



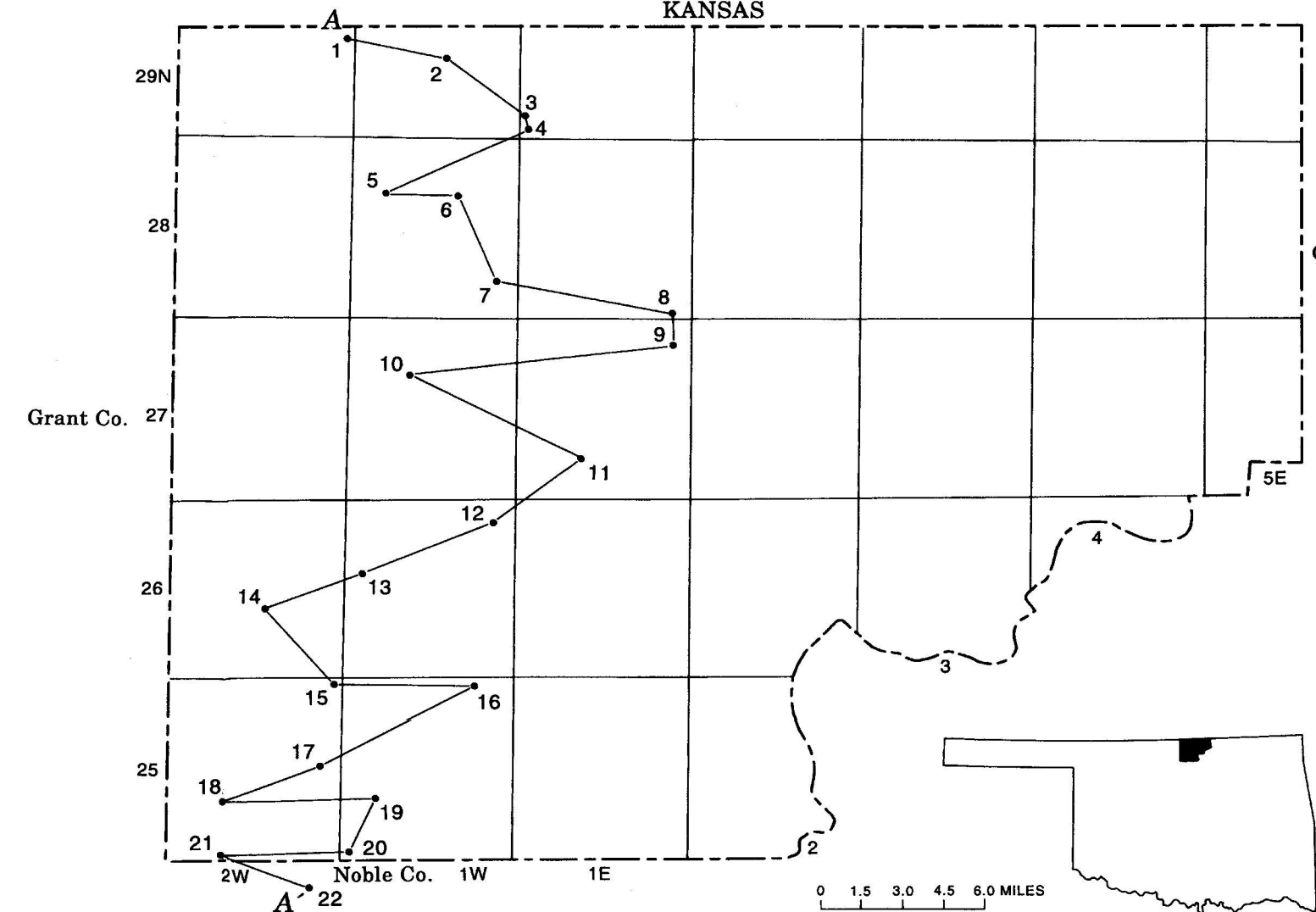
NORTH A

SOUTH A'

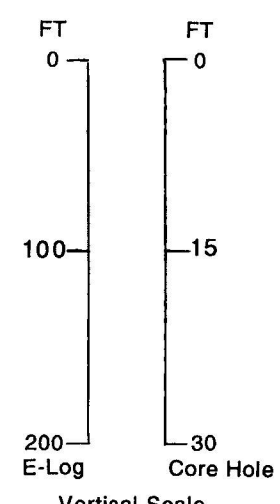
EXPLANATION

- SP Spontaneous-potential log  
Res Resistivity log
- Limestone—dolomitic  
Limestone—cherty  
Limestone—sandy  
Limestone—shaly  
Limestone—silty  
Dolomite  
Dolomite—shaly  
Dolomite—sandy  
Gypsum—Anhydrite  
Salt  
Nodules—sandy  
Nodules—dolomitic  
Nodules—calcareous  
Nodules—calcareous  
Nodules—gypsiferous  
Limestone  
Lost core
- Terrace deposits  
Sandstone  
Sandstone—calcareous  
Sandstone—shaly  
Siltstone  
Siltstone—calcareous  
Shale-Mudstone—red, grayish red, reddish brown  
Shale-Mudstone—gray, greenish gray, olive black  
Shale—fossil, black, greenish black  
Shale—fossil, red, grayish red  
Shale-Mudstone—calcareous  
Shale-Mudstone—dolomitic  
Shale-Mudstone—sandy  
Shale-Mudstone—gypsiferous

| MIDCONTINENT LITHOSTRATIGRAPHIC NOMENCLATURE |                      | FORMATION              | MEMBER               |
|----------------------------------------------|----------------------|------------------------|----------------------|
| SUMMIT (part)                                | Wellington (part)    |                        | Midco                |
|                                              |                      |                        | Otoe                 |
| EARLY PERMIAN                                | Wellington Formation |                        | Anhydrite            |
|                                              |                      | Nolans Limestone       | Padlock Shale        |
|                                              |                      |                        | Kider Limestone      |
|                                              |                      | Odell-Enterprise Shale |                      |
|                                              |                      | Winfield Limestone     | Creswell Limestone   |
|                                              |                      |                        | Grant Shale          |
|                                              |                      |                        | Stoval Limestone     |
|                                              |                      | Gage Shale             |                      |
|                                              |                      | Draft Shale            | Towanda Limestone    |
|                                              |                      |                        | Holmesville Shale    |
| COUNCIL GROVE (part)                         | Wellington Formation | Barnston Limestone     | Pi. Riley Limestone  |
|                                              |                      |                        | Chato Shale          |
|                                              |                      |                        | Florence Limestone   |
|                                              |                      | Matfield Shale         | Blue Springs Shale   |
|                                              |                      |                        | Kinney Limestone     |
|                                              |                      |                        | Wynore Shale         |
|                                              |                      | Winfield Limestone     | Schroyer Limestone   |
|                                              |                      |                        | Havenville Shale     |
|                                              |                      |                        | Thermite Limestone   |
|                                              |                      | Shaler Shale           |                      |
| COUNCIL GROVE (part)                         | Wellington Formation | Crouse Limestone       |                      |
|                                              |                      | Easy Creek Shale       |                      |
|                                              |                      |                        | Middleburg Limestone |
|                                              |                      | Bader Limestone        | Hoscar Shale         |
|                                              |                      |                        | Eiss Limestone       |
|                                              |                      | Seams Shale            |                      |
|                                              |                      |                        | Martell Limestone    |
|                                              |                      | Beattie Limestone      | Florence Shale       |
|                                              |                      |                        | Cottonwood Limestone |
|                                              |                      | Esridge Shale          |                      |
| COUNCIL GROVE (part)                         | Wellington Formation |                        | Nova Limestone       |
|                                              |                      |                        |                      |



Index map of Kay County showing location of north-south cross section A-A'



LOCATIONS OF WELLS AND CORE HOLES USED IN STRATIGRAPHIC CROSS SECTION A-A'

- Silver Fox Drilling Company & Keran Oil Company  
1 State  
NW NE SE, sec 13, T28N, R2W  
Kay County
- Thomas N. Berry & Company  
1 Russell  
SW NW NW, sec 22, T28N, R1W  
Kay County
- Toto Gas Company  
1 Shurtz  
NW NW NW, sec 31, T28N, R1E  
Kay County
- KC-9  
Phish Ranch  
SE NW NE SW, sec 31, T29N, R1E  
Kay County
- Time Petroleum Company  
1-A Hunschitz  
NW NE SW, sec 8, T28N, R1W  
Kay County
- KC-8  
Bell Ranch  
NW SE NE SE, sec 10, T28N, R1W  
Kay County
- The Palmer Oil Company  
1 Mattox  
NW NW SW, sec 25, T28N, R1W  
Kay County
- Mazda Oil Company  
1 State  
SE SE SW, sec 36, T28N, R1E  
Kay County
- KC-7  
Johnson Ranch  
SW NW NE SW, sec 1, T27N, R1E  
Kay County
- Clipper Oil Company  
1 Woods  
SW SW SW, sec 9, T27N, R1W  
Kay County
- L.W. Prunty  
10 Prunty  
SW SW NW, sec 28, T27N, R1E  
Kay County
- Schermerhorn Oil Corporation  
1 Hennings  
SE NE SW, sec 1, T28N, R1W  
Kay County
- Jenkins Drilling Company  
1 Brown  
SW NE sec 18, T28N, R1W  
Kay County
- Price Exploration Company  
1 Schup  
NW SW, sec 22, T28N, R2W  
Kay County
- An-Son Corporation  
1 Quarry  
SW NE NE, sec 1, T25N, R2W  
Kay County
- Gene Goff  
1 Bantley  
NE NE NE, sec 2, T25N, R1W  
Kay County
- Glenwood Oil Company-Sunray Midcontinent  
1 O.R. Moss  
SW SE SW, sec 13, T25N, R2W  
Kay County
- Oras A. Shaw  
1 Zody  
NE SE NE, sec 20, T25N, R2W  
Kay County
- M & F Oil Company  
1 Redmaker  
SE SW SW, sec 20, T25N, R1W  
Kay County
- KC-1  
Kay County Shale Pit  
NE SE NW SW, sec 31, T25N, R1W  
Kay County
- Almar Drilling Company  
1 Woods  
SW SW SE, sec 32, T25N, R2W  
Kay County
- Lee & Heape  
1 Baldwin  
SW SW NW, sec 1, T24N, R2W  
Noble County

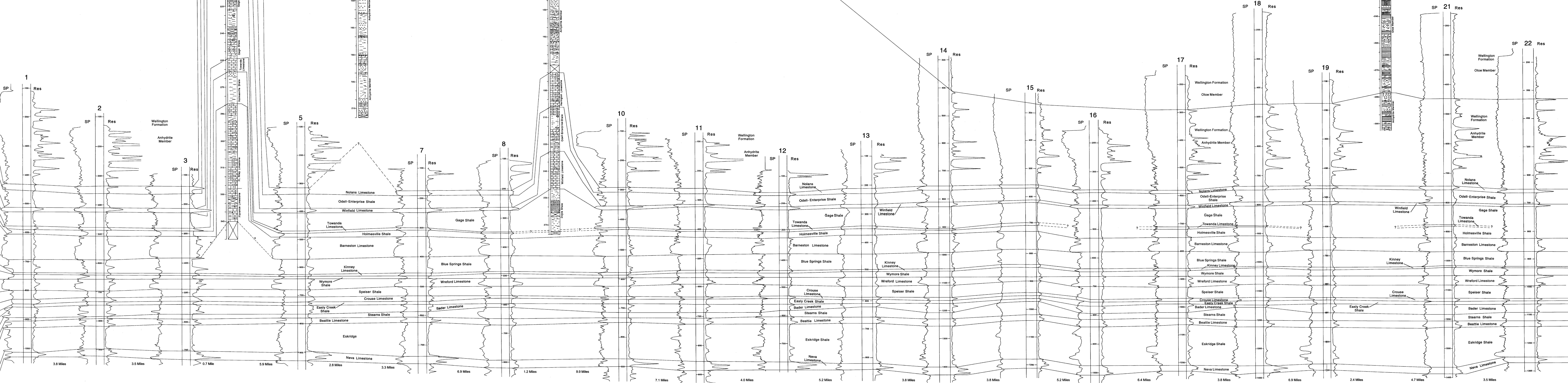


PLATE 1  
NORTH-SOUTH STRIKE-ORIENTED CORE HOLE-ELECTRIC LOG STRATIGRAPHIC CORRELATION CROSS SECTION A-A'  
FOR WESTERN KAY COUNTY AND NORTHERNMOST NOBLE COUNTY, OKLAHOMA  
By  
James R. Chaplin