Sandy Lithofacies within the Icebox Formation (Ordovician), North Dakota and Montana

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The Icebox Formation was deposited in a marine environment, seaward of the shoreline environments. Normal marine conditions are indicated by the fossil assemblages, which suggest that conditions existed for at least part of the time during which the Icebox Formation was being deposited. The mouth of water was unidirectional, but the presence of some sandy lithofacies may indicate that shallows were cut grass. The lack of coral is unusual and new refraction appears from another rather shallow water.

Approximate stratigraphic positions of the major and extensive sand bodies within the Icebox Formation

Locations of wells in which the Icebox Formation was tested

Locations of wells reporting gas in Icebox Formations

Locations of wells reporting oil in Icebox Formations

Locations of wells in which the Icebox Formation was tested

Formation tests were run on the Icebox in two wells in Beekmantown, Manhattan, Montana, the second test was also in a second section of one of the sand units.

Most of the reported tests were done on the Black Island Formation, or on an interval which included the Black Island and some of the overlying formations, or on the underlying Icebox Formation. Of the tests, four reported gas and three reported oil. Two of the gas tests were done on sand bodies in the Icebox, one test reported oil, one gas, and one oil/gas.

On balance, it seems likely that the Icebox formation, particularly the sand units, has some oil and gas potential. The sand bodies have only been tested in a limited number of locations. Large areas of sandstones that are good candidates for reservoir rock, and underlying with an extensive seismic survey may have allowed generated hydrocarbons to accumulate in the sand bodies. Production from the sand bodies will probably be of great importance.

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The Icebox Formation is divided into three marine environments in the eastern United States. The mouth of water is unidirectional, but the presence of some sandy lithofacies may indicate that shallows were cut grass. The lack of coral is unusual and new refraction appears from another rather shallow water.

Approximate stratigraphic positions of the major and extensive sand bodies within the Icebox Formation

Locations of wells in which the Winnipeg Formation was tested

Locations of wells reporting gas in Winnipeg Formations

Locations of wells reporting oil in Winnipeg Formations

Locations of wells in which the Winnipeg Formation was tested

Formation tests were run on the Winnipeg in a number of locations. Some gas tests were done on the Winnipeg Formation in the central Basin in Saskatchewan.


