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Geologic Map of the Adams 7°5' Quadrangle, Umatilla County, Oregon

Carlisle J.M. Azzopardi¹, Jason D. McClaughry², David R. Gaylord³,
Eduardo F. Guerrero¹, and Lowell H. Anthony¹

Cartography by Jon J. Franczyk⁴ and Geodatabase by Carlisle J.M. Azzopardi¹

¹Oregon Department of Geology and Mineral Industries, 800 SE Oregon Street, Suite 905, Portland, OR 97232
²University of Oregon and Geology and Mineral Industries, Baker City Field Office, Baker City Geosyncline, 295 Third Street, Baker City, OR 97601
³Richard H. Bennett, 10000 NE 10th Avenue, Portland, OR 97220
⁴Richard H. Bennett, 10000 NE 10th Avenue, Portland, OR 97220

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This geological map of the Spring Hollow area displays a complex network of faults and topographic features. Key faults include the Spring Hollow Fault, Greenwood Creek Fault, Adams Fault, and the Spring Creek Quarry Fault. The map also shows the Spring Hollow Creek and Greenwood Creek. Land parcels are identified by UMAT numbers, and the map includes a scale bar and a north arrow.

UPPER CENOZOIC SURFICIAL DEPOSITS	
	modern fill and construction material (upper Holocene)
	landslide deposits (Holocene)
	alluvium (Holocene and Upper Pleistocene)
	fan deposits (Holocene and Upper Pleistocene)
	loess deposits (Holocene to lower Pleistocene)
	Stippled overlay pattern depicts areas where concentrations of sandy Mazama tephra (Holocene) cap or are intermixed with loess

UPPER CENOZOIC VOLCANIC AND SEDIMENTARY ROCKS

COLUMBIA RIVER BASALT GROUP

Saddle Mountains Basalt

Umatilla Member

Tsu Umatilla Member (middle Miocene)

Wanapum Basalt

Frenchman Springs Member

Twfsl	Basalt of Sentinel Gap, low-phosphorous lava flows (lower Miocene)
Twfsh	Basalt of Sentinel Gap, high-phosphorous lava flows (lower Miocene) (cross section only)
Twfth	Basalt of Sand Hollow (lower Miocene) (cross section only)

Grande Ronde Basalt

Normal polarity (NZ) magnetostratigraphic unit subdivided into:

Seriated Bluffs Member

- T_{msu}** Result of Museum (lower Miocene) (cross section only)
- T_{pmc}** Result of McCoy Canyon (lower Miocene) (cross section only)

Winter Water Member

- T_{pw}** Winter Water Member (lower Miocene) (cross section only)

Indian Ridge Member

- T_{ir}** Indian Ridge Member (lower Miocene) (cross section only)

Buttermilk Canyon member

 Buttermilk Canyon member (lower Miocene) (cross section only)

Reverse-polarity (R2) magnetostratigraphic unit

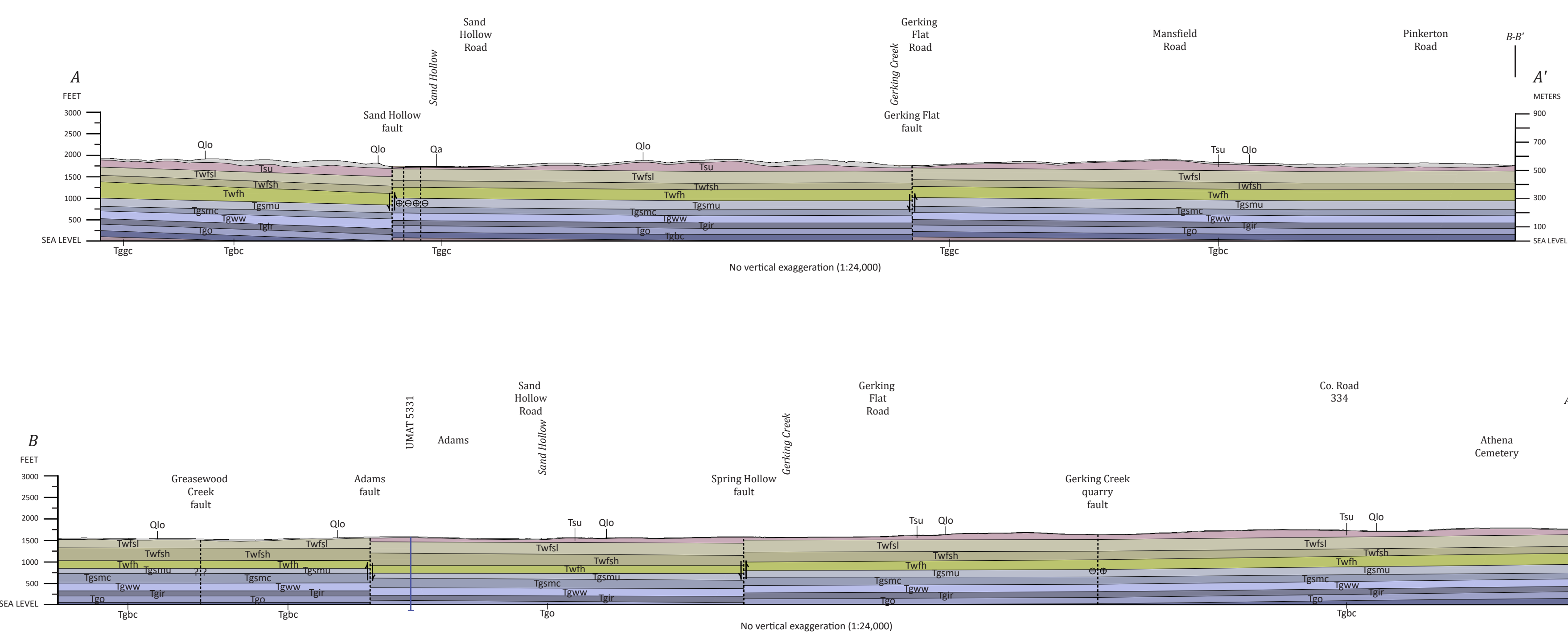
 Grouse Creek member (lower Miocene) (cross section only)

[illegible]

*The geologic time scale used is the 2024 (v2024-12) version of the International Stratigraphic Commission on chronographic chart (<https://stratigraphy.org/chart>) revised from Gradstein and others (2004), Ogg and others (2008), and Cohen and others (2013).

This geological map depicts the Adams and Spring Hollow area, characterized by a complex network of faults and creeks. The map is oriented with North at the top, as indicated by the north arrow in the upper right corner. A scale bar in the upper left corner shows a distance of 1 mile. The map is divided into several sections by major faults, including the Gerking Creek Quarry Fault, Spring Hollow Fault, Adams Fault, and Weston Fault. These faults are shown as dashed lines with different colors and patterns. The map also shows several creeks, including Greenwood Creek, Spring Hollow Creek, and Weston Creek. Land parcels are labeled with UMAT numbers, and various other features like roads, pipelines, and land use designations are also shown. The map is a detailed representation of the geological and geographical features of the area.

Select Quaternary units not shown in cross section.



Stream	☞	Lidar-derived elevation		Strike-slip fault, right-lateral offset—solid line where accurately located, long-dashed where approximate, short-dashed where inferred, dotted where concealed, queried where uncertain.
Road	●	Location of geochemical analysis sample		Strike-slip fault, left-lateral offset—solid line where accurately located, long-dashed where approximate, short-dashed where inferred, dotted where concealed, queried where uncertain.
Secondary highway	UMAT 1462	Water well, as shown on topographic maps or on general-purpose or smaller-scale maps		Generic fault (in cross section)—uncertain and questionable with approximate location.
Primary highway	A—A'	Cross section		Normal fault (in cross section)—arrows show relative motion.
Cemetery boundary	↓	Water well (cross section only)		Strike-slip fault, right-lateral offset (in cross section)—minus, away from observer; plus, towards observer.
Boundary—Confederated Tribes of the Umatilla Indian Reservation				Strike-slip fault, left-lateral offset (in cross section)—minus, away from observer; plus, towards observer.
Contact	—	—		Anticline—solid line where accurately located, long-dashed where approximate, short-dashed where inferred, dotted where concealed, queried where uncertain.
Fault	—	—		Syncline—solid line where accurately located, long-dashed where approximate, short-dashed where inferred, dotted where concealed, queried where uncertain.
Normal fault	—	—		Normal fault—ball and bar on downthrown block. Solid line where accurately located, long-dashed where approximate, short-dashed where inferred, dotted where concealed, queried where uncertain.

Source Data:
U.S. Geological Survey (USGS) and National Oceanic and Atmospheric Administration (NOAA) Coastal Swath Data (1998-1999), 1-meter digital elevation model for the Adams (45°11'03"N) Coastal Swath. Water Wetness from USGS (2001). USGS and NOAA (2002). Digital Bathymetry from Oregon Department of Transportation (2002). Unpublished boundary from the U.S. Census Bureau's Master Address File (Topologically Integrated Geographic Encoding and Clustering (TIGER) database (HTF020202)).

Project/Event:
Oregon National Lambert Conformal Conic, NAD 1983 International Feet, Horizontal Datum, NAD 1983 HARN UTM, UTM Zone 18N, NAD 1983. North: local quadrangle has been oriented 1.25 degrees counter clockwise.

Field Work:
Data collected 1987-1988 and 1989 by James D. McLaughlin and Edward R. Gaylord.

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References:
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Gay, R. E., and Gradstein, F. M., 2000. *The concise geologic time scale*. New York, Cambridge University Press, 176 p.

Geographic Names:
Mark Fries (DOGAMI retired), Jon Wozniak (OWBD), Lisa T. Salsbery, and Reed Bourgeois (DOGAMI).

Digital Data:
Mark Fries (DOGAMI retired).

Contributors:
Gordon L. M. Armstrong, DOGAMI

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