Table 2.4 Mineralogy of the surface evaporites and sediments of Saskatchewan lakes (Italicized minerals were major constituents for a limited number of samples).

| Lake | Deposit | Major >10% | Minor <10% |
| --- | --- | --- | --- |
| Manitou | Sediment | Amorphous, clay minerals, feldspars, quartz | Ankerite calcite dolomite gypsum, hexahydrite, hornblende, pyroxene, rutile |
| Whiteshore | Surface | Blödite, thenardite, quartz | Dolomite, gypsum, halite, hexahydrite, starkeyite  |
|  | Sediment | Amorphous, clay minerals, *dolomite*, feldspars, quartz | Blödite, calcite dolomite, gypsum, halite, konyaite, rutile |
|  | Organic | Amorphous, blödite | Aragonite, dolomite, halite, pyroxene, quartz |
| West Coteau | Surface | Blödite, thenardite | Aragonite, blödite, calcite, dolomite, gypsum, quartz |
|  | Sediment | Amorphous, clay minerals, dolomite, feldspars, quartz | Ankerite, aragonite, calcite, gypsum, hornblende, pyroxene, rutile, thenardite |
|  | Organic | Amorphous, thenardite | Ankerite, calcite, dolomite, quartz  |
| Big Muddy | Surface | Thenardite | Calcite, dolomite, quartz  |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz | Calcite, dolomite, hornblende, pyroxene, rutile, sylvite  |
|  | Organic | Amorphous, quartz | Ankerite, calcite, dolomite  |
| Willow Bunch | Surface | Quartz, thenardite | Calcite, dolomite |
|  | Sediment | Amorphous, clay minerals, dolomite, feldspars, quartz | Ankerite, calcite, hornblende, pyroxene, rutile |
| Shoe Lake | Surface | Thenardite | Quartz |
|  | Sediment | Amorphous, clay minerals, dolomite, feldspars, quartz | Ankerite, calcite, hornblende, pyroxene, rutile |
|  | Organic | Blödite, quartz | Aragonite, dolomite, gypsum, sylvite, thenardite |
| Burn Lake | Surface | Thenardite | Aragonite, gypsum, quartz  |
|  | Sediment | Amorphous, clay minerals, dolomite, feldspars, quartz  | Calcite, hornblende, pyroxene, rutile, thenardite  |
|  | Organic | Amorphous, aragonite | Calcite, dolomite, gypsum, quartz, thenardite |
| Shoe Road | Surface | Blödite, quartz, thenardite  | Ankerite, dolomite, gypsum |
|  | Sediment | Amorphous, clay minerals, dolomite, feldspars, *gypsum,* quartz,  | Ankerite, blödite, calcite, goethite, gypsum, hornblende, magnesite, pyroxene, rutile |
|  | Organic | Amorphous, blödite | Gypsum, quartz, thenardite |
| Bliss Lake | Surface | Blödite, *dolomite,* quartz | Burkeite, calcite, halite  |
|  | Sediment | Amorphous, clay minerals, feldspars, *gypsum,* quartz,  | Ankerite, aragonite, blödite, calcite, dolomite, gypsum, halite, hornblende, magnesite, pyroxene, rutile |
| Frederick Lake | Surface | Aragonite, *dolomite*, *gypsum*, quartz, thenardite  | Blödite, calcite, |
|  | Sediment | Amorphous, *aragonite,* clay minerals, *dolomite,* feldspars, quartz  | Ankerite, calcite, dolomite, hornblende, magnesite, pyroxene, rutile, thenardite  |
|  | Hardpan | Thenardite |  |
|  | Organic | Amorphous, quartz | Aragonite, blödite, calcite, dolomite, feldspar, thenardite  |
| Chaplin Lake | Surface | Blödite, quartz, thenardite  | Ankerite, aragonite, calcite, dolomite, halite, sylvite |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz | Ankerite, aragonite, calcite, dolomite, halite, hornblende, magnesite, pyroxene, rutile |
|  | Hardpan | Thenardite |  |
| Highway 342 | Organic | Amorphous, quartz | Blödite, feldspar, gypsum |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz | Ankerite, blödite, dolomite, gypsum, pyroxene, rutile |
| Stink Lake | Surface | Blödite, quartz, starkeyite  | Ankerite, calcite, dolomite, gypsum |
|  | Sediment | Amorphous, blödite, clay minerals, feldspars, quartz,  | Ankerite, calcite, dolomite, gypsum, hornblende, pyroxene, rutile |
| Beechy Lake | Surface | Blödite, quartz, starkeyite | Dolomite |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz | Ankerite, calcite, dolomite, gypsum, hornblende, pyroxene, rutile |
| Beechy Creek | Surface | Blödite, starkeyite, quartz | Ankerite, calcite, dolomite, sylvite |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz | Ankerite, dolomite, gypsum, natrojarosite, pyroxene, rutile |
| Snakehole Lake | Surface | Blödite, quartz, thenardite | Ankerite, dolomite, gypsum, halite, magnesite |
|  | Sediment | Amorphous, clay minerals, feldspars, *magnesite,* quartz  | Ankerite, aragonite, blödite, dolomite, gypsum, halite, hornblende, magnesite, pyroxene, rutile, thenardite  |
|  | Hardpan | Thenardite | Dolomite, gypsum, quartz |
|  | Crystals | Gypsum, *magnesite*, quartz | Dolomite, magnesite, thenardite  |
| Mason Lake | Surface | Blödite, quartz | Halite |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz,  | Aragonite, blödite, dolomite, gypsum, halite, hornblende, pyroxene, rutile |
|  | Organic | Amorphous, quartz | Dolomite, feldspar, halite |
| Ingebrigt Lake | Surface | Blödite, gypsum, thenardite | Ankerite, aragonite, burkeite, dolomite, gypsum, halite, quartz,  |
|  | Sediment | Amorphous, clay minerals, feldspars, quartz | Ankerite, blödite, calcite, dolomite, gypsum, halite, hornblende, magnesite, pyroxene, rutile |
|  | Organic | Amorphous, blödite, quartz | Aragonite, dolomite, feldspars, halite  |
|  | Hardpan | *Gypsum,* thenardite  | Quartz, sylvite  |

\*All samples were analyzed as air-dried powders; therefore the hydrated states of evaporite minerals are not included.

† Italicized minerals represent single samples with proportions >10%.

‡ Feldspars include plagioclase and K-feldspar.