Albee, H.F., 1972, Geologic map of the Jackson quadrangle, Teton County, Wyoming: U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-769-A, scale 1:24,000.

Love, J.D., and Christiansen, A.C., comps., 1985, Geologic map of Wyoming: U.S. Geological Survey, 3 sheets, scale 1:500,000.

Love, J.D., Christiansen, A.C., and Ver Ploeg, A.J., comps, 1993, Stratigraphic chart showing the Phanerozoic nomenclature for the state of Wyoming: Wyoming Geological Survey [Wyoming State Geological Survey] Map Series 41.

Love, J.D., and Keefer, W.R., 1975, Geology of sedimentary rocks in southern Yellowstone National Park, Wyoming: U.S. Geological Survey, Professional Paper 729-D, scale 1:62,500.

Love, J.D., Keefer, W.R., Duncan, D.C., Bergquist, H.R., and Hose, R.K., 1951, Geologic map of the Spread Creek-Gros Ventre River area, Teton County, Wyoming: U.S. Geological Survey, Oil and Gas Investigations Map OM-118, scale 1:48,000.

Rubey, W.W., 1973, Geologic map of the Afton quadrangle and part of the Big Piney quadrangle, Lincoln and Sublette Counties, Wyoming: U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-686, scale 1:62,500.

Stoeser, D.B., Green, G.N., Morath, L.C., Heran, W.D., Wilson, A.B., Moore, D.W., and Van Gosen, B.S., 2006, Preliminary integrated geologic map databases for the United States—central states—Montana, Wyoming, Colorado, New Mexico, Kansas, Oklahoma, Texas, Missouri, Arkansas, Louisiana, North Dakota, South Dakota, Nebraska, and Iowa: U.S. Geological Survey Open-File Report 2005-1351, version 1.2, updated December 2007, digital data, [Includes Wyoming, Colorado, and Nebraska at 1:500,000-scale].

Tele Atlas North America, Inc., and ESRI, 2006, World, Europe, United States, Canada, and Mexico, ESRI data & maps.

DISCLAIMERS

Users of these maps are cautioned against using the data at scales different from those at which the maps were compiled. Using this data at a larger scale will not provide greater accuracy and is, in fact, a misuse of the data.

The Wyoming State Geological Survey (WSGS) and the State of Wyoming make no representation or warranty, expressed or implied, regarding the use, accuracy, or completeness of the data presented herein, or of a map printed from these data. The act of distribution shall not constitute such a warranty. The WSGS does not guarantee the digital data or any map printed from the data to be free of errors or inaccuracies.

The WSGS and the State of Wyoming disclaim any responsibility or liability for interpretations made from these digital data or from any map printed from these digital data, and for any decisions based on the digital data or printed maps. The WSGS and the State of Wyoming retain and do not waive sovereign immunity.

The use of or reference to trademarks, trade names, or other product or company names in this publication is for descriptive or informational purposes only, or is pursuant to licensing agreements between the WSGS or State of Wyoming and software or hardware developers/vendors, and does not imply endorsement of those products by the WSGS or the State of Wyoming.

NOTICE TO USERS OF INFORMATION FROM THE WYOMING STATE GEOLOGICAL SURVEY

The WSGS encourages the fair use of its material. We request that credit be expressly given to the "Wyoming State Geological Survey" when citing information from this publication. Please contact the WSGS at 307-766-2286, ext. 224, or by email at wsgs.sales@wyo.gov if you have questions about citing materials, preparing acknowledgments, or extensive use of this material. We appreciate your cooperation.

Individuals with disabilities who require an alternative form of this publication should contact the WSGS. For the TTY relay operator call 800-877-9975.

For more information about the WSGS or to order publications and maps, go to www.wsgs.uwyo.edu, call 307-766-2286, ext. 224, or email wsgs.sales@wyo.gov.

Map Projection: Universal Transverse Mercator (UTM), zone 12
False Easting: 500000, False Northing: 0
Central Meridian: -111.0 degrees West
Linear Unit: Meter
Horizontal Datum: North American Datum of 1983 (NAD 83)

Map layout by Tomas Gracias
and Jim Stafford
Map editing by Suzanne C. Luhr