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## $1850$

## Miehilatirn ITon Ore

## Introduction

Formed in 1892, the Lake Superior \& Ishpeming hauls Magnetite and Hematite pellets from the Empire and Tilden Mines to the ore docks at Presque Isle, Michigan. With a combination of first and second generation Alco and GE motive power, the LS\&I is a unique look at modern day iron ore railroading on the Michigan Ore Range.

Michigan Iron Ore, contains over 40 miles of short line operations with an interesting mix of motive power, including the ALCO RSD-12 and the RSD-15 "Alligator". Later LS\&I motive power, such as former BN U30C and C30-7's are also included. With these locomotives, you will pull 100 car ore trains from the mines to the docks. With this kind of tonnage, we can assure you that you will be challenged every step of the way down the step hill to the docks.

## Michivan Iron Ore

## Knowing Your Train

One of the most important elements involved in running a train is knowing the controls like the back of your hand. We have included control diagrams below to help you familiarize yourself with the cabs which are used on the locomotives in Michigan Iron Ore.

GE U23C, U30C, C30-7


## GE Locomotives:

1. Speed Recorder
2. Load Meter
3. Brake Gauges
4. Horn
5. Train Brake
6. Sander
7. Bell
8. Engine Brake
9. Headlights
10. Reverser
11. Throttle
12. Dynamic Brake
13. Alerter

## Marinigan Iron Ore

ALCO RSD-12, RSD-15


## ALCO locomotives:

1. Load Meter
2. Speed Recorder
3. Brake Gauges
4. Horn
5. Dynamic Brake
6. Throttle
7. Train Brake
8. Engine Brake
9. Bell
10. Sander
11. Headlights
12. Reverser

Minfrhigan ITPOI OPE
Ore Subdivision Timetable

| Milepost |  | Siding | Stations |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { LS\&I } \\ & 55.20 \end{aligned}$ | (CTC) | Yard | Marquette 0.07 |
| $\begin{aligned} & \text { LS\&I } \\ & 55.27 \end{aligned}$ | (CTC) |  | $\begin{aligned} & \text { Co. Rd. } 550 \\ & 9.33 \end{aligned}$ |
| $\begin{aligned} & \text { LS\&I } \\ & 64.60 \end{aligned}$ | (CTC) |  | $\begin{gathered} \text { Co. Rd. } 492 \\ 0.70 \end{gathered}$ |
| $\begin{aligned} & \text { LS\&I } \\ & 65.30 \end{aligned}$ | (CTC) | Yard | $\begin{gathered} \text { Eagle Mills } \\ 0.57 \end{gathered}$ |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q65.87 } \end{aligned}$ |  |  | Hwy.M-35 (South) 1.63 |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q67.50 } \end{aligned}$ |  | 49 | $\begin{gathered} \text { Queens } \\ 0.63 \end{gathered}$ |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q68.13 } \end{aligned}$ | (CTC) |  | $\begin{gathered} \text { Eagle Mills JCT. } \\ 0.53 \end{gathered}$ |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q68.63 } \end{aligned}$ | (CTC) |  | Palmer Line JCT. 0.42 |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q69.05 } \end{aligned}$ | (CTC) |  | $\begin{gathered} \text { Empire JCT. } \\ 1.73 \end{gathered}$ |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q70.78 } \end{aligned}$ |  | Yard | Empire Mine Siding 0.55 |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q71.23 } \end{aligned}$ |  |  | $\begin{gathered} \text { Tilden JCT. } \\ 1.67 \end{gathered}$ |
| $\begin{aligned} & \text { LS\&I } \\ & \text { Q73.00 } \end{aligned}$ |  | 135 | Tilden Mine |

## Michivan Iron ore

## Signals

| Signal Aspect | Name | Indication |
| :---: | :---: | :---: |
|  | Stop | Stop before any part of train or engine passes the signal. |
|  | Stop and Proceed | Stop before any part of train or engine passes the signal, then proceed at restricted speed through entire block. |
| (with or without A plate or number plate) | Approach | Proceed, prepared to stop before any part of train or engine passes the next signal. |
| (with or without A plate or number plate) | Clear | Proceed. |
| (with or without A plate) | Restricting | Proceed en route indicated at restricted speed. Speed through turnout must not exceed 15 mph . |
|  | Permissive | Proceed at restricted speed through entire block. |
| $\$$ $\$$ $\$$  $\phi$ $\$$ $\$$ | Diverging Approach | Proceed on diverging route, prepared to stop at next signal, not exceeding prescribed speed through turnout. |
|  | Diverging Clear | Proceed on diverging route, not exceeding prescribed speed through turnout. |

## Trackside Signs



Restricted Clearance Sign - Meant for snowplows and trains carrying wide loads. Warns of impending clearance restrictions.

Yard Limit Advance Warning - Placed approximately 1 mile from yard limits.

Yard Limit Sign - defines yard limits and switching zones.


Speed Sign - Displays current speed limit in Miles per Hour (MPH)


Milepost - Displays current subdivision mileage. Usually •used for communications and to aid train crews in eknowing current location on the line.

Begin/End CTC - Sign telling train crew that they are•entering or leaving Centralized Traffic Control Territory.
Snowplow/Flanger Warning - Warns crews of snowplows and flangers to clear their equipment of an upcoming obstruction such as a bridge or grade crossing.

Whistle Post - Sign telling train crew that they must blow whistle and ring bell for upcoming grade crossing or obstruction.

## Credits

## Development Team

Andy Hockin - Route design, train physics, 3d artwork, activities, logic programming
Jason Dilworth - Route design, 3d artwork, sounds, documentation, activities
Colin Graham - Product Testing and QA
Danny Beck - 3d artwork and locomotive cabviews

## Sales and Marketing

Dawn Dilworth

Translations
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