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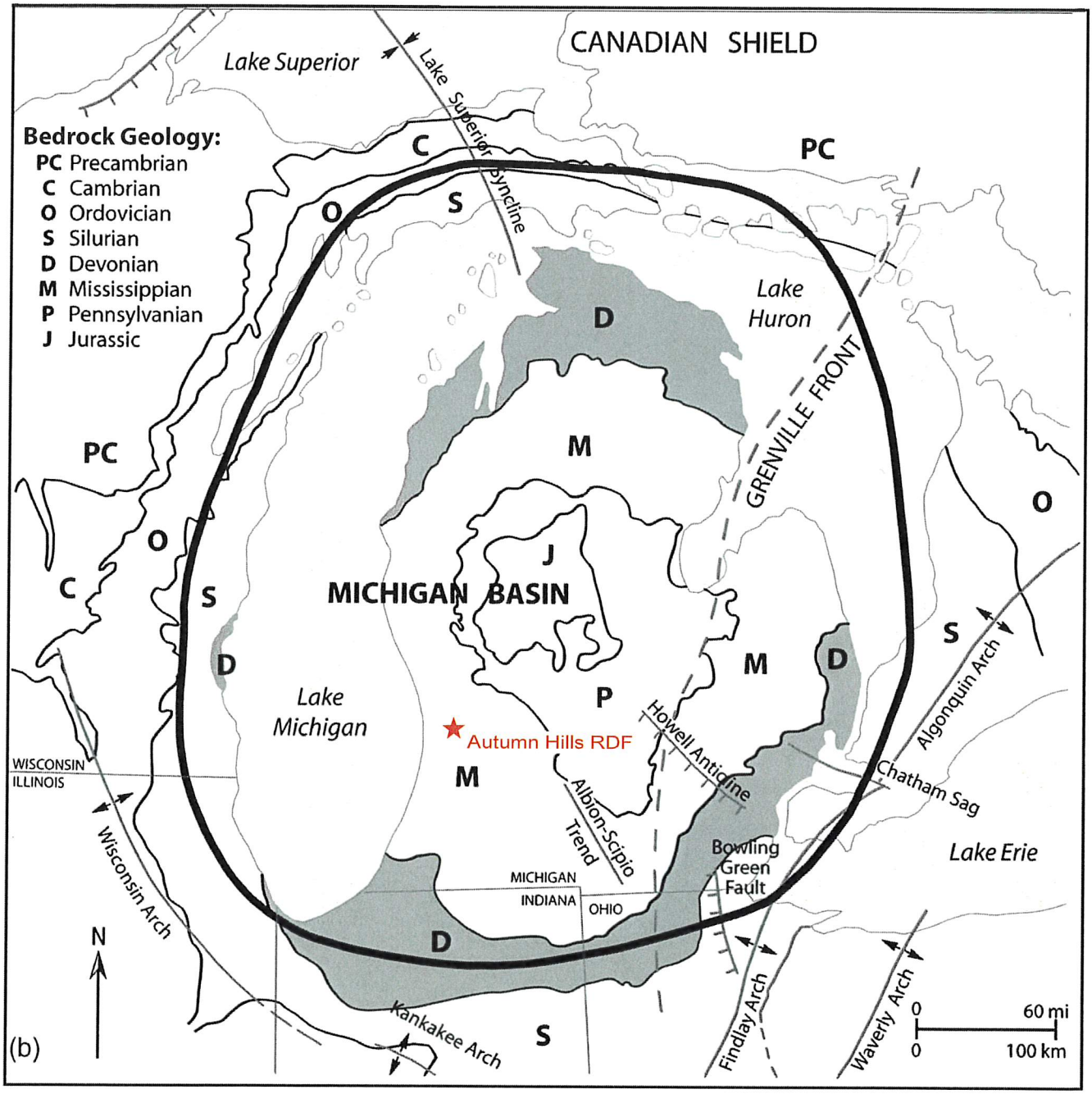

Modified from : Catacosinos et al., 1991

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Figure B.8-1
General Geology and Structural Features of the Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: See Bar Scale	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-01.ai	By: JLM	Checked: AP

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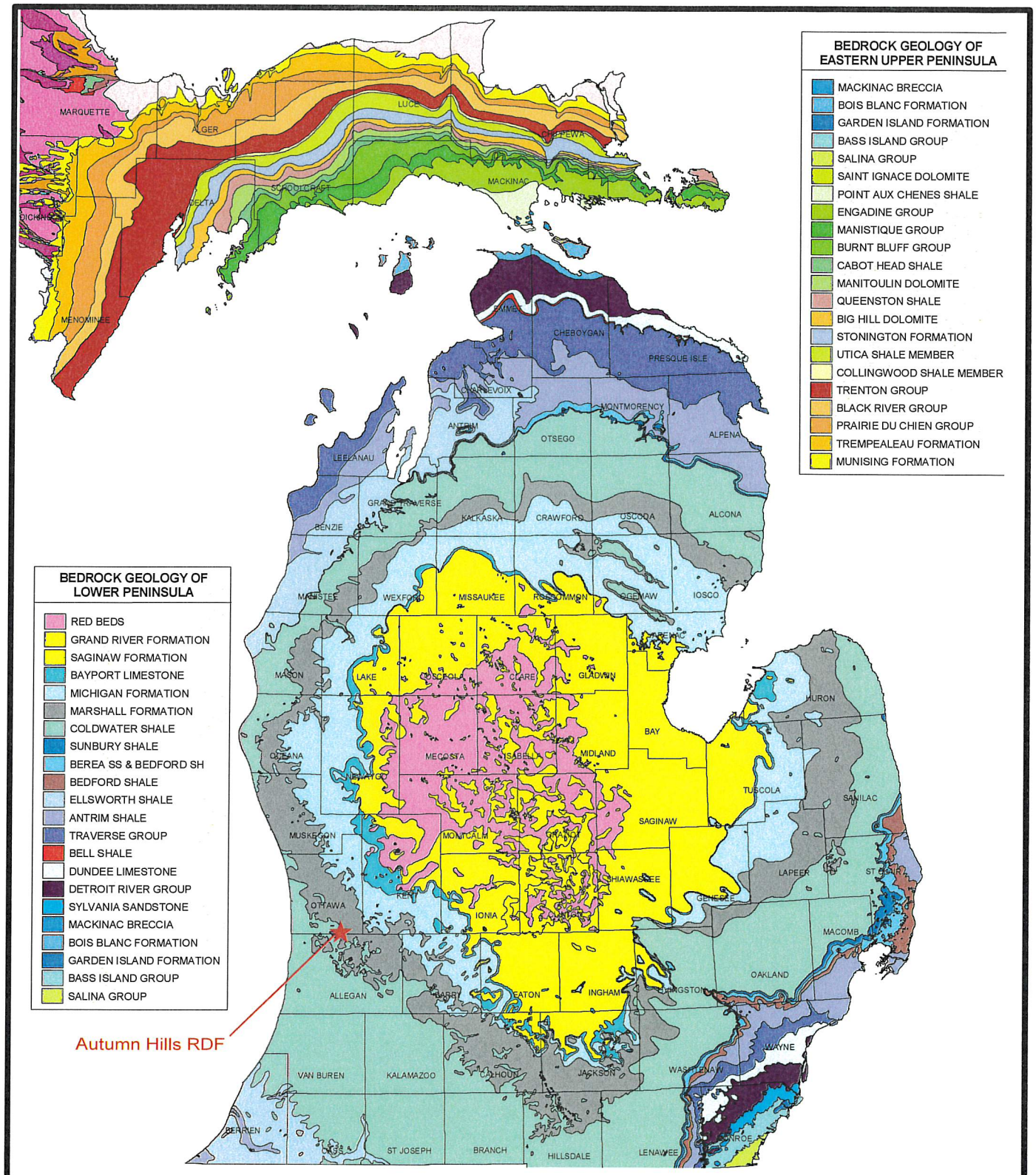

SOURCE

Michigan DNR — MICHIGAN DEPARTMENT OF NATURAL RESOURCES
LAND AND MINERALS SERVICES DIVISION
RESOURCE MAPPING AND AERIAL PHOTOGRAPHY — RMAP

Michigan Resource Information System
Part 609, Resource Inventory, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Automated from "Bedrock Geology of Michigan," 1967, 1:500,000 scale, which was compiled from a variety of sources by the Michigan Department of Environmental Quality, Geological Survey Division.

Date: 11/12/99 — N — 0 20 40 Miles

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Figure B.8-2
Geology Map of Michigan
2018 Autumn Hills - MDEQ Class I Permit

Scale: See Bar Scale	Date: April 2018
2018_WM_MDEQ_Fig_B.8-02.ai	By: JLM — Checked: AP

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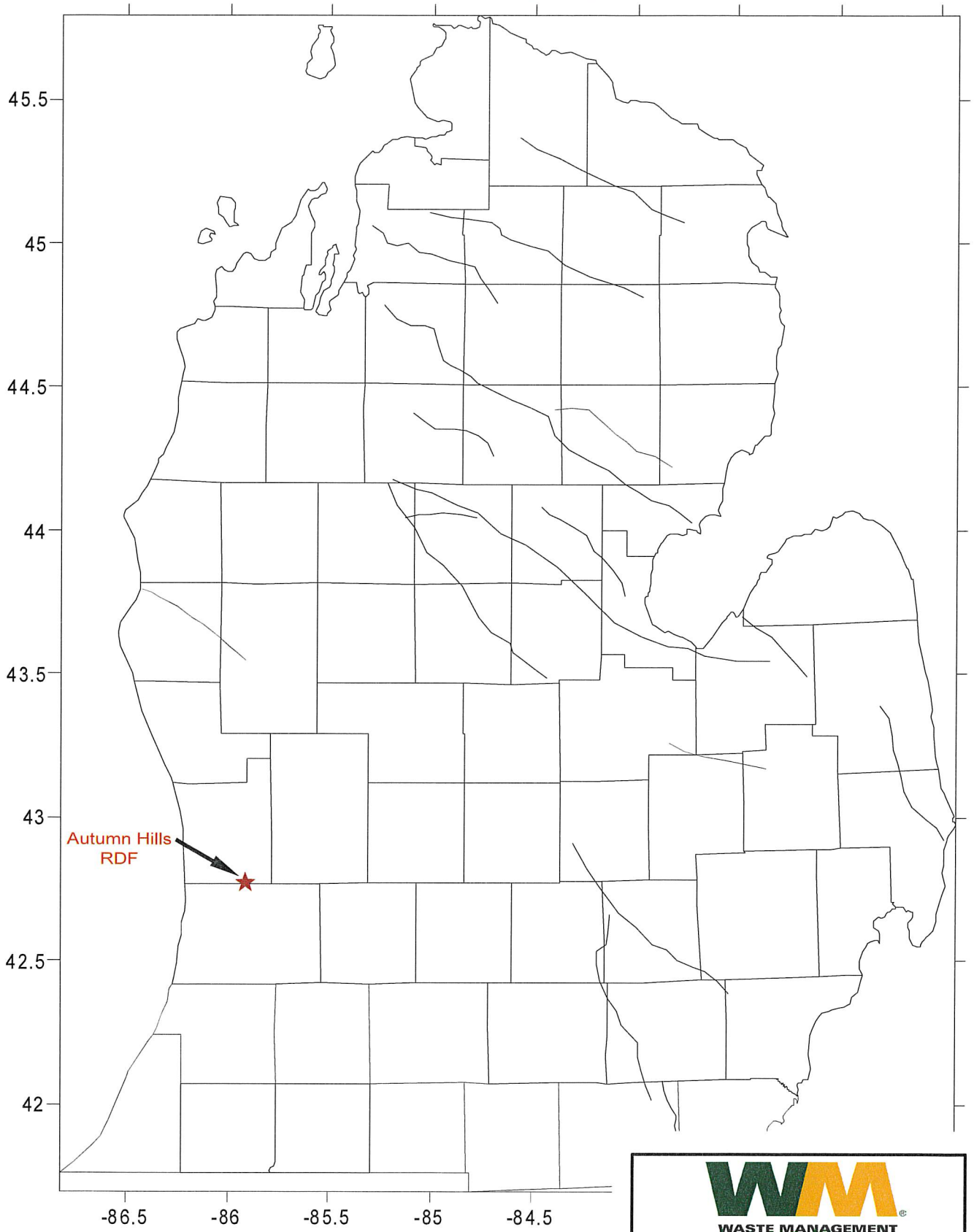

From: Wood and Harrison, 2002

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Figure B.8-3
Dundee Lineaments, Michigan Basin

2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-03.ai	By: JLM	Checked: AP

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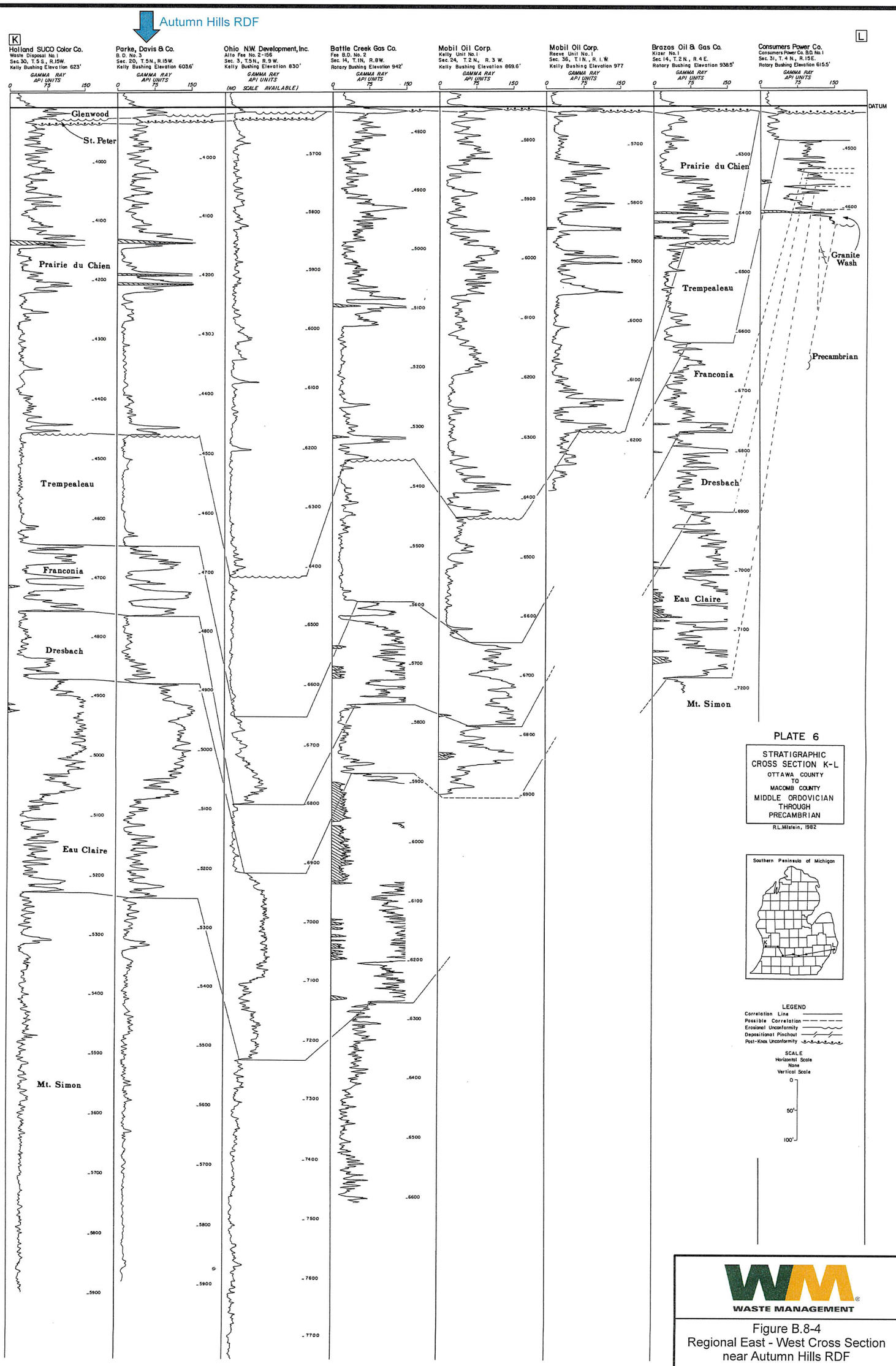

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Figure B.8-4
Regional East - West Cross Section near Autumn Hills RDF

2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018
2018_WM_MDEQ_Fig_B.8-04.ai	By: JLM / Checked: AP

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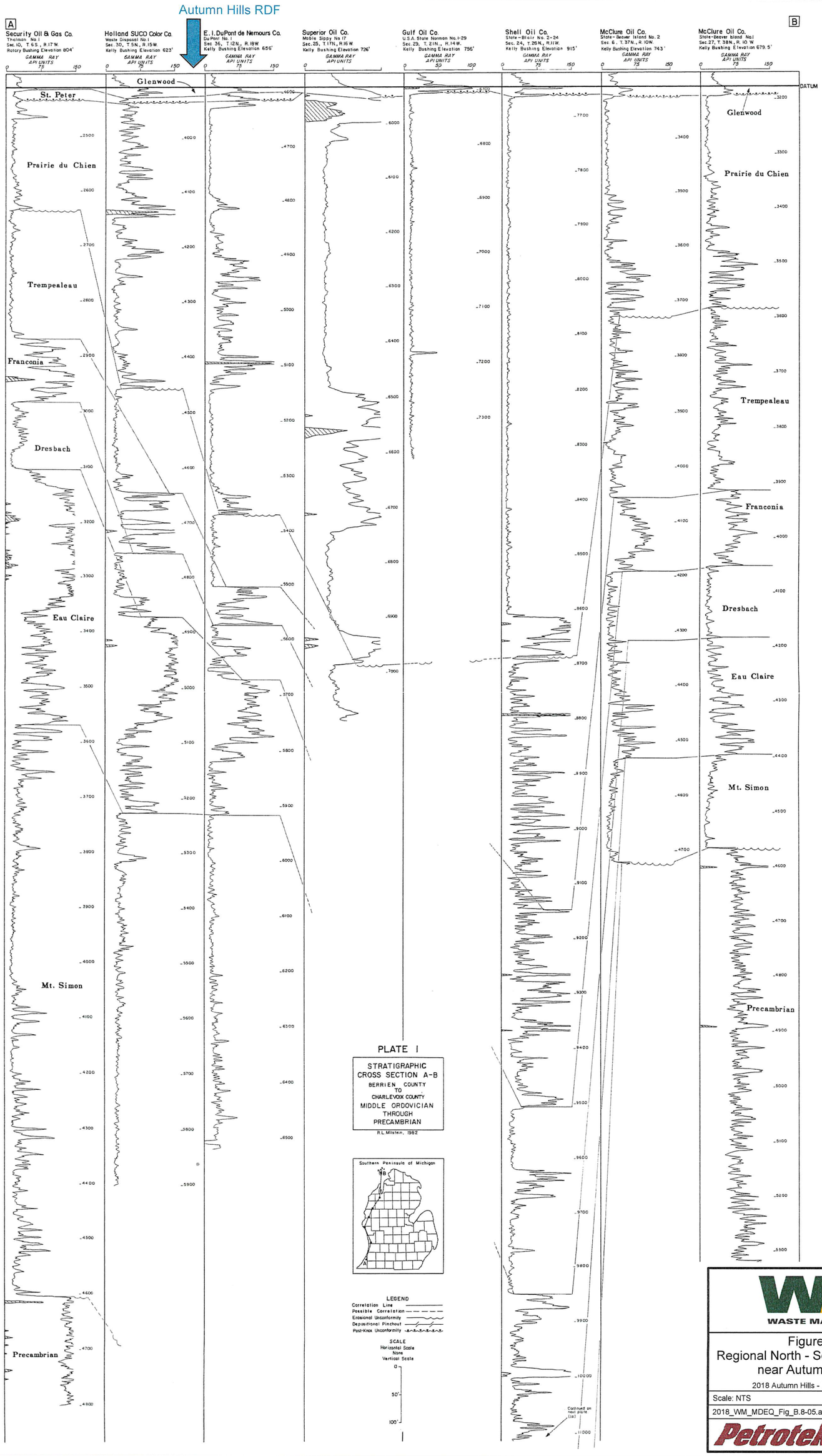

PLATE I

STRATIGRAPHIC CROSS SECTION A-B
BERRIEN COUNTY TO CHARLEVOIX COUNTY
MIDDLE ORDOVICIAN THROUGH PRECAMBRIAN

R.L. Milstein, 1982

Southern Peninsula of Michigan

LEGEND
Correlation Line
Possible Correlation
Erosional Unconformity
Depositional Pinchout
Post-Knox Unconformity

SCALE
Horizontal Scale
None
Vertical Scale
0
50'
100'

WASTE MANAGEMENT

Figure B.8-5
Regional North - South Cross Section near Autumn Hills RDF

2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
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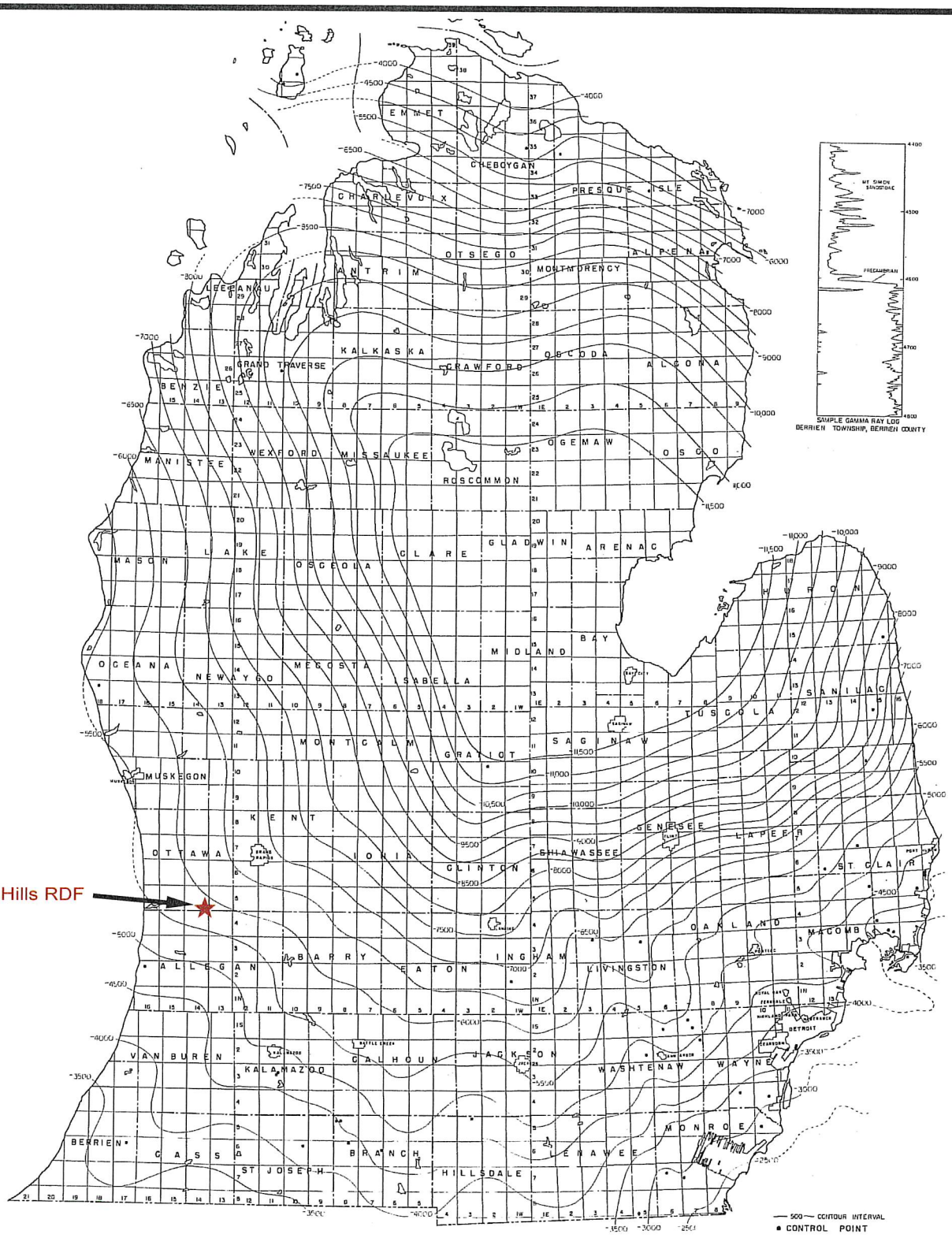

After: R. Milstein, 1988

WASTE MANAGEMENT

Figure B.8-6
Precambrian Basement Structure Contour Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
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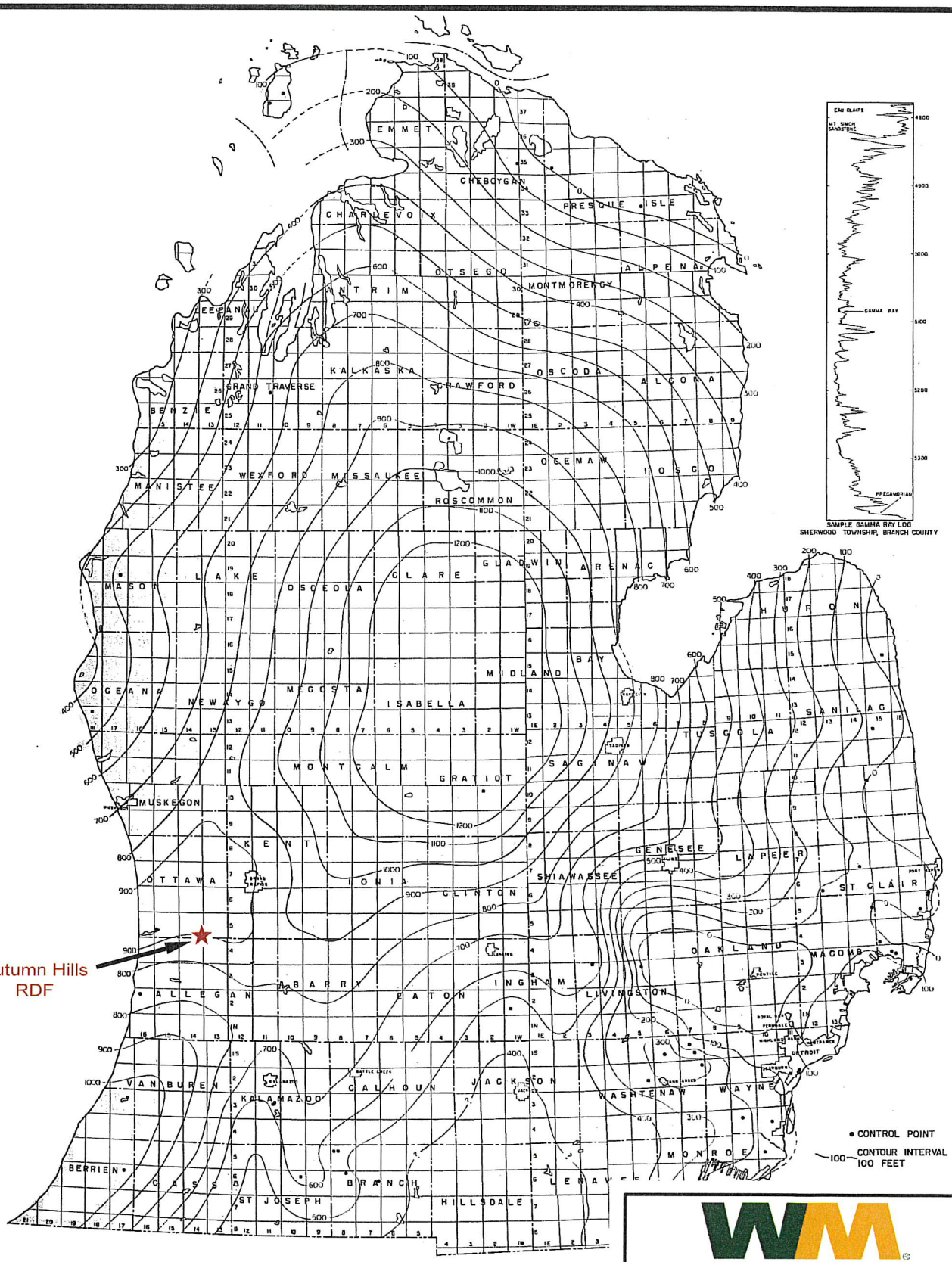

After: R. Milstein, 1988

WASTE MANAGEMENT

Figure B.8-7
Mt. Simon Sandstone Isopach Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-07.ai	By: JLM	Checked: AP

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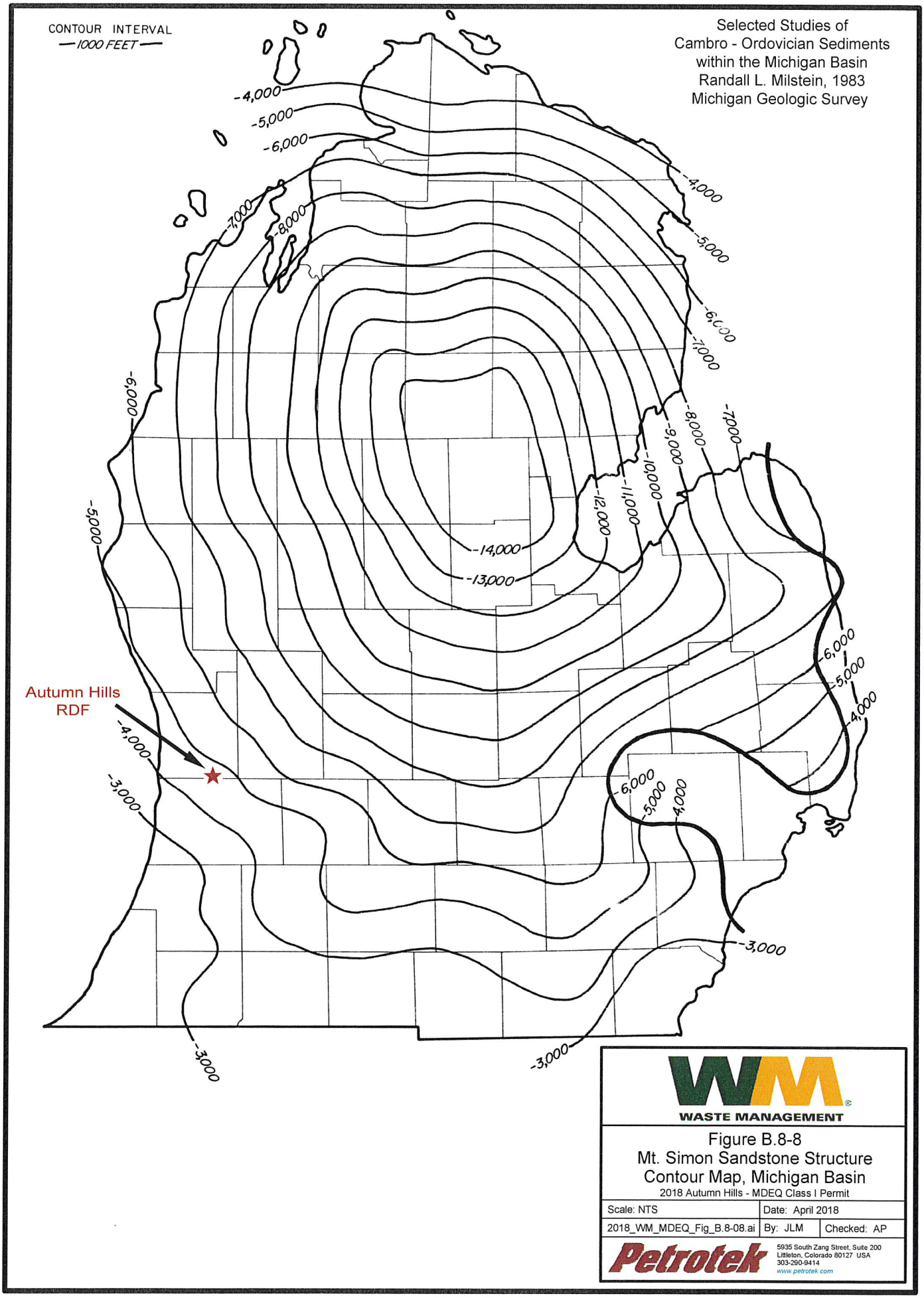

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Figure B.8-8
Mt. Simon Sandstone Structure
Contour Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-08.ai	By: JLM	Checked: AP

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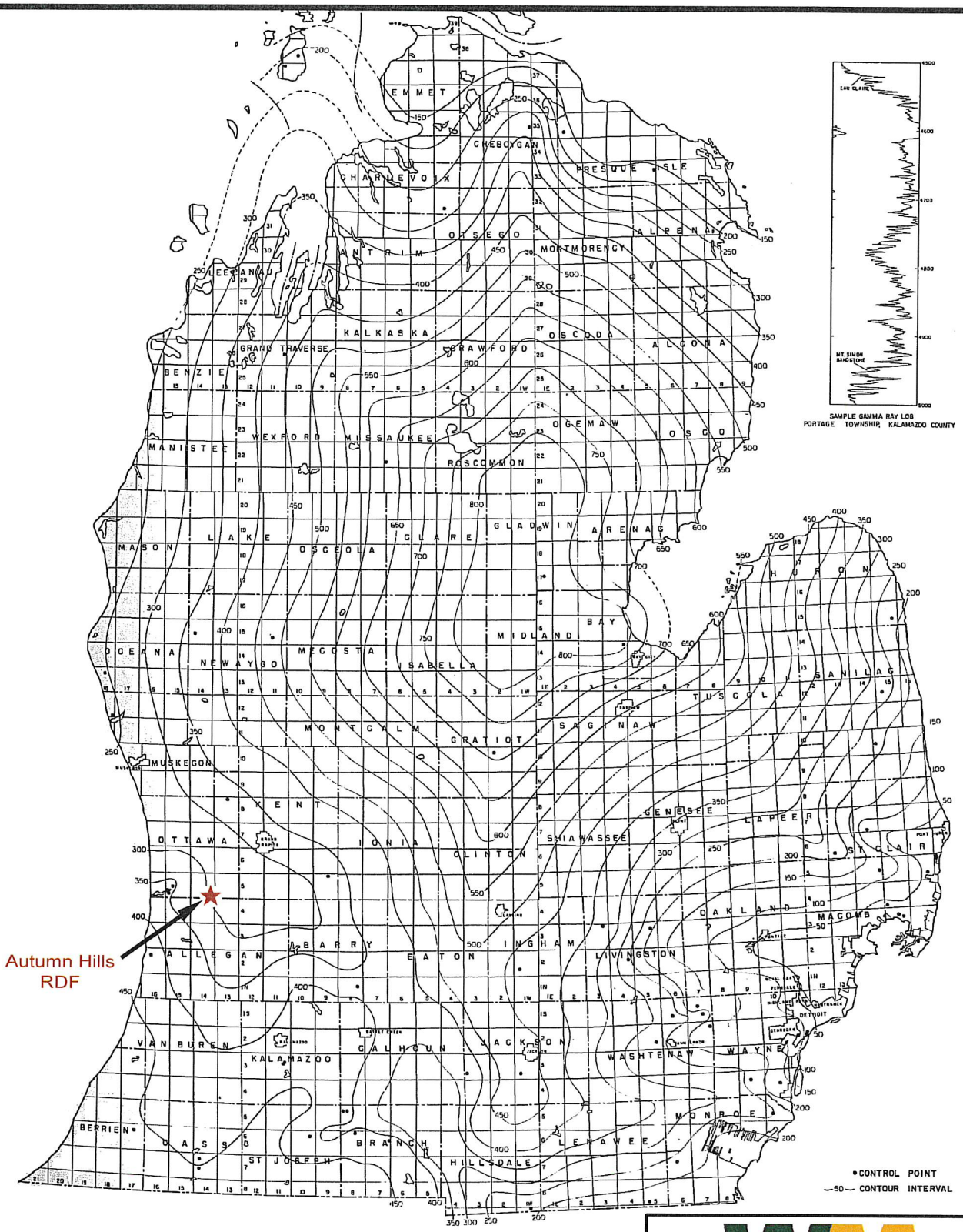

After: R. Milstein, 1988

WASTE MANAGEMENT

Figure B.8-9
Eau Claire Formation Isopach Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-09.ai	By: JLM	Checked: AP

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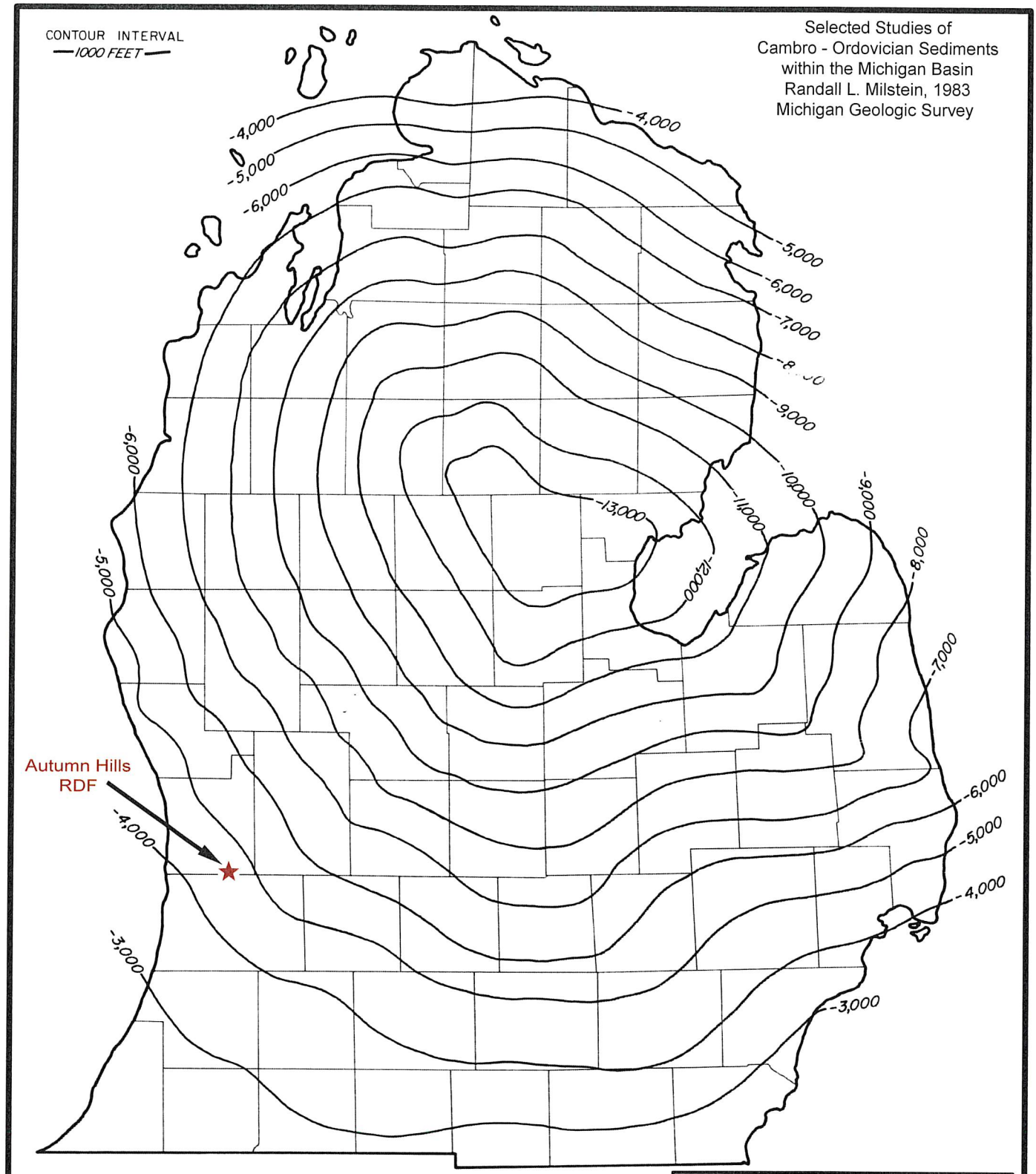

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Figure B.8-10
Eau Claire Formation Structure
Contour Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-10.ai	By: JLM	Checked: AP

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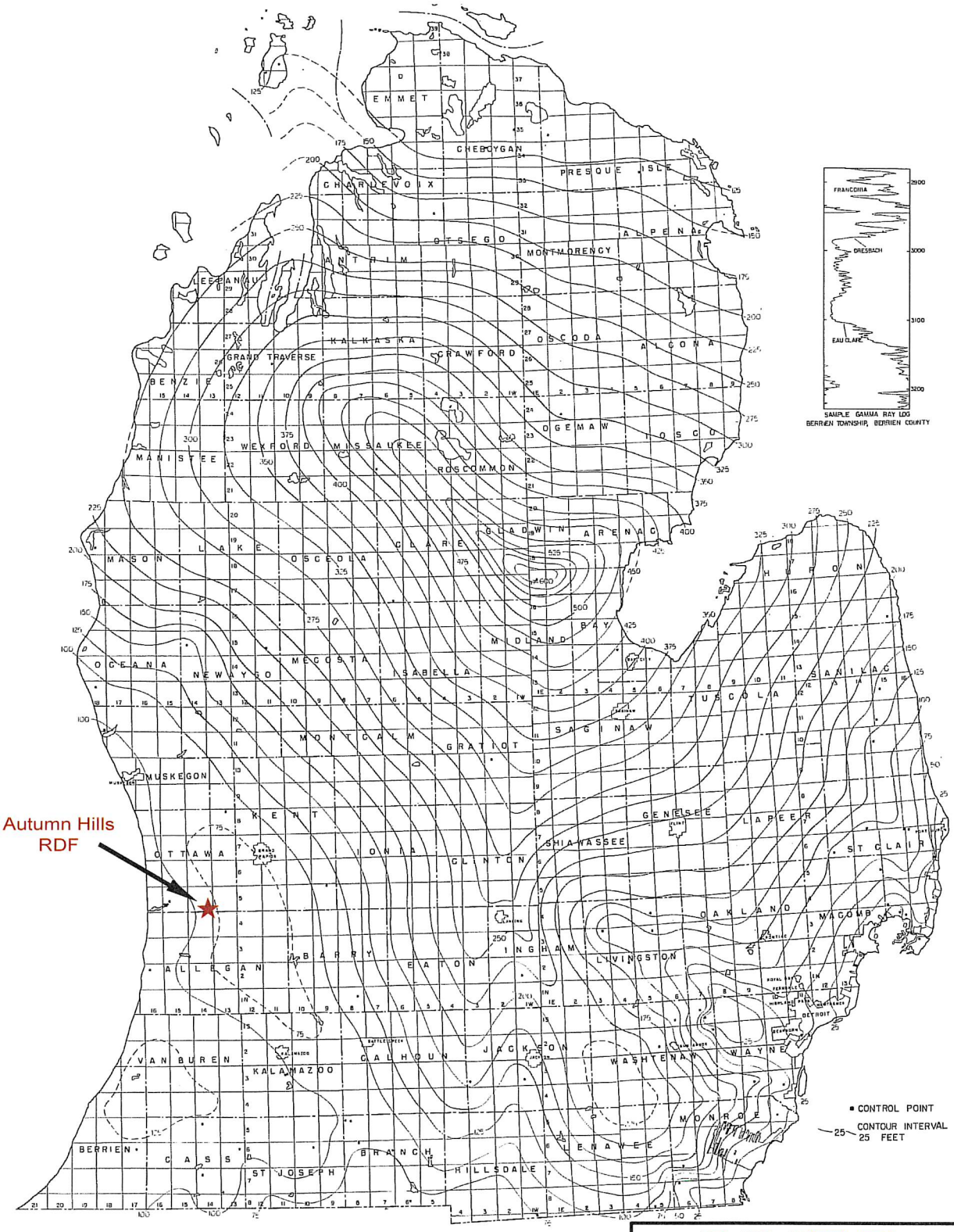

WASTE MANAGEMENT

Figure B.8-11
Galesville (Dresbach) Sandstone
Isopach Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-11.ai	By: JLM	Checked: AP

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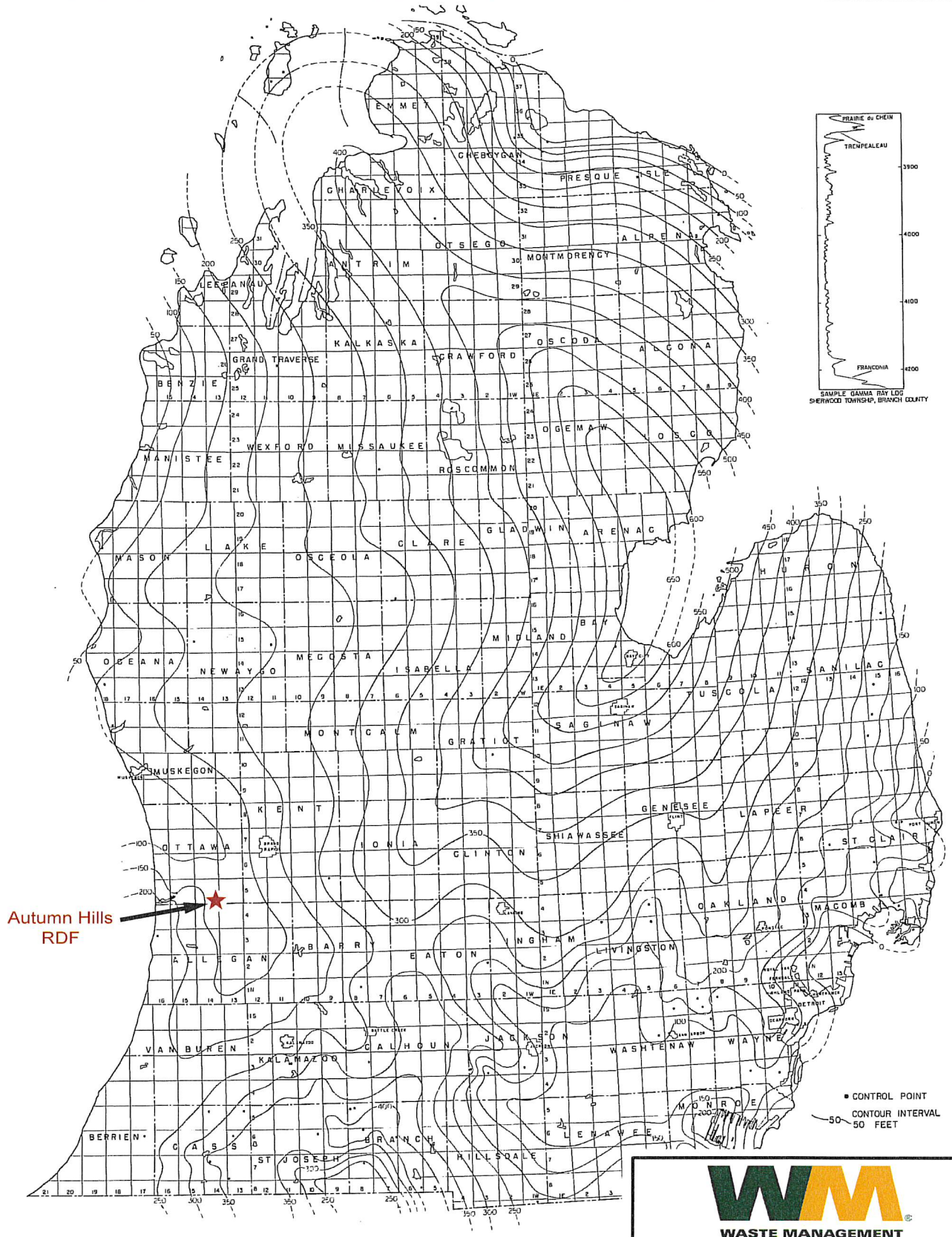
After: R. Milstein, 1988



After: R. Milstein, 1988

WASTE MANAGEMENT

Figure B.8-12
Trempealeau Formation Isopach Map, Michigan Basin

2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: January 2018	
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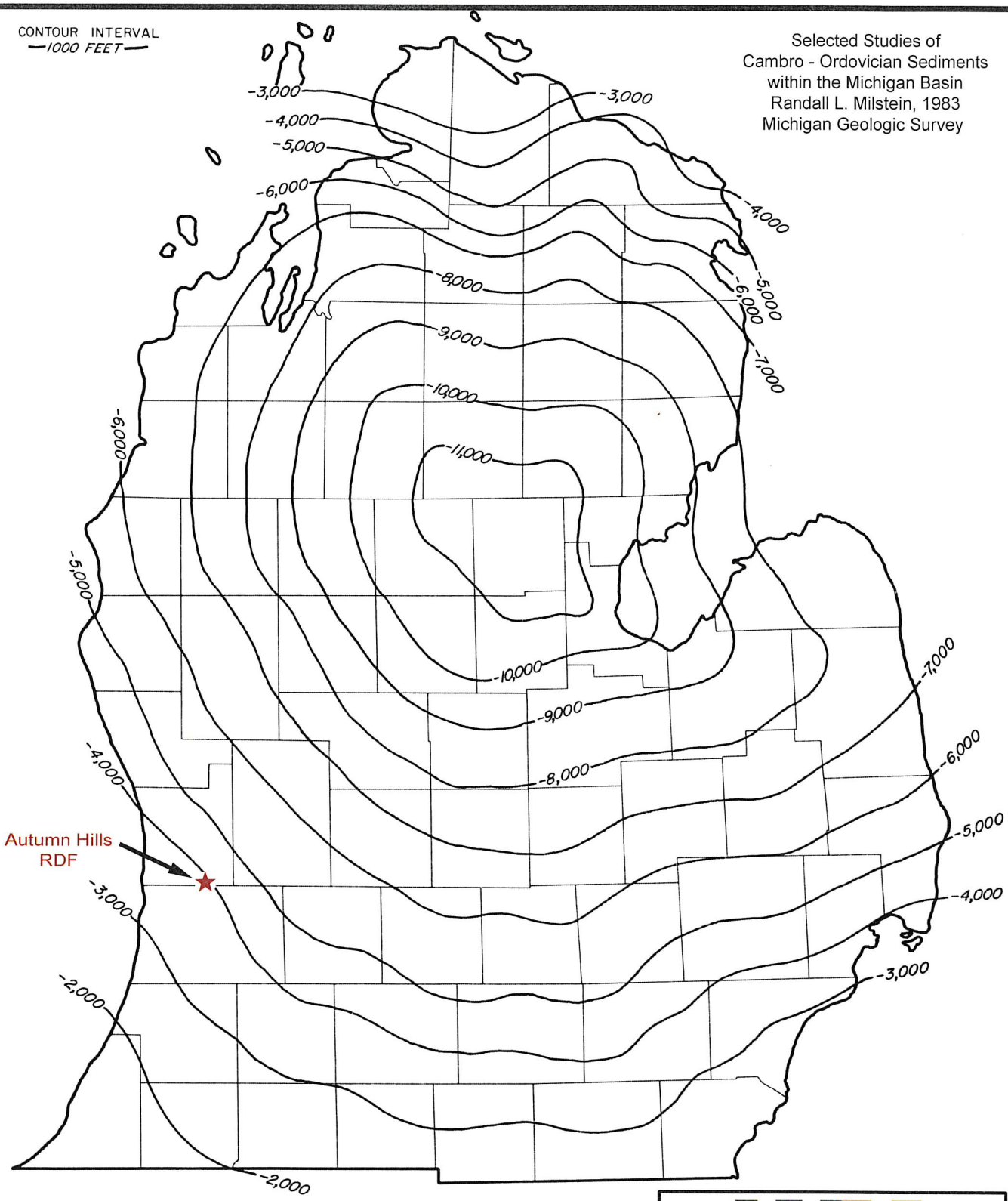

WASTE MANAGEMENT

Figure B.8-13
Trempealeau Formation Structure
Contour Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-13.ai	By: JLM	Checked: AP

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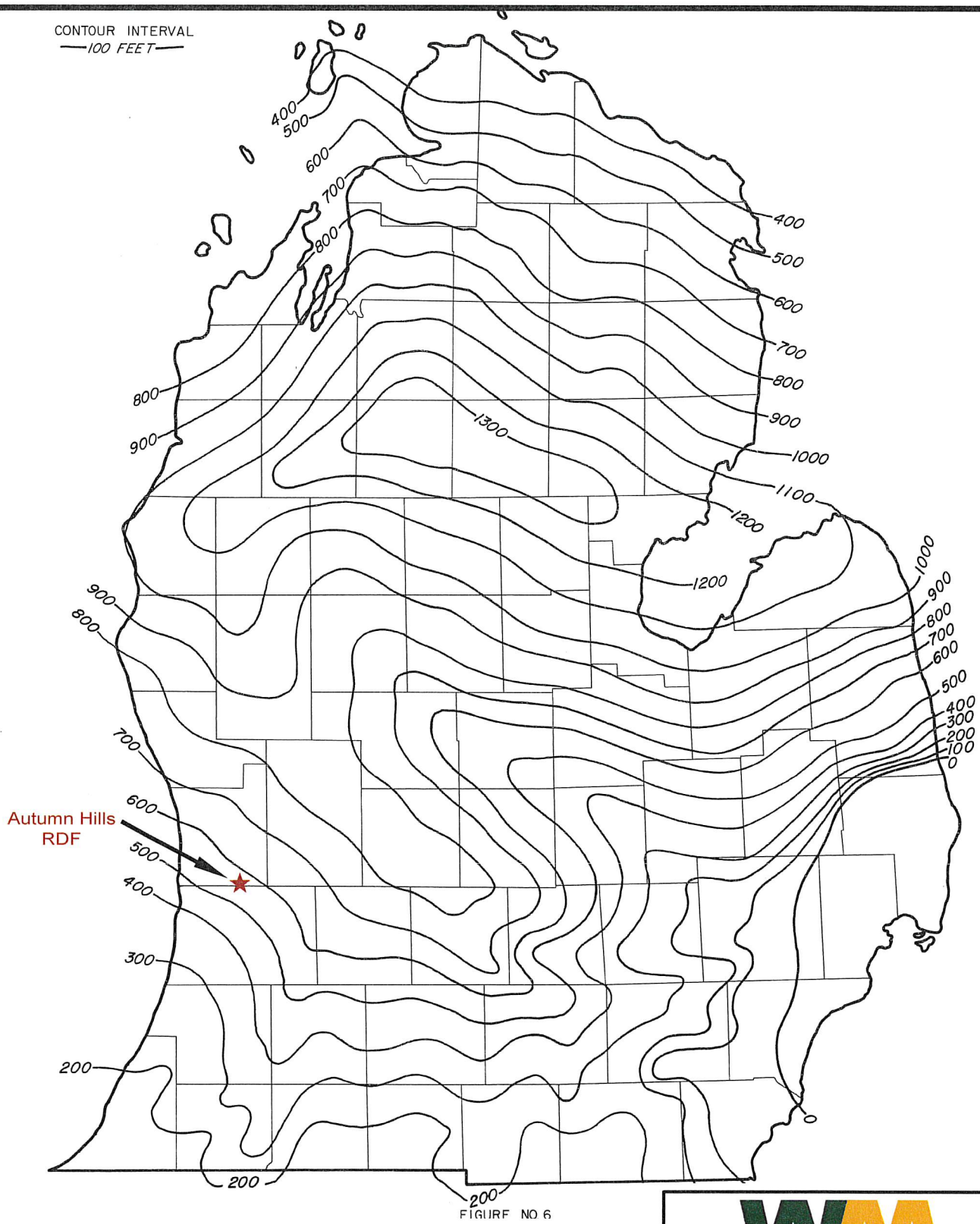

FIGURE NO 6

After: R. Milstein, 1983

WASTE MANAGEMENT

Figure B.8-14
Prairie du Chien Group
Isopach Map, Michigan Basin
2018 Autumn Hills - MDEQ Class I Permit

Scale: NTS	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-14.ai	By: JLM	Checked: AP

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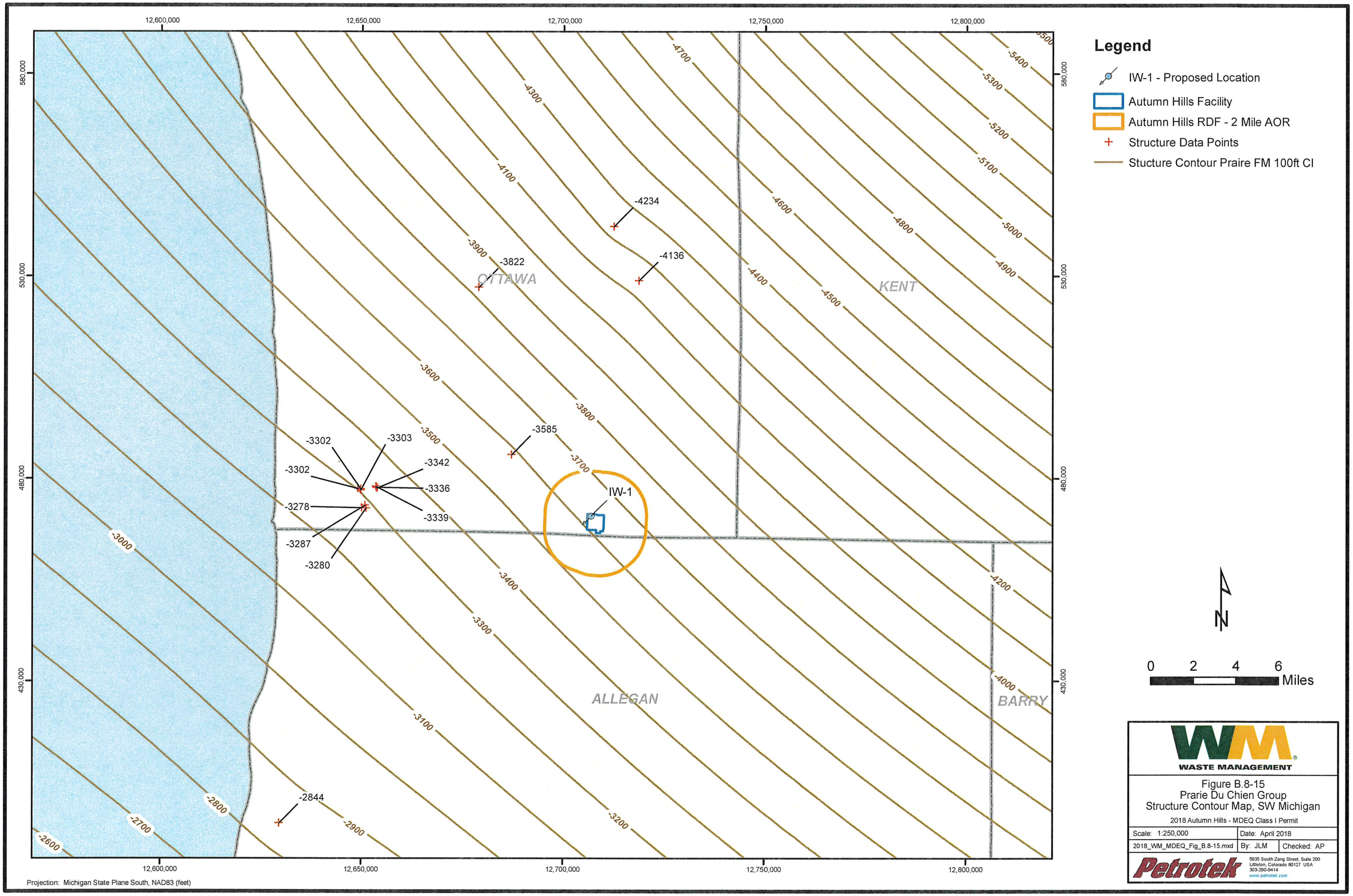
Legend
IW-1 - Proposed Location
Autumn Hills Facility
Autumn Hills RDF - 2 Mile AOR
Structure Data Points
Stucture Contour Praire FM 100ft CI
12,600,000
12,650,000
12,700,000
12,750,000
12,800,000
580,000
530,000
480,000
430,000
-4700
-4300
-4100
-5400
-5300
-5200
-5100
-5000
-4900
-4800
-4600
-4400
-4500
-4200
-4000
-3900
-3600
-3800
-3700
-3500
-3400
-3300
-3200
-3100
-3000
-2900
-2800
-2700
-2600
-4234
-4136
-3822
-3585
-3302
-3303
-3342
-3336
-3339
-3278
-3287
-3280
-2844
IW-1
OTTAWA
KENT
ALLEGAN
BARRY
N
0 2 4 6
Miles
WASTE MANAGEMENT
Figure B.8-15
Prarie Du Chien Group
Structure Contour Map, SW Michigan
2018 Autumn Hills - MDEQ Class I Permit
Scale: 1:250,000
Date: April 2018
2018_WM_MDEQ_Fig_B.8-15.mxd
By: JLM
Checked: AP
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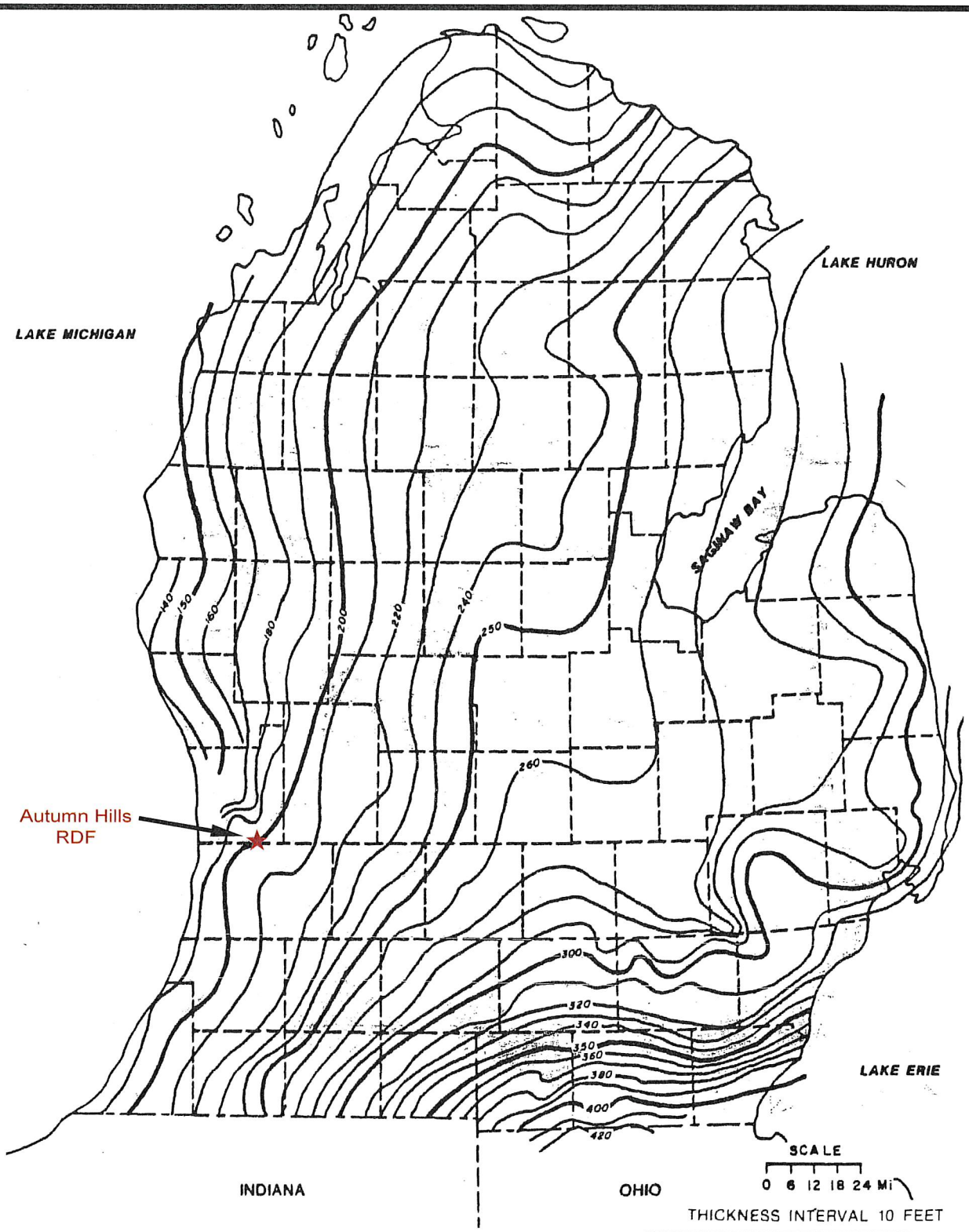
Projection: Michigan State Plane South, NAD83 (feet)



Nurmi, 1972 as presented in Envirocorp, 1991

WASTE MANAGEMENT

Figure B.8-16
Utica Shale Isopach Map,
Michigan Basin

2018 Autumn Hills - MDEQ Class I Permit

Scale: See Bar Scale	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-16.ai	By: JLM	Checked: AP

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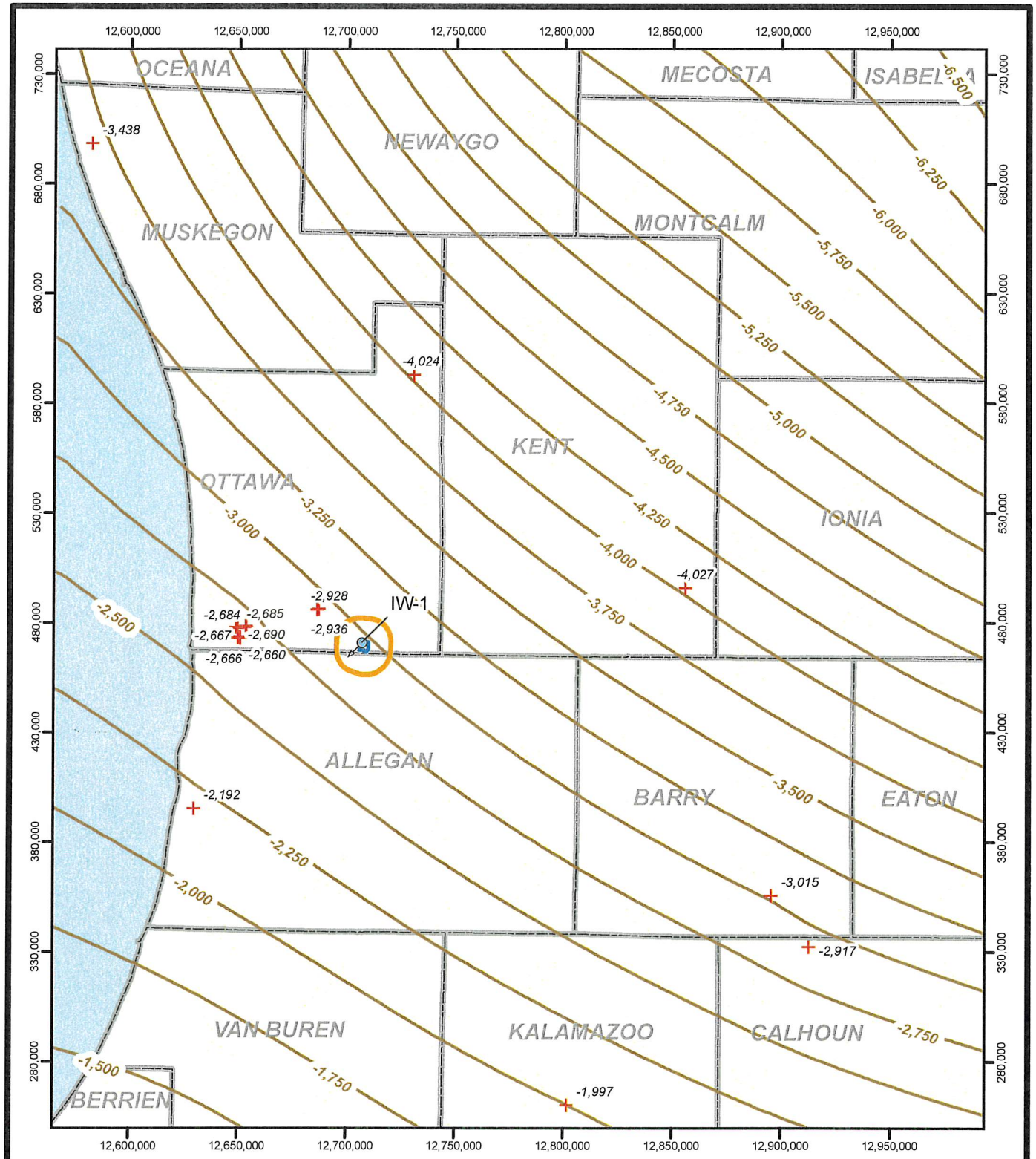

Legend

- IW-1 - Proposed Location
- Autumn Hills RDF - 2 Mile AOR
- Autumn Hills Facility
- Contour Line, Major

N

0 5 10 Miles

Projection: Michigan State Plane South, NAD83 (feet)

WASTE MANAGEMENT

Figure B.8-17
Utica Shale Structure Contour Map, Southwestern Michigan
2018 Autumn Hills - MDEQ Class I Permit

Scale: 1:750,000	Date: April 2018	
2018_WM_MDEQ_Fig_B.8-17.mxd	By: JLM	Checked: AP

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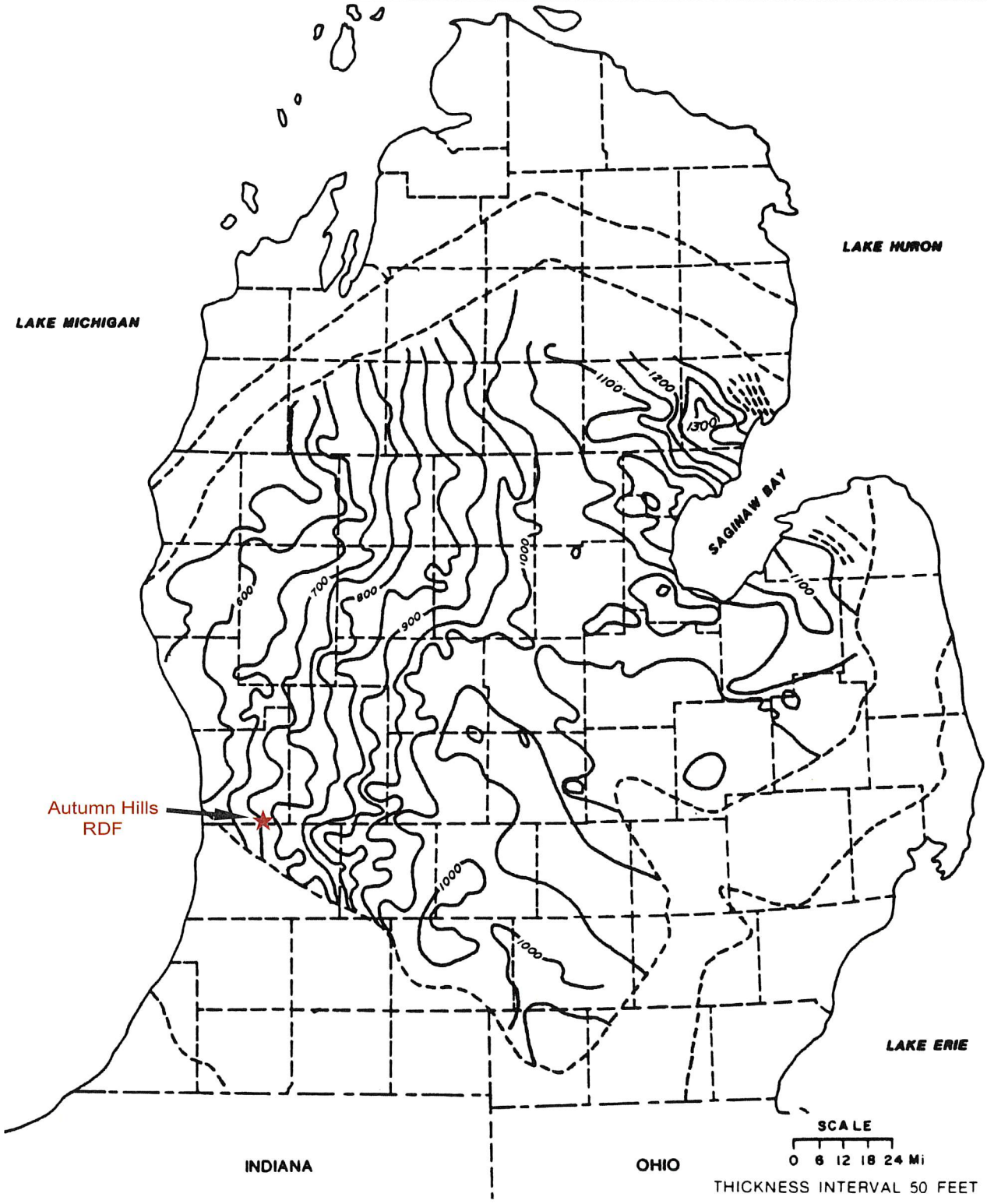

After: Chung, 1973, as presented in WMU, 1981

WASTE MANAGEMENT

Figure B.8-18
Coldwater Formation Isopach Map, Michigan Basin
2018 Autumn Hills RDF - MDEQ Class I Permit

Scale: See Bar Scale	Date: April 2018	
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