





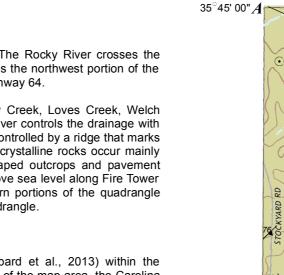
This is an Open File Map. It has been reviewed internally for conformity with North Carolina Geological Survey mapping standards and with the North American Stratigraphic Code. Further revisions or corrections to this Open File map may occur. Research supported by the U.S. Geological Survey, National Cooperative Geologic Mapping Program, under USGS award numbers G15AC00237 and G16AC00288. The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government. This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program under StateMap award numbers G15AC00237, 2015 and G16AC00288, 2016. Geologic data collected in July 2015 through May 2016 under award G15AC00237 and July 2016 through May 2017 under award G16AC00288. Acknowledgements: Field assistance provided by Randy Bechtel and members of the Energy Group -

Locally interlayered with pyroclastic rocks and meta-sediments identical to the Zhime/pl units.

Hauck (1977). Present as isolated outcrops or boulders as designated by green station locations.

through May 2016.

This Geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program



79[°] 30' 00"

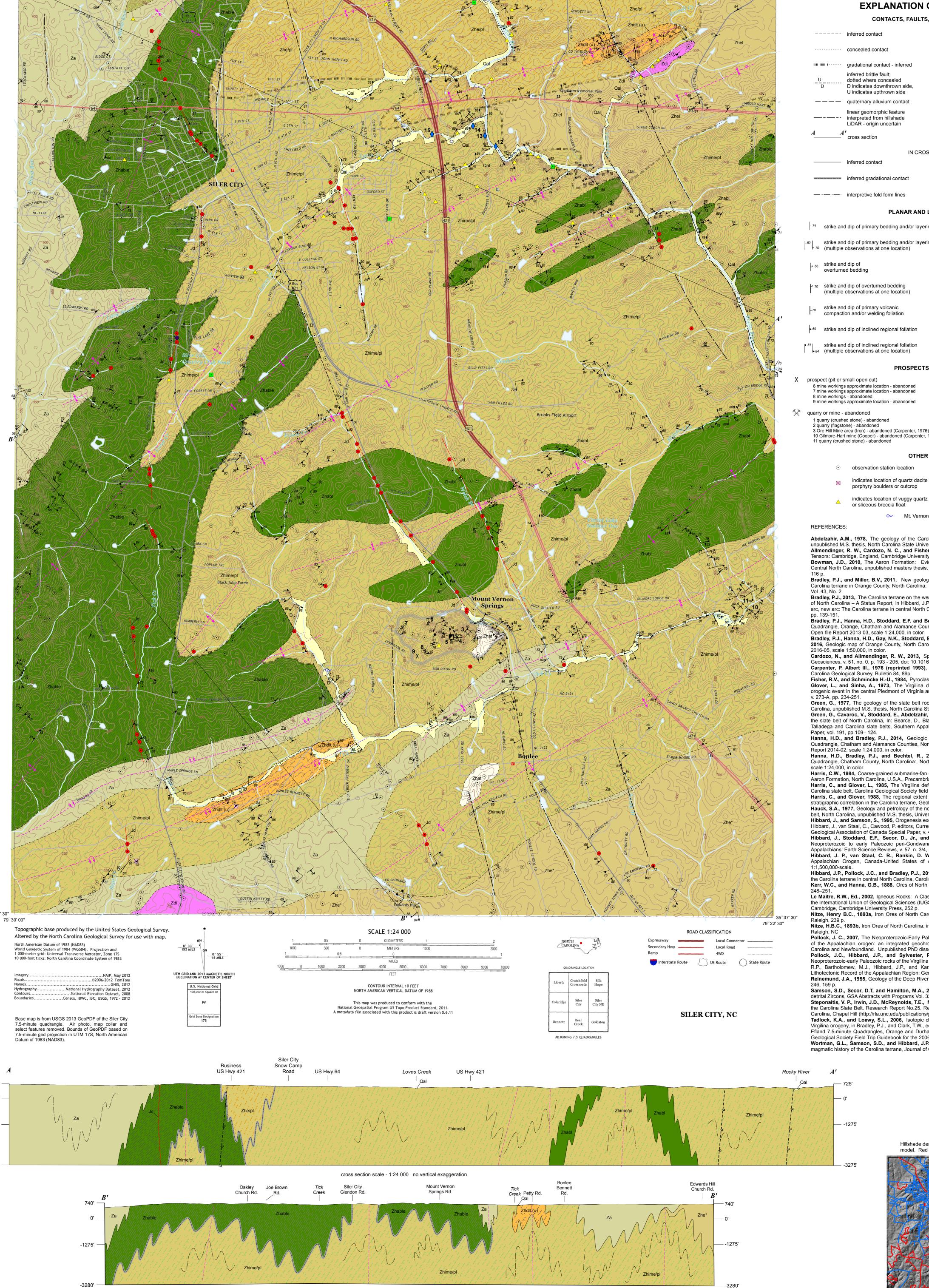
35[°]37' 30'

-1275' -

-3275' -

tone, siltstone and conglomeratic rocks consisting of angular clasts of andesite and/or basalt are common and are interpreted as resedimented hyaloclastite. Zhablt-dcp Zhablt-dcp – Andesite to basalt porphyry of the Dry Creek area: Distinctive, green to dark green, metamorphosed andesite porphyry with aphanitic groundmass and euhedral phenocrysts (up to 10 mm) of greenish-white plagioclase; phenocrysts typically constitute 20 to 50% of the rock; local alignment of plagioclase; lesser pyroxene/amphibole phenocrysts. Green to dark green basalt porphyry with abundant pyroxene (altered to amphibole) phenocrysts with minor plagioclase phenocrysts. Andesite and basalt porphyries locally amygdaloidal (up to 2 cm), amygdules in filling include calcite, quartz, chlorite, and epidote. Same as Dry Creek Porphyry complex of

Oil and Gas Program: Ann Shields, Ryan Channell, Katherine Marciniak, and Walt T. Haven in January



Geologic Map of the Siler City 7.5-minute Quadrangle, Chatham County, North Carolina By Philip J. Bradley, Brandon T. Peach and Heather D. Hanna Map preparation, digital cartography and editing by Michael A. Medina, Heather D. Hanna and Philip J. Bradley

Supersedes Open-file Report 2016-08



79[°]22' 30" 5[°]45' 00"

EXPLANATION

Hillshade de model. Red

FAULTS, AND O	THER FEATURES	
‡	interpreted fold hinge of anticline;	
red¥	is questionable; dotted where concealed interpreted fold hinge of syncline; ? question mark where existence	
ide, 🗸	is questionable; dotted where concealed	ne
ict 1	interpreted fold hinge of overturned synclin	
	inferred diabase dike; dotted where concealed	
	zone of alteration associated with the Ore Hill Mine area	
IN CROSS SECTI	DNS brittle fault, identity or existence questione inferred from LiDAR lineament	ed,
ct	inferred fold axis	
AR AND LINEAR	— — diabase dike - inferred FEATURES	
d/or layering	[77 strike and dip of cleavage	
d/or layering m)	$\begin{bmatrix} 75 \\ 84 \end{bmatrix}$ strike and dip of cleavage (multiple observations at one location)	
	171 strike and dip of inclined joint surface	
n)	 strike of vertical joint surface 	
	 strike and dip of inclined joint surface a (multiple observations at one location) 	
iation	 strike of vertical joint surface (multiple observations at one location) 	
iation n)	⁵⁶ ↓ clast lineation	
SPECTS AND Q	_	
oned oned oned	 mine shaft - abandoned 5 shaft (Whim?) - abandoned 4 - trenches - abandoned 	
	FBL geochemical sample location	
enter, 1976) Carpenter, 1976)	12 FBL035 lithic sample of Steponaitis et al. 13 FBL036 lithic sample of Steponaitis et al. 14 FBL037 lithic sample of Steponaitis et al. 15 FBL038 lithic sample of Steponaitis et al.	(2006) (2006)
OTHER FEATU	RES	- /
tion	indicates location of Zhahlt-don	
ncrop ngy quartz	indicates location of MPzgb boulders or outcrop	
Mt. Vernon Springs	·	
University Press, 2 ation: Evidence for ers thesis, North Ca ew geologic mappi Carolina: Geologic on the west flank o bbard, J.P. and Po ral North Carolina, .F. and Bechtel, R ance Counties, Nor in color. toddard, E.F., Bec	 3, Structural Geology Algorithms: Vectors and 89 pp. a New Lithotectonic Unit in Carolinia, North rolina State University, Raleigh, North Carolina, ng and age constraints in the Hyco Arc of the al Society of America Abstracts with Programs, the Deep River Basin in the northern Piedmont lock, J.C. editors, 2013, One arc, two arcs, old Carolina Geological Society field trip guidebook, 2013 Geologic Map of the Bynum 7.5-Minute th Carolina: North Carolina Geological Survey ntel, R., Phillips, C.M., and Fuemmeler, S. J, h Carolina Geological Survey Open-file Report 	
oi: 10.1016/j.cageo.	rojections with OSXStereonet: Computers and 2012.07.021. mineral deposits of the Carolina Slate, North	
9p. , Pyroclastic rocks Virgilina deformatio	Berlin, West Germany, Springer-Verlag, 472 p. n, a late Precambrian to Early Cambrian (?)	
te belt rocks of the Carolina State Unive	Carolina, American Journal of Science, Cooper Goldston and Bear Creek quadrangles, North rsity, Raleigh, North Carolina, 68 p.	
bdelzahir, A., 1982 ce, D., Black, W., I	, Volcanic and volcaniclastic facies in a part of (ish, S., Tull, J. (Eds.), Tectonic studies in the progen. Geological Society of America Special	
	he Chatham County Portion of the Silk Hope a: North Carolina Geological Survey Open-file	
olina: North Carolir	ologic Map of the Siler City NE 7.5 Minute a Geological Survey Open-file Report 2015-02,	
Precambrian Resea irgilina deformation poiety field trip guide nal extent of the ca rane, Geological So y of the northwest of esis, University of No genesis exotic to the tors, Current Perspe- paper, v. 41, pp. 19 ., Jr., and Dennis -Gondwanan terrar 57, n. 3/4, p. 299-33 ., kin, D. W., and N tates of America, y, P.J., 2013 , One lina, Carolina Geolo s of North Carolina es of North Carolina es (IUGS) Subco 252 p.	 . 600 Ma Virgilina deformation: implications of ciety of America Bulletin, v. 100, pp. 200-217. guarter of the Bynum quadrangle, Carolina slate orth Carolina at Chapel Hill, 146 p. e lapetan cycle in the southern Appalachians, In, actives in the Appalachian– Caledonian Orogen. 11–205. A., 2002, The Carolina Zone: Overview of the southern flank of the southern 9. Villiams, H., 2006, Lithotectonic map of the Geological Survey of Canada, Map-2096A. arc, two arcs, old arc, new arc: An overview of gical Society field trip guidebook, 265 p. North Carolina Geological Survey Bulletin 2, p. and Glossary of Terms: Recommendations of mmission on the Systematics of Igneous Rocks: 	
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