| Table Name | Field Name | Key | Definition | Valid Values | Description |
|---|---|---|---|---|---|
| | TestName | (may be linked to 'Test Type') | text, 50 | | The name of tests performed on samples. (See 'Test Type' table for further definition) |
| | SampleNm | foreign key (links to 'Sample') | text, 4 | | Unique identifier that corresponds to samples taken from the stockpiles. |
| | SampType | | text, 10 | "single" or "composite" | See descriptions above for "SampleNm" field in 'Sample' table |
| **Test Results-Abrasion** | | | | | This test measures the breakdown of material by weight percent. This test was performed on glacial overburden, natural ore coarse tailings, natural ore fine tailings, natural ore and taconite mixed-sized rock, and cretaceous ore samples. |
| | TestTypeID | primary key (composite)  foreign key (links to 'Test Type') | text, 20 | "C131/C535" | These are the official call letters for the American Society Testing and Materials (ASTM) test for Los Angeles Abrasion. |
| | TR3ID | primary key (composite) | number (long), 4 | | Unique identification number for each 'test results...' record in this table. |
| | SampleNM | foreign key (links to 'Sample') | text, 4 | "ZZ1", "ZZ2", "ZZ3", "ZZ4", 'ZZ5", and "ZZ6" | Unique identifier that corresponds to samples taken from the stockpiles. In this case, composites of composite samples. |
| | AbrasVal | | number (double), 8 | Ex: 45.30 | The test results for abrasions measured in weight percent. |
| **Test Results-Chem Assays** | | | | | This test measures major chemical oxides within a sample. The results are the percentage of the sample. Chemical assays were performed **only** on single samples that contain **iron ore.** |

| Table Name | Field Name | Key | Definition | Valid Values | Description |
|---|---|---|---|---|---|
| | TestTypeID | primary key (composite)<br><br>foreign key (links to 'Test Type') | text, 20 | "IRON" | Call letters for this test. |
| | TR10ID | primary key (composite) | number (long), 4 | Ex: 1, 2, 3, 4, ...51 | Unique identification number for each 'test results...' record in this table. |
| | SampleNM | foreign key (links to 'Sample') | text, 4 | Ex: "14", "15", "16", ..."82" | Unique identifier that corresponds to samples taken from the stockpiles. In this case, single samples taken from iron ore stockpiles. |
| | Fe | | number (double), 8 | Ex: 41.91 | Percent total iron in a sample by weight. |
| | Hematite | | number (double), 8 | Ex: 59.38 | Percent of hematite in the sample. This calculation was derived by:<br><br>(Fe - Fe++) x 1.4297 |
| | Fe++ | | number (double), 8 | Ex: 0.90 | Percent ferrous iron in a sample by weight. |
| | FeO | | number (double), 8 | Ex: 1.16 | Percent iron oxide in a sample by weight. |
| | SiO2 | | number (double), 8 | Ex: 22.16 | Percent of silica in a sample by weight. |
| | Al2O3 | | number (double), 8 | Ex: 2.685 | Percent of aluminum oxide in a sample by weight. |
| | CaO | | number (double), 8 | Ex: 1.010 | Percent of calcium oxide in a sample by weight. |
| | MgO | | number (double), 8 | Ex: 0.345 | Percent of magnesium oxide in a sample by weight. |
| | Na2O | | number (double), 8 | Ex: 0.013 | Percent of sodium oxide in a sample by weight. |
| | K2O | | number (double), 8 | Ex: 0.181 | Percent of potassium oxide in a sample by weight. |

| Table Name | Field Name | Key | Definition | Valid Values | Description |
|---|---|---|---|---|---|
| | MnO | | number (double), 8 | Ex: 0.218 | Percent of manganese in a sample by weight. |
| | FreeSiO2 | | number (double), 8 | Ex: 17.26 | Percent of free silica in a sample by weight. |
| | CO2 | | number (double), 8 | Ex: 0.44 | Percent of carbon dioxide in a sample by weight. |
| **Test Results-Clay Lumps** | | | | | A test to measure the amount of clay lumps and friable particles in a sample by weight percent. Tests were performed on glacial overburden, natural ore coarse tailings, Cretaceous ore, natural ore and taconite mixed-sized rock samples. |
| | TestTypeID | primary key (composite)<br><br>foreign key (links to 'Test Type') | text, 20 | "C142" | These are the official call letters for the American Society Testing and Materials (ASTM) test for clay lumps. |
| | TR1ID | primary key (composite) | number (long), 4 | | Unique identification number for each 'test results...' record in this table. |
| | SampleNM | foreign key (links to 'Sample') | text, 4 | Ex: "A1", "B9" | Unique identifier that corresponds to samples taken from the stockpiles. In this case, composite samples of single samples. |
| | ClyLmpVal | | number (double), 8 | Ex: 0.62 | Amount of clay lumps in a sample by the percent weight. |
| **Test Results-Fine Agg** | | | | | This test measures the angularity of the fine particles within a sample by weight percent. This test was only performed on natural ore fine tailing samples because of their small grain size. |