

PETROLOGY SPECIMEN KEY  
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- B-1. Quartz Diorite
  - B-2. Porphyritic Granite
  - B-3. Quartz Syenite
  - B-4. Syenite
  - B-5. Basalt
  - B-6. Porphyritic Quartz Syenite
  - B-7. Monzodiorite
  - B-8. Diabase
  - B-9. Diorite (with mafic xenoliths)
  - B-10. Granite
  - B-11. Vent Agglomerate Dike
  - B-12. Granite
  - B-13. Syenite
  - B-14. Volcanic Breccia
  - B-15. Vent Agglomerate
  - B-16. Hornblende Syenite
  - B-17. Quartz Syenite
  - B-18. Gabbro
  - B-19. Volcanic rock
  - B-20. Hornblende Nepheline Syenite
  - B-21. Hornblende Syenite
  - B-24. Syenite
  - B-27. Hornblende Diorite
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- BC-1. Granite
  - BC-2. Sodalite Nepheline Syenite
  - BC-3. Sodalite Hornblende Alkali Feldspar Syenite
  - BC-4. Nepheline Syenite
  - BC-5. Calcite
  - BC-6. Carbonatite
  - BC-7. Syenite
  - BC-8. Carbonatite with Biotite
  - BC-9. Shonkinite
  - BC-10. Granite
  - BC-11. Shonkinite
  - BC-12. Garnet Shonkinite
  - BC-13. Syenite
  - BC-14. Sodalite Hornblende Nepheline Syenite
  - BC-15. Banded Syenite

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DA Series Label Scheme

Felsic Volcanics	1100-1199
Felsic Intrusives	1200-1299
Intermediate Volcanics	1300-1399
Intermediate Intrusive	1400-1499
Mafic Volcanics	1500-1599
Mafic/ultramafic Intrusive	1600-1699
Foliated Metamorphic	2100-2199
Non-foliated Metamorphic	2200-2299
Clastic Sedimentary Rocks	3000-3500
Chemical/Biochemical Sedimentary Rocks	3600-4000

(Felsic extrusive rocks)

- DA-1101. Obsidian
- DA-1102. Plagioclase Rhyolite Porphyry
- DA-1103. Lithic Tuff
- DA-1104. Welded Tuff
- DA-1105. Welded Tuff
- DA-1106. Perlite
- DA-1107. Welded Tuff (Rhyolite) with pumice fragments
- DA-1108. Volcanic Breccia (Crede, Mineral Co., CO; Miocene- Alboroto Gp.)
- DA-1109. Vitrophyre
- DA-1110. Sanadine Trachyte Porphyry
- DA-1111. Rhyolite Porphyry (Hondo Canyon, Taos Ski Valley, New Mexico; Tertiary)
- DA-1112. Rhyolite Porphyry (Sangre De Cristo Range, Taos Ski Valley, New Mexico; Tertiary)
- DA-1113. Pumice (Bandelier National Monument, New Mexico; Quaternary)
- DA-1114. Obsidian (Bandelier National Monument, New Mexico; Quaternary)
- DA-1115. Welded Tuff (Questa, New Mexico; Quaternary)
- DA-1116. Welded Tuff (Los Alamos, New Mexico; Tertiary)
- DA-1117. K-feldspar Porphyritic Rhyolite
- DA-1118. Rhyolite Porphyry
- DA-1119. Blue Quartz K-feldspar Rhyolite Porphyry (“Llanite”, Llano, Texas, 800Ma.)
- DA-1120. Welded tuff with pumice fragments (Los Alamos, NM, Quaternary)
- DA-1121. Rhyolite porphyry (Johnson Shut-Ins State Park, MO; Precambrian Grenville basement)

(Felsic intrusive rocks)

- DA-1201. Biotite Granite
- DA-1202. Hornblende Pegmatite
- DA-1203. Porphyritic Granodiorite (Rapakivi texture, Hondo Canyon near Taos, NM,

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Proterozoic)

- DA-1204. Tourmaline Pegmatite
- DA-1205. Pegmatite (Graphic Granite)
- DA-1206. Biotite Granite
- DA-1207. Biotite Granite
- DA-1208. Hornblende Granite
- DA-1209. Orbicular Granite
- DA-1210. Biotite Hornblende Granite
- DA-1211. Quartz Alkali Feldspar Syenite (Town Mt. Granite, Llano Co. TX; Precambrian [1.0 GA])
- DA-1212. Quartz Muscovite Trondhjemite (Alex City, AL; Devonian [366 MA])
- DA-1213. Biotite Granite
- DA-1214. Biotite Granite (Town Mt. Granite, Llano, Texas; Precambrian [1.0 GA])
- DA-1215. Biotite Pegmatite
- DA-1216. Pegmatite
- DA-1217. Spodumene Pegmatite (Harding Pegmatite Mine, Copper Hill, New Mexico; Precambrian)
- DA-1218. Lepidolite Apatite Spodumene Pegmatite (Harding Pegmatite Mine, Dixon, New Mexico, Proterozoic)
- DA-1219. Lepidolite pegmatite (Harding pegmatite, Dixon, NM, Proterozoic)
- DA-1220. Granodiorite with K-feldspar phenocrysts (Questa NM, Precambrian)
- DA-1221. Syenite (Larvakite with labradorescence in orthoclase) (Larvik, Norway)
- DA-1222. Alkali Feldspar Granite
- DA-1223. Granite
- DA-1224. Muscovite Biotite Granite, Estes Park CO (Precambrian)
- DA-1225. Syenite (Knob Lick quarry, MO; Precambrian Grenville basement)
- DA-1226. Granite (Elephant Rocks S.P., MO; Precambrian Grenville basement)
- DA-1227. Alkali-Feldspar Syenite (Larvikite), Larvik, Norway; Precambrian
- DA-1228. Granite, Pike's Peak, Colorado; Precambrian
- DA-1229. Granite, Stone Mt. GA; (281-325Ma)

(Intermediate extrusive rocks)

- DA-1301. Porphyritic Andesite
- DA-1302. Andesite Porphyry
- DA-1303. Hornblende Andesite Porphyry
- DA-1304. Hornblende Porphyritic Dacite, Taos Ski Valley, New Mexico, Tertiary
- DA-1305. Andesite Porphyry
- DA-1306. Quartz Latite
- DA-1307. Porphyritic Andesite (showing prophyllitization)
- DA-1308. Hornblende Plagioclase Andesite Porphyry (contains epidote and aegirine)
- DA-1309. Hornblende Plagioclase Andesite Porphyry (Sangre De Cristo Range, Taos Ski

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Valley, New Mexico; Tertiary)

DA-1310. Plagioclase Dacite Porphyry (Rio Grande Gorge, Taos, New Mexico; Tertiary)

DA-1311. Hornblende K-feldspar Dacite Porphyry altered by pyrophyllitic mineralization, Questa, New Mexico, Tertiary

DA-1312. Plagioclase Andesite Porphyry, Uspallata, Argentina, Triassic

(Intermediate intrusive rocks)

DA-1401. Hypersthene Quartz Diorite (Alpine, San Diego Co., CA; Cretaceous)

DA-1402. Biotite Diorite

DA-1403. Porphyritic Granodiorite (Hondo Canyon, Taos Ski Valley, New Mexico; Precambrian)

DA-1404. Quartz Monzonite Porphyry with Rapakivi feldspar phenocrysts (Taos Ski Valley, New Mexico; Precambrian)

DA-1405. Quartz Monzonite (Tetford Mines, Ontario; Precambrian)

DA-1406. Hornblende Biotite Diorite (Alexander City, Alabama; Ordovician [480ma])

DA-1407. Biotite granodiorite

DA-1408. Biotite Alkali Feldspar Granite

DA-1424. Granodiorite

DA-1425. Tonalite (Elkahatchee Quartz Diorite, Tallapoosa Co. AL, 480Ma)

(Mafic extrusive rocks)

DA-1501. Basalt

DA-1502. Olivine Basalt

DA-1503. Plagioclase Basalt Porphyry

DA-1504. Scoriaeous Basalt Porphyry (San Antonio Mt., Taos Co., NM)

DA-1505. Vesicular Porphyritic Olivine Basalt (Rio Grande Gorge, Taos NM [Quaternary])

DA-1506. Diabase (Palisades Sill, Hudson River)

DA-1507. Plagioclase Basalt Porphyry

DA-1508. Plagioclase Porphyritic Basalt

DA-1509. Biotite Lamprophyre, Spanish Peaks, Colorado, Tertiary

DA-1510. Olivine Biotite Gabbro, Spanish Peaks, Colorado, Tertiary

DA-1511. Basalt (Rio Grande Gorge, Pilar, New Mexico, Quaternary)

DA-1512. Basalt (Lake Taupo, New Zealand)

(Mafic intrusive/Ultramafic rocks)

DA-1601. Olivine Kimberlite Porphyry

DA-1602. Gabbro

DA-1603. Pyroxenite

DA-1604. Gabbro

DA-1605. Gabbro

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DA-1606. Serpentinite  
DA-1607. Anorthosite  
DA-1608. Pyroxenite (Hypersthene)  
DA-1609. Gabbro  
DA-1610. Porphyritic Peridotite  
DA-1611. Picrite  
DA-1612. Enstatite in dunite  
DA-1613. Anorthosite (White Face Mountain, Adirondacks, New York)  
DA-1614. Peridotite(?) (Tablelands ophiolite of Gros Morne Park, Newfoundland)  
DA-1615. Gabbro  
DA-1616. Pyroxene anorthosite (Lake Placid, NY, Precambrian)  
DA-1617. Cpx Gabbro  
DA-1618. Eclogite  
DA-1619. Peridotite (Montana [Precambrian])

(Foliated metamorphic rocks)

DA-2101. Gneiss  
DA-2102. Schist  
DA-2103. Graphitic Slate (Delta, PA)  
DA-2104. Crenulated Phyllite (Delta, PA)  
DA-2105. Micaceous Quartzite (Philadelphia, PA)  
DA-2106. Granitic Gneiss (Lake of the Woods, Ontario)  
DA-2107. Slate  
DA-2108. Slate (Pawlet, Rutland Co., VT; Cambrian- Mettawee Fm.)  
DA-2109. Crenulated Chlorite Phyllite (Murphy Belt, Western Blue Ridge, NW Georgia)  
DA-2110. Graphite Schist  
DA-2111. Chlorite Tremolite Schist  
DA-2112. Amphibolite (Higgins Ferry Group, Mitchell Dam Amphibolite, Alabama State Highway 22 road cut; Late Proterozoic rift basalt protolith; 366Ma K-Ar uplift date)  
DA-2113. Mylonite (Millerville, AL; Hollins Line Fault)  
DA-2114. Gneiss (North Shore, Lake Superior)  
DA-2115. Amphibolite (Llano, TX; Precambrian)  
DA-2116. Mylonite (Weogufka, AL; Hollins Line Fault)  
DA-2117. Gneiss (tonalite composition) cross-cut by foliated trondhjemite (Alex City, AL; Ordovician [480 ma])  
DA-2118. Biotite Schist  
DA-2119. Quartzite with minor Schist  
DA-2120. Gneiss  
DA-2121. Pencil Gneiss (mylonitic; Auburn, AL)  
DA-2122. Serpentinite (foliated; Precambrian; Willow City, TX)  
DA-2123. Phyllite (Gettysburg, PA)

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- DA-2124. Slate (Gettysburg, PA)
- DA-2125. Schist
- DA-2126. Mylonite (Weogufka, AL; Hollins Line Fault)
- DA-2127. Granulite (Adirondacks, New York [Grenville 1.2 Ga])
- DA-2128. Garnet Staurolite Schist (Copper Hill, Taos, NM; Proterozoic)
- DA-2129. Garnet Biotite Staurolite Schist
- DA-2130. Andalusite Quartzite (Copper Hill, Picuris Mts., Taos, New Mexico, Proterozoic)
- DA-2131. Garnet schist (Murphy Belt, northern Georgia Blue Ridge, mid-Paleozoic)
- DA-2132. Garnet Staurolite Andalusite Schist (Rinconada Formation, Copper Hill, New Mexico; Precambrian)
- DA-2133. Garnet Phyllonite (Pilar Formation, Copper Hill, New Mexico; Precambrian)
- DA-2134. Graphitic Phyllite (Cheaha Quartzite Formation, Lower Devonian, Cheaha Mt. State Park, Alabama)
- DA-2135. Staurolite Garnet Graphitic Phyllonite (Pilar Formation, Picuris Mts., New Mexico, Proterozoic)
- DA-2136. Malachite Andalusite Quartzite (Copper Hill Mine, Picuris Mts., New Mexico, Proterozoic)
- DA-2137. Migmatite
- DA-2138. Chlorite schist
- DA-2139. Tourmaline schist
- DA-2140. Garnet chlorite schist
- DA-2141. Phyllite (Copper Hill, New Mexico; Proterozoic Vadito Group)
- DA-2142. Staurolite garnet schist
- DA-2143. Granitic gneiss (Red River, NM, Precambrian)
- DA-2144. Foliated granite (Red River, NM, Precambrian)
- DA-2145. Andalusite schist (Dixon, NM, Precambrian Marquenas Fm.)
- DA-2146. Chlorite talc schist.
- DA-2147. Phyllite
- DA-2148. Kyanite schist (massive kyanite, Hollins, AL; Late Proterozoic)
- DA-2149. Graphitic phyllite
- DA-2150. Glaucophane schist, Franciscan terrane CA, Cretaceous
- DA-2151. Greenstone, Franciscan terrane CA, Cretaceous
- DA-2152A. Mylonite (Brevard Fault Zone, Atlanta GA; K-Ar 361Ma)
- DA-2152B. Garnet Blastomylonite (Brevard Fault Zone, Atlanta GA; K-Ar 361Ma)
- DA-2153. Garnet schist (Franz Joseph, New Zealand)
- DA-2154. Blue schist (Franz Joseph, New Zealand)
- DA-2155. Greenstone (?) (Franz Joseph, New Zealand)
- DA-2156. Corbin K-Feldspar Gneiss (Red Top Mt. State Park, GA; 1.1Ga)
- DA-2157. Mylonite, Brevard Zone, Atlanta GA (360Ma metamorphic age)
- DA-2158. Garnet staurolite schist, Murphy Belt, North Georgia (Siluro-Devonian Brasstown Fm.)

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- DA-2159. Garnet graphite phyllonite, Pilar Formation, Dixon NM (1.8Ga)
- DA-2160. Garnet gneiss (Murphy Belt, Tate GA, Brasstown Fm., S-D)
- DA-2161. Black Slate, Meguma Terrane, Nova Scotia Canada [Late Proterozoic])
- DA-2162. Phyllite (Cheaha State Park, AL [S-D])

(Non-foliated metamorphic rocks)

- DA-2201. Wollastonite Skarn (Llano, TX; Precambrian)
- DA-2202. Quartzite (Cheaha State Park, Alabama; Siluro-Devonian)
- DA-2203. Metaconglomerate (Cheaha State Park, Alabama; Siluro-Devonian)
- DA-2204. Cordierite Hornfels
- DA-2205. Serpentinite
- DA-2206. Garnet Epidote Wollastonite Skarn
- DA-2207. Phlogopite-bearing Marble
- DA-2208. Marble (Walsenburg, Colorado; Precambrian)
- DA-2209. Andalusite Quartzite (Vadito Group, Copper Hill, New Mexico; Precambrian)
- DA-2210. Malachite Quartzite (Ortega Quartzite Formation, Copper Hill, New Mexico; Precambrian)
- DA-2211. Stretch-pebble Metaconglomerate (Cheaha Quartzite Formation, Bull Gap near Sylacauga, Alabama; Siluro-Devonian)
- DA-2212. Hornfels
- DA-2213. Greenstone (Millerville, AL., Siluro-Devonian)
- DA-2214. Quartzite
- DA-2215. Marble
- DA-2216. Marble (Murphy Marble quarry near Jasper, GA; Cambro-Ordovician)
- DA-2217. Greenstone
- DA-2218. Skarn
- DA-2219. Garnet Granulite (Adirondaks, New York; Grenville front 1.2 Ga)
- DA-2221. Red Marble
- DA-2222. Valley Spring Orthogneiss (metavolcanic) (Llano Uplift Grenville Basement; Llano TX; 1.2 Ga)

(Clastic sedimentary rocks)

- DA-3001. Arkose (Flechado Sandstone, Sipapu, NM, Mississippian)
- DA-3002. Hematite-cemented Sandstone, Dingle Peninsula, Ireland (Devonian "old red sandstone")
- DA-3003. Limestone, Estes Park CO (Mississippian)
- DA-3004. Feldspathic Sandstone (Arkose) Estes Park CO (Tertiary)
- DA-3005. Abyssal plain chert, Franciscan terrane CA; Cretaceous
- DA-3006. Siltstone (Napier, New Zealand)
- DA-3007. Siltstone (Bay of Islands, New Zealand)

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(Chemical/Biochemical Sedimentary Rocks)

DA-3600. Micritic Limestone (Ringgold Gap, Georgia, middle Ordovician)

DA-3601. Fossiliferous Limestone (Ringgold Gap, Georgia, middle Ordovician)

L2. Perlite (Glassy) (Sandoval Co., NM)

L3. Andesite Porphyry

L5. Gabbro

L6. Pyroxenite (hypersthene)

L7. Porphyritic Rhyolite

L9. Syenite

L10. K-feldspar Rhyolite Porphyry

L12. Metaconglomerate

L14. Gabbro

L18. Hornblende Nepheline Syenite

L19. Porphyritic Basalt

L23. Amphibolite

L25. Biotite Quartz Diorite

L26. Alkali Syenite

L27. Gabbro

L28. Gabbro (displays excellent plagioclase twinning/striations)

LA-17B. Aplite

PP-11. Chlorite Schist

R103. Feldspathic Schist

R107. Garnet Amphibolite

RI1021. Obsidian

RI1022. Obsidian

RI1025. Quartz Diorite

RI1029. Hornblende Quartz Monzodiorite

RI1030. Diorite

RI1075. Biotite Diorite

RI1077. Hornblende Plagioclase Andesite Porphyry

RI1082. Quartz Monzonite

RI1089. Vesicular Olivine Pyroxene Porphyritic Basalt

RI1119. Rhyolite tuff

RI1148. Olivine Plagioclase Basalt Porphyry

RI1149. Quartz Monzonite

RI1154. Hornblende Dacite Porphyry

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RI1156. Sodalite Phonolite Porphyry  
RI1188. Garnet Wollastonite Skarn  
RI1191. Hornblende pegmatite  
RI1208. Marble  
RI1209. Diorite  
RI1228. Granite  
RI1269. Olivine Plagioclase Porphyritic Basalt  
RI1270. Basalt porphyry  
RI1319. Marble  
RI1351. Scoraceous Basalt  
RI1378. Olivine Basalt  
RI1513. Rhyolite  
RI1546. Amphibolite  
RI1562. Calc-silicate gneiss  
RI1570. Pyroxenite  
RI1607. Augen Gneiss  
RI1618. Gabbro  
RI1645. Garnet Mica Schist  
RI1695. Schist  
RI1715. Amphibolite  
RI1761. Marble  
RI1799. Hornblende schist  
RI1867. Amphibolite  
RI1958. Pegmatite  
RI2003. Dacite  
RI2081. Dunite  
RI2098. Hornblende Syenite  
RI2121. Tourmaline Pegmatite  
RI2123. Garnet Wollastonite Skarn  
RI2207. Anorthosite  
RI2238. Granite  
RI2287. Gneiss  
RI2291. Gneiss  
RI2309. Slate  
RI2332. Marble  
RI2340. Chlorite Schist  
RI2356. Porphyritic basalt  
RI2358. Biotite Hornblende porphyritic Monzonite  
RI2359. Hornblende Dacite Porphyry  
RI2400. Gabbro  
RI2420. Olivine Gabbro

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RI2430. Gabbro  
RI2463. Pyroxenite  
RI2470. Biotite Granodiorite  
RI2476. Hornblende Plagioclase Andesite Porphyry  
RI2548. Porphyritic Rhyolite  
RI2608. Tourmaline schist  
RI2745. Andesite  
RI2766. Pegmatite  
RI2768. Rhyolite  
RI2790. Amphibolite  
RI2915. Biotite Syenite  
RI2941. Hornblende Diorite  
RI2952. Biotite Granodiorite  
RI2992. Syenite  
RI3292. Tourmaline granite  
RI3706. Basalt  
RI3769. Greenstone

RP-1. Granite  
RP-5. Gabbro

S-1. Plagioclase Basalt Porphyry  
S-2. Hornblende Syenite  
S-3. Biotite Nepheline Syenite  
S-4. Gabbro (Ca-plagioclase + Augite)  
S-7. Pyroxenite  
S-8. Hornblende Granite  
S-10. Biotite Porphyritic Andesite  
S-12. Metadacite  
S-13. Slate  
S-16. Hornfels  
S-17. Hornblende Syenite  
S-18. Basalt  
S-20. Charnockite  
S-21. Alkali-Feldspar Trachyte Porphyry  
S-22. Hornblende Granodiorite  
S-22A. Hornblende Granodiorite  
S-23. Hornblende Nepheline Syenite

SG samples from the Slieve Gullion Tertiary Complex and Giant's Causeway, Northern Ireland

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SG-2. Basalt  
SG-3. Granodiorite  
SG-4. Hypersthene Dolerite  
SG-5. Hypersthene Dolerite  
SG-6. Volcanic Breccia  
SG-7. Porphyritic Granophyre  
SG-8. Porphyritic Granophyre  
SG-9. Granophyric Dolerite  
SG-10. Granodiorite  
SG-11. White Quartz Gabbro  
SG-12. Granophyre  
SG-13. Gabbro  
SG-14. White Gabbro  
SG-15. Gabbro

SK8. Basalt  
SK22. Nepheline Syenite

SN18. Diorite  
SN21. Granite  
SN26. Diorite  
SN33. Quartz Monzonite  
SN35. Hornblende Granite  
SN38. Nepheline syenite

W1. Obsidian  
W2. Scoria  
W3. Pumice  
W4. Tuff  
W5. Aporhyolite  
W6. Rhyolite  
W7. Rhyolite  
W8. Rhyolite  
W9. Plagioclase porphyritic Basalt  
W10. Porphyritic Biotite Granite  
W11. Biotite Granite  
W12. Muscovite Biotite Granite  
W13. Alkali Granite  
W14. Hornblende Syenite  
W15. Pegmatite  
W16. Aplite

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- W17. Trachyte
- W18. Hornblende Syenite
- W19. Hornblende Syenite
- W20. Porphyritic Hornblende Alkali Trachyte
- W21. Phonolite
- W22. Nepheline Syenite
- W23. Nepheline Sodalite Syenite
- W24. Monzonite
- W25. Quartz Monzonite Porphyry
- W26. Granodiorite
- W27. Mica Dacite Porphyry
- W28. Andesite Breccia
- W29. Hornblende Andesite
- W30. Andesite Porphyry
- W31. Diorite
- W32. Diorite Porphyry
- W33. Vesicular Basalt
- W34. Rhyolite Porphyry
- W35. Basalt
- W36. Olivine Basalt Porphyry
- W37. Diabase
- W38. Diabase Porphyry
- W39. Gabbro
- W40. Hypersthene Gabbro
- W41. Gabbro
- W42. Anorthosite
- W43. Pyroxenite
- W44. Dunite
- W45. Phlogopite Olivine Kimberlite Porphyry
- W46. Porphyritic basalt
- W47. Limestone Breccia
- W48. Quartz Conglomerate
- W49. Quartz Conglomerate
- W50. Limestone Conglomerate Breccia
- W51. Calcareous Shale
- W52. Carbonaceous Shale
- W53. Arenaceous Shale
- W54. Carbonaceous Shale
- W55. Oil Shale
- W56. Volcanic Ash Shale
- W57. Diatomaceous Earth

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W58. Gray Sandstone  
W59. Red Sandstone  
W60. Brownstone  
W61. Greywacke  
W62. Arkose  
W63. Argillaceous Sandstone  
W64. Glauconitic Sandstone  
W65. Fossiliferous Limestone  
W66. Encrinal Limestone  
W67. Chalk  
W68. Marble (Tennessee)  
W69. Argillaceous Limestone  
W70. Gray Limestone  
W71. Cherty Limestone  
W72. öölitic Limestone  
W73. Calcareous  
W74. Dolomitic Limestone  
W75. Gypsum  
W76. öölitic Iron Ore  
W77. Siliceous oolite  
W78. Chert  
W79. Biotite Gneiss  
W80. Sillimanite Garnet Gneiss  
W81. Hornblende Gneiss  
W82. Hornblende Granite  
W83. Mica Schist  
W84. Garnetiferous Mica Schist  
W85. Phyllite  
W86. Hornblende Schist  
W87. Chlorite Schist  
W88. Talc Schist  
W89. Tourmaline Mica Schist  
W90. Quartz Sericite Schist  
W91. Red Slate  
W92. Gray Slate  
W93. Quartzite  
W94. Quartzite  
W95. White Marble  
W96. Pink Marble  
W97. Dolomitic Marble  
W98. Verd Antique

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W99. Serpentine  
W100. Soapstone  
W101. Granite Pegmatite  
W102. Argillite  
W103. Quartz Diorite  
W104. Green Lapilli Tuff  
W105. Kimberlite  
W106. Ijolite  
W107. Amphibole  
W108. Glauconitic Sandstone  
W301. Serpentine (Serpentinite)  
W302. Sanadine Andesite Porphyry  
W304. Glaucothane schist  
W308. Garnet Quartzite  
W324. Magnetite Ore  
W330. Chlorite Schist  
W333. Pegmatite  
W334. Dunite (olivine)  
W337. Pyroxenite (Hedenbergite, Butte, Montana)  
W338. K-feldspar porphyritic Latite  
W346. Quartz  
W353. Anorthosite  
W356. Marble  
W360. Serpentinite  
W363. Orthopyroxenite  
W365. Pyroxenite (Enstatite)  
W370. Chlorotoid Schist

PETROLOGY SPECIMEN KEY  
LAST UPDATE: June 15, 2007

EUROPEAN ROCK SUITE

The Specimens in this Suite were Collected  
Under the Direct Supervision  
of  
Dr. Forbes Robertson, Professor of Geology  
Principia College  
Elsah, Illinois, 62028

SLIEVE GULLION TERTIARY COMPLEX AND GIANT'S CAUSEWAY,  
NORTHERN IRELAND

Reference: Reynolds, Doris L., The Geology of Slieve Gullion, Foughill and Carrickeanan: An Actualistic Interpretation of a Tertiary Gabbro-granophyre Complex: Trans. Roy. Soc. Edin., v. 62, Part I, 1950-1. With colored map.

Location of Specimens: (Slieve Gullion 3 - 16) rel. to Reynolds Map.

SG-1. Giant's Causeway. Small piece.

SG-2. Basalt, Antrim, 3 mi. W. of Ballycastle Center, SE of Causeway.

SG-3. Newry Granodiorite., within ring complex of Slieve Gullion, 2.6 mi. N. of Forkill.

SG-4. Hypersthene dolerite, Hughes Quarry

SG-5. Hypersthene dolerite, small quarry 1/4 mi. SW of Hughes Quarry.

SG-6. Breccia from N. part of ring dike complex, 0.6 mi. SW of Quarry at Lislea.

SG-7. Porphyritic granophyre of the ring structure, SW of Lislea.

SG-8. Porphyritic granophyre inside ring structure, Lislea Quarry.

SG-9. Granophyric dolerite, quarry at "d" about 1/8 mi. SE Adavoyle Sta.

SG-10. Granodiorite blocks in, same quarry as 9.

SG-11. White quartz gabbro (?) N. end of Carricharnan Hill.

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SG-12. Granophyre, N end of Carricharnan Hill.

SG-13. Gabbro, quarry SW of Reservoir, NE side of Slieve Gullion.

SG-14. White Gabbro, small quarry NW of Reservoir

SG-15. Gabbro, main country rock at quarry NW of Reservoir, same quarry where specimen 14 obtained. This specimen is small, and collected to show the dominant rock type at the quarry. Specimen 14 occurs in blocks within the quarry and has a strong megascopic resemblance to granophyre. It is a very local facies of gabbro, no hint of a "layer" and certainly but a minor fraction of the rock which is found in the quarry.

SG-16. Rhyolite, ignimbrite. From ring complex at S end, 1/2 mi. E. of Forkhill.

Terminology taken from the mapped units of Dr. Reynolds, for the most part. \* indicates specimen taken from same locality as that represented by a chemical analysis.

Chemical Analyses:

	1a	1b	4	5	8
SiO <sub>2</sub>	50.36	50.71	49.16	49.87	76.68
Al <sub>2</sub> O <sub>3</sub>	14.51	14.66	14.04	14.54	12.44
Fe <sub>2</sub> O <sub>3</sub>	2.61	2.39	3.07	3.36	0.38
FeO	8.09	8.19	10.09	9.57	1.44
MgO	6.23	5.91	6.28	6.38	0.14
CaO	10.77	10.53	10.66	11.22	0.81
Na <sub>2</sub> O	2.48	2.63	2.69	2.18	3.07
K <sub>2</sub> O	0.99	0.89	0.58	0.85	5.59
H <sub>2</sub> O+	1.10	1.22	1.13	0.63	0.24
H <sub>2</sub> O-	1.27	0.94	0.22	0.20	0.07
CO <sub>2</sub>	0.10	0.66	-	-	0.02
TiO <sub>2</sub>	1.06	0.99	1.48	0.70	0.23
P <sub>2</sub> O <sub>5</sub>	0.45	0.50	0.15	0.13	-
Cr <sub>2</sub> O <sub>5</sub>	0.02				
S	0.06				
MnO	0.12	0.22	0.24	0.38	0.04
SrO	0.05				
BaO	0.03				
Total	100.37	99.88	99.78	100.01	100.19

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- 1a. A. Holmes, 1936, 91: Anal. I.C.I. A record of new analyses of tertiary Igneous Rocks: PRIA 43b, 89-94.
- 1b. S.E. Tomkeieff, 1950. The basalt lavas of the Giants Causeway district of Northern Ireland: Bull. V, ser. 2.
- 4. D. L. Reynolds (see reference) #2 p. 97.
- 5. do. #1 p. 97.
- 8. do. #17 P. 111.

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