MEISSNER AND MILLER-GEOLOGY OF HONAKER QUAD, RUSSELL, TAZEWELL, AND BUCHANAN CO., VA.

DEPARTMENT OF THE INTERIOR UNITED STATES GEOLOGICAL SURVEY

GEOLOGIC MAP OF THE HONAKER QUADRANGLE, RUSSELL, TAZEWELL, AND BUCHANAN COUNTIES, VIRGINIA By Charles R. Meissner Jr., and Ralph L. Miller

## GEOLOGIC MAP SYMBOLS COMMONLY USED ON MAPS OF THE UNITED STATES GEOLOGICAL SURVEY (Special symbols are shown in explanation)

	Contact—Dashed where approximately located; short dashed where inferred; dotted where concealed	Strike and dip of beds—Ball indicates top of beds known from sedimentary structures
.45		$\frac{70}{1}$ Inclined $\oplus$ Horizontal
<del></del>	Contact—Showing dip; well exposed at triangle	→ Vertical → Overturned
	Fault Dashed whom approximately	Strike and dip of foliation
	Fault—Dashed where approximately located; short dashed where inferred; dotted where concealed	20 Inclined + Vertical + Horizontal
	dotted where conceance	Strike and dip of cleavage
	Fault, showing dip—Ball and bar on downthrown side	
		Bearing and plunge of lineation
<del></del>	Normal fault—Hachured on down- thrown side	/5_ Inclined ◆ Vertical ← Horizontal
		Strike and dip of joints
	Fault—Showing relative horizontal movement	40 Inclined - Vertical + Horizontal
	Thrust fault—Sawteeth on upper plate	Note: Planar symbols (strike and dip of beds, foliation or schistosity, and cleav- age) may be combined with linear symbols to record data observed at
<b></b>	Anticline—Showing direction of plunge;	same locality by superimposed symbols
·	dashed where approximately located; dotted where concealed	at point of observation. Coexisting planar symbols are shown intersecting at point of observation.
	Asymmetric anticline—Short arrow indicates steeper limb	•
2	Overturned anticline—Showing	Shafts
	direction of dip of limbs	☑ Vertical ☑ Inclined
4	Syncline—Showing direction of plunge;	Adit, tunnel, or slope
٠.	dashed where approximately located;	≻— Accessible → Inaccessible
ı		X Prospect
<del></del>	Asymmetric syncline—Short arrow indicates steeper limb	Quarry
	O 1 1 Charrier	X Active X Abandoned
<del></del>	Overturned syncline—Showing direction of dip of limbs	Gravel pit
1	Managlina Charring direction of plungs	X Active X Abandoned
<del></del>	Monocline—Showing direction of plunge of axis	Oil wells
<del>&gt;→</del> 20	Minor anticline—Showing plunge of axis	○ Drilling ◇ Shut-in → Dry hole,  ☆ Gas → Show of gas abandoned
<b>-€→</b> <sup>60</sup>	Minor syncline—Showing plunge of axis	• Oil • Show of oil