A

STRATIGRAPHIC CROSS SECTION A-J

GRATIOT COUNTY TO HILLSDALE COUNTY

UPPER & MIDDLE ORDOVICIAN

OF THE MICHIGAN BASIN

R T LILIENTHAL, 1978

DRAWN BY G A WILSON

SCALE

Horizontal Scale None

Vertical Scale 0 — 100 — 200

LEGEND

- CORRELATION LINE
- POSSIBLE CORRELATION
- EROSIONAL UNCONFORMITY
- DEPOSITIONAL PINCHOUT
- POROSITY ZONE

J

McClure Oil Co.
Sparks, Eckelbarger & Whightsil No. 1-8
Sec. 8, T 10 N R 2 W
Ground Level Elevation 745'

McClure Oil Co.
Fox No. 1
Sec. 6, T 7 N R 1 W
Ground Level Elevation 759.5'

Hibbard Oil Corp.
R. A. Selby No. 1
Sec 33, T 2 N R 2 W
Ground Level Elevation 925'

Mobil Oil Corp.
Gladys Kelly Unit No. 1
Sec. 24, T 2 N R 3 W
Ground Level Elevation 855.73'

McClure Oil Co.
Crawford No. 1
Sec 4, T 1 S R 3 W
Ground Level Elevation 932.6'

Texaco, Inc.
Stella Konkol No 1
Sec 15, T 2 S R 2 W.
Ground Level Elevation 972'

McClure Oil Co.
Harlan J. Bellis et al No. 1
Sec 17, T 4 S R 2 W
Ground Level Elevation 1057.9'

Jenkins and Woodruff Oil, Inc.
Edwin Houseknecht No. 1
Sec 31, T 5 S R 2 W
Ground Level Elevation 1175.6'

Texaco, Inc.
Percy Edmonds No. 1
Sec 10, T 7 S R 2 W.
Ground Level Elevation 1082'

Glynn Trolz & Assoc., Inc.
L Laser No. 1
Sec 15, T 8 S R 1 W
Ground Level Elevation 923'

GAMMA RAY API UNITS

NEUTRON POROSITY % LIMESTONE MATRIX

DATUM

ORDOVICIAN

Cincinnation Series

CS Unit 5

CS Unit 4

CS Unit 3

CS Unit 2

CS Unit 1

Utica

Trenton Group

Black River Group

TG-1

Black River Shale

BR-1

BR-2

Porosity Zone

Glenwood Member

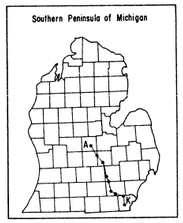
K

STRATIGRAPHIC CROSS SECTION A-K

GRATIOT COUNTY
TO
MONROE COUNTY
PENNSYLVANIAN & MISSISSIPPIAN
OF THE
MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY: D. D. HODGE & G. A. WILSON

SCALE
Horizontal Scale
None
Vertical Scale
0
100
200



LEGEND
CORRELATION LINE
POSSIBLE CORRELATION
EROSIONAL UNCONFORMITY
DEPOSITIONAL PINCHOUT
POROSITY ZONE

A

McClure Oil Co.
Sparks, Eckelbarger & Whightsil No. 1-8
Sec. 8, T.10 N. R.2W.
Ground Level Elevation 745'

GAMMA RAY API UNITS 0 150 300

JURASSIC
Kimeridgian
PENNSYLVANIAN
MISSISSIPPIAN
Bayport
Michigan
"Triple Grp"
"Green Line"
Michigan "Stray"
Marshall
DELETED AREA SHOWN ON PLATE 9
DATUM

McClure Oil Co.
Fox No. 1
Sec. 6, T.7 N. R.1W.
Ground Level Elevation 759.5'

GAMMA RAY API UNITS 0 100 200 300 400

DELETED AREA SHOWN ON PLATE 56

Mobil Oil Corp.
Jelinek-Ferris Unit No. 1
Sec. 5, T. 5 N. R.2E.
Ground Level Elevation 831.25'

GAMMA RAY API UNITS 0 100 200 300 400
NEUTRON API UNITS 0 2000 4000
LATEROLOG CONDUCTIVITY MILLIMHOS/M (=1000/OHM-M) 400 200 0

Coldwater
NEUTRON
CONDUCTIVITY

Patrick Petroleum Corp.
R Kleinschmidt No. 1
Sec. 17, T. 2 N. R.3E.
Ground Level Elevation 948'

GAMMA RAY API UNITS 0 150 300

Glacial Drift
Sunbury
Berea

William R. Albers
Hannawald No. 1
Sec. 6, T.1 S. R.3E.
Ground Level Elevation 948'

GAMMA RAY API UNITS 0 100 200 300 400

A. E. Rovsek
Irma Grau No. 1
Sec. 8, T. 3 S. R.4E.
Ground Level Elevation 947.7'

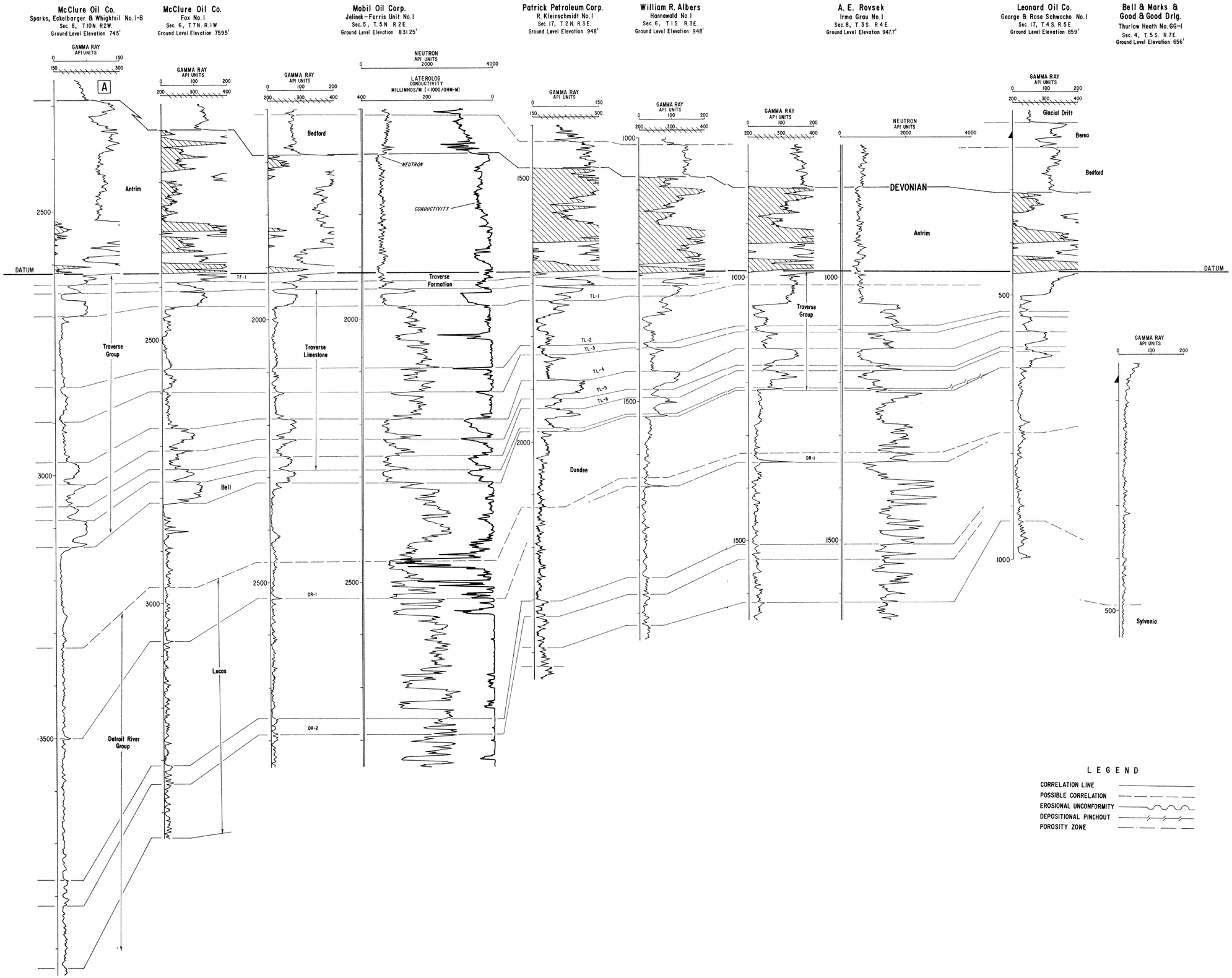
GAMMA RAY API UNITS 0 100 200 300 400
NEUTRON API UNITS 0 2000 4000

Coldwater "Red Rock"
DATUM

Leonard Oil Co.
George & Rose Schwocho No. 1
Sec. 17, T.4 S. R.5E.
Ground Level Elevation 859'

GAMMA RAY API UNITS 0 100 200

Glacial Drift
Berea



K

STRATIGRAPHIC CROSS SECTION A-K
GRATIOT COUNTY TO MONROE COUNTY
UPPER & MIDDLE DEVONIAN OF THE MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY D. D. HODGE & G. A. WILSON

SCALE
Horizontal Scale None
Vertical Scale
0
100
200

K

A

McClure Oil Co.
Sparks, Eckelbarger & Whightsil No. I-8
Sec. 8, T.10N. R.2W.
Ground Level Elevation 745'

GAMMA RAY API UNITS 0 150

Mobil Oil Corp.
Jelinek–Ferris Unit No. I
Sec. 5, T. 5 N. R.2 E.
Ground Level Elevation 831.25'

NEUTRON API UNITS 0 2000 4000

McClure Oil Co.
Fox No. I
Sec. 6, T.7N. R.1W.
Ground Level Elevation 759.5'

GAMMA RAY API UNITS 0 100 200

GAMMA RAY API UNITS 0 100 200

LATEROLOG CONDUCTIVITY MILLIMHOS/M (=1000/OHM-M) 400 200 0

STRATIGRAPHIC CROSS SECTION A-K
GRATIOT COUNTY
TO
MONROE COUNTY
MIDDLE & LOWER DEVONIAN
& UPPER SILURIAN
OF THE
MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY: D. D. HODGE & G. A. WILSON

SCALE
Horizontal Scale
None
Vertical Scale
0
100
200

Southern Peninsula of Michigan

LEGEND
CORRELATION LINE
POSSIBLE CORRELATION
EROSIONAL UNCONFORMITY
DEPOSITIONAL PINCHOUT
POROSITY ZONE

Patrick Petroleum Corp.
R. Kleinschmidt No. I
Sec. 17, T.2 N. R.3 E.
Ground Level Elevation 948'

GAMMA RAY API UNITS 0 150

William R. Albers
Hannawald No. I
Sec. 6, T.1 S. R.3 E.
Ground Level Elevation 948'

GAMMA RAY API UNITS 0 100 200

A. E. Rovsek
Irma Grau No. I
Sec. 8, T.3 S. R.4 E.
Ground Level Elevation 947.7'

GAMMA RAY API UNITS 0 100 200

NEUTRON API UNITS 0 2000 4000

Leonard Oil Co.
George & Rose Schwocho No. I
Sec. 17, T.4 S. R.5 E.
Ground Level Elevation 859'

GAMMA RAY API UNITS 0 100 200 300

Bell & Marks & Good & Good Drlg.
Thurlow Heath No. GG-I
Sec. 4, T.5 S. R.7 E.
Ground Level Elevation 656'

GAMMA RAY API UNITS 0 100 200

McClure Oil Co.
Stotz – Williams No. I
Sec. 10, T.7 S. R.7 E.
Ground Level Elevation 637'

GAMMA RAY API UNITS 0 150

Amherstburg
Sylvania
SILURIAN
Bass Islands
Salina Group
F Evaporite
Detroit River Group
G Unit
F Salt 6
F Salt 5
F Salt 4
F Salt 3
F Salt 2
F Salt 1
E Unit
D Evaporite
C Unit
CONDUCTIVITY
NEUTRON
Sylvania
Bois Blanc
DATUM

McClure Oil Co.
Sparks, Eckelbarger & Whightsil No.1-8
Sec. 8, T.10N R.2W.
Ground Level Elevation 745'

McClure Oil Co.
Fox No.1
Sec. 6, T.7N. R.1W.
Ground Level Elevation 759.5'

Mobil Oil Corp.
Jelinek-Ferris Unit No.1
Sec. 5, T.5N R.2E.
Ground Level Elevation 831.25'

Patrick Petroleum Corp.
R. Kleinschmidt No.1
Sec. 17, T.2N R.3E.
Ground Level Elevation 948'

William R. Albers
Hannawald No.1
Sec. 6, T.1S. R.3E.
Ground Level Elevation 948'

A. E. Rovsek
Irma Grau No.1
Sec. 8, T.3S. R.4E.
Ground Level Elevation 947.7'

Leonard Oil Co.
George & Rose Schwocho No.1
Sec. 17, T.4S. R.5E.
Ground Level Elevation 859'

Bell & Marks & Good & Good Drlg.
Thurlow Heath No. GG-1
Sec. 4, T.5S. R.7E.
Ground Level Elevation 656'

McClure Oil Co.
Stotz - Williams No.1
Sec 10, T.7S. R.7E.
Ground Level Elevation 637'

A

K

GAMMA RAY API UNITS 0 150

GAMMA RAY API UNITS 0 100 200

LATEROLOG CONDUCTIVITY MILLIMHOS/M (÷1000/OHM-M) 400 200 0

NEUTRON API UNITS 0 2000 4000

DATUM 5500

C Unit

B Evaporite

Salina Group

A-2 Carbonate

A-2 Evaporite

A-1 Carbonate

A-1 Evaporite

Niagara Group

ORDOVICIAN

NEUTRON

CONDUCTIVITY

Clinton

Cabot Head

Manitoulin

DATUM 500

STRATIGRAPHIC CROSS SECTION A-K

GRATIOT COUNTY
TO
MONROE COUNTY
MIDDLE & LOWER SILURIAN
OF THE
MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY D. D. HODGE & C. A. WILSON

SCALE
Horizontal Scale
None
Vertical Scale
0 100 200

LEGEND

- CORRELATION LINE
- POSSIBLE CORRELATION
- EROSIONAL UNCONFORMITY
- DEPOSITIONAL PINCHOUT
- POROSITY ZONE

Southern Peninsula of Michigan

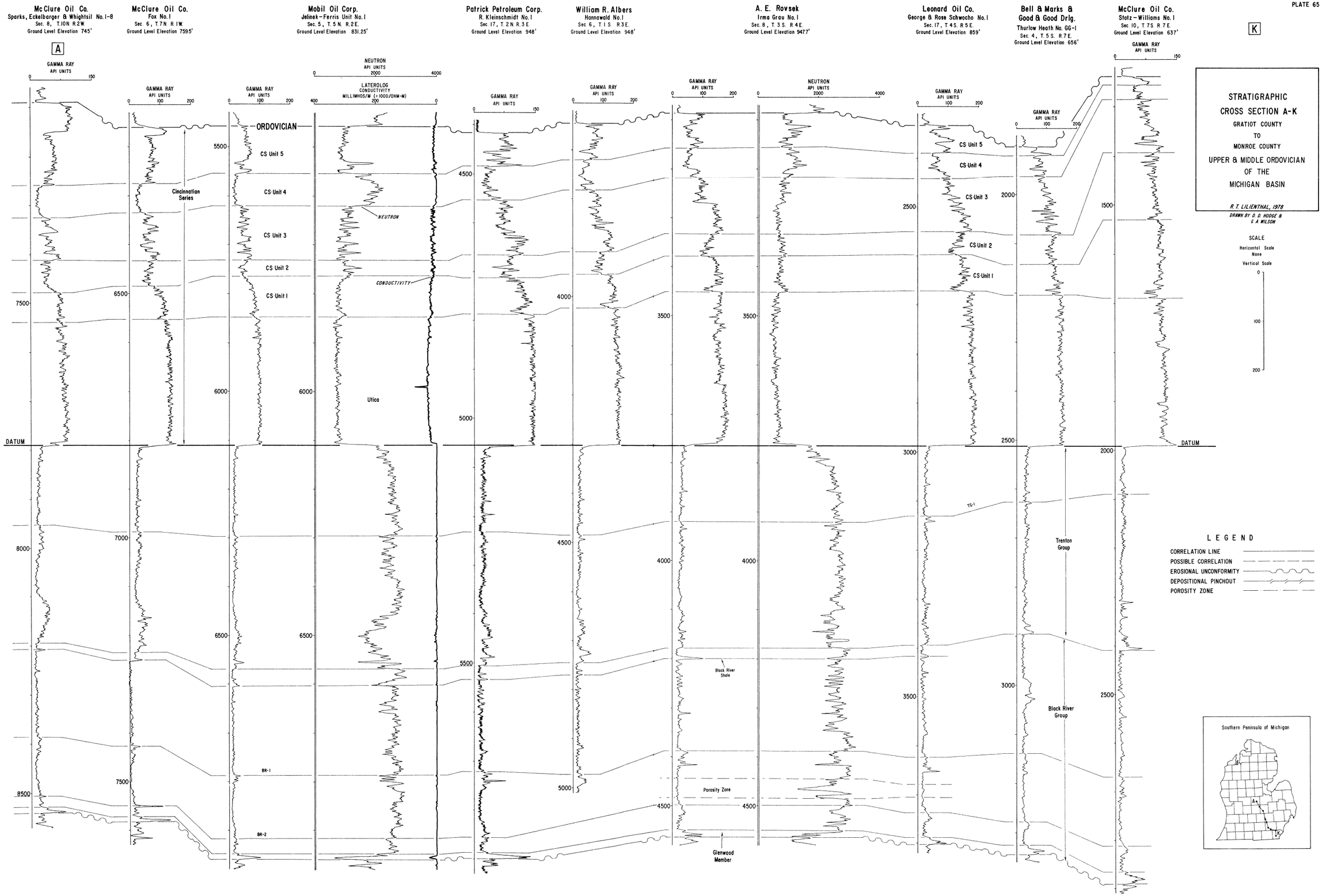

McClure Oil Co.
Sparks, Eckelbarger & Whightsil No. 1-8
Sec. 8, T. 10N R. 2W.
Ground Level Elevation 745'
McClure Oil Co.
Fox No. 1
Sec. 6, T. 7N R. 1W.
Ground Level Elevation 759.5'
Mobil Oil Corp.
Jelinek-Ferris Unit No. 1
Sec. 5, T. 5N R. 2E.
Ground Level Elevation 831.25'
Patrick Petroleum Corp.
R. Kleinschmidt No. 1
Sec. 17, T. 2N R. 3E.
Ground Level Elevation 948'
William R. Albers
Hannawald No. 1
Sec. 6, T. 1S R. 3E.
Ground Level Elevation 948'
A. E. Rovsek
Irma Grau No. 1
Sec. 8, T. 3S R. 4E.
Ground Level Elevation 947.7'
Leonard Oil Co.
George & Rose Schwocho No. 1
Sec. 17, T. 4S R. 5E.
Ground Level Elevation 859'
Bell & Marks & Good & Good Drlg.
Thurlow Heath No. GG-1
Sec. 4, T. 5S R. 7E.
Ground Level Elevation 656'
McClure Oil Co.
Stotz-Williams No. 1
Sec. 10, T. 7S R. 7E.
Ground Level Elevation 637'
A
K
GAMMA RAY API UNITS
NEUTRON API UNITS
LATEROLOG CONDUCTIVITY MILLIMHOS/M (=1000/OHM-M)
ORDOVICIAN
CS Unit 5
CS Unit 4
CS Unit 3
CS Unit 2
CS Unit 1
Cincinnatian Series
NEUTRON
CONDUCTIVITY
Utica
DATUM
BR-1
BR-2
TG-1
Trenton Group
Black River Group
Black River Shale
Porosity Zone
Glenwood Member
STRATIGRAPHIC CROSS SECTION A-K
GRATIOT COUNTY TO MONROE COUNTY
UPPER & MIDDLE ORDOVICIAN OF THE MICHIGAN BASIN
R. T. LILIENTHAL, 1978
DRAWN BY D. D. HODGE & G. A. WILSON
SCALE
Horizontal Scale None
Vertical Scale
LEGEND
CORRELATION LINE
POSSIBLE CORRELATION
EROSIONAL UNCONFORMITY
DEPOSITIONAL PINCHOUT
POROSITY ZONE
Southern Peninsula of Michigan

PLATE 66

McClure Oil Co.
Sparks, Eckelbarger & Whigtsil No. 1-8
Sec 8, T10N R2W
Ground Level Elevation 745'

McClure Oil Co.
Fox No. 1
Sec. 6, T.7N R1W.
Ground Level Elevation 759.5'

Mobil Oil Corp.
Jelinek-Ferris Unit No. 1
Sec 5, T 5N. R 2E.
Ground Level Elevation 831.25'

Mobil Oil Corp.
Howard J. Messmore No. 1
Sec 11, T.3N. R.5E.
Ground Level Elevation 968.2'

G.W. Strake
Manuel Lopez No. 1
Sec. 14, T.1N. R.6E
Ground Level Elevation 915'

A.E. Rovsek
Knudt Jorgensen No. 1
Sec. 26, T.2S. R.7E.
Ground Level Elevation 768'

Consumers Power Company
Consumers Power Company No. 208
Sec. 22, T.1S. R.8E.
Ground Level Elevation 800.2'

Panhandle Eastern Pipeline Company
Ford Motor Company No. 1
Sec 19, T.2S. R.11E.
Ground Level Elevation 587.7'

A — L

GAMMA RAY API UNITS

NEUTRON API UNITS

LATEROLOG CONDUCTIVITY MILLIMHOS/M (=1000/OHM-M)

NEUTRON

CONDUCTIVITY

DATUM

Traverse Formation

Traverse Limestone

Traverse Group

Sunbury

Berea

Berea-Bedford

Bedford

Antrim

DEVONIAN

Glacial Drift

TF-1

TL-1

TL-2

TL-3

TL-4

TL-5

TL-6

Bell

Dundee

Lucas

DR-1

DR-2

Detroit River Group

Amherstburg

STRATIGRAPHIC CROSS SECTION A-L

GRATIOT COUNTY TO WAYNE COUNTY

UPPER & MIDDLE DEVONIAN OF THE MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY D. D. HODGE & G. A. WILSON

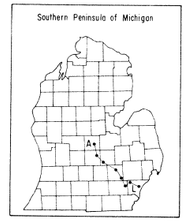
SCALE

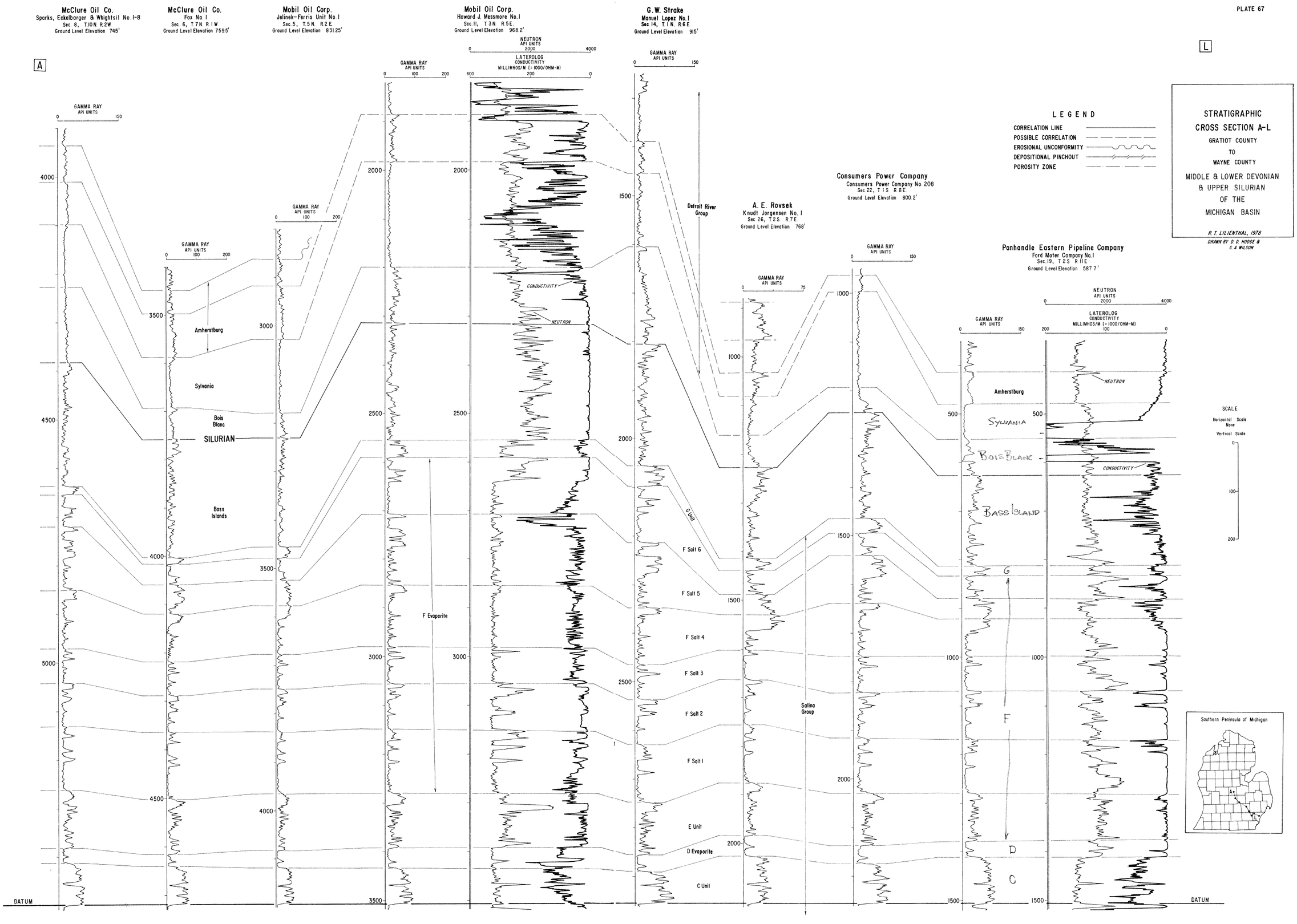
Horizontal Scale None

Vertical Scale 0 — 100 — 200

LEGEND

- CORRELATION LINE
- POSSIBLE CORRELATION
- EROSIONAL UNCONFORMITY
- DEPOSITIONAL PINCHOUT
- POROSITY ZONE





STRATIGRAPHIC CROSS SECTION A-L
GRATIOT COUNTY TO WAYNE COUNTY
MIDDLE & LOWER DEVONIAN & UPPER SILURIAN OF THE MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY D. D. HODGE & G. A. WILSON

PLATE 68

A

L

McClure Oil Co.
Sparks, Eckelborger & Whightsil No. 1-8
Sec. 8, T.10N. R.2W.
Ground Level Elevation 745'

McClure Oil Co.
Fox No. 1
Sec. 6, T.7N. R.1W.
Ground Level Elevation 759.5'

Mobil Oil Corp.
Jelinek–Ferris Unit No.1
Sec. 5, T.5N. R.2E.
Ground Level Elevation 831.25'

Mobil Oil Corp.
Howard J. Messmore No. 1
Sec.11, T.3N. R.5E.
Ground Level Elevation 968.2'

G.W. Strake
Manuel Lopez No.1
Sec.14, T.1N. R.6E.
Ground Level Elevation 915'

A.E. Rovsek
Knudt Jorgensen No. 1
Sec.26, T.2S R.7E.
Ground Level Elevation 768'

Consumers Power Company
Consumers Power Company No. 208
Sec.22, T.1S. R.8E.
Ground Level Elevation 800.2'

Panhandle Eastern Pipeline Company
Ford Motor Company No.1
Sec.19, T.2S R.11E.
Ground Level Elevation 587.7'

GAMMA RAY API UNITS
NEUTRON API UNITS
LATEROLOG CONDUCTIVITY MILLIMHOS/M (÷1000/OHM-M)
NEUTRON
CONDUCTIVITY

DATUM

A-2 Evaporite
A-1 Evaporite
SYLVITE?
A-1 Carbonate
Clinton
Niagara Group
Manitoulin
ORDOVICIAN
C Unit
B Evaporite
Salina Group
A-1 Carbonate
A-1 Evaporite
Cabot Head

STRATIGRAPHIC CROSS SECTION A-L

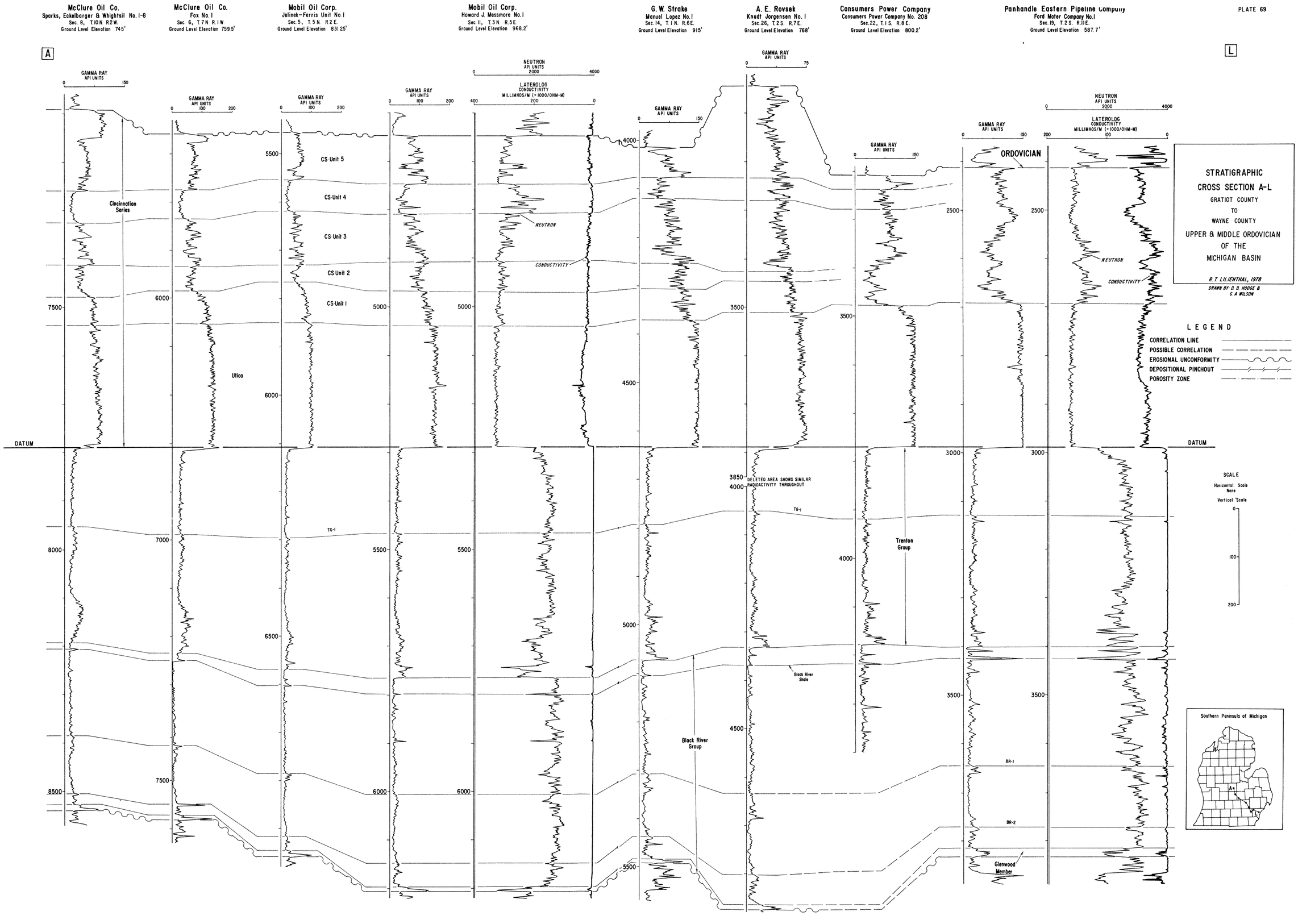
GRATIOT COUNTY
TO
WAYNE COUNTY
MIDDLE & LOWER SILURIAN
OF THE
MICHIGAN BASIN

R. T. LILIENTHAL, 1978
DRAWN BY: D. D. HODGE & G. A. WILSON

SCALE
Horizontal Scale None
Vertical Scale

LEGEND
- CORRELATION LINE
- POSSIBLE CORRELATION
- EROSIONAL UNCONFORMITY
- DEPOSITIONAL PINCHOUT
- POROSITY ZONE

Southern Peninsula of Michigan


McClure Oil Co.
Sparks, Eckelberger & Whightsil No. 1-8
Sec. 8, T.10N R.2W.
Ground Level Elevation 745'
McClure Oil Co.
Fox No. 1
Sec. 6, T.7N R.1W.
Ground Level Elevation 759.5'
Mobil Oil Corp.
Jelinek-Ferris Unit No. 1
Sec. 5, T.5N R.2E.
Ground Level Elevation 831.25'
Mobil Oil Corp.
Howard J. Messmore No. 1
Sec. 11, T.3N R.5E.
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Consumers Power Company
Consumers Power Company No. 208
Sec. 22, T.1S. R.8E.
Ground Level Elevation 800.2'
Panhandle Eastern Pipeline Company
Ford Motor Company No. 1
Sec. 19, T.2S. R.11E.
Ground Level Elevation 587.7'
A
L
GAMMA RAY API UNITS
NEUTRON API UNITS
LATEROLOG CONDUCTIVITY MILLIMHOS/M (=1000/OHM-M)
Cincinnation Series
Utica
CS Unit 5
CS Unit 4
CS Unit 3
CS Unit 2
CS Unit 1
NEUTRON
CONDUCTIVITY
ORDOVICIAN
DATUM
TG-1
DELETED AREA SHOWS SIMILAR RADIOACTIVITY THROUGHOUT
Trenton Group
Black River Shale
Black River Group
BR-1
BR-2
Glenwood Member
STRATIGRAPHIC CROSS SECTION A-L
GRATIOT COUNTY TO WAYNE COUNTY
UPPER & MIDDLE ORDOVICIAN OF THE MICHIGAN BASIN
R. T. LILIENTHAL, 1978
DRAWN BY: D. D. HODGE & G. A. WILSON
LEGEND
CORRELATION LINE
POSSIBLE CORRELATION
EROSIONAL UNCONFORMITY
DEPOSITIONAL PINCHOUT
POROSITY ZONE
SCALE
Horizontal Scale None
Vertical Scale
Southern Peninsula of Michigan