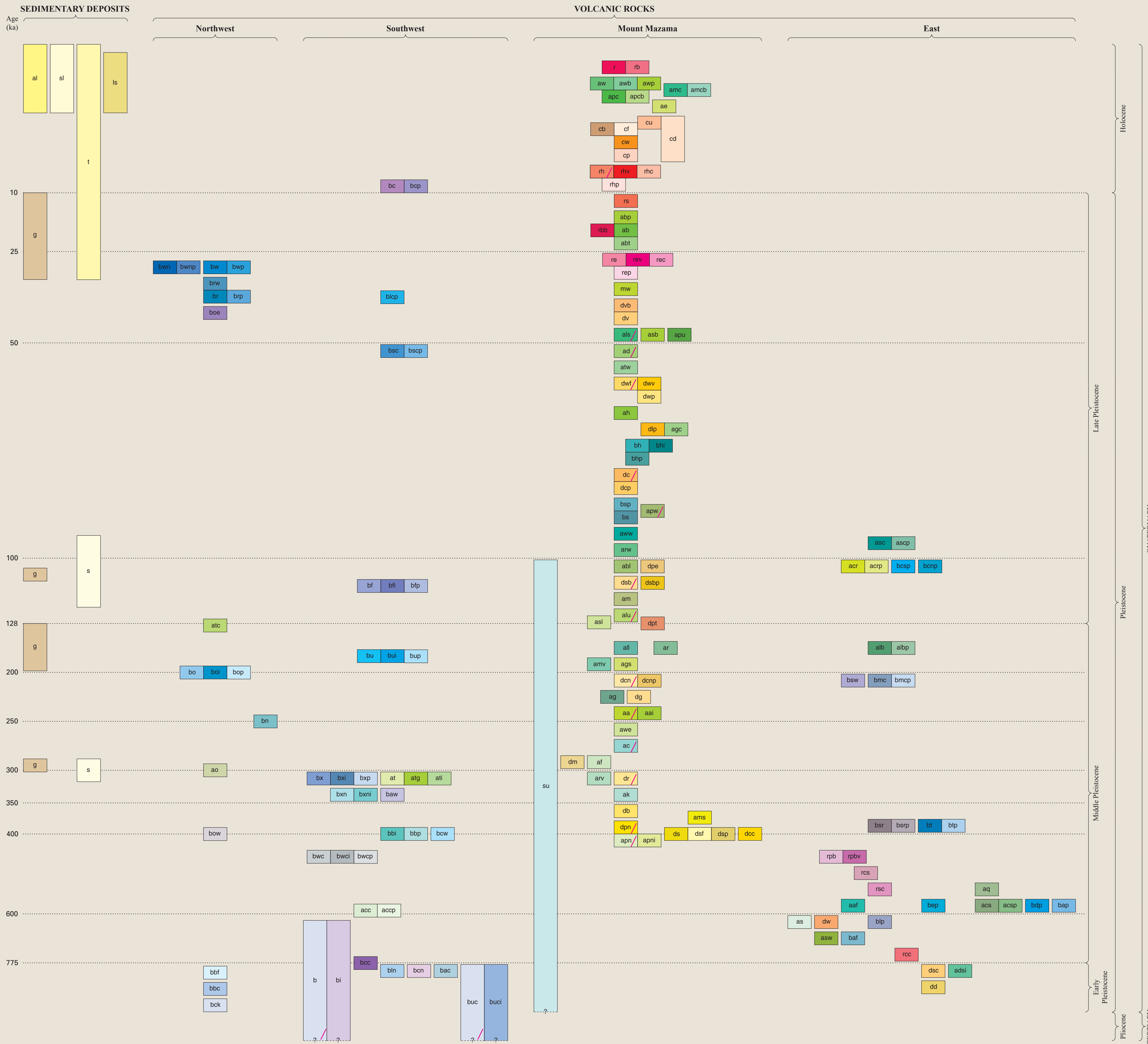


CORRELATION OF MAP UNITS
[Touching boxes indicate units are part of same episode. Late/middle Pleistocene boundary from Stirling and others (1998). Middle/early Pleistocene boundary from Bassinet and others (1994). See DESCRIPTION OF MAP UNITS for specific age determinations]



LIST OF MAP UNITS
[Units are shown on geologic map (sheet 1) and (or) on bedrock map (sheet 3) and panoramas (sheet 4). See DESCRIPTION OF MAP UNITS (pamphlet) for specific age determinations. Unit colors for igneous rocks are intended to reflect composition, nature of material, and age (a color may be used for different units): basalt, purple; basaltic andesite, blue; andesite, green; borderline andesite/basaltic andesite, blue-green; dacite, yellow or orange; rhyodacite, pink or red. Generally, darker colors denote younger units. Within a unit, intrusive rocks (labels end in "i") are darkest, lava flows intermediate, and pyroclastic rocks (labels end in "p") lightest. Some unit exposures on the printed map are too small to distinguish the color for unit identification. These are labeled where possible, and unlabeled units are attributed in the database]

- SEDIMENTARY DEPOSITS**
- al Alluvium (Holocene)
 - sl Sediment gravity-flow deposits (Holocene)
 - t Talus (Holocene and Pleistocene)
 - ls Landslide deposits (Holocene)
 - g Glacial deposits, undivided (Pleistocene)
 - s Sedimentary deposits, undivided (late and middle Pleistocene)

- VOLCANIC ROCKS**
Regional Volcanism, Northwest
- Basaltic andesite north of Williams Crater (late Pleistocene)
 - hwn Lava
 - hwip Pyroclastic
 - Basaltic andesite of Williams Crater (late Pleistocene)
 - bw Lava
 - bwp Pyroclastic
 - Basaltic andesite northwest of Red Cone (late Pleistocene)
 - brw Basaltic andesite northwest of Red Cone (late Pleistocene)
 - Basaltic andesite of Red Cone (late Pleistocene)
 - br Lava
 - brp Pyroclastic
 - Basalt east of Oasis Butte (late Pleistocene)
 - boe Basalt east of Oasis Butte (late Pleistocene)
 - Andesite of Timber Crater (late or middle Pleistocene)
 - atc Andesite of Timber Crater (late or middle Pleistocene)
 - Basaltic andesite of Oasis Butte (middle Pleistocene)
 - bol Intrusive
 - bo Lava
 - bop Pyroclastic
 - Basaltic andesite north of Red Cone (middle? Pleistocene)
 - bn Basaltic andesite north of Red Cone (middle? Pleistocene)
 - Andesite southwest of Oasis Butte (middle Pleistocene)
 - ao Andesite southwest of Oasis Butte (middle Pleistocene)
 - Basaltic andesite west of Oasis Butte (middle? Pleistocene)
 - bow Basaltic andesite west of Oasis Butte (middle? Pleistocene)
 - Basaltic andesite of Bert Creek (early Pleistocene)
 - bbf Mudflow
 - bbc Lava
 - bck Basaltic andesite north of Crater Creek (early Pleistocene)

- Regional Volcanism, Southwest**
- Basalt of Castle Point (early Holocene)
 - bc Lava
 - bcp Pyroclastic
 - blcp Basaltic andesite north of Little Castle Creek (late Pleistocene)
 - Basaltic andesite of Scoria Cone (late Pleistocene)
 - bsc Lava
 - bscp Pyroclastic
 - Basaltic andesite northwest of Pumice Flat (late Pleistocene)
 - bf Lava
 - bfi Intrusive
 - bfp Pyroclastic
 - Basaltic andesite of Union Peak (middle Pleistocene)
 - bu Lava
 - bui Intrusive
 - bup Pyroclastic
 - Basaltic andesite of Whitehorse Bluff (middle Pleistocene)
 - bx Lava
 - bxi Intrusive
 - bxp Pyroclastic
 - Andesite of Arant Point (middle Pleistocene)
 - at Lava
 - atg Vitric
 - ati Intrusive
 - Basalt northwest of Whitehorse Bluff (middle? Pleistocene)
 - bxn Lava
 - bxni Intrusive
 - baw Basaltic andesite west of Arant Point (middle Pleistocene)
 - Basaltic andesite west of Bear Bluff (middle? Pleistocene)
 - bbi Intrusive
 - bbp Pyroclastic
 - bcw Basaltic andesite west of Mazama Campground (middle? Pleistocene)
 - Basaltic andesite of Whitehorse Creek (middle? Pleistocene)
 - bwc Lava
 - bwci Intrusive
 - bwcp Pyroclastic
 - Andesite north of Castle Creek (middle Pleistocene)
 - acc Lava
 - accp Pyroclastic
 - Basaltic andesite, undivided (Pleistocene or Pliocene)
 - b / Lava
 - bi Intrusive
 - bcc Basalt of Castle Creek (middle or early Pleistocene)
 - bin Basaltic andesite northwest of Little Castle Creek (early? Pleistocene)
 - bcni Basaltic north of Castle Creek (early? Pleistocene)
 - bac Basaltic andesite of Castle Point (early? Pleistocene)

- Mount Mazama**
- Basaltic andesite of Union Creek (Pleistocene or Pliocene)
 - buc Lava
 - buci Intrusive
 - Rhyodacite of the postcaldera dome (Holocene)
 - r Lava
 - rb Breccia
 - Andesite of Wizard Island (Holocene)
 - aw Lava
 - awb Breccia
 - awp Pyroclastic
 - Andesite of Merriam Cone (Holocene)
 - amc Lava
 - amcb Breccia
 - Andesite of the central platform (Holocene)
 - apc Lava
 - apcb Breccia
 - ae Andesite of the east basin (Holocene)
 - Deposits of the climactic eruption of Mount Mazama (Holocene)
 - cu Fine-grained lithic- and crystal-rich ignimbrite
 - cd Undivided climactic unit
 - cb Lithic breccia
 - cf Ring-vent-phase ignimbrite
 - cw Wineglass Welded Tuff of Williams (1942)
 - cp Plinian and other Holocene pumice-fall deposits
 - Holocene preclimactic rhyodacite (Holocene)
 - rh Felsite
 - rv Vitrophyre
 - rhc Pumiceous carapace
 - rhp Pyroclastic
 - rs Rhyodacite of Sharp Peak (late Pleistocene)
 - Andesite south of Bear Bluff (late Pleistocene)
 - abp Pyroclastic
 - ab Lava
 - abt Tuff breccia
 - abd Rhyodacite of Bear Bluff (late Pleistocene)
 - Evolved Pleistocene preclimactic rhyodacite (late Pleistocene)
 - re Felsite
 - rev Vitrophyre
 - rcp Pumiceous carapace
 - rep Pyroclastic
 - rw Mingled lava of Williams Crater (late Pleistocene)
 - Dacite of Munson Valley (late Pleistocene)
 - dvb Prismaticly jointed block unit
 - dv Monolithologic breccia
 - als Andesite of Lightning Spring (late Pleistocene)
 - asb Andesite of Steel Bay (late Pleistocene)
 - apu Andesite of Pumice Point (late Pleistocene)
 - ad Andesite of Devils Backbone (late Pleistocene)
 - atw Andesite south of The Watchman (late Pleistocene)
 - Dacite of The Watchman (late Pleistocene)
 - dwl Felsite
 - dvw Pumiceous carapace and dense vitrophyre
 - dwp Pyroclastic-flow deposits
 - ah Andesite of Hillman Peak (late Pleistocene)
 - dpl Dacite below L'ao Rock (late Pleistocene)
 - agc Andesite of Grotto Cove (late Pleistocene)
 - Basaltic andesite of Hillman Peak (late Pleistocene)
 - bh Lava
 - bni Intrusive
 - bhp Pyroclastic
 - Dacite of Pumice Castle (late Pleistocene)
 - dc Lava
 - dcp Pyroclastic
 - Basaltic andesite of Steel Bay (late Pleistocene)
 - bep Pyroclastic
 - bs Lava
 - apw Andesite west of Pumice Point (late Pleistocene)
 - aww Andesite of the west wall (late Pleistocene)
 - arw Andesite west of Red Cone (late Pleistocene)
 - abl Andesite of the boat landing (late Pleistocene)
 - dpe Dacite east of Palisade Point (late Pleistocene)
 - Dacite of Steel Bay (late Pleistocene)
 - dsb Lava
 - dsbp Pyroclastic
 - am Andesite of Merriam Point (late Pleistocene)
 - alu Andesite of L'ao Bay, upper unit (late Pleistocene)
 - asl Andesite east of Spruce Lake (late or middle Pleistocene)
 - dpt Dacite of Palisade Point (late or middle Pleistocene)
 - all Andesite of L'ao Bay, lower unit (middle Pleistocene)
 - ar Andesite of Roundtop (middle Pleistocene)
 - amv Andesite east of Munson Valley (middle Pleistocene)
 - ags Andesite of the gaging station (middle Pleistocene)
 - Dacite north of Castle Creek (middle Pleistocene)
 - dcn Lava
 - dcnp Pyroclastic

- Regional Volcanism, East**
- Andesite of Scott Creek (late? Pleistocene)
 - asc Lava
 - ascp Pyroclastic
 - Andesite of Crater Peak (late Pleistocene)
 - acr Lava
 - acrp Pyroclastic
 - Basaltic andesite south of Crater Peak (late Pleistocene)
 - bosp Basaltic andesite south of Crater Peak (late Pleistocene)
 - bcnp Basaltic andesite north of Crater Peak (late? Pleistocene)
 - Andesite south of Lookout Butte (middle Pleistocene)
 - alb Lava
 - albp Pyroclastic
 - Basalt west of Sun Creek (middle Pleistocene)
 - bsw Basalt west of Sun Creek (middle Pleistocene)
 - Basaltic andesite of Maklaks Crater (middle Pleistocene)
 - bmc Lava
 - bmcp Pyroclastic
 - Basalt of Sand Ridge (middle Pleistocene)
 - bsr Lava
 - bsrp Pyroclastic
 - Basaltic andesite northeast of Boundary Butte (middle Pleistocene?)
 - bt Lava
 - btp Pyroclastic
 - Rhyodacite of Pothole Butte (middle Pleistocene)
 - rbp Felsite
 - rbpv Vitrophyre
 - Rhyodacite south of Crater Peak (middle Pleistocene)
 - rcs Rhyodacite south of Crater Peak (middle Pleistocene)
 - Rhyodacite of Scott Creek (middle Pleistocene)
 - rcp Rhyodacite of Scott Creek (middle Pleistocene)
 - Andesite of Sand Creek quarry (middle? Pleistocene)
 - aq Andesite of Sand Creek quarry (middle? Pleistocene)
 - Andesite northeast of Annie Falls (middle Pleistocene)
 - aaf Andesite northeast of Annie Falls (middle Pleistocene)
 - Basaltic andesite east of Cavern Creek (middle? Pleistocene)
 - bap Basaltic andesite east of Cavern Creek (middle? Pleistocene)
 - Andesite south of Sand Creek (middle? Pleistocene)
 - acs Lava
 - acsp Pyroclastic
 - Basaltic andesite east of Dry Butte (middle? Pleistocene)
 - bdp Basaltic andesite east of Dry Butte (middle? Pleistocene)
 - Basaltic andesite of Boundary Butte (middle? Pleistocene)
 - bap Basaltic andesite of Boundary Butte (middle? Pleistocene)
 - Andesite of Sun Creek (middle Pleistocene)
 - as Andesite of Sun Creek (middle Pleistocene)
 - Dacite west of The Pinnacles (middle Pleistocene)
 - dvw Dacite west of The Pinnacles (middle Pleistocene)
 - Basaltic andesite north of Lookout Butte (middle Pleistocene)
 - blp Basaltic andesite north of Lookout Butte (middle Pleistocene)
 - Andesite west of Sand Creek (middle Pleistocene)
 - asw Andesite west of Sand Creek (middle Pleistocene)
 - Basaltic andesite east of Annie Falls (middle Pleistocene)
 - bae Basaltic andesite east of Annie Falls (middle Pleistocene)
 - Rhyodacite west of Cavern Creek (middle Pleistocene)
 - rcc Rhyodacite west of Cavern Creek (middle Pleistocene)
 - Dacite of Sand Creek (early Pleistocene)
 - dsc Dacite of Sand Creek (early Pleistocene)
 - Andesite south of Dry Butte (early Pleistocene)
 - adsi Andesite south of Dry Butte (early Pleistocene)
 - Dacite of Dry Butte (early Pleistocene)
 - dd Dacite of Dry Butte (early Pleistocene)

Geologic Map of Mount Mazama and Crater Lake Caldera, Oregon
By Charles R. Bacon 2008

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— Contact—Long dash where gradational
..... Internal contact—Indicates base or margin of lava flow
— Dike—Narrower than approximately 5 m
- - - Fault—Dotted where concealed; bar and ball on downthrown side
- - - - - Bedform crest—Shown in units cb, cu, and cf
- - - - - Moraine crest—Open circle where concealed
- - - - - Slump surface—Dotted where inferred (units abt, cb, cf)
--- Crater Lake National Park boundary
* Volcanic Vent—Does not include dikes feeding lava flows
22647 Dated sample—Location and age (ka) of sample dated by K-Ar or ⁴⁰Ar/³⁹Ar methods. See DESCRIPTION OF MAP UNITS for units containing sample localities without ages
M21-11A Geothermal exploration well