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| **Table S1:** Sample descriptions | | |  |  |  |  |  |
| **Sample Number** | **Unit** | **Lithology** | **XRF** | **ICP-MS** | **EPMA** | **Mineral Assemblage\*** | **Coordinates (Lat, Long) WGS84** |
| **ND01-17A** | Așıgediği | amphibolite | X |  |  | Hbl + Pl + Qz + Bt | 37.8465 N, 34.8360 E |
| **ND01-32B** | Gümüșler | amphibolite | X | X |  | Hbl + Pl + Qz + Bt | 37.9500 N, 34.8124 E |
| **ND14-01** | float, NMC | cobble (gabbro) |  |  |  | Pl + Hbl | 38.03224 N, 34.74825 E |
| **ND14-02A** | NMC | metagabbro |  |  |  | Pl + Hbl + Cpx + Ttn | 38.01018 N, 34.75679 E |
| **ND14-02B** | NMC | metagabbro |  |  | X | **Pl** + **Cpx** + **Hbl** + Ttn | 38.01018 N, 34.75679 E |
| **ND14-02C** | NMC | protomylonite |  |  |  | Pl + Hbl + Qz + Ttn | 38.01018 N, 34.75679 E |
| **ND14-02D** | NMC | protomylonite |  |  |  | Pl + Qz + Bt + Afs | 38.01018 N, 34.75679 E |
| **ND14-02E** | NMC | protomylonite |  |  |  | Pl + Qz + Hbl + Bt + Zr | 38.01018 N, 34.75679 E |
| **ND14-03A** | EMC | gabbro |  |  |  | Ol + Cpx + Pl + Srp | 38.0764 N, 35.12908 E |
| **ND14-03B** | EMC | ultramafic |  |  |  | Srp + Mag | 38.0764 N, 35.12908 E |
| **ND14-04A** | Çukurbağ | cobble (gabbro) |  |  |  | Ol + Cpx + Pl + Srp + Act | 38.14707 N, 35.13839 E |
| **ND14-04B** | Çukurbağ | cobble (diabase) | X |  |  | Pl + Hbl + Ttn + Chl + uralite | 38.14707 N, 35.13839 E |
| **ND14-05A** | M3pl (N) | float (metagabbro) |  |  |  | Pl + Hbl | 38.2215 N, 35.0612 E |
| **ND14-05B** | M3pl (N) | float (diabase) |  |  |  | Pl + Hbl | 38.2215 N, 35.0612 E |
| **ND14-06A** | EFZ | gabbro | X |  |  | Cpx + Pl + Ac | 38.01138 N, 35.10219 E |
| **ND14-06B** | EFZ | gabbro |  |  |  | Ol + Cpx + Pl + Srp | 38.01138 N, 35.10219 E |
| **ND14-06C** | EFZ | ultramafic |  |  |  | Srp + Cpx + Pl | 38.01138 N, 35.10219 E |
| **ND14-06D** | EFZ | gabbro |  |  |  | Ol + Cpx + Srp + Pl | 38.01138 N, 35.10219 E |
| **ND14-07A** | EFZ | gabbro | X | X | X | **Ol** + **Cpx** + **Pl** + Ac + Srp | 37.9924 N, 35.1039 E |
| **ND14-08A** | Aladağ ophiolite | ultramafic |  |  |  | Ol + Opx + Srp + Chr | 37.78225 N, 35.07171 E |

\* bold font indicates minerals that were analyzed by electron microprobe.

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| **Sample Number** | **Unit** | **Lithology** | **XRF** | | **ICP-MS** | **EPMA** | **Mineral Assemblage\*** | **Coordinates (Lat, Long) WGS84** |
| **ND15-01** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Cpx + uralite | 38.14685 N, 35.13848 E |
| **ND15-02** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Hbl + Chl | 38.14685 N, 35.13848 E |
| **ND15-03** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Cpx + Chl | 38.14685 N, 35.13848 E |
| **ND15-04** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Cpx + Act + Sp | 38.14772 N, 35.1388 E |
| **ND15-05** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Cpx + Act + Chl + Sp | 38.14772 N, 35.1388 E |
| **ND15-06** | EFZ | gabbro | X | | X |  | Pl + Cpx + Ol | 37.99448 N, 35.10757 E |
| **ND15-07** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Hbl + Chl | 37.89441 N, 35.09982 E |
| **ND15-08A** | Çukurbağ | cobble (gabbro) | X | |  |  | Pl + Cpx + Ol + uralite | 37.89448 N, 35.09982 E |
| **ND15-08B** | Çukurbağ | cobble (plagio-granite) |  | |  |  | Pl + Qz + Hbl + Afs | 37.89448 N, 35.09982 E |
| **ND15-09A** | NMC | gabbro |  | |  |  | Pl + Hbl + Bt + Qz + Afs + Cpx | 38.00996 N, 34.75678 E |
| **ND15-09B** | NMC | gabbro |  | |  |  | Pl + Hbl | 38.00996 N, 34.75678 E |
| **ND15-09C** | NMC | plagiogranite |  | |  |  | Pl + Qz | 38.00996 N, 34.75678 E |
| **ND15-09D** | NMC | gabbro |  | |  |  | Pl + Hbl + Cpx | 38.00996 N, 34.75678 E |
| **ND15-09E** | NMC | gabbro |  | |  |  | Pl + Hbl + Cpx | 38.00996 N, 34.75678 E |
| **ND15-09F** | NMC | gabbro |  | |  |  | Pl + Hbl + Cpx | 38.00996 N, 34.75678 E |
| **ND15-09G** | NMC | gabbro |  | |  |  | Pl + Hbl | 38.00996 N, 34.75678 E |
| **ND15-09H** | NMC | gabbro |  | |  |  | Pl + Hbl + Bt | 38.00996 N, 34.75678 E |
| **ND15-09I** | NMC | granitoid |  | |  |  | Qz + Pl + Afs + Bt + Zr | 38.00996 N, 34.75678 E |
| **ND15-09J** | NMC | gabbro | X | |  |  | Pl + Hbl + Cpx + opaques | 38.00996 N, 34.75678 E |
| **ND15-10** | NMC | gabbro |  | |  |  | Pl + Hbl | 38.02005 N, 34.76472 E |
| **Sample Number** | **Unit** | **Lithology** | **XRF** | | **ICP-MS** | **EPMA** | **Mineral Assemblage\*** | **Coordinates (Lat, Long) WGS84** |
| **ND15-11A** | NMC | gabbro |  | |  |  | Pl + Hbl + Qz | 38.02184 N, 34.76223 E |
| **ND15-11B** | NMC | gabbro | X | |  |  | Pl + Hbl | 38.02184 N, 34.76223 E |
| **ND15-12** | NMC | plagiogranite |  | |  |  | Pl + Hbl + Qz | 38.02209 N, 34.76722 E |
| **ND15-13** | NMC | plagiogranite |  | |  |  | Pl + Hbl + Qz | 38.01467 N, 34.74663 E |
| **ND15-14** | NMC | diabase | X | |  |  | Hbl + Pl + Bt | 38.02942 N, 34.74106 E |
| **ND15-15** | NMC | gabbro | X | | X | X | **Pl** + **Hbl** + **Opx** + **Cpx** | 38.02942 N, 34.74106 E |
| **ND15-16** | NMC | gabbro | X | | X |  | Pl + Hbl + Cpx | 38.02942 N, 34.74106 E |
| **ND15-17A** | Cihanbeyli | cobble (gabbro) |  | |  |  | Pl + Cpx + Ol + Chl + Sp | 37.79285 N, 34.83465 E |
| **ND15-17B** | Cihanbeyli | cobble (gabbro) |  | |  |  | Pl + Cpx + uralite + Sp + Chl | 37.79285 N, 34.83465 E |
| **ND15-18** | Cihanbeyli | cobble (gabbro) |  | |  |  | Pl + Cpx + Ol + uralite + Sp | 37.79166 N, 34.82545 E |
| **ND15-19A** | Çukurbağ | cobble (limestone) |  | |  |  | Cal | 37.7886 N, 35.00814 E |
| **ND15-19B** | Çukurbağ | cobble (gabbro) | X | |  |  | Pl + Cpx + Chl + uralite | 37.7886 N, 35.00814 E |
| **ND15-19C** | Çukurbağ | cobble (gabbro) |  | |  |  | Pl + Cpx + Ttn + Chl + uralite | 37.7886 N, 35.00814 E |
| **ND15-20** | NMC | diabase |  | |  |  | Pl + Hbl + Cpx | 38.04366 N, 34.83705 E |
| **ND15-21A** | NMC | granitoid |  | |  |  | Qz + Hbl + Pl | 38.04189 N, 34.83964 E |
| **ND15-21B** | NMC | plagiogranite | X | |  |  | Qz + Hbl + Pl | 38.04189 N, 34.83964 E |
| **ND15-22A** | NMC | amphibolite |  | |  |  | Qz + Pl + Hbl | 38.03722 N, 34.8397 E |
| **ND15-22B** | NMC | granitic gneiss |  | |  |  | Bt + Qz + Pl | 38.03722 N, 34.8397 E |
| **ND15-22C** | NMC | amphibolite |  | |  | X | **Hbl** + Qz + **Pl** | 38.03722 N, 34.8397 E |
| **ND15-22D** | Üçkapılı | pegmatite |  | |  |  | Qz + Fsp | 38.03722 N, 34.8397 E |
| **ND15-23** | NMC | gabbro |  | |  |  | Pl + Hbl + Cpx + Qz | 38.03455 N, 34.85101 E |
| **Sample Number** | **Unit** | **Lithology** | **XRF** | | **ICP-MS** | **EPMA** | **Mineral Assemblage\*** | **Coordinates (Lat, Long) WGS84** |
| **ND15-24** | NMC | gabbro | X | |  |  | Pl + Cpx + uralite | 38.03522 N, 34.85263 E |
| **ND15-25** | NMC | rhyolite | X | |  |  | Pl + Qz +Bt + Ms | 38.03675 N, 34.8521 E |
| **ND15-26** | NMC | gneiss |  | |  |  | Pl + Qz + Bt + Ms | 38.00586 N, 34.85191 E |
| **ND15-27** | NMC | gabbro |  | |  |  | Pl + Hbl + Qz + Cpx + Cal | 38.03478 N, 34.8903 E |
| **ND15-28** | NMC | diabase | X | | X |  | Pl + Hbl + Qz | 38.04575 N, 34.87593 E |
| **ND15-29** | NMC | diabase | X | |  |  | Pl + Qz + Hbl | 38.02634 N, 34.89849 E |
| **ND15-30A** | N. Region | gabbro |  | |  |  | Pl + Hbl + Qz | 38.19878 N, 35.06535 E |
| **ND15-30B** | N. Region | ultramafic |  | |  |  | Srp | 38.19878 N, 35.06535 E |
| **ND15-31** | N. Region | plagiogranite | X | |  | X | *Pl* + Qz + *Cum* + *Chl* | 38.19944 N, 35.06783 E |
| **ND15-32** | N. Region | diabase | X | |  |  | Pl + Hbl + Qz | 38.20171 N, 35.06634 E |
| **ND15-33A** | M3pl (N) | cobble  (metagabbro) |  | |  |  | Pl + Hbl + Opx + Cpx | 38.22279 N, 35.05791 E |
| **ND15-33B** | M3pl (N) | cobble (metagabbro) |  | |  |  | Pl + Hbl + Cpx | 38.22279 N, 35.05791 E |
| **ND15-34A** | N. Region | gabbro |  | |  |  | Pl + Hbl + Qz + Cpx | 38.22818 N, 34.95158 E |
| **ND15-34B** | N. Region | gabbro | X | | X | X | **Pl** + **Ol** + **Cpx** + **Opx** + **Hbl** | 38.22818 N, 34.95158 E |
| **ND15-34C** | N. Region | gabbro |  | |  |  | Pl + Ol + Cpx + Ac + iddingsite | 38.22818 N, 34.95158 E |
| **ND15-34D** | N. Region | gabbro |  | |  |  | Pl + Hbl | 38.22818 N, 34.95158 E |
| **ND15-35** | M3pl (N) | cobble (metagabbro) |  | |  |  | Pl + Hbl | 38.07973 N, 34.93031 E |
| **ND15-36A** | NMC | gabbro |  | |  | X | **Pl** + **Opx** + **Cpx** + **Hbl** | 38.04772 N, 34.91239 E |
| **ND15-36B** | NMC | gabbro | X | | X | X | **Pl** + **Opx** + **Cpx** + **Hbl** | 38.04772 N, 34.91239 E |
| **ND15-37** | NMC | gabbro |  | |  |  | Pl + Hbl + Qz | 37.9606 N, 34.8655 E |
| **ND15-38A** | NMC | gabbro | X | |  |  | Amp + Cb + Cpx | 37.96175 N, 34.87276 E |
| **Sample Number** | **Unit** | **Lithology** | **XRF** | | **ICP-MS** | **EPMA** | **Mineral Assemblage\*** | **Coordinates (Lat, Long) WGS84** |
| **ND15-38B** | NMC | hornblendite |  | |  | X | **Amp** + Cb + **Cpx** | 37.96175 N, 34.87276 E |
| **ND15-38C** | Așıgediği | quartzite |  | |  |  | Qz | 37.96175 N, 34.87276 E |
| **ND15-39** | Gümüșler | gneiss |  | |  |  | Qz + Bt + Fsp | 37.96257 N, 34.88025 E |
| **ND15-40A** | NMC | plagiogranite | X | |  | X | Qz + *Pl* + *Bt* + *Cum* + *Hbl* | 38.02985 N, 34.74078 E |
| **ND15-40B** | NMC | diabase | X | | X | X | **Pl** + **Hbl** + Bt + Qz + **Afs** | 38.02985 N, 34.74078 E |
| **ND15-40C** | Üçkapılı | pegmatite |  | |  |  | Afs + Qz | 38.02985 N, 34.74078 E |
| **ND15-41** | Cihanbeyli | cobble (metadiabase) | X | |  |  | Pl + Hbl + Qz + Chl | 37.78354 N, 34.97796 E |
| **ND15-42** | Cihanbeyli | cobble (metagabbro) |  | |  |  | Pl + Hbl + Cpx + Ep | 37.77607 N, 34.83318 E |
| **ND15-43** | M3pl (S) | cobble (gabbro) | X | |  |  | Pl + Hbl + Cpx | 37.74267 N, 34.7411 E |
| **ND15-44** | Cihanbeyli | cobble (gabbro) | X | |  |  | Pl + Ep + Cpx + Ol | 37.78556 N, 34.8151 E |
| **ND15-45** | Cihanbeyli | cobble (diabase) |  | |  |  | Pl + Cpx + Sp + Chl + uralite | 37.79258 N, 34.83747 E |
| **ND15-46** | Cihanbeyli | cobble (metagabbro) | X | |  |  | Pl + Hbl + Cpx | 37.79528 N, 34.87641 E |
| **ND15-47A** | Așıgediği | gneiss |  | |  |  | Pl + Qz + Hbl | 37.87794 N, 34.8921 E |
| **ND15-47B** | Așıgediği | amphibolite | X | | X |  | Cpx + Hbl + Pl + Ep + Cb | 37.87794 N, 34.8921 E |
| **ND15-47C** | Așıgediği | eclogite |  | |  |  | Gt + Cpx + Ep | 37.87794 N, 34.8921 E |
| **ND15-47D** | Așıgediği | amphibolite |  | |  |  | Hbl + Qz + Gt | 37.87794 N, 34.8921 E |
| **ND15-47E** | Așıgediği | amphibolite |  | |  |  | Hbl + Cb + Ep | 37.87794 N, 34.8921 E |
| **ND15-48A** | NMC | metaperidotite | |  |  | X | **Ol** + **Tr** + Tlc + Srp | 37.98822 N, 34.89011 E |
| **ND15-48B** | NMC | serpentinite | |  |  |  | Chl + Srp | 37.98822 N, 34.89011 E |
| **ND15-48C** | NMC | diabase | |  |  |  | Pl + Hbl | 37.98822 N, 34.89011 E |
| **ND15-48D** | NMC | metaperidotite | |  |  |  | Ol + Tlc + Tr + Srp | 37.98822 N, 34.89011 E |
| **Sample Number** | **Unit** | **Lithology** | | **XRF** | **ICP-MS** | **EPMA** | **Mineral Assemblage** | **Coordinates (Lat, Long)** |
| **ND15-48E** | NMC | gabbro | | X |  | X | **Pl** + **Opx** + **Cpx** + Hbl | 37.98822 N, 34.89011 E |
| **ND15-48F** | Üçkapılı | aplite dike | | X |  |  | Ab + Qz + Bt + Gt + Ms | 37.98822 N, 34.89011 E |
| **ND15-48G** | NMC | gabbro | | X | X |  | Pl + Cpx + Opx + Hbl | 37.98822 N, 34.89011 E |
| **ND15-49A** | M3pl (N) | cobble (gabbro) | |  |  |  | Pl + Cpx + uralite | 38.07938 N, 34.97025 E |
| **ND15-49B** | M3pl (N) | cobble (diabase) | |  |  |  | Pl + Hbl | 38.07938 N, 34.97025 E |
| **ND15-50A** | NMC | amphibolite | |  |  |  | Hbl + Qz + Pl | 38.06963 N, 35.00359 E |
| **ND15-50B** | NMC | ultramafic | |  |  |  | Srp + Mag | 38.06963 N, 35.00359 E |
| **ND15-50C** | NMC | gabbro | | X |  |  | Pl + Hbl | 38.06963 N, 35.00359 E |
| **ND15-50D** | NMC | plagiogranite | | X |  |  | Pl + Qz | 38.06963 N, 35.00359 E |
| **ND15-50E** | NMC | amphibolite | |  |  |  | Hbl + Cal + Qz + Pl | 38.06963 N, 35.00359 E |
| **ND15-51A** | NMC | greenschist | |  |  |  | Chl + Ep + Cal + Qz | 38.03359 N, 34.82002 E |
| **ND15-51B** | NMC | greenschist | |  |  |  | Chl + Cal +Act | 38.03359 N, 34.82002 E |
| **ND15-51C** | NMC | ultramafic | |  |  |  | Srp + Chr + Hc | 38.03359 N, 34.82002 E |
| **ND15-51D** | NMC | gabbro | |  |  |  | Hbl + Pl + Qz | 38.03359 N, 34.82002 E |
| **ND15-51E** | NMC | hornblende-chlorite schist | |  |  | X | **Hbl** + Chl + Qz + Pl | 38.03359 N, 34.82002 E |
| **ND15-51F** | NMC | gabbro or diabase | |  |  | X | **Hbl** + **Pl** + Qz + Ms(Tlc?) | 38.03359 N, 34.82002 E |
| **ND15-52** | Așıgediği | amphibolite | | X |  |  | Hbl + Cal + Ep + Pl | 37.89328 N, 34.71012 E |
| **ND15-53A** | N. Region | gabbro | |  |  | X | **Ts** + **Ac** + **Pl** + Qz | 38.16915 N, 34.75048 E |
| **ND15-53B** | N. Region | basalt | | X | X | X | **Amp (Ts, Ac, Mhb**) + **Pl** + Qz | 38.16915 N, 34.75048 E |
| **ND15-53C** | N. Region | gabbro | |  |  | X | **Hbl** + **Pl** | 38.16915 N, 34.75048 E |
| **PU15-13A** | Çukurbağ | cobble (sandstone) | |  |  |  | Qz + Fsp + Cal | 37.90568 N, 35.0994 E |
| **Sample Number** | **Unit** | **Lithology** | | **XRF** | **ICP-MS** | **EPMA** | **Mineral Assemblage\*** | **Coordinates (Lat, Long) WGS84** |
| **PU15-13B** | Çukurbağ | cobble (diabase) | |  |  |  | Hbl + Pl + Chl + uralite | 37.90568 N, 35.0994 E |
| **PU15-13C** | Çukurbağ | cobble (micrite?) | |  |  |  | N/A | 37.90568 N, 35.0994 E |
| **PU15-13D** | Çukurbağ | cobble (granite) | |  |  |  | Qz + Fsp | 37.90568 N, 35.0994 E |
| **PU15-14** | Çukurbağ | cobble (gabbro) | | X |  |  | Pl + Cpx + Hbl + Chl | 37.90568 N, 35.0994 E |
| **PU15-17** | Çukurbağ | cobble (gabbro) | |  |  |  | Pl + Ol + Hbl + Chl | 37.91304 N, 35.08693 E |
| **ND8614** | Çukurbağ | cobble (gabbro) | |  |  |  | Cpx + Pl + Act | 37.90668 N, 35.09982 E |
| **ND9614** | Çukurbağ | cobble (gabbro) | |  |  |  | Hbl + Pl | 37.90714 N, 35.15305 E |