--- GEOLOGIC SYMBOLS GSMAP VERSION 9 ---

LINE TYPES

0, Accurately located trace

1, Concealed trace

2, Inferred trace

3, Approximately located trace

4, City boundaries
Linear from air photos not identified on the ground

5, Trace, location from ground geophysical survey

6, Trace, location from aeromagnetic survey

7, Concealed trace

8, Approximate structure contours

9, Trail

10, National or State Reservation boundaries

11, County boundaries

12, National and State boundaries

13, Intermittent drainage or shoreline

14, Dune crest

15, Concealed trace

16, Geophysical survey line

17, Trace of yesterday's fault, 0.007–0.015" width depends on fright

STANDARD CHARACTERS DESIGNATING AGE

GSMAP Font #0 ..... ASCII #

Phanerozoic	185	
Cenozoic	218	Cz
Quaternary		Q
Holocene		H
Pleistocene	186	
Tertiary		T
Neogene		N
Pliocene	187	
Miocene	188	
Paleogene	189	
Oligocene	249	
Eocene	250	
Paleocene	251	
Mesozoic	217	Mz
Cretaceous		K
Jurassic		J
Triassic	211	Ꞧ
Paleozoic	216	Pz
Permian		P
Carboniferous		C
Pennsylvanian	210	ℙ
Mississippian		M
Devonian		D
Silurian		S
Ordovician		O
Cambrian	212	Є
Precambrian	p212	pЄ
Proterozoic	215	P
Late Proterozoic		Z
Middle Proterozoic		Y
Middle Proterozoic 1200–900 MY	181	Y^3
Middle Proterozoic 1400–1200 MY	182	Y^2
Middle Proterozoic 1600–1400 MY	183	Y^1
Early Proterozoic		X
Early Proterozoic 1800–1600 MY	178	X^3
Early Proterozoic 2100–1800 MY	179	X^2
Early Proterozoic 2500–2100 MY	180	X^1
Archean		A
Late Archean		W
Middle Archean		V
Early Archean		U
pre–Archean		pA

FONT 99
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz ' X^1
0123456789 P_4 ℙ C_z P_3 M_z
P_0 Y^3 M_1 E_0 P_6 O_6 Y^1 X^2 Є P Ꞧ > X^3 / , . Y^2

Characters used to designate age

	Redefined ASCII Character	
Phanerozoic	33	P_4
Cenozoic	35	C_z
Quaternary		Q
Holocene		H
Pleistocene	36	P_3
Tertiary		T
Neogene		N
Pliocene	37	P_8
Miocene	38	M_1
Paleogene	40	P_6
Oligocene	41	O_6
Eocene	42	E_0
Paleocene	43	P_A
Mesozoic	45	M_z
Cretaceous		K
Jurassic		J
Triassic	60	Ꞧ
Paleozoic	61	P_z
Permian		P
Carboniferous		C
Pennsylvanian	64	ℙ
Mississippian		M
Devonian		D
Silurian		S
Ordovician		O
Cambrian	91	Є
Precambrian	p91	pЄ
Proterozoic	93	P
Late Proterozoic		Z
Middle Proterozoic		Y
Middle Proterozoic 1200 900 MY	94	Y^3
Middle Proterozoic 1400 1200 MY	95	Y^2
Middle Proterozoic 1600 1400 MY	123	Y^1
Early Proterozoic		X
Early Proterozoic 1800 1600 MY	124	X^3
Early Proterozoic 2100 1800 MY	125	X^2
Early Proterozoic 2500 2100 MY	126	X^1
Archean		A
Late Archean		W
Middle Archean		V
Early Archean		U
pre Archean		pA

Bedding

Code
201 Strike and dip of inclined beds
233 Strike and dip of inclined beds, top known from local structures
246 Strike and general direction of dip of inclined beds
219 Strike and dip of overturned beds
249 Strike and dip of overturned beds, top known from local structures
234 Strike and dip of beds overturned more than 180 degrees
220 Approximate strike and dip of inclined beds
221 Strike of vertical beds
250 Strike of vertical beds, top known from local structures
252 Approximate strike and dip of contorted beds
243 Strike and general direction of dip from pillow structures
253 Strike and dip of inclined cumulate layering, igneous rocks
254 Strike of vertical cumulate layering, igneous rocks

Symbol Number
use with 300–399 code
62 Horizontal beds
59 Horizontal cumulate layering in igneous rocks

Foliation

Code
202 Strike and dip of inclined foliation (filled triangle)
251 Strike and dip of inclined foliation parallel to bedding
247 Strike and general direction of foliation (filled triangle)
222 Strike of vertical foliation (filled triangle)
259 Approximate strike and dip of contorted foliation
224 Strike and dip of inclined foliation, open triangle used for igneous rock foliation
248 Strike and general direction of foliation, open triangle
225 Strike of vertical foliation, open triangle
260 Approximate strike and dip of contorted foliation, open triangle

Inclined foliation and lineation
18
48

Layering

Code
270 Strike and dip of inclined compaction foliation/layering in ashflow tuff
271 Strike of vertical compaction layering in ashflow tuff

Symbol Number, use with 300–399 code
58 Horizontal compositional layering in igneous rocks
60 Horizontal foliation, filled symbol
61 Horizontal foliation, open symbol
48 Massive igneous rock

Horizontal foliation and horizontal lineation

Cleavage

Code
211 Inclined cleavage
261 Inclined cleavage, second type
212 Vertical cleavage
262 Vertical cleavage, second type
244 Inclined cleavage parallel to bedding
245 Inclined cleavage parallel to overturned bedding

Joints

Code
213 Inclined joint, filled box, index at center
214 Vertical joint, filled box, index at center
215 Inclined joint, open box (used for second set of joints), index at center
216 Vertical joint, open box (used for second set of joints), index at center
229 Inclined joint, index point at S end, posted near N end, filled box
230 Vertical joint, index point on S end, filled box

Multiple joints (229) plotted below
56 50 54 61

Symbol number, use with 300–399 code
56 Horizontal joint, filled box
57 Horizontal joint, open box

Lineation

Code
203 Lineation arrow with plunge angle
267 Minor fold axis with plunge angle
258 Lineation arrow, single tick mark, with plunge; use for linear feature formed by intersection of bedding and cleavage
263 Lineation arrow, double tick mark, with plunge; use for linear feature formed by intersection of foliation and cleavage
223 Horizontal lineation, index point at center
235 Minor syncline with plunge
236 Minor anticline with plunge
238 Minor fold, sinestral with plunge
237 Minor fold, dextral with plunge
239 Minor folds with plunge
268 Slickenside

Symbol number
55 Vertical lineation

Symbols used to represent observations made on surfaces

208 Dip angle and direction (true dip) of dipping surface used on fault traces, contacts, to indicate direction and magnitude of dip
269 Bearing and plunge of major fold axis, symbol used on trace

Label symbols used on traces of surfaces to indicate type of trace represented by line
Code
204 Anticline axis
205 Syncline axis
227 Overturned anticline
228 Overturned syncline
255 Monocline, anticlinal bend, shorter arrow indicates steeper beds, index point at lower arrow point
256 Monocline, synclinal bend, shorter arrow indicates steeper beds, index point at lower arrow point
257 Monocline drawn as a single line, index point at center of shaft, anticlinal and synclinal bends too close to separate at map scale, arrow points in direction of dip of beds, index at center of arrow
264 Antiform
265 Synform
240 Open triangle to indicate general direction of plunge of fold axis
241 Filled triangle to indicate general direction of plunge of fold axis
207 Bar and ball to indicate offset on fault
209 Paired arrows, left lateral offset on fault
210 Paired arrows, right lateral offset on fault
242 Question mark to indicate uncertainty in a reach of a linear feature
231, used to label trace of fold axial surface with vertical axis indicates direction of closure

Label symbols for lines used with 300–399 codes
8, used to label trace of fold axial surface with vertical axis

Symbols used for decorating lines, codes 1–99, 600–699

Symbol number
102 Thrust fault, filled triangle
110 Thrust fault, open triangle used to indicate a second thrust set
111 Thrust fault, open symbol with line to indicate a third thrust set
122 Overturned thrust fault
150 Detachment fault, filled half circle
231 Detachment fault, open half circle, used to indicate second set
104 Hachure to indicate closure
106 Double hachure

Symbols for works of mankind

Symbols used with 300–399 codes
Symbol number
22 US Highway
47 Interstate Highway
12 Prospect
13 Quarry
14 Shaft
52 Triangulation (survey) station
1 Water well
2 Water well used for domestic water supply
54 Water well used for irrigation supply
51 Drill hole
75 Dry hole
2 Oil well
74 Gas well
78 Oil and gas well

Code
206 Adit, incline
218 Position of an observation on a linear trace index point at tip of arrowhead
266 Spring

200 Arrow

DECORATED LINES
Detachment fault, symbol 150 50% size, spacing 0.25 "
Thrust fault, symbol 102, spacing 0.2 "
34
Thrust fault, symbol 110, spacing 0.2 "
Thrust fault, symbol 111, spacing 0.2 "
Overturned thrust fault, symbol 122, spacing 0.3"
Clinkered coal bed, symbol 108, spacing 0.08"

LINES LABELED USING SYMBOLS
Anticline axial trace, label symbol 204, general plunge 241, axis 241
45
Synform, axial trace, label symbol 265, vertical axis, symbol 231

Shear zone, line type 99, symbol 116 (40% size)