

**18—VOLCANIC FEATURES**

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS	NOTES ON USAGE
18.1	Rim of volcanic crater—Certain		lineweight .3 mm 	Use to show outline of topographic wall. Hachures point into crater. Rim may not outline crater completely.
18.2	Rim of volcanic crater—Approximately located		3.0 mm 	
18.3	Rim of volcanic crater—Approximately located, queried		1.0 mm	
18.4	Rim of volcanic crater—Concealed		.5 mm 	
18.5	Rim of volcanic crater—Concealed, queried		.5 mm	
18.6	Rim of volcanic crater—Showing low point of crater (dot)		dot diameter .875 mm	
18.7	Caldera margin 1—Certain		lineweight .375 mm hachure lineweight .25 mm; height 1.0 mm; variable spacing, 7.125 to 7.5 mm	Hachures point into caldera. May also be shown in red or other colors.
18.8	Caldera margin 1—Approximately located		6.25 mm 	
18.9	Caldera margin 1—Approximately located, queried		1.25 mm	
18.10	Caldera margin 1—Inferred		1.5 mm 	
18.11	Caldera margin 1—Inferred, queried		1.0 mm	
18.12	Caldera margin 1—Concealed		.5 mm 	
18.13	Caldera margin 1—Concealed, queried		.5 mm 1.5 mm	
18.14	Caldera margin 2—Certain		lineweight .375 mm .75 mm hachure lineweight .25 mm; height 1.0 mm variable spacing between hachure pairs, 6.375 to 6.75 mm	
18.15	Caldera margin 2—Approximately located		6.25 mm 	
18.16	Caldera margin 2—Approximately located, queried		1.25 mm	
18.17	Caldera margin 2—Inferred		1.5 mm 	
18.18	Caldera margin 2—Inferred, queried		1.0 mm	
18.19	Caldera margin 2—Concealed		.5 mm 	
18.20	Caldera margin 2—Concealed, queried		.5 mm 1.5 mm	

**18—VOLCANIC FEATURES (continued)**

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS	NOTES ON USAGE
18.21	Outline of basalt-filled lava pond that is bounded by levees.		all lineweights .15 mm tick spacing 2.0 mm (at base) 	T-shaped ticks point toward lava pond.
18.22	Crest line of pressure ridge or tumulus on lava flow		lineweight .15 mm 	Draw on axis of ridge.
18.23	Pressure ridge on lava flow		lineweight .15 mm 	Form lines are normal to local flow directions.
18.24	Lava tube		all lineweights .15 mm circle diameter .75 mm; spacing will vary 	Line shows position beneath surface; circles show skylights.
18.25	Volcanic fissure—Certain		lineweight .2 mm 	
18.26	Volcanic fissure—Concealed			
18.27	Volcanic fissure—Hachures show location where lava was emitted			hachure lineweight .15 mm
18.28	Flow lobe—Certain		all lineweights .15 mm hachure height .75 mm; spacing 2.0 mm	Line follows foot of lobe of lava flow; hachures point into lobe.
18.29	Flow lobe—Approximately located		5.0 mm 	
18.30	Flow lobe—Approximately located, queried		1.0 mm	
18.31	Flow lobe—Concealed		.5 mm 	
18.32	Flow lobe—Concealed, queried		.5 mm	
18.33	Ice-contact flow margin—Certain		lineweight .15 mm box height .75 mm; width 2.0 mm; spacing 4.0 mm	Boxes on flow edge that shows ice-contact fabric.
18.34	Ice-contact flow margin—Approximately located		5.0 mm 	
18.35	Ice-contact flow margin—Approximately located, queried		1.0 mm	
18.36	Ice-contact flow margin—Concealed		.5 mm 	
18.37	Ice-contact flow margin—Concealed, queried		.5 mm	
18.38	Flow lines on lava flow		lineweights .15 mm stem lengths and spacing may vary 	
18.39	Contact separating individual flows within map unit, erupted either from same vent or from different vents		lineweight .175 line color 100% red	May also be printed in magenta or other colors.
18.40	Cracks on surface of lava flow		lineweight .175 mm line color 100% red lengths and spacing may vary	
18.41	Rootless vent area on lava flow		line color 100% red lineweight .175 mm; dash 1.5 mm; space .5 mm pattern 328-R	
18.42	Thermal area		line color 100% red lineweight .175 mm; dash 1.5 mm; space .5 mm pattern 121-R in 30% red	

**18—VOLCANIC FEATURES (continued)**

REF NO	DESCRIPTION	SYMBOL	CARTOGRAPHIC SPECIFICATIONS	NOTES ON USAGE
18.43	Flow direction at base of ash deposits formed in surges		2.75 mm 1.5 mm all lineweights .15 mm 25° 5.0 mm half-circle radius 1.5 mm; dash .75 mm; space .375 mm	Identified from antidune bed forms.
18.44	Small cone, cinder cone, or spatter cone (hornito) on surface of lava flow		45° lineweight .2 mm 2.0 mm	May also be shown in red or other colors.
18.45	Recent volcano on small-scale maps		22.5° lineweight .175 mm outer diameter 3.0 mm; inner diameter 1.375 mm	Usually reserved for maps at scales of 1:250,000 or smaller.
18.46	Active volcano on small-scale maps		lineweight .275 mm 2.625 mm 60°	May also be shown in red or other colors.
18.47	Inactive volcano on small-scale maps		90° 2.5 mm lineweight .275 mm	
18.48	Cinder cone on small-scale maps		circle diameter 1.375 mm lineweight .15 mm	
18.49	Diatreme		dot diameter 1.375 mm	
18.50	Breccia pipe		dot diameter 1.375 mm ← H-7	
18.51	Collapse structure—Indicating breccia pipe at depth		lineweight .15 mm circle diameter 1.375 mm ← H-7	
18.52	Thermal spring, type 1		H-7 lineweight .15 mm dot diameter 1.5 mm radius .5 mm 2.0 mm	Rotate tail to point in downhill direction of flow.
18.53	Thermal spring, type 2		lineweight .2 mm lineweight .15 mm	May also be shown in red or other colors.
18.54	Geyser		lineweight .2 mm lineweight .375 mm lineweight .2 mm radius .5 mm 2.75 mm ellipse height 1.25 mm; width 2.5 mm	May also be shown in red or other colors.
18.55	Fumarole or steam vent		draft as shown 2.5 mm all lineweights .2 mm ellipse height 1.25 mm; width 2.5 mm	