STATE of OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL SURVEY
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NET THICKNESS CONTOUR MAP OF THE HALITE WITHIN SILURIAN SALINA F1 IN OHIO

by

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with cartography by Shawn R. Bleiler

Open-File Map 370
VERSION 1.0
1/24

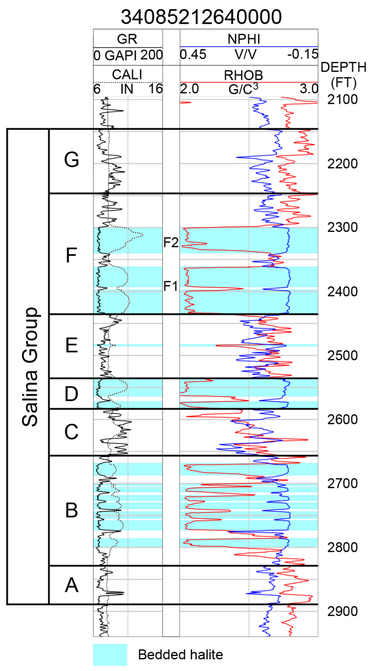
STRATIGRAPHY

The Silurian Salina Group consists of interbedded anhydrite, dolomite, halite, and shale (Clifford, 1973). The Salina is broken into seven units in eastern Ohio (see type log below). These units, in ascending order, are A, B, C, D, E, F, and G. Halite-bearing units are the B, D, E, and F units. Halite is most abundant in the F unit and occurs in four zones, identified as the F1, F2, F3, and F4 units. Typically, salts in the F1 and F2 units are mined.

THICKNESS

This map shows hand-drawn thickness contours of halite within the Salina F1 of the F unit of the Silurian Salina Group. The bedded halite in the Salina F1 ranges from 1 to 3 bed(s) with interbedded shale. Thickness of the halite in the Salina F1 ranges from 0 ft (0 m) to over 120 ft (37 m) in Mahoning County. The margin of the Salina F1 halite appears to be depositionally controlled.

TYPE LOG FOR THE SALINA F1



The Salina Group units were identified using Clifford's (1973) Salina unit definitions, as shown on the geophysical log above. Halite beds were picked using gamma-ray (GR), caliper (CALI), bulk-density (RHOB), and porosity (NPHI) curves when available. Halite has a relatively low gamma-ray value and is relatively soft, so the caliper shows borehole rugosity in the halite measures. Halite has a relatively consistent density of 2.16 g/cm^3, and has low porosity; however, because of the borehole rugosity the halite appears to have a higher porosity, causing the density and porosity curves to cross. After the halite beds in each salt-bearing unit were picked, the beds in each unit were added together and the thickness values were hand contoured.

EXPLANATION OF MAP SYMBOLS

- Type log
- Well locations
- 5-ft contour
- 10-ft index contour

Thickness in ft
120 (37 m)
0 (0 m)

REFERENCES

Clifford, M.J., 1973, Silurian rock salt of Ohio: Columbus, Ohio Department of Natural Resources, Division of Geological Survey Report of Investigations 90, 21 p., 4 pl.

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