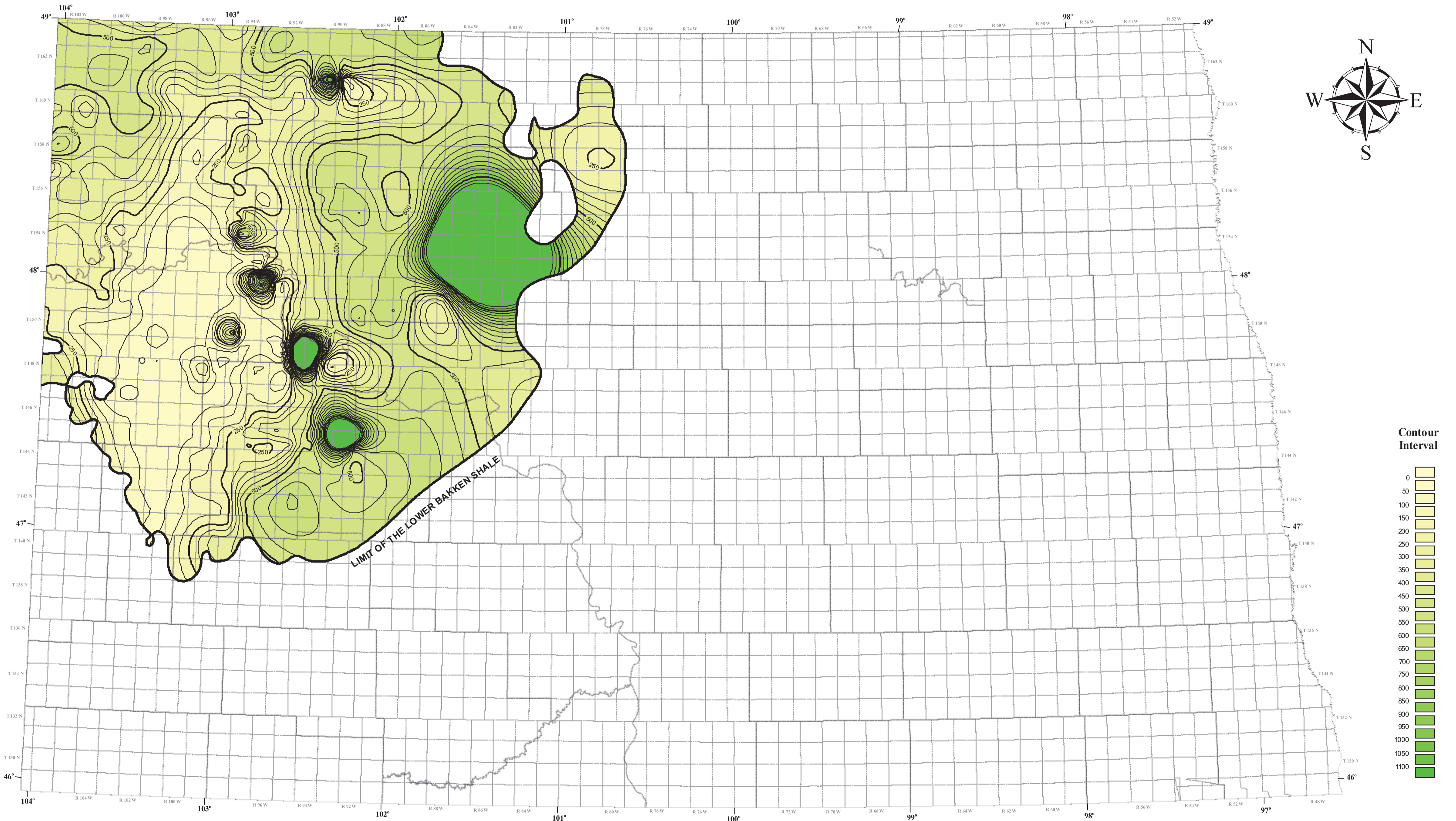
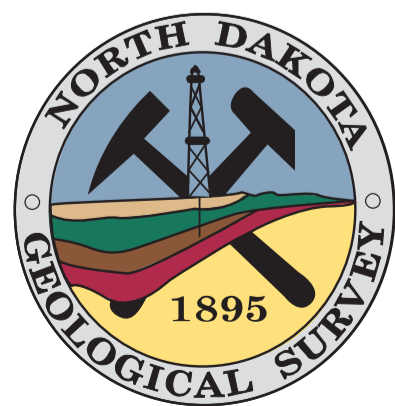


Hydrogen Index of the Lower Bakken Shale in North Dakota




Julie A. LeFever



Contour Interval



Explanation

-  Hydrogen Index Contour (calculated ratio)
-  Township Boundaries
-  County Boundaries

Scale 1:1,000,000



Miles

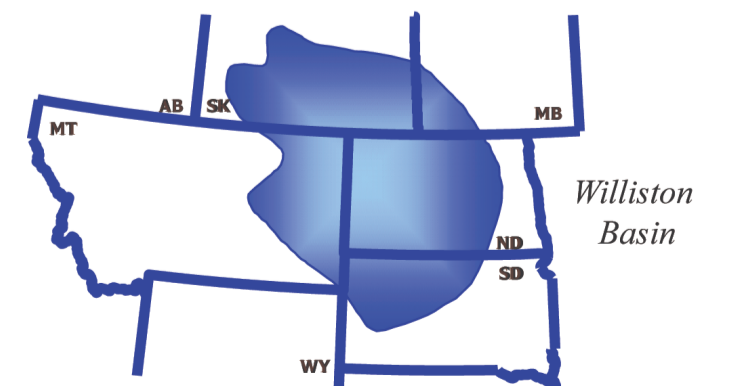


Kilometers

North American Datum 1927 Lambert Conformal Conic

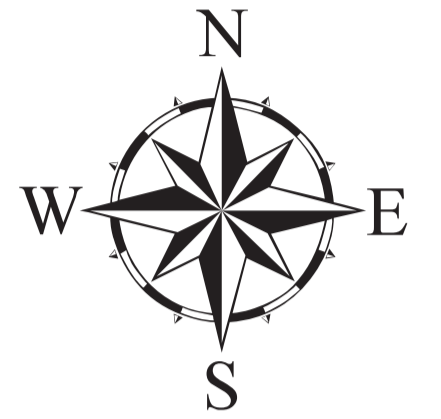
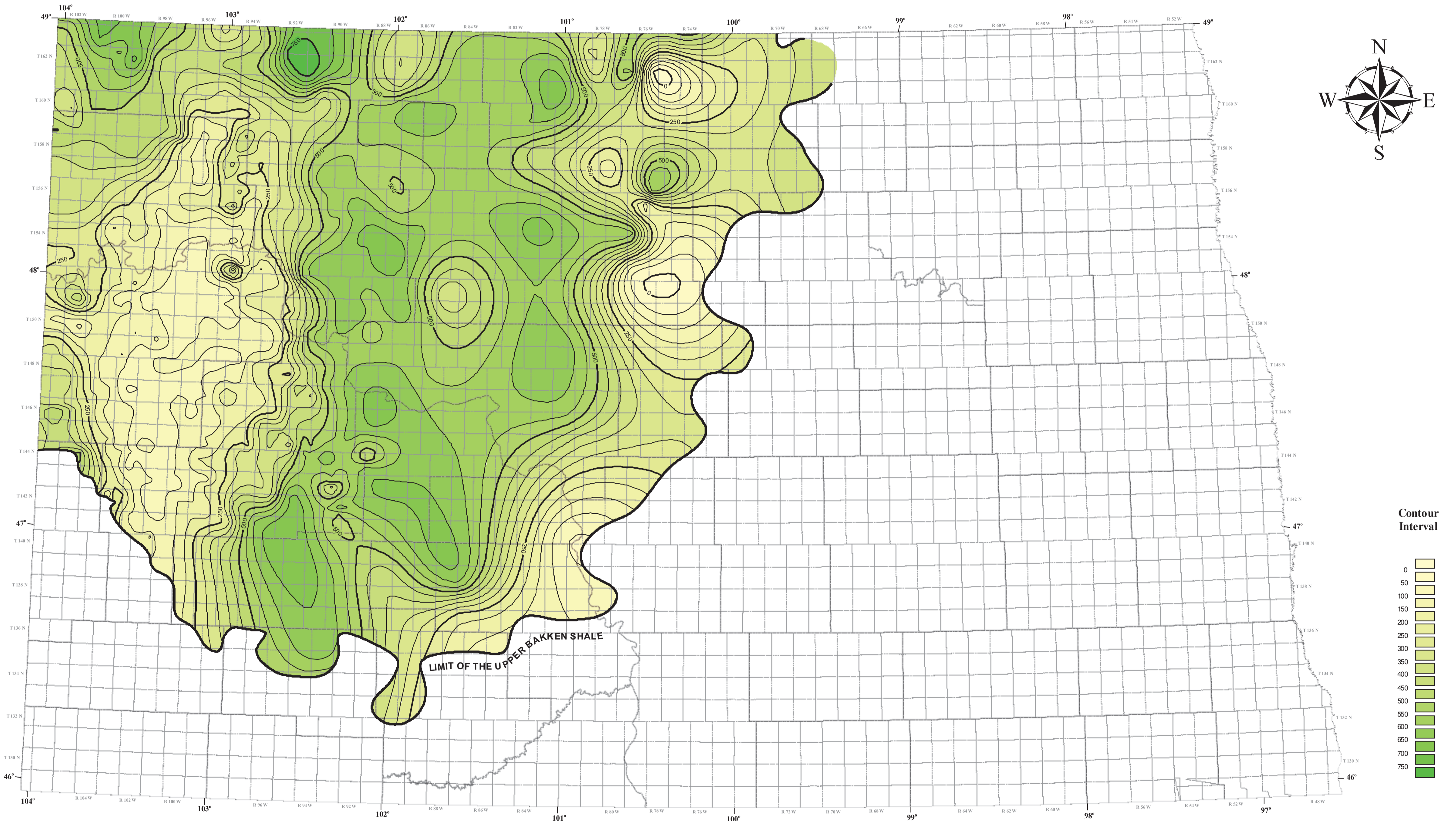
References:

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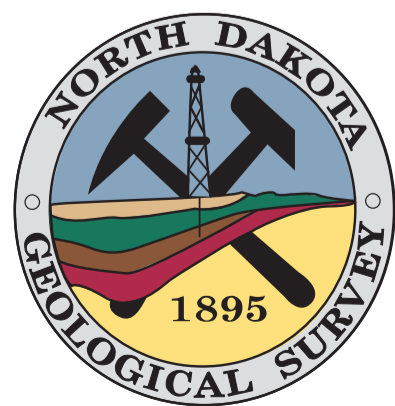


Hydrogen Index of the Upper Bakken Shale in North Dakota

Julie A. LeFever



Contour Interval



Explanation

- Hydrogen Index Contour (calculated ratio)
- Township Boundaries
- County Boundaries

Scale 1:1,000,000



Miles

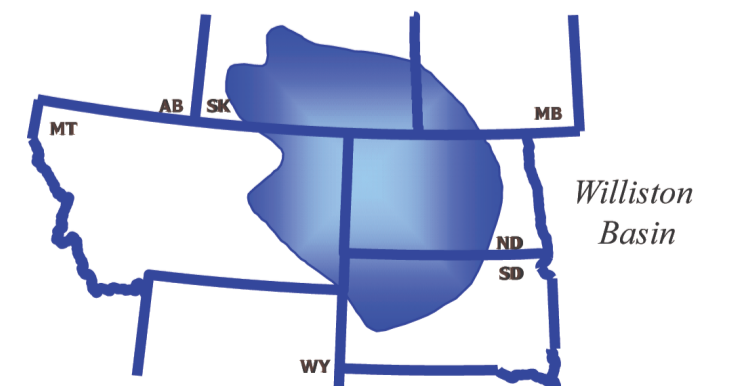


Kilometers

North American Datum 1927 Lambert Conformal Conic

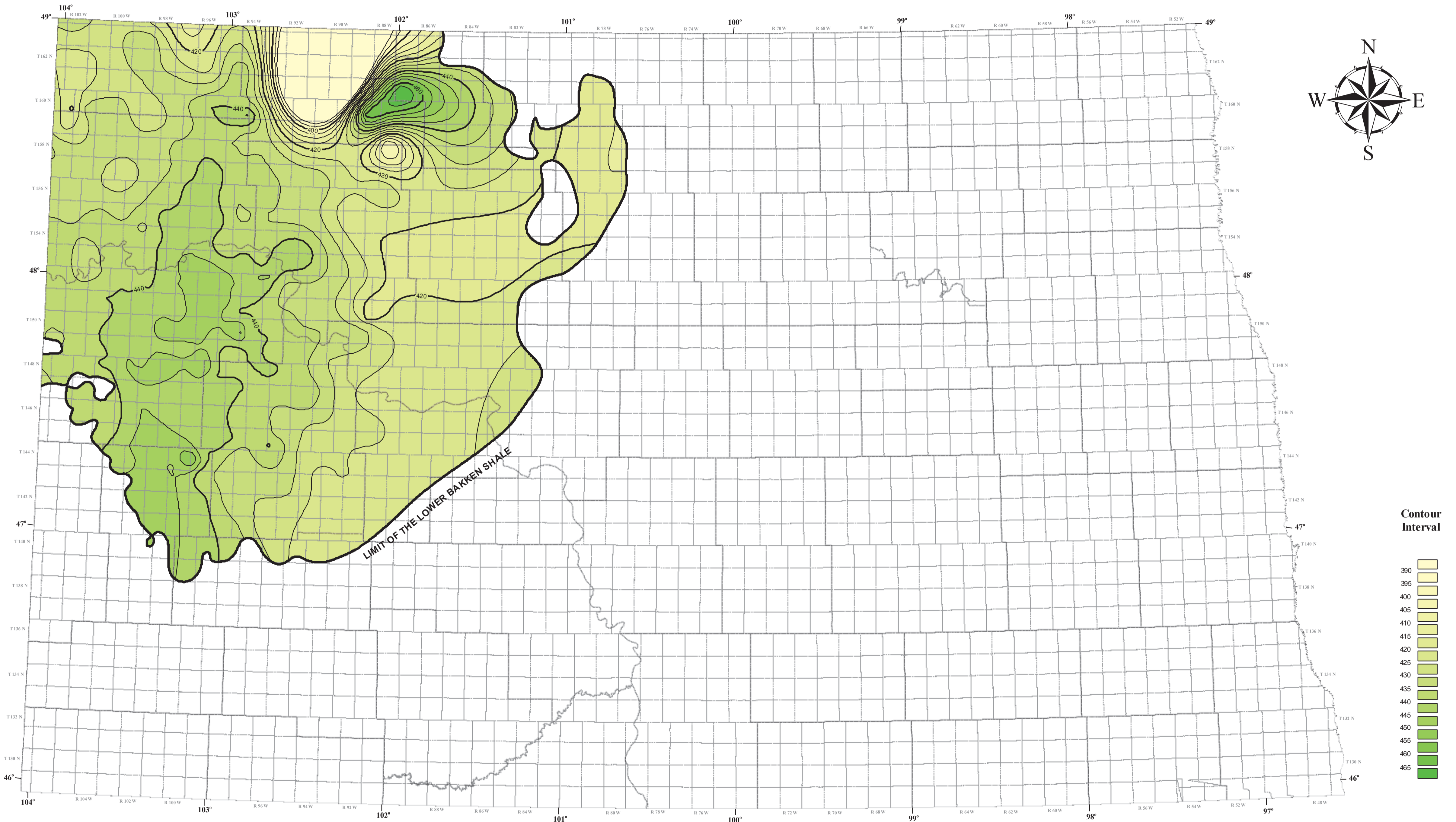
References:

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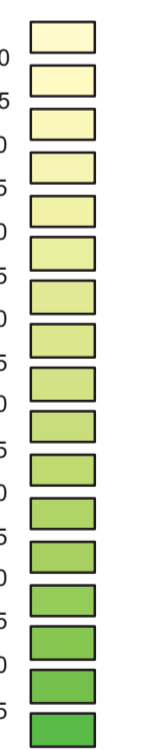


S2 - TMAX of the Lower Bakken Shale in North Dakota




Julie A. LeFever



Contour Interval



Explanation

-  S2 - TMAX Contour (degrees Celsius)
-  Township Boundaries
-  County Boundaries

Scale 1:1,000,000



North American Datum 1927 Lambert Conformal Conic

References:

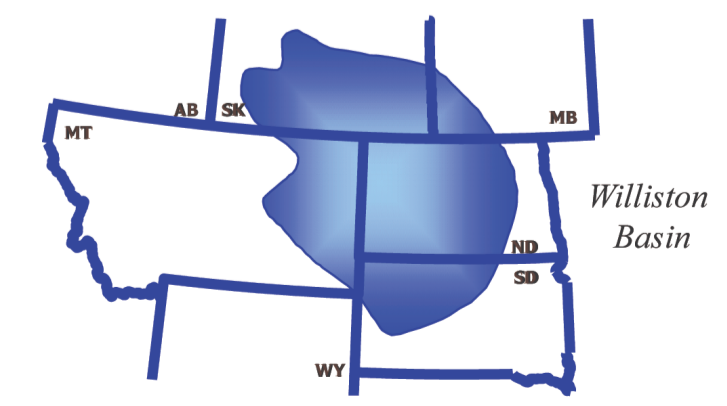
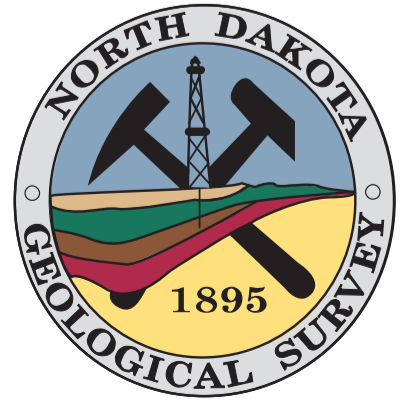
Musco, G.P.A., 1994. The Fate of Oil and Gas in a Constrained Natural System - Implications from the Bakken Petroleum System, Ph.D. Dissertation, Institut fur Dynamik der Geosphare 4: Erdol und Geochemie, 167p.

NDIC Oil & Gas Division Well Database

North Dakota Geological Survey TOCs (<http://www.dmr.nd.gov/ndgs/bakken/bakken.asp>)

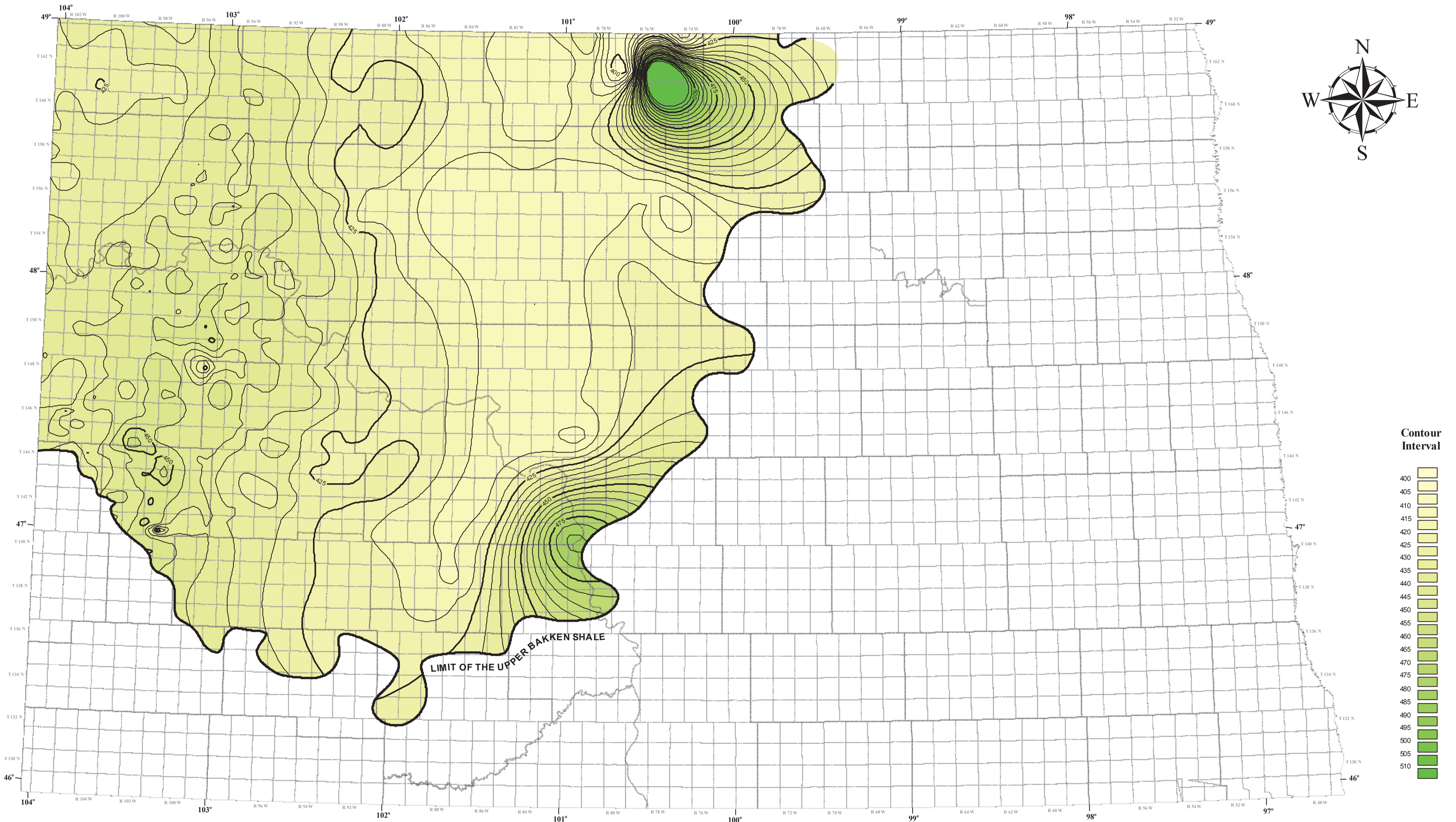
Smith, M.G., 1996. The Bakken Formation (Late Devonian-Early Mississippian), A Black Shale Source Rock in the Williston Basin: Ph.D. Dissertation, University of British Columbia, 295p.

Threlked, C.N., 2007. Organic Geochemistry Database: Provisional Release: USGS Energy Resources Program Organic Geochemistry Data Base (<http://energy.cr.usgs.gov/prov/og/>).

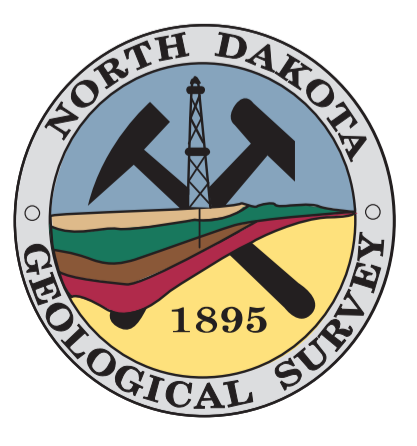


S2 - TMAX of the Upper Bakken Shale in North Dakota

Julie A. LeFever



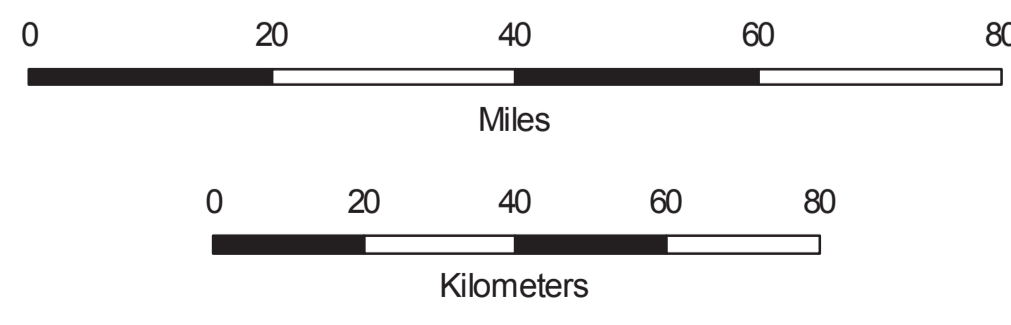
Contour Interval



Explanation

- S2 - TMAX Contour (degrees Celsius)
- Township Boundaries
- County Boundaries

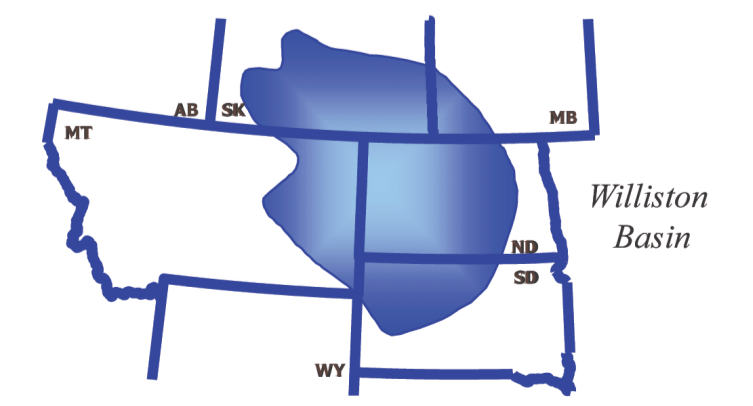
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North American Datum 1927 Lambert Conformal Conic

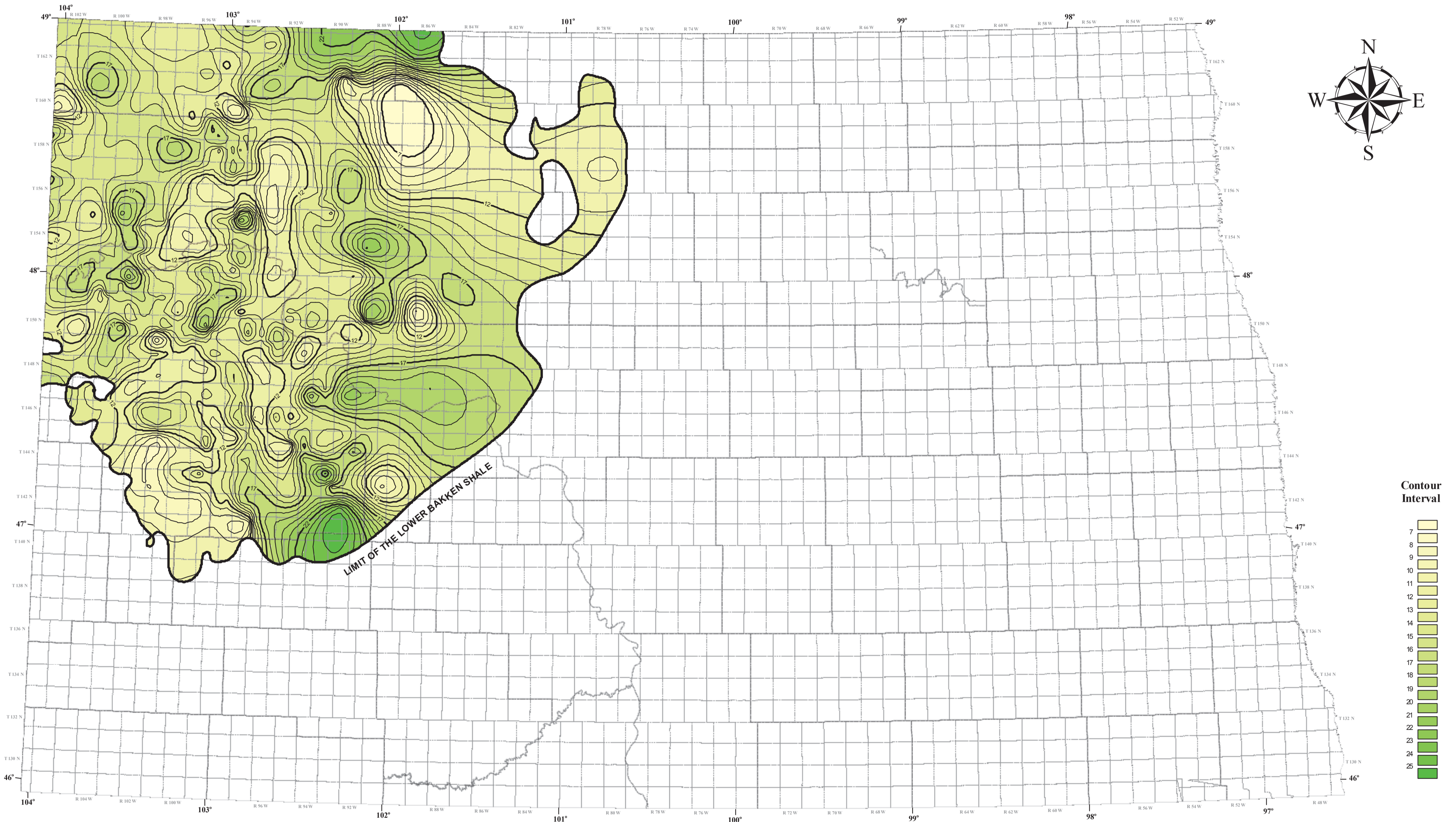
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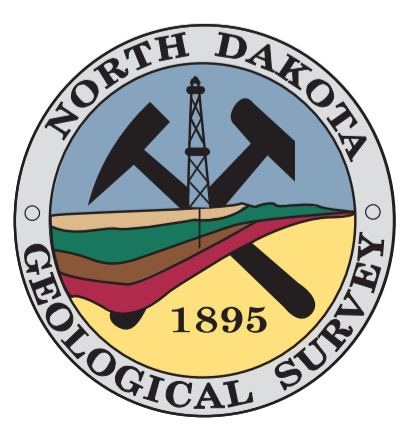
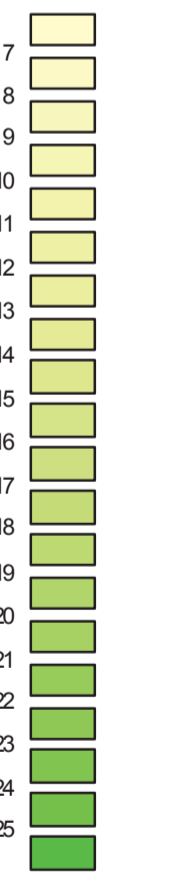
Total Organic Carbon of the Lower Bakken Shale in North Dakota

Julie A. LeFever



LIMIT OF THE LOWER BAKKEN SHALE

Contour Interval



Explanation

- Total Organic Carbon Contour (weight percentage)
- Township Boundaries
- County Boundaries

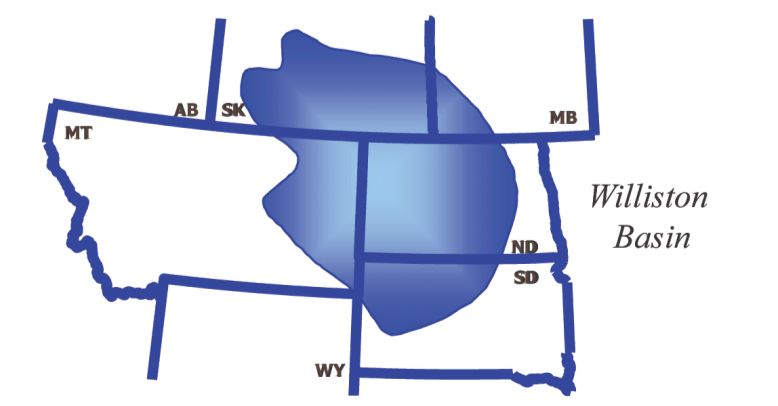
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North American Datum 1927 Lambert Conformal Conic

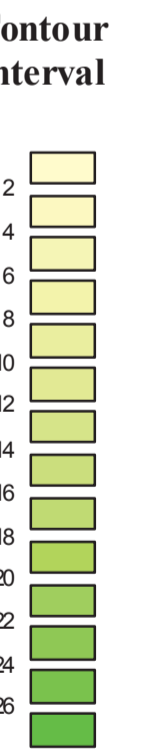
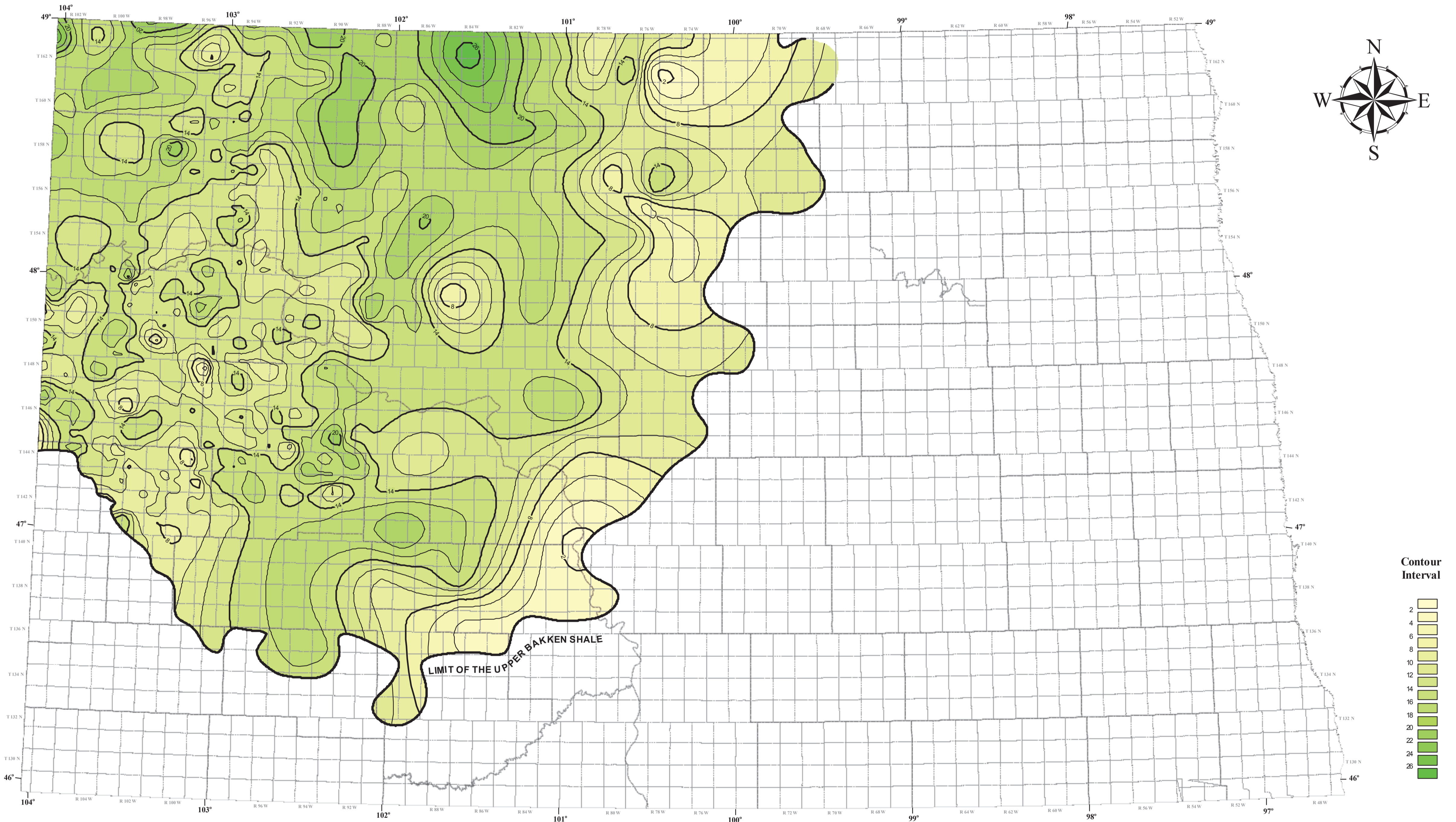
References:

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Total Organic Carbon of the Upper Bakken Shale in North Dakota

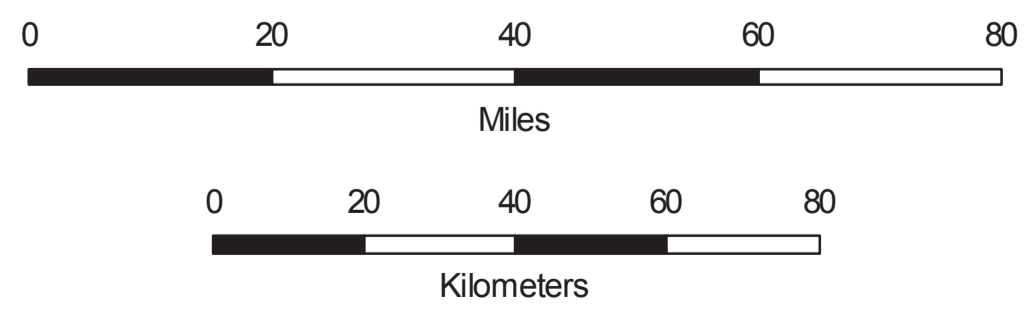
Julie A. LeFever



Explanation

- Total Organic Carbon Contour (weight percentage)
- Township Boundaries
- County Boundaries

Scale 1:1,000,000



North American Datum 1927 Lambert Conformal Conic

References:
 Muscio, G.P.A., 1994. The Fate of Oil and Gas in a Constrained Natural System - Implications from the Bakken Petroleum System, Ph.D. Dissertation, Institut fur Dynamik der Geosphäre 4: Erdöl und Geochemie, 167p.
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