GEOLOGIC-POINT TYPES (.PNT.)

GEOLOGIC POINTS HAVING ANALYZABLE INFORMATION (.PNTZ.)

Points describing planar geologic structures	(.PNTZP.)
Bedding	(.BED.)
Sedimentary bedding	(.BEDS.)
Volcanogenic bedding	(.BEDV.)
Cleavage	(.CLV.)
Foliation	(.FOL.)
Igneous-flow foliation	(.FOLI.)
metamorphic foliation	(.FOLM.)
strain-dominant foliation	(.FOLD.)
origin not determined	(.FOLN.)
Jointing	(.JNT.)
In igneous rocks	(.JNTI.)
In sedimentary rocks	(.JNTS.)
Geometry of planar structures	(.GEMP.)
Horizontal features	(.GEMPH.)
Inclined features	(.GEMPI.)
Vertical features	(.GEMPV.)
Overturned features	(.GEMPO.)
Points describing linear geologic structures	(.PNTZL.)
Lineations	(.LIN.)
Lineations in igneous rock	(.LINI.)
Lineations in metamorphic rock	(.LINM.)
Lineations in sedimentary rock	(.LINS.)
Lineations in strain-dominated rock	(.LINS.)
Lineations on fault surfaces	(.LINF.)
Minor-fold-axis lineations	(.LINA.)
Geometry of linear structures	(.GEML.)
Horizontal lineations	(.GEMLH.)
In plane of inclined foliation	(.GEMLHI.)
In plane of vertical foliation	(.GEMLHV.)
Minor-fold-axis geometry	(.GEMLA.)
Geometry not determined	(.GEMLAN.)
Geometry determined	(.GEMLAD.)
Points describing mapped planar features	(.PNTZPM.)
Contact dip direction and amount	(.PNTZPMC.)
Dike dip direction and amount	(.PNTZPMD.)
Fault dip direction and amount	(.PNTZPMF.)
Fold axial-plane dip direction and amount	(.PNTZPMO.)
Vein dip direction and amount	(.PNTZPMV.)

GEOLOGIC POINTS HAVING ANNOTATION INFORMATION (.PNTA.)

Annotations describing contacts	(.PNTAC.)
Clearly observable contact	(.PNTACO.)
knife-edge contact	(.PNTACOK.)
gradational over 1 to 10 m	(.PNTACOG.)
transitional over 1 to 10 m	(.PNTACOT.)
Annotations describing faults	(.PNTAF.)
Bar-and-ball symbol for downthrown block	(.PNTAFB.)
Fault-movement arrows for strike-slip faults	(.PNTAFA.)
arrows for right-slip faults	(.PNTAFAR.)
arrows for left-slip faults	(.PNTAFAL.)
Annotation balloon for fault information	(.PNTAFL.)
Annotations describing folds	(.PNTAO.)
Fold form not determined	(.PNTAON.)
antiform	(.PNTAONA.)
upright	(.PNTAONAU.)
overturned	(.PNTAONAO.)
synform	(.PNTAONS.)
upright	(.PNTAONSU.)
overturned	(.PNTAONSO.)
Fold form determined	(.PNTAOD.)
anticline	(.PNTAODA.)
upright	(.PNTAODAU.)
overturned	(.PNTAODAO.)
anticline	(.PNTAODA.)
upright	(.PNTAODAU.)
overturned	(.PNTAODAO.)
Re-folded folds	(.PNTAOR.)
fold-form not determined	(.PNTAORN.)
fold-form determined	(.PNTAORD.)
antiformal syncline	(.PNTAORDA.)
synformal anticline	(.PNTAORDS.)
Annotations describing observation stations	(.PNTAB.)

SYMBOLS FOR ANALYZABLE GEOLOGIC FEATURES, PLANAR (.PNTZP.)

PLANAR-FEATURE TYPE

PLANAR FEATURES OF SEDIMENTARY AND VOLCANOGENIC ROCKS

Bedding in sedimentary and volcanogenic rocks	(.BED.)
Bedding in sedimentary rocks, planar	(.BEDS.)
Bedding in sedimentary rocks, wavy or crinkled	(.BEDSW.)
Bedding in volcanogenic rocks, planar	(.BEDV.)
Bedding in volcanogenic rocks, wavy or crinkled	(.BEDVW.)
Cleavage	(.CLV.)
One cleavage	(.CLVO.)
Two cleavage	(.CLVT.)
Joints	(.JNT.)
Joints in igneous rock	(.JNTI.)
Joints in sedimentary rock	(.JNTS.)

POINTS DESCRIBING MAPPED PLANAR-LINE FEATURES (.PNTZPM.)

Contact dip direction and amount	(.PNTZPMC.)
Dike dip direction and amount	(.PNTZPMD.)
Fault dip direction and amount	(.PNTZPMF.)
Fold axial-plane dip direction and amount	(.PNTZPMO.)
Vein dip direction and amount	(.PNTZPMV.)

PLANAR FEATURES OF IGNEOUS AND METAMORPHIC ROCKS

Foliation in crystalline rocks	(.FOL.)
Foliation in igneous rocks	(.FOLI.)
Foliation in igneous rocks, cumulate layering	(.FOLIC.)
Foliation in igneous rocks, eutaxitic flow banding	(.FOLIE.)
Foliation in igneous rocks, flow foliation	(.FOLIF.)
Flow foliation, oriented grains	(.FOLIFG.)
Flow foliation, oriented lapilli	(.FOLIFL.)
Flow foliation, oriented schlieren	(.FOLIFS.)
Flow foliation, oriented xenoliths	(.FOLIFS.)
Flow foliation, type unspecified	(.FOLIFU.)
Foliation in igneous rocks, origin unspecified	(.FOLIU.)
Foliation in igneous rocks, welded	(.FOLIW.)
Foliation in igneous rocks, type unspecified	(.FOLIU.)
Foliation in metamorphic rocks	(.FOLM.)
Foliation in metamorphic rocks, crenulated	(.FOLMC.)
Foliation in metamorphic rocks, crinkled	(.FOLMK.)
Foliation in metamorphic rocks, gneissose	(.FOLMG.)
Foliation in metamorphic rocks, schistose	(.FOLMS.)
Foliation in metamorphic rocks, undulatory	(.FOLMN.)
Foliation in metamorphic rocks, wavy	(.FOLMW.)
Foliation in metamorphic rocks, type unspecified	(.FOLMU.)
Foliation in strain-dominated rocks	(.FOLD.)
Foliation, origin not determined	(.FOLN.)

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SYMBOLS FOR ANALYZABLE GEOLOGIC FEATURES, PLANAR (.PNTZP.)

PLANAR-FEATURE GEOMETRY (.GEMP.)

Horizontal	(.GEMPH.)
Bedding	(.GEMPHB.)
Cleavage	(.GEMPHC.)
Foliation	(.GEMPHF.)
Igneous	(.GEMPHFI.)
Cumulate layering	(.GEMPHFC.)
Metamorphic	(.GEMPHFM.)
Strain-dominated	(.GEMPHFD.)
Origin unspecified	(.GEMPHFU.)
Jointing	(.GEMPHJ.)
Igneous	(.GEMPHJI.)
Sedimentary	(.GEMPHJS.)
Inclined	(.GEMPIB.)
Bedding	(.GEMPIB.)
Tops of beds (facing) determined	(.GEMPIBT.)
Tops of beds (facing) unknown	(.GEMPIBU.)
Cleavage	(.GEMPIC.)
Foliation	(.GEMPIF.)
Igneous	(.GEMPIFI.)
Cumulate layering	(.GEMPIFC.)
Metamorphic	(.GEMPIFM.)
Strain-dominated	(.GEMPIFD.)
Origin unspecified	(.GEMPIFU.)
Jointing	(.GEMPIJ.)
Igneous	(.GEMPIJI.)
Sedimentary	(.GEMPIJS.)
Vertical	(.GEMPV.)
Bedding	(.GEMPVB.)
Tops of beds (facing) determined	(.GEMPVBT.)
Tops of beds (facing) unknown	(.GEMPVBU.)
Cleavage	(.GEMPVC.)
Foliation	(.GEMPVF.)
Igneous	(.GEMPVFI.)
Cumulate layering	(.GEMPVFC.)
Metamorphic	(.GEMPVFM.)
Strain-dominated	(.GEMPVFD.)
Origin unspecified	(.GEMPVFU.)
Jointing	(.GEMPVJ.)
Igneous	(.GEMPVJI.)
Sedimentary	(.GEMPVJS.)
Overturned	(.GEMPO.)
Bedding	(.GEMPOB.)
Tops of beds (facing) determined	(.GEMPOBT.)
Tops of beds (facing) unknown	(.GEMPOBU.)
Cleavage	(.GEMPOC.)
Foliation	(.GEMPOF.)
Igneous	(.GEMPOFI.)
Cumulate layering	(.GEMPOFC.)
Metamorphic	(.GEMPOFM.)
Strain-dominated	(.GEMPOFD.)
Jointing	(.GEMPOJ.)
Igneous	(.GEMPOJI.)
Sedimentary	(.GEMPOJS.)

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SYMBOLS FOR ANALYZABLE GEOLOGIC FEATURES, PLANAR (.PNTZP.)

METHOD OF DETERMINATION

Azimuth & inclination measured at site	(.ADPM.)
Azimuth & inclination approximated	(.ADPA.)
estimated	(.ADPAE.)
from binocular observation	(.ADPAEB.)
from aerial photographs	(.ADPAEA.)
indicated but not estimated	(.ADPAI.)

Azimuth & inclination measured at site	(.ADPM.)
Azimuth & inclination approximated	(.ADPA.)
indicated but not measured	(.ADPAI.)
estimated	(.ADPAE.)
from binocular observation	(.ADPAEB.)
from aerial photographs	(.ADPAEA.)

DATA-SOURCE (.DAT.)

Original data collected by map authors	(.DATO.)
Data compiled from other sources	(.DATC.)

Original data collected by map authors	(.DATO.)
Data compiled from other sources	(.DATC.)

SYMBOLS FOR ANALYZABLE GEOLOGIC FEATURES, LINEAR (.PNTZL.)

LINEAR-FEATURE TYPE

Lineation, origin not determined	(.LINN.)	
Lineations in igneous rocks	(.LINI.)	
Flow-related lineations	(.LINIF.)	
Aligned mineral grains	(.LINIFA.)	
Lineations in metamorphic rocks	(.LINM.)	
Aligned mineral grains	(.LINMA.)	
Boudinage	(.LINMB.)	
Crushed and streaked mineral grains	(.LINMC.)	
Crushed and streaked mineral grains together with aligned mineral grains	(.LINMCA.)	
Crushed and streaked mineral grains together with rodding	(.LINMCR.)	
Rodding	(.LINMR.)	
Intersection of foliation and cleavage	(.LINMI.)	
Lineations in sedimentary rocks	(.LINS.)	
Paleocurrent lineations	(.LINSP.)	
Uni-directional paleocurrent lineation	(.LINSPU.)	
Bi-directional paleocurrent lineation	(.LINSPB.)	
Rodding	(.LINSR.)	
Intersection of bedding and cleavage	(.LINSI.)	
Lineations in strain-dominated rocks	(.LIND.)	
Aligned mineral grains	(.LINDA.)	
Crushed and streaked mineral grains	(.LINDC.)	
Crushed and streaked mineral grains together with aligned mineral grains	(.LINDCA.)	
Crushed and streaked mineral grains together with rodding	(.LINDCR.)	
Intersection of foliation and cleavage	(.LINDI.)	
Rodding	(.LINDR.)	
Lineations on fault surfaces	(.LINF.)	
Bi-directional	(.LINFB.)	
Fault groove	(.LINFBG.)	
Fault striation	(.LINFBS.)	
Uni-directional	(.LINFU.)	
Fault slickensides	(.LINFUS.)	
Fault mullion	(.LINFUM.)	
Minor-fold-axis lineations	(.LINA.)	
Minor folds in igneous rocks	(.LINAI.)	
kink-band fold	(.LINAIK.)	
Minor folds in metamorphic rocks	(.LINAM.)	
kink-band fold	(.LINAMK.)	
Minor folds in sedimentary rocks	(.LINAS.)	
kink-band fold	(.LINASK.)	
soft-sediment slump fold	(.LINASS.)	
Minor folds in strain-dominated rocks	(.LINAD.)	
kink-band fold	(.LINADK.)	

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SYMBOLS FOR ANALYZABLE GEOLOGIC FEATURES, LINEAR (CONTINUED)

LINEAR-FEATURE GEOMETRY (.GEML.)

Geometry of minor-fold axes	(.GEMLA.)	
Geometry not determined	(.GEMLAN.)	
Antiformal	(.GEMLANA.)	
Synformal	(.GEMLANS.)	
Rootless fold hinge	(.GEMLANR.)	
Antiformal	(.GEMLANRA.)	
Synformal	(.GEMLANRS.)	
Geometry determined	(.GEMLAD.)	
Dextral rotation	(.GEMLADD.)	
Sinistral rotation	(.GEMLADS.)	
Rotation sense not determined	(.GEMLADN.)	
Geometry of horizontal lineations	(.GEMLH.)	
In plane of inclined foliation	(.GEMLHI.)	
Igneous	(.GEMLHII.)	
Metamorphic	(.GEMLHIM.)	
Strain-dominated	(.GEMLHID.)	
Origin unspecified	(.GEMLHIU.)	
In plane of vertical foliation	(.GEMLHV.)	
Igneous	(.GEMLHVI.)	
Metamorphic	(.GEMLHVM.)	
Strain-dominated	(.GEMLHVD.)	
Origin unspecified	(.GEMLHVU.)	

DATA-SOURCE FOR LINEAR POINT DATA (.DAT.)

Original data collected by map authors	(.DATO.)
Data compiled from other sources	(.DATC.)

DATA-INTEGRITY FOR PLANAR AND LINEAR POINT DATA (.ADP.)

Azimuth and dip measured at site	(.ADPM.)
Azimuth and dip approximate	(.ADPA.)
azimuth and dip direction indicated but not measured	(.ADPAI.)
azimuth and dip estimated	(.ADPAE.)
azimuth and dip estimated from binocular observation	(.ADPAEB.)
azimuth and dip estimated from aerial photographs	(.ADPAEA.)

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SYMBOLS FOR GEOLOGIC-ANNOTATION POINTS(.PNTA.)

Point symbols describing contacts	(.PNTAC.)	
Clearly observable contact	(.PNTACO.)	
knife-edge contact	(.PNTACOK.)	— k
gradational over 1 to 10 m	(.PNTACOG.)	— g
transitional over 1 to 10 m	(.PNTACOT.)	— t
Point symbols describing faults	(.PNTAF.)	
Bar-and-ball symbol for downthrown block	(.PNTAFB.)	
Fault-movement arrows for strike-slip faults	(.PNTAFM.)	
arrows for right-slip faults	(.PNTAFMR.)	
arrows for left-slip faults	(.PNTAFML.)	
Annotation balloon for fault information	(.PNTAFL.)	
Point symbols describing folds	(.PNTAO.)	
Fold forms not determined	(.PNTAON.)	
antiform	(.PNTAONA.)	
upright	(.PNTAONAU.)	
overturned	(.PNTAONAO.)	
synform	(.PNTAONS.)	
upright	(.PNTAONSU.)	
overturned	(.PNTAONSO.)	
Fold forms determined	(.PNTAOD.)	
anticline	(.PNTAODA.)	
upright	(.PNTAODAU.)	
overturned	(.PNTAODAO.)	
syncline	(.PNTAODS.)	
upright	(.PNTAODSU.)	
overturned	(.PNTAODSO.)	
Re-folded folds	(.PNTAOR.)	
fold-form not determined	(.PNTAORN.)	
fold-form determined	(.PNTAORD.)	
antiformal syncline	(.PNTAORDA.)	
synformal anticline	(.PNTAORDS.)	

Fold-hinge plunge arrow	(.PNTAOH.)	
Fold form not determined	(.PNTAOHN.)	
antiform	(.PNTAOHNA.)	
synform	(.PNTAOHNS.)	
Fold form determined	(.PNTAOHD.)	
anticline	(.PNTAOHDA.)	
syncline	(.PNTAOHDA.)	
Re-folded folds	(.PNTAOHR.)	
fold-form not determined	(.PNTAOHRN.)	
fold-form determined	(.PNTAOHRD.)	
antiformal syncline	(.PNTAOHRDA.)	
synformal anticline	(.PNTAOHRDS.)	
Symbols for observation stations	(.PNTAV.)	
Annotation balloon for geologic info	(.PNTAVA.)	
Fossil observation	(.PNTAVF.)	
fossil collection	(.PNTAVFC.)	
fossil description	(.PNTAVFD.)	
fossils observed	(.PNTAVFO.)	
Generic observation station	(.PNTAVV.)	
Geochemistry determination	(.PNTAVH.)	
Geophysical measurement	(.PNTAVG.)	
Gravity	(.PNTAVGG.)	
Magnetic susceptibility	(.PNTAVGM.)	
Isotopic-age determination	(.PNTAVI.)	
Ar40/39 determination	(.ANNVIF.)	
C14 determination	(.ANNVIC.)	
Fission-track determination	(.ANNVIT.)	
K/Ar determination	(.ANNVIK.)	
U-Pb determination	(.ANNVIU.)	
Lithologic description	(.ANNVL.)	
Modal mineralogy determination	(.ANNVM.)	
Thin-section determination	(.ANNVMT.)	
Stained-slab determination	(.ANNVMS.)	
Paleomagnetic determination	(.ANNVN.)	
Pedogenic-soil observation	(.ANNVP.)	
soil profile examined	(.ANNVPE.)	
soil profile described	(.ANNVPD.)	
Subsurface-boring site	(.ANNVS.)	