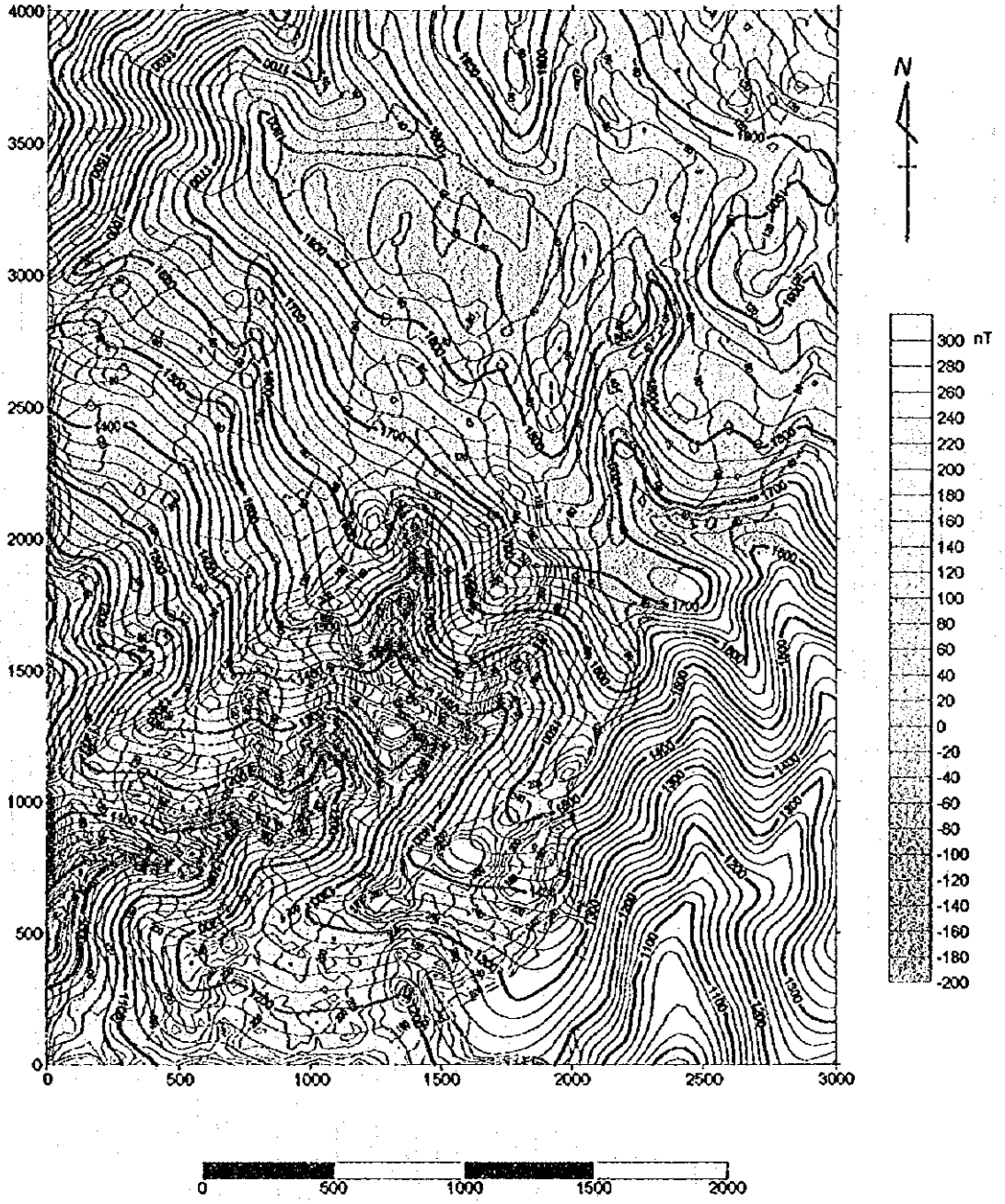
Apx. 2-2-1 (4) Total magnetic intensity map computed with susceptibilities, Central Shebenik area



## Apx. 2-3-1 (1) Geological logging of MJAS-1, Bregu i Pishes area

**MJAS-1**

INCLINATION : −43°

AREA : BREGU I PISHES BEARING : S60°W (240°) ELEVATION : 1,141.32m FINAL DEPTH : 80.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.00 - 4.00: Non Core | | | | | | 0 | Non Core |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| 5 | | | 4.00 - 19.43: Harzburgite; serpentinized, dark green, Px:30%, with foliation of 75 - 80 degree of core angle, with thin dunites, | | | | | | 80 | 97 |
| | | | 5.70 - 5.80: Dunite; brown, | | | | | | 0 | 97 |
| | | | | | | | | | 0 | 100 |
| | | | 8.00 - 8.10: Dunite; brown, | | | | | | 0 | |
| | | | 8.50 - 9.50: fault zone, friable, | | | | | | 0 | 36 |
| 10 | | | | | | | | | 0 | |
| | | | 10.20 - 10.40: Dunite; brown, poor in Cr-spinel, | | | | | | 0 | 62 |
| | | | 11.30 - 11.45: sheared zone in Harzburgite, | | | | | | 56 | 100 |
| | | | | | | | | | 75 | 100 |
| | | | 13.60 - 13.75: Dunite; brown, gradual contact with harzburgite, | | | | | | 80 | |
| | | | 14.50 - 14.60: Dunite; brown, gradual contact with harzburgite, | | | | | | 100 | 100 |
| 15 | | | 15.10 - 15.20: Dunite; brown, gradual contact with harzburgite, | | | | | | 50 | |
| | | | 15.40 - 16.10: Fault zone, friable, | | | | | | 80 | 100 |
| | | | 17.50 - 18.00: brecciated zone with blocks of harzburgite, | | | | | | 20 | 100 |
| | | | 18.85 - 19.43: fault zone, friable, with blocks of harzburgite, | | | | | | 30 | |
| 20 | | | 19.43 - 23.00: Harzburgite; serpentinized, dark green, Px:35-40%, hard, with thin dunites, | | | | | | 30 | 84 |
| | | | | | | | | | 35 | 100 |
| | | | 22.85 - 23.00: Dunite; brown, medium hard, | | | | | | 65 | 94 |
| | | | 23.00 - 30.80 Harzburgite; serpentinized, dark green, partly brecciated, Px:20-25%, with thin dunites, | | | | | | 70 | |
| | | | | | | | | | 100 | 100 |
| 25 | | | | | | | 25.30 | | 100 | |
| | | | | | | | 1−R−5 | | 100 | |
| | | | 26.10 - 26.60: brecciated | | | | | | 100 | 100 |
| | | | 26.60 - 26.80: Dunite; dark greenish gray, gradual contact with Hz, | | | | | | 30 | |
| | | | | | | | | | 30 | 100 |
| 30 | | | 30.40 - 30.80: fault zone, friable, | | | | | | 30 | |
| | | | 30.80 - 41.65: Harzburgite; dark green, compact, hard, with thin dunites | | | | | | 40 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | 41.70-42.10 | | 100 | |
| | | | | | | | 1−C−1 | | 0 | |
| 35 | | | 34.10 - 35.00: strongly brecciated, | | | | | | 20 | 29 |
| | | | 35.18 - 36.15: strongly brecciated, | | | | 42.10-42.30 | | 20 | |
| | | | | | | | 1−C−2 | | 0 | 62 |
| | | | 37.00 - 38.10: fault zone ?, friable, with blocks of dunite and harzburgite, | | | | | | 0 | |
| | | | | | | | 1−R−3 | | 75 | 67 |
| | | | 38.90 - 39.00: Dunite; brown, | | | | 39.50 | | 50 | |
| 40 | | | 39.90 - 40.00, 40.25-40.30: Dunite; gradual contact with Hz, | | | | 1−R−1 | | 50 | 100 |
| | | | 41.65 - 49.00: Dunite with chromitite accompanied with harzburgite; dunites is relatively thick, | | | 36.70 | 42.00 | | 30 | 100 |
| | | | 41.65 - 41.70: Dunite envelope of chromitite (upper), brown, | | 41.70 - 42.73: Chromitite; high grade disseminated ore, width = 1.03 cm, about 35% $Cr_2O_3$, 42.10-42.30 is richer than others, | 34.40 | 43.00 | | 50 | |
| | | | 41.70 - 42.73: Chromitite; high grade disseminated ore, width = 1.03 cm, about 35% $Cr_2O_3$, 42.10-42.30 is richer than others, | | | 32.40 | 1−R−2 | | 0 | 100 |
| 45 | | | | | | | | | 0 | 64 |
| | | | 42.73 - 43.70: Dunite envelope of chromitite (lower), brown, | | | | | | 0 | 90 |
| | | | 43.70 - 43.80: brecciated zone, | | | | 42.30-42.73 | | 0 | |
| | | | 44.10 - 44.90: fault zone with friable material mainly of dunite, | | | | 1−C−3 | | 0 | 100 |
| | | | 45.30 - 46.00: fault zone with friable material mainly of dunite, | | | | | | 20 | 87 |
| 50 | | | 46.00 - 46.65: Dunite; brown, | | | | | | 70 | |
| | | | 46.65 - 46.95: fault zone with friable material mainly of dunite, | | | | | | 80 | 85 |
| | | | 46.95 - 47.00: Dunite; brown, | | | | | | 10 | |
| | | | 47.00 - 49.00: fault zone with friable material mainly of dunite, | | | | 53.40 | | 50 | 100 |
| | | | 49.00 - 80.00: Harzburgite; dark green, compact, Px: 30-35%, with thin dunites, frequently, broken into small fragments, | | | | 1−R−4 | | 50 | |
| 55 | | | | | | | | | 0 | 100 |
| | | | 49.20 - 49.80: brecciated zone, | | | | | | 20 | |
| | | | 50.80 - 51.11: fault zone, brecciated at lower part, | | | | | | 0 | 100 |
| | | | 55.70 - 56.70: Dunite; brown, medium hard, | | | | | | 40 | 100 |
| | | | 57.00 - 58.50: fault zone, brecciated at bottom, | | | | | | 40 | |
| 60 | | | 59.20 - 59.70: fault zone, friable, | | | | | | 100 | 100 |
| | | | 59.70 - 59.80: fault zone, | | | | | | 60 | |
| | | | 59.80 - 60.20: Dunite; brown, | | | | | | 30 | 100 |
| | | | 60.70 - 61.10: brecciated zone, green, core angle of contact:20 degree, | | | | | | 0 | 100 |
| | | | 62.30 - 62.50: Dunite; brown, core angle of contact: 0 degree, | | | | | | 20 | 100 |
| 65 | | | 63.00 - 63.50: Dunite; brown, | | | | | | 30 | |
| | | | 65.50 - 65.40: fault zone, green, friable, brecciated, | | | | | | 60 | 100 |
| | | | 68.00 - 68.50: brecciated zone, green, friable, core angle of contact:0 to 20 degree, | | | | | | 67 | 100 |
| | | | | | | | | | 36 | 100 |
| 70 | | | 68.50 - 68.60: Dunite; brown, | | | | | | 22 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-1**

INCLINATION : −43°

AREA : BREGU I PISHES BEARING : S60°W (240°) ELEVATION : 1,141.32m FINAL DEPTH : 80.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | 70.40 - 70.50; friable zone, maybe fault, | | | | | | 14 | |
| | | | 71.20 - 72.60; friable zone, maybe fault, | | | | | | 0 | 100 |
| | | | | | | | | | 29 | 100 |
| | | | | | | | | | 87 | 100 |
| | | | 74.50 - 75.32; friable zone, maybe fault, | | | | | | 14 | 100 |
| 75 | | | 75.32 - 75.42; Dunite; brown, | | | | | | 42 | 100 |
| | | | 76.25 - 76.45; brecciated zone, | | | | | | 20 | 65 |
| | | | 76.45 - 76.55; Dunite; brown, | | | | | | 0 | 37 |
| | | | 76.55 - 80.00; friable zone, green, brecciated, may be fault, | | | | | | 0 | 69 |
| 80 | | 80.00 | | | | | | | 0 | 29 |

## Apx. 2-3-1 (2) Geological logging of MJAS-2, Bregu i Pishes area

**MJAS-2**

INCLINATION : −45°

AREA : BREGU I PISHES BEARING : S60°W (240°) ELEVATION : 1,141.46m FINAL DEPTH : 80.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | Harzburgite with dunite; weathered to brown, serpentinized, medium hard, Px:30 - 35% and max. 4 mm in size, core angle of foliation: 80 - 90 degree, | | | | | | 0 | 28 |
| | | 0.60 | friable materials of dunite; brown, fault zone ? | | | | | | 0 | |
| | | 1.00 | Dunite; weathered to brown, medium hard, poor in Cr-spinel, gradual contact with harzburgite, | | | | | | 18 | 52 |
| 5 | | 3.50 | fault zone, friable, lumps are mainly of harzburgite, | | | | | | 5 | |
| | | 5.40 | Dunite; brown, | | | | | | 32 | 98 |
| | | 5.60 | friable material of dunite; brown, fault zone, | | | | | | 83 | 72 |
| | | 5.83 | Dunite; brown to dark brown, | | | | | | 20 | 87 |
| | | 8.00 | friable materials of dunite; fault zone | | | | | | 17 | |
| 10 | | 10.30 | friable materials of harzburgite; fault zone, | | | | | | 26 | 88 |
| | | 10.50 | Harzburgite; serpentinized, dark greenish gray, medium hard, Px:25 - 30%, core angle of foliation: 70 - 90 degree, | | | | | | 46 | 94 |
| | | 13.90 | Dunite; brown, | | | | | | 48 | 71 |
| 15 | | | | | | | | | 78 | 100 |
| | | | | | | | | | 100 | 82 |
| | | | | | | | | | 90 | 90 |
| | | | | | | | | | 100 | 89 |
| | | | | | | | | | 85 | |
| | | | | | | | | | 85 | 88 |
| | | | | | | | | | 100 | |
| 20 | | | | | | | | | 82 | 86 |
| | | | | | | | | | 80 | 97 |
| | | | | | | | | | 84 | 81 |
| | | | | | | | | | 100 | |
| | | 22.50 | Harzburgite; serpentinized, dark green, medium hard, Px:30 - 35% and max. 4 mm in size, with thin dunite, | | | | 22.30 2−R−1 | | 70 | 80 |
| 25 | | 24.30 | broken into small blocks, | | | | | | 0 | |
| | | 26.60 | brecciated zone, friable, | | | | | | 60 | 87 |
| | | 28.55 | brecciated zone, friable, | | | | | | 85 | 62 |
| | | | | | | | | | 32 | |
| 30 | | | | | | | | | 73 | |
| | | 31.30 | brown in color, | | | | | | 10 | 73 |
| | | 32.95 | Dunite, brown, very rare in Cr-spinel grains, | | | | | | 30 | 81 |
| | | 33.40 | Dunite, brown, core angle of contact: 90 degree, | | | | | | 55 | 56 |
| 35 | | 34.10 | Dunite, brown, | | | | | | 0 | 75 |
| | | 35.30 | brecciated dunite; green, core angle of contact:30 degree, | | | | | | 73 | |
| | | 36.37 | Dunite; brown to dark green, partly brecciated, | | | | | | 30 | 99 |
| | | 38.10 | Harzburgite with intercalation of thin dunite (1 - 2 cm in thickness) with core angle of 90 degree, | | | | | | 82 | |
| 40 | | 40.42 | Harzburgite; dark greenish gray partly brown, medium hard, core angle of foliation: 80 - 90 degree, with very thin dunite bands of 0.5 - 2 cm in thickness parallel to foliation, | | | | 40.50 2−R−2 | | 50 | 100 |
| | | 43.90 | broken into small blocks, | | | | | | 35 | |
| | | 45.00 | brownish green, hard, Px:35 - 40% and max. 5mm in size, | | | | | | 50 | 100 |
| 45 | | | | | | | | | 20 | |
| | | | | | | | | | 30 | 100 |
| | | | | | | | | | 78 | |
| | | | | | | | | | 40 | 100 |
| | | | | | | | | | 65 | |
| | | | | | | | | | 50 | 100 |
| | | | | | | | | | 46 | |
| 50 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 43 | 100 |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 40 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 90 | |
| | | | | | | | | | 80 | |
| | | 52.40 | brecciated zone, green, friable, | | | | | | 26 | 100 |
| | | 55.30 | brecciated zone, green, | | | | | | 30 | 100 |
| 55 | | 57.30 | brecciated zone, brown, friable, | | | | 59.00-59.25 2−C−1 | | 40 | |
| | | 58.10 | Dunite, brown, compact, core angle of contact: 0 degree, | | | | | | 90 | 100 |
| | | 58.80 | Dunite envelope of following chromitite, brown, | | | | | | 75 | 100 |
| | | 59.00 | Chromitite; dense disseminated ore, olivine is green in color, | | 59.00 - 59.25: Chromitite; dense disseminated ore, olivine is green in color, | | | | 30 | |
| | | 59.25 | Dunite, brown, rare in Cr-spinel, medium hard, | | | 38.60 | 2−R−3 | | 42 | 100 |
| 60 | | 60.05 | Chromitite; black, massive, medium hard, size of Cr-spinel is up to 3 mm, with green olivine patches, lower boundary is cut by fault to contact direct with harzburgite without dunite envelope, | | 60.05 - 60.90: Chromitite; black, massive, medium hard, size of Cr-spinel is up to 3 mm, with green olivine patches, lower boundary is cut by fault to contact direct with harzburgite without dunite envelope, | 49.70 | 59.80 60.30 2−R−4 | | 55 | 100 |
| | | 60.90 | brecciated harzburgite, | | | | | | 60 | |
| | | 61.80 | friable zone of Hz and dunite, brown, may be fault, | | | | | | 80 | 100 |
| | | 62.30 | Dunite, brown, | | | | | | 0 | |
| | | 63.00 | brecciated zone of friable material, brown, | | | | 60.05-60.90 2−C−2 | | 57 | 100 |
| 65 | | 64.40 | Harzburgite with dunite intercalation between 65.2 - 65.4 m, | | | | | | 80 | |
| | | 65.40 | brecciated zone, brown | | | | | | 70 | 100 |
| | | 65.80 | Harzburgite with dunite intercalation same as 38.1 - 40.42 m, | | | | 66.40 2−R−5 | | 100 | |
| | | 67.10 | brecciated zone, green, | | | | | | 35 | 100 |
| 70 | | 69.30 | brecciated zone, green, soft, with blocks of harzburgite, | | | | | | 50 | |
| | | | | | | | | | 40 | 100 |

A - 27

# GEOLOGIC LOG ( 2 )

**MJAS-2**

INCLINATION : −45°

AREA : BREGU I PISHES BEARING : S60°W (240°) ELEVATION : 1,141.46m FINAL DEPTH : 80.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 25 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 20 | 100 |
| | | | | | | | | | 20 | |
| | | | 74.10 - 75.50; brecciated zone in harzburgite, green. | | | | | | 60 | 100 |
| 75 | | | 75.80 - 75.90; ditto. | | | | | | 15 | 100 |
| | | | 75.81 - 76.30; Dunite, brown, very rare in Cr-spinel, | | | | | | 10 | 100 |
| | | | 76.30 - 77.75, 77.90 - 78.60, 79.20 - 80.00; brecciated zone in harzburgite, green, | | | | | | 0 | |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 35 | 100 |
| 80 | | 80.00 | | | | | | | | |

## Apx. 2-3-1 (3) Geological logging of MJAS-3, Bregu i Pishes area

# MJAS-3

INCLINATION : −40°

AREA : BREGU I PISHES　BEARING : S60°W (240°)　ELEVATION : 1,135.48m　FINAL DEPTH : 130.86m

| 1:200 SCALE(m) | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 - 0.80: | Surface soil; brown, very soft, | | | | | | 0 | 100 |
| | | 0.80 - 1.30: | Strongly weathered ultrabasic rock like soil; green, | | | | | | 0 | 100 |
| | | 1.30 - 3.60: | Weathered harzburgite; green, friable, with harzburgite block between 3.60 m and 4.50 m, | | | | | | 0 | 100 |
| 5 | | 3.60 - 10.95: | Harzburgite; serpentinized, dark greenish gray, medium hard, Px: approx. 30%, weakly weathered, with thin dunite, | | | | | | 40 | 100 |
| | | | | | | | | | 55 | 100 |
| | | | | | | | | | 30 | 100 |
| | | | | | | | | | 49 | 100 |
| | | | | | | | | | 15 | 100 |
| | | 8.40 - 8.70: | Dunite; brown, gradual contact with harzburgite, poor in Cr-spinel, | | | | | | 80 | 100 |
| 10 | | | | | | | | | 70 | 100 |
| | | | | | | | | | 0 | 100 |
| | | 10.95 - 16.60: | Harzburgite; serpentinized, dark greenish gray, medium hard, Px:30-35%, | | | | 11.00 3−R−1 | | 26 | 100 |
| | | | | | | | | | 100 | 100 |
| 15 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | 16.30 - 16.60: | brecciated zone, green, | | | | | | 100 | 100 |
| | | 16.60 - 72.00: | Harzburgite; serpentinized, dark greenish gray, medium hard, poor in Cr-spinel, | | | | | | 13 | 90 |
| | | 16.80 - 17.00: | brecciated zone, green, | | | | | | 25 | 100 |
| 20 | | 18.80 - 19.00: | brecciated zone of friable materials, green to red, core angle of contact: 0 degree, | | | | | | 18 | 100 |
| | | 20.70 - 21.40: | fault zone ?, friable, green to red, | | | | | | 40 | 92 |
| | | | | | | | | | 36 | 100 |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 40 | 100 |
| 25 | | | | | | | | | 80 | 100 |
| | | 25.00 - 25.40: | Dunite; brown, medium hard, poor in Cr-spinel, | | | | | | 34 | 100 |
| | | 26.00 - 26.60: | Ditto | | | | | | 85 | 100 |
| | | | | | | | 26.50 3−R−2 | | 52 | 100 |
| | | | | | | | | | 76 | 100 |
| 30 | | | | | | | | | 69 | 100 |
| | | 29.90 - 30.10: | Dunite of two thin bands; brown, medium hard, core angle of contact: 60 degree, | | | | | | 100 | 100 |
| | | 30.50 - 31.10: | Dunite, brown, medium hard, with Cr-spinel grains up to 1 mm, gradual contact with harzburgite, | | | | | | 80 | 100 |
| | | 31.10 -33.00: | Harzburgite; with core angle of foliation of 80-90 degree, olivine is brown in color, | | | | | | 27 | 90 |
| 35 | | | | | | | | | 75 | 100 |
| | | 33.00 - 34.10: | Harzburgite; broken into small blocks, | | | | | | 70 | 100 |
| | | 35.00 - 35.10: | Pyroxinite dike; green, medium hard, | | | | | | 50 | 100 |
| | | 36.40 - 37.00: | brecciated zone; green, soft, core angle: 60 degree, | | | | | | 100 | 100 |
| | | 37.00 - 37.30: | Dunite, brown, intercalated with harzburgite, | | | | | | 44 | 100 |
| 40 | | 37.30 - 39.50: | sheared in parallel with drilling axis, | | | | | | 67 | 100 |
| | | 39.50 - 39.70: | friable zone, green, core angle of contact with harzburgite: 0 degree | | | | | | 35 | 100 |
| | | 39.70 - 42.40: | Harzburgite; broken into small blocks, | | | | | | 27 | 100 |
| | | 42.40 - 42.90: | brecciated zone, friable, green, | | | | | | 0 | 100 |
| | | 43.70 - 43.80: | Dunite; brown, core angle of contact: 70 degree, | | | | | | 25 | 100 |
| 45 | | | | | | | | | 37 | 100 |
| | | 46.10 - 46.40: | brecciated zone, friable, green, | | | | | | 100 | 100 |
| | | 46.40 - 46.90: | Dunite, brown, poor in Cr-spinel, | | | | | | 45 | 100 |
| | | 48.40 - 49.10: | friable zone, may be fault zone, | | | | | | 20 | 100 |
| | | 49.90 - 50.00: | brecciated zone; green, friable, | | | | | | 53 | 100 |
| 50 | | 50.70 - 51.10: | brecciated zone; green, friable, core angle of contact:70 degree, | | | | | | 38 | 100 |
| | | 51.10 - 51.70: | Dunite in networks; brown, | | | | | | 37 | 100 |
| | | 52.80 - 53.95: | Dunite; brown, brecciated, poor in Cr-spinel, | | | | | | 0 | 100 |
| | | 55.00 - 55.20: | brecciated zone in harzburgite, dark green, | | | | | | 48 | 100 |
| 55 | | 55.50 - 55.70: | Ditto | | | | | | 52 | 100 |
| | | | | | | | | | 71 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | | | | | | | 64 | 100 |
| | | | | | | | | | 70 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | 58.35 - 58.85: | Repetition of dunite and brecciated zone with core angle of contact: 50-90 degree, brecciated zones at 58.45-58.55, 58.65-58.75, | | | | | | 80 | 100 |
| 60 | | 60.00 - 61.00: | Harzburgite; Px: 35-40%, with thin pyroxinite dikes between 60.40 and 60.70 m, | | | | 59.20 3−R−3 | | 83 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | | | | | | | 53 | 100 |
| | | 62.85 - 65.10: | Harzburgite; broken into small blocks, | | | | | | 26 | 38 |
| | | | | | | | | | 0 | 75 |
| 65 | | | | | | | | | 0 | 40 |
| | | 65.10 - 65.20: | Dunite; brown, poor in Cr-spinel, | | | | | | 10 | 44 |
| | | 66.30 - 66.40: | Ditto, | | | | | | 20 | |
| | | 67.50 - 67.60: | Ditto, | | | | | | 0 | 33 |
| | | | | | | | | | 0 | 42 |
| 70 | | | | | | | | | 0 | 45 |
| | | | | | | | | | 40 | 41 |

# GEOLOGIC LOG ( 2 )

**MJAS-3** INCLINATION : −40°

AREA : BREGU I PISHES BEARING : S60°W (240°) ELEVATION : 1,135.48m FINAL DEPTH : 130.86m

| SCALE(m) 1/200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 15 | 38 |
| | | | | | | | | | 0 | 31 |
| | | | 72.00 - 79.10; strongly brecciated and fractured zone rich in dunite and serpentinized harzburgite, low in core recovery, | | | | | | 0 | 30 |
| | | | 72.00 - 72.50; brecciated zone, green, friable, | | | | | | 0 | 33 |
| | | | | | | | 74.00 3−R−4 | | 0 | 39 |
| 75 | | | 72.50 - 75.40; Serpentinized harzburgite blocks with dunite lump including Cr-spinel grains up to 2 mm in diameter, | | | | | | 0 | 45 |
| | | | 75.40 - 76.00; Harzburgite, serpentinized, brecciated, | | | | | | 0 | 64 |
| | | | 76.00 - 76.50; Harzburgite, serpentinized, | | | | | | 17 | 50 |
| | | | 76.50 - 79.10; brecciated zone, mainly of harzburgite, green, friable, | | | | | | 37 | 80 |
| | | | | | | | | | 40 | 86 |
| 80 | | | 79.10 - 86.85; Harzburgite; strongly serpentinized, green to dark greenish gray, soft to medium hard, broken to small blocks and relatively low in core recovery, | | | | | | 52 | 91 |
| | | | 81.15 - 81.35; brecciated zone | | | | | | 16 | 92 |
| | | | 81.70 - 81.90; Dunite; brown, broken to small blocks, poor in Cr-spinel, | | | | | | 0 | 86 |
| | | | 83.20 - 83.30; Dunite; brown, | | | | | | 0 | 86 |
| 85 | | | 84.50 - 84.70; brecciated zone, green, friable, | | | | | | 0 | 85 |
| | | | 86.10 - 86.55; Ditto | | | | | | 0 | 90 |
| | | | 86.75 - 86.85; Dunite, brecciated, brown, | | | | | | 0 | 80 |
| | | | | | | | | | 0 | 56 |
| | | | 86.85 - 93.10; strongly brecciated zone of fault; mainly of strongly serpentinized harzburgite and dunite, green, | | | | | | 0 | 80 |
| | | | | | | | | | 0 | 82 |
| 90 | | | 86.85 - 89.15; brecciated zone rich in dunite, green, friable, | | | | | | 100 | 94 |
| | | | 89.15 - 90.80; brecciated zone rich in dunite, green, compact, | | | | | | 70 | 88 |
| | | | 90.80 - 91.60; brecciated zone with serpentine, brown to white, | | | | | | 42 | 88 |
| | | | 91.60 - 92.75; brecciated zone with limonite, brown to red, | | | | | | 25 | 88 |
| | | | 92.75 - 93.10; Harzburgite, serpentinized, transitional zone? | | | | | | 100 | 100 |
| 95 | | | 93.10 - 130.86; Harzburgite; fresh, gray to brownish yellow, hard, | | | | | | 100 | |
| | | | | | | | | | 100 | 97 |
| | | | | | | | | | 47 | |
| | | | | | | | | | 55 | 94 |
| | | | | | | | | | 10 | |
| 100 | | | | | | | | | 50 | 87 |
| | | | | | | | | | 24 | 97 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 70 | 100 |
| | | | | | | | | | 50 | 96 |
| 105 | | | | | | | | | 70 | 100 |
| | | | | | | | | | 100 | 97 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 65 | 100 |
| | | | 108.90 - 110.00; brecciated zone, green, soft, | | | | | | 34 | |
| 110 | | | | | | | | | 13 | 90 |
| | | | | | | | | | 15 | 90 |
| | | | | | | | | | 48 | 95 |
| | | | | | | | | | 90 | 98 |
| | | | | | | | | | 100 | |
| 115 | | | | | | | | | 50 | 92 |
| | | | | | | | 115.50 3−R−5 | | 80 | 100 |
| | | | | | | | | | 60 | 92 |
| | | | | | | | | | 50 | 90 |
| | | | | | | | | | 80 | 93 |
| 120 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 97 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 85 | 94 |
| | | | 122.80 - 123.00; friable materials mainly of serpentinized harzburgite, green to dark green, | | | | | | 90 | |
| 125 | | | | | | | | | 34 | 97 |
| | | | | | | | | | 64 | 99 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| 130 | | | | | | | | | 100 | 100 |
| | | 130.86 | | | | | | | | |

## Apx. 2-3-1 (4) Geological logging of MJAS-4, Fusha e Madhe area

**MJAS-4**

INCLINATION : −45°

AREA : FUSHA E MADHE BEARING : N50°W (310°) ELEVATION : 1,119.44m FINAL DEPTH : 191.50m

| 1:200 SCALE(m) | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| | | | | | | | | | 44 | 100 |
| | | | | | | | | | 25 | |
| | | | | | | | | | 40 | 100 |
| 5 | | | | | | | | | 26 | |
| | | | | | | | | | 0 | 71 |
| | | | | | | | | | 24 | 67 |
| | | | | | | | | | 10 | 36 |
| 10 | | | | | | | | | 14 | 80 |
| | | | | | | | | | 27 | |
| | | | | | | | | | 0 | 19 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| 15 | | | | | | | | | 0 | 58 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| | | | | | | | | | 10 | 40 |
| | | | | | | | | | 11 | |
| | | | | | | | | | 0 | 19 |
| 20 | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 55 |
| | | | | | | | | | 0 | 83 |
| | | | | | | | | | 32 | |
| | | | | | | | | | 12 | 83 |
| 25 | | | | | | | | | 22 | |
| | | | | | | | | | 90 | 83 |
| | | | 0.00 - 55.00: Lateritic surface soil; reddish brown, soft, with blocks of harzburgite in various size, | | | | | | 100 | |
| | | | | | | | | | 92 | |
| | | | | | | | | | 72 | 100 |
| 30 | | | | | | | | | 70 | |
| | | | | | | | | | 80 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 28 | |
| | | | | | | | | | 85 | 100 |
| 35 | | | | | | | | | 60 | |
| | | | | | | | | | 34 | |
| | | | | | | | | | 80 | 100 |
| | | | | | | | | | 16 | |
| | | | | | | | | | 30 | |
| 40 | | | | | | | | | 46 | 100 |
| | | | | | | | | | 15 | |
| | | | | | | | | | 0 | 52 |
| | | | | | | | | | 46 | |
| | | | | | | | | | 64 | 90 |
| 45 | | | | | | | | | 0 | |
| | | | | | | | | | 46 | |
| | | | | | | | | | 100 | 65 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 100 |
| 50 | | | | | | | | | 55 | 100 |
| | | | | | | | | | 52 | |
| | | | | | | | | | 90 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 48 | |
| A - 35 | | | | | | | | | 12 | 100 |
| 55 | | | 55.00 - 63.00: Harzburgite; serpentinized, strongly weathered along cracks, brown to yellowish brown, | | | | | | 66 | |
| | | | 55.00 - 56.90: friable, strongly weathered, | | | | | | 50 | 100 |
| | | | 58.20 - 61.20: greenish gray, Px: 35 to 40% and 3 to 5mm in size, | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 60 | | | | | | | | | 100 | |
| | | | 61.20 - 62.70: weathered, brown, | | | | | | 100 | 100 |
| | | | 62.70 - 63.00: with foliation of 70 degree of core angle, | | | | | | 52 | |
| | | | 63.00 - 86.23: Harzburgite; serpentinized, green to dark green, weathered along cracks, brown to yellowish brown, Px: 35 to 40% and 3 mm in size, accompanied with thin dunite sparsely, | | | | | | 90 | 97 |
| | | | | | | | | | 86 | |
| 65 | | | 63.00 - 64.38: core angle of foliation: 60 degree, | | | | | | 61 | 100 |
| | | | 64.38 - 64.70: Dunite; brown partly dark green, medium hard, with fine-grained Cr-spinel grains sparsely, | | | | | | 100 | |
| | | | 68.45 - 68.75: weathered along crack, yellowish brown, | | | | | | 100 | 100 |
| | | | 69.00 - 69.10: Dunite; green to dark green, poor in Cr-spinel, core angle of contact 60 degree in parallel with foliation in harzburgite. | | | | | | 66 | |
| 70 | | | | | | | | | 100 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-4**

INCLINATION : −45°

AREA : FUSHA E MADHE BEARING : N50°W (310°) ELEVATION : 1,119.44m FINAL DEPTH : 191.50m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70.00 - 70.10; | Dunite; dark green, poor in Cr-spinel, | | | | | | 100 | 100 |
| | | | | | | | | | 56 | |
| | | 72.20 - 72.85; | strongly weathered along crack, brown to yellowish brown, cores are broken into small blocks, | | | | | | 28 | 100 |
| | | | | | | | | | 90 | |
| | | 73.70 - 73.80; | Dunite; brown, poor in Cr-spinel, core angle of contact: 60 degree, | | | | | | 30 | 100 |
| 75 | | | | | | | | | 68 | 100 |
| | | 75.00 - 75.76; | Dunite; weathered, brown to yellowish brown, poor in Cr-spinel, soft to medium hard, | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 100 |
| | | 76.76 - 78.80; | broken into small blocks, strongly weathered, yellowish brown, maybe fault zone, | | | | | | 10 | 80 |
| 80 | | | | | | | | | 17 | |
| | | 81.00 - 82.00; | ditto, | | | | | | 23 | 47 |
| | | | | | | | | | 0 | 60 |
| | | | | | | | | | 92 | 87 |
| | | | | | | | | | 40 | 100 |
| 85 | | 85.00 - 86.23; | broken into small blocks, weathered to yellowish brown along cracks, | | | | | | 45 | |
| | | | | | | | | | 0 | 58 |
| | | 86.23 - 117.80; | Harzburgite; serpentinized, dark green, open cracks are stained by iron oxides, with thin dunite sparsely, core angle of foliation: 50 to 60 degree, | | | | | | 80 | 92 |
| | | | | | | | | | 28 | |
| | | | | | | | | | 0 | |
| | | 87.00 - 88.23; | broken into small blocks, weakly weathered, | | | | | | 14 | 64 |
| 90 | | 88.23 - 88.53; | Dunite; brown to yellowish brown, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 77 | 90 |
| | | | | | | | | | 75 | |
| 95 | | 94.50 - 94.70; | Dunite; dark brown, | | | | | | 40 | 100 |
| | | 96.60 - 96.90; | fault zone, friable, with blocks of harzburgite and dunite, | | | | | | 28 | 87 |
| | | 97.80 - 97.90; | Dunite; brown, broken into small blocks, | | | | | | 38 | 93 |
| | | | | | | | | | 50 | |
| | | | | | | | | | 68 | 100 |
| 100 | | 99.70 - 100.10; | broken into small blocks, weathered, yellowish brown,, | | | | | | 20 | 100 |
| | | 100.10 - 101.00; | Dunite; weathered, brown to yellowish brown, with Cr-spinel grains, | | | | | | 50 | 100 |
| | | | | | | | | | 40 | 90 |
| | | 101.50 - 102.05; | broken into small blocks, | | | | | | 23 | |
| | | 102.45 - 103.40; | weathered, brown, broken into small blocks | | | | | | 13 | 100 |
| 105 | | 103.40 - 104.60; | Dunite; brown, weathered, broken into small blocks, maybe faulted, | | | | | | 0 | 100 |
| | | 104.90 - 105.80; | Dunite, ditto. | | | | | | 28 | |
| | | | | | | | | | 55 | 89 |
| | | 108.00 - 108.20; | fault zone, very friable, weathered, | | | | | | 55 | |
| | | 108.80 - 109.00; | Dunite, dark brown, medium hard, | | | | | | 12 | 100 |
| 110 | | | | | | | | | 15 | |
| | | 111.80 - 112.30; | broken into small blocks, partly stained by iron oxides, maybe fault zone, | | | | | | 29 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 85 | 100 |
| | | | | | | | | | 70 | |
| 115 | | | | | | | | | 65 | 90 |
| | | | | | | | | | 32 | |
| | | | | | | | | | 10 | |
| | | 117.80 - 121.60; | fault zone partly brecciated; strongly weathered, reddish brown to yellowish brown, partly friable, blocks are mainly of harzburgite but partly of dunite, | | | | | | 0 | 100 |
| | | | | | | | 119.40 | | 18 | |
| 120 | | 117.80 - 118.80; | broken into small blocks, with brecciated zone of friable materials at the interval of 118.34 to 118.40 m, | | | | 4−R−1 | | 20 | |
| | | 118.80 - 119.00; | brecciated zone, friable, weathered strongly, reddish brown, | | | | | | 10 | 100 |
| | | 119.00 - 119.10; | Dunite; weathered to light brown, with Cr-spinel grains, | | | | | | 33 | |
| | | 119.20 - 119.50; | ditto, | | | | | | 73 | |
| | | 119.50 - 119.90; | broken harzburgite into small blocks, | | | | 124.10 | | 90 | 100 |
| 125 | | 119.90 - 121.10; | brecciated zone; weathered, reddish brown, friable, with blocks of harzburgite, | | | | 4−R−2 | | 90 | |
| | | 121.10 - 121.20; | Dunite; strongly weathered, yellowish brown, | | | | | | 80 | 100 |
| | | 121.20 - 121.60; | brecciated zone; weathered, reddish brown, friable, with blocks of harzburgite, | | | | | | 53 | |
| | | | | | | | | | 20 | 100 |
| 130 | | 121.60 - 140.00; | Harzburgite; serpentinized, dark green, with thin dunite, Px: 30 to 35%, | | | | | | 12 | 100 |
| | | 123.20 - 123.40; | faulted zone, friable, weathered, brown, with blocks of dark green colored harzburgite, | | | | | | 36 | 100 |
| | | 128.30 - 130.46; | strongly fragmented fault zone, weathered, reddish brown, friable, | | | | | | 75 | 100 |
| | | 131.10 - 131.20; | friable, weathered to reddish brown, | | | | | | 18 | 88 |
| 135 | | 133.00 - 135.00; | broken into small blocks, partly friable, some cracks are filled with calcite veinlets, | | | | | | 55 | |
| | | 135.00 - 135.20; | friable, partly oxidized, | | | | | | 10 | 43 |
| | | 135.20 - 135.55; | Dunite, dark brown, | | | | | | 50 | |
| | | 137.80 - 137.95; | brecciated zone, green, core angle of contact: 60 degree | | | | | | 100 | |
| | | 139.10 - 139.15; | brecciated zone, green, core angle of contact: 80 - 90 degree. | | | | | | 100 | 57 |
| 140 | | | | | | | | | 82 | |
| | | | | | | | | | 25 | 60 |

A − 31

# GEOLOGIC LOG ( 3 )

## MJAS-4

INCLINATION : −45°

AREA : FUSHA E MADHE BEARING : N50°W (310°) ELEVATION : 1,119.44m FINAL DEPTH : 191.50m

| SCALE(m) 1200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 140 | | | 140.00 - 145.65: Dunite; serpentinized, dark brown, medium hard, poor in Cr-spinel, | | | | | | 0 | 60 |
| | | | | | | | | | 27 | |
| | | | 143.10 - 143.20: fault zone, friable, green partly reddish brown, | | | | | | 100 | |
| | | | | | | | | | 15 | 57 |
| | | | | | | | | | 32 | |
| 145 | | | | | | | 145.50 | | 40 | |
| | | | 145.65 - 161.05: Complex zone of harzburgite and dunite; both are serpentinized and medium hard, harzburgite is dark green and dunite is generally dark brown, fractures are filled with serpentine minerals and calcite, | | | | 4−R−3 | | 34 | 67 |
| | | | | | | | | | 24 | |
| | | | | | | | | | 100 | |
| | | | | | | | 149.00 | | 85 | 100 |
| 150 | | | 147.15 - 147.80: broken into small blocks, rich in network veinlets of calcite, | | | | 4−R−4 | | 0 | |
| | | | 147.80 - 147.90: Dunite; dark brown, | | | | | | 20 | 100 |
| | | | 149.00 - 149.30: Dunite; dark brown, with network veinlets of serpentine minerals, | | | | | | 30 | 100 |
| | | | 149.60 - 150.25: ditto, partly brecciated, core angle of contact: 40 to 50 degree, | | | | | | 34 | 100 |
| 155 | | | | | | | | | 33 | |
| | | | 151.20 - 151.60: Harzburgite; broken into small blocks, partly reddish brown, fault zone ?, | | | | | | 100 | 100 |
| | | | | | | | | | 43 | |
| | | | 151.60 - 151.80: Dunite; dark brown, | | | | | | 61 | 100 |
| | | | 152.00 - 152.50: ditto, the interval between 152.10 and 152.25 is friable, | | | | | | 62 | |
| | | | 154.60 - 156.55: Dunite, dark green partly dark brown, poor in Cr-spinel, | | | | | | 33 | 100 |
| 160 | | | 157.30 - 157.80: Dunite, dark brown, | | | | | | 30 | |
| | | | 158.10 - 158.15: ditto, | | | | | | 90 | 100 |
| | | | 159.40 - 159.70: ditto, broken into small blocks, | | | | | | 43 | |
| | | | 160.00 - 160.30: ditto, partly dark green, | | | | | | 27 | 100 |
| | | | 161.05 - 169.50: Dunite; dark green partly brown, poor in Cr-spinel, | | | | | | 0 | 85 |
| 165 | | | 162.60 - 163.00: broken into small blocks, dark brown, | | | | | | 28 | |
| | | | 163.00 - 165.60: brown in color, broken into small blocks at intervals of 163.60-163.70, 164.00-164.60 and 165.00-165.05, | | | | 166.30 | | 84 | |
| | | | | | | | 4−R−5 | | 69 | 100 |
| | | | | | | | | | 66 | |
| 170 | | | | | | | | | 68 | |
| | | | 169.50 - 172.80: Harzburgite; serpentinized, dark green, Px:30 to 40% and up to 3mm in size, | | | | 170.30 | | 100 | 100 |
| | | | | | | | 4−R−6 | | 100 | |
| | | | | | | | | | 79 | |
| | | | 172.80 - 182.80: Complex zone of harzburgite and dunite; both are medium hard and serpentinized, Harzburgite is dark green and dunite is dark brown, fractures are filled with serpentine minerals, | | | | | | 48 | 100 |
| 175 | | | | | | | | | 70 | |
| | | | 172.80 - 172.90: Dunite, | | | | | | 61 | 100 |
| | | | 173.30 - 175.60: Dunite, dark brown, | | | | | | 80 | 100 |
| | | | 176.70 - 177.20: Dunite, | | | | | | 95 | |
| | | | 177.20 - 177.35: Harzburgite with dunite intercalation, | | | | | | 95 | 100 |
| 180 | | | 177.35 - 180.00: Dunite; dark green to green partly dark brown, poor in Cr-spinel, | | | | | | 39 | 100 |
| | | | 181.50 - 182.80: Dunite; same as above, | | | | | | 85 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 43 | 100 |
| | | | | | | | | | 100 | |
| 185 | | | 182.80 - 188.20: Harzburgite; serpentinized, green, fractures are filled with serpentine minerals, | | | | | | 100 | |
| | | | | | | | | | 65 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 10 | 100 |
| | | | | | | | 4−R−7 | | 64 | |
| | | | 188.20 - 191.50: Complex zone of harzburgite and dunite; both are serpentinized and medium hard, Harzburgite is dark green and dunite is generally dark brown, fractures are filled with serpentine minerals, | | | | 189.00 | | 100 | 100 |
| 190 | | | 188.20 - 188.30: Dunite; brown, | | | | 189.60 | | 100 | |
| | | | 189.10 - 189.90: Dunite; brown, lower part is broken into small blocks, poor in Cr-spinel, | | | | 4−R−8 | | 0 | 60 |
| | | | 190.10 -191.50: ditto, | | | | | | | |
| | | 191.50 | | | | | | | | |
| 195 | | | | | | | | | | |
| 200 | | | | | | | | | | |

## Apx. 2-3-1 (5) Geological logging of MJAS-6, Gjorduke area

**MJAS-6** INCLINATION : −60°

AREA : GJORDUKE BEARING : S70°W (250°) ELEVATION : 1,304.85m FINAL DEPTH : 170.10m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0.00 - 3.04: Surface soil; brown, very soft, with blocks of Hz, | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | 3.04 - 22.70: Harzburgite; greenish gray, medium hard, Px: approximately 35%, weathered up to the depth of 7.10 m, | | | | | | 0 | 100 |
| | | | | | | | | | 18 | 100 |
| 5 | | | 3.20 - 3.30: Dunite; brown, serpentinized, | | | | | | 29 | 100 |
| | | | 4.90 - 6.10: brecciated zone; composed mainly of friable materials of harzburgite and dunite, brown to reddish brown, | | | | | | 77 | 100 |
| | | | 6.10 - 6.65: Dunite; dark brown, cut by thin networks veinlets of serpentine, broken easily to small blocks, | | | | | | 46 | 100 |
| 10 | | | 6.65 - 7.10: fault zone, composed mainly of friable materials, | | | | | | 100 | 100 |
| | | | 7.10 - 11.35: Compact harzburgite, green, serpentinized but olivine is remained in some parts | | | | | | 100 | 100 |
| | | | | | | | | | 83 | |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | | | | | | | 90 | |
| 15 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | 15.40 - 16.30: friable zone, with blocks of harzburgite and dunite, may be fault, green to reddish brown | | | | | | 44 | 100 |
| | | | 16.85 - 17.90: friable materials mainly of harzburgite, green to reddish brown, partly brecciated, | | | | | | 0 | 100 |
| | | | 18.70 - 19.20: fault zone; brecciated and friable, green, | | | | | | 0 | 100 |
| 20 | | | 19.20 - 19.70: Harzburgite; broken into small blocks, | | | | | | 56 | 100 |
| | | | 20.40 - 20.60: Ditto, | | | | | | 0 | 100 |
| | | | 20.60 - 20.90: Dunite; serpentinized, brown, with a small amount of Cr-spinel, gradual contact with harzburgite with core angle of 90 degree, | | | | | | 74 | 100 |
| | | | 21.70 - 21.75: fault zone, | | | | | | 70 | 100 |
| | | | 22.50 - 22.70: fault zone, | | | | | | 84 | 100 |
| 25 | | | | | | | | | 46 | 100 |
| | | | 22.70 - 37.20: Harzburgite; greenish gray, medium hard, Px: approx. 35%, accompanied with many dunites in various thickness, | | | | | | 67 | 100 |
| | | | 23.15 - 23.50: Dunite; serpentinized, brown, | | | | | | 100 | 100 |
| | | | 24.05 - 24.70: Dunite, brown to greenish gray, compact, medium hard, with Cr-spinel, | | | | | | 90 | 100 |
| | | | 24.70 - 25.05: brecciated zone; with blocks mainly of harzburgite, | | | | | | 69 | 100 |
| 30 | | | 25.05 - 26.85: Dunite; fresh, gray, compact, medium had, with a small amount of Cr-spinel grains, | | | | | | 67 | 100 |
| | | | 27.10 - 28.60: Ditto | | | | | | 30 | 89 |
| | | | 31.90 - 32.10: brecciated zone, green, friable, | | | | | | 72 | 95 |
| | | | 32.90 - 33.00: ditto, | | | | | | 51 | 100 |
| | | | 33.20 - 33.50: Dunite; brown, | | | | | | 33 | 100 |
| | | | 33.70 - 35.10: Dunite; brown, medium hard, gradual contact with harzburgite, with Cr-spinel, | | | | 6—R—1 | | 60 | 100 |
| 35 | | | 36.20 - 36.30: brecciated zone; green to reddish brown, | | | | 34.50 | | 64 | 100 |
| | | | 36.30 - 36.40: Dunite, | | | | 35.65 | | 67 | 100 |
| | | | 36.40 - 36.70: brecciated zone; green to reddish brown, | | | | 6—R—2 | | 22 | 100 |
| | | | 36.80 - 37.20: Dunite, | | | | | | 64 | 100 |
| | | | 37.20 - 54.70: Harzburgite; weakly serpentinized, greenish gray, medium hard, Px: approx. 30 to 35%, | | | | | | 84 | 100 |
| 40 | | | 37.20 - 40.40: Harzburgite; with foliation of 80 - 90 degree of core angle, | | | | | | 100 | 100 |
| | | | 44.50 - 44.60: fault zone, brecciated, friable, green to reddish brown, | | | | | | 30 | 97 |
| | | | 45.20 - 45.30: ditto | | | | | | 0 | 100 |
| | | | 45.40 - 45.60: ditto | | | | | | 33 | 100 |
| | | | 46.10 - 46.30: ditto | | | | | | 30 | 89 |
| | | | 47.50 - 47.60: ditto | | | | | | 0 | 98 |
| 45 | | | 47.60 - 50.50: Harzburgite, compact, | | | | | | 20 | 100 |
| | | | 50.50 - 50.70: Dunite; brown, gradual contact with harzburgite, | | | | | | 0 | 98 |
| | | | 50.70 - 50.80: brecciated zone, green, friable, | | | | | | 0 | 98 |
| | | | 51.20 - 51.30: Dunite; brown, gradual contact with harzburgite, | | | | | | 0 | 92 |
| | | | 52.30 - 53.00: Fissures are filled with serpentine minerals stained by iron oxides, core angle of fissures: 30 & 60 degree, | | | | | | 33 | 96 |
| 50 | | | | | | | | | 69 | 100 |
| | | | | | | | | | 72 | 100 |
| | | | | | | | | | 59 | 100 |
| | | | | | | | | | 73 | 100 |
| | | | | | | | | | 100 | |
| | | | 54.70 - 82.70: Harzburgite; weakly serpentinized in part, pale greenish gray, transitional zone between serpentinized and fresh harzburgites, | | | | | | 100 | 100 |
| | | | 55.50 - 55.70: Dunite; greenish gray, gradual contact with harzburgite, with a small amount of Cr-spinel, | | | | | | 100 | 100 |
| 55 | | | 58.50 - 58.60: brecciated zone, green, core angle of contact: 60 degree, | | | | | | 100 | 100 |
| | | | | | | | | | 84 | 100 |
| | | | | | | | | | 87 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | 61.40 - 63.30: fragmented cores of small blocks of harzburgite, | | | | | | 49 | 100 |
| | | | | | | | | | 12 | 100 |
| | | | | | | | | | 60 | 68 |
| 60 | | | 63.70 - 64.40: brecciated zone, green, compact, | | | | | | 77 | |
| | | | | | | | | | 100 | 100 |
| | | | 66.00 - 66.30: Dunite; greenish gray, | | | | | | 100 | |
| | | | 66.80 - 67.20: ditto, | | | | | | 100 | 100 |
| | | | 69.70 - 70.50: Dunite; serpentinized, brown, gradual contact with harzburgite, | | | | | | 90 | 100 |
| 65 | | | | | | | | | 100 | 100 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 70 | | | | | | | | | | |

# GEOLOGIC LOG ( 2 )

**MJAS-6** INCLINATION : −60°

AREA : GJORDUKE BEARING : S70°W (250°) ELEVATION : 1,304.85m FINAL DEPTH : 170.10m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 100 | 97 |
| | | | 71.70 - 71.90; brecciated zone, friable, green, | | | | 6−R−3 | | 67 | 97 |
| | | | 72.10 - 72.50; ditto, | | | | 72.80 | | 70 | |
| | | | 72.50 - 73.10; Dunite; greenish gray, | | | | 73.70 | | 90 | 100 |
| 75 | | | 74.42: Foliation in harzburgite is 70 to 90 degree of core angle, | | | | 6−R−4 | | 56 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 60 | 100 |
| | | | | | | | | | 100 | 100 |
| 80 | | | 79.20 - 80.20; Dunite: brown, compact, thin harzburgite occurs between 79.65 and 79.75 | | | | | | 100 | 100 |
| | | | 81.45 - 82.60; Dunite; fragmented to small blocks, brown, | | | | | | 33 | 100 |
| | | | 82.60 - 82.70; brecciated zone, brown, core angle of contact: 50 degree, | | | | | | 58 | 100 |
| | | | 82.70 - 113.30; Fresh harzburgite; light yellowish green, hard, | | | | | | 76 | 100 |
| | | | | | | | | | 100 | 100 |
| 85 | | | 85.00 - 89.60; brecciated zone, compact, upper part includes blocks of harzburgite and dunite, but lower part includes only harzburgite, | | | | | | 100 | 100 |
| | | | | | | | | | 70 | 100 |
| | | | | | | | | | 60 | |
| | | | | | | | | | 0 | 100 |
| | | | 89.10 - 89.30; Dunite; brown, partly greenish gray, | | | | | | 33 | 98 |
| 90 | | | 90.30 - 92.90; brecciated zone, green to brown, compact, with blocks of harzburgite and dunite, | | | | | | 80 | 100 |
| | | | | | | | | | 78 | 100 |
| | | | | | | | | | 35 | 100 |
| | | | | | | | | | 100 | 100 |
| 95 | | | | | | | | | 90 | 100 |
| | | | 95.90 - 98.50; Weakly serpentinized harzburgite, greenish gray, 97.80 to 97.90 is brecciated, | | | | | | 85 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 90 | |
| | | | | | | | | | 40 | 100 |
| 100 | | | | | | | | | 37 | 100 |
| | | | 98.50 - 102.60; Harzburgite; broken into small blocks, serpentinized, | | | | | | 40 | 100 |
| | | | | | | | | | 10 | 100 |
| | | | 102.60 - 103.70; brecciated zone; green, friable, core angle of contact: 25 degree, | | | | | | 18 | 100 |
| | | | | | | | | | 45 | 92 |
| 105 | | | 104.10 - 105.55; Dunite; brown, the intervals of 104.50 - 104.60 and 104.90 - 105.45 are of brecciated zone of reddish brown friable materials, | | | | | | 56 | 100 |
| | | | 107.00 - 107.30; Dunite; brown, gradual contact with harzburgite with 60 degree of core angle, | | | | | | 35 | 100 |
| | | | | | | | | | 77 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 100 | 100 |
| 110 | | | 109.85 - 110.30; Harzburgite; cut by veinlets of serpentine minerals, | | | | | | 100 | |
| | | | 110.30 - 110.35; brecciated zone, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | 112.60 - 112.80; Dunite; brown, | | | | | | 43 | 100 |
| | | | 113.30 - 133.60; Harzburgite; fresh but partly serpentinized, with thin dunites and dunite intercalation in part, | | | | | | 46 | 100 |
| 115 | | | 113.30 - 113.50; Harzburgite with intercalation of dunite, dunite is brown and 2 to 3 cm in thickness, | | | | | | 80 | 100 |
| | | | 113.50 - 114.00; brecciated zone; reddish brown, friable, | | | | | | 100 | |
| | | | 114.30 - 114.50; ditto, | | | | | | 100 | |
| | | | 114.60 - 114.80; ditto, | | | | 118.50 | | 100 | 100 |
| 120 | | | 114.80 - 114.90; Dunite; brown, | | | | 6−R−5 | | 100 | |
| | | | 115.20 - 116.10; Dunite; brown, with Cr-spinel, | | | | | | 100 | |
| | | | 116.90 - 117.30; brecciated zone; reddish brown, friable, | | | | | | 100 | 100 |
| | | | 118.35 - 119.30; Dunite; fresh, brown, cor angle of contact: 80 to 90 degree, | | | | 121.40 | | 92 | |
| | | | 119.30 - 119.60; brecciated zone, green, | | | | 6−R−6 | | 95 | 100 |
| | | | 121.60 - 122.10; Dunite; brown, core angle of contact: 60 degree, | | | | | | 100 | |
| 125 | | | 122.10 - 122.30; brecciated zone, fault?, core angle of contact: 60degree, | | | | | | 100 | 100 |
| | | | 123.10 - 124.00; Dunite; brown, with Cr-spinel, | | | | | | 100 | |
| | | | 124.00 - 126.25; With intercalation of thin dunites of 2 to 3 cm in thick, | | | | | | 100 | 100 |
| | | | 126.25 - 126.50; brecciated zone; green, with blocks of harzburgite, | | | | | | 72 | |
| | | | 126.60 - 127.30; ditto, | | | | | | 100 | |
| | | | 127.70 - 130.45; brecciated zone; green with brown patches, compact, 130.05 - 130.45 m is reddish brown and friable, | | | | | | 100 | 100 |
| 130 | | | 130.90 - 131.20; brecciated zone; green with brown patches, compact, | | | | | | 56 | |
| | | | 131.20 - 131.50; Harzburgite, broken into small blocks, accompanied with few dunite lumps, | | | | | | 67 | 100 |
| | | | 131.50 - 133.60; brecciated zone; green with brown patches, compact, | | | | | | 100 | |
| | | | 133.60 - 153.70; Fresh harzburgite; greenish gray, frequently cut by network veinlets of black serpentine minerals, | | | | | | 100 | |
| 135 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 85 | |
| | | | 139.00 - 139.50; brecciated zone in harzburgite, | | | | | | 84 | 100 |
| | | | 138.50 - 141.00; Dunite; brown, with network veinlets of black serpentine minerals, | | | | | | 70 | 100 |
| 140 | | | | | | | | | 65 | 100 |

# GEOLOGIC LOG ( 3 )

**MJAS-6** AREA : GJORDUKE INCLINATION : −60° BEARING : S70°W (250°) ELEVATION : 1,304.85m FINAL DEPTH : 170.10m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 140 | | | | | | | | | 67 | 100 |
| | | | 142.00 - 144.00: Fresh dunite, yellowish green, with Cr-spinel, | | | | | | 60 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 145 | | | | | | | | | 100 | |
| | | | 145.70 - 145.90: Ditto. | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 150 | | | 150.00 - 150.10: Dunite; brown, gradual contact with harzburgite, | | | | | | 54 | |
| | | | | | | | | | 66 | 100 |
| | | | | | | | | | 85 | |
| | | | | | | | | | 64 | 100 |
| | | | | | | | 153.00 6−R−8 | | 100 | |
| | | | 153.70 - 162.90: Fresh dunite with thin harzburgite; yellowish green, hard, core angle of contact with harzburgite: 60 degree, | | | | | | 100 | 100 |
| 155 | | | 155.60 - 156.10: Dunite with Cr-spinel spots up to 7 mm in diameter, yellowish green, hard, | | | 4.97 | 156.00 6−R−7 | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| 160 | | | 159.50 - 160.50: Fresh harzburgite; yellowish green, hard, | | | | | | 100 | 100 |
| | | | 160.70 - 161.10: Ditto, | | | | 155.60-156.10 6−C−1 | | 100 | 100 |
| | | | 162.80 - 162.90: fault, serpentinized, | | | | | | 83 | 100 |
| | | | 162.90 - 170.10: Fresh harzburgite; yellowish green, hard, | | | | | | 100 | 100 |
| 165 | | | | | | | | | 100 | 100 |
| | | | 165.10 - 165.50: Fresh dunite, yellowish green, hard, | | | | | | 72 | 100 |
| | | | | | | | | | 80 | 100 |
| | | | | | | | | | 100 | 100 |
| 170 | | | | | | | | | 54 | 100 |
| | | 170.10 | | | | | | | | |

## Apx. 2-3-1 (6) Geological logging of MJAS-7, Gjorduke area

**MJAS-7** INCLINATION : −49°

AREA : GJORDUKE BEARING : S70°W (250°) ELEVATION : 1,303.65m FINAL DEPTH : 167.30m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | CrzOs (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (° ) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 - 1.00; | Surface soil; brown, with blocks of harzburgite, | | | | | | 0 | 100 |
| | | 1.00 - 4.75; | Blocks of harzburgite, weathered, | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 56 |
| | | | | | | | | | 0 | 80 |
| | | | | | | | | | 0 | 78 |
| | | | | | | | | | 23 | 89 |
| 5 | | 4.75 - 97.70; | Harzburgite; greenish gray, serpentinized, hard, Px: 30 to 35%, core angle of foliation: 80 to 90 degree, | | | | | | 95 | 100 |
| | | 6.40 - 6.75; | with intercalation of very thin dunite, | | | | | | 100 | 100 |
| | | 6.75 - 8.00; | Dunite; brown, with Cr-spinel, | | | | | | 43 | 100 |
| | | 8.20 - 8.60; | Ditto, | | | | | | 46 | 92 |
| 10 | | 8.70 - 8.80; | brecciated zone; green to reddish brown, friable, | | | | | | 100 | 100 |
| | | 8.85 - 9.20; | Ditto, | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | 12.20 - 14.70; | Harzburgite with intercalation of dunite at intervals of 12.20 - 12.40, 13.20 - 13.40, 13.65 - 14.70, | | | | 7−R−1 | | 80 | 97 |
| | | | | | | | 14.00 | | 68 | |
| | | | | | | | 15.00 | | 51 | 100 |
| 15 | | | | | | | 7−R−2 | | 71 | |
| | | | | | | | | | 77 | 100 |
| | | 16.90 - 17.10; | Dunite; brown, with Cr-spinel, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | 19.00 - 19.15; | fault zone, friable, green, | | | | | | 67 | 100 |
| 20 | | | | | | | | | 90 | 100 |
| | | 21.00 - 21.05; | Dunite; brown, with Cr-spinel, | | | | | | 46 | 100 |
| | | 21.50 - 23.00; | brecciated zone; green but partly reddish brown, compact, mainly of harzburgite, | | | | | | 50 | |
| | | 23.00 - 31.20; | Cracks are filled with brown materials with iron oxides at | | | | | | 88 | 100 |
| | | | | | | | | | 80 | |
| 25 | | | the depth of 23.70, 24.40, 24.60, 27.30, 30.15-30.45, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | | | | | | | 95 | 100 |
| 30 | | | | | | | | | 40 | 100 |
| | | 31.20 - 31.40; | fault zone ?, friable, green partly reddish brown, | | | | | | 62 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 85 | 100 |
| | | | | | | | | | 80 | |
| 35 | | | | | | | | | 83 | |
| | | 35.70 - 35.90; | friable zone, green, | | | | | | 85 | 100 |
| | | 35.90 - 35.95; | Dunite; brown, | | | | | | 54 | 98 |
| | | 37.30 - 38.00; | Fractures with core angle of 0 degree are stained by iron oxides to reddish brown, | | | | | | 90 | 100 |
| | | | | | | | | | 92 | |
| | | 38.70 - 40.05; | brecciated zone, with core angle 30 degree, green, compact, | | | | | | 90 | 100 |
| 40 | | 40.05 - 46.20; | Some cracks at the depth of 40.60, 41.30, 44.00 are filled with iron oxides , | | | | | | 92 | 97 |
| | | | | | | | | | 62 | |
| | | | | | | | | | 88 | 100 |
| | | 43.50 - 43.90; | Dunite; brown., | | | | | | 84 | 100 |
| 45 | | | | | | | | | 90 | 100 |
| | | 46.20 - 46.30; | Ditto | | | | | | 85 | 100 |
| | | | | | | | | | 27 | 100 |
| | | 48.00 - 48.10; | friable zone, | | | | | | 32 | 100 |
| | | | | | | | | | 14 | 50 |
| 50 | | 49.50 - 51.60; | broken into small blocks, | | | | | | 10 | 100 |
| | | | | | | | | | 13 | 100 |
| | | 51.60 - 51.80; | friable zone, maybe fault, | | | | | | 21 | 100 |
| | | | | | | | | | 100 | 100 |
| | | 53.70 - 53.75; | Dunite; brown, | | | | | | 90 | 100 |
| 55 | | 53.90 - 54.25; | brecciated zone; compact, green to reddish brown, core angle of contact: 30 degree, | | | | | | 51 | |
| | | | | | | | | | 82 | 100 |
| | | 54.55 - 55.55; | brecciated zone; compact, green to reddish brown, | | | | | | 31 | 100 |
| | | 56.80 - 57.75; | broken into small blocks, | | | | | | 54 | 100 |
| | | 57.15 - 57.25; | Dunite, brown, broken into small blocks, | | | | | | 48 | 100 |
| 60 | | 57.50 - 57.60; | brecciated zone; green to reddish brown, compact, | | | | | | 28 | 100 |
| | | 58.30 - 58.40; | ditto, | | | | | | 28 | 100 |
| | | 58.40 - 58.70; | Dunite; brown, core angle of contact: 60 degree, | | | | | | 58 | 100 |
| | | 58.80 - 58.90; | brecciated zone, compact, | | | | | | 47 | 100 |
| | | 58.90 - 73.00; | Fractures are filled with green serpentine minerals and some are with brown iron oxides, | | | | | | 32 | 75 |
| 65 | | | | | | | | | 50 | 71 |
| | | 64.10 - 64.20; | Dunite; brown partly green, with Cr-spinel, | | | | | | 10 | 42 |
| | | 64.40 - 64.60; | Ditto, | | | | | | 34 | 92 |
| | | 65.00 - 65.10; | Ditto, | | | | | | 56 | 82 |
| 70 | | | | | | | | | 25 | 79 |

# GEOLOGIC LOG ( 2 )

**MJAS-7** INCLINATION : −49°

AREA : GJORDUKE BEARING : S70°W (250°) ELEVATION : 1,303.65m FINAL DEPTH : 167.30m

| DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 61 | 100 |
| | | | | | | | 50 | 73 |
| | | | | | | | 66 | 92 |
| | 73.00 - 73.50; Dunite; brown, with Cr-spinel, broken into small blocks, | | | | | | 0 | 85 |
| | 73.50 - 73.90; friable zone of Du and Hz, fault ?, | | | | | | 18 | 70 |
| 75 | 74.25 - 75.30; Dunite; brown, partly broken, with Cr-spinel, | | | | | | 26 | 67 |
| | 76.25 - 76.40; friable zone; green, maybe fault, | | | | | | 0 | 73 |
| | 77.10 - 78.10; brecciated zone, green partly reddish brown, compact partly very friable, | | | | | | 37 | 82 |
| | 78.10 - 78.30; Dunite; greenish gray, gradual contact with harzburgite, | | | | 7−R−3 | | 54 | 91 |
| | 79.90 - 80.10; Dunite; green, core angle of contact: 30 degree, | | | | 79.60 | | 38 | 82 |
| 80 | | | | | 80.00 7−R−4 | | 100 | 93 |
| | | | | | | | 100 | 92 |
| | | | | | | | 42 | |
| | | | | | | | 35 | 80 |
| | | | | | | | 0 | 77 |
| 85 | 84.70 - 84.75; brecciated zone; green to reddish brown, friable, | | | | | | 26 | 67 |
| | 85.25 - 88.50; brecciated zone, green partly reddish brown, compact partly friable, core angle of contact: 70 to 90 degree, | | | | | | 60 | 98 |
| | 87.50 - 87.60; Dunite; brown, core angle of contact: 80 degree, | | | | | | 80 | |
| | 87.80 - 88.50; Dunite; green, with Cr-spinel, | | | | | | 100 | |
| | 89.50 - 90.20; Dunite; green to brown, with network veinlets of serpentine minerals, core angle of contact: 80 to 90 degree, | | | | | | 82 | 96 |
| 90 | 90.15 - 92.25; Dunite; green, | | | | | | 90 | |
| | 94.00 - 94.35; brecciated zone of harzburgite and dunite, green partly brown, friable, | | | | | | 90 | 100 |
| | 94.35 - 94.75; Dunite; green, poor in Cr-spinel, | | | | | | 90 | 100 |
| | 95.00 - 96.30; Ditto, core angle of contact: 80 to 90 degree, | | | | | | 39 | |
| 95 | 97.15 - 97.70; Dunite; brown, with Cr-spinel, cut by fault filled with serpentine minerals at upper part, | | | | | | 100 | 96 |
| | | | | | | | 100 | |
| | 97.70 - 125.30; Harzburgite in transitional zone, greenish gray, poor in Cr-spinel, Px: approx. 35% and 1 to 2 cm in size, frequently cut by network veinlets of green to black colored serpentine mineral, | | | | | | 67 | |
| | | | | | | | 90 | 98 |
| | | | | | | | 100 | |
| 100 | | | | | | | 90 | |
| | 101.15 - 101.20; Dunite; green, | | | | 101.00 7−R−5 | | 92 | 100 |
| | | | | | | | 94 | |
| | 103.25 - 103.65; Cut by networks veinlets of serpentine minerals, | | | | | | 95 | |
| | 104.00 - 104.10; Dunite; brown, poor in Cr-spinel, core angle of contact: 50 | | | | | | 100 | 100 |
| 105 | degree, gradual contact with harzburgite, | | | | | | 90 | |
| | 104.80 - 105.00; Dunite; brown partly green, | | | | | | 100 | |
| | 106.20 - 106.25; Dunite; brown, | | | | | | 100 | 100 |
| | 108.40 - 108.45; Dunite; green, gradual contact with harzburgite, | | | | | | 100 | |
| | 108.80 - 108.85; Ditto, | | | | | | 100 | |
| 110 | | | | | | | 92 | 100 |
| | | | | | | | 83 | 100 |
| | | | | | | | 90 | |
| | | | | | | | 100 | 100 |
| | | | | | | | 100 | |
| 115 | | | | | | | 38 | |
| | | | | | | | 41 | 91 |
| | 116.80 - 117.60; Dunite, brown to green, partly brecciated, | | | | | | 58 | 91 |
| | 118.70 - 118.80; broken into small blocks, | | | | | | 40 | 96 |
| | 119.90 - 119.95; Dunite; brown, gradual contact with harzburgite, | | | | | | 12 | 76 |
| 120 | 120.40 - 120.45; Ditto, | | | | | | 32 | 82 |
| | 121.15 - 121.20; brecciated zone, friable, green to reddish brown, | | | | | | 12 | 76 |
| | 122.50 - 122.70; brecciated zone; green, | | | | | | 14 | 92 |
| | 122.75 - 123.20; ditto, with blocks of dunite, | | | | | | 10 | 92 |
| | 123.35 - 124.60; ditto, with blocks of dunite, | | | | | | 0 | 100 |
| | 124.85 - 125.30; ditto, with blocks of dunite, partly brown, | | | | | | 67 | 94 |
| 125 | 125.30 - 167.30; Fresh harzburgite; gray, Px: 30% and 1 to 2 cm in size, hard, | | | | | | 52 | 99 |
| | | | | | 126.40 7−R−6 | | 100 | |
| | 127.65 - 127.70; Dunite: fresh, gray, gradual contact with harzburgite, | | | | | | 90 | 98 |
| | | | | | | | 43 | 94 |
| 130 | | | | | | | 61 | 100 |
| | | | | | | | 60 | |
| | 131.50 - 132.50; Dunite; cut by networks of serpentine minerals, | | | | | | 100 | 100 |
| | 133.20 - 133.70; Ditto, | | | | | | 50 | |
| | | | | | | | 75 | 100 |
| 135 | 134.40 - 135.50; Ditto, | | | | | | 65 | |
| | | | | | | | 75 | |
| | | | | | | | 100 | 98 |
| | | | | | | | 82 | |
| 140 | 139.75 - 140.45; fault zone; consist of friable materials with dunite, | | | | | | 86 | 96 |

V - 49

# GEOLOGIC LOG ( 3 )

## MJAS-7

INCLINATION : −49°

AREA : GJORDUKE　　BEARING : S70°W (250°)　　ELEVATION : 1,303.65m　　FINAL DEPTH : 167.30m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 140 | | | 140.45 - 140.90: Dunite; brown to dark gray, serpentinized, medium hard, very rare in Cr-spinel. | | | | | | 28 | 94 |
| | | | 140.90 - 141.70: fault zone; consist of friable material with dunite, green. | | | | | | 33 | 92 |
| | | | 141.70 - 142.30: Dunite; brown to dark gray, serpentinized, medium hard, very rare in Cr-spinel. | | | | | | 56 | 97 |
| | | | 142.50 - 143.20: fault zone; consist of friable material with dunite, green. | | | | | | 42 | |
| 145 | | | 143.20 - 144.10: brecciated zone with blocks of dunite, green to brown. | | | | | | 70 | 100 |
| | | | 144.90 - 145.60: ditto. | | | | | | 25 | |
| | | | | | | | | | 24 | 100 |
| | | | | | | | | | 34 | |
| | | | | | | | | | 90 | 100 |
| | | | | | | | | | 75 | |
| 150 | | | | | | | | | 77 | 100 |
| | | | 150.70 - 151.40: Dunite, fresh, yellowish gray. | | | | 150.85 7−R−7 | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 84 | |
| | | | 154.40 - 155.00: Dunite, fresh, yellowish gray, with Cr-spinel. | | | | | | 92 | 100 |
| 155 | | | | | | | | | 92 | 100 |
| | | | | | | | | | 36 | 63 |
| | | | 156.60 - 156.80: Dunite, brown, with Cr-spinel. | | | | | | 80 | 100 |
| | | | | | | | | | 18 | |
| | | | | | | | | | 100 | 100 |
| 160 | | | | | | | | | 100 | 100 |
| | | | | | | | 7−R−9 | | 83 | |
| | | | | | | | 162.50 163.15 | | 100 | 100 |
| | | | 162.70 - 164.30: Dunite, fresh, yellowish gray with Cr-spinel. | | | | 7−R−8 | | 100 | 100 |
| | | | 164.30 - 164.70: friable materials of serpentine minerals, green, core angle of contact: 30 degree. | | | | | | 61 | |
| 165 | | | | | | | | | 90 | 100 |
| | | | | | | | | | 100 | 100 |
| | | 167.30 | | | | | | | 0 | |
| 170 | | | | | | | | | | |

IS - V

## Apx. 2-3-1 (7) Geological logging of MJAS-8, Qarri i Zi area

# MJAS-8

INCLINATION : −40°

AREA : QARRI I ZI　　BEARING : N60°E( 60° )　　ELEVATION : 644.87m　　FINAL DEPTH : 87.50m

| SCALE (m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | Cr2O3 (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (° ) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.00 - 3.15: Dunite; brown but partly green, weathered, strongly fragmented into very small chips and powder. | | | | 4.85-5.11 | | 0 | 100 |
| | | | | | | | 8−C−1 | | 0 | |
| | | | | | | | 5.19-5.21 | | 0 | 100 |
| | | | | | | | 8−C−2 | | 0 | |
| | | S=1/50 | 3.15 - 4.85: Dunite; green but partly brown, very strongly fragmented partly powder like, rare in Cr-spinel, | | | | 4.90 | | 0 | 100 |
| 5 | | | | | | 40.50 | 8−R−8 | | 0 | 100 |
| | | | 4.85 - 5.32: Chromitite; disseminated ore, fine-grained | | 4.85 - 5.32: Chromitite; disseminated ore, fine-grained, | 33.40 | | | 40 | |
| | | | 5.11 - 5.19: intercalation of dunite, strongly fragmented, | | | 36.00 | 5.29-5.32 | | 0 | 100 |
| | | | 5.21 - 5.29: ditto, | | | | 8−C−3 | | 0 | |
| | | | 5.32 - 9.75: Dunite; brown, fragmented, cracks are filed with serpentine minerals and rarely with calcite, | | | | | | 0 | 100 |
| 10 | | | | | | 24.30 | 9.77 | | 0 | 100 |
| | | | 6.65 - 7.25: broken into very small blocks, | | 9.75 - 10.00: Chromitite; olive green disseminated ore, friable, | | 8−R−9 | | 40 | 100 |
| | | | 7.25 - 9.75: very friable, maybe fault zone. | | | | 9.75-10.00 | | 0 | 100 |
| | | | 9.75 - 10.00: Chromitite; olive green, disseminated ore, friable, | | | | 8−C−4 | | 44 | 100 |
| | | | 10.00 - 12.90: Dunite; green to brown, with Cr-spinel grains and spots, partly friable, with networks veinlets of serpentine minerals, | | | | | | 0 | |
| | | | | | | | | | 31 | 100 |
| 15 | | | core angle of contact with harzburgite: 70 degree, | | | | | | 0 | |
| | | | 11.50 - 12.20: powder like core, very friable, fault ?, | | | | | | 0 | 100 |
| | | | 12.90 - 16.00: Harzburgite, green partly brown, medium hard, Px: 35% and 3 to 4 mm in size, | | | | | | 20 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 0 | |
| | | | 16.00 - 20.70: brecciated zone; with harzburgite and dunite blocks, green, | | | | | | 0 | 100 |
| 20 | | | some cracks are filled with calcite. | | | | | | 0 | |
| | | | 20.70 - 22.46: Dunite, weathered, brown, | | | | | | 10 | 100 |
| | | | 22.46 - 24.20: Harzburgite; same as the interval of 12.90 - 16.00 m, | | | | 22.70 | | 40 | 100 |
| | | | | | | | 8−R−1 | | 67 | 100 |
| | | | 24.20 - 43.30: Dunite; weathered weakly, dark brown, fractures are filled with serpentine minerals and some with calcite, | | | | | | 13 | 100 |
| 25 | | | | | | | | | 13 | 100 |
| | | | | | | | | | 13 | 100 |
| | | | 27.68 - 28.58: brecciated zone in dunite, green, friable, | | | | | | 15 | |
| | | | 28.58 - 28.73: Intercalation of harzburgite, brown, | | | | | | 30 | 78 |
| | | | 28.76 - 28.81: Chromitite; disseminated, core angle of contact: 50 to 90 degree, | | 28.76 - 28.81: Chromitite; disseminated core angle of contact; 50 to 90 degree | | | | 44 | 100 |
| 30 | | | | | | | | | 0 | 24 |
| | | | 28.81 - 31.97: with Cr-spinel grains, partly broken into small blocks, | | | | | | 0 | |
| | | | 31.97 - 32.80: brecciated zone in dunite; light brown to green, partly friable, core angle of contact:40 degrees. | | | | | | 42 | 46 |
| | | | | | | | | | 10 | |
| | | | | | | | | | 14 | 58 |
| 35 | | | | | | | | | 0 | |
| | | | 35.70 - 36.00: Intercalation of Hz; dark brown, Px: 30%, | | | | | | 10 | 26 |
| | | | 36.00 - 39.50: weathered, with Cr-spinel grains, | | | | | | 0 | |
| | | | | | | | | | 23 | 40 |
| | | | | | | | 43.30-43.85 | | 23 | 63 |
| 40 | | | 39.50 - 41.40: brecciated zone in dunite, friable, | | | | 8−C−5 | | 0 | |
| | | | 42.70 - 43.30: ditto, compact. | | | | | | 17 | 82 |
| | | | | | | | 8−R−2 | | 0 | |
| | | | 43.30 - 43.85: Chromitite; disseminated ore, fine grained, hard, olivine shows green color, core angle of upper contact: 30 degree, and lower contact is not clear. | | 43.30 - 43.85: Chromitite; disseminated ore, fine grained, hard, olivine shows green color, core angle of upper contact:30 degree,and lower contact is not clear, | 21.70 | 42.70 | | 38 | 92 |
| | | | | | | | 44.45 | | 32 | 100 |
| 45 | | | 43.85 - 48.80: Dunite; green to brown, with network veinlets of serpentine minerals and calcite, broken into blocks, | | | | 8−R−3 | | 100 | 88 |
| | | | | | | | | | 63 | |
| | | | 44.30 - 44.50: with a few pyroxene grains, | | | | | | 70 | 75 |
| | | | | | | | | | 100 | 85 |
| | | | 48.80 - 49.25: Chromitite; disseminated, fine-grained, core angle of upper contact: 50 degree and lower: 35 degree, | | 48.80 - 49.25: Chromitite; disseminated , fine grained,core angle of upper contact:50 degree and lower:35 degree, | 26.70 | 49.20 | | 60 | 100 |
| 50 | | | | | | | 8−R−4 | | 37 | 83 |
| | | | 49.25 - 53.30: Dunite: brown, with network veinlets of serpentine minerals and few calcite, | | 50.80 ; Chromitite brand of 2 to 3 mm with core angle of 90 degree, | | | | 72 | |
| | | | | | | | 48.80-49.25 | | 54 | 83 |
| | | | 50.80 ; Chromite band of 2 to 3 mm with core angle of 90 degree, | | | | 8−C−6 | | 53 | 91 |
| A - 53 | | | 52.00 - 53.30: brecciated zone in dunite, reddish brown to green, withnetworks of calcite, fault ?, | | | | | | 100 | 100 |
| 55 | | | | | | | 55.23 | | 65 | 100 |
| | | | 53.30 - 58.58: Harzburgite; dark green, hard, Px: 30% and 3 mm in size, fractures are filled with calcite and serpentine minerals, | | | | 8−R−5 | | 65 | 100 |
| | | | | | | | | | 39 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | 58.58 - 59.85: Dunite: dark brown, medium hard, | | | | | | 82 | 100 |
| 60 | | | | | | | | | 58 | 100 |
| | | | 59.85 - 61.40: Serpentinite; with dunite at the interval of 60.05 - 60.25 m, core angle of contact: 80 to 90 degree, | | | | | | 18 | 100 |
| | | | | | | | | | 90 | 100 |
| | | | 61.40 - 87.50: Harzburgite; dark green, Px: 35%, with network veinlets of serpentine minerals and calcite, | | | | | | 38 | |
| | | | | | | | | | 22 | 56 |
| 65 | | | 65.53 - 69.95: broken into small blocks, | | | | | | 0 | |
| | | | | | | | | | 0 | 94 |
| | | | | | | | | | 0 | 66 |
| | | | | | | | | | 0 | 47 |
| 70 | | | | | | | 8−R−6 70.00 | | 25 | |

# GEOLOGIC LOG ( 2 )

**MJAS-8** INCLINATION : −40°

AREA : QARRI I ZI BEARING : N60°E( 60° ) ELEVATION : 644.87m FINAL DEPTH : 87.50m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (° ) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 100 | 87 |
| | | | 72.22 - 75.22; ditto. | | | | | | 100 | |
| | | | | | | | | | 15 | 53 |
| | | | | | | | | | 0 | |
| 75 | | | | | | | | | 0 | 60 |
| | | | 76.00 - 77.00; strongly fragmented core, may be fault. | | | | | | 38 | 91 |
| | | | | | | | | | 0 | 51 |
| | | | | | | | | | 0 | 43 |
| | | | | | | | | | 0 | 50 |
| 80 | | | | | | | | | 0 | 49 |
| | | | | | | | | | 10 | |
| | | | | | | | | | 0 | 51 |
| | | | | | | | | | 20 | |
| | | | | | | | | | 32 | 69 |
| | | | | | | | | | 29 | |
| 85 | | | | | | | 85.00 S−R−7 | | 60 | 64 |
| | | | 87.00 - 87.50; Brecciated zone; partly compact but friable, fault. | | | | | | 11 | 75 |
| | | 87.50 | | | | | | | | |
| 90 | | | | | | | | | | |
| 95 | | | | | | | | | | |
| 100 | | | | | | | | | | |

## Apx. 2-3-1 (8) Geological logging of MJAS-9, Qarri i Zi area

**MJAS-9**

INCLINATION : −51°

AREA : QARRI I ZI　　BEARING : N60°E (60°)　　ELEVATION : 644.68m　　FINAL DEPTH : 101.55m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.00 - 0.30; Surface soil; brown, with blocks of dunite, | | | | 3.60-3.87 | | 0 | 100 |
| | | | 0.30 - 12.00; Dunite with chromitite; weathered, gray to greenish gray, serpentinized, friable, broken into small blocks, with Cr-spinel grains and spots, | | | | 9—C—1 | | 0 | |
| | | | 3.60 - 4.51; Chromitite; massive to disseminated, friable, | | 3.60 - 4.51; Chromitite; massive to disseminated, friable, | 25.60 | 3.87-4.13 | | 0 | 100 |
| | | | 3.60 - 3.87; massive ore, | | | 23.00 | 9—C—2 | | 0 | 100 |
| 5 | | | 3.87 - 4.13; densely disseminated ore, | | 4.93 - 5.00; Chromitite disseminated, broken into small chips, | 22.70 | | | 0 | 100 |
| | | | 4.13 - 4.51; disseminated ore, | | | 27.10 | 4.13-4.51 | | 0 | 100 |
| | | | 4.93 - 5.00; Chromitite disseminated, broken into small chips, | | | | 9—C—3 | | 0 | |
| | | | 6.97 - 7.47; Chromitite; dense disseminated ore, friable, | | 6.97 - 7.47; Chromitite; dense disseminated ore, friable, | | 6.97-7.47 | | 0 | 36 |
| | | | 7.47 - 8.28; brecciated zone in dunite, with spots of Cr-spinel in dunite lumps, | | | | 9—C—4 | | 0 | |
| 10 | | | 9.30 - 9.32; Chromitite as small chips, disseminate, | | 9.30 - 9.32; Chromitite as small chips, disseminate, | | | | 0 | 35 |
| | | | 11.17 - 11.19; Chromitite as small chips, disseminated, | | 11.17 - 11.19; Chromitite as small chips, disseminated, | | | | 0 | 63 |
| | | | 12.00 - 18.70; Complex zone of dunite and harzburgite; Dunite is brown and harzburgite is brown to dark gray in color, both are friable and broken into small blocks, | | | | | | 0 | 42 |
| | | | 12.00 - 12.60; Harzburgite; Px: 30%, | | | | 12.9 | | 0 | 78 |
| | | | 12.60 - 14.90; Dunite, | | | | 9—R—1 | | 15 | 98 |
| 15 | | | 14.90 - 18.70; Harzburgite; Px: 30%, | | | | | | 0 | |
| | | | 16.85 - 17.20; fault zone, friable, partly with clay, | | | | | | 0 | 100 |
| | | | 18.70 - 31.90; Dunite; brown, poor in Cr-spinel grains, with disseminated thin chromitite lenses, fractures are filled with serpentine minerals, | | | | | | 23 | |
| | | | 21.75 - 21.80; Chromitite; disseminated, core angle of contact with dunite: 60 degree, $Cr_2O_3$ content estimated: 20%, | | 21.75 - 21.80; Chromitite; disseminated, core angle of contact with dunite: 60 degree, $Cr_2O_3$ content estimated: 20%, | | | | 0 | 83 |
| | | | 23.55 - 23.58; Chromitite; disseminated, $Cr_2O_3$ content estimated: 15%, | | 23.55 - 23.58; Chromitite; disseminated, $Cr_2O_3$ content estimated: 15%, | | 18.5 | | 13 | |
| 20 | | | 25.60 - 25.65; Chromitite; disseminated, core angle of contact with dunite: 50 degree, $Cr_2O_3$ content estimated: 18%, | | 25.60 - 25.65; Chromitite; disseminated, core angle of contact with dunite: 50 degree, $Cr_2O_3$ content estimated: 18%, | | 9—R—2 | | 23 | 100 |
| | | | 26.20 - 26.23; Chromitite; disseminated, $Cr_2O_3$ content estimated: 15%, | | 26.20 - 26.23; Chromitite; disseminated, $Cr_2O_3$ content estimated: 15%, | | | | 10 | 55 |
| | | | | | | | | | 11 | 67 |
| | | | | | | | | | 0 | 86 |
| | | | | | | | | | 13 | |
| 25 | | | | | | | | | 12 | 85 |
| | | | | | | | | | 57 | 100 |
| | | | | | | | | | 27 | |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 45 | |
| 30 | | | | | | | | | 20 | 100 |
| | | | | | | | | | 0 | |
| | | | 31.90 - 53.19; Complex zone of dunite and harzburgite; Dunite is brown to dark green and harzburgite is brown to dark green in color, fractures in both are filled with serpentine minerals and calcite, core angle of foliation in harzburgite: 70 to 80 degree, | | | | | | 15 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 30 | 100 |
| 35 | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| | | | 31.90 - 32.65; brecciated zone, dark green to gray, with lumps of dunite and harzburgite, with veinlets of serpentine minerals and calcite, | | 36.30 - 36.32; Chromitite lens, disseminated, core angle of contact with dunite: 80 to 90 degree, | | | | 36 | |
| | | | 33.00 - 36.40; Dunite; brown, fractured, friable, with schlieren of chromitite sparsely, | | | | | | 73 | |
| | | | 36.30 - 36.32; Chromitite lens, disseminated, core angle of contact with dunite: 80 to 90 degree, | | | | | | 84 | 100 |
| 40 | | | 40.60 - 47.20; Dunite; brown to dark green, fractures are filled with network veinlets of calcite, | | | | 39.51 | | 93 | |
| | | | 43.70 - 44.15; fault zone, partly brecciated, friable, | | | | 9—R—3 | | 53 | 100 |
| | | | | | | | | | 83 | |
| | | | | | | | | | 66 | 100 |
| | | | | | | | 42.7 | | 0 | |
| 45 | | | | | | | 9—R—4 | | 40 | 94 |
| | | | | | | | | | 80 | 100 |
| | | | | | | | | | 100 | |
| | | | 48.60 - 53.19; Dunite; brown to dark green, fractures are filled with networks of calcite, | | | | | | 100 | 100 |
| | | | | | | | | | 60 | |
| 50 | | | | | | | | | 59 | 100 |
| | | | | | | | | | 92 | |
| | | | | | | | | | 0 | 100 |
| | | | 52.30 - 52.50; brecciated zone, with calcite veinlets, green, | | | | | | 34 | 100 |
| | | | 53.19 - 101.55; Harzburgite; dark greenish gray, fractures are filled with veinlets of calcite and serpentine minerals, Px: 30 to 35% and 1 to 3 mm in size, with thin dunite, | | | | | | 0 | |
| | | | | | | | | | 15 | 100 |
| 55 | | | | | | | | | 66 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 67 | 100 |
| | | | | | | | | | 56 | 100 |
| 60 | | | | | | | | | 56 | |
| | | | 60.23 - 60.28; brecciated zone, core angle of contact: 35 degree, | | | | | | 0 | 100 |
| | | | 60.60 - 60.80; Dunite; brown, | | | | | | 15 | 72 |
| | | | | | | | | | 0 | 78 |
| | | | 63.00 - 68.14; brecciated zone with lumps of harzburgite, green to dark green, | | | | | | 52 | |
| 65 | | | | | | | | | 25 | 76 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 68 | 76 |
| | | | | | | | | | 0 | 100 |
| 70 | | | | | | | | | 30 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-9**

INCLINATION : −51°

AREA : QARRI I ZI  BEARING : N60°E (60°)  ELEVATION : 644.68m  FINAL DEPTH : 101.55m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | 70.00 - 70.05: brecciated zone, green, with calcite veinlets, | | | | | | 0 | |
| | | | 70.40 - 70.50: ditto, | | | | | | 28 | 43 |
| | | | | | | | | | 0 | 41 |
| | | | | | | | | | 58 | 60 |
| | | | | | | | | | 40 | |
| 75 | | | | | | | | | 50 | 61 |
| | | | | | | | | | 0 | 45 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 67 |
| | | | 78.60 - 78.80: brecciated zone, brown, with calcite veinlets, compact, | | | | 78.7 9−R−5 | | 29 | |
| 80 | | | | | | | | | 60 | 73 |
| | | | | | | | | | 42 | |
| | | | | | | | | | 61 | 91 |
| | | | | | | | | | 0 | 40 |
| | | | 84.00 - 84.50: brecciated zone, friable, with calcite veinlets, | | | | | | 44 | 84 |
| 85 | | | 85.00 - 85.20: ditto, | | | | | | 44 | 81 |
| | | | | | | | 86.5 9−R−6 | | 86 | 100 |
| | | | | | | | | | 84 | 85 |
| | | | | | | | | | 23 | |
| | | | | | | | | | 60 | 78 |
| 90 | | | | | | | | | 69 | 100 |
| | | | | | | | | | 80 | 100 |
| | | | | | | | | | 71 | |
| | | | | | | | | | 48 | 100 |
| | | | | | | | | | 65 | |
| 95 | | | | | | | | | 87 | 89 |
| | | | | | | | | | 81 | 88 |
| | | | | | | | | | 67 | 78 |
| | | | | | | | | | 0 | 46 |
| | | | | | | | | | 0 | 100 |
| 100 | | | | | | | | | 20 | 100 |
| | | 101.55 | | | | | | | | |

## Apx. 2-3-1 (9) Geological logging of MJAS-10, Qarri i Zi area

# MJAS-10

INCLINATION : −46°

AREA : QARRI I ZI　　BEARING : N60°E (60°)　　ELEVATION : 627.18m　　FINAL DEPTH : 101.13m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | 0.00 - 1.60; Harzburgite; serpentinized, weathered, dark brown, Px: 30 to 35%, broken into small blocks, | | | | | | 0 | 100 |
| | | 1.60 | | | | | | | 0 | 100 |
| | | | | | | | | | 36 | 92 |
| | | | | | | | | | 84 | 100 |
| 5 | | | 1.60 - 8.85; Harzburgite; serpentinized, weathered, dark brown, Px: 35 to 40% and 2 to 3 mm in size, | | | | | | 12 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 24 | 100 |
| | | | | | | | | | 13 | 75 |
| | | | | | | | | | 12 | 100 |
| | | 8.85 | | | | | | | 0 | 100 |
| 10 | | | 8.85 - 12.70; Dunite with thin harzburgite; Dunite is brown in color and poor in Cr-spinel, harzburgite is the same as the interval of 1.60 - 8.85, both are serpentinized and weakly weathered, broken into small blocks, | | | | 10−R−1 | | 0 | 100 |
| | | | | | | 11.3 | | | 16 | 100 |
| | | | 9.20 - 9.53; Harzburgite, | | | 12.2 | | | 0 | 100 |
| | | | 11.70 - 12.30; Harzburgite, | | | | 10−R−2 | | 26 | 91 |
| | | 12.70 | | | | | | | 30 | 80 |
| 15 | | | 12.70 - 101.13; Harzburgite; dark greenish gray, serpentinized, Px: 35 to 40% and 2 to 3 mm in size, sparsely accompanied with dunite and pyroxinite dikes, fractures are filled with serpentine minerals and calcite, | | | 14.7 | 10−R−3 | | 50 | 85 |
| | | | 12.80 - 12.85; fault zone, green, friable, | | | | | | 14 | 74 |
| | | | 12.85 - 16.40; poor in pyroxene grains so that partly looks like dunite, | | | | | | 45 | 90 |
| | | | | | | | | | 15 | 100 |
| 20 | | | | | | | | | 31 | 100 |
| | | | 20.30 - 20.50; Dunite; dark gray, serpentinized, | | | | | | 40 | |
| | | | | | | | | | 10 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | 23.90 - 24.00; brecciated zone, | | | | | | 0 | 100 |
| 25 | | | | | | | | | 68 | 100 |
| | | | 24.50 - 25.55; brecciated zone, green, with calcite veinlets | | | | | | 12 | 100 |
| | | | 25.90 - 26.00; ditto, | | | | | | 40 | 68 |
| | | | 26.80 - 27.40; ditto, core angle of contact: 35 to 40 degree, | | | | | | 15 | |
| | | | | | | | | | 0 | 83 |
| 30 | | | 29.40 - 30.90; pyroxene content: approx. 30%, | | | | | | 50 | 100 |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 47 | 100 |
| | | | | | | | | | 82 | 100 |
| | | | | | | | | | 53 | 93 |
| | | | 33.80 - 33.90; brecciated zone, brown, core angle of contact: 50 degree, with calcite veinlets | | | | | | 20 | 98 |
| 35 | | | | | | | | | 35 | 100 |
| | | | 35.00 - 35.05; brecciated zone, brown, core angle of contact: 40 degree, with calcite veinlets, | | | | | | 68 | |
| | | | | | | | | | 52 | 90 |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 70 | |
| | | | | | | 39.6 | | | 46 | 87 |
| 40 | | | 40.20 - 40.40; brecciated zone, brown, with calcite veinlets, | | | | 10−R−4 | | 0 | 86 |
| | | | | | | | | | 14 | 88 |
| | | | | | | | | | 35 | 70 |
| | | | | | | | | | 30 | 82 |
| 45 | | | | | | | | | 64 | 100 |
| | | | | | | | | | 30 | 100 |
| | | | | | | | | | 37 | 79 |
| | | | | | | | | | 15 | 92 |
| | | | | | | | | | 0 | 79 |
| 50 | | | | | | | | | 0 | 100 |
| | | | 51.10 - 51.12; Pyroxinite dike; width: 2 cm, core angle of contact: 30 degree, | | | | | | 62 | 93 |
| | | | | | | | | | 0 | 81 |
| | | | | | | | | | 31 | 92 |
| 55 | | | | | | | | | 0 | 100 |
| | | | | | | | | | 83 | 100 |
| | | | | | | | | | 100 | 84 |
| | | | | | | | | | 84 | 100 |
| | | | | | | | | | 100 | 73 |
| 60 | | | | | | | | | 73 | 100 |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 100 | 70 |
| | | | | | | | | | 70 | 100 |
| | | | | | | | | | 100 | 100 |
| 65 | | | | | | | | | 100 | 37 |
| | | | 65.40 - 66.00; fault zone, brecciated and partly broken into small blocks, | | | | | | 37 | 89 |
| | | | | | | | | | 89 | 100 |
| | | | | | | | | | 90 | 100 |
| 70 | | | | | | | | | 100 | 68 |

19 − V

# GEOLOGIC LOG ( 2 )

**MJAS-10** AREA : QARRI I ZI INCLINATION : −46° BEARING : N60° E (60°) ELEVATION : 627.18m FINAL DEPTH : 101.13m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 93 | 100 |
| | | | | | | | | | 100 | |
| | | | 72.66 - 72.70; brecciated zone, green to brown, | | | | | | 93 | |
| | | | | | | | | | 34 | 100 |
| 75 | | | | | | | | | 20 | |
| | | | | | | | | | 28 | 100 |
| | | | | | | | | | 92 | 100 |
| | | | | | | | 77.0 | | 20 | |
| | | | | | | | 10—R—5 | | 12 | 100 |
| | | | 78.10 - 78.30; brecciated zone, green to brown, with calcite veinlets, core angle of contact: 40 degree, | | | | | | 21 | 100 |
| 80 | | | | | | | | | 28 | 95 |
| | | | | | | | | | 12 | 89 |
| | | | | | | | | | 0 | 94 |
| | | | | | | | | | 12 | |
| | | | | | | | | | 36 | 80 |
| 85 | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 86 |
| | | | | | | | | | 12 | |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 0 | |
| 90 | | | | | | | | | 0 | 90 |
| | | | 91.70 - 91.90; Dunite; brown, | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 100 |
| 95 | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 75 |
| | | | | | | | | | 0 | 81 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | 10—R—6 | | 44 | |
| 100 | | | | | | | 100.7 | | 36 | 100 |
| | | 101.13 | | | | | | | | |

# Apx. 2-3-1 (10) Geological logging of MJAS-12, Shesh Bush No.1 area

**MJAS-12** INCLINATION : −40°

AREA : SHESH BUSH No.1 BEARING : S60°W (240°) ELEVATION : 1,202.04m FINAL DEPTH : 100.60m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.00 - 3.10; Surface soil; brown, with blocks of dunite and harzburgite, | | | | | | 0 | |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 0 | |
| | | | 3.10 - 5.30; Harzburgite; weathered to brown, serpentinized, Px: approx. 35%, | | | | | | 14 | 100 |
| 5 | | | | | | | | | 0 | |
| | | | 5.30 - 11.50; Dunite, weathered to brown, with thin harzburgite sparsely, poor in Cr-spinel, fractures are filled with serpentine minerals, core angle of contact: 60 degree | | | | | | 15 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 63 | |
| | | | 7.70 - 9.20; brecciated zone, brown partly green, compact, | | | | | | 20 | 100 |
| | | | | | | | 9.3 | | 61 | |
| 10 | | | 10.20 - 10.80; brecciated zone, green, partly friable, | | | | 12−R−1 | | 37 | 100 |
| | | | 10.80 - 11.20; Harzburgite; weathered, brown, Px: 35% and 1 - 3 mm in size, | | | | | | 0 | |
| | | | | | | | 12.1 | | 24 | 100 |
| | | | 11.50 - 16.00; Harzburgite; weathered to brown, Px:25 to 30%, fractures are filled with serpentine minerals, | | | | 12−R−2 | | 31 | |
| 15 | | | | | | | | | 68 | 100 |
| | | | | | | | | | 0 | |
| | | | 16.00 - 24.60; Complex zone of dunite and harzburgite; weakly weathered, Dunite is brown in color and poor in Cr-spinel, Harzburgite is intercalated with very thin dunite bands (up to 1 cm in thick) and shows foliation of 50 to 70-80 degree of core angle, | | | | | | 64 | |
| | | | | | | | | | 78 | 100 |
| | | | | | | | | | 38 | |
| 20 | | | 16.00 - 16.80; Dunite, | | | | 12−R−3 | | 23 | 100 |
| | | | 17.80 - 18.20; Dunite, | | | | 20.6 | | 38 | |
| | | | 19.80 - 20.80; Dunite, | | | | 21.0 | | 50 | |
| | | | 21.00 - 22.60; Dunite, | | | | 12−R−4 | | 70 | 100 |
| | | | 23.20 - 23.25; Dunite, | | | | | | 30 | |
| | | | 23.30 - 23.40; Dunite, | | | | | | 17 | |
| 25 | | | 24.60 - 51.70; Dunite; weakly weathered, brown to greenish gray, sparsely accompanied with thin harzburgite, | | | | | | 14 | 100 |
| | | | | | | | | | 49 | 100 |
| | | | 24.60 - 24.70; brecciated zone, green to brown, friable, | | | | 26.8 | | 23 | |
| | | | 25.00 - 25.10; ditto, | | | | 12−R−5 | | 50 | 100 |
| | | | 25.90 - 26.30; ditto, core angle of contact: 50 degree, | | | | | | 38 | |
| 30 | | | 28.00 - 31.20; brecciated zone, green to brown, compact, | | | | | | 56 | 100 |
| | | | 31.50 - 31.70; ditto, | | | | | | 10 | |
| | | | 31.70 - 32.00; Harzburgite, | | | | | | 10 | 100 |
| | | | 33.60 - 33.70; brecciated zone, green, | | | | | | 11 | 100 |
| 35 | | | | | | | | | 66 | 100 |
| | | | | | | | | | 86 | |
| | | | | | | | 36.4 | | 55 | 100 |
| | | | 36.80 - 37.00; brecciated zone, green, | | | | 12−R−6 | | 34 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 80 | |
| 40 | | | | | | | | | 73 | 100 |
| | | | 40.70 - 40.80; brecciated zone, green, mainly of serpentine minerals, | | | | | | 13 | |
| | | | 42.00 - 42.50; brecciated zone, green partly brown, core angle of contact: 10 to 30 degree, | | | | | | 56 | 100 |
| | | | | | | | | | 46 | |
| | | | | | | | 44.4 | | 82 | |
| 45 | | | 45.30 - 48.30; fractures are filled with serpentine minerals and calcite, some of which are accompanied with iron oxides, | | | | 12−R−7 | | 77 | 100 |
| | | | | | | | | | 43 | |
| | | | | | | | | | 50 | 100 |
| | | | | | | | | | 71 | 100 |
| 50 | | | | | | | | | 50 | |
| | | | | | | | | | 73 | 100 |
| | | | | | | | | | 87 | |
| | | | 51.70 - 100.60; Harzburgite; dark greenish gray, medium hard, sparsely accompanied with thin dunite and pyroxinite dikes, Px:30 to 35% and 1 to 2 mm in size, fractures are filled with serpentine minerals and partly calcite with iron oxides, | | | | | | 42 | 100 |
| | | | | | | | | | 60 | |
| 55 | | | | | | | 53.7 | | 68 | |
| | | | | | | | 12−R−8 | | 59 | 100 |
| | | | 54.80 - 55.10; Dunite, greenish dark gray, | | | | | | 86 | |
| | | | 55.60 - 56.00; ditto, | | | | | | 46 | 100 |
| | | | | | | | | | 13 | 100 |
| | | | | | | | | | 53 | 100 |
| 60 | | | | | | | 59.5 | | 39 | |
| | | | | | | | 12−R−9 | | 63 | 100 |
| | | | | | | | | | 61 | |
| | | | | | | | | | 28 | 100 |
| | | | | | | | | | 100 | |
| 65 | | | | | | | | | 72 | 100 |
| | | | | | | | | | 72 | |
| | | | | | | | | | 69 | 100 |
| | | | | | | | | | 50 | 100 |
| 70 | | | | | | | | | 10 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-12** INCLINATION : −40°

AREA : SHESH BUSH No.1 BEARING : S60°W (240°) ELEVATION : 1,202.04m FINAL DEPTH : 100.60m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | 70.60 - 70.80; Pyroxinite dike; core angle of contact 10 to 20 degree. | | | | | | 36 | |
| | | | | | | | | | 13 | 100 |
| | | | | | | | | | 77 | 100 |
| | | | | | | | | | 14 | 100 |
| 75 | | | | | | | | | 27 | 100 |
| | | | | | | | | | 26 | 100 |
| | | | 76.90 - 77.10; Pyroxinite dike; core angle of contact 60 degree. | | | | | | 28 | 100 |
| | | | | | | | | | 66 | 100 |
| | | | 78.30 - 78.70; Dunite; brown, poor in Cr-spinel. | | | | | | 38 | |
| | | | 78.80 - 79.50; ditto, partly brecciated. | | | | | | 14 | 100 |
| 80 | | | | | | | | | 70 | 100 |
| | | | 81.25 - 81.35; Pyroxinite dike; core angle of contact 40 degree. | | | | | | 100 | 100 |
| | | | | | | | | | 48 | 100 |
| | | | 83.30 - 83.40; Pyroxinite dike; core angle of contact 60 degree. | | | | | | 75 | 100 |
| | | | | | | | | | 32 | 100 |
| 85 | | | | | | | | | 43 | |
| | | | | | | | | | 46 | 100 |
| | | | | | | | | | 88 | 100 |
| | | | | | | | | | 70 | |
| | | | | | | | | | 54 | 100 |
| 90 | | | 89.65 - 89.75; Pyroxinite dike; core angle of contact 90 degree. | | | | | | 22 | 100 |
| | | | 91.10 - 91.13; Pyroxinite dike; core angle of contact 60 degree. | | | | | | 74 | 100 |
| | | | 91.13 - 100.60; pyroxene is 4 to 5 mm in size. | | | | | | 100 | |
| | | | | | | | | | 80 | 100 |
| | | | | | | | 93.6 12−R−10 | | 100 | |
| 95 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 70 | 100 |
| 100 | | | | | | | | | 88 | 100 |
| | | 100.60 | | | | | | | | |

## Apx. 2-3-1 (11) Geological logging of MJAS-13, Shesh Bush No.1 area

**MJAS-13**

INCLINATION : −43°

AREA : SHESH BUSH No.1 BEARING : S60°W (240°) ELEVATION : 1,199.60m FINAL DEPTH : 100.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | | | | | | | 0 | 100 |
| | | | 0.00 - 3.60: Surface soil; brown, with blocks of dunite and harzburgite, | | | | | | 0 | |
| | | 3.60 | | | | | | | 10 | 100 |
| | | | 3.60 - 19.80: Dunite; accompanied with harzburgite, weathered, brown, serpentinized, very poor in Cr-spinel, partly broken into small blocks, | | | | | | 0 | |
| 5 | | | 3.70 - 4.30: Harzburgite; weathered, brown, medium hard, Px: approx. 30% and 2 mm in size, | | | | 5.5 13−R−1 | | 15 | 100 |
| | | | 4.30 - 4.35: fault zone, friable, green to brown, | | | | | | 38 | |
| | | | 6.35 - 6.60: Harzburgite; weathered to brown, Px: 35%, | | | | | | 10 | 100 |
| | | | 7.40 - 10.40: Harzburgite; greenish gray to brown, Px: 30% and 1 to 2 mm in size, intervals of 8.90 - 9.00 m and 9.90 - 10.40 m are fault zones of friable materials and green in color, | | | | | | 10 | |
| 10 | | | 12.20 - 12.90: fault zone in dunite, green, mainly of serpentine minerals, | | | | 8.1 13−R−2 | | 17 | 100 |
| | | | 13.70 - 14.00: ditto. | | | | | | 12 | |
| | | | | | | | | | 12 | 100 |
| | | | | | | | | | 28 | |
| | | | | | | | | | 10 | 100 |
| | | | | | | | | | 11 | 100 |
| 15 | | | | | | | | | 11 | 100 |
| | | | | | | | | | 12 | |
| | | | | | | | | | 43 | 100 |
| | | | 17.00 - 17.70: ditto, | | | | 13−R−3 | | 10 | |
| | | | | | | | 18.4 | | 81 | 100 |
| | | | 18.70 - 18.80: ditto. | | | | | | 64 | |
| 20 | | | 19.80 - 35.00: Harzburgite; weakly weathered, serpentinized, greenish gray to brown, fractures are filled with serpentine minerals, Px: 30% and up to 3 mm in size, core angle of foliation: 50 to 60 degree, with thin dunite, | | | | 20.2 13−R−4 | | 78 | 100 |
| | | | 21.40 - 21.65: Dunite; brown, interval of 21.55 - 21.65 m is mainly of serpentine minerals, maybe fault zone. | | | | | | 21 | |
| | | | | | | | | | 70 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 69 | |
| 25 | | | | | | | | | 26 | 100 |
| | | | | | | | | | 55 | |
| | | | 27.70 - 28.00: fault zone; mainly of serpentine minerals, | | | | | | 66 | 100 |
| | | | | | | | | | 54 | |
| | | | | | | | | | 47 | 100 |
| 30 | | | | | | | | | 27 | |
| | | | 31.00 - 33.20: Dunite; brown, poor in Cr-spinel, the interval of 31.40 - 31.45 m is fault zone mainly of serpentine minerals, | | | | | | 53 | |
| | | | 33.20 - 34.00: fault brecciated zone with a lot of blocks of dunite, friable, | | | | 32.8 13−R−5 | | 50 | 100 |
| | | | | | | | | | 12 | |
| | | | | | | | | | 47 | 100 |
| 35 | | | | | | | | | 90 | |
| | | | 35.00 - 78.80: Harzburgite, serpentinized, greenish gray partly brown, hard, Px: 30 % and up to 3 mm in size, but intervals of 44.00 - 56.90, 66.30 - 78.80 are rich in pyroxene up to 35 to 40 % and 1 to 2 cm in size, sparsely with thin dunite, | | | | | | 90 | 100 |
| | | | | | | | 37.5 13−R−6 | | 90 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 40 | | | | | | | | | 85 | |
| | | | | | | | | | 75 | |
| | | | | | | | | | 88 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 45 | | | | | | | | | 62 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 76 | |
| | | | | | | | | | 100 | |
| 50 | | | | | | | | | 90 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 55 | | | | | | | | | 50 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 58 | |
| | | | | | | | | | 83 | 100 |
| | | | 57.80 - 57.85: Dunite; brown, | | | | | | 44 | |
| | | | 57.85 - 58.40: brecciated zone, friable, green to reddish brown, | | | | | | 57 | 100 |
| 60 | | | | | | | | | 56 | |
| | | | | | | | | | 40 | 100 |
| | | | | | | | | | 48 | 100 |
| | | | | | | | | | 57 | 100 |
| | | | | | | | | | 0 | |
| 65 | | | 64.30 - 64.40: ditto, | | | | | | 66 | 100 |
| | | | 64.90 - 65.10: ditto, | | | | | | 54 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 85 | |
| 70 | | | | | | | | | 100 | 100 |

69 − V

# GEOLOGIC LOG ( 2 )

**MJAS-13** INCLINATION : −43°

AREA : SHESH BUSH No.1 BEARING : S60°W (240°) ELEVATION : 1,199.60m FINAL DEPTH : 100.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 90 | |
| | | | | | | | | | 57 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 58 | 100 |
| 75 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | 76.7 13−R−7 | | 45 | 100 |
| | | | 78.80 - 94.20: Complex zone of dunite and harzburgite; dunite is brown to greenish gray and poor in Cr-spinel, harzburgite is rich in pyroxene up to 35 to 40 % and the size is large up to 1 to 2 cm, | | | | | | 70 | 100 |
| 80 | | | 78.80 - 79.50: Dunite, | | | | 79.1 13−R−8 | | 100 | 100 |
| | | | 80.90 - 81.20: Dunite, | | | | | | 90 | |
| | | | 82.70 - 82.80: Dunite, | | | | | | 47 | 100 |
| | | | 82.90 - 83.10: Dunite, | | | | | | 61 | |
| | | | 84.00 - 88.60: Dunite, | | | | | | 100 | |
| 85 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 40 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | 88.1 13−R−9 | | 100 | 100 |
| 90 | | | | | | | | | 100 | |
| | | | 89.90 - 91.10: Dunite, the interval of 90.70 - 90.80 is brecciated, | | | | | | 53 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | 93.40 - 94.20: Dunite, | | | | | | 86 | 100 |
| | | | | | | | | | 65 | |
| 95 | | | 94.20 - 100.00: Harzburgite; greenish gray, Px: 35 to 40% and large in size, with thin dunite, | | | | | | 78 | |
| | | | | | | | 96.0 13−R−10 | | 100 | 100 |
| | | | 97.90 - 98.00: Dunite, | | | | | | 100 | |
| | | | 98.80 - 99.00: Dunite, | | | | | | 50 | 100 |
| | | | 99.00 - 99.20: fault zone of friable materials, green, | | | | | | 40 | 100 |
| 100 | | | 99.60 - 100.00: ditto, | | | | | | | |
| | | 100.00 | | | | | | | | |

## Apx. 2-3-1 (12) Geological logging of MJAS-14, Shesh Bush No.1 area

MJAS-14

INCLINATION : −40°

AREA : SHESH BUSH No.1 BEARING : S60°W(240°) ELEVATION : 1,199.76m FINAL DEPTH : 100.80m

| SCALE(m) 1:200 | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|
| | 0.00 - 1.30 | Surface soil; brown, with small blocks of dunite, | | | | | | 0 | |
| | 1.30 - 11.30 | Dunite; accompanied with thin harzburgite, weathered, brown, serpentinized, with Cr-spinel, partly broken into small blocks, | | | | | | 0 | 100 |
| | | | | | | | | 0 | |
| | | | | | | | | 30 | |
| 5 | 2.80 - 3.50 | fault zone, friable partly argillized, green, | | | | 4.20 | | 71 | 100 |
| | 6.30 - 6.70 | Harzburgite; weathered, brown to gray, Px: 30%, serpentinized, gradual contact with dunite, | | | | 14−R−1 | | 60 | |
| | | | | | | | | 30 | 100 |
| | 6.90 - 7.40 | brecciated dunite; green to reddish brown, compact, | | | | | | 54 | |
| | 7.40 - 7.60 | Harzburgite; dark gray, compact, | | | | | | 0 | 100 |
| 10 | 7.90 - 8.30 | Ditto, broken into small blocks, | | | | | | 10 | |
| | 8.30 - 8.90 | fault zone with blocks of harzburgite and dunite, friable, green, partly brecciated, | | | | | | 0 | 100 |
| | | | | | | 11.60 | | 76 | |
| | 10.60 - 11.30 | fault zone, green, friable, with blocks of dunite at upper and harzburgite at lower parts, | | | | 14−R−2 | | 55 | 100 |
| | | | | | | | | 100 | |
| 15 | 11.30 - 44.40 | Harzburgite; weakly weathered, brown to dark brown, partly greenish dark gray, Px: approx.35% and 3 to 4 mm in size, core angle of foliation: 50 degree, fractures are filled with serpentine minerals with friable materials of iron oxides, sparsely cut by pyroxinite dikes, | | | | | | 95 | 100 |
| | | | | | | | | 56 | |
| | | | | | | | | 100 | |
| | | | | | | | | 100 | 100 |
| | 20.30 - 20.45 | brecciated zone, compact, brown to green, | | | | | | 10 | |
| 20 | 20.60 - 20.75 | ditto, | | | | | | 15 | 100 |
| | 20.85 - 21.60 | ditto, friable, | | | | | | 76 | |
| | 22.30 - 22.40 | Pyroxinite dike; width: 3 cm, | | | | | | 45 | 100 |
| | 22.90 - 23.30 | Pyroxinite dike; gray, core angle of contact: 0 to 20 degree, | | | | | | 100 | |
| | 24.70 : | Pyroxinite dike; width: 2 cm, core angle of contact: 40, | | | | | | 100 | |
| 25 | | | | | | | | 73 | 100 |
| | | | | | | | | 54 | |
| | | | | | | | | 64 | |
| | | | | | | 14−R−3 | | 100 | 100 |
| | | | | | | 28.20 | | 100 | |
| | | | | | | 29.00 | | | |
| 30 | 28.85 - 29.00 | Dunite; brown, with fine-grained Cr-spinel, | | | | 14−R−4 | | 100 | 100 |
| | | | | | | | | 100 | |
| | | | | | | | | 60 | 100 |
| | 31.90 - 32.30 | fault zone ?: green, friable, | | | | | | 10 | |
| | | | | | | | | 0 | 100 |
| 35 | | | | | | | | 22 | |
| | | | | | | | | 12 | 100 |
| | | | | | | | | 32 | |
| | | | | | | | | 49 | 100 |
| | 38.00 - 38.30 | friable materials partly of clay, green to reddish brown, with small blocks of dunite, | | | | | | 10 | 100 |
| 40 | | | | | | | | 40 | |
| | | | | | | | | 0 | 100 |
| | 41.20 - 41.30 | Dunite; brown, with Cr-spinel, | | | | | | 50 | |
| | | | | | | | | 50 | 100 |
| | | | | | | 14−R−5 | | 46 | 100 |
| | | | | | | 44.50 | | 34 | |
| 45 | 44.40 - 46.50 | Dunite; brown to greenish gray, with Cr-spinel spots at upper part, highly possible to be continuation of dunite of Shesh Bush No.1 body, | | | | 14−R−6 | | 68 | 100 |
| | | | | | | 46.30 | | 100 | |
| | | | | | | 46.70 | | 100 | |
| | 46.50 - 59.70 | Harzburgite; serpentinized, greenish gray, hard, fractures are filled with green colored serpentine minerals, sparsely cut by pyroxinite dikes, | | | | 14−R−7 | | 100 | 100 |
| 50 | | | | | | | | 100 | |
| | | | | | | | | 100 | 100 |
| | | | | | | | | 100 | |
| | | | | | | | | 100 | 100 |
| | | | | | | | | 100 | |
| 55 | | | | | | | | 90 | 100 |
| | | | | | | | | 90 | |
| | | | | | | | | 60 | |
| | 57.50 - 57.65 | Pyroxinite dike; core angle of contact: 40 degree, | | | | | | 100 | 100 |
| | 57.80 - 58.26 | ditto, core angle of contact: 40 degree, | | | | | | 28 | |
| | 59.30 - 59.70 | brecciated zone, green, compact, | | | | | | 50 | |
| 60 | 59.70 - 72.70 | Complex zone of dunite and harzburgite; Cr-spinel is poor both in dunite and harzburgite, fractures are filled with serpentine minerals, dunite is brown to greenish gray and partly broken into small blocks, | | | | 60.3 | | 34 | 100 |
| | | | | | | 14−R−8 | | 34 | 100 |
| | 59.70 - 61.80 | dunite, brown to greenish gray, | | | | | | 37 | 100 |
| | 63.10 - 65.10 | ditto, | | | | | | 15 | 100 |
| 65 | 66.80 - 68.60 | ditto, | | | | | | 0 | |
| | 69.50 - 70.00 | ditto, | | | | | | 30 | 100 |
| | | | | | | | | 75 | |
| | | | | | | | | 63 | |
| | | | | | | | | 100 | 100 |
| 70 | | | | | | | | 54 | |

# GEOLOGIC LOG ( 2 )

**MJAS-14** INCLINATION : −40°

AREA : SHESH BUSH No.1 BEARING : S60° W(240°) ELEVATION : 1,199.76m FINAL DEPTH : 100.80m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | 70.20 - 71.20: ditto, | | | | | | 100 | 100 |
| | | | 72.00 - 72.70: ditto, greenish gray. | | | | | | 60 | |
| | | | | | | | | | 100 | |
| | | | 72.70 - 86.80: Harzburgite; serpentinized, dark greenish gray, frequently accompanied with dunite and sparsely with pyroxinite dikes, | | | | | | 100 | 100 |
| | | | | | | | | | 90 | |
| 75 | | | | | | | | | 88 | |
| | | | 77.00 - 77.10: fault zone, friable, mainly of serpentine minerals, | | | | | | 90 | 100 |
| | | | 77.80 - 78.30: Dunite; brown, poor in Cr-spinel, | | | | | | 34 | |
| | | | 79.30 - 80.00: brecciated zone in harzburgite, compact, brown to dark gray, | | | | 78.4 14−R−10 | | 80 | 100 |
| 80 | | | 80.00 - 80.30: Dunite; brown, brecciated, poor in Cr-spinel, | | | | | | 100 | |
| | | | 81.60 - 82.10: Pyroxinite dike; core angle of contact: 50 degree, | | | | | | 70 | |
| | | | 82.60 - 83.40: Dunite; brown, | | | | | | 100 | |
| | | | 84.90 - 85.00: Dunite, | | | | | | 83 | 100 |
| | | | 85.00 - 85.50: brecciated zone, green, friable, | | | | | | 42 | |
| 85 | | | 85.80 - 85.90: Dunite, | | | | | | 54 | |
| | | | 85.90 - 86.60: brecciated zone, green friable, | | | | | | 50 | 100 |
| | | | 86.80 - 91.40: Dunite; brown to dark green, serpentinized, with Cr-spinel, | | | | | | 15 | |
| | | | 86.80 - 87.80: brecciated zone with clay and partly with serpentine minerals, green to brown, | | | | | | 26 | 100 |
| | | | | | | | 88.3 14−R−9 | | 86 | |
| 90 | | | 91.00 - 91.40: brecciated zone, compact, green to brown, | | | | | | 41 | |
| | | | 91.40 - 100.80: Harzburgite; serpentinized, dark greenish gray, accompanied with dunite, | | | | | | 78 | 100 |
| | | | | | | | | | 60 | |
| | | | | | | | | | 82 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 95 | | | 94.10 - 94.50: Dunite; dark green, compact, core angle of contact: 40 degree, | | | | | | 90 | 100 |
| | | | | | | | 96.3 14−R−11 | | 90 | |
| | | | 95.30 - 95.50: Dunite, ditto, | | | | | | 100 | 100 |
| | | | 97.10 - 100.40: Dunite; brecciated at the interval of 98.10 - 98.35 m, | | | | | | 70 | |
| | | | | | | | | | 75 | 100 |
| 100 | | | 100.40 - 100.60: Pyroxinite dike; core angle of contact: 60 degree, | | | | | | 68 | |
| | | 100.80 | | | | | | | | |

## Apx. 2-3-1 (13) Geological logging of MJAS-15, Pishkash South area

# MJAS-15

INCLINATION : −45°

AREA : PISHKASH SOUTH　　BEARING : E (90°)　　ELEVATION : 959.19m　　FINAL DEPTH : 209.50m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 - 1.00; | Lateritic surface soil; brown, soft, with blocks of harzburgite, | | | | | | 0 | 100 |
| | | 1.00 - 2.00; | ditto, with a lot of blocks of harzburgite, | | | | | | 0 | 100 |
| | | 2.00 - 24.20 | Harzburgite; serpentinized, dark green gray, weathered, brown or olive brown, medium hard, Px:30 to 35% and 2 to 3 mm (max. 5mm) in size, core angle of foliation : 50 degree, fractures are filled with green serpentine minerals, | | | | | | 30 | 100 |
| | | | | | | | | | 10 | 100 |
| | | | | | | | | | 14 | 99 |
| 5 | | | | | | | | | 69 | |
| | | 5.80 - 6.05; | broken into small blocks, | | | | | | 0 | 100 |
| | | 6.05 - 6.70; | fault zone ? ; friable | | | | | | 22 | 100 |
| | | 7.50 - 7.70; | ditto, | | | | | | 23 | 100 |
| | | | | | | | | | 0 | 100 |
| 10 | | | | | | | | | 46 | 100 |
| | | | | | | | | | 18 | 100 |
| | | | | | | | | | 20 | 100 |
| | | | | | | | | | 38 | 100 |
| | | | | | | | | | 0 | 100 |
| 15 | | | | | | | | | 30 | 100 |
| | | | | | | | | | 24 | |
| | | | | | | | 17.40 15−R−1 | | 68 | 100 |
| | | | | | | | | | 30 | |
| | | | | | | | | | 25 | 100 |
| 20 | | 21.90 - 21.95; | fault zone?, friable, | | | | | | 32 | 100 |
| | | 22.85 - 22.90; | ditto, | | | | | | 30 | |
| | | | | | | | | | 47 | 100 |
| | | | | | | | | | 59 | |
| | | 24.20 - 74.60; | Harzburgite; dark greenish gray, serpentinized, medium hard to hard, Px: 20 to 30% and 2 to 3 mm in size, fractures are filled with serpentine minerals frequently and rarely with calcite, following intervals are weakly weathered to show partly brown in color, namely, 31.40 - 32.30, 34.00 - 35.60, 37.70 - 41.00, 41.30 - 43.70, 45.50 - 49.50, 54.20 - 63.00 and 65.40 - 71.60, | | | | | | 87 | 100 |
| 25 | | | | | | | | | 72 | |
| | | | | | | | | | 60 | 100 |
| | | | | | | | | | 74 | |
| | | | | | | | 28.80 15−R−2 | | 79 | 100 |
| | | | | | | | | | 25 | |
| 30 | | 29.70 - 30.10; | fault zone ?, friable, | | | | | | 57 | 100 |
| | | | | | | | | | 60 | |
| | | | | | | | | | 72 | 100 |
| | | | | | | | | | 94 | |
| | | | | | | | | | 47 | |
| 35 | | | | | | | | | 41 | |
| | | 35.60 - 35.90; | ditto, | | | | | | 60 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 56 | 100 |
| 40 | | | | | | | | | 68 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| 45 | | | | | | | | | 100 | |
| | | | | | | | | | 40 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 72 | 100 |
| | | | | | | | | | 56 | |
| 50 | | | | | | | 15−R−3 50.70 | | 100 | |
| | | | | | | | 51.60 15−R−4 | | 100 | 100 |
| | | 51.20 - 52.10; | Dunite; dark gray, with fine-grained Cr-spinel, | | | | | | 16 | |
| | | 53.40; | calcite veinlets along fractures, | | | | | | 69 | 100 |
| | | 53.95; | ditto, | | | | | | 81 | 100 |
| 55 | | | | | | | | | 40 | |
| | | | | | | | | | 20 | 100 |
| | | | | | | | | | 64 | 100 |
| | | | | | | | | | 76 | |
| | | 56.90 - 57.20; | fault zone ?, friable | | | | | | 17 | 100 |
| | | 59.00 - 60.00; | ditto, | | | | | | 86 | |
| 60 | | | | | | | | | 95 | 100 |
| | | | | | | | | | 92 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 90 | 100 |
| 65 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 95 | |
| 70 | | | | | | | | | 100 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-15** INCLINATION : −45°

AREA : PISHKASH SOUTH BEARING : E (90°) ELEVATION : 959.19m FINAL DEPTH : 209.50m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 90 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 60 | |
| 75 | | | 74.60 - 119.75; Harzburgite; dark greenish gray, serpentinized, medium hard, pyroxene rich parts (30 to 35%) alternated with poor parts (20 to 30%), partly brecciated and with network veinlets of serpentine minerals, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 48 | 100 |
| | | | | | | | | | 42 | |
| 80 | | | | | | | | | 65 | 100 |
| | | | | | | | | | 62 | |
| | | | | | | | | | 58 | |
| | | | | | | | | | 61 | 100 |
| | | | | | | | | | 75 | |
| 85 | | | | | | | | | 80 | 100 |
| | | | | | | | | | 57 | 100 |
| | | | | | | | | | 90 | |
| | | | | | | | | | 75 | |
| | | | | | | | | | 58 | 100 |
| 90 | | | | | | | | | 100 | |
| | | | | | | | | | 90 | |
| | | | | | | | | | 90 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 85 | |
| 95 | | | | | | | | | 95 | |
| | | | | | | | | | 53 | 100 |
| | | | | | | | | | 73 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | 99.10 | | 100 | 100 |
| 100 | | | | | | | 15—R—5 | | 100 | |
| | | | 101.00 - 101.40; fault zone ?; green, friable, composed mainly of serpentine minerals, | | | | | | 55 | 100 |
| | | | | | | | | | 53 | 100 |
| | | | 104.15 - 104.65; ditto, | | | | | | 84 | 100 |
| 105 | | | 105.65 - 105.75; ditto, | | | | | | 15 | 100 |
| | | | 106.20 - 106.30; ditto, | | | | | | 16 | 100 |
| | | | 107.30 - 107.40; ditto, | | | | | | 12 | 100 |
| | | | | | | | | | 19 | 100 |
| | | | 108.72 - 109.20; ditto, | | | | | | 0 | 100 |
| 110 | | | | | | | | | 48 | 100 |
| | | | | | | | | | 42 | |
| | | | 111.70 - 112.00; ditto, | | | | | | 29 | 100 |
| | | | 112.70 - 113.80; Dunite; greenish gray, rare in Cr-spinel, | | | | 15—R—6 | | 36 | 100 |
| | | | | | | | 113.30 | | 73 | |
| | | | | | | | | | 100 | 100 |
| 115 | | | | | | | 115.05 | | 100 | |
| | | | | | | | 15—R—7 | | 46 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 61 | 100 |
| | | | 119.15 - 119.35; fault zone, green, friable, | | | | | | 48 | |
| 120 | | | 119.75 - 127.70; Dunite; oxidized, brown to reddish brown, very poor in Cr-spinel, rarely accompanied with thin harzburgite, | | | | | | 68 | 100 |
| | | | | | | | | | 43 | |
| | | | | | | | 122.30 | | 40 | 100 |
| | | | | | | | 15—R—8 | | 82 | |
| | | | 123.70 - 124.00; Harzburgite; brown, medium hard, | | | | | | 60 | 100 |
| 125 | | | 124.90 - 125.80; fault zone ?, mainly of friable materials derived from dunite, | | | | | | 0 | |
| | | | 126.40 - 127.70; brecciated zone in dunite, green, friable, 30%), with network veinlets of serpentine minerals, | | | | | | 26 | 100 |
| | | | | | | | | | 20 | |
| | | | 127.70 - 199.10; Harzburgite; dark greenish gray, serpentinized, medium hard, pyroxene rich parts (30 to 35%) alternated thickly with poor parts (20 to 30%), with network veinlets of serpentine minerals, | | | | | | 100 | 100 |
| 130 | | | | | | | 129.00 | | 100 | |
| | | | | | | | 15—R—9 | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 135 | | | | | | | | | 82 | |
| | | | 135.70 - 136.20; brecciated zone, green, compact, | | | | | | 87 | 100 |
| | | | | | | | | | 13 | |
| | | | | | | | | | 95 | 100 |
| | | | | | | | | | 95 | |
| 140 | | | | | | | | | 53 | 100 |

# GEOLOGIC LOG ( 3 )

**MJAS-15** INCLINATION : −45°

AREA : PISHKASH SOUTH BEARING : E (90°) ELEVATION : 959.19m FINAL DEPTH : 209.50m

| SCALE (m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | Cr2O3 (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 140 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 145 | | | | | | | | | 100 | |
| | | | | | | | | | 70 | 100 |
| | | | 147.00 - 147.10; fault zone, mainly of serpentine minerals, green to dark greenish gray, friable, | | | | | | 95 | |
| | | | 149.10 - 149.50; ditto, | | | | | | 100 | 100 |
| 150 | | | | | | | | | 33 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | 152.20 15−R−10 | | 80 | |
| | | | | | | | | | 11 | 100 |
| 155 | | | | | | | | | 77 | |
| | | | | | | | | | 79 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 160 | | | | | | | | | 100 | |
| | | | 160.60 - 160.75; fault zone ?; green, friable, | | | | | | 77 | |
| | | | | | | | | | 80 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 50 | |
| 165 | | | | | | | | | 75 | |
| | | | | | | | | | 100 | 97 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 66 | |
| | | | 167.80 - 167.85; with calcite veinlets of core angle of 40 degree, | | | | | | 82 | 100 |
| | | | 168.60 - 168.90; ditto, | | | | | | 69 | |
| 170 | | | 169.75 - 169.95; ditto, | | | | | | 62 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| 175 | | | | | | | | | 90 | 100 |
| | | | | | | | 176.30 15−R−11 | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 180 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 185 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 40 | 100 |
| | | | 188.10 - 191.10; brecciated zone; green to brown or reddish brown, compact but partly friable, | | | | | | 48 | 100 |
| 190 | | | | | | | | | 0 | |
| | | | | | | | | | 28 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | 193.80 - 194.60; ditto, core angle of contact: 50 degree, | | | | | | 85 | 100 |
| 195 | | | | | | | | | 85 | |
| | | | | | | | | | 54 | 100 |
| | | | | | | | 15−R−12 | | 100 | |
| | | | | | | | 198.40 | | 100 | 100 |
| | | | | | | | 199.70 | | 100 | |
| 200 | | | 199.10 - 203.50; Complex zone of dunite and harzburgite; dunite is brown to light reddish brown in color and poor in Cr-spinel, | | | | 15−R−13 | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 60 | 100 |
| | | | | | | | | | 100 | |
| | | | 203.50 - 209.50; Harzourgite; dark greenish gray, with thin dunite, | | | | | | 100 | |
| | | | 204.80 - 204.90; Dunite; brown, | | | | | | 100 | 100 |
| 205 | | | 205.10 - 205.15; ditto, | | | | | | 100 | |
| | | | 206.40; Pyroxinite dike; core angle of contact: 30 degree, 3 to 4 cm in thick, | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | 209.50 | | | | | | | 15 | |
| 210 | | | | | | | | | | |

18 − V

## Apx. 2-3-1 (14) Geological logging of MJAS-16, Pishkash South area

**MJAS-16** INCLINATION : −60°

AREA : PISHKASH SOUTH BEARING : E(90°) ELEVATION : 885.63m FINAL DEPTH : 211.80m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | CrzOs (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | 0.00 - 1.55; Surface soil; brown, with blocks of harzburgite and limestone, | | | | | | 0 | 100 |
| | | 1.55 | 1.55 - 2.70; Harzburgite, weathered, dark green partly brown, Px: 30%, medium hard, | | | | | | 0 | |
| | | 2.60 | 2.60 - 2.70; friable zone, maybe fault, | | | | | | 24 | |
| | | 2.70 | 2.70 - 7.60; Harzburgite; serpentinized, dark green partly brown, Px: 30 to 35% and 2 to 3 mm in size, fractures are filled with serpentine minerals and some fissures are very friable, intervals of 4.50 - 4.70 and 6.35 - 6.65 are broken into small blocks, | | | | | | 26 | 100 |
| 5 | | | | | | | | | 12 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | 100 |
| | | 7.60 | 7.60 - 16.20; Harzburgite; serpentinized, compact, green to dark green, Px: 30% and 5 mm in size, fractures are filled with serpentine minerals and rarely stained by iron oxides, | | | | | | 60 | 100 |
| | | | | | | | | | 100 | |
| 10 | | | | | | | | | 85 | |
| | | | | | | | | | 90 | 100 |
| | | 10.40 | 10.40 - 10.60; Pyroxinite dike; core angle of contact: 20 degree, | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 56 | |
| 15 | | 15.10 | 15.10 - 16.20; fractures are filled with green serpentine mineral partly brown in color, | | | | | | 100 | |
| | | | | | | | | | 16 | 100 |
| | | 16.20 | 16.20 - 17.60; Brecciated zone in harzburgite, 16.20-17.70 is friable, | | | | | | 36 | |
| | | | | | | | | | 100 | |
| | | 17.60 | 17.60 - 22.40; Harzburgite; serpentinized, dark green partly brown, Px: 30 to 35% and 2 to 3 mm in size, fractures are filled with green serpentine minerals partly reddish brown to brown, | | | | | | 36 | 100 |
| 20 | | | | | | | | | 30 | |
| | | | | | | | | | 76 | 100 |
| | | 22.10 | 22.10 - 22.40; broken into small blocks, maybe fault, | | | | | | 70 | |
| | | 22.40 | 22.40 -131.30; Harzburgite; serpentinized, green partly brown, compact and hard, Px: 30 to 35% and 2 to 3 mm in size, core angle of foliation: 50 degree, fractures are filled with green serpentine minerals, | | | | | | 79 | 100 |
| | | | | | | | | | 40 | |
| | | | | | | | | | 100 | 100 |
| 25 | | | | | | | | | 90 | |
| | | | | | | | | | 60 | 100 |
| | | | | | | | | | 95 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | 29.00 16−R−1 | | 100 | |
| 30 | | | | | | | | | 90 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 35 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | 37.00 | 37.00; Pyroxinite dike; width: 2 to 3 cm, core angle of contact: 20 degree, | | | | | | 80 | |
| | | | | | | | | | 100 | |
| 40 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 70 | |
| | | 42.00 | 42.00; Pyroxinite dike; width: 2 to 3 cm, core angle of contact: 50 degree, | | | | | | 100 | 100 |
| | | 42.10 | 42.10; Ditto, | | | | | | 100 | |
| | | 43.45 | 43.45 - 43.90; broken into small blocks | | | | | | 56 | 100 |
| 45 | | | | | | | | | 49 | |
| | | 45.50 | 45.50 - 45.70; broken into small blocks partly friable, fault ?, | | | | | | 35 | |
| | | 47.90 | 47.90 - 48.10; Pyroxinite dike; hard, core angle of contact: 20 degree, | | | | | | 63 | 100 |
| | | 48.10 | 48.10 - 56.60; core angle of foliation: 50 degree, | | | | | | 37 | |
| | | | | | | | | | 100 | 100 |
| 50 | | | | | | | | | 90 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 90 | 100 |
| 55 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | 56.60 | 56.60 - 57.00; Pyroxinite dike; hard, core angle of contact: 40 to 80 degree, | | | | | | 90 | 100 |
| | | | | | | | | | 25 | |
| | | | | | | | | | 62 | |
| 60 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | 63.70 | 63.70 - 64.50; cut by networks veinlets of serpentine minerals, | | | | | | 60 | 100 |
| 65 | | 64.80 | 64.80 - 65.30; friable zone, fault ?, green, | | | | | | 62 | |
| | | | | | | | 65.70 16−R−2 | | 56 | 100 |
| | | 66.70 | 66.70 - 67.20; ditto, | | | | | | 46 | |
| | | 67.80 | 67.80 - 68.00; broken into small blocks, | | | | | | 10 | 100 |
| | | 68.20 | 68.20 - 68.70; friable zone, fault, green to dark green, | | | | | | 77 | 100 |
| 70 | | | | | | | | | | |

# GEOLOGIC LOG ( 2 )

**MJAS-16** INCLINATION : −60°

AREA : PISHKASH SOUTH BEARING : E(90°) ELEVATION : 885.63m FINAL DEPTH : 211.80m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (° ) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | 70.60 - 70.75: friable zone, fault ?, green. | | | | | | 23 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 80 | 100 |
| | | | 73.20 - 73.80: Pyroxinite dike, core angle of contact: 30 degree, | | | | | | 80 | |
| | | | 74.20 - 74.90: broken into small blocks, | | | | | | 20 | 100 |
| 75 | | | 76.00 - 76.20: ditto, | | | | | | 86 | |
| | | | | | | | | | 32 | |
| | | | | | | | | | 40 | 100 |
| | | | | | | | | | 72 | |
| | | | | | | | | | 65 | 100 |
| 80 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 90 | |
| | | | | | | | | | 65 | 100 |
| | | | | | | | | | 100 | |
| 85 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 90 | | | | | | | 90.20 16−R−3 | | 100 | |
| | | | | | | | | | 49 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 84 | |
| | | | 94.00 - 94.10: ditto, | | | | | | 72 | 100 |
| 95 | | | 95.00 - 95.55: ditto, | | | | | | 43 | |
| | | | 96.10 - 96.55: ditto, | | | | | | 18 | 100 |
| | | | 98.50 - 98.55: brecciated zone; green, core angle of contact: 40 degree, | | | | | | 29 | |
| | | | 99.00 - 99.20: Pyroxinite dike: width: 5 to 6 cm, core angle of contact: 40°, | | | | | | 90 | 100 |
| | | | 99.50 - 99.70: ditto, width: 3 to 4 cm, core angle of contact: 60 degree, | | | | | | 80 | |
| 100 | | | 99.85 - 100.25: broken into small blocks, | | | | | | 43 | |
| | | | | | | | | | 80 | 100 |
| | | | 102.10 - 102.95: ditto, | | | | | | 20 | |
| | | | 103.50 - 104.80: Dunite, light brown, including very rarely pyroxene grains, medium hard, poor in Cr-spinel, | | | | | | 100 | |
| | | | | | | | | | 82 | 100 |
| 105 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 38 | |
| | | | | | | | | | 85 | |
| | | | | | | | | | 77 | 100 |
| 110 | | | | | | | | | 77 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 80 | |
| | | | | | | | | | 63 | |
| 115 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | 117.00 - 117.10: friable, fault ?, | | | | | | 90 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 30 | |
| 120 | | | | | | | | | 77 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | 124.20 - 125.40: brecciated zone; compact, green, | | | | | | 100 | |
| 125 | | | 125.40 - 129.85: with foliation of 35 degree of core angle, | | | | | | 60 | |
| | | | | | | | | | 64 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | 128.05 16−R−4 | | 100 | |
| | | | 129.85 - 131.30: brecciated zone: partly compact and partly friable, core angle of contact: 60 degree, | | | | | | 95 | 100 |
| 130 | | | | | | | | | 47 | |
| | | | 131.30 - 152.20: Dunite: brown or light brown to green, medium hard, | | | | | | 43 | |
| | | | 133.40 - 134.00: friable green, fault ?, | | | | | | 37 | 100 |
| | | | 134.20 - 144.10: brecciated zone; green rarely reddish brown, compact, partly with calcite veinlets, | | | | 133.10 16−R−5 | | 40 | |
| | | | | | | | | | 100 | 100 |
| 135 | | | | | | | | | 100 | |
| | | | | | | | | | 50 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 140 | | | | | | | | | 100 | 100 |

V - 85

# GEOLOGIC LOG ( 3 )

**MJAS-16**

INCLINATION : −60°

AREA : PISHKASH SOUTH　　BEARING : E(90°)　　ELEVATION : 885.63m　　FINAL DEPTH : 211.80m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 140 | | | | | | | | | 84 | 100 |
| | | | | | | | | | 36 | |
| | | | | | | | | | 50 | |
| | | | | | | | | | 100 | 100 |
| 145 | | | 144.10 - 145.00; brown, with network veinlets of serpentine minerals, | | | | | | 100 | |
| | | | 145.00 - 146.00; light brown to reddish brown, with network veinlets of serpentine minerals, | | | | | | 67 | |
| | | | 146.00 - 148.00; dark brown partly green, with network veinlets of serpentine minerals, | | | | | | 71 | 100 |
| | | | | | | | | | 79 | 100 |
| | | | | | | | 148.50 16−R−6 | | 100 | |
| 150 | | | 148.00 - 149.15; green, compact, poor in Cr-spinel, | | | | | | 90 | 100 |
| | | | 149.15 - 151.60; light brown to reddish brown, poor in Cr-spinel, | | | | | | 46 | |
| | | | 151.60 - 151.70; friable zone, green, maybe fault, | | | | | | 22 | |
| | | | 151.70 - 152.20; lower part is brecciated, core angle of contact: 30 degree, | | | | | | 100 | 100 |
| | | | 152.20 - 163.60; Harzburgite with dunite; Harzburgite is same as the interval between 22.40 and 131.3m, | | | | | | 100 | |
| 155 | | | | | | | | | 100 | |
| | | | | | | | 155.60 16−R−7 | | 100 | 100 |
| | | | 157.05 - 157.45; Dunite; green, compact, poor in Cr-spinel, | | | | | | 100 | |
| | | | 158.65 - 159.80; Ditto, | | | | | | 95 | 100 |
| 160 | | | | | | | | | 85 | |
| | | | 160.35 - 160.80; Ditto, | | | | | | 80 | |
| | | | 160.80 - 161.50; Dunite; brecciated, green, | | | | | | 20 | 100 |
| | | | 162.70 - 163.10; friable zone, green, fault in harzburgite, | | | | | | 40 | 100 |
| | | | 163.50 - 163.60; Pyroxinite dike; core angle of contact: 70 degree, | | | | | | 72 | |
| | | | 163.60 - 211.80; Dunite with harzburgite rarely; cut by fault frequently, dark green, medium hard, some fractures are filled with calcite veinlets, poor in Cr-spinel, | | | | | | 100 | 100 |
| 165 | | | | | | | | | 46 | |
| | | | | | | | | | 93 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 170 | | | | | | | 170.00 16−R−8 | | 100 | 100 |
| | | | | | | | | | 66 | |
| | | | 172.30 - 173.00; Harzburgite; same as the interval of 22.40 - 131.30, | | | | | | 100 | 100 |
| | | | 173.00 - 173.90; dark brown, | | | | | | 100 | |
| 175 | | | 175.10 - 176.80; brown to reddish brown, cut by network veinlets of serpentine minerals, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 180 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 56 | |
| | | | 181.60 - 182.10; friable zone, green, fault?, | | | | | | 68 | |
| | | | | | | | | | 53 | 100 |
| | | | | | | | 183.30 16−R−9 | | 63 | |
| 185 | | | | | | | | | 70 | |
| | | | 185.90 - 187.40; brecciated zone, compact, | | | | | | 100 | 100 |
| | | | | | | | | | 63 | |
| | | | 188.15; Pyroxinite dike; width: 1 cm, | | | | | | 52 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 190 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 54 | 100 |
| 195 | | | | | | | | | 53 | |
| | | | 195.45 - 195.55; friable zone, green, fault, | | | | | | 50 | 100 |
| | | | 196.50 - 196.70; ditto, with calcite veinlets, | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 200 | | | | | | | | | 90 | |
| | | | | | | | | | 40 | 100 |
| | | | | | | | | | 60 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 205 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | |
| 210 | | | | | | | | | 100 | 100 |

# GEOLOGIC LOG ( 4 )

**MJAS-16**

INCLINATION : −60°

AREA : PISHKASH SOUTH　　BEARING : E(90°)　　ELEVATION : 885.63m　　FINAL DEPTH : 211.80m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 210 | | | 210.20 - 210.40: ditto, fault, core angle of contact: 0 to 20 degree, | | | | 16—R—10 211.20 | | 66 / 100 | 100 |
| | | 211.80 | | | | | | | | |
| 215 | | | | | | | | | | |
| 220 | | | | | | | | | | |

## Apx. 2-3-1 (15) Geological logging of MJAS-18, Murriq area

**MJAS-18** INCLINATION : −30°

AREA : MURRIQ BEARING : N (0°) ELEVATION : 714.35m FINAL DEPTH : 100.00m

| SCALE(m) 1/200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | Cr2O3 (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | 0.00 - 1.60: Surface soil; brown, with blocks of harzburgite, | | | | | | 0 | 100 |
| | | 1.60 | 1.60 - 20.35: Harzburgite; serpentinized greenish gray partly brown, medium hard, fractures are filled with serpentine minerals, Px: 30% and 1 to 3 mm in size, weakly weathered to the depth of 10.4 m, with thin dunite sparsely, | | | | | | 23 | |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 100 |
| 5 | | | | | | | | | 22 | 100 |
| | | | 6.20 - 6.50; fault clay, thickness: 3 mm, core angle of contact: 20 degree, | | | | | | 54 | |
| | | | 7.20 - 7.40; brecciated zone, brown partly green, | | | | | | 27 | 100 |
| | | | | | | | | | 42 | 100 |
| | | | | | | | | | 50 | |
| 10 | | | | | | | | | 86 | 100 |
| | | | 10.40 - 10.70: brecciated zone, green to gray, friable, | | | | 10.2 18—R—1 | | 69 | 100 |
| | | | | | | | | | 58 | |
| | | | | | | | | | 95 | 100 |
| | | | 13.70 - 13.75; fault zone, green, friable, | | | | | | 50 | 100 |
| 15 | | | 14.80 - 14.90; fault zone, green, friable, | | | | | | 35 | 100 |
| | | | 15.20 - 15.30; fault clay, gray, core angle of contact: 80 degree, | | | | | | 49 | 100 |
| | | | 16.00 - 16.65; brecciated zone, partly of clay, green, core angle of contact: 30 to 40 degree, | | | | | | 56 | |
| | | | | | | | 16.75 18—R—2 | | 70 | 100 |
| | | | 16.65 - 17.25; Dunite, greenish gray, hard, poor in Cr-spinel, | | | | | | 18 | 100 |
| | | | 17.75 - 17.85; fault zone, gray, friable, | | | | | | 60 | 100 |
| 20 | | | 18.00 - 18.18; ditto, | | | | | | 60 | |
| | | | 18.40 - 18.60; fault clay, gray, core angle of contact: 30 degree, | | | | | | 53 | 100 |
| | | | 20.20 - 20.35; ditto, | | | | 22.5 18—R—3 | | 63 | 100 |
| | | 20.35 | 20.35 - 28.10; Dunite; serpentinized, dark greenish gray, poor in Cr-spinel, | | | | | | 0 | |
| | | | 23.00 - 23.80; fault zone, green, friable, | | | | | | 64 | 100 |
| 25 | | | 24.50 - 27.00; brecciated zone, green, friable, core angle of contact: 60°, | | | | | | 25 | 100 |
| | | | | | | | | | 40 | 100 |
| | | | | | | | | | 0 | 93 |
| | | 28.10 | 28.10 - 35.60; Harzburgite; serpentinized, dark greenish gray, medium hard, Px: approx. 30% and 1 to 3 mm in size, | | | | | | 32 | 95 |
| | | | | | | | | | 46 | 95 |
| 30 | | | | | | | 30.0 18—R—4 | | 64 | 100 |
| | | | 28.10 - 28.20; fault zone ?, green, friable, | | | | | | 30 | 100 |
| | | | 31.70 - 31.90; fault zone ?, green, friable, core angle of contact: 80 degree, | | | | | | 26 | 100 |
| | | | 32.40 - 32.50; ditto, core angle of contact: 80 degree, | | | | | | 30 | 100 |
| | | | 33.80 - 34.00; ditto, core angle of contact: 50 degree, | | | | | | 23 | 69 |
| 35 | | | | | | | | | 0 | 70 |
| | | 35.60 | 35.60 - 37.80; Dunite; serpentinized, dark greenish gray, poor in Cr-spinel, | | | | | | 12 | 100 |
| | | 37.80 | 37.80 - 81.00; Harzburgite; dark greenish gray, medium hard, sparsely accompanied with thin dunite and pyroxinite dikes, Px:30 to 35% and 1 to 2 mm in size, fractures are filled with serpentine minerals and partly calcite with iron oxides, | | | | | | 16 | 64 |
| | | | | | | | | | 62 | 87 |
| | | | | | | | | | 100 | 95 |
| 40 | | | | | | | | | 34 | |
| | | | | | | | | | 55 | 97 |
| | | | | | | | | | 23 | |
| | | | | | | | | | 84 | 100 |
| 45 | | | | | | | | | 33 | |
| | | | 46.00 - 46.40; fault zone ?, green, friable, | | | | | | 35 | 100 |
| | | | | | | | | | 44 | |
| | | | | | | | | | 10 | 100 |
| | | | | | | | | | 68 | 100 |
| 50 | | | | | | | | | 27 | |
| | | | | | | | | | 45 | 100 |
| | | | 51.90 - 52.00; fault zone ?, green, friable, | | | | | | 74 | 100 |
| | | | | | | | | | 24 | 100 |
| 16 — V | | | | | | | | | 84 | 100 |
| | | | | | | | | | 68 | |
| 55 | | | | | | | | | 34 | 100 |
| | | | | | | | | | 18 | 100 |
| | | | 57.47 - 57.70; brecciated zone, fault ?, friable, core angle of contact: 50°, | | | | 57.1 18—R—5 | | 71 | 100 |
| | | | | | | | | | 42 | 100 |
| | | | | | | | | | 30 | 87 |
| 60 | | | | | | | | | 0 | 100 |
| | | | | | | | | | 10 | 100 |
| | | | 61.80 - 61.85; fault zone ?, friable, | | | | | | 32 | 89 |
| | | | | | | | | | 74 | 100 |
| | | | | | | | | | 0 | 30 |
| 65 | | | | | | | | | 44 | 57 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 35 | 93 |
| | | | | | | | | | 20 | 85 |
| 70 | | | 64.30 - 64.35; fault zone ?, green, friable, core angle of contact: 80 to 90° | | | | | | 20 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-18**

INCLINATION : −30°

AREA : MURRIQ BEARING : N (0°) ELEVATION : 714.35m FINAL DEPTH : 100.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 0 | 90 |
| | | | | | | | | | | 83 |
| | | | | | | | | | 18 | |
| | | | 72.40 - 72.50: fault zone ?, friable, core angle of contact: 80 degree, | | | | | | 44 | 80 |
| | | | 72.60 - 73.00: ditto, | | | | | | 0 | 34 |
| | | | 73.60 - 73.80: ditto, | | | | | | 0 | 54 |
| 75 | | | 74.50 - 75.70: fault zone ?, friable, core angle of lower contact: 20 degree, | | | | | | 23 | 62 |
| | | | | | | | 76.0 18−R−6 | | 20 | 74 |
| | | | 77.40 - 77.60: fault clay, greenish gray, friable, | | | | | | 0 | 85 |
| | | | | | | | | | 26 | |
| | | | | | | | | | 17 | 92 |
| 80 | | | 80.20 - 81.00: fault clay, partly brecciated, green, | | | | | | 13 | 92 |
| | | | 81.00 - 82.80: Dunite; dark greenish gray, with Cr-spinel, | | | | | | 22 | 80 |
| | | | | | | | 82.0 18−R−7 | | 26 | 72 |
| | | | 82.80 - 91.80: Fault clay; friable, partly with blocks of harzburgite at the intervals of 83.50 - 84.80 m and rarely dunite, | | | | | | 0 | 51 |
| | | | | | | | | | 10 | 62 |
| 85 | | | | | | | | | 0 | 51 |
| | | | | | | | | | 0 | 60 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 0 | 70 |
| | | | | | | | | | 0 | |
| 90 | | | | | | | | | 0 | 80 |
| | | | | | | | | | 0 | 74 |
| | | | 91.80 - 100.00: Harzburgite; serpentinized greenish gray, medium hard, fractures are filled with serpentine minerals, Pc: 30% and 1 to 3 mm in size, | | | | | | 16 | 73 |
| | | | | | | | | | 26 | 87 |
| | | | | | | | | | 0 | |
| 95 | | | | | | | | | 0 | 88 |
| | | | | | | | | | 0 | 69 |
| | | | | | | | | | 0 | |
| | | | | | | | 18−R−8 98.6 | | 23 | 85 |
| | | | | | | | | | 0 | |
| 100 | | 100.00 | | | | | | | | |

## Apx. 2-3-1 (16) Geological logging of MJAS-19, Murriq area

**MJAS-19** INCLINATION : −30°

AREA : MURRIQ BEARING : N (0°) ELEVATION : 719.74m FINAL DEPTH : 100.00m

| SCALE:(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | 0.00 - 2.85: Surface soil; brown, with blocks of harzburgite, | | | | | | 0 | |
| | | 2.85 | 2.85 - 100.00: Harzburgite: greenish gray, medium hard, core angle of foliation: 10 to 20 degree, Px: 30 to 35% and 1 to 2 mm (up to 3 to 4 mm) in size, sparsely accompanied with thin dunite and pyroxinite dikes, | | | | | | 26 | 100 |
| | | | | | | | | | 88 | |
| | | | | | | | | | 74 | 100 |
| 5 | | | | | | | | | 52 | |
| | | | | | | | | | 82 | 100 |
| | | | | | | | | | 58 | |
| | | | | | | | | | 50 | 100 |
| | | | | | | | | | 0 | 100 |
| | | | | | | | | | 43 | |
| 10 | | | 9.40 - 13.05: fractures are filled with serpentine minerals and calcite, | | | | | | 100 | 100 |
| | | | | | | | 11.4 19−R−1 | | 100 | |
| | | | | | | | | | 90 | 100 |
| | | | | | | | 12.4 19−R−2 | | 80 | 100 |
| | | | 13.05 - 13.10: Dunite; brown, | | | | | | 56 | |
| | | | 13.10 - 14.00: rather poor in pyroxene (10 to 15%), | | | | | | 26 | |
| 15 | | | 14.40 - 14.60: Dunite; greenish gray, poor in Cr-spinel, | | | | | | 53 | 100 |
| | | | 14.60 - 14.90: brecciated zone, core angle of contact: 40 degree, | | | | 16.8 19−R−3 | | 22 | 100 |
| | | | 16.00 - 18.00: Dunite; greenish gray, poor in Cr-spinel, | | | | | | 15 | 100 |
| | | | | | | | | | 60 | 100 |
| 20 | | | | | | | | | 60 | |
| | | | | | | | | | 100 | |
| | | | | | | | 22.4 19−R−4 | | 100 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 25 | |
| 25 | | | | | | | | | 37 | 100 |
| | | | | | | | | | 18 | 100 |
| | | | | | | | | | 68 | |
| | | | 26.70 - 26.80: Pyroxinite dike; core angle of contact: 30 to 35 degree, | | | | | | 13 | 100 |
| | | | | | | | | | 79 | 100 |
| 30 | | | | | | | | | 36 | 100 |
| | | | 30.20 - 30.50: fault zone, green, core angle of contact: 70 degree | | | | | | 40 | |
| | | | 30.90 - 31.25: ditto, | | | | | | 24 | 100 |
| | | | 32.00 - 32.20: ditto, | | | | | | 36 | |
| | | | | | | | | | 25 | 100 |
| 35 | | | | | | | | | 18 | |
| | | | | | | | | | 22 | |
| | | | | | | | | | 24 | 100 |
| | | | | | | | | | 63 | 100 |
| | | | 38.10 - 38.30: brecciated zone, green, friable, | | | | | | 25 | 100 |
| 40 | | | 39.80 - 39.90: ditto, | | | | | | 19 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 43 | |
| | | | | | | | | | 35 | 100 |
| | | | | | | | | | 20 | 100 |
| 45 | | | | | | | | | 16 | 100 |
| | | | | | | | | | 0 | |
| | | | | | | | | | 0 | |
| | | | | | | | | | 14 | 92 |
| | | | 47.85 - 48.15: fault zone, green, friable, | | | | | | 62 | |
| 50 | | | | | | | | | 44 | 100 |
| | | | | | | | | | 39 | 100 |
| | | | | | | | | | 36 | 100 |
| | | | | | | | | | 39 | |
| | | | 53.20 - 53.50: fault zone, green, friable, | | | | | | 32 | 100 |
| 55 | | | | | | | | | 46 | 92 |
| | | | | | | | | | 38 | |
| | | | | | | | 57.0 19−R−5 | | 78 | 100 |
| | | | | | | | | | 52 | 81 |
| | | | | | | | | | 32 | 92 |
| 60 | | | | | | | | | 40 | 100 |
| | | | | | | | | | 54 | |
| | | | 61.50 - 61.60: fault zone, mainly of unconsolidated clay, green to dark green, core angle of contact: 80 to 90 degree, | | | | | | 13 | 100 |
| | | | | | | | | | 32 | 100 |
| | | | | | | | | | 78 | 100 |
| 65 | | | | | | | | | 57 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | 67.20 - 68.82: fault zone, mainly of unconsolidated clay, green to dark gray, | | | | 19−R−6 | | 90 | 100 |
| | | | | | | | 68.87 | | 60 | |
| 70 | | | 68.82 - 69.00: Dunite; dark greenish gray, core angle of contact: 50 degree, | | | | | | 48 | 100 |

# GEOLOGIC LOG ( 2 )

**MJAS-19** INCLINATION : −30°

AREA : MURRIQ BEARING : N (0°) ELEVATION : 719.74m FINAL DEPTH : 100.00m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 33 | |
| | | | | | | | | | 66 | 100 |
| | | | 72.60 - 72.65; Pyroxinite dike, core angle of contact: 30 degree, | | | | | | 88 | 100 |
| | | | | | | | | | 30 | |
| 75 | | | | | | | | | 77 | 100 |
| | | | | | | | | | 34 | 100 |
| | | | | | | | | | 82 | 100 |
| | | | | | | | | | 75 | |
| | | | 78.10 - 78.55; brecciated zone, friable, green, core angle of contact:40 degree, | | | | | | 0 | |
| 80 | | | | | | | | | 0 | |
| | | | | | | | | | 23 | 92 |
| | | | | | | | | | 22 | 100 |
| | | | | | | | | | 21 | 100 |
| | | | | | | | | | 29 | 96 |
| | | | | | | | | | 37 | 100 |
| 85 | | | | | | | | | 10 | 100 |
| | | | | | | | | | 0 | 67 |
| | | | | | | | | | 0 | 30 |
| | | | | | | | | | 44 | 23 |
| | | | | | | | | | 53 | 90 |
| 90 | | | 90.10 - 91.60; fault zone, friable, with blocks of harzburgite max. 10 cm in size, | | | | | | 0 | 100 |
| | | | 91.60 - 93.70; with foliation of 10 degree of core angle. | | | | | | 31 | 64 |
| | | | | | | | | | 59 | 69 |
| | | | | | | | | | 43 | 100 |
| | | | | | | | | | 0 | 71 |
| 95 | | | | | | | | | 60 | 50 |
| | | | | | | | | | 100 | 92 |
| | | | | | | | | | 71 | |
| | | | | | | | 19−R−7 | | 90 | 97 |
| | | | | | | | 99.2 | | 71 | |
| 100 | | 100.00 | | | | | | | | |

## Apx. 2-3-1 (17) Geological logging of MJAS-20, Mbi Skroske area

**MJAS-20** INCLINATION : −55°

AREA : MBI SKROSKE BEARING : N54°E(54°) ELEVATION : 1,041.81m FINAL DEPTH : 100.17m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | CrzOs (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | ROCK PROPERTY: RQD (%) | ROCK PROPERTY: Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.00 | 0.00 - 0.50; Surface soil; brown, with blocks of harzburgite, | | | | | | 0 | 100 |
| | | 0.50 | 0.50 - 3.10; Harzburgite; strongly weathered, large blocks of harzburgite are embedded in brown lateritic materials, | | | | | | 0 | 100 |
| | | 3.10 | 3.10 - 4.68; Harzburgite; weathered, gray, broken into small blocks, | | | | | | 0 | 100 |
| | | 3.70 | 3.70 - 3.80; friable zone, fault ?, | | | | | | 0 | 100 |
| 5 | | 4.68 | 4.68 - 9.63; Harzburgite; serpentinized, dark green partly brown, weakly weathered, Px: 20 %, frequently broken into small blocks, fractures are filled with serpentine minerals and rarely with calcite, | | | | | | 50 | 100 |
| | | | 5.50 - 5.90; Pyroxinite dike; gray, hard, core angle of contact: 90 degree, | | | | | | 11 | 62 |
| | | | 5.90 - 6.30; Dunite; greenish dark gray, serpentinized, | | | | | | 56 | 100 |
| | | | 6.30 - 7.10; broken into small blocks with lump of dunite and harzburgite, fault ?, | | | | | | 0 | 100 |
| 10 | | 9.63 | 9.63 - 29.90; Harzburgite; serpentinized, dark greenish gray, medium hard, compact, Px: 10 to 20% and 1 mm in size, fractures are filled with green serpentine minerals, | | | | | | 90 | 100 |
| | | | 11.70 - 12.35; broken into small blocks, | | | | | | 67 | 100 |
| | | | 12.35 - 13.05; cut by network veinlets of serpentine minerals, | | | | | | 59 | 100 |
| | | | 17.10 - 17.90; cut by network veinlets of serpentine minerals, | | | | | | 45 | 100 |
| 15 | | | 17.90 - 20.32; brecciated zone; compact, green to reddish brown, with calcite veinlets of 70 degree of core angle, | | | | | | 0 | 100 |
| | | | 20.32 - 21.30; cut by network veinlets of serpentine minerals, | | | | | | 33 | |
| | | | | | | | | | 0 | 38 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | 73 |
| 20 | | | | | | | | | 0 | |
| | | | | | | | | | 83 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 25 | | | 24.65 - 25.13; broken into small blocks, | | | | | | 44 | |
| | | | 26.17 - 26.70; ditto, | | | | | | 0 | 68 |
| | | | 27.25 - 27.50; ditto, partly brecciated, fault ?, | | | | | | 45 | 100 |
| | | | | | | | | | 55 | |
| | | | | | | | 28.60 | | 100 | 100 |
| 30 | | | | | | | 20—R—1 | | 100 | |
| | | 29.90 | 29.90 - 32.50; Pyroxinite dike; gray, hard, core angle of contact: 60 degree, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | 32.50 | 32.50 - 100.17; Harzburgite; serpentinized, greenish dark gray, hard, compact, Px: 30 to 35% and 2 to 3 mm in size, fractures are filled with, serpentine minerals, | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| 35 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 92 | 100 |
| | | | | | | | | | 68 | |
| | | | | | | | 38.70 | | 100 | 100 |
| 40 | | | | | | | 20—R—2 | | 100 | |
| | | | | | | | | | 100 | |
| | | | 40.90 - 47.45; poor in pyroxene grains (10 to 20%), | | | | | | 100 | 100 |
| | | | 43.70 ; Pyroxinite dike; gray, width: 2 cm, core angle of contact: 50 degree, | | | | | | 77 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 88 |
| 45 | | | | | | | | | 74 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 76 | |
| | | | | | | | | | 46 | 100 |
| | | | 48.40 - 50.08; broken into small blocks, | | | | | | 0 | 100 |
| 50 | | | 50.08 - 52.00; poor in pyroxene grains (10 to 20%), | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 55 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | 57.10 - 57.20; Pyroxinite dike; gray, core angle of contact: 75 to 80 degree, | | | | | | 100 | |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 60 | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | 62.50 - 67.61; poor in pyroxene grains (10 to 20%), | | | | | | 100 | |
| | | | | | | | | | 90 | 100 |
| | | | 64.00 - 64.58; broken into small blocks, | | | | | | 45 | |
| 65 | | | | | | | | | 80 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | 67.61 - 70.30; with foliation of 80 to 90 degree of core angle, | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 70 | | | | | | | | | 100 | |

# GEOLOGIC LOG ( 2 )

**MJAS-20**

INCLINATION : −55°

AREA : MBI SKROSKE BEARING : N54°E(54°) ELEVATION : 1,041.81m FINAL DEPTH : 100.17m

| SCALE(m) 1:200 | COLUMN | DEPTH (m) | DESCRIPTION | REMARKS | MINERALIZATION | $Cr_2O_3$ (%) | SAMPLE No. | ROCK PROPERTY: Angle of Fiss. (°) | RQD (%) | Core Rec (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | | | | | | | | 53 | 100 |
| | | | | | | | | | 84 | 100 |
| | | | 72.30 - 75.10: poor in pyroxene grains (10 to 20%), | | | | | | 85 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | 74.50 | | 72 | |
| 75 | | | 75.10 - 75.30: Pyroxinite dike, gray, core angle of contact: 60 degree, | | | | 20—R—3 | | 68 | 100 |
| | | | 75.70 - 83.40: with foliation of 90 degree of core angle, | | | | | | 90 | 100 |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| 80 | | | | | | | | | 100 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | 83.40 - 83.42: Pyroxinite dike; gray, core angle of contact: 70 degree, | | | | | | 100 | 100 |
| | | | 84.30 - 84.40: ditto, | | | | | | 100 | |
| 85 | | | 86.00 - 87.00: poor in pyroxene grains (10 to 20%), | | | | | | 100 | 100 |
| | | | 87.00 - 87.50: Pyroxinite dike; gray, hard, core angle of contact: 80 to 90 degree, | | | | | | 100 | |
| | | | 87.50 - 88.10: poor in pyroxene grains (10 to 20%), | | | | | | 64 | 100 |
| | | | 88.10 - 90.10: Pyroxinite dike: gray, hard, core angle of contact: 80 to 90 degree, | | | | | | 90 | 100 |
| 90 | | | 90.10 - 93.32: poor in pyroxene grains (10 to 20%), | | | | | | 90 | 100 |
| | | | | | | | | | 88 | 100 |
| | | | | | | | | | 100 | |
| | | | | | | | | | 100 | 100 |
| | | | | | | | | | 85 | 100 |
| | | | | | | | | | 86 | 100 |
| 95 | | | 94.90 - 95.03: friable and broken into small blocks, fault ?, | | | | 20—R—4 | | 100 | 100 |
| | | | | | | | 96.60 | | 100 | |
| | | | 97.50 - 100.17: poor in pyroxene grains (10 to 20%), | | | | 20—R—5 | | 70 | 99 |
| | | | | | | | 99.20 | | 100 | |
| 100 | | | | | | | | | 90 | |
| | | 100.17 | | | | | | | | |