**Mechanical, Technical and physical properties of the different rock samples.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Location** | **Lithology** | **Texture** | **Compressive Strength MPa** | **Aggregate Crushing Value** | **Specific Gravity** | **Water Absorption** | **Point Load** | **Brittleness Value** | **Siever J (SJ) Value** | **Density** |
| CG | Granite Gnesis |  | 59.0 | 25.4 | 2.692 | 0.33 | 8.22 | 34.43 | 0.58 | 2.685 |
| KM | Granite Gnesis |  | 126.6 | 25.1 | 2.649 | 0.38 | 6.75 | 49.78 | 0.67 | 2.710 |
| LG | Hornblende Granite |  | 124.5 | 27.8 | 2.691 | 0.34 | 7.65 | 78.23 | 0.67 | 2.863 |
| GA |  |  | 91.7 | 31.2 | 2.641 | 0.33 | 5.60 | 81.54 | 0.70 | 2.734 |
| NE |  |  | 174.4 | 20.2 | 2.661 | 0.32 | 8.51 | 55.41 | 0.67 | 2.758 |
| KF | Porphyritic Granite |  | 74.2 | 26.1 | 2.663 | 0.25 | 5.43 | 61.37 | 0.70 | 2.831 |
| GW | Hornblende Granite |  | 96.1 | 28.4 | 2.720 | 0.10 | 4.97 | 68.52 | 0.63 | 2.629 |
| KW | Porphyritic Granite |  | 122.3 | 22.0 | 2.631 | 0.30 | 6.70 | 63.71 | 0.60 | 2.661 |
| MD | Hornblende Granite |  | 34.9 | 29.4 | 2.617 | 0.44 | 10.04 | 64.12 | 0.62 | 2.694 |

**Mechanical, Technical and physical properties of the different rock samples. (Continued)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Location** | **Dynamic Young Modulus** | **Dynamic Shear Modulus** | ***P* – Wave Velocity (m/s)** | ***S* – Wave Velocity (m/s)** | **Poission’s Ratio (V)** | **Rock Hardness (*f*)** | **Drilling Rate Index (DRI)** | **Drillability Characterization based on Rock Hardness (*f*)** | **Drillability Characterization based on DRI** |
| CG | 24.9 | 9.7 | 3425 | 1898 | 0.28 | 5.90 | 22 | Rather Hard | Extremely Low |
| KM | 42.1 | 16.4 | 4536 | 2486 | 0.29 | 12.66 | 35 | Hard | Low |
| LG | 25.0 | 10.3 | 3251 | 1969 | 0.21 | 12.45 | 59 | Hard | High |
| GA | 16.7 | 7.0 | 2641 | 1637 | 0.19 | 9.17 | 65 | Hard | High |
| NE | 47.7 | 18.1 | 5045 | 2618 | 0.32 | 17.44 | 38 | Very Hard | Medium |
| KF | 37.8 | 15.1 | 4146 | 2379 | 0.25 | 7.42 | 45 | Hard | Medium |
| GW | 35.5 | 14.5 | 3866 | 2316 | 0.22 | 9.61 | 52 | Hard | High |
| KW | 41.1 | 15.7 | 4626 | 2442 | 0.31 | 12.23 | 44 | Hard | Medium |
| MD | 37.4 | 14.9 | 4134 | 2371 | 0.25 | 3.49 | 47 | Moderate | Medium |