REINTERPRETATION OF UPPER PALEOZOIC AND MESOZOIC(?) ROCKS OF THE NORTHERN SHOSHONE RANGE, NEVADA AND THE AGE OF EMPLACEMENT OF THE GOLCONDA ALLOCHTHON. **Nº 26486**

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Previously stratigraphic and structural relationships of upper Paleozoic and Mesozoic(?) rocks in the N. Shoshone range were depicted as documenting a depositional overlap of the Golconda thrust, thereby establishing a Permian and Triassic age for emplacement of the Golconda allochthon. Based on new fossil evidence, strata formerly assigned to the lower part of a Middle Triassic overlap sequence are herein assigned a late Paleozoic age. Regional Correlation and lower contact relationships of this upper Paleozoic unit"upu" are uncertain. The unit may be allochthonous or autochthonous with respect to the Golconda thrust. Overlying this unit with angular unconformity are alluvial fan deposits that, based on meager fossil data, are Mesozoic(?) in age Careful mapping of the alluvial fan deposits demonstrates that they are in depositional contact with only the "upu", thus no depositional overlap of the Golconda thrust is evident. Therefore, these rocks do not strictly provide an upper age constraint for the emplacement of the allochthon. Very immature clasts from the alluvial fan deposits however, suggest that both autochthon and allochthon of the Golconda thrust were being eroded while this sequence was being deposited. The autochthon is represented by clasts derived from the Upper Pennsylvanian and Lower Permian Antler Peak Limestone, the Middle Pennsylvanian Battle Formation, and the underlying mid-Paleozoic Roberts Mountains allochthon. If the "upu" is allochthonous then clasts derived from it, and present in the alluvial fan deposits, indicate an overlap of the Golconda thrust. Overlap is also indicated if this unit is autochthonous and the alluvial fan sequence correlates with the Triassic Star Peak Group, because elsewhere the Star Peak Group, with the underlying lower Triassic Koipato Formation overlaps the Golconda allochthon.

SIGNIFICANCE OF TECTONIC FABRIC OF THE GOLCONDA ALLOCHTHON IN TOIYABE RANGE, NEVADA **Nº 24505**

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The Golconda allochthon in southern Toiyabe Range of Nevada comprises 12 vertical or west- dipping thrust nappes that include Miss., Penn., Permian pelite, chert, and pillow lava. The allochthon lies above Permian strata. Four phases of deformation are recognized in the allochthon, each of which can be related to sequential processes in the development and emplacement of the allochthon.

D1 consists of isoclines and axial plane cleavage; D2: large folds of bedding, cleavage, and some nappe boundaries; D3: local folds near faults; D4: kinks and related folds.

Trends of a) X (max. elong.) from elliptical grains in slates of D1, b) Z from intersecting kinks of D4, c) shear directions from fold-Golconda thrust zone pairs, and d) fault slip indicate EW tectonic transport. D1 and D2 can be interpreted as syn-accretionary, whereas D3 may represent motions within an accretionary prism; D4 may have formed at the final stages of emplacement.

TRANSITION FROM INFRASTRUCTURE TO SUPRASTRUCTURE IN THE EAST-CENTRAL RUBY MOUNTAINS, NEVADA **Nº 15783**

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Rocks of the east-central Ruby Mountains, northeastern Nevada, record a north-to-south transition from migmatitic infrastructure to overlying low-grade metamorphosed suprastructure. Lowermost intermixed granitic rocks with isoclinally-folded Precambrian feldspathic schist and quartzite xenoliths (upper amphibolite facies) grade to complexly folded garnet- and staurolite-rich Precambrian schists (middle to upper amphibolite facies) and Cambrian Prospect Mountain Quartzite, with only minor intruded granitic rocks.

Structurally above this area, a steeply-dipping fault zone and recrystallized marble band juxtapose medium-grade Prospect Mountain Quartzite and overlying low-grade metamorphosed Middle and Upper Cambrian carbonate and clastic rocks. The Lower Cambrian Pioche Shale is absent. The remaining Cambrian section is thinned by 15 to 40% as compared to that exposed further south in the range.

Pre- to synkinematic Jurassic and Cretaceous age two-mica granitic rocks which pervasively intrude the migmatitic infrastructure show field relations and chemical and modal compositions which indicate their derivation, at least in part, from partial melting of metasedimentary rocks. Petrographic textures document complex near-eutectic crystallization and/or late-stage alkali metasomatism.

DIAGENETIC CONTROLS ON THE STRUCTURAL EVOLUTION OF SILICEOUS SEDIMENTS, GOLCONDA ALLOCHTHON, NEVADA **Nº 25258**

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The Havallah Sequence of northern and central Nevada is an upper Paleozoic ocean floor assemblage that was thrust over western North America during the Permo-Triassic Sonoma orogeny. Numerous thrusts slice the sequence into tectonic packets comprised largely of chert and argillite with some greenstone and turbidite. Many chert packets contain multiple structures including bedding-parallel and bedding-normal [illegible] features, bedding-parallel lenticular structures, two or more [illegible] tions of east-verging folds associated with at least two sets of thrusts and a later set of west-verging folds. Other packets [illegible] some of these structures, and a few (ribbon chert) almost none. The structural evolution can be modeled by the imbrication of a thick [illegible] of sediments in an accretionary prism with subsequent obduction onto North America during arc-continent collision. The packet to Pe[illegible] structural heterogeneity suggests the siliceous sediments had [illegible] rheologies and solubilities during accretion. We attribute most of these variations to differences in diagenetic state of the silica. Biogenic silica (opal-A) developed ductile folds and numerous [illegible] features (microstylolites, lenticles) as a result of its low [illegible] and relatively high solubility. Quartz chert, the end product of [illegible] ial diagenesis, was rigid and either sheared or remained undeformed. Rapid tectonic burial as a result of accretion accelerated the [illegible] tion of opal-A to form quartz which may have created the excess [illegible] pressure responsible for the development of penetrative thrusts and local breccias and clastic dikes. The abundance of rigid quartz [illegible] in the Havallah sequence may have prevented the pervasive development of melange that characterizes many accretionary complexes.

THE NATURE OF THE ANTLER OROGENY: VIEW FROM NORTH-CENTRAL NEVADA **Nº 13[illegible]**

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The Schoonover sequence (Independence Mtns) is part of the Go[illegible] lochthon (GA, emplaced in Permo-Triassic time) and contains a [illegible] succession that spans latest Devonian to early Permian time. [illegible] graphy and that of the autochthonous Mississippian "overlap" [illegible] the Mountain City area record events that took place during and [illegible] the emplacement of the Roberts Mountains allochthon (RMA) in the [illegible] Mississippian Antler orogeny; they thus constrain the paleogeograph[illegible] westward of the "Antler foredeep" and "Antler orogenic highland".

In the Schoonover, Fammenian to Kinderhook andesite and arc [illegible] clastics interfinger with Kinderhook siliciclastics derived in part [illegible] the RMA exposed in the "Antler highlands" and are coeval with Antler thrusting. The major pulse of siliciclastics in the Schoonover is [illegible] chronous with the onset of clastic deposition in the "foredeep." [illegible] source terranes represented in the Schoonover place the basin between along strike of an offshore island arc and the active Antler orogen.

Meramec age basalt flows in the Schoonover are coeval with those in the Goughs Canyon Formation (part of the GA in the Osgood Mtns) and those in the autochthonous Nelson Formation (Mountain City), which is overlain by a transgressive sequence. These sequences record late Mississippian extension and subsidence within and to the west of the Antler orogen. Thus a rifting event occasioned the end of Antler thrusting.

Collision of an exotic arc as a model for the emplacement of the RMA is untenable with these stratigraphic data. A more compatible model is that the Antler orogeny resulted from thrusting in a back-arc basin that lay immediately offshore of western North America.

TECTONIC IMPLICATIONS OF PRE-CENOZOIC STRUCTURES, SONOMA RANGE, NORTHERN NEVADA **Nº 24[illegible]**

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In the Sonoma Range, the Mesozoic (Mz) Winnemucca Orogeny (WO) caused lower and upper Paleozoic (Pz) rocks to be thrust westward over Triassic beds. Tectonostratigraphic units in ascending order are: 1) lower Pz Harmony "Formation", 2) Pz rocks of disputed Roberts Mountains allochthon (RMA) or Golconda allochthon (GA), 3) Permian(?) breccia and volcanics and Triassic shelf deposits, 4) lower Pz Harmony and Valmy "Formations", 5) undated interbedded [illegible] and slaty limestone with chert and biosparite olistoliths, and 6) rocks of GA. Problems are which units were allochthonous in Mz time and the cause of the west-verging structures. To evaluate the Mz allochthoneity, we have analyzed the deformation history of several units and obtained [illegible] protolith ages.

4 phases of deformation recognized in both units 1 and 4 are related to the Pz emplacement of the RMA. 2 phases of deformation common to units 1, 3, and 4 represent [illegible] WO deformations. Syn-WO deformations are present in [illegible] 4. A biosparite correlated to Antler Peak limestone [illegible] posed between units 1 and 2 is evidence that 2 is GA. [illegible] conclusions are: 1) unit 3 is para-autochthonous, 2) [illegible] 4, 5, and 6 are the Winnemucca allochthon (WA). An early Pz age for unit 5 necessitates extensive Mz thrusting [illegible] in the WA, whereas a late Pz or Triassic age permits [illegible] placement of the WA as a single block. West vergence and transport may have been related to an east-facing ramp at the base of the layered cover.