



# Bakken Formation Middle Member Lithofacies CBF

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## LITHOFACIES - CENTRAL BASIN FACIES

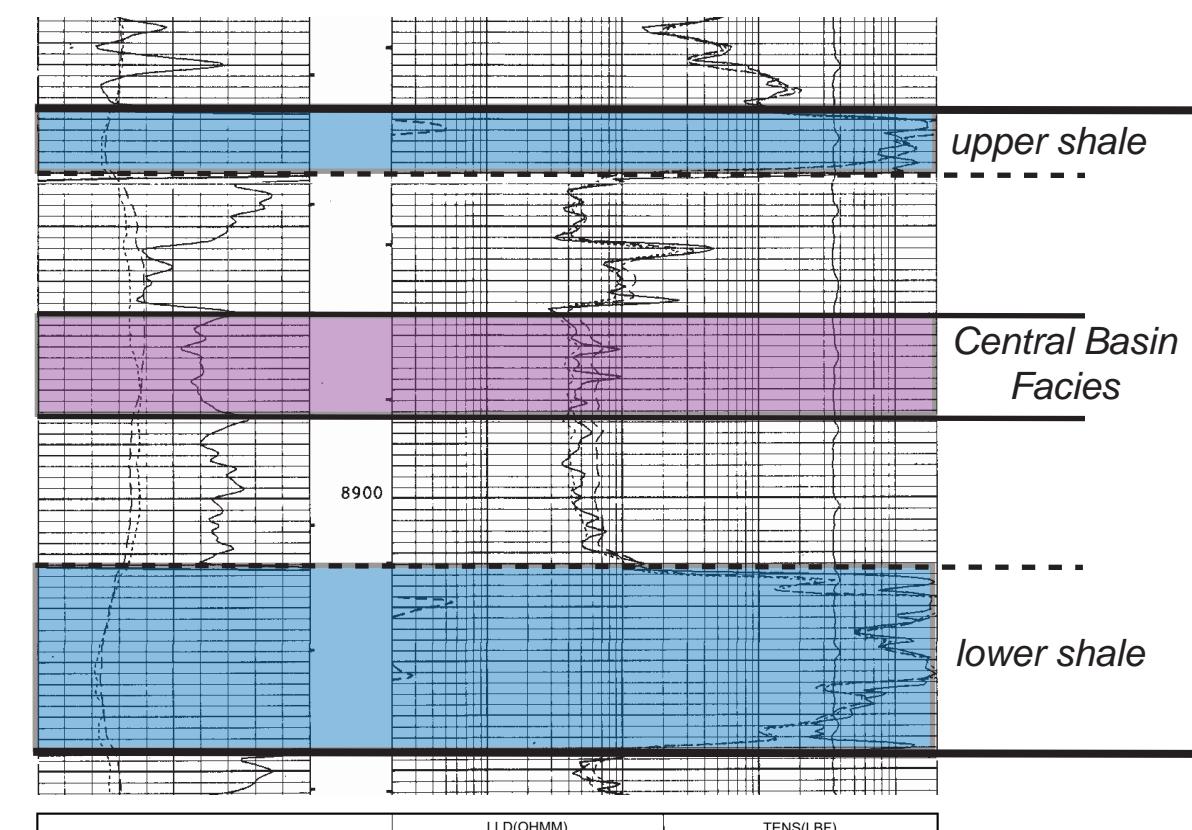
The central basin facies (cbf) consists of four distinctive lithologies that are limited to the central portion of the Williston basin. They are visible in core but are too small to be identified individually on wireline logs. As a group, the combined sequence on wireline logs with core control is mappable.

The basal 5 ft of this combined sequence consists of a laminated, slightly argillaceous sandy siltstone. There is a slight undulation to the laminations. This is overlain by 2 ft of medium brownish-grey massive siltstone. The third bed set consists of a 4.5 ft thick interbedded sequence of very fine-grained sandstones and wavy laminated claystones. The beds become lensoidal locally due to burrowing. A medium grayish-brown, laminated sequence of siltstones and very fine-grained sandstones completes the sequence. These laminations are very thin (< 5 cm) and uniform in thickness; thicker individual beds are massive to cross-bedded. Thicker individual beds are massive to cross-bedded. Although very fine-grained, cementation is limited to non-existent and the interval shows extensive oil staining.

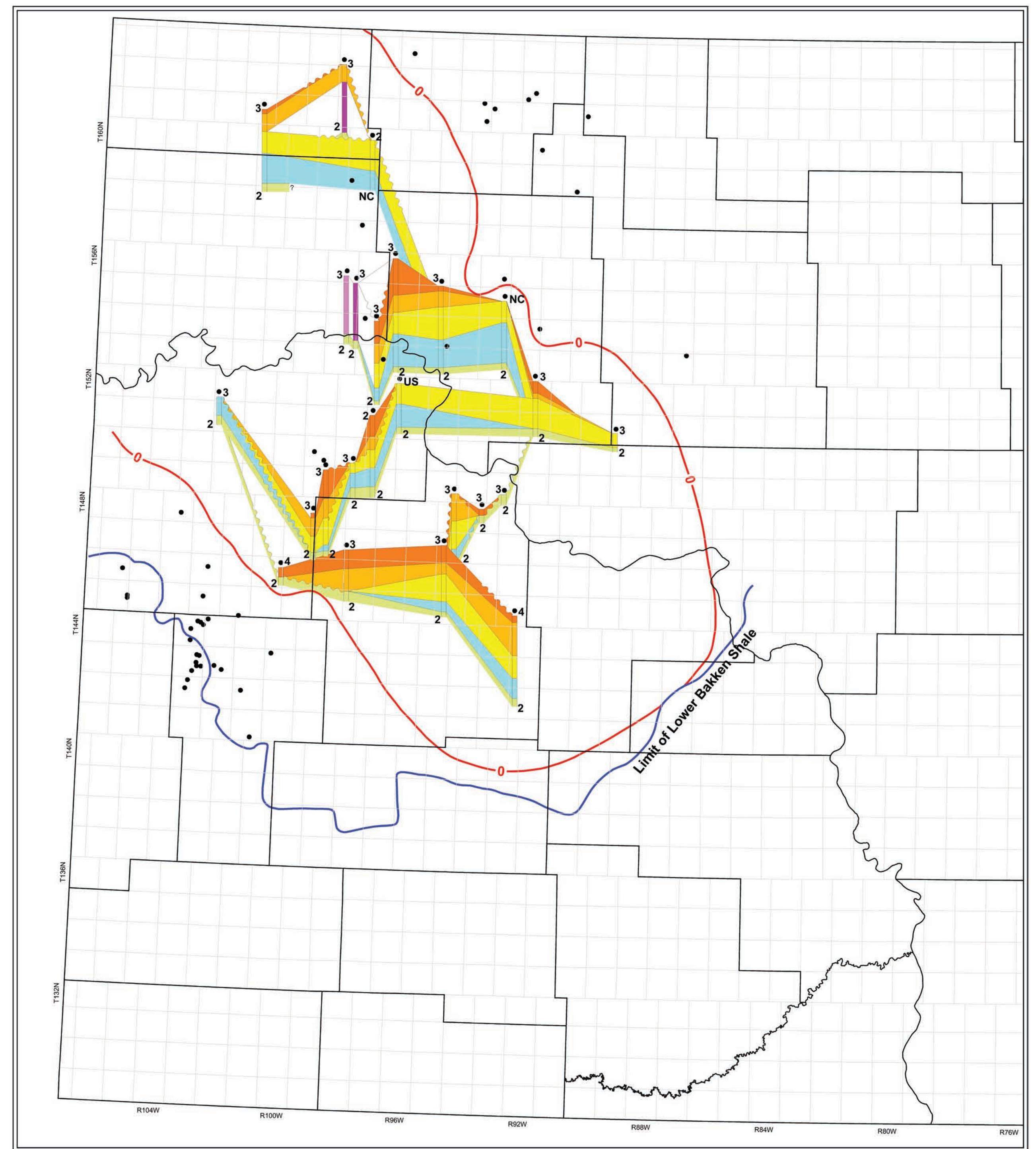
The entire sequence reaches a maximum thickness of 24 ft. Additional core data is expanding the areal extent of this lithofacies. As with the other middle member lithofacies, the contacts with the overlying and underlying beds vary from unconformable to gradational. Disconformities are abrupt and common with this interval and appear to be in response to local tectonics (probably related to salt dissolution).

The combined facies is within the middle shoreface environment. Cores on the western side of the state show finer grained sediment similar to the other middle member facies. The northern and southern end of the Nessos is structurally high noted by the thinner interval and unconformable contacts with the overlying lithofacies.

SENW Sec. 11, T.160N., R.95W  
 Conoco, Inc.  
 #17 Watterud "A"



NDIC File No: 13318



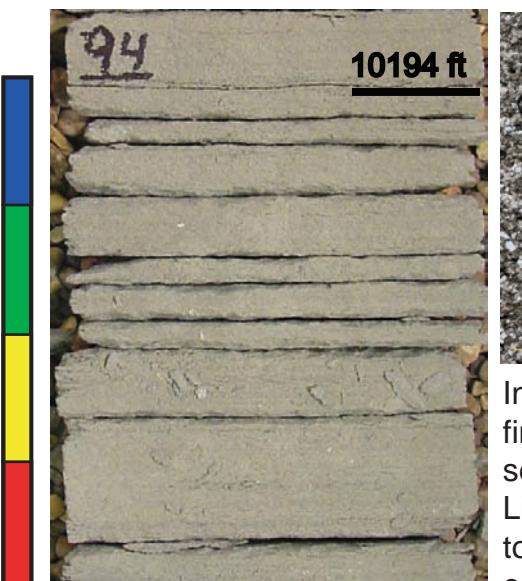
## Top Unit

SWNE Sec. 4, T.148N., R.92W.  
 Shell Oil Co.  
 #22-4 Young Bear  
 KB = 2361



## Third Unit

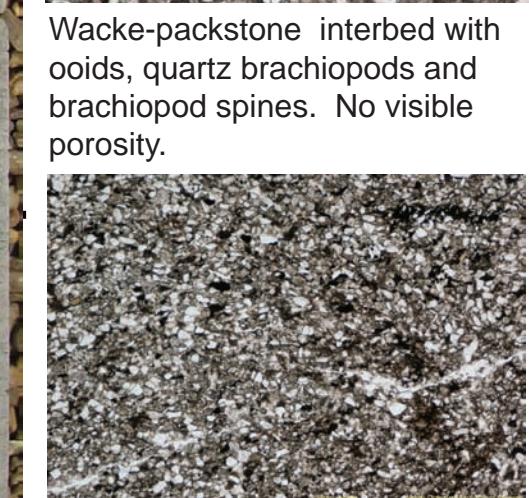
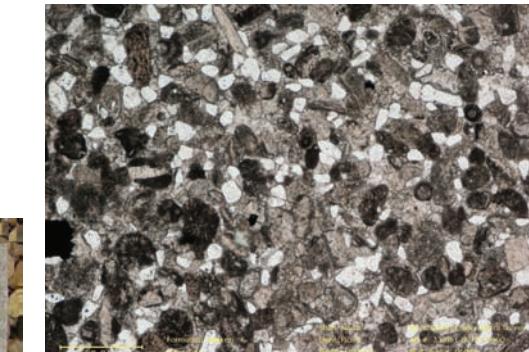
NENW Sec. 35, T.156N., R.93W.  
 Shell Oil Co.  
 #21-35 L. Texel  
 KB = 2409



## Central Basin Facies

- Laminated Siltstone/Very Fine-Grained Sandstone
- Waxy bedded Very Fine-grained Sandstone-Claystone
- Massive Siltstone
- Laminated Sandy Siltstone
- L2 Porosity Zone
- Overlying / Underlying Lithofacies / No Core
- Unconformity Surface
- 0- Limit of Central Basin Facies
- Limit of Lower Bakken Shale

## Second Unit



## Base Unit

SWSE Sec. 15, T.145N., R.91W.  
 Pan American Petroleum Corp.  
 #1 Jacob Huber  
 KB = 2212

