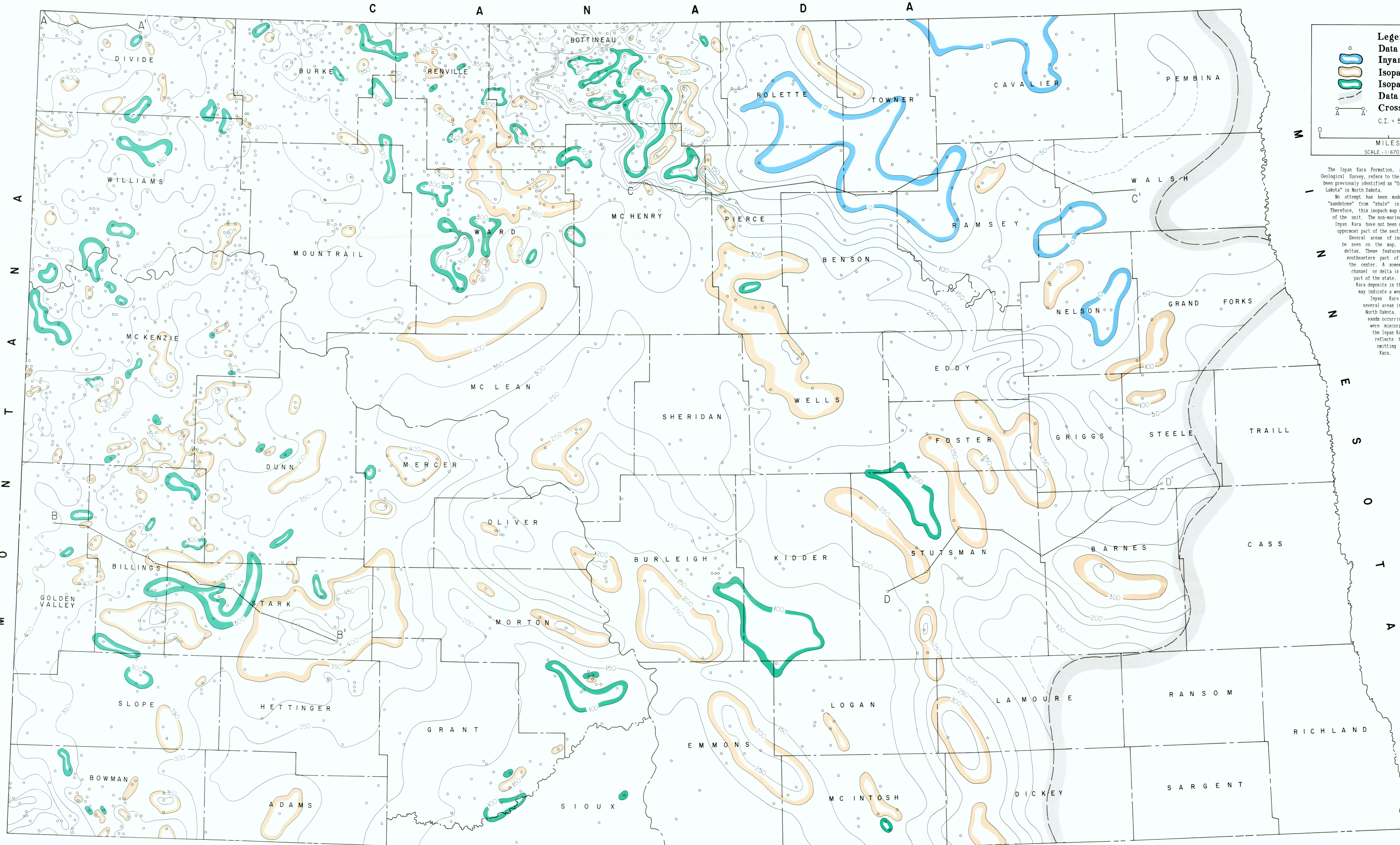


# ISOPACH : INYAN KARA FORMATION

By Walter L. Moore, David W. Fischer, Sidney B. Anderson  
1987

Sidney B. Anderson  
Acting State Geologist

NORTH DAKOTA GEOLOGICAL SURVEY  
MISCELLANEOUS MAP NO. 27



**Legend**

- Data Point
- Inyan Kara Absent
- Isopach Thick
- Isopach Thin
- Data Absent
- Cross-section

C.I. = 50'

0 36  
MILES  
SCALE - 1:670,000

The Inyan Kara Formation, as used by the North Dakota Geological Survey, refers to the Cretaceous section that has been previously identified as "Dakota" or "Fall River-Puson-Lakota" in North Dakota.

No attempt has been made in this study to separate "sandstone" from "shale" in the Inyan Kara Formation. Therefore, this isopach map reflects the total thickness of the unit. The non-marine and marine sections of the Inyan Kara have not been differentiated, but only the uppermost part of the section appears to be marine.

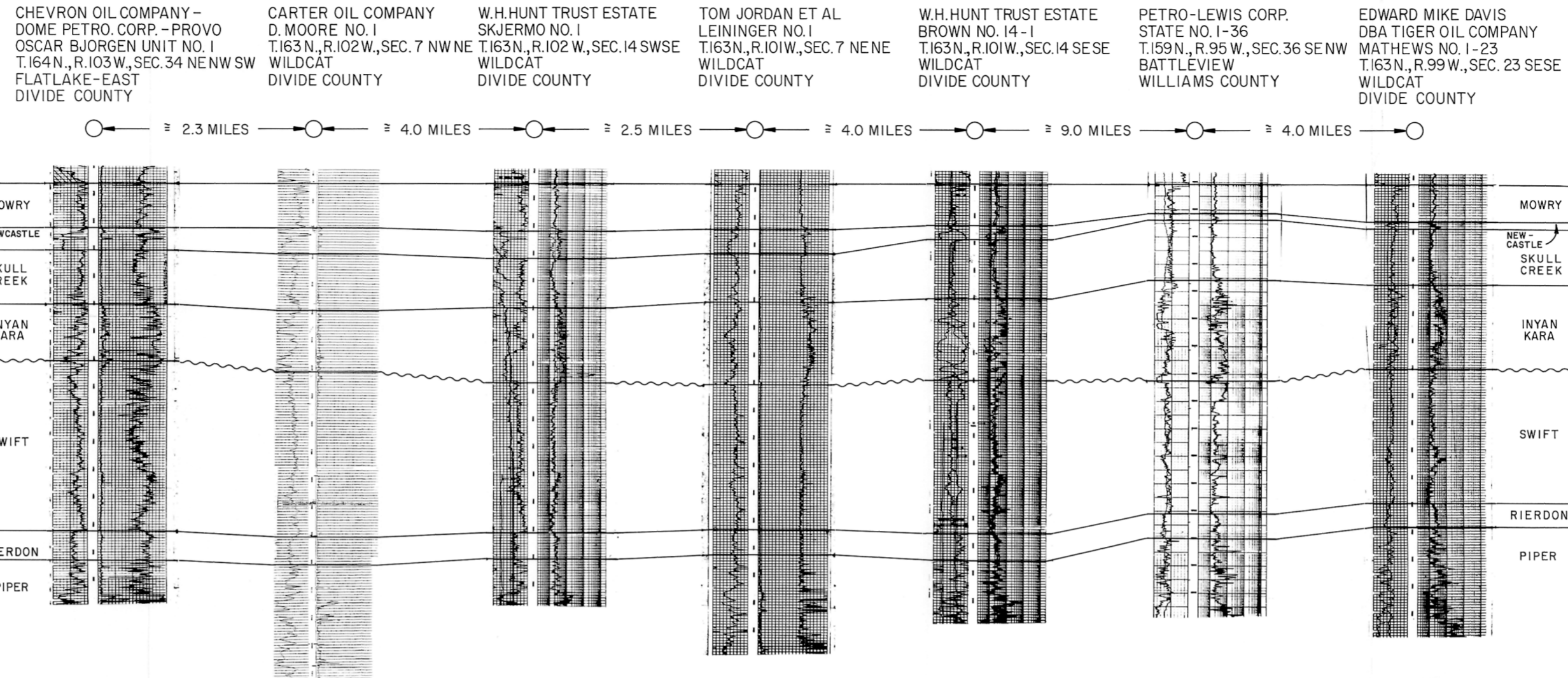
Several areas of increased thickness, which can be seen on the map, may represent channels or deltas. These features are located mainly in the southeastern part of the state, extending toward the center. A somewhat less clearly defined channel or delta is located in the southwestern part of the state. The generally thicker Inyan Kara deposits in the western part of the state may indicate a western source area.

Inyan Kara sediments are absent in several areas in the northeastern corner of North Dakota. In the past, Jurassic Swift sands occurring at the top of the section were miscorrelated and were included in the Inyan Kara. The current isopach map reflects the correct interpretation, omitting these sands from the Inyan Kara.

# SELECTED INYAN KARA CROSS SECTIONS

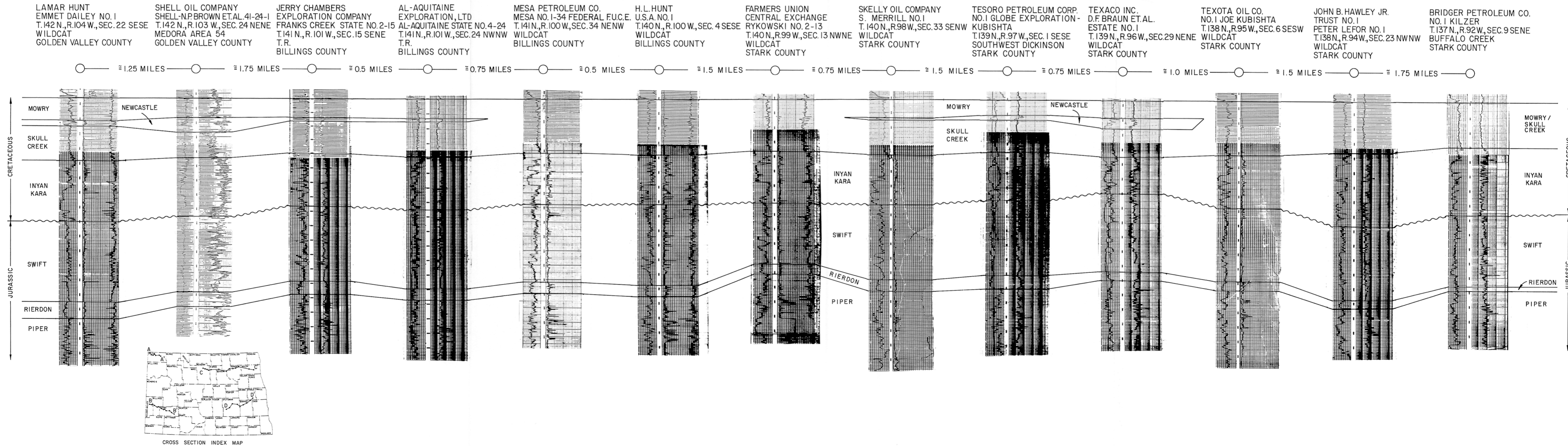
A

A'



B

B'



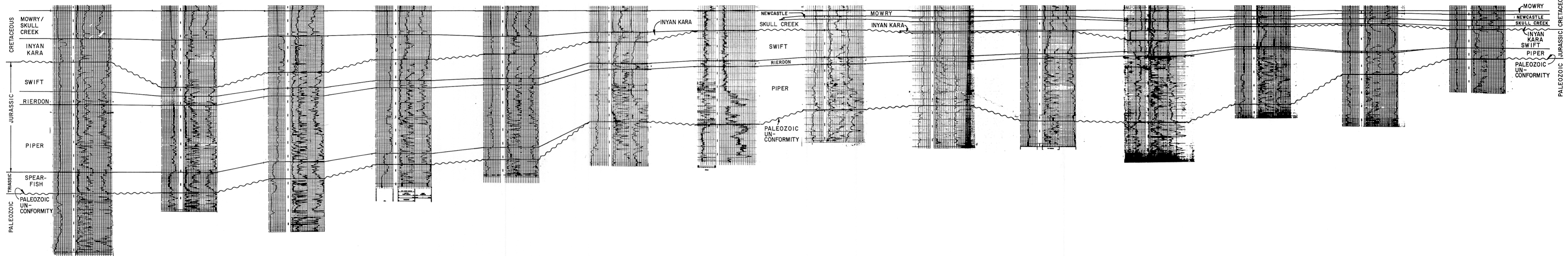
# SELECTED INYAN KARA CROSS SECTIONS

C

C'

AMERADA PETROLEUM C. BRUMMOND NO.1 T.157 N., R.78 W., SEC. 23 SESW WILDCAT MCHENRY COUNTY	AMERADA PETROLEUM CARL GREEN TRACT 1, NO.1 T.157 N., R.77 W., SEC. 21 NENE WILDCAT MCHENRY COUNTY	MCMORAN EXPL. CO. STATE NO.1 T.157 N., R.76 W., SEC. 34 NESW WILDCAT MCHENRY COUNTY	BARRON-KIDD BALLANTINE BROS. NO.1 FOLLMAN PARTNERSHIP T.156 N., R.76 W., SEC. 1 NWNE WILDCAT MCHENRY COUNTY	TOM JORDAN HAGBOE NO.1 T.156 N., R.74 W., SEC. 5 SWNE WILDCAT PIERCE COUNTY	SHELL OIL COMPANY GIFFORD MARCHUS NO.1 T.157 N., R.70 W., SEC. 23 SESE WILDCAT PIERCE COUNTY	SHELL OIL COMPANY BETSY JORGENSEN NO.1 T.156 N., R.68 W., SEC. 5 NESW WILDCAT BENSON COUNTY	SHELL OIL COMPANY OSCAR SINNESS NO.1 T.156 N., R.67 W., SEC. 2 NESW WILDCAT BENSON COUNTY	F. H. RHODES RHODES GIBBONS NO.1 T.157 N., R.65 W., SEC. 17 SWSE WILDCAT TOWNER COUNTY	AMERADA PETROLEUM J.T. MYKLEBUST NO.1 T.157 N., R.63 W., SEC. 5 SESE WILDCAT RAMSEY COUNTY	UNION OIL COMPANY OF CALIFORNIA AANSTAD NO.1 T.158 N., R.62 W., SEC. 29 SENE WILDCAT RAMSEY COUNTY	AMERADA PETROLEUM R.A. HAMMER NO.1 T.158 N., R.61 W., SEC. 21 NENE WILDCAT RAMSEY COUNTY	TRAUGOTT DRILLING CO. HATTIE BAKKE NO.1 T.156 N., R.58 W., SEC. 9 NENW WILDCAT WALSH COUNTY	I.J. WILHITE-CANADIAN DAKOTA DEVELOPMENT INC. A.O. GAARDER NO.1 T.156 N., R.56 W., SEC. 8 SWSE WILDCAT WALSH COUNTY
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○ ≅ 4.0 MILES    ○ ≅ 7.0 MILES    ○ ≅ 5.0 MILES    ○ ≅ 7.0 MILES    ○ ≅ 26 MILES    ○ ≅ 11 MILES    ○ ≅ 9.0 MILES    ○ ≅ 9.0 MILES    ○ ≅ 12 MILES    ○ ≅ 7.0 MILES    ○ ≅ 6.0 MILES    ○ ≅ 32 MILES    ○ ≅ 12 MILES    ○



D

D'

GORDON B. BUTTERFIELD RUDOLPH TRAUTMAN NO.1 T.139 N., R.68 W., SEC. 5 SESE WILDCAT STUTSMAN COUNTY	CALVERT EXPLORATION NO.1 GANSER T.140 N., R.67 W., SEC. 12 NWSW WILDCAT STUTSMAN COUNTY	GENERAL ATLAS CARBON FLOYD BARTHEL NO.1 T.142 N., R.65 W., SEC. 15 SWNE WILDCAT STUTSMAN COUNTY	GENERAL ATLAS CARBON ALEX PEPLINSKI NO.1 T.142 N., R.63 W., SEC. 21 SENE WILDCAT STUTSMAN COUNTY	JACK M. JOHNSTON DRILLING CORPORATION CLARENCE JOHNSON NO.1 T.141 N., R.61 W., SEC. 30 NWSE WILDCAT BARNES COUNTY	JACK M. JOHNSTON DRILLING CORPORATION R.B. SAAR NO.1 T.142 N., R.60 W., SEC. 25 NWSE WILDCAT BARNES COUNTY	JACK M. JOHNSTON DRILLING CORPORATION ALLEN E. VIG NO.1 T.140 N., R.59 W., SEC. 9 SESW WILDCAT BARNES COUNTY	JOHNSTON-TEXANA-FOREST- GLOBE-CASCADE WEILAND NO.1 T.143 N., R.58 W., SEC. 29 SWNE WILDCAT BARNES COUNTY	NYVATEX OIL COMPANY FOSDICK NO.12-28 T.144 N., R.56 W., SEC. 28 SNNW WILDCAT STEELE COUNTY
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○ ≅ 11 MILES    ○ ≅ 14 MILES    ○ ≅ 11 MILES    ○ ≅ 12 MILES    ○ ≅ 10 MILES    ○ ≅ 9 MILES    ○ ≅ 8 MILES    ○ ≅ 11 MILES    ○

