

### Location/Identification

|                           |                                                                                                          |                            |                                |
|---------------------------|----------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------|
| <b>MINFILE Number:</b>    | 092P 069                                                                                                 |                            |                                |
| <b>Name(s):</b>           | <u><b>CLINTON LAKE</b></u>                                                                               |                            |                                |
|                           | ADA B (L4792), CLIFFORD (L4791), J.T.M. #1-8                                                             |                            |                                |
| <b>Status:</b>            | Past Producer                                                                                            | <b>Mining Division:</b>    | Clinton                        |
| <b>Mining Method</b>      | Open Pit                                                                                                 | <b>Electoral District:</b> | Cariboo South                  |
| <b>Regions:</b>           | British Columbia                                                                                         | <b>Resource District:</b>  | 100 Mile House Forest District |
| <b>BCGS Map:</b>          | 092P003                                                                                                  |                            |                                |
| <b>NTS Map:</b>           | 092P04E                                                                                                  | <b>UTM Zone:</b>           | 10 (NAD 83)                    |
| <b>Latitude:</b>          | 51 04 28 N                                                                                               | <b>Northing:</b>           | 5659056                        |
| <b>Longitude:</b>         | 121 35 06 W                                                                                              | <b>Easting:</b>            | 599129                         |
| <b>Elevation:</b>         | 915 metres                                                                                               |                            |                                |
| <b>Location Accuracy:</b> | Within 500M                                                                                              |                            |                                |
| <b>Comments:</b>          | Small lake on Lot 876 on the east side of Highway 97, 1.5 kilometres south of Clinton (EMPR Bulletin 4). |                            |                                |

### Mineral Occurrence

|                     |                            |                                         |  |
|---------------------|----------------------------|-----------------------------------------|--|
| <b>Commodities:</b> | Magnesium Sulphate         |                                         |  |
| <b>Minerals</b>     | <b>Significant:</b>        | Epsomite, Brines                        |  |
|                     | <b>Mineralization Age:</b> | Recent                                  |  |
| <b>Deposit</b>      | <b>Character:</b>          | Stratiform                              |  |
|                     | <b>Classification:</b>     | Evaporite, Industrial Min.              |  |
|                     | <b>Type:</b>               | F09: Playa and Alkaline Lake Evaporites |  |

### Host Rock

|                            |                                     |                       |                                  |
|----------------------------|-------------------------------------|-----------------------|----------------------------------|
| <b>Dominant Host Rock:</b> | Sedimentary                         |                       |                                  |
| <b>Stratigraphic Age</b>   | <b>Group</b>                        | <b>Formation</b>      | <b>Igneous/Metamorphic/Other</b> |
| Quaternary                 | Undefined Group                     | Undefined Formation   | -----                            |
| <b>Isotopic Age</b>        | <b>Dating Method</b>                | <b>Material Dated</b> |                                  |
| -----                      | -----                               | -----                 |                                  |
| <b>Lithology:</b>          | Unconsolidated Sediment/Sedimentary |                       |                                  |

### Geological Setting

|                       |                    |                            |                 |
|-----------------------|--------------------|----------------------------|-----------------|
| <b>Tectonic Belt:</b> | Intermontane       | <b>Physiographic Area:</b> | Cariboo Plateau |
| <b>Terrane:</b>       | Overlap Assemblage |                            |                 |

### Inventory

No inventory data

### Capsule Geology

Clinton Lake is located east of Highway 97, 1.5 kilometres south of Clinton. Physiographically it is located near the edge of the Cariboo Plateau. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

The lake is a semi-evaporitic playa lake located in the dry valley along the Ashcroft-Clinton road. Bedrock includes marine sedimentary (ribbon chert,

limestone and argillite) and volcanic rocks (basic flows and tuffs) of the Permian to Upper Triassic Cache Creek Group; Jurassic sedimentary rocks (chert pebble conglomerate, greywacke, shale and grit); and non-marine sediments (shale, sandstone, tuff, diatomite, conglomerate and breccias) of the Miocene Deadman River Formation.

Clinton Lake contains magnesium sulphate-rich brine and has at times contained layers of epsomite. It covers an area of approximately 10 hectares and is covered with brine to depths ranging from a few centimetres to metres; the epsomite crystallizing at times of low water levels. Between 1918 and 1920, approximately 1800 tonnes of epsomite was harvested from the lake, and more than 900 tonnes was sold (EMPR Bulletin 4). The brine had a density of 1.123 and contained 13.97 per cent dissolved solids composed mainly of 84.1 per cent magnesium sulphate, 3.45 per cent sodium sulphate, 9.5 per cent sodium chloride and 1.16 per cent potassium chloride. Assessment Report 8051 reports that random sampling of epsomite "evaporite residue" returned values of 19.5 per cent MgO and 49.1 per cent SO4, indicating the material is nearly pure epsomite.

***Bibliography***

EMPR AR \*8051  
EMPR BULL 4-40  
EMPR P 1991-1  
EMPR AR 1918-228, 1922-155  
GSC MEM 363  
GSC MAP 1278A  
EMPR PFD 13569, 13570

|                      |            |                    |                             |                     |   |
|----------------------|------------|--------------------|-----------------------------|---------------------|---|
| <b>Date Coded:</b>   | 1985/07/24 | <b>Coded By:</b>   | BC Geological Survey (BCGS) | <b>Field Check:</b> | N |
| <b>Date Revised:</b> | 2003/02/19 | <b>Revised By:</b> | Ron McMillan (RHM)          | <b>Field Check:</b> | N |